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Type I Data Package

Prepared for:

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

Project: Amtrak Wilmington
Groundwater and Water Samples
Collected on 04/13/18

SDG# AMW17

GROUP	SAMPLE NUMBERS
1932228	9560425-9560443

PA Cert. # 36-00037
NY Cert. # 10670
NJ Cert. # PA011
NC Cert. # 521
TX Cert. # T104704194-13-10
AZ Cert. # AZ0780

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

Authorized by: Dana M Kauffman **Date: 05/14/2018**

Dana M. Kauffman
Manager

Any questions or concerns you might have regarding this data package should be directed to your client representative, Loran Carter at (717) 556-7252.

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Sample Reference List for SDG Number AMW17
with a Data Package Type of I

11289 - Stantec

Project: Amtrak Wilmington

Lab Sample Number	Client Sample ID	Collection Date	Date Received
9560425	NY-MW-7	04/13/2018 10:00	04/16/2018 17:06
9560426	NY-MW-7 MS	04/13/2018 10:00	04/16/2018 17:06
9560427	NY-MW-7 MSD	04/13/2018 10:00	04/16/2018 17:06
9560428	NY-MW-7 DUP	04/13/2018 10:00	04/16/2018 17:06
9560429	NY-MW-34	04/13/2018 11:09	04/16/2018 17:06
9560430	NY-MW-37	04/13/2018 12:06	04/16/2018 17:06
9560431	NY-MW-45	04/13/2018 13:01	04/16/2018 17:06
9560432	NY-MW-46	04/13/2018 14:11	04/16/2018 17:06
9560433	NY-MW-36	04/13/2018 14:53	04/16/2018 17:06
9560434	EB_20180413	04/13/2018 15:20	04/16/2018 17:06
9560435	NY-MW-35	04/13/2018 09:30	04/16/2018 17:06
9560436	NY-MW-22	04/13/2018 10:30	04/16/2018 17:06
9560437	NY-MW-16	04/13/2018 11:15	04/16/2018 17:06
9560438	NY-MW-49	04/13/2018 12:20	04/16/2018 17:06
9560439	NY-MW-50	04/13/2018 13:00	04/16/2018 17:06
9560440	NY-MW-15	04/13/2018 13:45	04/16/2018 17:06
9560441	NY-MW-23	04/13/2018 14:25	04/16/2018 17:06
9560442	NY-MW-14	04/13/2018 15:05	04/16/2018 17:06
9560443	Trip Blank	04/09/2018 00:00	04/16/2018 17:06

Sample pH Log

SDG: AMW17

LLI Sample Number	Bottle Code	Actual pH	Exp. pH	pH Check Code	Adj. pH	Adjusted Date	Adjusted Time	Preservative Added	Preservative Lot #	LLI Supplied Bottle?	Sulfide Present?	Corrective Substance	CS Lot #	Res. Cl. Present?	Corrective Substance	CS Lot #	Record Date	Employee
9560425	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:11:01AM	1327
9560426	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:57AM	1327
9560427	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:57AM	1327
9560428	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:57AM	1327
9560429	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560430	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560431	038B	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 5:56:30PM	10002
9560432	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560433	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560434	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560435	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560436	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560437	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560438	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560439	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560440	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560441	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:58AM	1327
9560442	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:59AM	1327
9560443	038A	<2	<2	NA	NA	NA	NA	NA	NA	Y	NA	NA	NA	NA	NA	NA	4/24/2018 8:10:59AM	1327

Check Code Key

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

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01163 GC/MS VOA Water Prep

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

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 5030B, December 1996.

10335 VOCs- 5ml Water by 8260B

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

Reference: Test Methods for Evaluating Solid Wastes, SW-846 Method 8260B, December 1996

Analysis Reports / Field Chain of Custody

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ANALYSIS REPORT

Prepared by:

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

Prepared for:

Stantec
1060 Andrew Drive
Suite 140
West Chester PA 19380

Report Date: April 26, 2018 10:39

Project: Amtrak Wilmington

Account #: 11289
Group Number: 1932228
SDG: AMW17
PO Number: 213402048
State of Sample Origin: DE

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

Electronic Copy To	Stantec	Attn: Paul Miller
Electronic Copy To	Stantec	Attn: Steve Baggett

Respectfully Submitted,

Amek Carter
Specialist

(717) 556-7252

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SAMPLE INFORMATION

Client Sample Description	Sample Collection Date/Time	ELLE#
NY-MW-7 Grab Groundwater	04/13/2018 10:00	9560425
NY-MW-7 MS Grab Groundwater	04/13/2018 10:00	9560426
NY-MW-7 MSD Grab Groundwater	04/13/2018 10:00	9560427
NY-MW-7 DUP Grab Groundwater	04/13/2018 10:00	9560428
NY-MW-34 Grab Groundwater	04/13/2018 11:09	9560429
NY-MW-37 Grab Groundwater	04/13/2018 12:06	9560430
NY-MW-45 Grab Groundwater	04/13/2018 13:01	9560431
NY-MW-46 Grab Groundwater	04/13/2018 14:11	9560432
NY-MW-36 Grab Groundwater	04/13/2018 14:53	9560433
EB_20180413 Grab Groundwater	04/13/2018 15:20	9560434
NY-MW-35 Grab Groundwater	04/13/2018 09:30	9560435
NY-MW-22 Grab Groundwater	04/13/2018 10:30	9560436
NY-MW-16 Grab Groundwater	04/13/2018 11:15	9560437
NY-MW-49 Grab Groundwater	04/13/2018 12:20	9560438
NY-MW-50 Grab Groundwater	04/13/2018 13:00	9560439
NY-MW-15 Grab Groundwater	04/13/2018 13:45	9560440
NY-MW-23 Grab Groundwater	04/13/2018 14:25	9560441
NY-MW-14 Grab Groundwater	04/13/2018 15:05	9560442
Trip Blank Water	04/09/2018	9560443

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

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Analysis Report

Sample Description: **NY-MW-7 Grab Groundwater Amtrak Wilmington**

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 10:00
SDG#: AMW17-01BKG

Stantec
ELLE Sample #: WW 9560425
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 00:31	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 00:31	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-7 MS Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 10:00
SDG#: AMW17-01MS

Stantec
ELLE Sample #: WW 9560426
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	93	20	1
10335	Benzene	71-43-2	21	1	1
10335	Bromodichloromethane	75-27-4	18	1	1
10335	Bromoform	75-25-2	14	4	1
10335	Bromomethane	74-83-9	19	1	1
10335	2-Butanone	78-93-3	100	10	1
10335	Carbon Disulfide	75-15-0	18	5	1
10335	Carbon Tetrachloride	56-23-5	20	1	1
10335	Chlorobenzene	108-90-7	20	1	1
10335	Chloroethane	75-00-3	19	1	1
10335	Chloroform	67-66-3	20	1	1
10335	Chloromethane	74-87-3	18	1	1
10335	Dibromochloromethane	124-48-1	17	1	1
10335	1,1-Dichloroethane	75-34-3	20	1	1
10335	1,2-Dichloroethane	107-06-2	18	1	1
10335	1,1-Dichloroethene	75-35-4	24	1	1
10335	cis-1,2-Dichloroethene	156-59-2	21	1	1
10335	trans-1,2-Dichloroethene	156-60-5	22	1	1
10335	1,2-Dichloropropane	78-87-5	21	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	18	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	17	1	1
10335	Ethylbenzene	100-41-4	21	1	1
10335	2-Hexanone	591-78-6	96	10	1
10335	4-Methyl-2-pentanone	108-10-1	100	10	1
10335	Methylene Chloride	75-09-2	21	1	1
10335	Styrene	100-42-5	19	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	20	1	1
10335	Tetrachloroethene	127-18-4	21	1	1
10335	Toluene	108-88-3	21	1	1
10335	1,1,1-Trichloroethane	71-55-6	22	1	1
10335	1,1,2-Trichloroethane	79-00-5	20	1	1
10335	Trichloroethene	79-01-6	21	1	1
10335	Vinyl Chloride	75-01-4	19	1	1
10335	Xylene (Total)	1330-20-7	61	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 00:55	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 00:55	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-7 MSD Grab Groundwater Amtrak Wilmington**

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 10:00
SDG#: AMW17-01MSD

Stantec
ELLE Sample #: WW 9560427
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	95	20	1
10335	Benzene	71-43-2	22	1	1
10335	Bromodichloromethane	75-27-4	18	1	1
10335	Bromoform	75-25-2	14	4	1
10335	Bromomethane	74-83-9	19	1	1
10335	2-Butanone	78-93-3	100	10	1
10335	Carbon Disulfide	75-15-0	19	5	1
10335	Carbon Tetrachloride	56-23-5	20	1	1
10335	Chlorobenzene	108-90-7	20	1	1
10335	Chloroethane	75-00-3	19	1	1
10335	Chloroform	67-66-3	21	1	1
10335	Chloromethane	74-87-3	19	1	1
10335	Dibromochloromethane	124-48-1	17	1	1
10335	1,1-Dichloroethane	75-34-3	20	1	1
10335	1,2-Dichloroethane	107-06-2	19	1	1
10335	1,1-Dichloroethene	75-35-4	24	1	1
10335	cis-1,2-Dichloroethene	156-59-2	22	1	1
10335	trans-1,2-Dichloroethene	156-60-5	23	1	1
10335	1,2-Dichloropropane	78-87-5	22	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	18	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	17	1	1
10335	Ethylbenzene	100-41-4	21	1	1
10335	2-Hexanone	591-78-6	96	10	1
10335	4-Methyl-2-pentanone	108-10-1	100	10	1
10335	Methylene Chloride	75-09-2	21	1	1
10335	Styrene	100-42-5	19	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	20	1	1
10335	Tetrachloroethene	127-18-4	21	1	1
10335	Toluene	108-88-3	21	1	1
10335	1,1,1-Trichloroethane	71-55-6	22	1	1
10335	1,1,2-Trichloroethane	79-00-5	20	1	1
10335	Trichloroethene	79-01-6	21	1	1
10335	Vinyl Chloride	75-01-4	19	1	1
10335	Xylene (Total)	1330-20-7	61	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 01:19	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 01:19	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-7 DUP Grab Groundwater Amtrak Wilmington**

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 10:00
SDG#: AMW17-02FD

Stantec
ELLE Sample #: WW 9560428
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 01:42	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 01:42	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-34 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 11:09
SDG#: AMW17-03

Stantec
ELLE Sample #: WW 9560429
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	10	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	5	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 02:06	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 02:06	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-37 Grab Groundwater**
Amtrak Wilmington

Stantec
ELLE Sample #: **WW 9560430**
ELLE Group #: **1932228**
Matrix: Groundwater

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 12:06
SDG#: AMW17-04

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	11	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	4	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 02:30	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 02:30	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-45 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 13:01
SDG#: AMW17-05

Stantec
ELLE Sample #: WW 9560431
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181141AA	04/24/2018 14:39	Nicole S Lamoreaux	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181141AA	04/24/2018 14:39	Nicole S Lamoreaux	1

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Analysis Report

Sample Description: **NY-MW-46 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 14:11
SDG#: AMW17-06

Stantec
ELLE Sample #: WW 9560432
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 02:54	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 02:54	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-36 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 14:53
SDG#: AMW17-07

Stantec
ELLE Sample #: WW 9560433
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 03:18	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 03:18	Kevin D Kelly	1

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Analysis Report

Sample Description: **EB_20180413 Grab Groundwater Amtrak Wilmington**

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 15:20
SDG#: AMW17-08EB

Stantec
ELLE Sample #: WW 9560434
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/23/2018 23:44	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/23/2018 23:44	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-35 Grab Groundwater**
Amtrak Wilmington

Stantec
ELLE Sample #: **WW 9560435**
ELLE Group #: **1932228**
Matrix: Groundwater

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 09:30
SDG#: AMW17-09

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 03:41	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 03:41	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-22 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 10:30
SDG#: AMW17-10

Stantec
ELLE Sample #: WW 9560436
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 04:05	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 04:05	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-16 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 11:15
SDG#: AMW17-11

Stantec
ELLE Sample #: WW 9560437
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	7	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 04:29	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 04:29	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-49 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 12:20
SDG#: AMW17-12

Stantec
ELLE Sample #: WW 9560438
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 04:53	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 04:53	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-50 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 13:00
SDG#: AMW17-13

Stantec
ELLE Sample #: WW 9560439
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	3	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 05:16	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 05:16	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-15 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 13:45
SDG#: AMW17-14

Stantec
ELLE Sample #: WW 9560440
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	9	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	7	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 05:40	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 05:40	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-23 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 14:25
SDG#: AMW17-15

Stantec
ELLE Sample #: WW 9560441
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 06:04	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 06:04	Kevin D Kelly	1

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Analysis Report

Sample Description: **NY-MW-14 Grab Groundwater**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/13/2018 15:05
SDG#: AMW17-16

Stantec
ELLE Sample #: WW 9560442
ELLE Group #: 1932228
Matrix: Groundwater

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 06:28	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 06:28	Kevin D Kelly	1

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Analysis Report

Sample Description: **Trip Blank Water**
Amtrak Wilmington

Project Name: **Amtrak Wilmington**

Submittal Date/Time: 04/16/2018 17:06
Collection Date/Time: 04/09/2018
SDG#: AMW17-17TB

Stantec
ELLE Sample #: WW 9560443
ELLE Group #: 1932228
Matrix: Water

CAT No.	Analysis Name	CAS Number	Result	Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	
10335	Acetone	67-64-1	< 20	20	1
10335	Benzene	71-43-2	< 1	1	1
10335	Bromodichloromethane	75-27-4	< 1	1	1
10335	Bromoform	75-25-2	< 4	4	1
10335	Bromomethane	74-83-9	< 1	1	1
10335	2-Butanone	78-93-3	< 10	10	1
10335	Carbon Disulfide	75-15-0	< 5	5	1
10335	Carbon Tetrachloride	56-23-5	< 1	1	1
10335	Chlorobenzene	108-90-7	< 1	1	1
10335	Chloroethane	75-00-3	< 1	1	1
10335	Chloroform	67-66-3	< 1	1	1
10335	Chloromethane	74-87-3	< 1	1	1
10335	Dibromochloromethane	124-48-1	< 1	1	1
10335	1,1-Dichloroethane	75-34-3	< 1	1	1
10335	1,2-Dichloroethane	107-06-2	< 1	1	1
10335	1,1-Dichloroethene	75-35-4	< 1	1	1
10335	cis-1,2-Dichloroethene	156-59-2	< 1	1	1
10335	trans-1,2-Dichloroethene	156-60-5	< 1	1	1
10335	1,2-Dichloropropane	78-87-5	< 1	1	1
10335	cis-1,3-Dichloropropene	10061-01-5	< 1	1	1
10335	trans-1,3-Dichloropropene	10061-02-6	< 1	1	1
10335	Ethylbenzene	100-41-4	< 1	1	1
10335	2-Hexanone	591-78-6	< 10	10	1
10335	4-Methyl-2-pentanone	108-10-1	< 10	10	1
10335	Methylene Chloride	75-09-2	< 1	1	1
10335	Styrene	100-42-5	< 5	5	1
10335	1,1,2,2-Tetrachloroethane	79-34-5	< 1	1	1
10335	Tetrachloroethene	127-18-4	< 1	1	1
10335	Toluene	108-88-3	< 1	1	1
10335	1,1,1-Trichloroethane	71-55-6	< 1	1	1
10335	1,1,2-Trichloroethane	79-00-5	< 1	1	1
10335	Trichloroethene	79-01-6	< 1	1	1
10335	Vinyl Chloride	75-01-4	< 1	1	1
10335	Xylene (Total)	1330-20-7	< 1	1	1

Sample Comments

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10335	VOCs- 5ml Water by 8260B	SW-846 8260B	1	W181132AA	04/24/2018 00:08	Kevin D Kelly	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	W181132AA	04/24/2018 00:08	Kevin D Kelly	1

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Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

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

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

Method Blank

Analysis Name	Result ug/l	LOQ ug/l
Batch number: W181132AA	Sample number(s): 9560425-9560430,9560432-9560443	
Acetone	< 20	20
Benzene	< 1	1
Bromodichloromethane	< 1	1
Bromoform	< 4	4
Bromomethane	< 1	1
2-Butanone	< 10	10
Carbon Disulfide	< 5	5
Carbon Tetrachloride	< 1	1
Chlorobenzene	< 1	1
Chloroethane	< 1	1
Chloroform	< 1	1
Chloromethane	< 1	1
Dibromochloromethane	< 1	1
1,1-Dichloroethane	< 1	1
1,2-Dichloroethane	< 1	1
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
1,2-Dichloropropane	< 1	1
cis-1,3-Dichloropropene	< 1	1
trans-1,3-Dichloropropene	< 1	1
Ethylbenzene	< 1	1
2-Hexanone	< 10	10
4-Methyl-2-pentanone	< 10	10
Methylene Chloride	< 1	1
Styrene	< 5	5
1,1,2,2-Tetrachloroethane	< 1	1
Tetrachloroethene	< 1	1
Toluene	< 1	1
1,1,1-Trichloroethane	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Xylene (Total)	< 1	1
Batch number: W181141AA	Sample number(s): 9560431	
Acetone	< 20	20
Benzene	< 1	1
Bromodichloromethane	< 1	1

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

Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

Method Blank (continued)

Analysis Name	Result ug/l	LOQ ug/l
Bromoform	< 4	4
Bromomethane	< 1	1
2-Butanone	< 10	10
Carbon Disulfide	< 5	5
Carbon Tetrachloride	< 1	1
Chlorobenzene	< 1	1
Chloroethane	< 1	1
Chloroform	< 1	1
Chloromethane	< 1	1
Dibromochloromethane	< 1	1
1,1-Dichloroethane	< 1	1
1,2-Dichloroethane	< 1	1
1,1-Dichloroethene	< 1	1
cis-1,2-Dichloroethene	< 1	1
trans-1,2-Dichloroethene	< 1	1
1,2-Dichloropropane	< 1	1
cis-1,3-Dichloropropene	< 1	1
trans-1,3-Dichloropropene	< 1	1
Ethylbenzene	< 1	1
2-Hexanone	< 10	10
4-Methyl-2-pentanone	< 10	10
Methylene Chloride	< 1	1
Styrene	< 5	5
1,1,2,2-Tetrachloroethane	< 1	1
Tetrachloroethene	< 1	1
Toluene	< 1	1
1,1,1-Trichloroethane	< 1	1
1,1,2-Trichloroethane	< 1	1
Trichloroethene	< 1	1
Vinyl Chloride	< 1	1
Xylene (Total)	< 1	1

LCS/LCSD

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: W181132AA	Sample number(s): 9560425-9560430,9560432-9560443								
Acetone	150	85.84			57		54-157		
Benzene	20	20.11			101		80-120		
Bromodichloromethane	20	17.3			87		71-120		
Bromoform	20	14.31			72		59-120		

*- Outside of specification
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.
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Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Bromomethane	20	17.21			86		58-130		
2-Butanone	150	107.31			72		59-135		
Carbon Disulfide	20	15.28			76		65-128		
Carbon Tetrachloride	20	17.27			86		64-134		
Chlorobenzene	20	18.92			95		80-120		
Chloroethane	20	16.93			85		61-123		
Chloroform	20	19.47			97		80-120		
Chloromethane	20	16.47			82		63-120		
Dibromochloromethane	20	16.74			84		71-120		
1,1-Dichloroethane	20	19.62			98		80-120		
1,2-Dichloroethane	20	18.82			94		73-124		
1,1-Dichloroethene	20	20.57			103		80-131		
cis-1,2-Dichloroethene	20	20.44			102		80-120		
trans-1,2-Dichloroethene	20	20.16			101		80-120		
1,2-Dichloropropane	20	20.34			102		80-120		
cis-1,3-Dichloropropene	20	17.82			89		75-120		
trans-1,3-Dichloropropene	20	17.18			86		76-120		
Ethylbenzene	20	19.48			97		80-120		
2-Hexanone	100	98.69			99		50-141		
4-Methyl-2-pentanone	100	103.58			104		62-133		
Methylene Chloride	20	20.83			104		80-120		
Styrene	20	18.31			92		80-120		
1,1,2,2-Tetrachloroethane	20	19.77			99		72-120		
Tetrachloroethene	20	18.44			92		80-120		
Toluene	20	19.38			97		80-120		
1,1,1-Trichloroethane	20	19.39			97		67-126		
1,1,2-Trichloroethane	20	19.86			99		80-120		
Trichloroethene	20	18.84			94		80-120		
Vinyl Chloride	20	16.18			81		68-120		
Xylene (Total)	60	56.39			94		80-120		
Batch number: W181141AA	Sample number(s): 9560431								
Acetone	150	128.15	150	152.41	85	102	54-157	17	30
Benzene	20	20.41	20	20.33	102	102	80-120	0	30
Bromodichloromethane	20	17.43	20	17.56	87	88	71-120	1	30
Bromoform	20	14.33	20	14.03	72	70	59-120	2	30
Bromomethane	20	19.43	20	19.44	97	97	58-130	0	30
2-Butanone	150	150	150	147.42	100	98	59-135	2	30
Carbon Disulfide	20	16.71	20	17.93	84	90	65-128	7	30
Carbon Tetrachloride	20	17.58	20	17.63	88	88	64-134	0	30
Chlorobenzene	20	19.08	20	18.98	95	95	80-120	1	30
Chloroethane	20	19.38	20	19.53	97	98	61-123	1	30
Chloroform	20	19.67	20	19.72	98	99	80-120	0	30
Chloromethane	20	20.58	20	19.71	103	99	63-120	4	30

*- Outside of specification
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(2) The unspiked result was more than four times the spike added.
P###### is indicative of a Background or Unspiked sample that is batch matrix QC and was not performed using a sample from this submission group.

Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

LCS/LCSD (continued)

Analysis Name	LCS Spike Added ug/l	LCS Conc ug/l	LCSD Spike Added ug/l	LCSD Conc ug/l	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Dibromochloromethane	20	16.48	20	16.44	82	82	71-120	0	30
1,1-Dichloroethane	20	20.04	20	20.06	100	100	80-120	0	30
1,2-Dichloroethane	20	19.31	20	18.85	97	94	73-124	2	30
1,1-Dichloroethene	20	21.51	20	20.54	108	103	80-131	5	30
cis-1,2-Dichloroethene	20	20.85	20	20.82	104	104	80-120	0	30
trans-1,2-Dichloroethene	20	20.63	20	20.68	103	103	80-120	0	30
1,2-Dichloropropane	20	20.48	20	20.51	102	103	80-120	0	30
cis-1,3-Dichloropropene	20	17.68	20	17.51	88	88	75-120	1	30
trans-1,3-Dichloropropene	20	16.78	20	16.81	84	84	76-120	0	30
Ethylbenzene	20	19.41	20	19.12	97	96	80-120	2	30
2-Hexanone	100	95.62	100	95.01	96	95	50-141	1	30
4-Methyl-2-pentanone	100	102.61	100	101.18	103	101	62-133	1	30
Methylene Chloride	20	20.15	20	20.17	101	101	80-120	0	30
Styrene	20	18.29	20	18.03	91	90	80-120	1	30
1,1,2,2-Tetrachloroethane	20	20.09	20	19.97	100	100	72-120	1	30
Tetrachloroethene	20	18.89	20	18.8	94	94	80-120	0	30
Toluene	20	19.68	20	19.61	98	98	80-120	0	30
1,1,1-Trichloroethane	20	19.81	20	19.92	99	100	67-126	1	30
1,1,2-Trichloroethane	20	20.16	20	20.13	101	101	80-120	0	30
Trichloroethene	20	19.31	20	19.35	97	97	80-120	0	30
Vinyl Chloride	20	20.14	20	19.62	101	98	68-120	3	30
Xylene (Total)	60	56.61	60	56.26	94	94	80-120	1	30

MS/MSD

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Batch number: W181132AA	Sample number(s): 9560425-9560430,9560432-9560443 UNSPK: 9560425									
Acetone	< 20	150	92.51	150	94.72	62	63	54-157	2	30
Benzene	< 1	20	21.49	20	21.73	107	109	80-120	1	30
Bromodichloromethane	< 1	20	17.74	20	18.11	89	91	71-120	2	30
Bromoform	< 4	20	14.06	20	14.18	70	71	59-120	1	30
Bromomethane	< 1	20	19.01	20	18.87	95	94	58-130	1	30
2-Butanone	< 10	150	100.88	150	101.84	67	68	59-135	1	30
Carbon Disulfide	< 5	20	17.9	20	18.52	89	93	65-128	3	30
Carbon Tetrachloride	< 1	20	20.09	20	20.43	100	102	64-134	2	30
Chlorobenzene	< 1	20	20.19	20	20.08	101	100	80-120	1	30
Chloroethane	< 1	20	19.25	20	19.46	96	97	61-123	1	30
Chloroform	< 1	20	20.31	20	20.61	102	103	80-120	1	30

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

Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
Chloromethane	< 1	20	18.2	20	18.56	91	93	63-120	2	30
Dibromochloromethane	< 1	20	16.86	20	16.96	84	85	71-120	1	30
1,1-Dichloroethane	< 1	20	19.82	20	20.32	99	102	80-120	2	30
1,2-Dichloroethane	< 1	20	18.05	20	19.15	90	96	73-124	6	30
1,1-Dichloroethene	< 1	20	23.8	20	24.28	119	121	80-131	2	30
cis-1,2-Dichloroethene	< 1	20	21.36	20	22	107	110	80-120	3	30
trans-1,2-Dichloroethene	< 1	20	22.18	20	22.6	111	113	80-120	2	30
1,2-Dichloropropane	< 1	20	21	20	21.6	105	108	80-120	3	30
cis-1,3-Dichloropropene	< 1	20	17.71	20	18.31	89	92	75-120	3	30
trans-1,3-Dichloropropene	< 1	20	16.98	20	16.89	85	84	76-120	1	30
Ethylbenzene	< 1	20	20.98	20	20.9	105	104	80-120	0	30
2-Hexanone	< 10	100	96.14	100	95.78	96	96	50-141	0	30
4-Methyl-2-pentanone	< 10	100	101.87	100	102.64	102	103	62-133	1	30
Methylene Chloride	< 1	20	21.39	20	21.17	107	106	80-120	1	30
Styrene	< 5	20	19.4	20	19.49	97	97	80-120	0	30
1,1,2,2-Tetrachloroethane	< 1	20	19.94	20	19.73	100	99	72-120	1	30
Tetrachloroethene	< 1	20	21.09	20	20.77	105	104	80-120	1	30
Toluene	< 1	20	21.18	20	21.19	106	106	80-120	0	30
1,1,1-Trichloroethane	< 1	20	21.51	20	22.08	108	110	67-126	3	30
1,1,2-Trichloroethane	< 1	20	20.28	20	20.2	101	101	80-120	0	30
Trichloroethene	< 1	20	20.78	20	21.25	104	106	80-120	2	30
Vinyl Chloride	< 1	20	19.19	20	18.74	96	94	68-120	2	30
Xylene (Total)	< 1	60	61.32	60	61.24	102	102	80-120	0	30
Batch number: W181141AA	Sample number(s): 9560431 UNSPK: P563063									
Acetone	29.87	150	178.3	150	169.66	99	93	54-157	5	30
Benzene	682.55	20	731.21	20	687.72	243 (2)	26 (2)	80-120	6	30
Bromodichloromethane	< 1	20	19.17	20	18.98	96	95	71-120	1	30
Bromoform	< 4	20	13.99	20	14.43	70	72	59-120	3	30
Bromomethane	< 1	20	18.84	20	18.75	94	94	58-130	0	30
2-Butanone	7.28	150	149.58	150	148.39	95	94	59-135	1	30
Carbon Disulfide	< 5	20	17.74	20	18.56	89	93	65-128	4	30
Carbon Tetrachloride	< 1	20	18.97	20	19.8	95	99	64-134	4	30
Chlorobenzene	< 1	20	19.93	20	19.8	100	99	80-120	1	30
Chloroethane	< 1	20	18.78	20	19	94	95	61-123	1	30
Chloroform	< 1	20	21.64	20	21.93	108	110	80-120	1	30
Chloromethane	< 1	20	18.96	20	19.55	95	98	63-120	3	30
Dibromochloromethane	< 1	20	15.95	20	16.39	80	82	71-120	3	30
1,1-Dichloroethane	< 1	20	21.5	20	21.93	107	110	80-120	2	30
1,2-Dichloroethane	< 1	20	35.93	20	34.89	180*	174*	73-124	3	30
1,1-Dichloroethene	< 1	20	23.47	20	23.91	117	120	80-131	2	30
cis-1,2-Dichloroethene	< 1	20	21.65	20	22	108	110	80-120	2	30
trans-1,2-Dichloroethene	< 1	20	22.26	20	22.89	111	114	80-120	3	30

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

Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

MS/MSD (continued)

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

Analysis Name	Unspiked Conc ug/l	MS Spike Added ug/l	MS Conc ug/l	MSD Spike Added ug/l	MSD Conc ug/l	MS %Rec	MSD %Rec	MS/MSD Limits	RPD	RPD Max
1,2-Dichloropropane	< 1	20	22.69	20	22.25	113	111	80-120	2	30
cis-1,3-Dichloropropene	< 1	20	18.12	20	18.46	91	92	75-120	2	30
trans-1,3-Dichloropropene	< 1	20	16.58	20	16.64	83	83	76-120	0	30
Ethylbenzene	19.52	20	38.24	20	37.46	94	90	80-120	2	30
2-Hexanone	< 10	100	101.12	100	102.62	101	103	50-141	1	30
4-Methyl-2-pentanone	< 10	100	107.78	100	108.88	108	109	62-133	1	30
Methylene Chloride	< 1	20	24.6	20	24.48	123*	122*	80-120	0	30
Styrene	< 5	20	19.8	20	20.01	99	100	80-120	1	30
1,1,2,2-Tetrachloroethane	< 1	20	20.82	20	21.24	104	106	72-120	2	30
Tetrachloroethene	< 1	20	20.5	20	20.28	102	101	80-120	1	30
Toluene	3.61	20	24.5	20	24.72	104	106	80-120	1	30
1,1,1-Trichloroethane	< 1	20	21.36	20	21.62	107	108	67-126	1	30
1,1,2-Trichloroethane	< 1	20	20.84	20	20.8	104	104	80-120	0	30
Trichloroethene	< 1	20	22.12	20	22.24	111	111	80-120	1	30
Vinyl Chloride	< 1	20	19.68	20	19.93	98	100	68-120	1	30
Xylene (Total)	31.76	60	88.54	60	86.86	95	92	80-120	2	30

Surrogate Quality Control

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

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181132AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9560425	97	105	98	93
9560426	97	100	101	97
9560427	99	106	100	97
9560428	97	103	99	94
9560429	97	105	99	94
9560430	97	103	99	95
9560432	96	104	98	96
9560433	96	104	100	95
9560434	96	104	99	95
9560435	97	102	99	94
9560436	97	106	97	95
9560437	98	105	98	94
9560438	96	104	98	95
9560439	96	107	99	95
9560440	96	104	98	94
9560441	95	106	99	94

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

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Quality Control Summary

Client Name: Stantec
Reported: 04/26/2018 10:39

Group Number: 1932228

Surrogate Quality Control

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

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181132AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9560442	97	104	98	94
9560443	96	104	99	94
Blank	96	104	99	94
LCS	98	97	101	98
MS	97	100	101	97
MSD	99	106	100	97
Limits:	80-120	80-120	80-120	80-120

Analysis Name: VOCs- 5ml Water by 8260B
Batch number: W181141AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
9560431	98	104	97	95
Blank	97	104	98	94
LCS	99	107	100	96
LCSD	99	105	100	97
MS	99	104	101	101
MSD	98	101	101	100
Limits:	80-120	80-120	80-120	80-120

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

Environmental Analysis Request/Chain of Custody

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Acct. # 11289 Group # 1932228 Sample # 9580425-43

COC # 548410

Client Information

Client: STANTEC

Acct. #:

Project Name/#: AMTRAK WILMINGTON

PWSID #:

Project Manager: PAUL MILLER

P.O. #: 213402048

Sampler: IAN ANDREE/DANE HOPKINS

Quote #:

State where samples were collected: DE

For Compliance: Yes ☐ No ☐

For Lab Use Only

FSC:

SCR#:

Preservation Codes

H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Soil	Sediment	Tissue	Water	Ground	Potable	Surface	NPDES	Other:	Total # of Containers	VOCs 8260	Remarks
NY-MW-7	4/13/18	1000	X					X						3	X	
NY-MW-7 MS	4/13/18	1000	X					X						3	X	
NY-MW-7 MSD	4/13/18	1000	X					X						3	X	
NY-MW-7 DUP	4/13/18	1000	X					X						3	X	
NY-MW-34	4/13/18	1109	X					X						3	X	
NY-MW-37	4/13/18	1206	X					X						3	X	
NY-MW-45	4/13/18	1301	X					X						3	X	
NY-MW-46	4/13/18	1411	X					X						3	X	
NY-MW-36	4/13/18	1453	X					X						3	X	
EB_20180413	4/13/18	1520	X					X						3	X	

Turnaround Time (TAT) Requested (please circle)

Standard Rush

(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed: _____

E-mail address: PAUL.MILLER@STANTEC.COM

Data Package Options (circle if required)

Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)

Type III (Reduced non-CLP) NJ DKQP TX TRRP-13

NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4.16.18	1405	[signature]	4.16.18	1405
[signature]	4.16.18	1706			
			[signature]	4-16-18	1706

EDD Required? Yes No

If yes, format: _____

Site-Specific QC (MS/MSD/Dup)? Yes No

(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:

UPS _____ FedEx _____ Other _____

Temperature upon receipt 1.3 °C

Environmental Analysis Request/Chain of Custody

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For Eurofins Lancaster Laboratories Environmental use only
Acct. # 11289 Group # 1932228 Sample # 9560425-43

COC # 548409

Client Information

Client: Stantec
Acct. #:
Project Name/#: 213402048 (NY Groundwater sampling)
PWSID #:
Project Manager: Paul Miller
P.O. #:
Sampler: Dana Hopkins
Quote #:
State where samples were collected: Delaware
For Compliance: Yes ☐ No ☐

Matrix

Soil ☐ Sediment ☐ Tissue ☐ | Water: Potable ☐ Ground ☒ NPDES ☐ Surface ☐ | Other: blanks

Analysis Requested

Preservation Codes

For Lab Use Only
FSC:
SCR#:

Preservation Codes
H=HCl T=Thiosulfate
N=HNO_3 B=NaOH
S=H_2SO_4 O=Other

Sample Identification	Collected Date	Collected Time	Grab	Composite	Total # of Containers	VOCs 8260	Remarks
NY-MW-35	4/13/18	0930	X		3	X	
NY-MW-22	↓	1030	X		3	X	
NY-MW-16		1115	X		3	X	
NY-MW-49		1220	X		3	X	
NY-MW-50		1300	X		3	X	
NY-MW-15		1345	X		3	X	
NY-MW-23		1425	X		3	X	
NY-MW-14		1505	X		3	X	
TRIP BLANK	4/9/18	—			2	X	

Turnaround Time (TAT) Requested (please circle)
Standard Rush
(Rush TAT is subject to laboratory approval and surcharge.)

Date results are needed:

E-mail address: Paul.Miller@stantec.com

Data Package Options (circle if required)
Type I (EPA Level 3 Equivalent/non-CLP) Type VI (Raw Data Only)
Type III (Reduced non-CLP) NJ DKQP TX TRRP-13
NYSDEC Category A or B MA MCP CT RCP

Relinquished by	Date	Time	Received by	Date	Time
[signature]	4/16/18	1405	[signature]	4/16/18	1405
[signature]	4-16-18	1706			
			[signature]	4-16-18	1706

EDD Required? Yes No
If yes, format:
Site-Specific QC (MS/MSD/Dup)? Yes No
(If yes, indicate QC sample and submit triplicate sample volume.)

Relinquished by Commercial Carrier:
UPS FedEx Other

Temperature upon receipt 1.3 °C

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Sample Administration Receipt Documentation Log

Doc Log ID: 213830

Group Number(s): 1932228

Client: Stantec

Delivery and Receipt Information

Delivery Method:	ELLE Courier	Arrival Timestamp:	04/16/2018 17:06
Number of Packages:	1	Number of Projects:	1
State/Province of Origin:	DE		

Arrival Condition Summary

Shipping Container Sealed:	No	Sample IDs on COC match Containers:	Yes
Custody Seal Present:	No	Sample Date/Times match COC:	Yes
Samples Chilled:	Yes	VOA Vial Headspace ≥ 6mm:	No
Paperwork Enclosed:	Yes	Total Trip Blank Qty:	2
Samples Intact:	Yes	Trip Blank Type:	HCl
Missing Samples:	No	Air Quality Samples Present:	No
Extra Samples:	No		
Discrepancy in Container Qty on COC:	No		

Unpacked by Cory Jeremiah (10469) at 17:36 on 04/16/2018

Samples Chilled Details

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

Cooler #	Thermometer ID	Corrected Temp	Therm. Type	Ice Type	Ice Present?	Ice Container	Elevated Temp?
1	DT42-01	1.3	DT	Wet	Y	Bagged	N

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

Explanation of Symbols and Abbreviations

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

BMQL	Below Minimum Quantitation Level	**mg**	milligram(s)
C	degrees Celsius	**mL**	milliliter(s)
cfu	colony forming units	**MPN**	Most Probable Number
CP Units	cobalt-chloroplatinate units	**N.D.**	non-detect
F	degrees Fahrenheit	**ng**	nanogram(s)
g	gram(s)	**NTU**	nephelometric turbidity units
IU	International Units	**pg/L**	picogram/liter
kg	kilogram(s)	**RL**	Reporting Limit
L	liter(s)	**TNTC**	Too Numerous To Count
lb.	pound(s)	**µg**	microgram(s)
m3	cubic meter(s)	**µL**	microliter(s)
meq	milliequivalents	**umhos/cm**	micromhos/cm

<	less than
>	greater than
ppm	parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas.
ppb	parts per billion
Dry weight basis	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

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

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

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

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

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Data Qualifiers

Qualifier	Definition
C	Result confirmed by reanalysis
D1	Indicates for dual column analyses that the result is reported from column 1
D2	Indicates for dual column analyses that the result is reported from column 2
E	Concentration exceeds the calibration range
K1	Initial Calibration Blank is above the QC limit and the sample result is ND
K2	Continuing Calibration Blank is above the QC limit and the sample result is ND
K3	Initial Calibration Verification is above the QC limit and the sample result is ND
K4	Continuing Calibration Verification is above the QC limit and the sample result is ND
J (or G, I, X)	Estimated value >= the Method Detection Limit (MDL or DL) and < the Limit of Quantitation (LOQ or RL)
P	Concentration difference between the primary and confirmation column >40%. The lower result is reported.
U	Analyte was not detected at the value indicated
V	Concentration difference between the primary and confirmation column >100%. The reporting limit is raised due to this disparity and evident interference.
W	The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L.
Z	Laboratory Defined - see analysis report

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

Volatiles by GC/MS Data

Case Narrative/Conformance Summary

Volatiles by GC/MS

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Case Narrative/Conformance Summary

CLIENT: Stantec
SDG: AMW17

GC/MS Volatiles

Fraction: Volatiles by GC/MS

Sample #	Client ID	Matrix Liquid	Matrix Solid	DF	Comments
9560425	NY-MW-7	X		1	Unspiked
9560426	NY-MW-7 MS	X		1	Matrix Spike
9560427	NY-MW-7 MSD	X		1	Matrix Spike Duplicate
9560428	NY-MW-7 DUP	X		1	Field Duplicate Sample
9560429	NY-MW-34	X		1	
9560430	NY-MW-37	X		1	
9560431	NY-MW-45	X		1	
9560432	NY-MW-46	X		1	
9560433	NY-MW-36	X		1	
9560434	EB_20180413	X		1	Equipment Blank
9560435	NY-MW-35	X		1	
9560436	NY-MW-22	X		1	
9560437	NY-MW-16	X		1	
9560438	NY-MW-49	X		1	
9560439	NY-MW-50	X		1	
9560440	NY-MW-15	X		1	
9560441	NY-MW-23	X		1	
9560442	NY-MW-14	X		1	
9560443	Trip Blank	X		1	Trip Blank

See QC Reference List for Associated Batch QC Samples

SAMPLE RECEIPT:

Samples were received in good condition and within temperature requirements.

HOLDING TIME:

All holding times were met.

PREPARATION/EXTRACTION/DIGESTION:

No problems were encountered.

CALIBRATION/STANDARDIZATION:

All criteria were met.

QUALITY CONTROL AND NONCONFORMANCE SUMMARY:

All QC is within specification.

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Case Narrative/Conformance Summary

CLIENT: Stantec
SDG: AMW17

GC/MS Volatiles

Fraction: Volatiles by GC/MS

SAMPLE ANALYSIS:

No problems were encountered with the analysis of the samples.

Abbreviation Key

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

Quality Control and Calibration Summary Forms

Volatiles by GC/MS

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Quality Control Reference List
GC/MS Volatiles

CLIENT: Stantec
SDG: AMW17

Fraction: Volatiles by GC/MS

Analysis	Batch Number	Sample Number	Analysis Date
VOCs- 5ml Water by 8260B	W181132AA	VBLKW92	04/23/2018 23:10:00
		LCSW92	04/23/2018 22:46:00
		9560425 UNSPK, MS	04/24/2018 00:31:00
		9560426 MS	04/24/2018 00:55:00
		9560427 MSD	04/24/2018 01:19:00
		9560428	04/24/2018 01:42:00
		9560429	04/24/2018 02:06:00
		9560430	04/24/2018 02:30:00
		9560432	04/24/2018 02:54:00
		9560433	04/24/2018 03:18:00
		9560434	04/23/2018 23:44:00
		9560435	04/24/2018 03:41:00
		9560436	04/24/2018 04:05:00
		9560437	04/24/2018 04:29:00
		9560438	04/24/2018 04:53:00
		9560439	04/24/2018 05:16:00
		9560440	04/24/2018 05:40:00
		9560441	04/24/2018 06:04:00
		9560442	04/24/2018 06:28:00
		9560443	04/24/2018 00:08:00
VOCs- 5ml Water by 8260B	W181141AA	VBLKW93	04/24/2018 09:37:00
		LCSW93	04/24/2018 08:50:00
		LCDW93	04/24/2018 09:14:00
		9560431	04/24/2018 14:39:00

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: AMW17
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W181132AA / VBLKW92 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
Chloromethane	04/23/18	N.D.	ug/l	0.5	1
Vinyl Chloride	04/23/18	N.D.	ug/l	0.5	1
Bromomethane	04/23/18	N.D.	ug/l	0.5	1
Chloroethane	04/23/18	N.D.	ug/l	0.5	1
1,1-Dichloroethene	04/23/18	N.D.	ug/l	0.5	1
Acetone	04/23/18	N.D.	ug/l	6	20
Carbon Disulfide	04/23/18	N.D.	ug/l	1	5
Methylene Chloride	04/23/18	N.D.	ug/l	0.5	1
trans-1,2-Dichloroethene	04/23/18	N.D.	ug/l	0.5	1
1,1-Dichloroethane	04/23/18	N.D.	ug/l	0.5	1
2-Butanone	04/23/18	N.D.	ug/l	3	10
cis-1,2-Dichloroethene	04/23/18	N.D.	ug/l	0.5	1
Chloroform	04/23/18	N.D.	ug/l	0.5	1
1,1,1-Trichloroethane	04/23/18	N.D.	ug/l	0.5	1
Carbon Tetrachloride	04/23/18	N.D.	ug/l	0.5	1
Benzene	04/23/18	N.D.	ug/l	0.5	1
1,2-Dichloroethane	04/23/18	N.D.	ug/l	0.5	1
Trichloroethene	04/23/18	N.D.	ug/l	0.5	1
1,2-Dichloropropane	04/23/18	N.D.	ug/l	0.5	1
Bromodichloromethane	04/23/18	N.D.	ug/l	0.5	1
cis-1,3-Dichloropropene	04/23/18	N.D.	ug/l	0.5	1
4-Methyl-2-pentanone	04/23/18	N.D.	ug/l	3	10
Toluene	04/23/18	N.D.	ug/l	0.5	1
trans-1,3-Dichloropropene	04/23/18	N.D.	ug/l	0.5	1
1,1,2-Trichloroethane	04/23/18	N.D.	ug/l	0.5	1
Tetrachloroethene	04/23/18	N.D.	ug/l	0.5	1
2-Hexanone	04/23/18	N.D.	ug/l	3	10
Dibromochloromethane	04/23/18	N.D.	ug/l	0.5	1
Chlorobenzene	04/23/18	N.D.	ug/l	0.5	1
Ethylbenzene	04/23/18	N.D.	ug/l	0.5	1
Xylene (Total)	04/23/18	N.D.	ug/l	0.5	1
Styrene	04/23/18	N.D.	ug/l	1	5
Bromoform	04/23/18	N.D.	ug/l	0.5	4
1,1,2,2-Tetrachloroethane	04/23/18	N.D.	ug/l	0.5	1

W181141AA / VBLKW93 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
Chloromethane	04/24/18	N.D.	ug/l	0.5	1
Vinyl Chloride	04/24/18	N.D.	ug/l	0.5	1
Bromomethane	04/24/18	N.D.	ug/l	0.5	1
Chloroethane	04/24/18	N.D.	ug/l	0.5	1
1,1-Dichloroethene	04/24/18	N.D.	ug/l	0.5	1
Acetone	04/24/18	N.D.	ug/l	6	20
Carbon Disulfide	04/24/18	N.D.	ug/l	1	5
Methylene Chloride	04/24/18	N.D.	ug/l	0.5	1

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Quality Control Summary
Method Blank
GC/MS Volatiles
SDG: AMW17
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W181141AA / VBLKW93 **Analyte**	**Analysis Date**	**Blank Results**	**Units**	**MDL**	**LOQ**
trans-1,2-Dichloroethene	04/24/18	N.D.	ug/l	0.5	1
1,1-Dichloroethane	04/24/18	N.D.	ug/l	0.5	1
2-Butanone	04/24/18	N.D.	ug/l	3	10
cis-1,2-Dichloroethene	04/24/18	N.D.	ug/l	0.5	1
Chloroform	04/24/18	N.D.	ug/l	0.5	1
1,1,1-Trichloroethane	04/24/18	N.D.	ug/l	0.5	1
Carbon Tetrachloride	04/24/18	N.D.	ug/l	0.5	1
Benzene	04/24/18	N.D.	ug/l	0.5	1
1,2-Dichloroethane	04/24/18	N.D.	ug/l	0.5	1
Trichloroethene	04/24/18	N.D.	ug/l	0.5	1
1,2-Dichloropropane	04/24/18	N.D.	ug/l	0.5	1
Bromodichloromethane	04/24/18	N.D.	ug/l	0.5	1
cis-1,3-Dichloropropene	04/24/18	N.D.	ug/l	0.5	1
4-Methyl-2-pentanone	04/24/18	N.D.	ug/l	3	10
Toluene	04/24/18	N.D.	ug/l	0.5	1
trans-1,3-Dichloropropene	04/24/18	N.D.	ug/l	0.5	1
1,1,2-Trichloroethane	04/24/18	N.D.	ug/l	0.5	1
Tetrachloroethene	04/24/18	N.D.	ug/l	0.5	1
2-Hexanone	04/24/18	N.D.	ug/l	3	10
Dibromochloromethane	04/24/18	N.D.	ug/l	0.5	1
Chlorobenzene	04/24/18	N.D.	ug/l	0.5	1
Ethylbenzene	04/24/18	N.D.	ug/l	0.5	1
Xylene (Total)	04/24/18	N.D.	ug/l	0.5	1
Styrene	04/24/18	N.D.	ug/l	1	5
Bromoform	04/24/18	N.D.	ug/l	0.5	4
1,1,2,2-Tetrachloroethane	04/24/18	N.D.	ug/l	0.5	1

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Quality Control Summary
Surrogates
GC/MS Volatiles
SDG: AMW17
Matrix: LIQUID

Fraction: Volatiles by GC/MS

W181132AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW92	104	80 - 120	94	80 - 120	96	80 - 120	99	80 - 120
LCSW92	97	80 - 120	98	80 - 120	98	80 - 120	101	80 - 120
9560425 UNSPK	105	80 - 120	93	80 - 120	97	80 - 120	98	80 - 120
9560426 MS	100	80 - 120	97	80 - 120	97	80 - 120	101	80 - 120
9560427 MSD	106	80 - 120	97	80 - 120	99	80 - 120	100	80 - 120
9560428	103	80 - 120	94	80 - 120	97	80 - 120	99	80 - 120
9560429	105	80 - 120	94	80 - 120	97	80 - 120	99	80 - 120
9560430	103	80 - 120	95	80 - 120	97	80 - 120	99	80 - 120
9560432	104	80 - 120	96	80 - 120	96	80 - 120	98	80 - 120
9560433	104	80 - 120	95	80 - 120	96	80 - 120	100	80 - 120
9560434	104	80 - 120	95	80 - 120	96	80 - 120	99	80 - 120
9560435	102	80 - 120	94	80 - 120	97	80 - 120	99	80 - 120
9560436	106	80 - 120	95	80 - 120	97	80 - 120	97	80 - 120
9560437	105	80 - 120	94	80 - 120	98	80 - 120	98	80 - 120
9560438	104	80 - 120	95	80 - 120	96	80 - 120	98	80 - 120
9560439	107	80 - 120	95	80 - 120	96	80 - 120	99	80 - 120
9560440	104	80 - 120	94	80 - 120	96	80 - 120	98	80 - 120
9560441	106	80 - 120	94	80 - 120	95	80 - 120	99	80 - 120
9560442	104	80 - 120	94	80 - 120	97	80 - 120	98	80 - 120
9560443	104	80 - 120	94	80 - 120	96	80 - 120	99	80 - 120

W181141AA	1,2-Dichloroethane-d4		4-Bromofluorobenzene		Dibromofluoromethane		Toluene-d8	
	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l	Spike Added	50 ug/l
Sample	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits	% Recovery	Limits
VBLKW93	104	80 - 120	94	80 - 120	97	80 - 120	98	80 - 120
LCSW93	107	80 - 120	96	80 - 120	99	80 - 120	100	80 - 120
LCDW93	105	80 - 120	97	80 - 120	99	80 - 120	100	80 - 120
9560431	104	80 - 120	95	80 - 120	98	80 - 120	97	80 - 120

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Quality Control Summary
Matrix Spike/Matrix Spike Duplicate

SDG: AMW17
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

UNSPK: 9560425 MS: 9560426 MSD: 9560427 **Analyte**	Batch: **W181132AA** (Sample number(s): 9560425-9560430, 9560432-9560443)								
	Spike Added ug/l	**Unspiked Conc ug/l**	**MS Conc ug/l**	**MSD Conc ug/l**	**MS %Rec**	**MSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloromethane	20	N.D.	18.2	18.56	91	93	63-120	2	30
Vinyl Chloride	20	N.D.	19.19	18.74	96	94	68-120	2	30
Bromomethane	20	N.D.	19.01	18.87	95	94	58-130	1	30
Chloroethane	20	N.D.	19.25	19.46	96	97	61-123	1	30
1,1-Dichloroethene	20	N.D.	23.8	24.28	119	121	80-131	2	30
Acetone	150	N.D.	92.51	94.72	62	63	54-157	2	30
Carbon Disulfide	20	N.D.	17.9	18.52	89	93	65-128	3	30
Methylene Chloride	20	N.D.	21.39	21.17	107	106	80-120	1	30
trans-1,2-Dichloroethene	20	N.D.	22.18	22.6	111	113	80-120	2	30
1,1-Dichloroethane	20	N.D.	19.82	20.32	99	102	80-120	2	30
2-Butanone	150	N.D.	100.88	101.84	67	68	59-135	1	30
cis-1,2-Dichloroethene	20	N.D.	21.36	22.	107	110	80-120	3	30
Chloroform	20	N.D.	20.31	20.61	102	103	80-120	1	30
1,1,1-Trichloroethane	20	N.D.	21.51	22.08	108	110	67-126	3	30
Carbon Tetrachloride	20	N.D.	20.09	20.43	100	102	64-134	2	30
Benzene	20	N.D.	21.49	21.73	107	109	80-120	1	30
1,2-Dichloroethane	20	N.D.	18.05	19.15	90	96	73-124	6	30
Trichloroethene	20	N.D.	20.78	21.25	104	106	80-120	2	30
1,2-Dichloropropane	20	N.D.	21.	21.6	105	108	80-120	3	30
Bromodichloromethane	20	N.D.	17.74	18.11	89	91	71-120	2	30
cis-1,3-Dichloropropene	20	N.D.	17.71	18.31	89	92	75-120	3	30
4-Methyl-2-pentanone	100	N.D.	101.87	102.64	102	103	62-133	1	30
Toluene	20	N.D.	21.18	21.19	106	106	80-120	0	30
trans-1,3-Dichloropropene	20	N.D.	16.98	16.89	85	84	76-120	1	30
1,1,2-Trichloroethane	20	N.D.	20.28	20.2	101	101	80-120	0	30
Tetrachloroethene	20	N.D.	21.09	20.77	105	104	80-120	1	30
2-Hexanone	100	N.D.	96.14	95.78	96	96	50-141	0	30
Dibromochloromethane	20	N.D.	16.86	16.96	84	85	71-120	1	30
Chlorobenzene	20	N.D.	20.19	20.08	101	100	80-120	1	30
Ethylbenzene	20	N.D.	20.98	20.9	105	104	80-120	0	30
Xylene (Total)	60	N.D.	61.32	61.24	102	102	80-120	0	30
Styrene	20	N.D.	19.4	19.49	97	97	80-120	0	30
Bromoform	20	N.D.	14.06	14.18	70	71	59-120	1	30
1,1,2,2-Tetrachloroethane	20	N.D.	19.94	19.73	100	99	72-120	1	30

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

Results are being reported on an as received basis.

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

SDG: AMW17
Matrix: LIQUID

GC/MS Volatiles
Fraction: Volatiles by GC/MS

LCS: LCSW92	Batch: **W181132AA** (Sample number(s): 9560425-9560430, 9560432-9560443)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloromethane	20	16.47	NA	82	NA	63-120	NA	NA
Vinyl Chloride	20	16.18	NA	81	NA	68-120	NA	NA
Bromomethane	20	17.21	NA	86	NA	58-130	NA	NA
Chloroethane	20	16.93	NA	85	NA	61-123	NA	NA
1,1-Dichloroethene	20	20.57	NA	103	NA	80-131	NA	NA
Acetone	150	85.84	NA	57	NA	54-157	NA	NA
Carbon Disulfide	20	15.28	NA	76	NA	65-128	NA	NA
Methylene Chloride	20	20.83	NA	104	NA	80-120	NA	NA
trans-1,2-Dichloroethene	20	20.16	NA	101	NA	80-120	NA	NA
1,1-Dichloroethane	20	19.62	NA	98	NA	80-120	NA	NA
2-Butanone	150	107.31	NA	72	NA	59-135	NA	NA
cis-1,2-Dichloroethene	20	20.44	NA	102	NA	80-120	NA	NA
Chloroform	20	19.47	NA	97	NA	80-120	NA	NA
1,1,1-Trichloroethane	20	19.39	NA	97	NA	67-126	NA	NA
Carbon Tetrachloride	20	17.27	NA	86	NA	64-134	NA	NA
Benzene	20	20.11	NA	101	NA	80-120	NA	NA
1,2-Dichloroethane	20	18.82	NA	94	NA	73-124	NA	NA
Trichloroethene	20	18.84	NA	94	NA	80-120	NA	NA
1,2-Dichloropropane	20	20.34	NA	102	NA	80-120	NA	NA
Bromodichloromethane	20	17.3	NA	87	NA	71-120	NA	NA
cis-1,3-Dichloropropene	20	17.82	NA	89	NA	75-120	NA	NA
4-Methyl-2-pentanone	100	103.58	NA	104	NA	62-133	NA	NA
Toluene	20	19.38	NA	97	NA	80-120	NA	NA
trans-1,3-Dichloropropene	20	17.18	NA	86	NA	76-120	NA	NA
1,1,2-Trichloroethane	20	19.86	NA	99	NA	80-120	NA	NA
Tetrachloroethene	20	18.44	NA	92	NA	80-120	NA	NA
2-Hexanone	100	98.69	NA	99	NA	50-141	NA	NA
Dibromochloromethane	20	16.74	NA	84	NA	71-120	NA	NA
Chlorobenzene	20	18.92	NA	95	NA	80-120	NA	NA
Ethylbenzene	20	19.48	NA	97	NA	80-120	NA	NA
Xylene (Total)	60	56.39	NA	94	NA	80-120	NA	NA
Styrene	20	18.31	NA	92	NA	80-120	NA	NA
Bromoform	20	14.31	NA	72	NA	59-120	NA	NA
1,1,2,2-Tetrachloroethane	20	19.77	NA	99	NA	72-120	NA	NA

LCS: LCSW93 LCSD: LCDW93	Batch: **W181141AA** (Sample number(s): 9560431)							
Analyte	**Spike Added ug/l**	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloromethane	20	20.58	19.71	103	99	63-120	4	30
Vinyl Chloride	20	20.14	19.62	101	98	68-120	3	30
Bromomethane	20	19.43	19.44	97	97	58-130	0	30

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

SDG: AMW17
Matrix: LIQUID

GC/MS Volatiles

Fraction: Volatiles by GC/MS

LCS: LCSW93 LCSD: LCDW93 **Analyte**	Batch: **W181141AA** (Sample number(s): 9560431)							
	Spike Added ug/l	**LCS Conc ug/l**	**LCSD Conc ug/l**	**LCS %Rec**	**LCSD %Rec**	**%Rec Limits**	**%RPD**	**%RPD Limits**
Chloroethane	20	19.38	19.53	97	98	61-123	1	30
1,1-Dichloroethene	20	21.51	20.54	108	103	80-131	5	30
Acetone	150	128.15	152.41	85	102	54-157	17	30
Carbon Disulfide	20	16.71	17.93	84	90	65-128	7	30
Methylene Chloride	20	20.15	20.17	101	101	80-120	0	30
trans-1,2-Dichloroethene	20	20.63	20.68	103	103	80-120	0	30
1,1-Dichloroethane	20	20.04	20.06	100	100	80-120	0	30
2-Butanone	150	150	147.42	100	98	59-135	2	30
cis-1,2-Dichloroethene	20	20.85	20.82	104	104	80-120	0	30
Chloroform	20	19.67	19.72	98	99	80-120	0	30
1,1,1-Trichloroethane	20	19.81	19.92	99	100	67-126	1	30
Carbon Tetrachloride	20	17.58	17.63	88	88	64-134	0	30
Benzene	20	20.41	20.33	102	102	80-120	0	30
1,2-Dichloroethane	20	19.31	18.85	97	94	73-124	2	30
Trichloroethene	20	19.31	19.35	97	97	80-120	0	30
1,2-Dichloropropane	20	20.48	20.51	102	103	80-120	0	30
Bromodichloromethane	20	17.43	17.56	87	88	71-120	1	30
cis-1,3-Dichloropropene	20	17.68	17.51	88	88	75-120	1	30
4-Methyl-2-pentanone	100	102.61	101.18	103	101	62-133	1	30
Toluene	20	19.68	19.61	98	98	80-120	0	30
trans-1,3-Dichloropropene	20	16.78	16.81	84	84	76-120	0	30
1,1,2-Trichloroethane	20	20.16	20.13	101	101	80-120	0	30
Tetrachloroethene	20	18.89	18.8	94	94	80-120	0	30
2-Hexanone	100	95.62	95.01	96	95	50-141	1	30
Dibromochloromethane	20	16.48	16.44	82	82	71-120	0	30
Chlorobenzene	20	19.08	18.98	95	95	80-120	1	30
Ethylbenzene	20	19.41	19.12	97	96	80-120	2	30
Xylene (Total)	60	56.61	56.26	94	94	80-120	1	30
Styrene	20	18.29	18.03	91	90	80-120	1	30
Bromoform	20	14.33	14.03	72	70	59-120	2	30
1,1,2,2-Tetrachloroethane	20	20.09	19.97	100	100	72-120	1	30

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

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

Lab File ID: wa09t04.d BFB Injection Date: 04/09/18

Instrument ID: HP09137 BFB Injection Time: 10:21

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.49
75	30.0 - 60.0% of mass 95	47.07
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.69
173	Less than 2.0% of mass 174	0.00 (0.00)1
174	Greater than 50.0% of mass 95	79.13
175	5.0 - 9.0% of mass 174	5.85 (7.39)1
176	Greater than 95.0%, but less than 101.0% of mass 174	76.37 (96.52)1
177	5.0 - 9.0% of mass 176	5.07 (6.64)2

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

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD300	wa09i01.d	04/09/18	11:16
02	VSTD100	wa09i02.d	04/09/18	11:39
03	VSTD50	wa09i03.d	04/09/18	12:03
04	VSTD20	wa09i04.d	04/09/18	12:27
05	VSTD10	wa09i05.d	04/09/18	12:51
06	VSTD4	wa09i06.d	04/09/18	13:14
07	VSTD1	wa09i07.d	04/09/18	13:38
08	VSTD0.5	wa09m01.d	04/09/18	14:02
09	LCSWICV	wa09v01.d	04/09/18	14:26

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID: wa23t05.d BFB Injection Date: 04/23/18

Instrument ID: HP09137 BFB Injection Time: 21:36

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	15.25
75	30.0 - 60.0% of mass 95	44.48
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.81
173	Less than 2.0% of mass 174	0.37 (0.44)1
174	Greater than 50.0% of mass 95	84.02
175	5.0 - 9.0% of mass 174	6.01 (7.16)1
176	Greater than 95.0%, but less than 101.0% of mass 174	81.27 (96.73)1
177	5.0 - 9.0% of mass 176	5.47 (6.73)2

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

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wa23c05.d	04/23/18	22:22
02	LCSW92	wa23s31.d	04/23/18	22:46
03	VBLKW92	wa23b05.d	04/23/18	23:10
04	9560434	wa23s32.d	04/23/18	23:44
05	9560443	wa23s33.d	04/24/18	00:08
06	9560425	wa23s34.d	04/24/18	00:31
07	9560426MS	wa23s35.d	04/24/18	00:55
08	9560427MSD	wa23s36.d	04/24/18	01:19
09	9560428	wa23s37.d	04/24/18	01:42
10	9560429	wa23s38.d	04/24/18	02:06
11	9560430	wa23s39.d	04/24/18	02:30
12	9560432	wa23s40.d	04/24/18	02:54
13	9560433	wa23s41.d	04/24/18	03:18
14	9560435	wa23s42.d	04/24/18	03:41
15	9560436	wa23s43.d	04/24/18	04:05
16	9560437	wa23s44.d	04/24/18	04:29
17	9560438	wa23s45.d	04/24/18	04:53
18	9560439	wa23s46.d	04/24/18	05:16
19	9560440	wa23s47.d	04/24/18	05:40
20	9560441	wa23s48.d	04/24/18	06:04
21	9560442	wa23s49.d	04/24/18	06:28

FORM V VOA

5A

VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK

BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID: wa24t01.d BFB Injection Date: 04/24/18

Instrument ID: HP09137 BFB Injection Time: 07:38

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.39
75	30.0 - 60.0% of mass 95	46.01
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.24 (0.31)1
174	Greater than 50.0% of mass 95	77.15
175	5.0 - 9.0% of mass 174	5.47 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.07 (96.00)1
177	5.0 - 9.0% of mass 176	4.95 (6.68)2

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

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
01	VSTD50	wa24c01.d	04/24/18	08:26
02	LCSW30	wa24l03.d	04/24/18	08:50
03	LCSW93	wa24l01.d	04/24/18	08:50
04	LCDW30	wa24l04.d	04/24/18	09:14
05	LCDW93	wa24l02.d	04/24/18	09:14
06	VBLKW30	wa24b02.d	04/24/18	09:37
07	VBLKW93	wa24b01.d	04/24/18	09:37
08	9563069	wa24s01.d	04/24/18	10:18
09	9563070	wa24s02.d	04/24/18	10:42
10	9563077	wa24s03.d	04/24/18	11:06
11	9562967	wa24s04.d	04/24/18	11:29
12	9563063	wa24s05.d	04/24/18	11:53
13	9563064MS	wa24s06.d	04/24/18	12:17
14	9563065MSD	wa24s07.d	04/24/18	12:41
15	9563063DL	wa24s08.d	04/24/18	13:04
16	9563076	wa24s09.d	04/24/18	13:28
17	9563067	wa24s10.d	04/24/18	13:52
18	9563067DL	wa24s11.d	04/24/18	14:15
19	9560431	wa24s12.d	04/24/18	14:39
20	9569395	wa24s14.d	04/24/18	15:03
21	9567535	wa24s13.d	04/24/18	15:27
22	9564029	wa24s15.d	04/24/18	15:51

FORM V VOA

5A
VOLATILE ORGANIC INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID: wa24t01.d BFB Injection Date: 04/24/18

Instrument ID: HP09137 BFB Injection Time: 07:38

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

m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
50	15.0 - 40.0% of mass 95	16.39
75	30.0 - 60.0% of mass 95	46.01
95	Base peak, 100% relative abundance	100.00
96	5.0 - 9.0% of mass 95	6.80
173	Less than 2.0% of mass 174	0.24 (0.31)1
174	Greater than 50.0% of mass 95	77.15
175	5.0 - 9.0% of mass 174	5.47 (7.09)1
176	Greater than 95.0%, but less than 101.0% of mass 174	74.07 (96.00)1
177	5.0 - 9.0% of mass 176	4.95 (6.68)2

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

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

	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
23	9564027	wa24s16.d	04/24/18	16:14
24	9564034	wa24s17.d	04/24/18	16:38
25	9564035MS	wa24s18.d	04/24/18	17:01
26	9564036MSD	wa24s19.d	04/24/18	17:25
27	9564030	wa24s20.d	04/24/18	17:49
28	9564032	wa24s21.d	04/24/18	18:13

FORM V VOA

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date(s): 04/09/18 04/09/18

Heated Purge: (Y/N) Y Calibration Times: 11:16 13:38

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wa09i07.d RRF 4 = wa09i06.d RRF 10= wa09i05.d
RRF 20= wa09i04.d RRF 50= wa09i03.d RRF100= wa09i02.d RRF300= wa09i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	___ RRF	% RSD	CAL. METHOD
Dichlorodifluoromethane	0.2721	0.3103	0.3585	0.3384	0.3365	0.3501	0.3160	0.3260	9	AVG
Chloromethane	#0.3477	0.3398	0.3831	0.3527	0.3455	0.3527	0.3225	0.3492	5	AVG #
1,3-Butadiene	0.3013	0.2713	0.2630	0.2537	0.2387	0.2465	0.2356	0.2586	9	AVG
Vinyl Chloride	*0.2946	0.3450	0.3852	0.3652	0.3652	0.3755	0.3395	0.3529	9	AVG *
Bromomethane	0.2470	0.2582	0.2799	0.2543	0.2548	0.2607	0.2395	0.2564	5	AVG
Chloroethane	0.1962	0.2009	0.2295	0.2148	0.2163	0.2177	0.1993	0.2107	6	AVG
Dichlorofluoromethane	0.5372	0.4774	0.5357	0.4815	0.3677	0.3655	0.3425	0.4439	19	AVG
n-Pentane		0.4702	0.4327	0.4223	0.3934	0.3984	0.3822	0.4165	8	AVG
Trichlorofluoromethane	0.3079	0.3692	0.4240	0.4127	0.4135	0.4275	0.3918	0.3924	11	AVG
Ethanol	0.1668	0.0815	0.1110	0.0769	0.0750	0.0721	0.0619	0.0922	39	2NDDEG
Freon 123a	0.2942	0.3141	0.3012	0.2887	0.2796	0.2809	0.2699	0.2898	5	AVG
Acrolein		1.7852	1.8377	2.1376	2.1133	1.9293	2.3692	2.0287	11	AVG
1,1-Dichloroethene	*0.1995	0.2079	0.2206	0.2298	0.2222	0.2234	0.2263	0.2185	5	AVG *
1,1-Dichloroethene(2)	*0.0919	0.0989	0.1050	0.1068	0.1003	0.1057	0.1020	0.1015	5	AVG *
Acetone	0.9045	0.8275	0.8797	0.8594	0.8285	0.8445	0.8218	0.8523	4	AVG
Freon 113	0.1800	0.2059	0.2216	0.2413	0.2297	0.2369	0.2348	0.2215	10	AVG
2-Propanol	0.6084	0.5964	0.7274	0.4903	0.5168	0.5965		0.5893	14	AVG
Methyl Iodide	0.3764	0.4057	0.4420	0.4433	0.4315	0.4377	0.4339	0.4243	6	AVG
Carbon Disulfide	0.6141	0.6892	0.7451	0.7643	0.7416	0.7639	0.7289	0.7210	7	AVG
Allyl Chloride	0.3425	0.3422	0.3669	0.3641	0.3327	0.3563	0.3367	0.3488	4	AVG
Methyl Acetate	0.2604	0.2981	0.2895	0.2292	0.2291	0.2734	0.2070	0.2552	13	AVG
Methylene Chloride	0.2510	0.2501	0.2602	0.2618	0.2504	0.2529	0.2512	0.2539	2	AVG
t-Butyl alcohol	0.9519	1.1605	1.2596	1.0276	1.0148	1.1852	0.9216	1.0745	12	AVG
Acrylonitrile		0.1315	0.1594	0.1141	0.1192	0.1474	0.1090	0.1301	15	AVG
trans-1,2-Dichloroethene	0.2031	0.2340	0.2481	0.2542	0.2467	0.2528	0.2444	0.2405	7	AVG
Methyl Tertiary Butyl Ether	0.7581	0.8365	0.8593	0.8459	0.8168	0.8527	0.7374	0.8152	6	AVG
n-Hexane	0.2736	0.2625	0.2799	0.2958	0.2814	0.2882	0.2765	0.2797	4	AVG
1,1-Dichloroethane	#0.3594	0.3978	0.4282	0.4269	0.4175	0.4259	0.3999	0.4079	6	AVG #
di-Isopropyl ether	0.7548	0.7574	0.7893	0.7935	0.7563	0.7735	0.7207	0.7637	3	AVG
2-Chloro-1,3-butadiene	0.3125	0.3470	0.3749	0.3784	0.3723	0.3755	0.3629	0.3605	7	AVG
Ethyl t-butyl ether	0.6972	0.7759	0.7953	0.7910	0.7681	0.7837	0.7132	0.7606	5	AVG
cis-1,2-Dichloroethene	0.2327	0.2679	0.2820	0.2875	0.2736	0.2833	0.2726	0.2714	7	AVG
2-Butanone	0.1856	0.1943	0.2162	0.1630	0.1656	0.1999	0.1446	0.1813	14	AVG
2,2-Dichloropropane	0.2034	0.2215	0.2448	0.2433	0.2272	0.2201	0.1829	0.2204	10	AVG
Propionitrile	1.3253	1.2336	1.2664	1.4107	1.4683	1.3002	1.3983	1.3432	6	AVG
Methacrylonitrile	0.1412	0.1568	0.1687	0.1527	0.1471	0.1673	0.1408	0.1535	7	AVG
Bromochloromethane	0.1236	0.1345	0.1484	0.1430	0.1362	0.1449	0.1363	0.1381	6	AVG
Tetrahydrofuran	1.3553	1.1638	1.2922	1.6293	1.5226	1.3732	1.7177	1.4363	14	AVG
Chloroform	*0.3741	0.4111	0.4335	0.4416	0.4220	0.4319	0.4135	0.4182	5	AVG *
1,1,1-Trichloroethane	0.3125	0.3777	0.3947	0.3925	0.3758	0.3846	0.3677	0.3722	8	AVG
Cyclohexane	0.3296	0.3571	0.3808	0.4027	0.3923	0.3996	0.3891	0.3787	7	AVG
Cyclohexane(2)	0.2826	0.3264	0.3966	0.3666	0.3494	0.3619	0.3575	0.3487	10	AVG
Cyclohexane(3)	0.1143	0.1146	0.1223	0.1294	0.1265	0.1286	0.1263	0.1231	5	AVG
1,1-Dichloropropene	0.3007	0.3190	0.3357	0.3540	0.3416	0.3458	0.3348	0.3331	5	AVG
Carbon Tetrachloride	0.2339	0.2533	0.2799	0.2927	0.2989	0.3061	0.3083	0.2819	10	AVG
Isobutyl Alcohol	0.3930	0.3518	0.3748	0.3479	0.3423	0.3680	0.2893	0.3524	9	AVG
Benzene	0.9051	0.9815	1.0498	1.0473	1.0197	1.0304	0.9766	1.0015	5	AVG
1,2-Dichloroethane	0.3585	0.3633	0.3639	0.3524	0.3350	0.3486	0.3226	0.3492	4	AVG
1,2-Dichloroethane(2)	0.0332	0.0309	0.0361	0.0358	0.0352	0.0360	0.0335	0.0344	6	AVG
t-Amyl methyl ether	0.7326	0.7956	0.8455	0.8292	0.7821	0.8232	0.7491	0.7939	5	AVG
n-Heptane		0.2549	0.2397	0.2808	0.2416	0.2386	0.2496	0.2508	6	AVG
n-Butanol	0.3092	0.2993	0.3315	0.3487	0.3528	0.3433	0.3367	0.3316	6	AVG

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

FORM VI VOA

6A
VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date(s): 04/09/18 04/09/18

Heated Purge: (Y/N) Y Calibration Times: 11:16 13:38

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wa09i07.d RRF 4 = wa09i06.d RRF 10= wa09i05.d
RRF 20= wa09i04.d RRF 50= wa09i03.d RRF100= wa09i02.d RRF300= wa09i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	___ RRF	% RSD	CAL. METHOD
Trichloroethene	0.2344	0.2586	0.2763	0.2842	0.2693	0.2745	0.2639	0.2659	6	AVG
Methylcyclohexane	0.3216	0.3447	0.3752	0.3713	0.3478	0.3752	0.3663	0.3575	6	AVG
Methylcyclohexane(2)	0.1321	0.1629	0.1738	0.1827	0.1704	0.1774	0.1767	0.1680	10	AVG
1,2-Dichloropropane	*0.2259	0.2401	0.2641	0.2714	0.2546	0.2670	0.2520	0.2536	6	AVG *
Dibromomethane	0.1489	0.1748	0.1834	0.1771	0.1722	0.1809	0.1665	0.1720	7	AVG
1,4-Dioxane		0.0661	0.0905	0.1007	0.1034	0.0839	0.0989	0.0906	15	AVG
Methyl Methacrylate	0.2667	0.2770	0.2848	0.2750	0.2573	0.2824	0.2533	0.2709	5	AVG
Bromodichloromethane	0.2794	0.3176	0.3354	0.3424	0.3324	0.3428	0.3262	0.3252	7	AVG
2-Nitropropane	0.0849	0.0806	0.1017	0.0852	0.0874	0.1055	0.0848	0.0900	11	AVG
2-Chloroethyl Vinyl Ether	0.1805	0.2041	0.2160	0.2147	0.2093	0.2208	0.2006	0.2066	7	AVG
cis-1,3-Dichloropropene	0.3699	0.4037	0.4475	0.4440	0.4462	0.4576	0.4322	0.4287	7	AVG
4-Methyl-2-pentanone	0.3507	0.3531	0.4305	0.3650	0.3777	0.4067	0.3331	0.3738	9	AVG
Toluene	*0.7925	0.8582	0.8903	0.9307	0.8970	0.8988	0.8794	0.8781	5	AVG *
trans-1,3-Dichloropropene	0.4662	0.4781	0.5323	0.5395	0.5443	0.5583	0.5435	0.5232	7	AVG
Ethyl Methacrylate	0.5565	0.6053	0.6020	0.6251	0.6206	0.6302	0.5996	0.6056	4	AVG
1,1,2-Trichloroethane	0.3044	0.3457	0.3583	0.3535	0.3549	0.3542	0.3450	0.3451	5	AVG
Tetrachloroethene	0.3269	0.3433	0.3664	0.3730	0.3611	0.3660	0.3645	0.3573	5	AVG
1,3-Dichloropropane	0.5132	0.5709	0.5864	0.5977	0.5831	0.5835	0.5586	0.5705	5	AVG
2-Hexanone	0.3457	0.3870	0.4310	0.3823	0.3858	0.4128	0.3536	0.3855	8	AVG
Dibromochloromethane	0.2833	0.3224	0.3502	0.3646	0.3705	0.3855	0.3804	0.3510	10	AVG
1,2-Dibromoethane	0.3282	0.3695	0.3928	0.3905	0.3857	0.3914	0.3736	0.3760	6	AVG
Chlorobenzene	#0.9182	0.9856	1.0133	1.0434	1.0150	1.0310	0.9968	1.0005	4	AVG #
1,1,1,2-Tetrachloroethane	0.2524	0.3006	0.3280	0.3398	0.3393	0.3471	0.3423	0.3214	11	AVG
Ethylbenzene	*1.4855	1.5824	1.6702	1.7176	1.6632	1.6817	1.5723	1.6247	5	AVG *
m+p-Xylene	0.5912	0.6418	0.6766	0.6976	0.6800	0.6953	0.6656	0.6640	6	AVG
o-Xylene	0.5960	0.6353	0.6690	0.6915	0.6759	0.6985	0.6762	0.6632	5	AVG
Styrene	0.9860	1.0769	1.1342	1.1830	1.1701	1.2124	1.1690	1.1331	7	AVG
Bromoform	#0.1851	0.2305	0.2431	0.2556	0.2664	0.2905	0.2920	0.2519	15	AVG #
Isopropylbenzene	1.3829	1.5385	1.6525	1.6711	1.5987	1.6661	1.5335	1.5776	7	AVG
Cyclohexanone	0.4336	0.3580	0.4517	0.4514	0.4695	0.3401		0.4174	13	AVG
Bromobenzene	0.7484	0.8113	0.8319	0.8558	0.8552	0.8293	0.7881	0.8171	5	AVG
1,1,2,2-Tetrachloroethane	#1.0035	1.0868	1.0868	1.0807	1.0821	1.0568	0.9647	1.0516	5	AVG #
1,2,3-Trichloropropane	0.3349	0.3418	0.3354	0.3346	0.3367	0.3303	0.2983	0.3303	4	AVG
trans-1,4-Dichloro-2-butene	0.2479	0.2762	0.3004	0.3046	0.3113	0.3037	0.2795	0.2891	8	AVG
n-Propylbenzene	3.2551	3.4395	3.5998	3.6588	3.5415	3.4171	2.9806	3.4132	7	AVG
2-Chlorotoluene	0.7068	0.7359	0.7766	0.7951	0.7757	0.7573	0.7103	0.7511	5	AVG
4-Chlorotoluene	0.7497	0.7904	0.8178	0.8433	0.8252	0.8190	0.7821	0.8039	4	AVG
1,3,5-Trimethylbenzene	2.2922	2.4850	2.6715	2.6952	2.6124	2.6105	2.3853	2.5360	6	AVG
tert-Butylbenzene	0.5308	0.5241	0.5889	0.5963	0.5668	0.5750	0.5537	0.5622	5	AVG
Pentachloroethane	0.3505	0.4061	0.4335	0.4488	0.4579	0.4719	0.4696	0.4340	10	AVG
1,2,4-Trimethylbenzene	2.4128	2.6677	2.7954	2.8170	2.6910	2.7200	2.4620	2.6523	6	AVG
sec-Butylbenzene	2.6282	2.8698	3.0558	3.0803	2.9168	2.9265	2.6214	2.8712	6	AVG
1,3-Dichlorobenzene	1.5233	1.5350	1.6059	1.5905	1.5395	1.5571	1.4577	1.5441	3	AVG
p-Isopropyltoluene	2.3834	2.5487	2.7380	2.7200	2.5982	2.6656	2.4257	2.5828	5	AVG
1,4-Dichlorobenzene	1.5730	1.6220	1.6677	1.6587	1.5943	1.6186	1.5103	1.6064	3	AVG
1,2,3-Trimethylbenzene	2.5890	2.7329	2.9476	2.8663	2.6933	2.7789	2.5157	2.7320	5	AVG
Benzyl Chloride	1.8017	2.0150	2.1351	2.2379	2.2352	2.3310	2.1301	2.1266	8	AVG
1,3-Diethylbenzene	1.3878	1.5134	1.6463	1.6185	1.5046	1.5988	1.5086	1.5397	6	AVG
1,4-Diethylbenzene	1.4883	1.5790	1.7172	1.6660	1.5258	1.6431	1.5525	1.5960	5	AVG
1,2-Dichlorobenzene	1.4788	1.5453	1.5783	1.5753	1.5292	1.5780	1.4917	1.5395	3	AVG
n-Butylbenzene	1.1546	1.1989	1.2998	1.2686	1.2050	1.2614	1.2085	1.2281	4	AVG
1,2-Diethylbenzene	1.2421	1.3108	1.4012	1.3707	1.2736	1.3642	1.2896	1.3217	4	AVG

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%

6A

VOLATILE ORGANICS INITIAL CALIBRATION DATA

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date(s): 04/09/18 04/09/18

Heated Purge: (Y/N) Y Calibration Times: 11:16 13:38

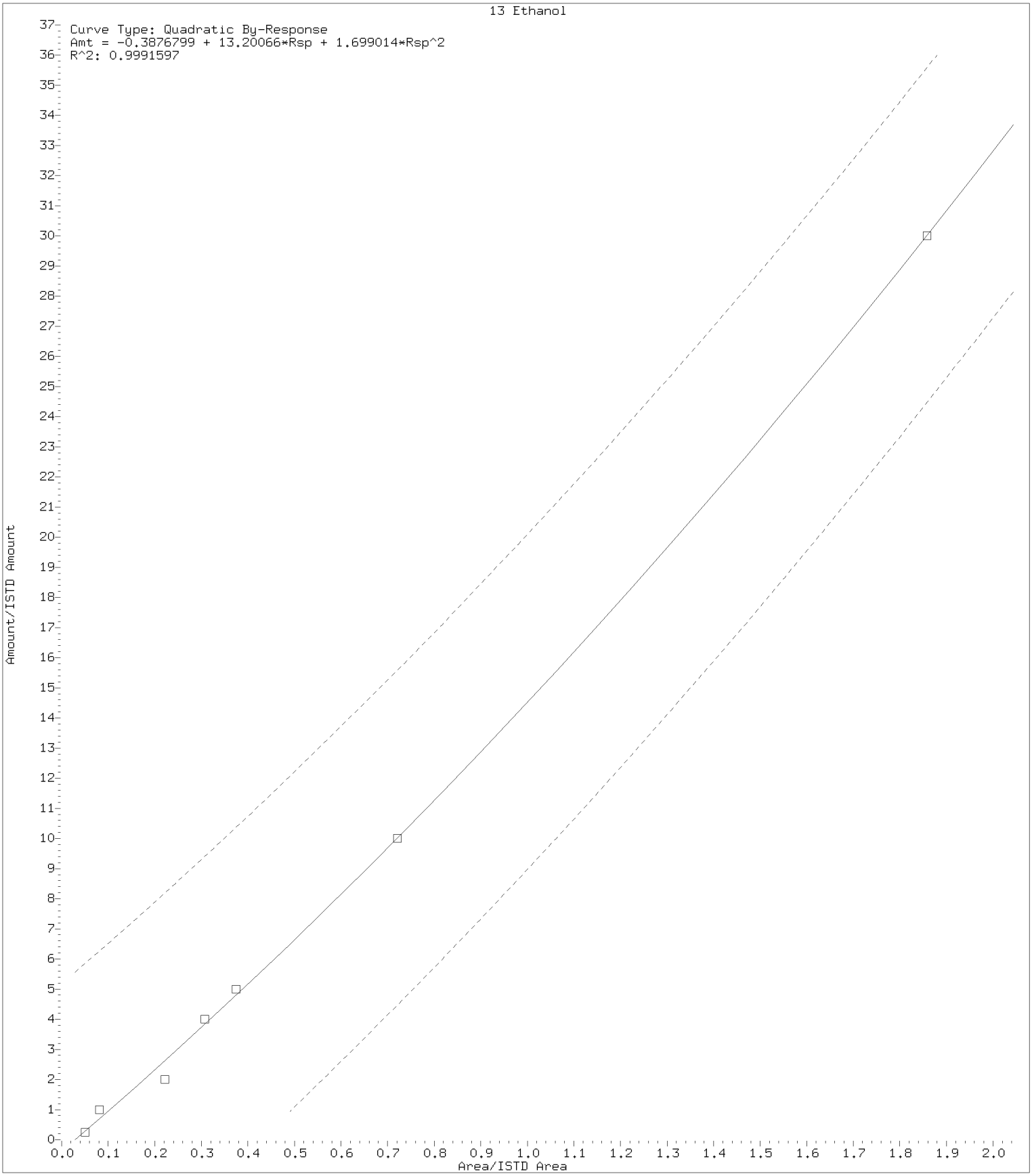
Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

LAB FILE ID: RRF 1 = wa09i07.d RRF 4 = wa09i06.d RRF 10= wa09i05.d
RRF 20= wa09i04.d RRF 50= wa09i03.d RRF100= wa09i02.d RRF300= wa09i01.d

COMPOUND	RRF 1	RRF 4	RRF 10	RRF 20	RRF 50	RRF100	RRF300	___ RRF	% RSD	CAL. METHOD
1,2-Dibromo-3-chloropropane	0.1753	0.2380	0.2387	0.2234	0.2303	0.2458	0.2153	0.2238	11	AVG
1,3,5-Trichlorobenzene	0.9652	0.9762	1.0478	0.9677	0.9486	0.9884	0.9569	0.9787	3	AVG
1,2,4-Trichlorobenzene	0.9213	0.9822	1.0628	0.9460	0.9675	0.9575	0.9501	0.9696	5	AVG
Hexachlorobutadiene	0.2983	0.2935	0.3096	0.2778	0.2771	0.2781	0.2772	0.2874	5	AVG
Naphthalene	3.4810	3.6370	3.8467	3.5039	3.5711	3.5091	3.0799	3.5184	7	AVG
1,2,3-Trichlorobenzene	0.9103	0.9185	1.0052	0.8857	0.9437	0.8784	0.9011	0.9204	5	AVG
2-Methylnaphthalene	1.7683	1.6433	2.0319	1.7497	2.1620	1.7729	1.8344	1.8518	10	AVG
Dibromofluoromethane	0.2245	0.2296	0.2305	0.2276	0.2263	0.2297	0.2272	0.2279	1	AVG
Dibromofluoromethane(2)	0.2294	0.2344	0.2354	0.2359	0.2314	0.2354	0.2321	0.2334	1	AVG
1,2-Dichloroethane-d4	0.0600	0.0624	0.0631	0.0589	0.0574	0.0607	0.0565	0.0598	4	AVG
1,2-Dichloroethane-d4(2)	0.2692	0.2804	0.2806	0.2758	0.2573	0.2663	0.2532	0.2689	4	AVG
1,2-Dichloroethane-d4(3)	0.0383	0.0394	0.0403	0.0382	0.0377	0.0396	0.0378	0.0388	3	AVG
Toluene-d8	1.2723	1.2671	1.2768	1.2866	1.2948	1.2778	1.2984	1.2820	1	AVG
Toluene-d8(2)	0.8394	0.8416	0.8444	0.8534	0.8735	0.8480	0.9476	0.8640	4	AVG
4-Bromofluorobenzene	0.4750	0.4818	0.4849	0.4846	0.4789	0.4921	0.4923	0.4842	1	AVG
4-Bromofluorobenzene(2)	0.3879	0.3905	0.3962	0.3954	0.3889	0.4038	0.4029	0.3951	2	AVG

Average %RSD 7

Minimum RRF for SPCC(#) = 0.10
(0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %RSD for CCC(*) = 30%



Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 14:28.
Target 3.5 esignature user ID: nsl01327

Internal Standard Area and Retention Time Summary

Initial Calibration Standards:

/chem2/HP09137.i/18apr09i.b/wa09i01.d VSTD300
/chem2/HP09137.i/18apr09i.b/wa09i02.d VSTD100
/chem2/HP09137.i/18apr09i.b/wa09i03.d VSTD050
/chem2/HP09137.i/18apr09i.b/wa09i04.d VSTD020
/chem2/HP09137.i/18apr09i.b/wa09i05.d VSTD010
/chem2/HP09137.i/18apr09i.b/wa09i06.d VSTD004
/chem2/HP09137.i/18apr09i.b/wa09i07.d VSTD001

Area Summary

File ID:
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Internal Standard Name	wa09i01.d	wa09i02.d	wa09i03.d	wa09i04.d	wa09i05.d	wa09i06.d	wa09i07.d	Avg. Area	%RSD	In Spec
t-Butyl alcohol-d10	143108	231548	166695	161544	254345	234031	149242	191502	24	Yes
Fluorobenzene	1075258	1063731	1055463	1044137	1023385	1028475	1026790	1045320	2	Yes
Chlorobenzene-d5	808620	825664	801369	808445	794952	799400	800980	805633	1	Yes
1,4-Dichlorobenzene-d4	466022	461030	413797	425782	424932	421063	415394	432574	5	Yes

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

RT Summary

File ID:
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Internal Standard Name	wa09i01.d	wa09i02.d	wa09i03.d	wa09i04.d	wa09i05.d	wa09i06.d	wa09i07.d	Avg. RT
t-Butyl alcohol-d10	2.764	2.786	2.776	2.773	2.780	2.773	2.776	2.776
Fluorobenzene	5.068	5.068	5.068	5.064	5.068	5.068	5.068	5.067
Chlorobenzene-d5	8.193	8.193	8.193	8.193	8.190	8.193	8.193	8.193
1,4-Dichlorobenzene-d4	10.070	10.070	10.070	10.067	10.067	10.070	10.067	10.069

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

Report generated on 04/09/2018 at 14:29.

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 ICV Date: 04/09/18 Time: 14:26

Lab File ID: wa09v01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.3260	0.3033	18.61	20	-7	
#	Chloromethane	0.3492	0.3371	19.31	20	-3	#
	1,3-Butadiene	0.2586	0.2725	21.08	20	5	
*	Vinyl Chloride	0.3529	0.3502	19.85	20	-1	*
	Bromomethane	0.2564	0.2561	19.98	20	0	
	Chloroethane	0.2107	0.2092	19.86	20	-1	
	Dichlorofluoromethane	0.4439	0.5077	22.88	20	14	
	n-Pentane	0.4165	0.4153	19.94	20	0	
	Trichlorofluoromethane	0.3924	0.4060	20.69	20	3	
	Ethanol	0.0922	0.0884	507.52	500	2	
	Freon 123a	0.2898	0.2957	20.41	20	2	
	Acrolein	2.0287	1.8477	136.62	150	-9	
*	1,1-Dichloroethene	0.2185	0.2433	22.27	20	11	*
	Acetone	0.8523	0.7973	140.32	150	-6	
	Freon 113	0.2215	0.2363	21.35	20	7	
	2-Propanol	0.5893	0.4763	121.22	150	-19	
	Methyl Iodide	0.4243	0.4253	20.04	20	0	
	Carbon Disulfide	0.7210	0.7354	20.40	20	2	
	Allyl Chloride	0.3488	0.3615	20.73	20	4	
	Methyl Acetate	0.2552	0.2202	17.26	20	-14	
	Methylene Chloride	0.2539	0.2569	20.24	20	1	
	t-Butyl alcohol	1.0745	1.0496	195.38	200	-2	
	Acrylonitrile	0.1301	0.1044	80.24	100	-20	
	trans-1,2-Dichloroethene	0.2405	0.2623	21.81	20	9	
	Methyl Tertiary Butyl Ether	0.8152	0.7930	19.45	20	-3	
	n-Hexane	0.2797	0.2740	19.59	20	-2	
#	1,1-Dichloroethane	0.4079	0.4283	21.00	20	5	#
	di-Isopropyl ether	0.7637	0.7513	19.68	20	-2	
	2-Chloro-1,3-butadiene	0.3605	0.3669	20.36	20	2	
	Ethyl t-butyl ether	0.7606	0.7336	19.29	20	-4	
	cis-1,2-Dichloroethene	0.2714	0.2959	21.81	20	9	
	2-Butanone	0.1813	0.1574	130.24	150	-13	
	2,2-Dichloropropane	0.2204	0.2372	21.52	20	8	
	Propionitrile	1.3432	1.4061	157.02	150	5	
	Methacrylonitrile	0.1535	0.1478	144.44	150	-4	
	Bromochloromethane	0.1381	0.1402	20.30	20	1	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

page 1 of 3 FORM VII VOA

INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 ICV Date: 04/09/18 Time: 14:26

Lab File ID: wa09v01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.4363	1.4872	103.54	100	4
* Chloroform	0.4182	0.4320	20.66	20	3 *
1,1,1-Trichloroethane	0.3722	0.3816	20.50	20	3
Cyclohexane	0.3787	0.3858	20.37	20	2
1,1-Dichloropropene	0.3331	0.3442	20.67	20	3
Carbon Tetrachloride	0.2819	0.2935	20.83	20	4
Isobutyl Alcohol	0.3524	0.3290	466.69	500	-7
Benzene	1.0015	1.0435	20.84	20	4
1,2-Dichloroethane	0.3492	0.3427	19.63	20	-2
t-Amyl methyl ether	0.7939	0.7697	19.39	20	-3
n-Heptane	0.2508	0.2487	19.83	20	-1
n-Butanol	0.3316	0.3430	1034.34	1000	3
Trichloroethene	0.2659	0.2725	20.50	20	3
Methylcyclohexane	0.3575	0.3664	20.50	20	3
* 1,2-Dichloropropane	0.2536	0.2686	21.19	20	6 *
Dibromomethane	0.1720	0.1752	20.38	20	2
1,4-Dioxane	0.0906	0.1028	567.17	500	13
Methyl Methacrylate	0.2709	0.2565	18.94	20	-5
Bromodichloromethane	0.3252	0.3306	20.34	20	2
2-Nitropropane	0.0900	0.0768	17.06	20	-15
2-Chloroethyl Vinyl Ether	0.2066	0.1999	19.36	20	-3
cis-1,3-Dichloropropene	0.4287	0.4361	20.34	20	2
4-Methyl-2-pentanone	0.3738	0.3557	95.15	100	-5
* Toluene	0.8781	0.9109	20.75	20	4 *
trans-1,3-Dichloropropene	0.5232	0.5223	19.97	20	0
Ethyl Methacrylate	0.6056	0.5814	19.20	20	-4
1,1,2-Trichloroethane	0.3451	0.3576	20.72	20	4
Tetrachloroethene	0.3573	0.3737	20.92	20	5
1,3-Dichloropropane	0.5705	0.5843	20.48	20	2
2-Hexanone	0.3855	0.3592	93.18	100	-7
Dibromochloromethane	0.3510	0.3549	20.22	20	1
1,2-Dibromoethane	0.3760	0.3849	20.48	20	2
# Chlorobenzene	1.0005	1.0275	20.54	20	3 #
1,1,1,2-Tetrachloroethane	0.3214	0.3273	20.37	20	2
* Ethylbenzene	1.6247	1.6996	20.92	20	5 *
m+p-Xylene	0.6640	0.6900	41.56	40	4

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

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INITIAL CALIBRATION VERIFICATION

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 ICV Date: 04/09/18 Time: 14:26

Lab File ID: wa09v01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	$\overline{RRF}$	RRF	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	o-Xylene	0.6632	0.6787	20.47	20	2	
	Styrene	1.1331	1.1807	20.84	20	4	
#	Bromoform	0.2519	0.2422	19.23	20	-4	#
	Isopropylbenzene	1.5776	1.6454	20.86	20	4	
	Cyclohexanone	0.4174	0.3879	464.62	500	-7	
	Bromobenzene	0.8171	0.8570	20.98	20	5	
#	1,1,2,2-Tetrachloroethane	1.0516	1.0712	20.37	20	2	#
	1,2,3-Trichloropropane	0.3303	0.3433	20.79	20	4	
	trans-1,4-Dichloro-2-butene	0.2891	0.3129	108.25	100	8	
	n-Propylbenzene	3.4132	3.6261	21.25	20	6	
	2-Chlorotoluene	0.7511	0.7862	20.94	20	5	
	4-Chlorotoluene	0.8039	0.8313	20.68	20	3	
	1,3,5-Trimethylbenzene	2.5360	2.6415	20.83	20	4	
	tert-Butylbenzene	0.5622	0.5747	20.44	20	2	
	Pentachloroethane	0.4340	0.4379	20.18	20	1	
	1,2,4-Trimethylbenzene	2.6523	2.7451	20.70	20	3	
	sec-Butylbenzene	2.8712	3.0065	20.94	20	5	
	1,3-Dichlorobenzene	1.5441	1.5543	20.13	20	1	
	p-Isopropyltoluene	2.5828	2.6854	20.79	20	4	
	1,4-Dichlorobenzene	1.6064	1.6416	20.44	20	2	
	1,2,3-Trimethylbenzene	2.7320	2.8338	20.75	20	4	
	Benzyl Chloride	2.1266	2.0832	19.59	20	-2	
	1,3-Diethylbenzene	1.5397	1.5419	20.03	20	0	
	1,4-Diethylbenzene	1.5960	1.5906	19.93	20	0	
	1,2-Dichlorobenzene	1.5395	1.5606	20.27	20	1	
	n-Butylbenzene	1.2281	1.2067	19.65	20	-2	
	1,2-Diethylbenzene	1.3217	1.3084	19.80	20	-1	
	1,2-Dibromo-3-chloropropane	0.2238	0.2153	19.24	20	-4	
	1,3,5-Trichlorobenzene	0.9787	0.9364	19.14	20	-4	
	1,2,4-Trichlorobenzene	0.9696	0.8890	18.34	20	-8	
	Hexachlorobutadiene	0.2874	0.2567	17.87	20	-11	
	Naphthalene	3.5184	3.2938	18.72	20	-6	
	1,2,3-Trichlorobenzene	0.9204	0.8355	18.16	20	-9	
	2-Methylnaphthalene	1.8518	1.4693	15.87	20	-21	

Average %Drift 5

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

page 3 of 3 FORM VII VOA

Lancaster Laboratories
Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/18apr09i.b/wa09i07.d
/chem2/HP09137.i/18apr09i.b/wa09i06.d
/chem2/HP09137.i/18apr09i.b/wa09i05.d
/chem2/HP09137.i/18apr09i.b/wa09i04.d
/chem2/HP09137.i/18apr09i.b/wa09i03.d
/chem2/HP09137.i/18apr09i.b/wa09i02.d
/chem2/HP09137.i/18apr09i.b/wa09i01.d

File /chem2/HP09137.i/18apr09i.b/wa09i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/18apr23b.b/wa23c05.d

RT Summary

Internal Standard Name	File ID: wa23c05.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.763	2.776	Yes
Fluorobenzene	5.067	5.068	Yes
Chlorobenzene-d5	8.193	8.193	Yes
1,4-Dichlorobenzene-d4	10.070	10.070	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

Internal Standard Name	File ID: wa23c05.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	132480	166695	83348	333390	Yes
Fluorobenzene	889036	1055463	527732	2110926	Yes
Chlorobenzene-d5	694966	801369	400684	1602738	Yes
1,4-Dichlorobenzene-d4	350308	413797	206898	827594	Yes

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

Comments: _____

report generated on 04/23/2018 at 22:43

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/23/18 Time: 22:22

Lab File ID: wa23c05.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.3260	0.2696	41.35	50	-17	
#	Chloromethane	0.3492	0.3370	48.26	50	-3	#
	1,3-Butadiene	0.2586	0.2106	40.73	50	-19	
*	Vinyl Chloride	0.3529	0.3311	46.91	50	-6	*
	Bromomethane	0.2564	0.2328	45.40	50	-9	
	Chloroethane	0.2107	0.1987	47.16	50	-6	
	n-Pentane	0.4165	0.3359	40.32	50	-19	
	Trichlorofluoromethane	0.3924	0.3379	43.05	50	-14	
	Ethanol	0.0922	0.0694	1102.05	1250	-12	
	Freon 123a	0.2898	0.2570	44.34	50	-11	
	Acrolein	2.0287	2.1420	527.92	500	6	
*	1,1-Dichloroethene	0.2185	0.2158	49.37	50	-1	*
*	1,1-Dichloroethene(2)	0.1015	0.0997	49.10	50	-2	*
	Acetone	0.8523	0.8658	101.59	100	2	
	Freon 113	0.2215	0.1974	44.57	50	-11	
	2-Propanol	0.5893	0.4579	194.24	250	-22	
	Methyl Iodide	0.4243	0.4186	49.32	50	-1	
	Carbon Disulfide	0.7210	0.6042	41.90	50	-16	
	Allyl Chloride	0.3488	0.3260	46.74	50	-7	
	Methyl Acetate	0.2552	0.2358	46.19	50	-8	
	Methylene Chloride	0.2539	0.2618	51.55	50	3	
	t-Butyl alcohol	1.0745	0.9623	223.89	250	-10	
	Acrylonitrile	0.1301	0.1178	45.27	50	-9	
	trans-1,2-Dichloroethene	0.2405	0.2425	50.42	50	1	
	Methyl Tertiary Butyl Ether	0.8152	0.7821	47.97	50	-4	
	n-Hexane	0.2797	0.2395	42.82	50	-14	
#	1,1-Dichloroethane	0.4079	0.4121	50.51	50	1	#
	di-Isopropyl ether	0.7637	0.7430	48.65	50	-3	
	2-Chloro-1,3-butadiene	0.3605	0.3455	47.92	50	-4	
	Ethyl t-butyl ether	0.7606	0.7349	48.31	50	-3	
	cis-1,2-Dichloroethene	0.2714	0.2751	50.69	50	1	
	2-Butanone	0.1813	0.1477	81.47	100	-19	
	2,2-Dichloropropane	0.2204	0.2309	52.37	50	5	
	Propionitrile	1.3432	1.7210	320.31	250	28	
	Methacrylonitrile	0.1535	0.1592	129.61	125	4	
	Bromochloromethane	0.1381	0.1409	51.01	50	2	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/23/18 Time: 22:22

Lab File ID: wa23c05.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
Tetrahydrofuran	1.4363	1.4997	104.41	100	4
* Chloroform	0.4182	0.4117	49.21	50	-2 *
1,1,1-Trichloroethane	0.3722	0.3545	47.62	50	-5
Cyclohexane	0.3787	0.3397	44.84	50	-10
Cyclohexane(2)	0.3487	0.3020	43.30	50	-13
Cyclohexane(3)	0.1231	0.1082	43.94	50	-12
1,1-Dichloropropene	0.3331	0.3257	48.90	50	-2
Carbon Tetrachloride	0.2819	0.2637	46.78	50	-6
Isobutyl Alcohol	0.3524	0.4155	736.79	625	18
Benzene	1.0015	1.0077	50.31	50	1
1,2-Dichloroethane	0.3492	0.3350	47.96	50	-4
1,2-Dichloroethane(2)	0.0344	0.0344	49.97	50	0
t-Amyl methyl ether	0.7939	0.7404	46.63	50	-7
n-Heptane	0.2508	0.2270	45.25	50	-9
n-Butanol	0.3316	0.3656	1378.12	1250	10
Trichloroethene	0.2659	0.2587	48.65	50	-3
Methylcyclohexane	0.3575	0.3278	45.86	50	-8
Methylcyclohexane(2)	0.1680	0.1555	46.29	50	-7
* 1,2-Dichloropropane	0.2536	0.2550	50.27	50	1 *
Dibromomethane	0.1720	0.1731	50.34	50	1
1,4-Dioxane	0.0906	0.1255	865.93	625	39
Methyl Methacrylate	0.2709	0.2738	50.52	50	1
Bromodichloromethane	0.3252	0.3056	46.99	50	-6
2-Nitropropane	0.0900	0.0596	66.23	100	-34
2-Chloroethyl Vinyl Ether	0.2066	0.2010	48.65	50	-3
cis-1,3-Dichloropropene	0.4287	0.4154	48.45	50	-3
4-Methyl-2-pentanone	0.3738	0.3181	85.10	100	-15
* Toluene	0.8781	0.8549	48.68	50	-3 *
trans-1,3-Dichloropropene	0.5232	0.4858	46.42	50	-7
Ethyl Methacrylate	0.6056	0.5994	49.49	50	-1
1,1,2-Trichloroethane	0.3451	0.3512	50.87	50	2
Tetrachloroethene	0.3573	0.3355	46.94	50	-6
1,3-Dichloropropane	0.5705	0.5773	50.59	50	1
2-Hexanone	0.3855	0.2981	77.34	100	-23
Dibromochloromethane	0.3510	0.3361	47.88	50	-4
1,2-Dibromoethane	0.3760	0.3806	50.61	50	1

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/23/18 Time: 22:22

Lab File ID: wa23c05.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
#	Chlorobenzene	1.0005	0.9719	48.57	50	-3	#
	1,1,1,2-Tetrachloroethane	0.3214	0.3063	47.66	50	-5	
*	Ethylbenzene	1.6247	1.5921	49.00	50	-2	*
	m+p-Xylene	0.6640	0.6437	96.95	100	-3	
	o-Xylene	0.6632	0.6448	48.61	50	-3	
	Styrene	1.1331	1.1005	48.56	50	-3	
#	Bromoform	0.2519	0.2320	46.05	50	-8	#
	Isopropylbenzene	1.5776	1.4789	46.87	50	-6	
	Cyclohexanone	0.4174	0.4108	615.18	625	-2	
	Bromobenzene	0.8171	0.8311	50.85	50	2	
#	1,1,2,2-Tetrachloroethane	1.0516	1.1749	55.86	50	12	#
	1,2,3-Trichloropropane	0.3303	0.3597	54.45	50	9	
	trans-1,4-Dichloro-2-butene	0.2891	0.3157	136.52	125	9	
	n-Propylbenzene	3.4132	3.3708	49.38	50	-1	
	2-Chlorotoluene	0.7511	0.7409	49.32	50	-1	
	4-Chlorotoluene	0.8039	0.7976	49.61	50	-1	
	1,3,5-Trimethylbenzene	2.5360	2.4411	48.13	50	-4	
	tert-Butylbenzene	0.5622	0.5400	48.02	50	-4	
	Pentachloroethane	0.4340	0.4556	52.49	50	5	
	1,2,4-Trimethylbenzene	2.6523	2.5632	48.32	50	-3	
	sec-Butylbenzene	2.8712	2.6567	46.26	50	-7	
	1,3-Dichlorobenzene	1.5441	1.4849	48.08	50	-4	
	p-Isopropyltoluene	2.5828	2.3950	46.36	50	-7	
	1,4-Dichlorobenzene	1.6064	1.5587	48.52	50	-3	
	1,2,3-Trimethylbenzene	2.7320	2.9264	53.56	50	7	
	Benzyl Chloride	2.1266	1.9784	46.52	50	-7	
	1,3-Diethylbenzene	1.5397	1.5259	49.55	50	-1	
	1,4-Diethylbenzene	1.5960	1.5900	49.81	50	0	
	1,2-Dichlorobenzene	1.5395	1.5105	49.06	50	-2	
	n-Butylbenzene	1.2281	1.0990	44.74	50	-11	
	1,2-Diethylbenzene	1.3217	1.3225	50.03	50	0	
	1,2-Dibromo-3-chloropropane	0.2238	0.2310	51.61	50	3	
	1,3,5-Trichlorobenzene	0.9787	0.8282	42.31	50	-15	
	1,2,4-Trichlorobenzene	0.9696	0.8149	42.02	50	-16	
	Hexachlorobutadiene	0.2874	0.2224	38.69	50	-23	
	Naphthalene	3.5184	3.4238	48.66	50	-3	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/23/18 Time: 22:22

Lab File ID: wa23c05.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
1,2,3-Trichlorobenzene	0.9204	0.7785	42.29	50	-15
2-Methylnaphthalene	1.8518	1.6409	44.31	50	-11
Dibromofluoromethane	0.2279	0.2265	49.68	50	-1
Dibromofluoromethane(2)	0.2334	0.2335	50.01	50	0
1,2-Dichloroethane-d4	0.0598	0.0600	50.13	50	0
1,2-Dichloroethane-d4(2)	0.2689	0.2612	48.55	50	-3
1,2-Dichloroethane-d4(3)	0.0388	0.0392	50.53	50	1
Toluene-d8	1.2820	1.2660	49.38	50	-1
Toluene-d8(2)	0.8640	0.8550	49.48	50	-1
4-Bromofluorobenzene	0.4842	0.4743	48.97	50	-2
4-Bromofluorobenzene(2)	0.3951	0.3807	48.18	50	-4

Average %Drift 7

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

Lancaster Laboratories

Continuing Calibration Internal Standard Check

Initial Calibration Standards:

/chem2/HP09137.i/18apr09i.b/wa09i07.d
/chem2/HP09137.i/18apr09i.b/wa09i06.d
/chem2/HP09137.i/18apr09i.b/wa09i05.d
/chem2/HP09137.i/18apr09i.b/wa09i04.d
/chem2/HP09137.i/18apr09i.b/wa09i03.d
/chem2/HP09137.i/18apr09i.b/wa09i02.d
/chem2/HP09137.i/18apr09i.b/wa09i01.d

File /chem2/HP09137.i/18apr09i.b/wa09i03.d is Mid Level Calibration Standard used for comparison.

Current Continuing Calibration Standard:

/chem2/HP09137.i/18apr24a.b/wa24c01.d

RT Summary

File ID:

Internal Standard Name	wa24c01.d	ICAL RT	In Spec
t-Butyl alcohol-d10	2.763	2.776	Yes
Fluorobenzene	5.067	5.068	Yes
Chlorobenzene-d5	8.193	8.193	Yes
1,4-Dichlorobenzene-d4	10.070	10.070	Yes

A "No" indicates the retention time is greater than 10 seconds from the referenced ICAL standard.

Area Summary

File ID:

Internal Standard Name	wa24c01.d	ICAL Area	Low Limit	High Limit	In Spec
t-Butyl alcohol-d10	146116	166695	83348	333390	Yes
Fluorobenzene	882355	1055463	527732	2110926	Yes
Chlorobenzene-d5	685679	801369	400684	1602738	Yes
1,4-Dichlorobenzene-d4	346158	413797	206898	827594	Yes

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

Comments: _____

report generated on 04/24/2018 at 11:22

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/24/18 Time: 08:26

Lab File ID: wa24c01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	Dichlorodifluoromethane	0.3260	0.3368	51.67	50	3	
#	Chloromethane	0.3492	0.3678	52.67	50	5	#
*	Vinyl Chloride	0.3529	0.3638	51.55	50	3	*
	Bromomethane	0.2564	0.2530	49.35	50	-1	
	Chloroethane	0.2107	0.2185	51.87	50	4	
	n-Pentane	0.4165	0.3988	47.87	50	-4	
	Trichlorofluoromethane	0.3924	0.4061	51.74	50	3	
	Ethanol	0.0922	0.0610	952.22	1250	-24	
	Freon 123a	0.2898	0.2783	48.01	50	-4	
	Acrolein	2.0287	2.1793	537.12	500	7	
*	1,1-Dichloroethene	0.2185	0.2158	49.37	50	-1	*
*	1,1-Dichloroethene(2)	0.1015	0.1014	49.93	50	0	*
	Acetone	0.8523	0.8313	97.54	100	-2	
	Freon 113	0.2215	0.2385	53.84	50	8	
	2-Propanol	0.5893	0.3352	142.22	250	-43	
	Methyl Iodide	0.4243	0.4275	50.37	50	1	
	Carbon Disulfide	0.7210	0.6760	46.88	50	-6	
	Allyl Chloride	0.3488	0.3323	47.63	50	-5	
	Methyl Acetate	0.2552	0.2529	49.55	50	-1	
	Methylene Chloride	0.2539	0.2541	50.04	50	0	
	t-Butyl alcohol	1.0745	0.7567	176.06	250	-30	
	Acrylonitrile	0.1301	0.1397	53.70	50	7	
	trans-1,2-Dichloroethene	0.2405	0.2490	51.77	50	4	
	Methyl Tertiary Butyl Ether	0.8152	0.7904	48.48	50	-3	
	n-Hexane	0.2797	0.2798	50.02	50	0	
#	1,1-Dichloroethane	0.4079	0.4185	51.29	50	3	#
	di-Isopropyl ether	0.7637	0.7580	49.63	50	-1	
	2-Chloro-1,3-butadiene	0.3605	0.3596	49.88	50	0	
	Ethyl t-butyl ether	0.7606	0.7275	47.83	50	-4	
	cis-1,2-Dichloroethene	0.2714	0.2825	52.06	50	4	
	2-Butanone	0.1813	0.1756	96.85	100	-3	
	2,2-Dichloropropane	0.2204	0.2397	54.37	50	9	
	Propionitrile	1.3432	1.5868	295.34	250	18	
	Methacrylonitrile	0.1535	0.1654	134.69	125	8	
	Bromochloromethane	0.1381	0.1446	52.35	50	5	
	Tetrahydrofuran	1.4363	1.6509	114.94	100	15	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/24/18 Time: 08:26

Lab File ID: wa24c01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
*	Chloroform	0.4182	0.4206	50.28	50	1	*
	1,1,1-Trichloroethane	0.3722	0.3624	48.68	50	-3	
	Cyclohexane	0.3787	0.3964	52.33	50	5	
	Cyclohexane(2)	0.3487	0.3544	50.82	50	2	
	Cyclohexane(3)	0.1231	0.1234	50.11	50	0	
	1,1-Dichloropropene	0.3331	0.3386	50.83	50	2	
	Carbon Tetrachloride	0.2819	0.2692	47.75	50	-4	
	Isobutyl Alcohol	0.3524	0.3224	571.74	625	-9	
	Benzene	1.0015	1.0375	51.80	50	4	
	1,2-Dichloroethane	0.3492	0.3454	49.46	50	-1	
	1,2-Dichloroethane(2)	0.0344	0.0346	50.32	50	1	
	t-Amyl methyl ether	0.7939	0.7429	46.79	50	-6	
	n-Heptane	0.2508	0.2482	49.47	50	-1	
	n-Butanol	0.3316	0.3046	1148.23	1250	-8	
	Trichloroethene	0.2659	0.2670	50.21	50	0	
	Methylcyclohexane	0.3575	0.3795	53.08	50	6	
	Methylcyclohexane(2)	0.1680	0.1779	52.95	50	6	
*	1,2-Dichloropropane	0.2536	0.2658	52.41	50	5	*
	Dibromomethane	0.1720	0.1743	50.67	50	1	
	1,4-Dioxane	0.0906	0.1142	788.09	625	26	
	Methyl Methacrylate	0.2709	0.2716	50.12	50	0	
	Bromodichloromethane	0.3252	0.3145	48.36	50	-3	
	2-Nitropropane	0.0900	0.0685	76.10	100	-24	
	2-Chloroethyl Vinyl Ether	0.2066	0.2089	50.57	50	1	
	cis-1,3-Dichloropropene	0.4287	0.4213	49.13	50	-2	
	4-Methyl-2-pentanone	0.3738	0.4059	108.59	100	9	
*	Toluene	0.8781	0.8844	50.35	50	1	*
	trans-1,3-Dichloropropene	0.5232	0.4878	46.62	50	-7	
	Ethyl Methacrylate	0.6056	0.5918	48.86	50	-2	
	1,1,2-Trichloroethane	0.3451	0.3581	51.87	50	4	
	Tetrachloroethene	0.3573	0.3484	48.76	50	-2	
	1,3-Dichloropropane	0.5705	0.5887	51.59	50	3	
	2-Hexanone	0.3855	0.3922	101.76	100	2	
	Dibromochloromethane	0.3510	0.3260	46.44	50	-7	
	1,2-Dibromoethane	0.3760	0.3807	50.63	50	1	
#	Chlorobenzene	1.0005	0.9968	49.81	50	0	#

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/24/18 Time: 08:26

Lab File ID: wa24c01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

	COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT	
	1,1,1,2-Tetrachloroethane	0.3214	0.3076	47.85	50	-4	
*	Ethylbenzene	1.6247	1.6369	50.38	50	1	*
	m+p-Xylene	0.6640	0.6608	99.52	100	0	
	o-Xylene	0.6632	0.6518	49.14	50	-2	
	Styrene	1.1331	1.1049	48.75	50	-2	
#	Bromoform	0.2519	0.2176	43.19	50	-14	#
	Isopropylbenzene	1.5776	1.5082	47.80	50	-4	
	Cyclohexanone	0.4174	0.3697	553.50	625	-11	
	Bromobenzene	0.8171	0.8365	51.18	50	2	
#	1,1,2,2-Tetrachloroethane	1.0516	1.1091	52.73	50	5	#
	1,2,3-Trichloropropane	0.3303	0.3464	52.44	50	5	
	trans-1,4-Dichloro-2-butene	0.2891	0.2893	125.08	125	0	
	n-Propylbenzene	3.4132	3.4133	50.00	50	0	
	2-Chlorotoluene	0.7511	0.7491	49.87	50	0	
	4-Chlorotoluene	0.8039	0.7988	49.68	50	-1	
	1,3,5-Trimethylbenzene	2.5360	2.4746	48.79	50	-2	
	tert-Butylbenzene	0.5622	0.5352	47.59	50	-5	
	Pentachloroethane	0.4340	0.4166	47.99	50	-4	
	1,2,4-Trimethylbenzene	2.6523	2.5740	48.53	50	-3	
	sec-Butylbenzene	2.8712	2.6857	46.77	50	-6	
	1,3-Dichlorobenzene	1.5441	1.4961	48.44	50	-3	
	p-Isopropyltoluene	2.5828	2.3558	45.61	50	-9	
	1,4-Dichlorobenzene	1.6064	1.5544	48.38	50	-3	
	1,2,3-Trimethylbenzene	2.7320	2.7363	50.08	50	0	
	Benzyl Chloride	2.1266	1.8693	43.95	50	-12	
	1,3-Diethylbenzene	1.5397	1.4161	45.99	50	-8	
	1,4-Diethylbenzene	1.5960	1.4702	46.06	50	-8	
	1,2-Dichlorobenzene	1.5395	1.5038	48.84	50	-2	
	n-Butylbenzene	1.2281	1.0818	44.04	50	-12	
	1,2-Diethylbenzene	1.3217	1.2220	46.23	50	-8	
	1,2-Dibromo-3-chloropropane	0.2238	0.2195	49.05	50	-2	
	1,3,5-Trichlorobenzene	0.9787	0.8074	41.25	50	-18	
	1,2,4-Trichlorobenzene	0.9696	0.7826	40.36	50	-19	
	Hexachlorobutadiene	0.2874	0.2119	36.87	50	-26	
	Naphthalene	3.5184	3.2966	46.85	50	-6	
	1,2,3-Trichlorobenzene	0.9204	0.7475	40.61	50	-19	

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

7A

VOLATILE CONTINUING CALIBRATION CHECK

Lab Name: Lancaster Laboratories Contract:_____

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

Instrument ID: HP09137 Calibration Date: 04/24/18 Time: 08:26

Lab File ID: wa24c01.d Init. Calib. Date(s): 04/09/18 04/09/18

Matrix: (soil/water) WATER Level: (low/med) LOW GC Column: DB-624 ID: .18

COMPOUND	RRF	RRF50	ACTUAL CONC.	TRUE CONC.	% DRIFT
2-Methylnaphthalene	1.8518	1.4532	39.24	50	-22
Dibromofluoromethane	0.2279	0.2227	48.86	50	-2
Dibromofluoromethane(2)	0.2334	0.2275	48.74	50	-3
1,2-Dichloroethane-d4	0.0598	0.0591	49.37	50	-1
1,2-Dichloroethane-d4(2)	0.2689	0.2584	48.03	50	-4
1,2-Dichloroethane-d4(3)	0.0388	0.0388	50.03	50	0
Toluene-d8	1.2820	1.2849	50.11	50	0
Toluene-d8(2)	0.8640	0.8554	49.50	50	-1
4-Bromofluorobenzene	0.4842	0.4719	48.73	50	-3
4-Bromofluorobenzene(2)	0.3951	0.3836	48.54	50	-3

Average %Drift 6

Minimum RRF for SPCC(#)=0.10 (0.30 for Chlorobenzene, 1,1,2,2-Tetrachloroethane)
Maximum %Drift for CCC(*)=20%

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID (Standard): wa23c05.d Date Analyzed: 04/23/18

Instrument ID: HP09137 Time Analyzed: 22:22

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

	IS1(TBA) AREA #	RT #	IS2(FBZ) AREA #	RT #	IS3(CBZ) AREA #	RT #	IS4(DCB) AREA #	RT #
12 HOUR STD	132480	2.763	889036	5.067	694966	8.193	350308	10.070
UPPER LIMIT	264960	3.263	1778072	5.567	1389932	8.693	700616	10.570
LOWER LIMIT	66240	2.263	444518	4.567	347483	7.693	175154	9.570
LAB SAMPLE ID								
01 LCSW92	173185	2.766	908534	5.067	703250	8.193	361999	10.070
02 VBLKW92	151377	2.767	901332	5.071	701577	8.193	342162	10.067
03 9560434	179423	2.789	894537	5.071	698143	8.196	350135	10.070
04 9560443	158225	2.770	891557	5.067	694713	8.193	341927	10.070
05 9560425	157727	2.782	881858	5.067	693433	8.193	342583	10.070
06 9560426MS	160247	2.786	902441	5.067	690348	8.193	351391	10.070
07 9560427MSD	164664	2.763	901165	5.067	702681	8.193	360809	10.070
08 9560428	168227	2.766	896192	5.067	699352	8.193	345913	10.070
09 9560429	168997	2.770	888261	5.070	702156	8.193	346982	10.070
10 9560430	156490	2.763	885134	5.067	693849	8.193	340813	10.070
11 9560432	157816	2.773	878354	5.067	688374	8.193	346770	10.070
12 9560433	175398	2.776	874439	5.067	682214	8.193	339756	10.070
13 9560435	172162	2.763	873677	5.067	682975	8.193	339584	10.070
14 9560436	187401	2.766	871198	5.067	691269	8.193	342747	10.067
15 9560437	170979	2.766	872319	5.067	690194	8.193	339608	10.070
16 9560438	176799	2.763	871699	5.067	681158	8.193	342891	10.070
17 9560439	165818	2.763	867869	5.067	680839	8.193	336691	10.067
18 9560440	162327	2.766	871527	5.067	687548	8.193	339480	10.070
19 9560441	168352	2.783	866335	5.067	674172	8.193	332841	10.070
20 9560442	169400	2.763	873567	5.067	682917	8.193	331484	10.070

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

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

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

page 1 of 1

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID (Standard): wa24c01.d Date Analyzed: 04/24/18

Instrument ID: HP09137 Time Analyzed: 08:26

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

	IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
	AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
12 HOUR STD	146116	2.763	882355	5.067	685679	8.193	346158	10.070
UPPER LIMIT	292232	3.263	1764710	5.567	1371358	8.693	692316	10.570
LOWER LIMIT	73058	2.263	441178	4.567	342840	7.693	173079	9.570
LAB SAMPLE ID								
01 LCSW93	175437	2.766	876800	5.070	686165	8.193	351430	10.067
02 LCSW30	175437	2.766	876800	5.070	686165	8.193	351430	10.067
03 LCDW93	160364	2.773	877075	5.070	687652	8.193	348507	10.070
04 LCDW30	154108	2.773	877075	5.070	687652	8.193	348507	10.070
05 VBLKW93	157198	2.767	874300	5.067	687161	8.193	334458	10.070
06 VBLKW30	157198	2.767	874300	5.067	687161	8.193	334458	10.070
07 9563069	162917	2.773	881015	5.070	692096	8.193	341974	10.070
08 9563070	158558	2.779	866044	5.067	681344	8.193	329897	10.070
09 9563077	156605	2.766	864930	5.067	675825	8.193	333046	10.070
10 9562967	176140	2.770	862537	5.070	681543	8.193	339646	10.070
11 9563063	141962	2.815	875758	5.067	690780	8.193	360544	10.070
12 9563064MS	159634	2.831	893808	5.067	712420	8.193	373554	10.070
13 9563065MSD	156203	2.828	913458	5.067	725331	8.193	374704	10.070
14 9563063DL	220763	2.796	907314	5.071	718160	8.193	356127	10.067
15 9563076	214934	2.779	901859	5.067	712741	8.193	357000	10.070
16 9563067	134984	2.773	910973	5.070	724924	8.193	354507	10.070
17 9563067DL	218541	2.805	908590	5.067	710617	8.193	356519	10.070
18 9560431	212537	2.770	908955	5.067	714384	8.193	354869	10.070
19 9569395	170467	2.776	901738	5.070	706966	8.193	343228	10.070
20 9567535	213325	2.789	905274	5.068	707917	8.193	351677	10.070
21 9564029	165072	2.760	897732	5.067	708999	8.193	344655	10.070
22 9564027	164391	2.763	893926	5.070	704039	8.193	342280	10.070

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

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

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

FORM VIII VOA

8A

VOLATILE INTERNAL STANDARD AREA AND RT SUMMARY

Lab Name: Lancaster Laboratories Contract:_____

Lab Code: LANCAS Case No.:_____ SAS No.:_____ SDG No.:_AMW17___

Lab File ID (Standard): wa24c01.d Date Analyzed: 04/24/18

Instrument ID: HP09137 Time Analyzed: 08:26

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

		IS1(TBA)		IS2(FBZ)		IS3(CBZ)		IS4(DCB)	
		AREA #	RT #	AREA #	RT #	AREA #	RT #	AREA #	RT #
	12 HOUR STD	146116	2.763	882355	5.067	685679	8.193	346158	10.070
	UPPER LIMIT	292232	3.263	1764710	5.567	1371358	8.693	692316	10.570
	LOWER LIMIT	73058	2.263	441178	4.567	342840	7.693	173079	9.570
	LAB SAMPLE ID								
23	9564034	176630	2.760	892758	5.067	704078	8.193	353094	10.070
24	9564035MS	182683	2.766	894626	5.067	702966	8.193	365604	10.070
25	9564036MSD	183042	2.766	910222	5.067	713770	8.193	363847	10.070
26	9564030	186934	2.760	908426	5.067	710827	8.193	353857	10.070
27	9564032	186688	2.770	904139	5.067	706583	8.193	348378	10.070

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

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

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

page 2 of 2

FORM VIII VOA

Sample Data

Volatiles by GC/MS

eurofins | Lancaster Laboratories Environmental

LOQ/MDL Summary
GC/MS Volatiles

SDG: AMW17

Fraction: Volatiles by GC/MS

10335: VOCs- 5ml Water by 8260B Analyte Name	Default MDL	Default LOQ	Units
Chloromethane	0.5	1	ug/l
Vinyl Chloride	0.5	1	ug/l
Bromomethane	0.5	1	ug/l
Chloroethane	0.5	1	ug/l
1,1-Dichloroethene	0.5	1	ug/l
Acetone	6	20	ug/l
Carbon Disulfide	1	5	ug/l
Methylene Chloride	0.5	1	ug/l
trans-1,2-Dichloroethene	0.5	1	ug/l
1,1-Dichloroethane	0.5	1	ug/l
2-Butanone	3	10	ug/l
cis-1,2-Dichloroethene	0.5	1	ug/l
Chloroform	0.5	1	ug/l
1,1,1-Trichloroethane	0.5	1	ug/l
Carbon Tetrachloride	0.5	1	ug/l
Benzene	0.5	1	ug/l
1,2-Dichloroethane	0.5	1	ug/l
Trichloroethene	0.5	1	ug/l
1,2-Dichloropropane	0.5	1	ug/l
Bromodichloromethane	0.5	1	ug/l
cis-1,3-Dichloropropene	0.5	1	ug/l
4-Methyl-2-pentanone	3	10	ug/l
Toluene	0.5	1	ug/l
trans-1,3-Dichloropropene	0.5	1	ug/l
1,1,2-Trichloroethane	0.5	1	ug/l
Tetrachloroethene	0.5	1	ug/l
2-Hexanone	3	10	ug/l
Dibromochloromethane	0.5	1	ug/l
Chlorobenzene	0.5	1	ug/l
Ethylbenzene	0.5	1	ug/l
Xylene (Total)	0.5	1	ug/l
Styrene	1	5	ug/l
Bromoform	0.5	4	ug/l
1,1,2,2-Tetrachloroethane	0.5	1	ug/l

99967 Lancaster Laboratories 9560425
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s34.d Injection date and time: **24-APR-2018 00:31**
Data file Sample Info. Line: 99967;9560425;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:46 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.783(-0.019)	608	65	157727 (19)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	881858 (-1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	693433 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	342583 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	194382	48.353	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	55197	52.293	105%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	873117	49.108	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	313013	46.611	93%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s34.d Injection date and time: **24-APR-2018 00:31**
Data file Sample Info. Line: 99967;9560425;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:46 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

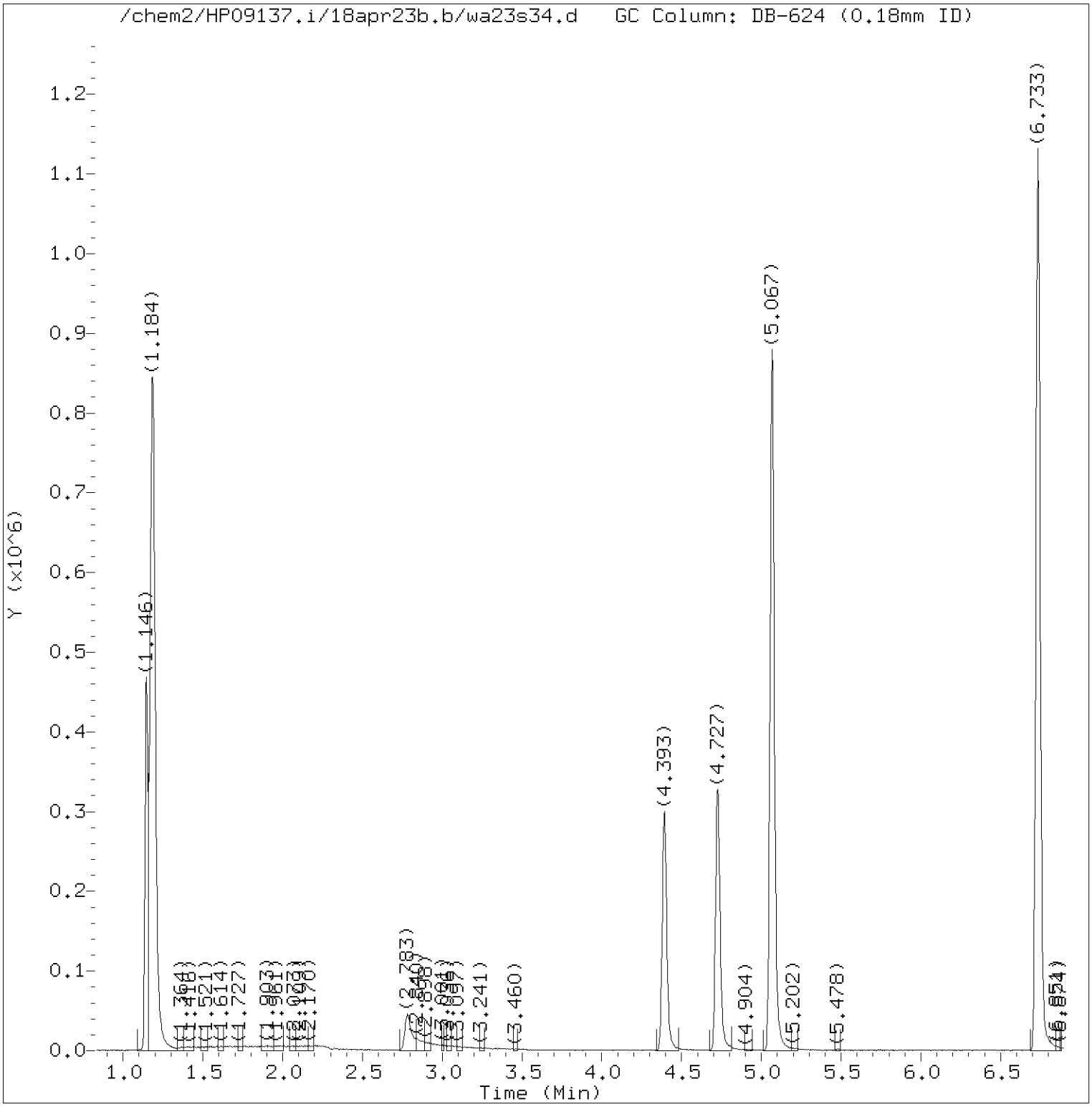
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

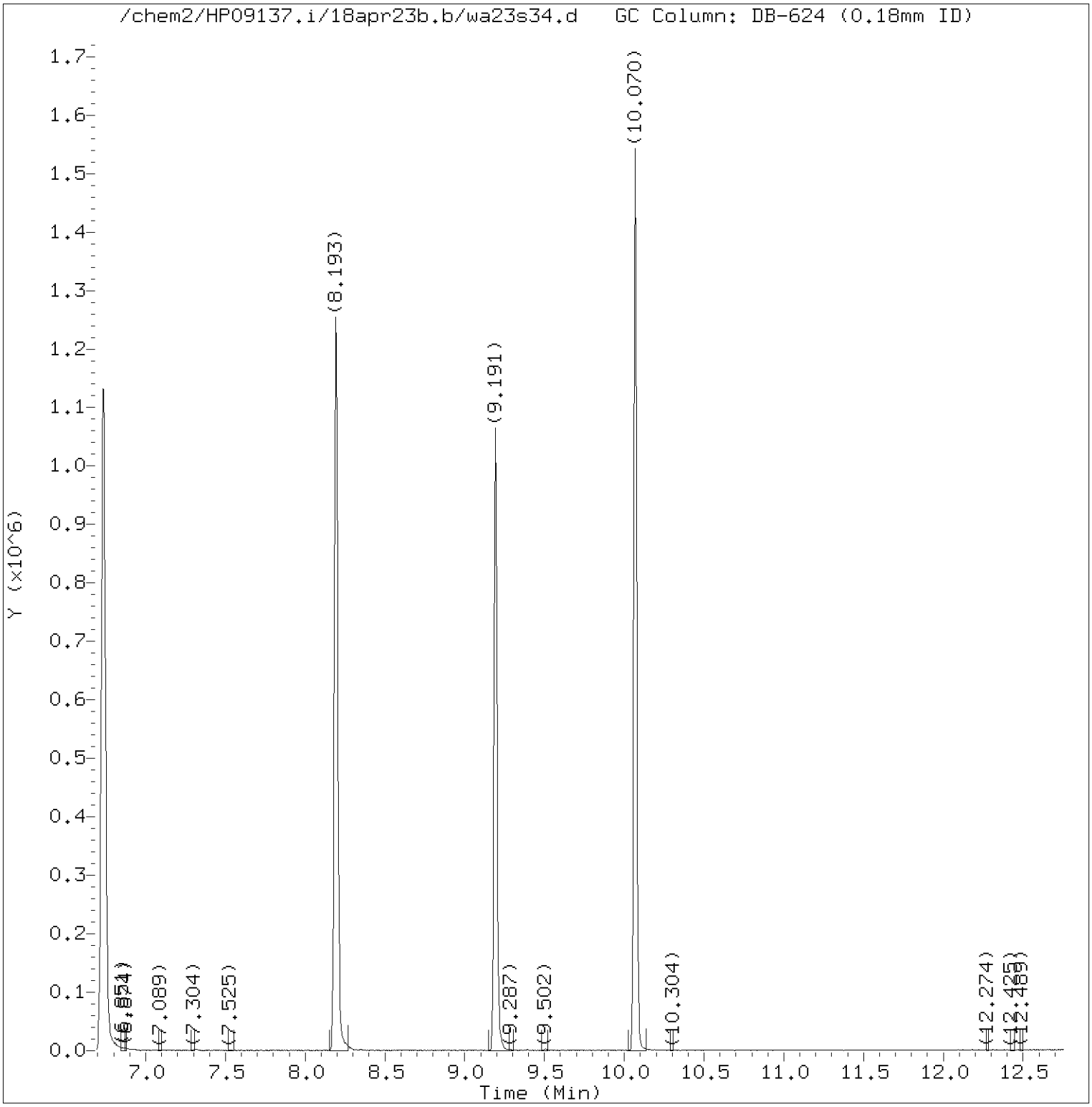
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s34.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:31 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:46 Automation

Sample Name: 99967 Lab Sample ID: 9560425

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s34.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:31 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:46 Automation

Sample Name: 99967 Lab Sample ID: 9560425

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s34.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:31 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:46 Automation

Sample Name: 99967 Lab Sample ID: 9560425

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.783	65	157727	250.000
52)$Dibromofluoromethane	(2)	4.393	113	194382	48.353
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55197	52.293
66)*Fluorobenzene	(2)	5.067	96	881858	50.000
83)$Toluene-d8	(3)	6.736	98	873117	49.108
100)*Chlorobenzene-d5	(3)	8.193	117	693433	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	313013	46.611
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	342583	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

99970 Lancaster Laboratories 9560428
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s37.d Injection date and time: **24-APR-2018 01:42**
Data file Sample Info. Line: 99970;9560428;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 01:58 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.766(-0.003)	603	65	168227 (27)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	896192 (1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	699352 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	345913 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	198180	48.509	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	55085	51.352	103%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	891599	49.723	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	319340	47.151	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s37.d Injection date and time: **24-APR-2018 01:42**
Data file Sample Info. Line: 99970;9560428;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 01:58 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

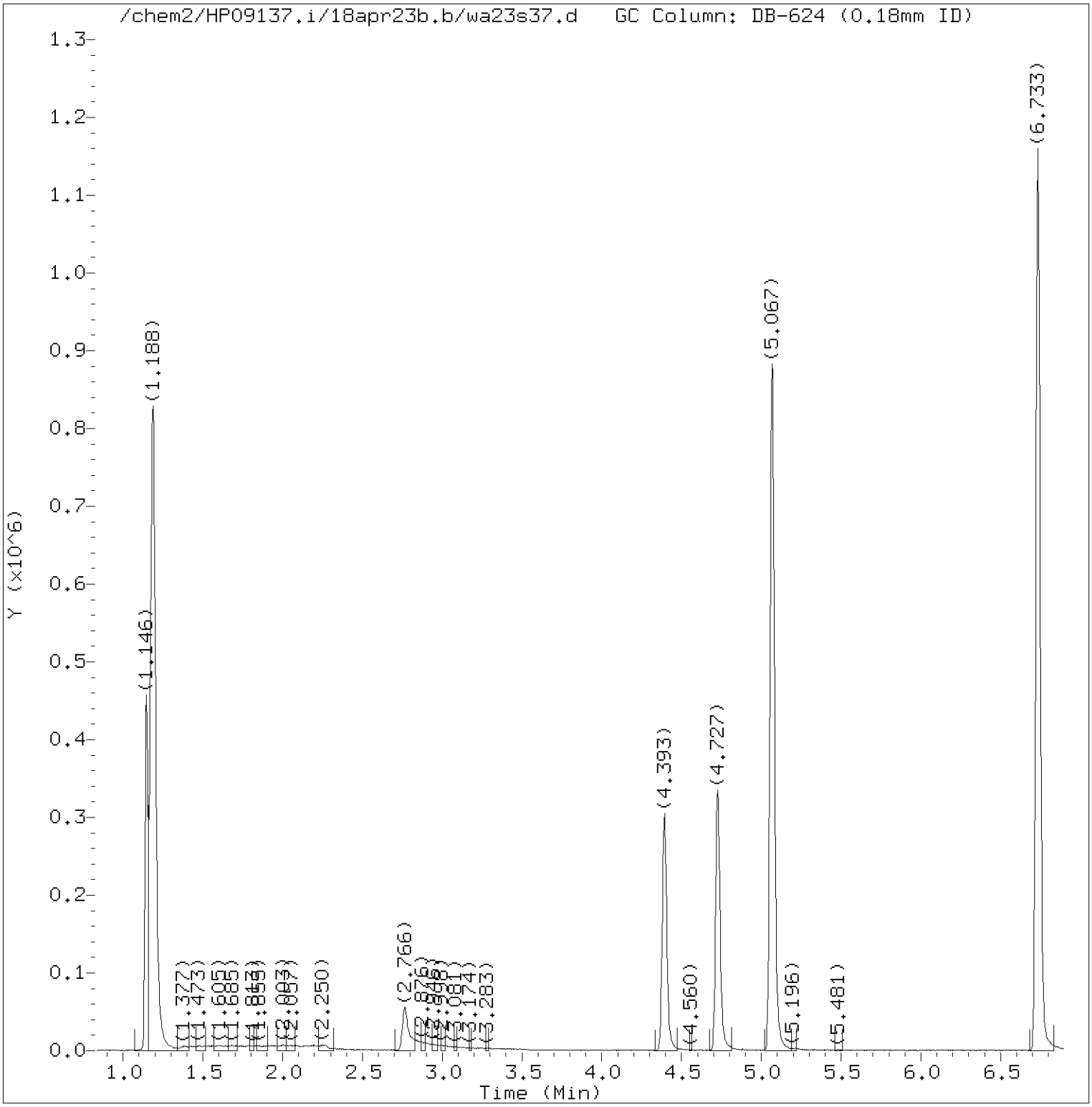
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

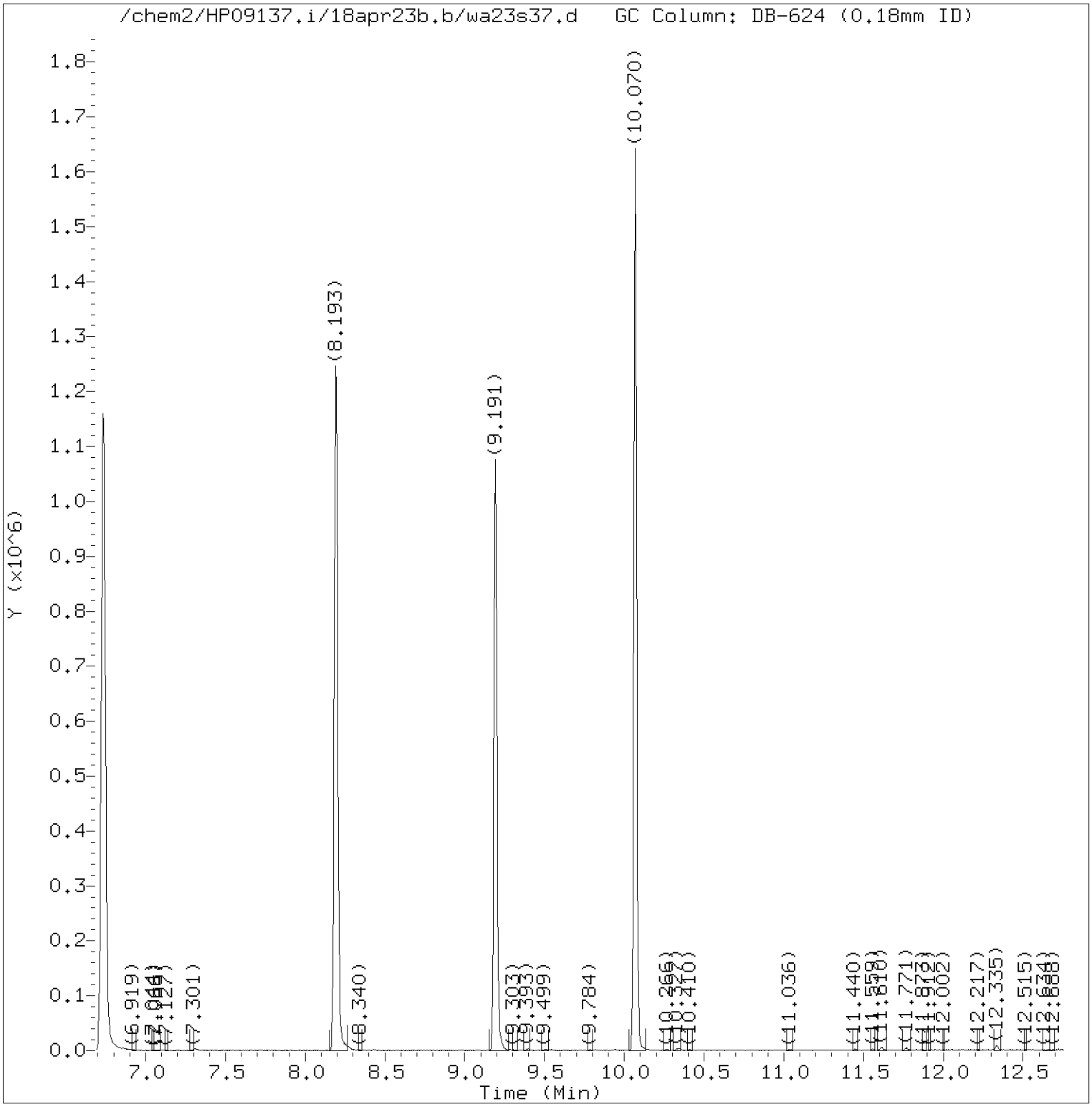
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s37.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:42 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:58 Automation

Sample Name: 99970 Lab Sample ID: 9560428

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s37.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:42 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:58 Automation

Sample Name: 99970 Lab Sample ID: 9560428

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s37.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:42 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:58 Automation

Sample Name: 99970 Lab Sample ID: 9560428

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.766	65	168227	250.000
52)$Dibromofluoromethane	(2)	4.393	113	198180	48.509
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55085	51.352
66)*Fluorobenzene	(2)	5.067	96	896192	50.000
83)$Toluene-d8	(3)	6.733	98	891599	49.723
100)*Chlorobenzene-d5	(3)	8.193	117	699352	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	319340	47.151
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	345913	50.000

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

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on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99971 Lancaster Laboratories 9560429
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s38.d Injection date and time: **24-APR-2018 02:06**
Data file Sample Info. Line: 99971;9560429;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.770(-0.006)	604	65	168997 (28)	250.00	
66) Fluorobenzene	5.070(-0.003)	1321	96	888261 (0)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	702156 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	346982 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.001)	113	196289	48.475	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.001)	102	55718	52.406	105%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	887351	49.288	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	320790	47.175	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)	2.327(0.006)	96	2847	0.734	0.73		J	0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)	3.922(0.001)	96	5386	1.117	1.12			0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)	5.443(0.000)	95	21674	4.589	4.59			0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	52291	10.421	10.42			0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

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99971 Lancaster Laboratories 9560429
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s38.d Injection date and time: **24-APR-2018 02:06**
Data file Sample Info. Line: 99971;9560429;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

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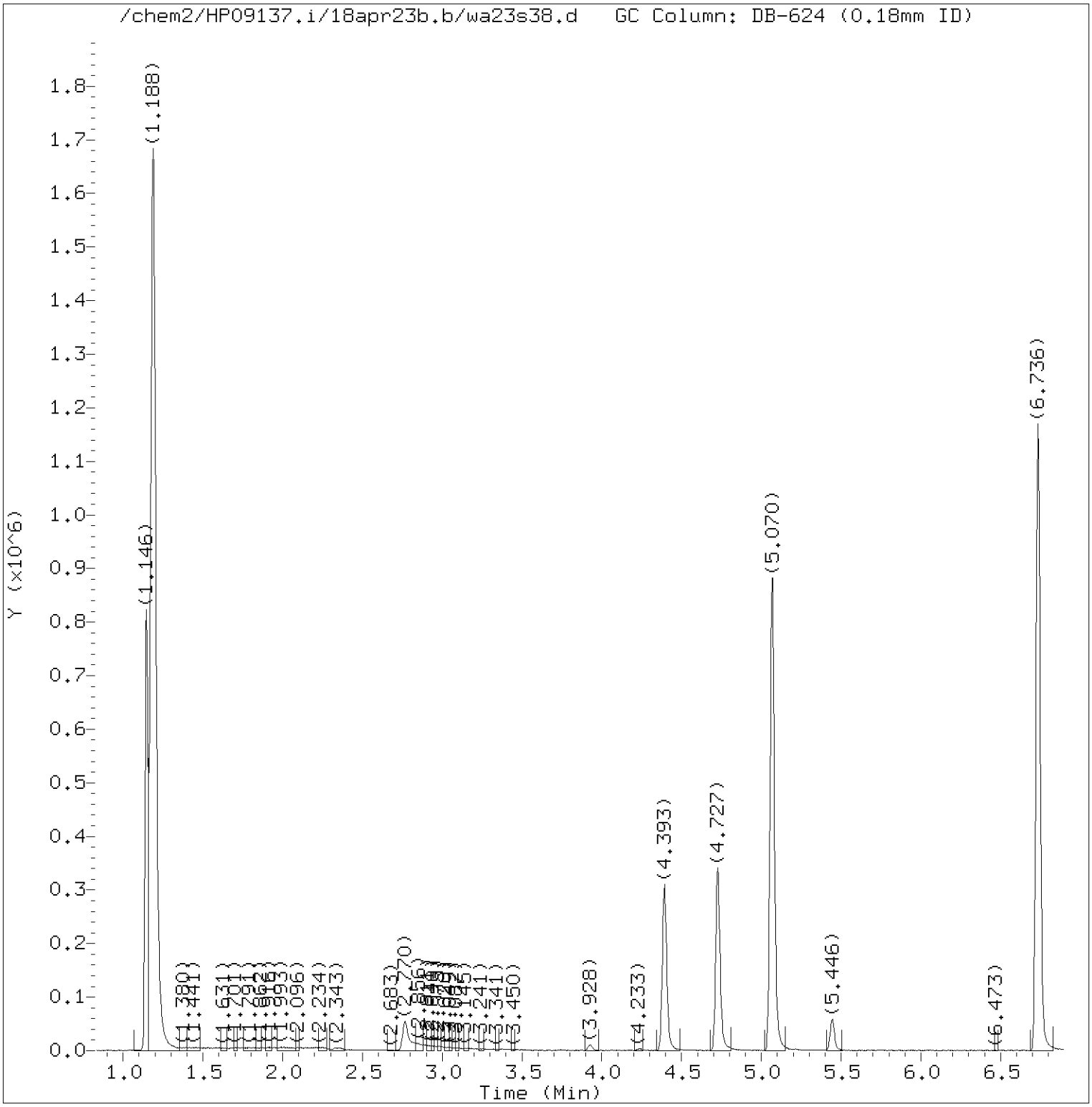
Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

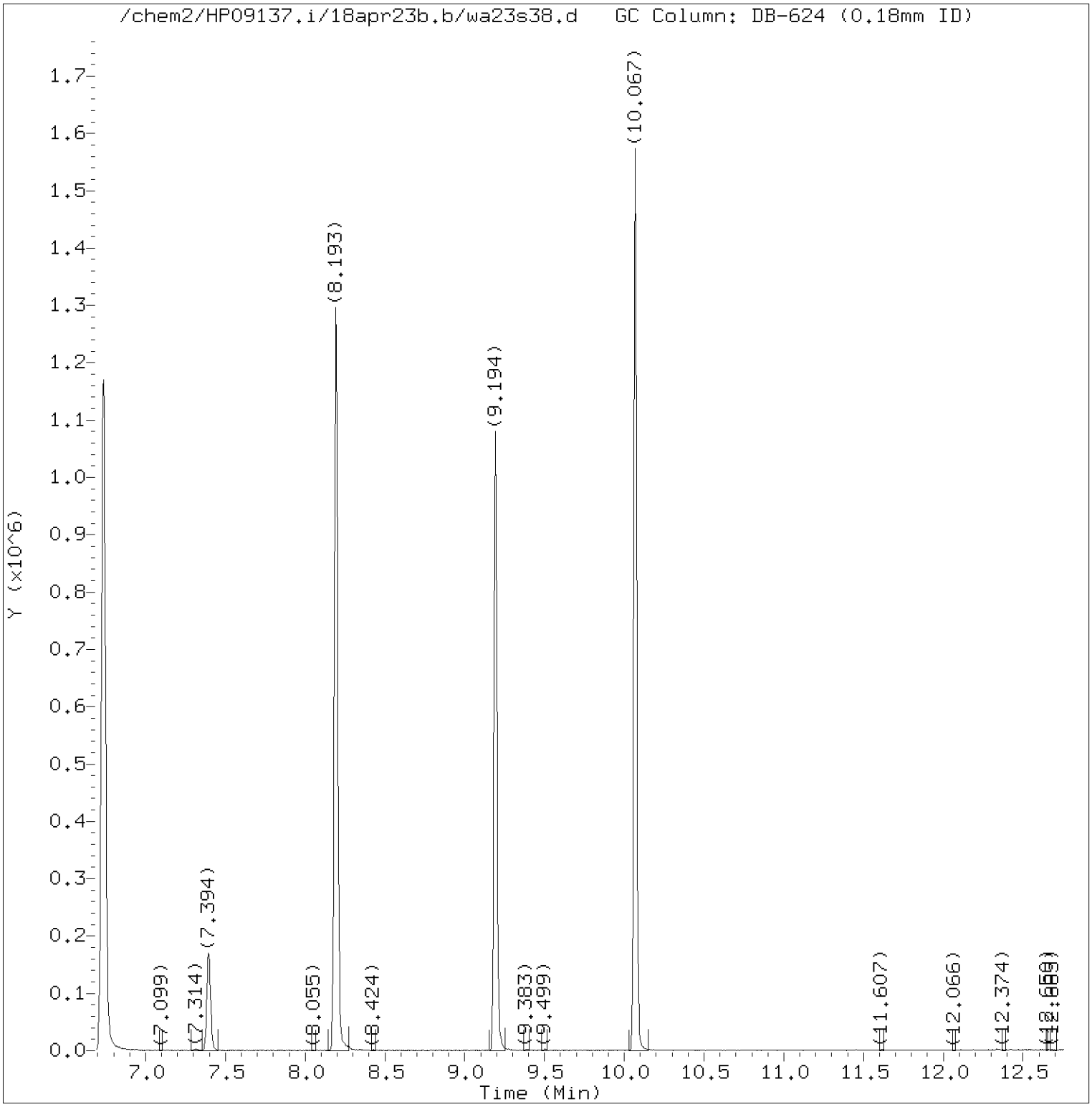
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

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on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
17) 1,1-Dichloroethene	(2)	2.327	96	2847	0.734
29)*t-Butyl alcohol-d10	(1)	2.770	65	168997	250.000
42) cis-1,2-Dichloroethene	(2)	3.922	96	5386	1.117
52)$Dibromofluoromethane	(2)	4.393	113	196289	48.475
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55718	52.406
66)*Fluorobenzene	(2)	5.070	96	888261	50.000
71) Trichloroethene	(2)	5.443	95	21674	4.589
83)$Toluene-d8	(3)	6.736	98	887351	49.288
93) Tetrachloroethene	(3)	7.394	166	52291	10.421
100)*Chlorobenzene-d5	(3)	8.193	117	702156	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	320790	47.175
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	346982	50.000

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

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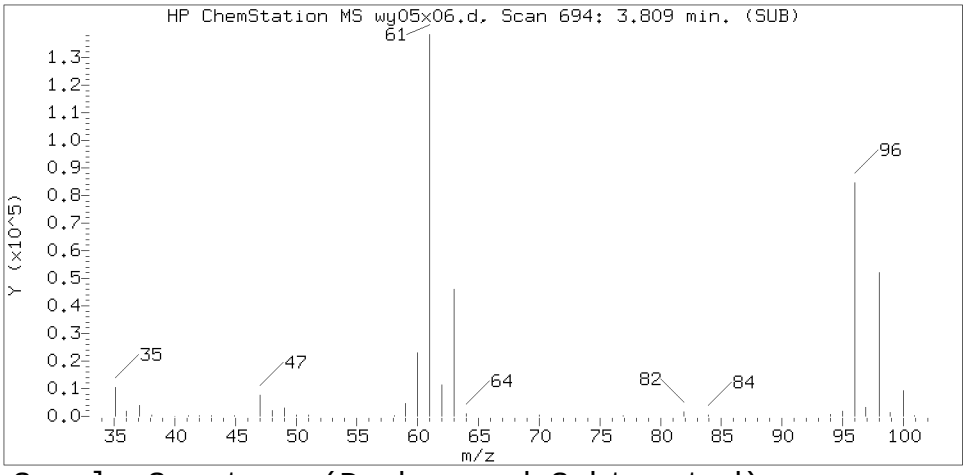
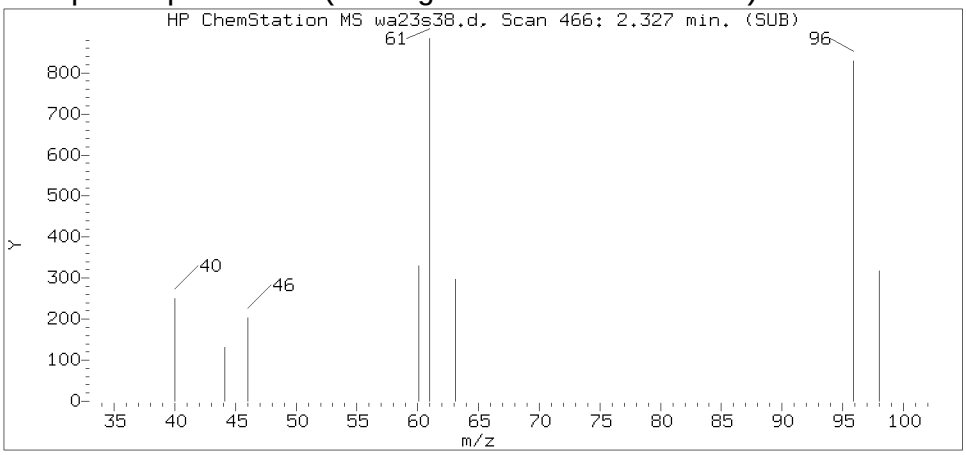
Target 3.5 esignature user ID: nsl01327

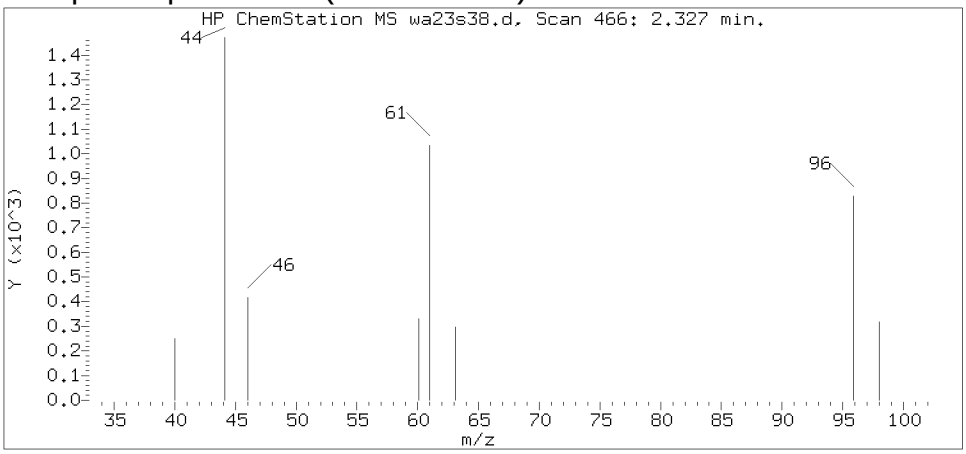
Reference Standard Spectrum for 1,1-Dichloroethene

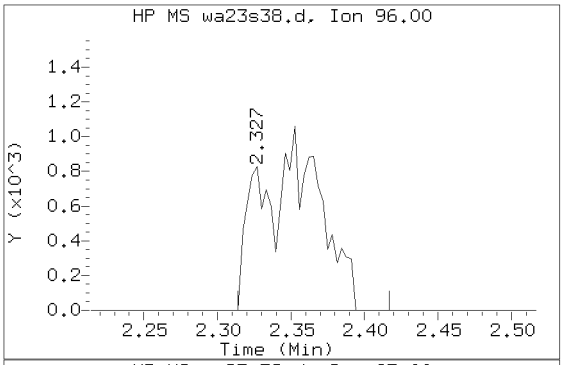


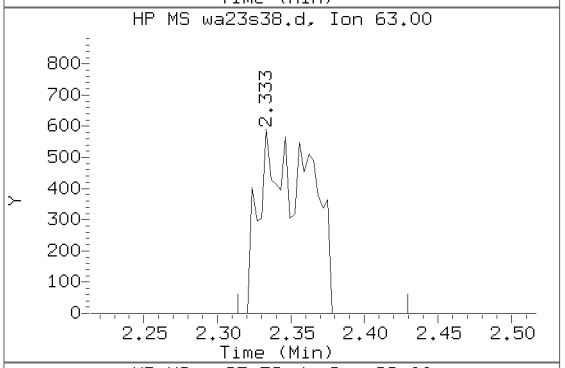
Sample Spectrum (Background Subtracted)

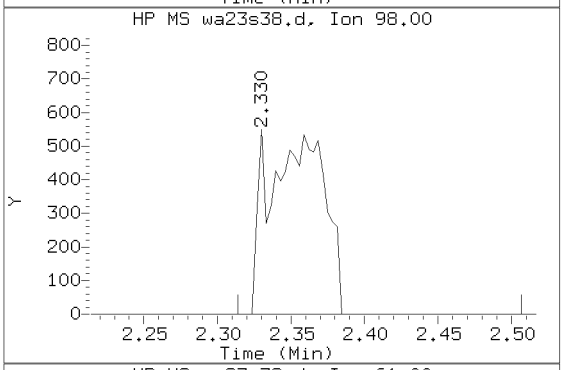


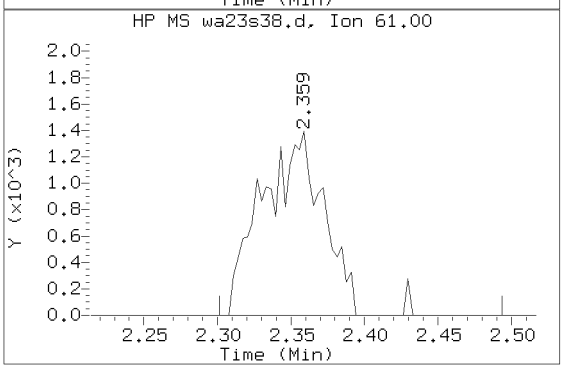
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Compound Number : 17
Compound Name : 1,1-Dichloroethene
Scan Number : 466
Retention Time (minutes): 2.327
Relative Retention Time : 0.00664
Quant Ion : 96.00
Area (flag) : 2847
On-Column Amount (ng) : 0.7336

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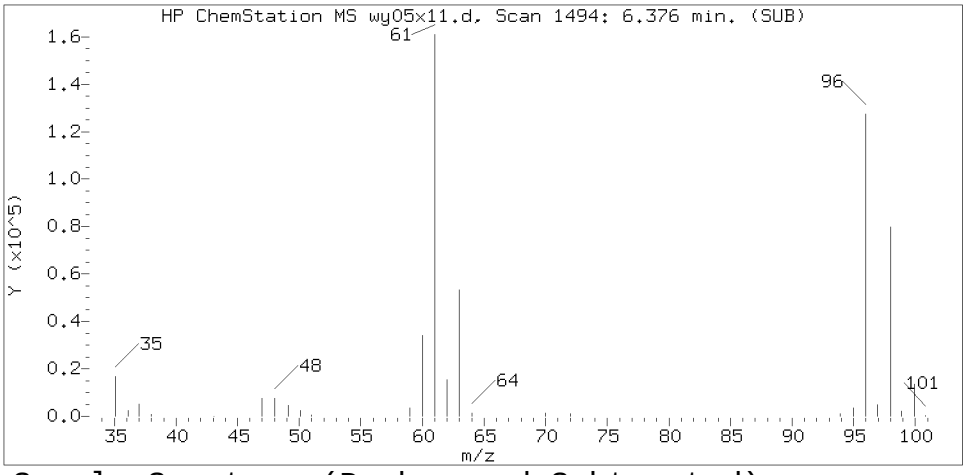
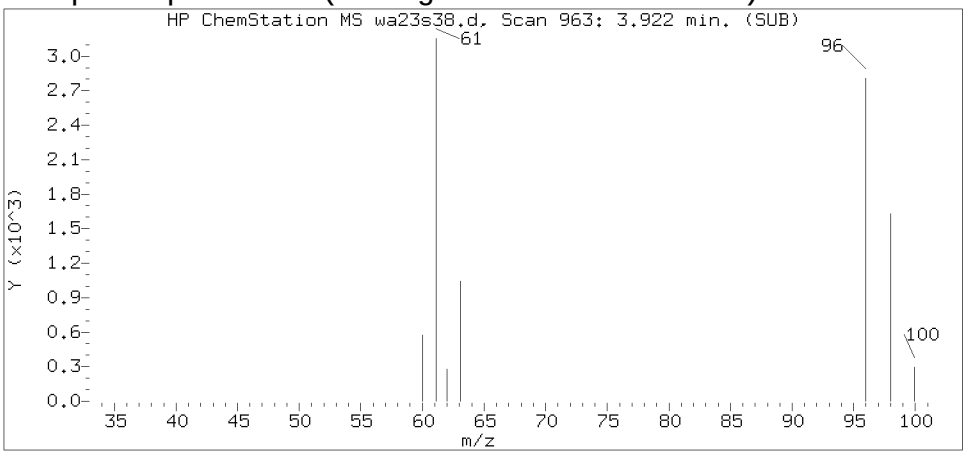
Target 3.5 esignature user ID: nsl01327

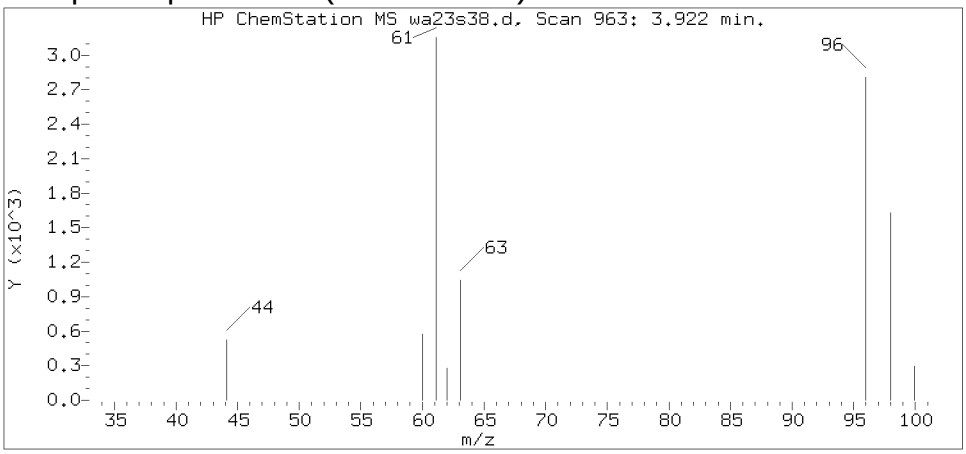
Reference Standard Spectrum for cis-1,2-Dichloroethene

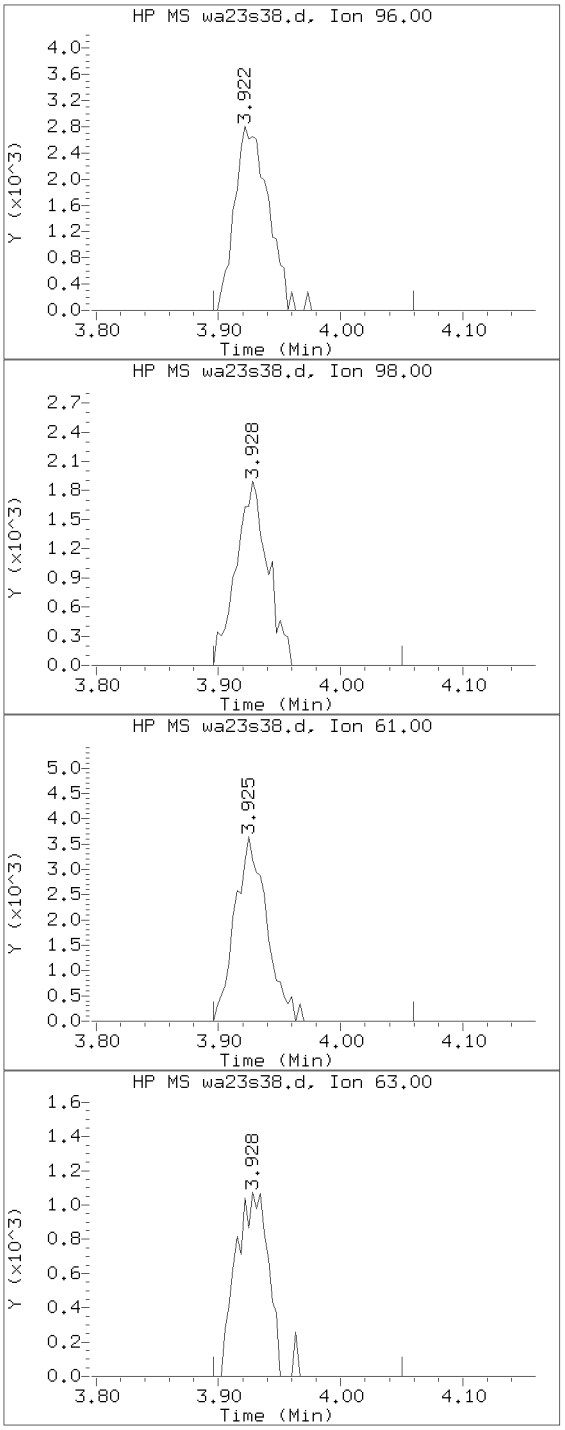


Sample Spectrum (Background Subtracted)



Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 963
Retention Time (minutes): 3.922
Relative Retention Time : 0.00113
Quant Ion : 96.00
Area (flag) : 5386
On-Column Amount (ng) : 1.1172

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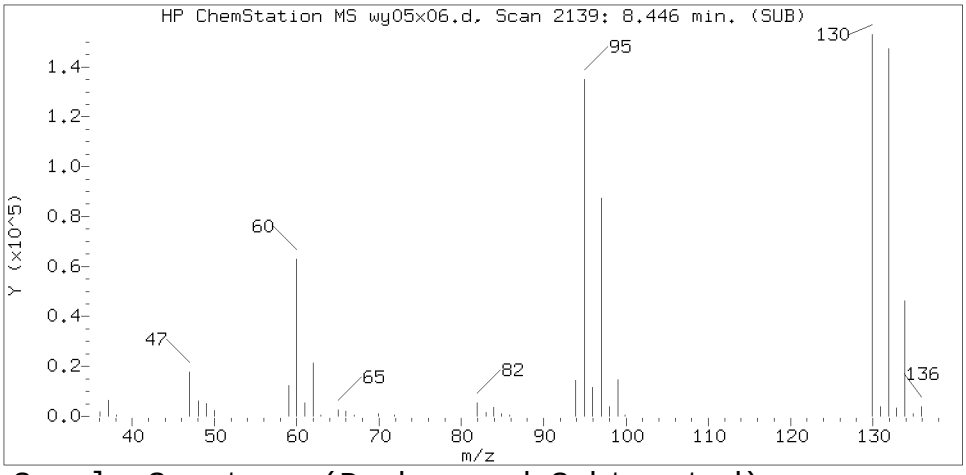
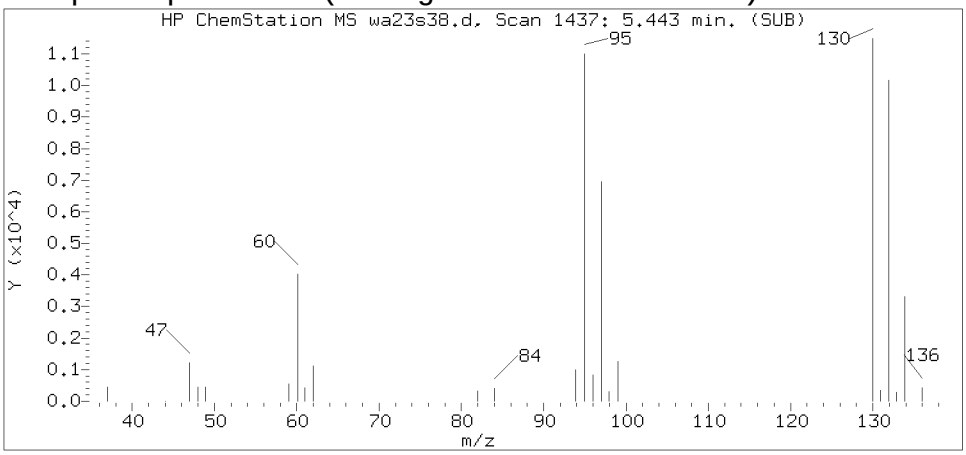
Target 3.5 esignature user ID: nsl01327

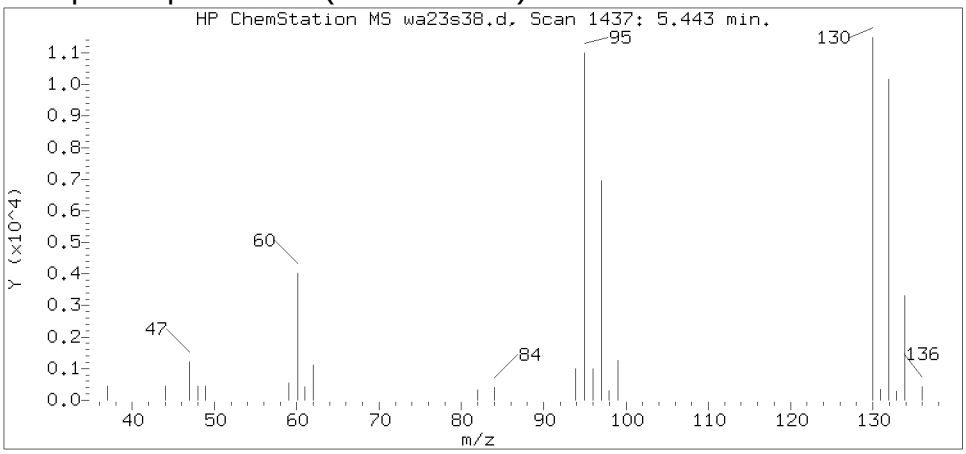
Reference Standard Spectrum for Trichloroethene

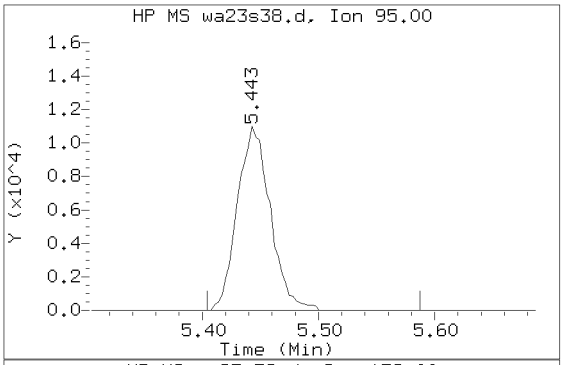


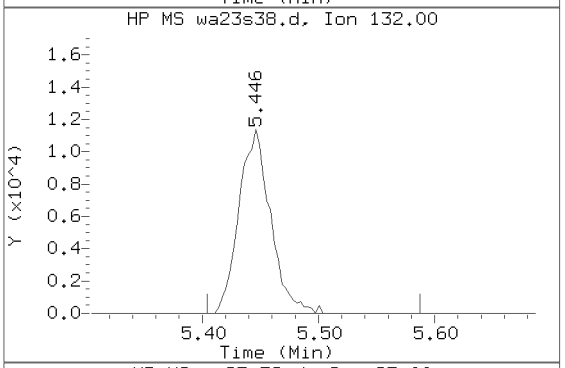
Sample Spectrum (Background Subtracted)

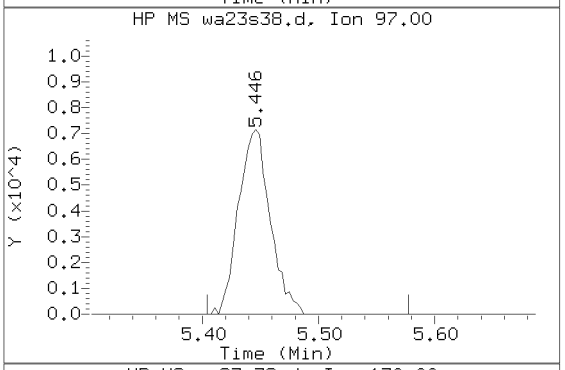


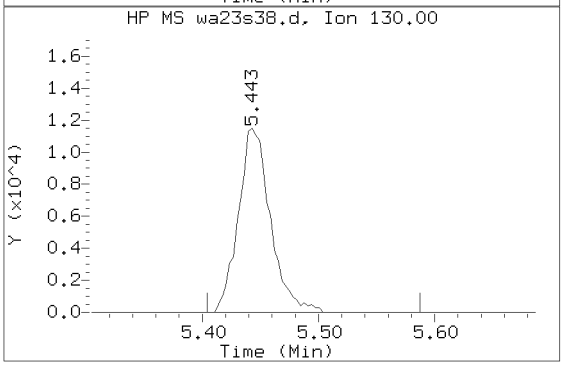
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1437
Retention Time (minutes): 5.443
Relative Retention Time : 0.00068
Quant Ion : 95.00
Area (flag) : 21674
On-Column Amount (ng) : 4.5890

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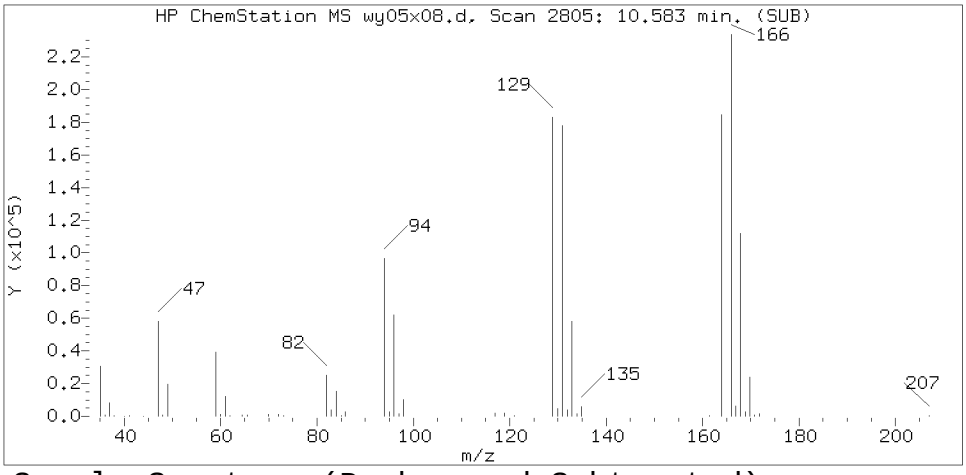
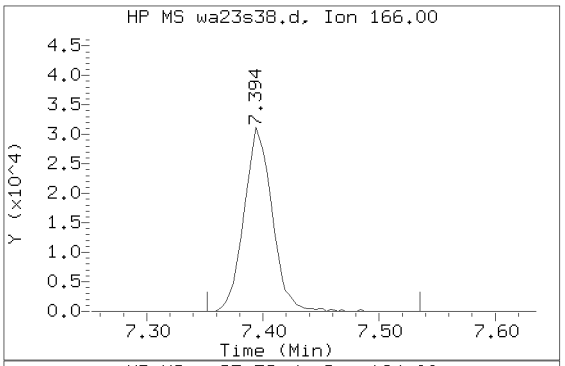
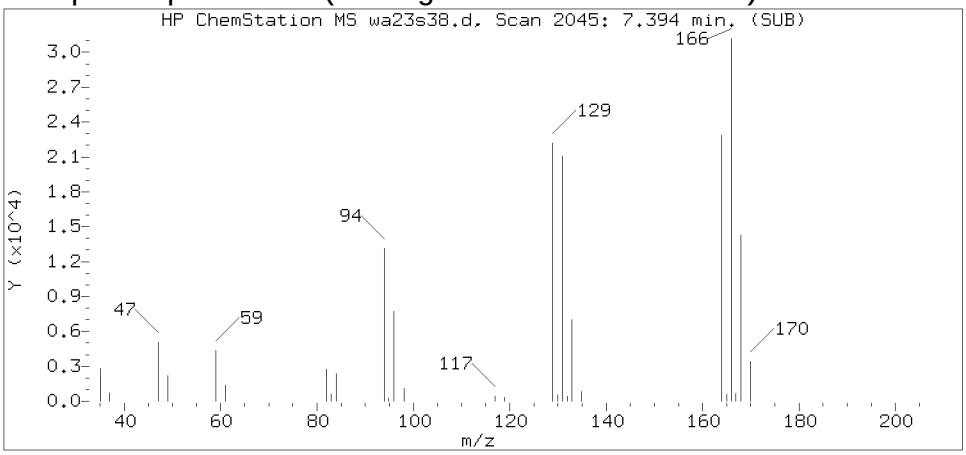
Target 3.5 esignature user ID: nsl01337

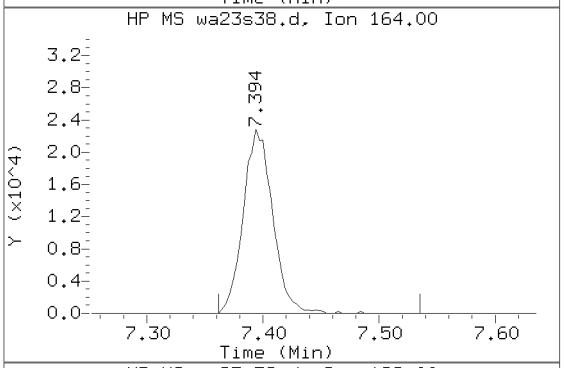
Reference Standard Spectrum for Tetrachloroethene

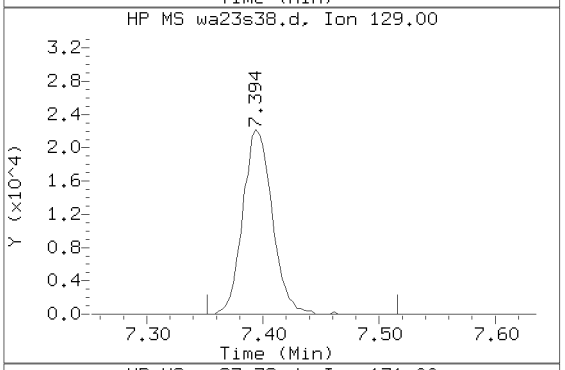




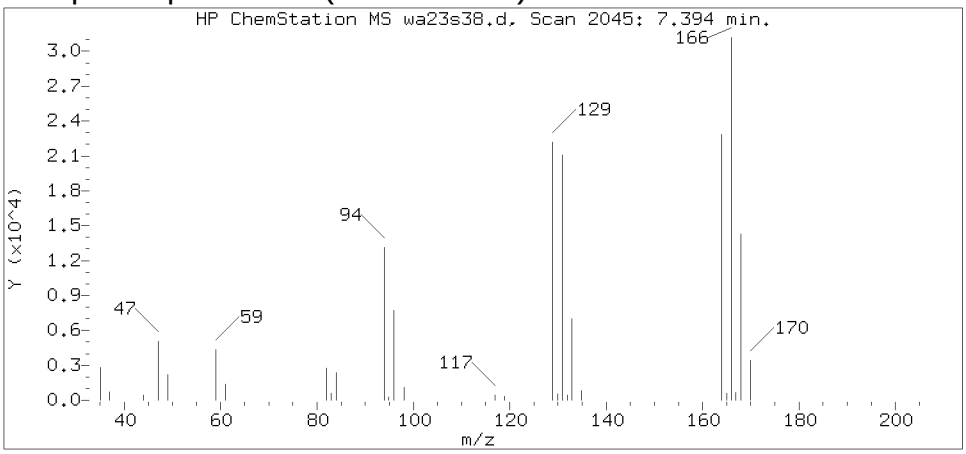
Sample Spectrum (Background Subtracted)

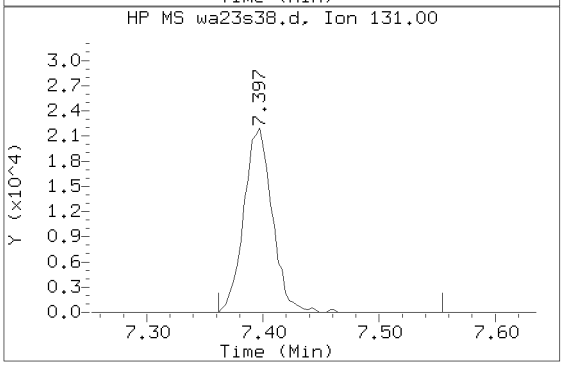






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/18apr23b.b/wa23s38.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:06 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:21 Automation

Sample Name: 99971 Lab Sample ID: 9560429

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2045
Retention Time (minutes): 7.394
Relative Retention Time : 0.00000
Quant Ion : 166.00
Area (flag) : 52291
On-Column Amount (ng) : 10.4207

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Target 3.5 esignature user ID: nsl01337

99972 Lancaster Laboratories 9560430
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s39.d Injection date and time: **24-APR-2018 02:30**
Data file Sample Info. Line: 99972;9560430;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.764(0.000)	602	65	156490 (18)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	885134 (0)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	693849 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	340813 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394(0.000)	113	194861	48.292	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.731(-0.001)	102	54737	51.665	103%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	877157	49.305	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	318061	47.334	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)	3.932(-0.001)	96	5019	1.045	1.04			0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)	4.240(-0.000)	83	3797	0.513	0.51		J	0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)	5.440(0.000)	95	19857	4.219	4.22			0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)	7.394(-0.000)	166	52214	10.530	10.53			0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s39.d Injection date and time: **24-APR-2018 02:30**
Data file Sample Info. Line: 99972;9560430;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

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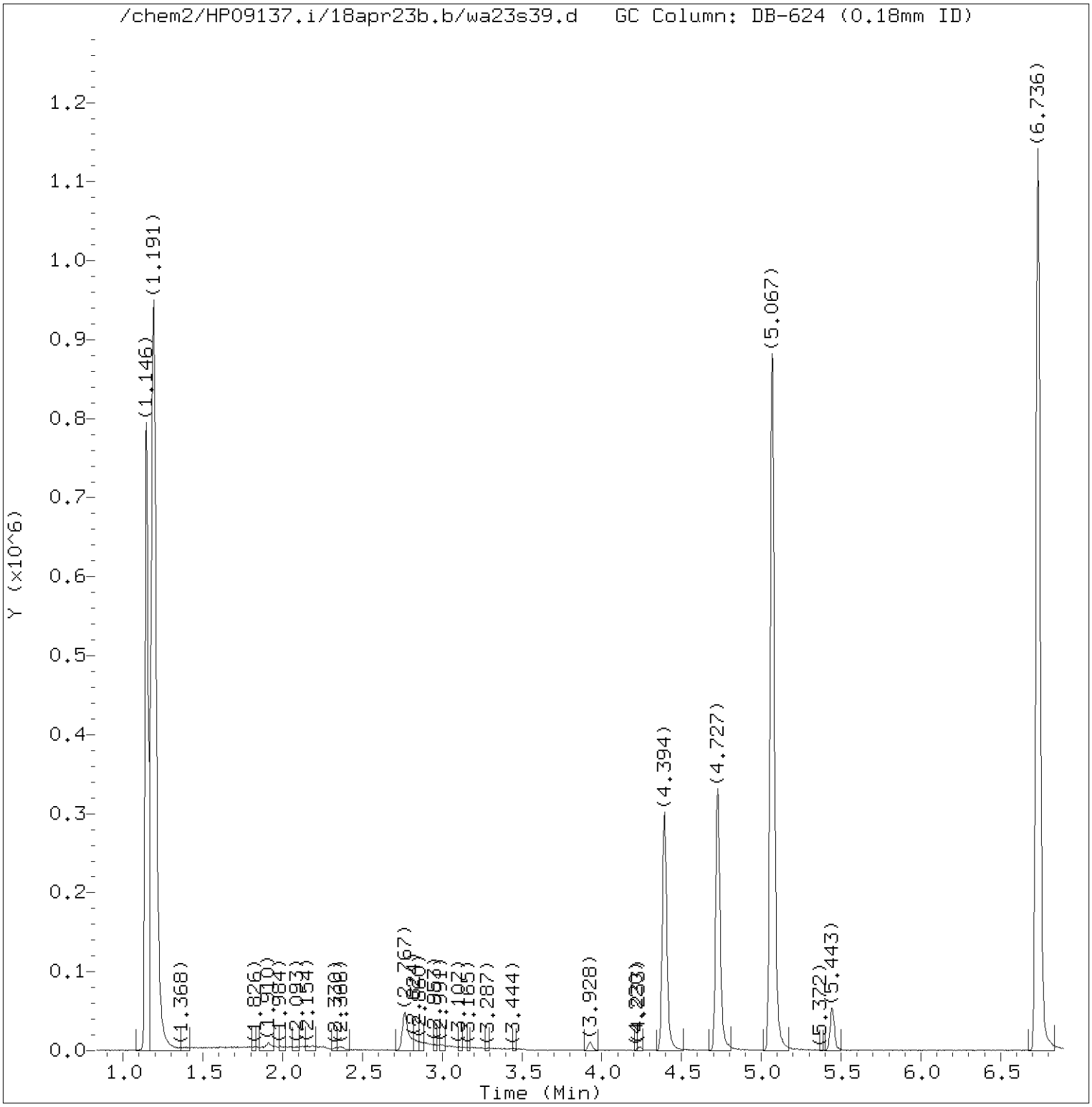
Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

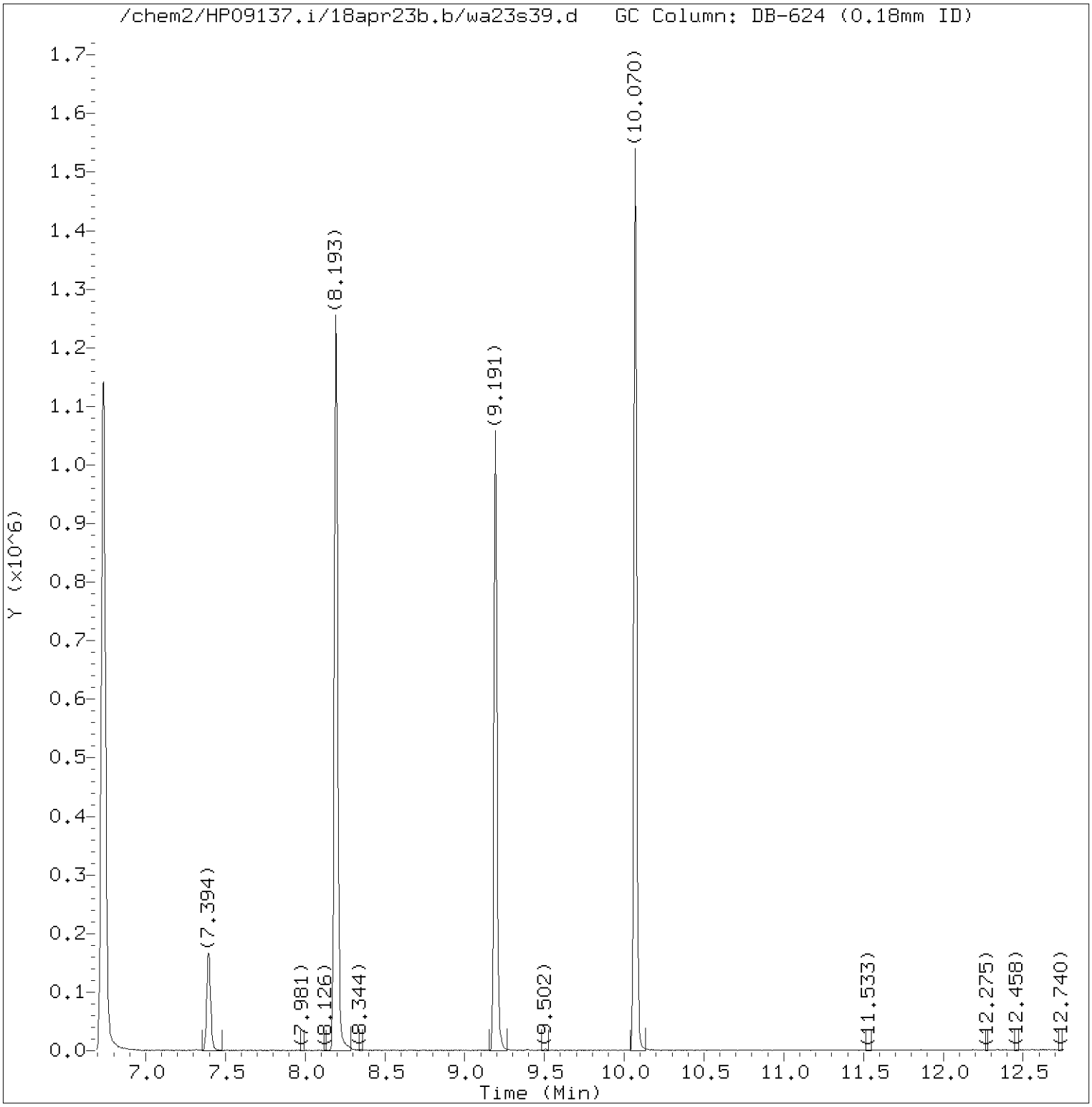
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

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on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.764	65	156490	250.000
42) cis-1,2-Dichloroethene	(2)	3.932	96	5019	1.045
51) Chloroform	(2)	4.240	83	3797	0.513
52)$Dibromofluoromethane	(2)	4.394	113	194861	48.292
57)$1,2-Dichloroethane-d4	(2)	4.731	102	54737	51.665
66)*Fluorobenzene	(2)	5.067	96	885134	50.000
71) Trichloroethene	(2)	5.440	95	19857	4.219
83)$Toluene-d8	(3)	6.733	98	877157	49.305
93) Tetrachloroethene	(3)	7.394	166	52214	10.530
100)*Chlorobenzene-d5	(3)	8.193	117	693849	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	318061	47.334
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	340813	50.000

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

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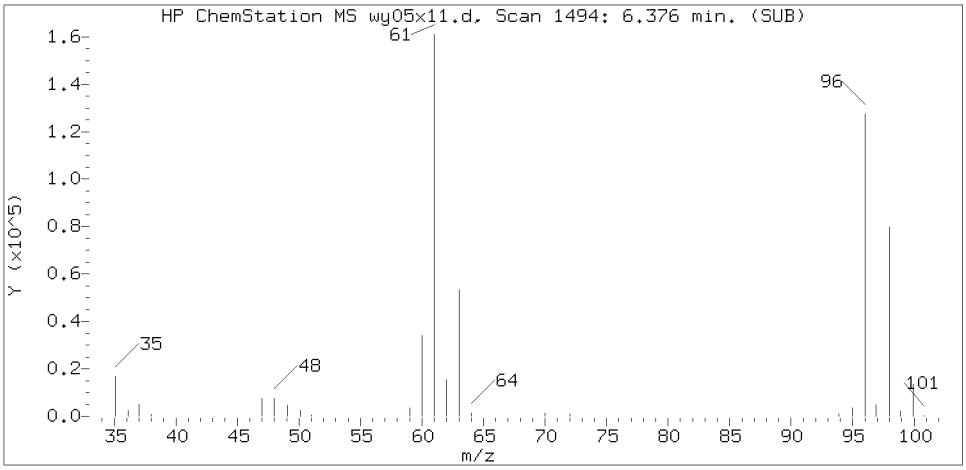
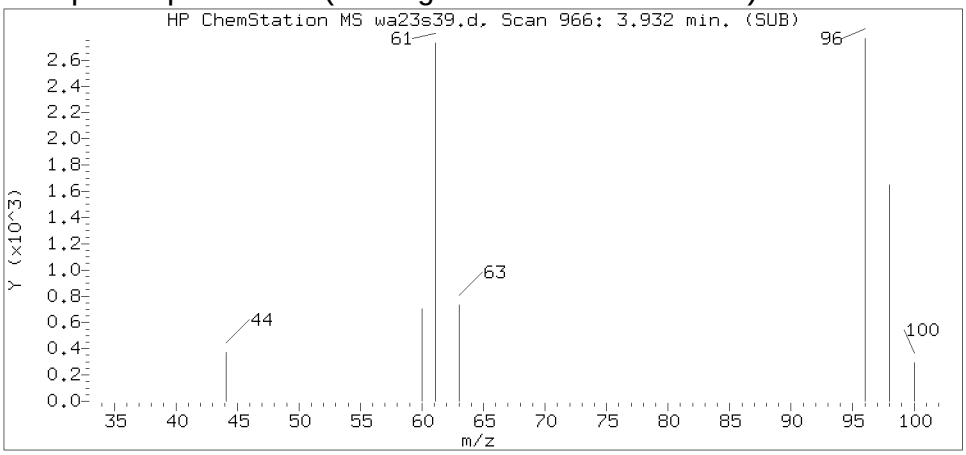
Target 3.5 esignature user ID: nsl01327

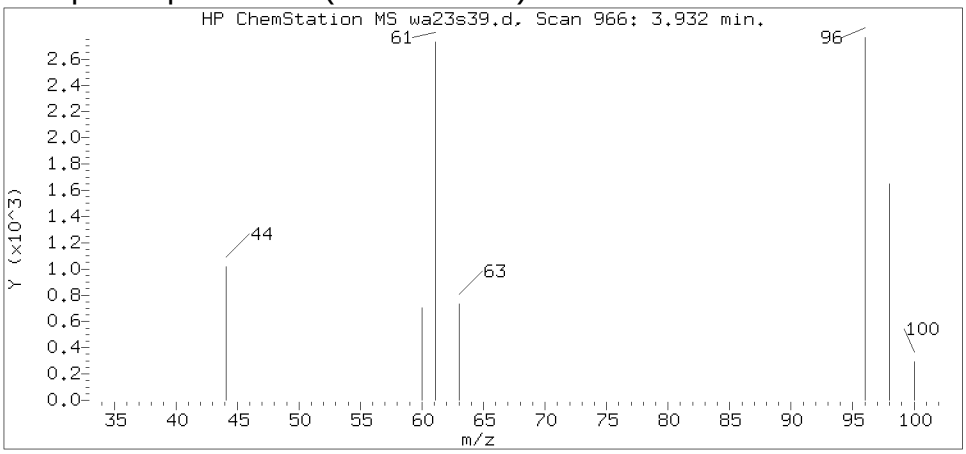
Reference Standard Spectrum for cis-1,2-Dichloroethene

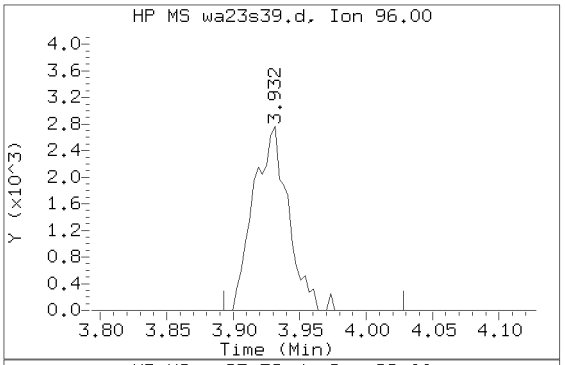


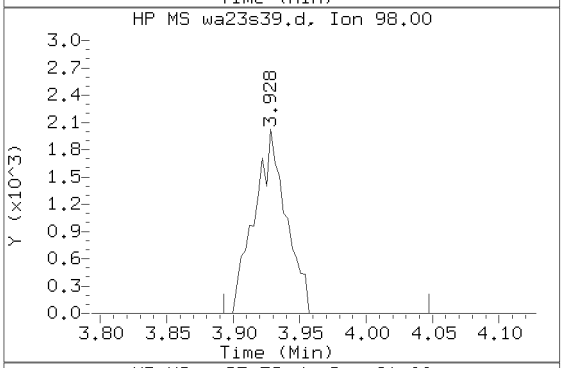
Sample Spectrum (Background Subtracted)

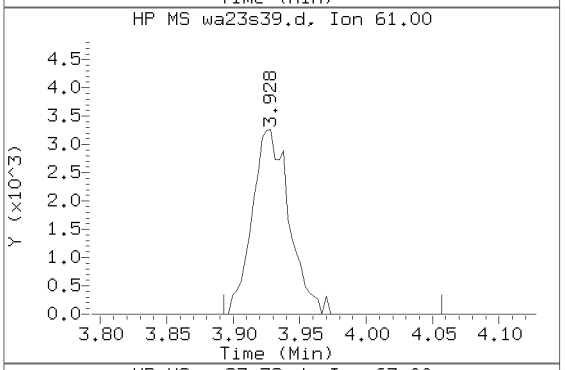


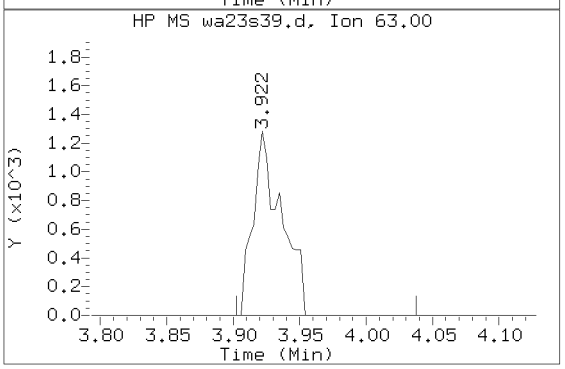
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 966
Retention Time (minutes): 3.932
Relative Retention Time :-0.00127
Quant Ion : 96.00
Area (flag) : 5019
On-Column Amount (ng) : 1.0449

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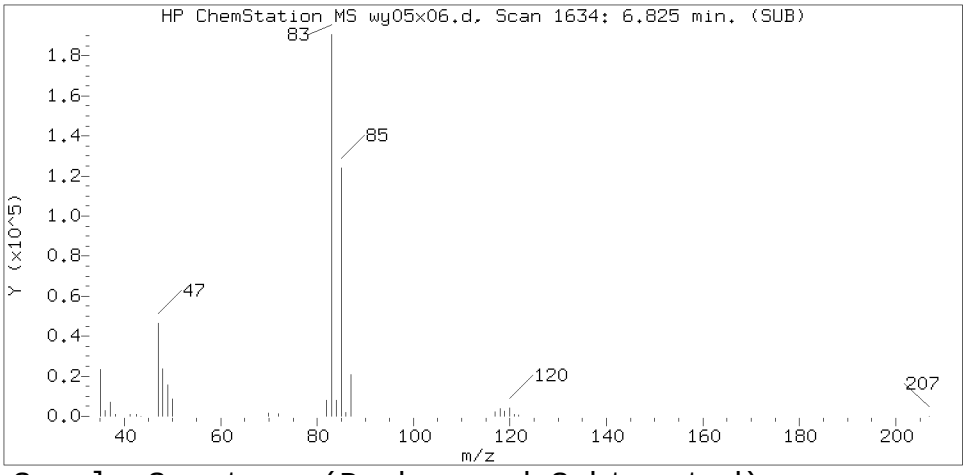
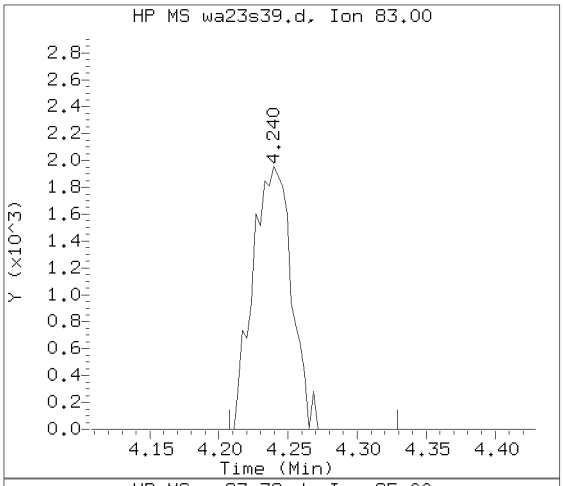
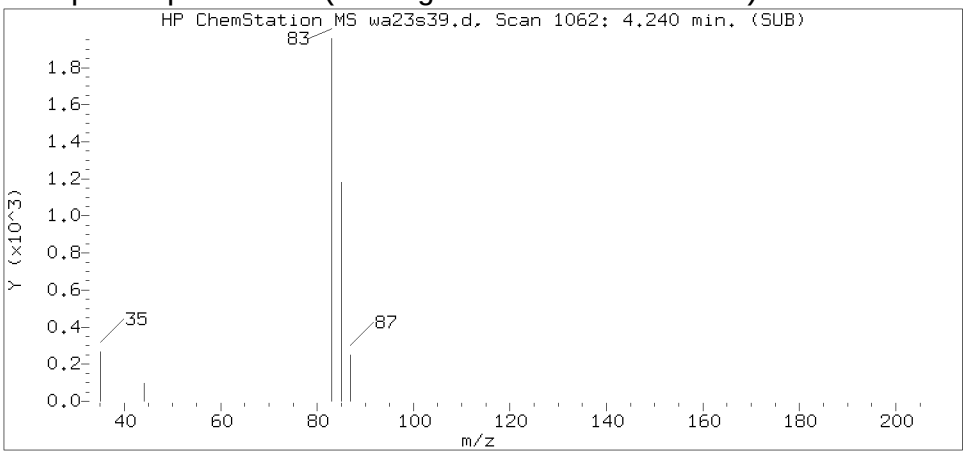
Target 3.5 esignature user ID: nsl01327

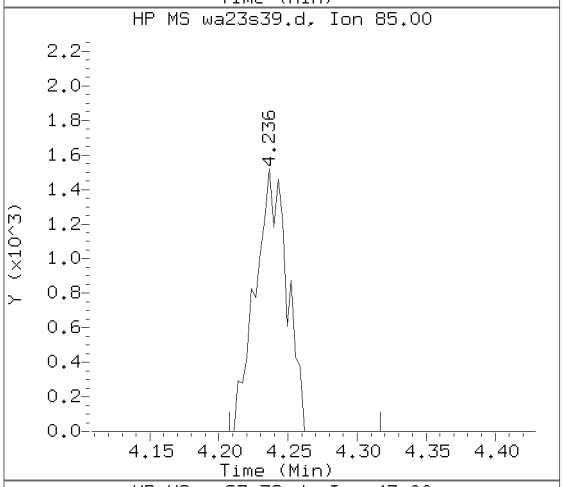
Reference Standard Spectrum for Chloroform



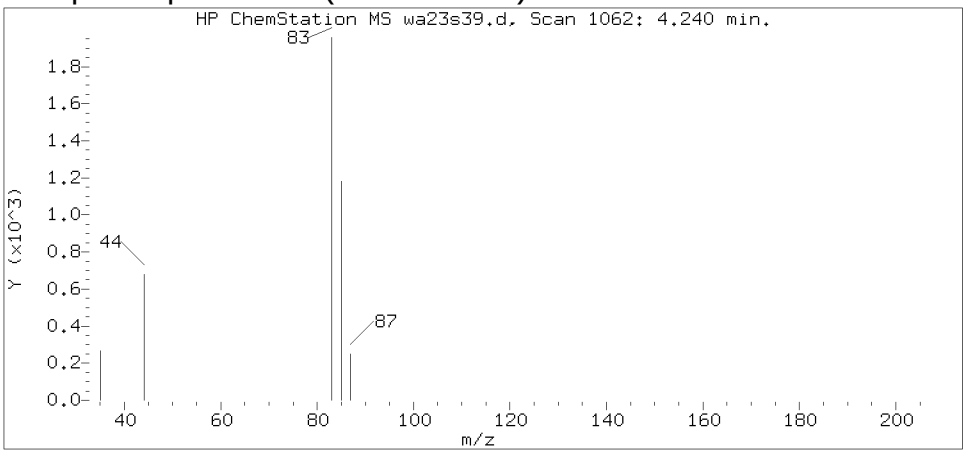


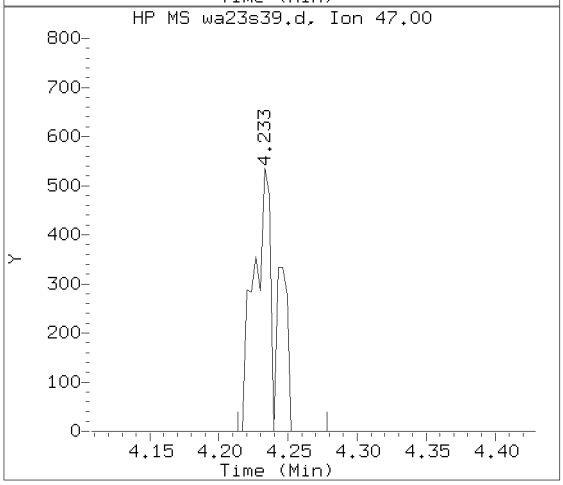
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Compound Number : 51
Compound Name : Chloroform
Scan Number : 1062
Retention Time (minutes): 4.240
Relative Retention Time :-0.00063
Quant Ion : 83.00
Area (flag) : 3797
On-Column Amount (ng) : 0.5129

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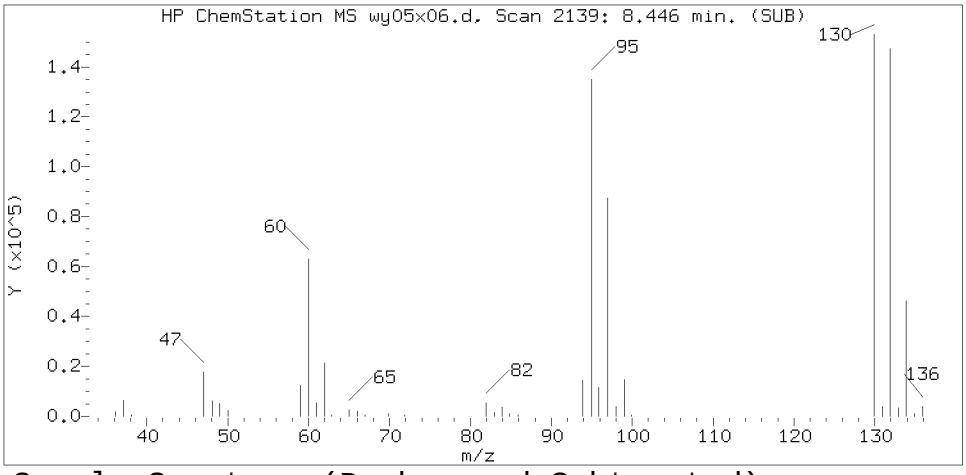
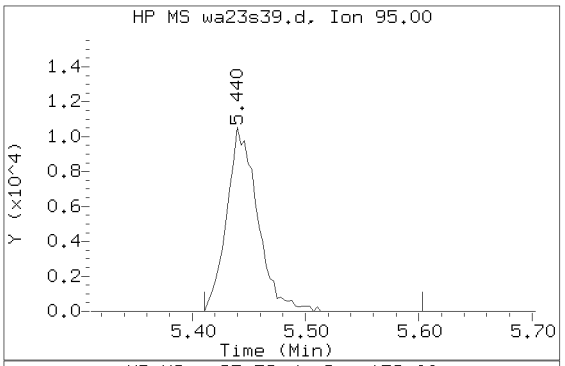
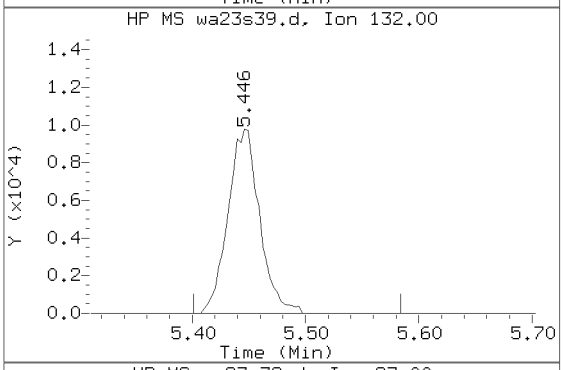
Target 3.5 esignature user ID: nsl01327

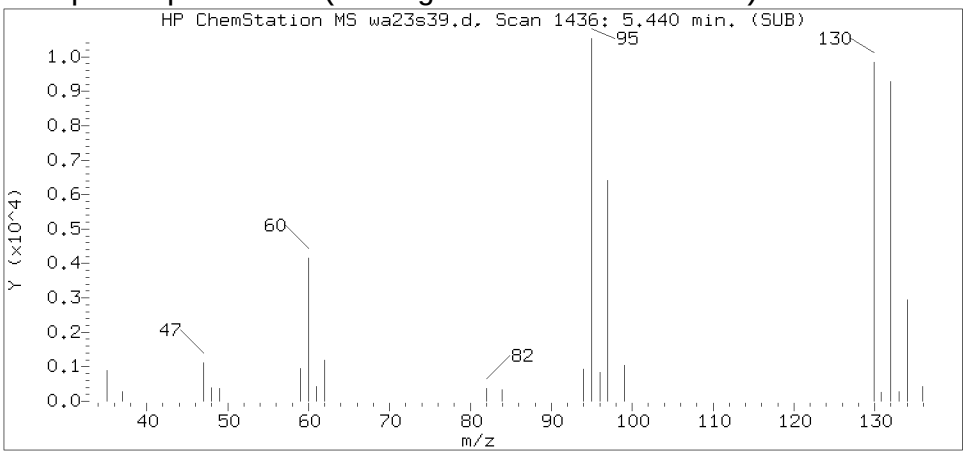
Reference Standard Spectrum for Trichloroethene

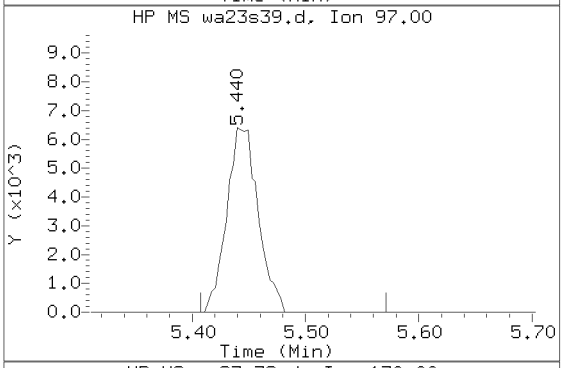




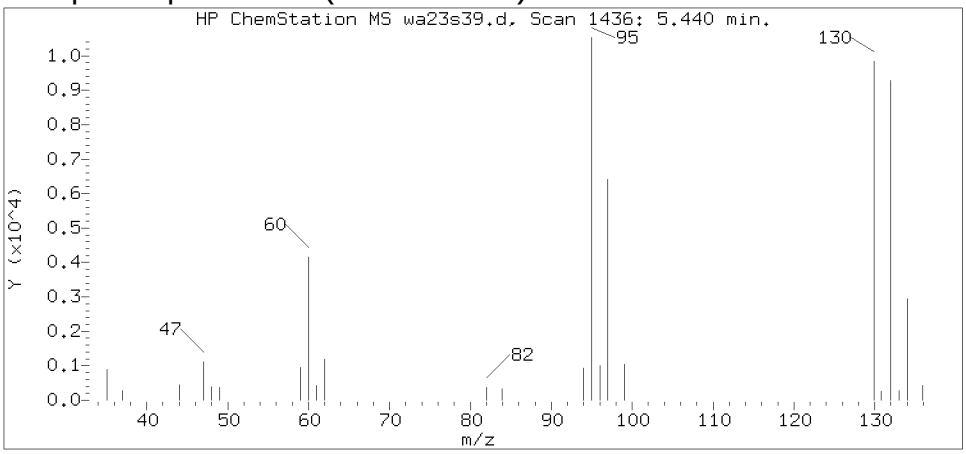


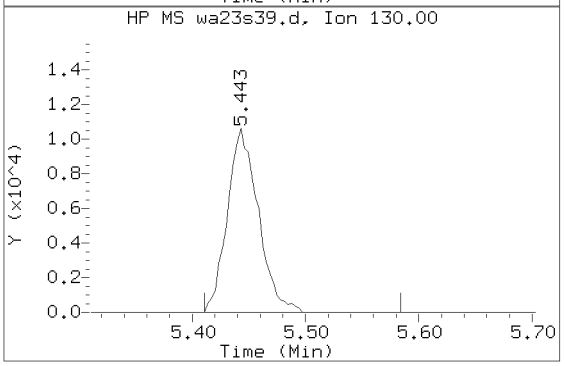
Sample Spectrum (Background Subtracted)





Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1436
Retention Time (minutes): 5.440
Relative Retention Time : 0.00064
Quant Ion : 95.00
Area (flag) : 19857
On-Column Amount (ng) : 4.2190

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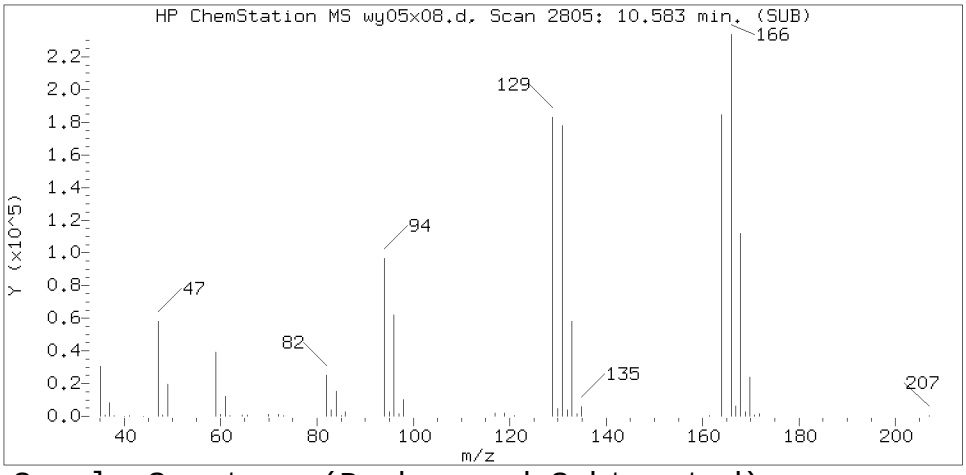
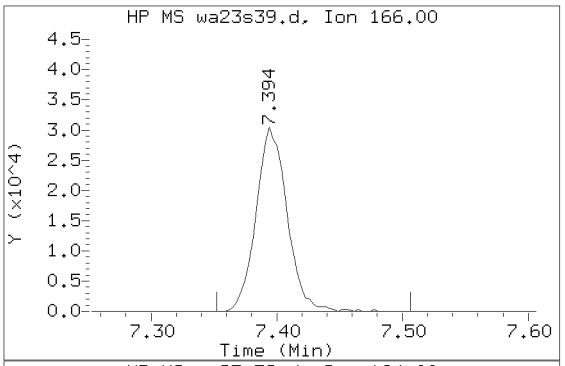
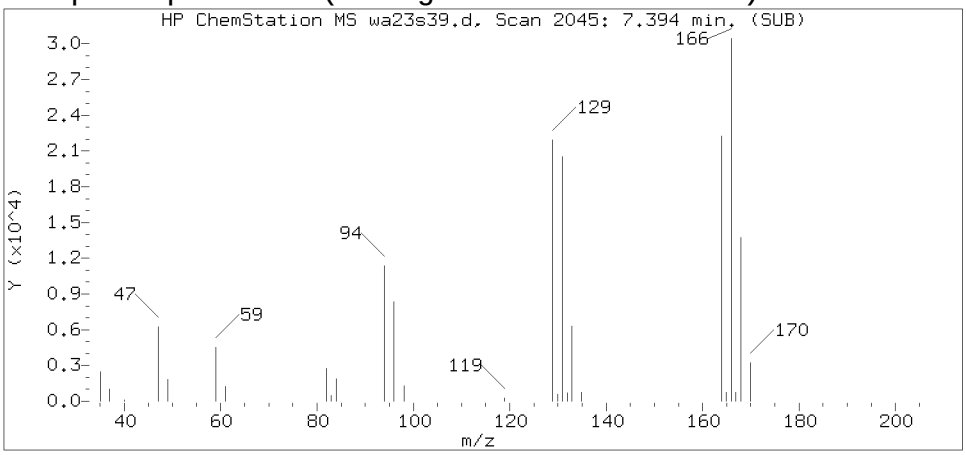
Target 3.5 esignature user ID: nsl01327

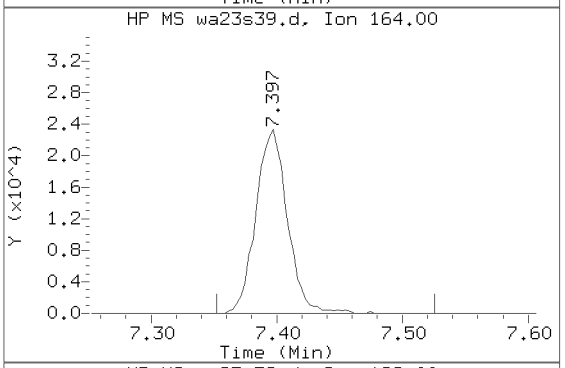
Reference Standard Spectrum for Tetrachloroethene

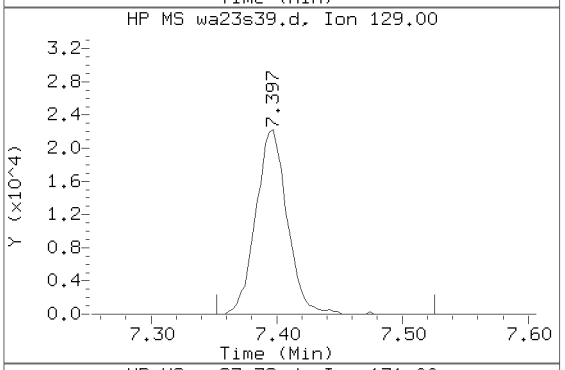




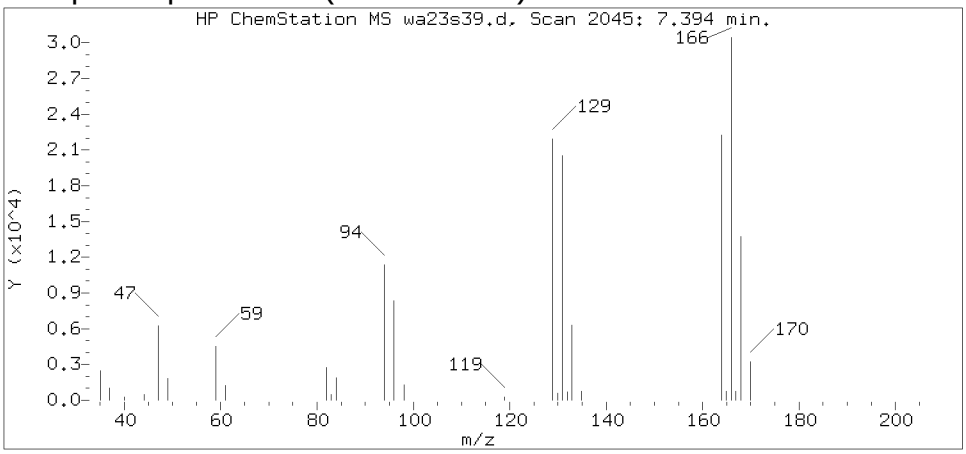
Sample Spectrum (Background Subtracted)

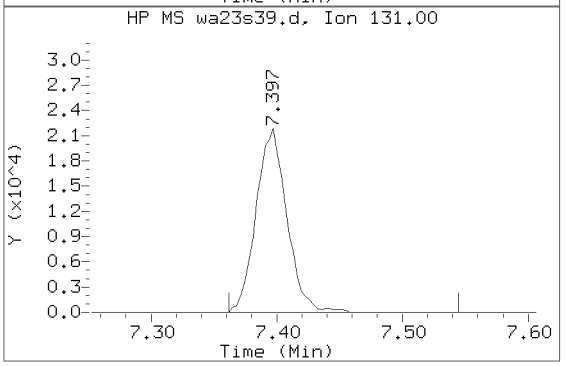






Sample Spectrum (Unaltered)





Data File: /chem2/HP09137.i/18apr23b.b/wa23s39.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:30 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 02:45 Automation

Sample Name: 99972 Lab Sample ID: 9560430

Compound Number : 93
Compound Name : Tetrachloroethene
Scan Number : 2045
Retention Time (minutes): 7.394
Relative Retention Time :-0.00000
Quant Ion : 166.00
Area (flag) : 52214
On-Column Amount (ng) : 10.5300

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99973 Lancaster Laboratories 9560431
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr24a.b/wa24s12.d Injection date and time: **24-APR-2018 14:39**
Data file Sample Info. Line: 99973;9560431;1;0;;AMW17;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 14:54 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.770(-0.006)	604	65	212537 (45)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	908955 (3)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	714384 (4)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	354869 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	202566	48.886	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(-0.001)	102	56573	51.998	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	891329	48.662	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	329200	47.584	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Kevin Kelly on 04/24/2018 at 16:31. Target 3.5 esignature user ID: kk10002

99973 Lancaster Laboratories 9560431
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr24a.b/wa24s12.d Injection date and time: **24-APR-2018 14:39**
Data file Sample Info. Line: 99973;9560431;1;0;;AMW17;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 14:54 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

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

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

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

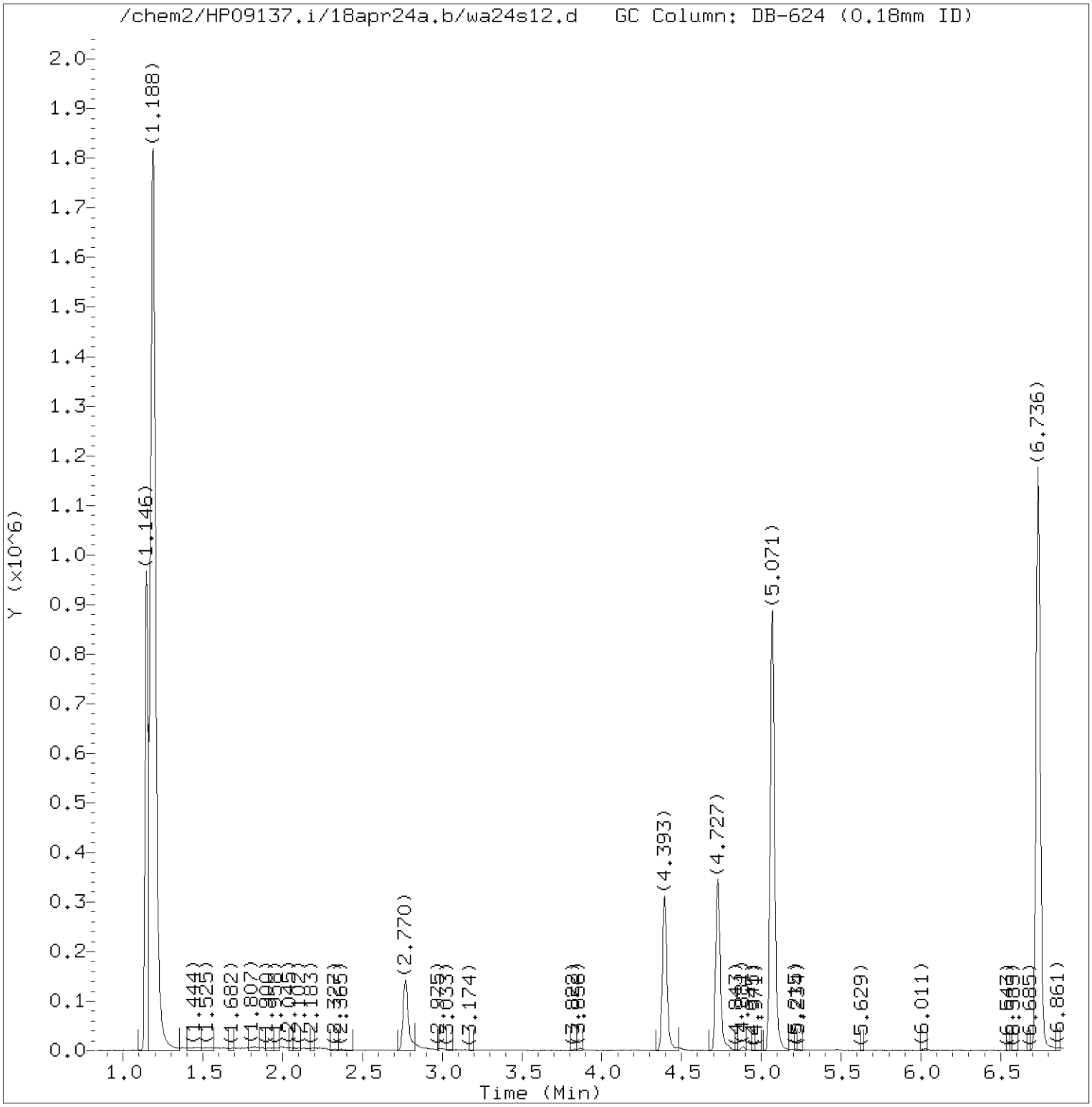
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Kevin Kelly on 04/24/2018 at 16:31. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

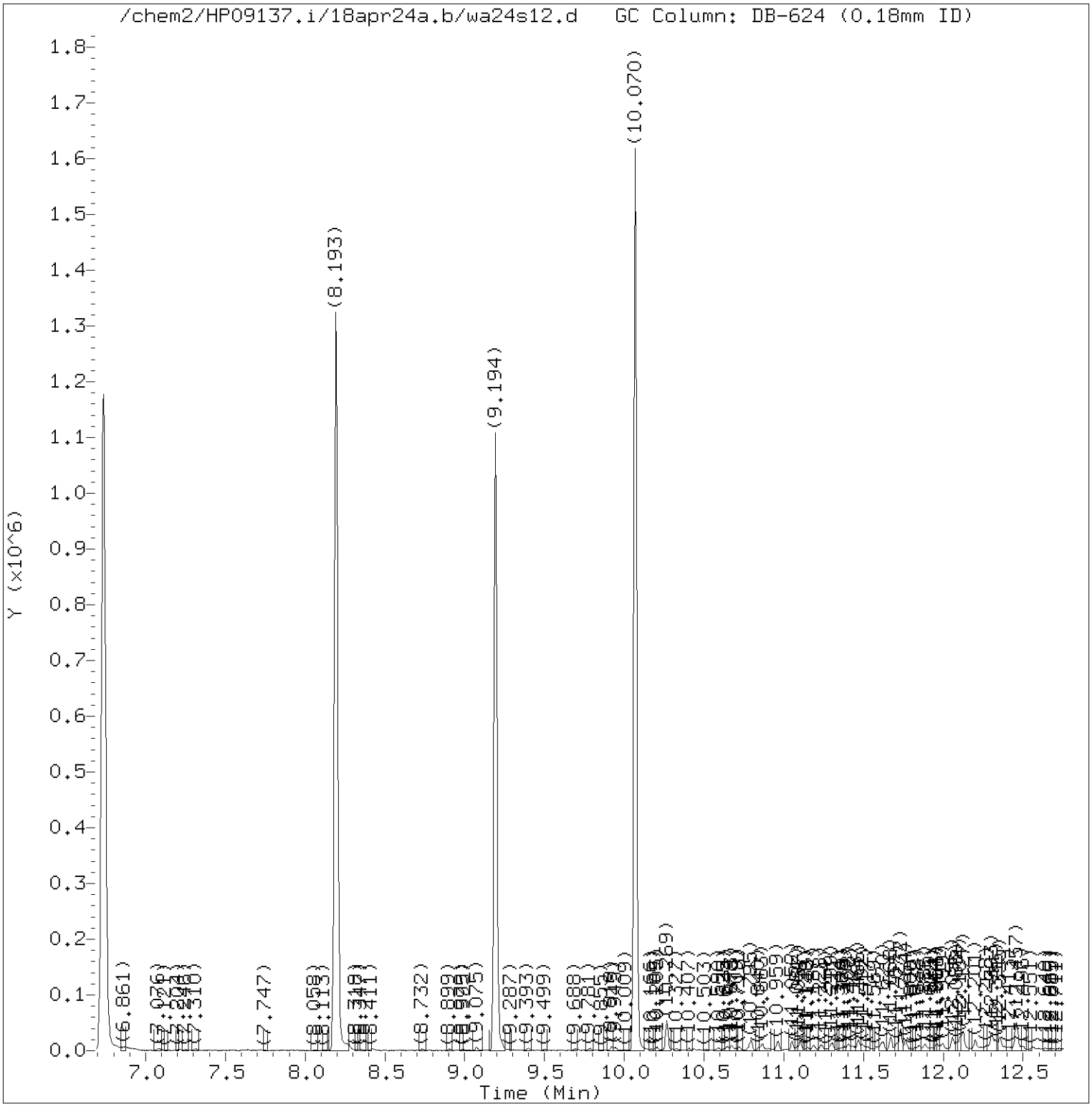
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24s12.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 14:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 10438
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 14:54 Automation

Sample Name: 99973 Lab Sample ID: 9560431

Digitally signed by Kevin Kelly
on 04/24/2018 at 16:31.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24s12.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 14:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 10438
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 14:54 Automation

Sample Name: 99973 Lab Sample ID: 9560431

Digitally signed by Kevin Kelly
on 04/24/2018 at 16:31.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24s12.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 14:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 10438
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 14:54 Automation

Sample Name: 99973 Lab Sample ID: 9560431

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.770	65	212537	250.000
52)$Dibromofluoromethane	(2)	4.393	113	202566	48.886
57)$1,2-Dichloroethane-d4	(2)	4.727	102	56573	51.998
66)*Fluorobenzene	(2)	5.067	96	908955	50.000
83)$Toluene-d8	(3)	6.736	98	891329	48.662
100)*Chlorobenzene-d5	(3)	8.193	117	714384	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	329200	47.584
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	354869	50.000

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

Digitally signed by Kevin Kelly
on 04/24/2018 at 16:31.
Target 3.5 esignature user ID: kk10002

99974 Lancaster Laboratories 9560432
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s40.d Injection date and time: **24-APR-2018 02:54**
Data file Sample Info. Line: 99974;9560432;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:09 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.773(-0.009)	605	65	157816 (19)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	878354 (-1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	688374 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	346770 (-1)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	193134	48.234	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	54656	51.987	104%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	862627	48.874	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	318443	47.768	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s40.d Injection date and time: **24-APR-2018 02:54**
Data file Sample Info. Line: 99974;9560432;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:09 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

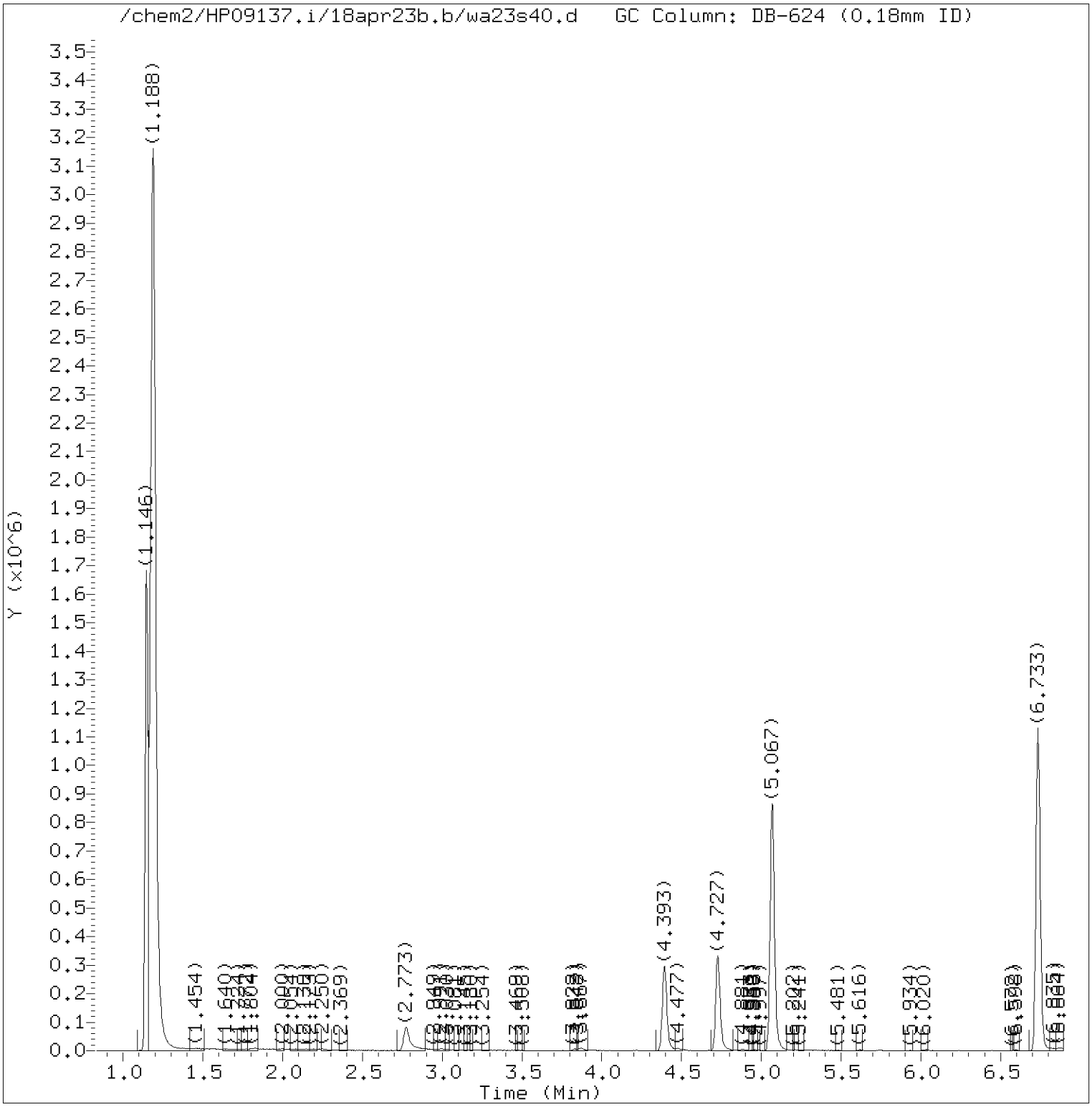
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

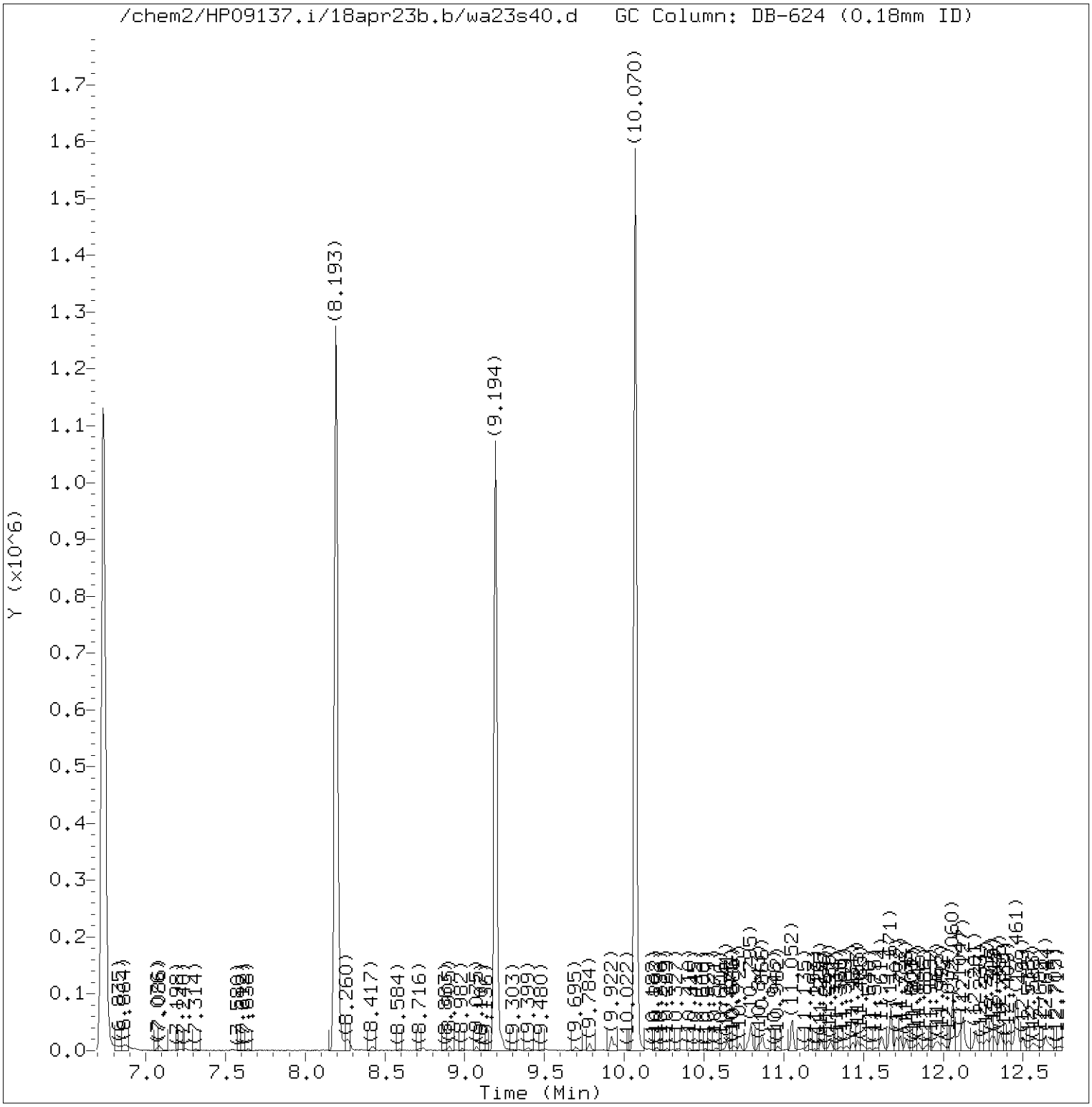
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s40.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:54 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:09 Automation

Sample Name: 99974 Lab Sample ID: 9560432

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s40.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:54 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:09 Automation

Sample Name: 99974 Lab Sample ID: 9560432

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s40.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 02:54 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:09 Automation

Sample Name: 99974 Lab Sample ID: 9560432

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.773	65	157816	250.000
52)$Dibromofluoromethane	(2)	4.393	113	193134	48.234
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54656	51.987
66)*Fluorobenzene	(2)	5.067	96	878354	50.000
83)$Toluene-d8	(3)	6.733	98	862627	48.874
100)*Chlorobenzene-d5	(3)	8.193	117	688374	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	318443	47.768
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	346770	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99975 Lancaster Laboratories 9560433
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s41.d Injection date and time: **24-APR-2018 03:18**
Data file Sample Info. Line: 99975;9560433;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:33 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.776(-0.013)	606	65	175398 (32)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	874439 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	682214 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	339756 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394(0.000)	113	191176	47.959	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	54670	52.233	104%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	871635	49.831	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	314704	47.633	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s41.d Injection date and time: **24-APR-2018 03:18**
Data file Sample Info. Line: 99975;9560433;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:33 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

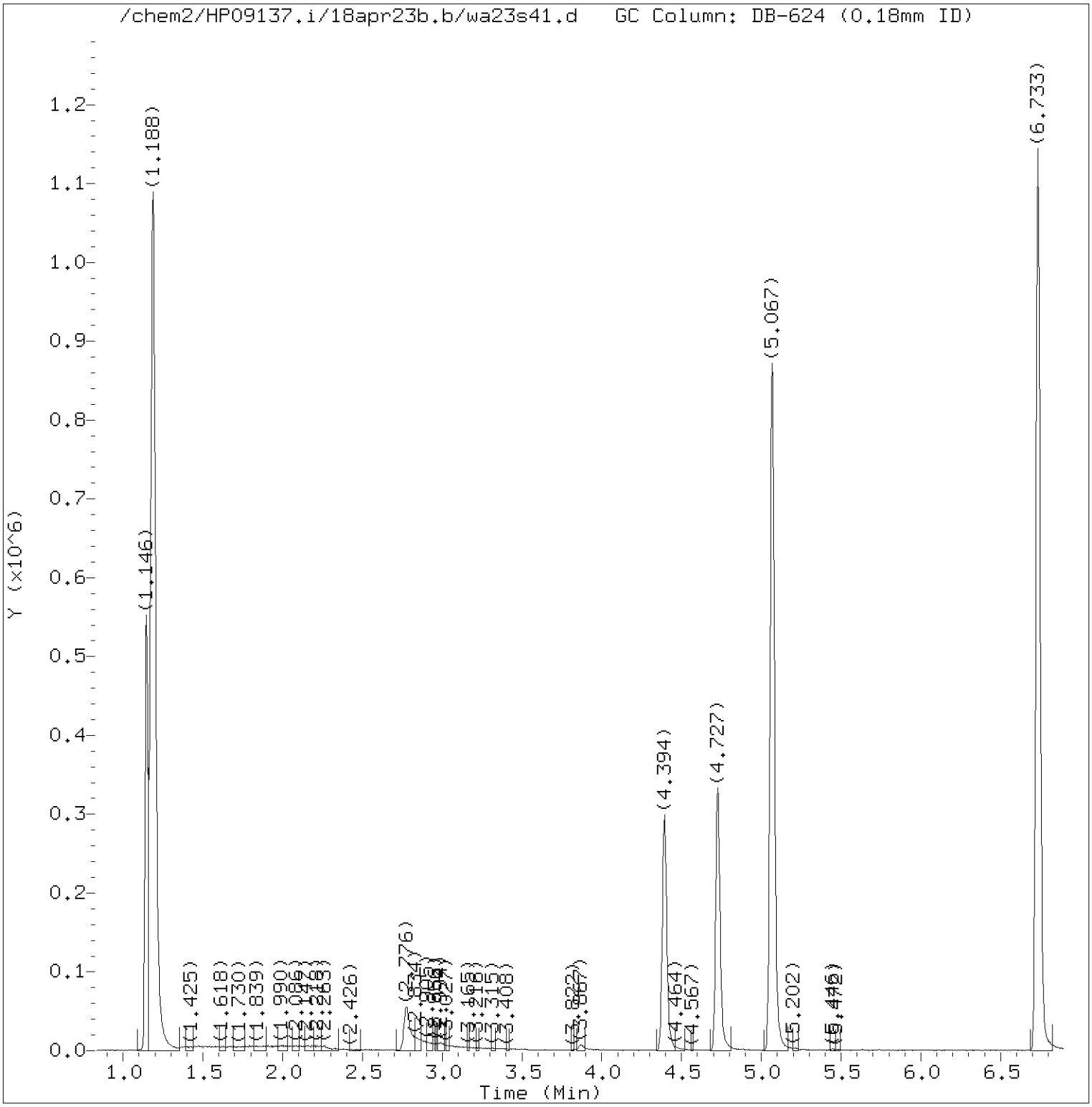
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

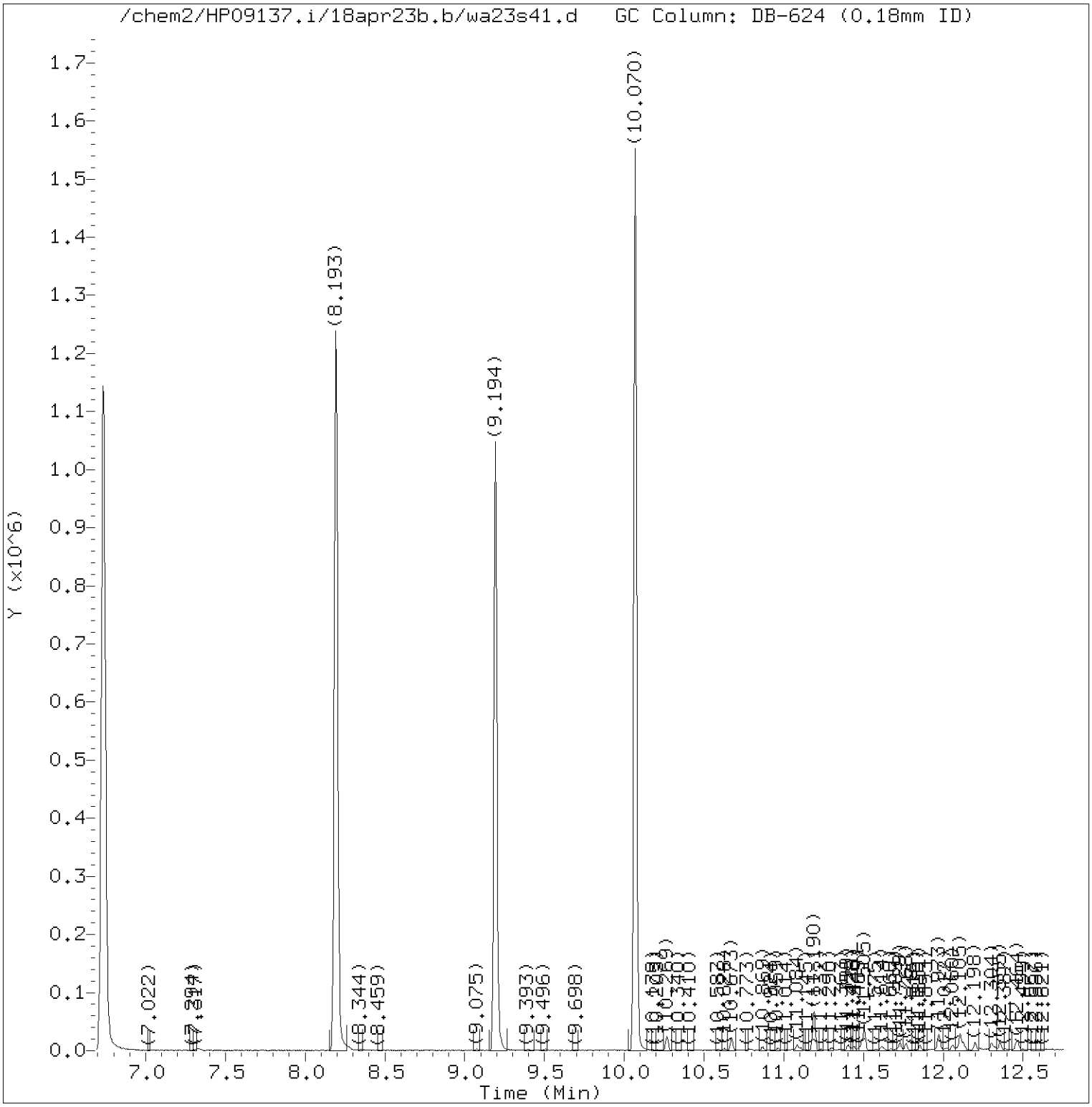
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s41.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:18 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:33 Automation

Sample Name: 99975 Lab Sample ID: 9560433

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s41.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:18 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:33 Automation

Sample Name: 99975 Lab Sample ID: 9560433

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s41.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:18 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:33 Automation

Sample Name: 99975 Lab Sample ID: 9560433

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.776	65	175398	250.000
52)$Dibromofluoromethane	(2)	4.394	113	191176	47.959
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54670	52.233
66)*Fluorobenzene	(2)	5.067	96	874439	50.000
83)$Toluene-d8	(3)	6.733	98	871635	49.831
100)*Chlorobenzene-d5	(3)	8.193	117	682214	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	314704	47.633
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	339756	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99976 Lancaster Laboratories 9560434
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s32.d Injection date and time: **23-APR-2018 23:44**
Data file Sample Info. Line: 99976;9560434;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:59 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.789(-0.026)	610	65	179423 (35)	250.00	
66) Fluorobenzene	5.071(-0.003)	1321	96	894537 (1)	50.00	
100) Chlorobenzene-d5	8.196(-0.003)	2295	117	698143 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	350135 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394	(0.001)	113	196457	48.176	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727	(0.001)	102	55891	52.200	104%		80 - 120
83) Toluene-d8	(3)	6.736	(0.000)	98	884042	49.387	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194	(0.000)	95	320498	47.403	95%		80 - 120

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)				Not Detected					0.5	1
6) Vinyl Chloride	(2)				Not Detected					0.5	1
8) Bromomethane	(2)				Not Detected					0.5	1
9) Chloroethane	(2)				Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)				Not Detected					0.5	1
18) Acetone	(1)				Not Detected					6	20
23) Carbon Disulfide	(2)				Not Detected					1	5
28) Methylene Chloride	(2)				Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)				Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)				Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)				Not Detected					0.5	1
44) 2-Butanone	(2)				Not Detected					3	10
51) Chloroform	(2)				Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)				Not Detected					0.5	1
56) Carbon Tetrachloride	(2)				Not Detected					0.5	1
60) Benzene	(2)				Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)				Not Detected					0.5	1
71) Trichloroethene	(2)				Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)				Not Detected					0.5	1
78) Bromodichloromethane	(2)				Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)				Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)				Not Detected					3	10
88) Toluene	(3)				Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)				Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)				Not Detected					0.5	1
93) Tetrachloroethene	(3)				Not Detected					0.5	1
96) 2-Hexanone	(3)				Not Detected					3	10
97) Dibromochloromethane	(3)				Not Detected					0.5	1
102) Chlorobenzene	(3)				Not Detected					0.5	1
104) Ethylbenzene	(3)				Not Detected					0.5	1
106) m+p-Xylene	(3)				Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s32.d Injection date and time: **23-APR-2018 23:44**
Data file Sample Info. Line: 99976;9560434;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:59 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

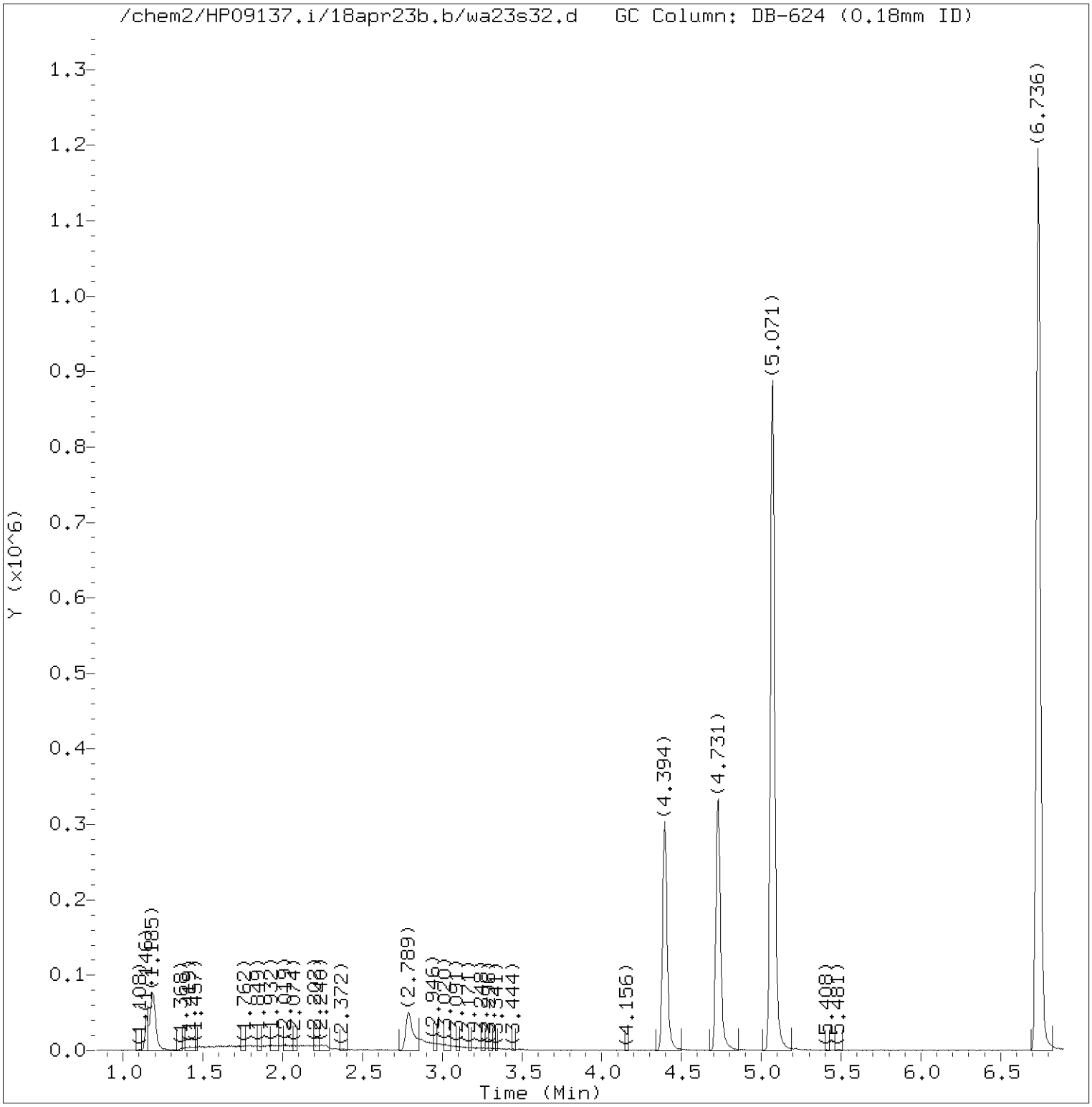
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

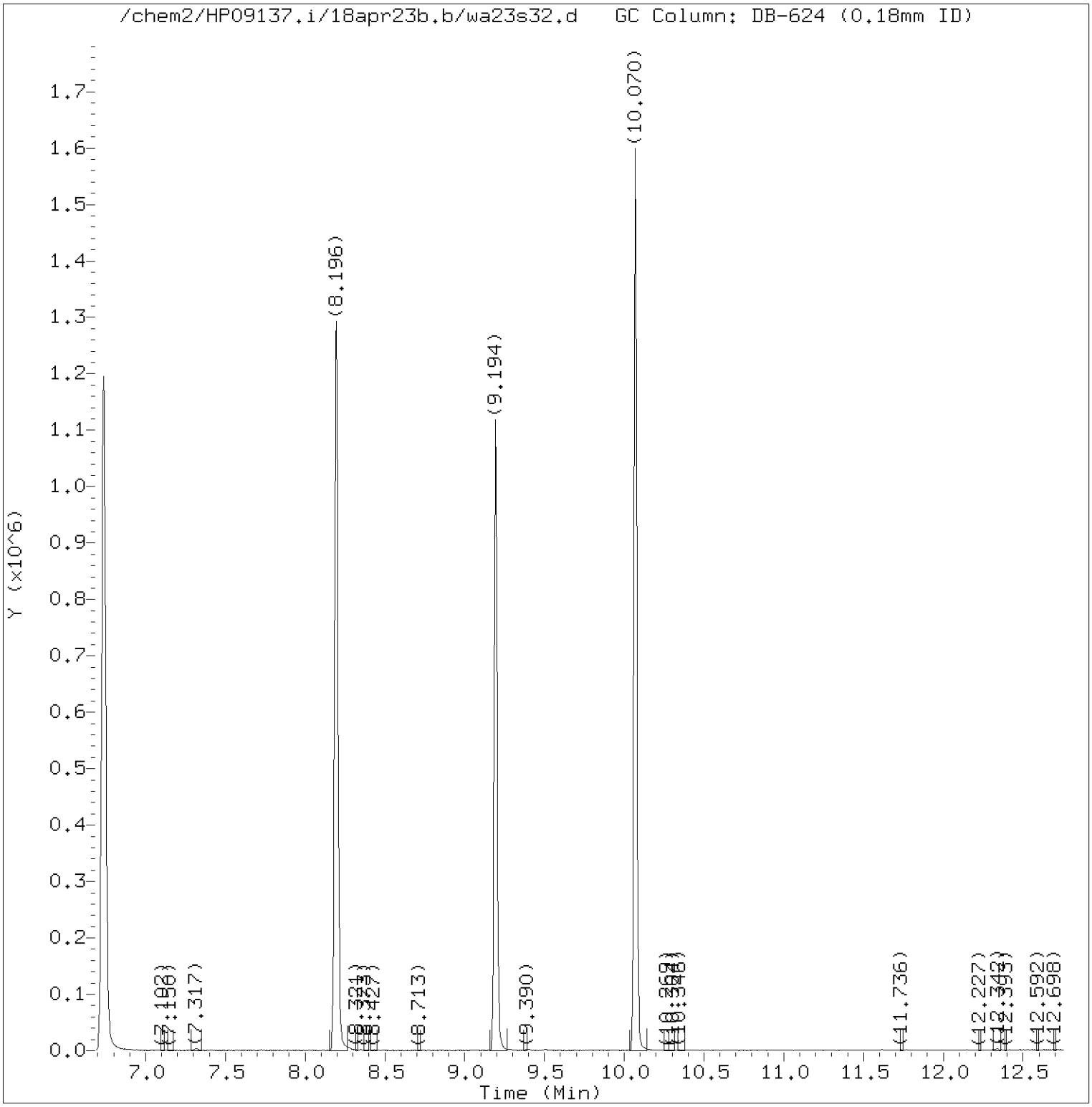
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s32.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:44 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:59 Automation

Sample Name: 99976 Lab Sample ID: 9560434

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s32.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:44 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:59 Automation

Sample Name: 99976 Lab Sample ID: 9560434

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s32.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:44 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:59 Automation

Sample Name: 99976 Lab Sample ID: 9560434

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.789	65	179423	250.000
52)$Dibromofluoromethane	(2)	4.394	113	196457	48.176
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55891	52.200
66)*Fluorobenzene	(2)	5.071	96	894537	50.000
83)$Toluene-d8	(3)	6.736	98	884042	49.387
100)*Chlorobenzene-d5	(3)	8.196	117	698143	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	320498	47.403
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	350135	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

99977 Lancaster Laboratories 9560435
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s42.d Injection date and time: **24-APR-2018 03:41**
Data file Sample Info. Line: 99977;9560435;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:57 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.763(0.000)	602	65	172162 (30)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	873677 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	682975 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	339584 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	192214	48.261	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	53246	50.917	102%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	870819	49.728	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	312220	47.205	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s42.d Injection date and time: **24-APR-2018 03:41**
Data file Sample Info. Line: 99977;9560435;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 03:57 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

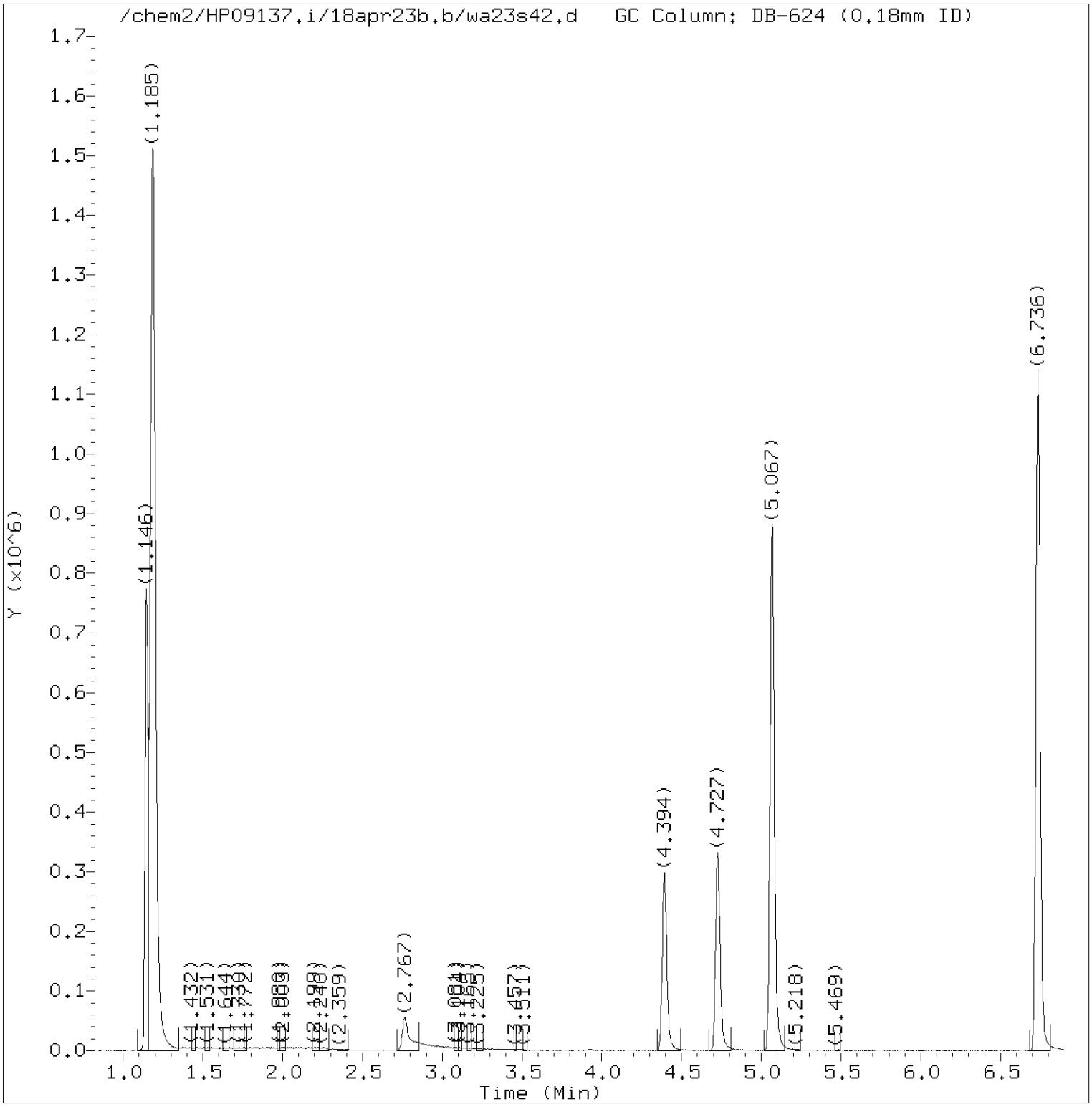
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

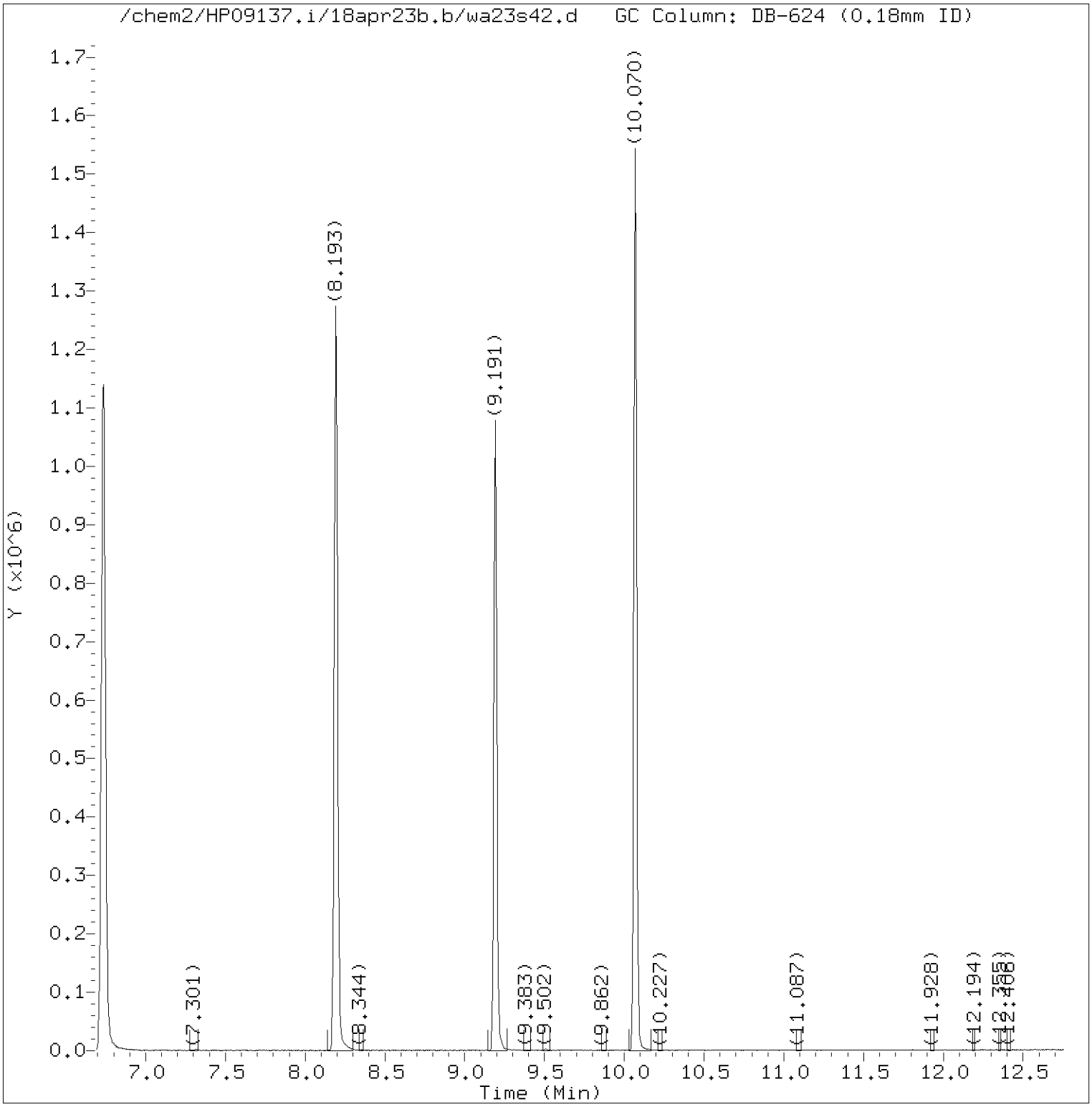
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s42.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:41 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:57 Automation

Sample Name: 99977 Lab Sample ID: 9560435

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s42.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:41 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:57 Automation

Sample Name: 99977 Lab Sample ID: 9560435

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s42.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 03:41 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 03:57 Automation

Sample Name: 99977 Lab Sample ID: 9560435

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.763	65	172162	250.000
52)$Dibromofluoromethane	(2)	4.390	113	192214	48.261
57)$1,2-Dichloroethane-d4	(2)	4.727	102	53246	50.917
66)*Fluorobenzene	(2)	5.067	96	873677	50.000
83)$Toluene-d8	(3)	6.736	98	870819	49.728
100)*Chlorobenzene-d5	(3)	8.193	117	682975	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	312220	47.205
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	339584	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99978 Lancaster Laboratories 9560436
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s43.d Injection date and time: **24-APR-2018 04:05**
Data file Sample Info. Line: 99978;9560436;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 04:20 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.766(-0.003)	603	65	187401 (41)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	871198 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	691269 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.067(0.003)	2878	152	342747 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	192751	48.534	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	55353	53.082	106%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	861962	48.632	97%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	316440	47.269	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s43.d Injection date and time: **24-APR-2018 04:05**
Data file Sample Info. Line: 99978;9560436;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 04:20 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

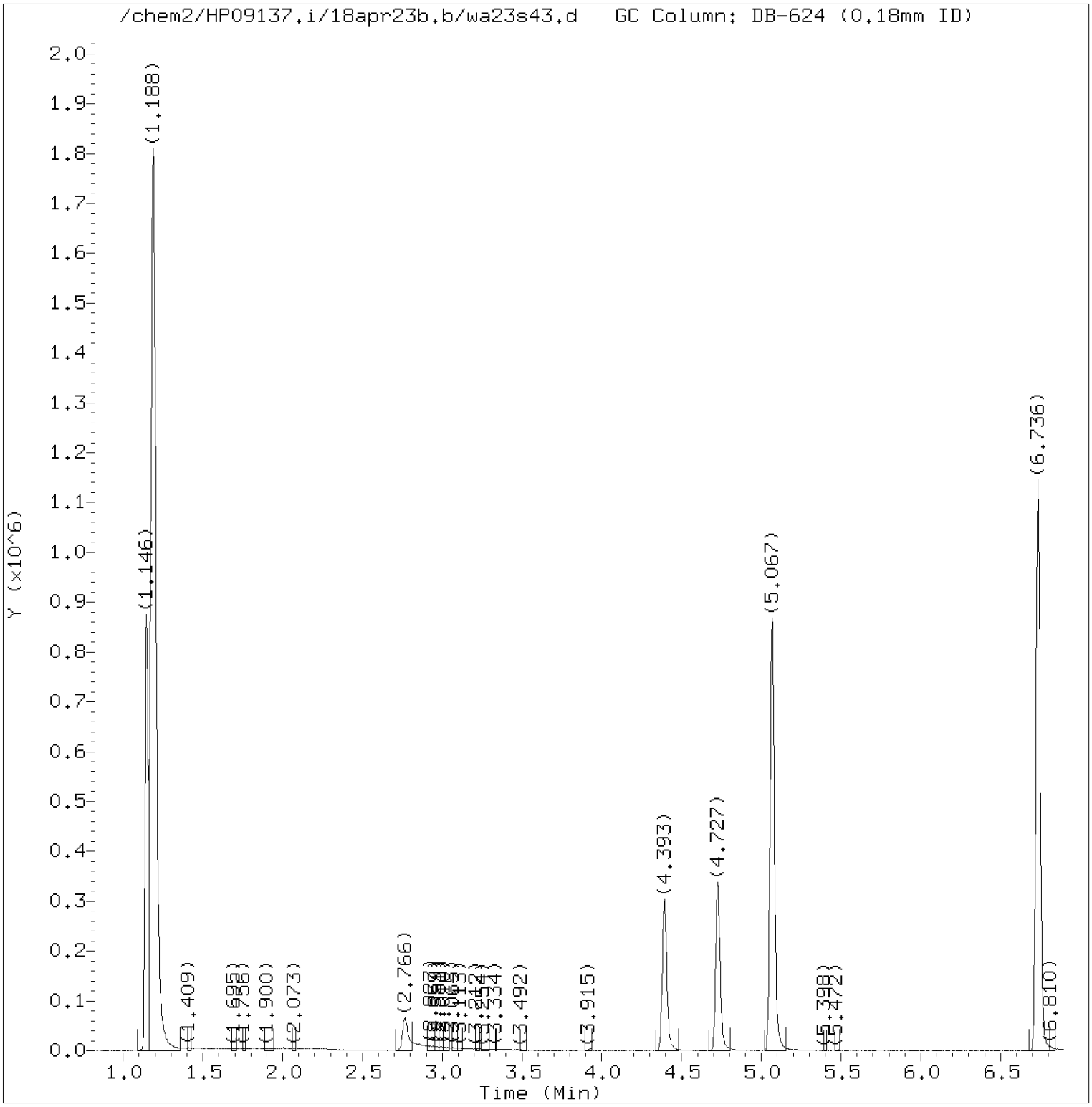
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

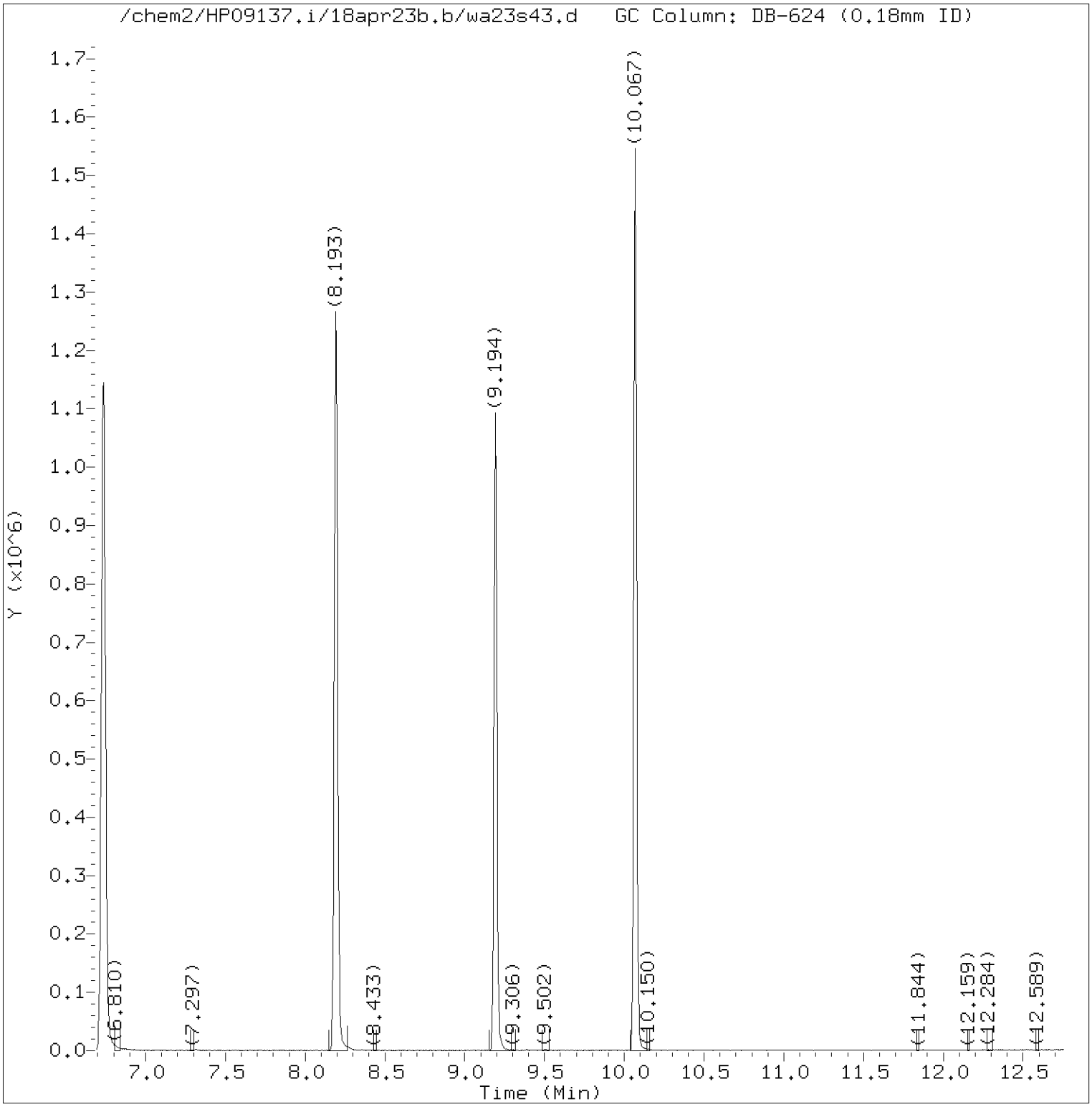
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s43.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:05 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:20 Automation

Sample Name: 99978 Lab Sample ID: 9560436

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s43.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:05 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:20 Automation

Sample Name: 99978 Lab Sample ID: 9560436

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s43.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:05 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:20 Automation

Sample Name: 99978 Lab Sample ID: 9560436

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.766	65	187401	250.000
52)$Dibromofluoromethane	(2)	4.393	113	192751	48.534
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55353	53.082
66)*Fluorobenzene	(2)	5.067	96	871198	50.000
83)$Toluene-d8	(3)	6.736	98	861962	48.632
100)*Chlorobenzene-d5	(3)	8.193	117	691269	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	316440	47.269
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	342747	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99979 Lancaster Laboratories 9560437
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s44.d Injection date and time: **24-APR-2018 04:29**
Data file Sample Info. Line: 99979;9560437;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.767(-0.003)	603	65	170979 (29)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	872319 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	690194 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	339608 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	194669	48.954	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	55070	52.743	105%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	866924	48.988	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	315749	47.239	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)	8.218(-0.000)	112	90489	6.552	6.55			0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s44.d Injection date and time: **24-APR-2018 04:29**
Data file Sample Info. Line: 99979;9560437;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

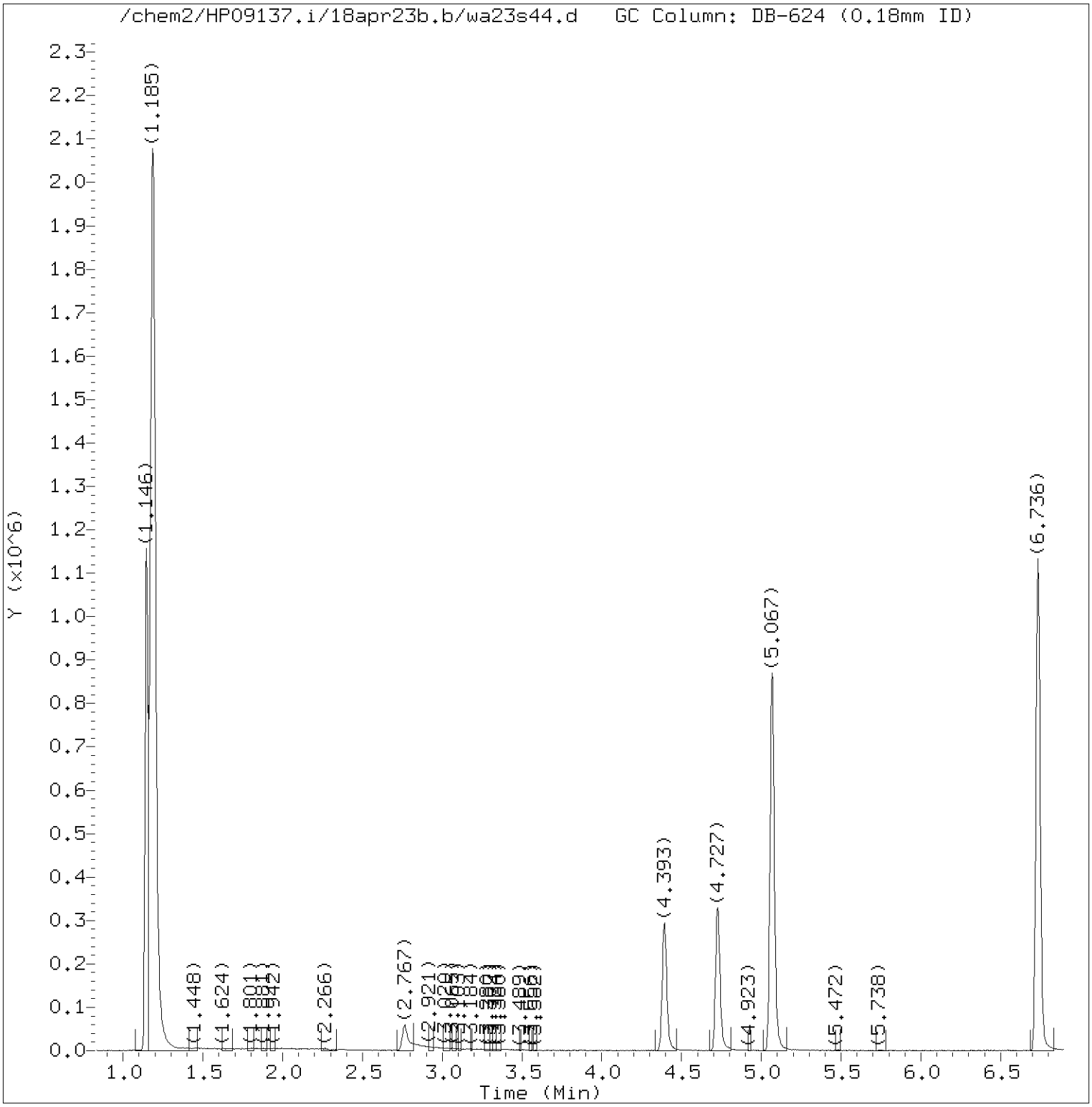
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

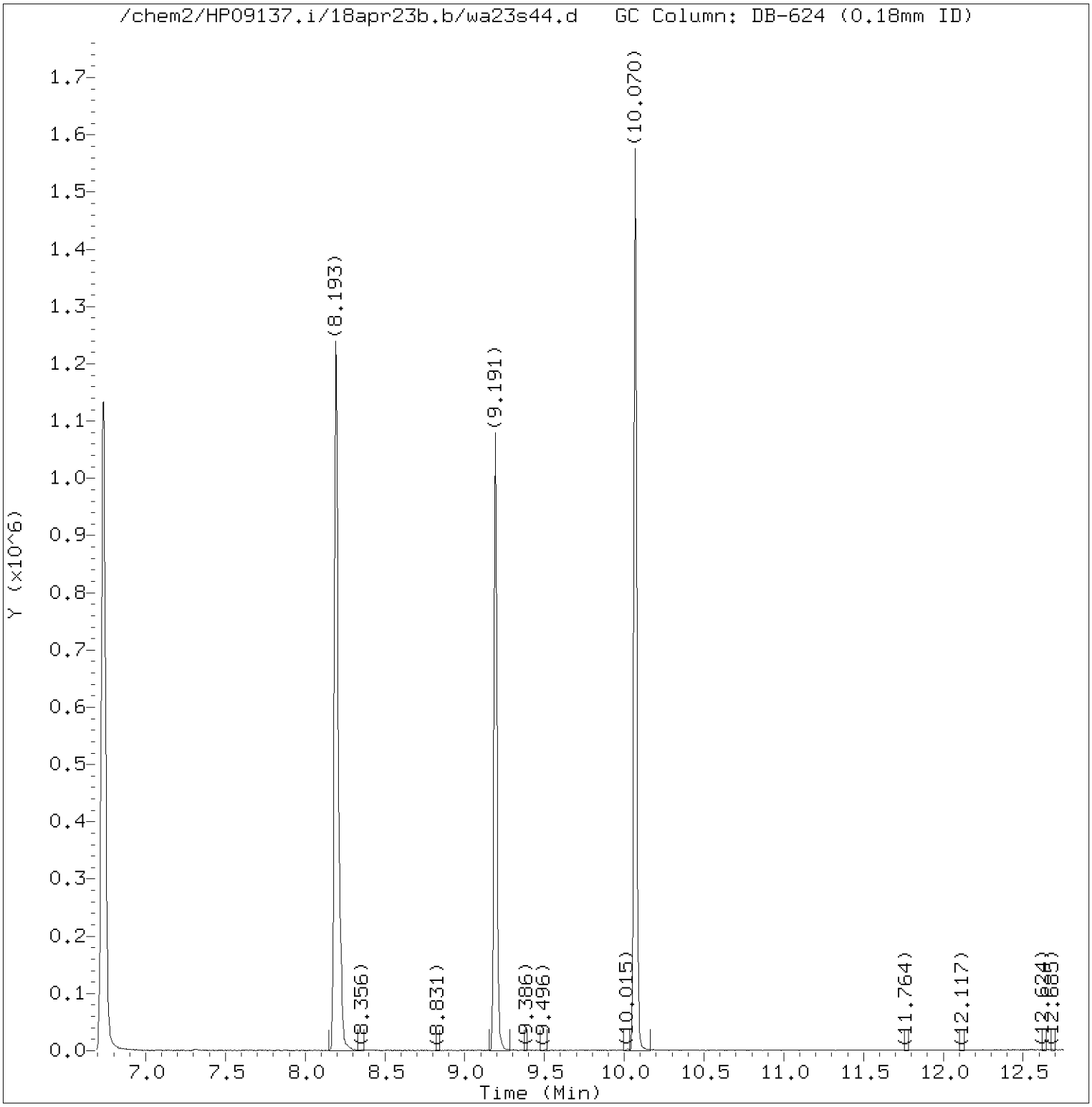
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s44.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:29 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Sample Name: 99979 Lab Sample ID: 9560437

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s44.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:29 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Sample Name: 99979 Lab Sample ID: 9560437

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s44.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:29 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Sample Name: 99979 Lab Sample ID: 9560437

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.767	65	170979	250.000
52)$Dibromofluoromethane	(2)	4.390	113	194669	48.954
57)$1,2-Dichloroethane-d4	(2)	4.727	102	55070	52.743
66)*Fluorobenzene	(2)	5.067	96	872319	50.000
83)$Toluene-d8	(3)	6.736	98	866924	48.988
100)*Chlorobenzene-d5	(3)	8.193	117	690194	50.000
102) Chlorobenzene	(3)	8.218	112	90489	6.552
114)$4-Bromofluorobenzene	(3)	9.191	95	315749	47.239
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	339608	50.000

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

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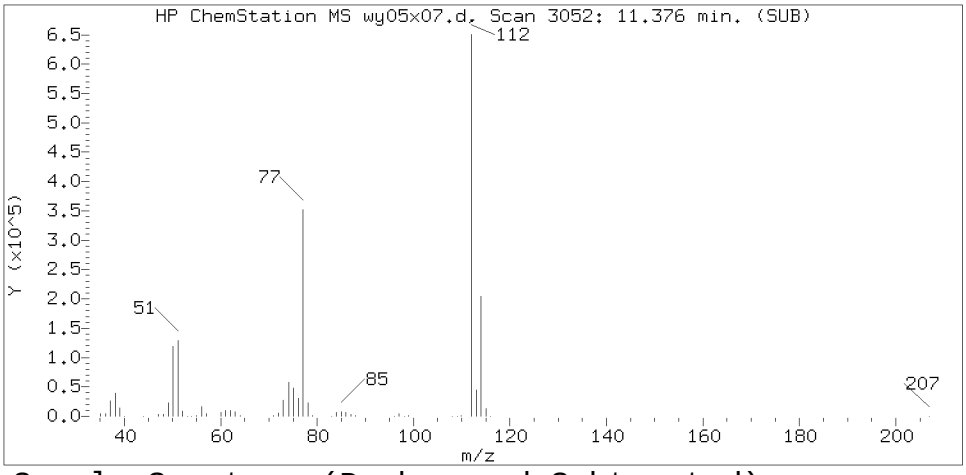
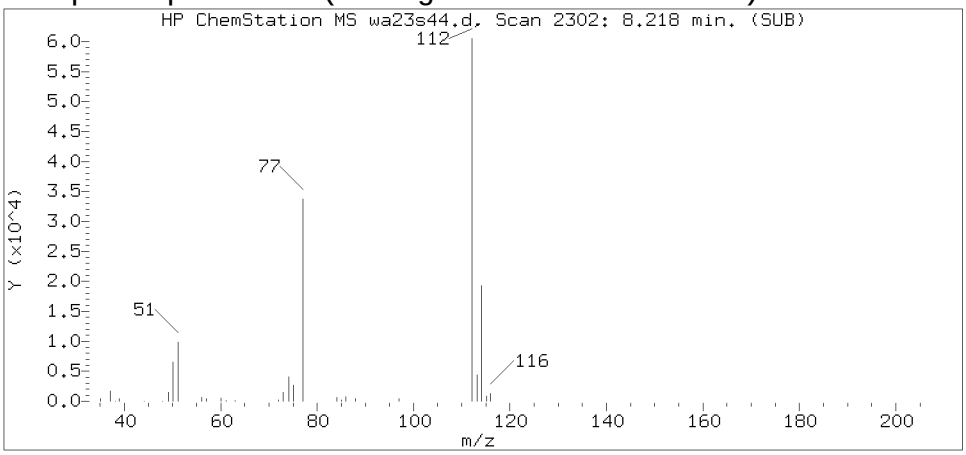
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

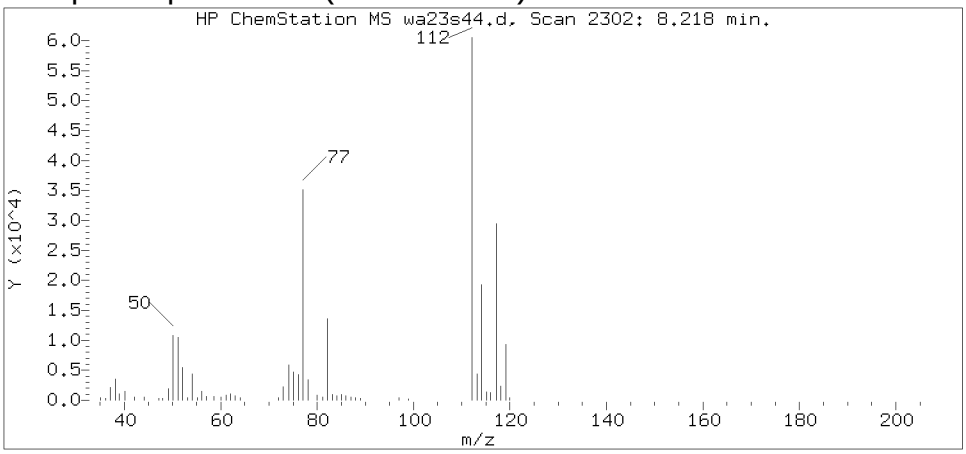
Reference Standard Spectrum for Chlorobenzene

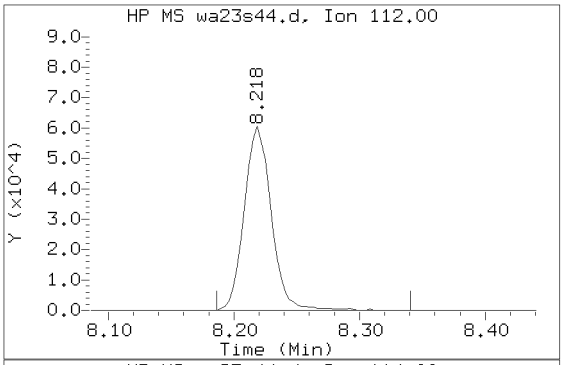


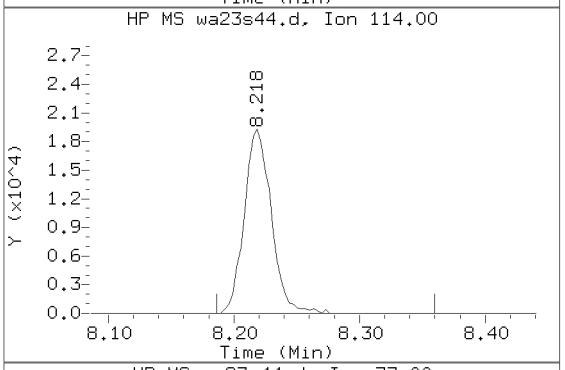
Sample Spectrum (Background Subtracted)

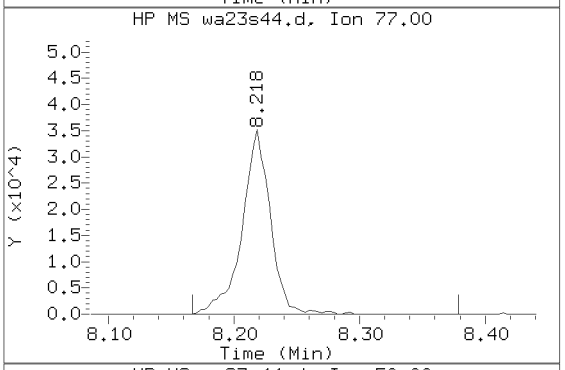


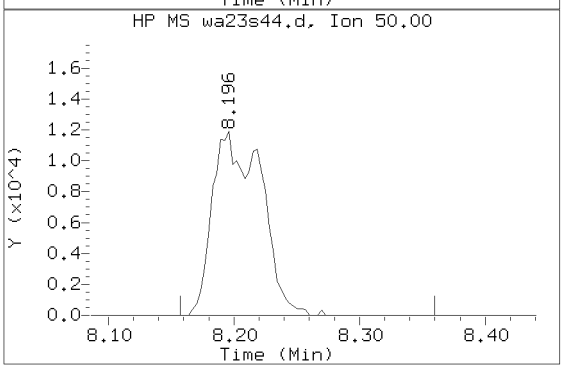
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s44.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:29 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 04:44 Automation

Sample Name: 99979 Lab Sample ID: 9560437

Compound Number : 102
Compound Name : Chlorobenzene
Scan Number : 2302
Retention Time (minutes): 8.218
Relative Retention Time :-0.00000
Quant Ion : 112.00
Area (flag) : 90489
On-Column Amount (ng) : 6.5522

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99980 Lancaster Laboratories 9560438
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s45.d Injection date and time: **24-APR-2018 04:53**
Data file Sample Info. Line: 99980;9560438;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:08 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.763(0.000)	602	65	176799 (33)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	871699 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	681158 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	342891 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394(0.000)	113	190925	48.046	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.731(-0.001)	102	54503	52.236	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	852821	48.831	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	313025	47.453	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s45.d Injection date and time: **24-APR-2018 04:53**
Data file Sample Info. Line: 99980;9560438;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:08 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

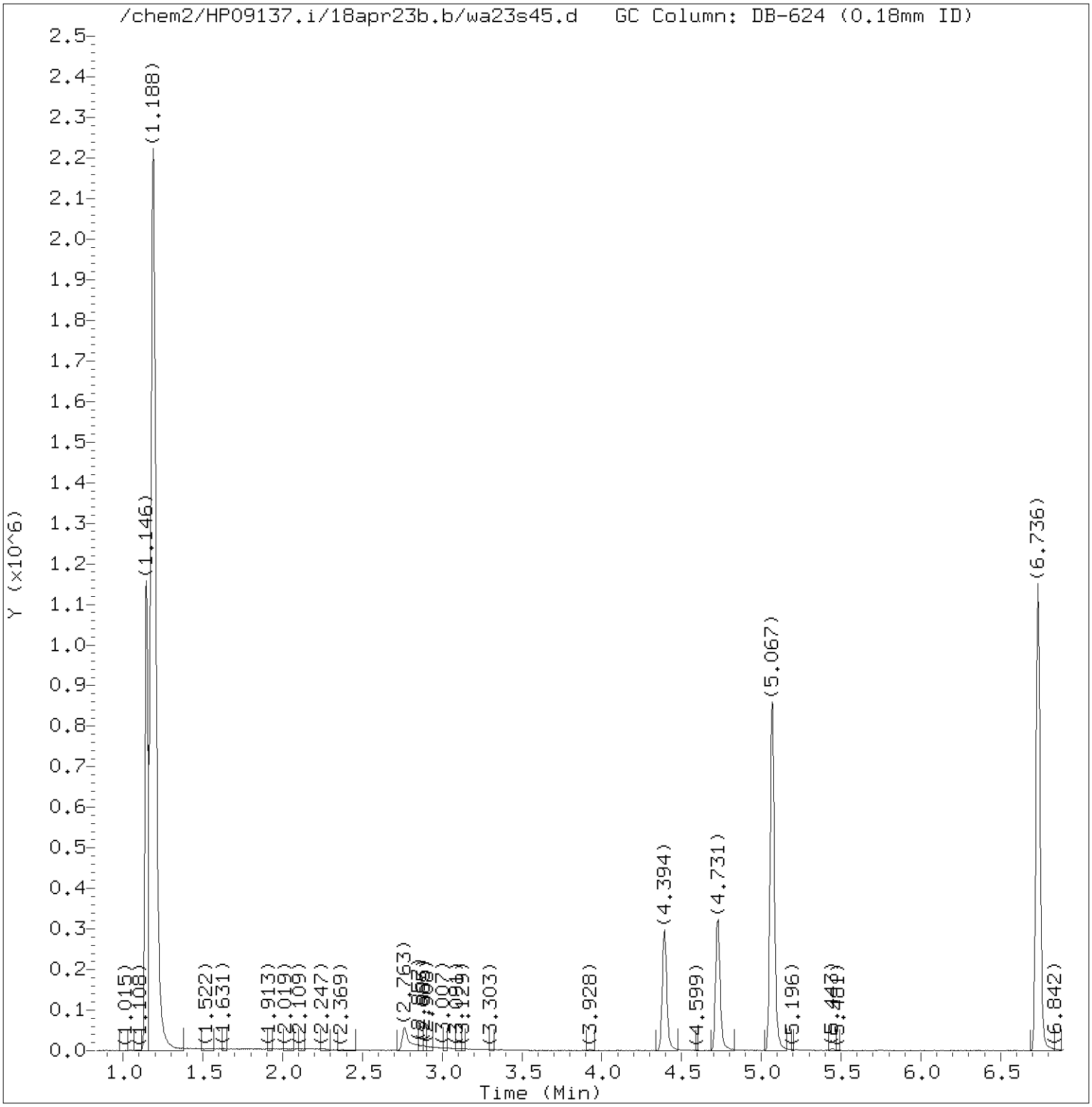
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

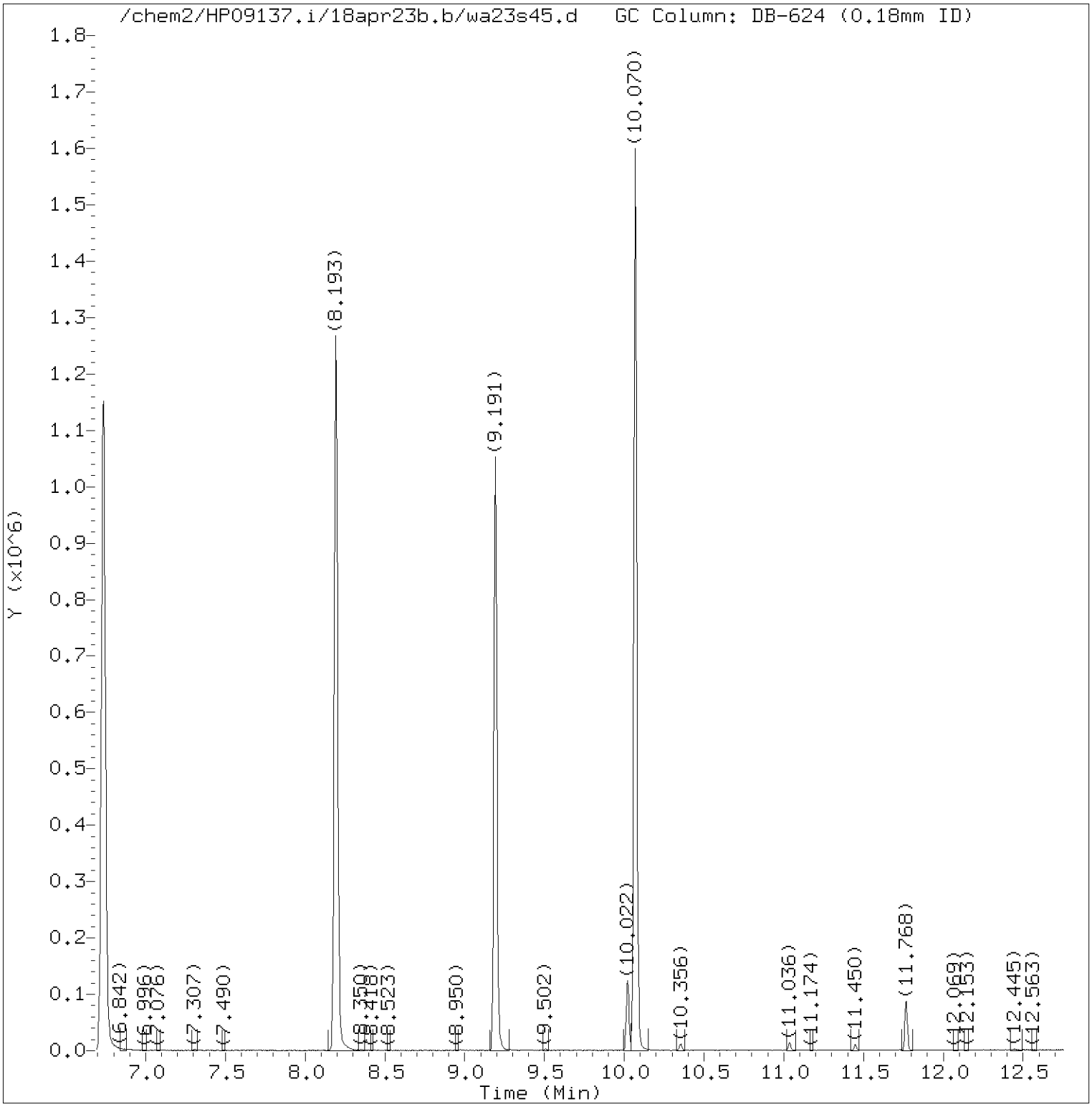
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s45.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:53 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:08 Automation

Sample Name: 99980 Lab Sample ID: 9560438

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s45.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:53 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:08 Automation

Sample Name: 99980 Lab Sample ID: 9560438

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s45.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 04:53 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:08 Automation

Sample Name: 99980 Lab Sample ID: 9560438

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.763	65	176799	250.000
52)$Dibromofluoromethane	(2)	4.394	113	190925	48.046
57)$1,2-Dichloroethane-d4	(2)	4.731	102	54503	52.236
66)*Fluorobenzene	(2)	5.067	96	871699	50.000
83)$Toluene-d8	(3)	6.736	98	852821	48.831
100)*Chlorobenzene-d5	(3)	8.193	117	681158	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	313025	47.453
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	342891	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

99981 Lancaster Laboratories 9560439
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s46.d Injection date and time: **24-APR-2018 05:16**
Data file Sample Info. Line: 99981;9560439;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.763(0.000)	602	65	165818 (25)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	867869 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	680839 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	10.067(0.003)	2878	152	336691 (-4)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394(0.000)	113	189866	47.991	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.730(-0.001)	102	55419	53.349	107%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	863020	49.438	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	313119	47.489	95%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)	8.218(-0.000)	112	45706	3.355	3.36			0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s46.d Injection date and time: **24-APR-2018 05:16**
Data file Sample Info. Line: 99981;9560439;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

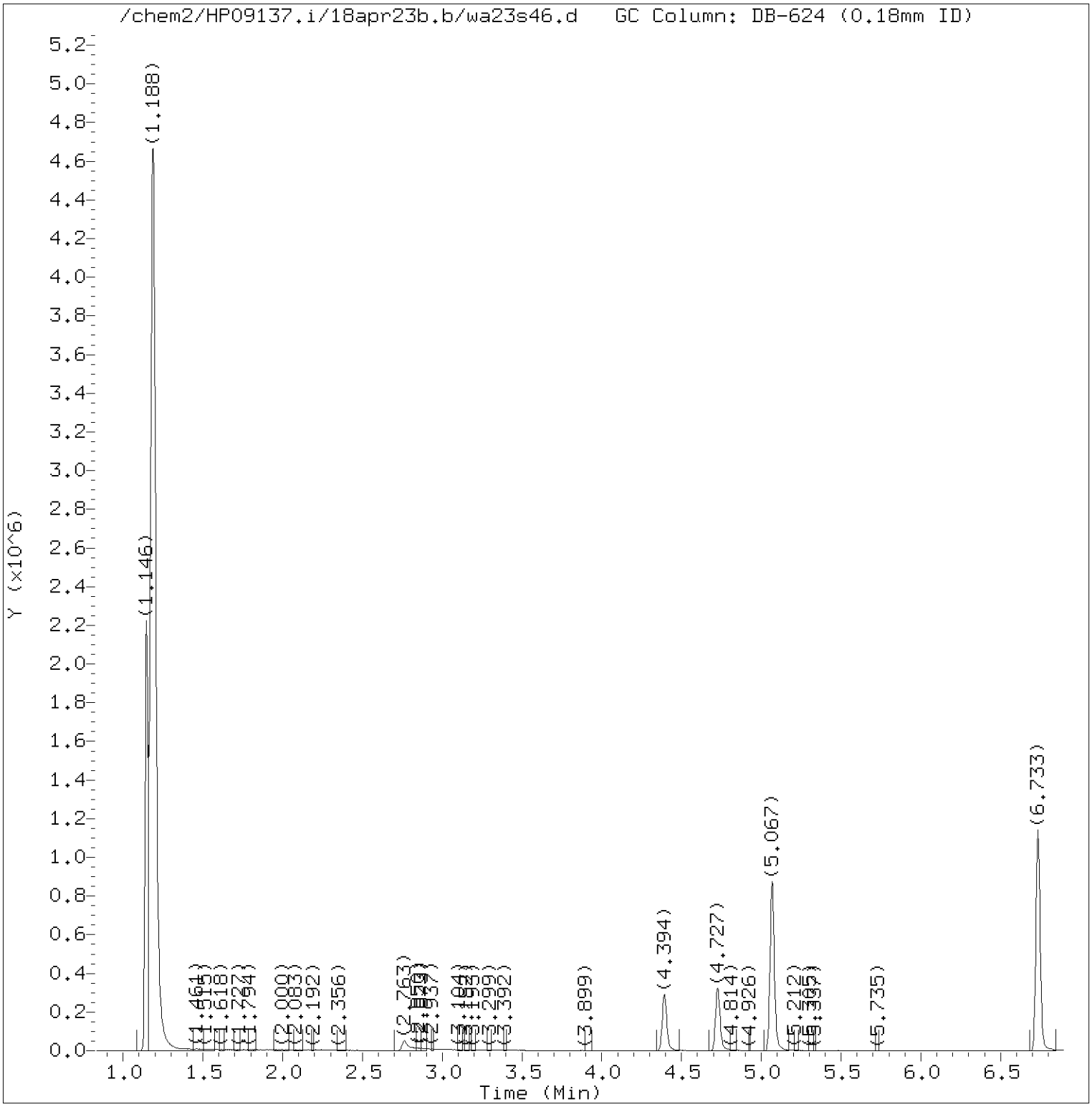
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:02. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

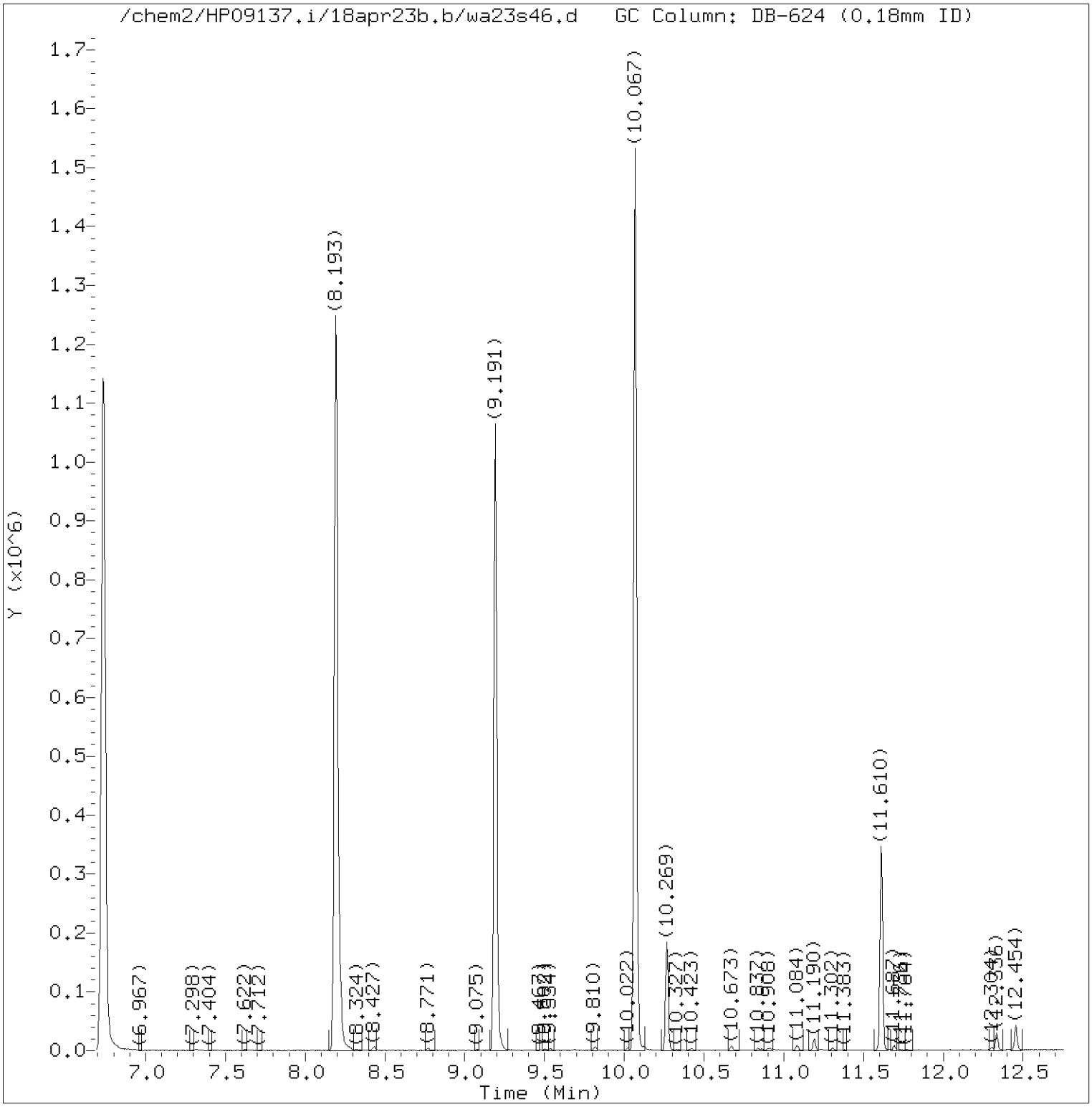
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s46.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:16 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Sample Name: 99981 Lab Sample ID: 9560439

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s46.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:16 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Sample Name: 99981 Lab Sample ID: 9560439

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on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s46.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:16 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Sample Name: 99981 Lab Sample ID: 9560439

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.763	65	165818	250.000
52)$Dibromofluoromethane	(2)	4.394	113	189866	47.991
57)$1,2-Dichloroethane-d4	(2)	4.730	102	55419	53.349
66)*Fluorobenzene	(2)	5.067	96	867869	50.000
83)$Toluene-d8	(3)	6.733	98	863020	49.438
100)*Chlorobenzene-d5	(3)	8.193	117	680839	50.000
102) Chlorobenzene	(3)	8.219	112	45706	3.355
114)$4-Bromofluorobenzene	(3)	9.191	95	313119	47.489
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	336691	50.000

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

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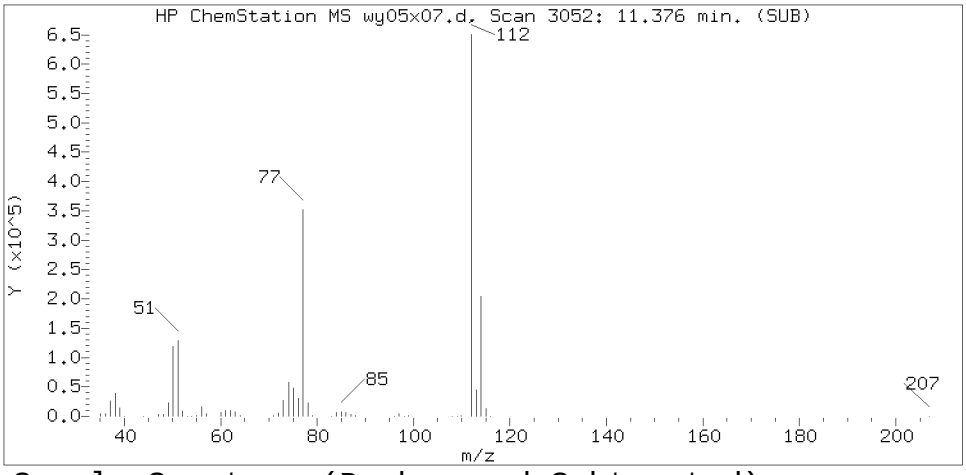
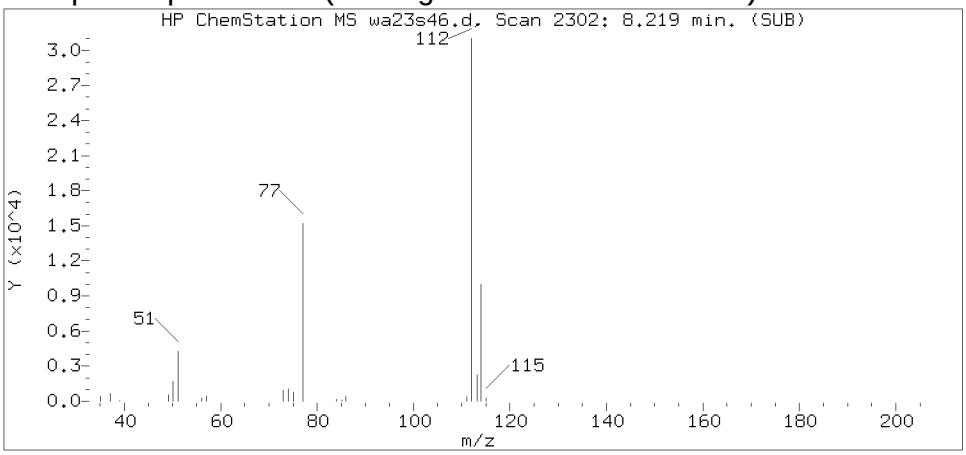
on 04/24/2018 at 08:02.
Target 3.5 esignature user ID: nsl01327

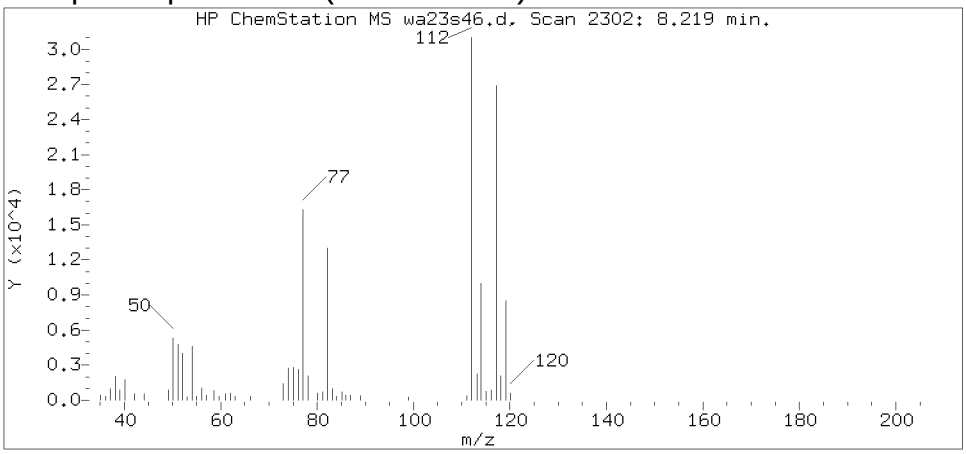
Reference Standard Spectrum for Chlorobenzene

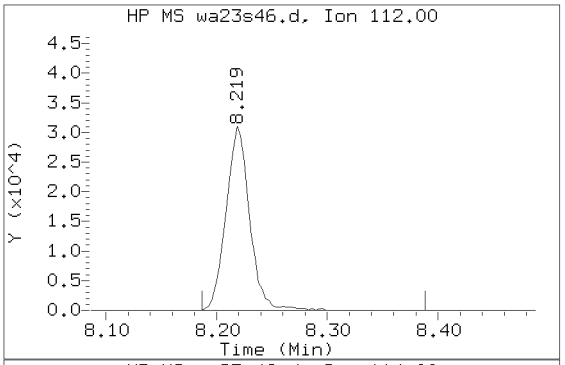


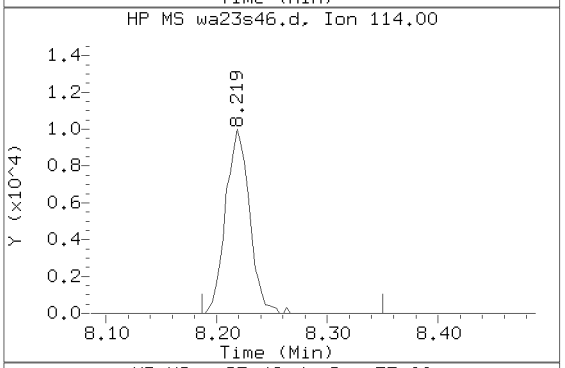
Sample Spectrum (Background Subtracted)

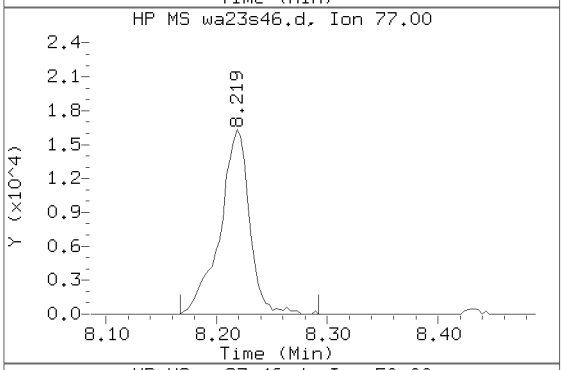


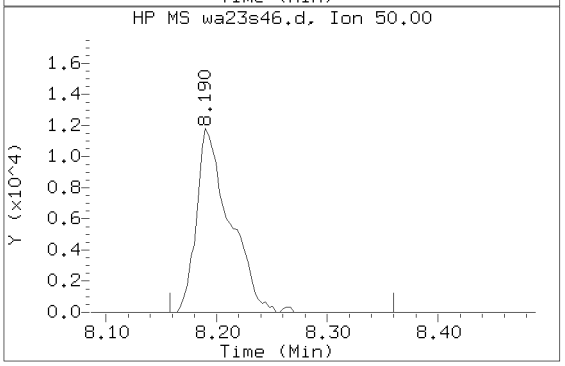
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s46.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:16 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:31 Automation

Sample Name: 99981 Lab Sample ID: 9560439

Compound Number : 102
Compound Name : Chlorobenzene
Scan Number : 2302
Retention Time (minutes): 8.219
Relative Retention Time :-0.00000
Quant Ion : 112.00
Area (flag) : 45706
On-Column Amount (ng) : 3.3550

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Target 3.5 esignature user ID: nsl01327

99982 Lancaster Laboratories 9560440
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s47.d Injection date and time: **24-APR-2018 05:40**
Data file Sample Info. Line: 99982;9560440;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.766(-0.003)	603	65	162327 (23)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	871527 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	687548 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	339480 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	191588	48.223	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	54066	51.828	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	865137	49.075	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	313511	47.085	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)	3.928(-0.000)	96	41852	8.848	8.85			0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)	5.443(0.000)	95	34391	7.421	7.42			0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

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Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s47.d Injection date and time: **24-APR-2018 05:40**
Data file Sample Info. Line: 99982;9560440;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

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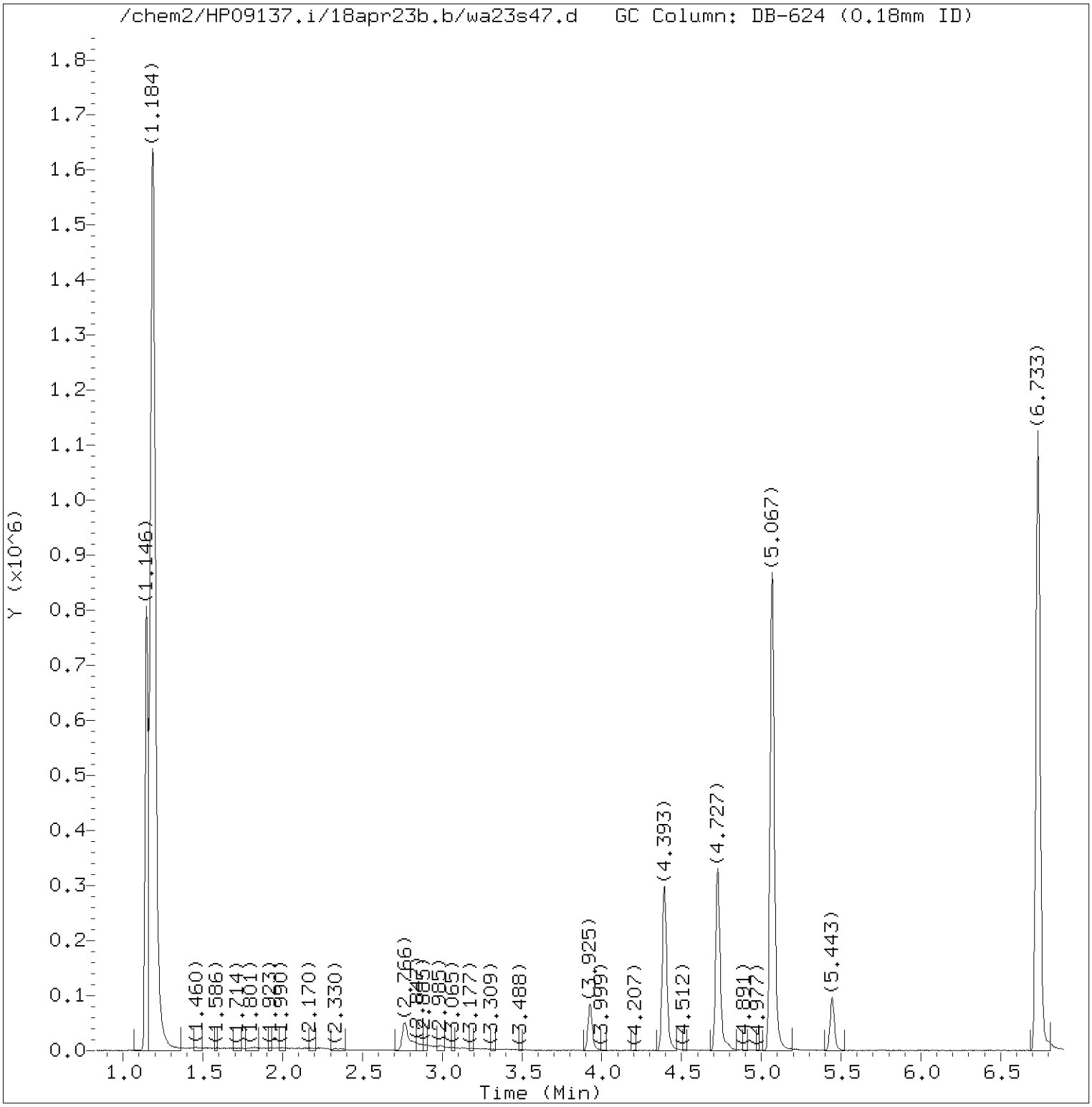
Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

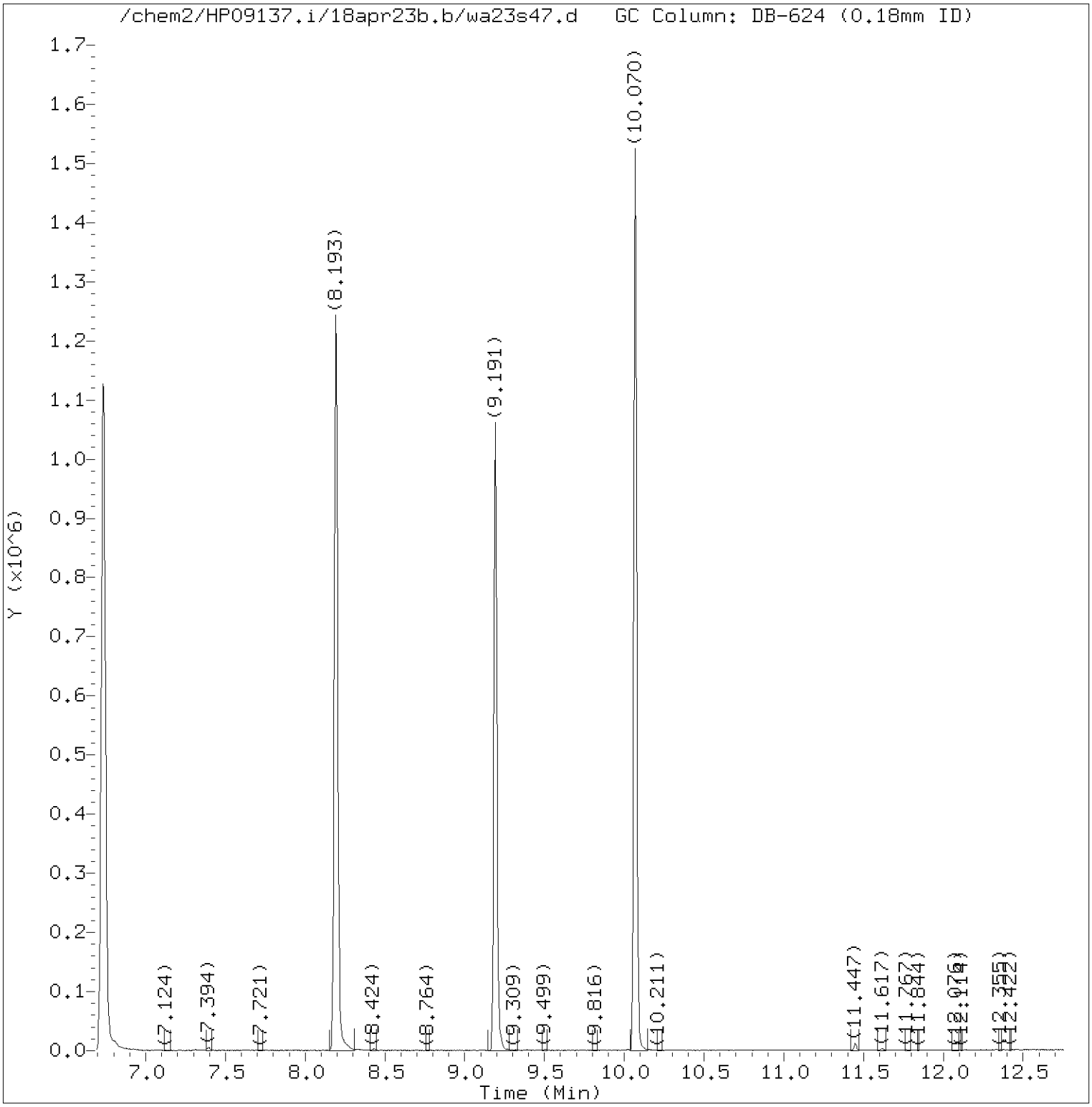
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s47.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:40 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Sample Name: 99982 Lab Sample ID: 9560440

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s47.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:40 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Sample Name: 99982 Lab Sample ID: 9560440

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s47.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:40 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Sample Name: 99982 Lab Sample ID: 9560440

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.766	65	162327	250.000
42) cis-1,2-Dichloroethene	(2)	3.928	96	41852	8.848
52)$Dibromofluoromethane	(2)	4.390	113	191588	48.223
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54066	51.828
66)*Fluorobenzene	(2)	5.067	96	871527	50.000
71) Trichloroethene	(2)	5.443	95	34391	7.421
83)$Toluene-d8	(3)	6.736	98	865137	49.075
100)*Chlorobenzene-d5	(3)	8.193	117	687548	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	313511	47.085
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	339480	50.000

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

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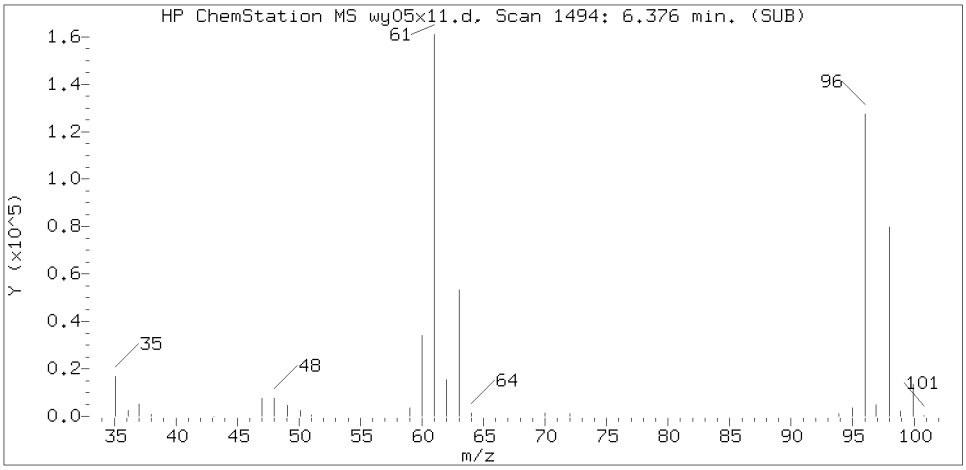
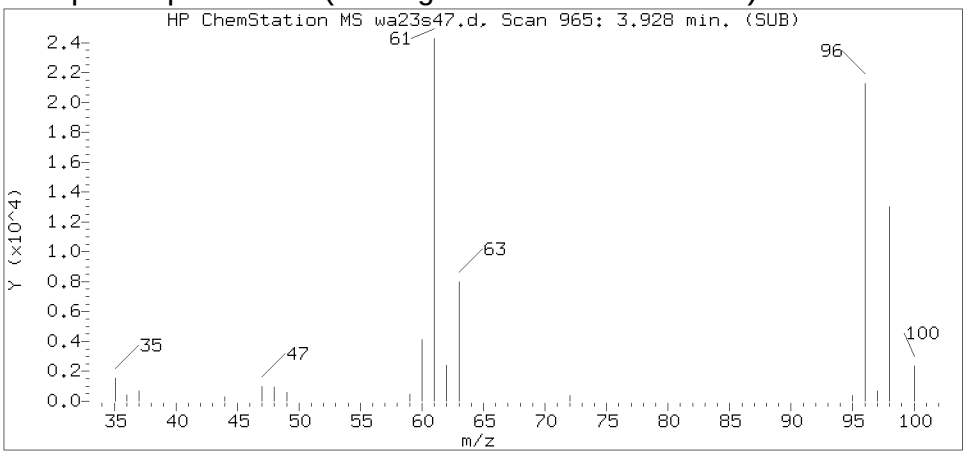
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

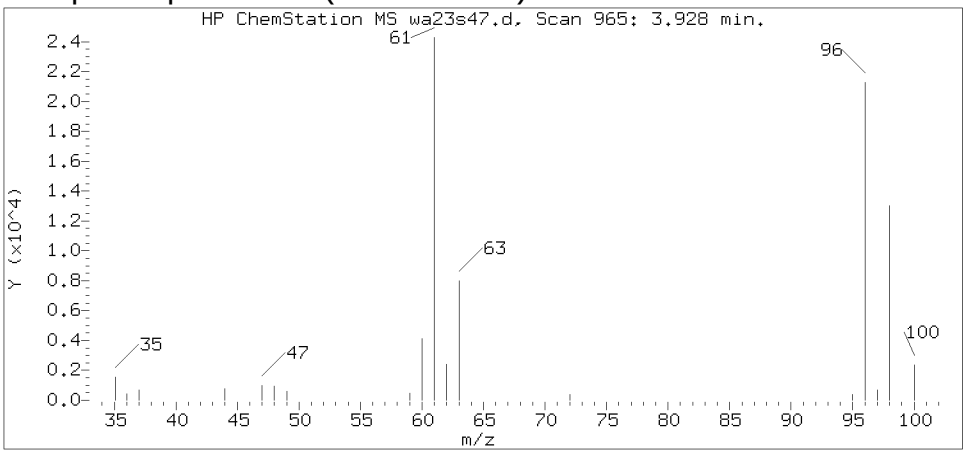
Reference Standard Spectrum for cis-1,2-Dichloroethene

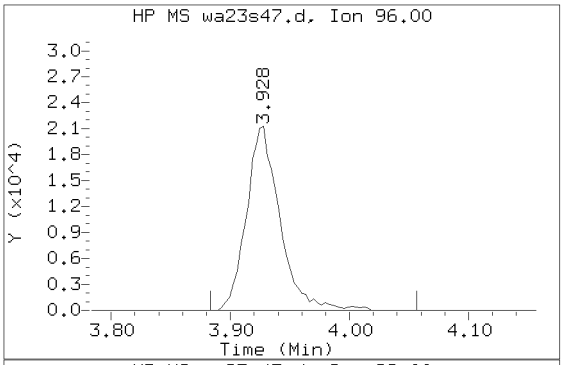


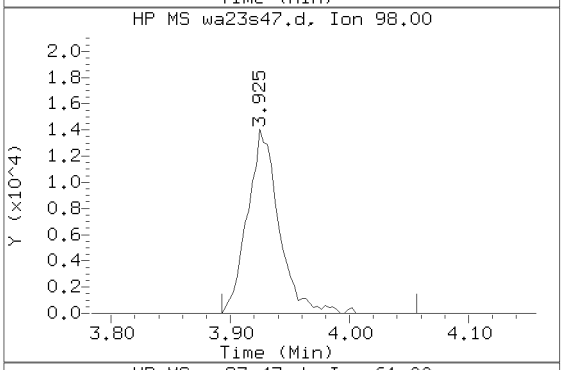
Sample Spectrum (Background Subtracted)

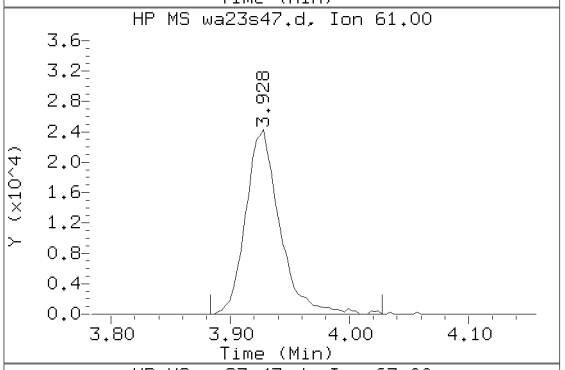


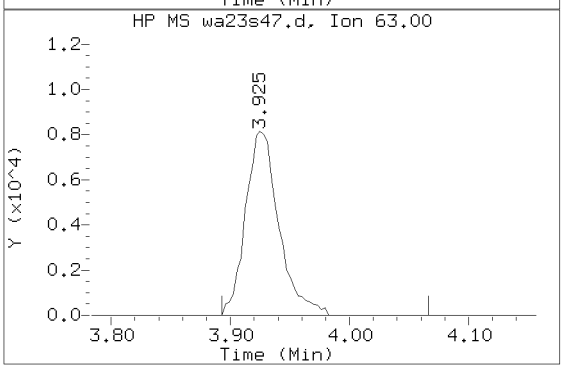
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s47.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:40 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Sample Name: 99982 Lab Sample ID: 9560440

Compound Number : 42
Compound Name : cis-1,2-Dichloroethene
Scan Number : 965
Retention Time (minutes): 3.928
Relative Retention Time :-0.00062
Quant Ion : 96.00
Area (flag) : 41852
On-Column Amount (ng) : 8.8480

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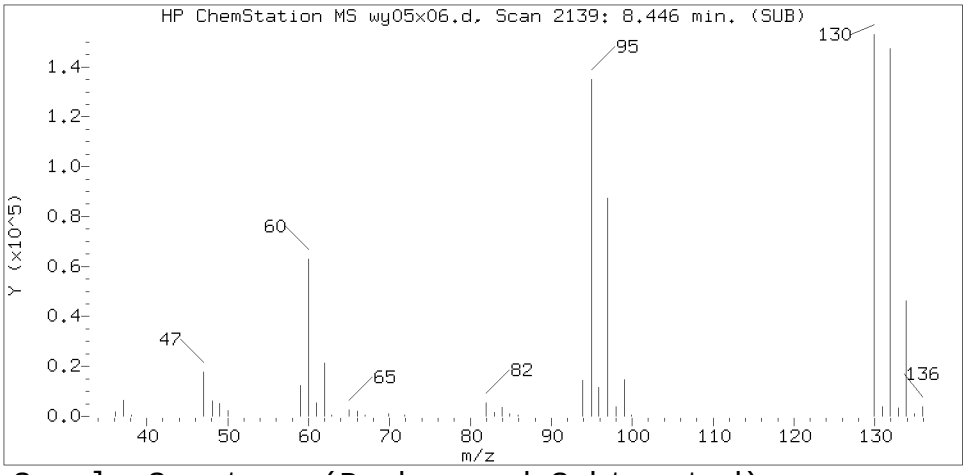
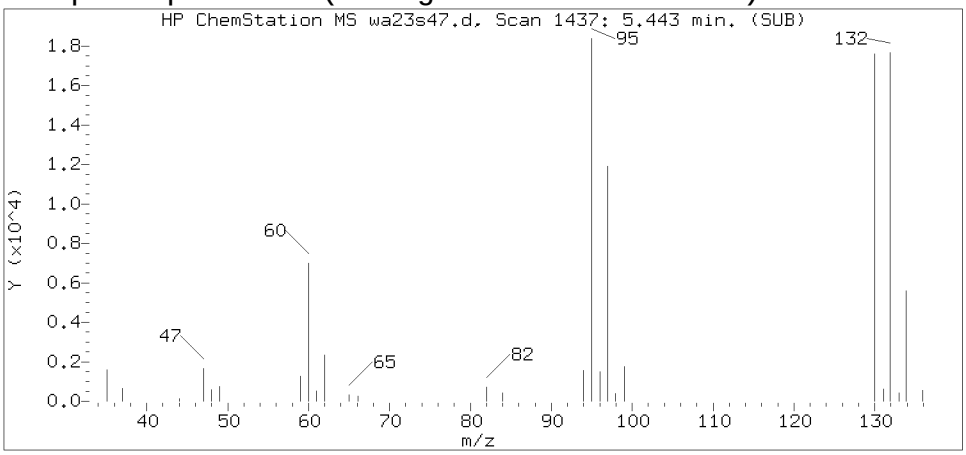
Target 3.5 esignature user ID: nsl01327

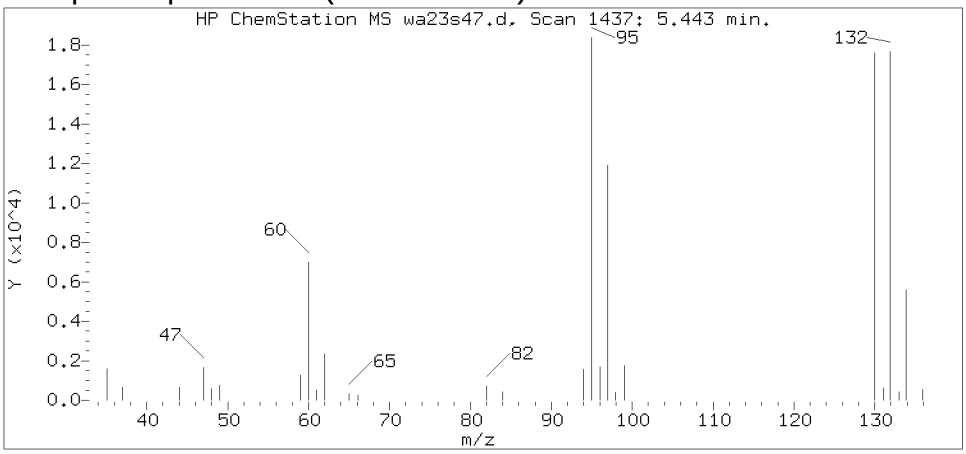
Reference Standard Spectrum for Trichloroethene

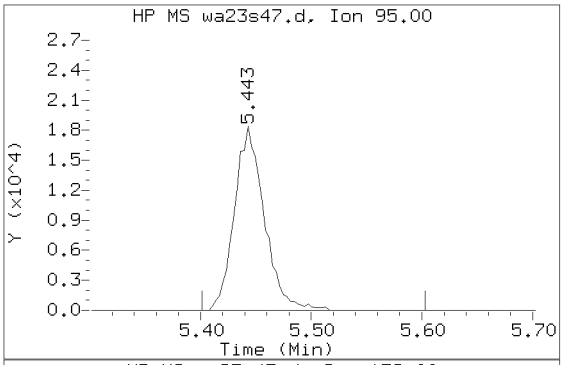


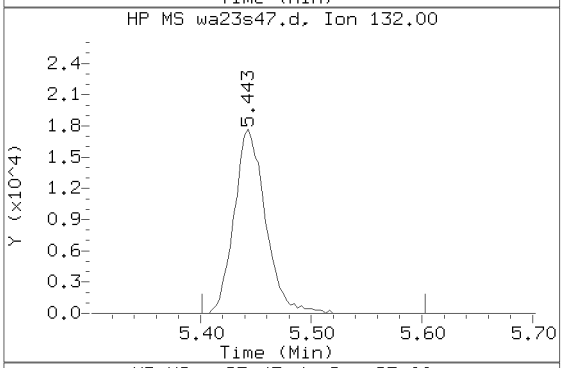
Sample Spectrum (Background Subtracted)

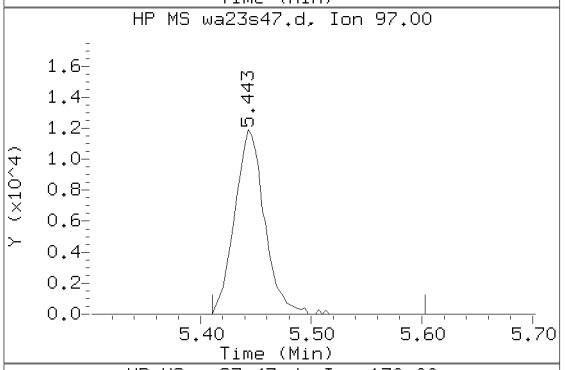


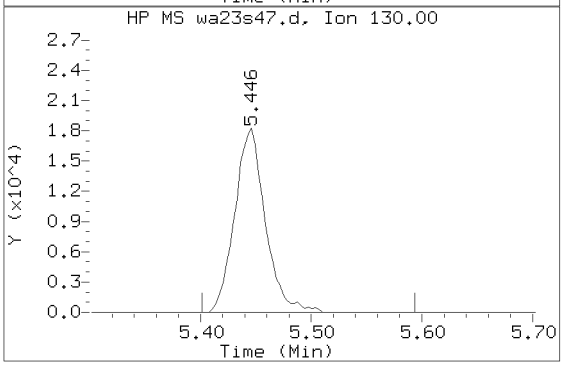
Sample Spectrum (Unaltered)











Data File: /chem2/HP09137.i/18apr23b.b/wa23s47.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 05:40 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 05:55 Automation

Sample Name: 99982 Lab Sample ID: 9560440

Compound Number : 71
Compound Name : Trichloroethene
Scan Number : 1437
Retention Time (minutes): 5.443
Relative Retention Time : 0.00000
Quant Ion : 95.00
Area (flag) : 34391
On-Column Amount (ng) : 7.4211

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

99983 Lancaster Laboratories 9560441
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s48.d Injection date and time: **24-APR-2018 06:04**
Data file Sample Info. Line: 99983;9560441;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:19 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.783(-0.019)	608	65	168352 (27)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	866335 (-3)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	674172 (-3)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	332841 (-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.394(0.000)	113	188551	47.742	95%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	54981	53.022	106%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	855892	49.514	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	308386	47.234	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:03. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s48.d Injection date and time: **24-APR-2018 06:04**
Data file Sample Info. Line: 99983;9560441;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:19 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

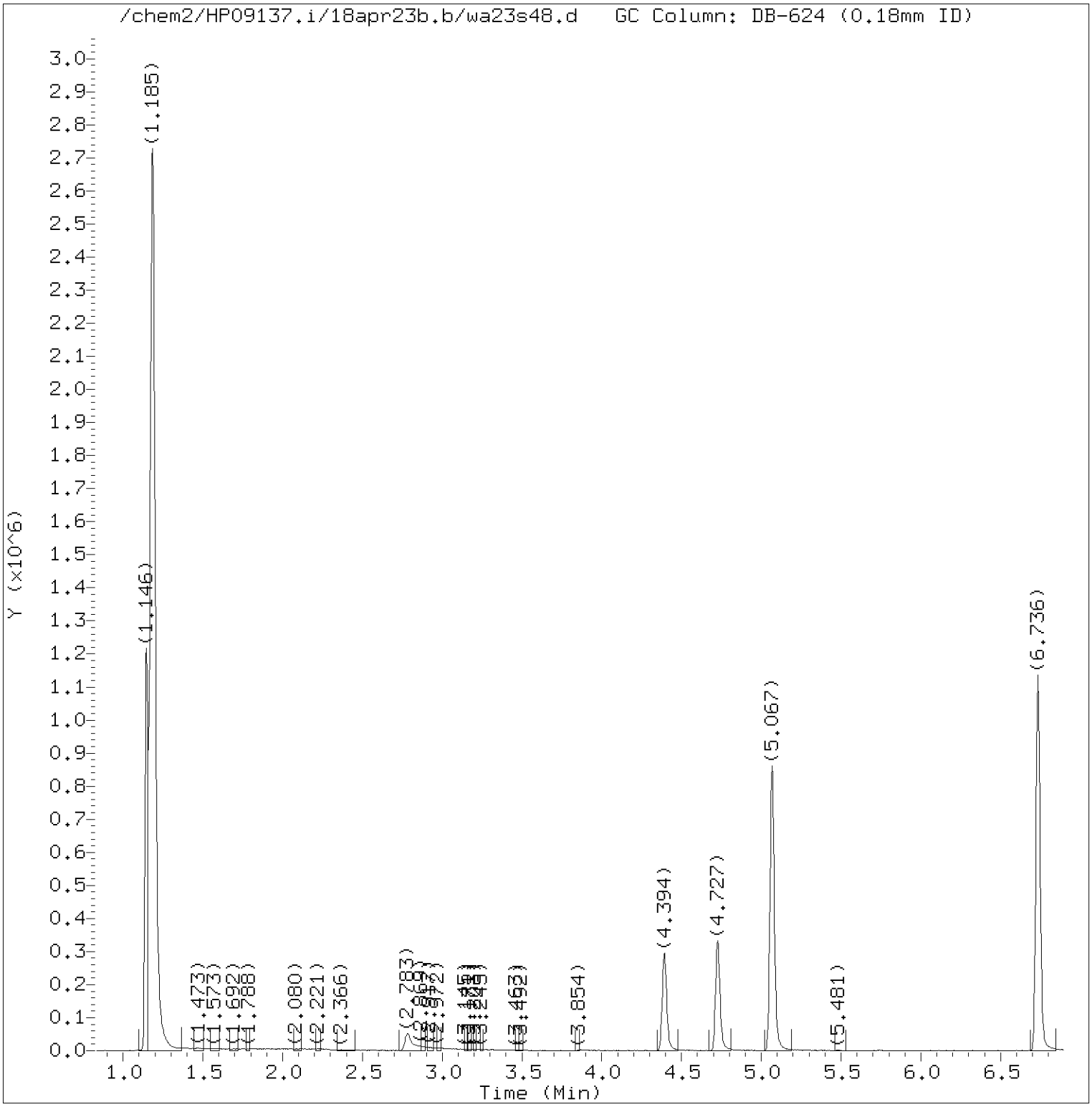
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:03. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

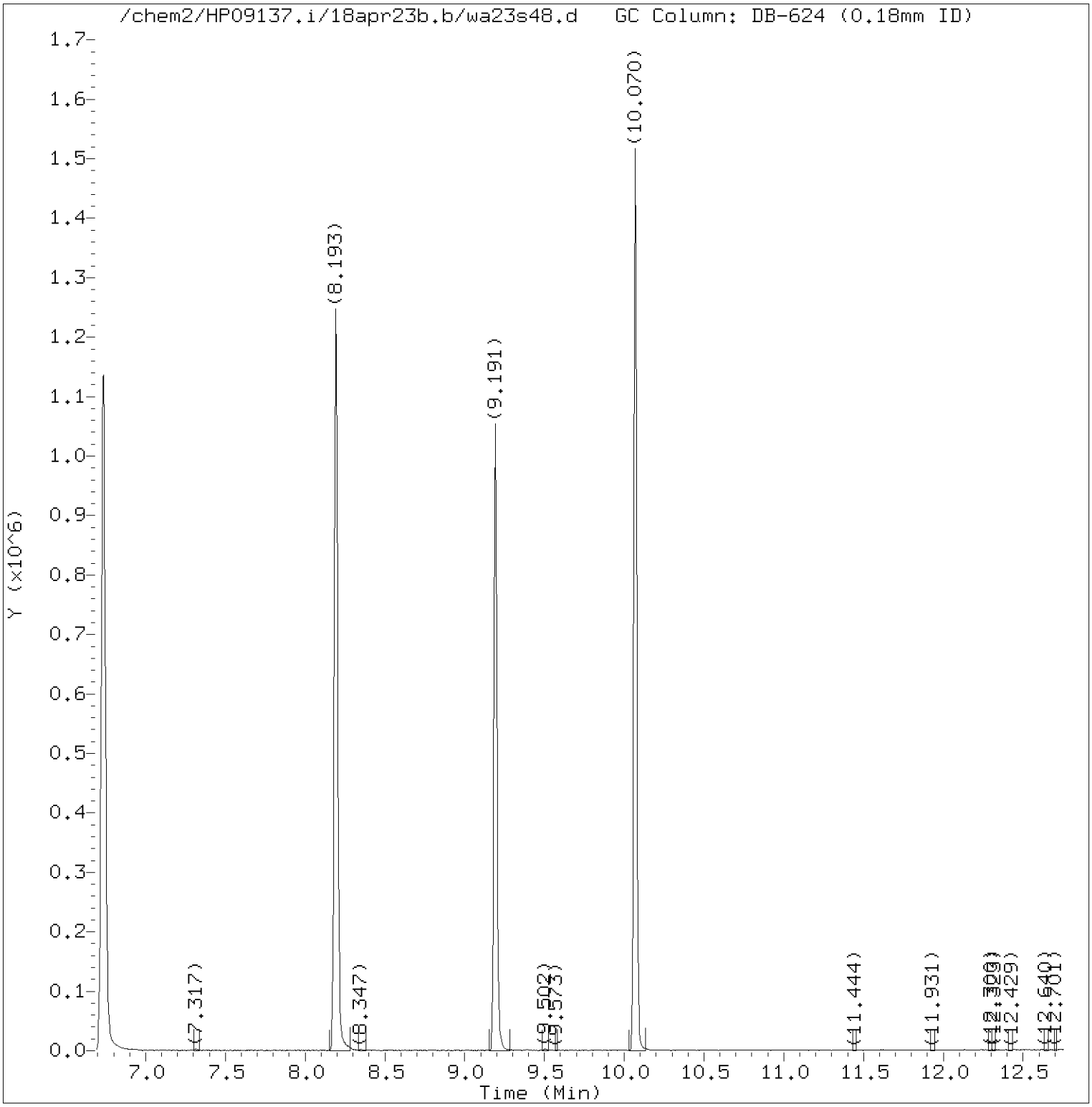
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s48.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:04 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:19 Automation

Sample Name: 99983 Lab Sample ID: 9560441

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s48.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:04 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:19 Automation

Sample Name: 99983 Lab Sample ID: 9560441

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s48.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:04 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:19 Automation

Sample Name: 99983 Lab Sample ID: 9560441

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.783	65	168352	250.000
52)$Dibromofluoromethane	(2)	4.394	113	188551	47.742
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54981	53.022
66)*Fluorobenzene	(2)	5.067	96	866335	50.000
83)$Toluene-d8	(3)	6.733	98	855892	49.514
100)*Chlorobenzene-d5	(3)	8.193	117	674172	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	308386	47.234
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	332841	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

99984 Lancaster Laboratories 9560442
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s49.d Injection date and time: **24-APR-2018 06:28**
Data file Sample Info. Line: 99984;9560442;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:43 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.763(0.000)	602	65	169400 (28)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	873567 (-2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	682917 (-2)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	331484 (-5)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	192416	48.318	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	54390	52.017	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	858320	49.019	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	310684	46.976	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:03. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s49.d Injection date and time: **24-APR-2018 06:28**
Data file Sample Info. Line: 99984;9560442;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 06:43 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

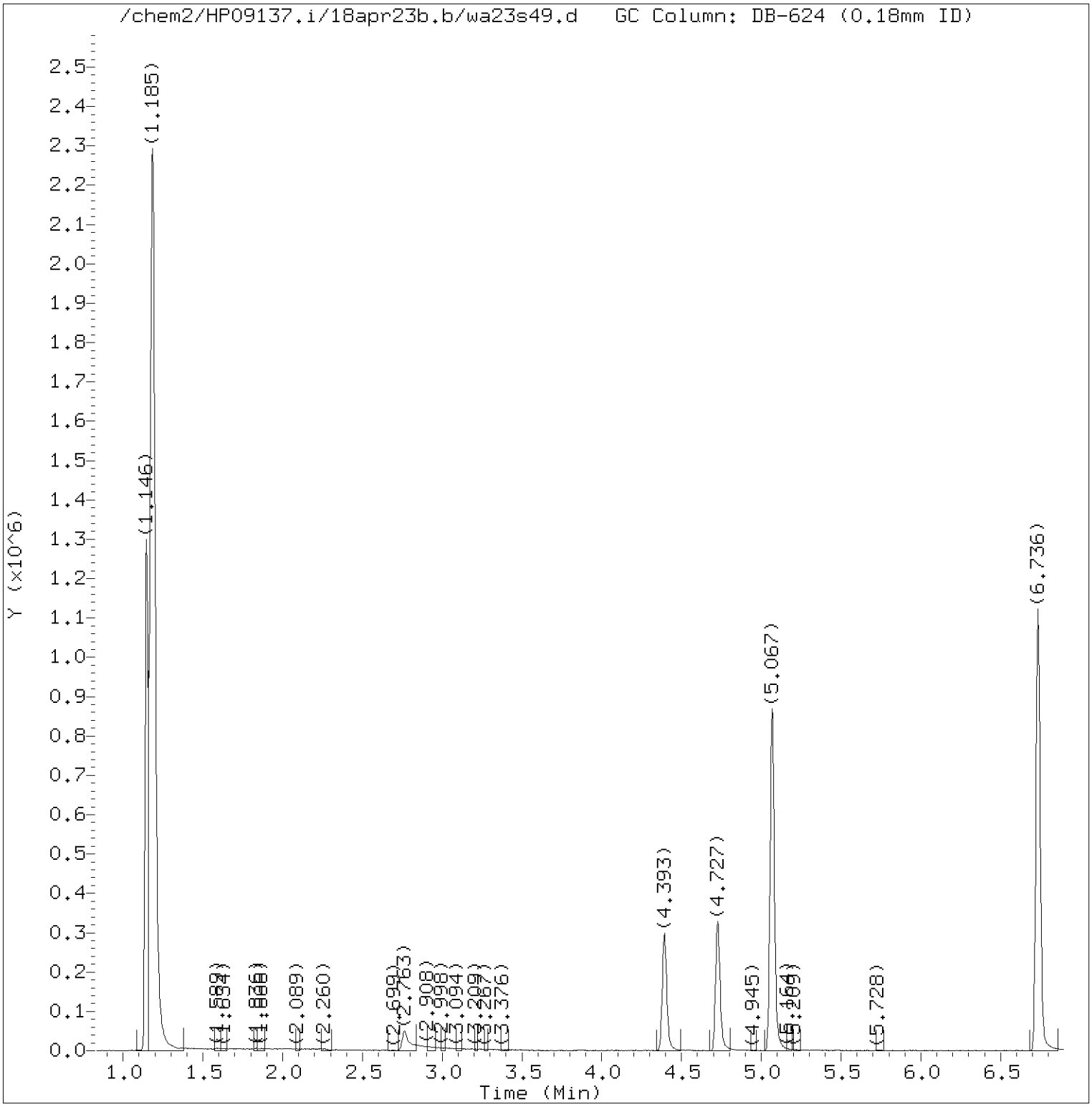
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:03. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

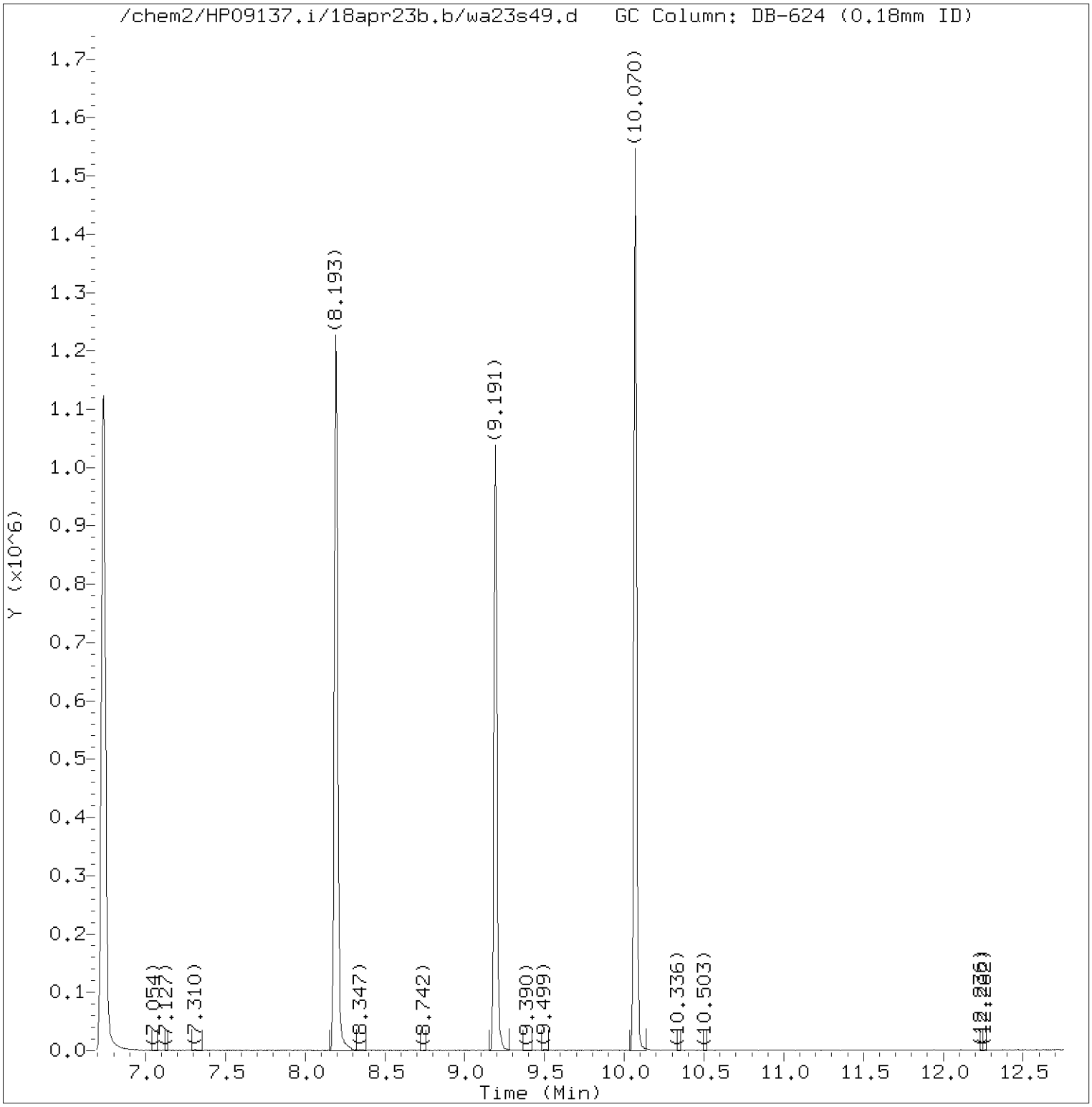
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s49.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:28 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:43 Automation

Sample Name: 99984 Lab Sample ID: 9560442

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s49.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:28 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:43 Automation

Sample Name: 99984 Lab Sample ID: 9560442

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s49.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 06:28 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 06:43 Automation

Sample Name: 99984 Lab Sample ID: 9560442

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.763	65	169400	250.000
52)$Dibromofluoromethane	(2)	4.393	113	192416	48.318
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54390	52.017
66)*Fluorobenzene	(2)	5.067	96	873567	50.000
83)$Toluene-d8	(3)	6.736	98	858320	49.019
100)*Chlorobenzene-d5	(3)	8.193	117	682917	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	310684	46.976
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	331484	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:03.
Target 3.5 esignature user ID: nsl01327

99985 Lancaster Laboratories 9560443
Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s33.d Injection date and time: **24-APR-2018 00:08**
Data file Sample Info. Line: 99985;9560443;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:23 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.770(-0.006)	604	65	158225 (19)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	891557 (0)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	694713 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	341927 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	195267	48.044	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.730(-0.001)	102	55228	51.753	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	884190	49.639	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	317449	47.184	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s33.d Injection date and time: **24-APR-2018 00:08**
Data file Sample Info. Line: 99985;9560443;1;0;;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 00:23 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

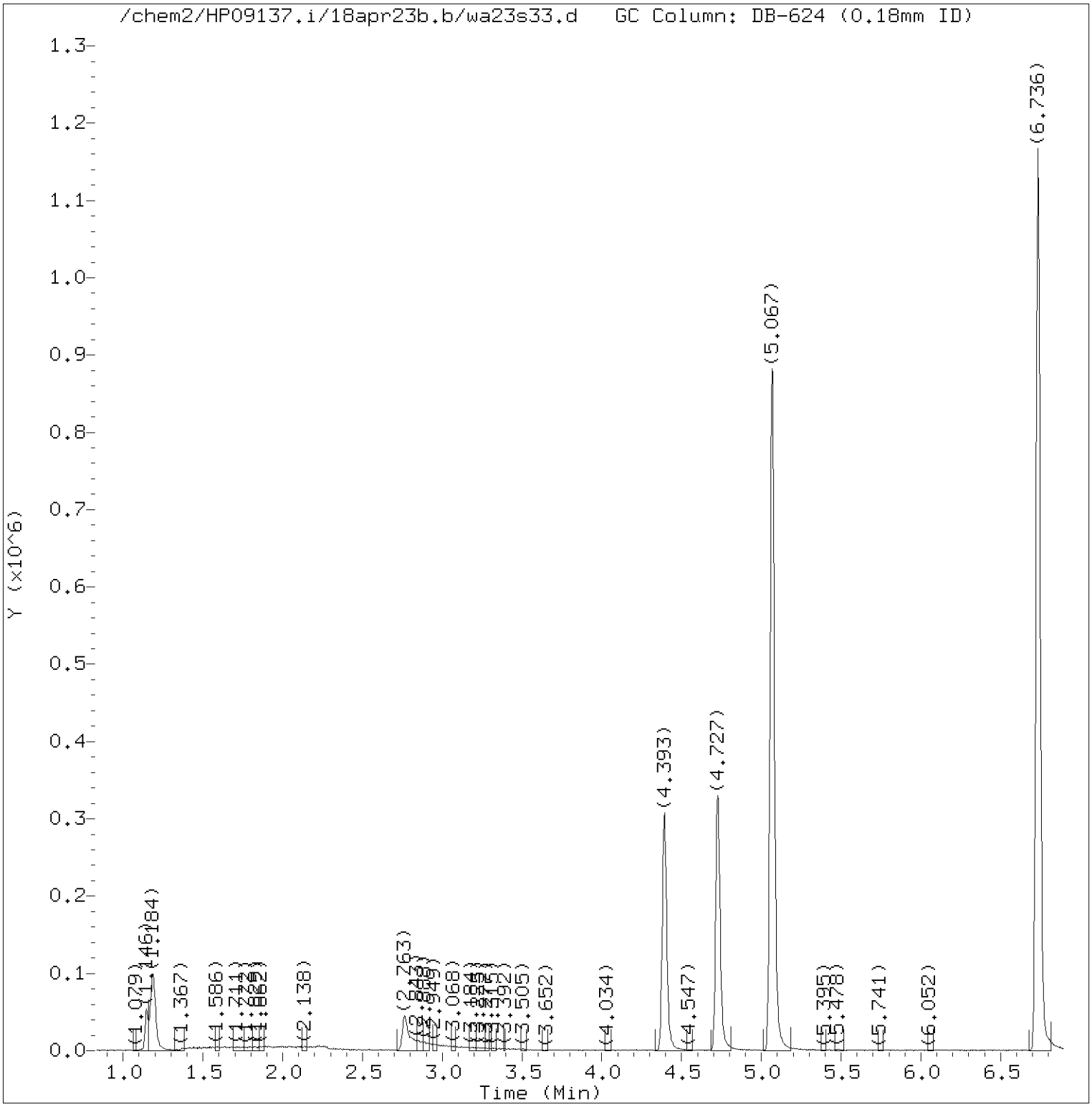
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

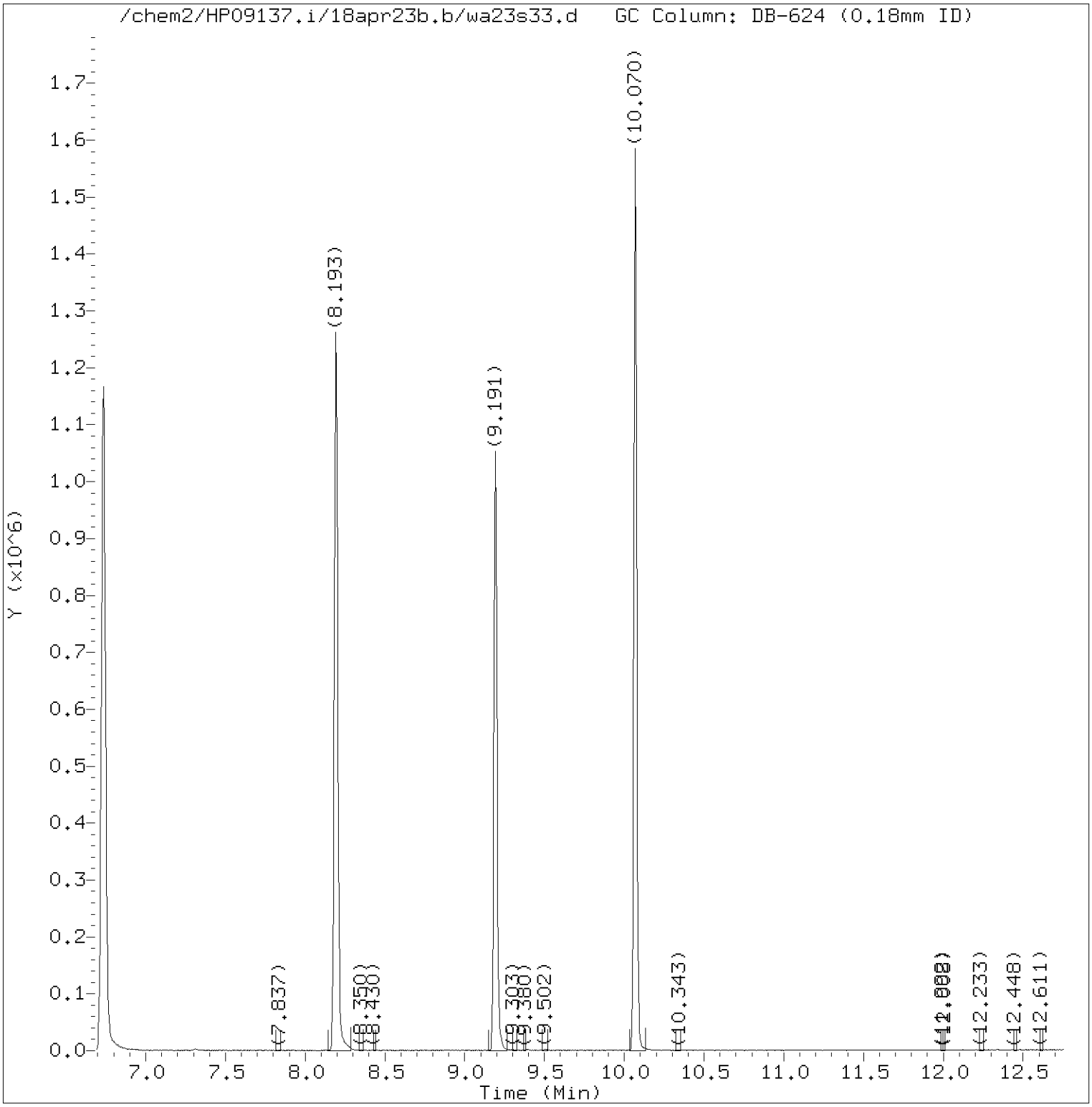
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s33.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:08 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:23 Automation

Sample Name: 99985 Lab Sample ID: 9560443

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s33.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:08 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:23 Automation

Sample Name: 99985 Lab Sample ID: 9560443

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s33.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:08 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 00:23 Automation

Sample Name: 99985 Lab Sample ID: 9560443

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.770	65	158225	250.000
52)$Dibromofluoromethane	(2)	4.393	113	195267	48.044
57)$1,2-Dichloroethane-d4	(2)	4.730	102	55228	51.753
66)*Fluorobenzene	(2)	5.067	96	891557	50.000
83)$Toluene-d8	(3)	6.736	98	884190	49.639
100)*Chlorobenzene-d5	(3)	8.193	117	694713	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	317449	47.184
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	341927	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Standards Data

Volatiles by GC/MS

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\18apr09i\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
nsl01327	WA09T02.D	50NGBFB	04/09/2018	09:51		
nsl01327	WA09T03.D	50NGBFB	04/09/2018	10:04		
nsl01327	WA09T04.D	50NGBFB	04/09/2018	10:21		
nsl01327	WA09X05.D	CLNBLK	04/09/2018	10:52		
nsl01327	WA09I01.D	VSTD300	04/09/2018	11:16		
nsl01327	WA09I02.D	VSTD100	04/09/2018	11:39		
nsl01327	WA09I03.D	VSTD050	04/09/2018	12:03		
nsl01327	WA09I04.D	VSTD020	04/09/2018	12:27		
nsl01327	WA09I05.D	VSTD010	04/09/2018	12:51		
nsl01327	WA09I06.D	VSTD004	04/09/2018	13:14		
nsl01327	WA09I07.D	VSTD001	04/09/2018	13:38		
nsl01327	WA09M01.D	VSTD0.5	04/09/2018	14:02		
nsl01327	WA09V01.D	LCSWICV	04/09/2018	14:26	W180991AA	

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - d:\data\18apr23b\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
kk10002	WA23T05.D	50NGBFB	04/23/2018	21:36	W181132AA	
kk10002	WA23X05.D	CBLKW92	04/23/2018	21:58	W181132AA	
kk10002	WA23C05.D	VSTD050	04/23/2018	22:22	W181132AA	
kk10002	WA23S31.D	LCSW92	04/23/2018	22:46	W181132AA	
kk10002	WA23B05.D	VBLKW92	04/23/2018	23:10	W181132AA	
kk10002	WA23S32.D	9560434	04/23/2018	23:44	W181132AA	
kk10002	WA23S33.D	9560443	04/24/2018	00:08	W181132AA	
kk10002	WA23S34.D	9560425	04/24/2018	00:31	W181132AA	
kk10002	WA23S35.D	9560426MS	04/24/2018	00:55	W181132AA	
kk10002	WA23S36.D	9560427MSD	04/24/2018	01:19	W181132AA	
kk10002	WA23S37.D	9560428	04/24/2018	01:42	W181132AA	
kk10002	WA23S38.D	9560429	04/24/2018	02:06	W181132AA	
kk10002	WA23S39.D	9560430	04/24/2018	02:30	W181132AA	
kk10002	WA23S40.D	9560432	04/24/2018	02:54	W181132AA	
kk10002	WA23S41.D	9560433	04/24/2018	03:18	W181132AA	
kk10002	WA23S42.D	9560435	04/24/2018	03:41	W181132AA	
kk10002	WA23S43.D	9560436	04/24/2018	04:05	W181132AA	
kk10002	WA23S44.D	9560437	04/24/2018	04:29	W181132AA	
kk10002	WA23S45.D	9560438	04/24/2018	04:53	W181132AA	
kk10002	WA23S46.D	9560439	04/24/2018	05:16	W181132AA	
kk10002	WA23S47.D	9560440	04/24/2018	05:40	W181132AA	
kk10002	WA23S48.D	9560441	04/24/2018	06:04	W181132AA	
kk10002	WA23S49.D	9560442	04/24/2018	06:28	W181132AA	
kk10002	WA23S50.D	9560431	04/24/2018	06:51	W181132AA	2
kk10002	WA23S51.D	9560431DL	04/24/2018	07:15	W181132AA	20

Lancaster Laboratories
Volatiles
Runlog for Agilent GC/MS System HP09137 **HP #18**

Data Directory Path is - D:\DATA\18APR24A\

OPERATOR	FILE	LLI#	DATE	TIME	BATCH	DILUTION FACTOR
NSL01327	WA24T01.D	50NGBFB	04/24/2018	07:38		
nsl01327	WA24BA1.D	VBLKW93	04/24/2018	08:02	W181141AA	
nsl01327	WA24C01.D	VSTD050	04/24/2018	08:26	W181141AA	
nsl01327	WA24L01.D	LCSW93	04/24/2018	08:50	W181141AA	
nsl01327	WA24L02.D	LCDW93	04/24/2018	09:14	W181141AA	
nsl01327	WA24B01.D	VBLKW93	04/24/2018	09:37	W181141AA	
nsl01327	WA24S01.D	9563069	04/24/2018	10:18	W181141AA	
nsl01327	WA24S02.D	9563070	04/24/2018	10:42	W181141AA	
nsl01327	WA24S03.D	9563077	04/24/2018	11:06	W181141AA	
nsl01327	WA24S04.D	9562967	04/24/2018	11:29	W181141AA	
nsl01327	WA24S05.D	9563063	04/24/2018	11:53	W181141AA	
nsl01327	WA24S06.D	9563064MS	04/24/2018	12:17	W181141AA	
nsl01327	WA24S07.D	9563065MSD	04/24/2018	12:41	W181141AA	
nsl01327	WA24S08.D	9563063DL	04/24/2018	13:04	W181141AA	10
nsl01327	WA24S09.D	9563076	04/24/2018	13:28	W181141AA	
nsl01327	WA24S10.D	9563067	04/24/2018	13:52	W181141AA	
nsl01327	WA24S11.D	9563067DL	04/24/2018	14:15	W181141AA	10
nsl01327	WA24S12.D	9560431	04/24/2018	14:39	W181141AA	
nsl01327	WA24S14.D	9569395	04/24/2018	15:03	W181141AA	
nsl01327	WA24S13.D	9567535	04/24/2018	15:27	W181141AA	
nsl01327	WA24S15.D	9564029	04/24/2018	15:51	W181142AA	
nsl01327	WA24S16.D	9564027	04/24/2018	16:14	W181142AA	
nsl01327	WA24S17.D	9564034	04/24/2018	16:38	W181142AA	
nsl01327	WA24S18.D	9564035MS	04/24/2018	17:01	W181142AA	
nsl01327	WA24S19.D	9564036MSD	04/24/2018	17:25	W181142AA	
nsl01327	WA24S20.D	9564030	04/24/2018	17:49	W181142AA	
nsl01327	WA24S21.D	9564032	04/24/2018	18:13	W181142AA	

Data File: /chem2/HP09137.i/18apr09i.b/wa09t04.d

Date : 09-APR-2018 10:21

Client ID: BFBFeb13-18

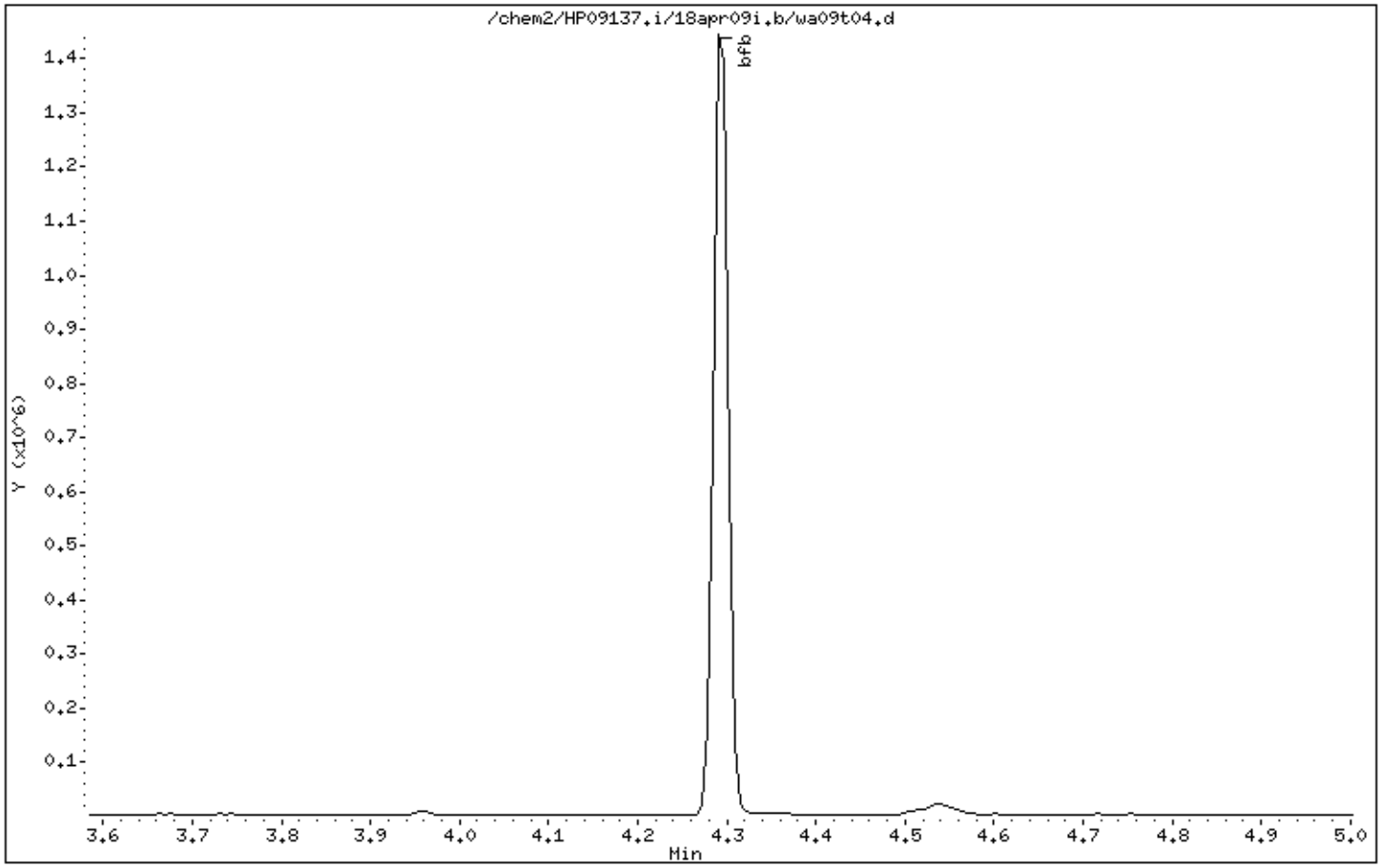
Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: nsl01327

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Data File: /chem2/HP09137.i/18apr09i.b/wa09t04.d

Date : 09-APR-2018 10:21

Client ID: BFBFeb13-18

Instrument: HP09137.i

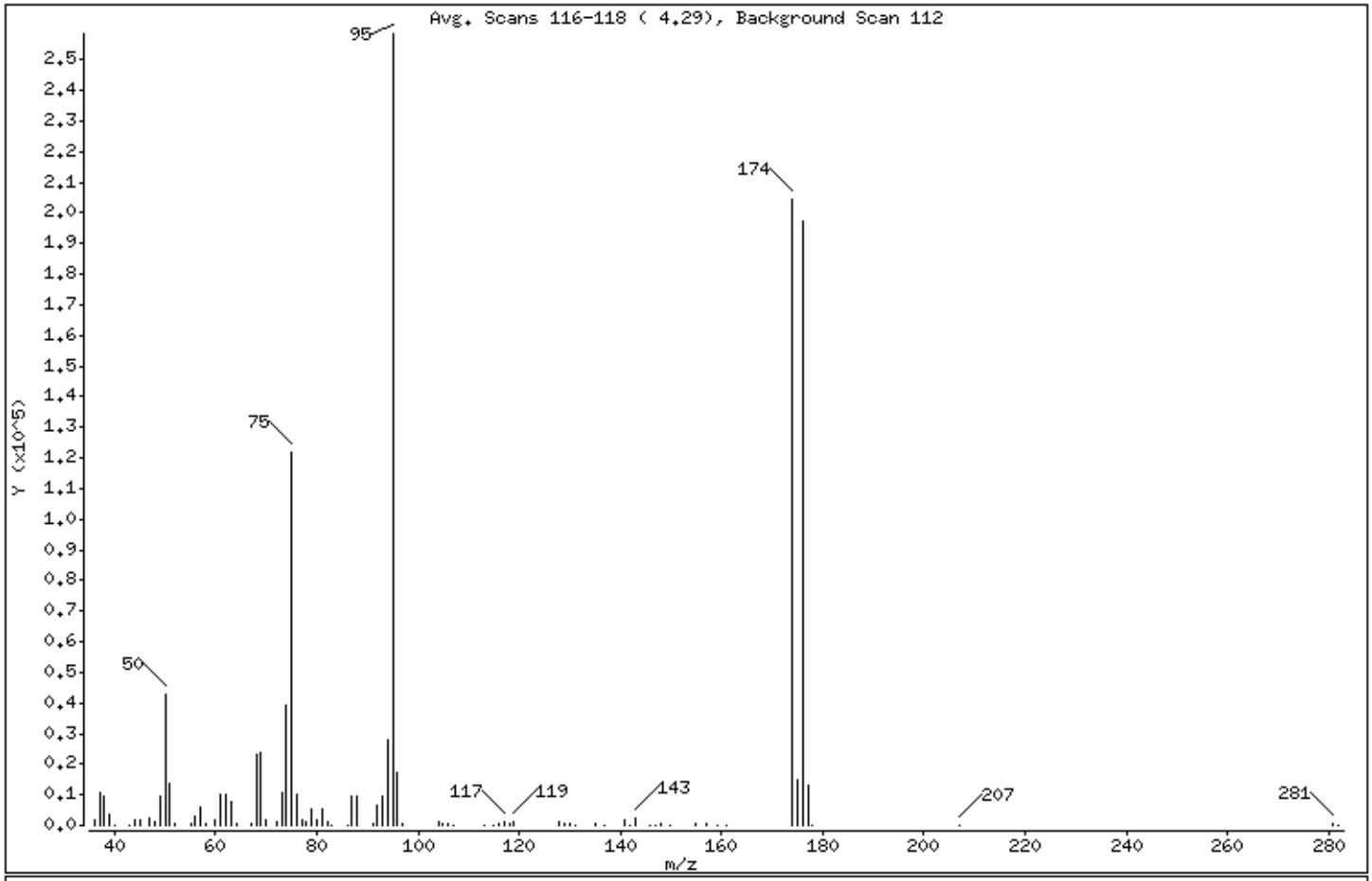
Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: nsl01327

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.49
75	30.00 - 60.00% of mass 95	47.07
96	5.00 - 9.00% of mass 95	6.69
173	Less than 2.00% of mass 174	0.00 (0.00)
174	50.00 - 100.00% of mass 95	79.13
175	5.00 - 9.00% of mass 174	5.85 (7.39)
176	95.00 - 101.00% of mass 174	76.37 (96.52)
177	5.00 - 9.00% of mass 176	5.07 (6.64)

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Data File: /chem2/HP09137.i/18apr09i.b/wa09t04.d

Date : 09-APR-2018 10:21

Client ID: BFBFeb13-18 Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

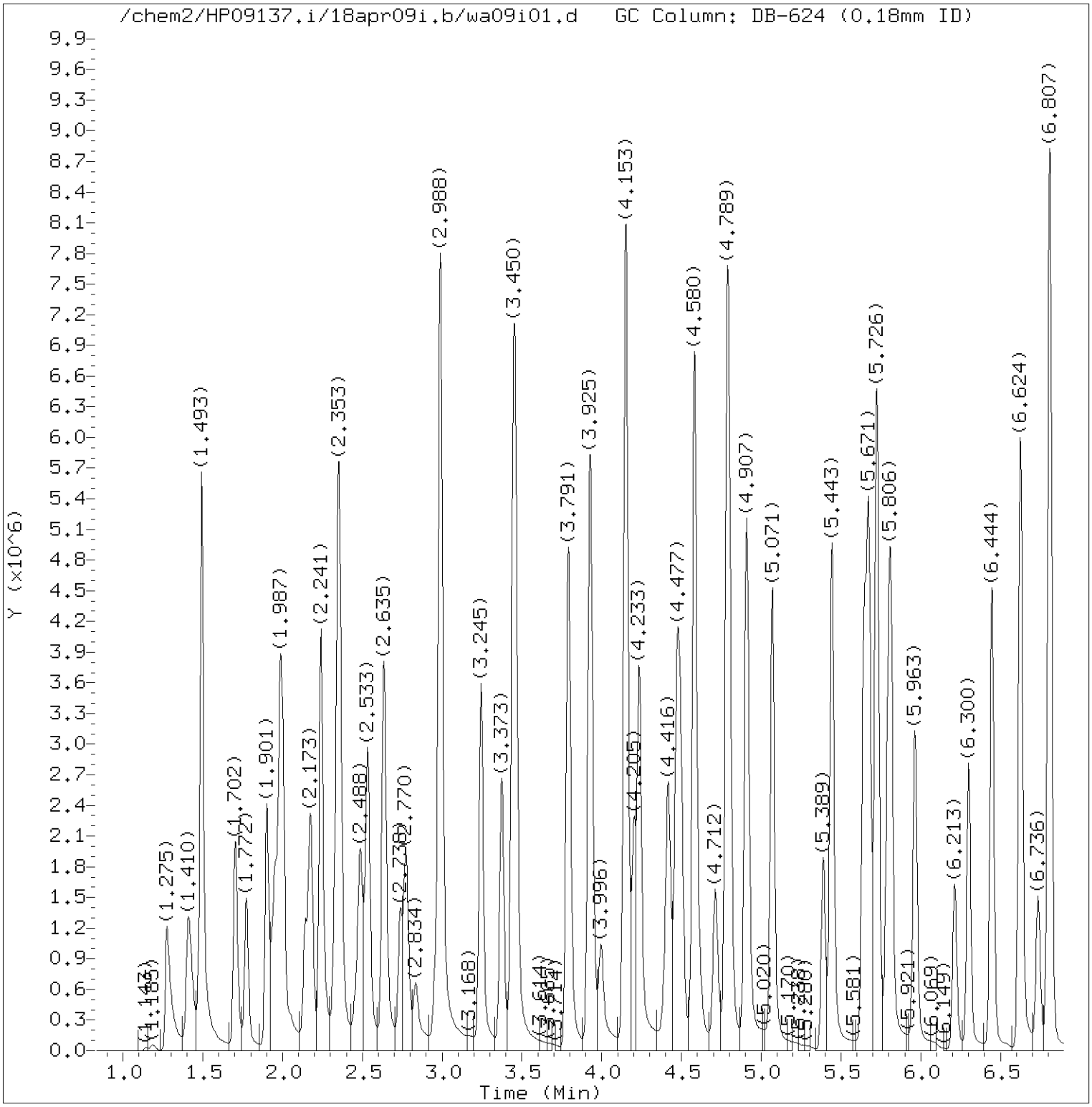
Operator: nsl01327

Column phase: DB-624 Column diameter: 0.18

Data File: wa09t04.d
Spectrum: Avg. Scans 116-118 (4.29), Background Scan 112
Location of Maximum: 95.00
Number of points: 84

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1990	64.00	822	93.00	9347	142.00	195
37.00	10511	67.00	690	94.00	28104	143.00	2163
38.00	9573	68.00	23016	95.00	258432	146.00	260
39.00	3371	69.00	23752	96.00	17296	147.00	91
40.00	105	70.00	1847	97.00	566	148.00	563
43.00	87	72.00	1216	104.00	953	150.00	275
44.00	1504	73.00	10404	105.00	427	155.00	560
45.00	1921	74.00	39040	106.00	818	157.00	415
47.00	2601	75.00	121664	107.00	205	159.00	263
48.00	1268	76.00	10347	113.00	85	161.00	228
49.00	9445	77.00	1519	115.00	229	174.00	204480
50.00	42616	78.00	936	116.00	732	175.00	15108
51.00	13522	79.00	5089	117.00	1303	176.00	197376
52.00	581	80.00	1658	118.00	811	177.00	13109
55.00	719	81.00	5333	119.00	1170	178.00	260
56.00	3218	82.00	1106	128.00	904	207.00	63
57.00	6011	83.00	86	129.00	329	281.00	557
58.00	314	86.00	220	130.00	744	282.00	192
60.00	2053	87.00	9769	131.00	250		
61.00	10354	88.00	9360	135.00	299		
62.00	9956	91.00	882	137.00	245		
63.00	7818	92.00	6395	141.00	2007		

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

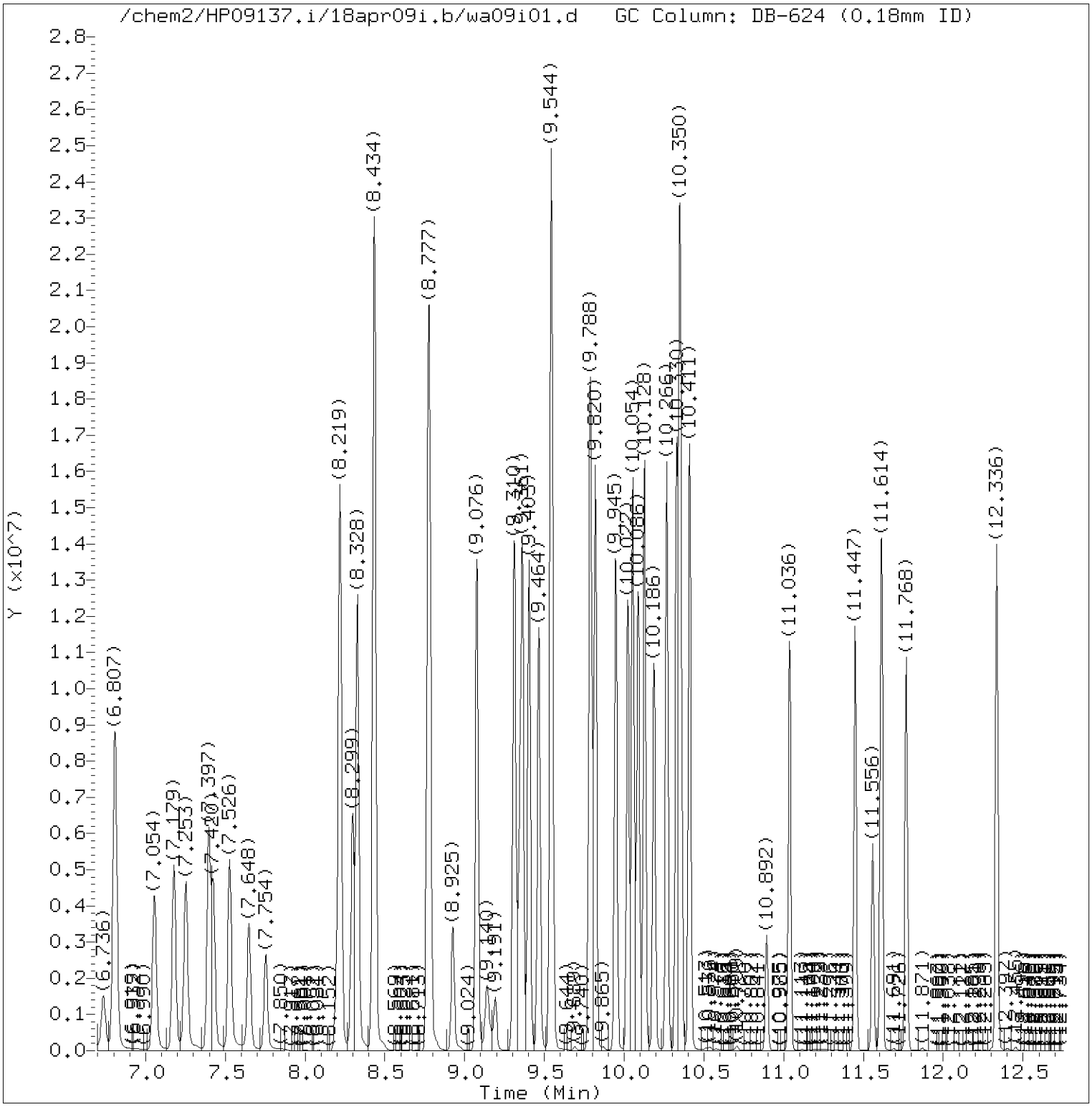
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	2038657	290.813
4) Chloromethane	(2)	1.410	50	2080641	277.094
6) Vinyl Chloride	(2)	1.487	62	2190310	288.617
5) 1,3-Butadiene	(2)	1.493	39	1519739	273.281
8) Bromomethane	(2)	1.702	94	1545149	280.283
9) Chloroethane	(2)	1.772	64	1286002	283.860
10) Dichlorofluoromethane	(2)	1.901	67	2209406	231.439
12) Trichlorofluoromethane	(2)	1.952	101	2527804	299.559
11) n-Pentane	(2)	1.994	43	2465602	275.244
13) Ethanol	(1)	2.055	45	265888	7501.520
15) Freon 123a	(2)	2.173	67	1741392	279.407
16) Acrolein	(1)	2.241	56	4068579	3503.505
17) 1,1-Dichloroethene	(2)	2.347	96	1459742	310.638
17) 1,1-Dichloroethene	(2)	2.347	63	658347	301.509
19) Freon 113	(2)	2.353	101	1515076	318.137
18) Acetone	(1)	2.363	58	282268	578.580
21) 2-Propanol	(1)	2.472	45	373111M	1106.057
22) Methyl Iodide	(2)	2.488	142	2799385	306.758
23) Carbon Disulfide	(2)	2.533	76	4702767	303.284
25) Allyl Chloride	(2)	2.632	41	2172406	289.631
27) Methyl Acetate	(2)	2.648	43	1335499	243.304
29)*t-Butyl alcohol-d10	(1)	2.764	65	143108	250.000
28) Methylene Chloride	(2)	2.773	84	1620501M	296.757
30) t-Butyl alcohol	(1)	2.838	59	791338	1286.596
31) Acrylonitrile	(2)	2.956	53	703044	251.301
32) trans-1,2-Dichloroethene	(2)	2.988	96	1576872	304.905
33) Methyl Tertiary Butyl Ether	(2)	2.992	73	4757545	271.366
34) n-Hexane	(2)	3.245	57	1784120	296.617
36) 1,1-Dichloroethane	(2)	3.373	63	2580099	294.099
38) di-Isopropyl ether	(2)	3.444	45	4649572	283.124
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	2340967	301.972
40) Ethyl t-butyl ether	(2)	3.791	59	4601239M	281.298
42) cis-1,2-Dichloroethene	(2)	3.925	96	1758434	301.315
45) 2,2-Dichloropropane	(2)	3.925	77	1179758	248.864
44) 2-Butanone	(2)	3.941	43	1866156	478.588
47) Propionitrile	(1)	3.996	54	1200605	1561.429
43) 1,2-Dichloroethene (Total)	(2)		96	3335306	606.220
48) Methacrylonitrile	(2)	4.150	67	2271060	687.844

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.156	128	879577	296.141
50) Tetrahydrofuran	(1)	4.205	71	589973	717.556
51) Chloroform	(2)	4.237	83	2667782	296.610
52)$Dibromofluoromethane	(2)	4.391	113	244332	49.846
52)$Dibromofluoromethane	(2)	4.391	111	249609	49.721
53) 1,1,1-Trichloroethane	(2)	4.416	97	2372389	296.386
54) Cyclohexane	(2)	4.481	56	2510231	308.191
54) Cyclohexane	(2)	4.481	84	2306323	307.546
54) Cyclohexane	(2)	4.481	69	814786	307.648
55) 1,1-Dichloropropene	(2)	4.580	75	2159804	301.526
56) Carbon Tetrachloride	(2)	4.583	117	1989011	328.114
58) Isobutyl Alcohol	(1)	4.712	41	621077	3078.401
57)$1,2-Dichloroethane-d4	(2)	4.728	102	60701	47.163
57)$1,2-Dichloroethane-d4	(2)	4.724	65	272305	47.079
57)$1,2-Dichloroethane-d4	(2)	4.724	104	40606	48.708
60) Benzene	(2)	4.789	78	6300650	292.553
61) 1,2-Dichloroethane	(2)	4.801	62	2081457	277.177
61) 1,2-Dichloroethane	(2)	4.805	98	215830	291.685
65) t-Amyl methyl ether	(2)	4.907	73	4832752	283.071
66)*Fluorobenzene	(2)	5.068	96	1075258	50.000
67) n-Heptane	(2)	5.071	43	1610523	298.539
69) n-Butanol	(1)	5.389	56	1445589	7614.736
71) Trichloroethene	(2)	5.443	95	1702563	297.779
72) Methylcyclohexane	(2)	5.645	83	2363313	307.432
72) Methylcyclohexane	(2)	5.645	98	1139899	315.519
73) 1,2-Dichloropropane	(2)	5.674	63	1625729	298.108
74) Dibromomethane	(2)	5.793	93	1074125	290.451
76) Methyl Methacrylate	(2)	5.812	69	1634064	280.470
75) 1,4-Dioxane	(1)	5.819	88	212311M	4094.352
78) Bromodichloromethane	(2)	5.963	83	2104227	300.924
79) 2-Nitropropane	(2)	6.213	41	1094651	565.436
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	1294298	291.373
81) cis-1,3-Dichloropropene	(2)	6.444	75	2788230	302.422
82) 4-Methyl-2-pentanone	(2)	6.624	43	4297653M	534.594
83)$Toluene-d8	(3)	6.736	98	1049940	50.641
83)$Toluene-d8	(3)	6.736	100	766248	54.838
88) Toluene	(3)	6.807	92	4266675	300.437
89) trans-1,3-Dichloropropene	(3)	7.054	75	2637053	311.670

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.179	69	2909237	297.036
90) 1,3-Dichloropropene (total)	(3)		100	5425283	614.092
92) 1,1,2-Trichloroethane	(3)	7.253	97	1673815	299.862
93) Tetrachloroethene	(3)	7.397	166	1768430	306.016
94) 1,3-Dichloropropane	(3)	7.426	76	2710174	293.740
96) 2-Hexanone	(3)	7.526	43	3431190	550.414
97) Dibromochloromethane	(3)	7.648	129	1845775	325.165
99) 1,2-Dibromoethane	(3)	7.754	107	1812555	298.106
100)*Chlorobenzene-d5	(3)	8.193	117	808620	50.000
102) Chlorobenzene	(3)	8.219	112	4836067	298.888
103) 1,1,1,2-Tetrachloroethane	(3)	8.299	131	1660628	319.526
104) Ethylbenzene	(3)	8.328	91	7628290	290.322
106) m+p-Xylene	(3)	8.434	106	6458222	601.412
107) o-Xylene	(3)	8.771	106	3280614	305.869
109) Styrene	(3)	8.780	104	5671543	309.501
108) Xylene (Total)	(3)		106	9738836	907.281
110) Bromoform	(3)	8.925	173	1416728	347.768
111) Isopropylbenzene	(3)	9.076	105	7440259	291.618
112) Cyclohexanone	(1)	9.143	55	732988A	3067.746
114)$4-Bromofluorobenzene	(3)	9.191	95	398087	50.835
114)$4-Bromofluorobenzene	(3)	9.194	174	325808	50.991
115) Bromobenzene	(4)	9.310	156	2203624	289.336
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	2697392	275.198
117) 1,2,3-Trichloropropane	(4)	9.345	110	834083	270.948
118) trans-1,4-Dichloro-2-butene	(4)	9.361	53	1953890	725.205
119) n-Propylbenzene	(4)	9.403	91	8334226	261.978
120) 2-Chlorotoluene	(4)	9.464	126	1985983	283.690
122) 1,3,5-Trimethylbenzene	(4)	9.541	105	6669685	282.174
121) 4-Chlorotoluene	(4)	9.547	126	2186748	291.850
124) tert-Butylbenzene	(4)	9.785	134	1548349	295.466
125) Pentachloroethane	(4)	9.794	167	1312924	324.544
126) 1,2,4-Trimethylbenzene	(4)	9.820	105	6884036	278.478
127) sec-Butylbenzene	(4)	9.945	105	7329722	273.893
129) 1,3-Dichlorobenzene	(4)	10.022	146	4076019	283.215
130) p-Isopropyltoluene	(4)	10.054	119	6782483	281.748
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	466022	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	4223016	282.060
134) 1,2,3-Trimethylbenzene	(4)	10.128	105	7034292	276.254

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

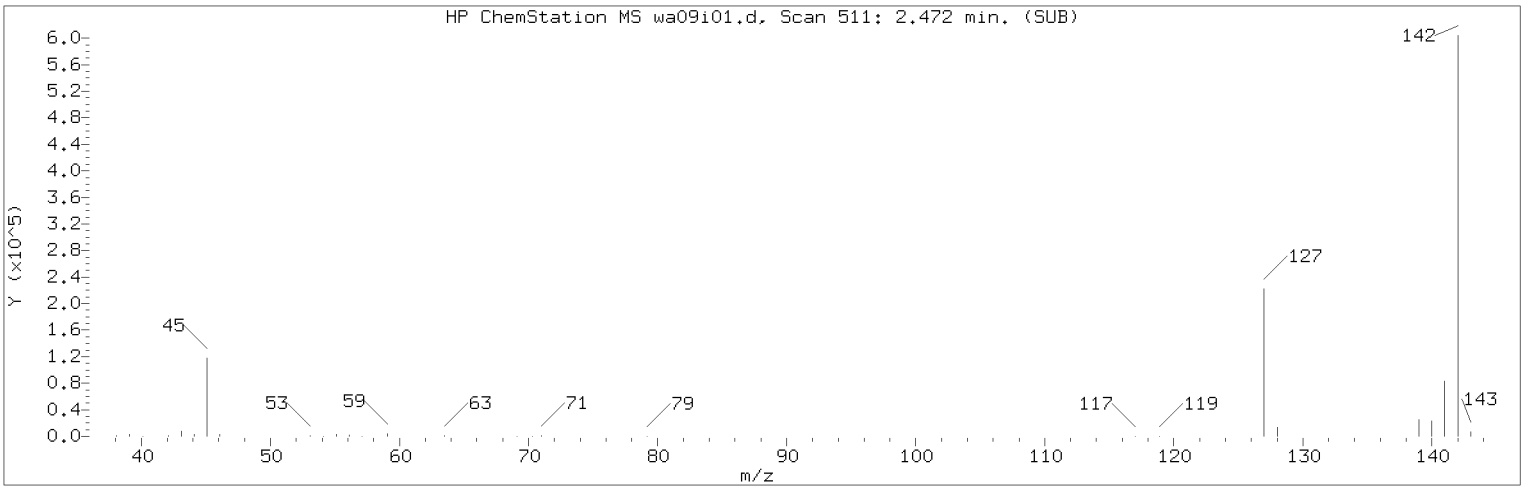
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

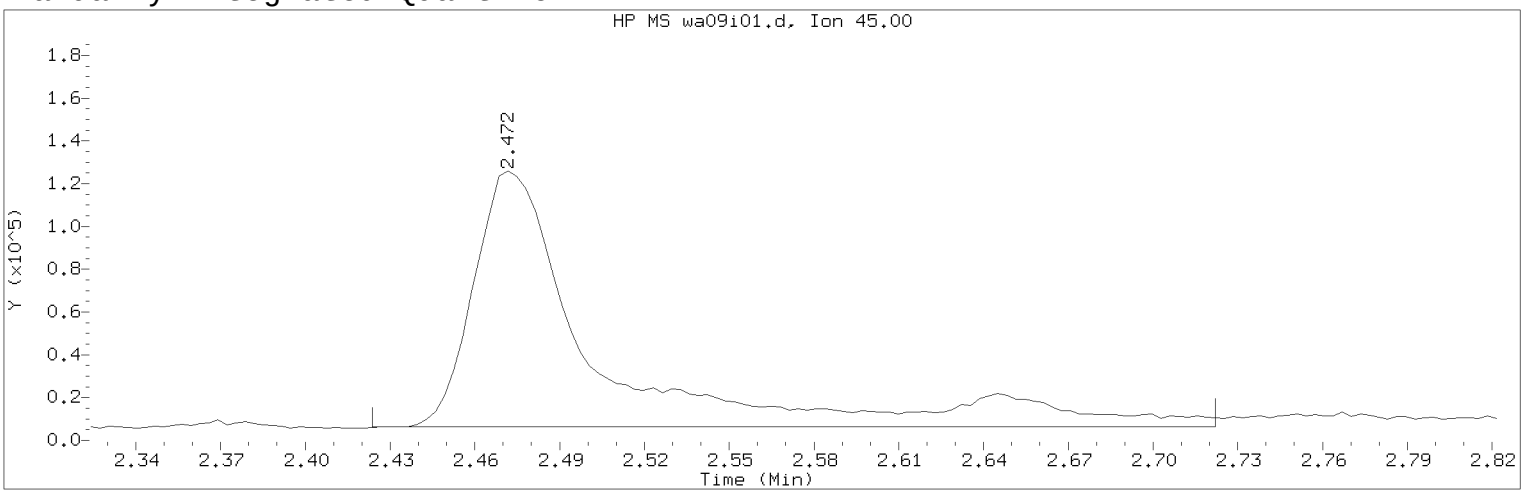
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	5955940	300.493
136) 1,3-Diethylbenzene	(4)	10.266	119	4218281	293.938
137) 1,4-Diethylbenzene	(4)	10.327	119	4341011	291.826
139) n-Butylbenzene	(4)	10.346	92	3379266	295.219
138) 1,2-Dichlorobenzene	(4)	10.353	146	4171010	290.683
140) 1,2-Diethylbenzene	(4)	10.411	119	3605887	292.707
141) Diethylbenzene (total)	(4)		100	12165179	878.472
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	601896	288.550
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	2675542	293.308
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	2656741	293.968
147) Hexachlorobutadiene	(4)	11.559	225	775079	289.381
148) Naphthalene	(4)	11.614	128	8611713	262.609
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	2519491	293.696
150) 2-Methylnaphthalene	(4)	12.336	142	5129337	297.188

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

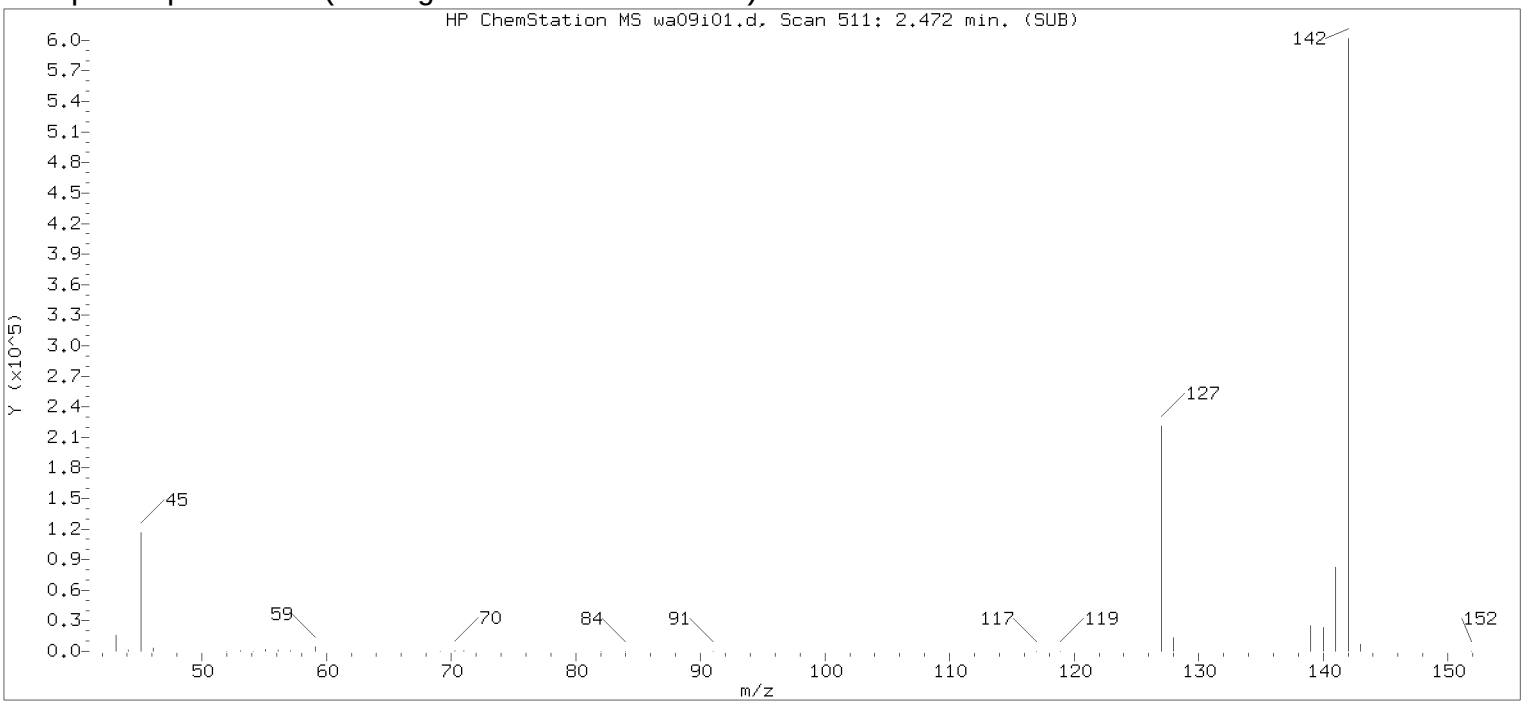
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 45.00
Area (flag) : 373111M
On-Column Amount (ng) : 1106.0570
Integration start scan : 495 Integration stop scan: 588
Y at integration start : 6149 Y at integration end: 6149

Reason for manual integration: improper integration

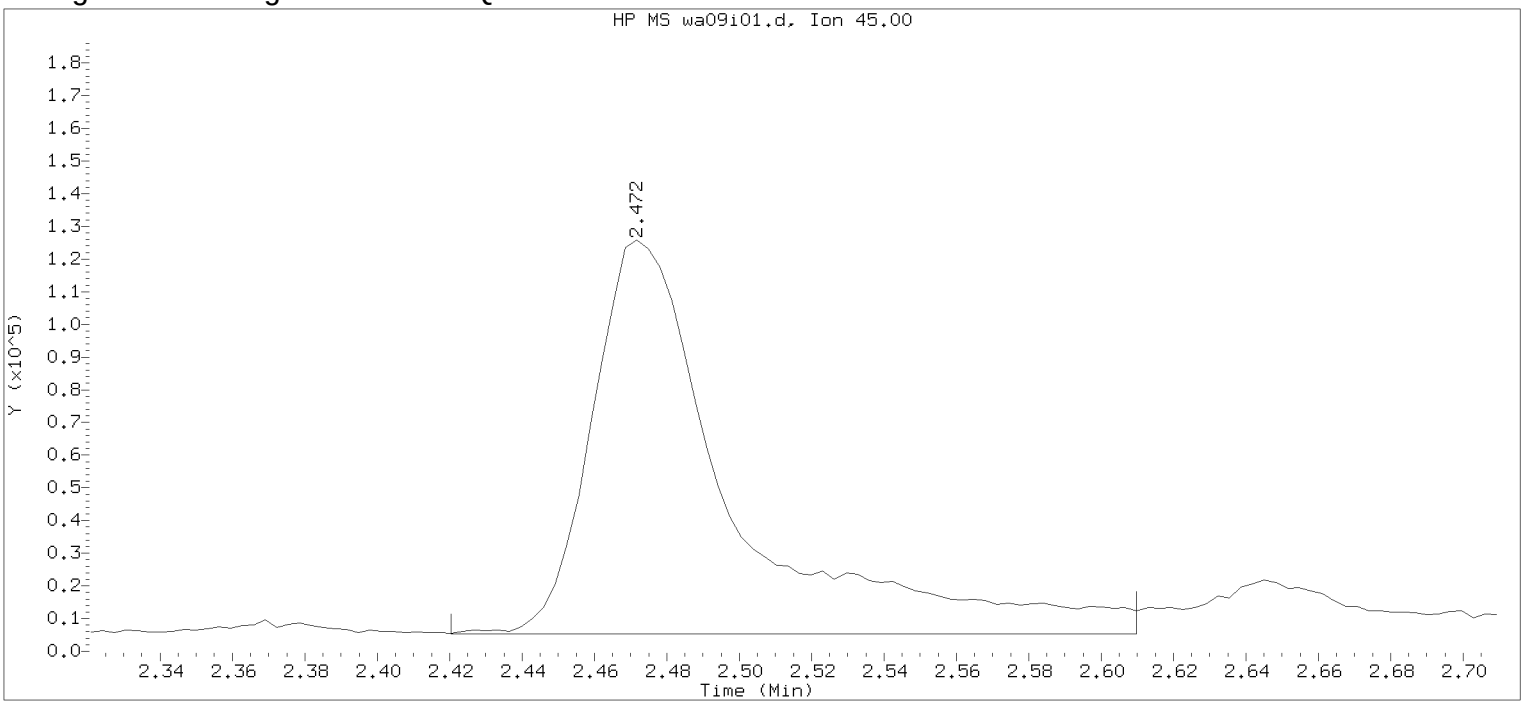
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

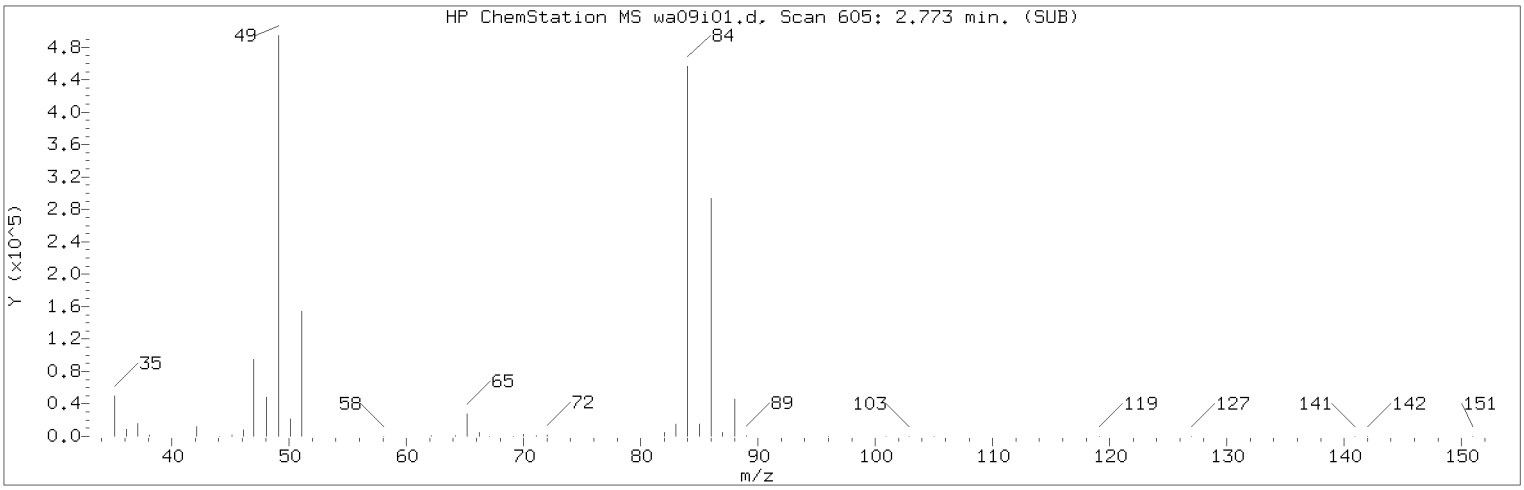
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

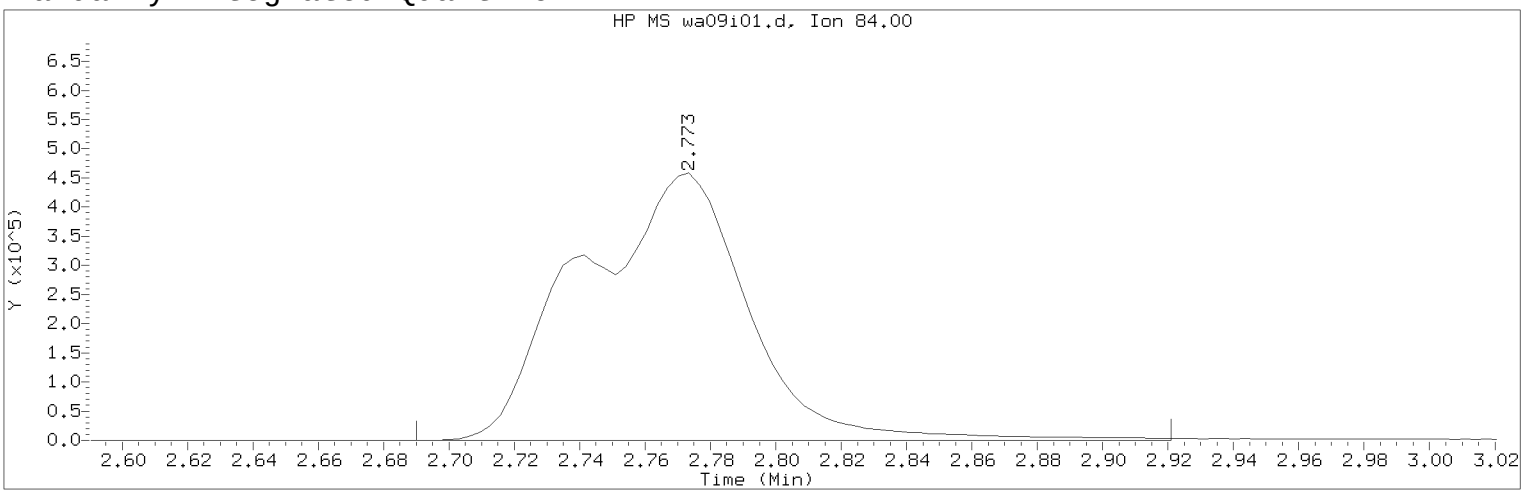
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 511
Retention Time (minutes): 2.472
Quant Ion : 45.00
Area : 326498
On-column Amount (ng) : 1027.3448
Integration start scan : 494 Integration stop scan: 553
Y at integration start : 5397 Y at integration end: 5397

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: 1317

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

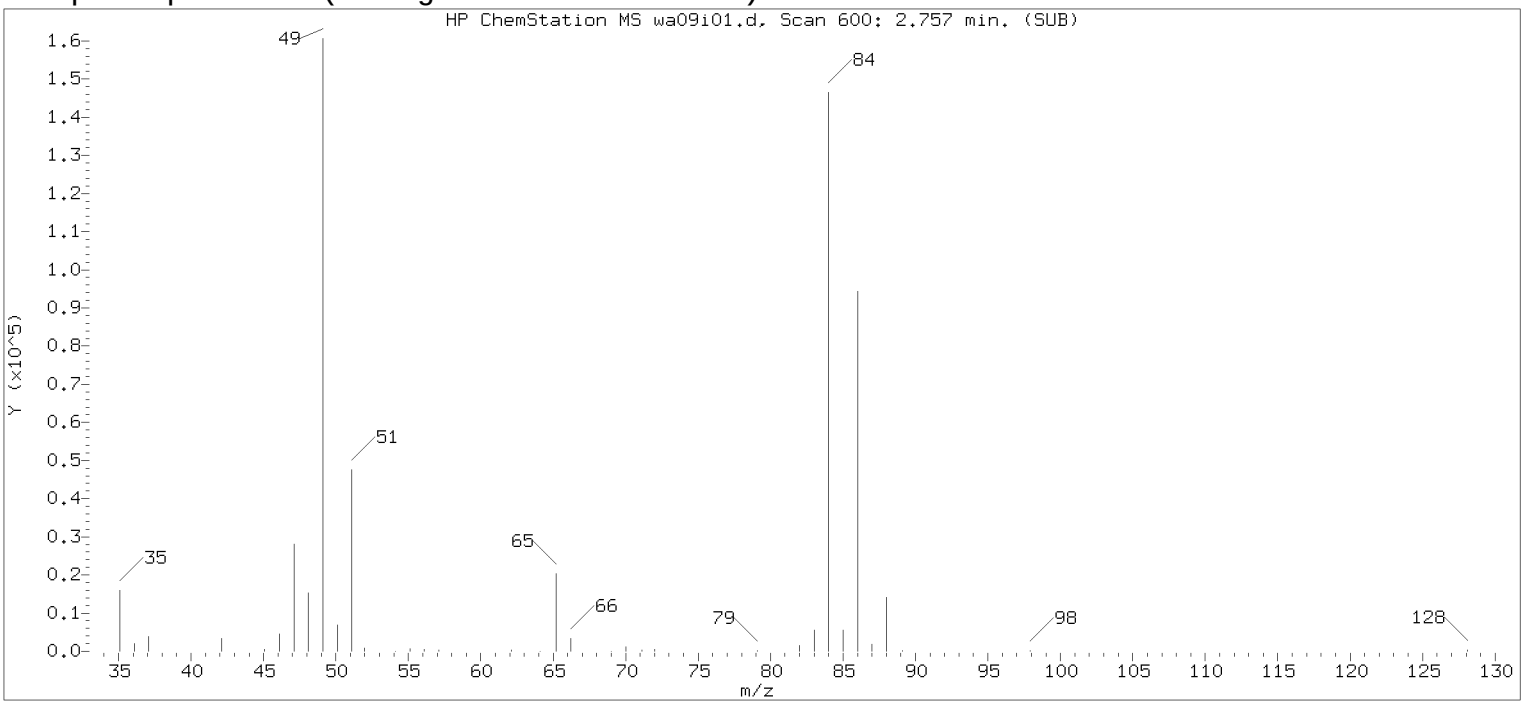
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 605
Retention Time (minutes): 2.773
Quant Ion : 84.00
Area (flag) : 1620501M
On-Column Amount (ng) : 296.7566
Integration start scan : 578 Integration stop scan: 650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

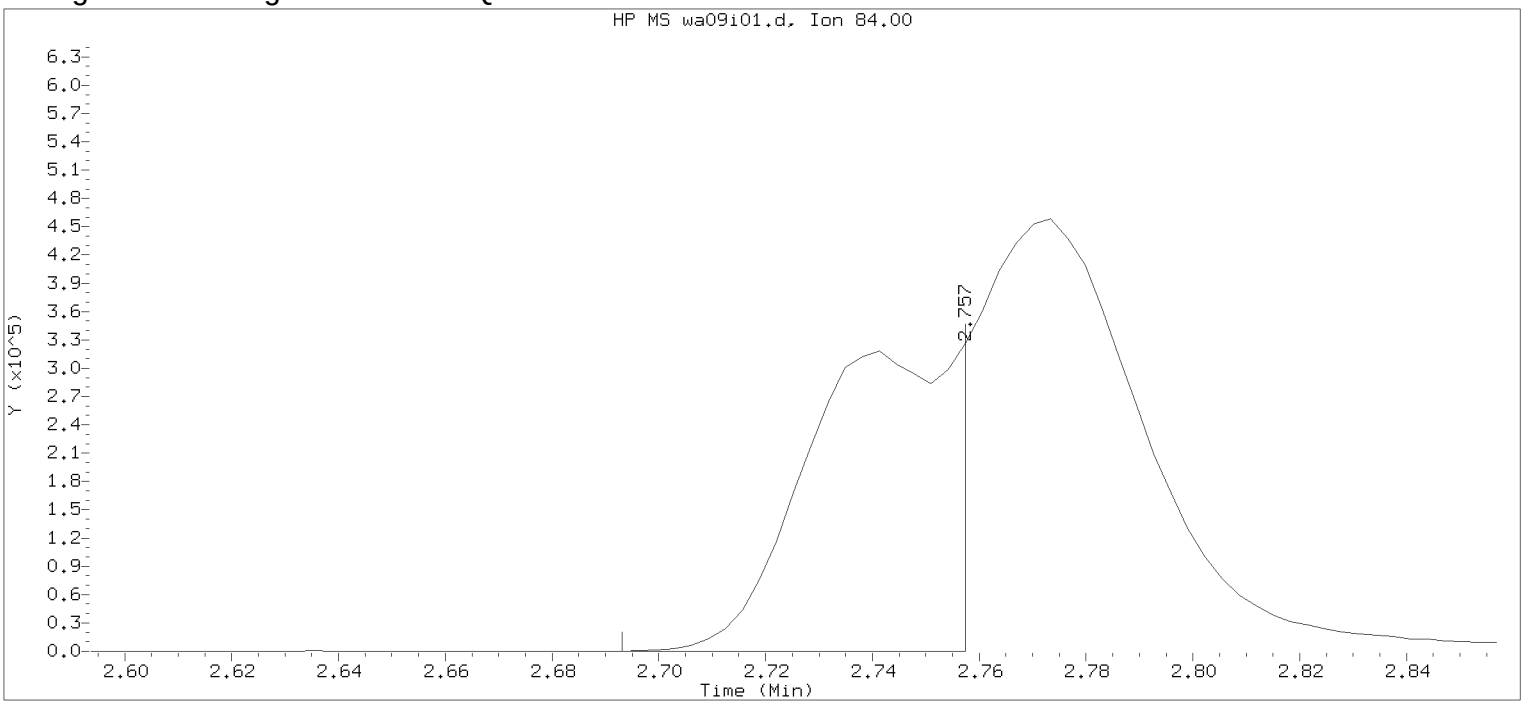
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

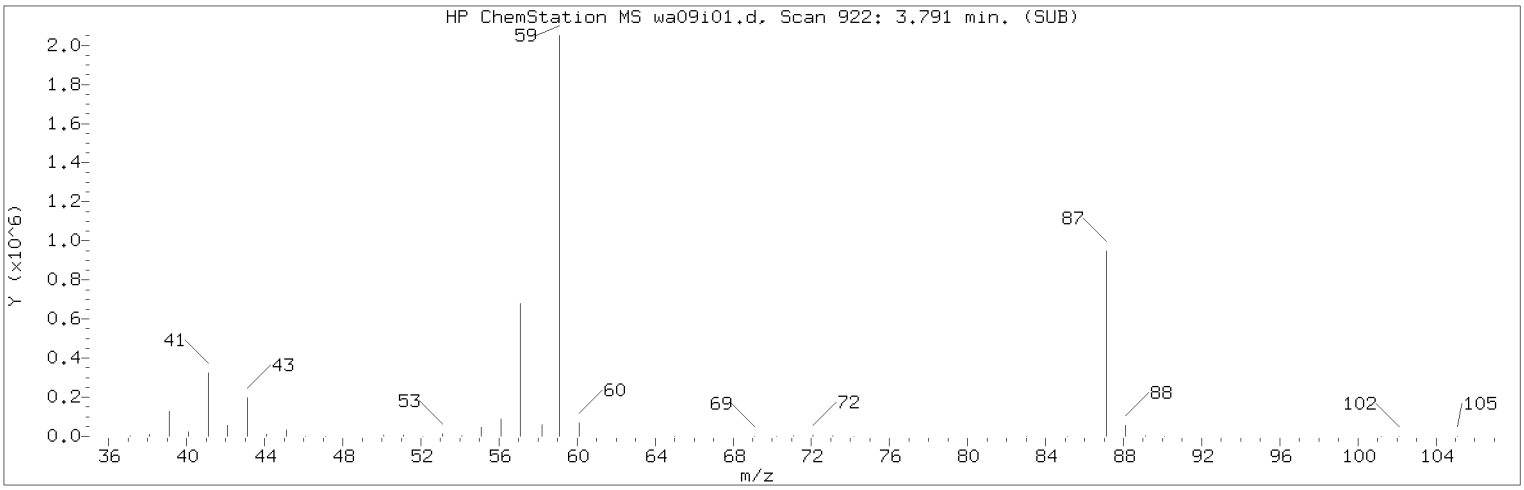
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

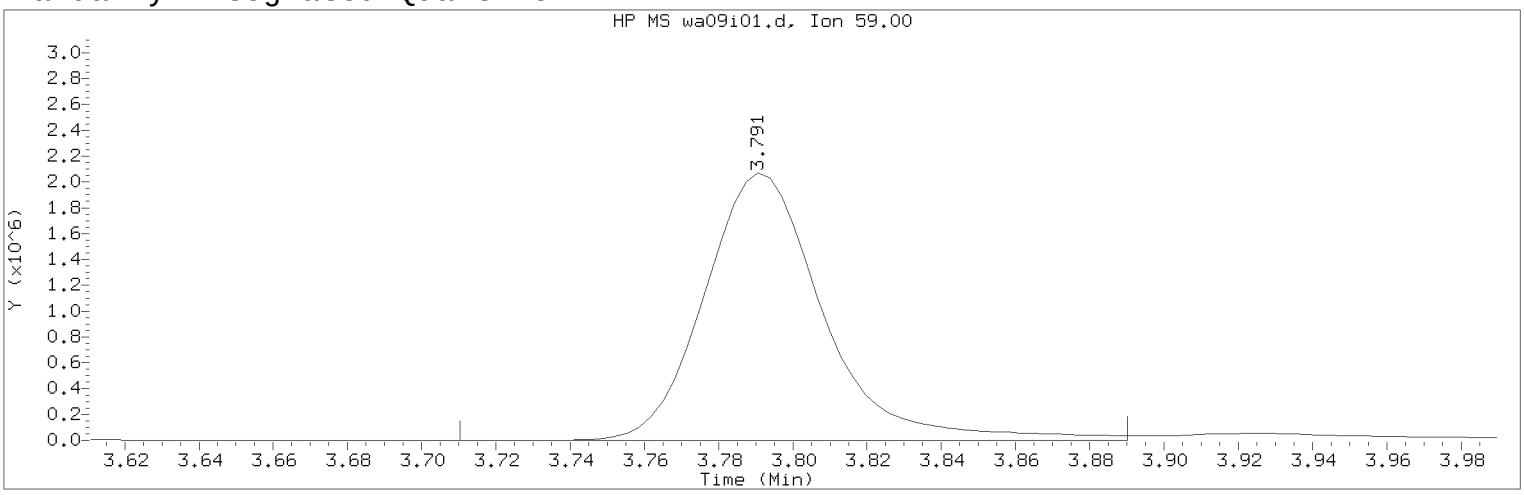
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 600
Retention Time (minutes): 2.757
Quant Ion : 84.00
Area : 617728
On-column Amount (ng) : 124.5995
Integration start scan : 579 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

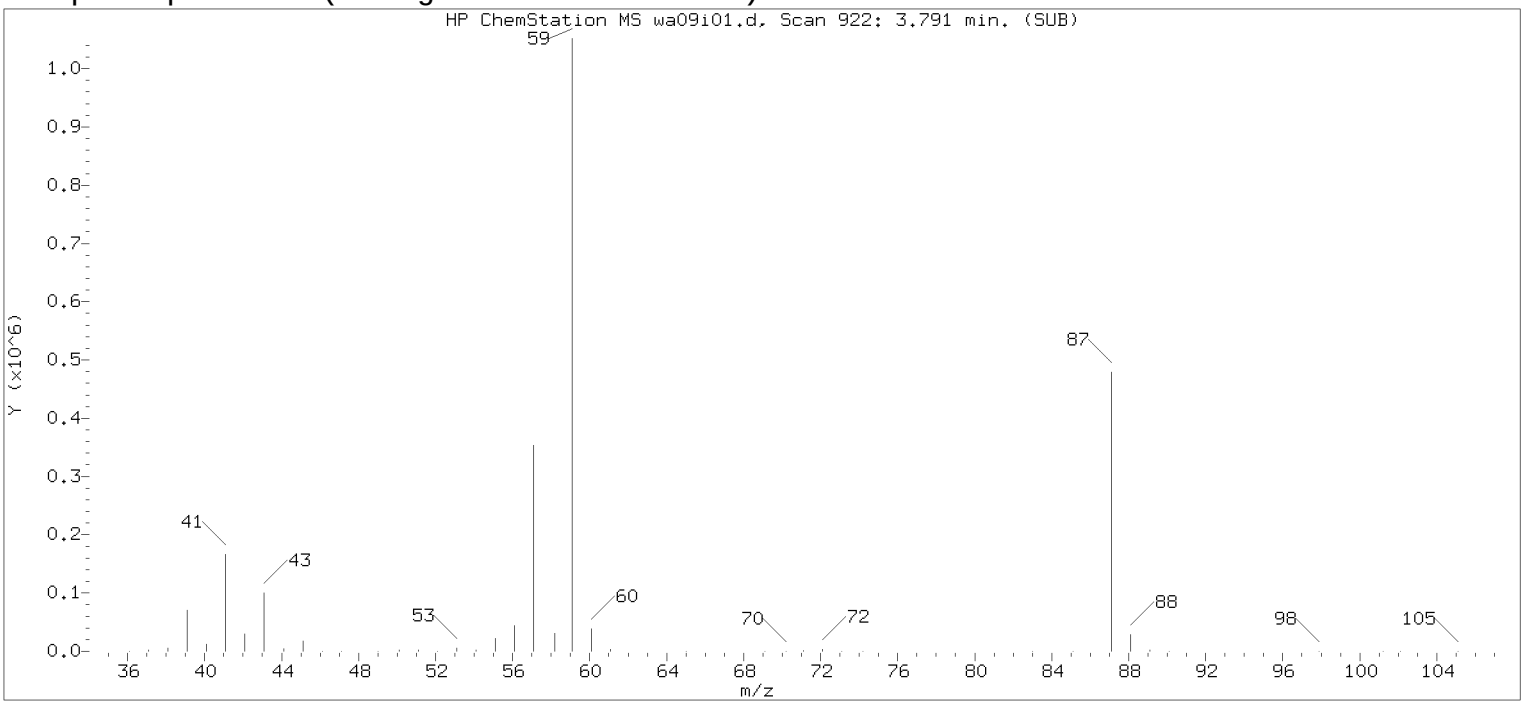
Compound Number : 40
Compound Name : Ethyl t-butyl ether
Scan Number : 922
Retention Time (minutes): 3.791
Quant Ion : 59.00
Area (flag) : 4601239M
On-Column Amount (ng) : 281.2976
Integration start scan : 896 Integration stop scan: 952
Y at integration start : 977 Y at integration end: 977

Reason for manual integration: improper integration

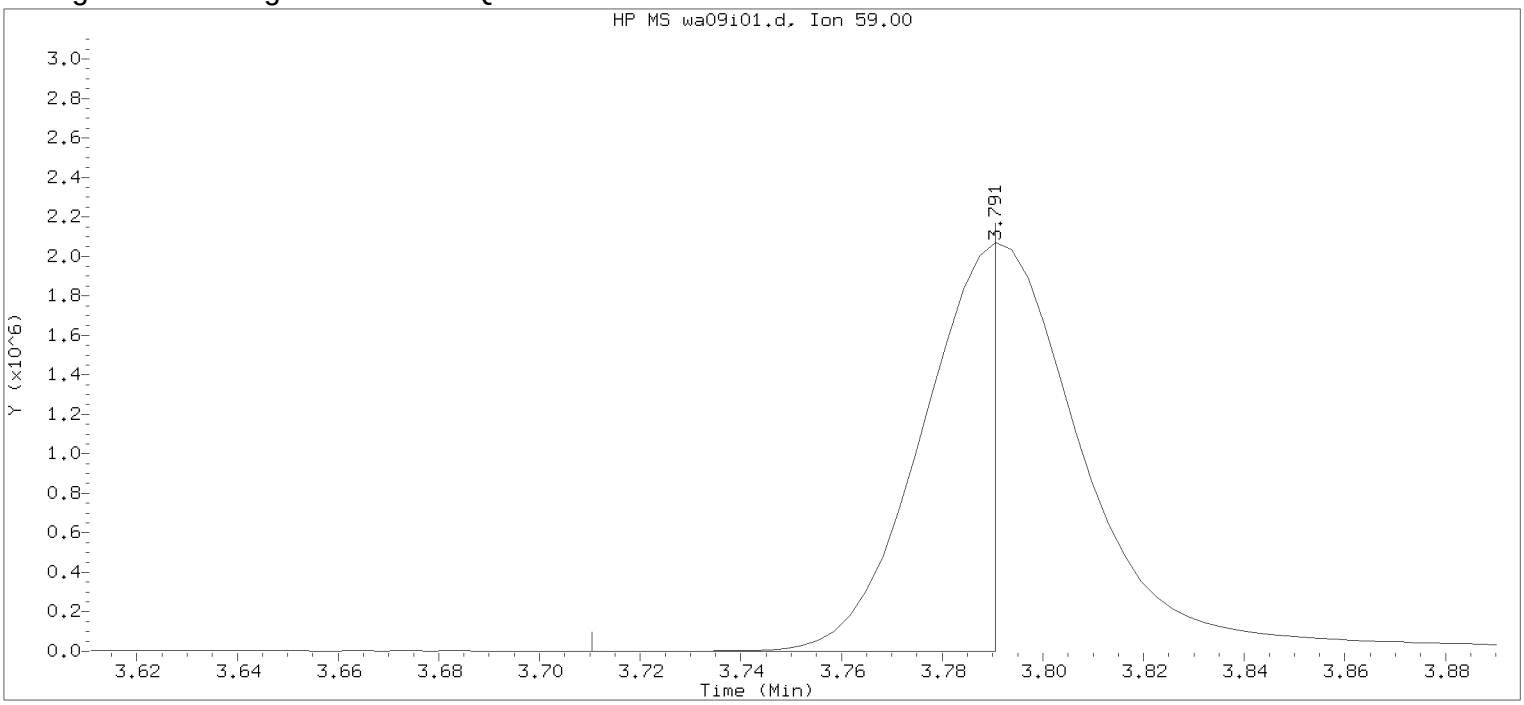
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

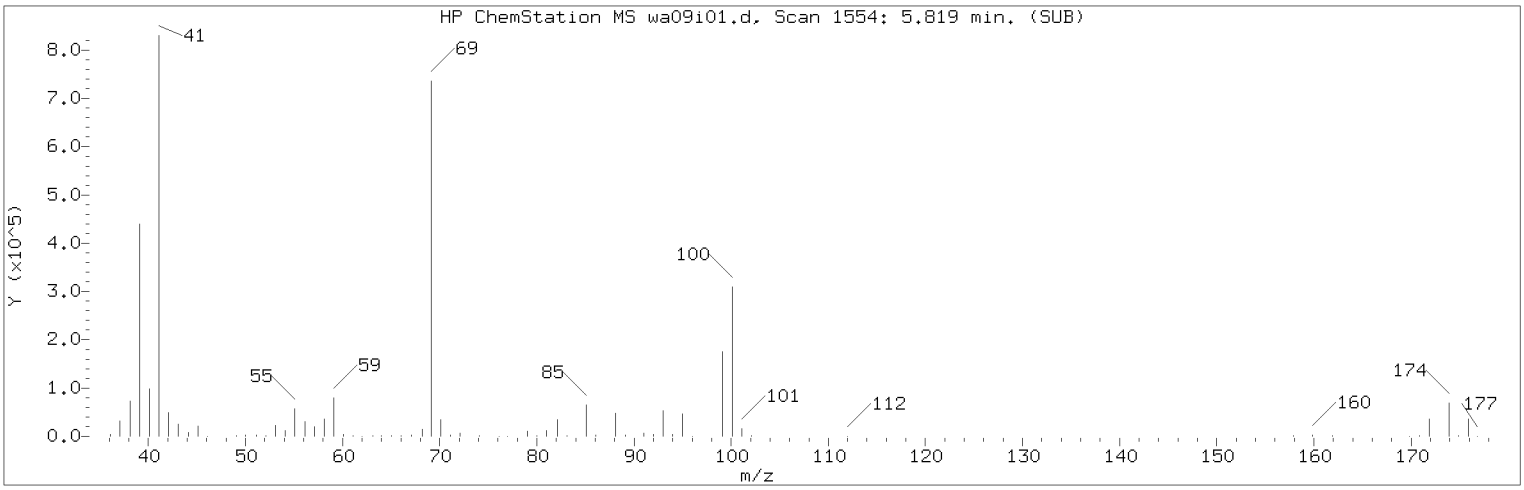
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

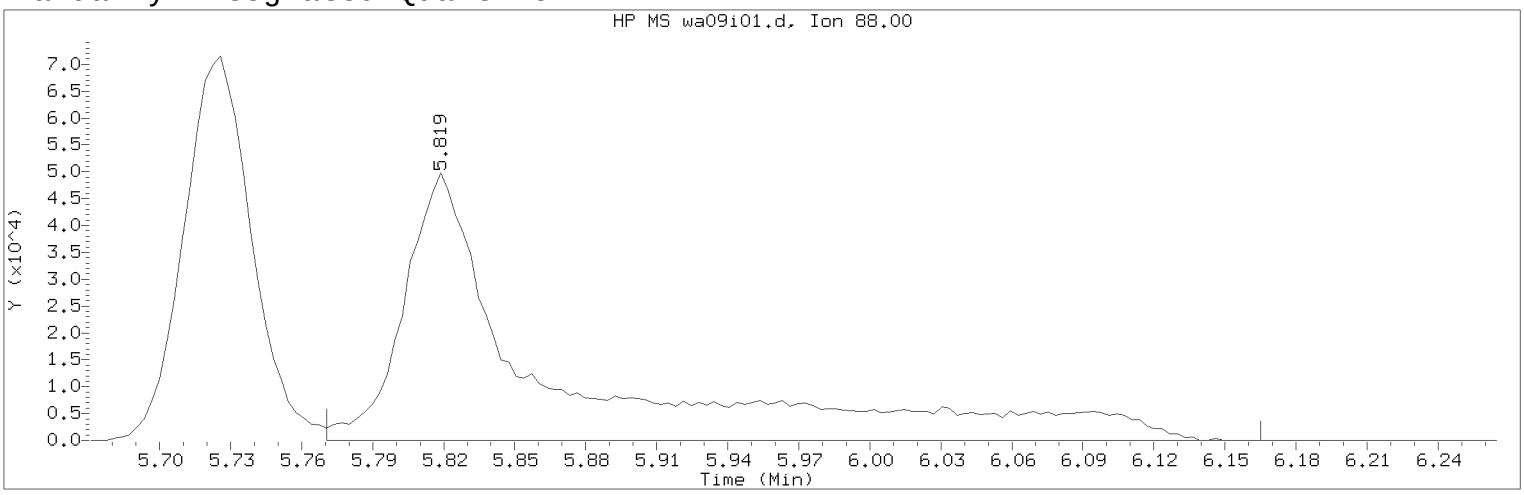
Compound Number : 40
Compound Name : Ethyl t-butyl ether
Scan Number : 922
Retention Time (minutes): 3.791
Quant Ion : 59.00
Area : 2035989
On-column Amount (ng) : 126.1561
Integration start scan : 896 Integration stop scan: 921
Y at integration start : 994 Y at integration end: 994

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

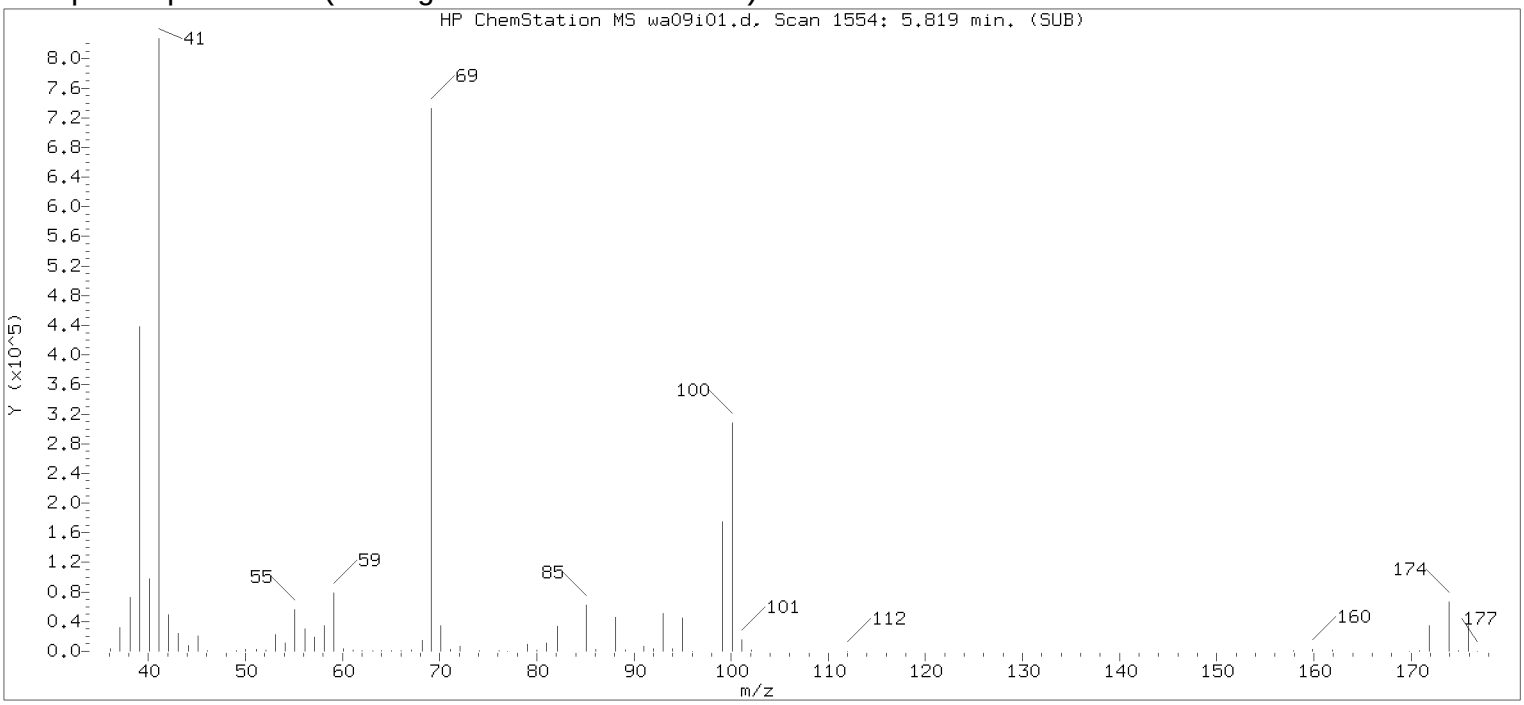
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1554
Retention Time (minutes): 5.819
Quant Ion : 88.00
Area (flag) : 212311M
On-Column Amount (ng) : 4094.3520
Integration start scan : 1538 Integration stop scan: 1661
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

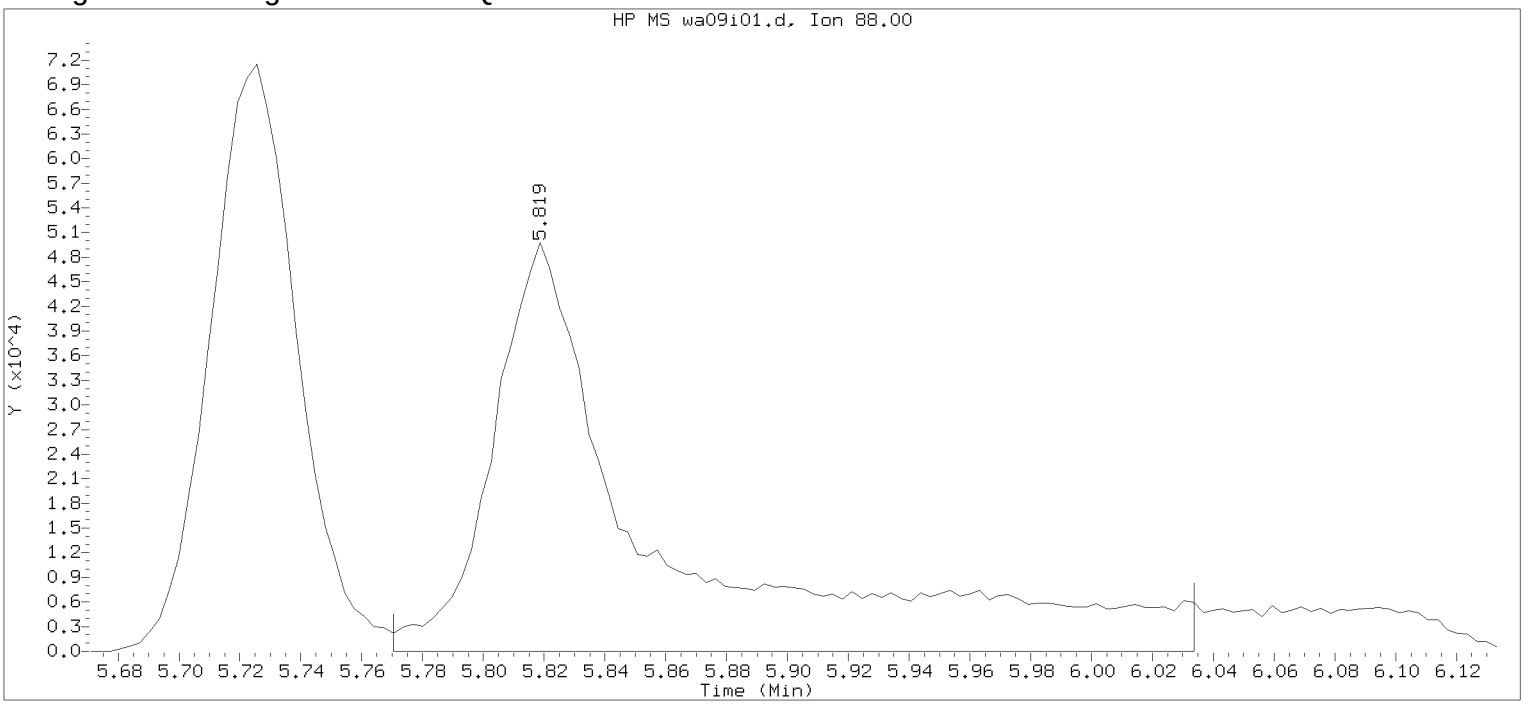
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

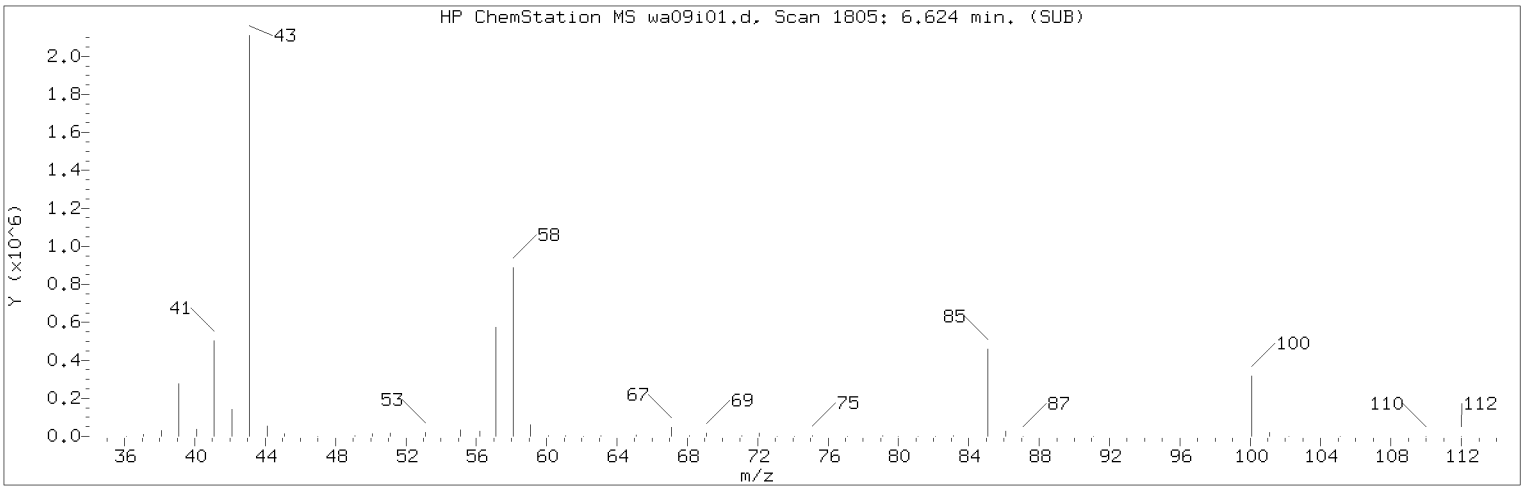
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

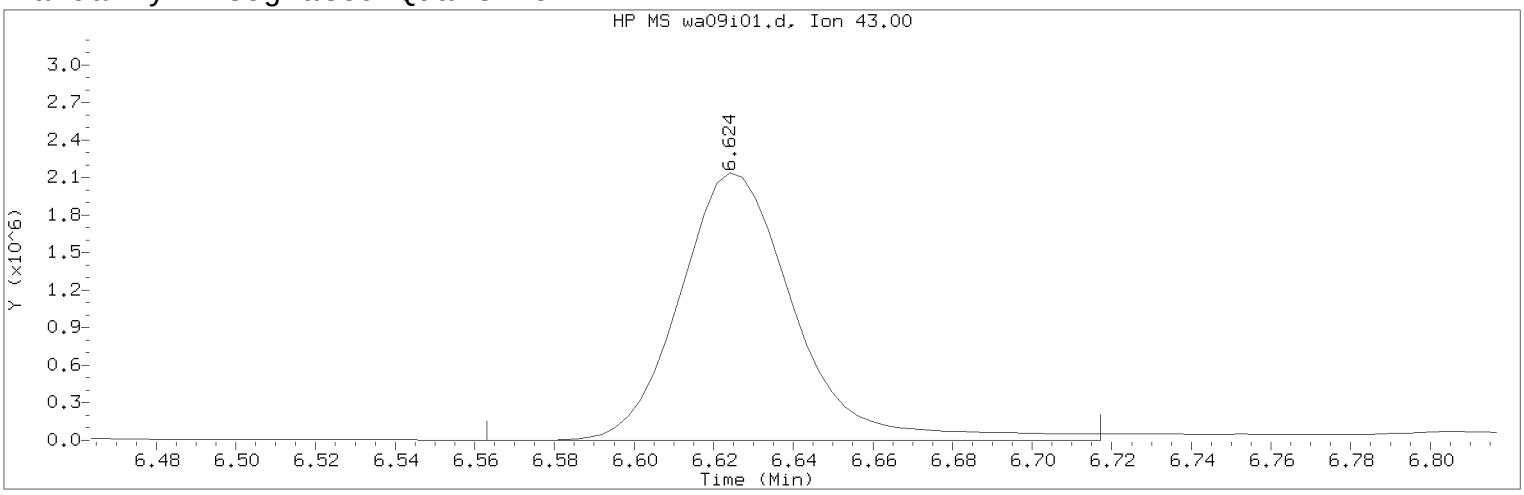
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1554
Retention Time (minutes): 5.819
Quant Ion : 88.00
Area : 185973
On-column Amount (ng) : 4036.8700
Integration start scan : 1538 Integration stop scan: 1620
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: 1317

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

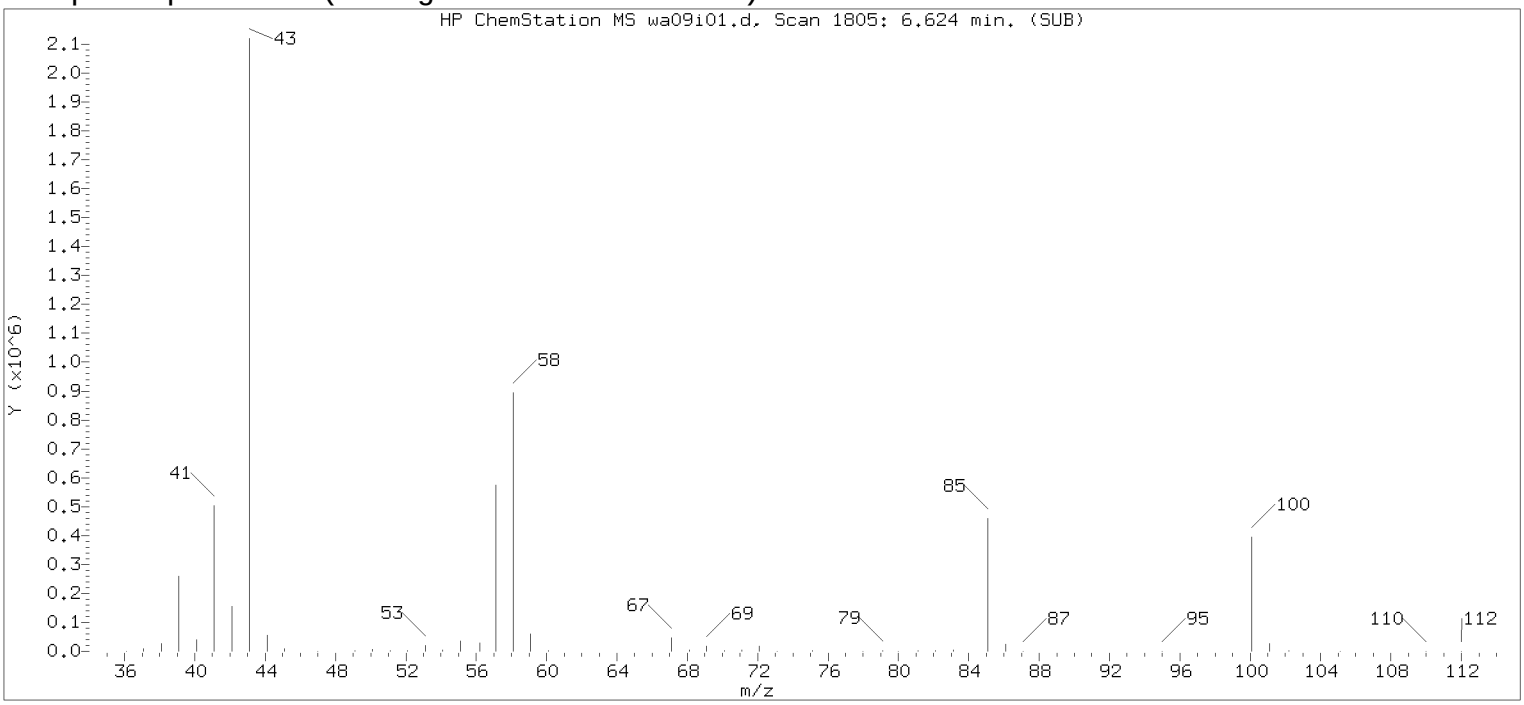
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1805
Retention Time (minutes): 6.624
Quant Ion : 43.00
Area (flag) : 4297653M
On-Column Amount (ng) : 534.5944
Integration start scan : 1785 Integration stop scan: 1833
Y at integration start : 860 Y at integration end: 860

Reason for manual integration: improper integration

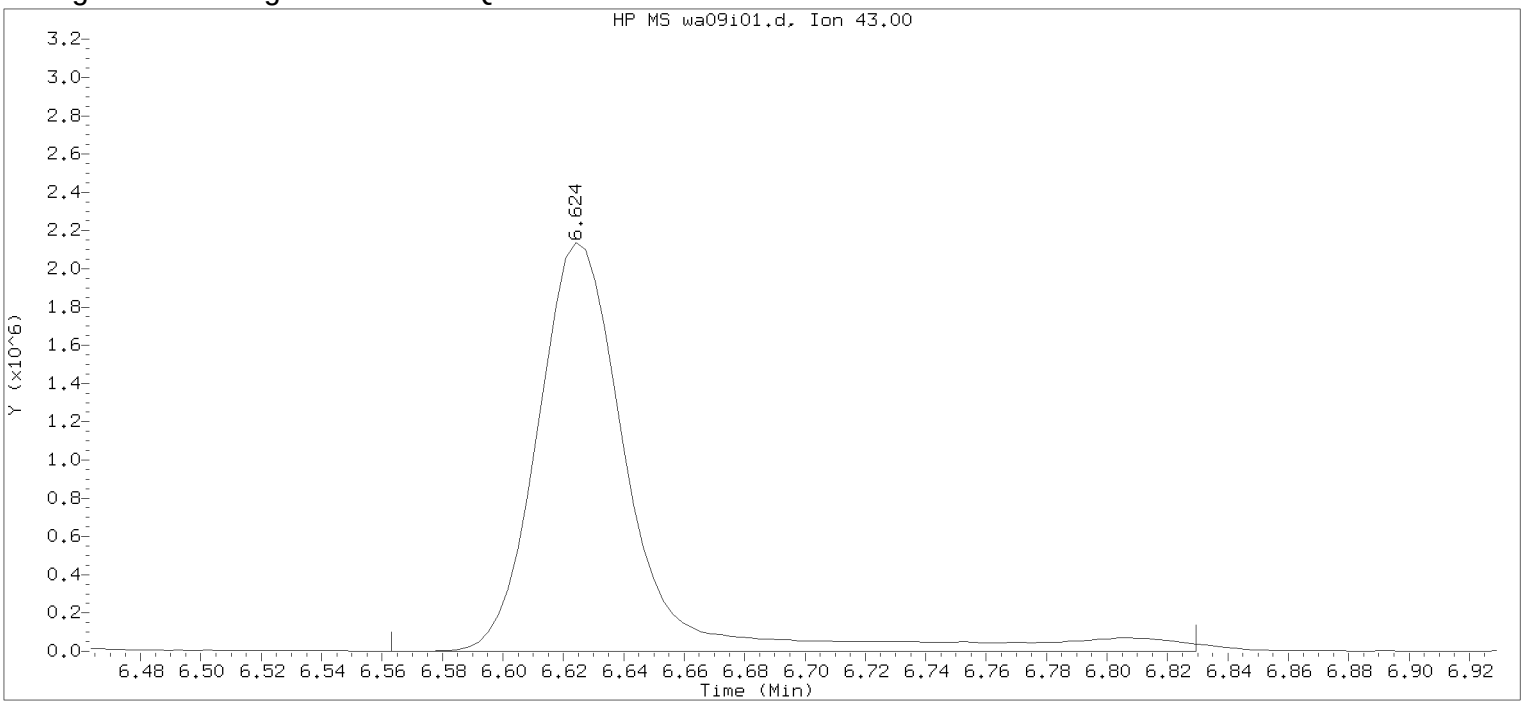
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

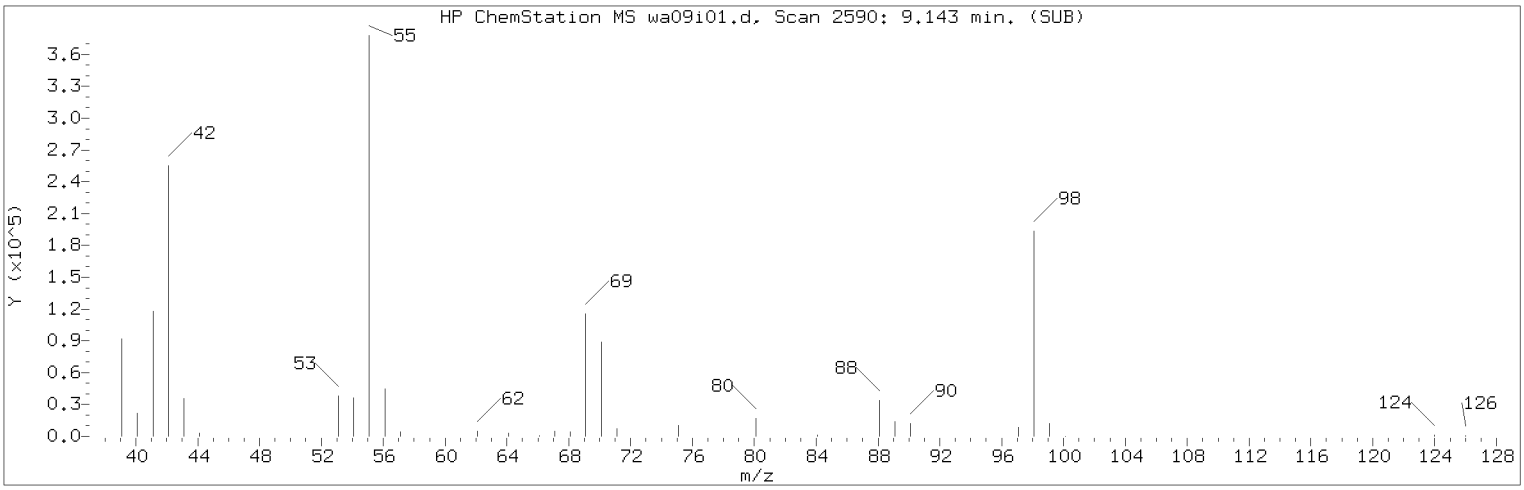
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

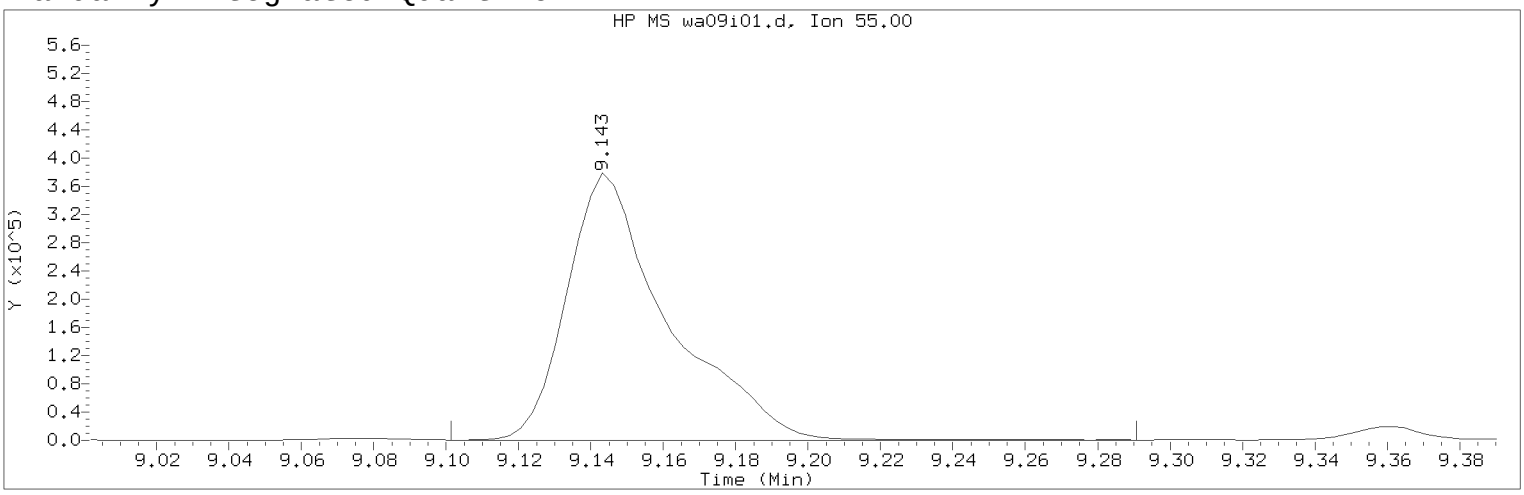
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1805
Retention Time (minutes): 6.624
Quant Ion : 43.00
Area : 4635677
On-column Amount (ng) : 515.8310
Integration start scan : 1785 Integration stop scan: 1868
Y at integration start : 860 Y at integration end: 860

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: 1317

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD300 Lab Sample ID: VSTD300

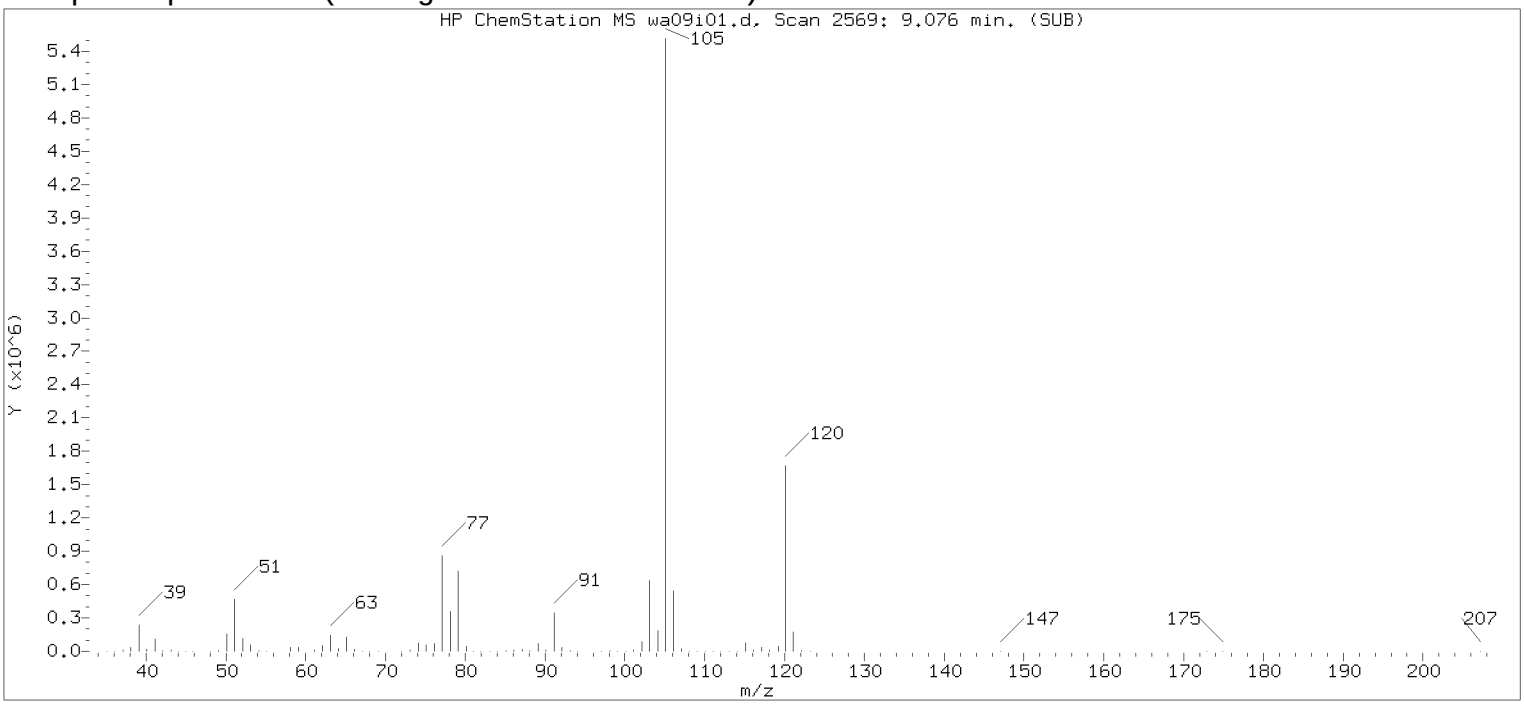
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2590
Retention Time (minutes): 9.143
Quant Ion : 55.00
Area (flag) : 732988A
On-Column Amount (ng) : 3067.7460
Integration start scan : 2576 Integration stop scan: 2635
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

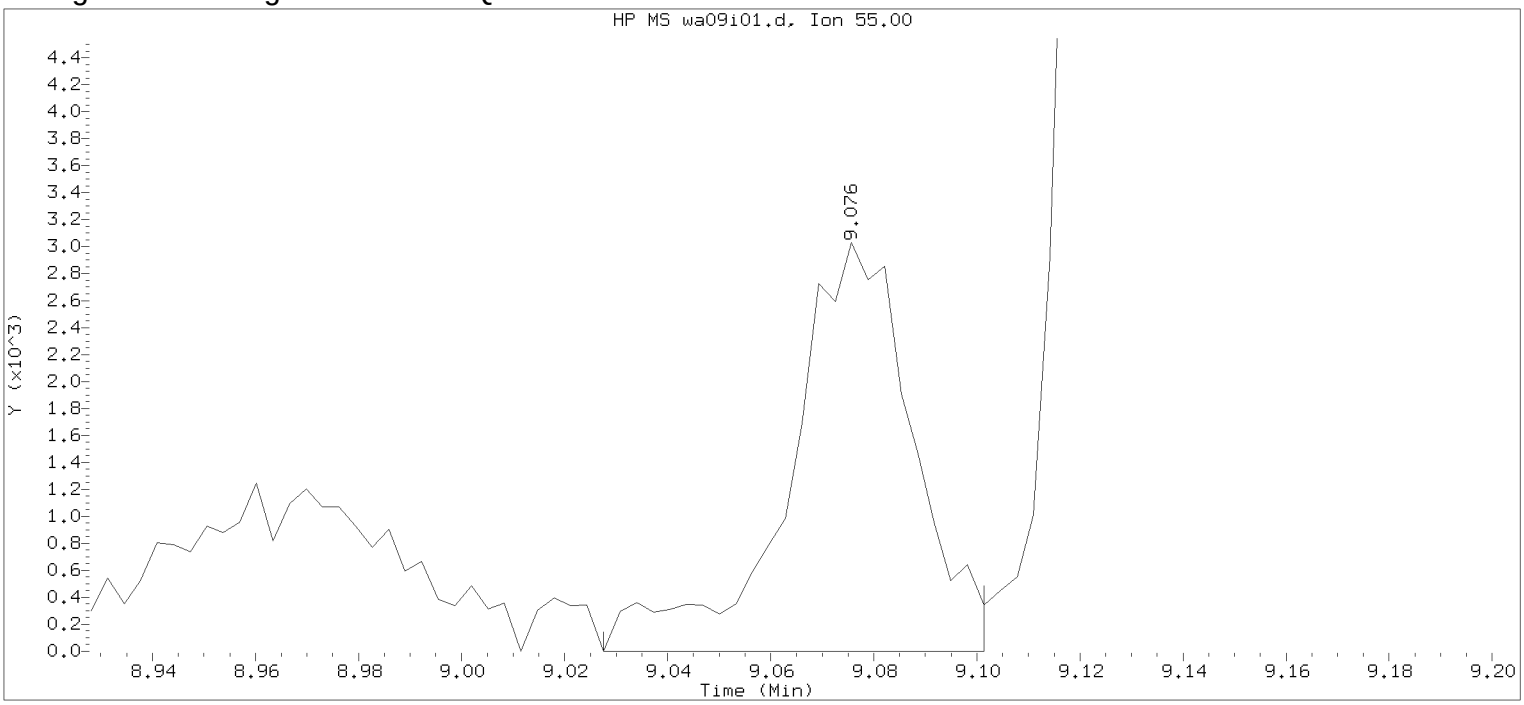
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:16 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:31
Date, time and analyst ID of latest file update: 09-Apr-2018 11:31 Automation

Sample Name: VSTD300 Lab Sample ID: VSTD300

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2569
Retention Time (minutes): 9.076
Quant Ion : 55.00
Area : 5052
On-column Amount (ng) : 34.2415
Integration start scan : 2553 Integration stop scan: 2576
Y at integration start : 0 Y at integration end: 0

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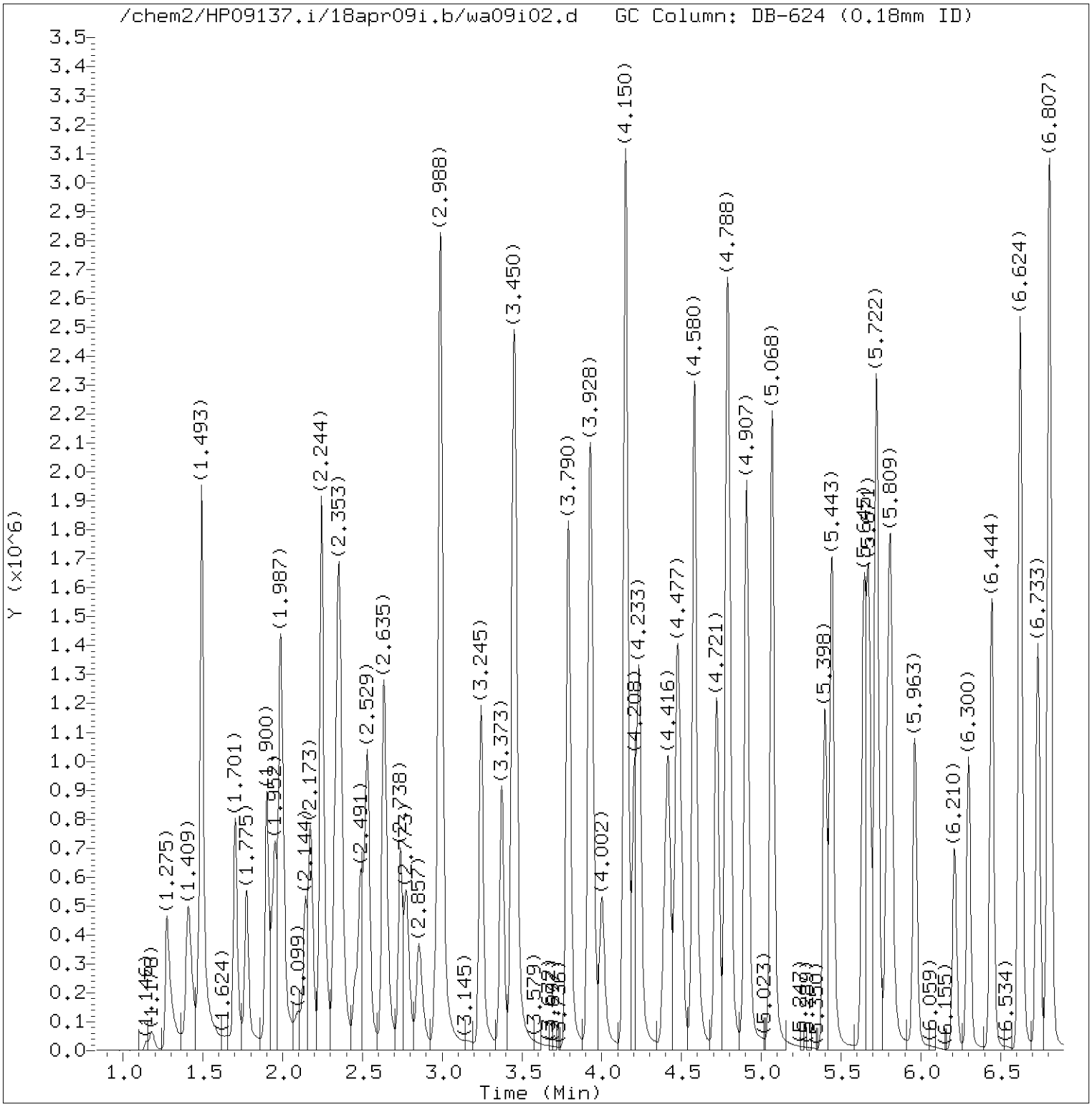
Target 3.5 esignature user id: 17 Page 207



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

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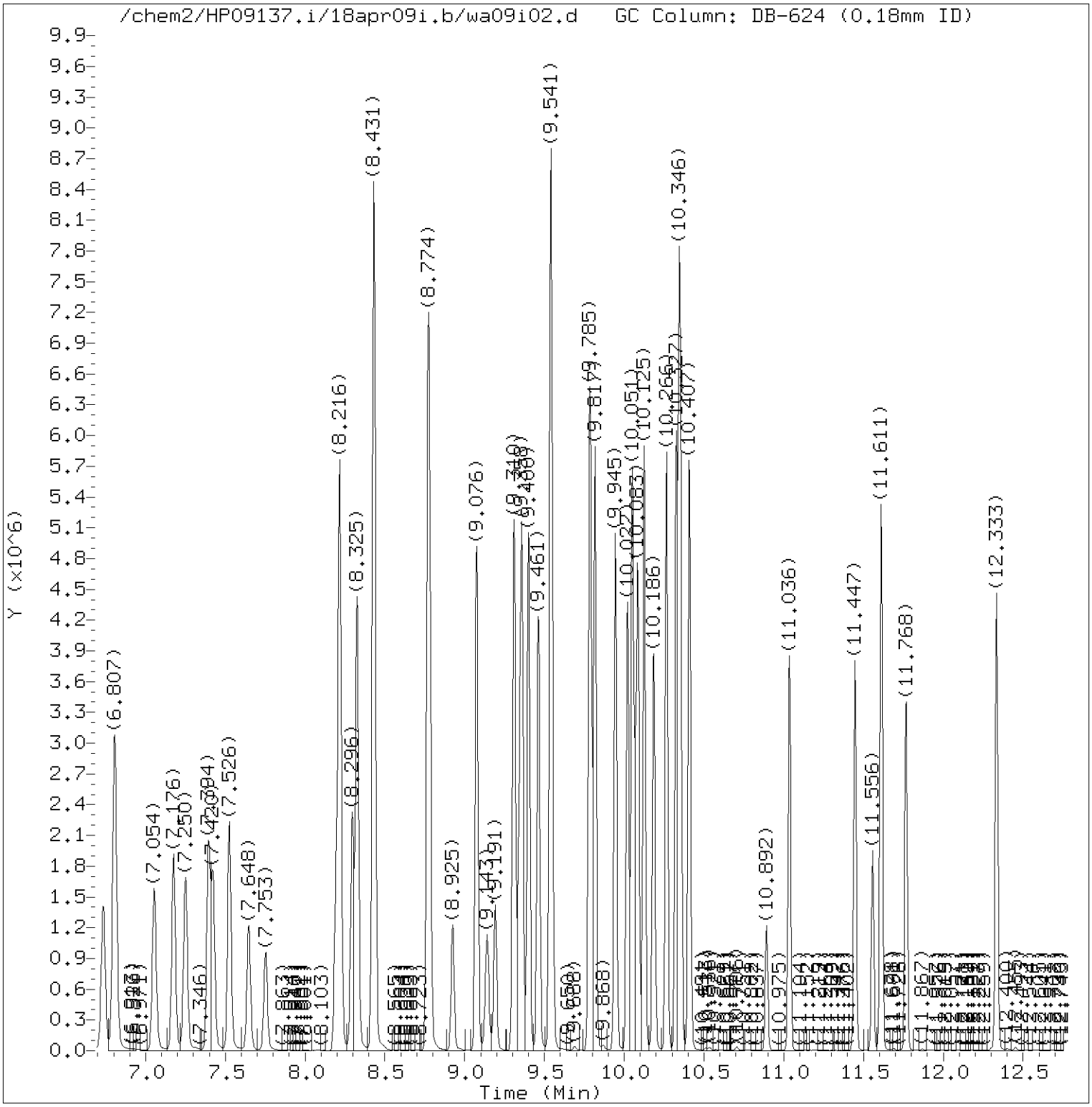
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	744751	107.390
4) Chloromethane	(2)	1.409	50	750436	101.024
6) Vinyl Chloride	(2)	1.483	62	798843	106.404
5) 1,3-Butadiene	(2)	1.493	39	524327	95.307
8) Bromomethane	(2)	1.701	94	554689	101.708
9) Chloroethane	(2)	1.775	64	463088	103.326
10) Dichlorofluoromethane	(2)	1.900	67	777551	82.332
12) Trichlorofluoromethane	(2)	1.952	101	909589	108.960
11) n-Pentane	(2)	1.990	43	847643	95.651
13) Ethanol	(1)	2.103	45	166839	2495.535
15) Freon 123a	(2)	2.173	67	597705	96.941
16) Acrolein	(1)	2.244	56	1786873	950.991
17) 1,1-Dichloroethene	(2)	2.346	96	475235	102.227
17) 1,1-Dichloroethene	(2)	2.343	63	224926	104.128
19) Freon 113	(2)	2.353	101	504021	106.982
18) Acetone	(1)	2.369	58	156430	198.173
22) Methyl Iodide	(2)	2.488	142	931187	103.146
21) 2-Propanol	(1)	2.507	45	276239M	506.113
23) Carbon Disulfide	(2)	2.533	76	1625252	105.949
25) Allyl Chloride	(2)	2.632	41	757941	102.146
27) Methyl Acetate	(2)	2.651	43	581619	107.109
28) Methylene Chloride	(2)	2.738	84	538074	99.603
29)*t-Butyl alcohol-d10	(1)	2.786	65	231548	250.000
30) t-Butyl alcohol	(1)	2.857	59	548851	551.515
31) Acrylonitrile	(2)	2.959	53	313487	113.269
32) trans-1,2-Dichloroethene	(2)	2.988	96	537925	105.141
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	1814048	104.593
34) n-Hexane	(2)	3.245	57	613166	103.046
36) 1,1-Dichloroethane	(2)	3.373	63	906106	104.404
38) di-Isopropyl ether	(2)	3.444	45	1645644	101.293
39) 2-Chloro-1,3-butadiene	(2)	3.460	53	798932	104.175
40) Ethyl t-butyl ether	(2)	3.790	59	1667300	103.035
42) cis-1,2-Dichloroethene	(2)	3.925	96	602801	104.412
45) 2,2-Dichloropropane	(2)	3.925	77	468176	99.830
44) 2-Butanone	(2)	3.945	43	850598	220.505
47) Propionitrile	(1)	4.002	54	602108	483.971
43) 1,2-Dichloroethene (Total)	(2)		96	1140726	209.552
48) Methacrylonitrile	(2)	4.147	67	889948	272.463

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

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on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.153	128	308227	104.900
50) Tetrahydrofuran	(1)	4.204	71	254372	191.212
51) Chloroform	(2)	4.237	83	918754	103.256
52)$Dibromofluoromethane	(2)	4.391	113	244306	50.381
52)$Dibromofluoromethane	(2)	4.391	111	250389	50.417
53) 1,1,1-Trichloroethane	(2)	4.416	97	818194	103.326
54) Cyclohexane	(2)	4.477	56	850232	105.518
54) Cyclohexane	(2)	4.480	84	769946	103.784
54) Cyclohexane	(2)	4.477	69	273697	104.463
55) 1,1-Dichloropropene	(2)	4.580	75	735694	103.822
56) Carbon Tetrachloride	(2)	4.583	117	651202	108.588
58) Isobutyl Alcohol	(1)	4.718	41	425998M	1304.999
57)$1,2-Dichloroethane-d4	(2)	4.727	102	64516	50.670
57)$1,2-Dichloroethane-d4	(2)	4.727	65	283245	49.501
57)$1,2-Dichloroethane-d4	(2)	4.727	104	42168	51.130
60) Benzene	(2)	4.785	78	2192202	102.892
61) 1,2-Dichloroethane	(2)	4.801	62	741727	99.842
61) 1,2-Dichloroethane	(2)	4.804	98	76648	104.709
65) t-Amyl methyl ether	(2)	4.907	73	1751274	103.690
66)*Fluorobenzene	(2)	5.068	96	1063731	50.000
67) n-Heptane	(2)	5.071	43	507620	95.116
69) n-Butanol	(1)	5.398	56	794865	2587.773
71) Trichloroethene	(2)	5.440	95	583951	103.240
72) Methylcyclohexane	(2)	5.645	83	798234	104.963
72) Methylcyclohexane	(2)	5.642	98	377491	105.620
73) 1,2-Dichloropropane	(2)	5.671	63	568039	105.289
74) Dibromomethane	(2)	5.790	93	384778	105.174
76) Methyl Methacrylate	(2)	5.812	69	600802	104.239
75) 1,4-Dioxane	(1)	5.835	88	97157M	1158.003
78) Bromodichloromethane	(2)	5.963	83	729255	105.420
79) 2-Nitropropane	(2)	6.213	41	449010	234.447
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	469731	106.892
81) cis-1,3-Dichloropropene	(2)	6.444	75	973608	106.745
82) 4-Methyl-2-pentanone	(2)	6.624	43	1730319M	217.571
83)$Toluene-d8	(3)	6.733	98	1055061	49.837
83)$Toluene-d8	(3)	6.736	100	700151	49.073
88) Toluene	(3)	6.807	92	1484206	102.353
89) trans-1,3-Dichloropropene	(3)	7.054	75	922001	106.721

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

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on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.176	69	1040651	104.058
92) 1,1,2-Trichloroethane	(3)	7.250	97	584916	102.624
90) 1,3-Dichloropropene (total)	(3)		100	1895609	213.466
93) Tetrachloroethene	(3)	7.394	166	604410	102.431
94) 1,3-Dichloropropane	(3)	7.423	76	963550	102.278
96) 2-Hexanone	(3)	7.526	43	1363305	214.180
97) Dibromochloromethane	(3)	7.648	129	636535	109.822
99) 1,2-Dibromoethane	(3)	7.753	107	646301	104.101
100)*Chlorobenzene-d5	(3)	8.193	117	825664	50.000
102) Chlorobenzene	(3)	8.219	112	1702590	103.055
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	573255	108.025
104) Ethylbenzene	(3)	8.325	91	2777080	103.510
106) m+p-Xylene	(3)	8.431	106	2296303	209.425
107) o-Xylene	(3)	8.768	106	1153409	105.319
109) Styrene	(3)	8.780	104	2001994	106.995
108) Xylene (Total)	(3)		106	3449712	314.744
110) Bromoform	(3)	8.925	173	479749	115.334
111) Isopropylbenzene	(3)	9.076	105	2751298	105.610
112) Cyclohexanone	(1)	9.143	55	393773	1018.571
114)$4-Bromofluorobenzene	(3)	9.191	95	406274	50.809
114)$4-Bromofluorobenzene	(3)	9.191	174	333443	51.109
115) Bromobenzene	(4)	9.307	156	764662	101.487
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	974478	100.496
117) 1,2,3-Trichloropropane	(4)	9.342	110	304586	100.015
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	699993	262.622
119) n-Propylbenzene	(4)	9.400	91	3150749	100.113
120) 2-Chlorotoluene	(4)	9.461	126	698260	100.824
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	2407058	102.938
121) 4-Chlorotoluene	(4)	9.547	126	755127	101.873
124) tert-Butylbenzene	(4)	9.785	134	530158	102.264
125) Pentachloroethane	(4)	9.794	167	435097	108.717
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	2508002	102.554
127) sec-Butylbenzene	(4)	9.945	105	2698410	101.924
129) 1,3-Dichlorobenzene	(4)	10.022	146	1435765	100.842
130) p-Isopropyltoluene	(4)	10.051	119	2457826	103.205
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	461030	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	1492455	100.762
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	2562342	101.719

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$ = Compound is a surrogate standard.

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on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

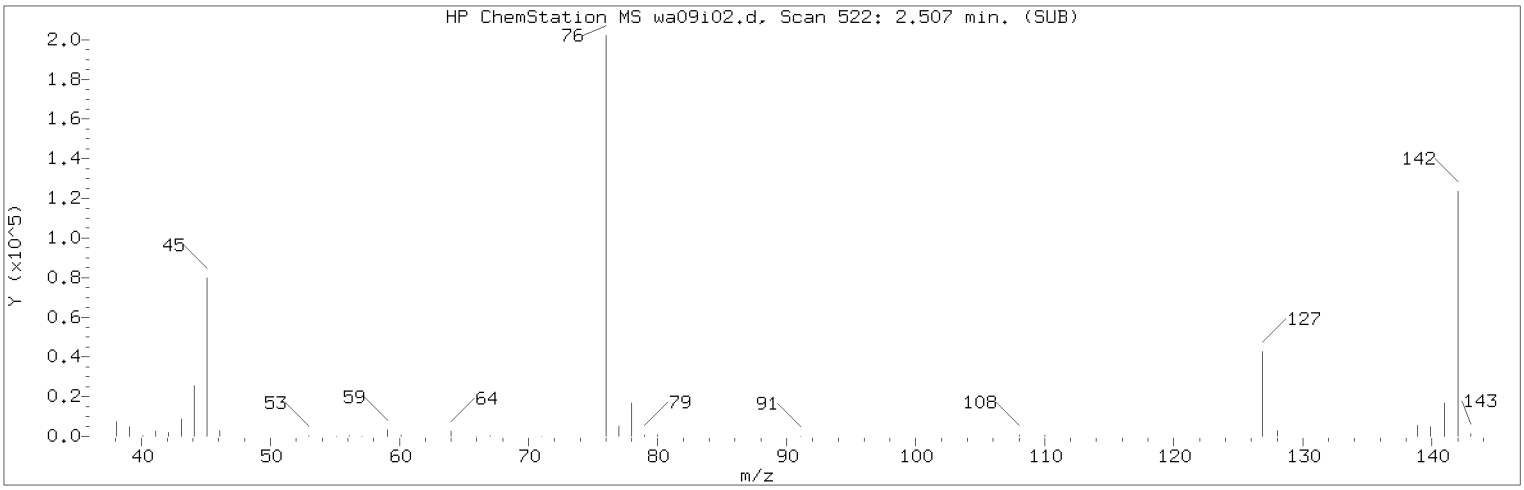
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

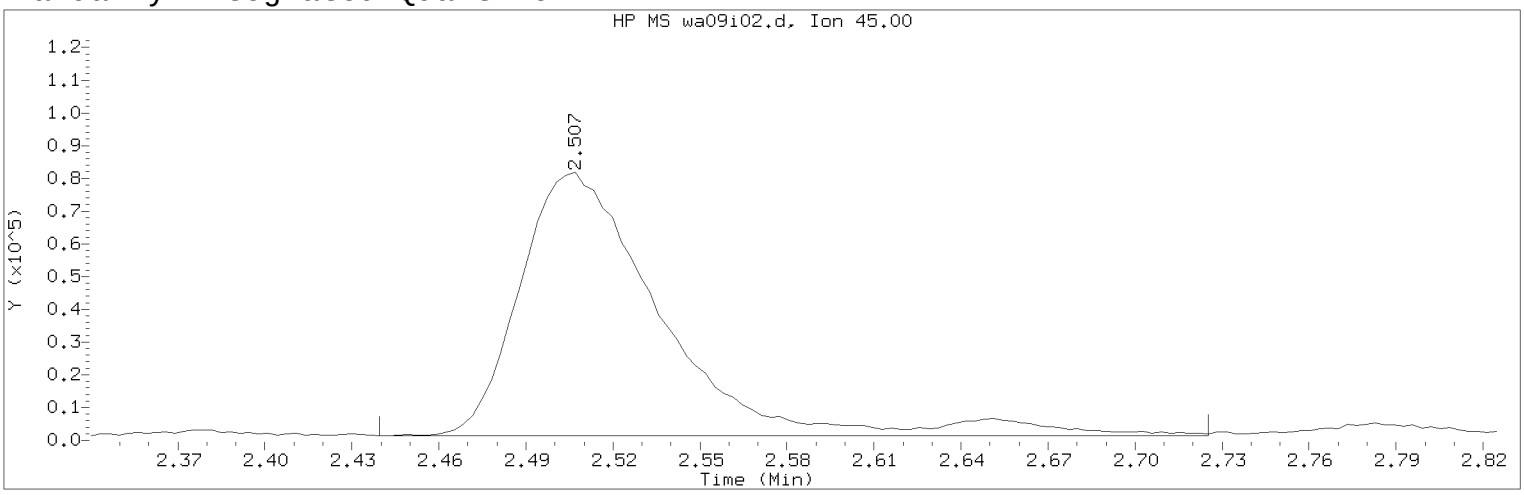
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	2149328	109.614
136) 1,3-Diethylbenzene	(4)	10.266	119	1474155	103.834
137) 1,4-Diethylbenzene	(4)	10.327	119	1515062	102.953
139) n-Butylbenzene	(4)	10.343	92	1163089	102.710
138) 1,2-Dichlorobenzene	(4)	10.353	146	1455008	102.499
140) 1,2-Diethylbenzene	(4)	10.407	119	1257839	103.210
141) Diethylbenzene (total)	(4)		100	4247056	309.998
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	226608	109.813
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	911395	100.994
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	882882	98.749
147) Hexachlorobutadiene	(4)	11.556	225	256426	96.775
148) Naphthalene	(4)	11.611	128	3235566	99.735
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	809892	95.431
150) 2-Methylnaphthalene	(4)	12.333	142	1634716	95.739

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

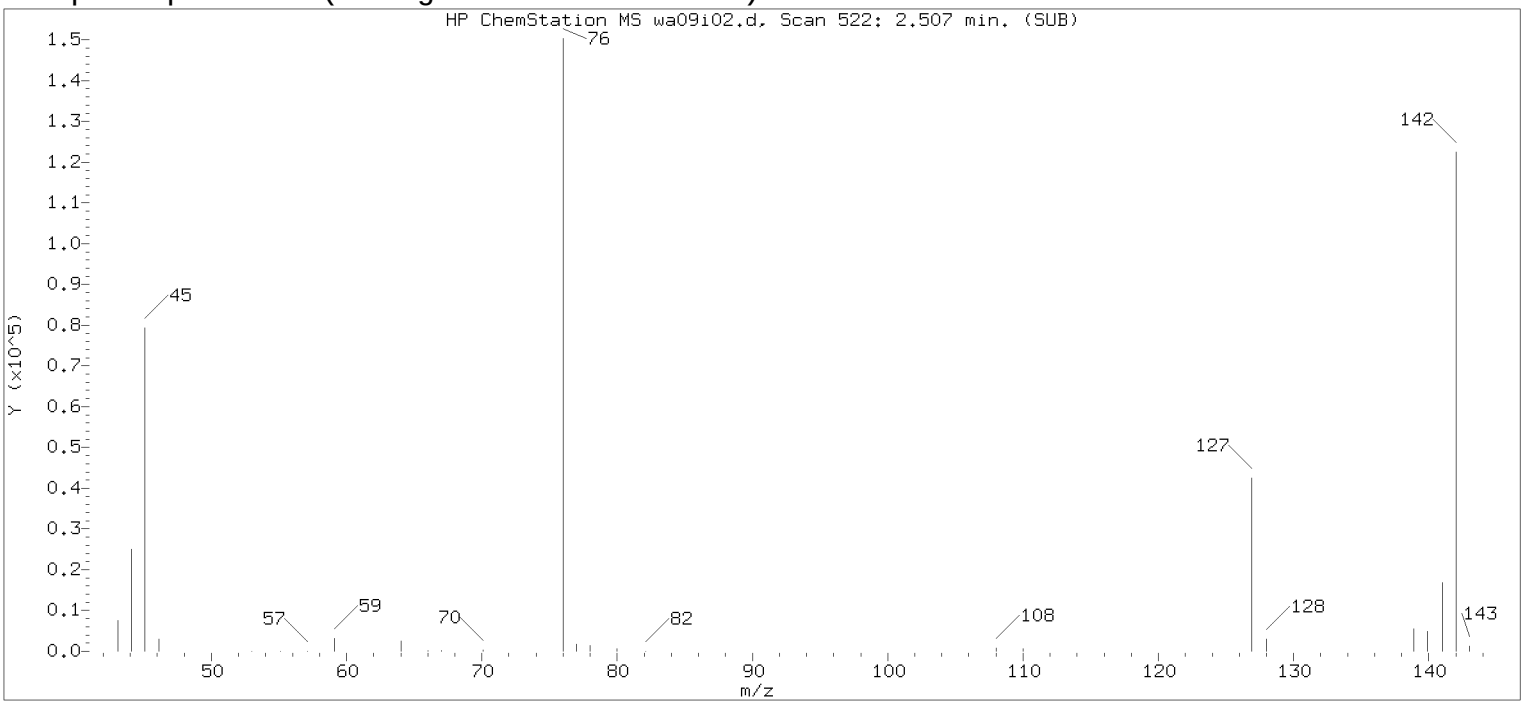
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 522
Retention Time (minutes): 2.507
Quant Ion : 45.00
Area (flag) : 276239M
On-Column Amount (ng) : 506.1128
Integration start scan : 500 Integration stop scan: 589
Y at integration start : 1348 Y at integration end: 1348

Reason for manual integration: improper integration

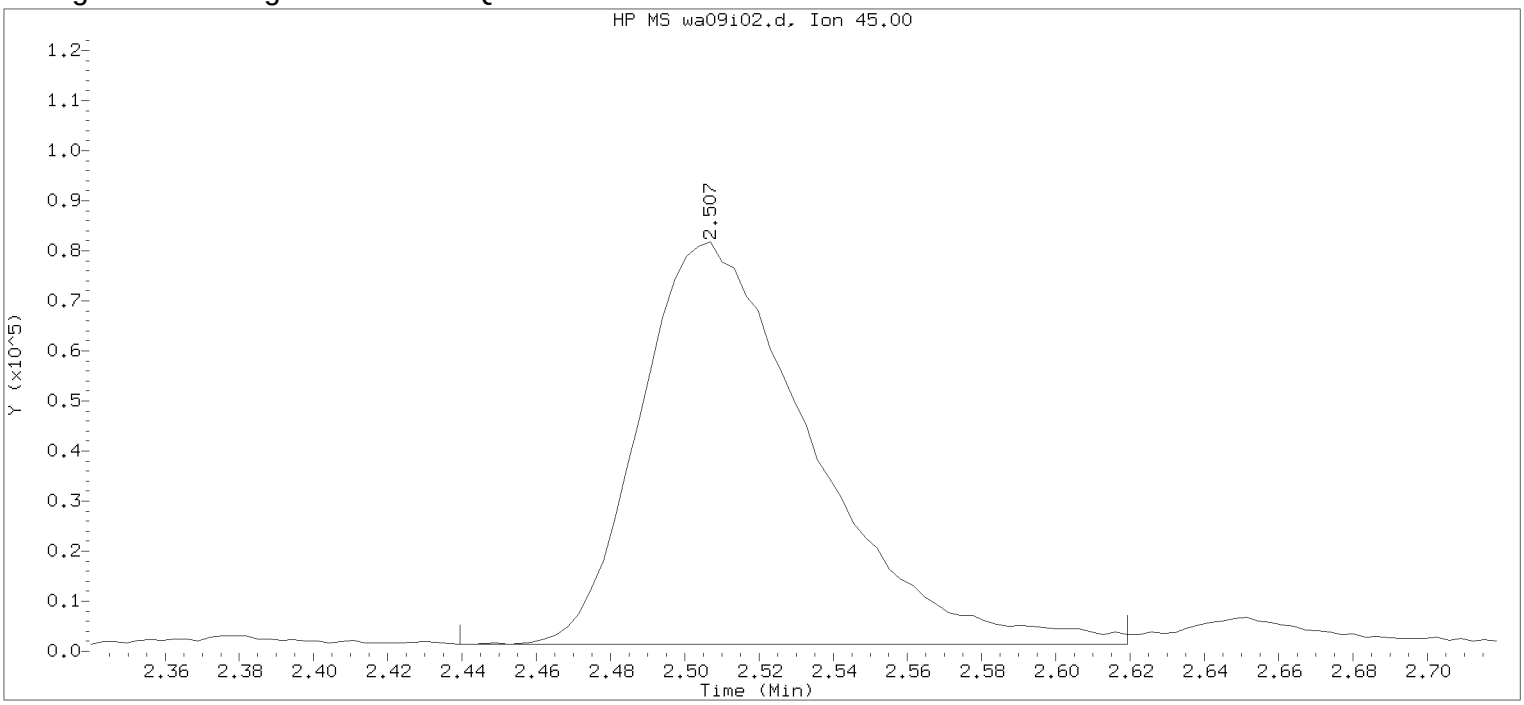
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

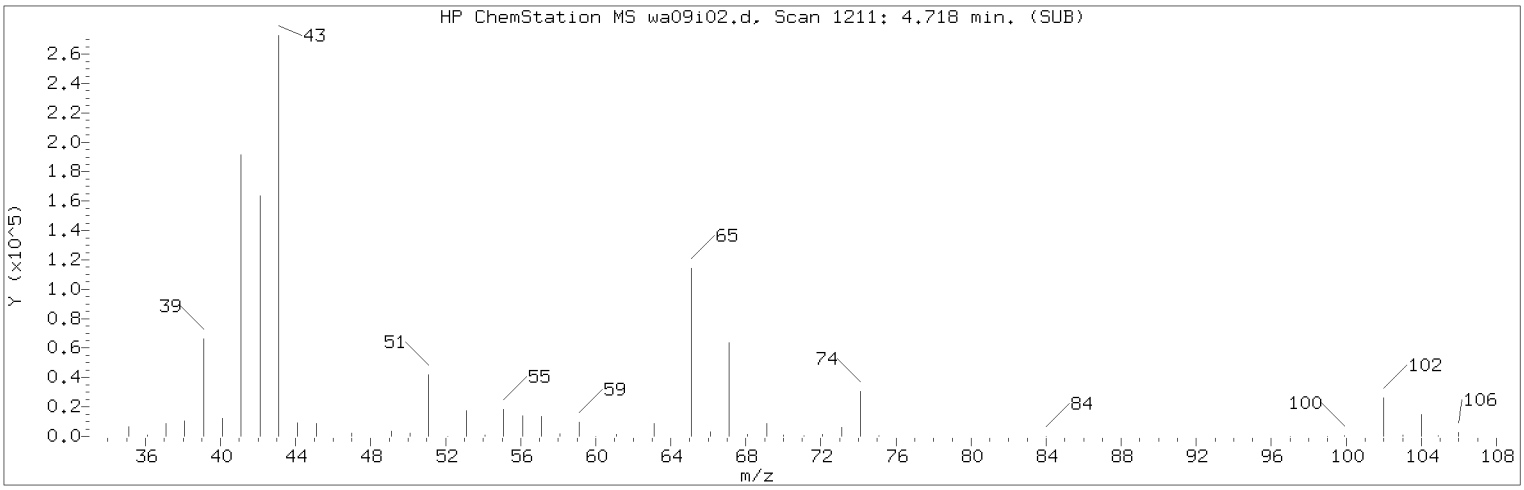
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:55
Date, time and analyst ID of latest file update: 09-Apr-2018 11:55 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

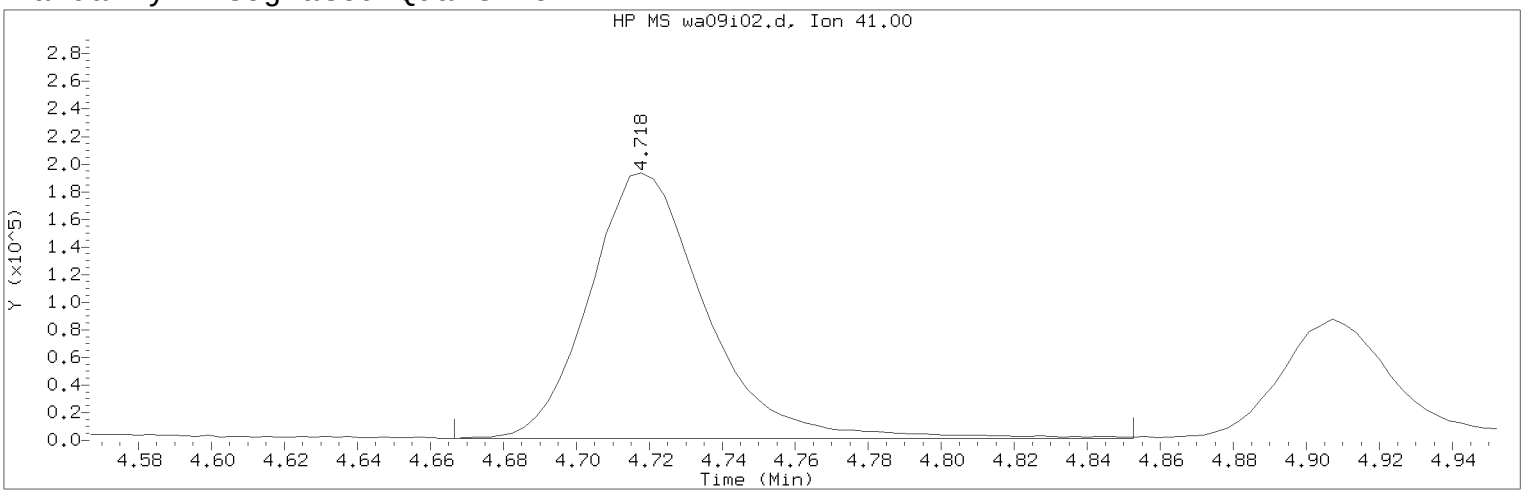
Compound Number : 21
Compound Name : 2-Propanol
Scan Number : 522
Retention Time (minutes): 2.507
Quant Ion : 45.00
Area : 260516
On-column Amount (ng) : 506.4809
Integration start scan : 500 Integration stop scan: 556
Y at integration start : 1348 Y at integration end: 1348

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: 17

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

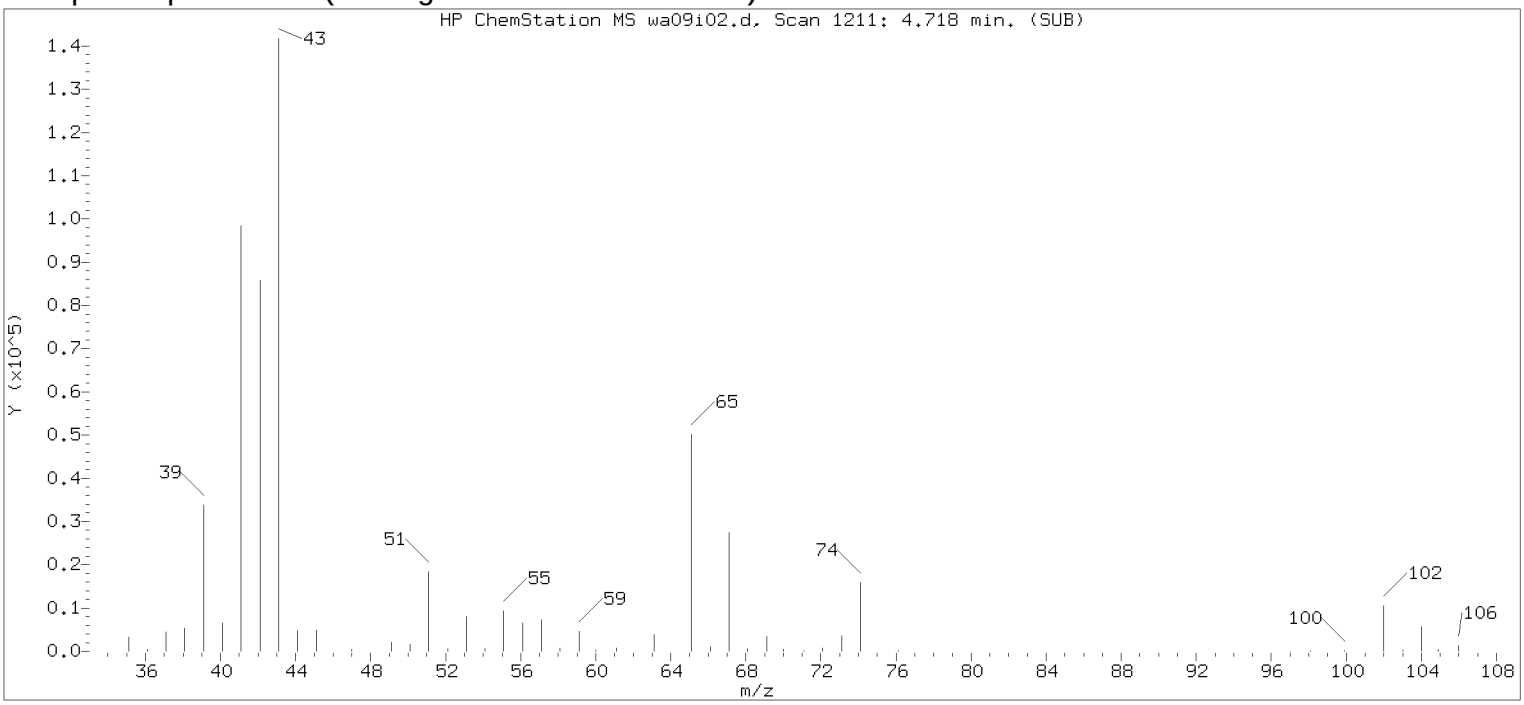
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1211
Retention Time (minutes): 4.718
Quant Ion : 41.00
Area (flag) : 425998M
On-Column Amount (ng) : 1304.9992
Integration start scan : 1194 Integration stop scan: 1252
Y at integration start : 1572 Y at integration end: 1572

Reason for manual integration: improper integration

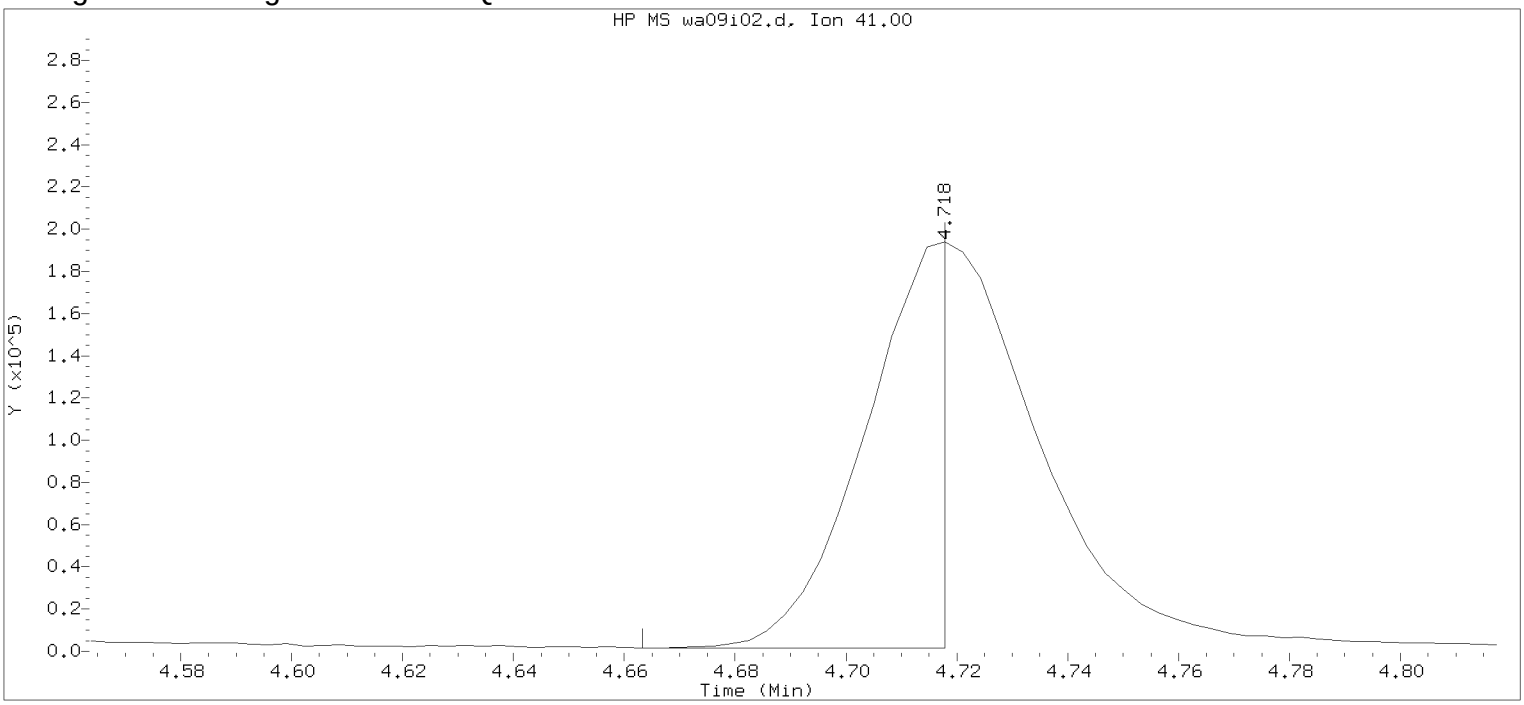
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

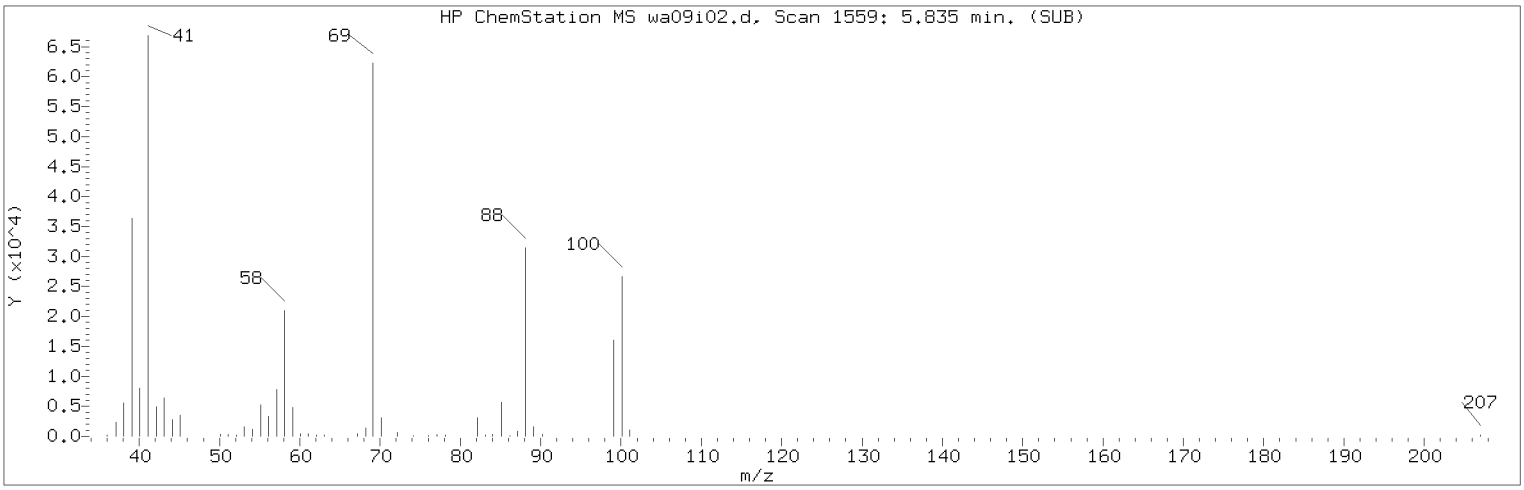
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:55
Date, time and analyst ID of latest file update: 09-Apr-2018 11:55 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

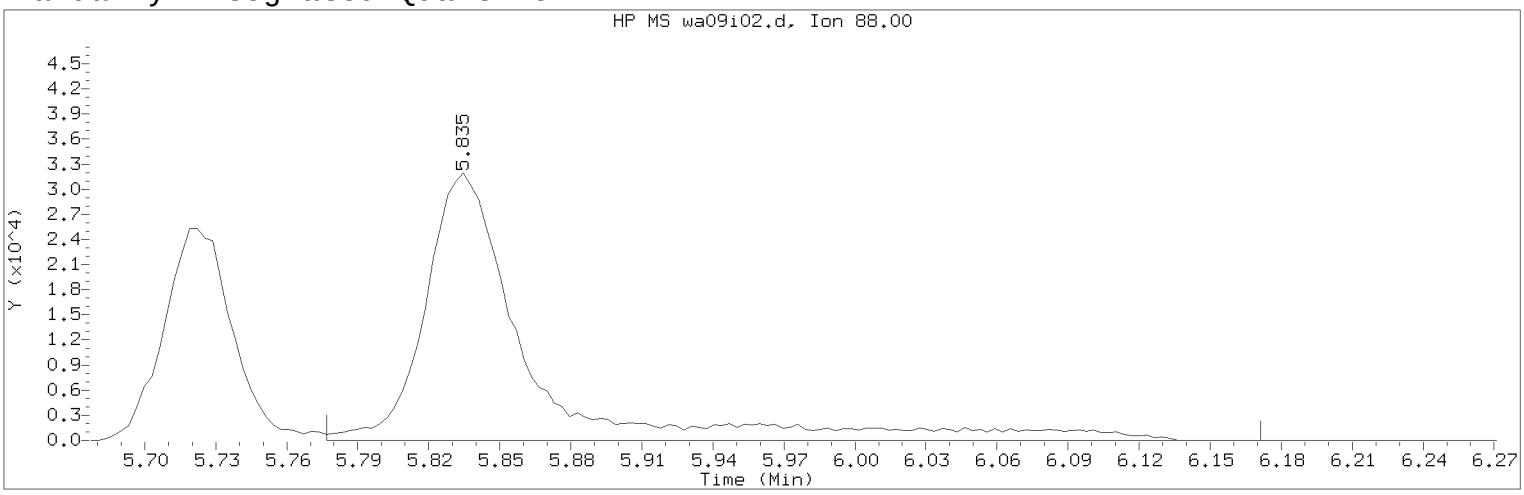
Compound Number : 58
Compound Name : Isobutyl Alcohol
Scan Number : 1211
Retention Time (minutes): 4.718
Quant Ion : 41.00
Area : 186847
On-column Amount (ng) : 581.1291
Integration start scan : 1193 Integration stop scan: 1210
Y at integration start : 1579 Y at integration end: 1579

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: 17

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

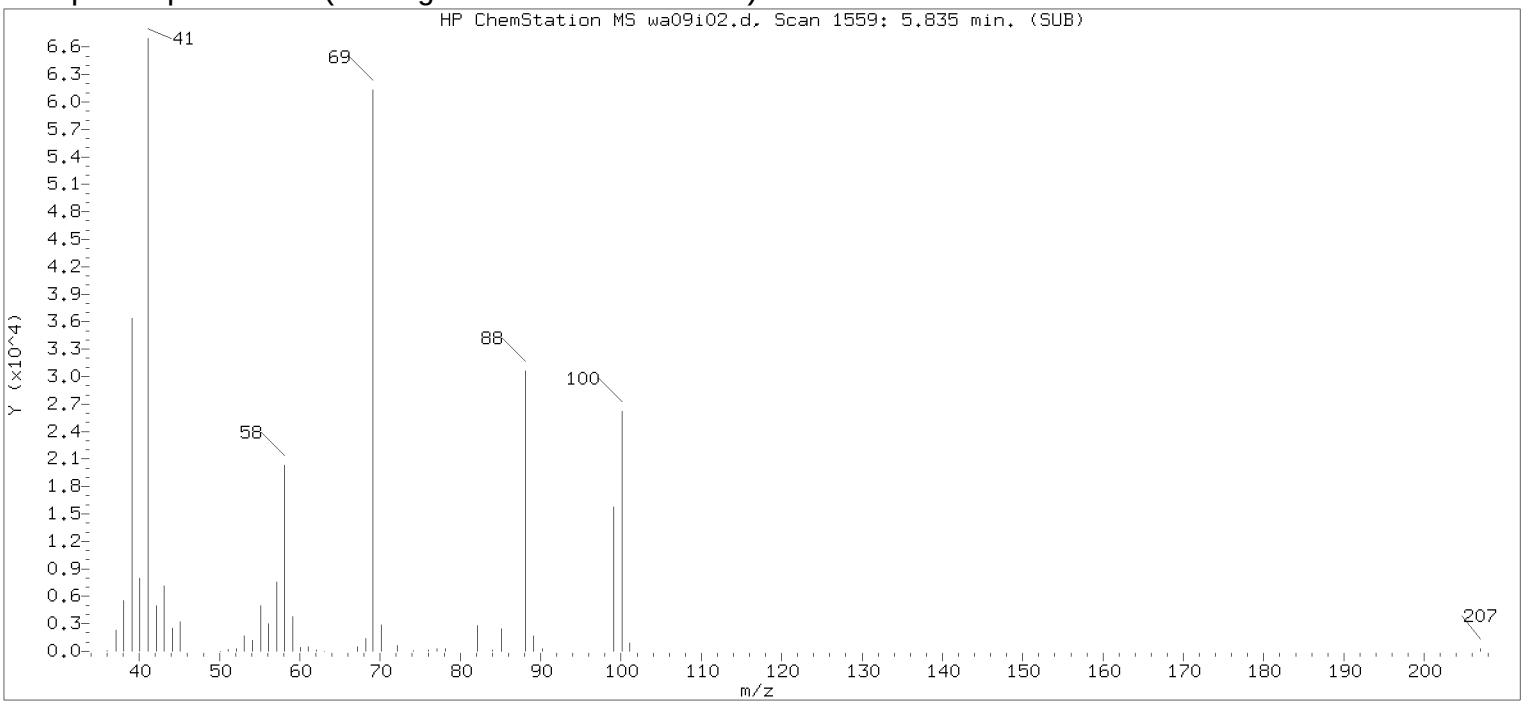
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area (flag) : 97157M
On-Column Amount (ng) : 1158.0029
Integration start scan : 1540 Integration stop scan: 1663
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

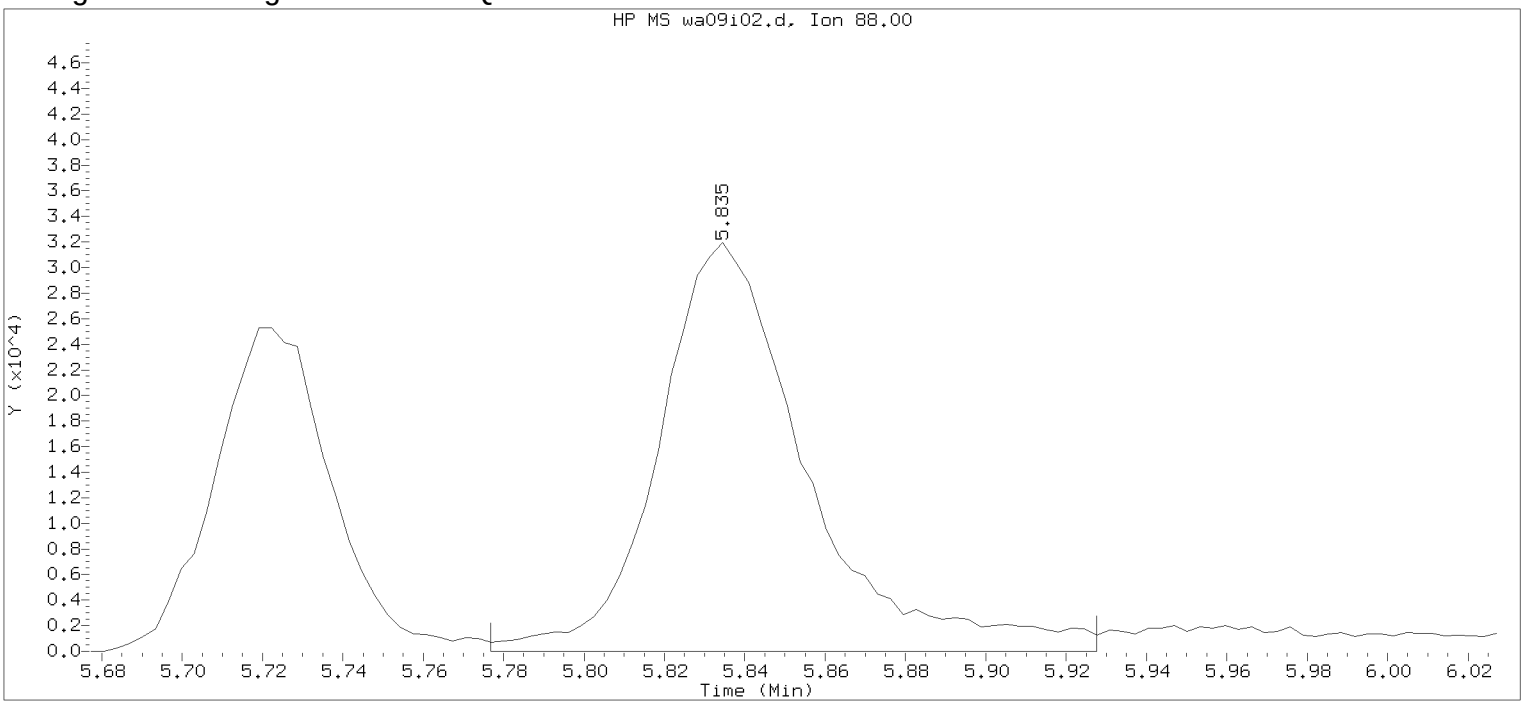
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

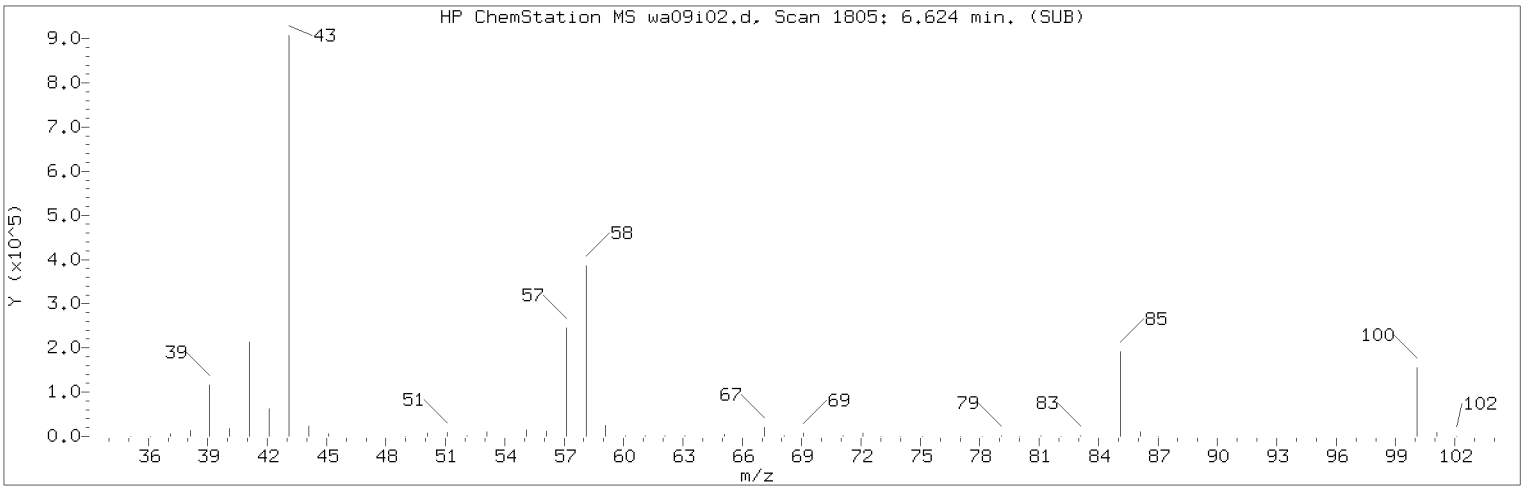
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:55
Date, time and analyst ID of latest file update: 09-Apr-2018 11:55 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

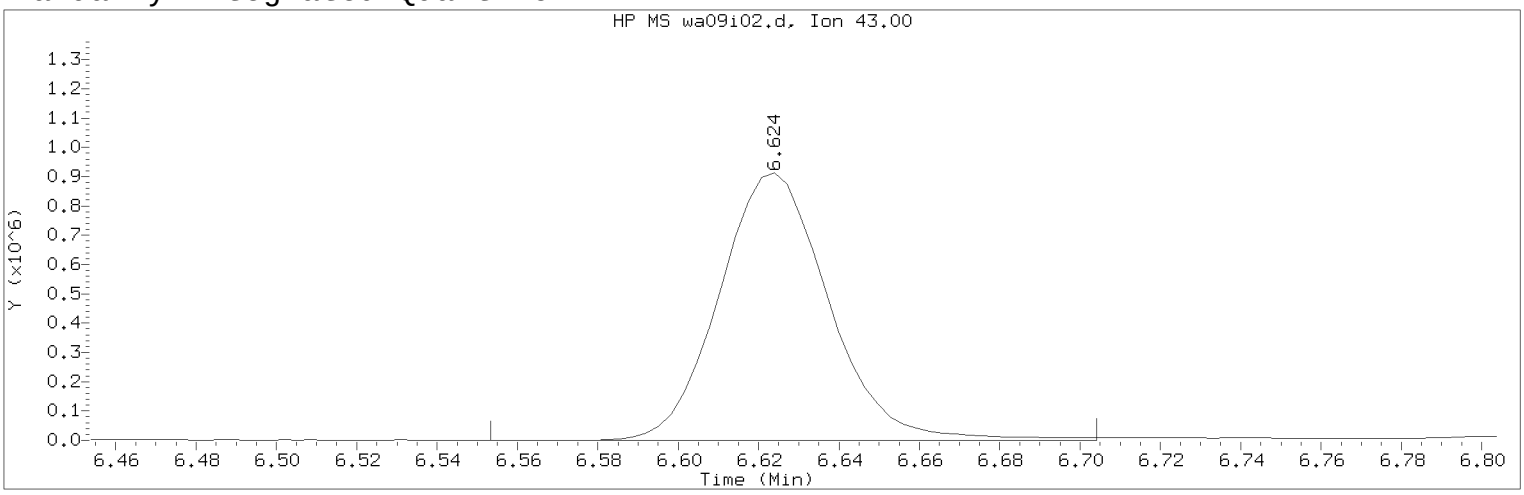
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area : 81439
On-column Amount (ng) : 1129.7311
Integration start scan : 1540 Integration stop scan: 1587
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD100 Lab Sample ID: VSTD100

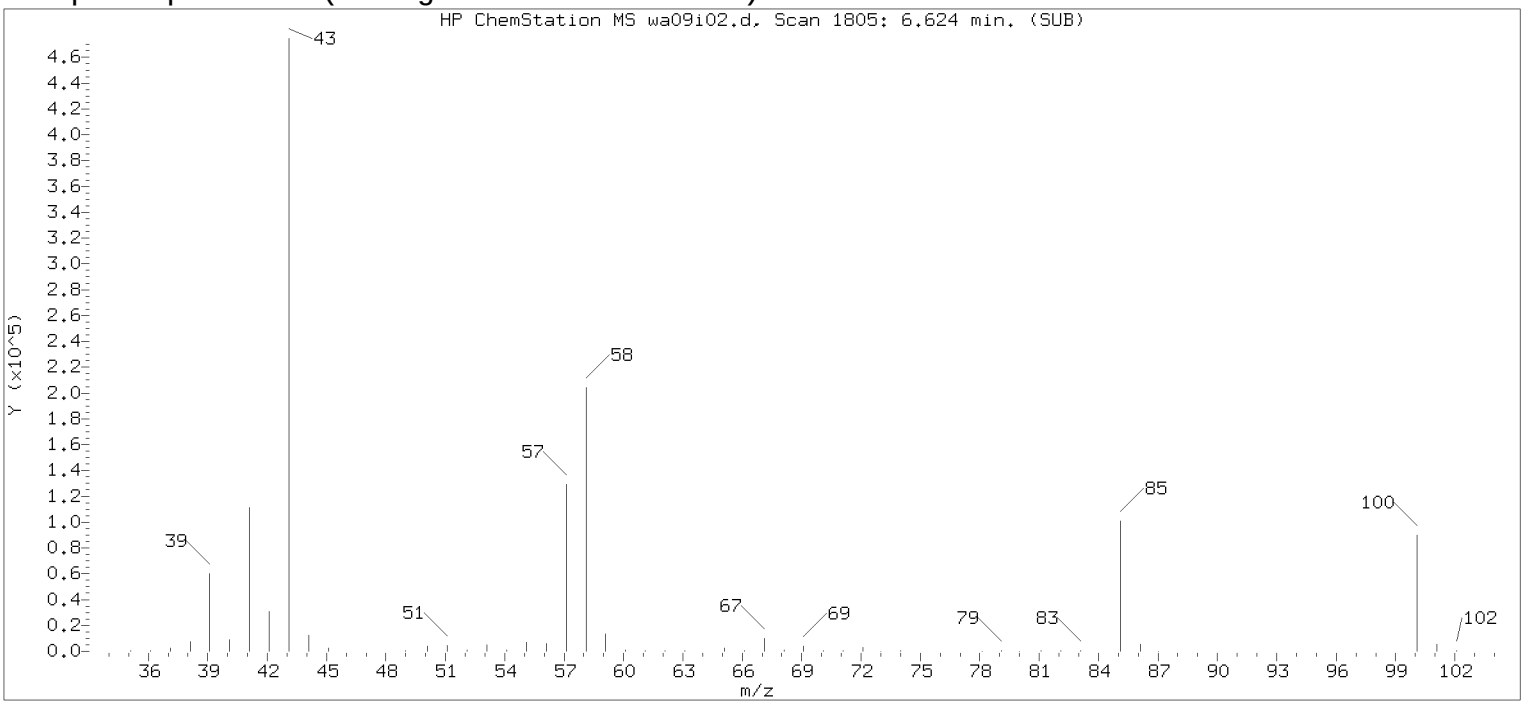
Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1805
Retention Time (minutes): 6.624
Quant Ion : 43.00
Area (flag) : 1730319M
On-Column Amount (ng) : 217.5705
Integration start scan : 1782 Integration stop scan: 1829
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

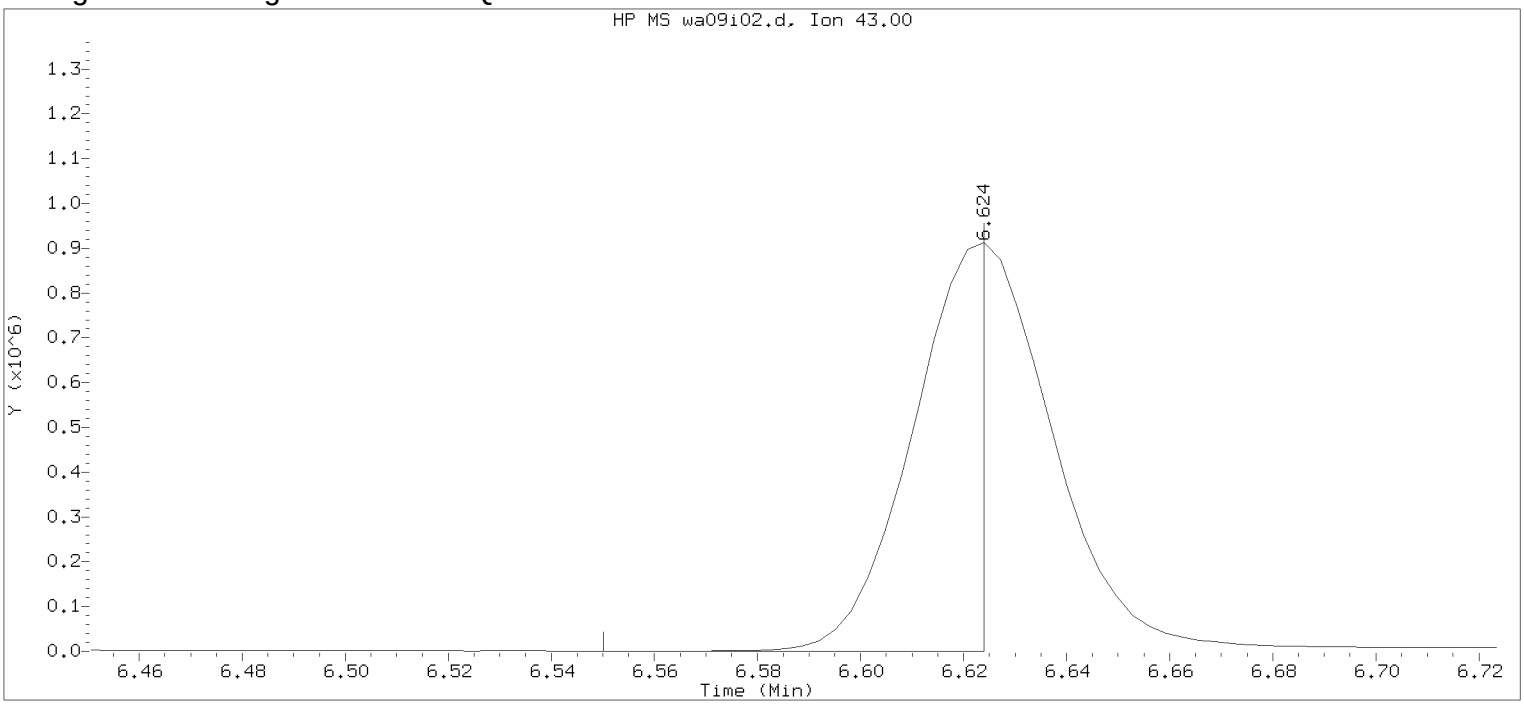
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:06.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i02.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 11:39 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 11:55
Date, time and analyst ID of latest file update: 09-Apr-2018 11:55 Automation

Sample Name: VSTD100 Lab Sample ID: VSTD100

Compound Number : 82
Compound Name : 4-Methyl-2-pentanone
Scan Number : 1805
Retention Time (minutes): 6.624
Quant Ion : 43.00
Area : 848071
On-column Amount (ng) : 104.3083
Integration start scan : 1781 Integration stop scan: 1804
Y at integration start : 516 Y at integration end: 516

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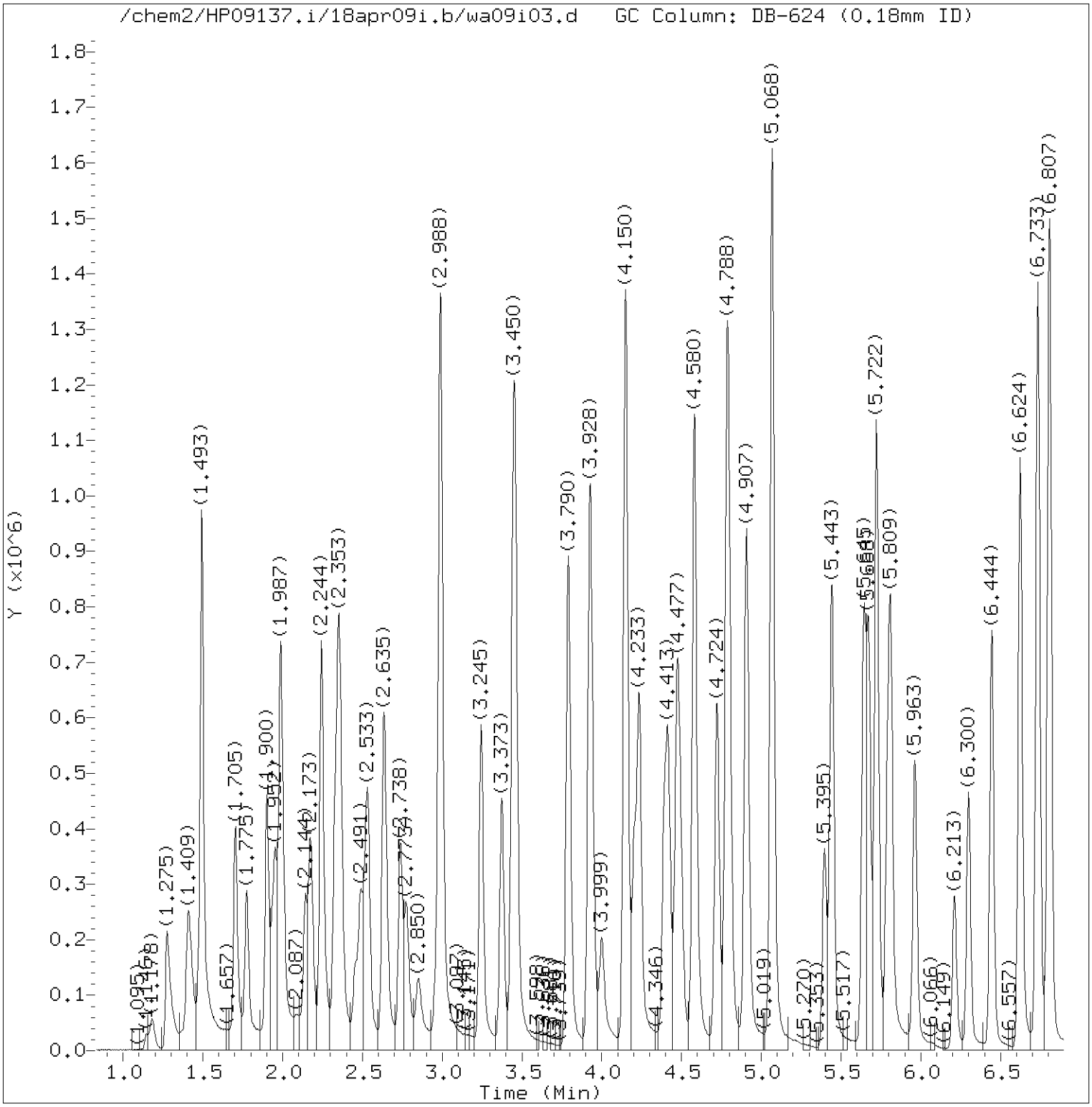
Target 3.5 esignature user id: 17 Page 216 of 432



Total Ion Chromatogram (TIC)

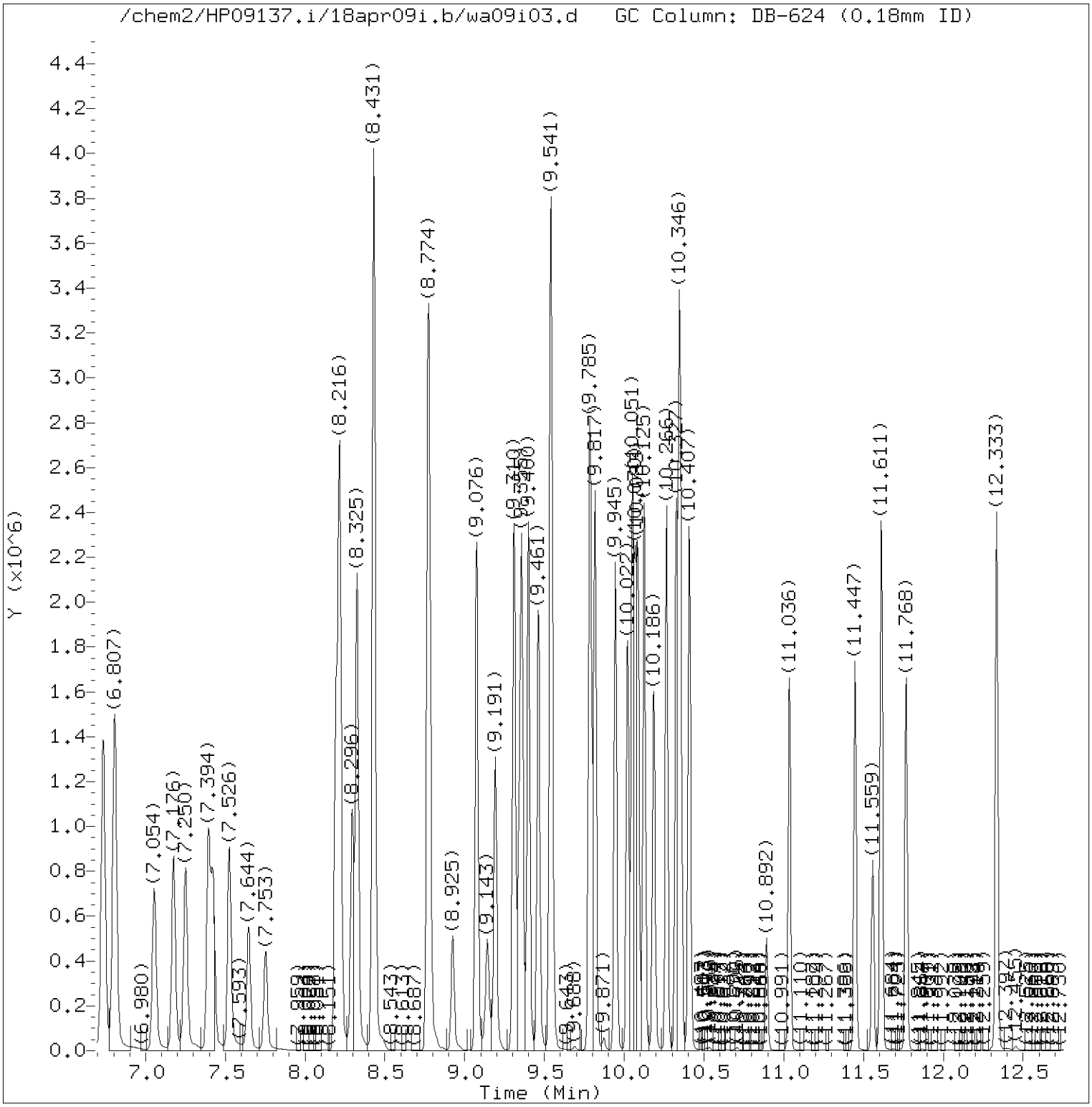
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	355149	51.612
4) Chloromethane	(2)	1.409	50	364676	49.477
6) Vinyl Chloride	(2)	1.486	62	385502	51.750
5) 1,3-Butadiene	(2)	1.493	39	251954	46.156
8) Bromomethane	(2)	1.705	94	268931	49.698
9) Chloroethane	(2)	1.775	64	228286	51.335
10) Dichlorofluoromethane	(2)	1.900	67	388052	41.411
12) Trichlorofluoromethane	(2)	1.952	101	436403	52.686
11) n-Pentane	(2)	1.990	43	415263	47.227
13) Ethanol	(1)	2.103	45	62474	1201.044
15) Freon 123a	(2)	2.173	67	295116	48.240
16) Acrolein	(1)	2.244	56	704548	520.849
17) 1,1-Dichloroethene	(2)	2.330	96	234534	50.846
17) 1,1-Dichloroethene	(2)	2.330	63	105903	49.411
19) Freon 113	(2)	2.353	101	242418	51.858
18) Acetone	(1)	2.369	58	55241	97.209
22) Methyl Iodide	(2)	2.488	142	455458	50.845
21) 2-Propanol	(1)	2.500	45	86140	219.223
23) Carbon Disulfide	(2)	2.533	76	782777	51.428
25) Allyl Chloride	(2)	2.632	41	351195M	47.700
27) Methyl Acetate	(2)	2.651	43	241828	44.883
28) Methylene Chloride	(2)	2.738	84	264287	49.306
29)*t-Butyl alcohol-d10	(1)	2.776	65	166695	250.000
30) t-Butyl alcohol	(1)	2.853	59	169164	236.118
31) Acrylonitrile	(2)	2.963	53	125851	45.829
32) trans-1,2-Dichloroethene	(2)	2.988	96	260420	51.299
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	862090	50.095
34) n-Hexane	(2)	3.245	57	296982	50.300
36) 1,1-Dichloroethane	(2)	3.373	63	440614	51.166
38) di-Isopropyl ether	(2)	3.444	45	798209	49.516
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	392988	51.644
40) Ethyl t-butyl ether	(2)	3.790	59	810677	50.490
42) cis-1,2-Dichloroethene	(2)	3.925	96	288814	50.418
45) 2,2-Dichloropropane	(2)	3.928	77	239758	51.524
44) 2-Butanone	(2)	3.941	43	349554	91.327
47) Propionitrile	(1)	4.002	54	244758	273.275
43) 1,2-Dichloroethene (Total)	(2)		96	549234	101.717
48) Methacrylonitrile	(2)	4.147	67	388254	119.797

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.153	128	143709	49.292
50) Tetrahydrofuran	(1)	4.208	71	101526	106.009
51) Chloroform	(2)	4.236	83	445380	50.447
52)$Dibromofluoromethane	(2)	4.394	113	238885	49.649
52)$Dibromofluoromethane	(2)	4.394	111	244230	49.562
53) 1,1,1-Trichloroethane	(2)	4.419	97	396655	50.484
54) Cyclohexane	(2)	4.477	56	414070	51.790
54) Cyclohexane	(2)	4.477	84	368776	50.098
54) Cyclohexane	(2)	4.477	69	133531	51.364
55) 1,1-Dichloropropene	(2)	4.580	75	360524	51.276
56) Carbon Tetrachloride	(2)	4.583	117	315525	53.026
58) Isobutyl Alcohol	(1)	4.715	41	142647	606.993
57)$1,2-Dichloroethane-d4	(2)	4.724	102	60562	47.938
57)$1,2-Dichloroethane-d4	(2)	4.727	65	271525	47.825
57)$1,2-Dichloroethane-d4	(2)	4.727	104	39793	48.628
60) Benzene	(2)	4.785	78	1076240	50.909
61) 1,2-Dichloroethane	(2)	4.801	62	353556	47.964
61) 1,2-Dichloroethane	(2)	4.804	98	37186	51.198
65) t-Amyl methyl ether	(2)	4.907	73	825434M	49.255
66)*Fluorobenzene	(2)	5.068	96	1055463	50.000
67) n-Heptane	(2)	5.071	43	255006	48.156
69) n-Butanol	(1)	5.395	56	294056	1329.785
71) Trichloroethene	(2)	5.443	95	284205	50.640
72) Methylcyclohexane	(2)	5.642	83	367121	48.653
72) Methylcyclohexane	(2)	5.645	98	179853	50.716
73) 1,2-Dichloropropane	(2)	5.674	63	268742	50.203
74) Dibromomethane	(2)	5.793	93	181754	50.069
76) Methyl Methacrylate	(2)	5.812	69	271544	47.482
75) 1,4-Dioxane	(1)	5.835	88	43110M	713.727
78) Bromodichloromethane	(2)	5.963	83	350810	51.110
79) 2-Nitropropane	(2)	6.213	41	184483	97.081
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	220888	50.659
81) cis-1,3-Dichloropropene	(2)	6.444	75	470908	52.034
82) 4-Methyl-2-pentanone	(2)	6.624	43	797322	101.041
83)$Toluene-d8	(3)	6.733	98	1037625	50.500
83)$Toluene-d8	(3)	6.733	100	700003	50.550
88) Toluene	(3)	6.807	92	718808	51.073
89) trans-1,3-Dichloropropene	(3)	7.054	75	436164	52.016

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.176	69	497298	51.234
92) 1,1,2-Trichloroethane	(3)	7.250	97	284437	51.418
90) 1,3-Dichloropropene (total)	(3)		100	907072	104.050
93) Tetrachloroethene	(3)	7.394	166	289345	50.523
94) 1,3-Dichloropropane	(3)	7.423	76	467298	51.106
96) 2-Hexanone	(3)	7.526	43	618291	100.081
97) Dibromochloromethane	(3)	7.648	129	296886	52.775
99) 1,2-Dibromoethane	(3)	7.753	107	309105	51.298
100)*Chlorobenzene-d5	(3)	8.193	117	801369	50.000
102) Chlorobenzene	(3)	8.219	112	813421	50.728
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	271893	52.789
104) Ethylbenzene	(3)	8.325	91	1332847	51.185
106) m+p-Xylene	(3)	8.431	106	1089803	102.404
107) o-Xylene	(3)	8.767	106	541665	50.959
109) Styrene	(3)	8.780	104	937687	51.633
108) Xylene (Total)	(3)		106	1631468	153.364
110) Bromoform	(3)	8.925	173	213498	52.882
111) Isopropylbenzene	(3)	9.076	105	1281118	50.667
112) Cyclohexanone	(1)	9.143	55	195664	703.032
114)$4-Bromofluorobenzene	(3)	9.191	95	383744	49.447
114)$4-Bromofluorobenzene	(3)	9.191	174	311655	49.218
115) Bromobenzene	(4)	9.307	156	353874	52.328
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	447778	51.450
117) 1,2,3-Trichloropropane	(4)	9.342	110	139306	50.964
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	321988	134.592
119) n-Propylbenzene	(4)	9.400	91	1465474	51.880
120) 2-Chlorotoluene	(4)	9.461	126	320989	51.639
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	1081013	51.506
121) 4-Chlorotoluene	(4)	9.544	126	341465	51.325
124) tert-Butylbenzene	(4)	9.785	134	234553	50.408
125) Pentachloroethane	(4)	9.794	167	189493	52.753
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	1113534	50.731
127) sec-Butylbenzene	(4)	9.945	105	1206943	50.792
129) 1,3-Dichlorobenzene	(4)	10.022	146	637029	49.849
130) p-Isopropyltoluene	(4)	10.051	119	1075129	50.298
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	413797	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	659728	49.625
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	1114475	49.292

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

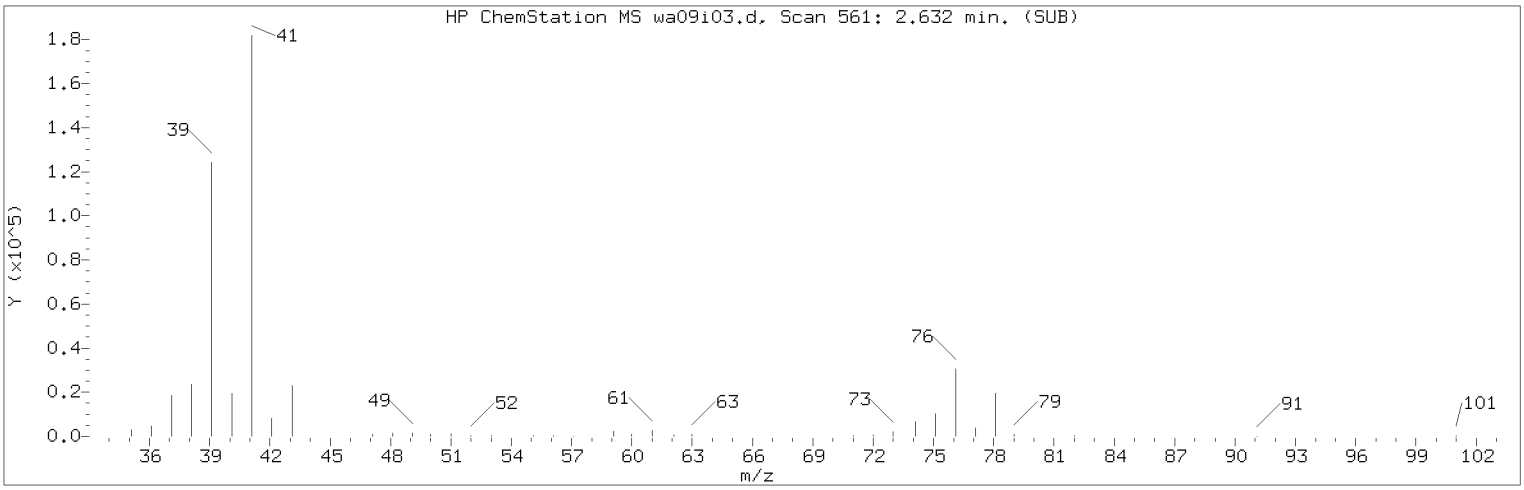
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

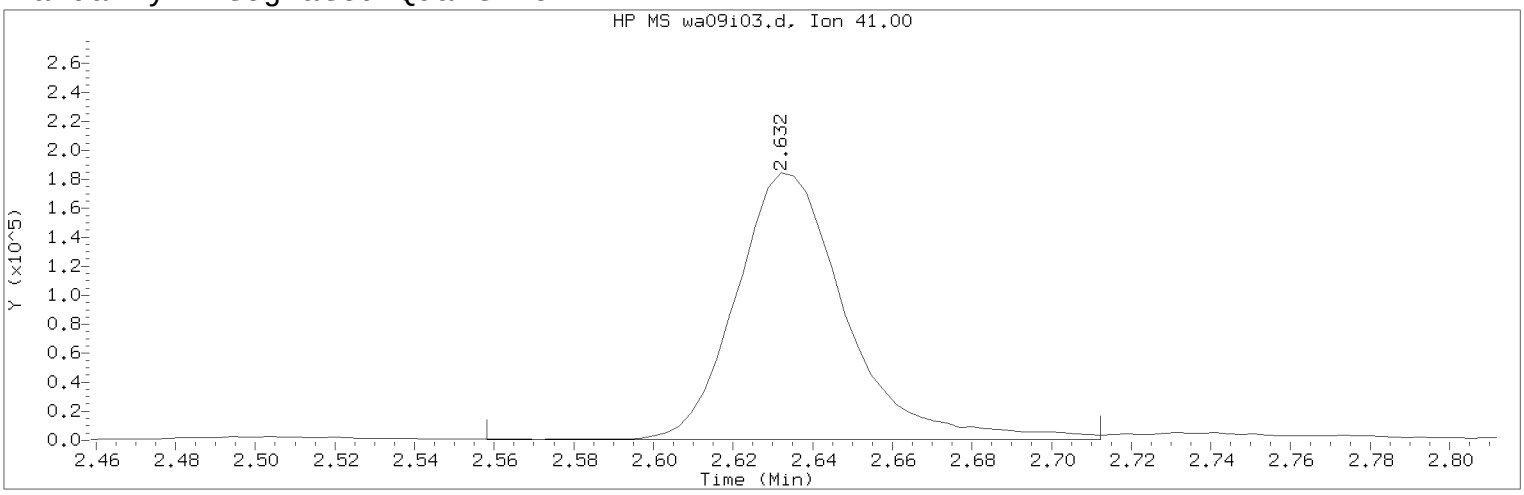
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	924919	52.554
136) 1,3-Diethylbenzene	(4)	10.266	119	622606	48.860
137) 1,4-Diethylbenzene	(4)	10.327	119	631355	47.800
139) n-Butylbenzene	(4)	10.343	92	498626	49.059
138) 1,2-Dichlorobenzene	(4)	10.353	146	632790	49.666
140) 1,2-Diethylbenzene	(4)	10.407	119	526996	48.178
141) Diethylbenzene (total)	(4)		100	1780957	144.838
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	95294	51.450
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	392524	48.462
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	400339	49.888
147) Hexachlorobutadiene	(4)	11.559	225	114661	48.212
148) Naphthalene	(4)	11.611	128	1477713	50.749
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	390504	51.266
150) 2-Methylnaphthalene	(4)	12.336	142	894610	58.374

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

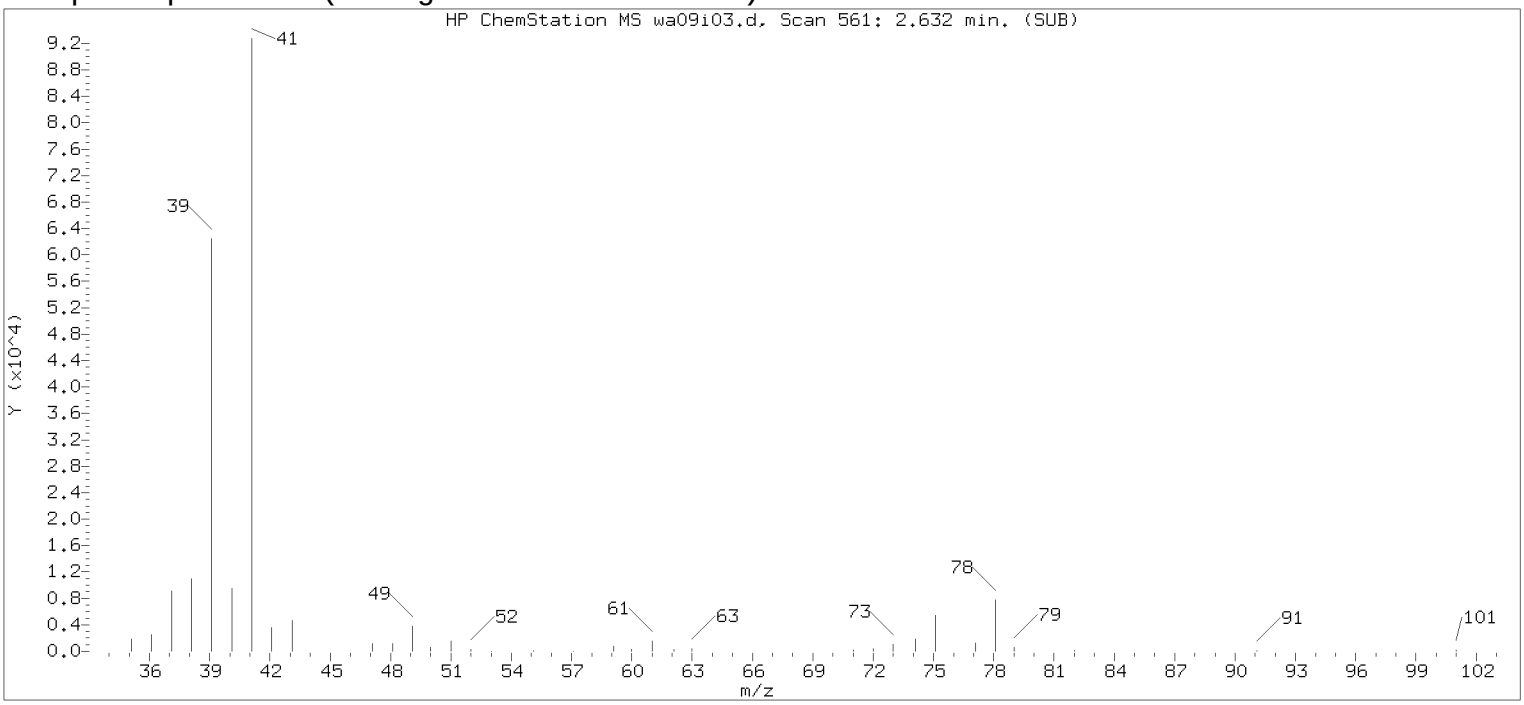
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 561
Retention Time (minutes): 2.632
Quant Ion : 41.00
Area (flag) : 351195M
On-Column Amount (ng) : 47.7004
Integration start scan : 537 Integration stop scan: 585
Y at integration start : 621 Y at integration end: 621

Reason for manual integration: improper integration

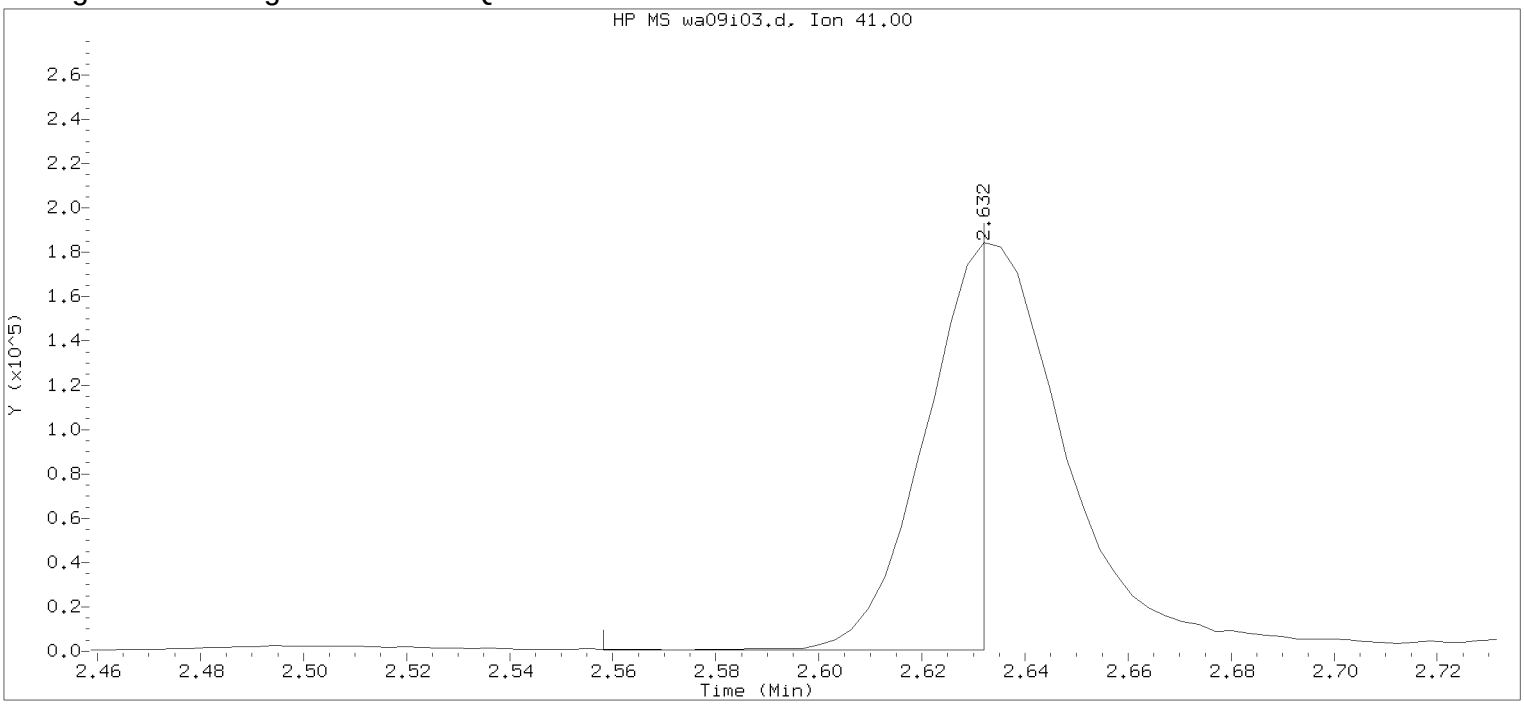
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

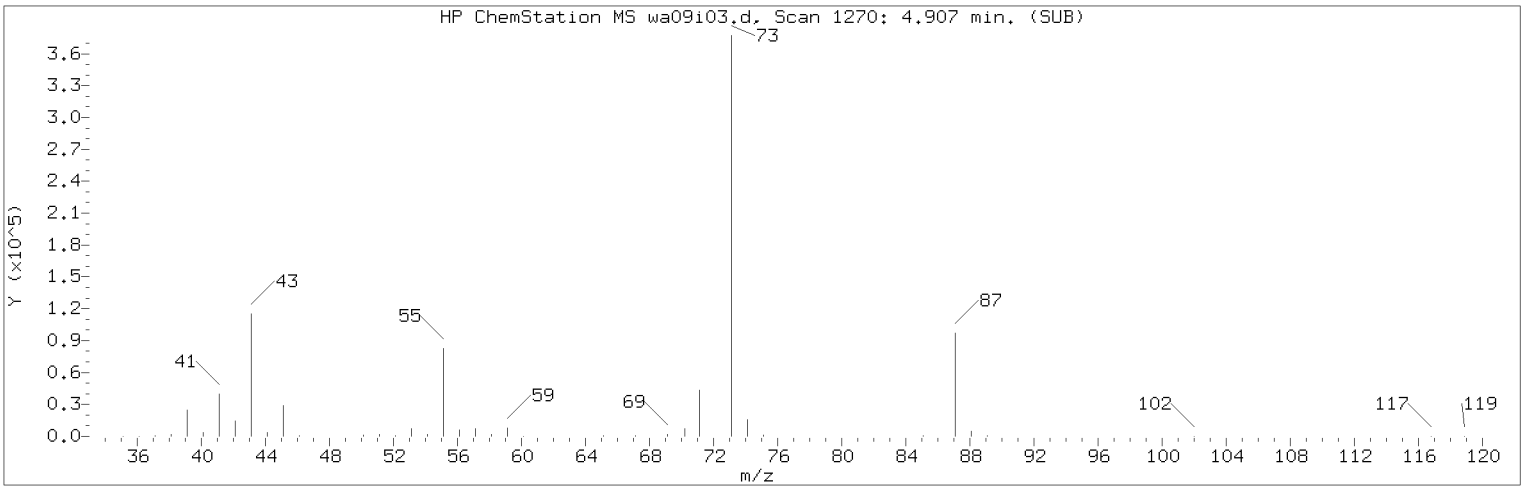
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 12:19
Date, time and analyst ID of latest file update: 09-Apr-2018 12:19 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

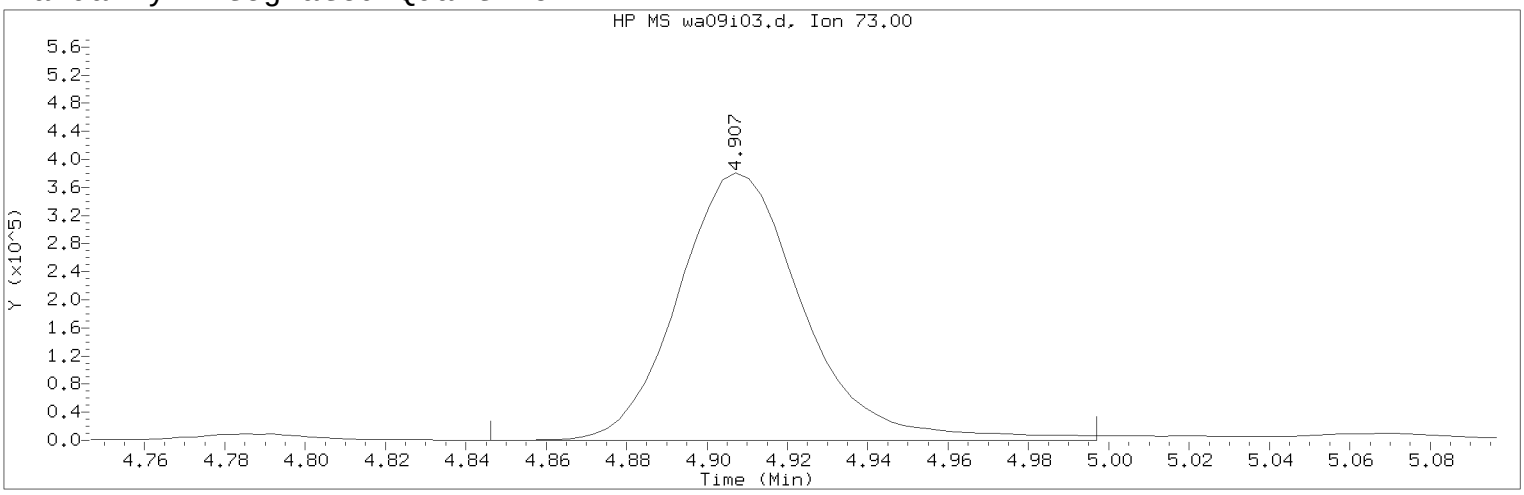
Compound Number : 25
Compound Name : Allyl Chloride
Scan Number : 561
Retention Time (minutes): 2.632
Quant Ion : 41.00
Area : 141982
On-column Amount (ng) : 18.9229
Integration start scan : 537 Integration stop scan: 560
Y at integration start : 661 Y at integration end: 661

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

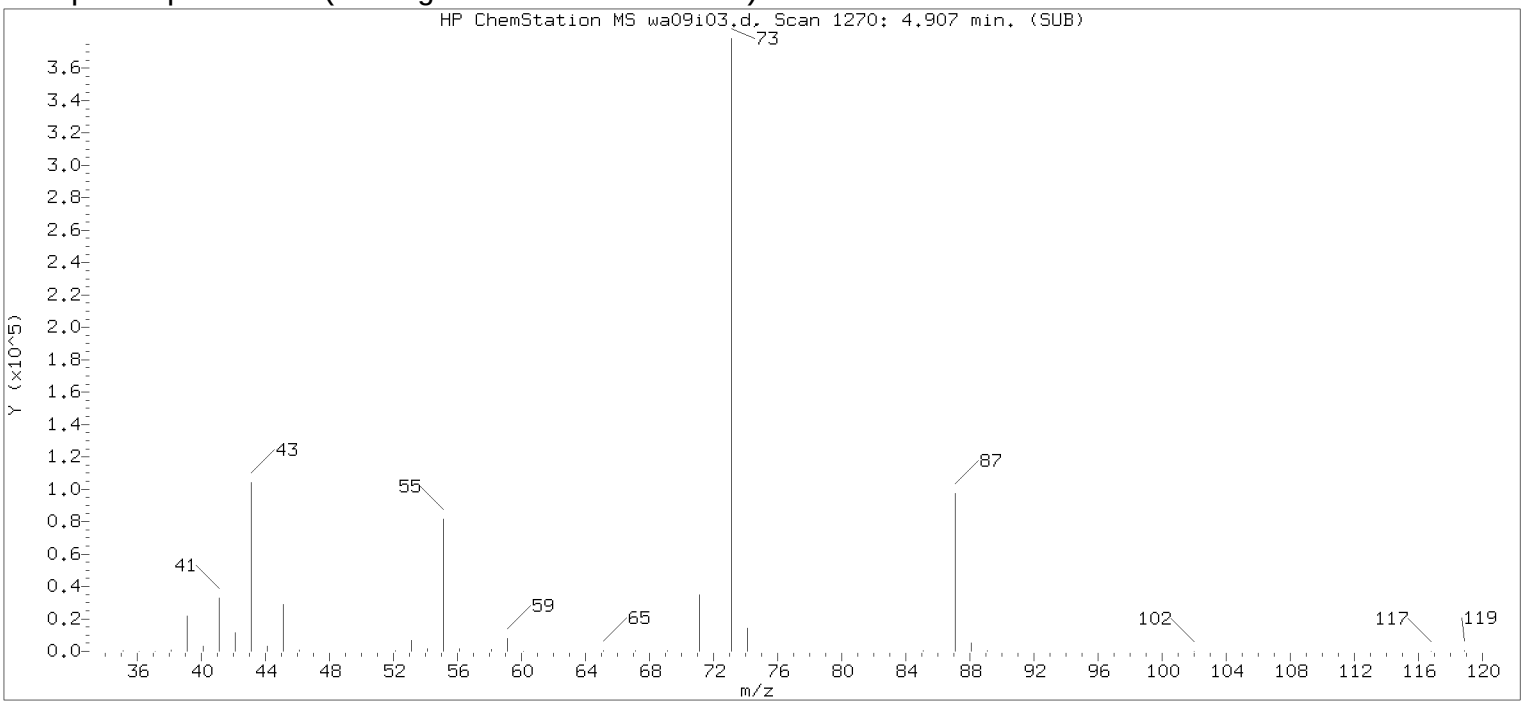
Compound Number : 65
Compound Name : t-Amyl methyl ether
Scan Number : 1270
Retention Time (minutes): 4.907
Quant Ion : 73.00
Area (flag) : 825434M
On-Column Amount (ng) : 49.2554
Integration start scan : 1250 Integration stop scan: 1297
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

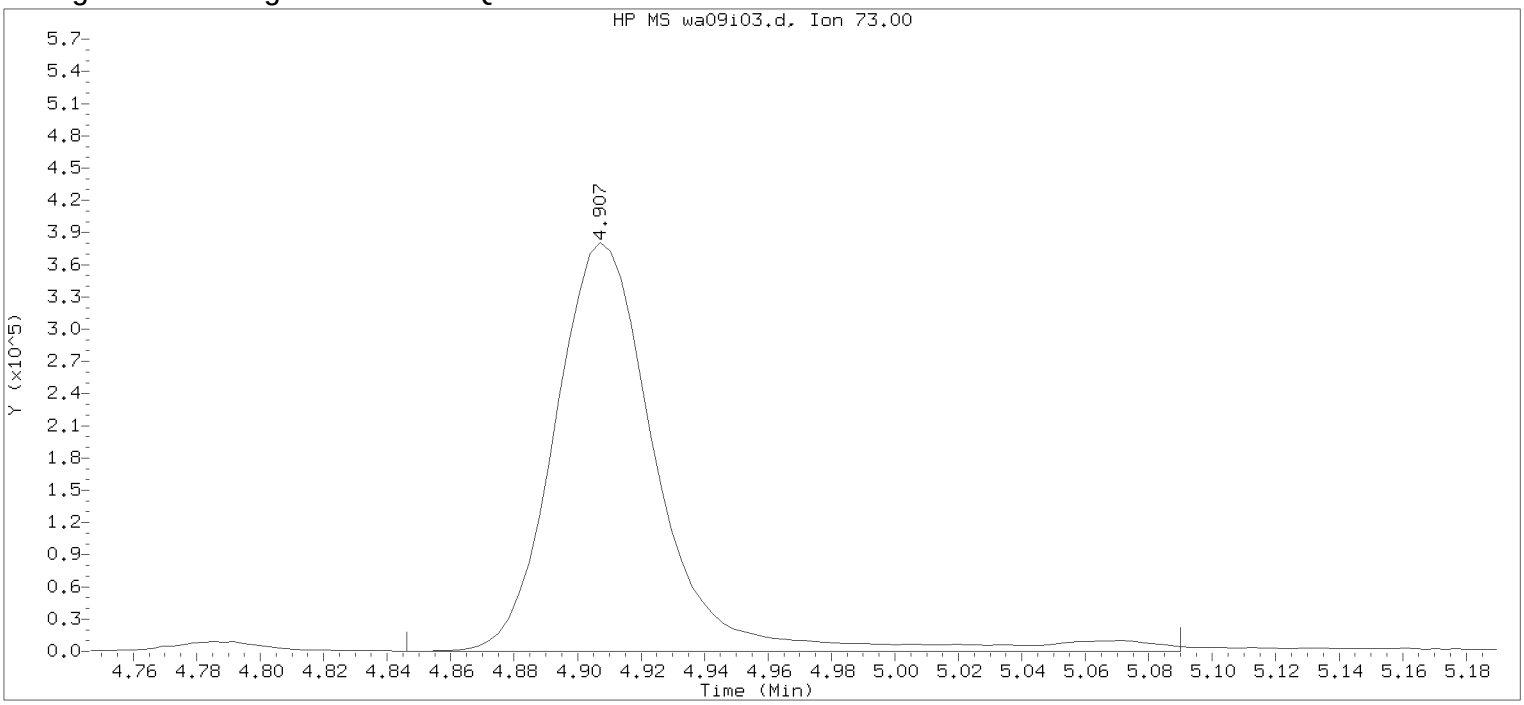
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

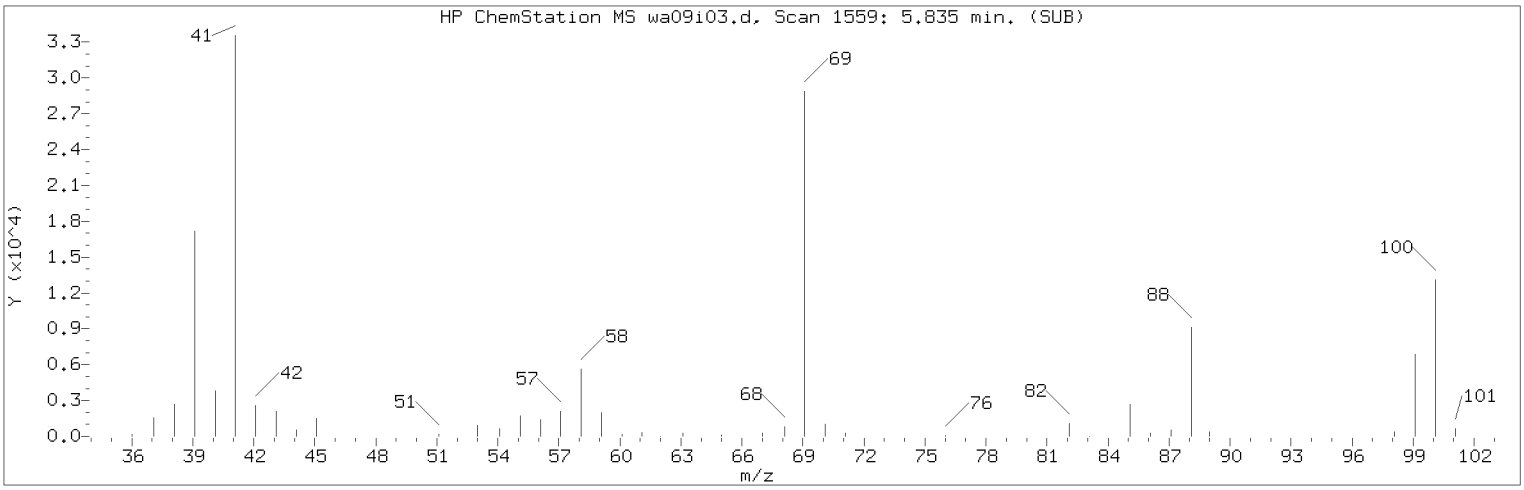
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 12:19
Date, time and analyst ID of latest file update: 09-Apr-2018 12:19 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

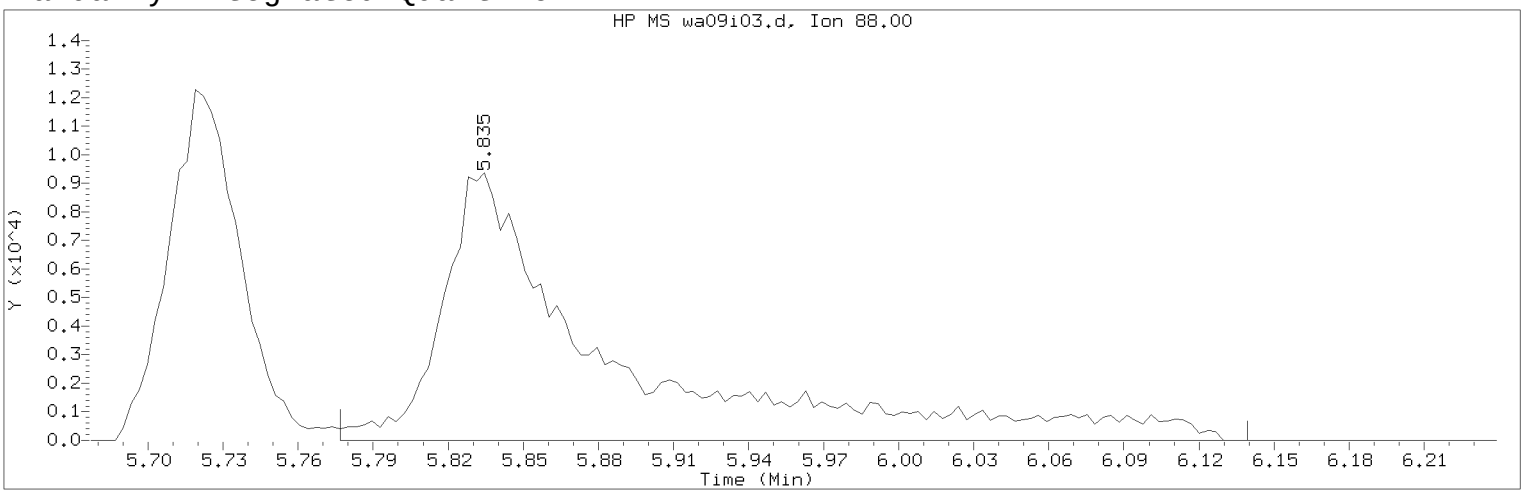
Compound Number : 65
Compound Name : t-Amyl methyl ether
Scan Number : 1270
Retention Time (minutes): 4.907
Quant Ion : 73.00
Area : 863297
On-column Amount (ng) : 51.4796
Integration start scan : 1250 Integration stop scan: 1326
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

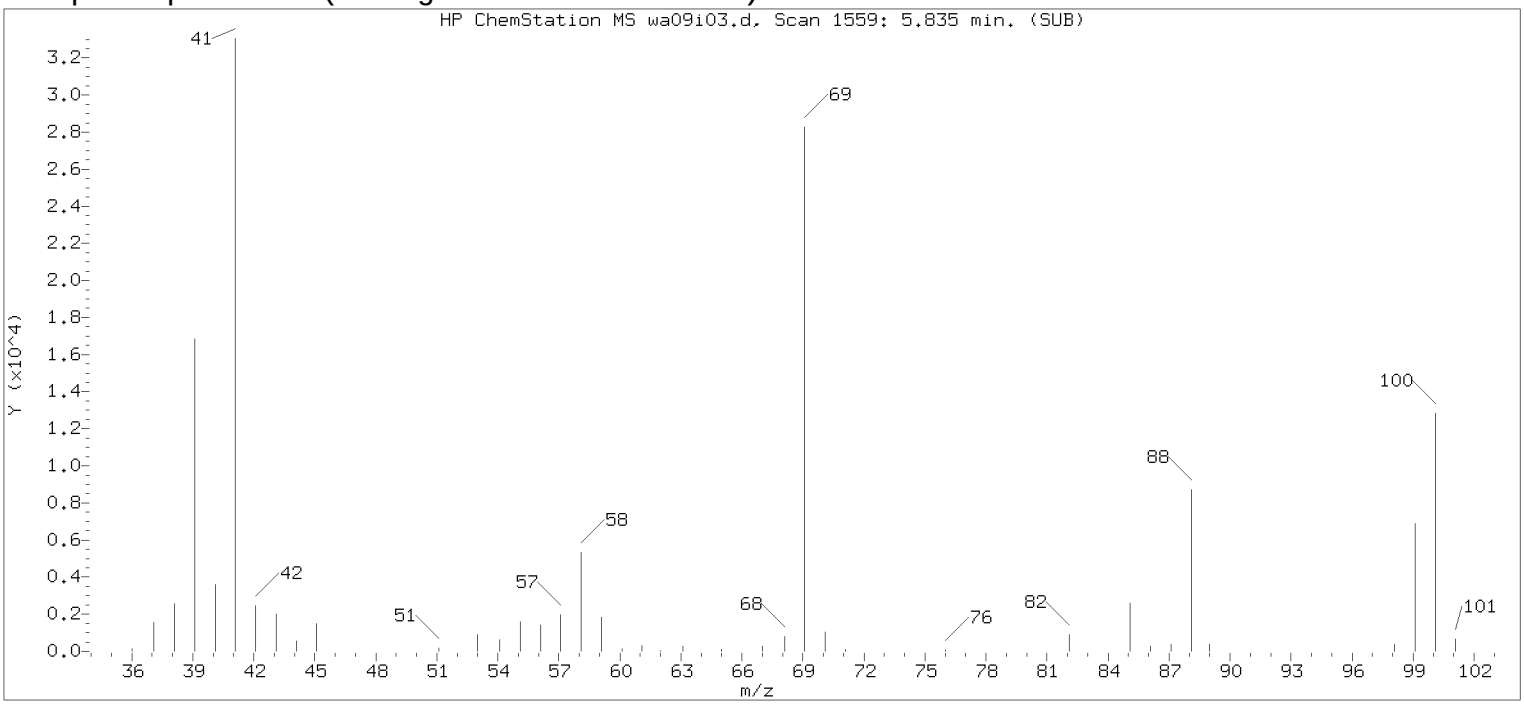
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area (flag) : 43110M
On-Column Amount (ng) : 713.7269
Integration start scan : 1540 Integration stop scan: 1653
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

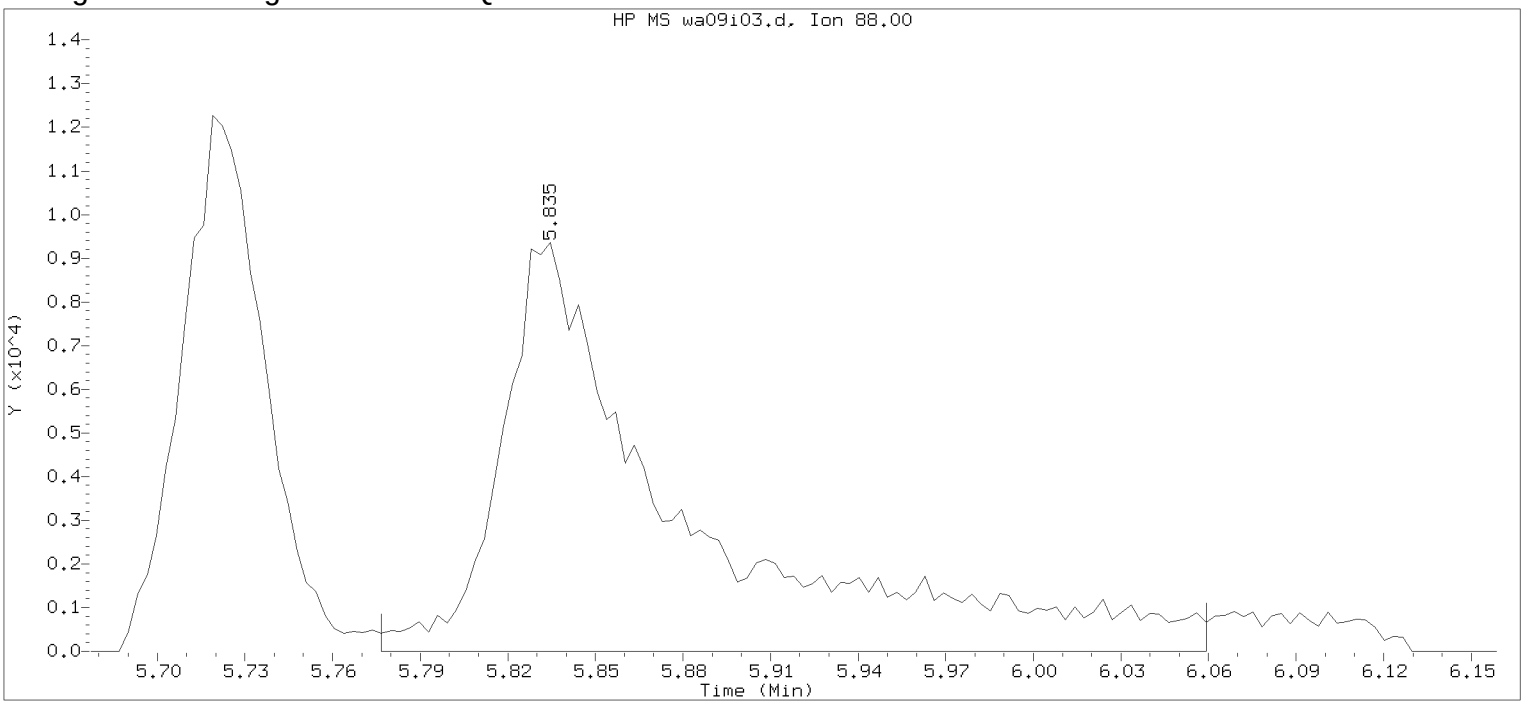
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



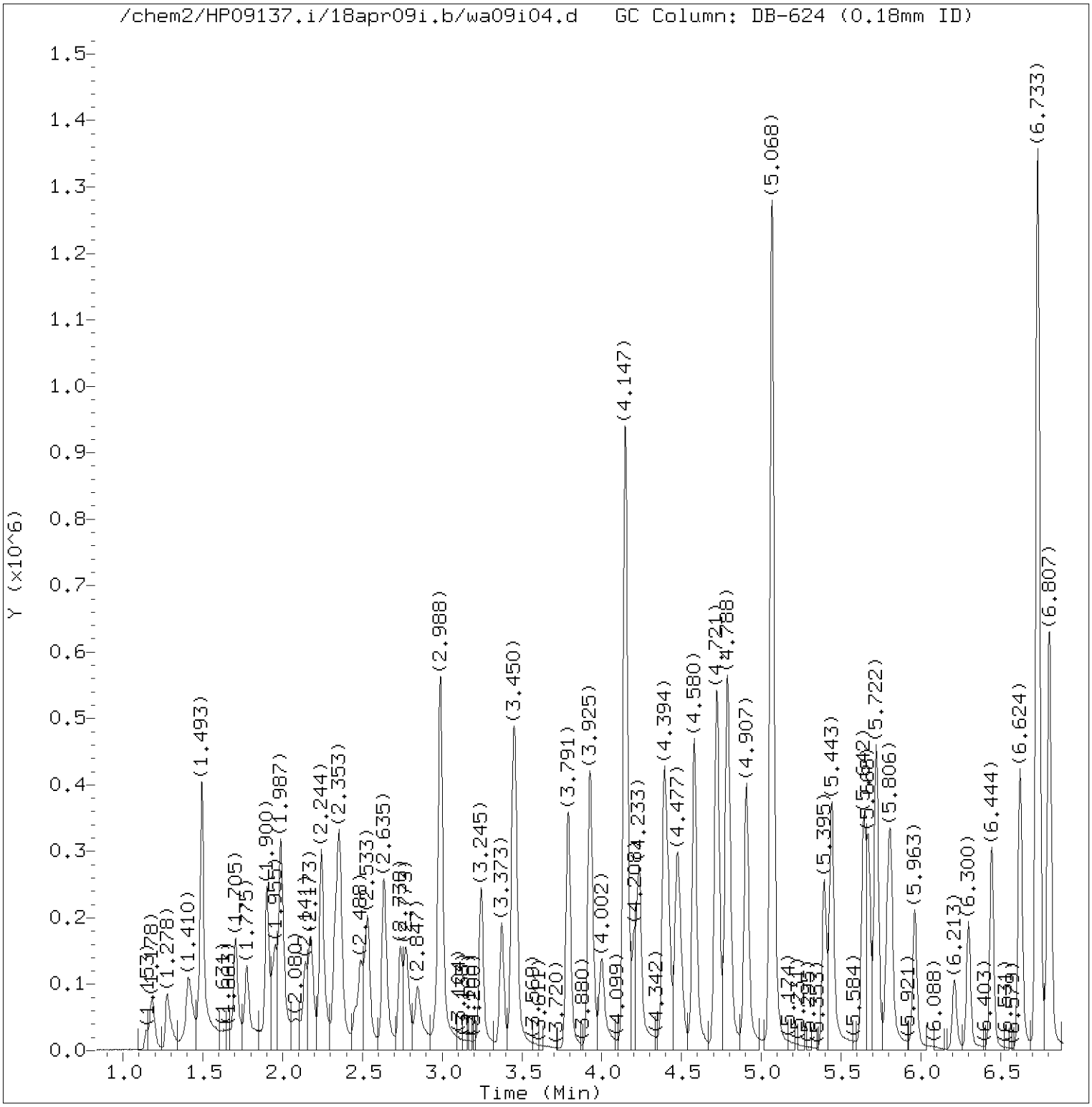
Data File: /chem2/HP09137.i/18apr09i.b/wa09i03.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:03 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 12:19
Date, time and analyst ID of latest file update: 09-Apr-2018 12:19 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area : 40230
On-column Amount (ng) : 757.5128
Integration start scan : 1540 Integration stop scan: 1628
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327



Total Ion Chromatogram (TIC)

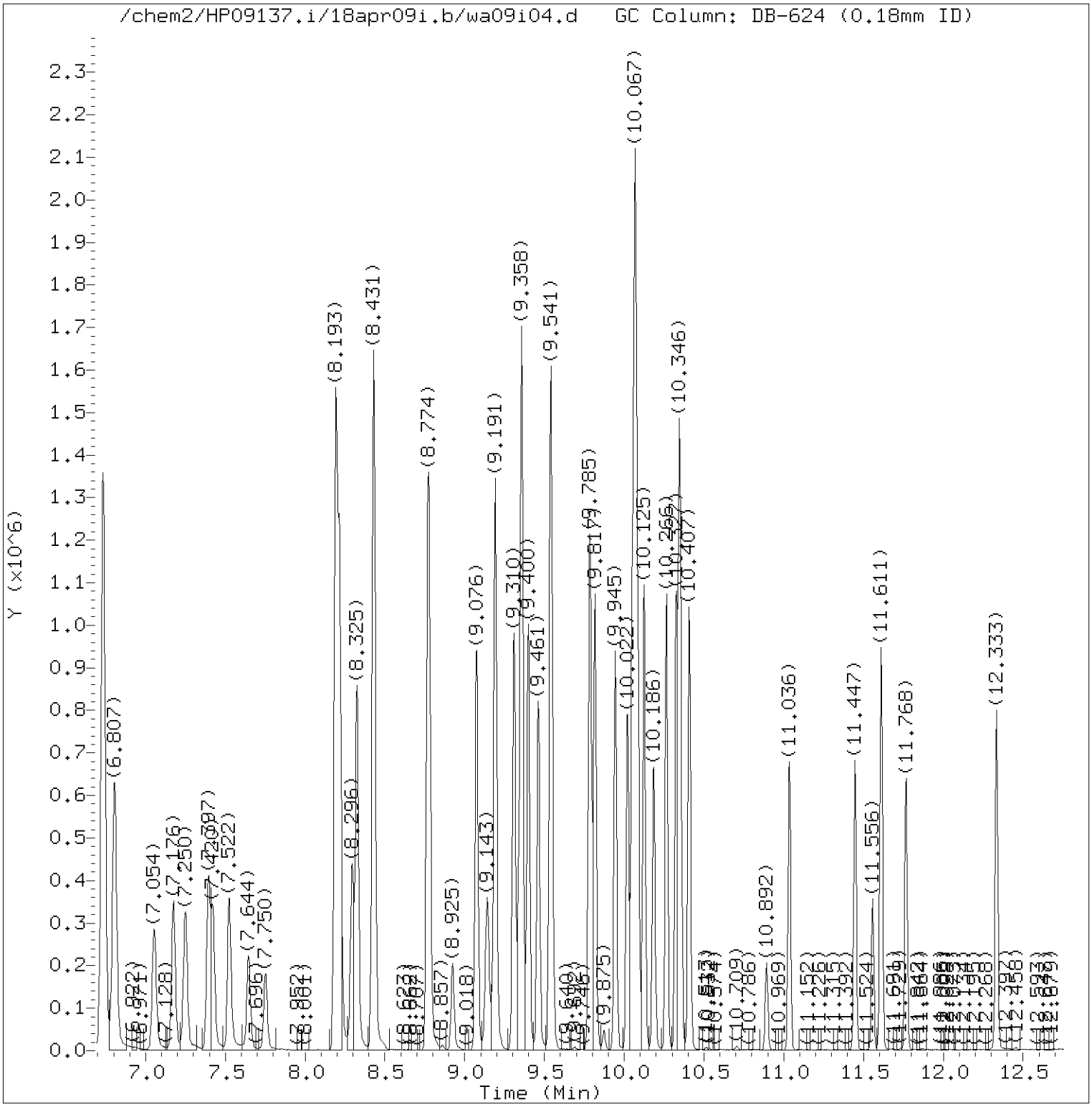
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	141333	20.762
4) Chloromethane	(2)	1.410	50	147318	20.204
6) Vinyl Chloride	(2)	1.483	62	152528	20.698
5) 1,3-Butadiene	(2)	1.493	39	105956	19.621
8) Bromomethane	(2)	1.702	94	106210	19.840
9) Chloroethane	(2)	1.775	64	89704	20.391
10) Dichlorofluoromethane	(2)	1.900	67	201113	21.695
12) Trichlorofluoromethane	(2)	1.949	101	172379	21.037
11) n-Pentane	(2)	1.990	43	176373M	20.276
13) Ethanol	(1)	2.090	45	49691	961.820
15) Freon 123a	(2)	2.176	67	120569	19.922
16) Acrolein	(1)	2.244	56	276247	210.732
17) 1,1-Dichloroethene	(2)	2.330	96	95959	21.029
17) 1,1-Dichloroethene	(2)	2.330	63	44594	21.032
19) Freon 113	(2)	2.353	101	100764	21.789
18) Acetone	(1)	2.369	58	22212	40.333
22) Methyl Iodide	(2)	2.488	142	185129	20.891
21) 2-Propanol	(1)	2.491	45	63361	166.393
23) Carbon Disulfide	(2)	2.533	76	319232	21.201
25) Allyl Chloride	(2)	2.635	41	152049	20.876
27) Methyl Acetate	(2)	2.651	43	95740	17.962
28) Methylene Chloride	(2)	2.738	84	109321	20.616
29)*t-Butyl alcohol-d10	(1)	2.773	65	161544	250.000
30) t-Butyl alcohol	(1)	2.847	59	132808	191.284
31) Acrylonitrile	(2)	2.966	53	47664	17.545
32) trans-1,2-Dichloroethene	(2)	2.988	96	106159	21.139
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	353294	20.752
34) n-Hexane	(2)	3.245	57	123522	21.148
36) 1,1-Dichloroethane	(2)	3.373	63	178312	20.931
38) di-Isopropyl ether	(2)	3.444	45	331427	20.783
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	158028	20.992
40) Ethyl t-butyl ether	(2)	3.791	59	330370	20.799
45) 2,2-Dichloropropane	(2)	3.922	77	101631	22.078
42) cis-1,2-Dichloroethene	(2)	3.925	96	120087	21.191
44) 2-Butanone	(2)	3.941	43	136173	35.963
47) Propionitrile	(1)	4.002	54	182307	210.038
43) 1,2-Dichloroethene (Total)	(2)		96	226246	42.330
48) Methacrylonitrile	(2)	4.147	67	318830	99.443

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.153	128	59705	20.701
50) Tetrahydrofuran	(1)	4.201	71	42112	45.374
51) Chloroform	(2)	4.237	83	184456	21.120
52)$Dibromofluoromethane	(2)	4.391	113	237652	49.928
52)$Dibromofluoromethane	(2)	4.394	111	246349	50.535
53) 1,1,1-Trichloroethane	(2)	4.416	97	163918	21.089
54) Cyclohexane	(2)	4.474	56	168183	21.264
54) Cyclohexane	(2)	4.477	84	153122	21.027
54) Cyclohexane	(2)	4.477	69	54026	21.007
55) 1,1-Dichloropropene	(2)	4.580	75	147864	21.258
56) Carbon Tetrachloride	(2)	4.583	117	122264	20.770
58) Isobutyl Alcohol	(1)	4.711	41	112407	493.567
57)$1,2-Dichloroethane-d4	(2)	4.724	102	61481	49.193
57)$1,2-Dichloroethane-d4	(2)	4.724	65	287921	51.263
57)$1,2-Dichloroethane-d4	(2)	4.728	104	39885	49.269
60) Benzene	(2)	4.785	78	437389	20.914
61) 1,2-Dichloroethane	(2)	4.805	62	147173	20.182
61) 1,2-Dichloroethane	(2)	4.801	98	14973	20.839
65) t-Amyl methyl ether	(2)	4.907	73	346299	20.889
66)*Fluorobenzene	(2)	5.064	96	1044137	50.000
67) n-Heptane	(2)	5.071	43	117258	22.384
69) n-Butanol	(1)	5.395	56	225289	1051.291
71) Trichloroethene	(2)	5.443	95	118692	21.378
72) Methylcyclohexane	(2)	5.642	83	155096	20.777
72) Methylcyclohexane	(2)	5.645	98	76305	21.750
73) 1,2-Dichloropropane	(2)	5.671	63	113336	21.402
74) Dibromomethane	(2)	5.793	93	73954	20.594
76) Methyl Methacrylate	(2)	5.809	69	114837	20.298
75) 1,4-Dioxane	(1)	5.831	88	32521M	555.584
78) Bromodichloromethane	(2)	5.963	83	143001	21.060
79) 2-Nitropropane	(2)	6.210	41	71162	37.854
80) 2-Chloroethyl Vinyl Ether	(2)	6.297	63	89656	20.785
81) cis-1,3-Dichloropropene	(2)	6.444	75	185424	20.711
82) 4-Methyl-2-pentanone	(2)	6.621	43	304930	39.061
83)$Toluene-d8	(3)	6.733	98	1040146	50.179
83)$Toluene-d8	(3)	6.733	100	689950	49.388
88) Toluene	(3)	6.807	92	300983	21.198
89) trans-1,3-Dichloropropene	(3)	7.054	75	174448	20.622

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

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on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.176	69	202141	20.643
92) 1,1,2-Trichloroethane	(3)	7.250	97	114299	20.481
90) 1,3-Dichloropropene (total)	(3)		100	359872	41.333
93) Tetrachloroethene	(3)	7.394	166	120633	20.879
94) 1,3-Dichloropropane	(3)	7.423	76	193290	20.954
96) 2-Hexanone	(3)	7.522	43	247263	39.673
97) Dibromochloromethane	(3)	7.648	129	117892	20.773
99) 1,2-Dibromoethane	(3)	7.754	107	126275	20.773
100)*Chlorobenzene-d5	(3)	8.193	117	808445	50.000
102) Chlorobenzene	(3)	8.219	112	337427	20.859
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	109891	21.149
104) Ethylbenzene	(3)	8.325	91	555422	21.143
106) m+p-Xylene	(3)	8.431	106	451161	42.023
107) o-Xylene	(3)	8.768	106	223611	20.853
109) Styrene	(3)	8.780	104	382569	20.882
108) Xylene (Total)	(3)		106	674772	62.876
110) Bromoform	(3)	8.925	173	82670	20.298
111) Isopropylbenzene	(3)	9.076	105	540397	21.185
112) Cyclohexanone	(1)	9.143	55	145858	540.787
114)$4-Bromofluorobenzene	(3)	9.191	95	391786	50.041
114)$4-Bromofluorobenzene	(3)	9.191	174	319651	50.039
115) Bromobenzene	(4)	9.307	156	145748	20.945
116) 1,1,2,2-Tetrachloroethane	(4)	9.310	83	184052	20.552
117) 1,2,3-Trichloropropane	(4)	9.342	110	56979	20.259
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	259385	105.372
119) n-Propylbenzene	(4)	9.400	91	623142	21.439
120) 2-Chlorotoluene	(4)	9.461	126	135418	21.172
122) 1,3,5-Trimethylbenzene	(4)	9.534	105	459022	21.255
121) 4-Chlorotoluene	(4)	9.544	126	143627	20.980
124) tert-Butylbenzene	(4)	9.782	134	101565	21.213
125) Pentachloroethane	(4)	9.794	167	76440	20.681
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	479763	21.242
127) sec-Butylbenzene	(4)	9.945	105	524611	21.456
129) 1,3-Dichlorobenzene	(4)	10.019	146	270875	20.600
130) p-Isopropyltoluene	(4)	10.051	119	463257	21.063
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	425782	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	282492	20.651
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	488166	20.983

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

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Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	381146	21.047
136) 1,3-Diethylbenzene	(4)	10.266	119	275656	21.024
137) 1,4-Diethylbenzene	(4)	10.324	119	283740	20.877
139) n-Butylbenzene	(4)	10.343	92	216055	20.659
138) 1,2-Dichlorobenzene	(4)	10.353	146	268296	20.465
140) 1,2-Diethylbenzene	(4)	10.407	119	233442	20.741
141) Diethylbenzene (total)	(4)		100	792838	62.641
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	38040	19.960
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	164820	19.776
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	161116	19.512
147) Hexachlorobutadiene	(4)	11.559	225	47316	19.335
148) Naphthalene	(4)	11.611	128	596759	19.918
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	150840	19.245
150) 2-Methylnaphthalene	(4)	12.333	142	297997	18.897

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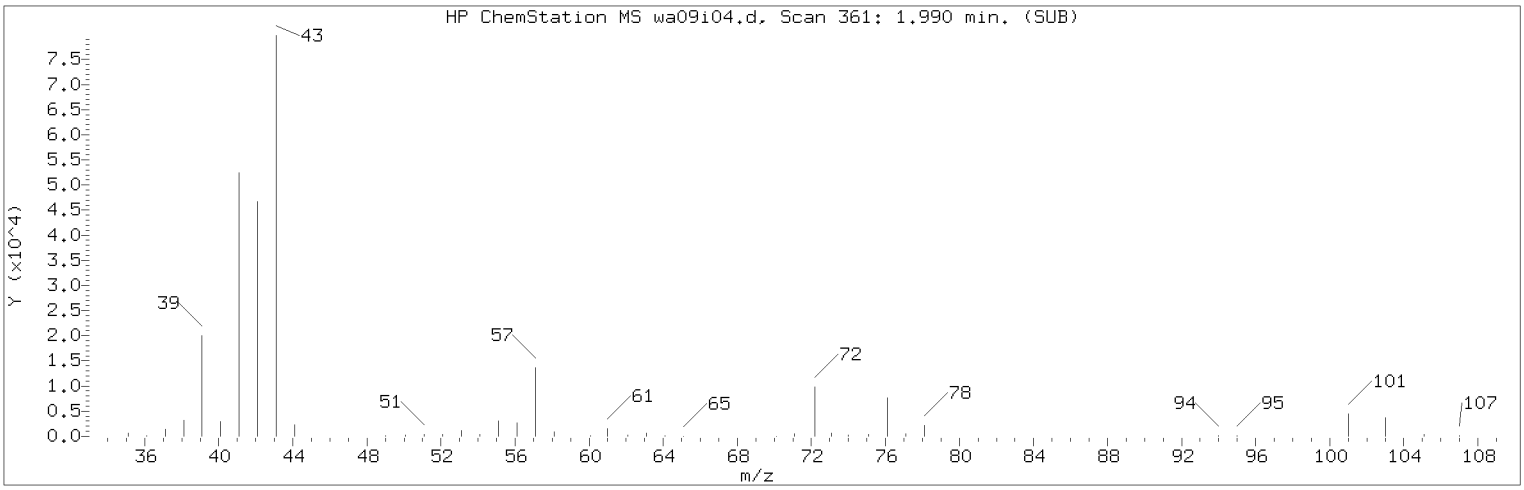
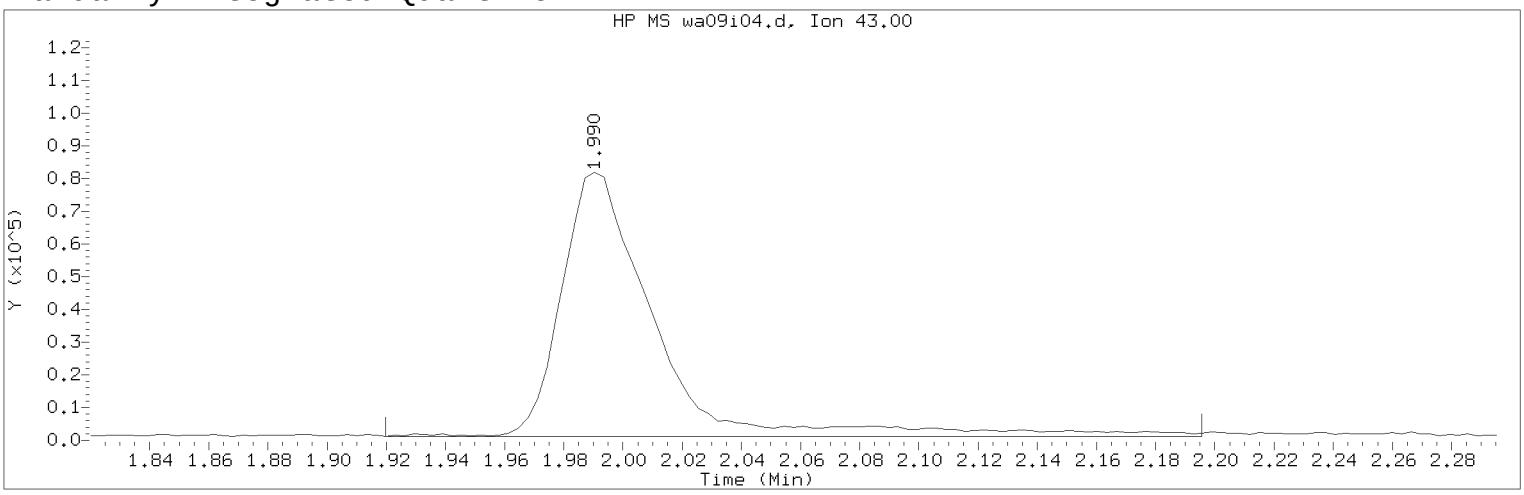
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

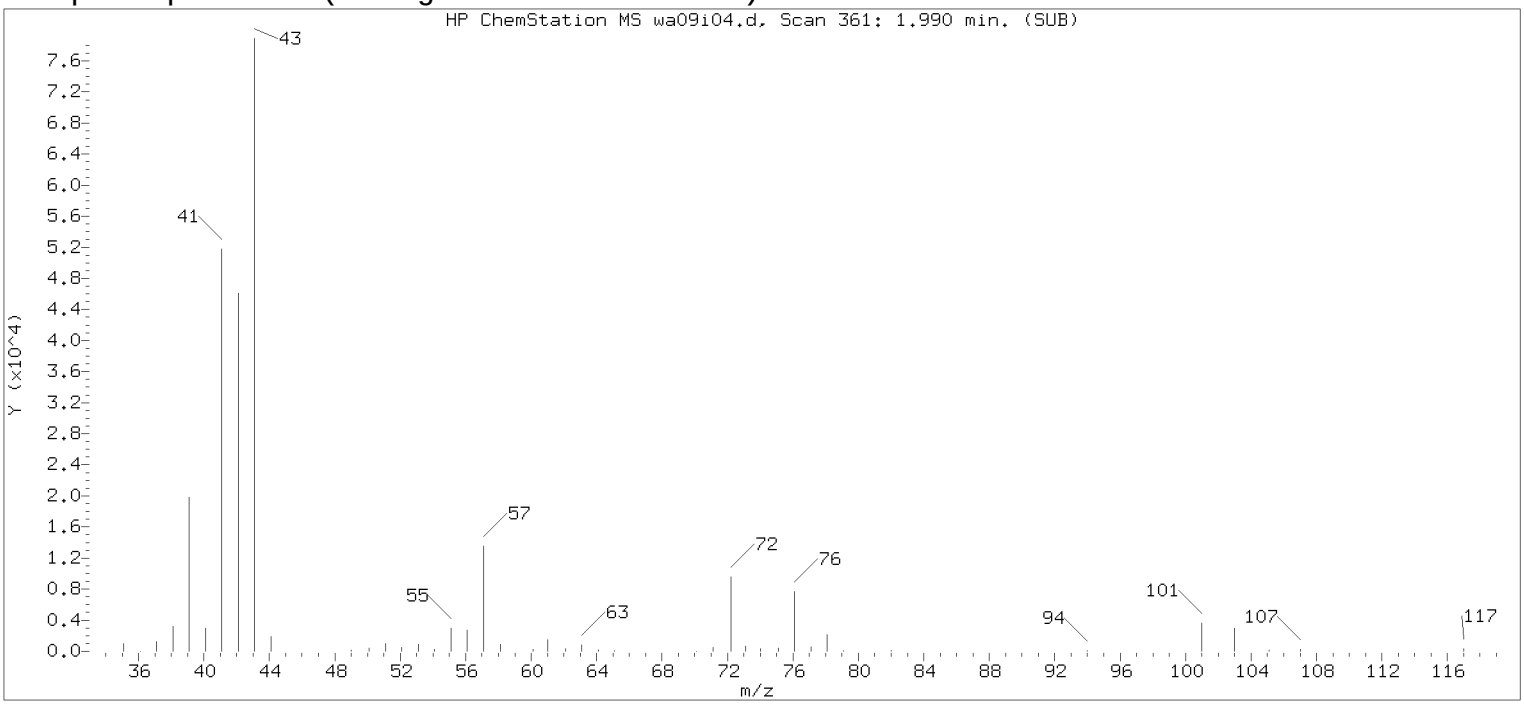
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 361
Retention Time (minutes): 1.990
Quant Ion : 43.00
Area (flag) : 176373M
On-Column Amount (ng) : 20.2760
Integration start scan : 338 Integration stop scan: 424
Y at integration start : 1228 Y at integration end: 1228

Reason for manual integration: improper integration

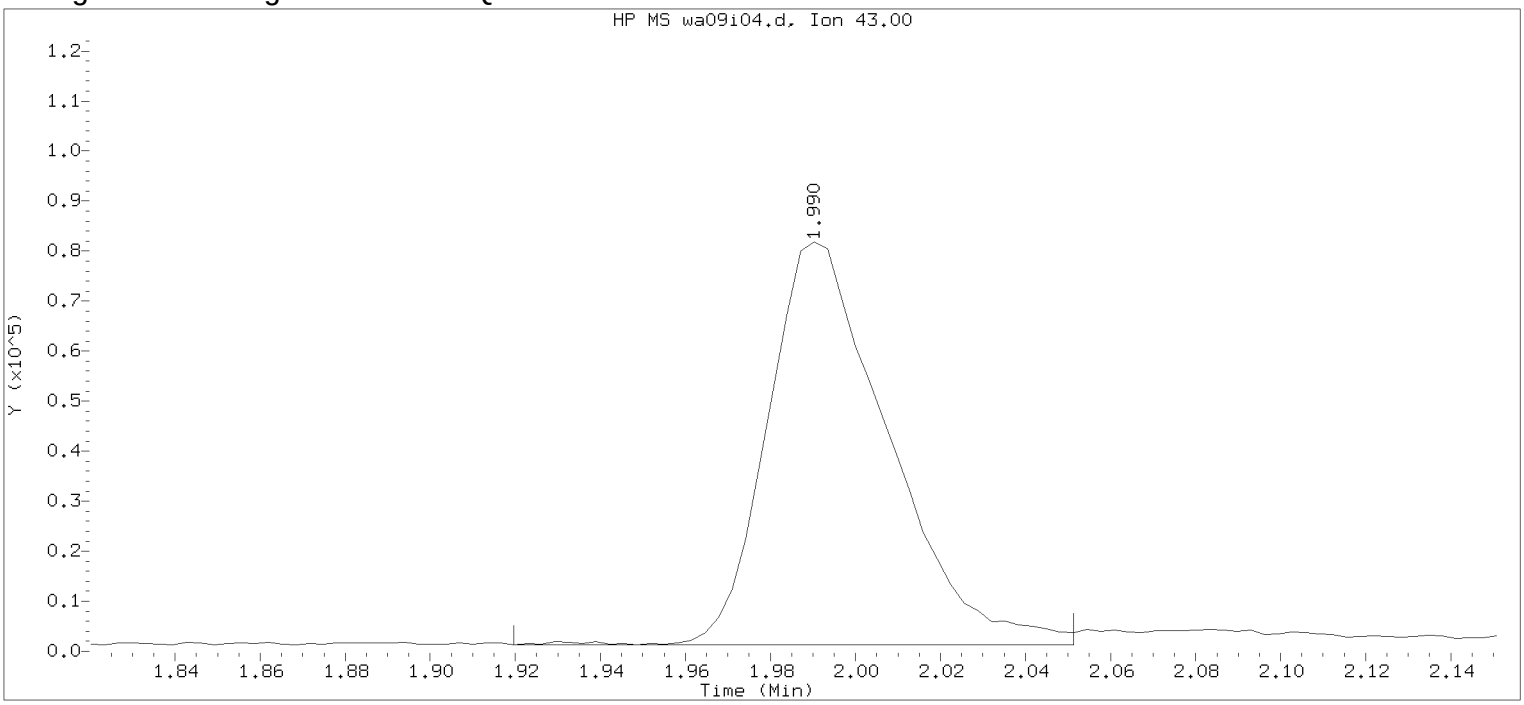
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

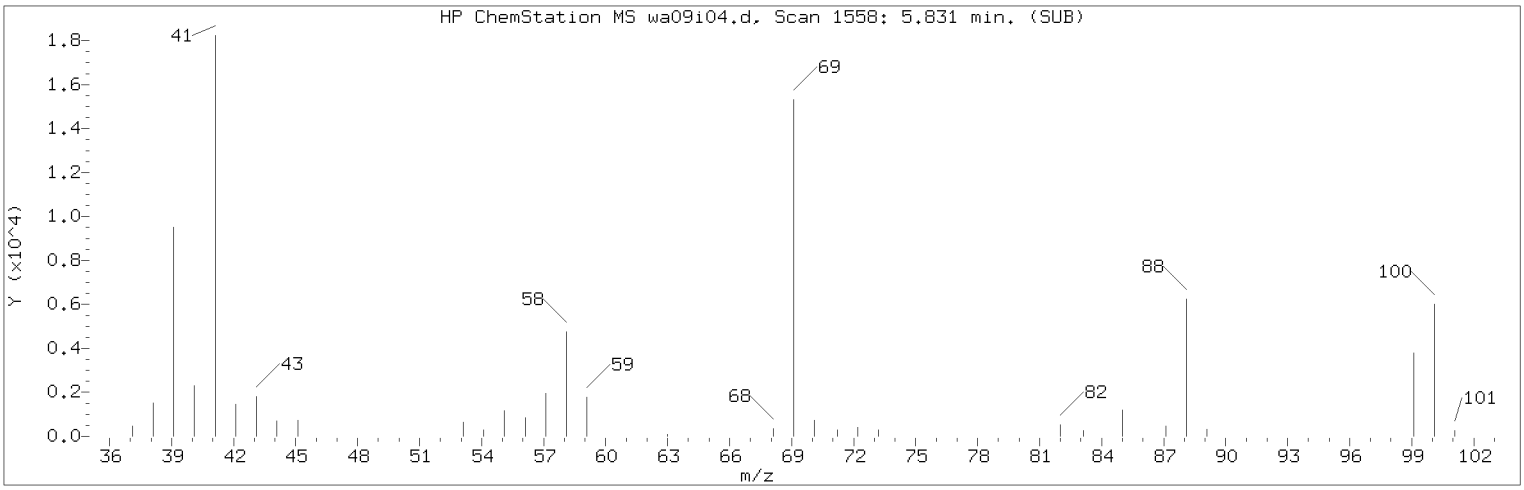
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 12:42
Date, time and analyst ID of latest file update: 09-Apr-2018 12:43 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

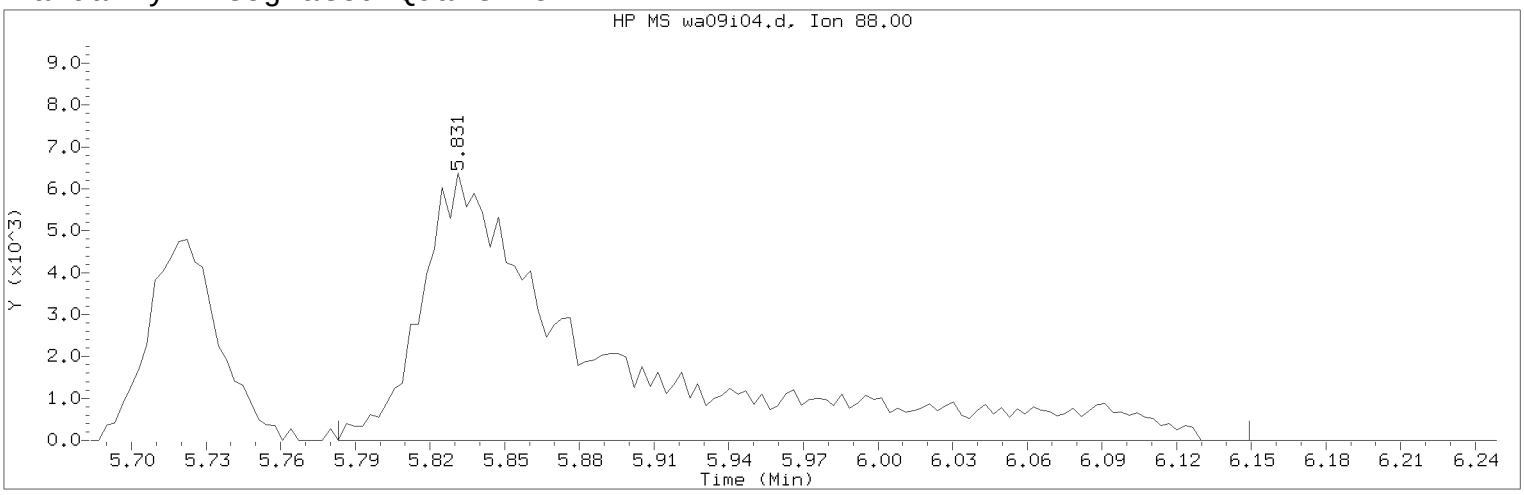
Compound Number : 11
Compound Name : n-Pentane
Scan Number : 361
Retention Time (minutes): 1.990
Quant Ion : 43.00
Area : 159100
On-column Amount (ng) : 19.5983
Integration start scan : 338 Integration stop scan: 379
Y at integration start : 1228 Y at integration end: 1228

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:02 nsl01327

Sample Name: VSTD020 Lab Sample ID: VSTD020

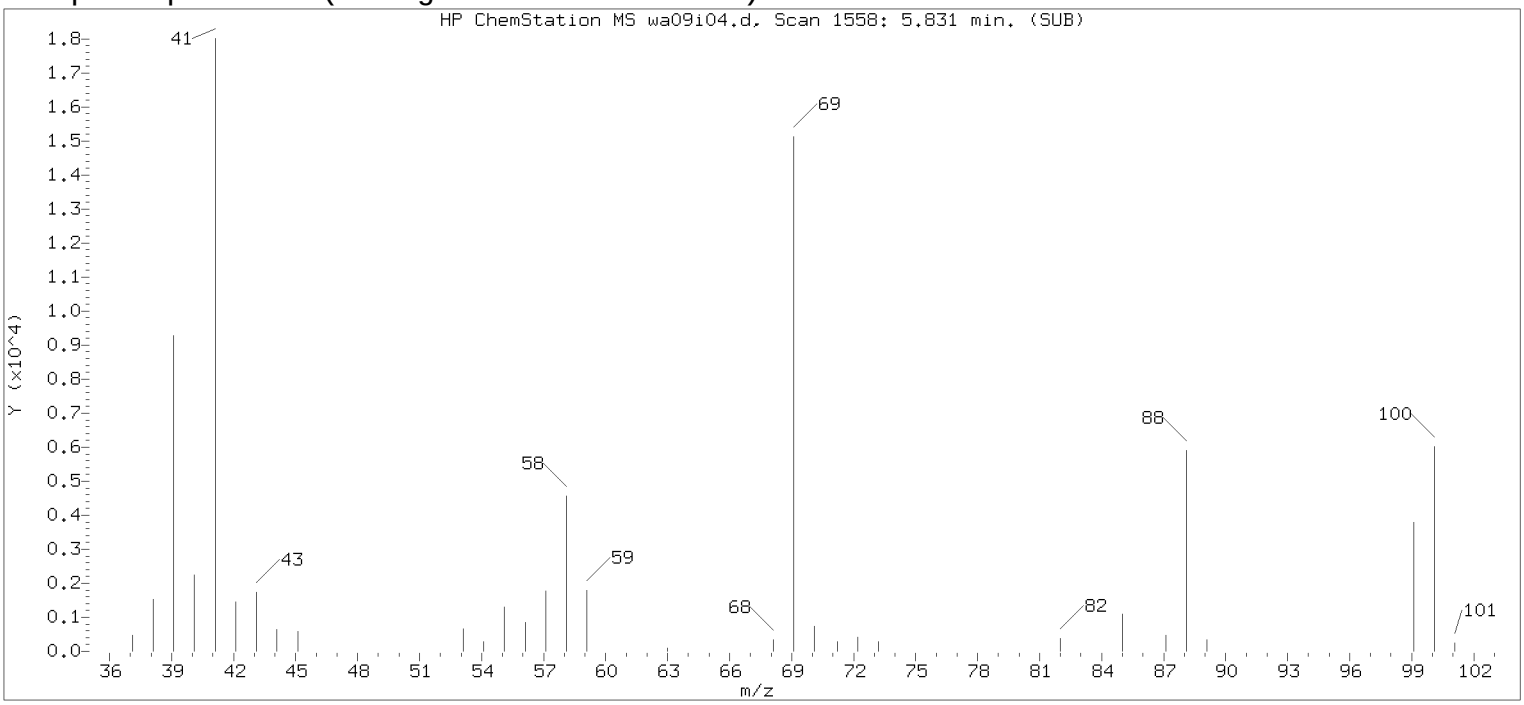
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1558
Retention Time (minutes): 5.831
Quant Ion : 88.00
Area (flag) : 32521M
On-Column Amount (ng) : 555.5839
Integration start scan : 1542 Integration stop scan: 1656
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

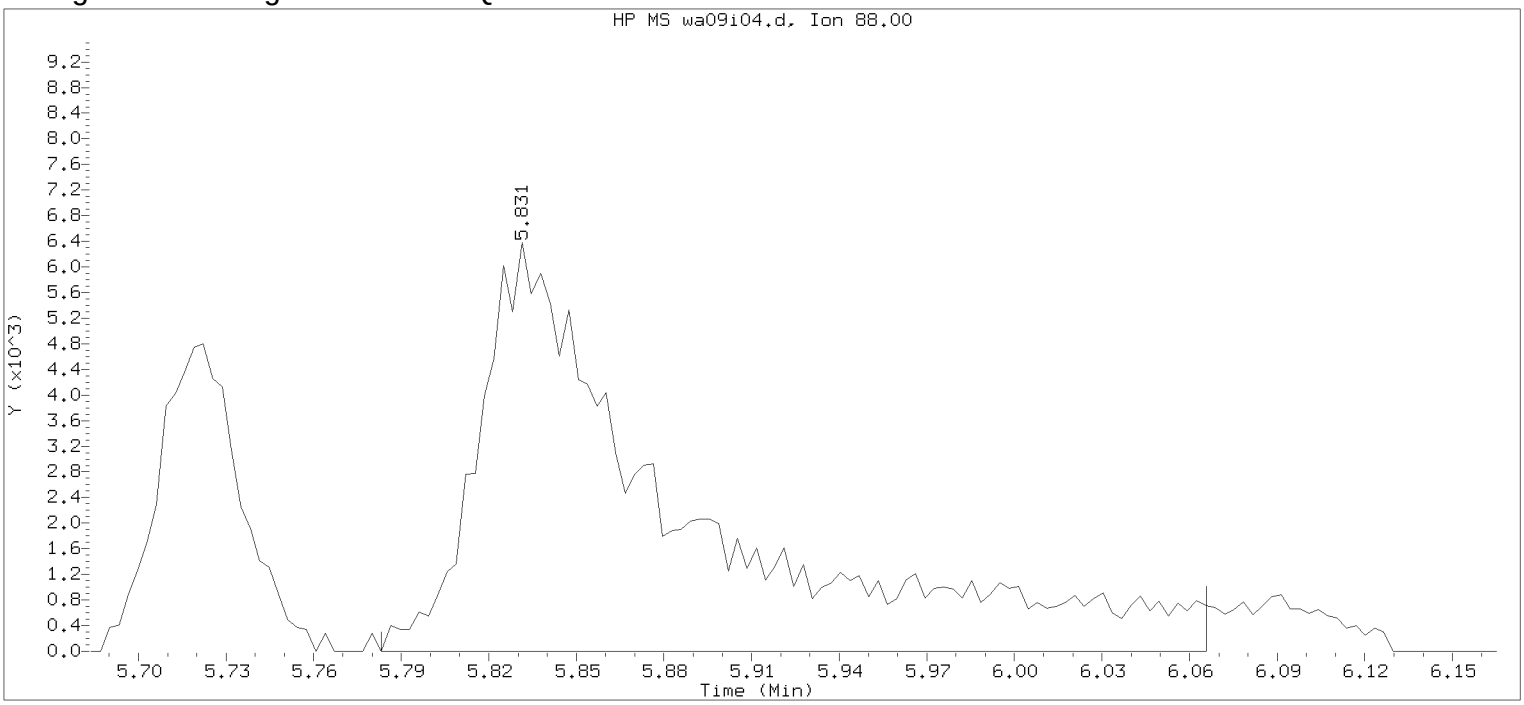
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i04.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:27 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 12:42
Date, time and analyst ID of latest file update: 09-Apr-2018 12:43 Automation

Sample Name: VSTD020 Lab Sample ID: VSTD020

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1558
Retention Time (minutes): 5.831
Quant Ion : 88.00
Area : 30336
On-column Amount (ng) : 493.9715
Integration start scan : 1542 Integration stop scan: 1630
Y at integration start : 0 Y at integration end: 0

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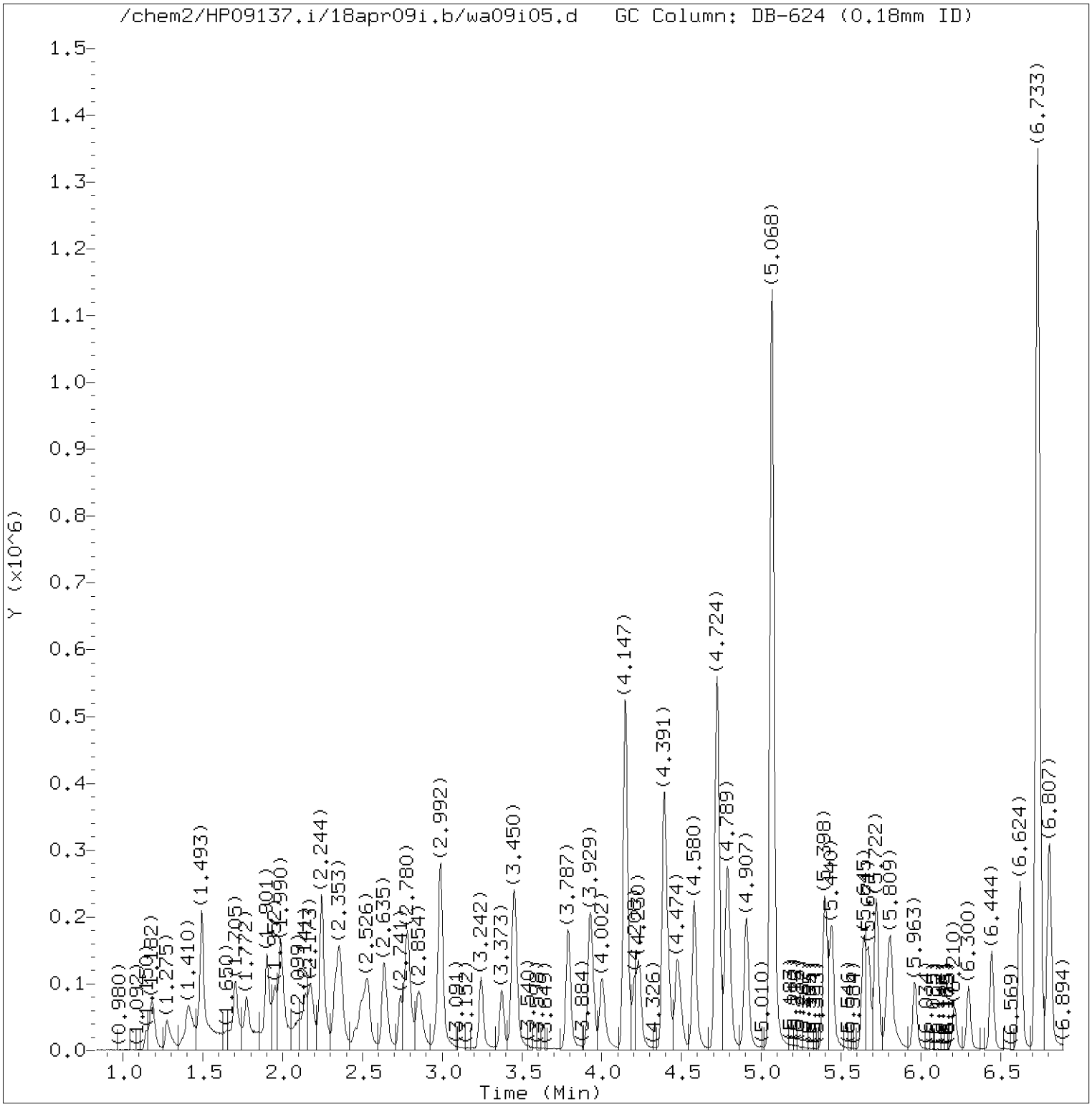
Target 3.5 esignature user id: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

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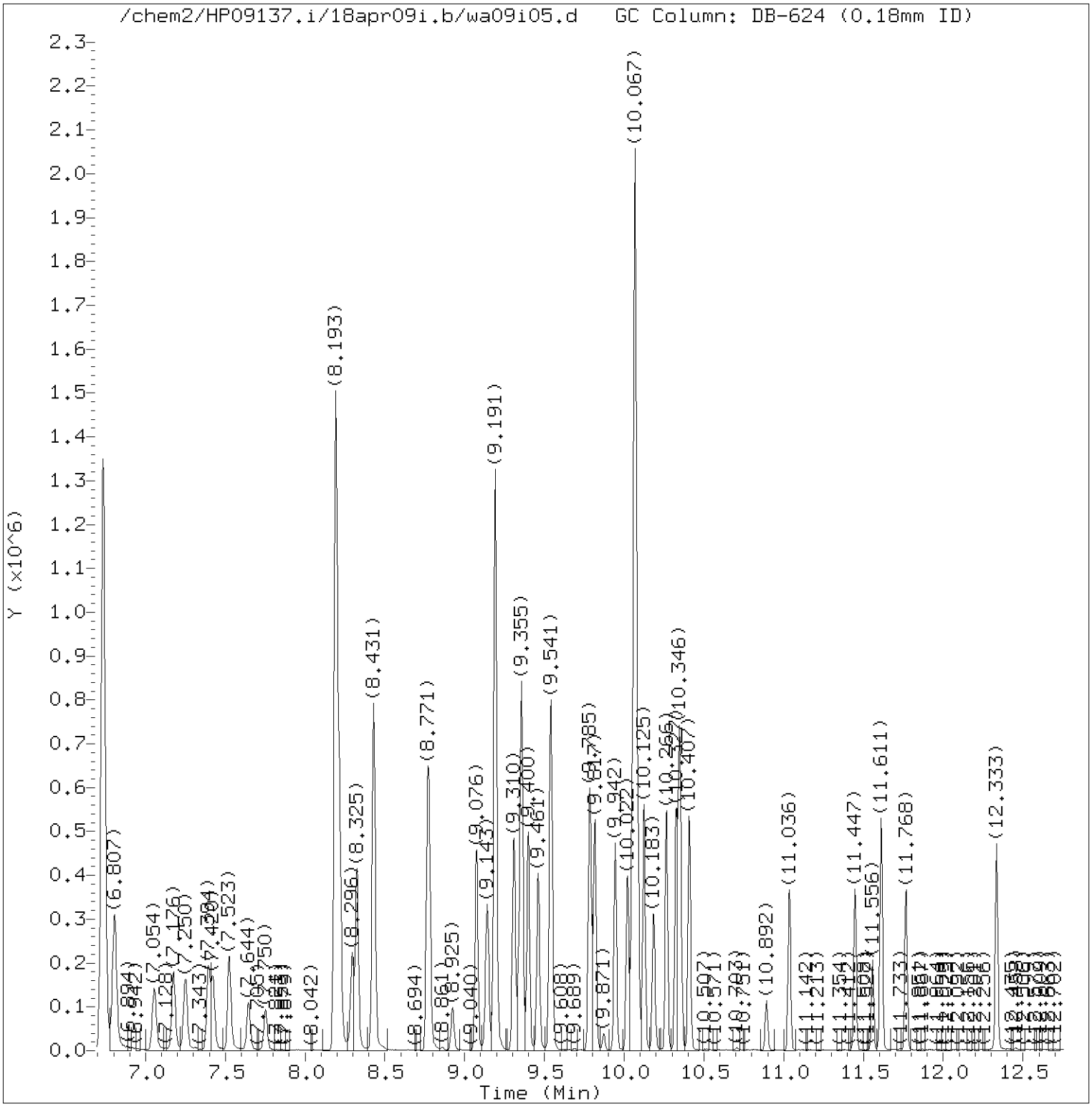
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	73376	10.998
4) Chloromethane	(2)	1.413	50	78411	10.972
6) Vinyl Chloride	(2)	1.483	62	78845	10.916
5) 1,3-Butadiene	(2)	1.493	39	53840	10.172
8) Bromomethane	(2)	1.702	94	57281	10.917
9) Chloroethane	(2)	1.775	64	46966	10.892
10) Dichlorofluoromethane	(2)	1.904	67	109641	12.067
12) Trichlorofluoromethane	(2)	1.952	101	86789	10.806
11) n-Pentane	(2)	1.990	43	88574	10.389
13) Ethanol	(1)	2.112	45	56440	662.463
15) Freon 123a	(2)	2.173	67	61657	10.394
16) Acrolein	(1)	2.244	56	186960	90.584
17) 1,1-Dichloroethene	(2)	2.337	96	45142	10.093
17) 1,1-Dichloroethene	(2)	2.327	63	21491	10.341
19) Freon 113	(2)	2.356	101	45349	10.005
18) Acetone	(1)	2.372	58	17899	20.643
22) Methyl Iodide	(2)	2.488	142	90460	10.415
21) 2-Propanol	(1)	2.507	45	74007	123.439
23) Carbon Disulfide	(2)	2.533	76	152500	10.333
25) Allyl Chloride	(2)	2.632	41	75100	10.520
27) Methyl Acetate	(2)	2.651	43	59257	11.343
28) Methylene Chloride	(2)	2.738	84	53257	10.247
29)*t-Butyl alcohol-d10	(1)	2.780	65	254345	250.000
30) t-Butyl alcohol	(1)	2.860	59	128148M	117.228
31) Acrylonitrile	(2)	2.966	53	32618	12.250
32) trans-1,2-Dichloroethene	(2)	2.988	96	50785	10.318
33) Methyl Tertiary Butyl Ether	(2)	2.992	73	175871	10.540
34) n-Hexane	(2)	3.245	57	57289	10.007
36) 1,1-Dichloroethane	(2)	3.373	63	87635	10.496
38) di-Isopropyl ether	(2)	3.444	45	161554	10.336
39) 2-Chloro-1,3-butadiene	(2)	3.460	53	76724	10.399
40) Ethyl t-butyl ether	(2)	3.787	59	162779	10.456
45) 2,2-Dichloropropane	(2)	3.922	77	50095	11.103
42) cis-1,2-Dichloroethene	(2)	3.925	96	57709	10.390
44) 2-Butanone	(2)	3.945	43	88482	23.842
47) Propionitrile	(1)	4.002	54	128836	94.276
43) 1,2-Dichloroethene (Total)	(2)		96	108494	20.707
48) Methacrylonitrile	(2)	4.147	67	172641	54.939

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.153	128	30367	10.742
50) Tetrahydrofuran	(1)	4.205	71	26294	17.994
51) Chloroform	(2)	4.233	83	88731	10.365
52)$Dibromofluoromethane	(2)	4.391	113	235932	50.572
52)$Dibromofluoromethane	(2)	4.391	111	240932	50.426
53) 1,1,1-Trichloroethane	(2)	4.420	97	80779	10.603
54) Cyclohexane	(2)	4.481	56	77945	10.055
54) Cyclohexane	(2)	4.481	84	81167	11.372
54) Cyclohexane	(2)	4.474	69	25040	9.934
55) 1,1-Dichloropropene	(2)	4.580	75	68711	10.079
56) Carbon Tetrachloride	(2)	4.580	117	57282	9.928
58) Isobutyl Alcohol	(1)	4.718	41	95340	265.886
57)$1,2-Dichloroethane-d4	(2)	4.724	102	64620	52.753
57)$1,2-Dichloroethane-d4	(2)	4.724	65	287181	52.168
57)$1,2-Dichloroethane-d4	(2)	4.724	104	41254	51.994
60) Benzene	(2)	4.785	78	214870	10.483
61) 1,2-Dichloroethane	(2)	4.801	62	74481	10.421
61) 1,2-Dichloroethane	(2)	4.798	98	7396	10.502
65) t-Amyl methyl ether	(2)	4.907	73	173054	10.650
67) n-Heptane	(2)	5.068	43	49057	9.555
66)*Fluorobenzene	(2)	5.068	96	1023385	50.000
69) n-Butanol	(1)	5.401	56	168643	499.826
71) Trichloroethene	(2)	5.443	95	56548	10.392
72) Methylcyclohexane	(2)	5.642	83	76803	10.497
72) Methylcyclohexane	(2)	5.639	98	35575	10.346
73) 1,2-Dichloropropane	(2)	5.671	63	54059	10.415
74) Dibromomethane	(2)	5.793	93	37544	10.667
76) Methyl Methacrylate	(2)	5.809	69	58300	10.514
75) 1,4-Dioxane	(1)	5.844	88	23010	249.672
78) Bromodichloromethane	(2)	5.963	83	68655	10.316
79) 2-Nitropropane	(2)	6.207	41	41631	22.594
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	44207	10.456
81) cis-1,3-Dichloropropene	(2)	6.444	75	91602	10.439
82) 4-Methyl-2-pentanone	(2)	6.624	43	176228	23.033
83)$Toluene-d8	(3)	6.733	98	1015029	49.799
83)$Toluene-d8	(3)	6.733	100	671290	48.868
88) Toluene	(3)	6.804	92	141553	10.139
89) trans-1,3-Dichloropropene	(3)	7.054	75	84630	10.174

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.176	69	95720	9.941
92) 1,1,2-Trichloroethane	(3)	7.250	97	56973	10.382
90) 1,3-Dichloropropene (total)	(3)		100	176232	20.613
93) Tetrachloroethene	(3)	7.394	166	58261	10.255
94) 1,3-Dichloropropane	(3)	7.423	76	93235	10.279
96) 2-Hexanone	(3)	7.523	43	137049	22.363
97) Dibromochloromethane	(3)	7.644	129	55684	9.978
99) 1,2-Dibromoethane	(3)	7.750	107	62457	10.449
100)*Chlorobenzene-d5	(3)	8.190	117	794952	50.000
102) Chlorobenzene	(3)	8.219	112	161107	10.128
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	52143	10.205
104) Ethylbenzene	(3)	8.325	91	265541	10.280
106) m+p-Xylene	(3)	8.431	106	215150	20.380
107) o-Xylene	(3)	8.768	106	106370	10.088
109) Styrene	(3)	8.777	104	180326	10.010
108) Xylene (Total)	(3)		106	321520	30.468
110) Bromoform	(3)	8.925	173	38653	9.651
111) Isopropylbenzene	(3)	9.072	105	262737	10.475
112) Cyclohexanone	(1)	9.143	55	114889	270.546
114)$4-Bromofluorobenzene	(3)	9.191	95	385468	50.070
114)$4-Bromofluorobenzene	(3)	9.191	174	314924	50.135
115) Bromobenzene	(4)	9.307	156	70703	10.181
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	92363	10.334
117) 1,2,3-Trichloropropane	(4)	9.342	110	28508	10.156
118) trans-1,4-Dichloro-2-butene	(4)	9.355	53	127641	51.956
119) n-Propylbenzene	(4)	9.400	91	305935	10.547
120) 2-Chlorotoluene	(4)	9.461	126	66002	10.340
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	227045	10.534
121) 4-Chlorotoluene	(4)	9.544	126	69498	10.172
124) tert-Butylbenzene	(4)	9.782	134	50051	10.475
125) Pentachloroethane	(4)	9.794	167	36844	9.988
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	237574	10.540
127) sec-Butylbenzene	(4)	9.945	105	259700	10.643
129) 1,3-Dichlorobenzene	(4)	10.022	146	136478	10.400
130) p-Isopropyltoluene	(4)	10.051	119	232692	10.601
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	424932	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	141733	10.382
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	250505	10.789

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.183	91	181455	10.040
136) 1,3-Diethylbenzene	(4)	10.266	119	139911	10.692
137) 1,4-Diethylbenzene	(4)	10.324	119	145938	10.759
139) n-Butylbenzene	(4)	10.343	92	110468	10.584
138) 1,2-Dichlorobenzene	(4)	10.353	146	134133	10.252
140) 1,2-Diethylbenzene	(4)	10.407	119	119082	10.601
141) Diethylbenzene (total)	(4)		100	404931	32.053
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	20283	10.664
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	89049	10.706
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	90327	10.961
147) Hexachlorobutadiene	(4)	11.559	225	26308	10.772
148) Naphthalene	(4)	11.611	128	326919	10.933
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	85425	10.921
150) 2-Methylnaphthalene	(4)	12.333	142	172686	10.973

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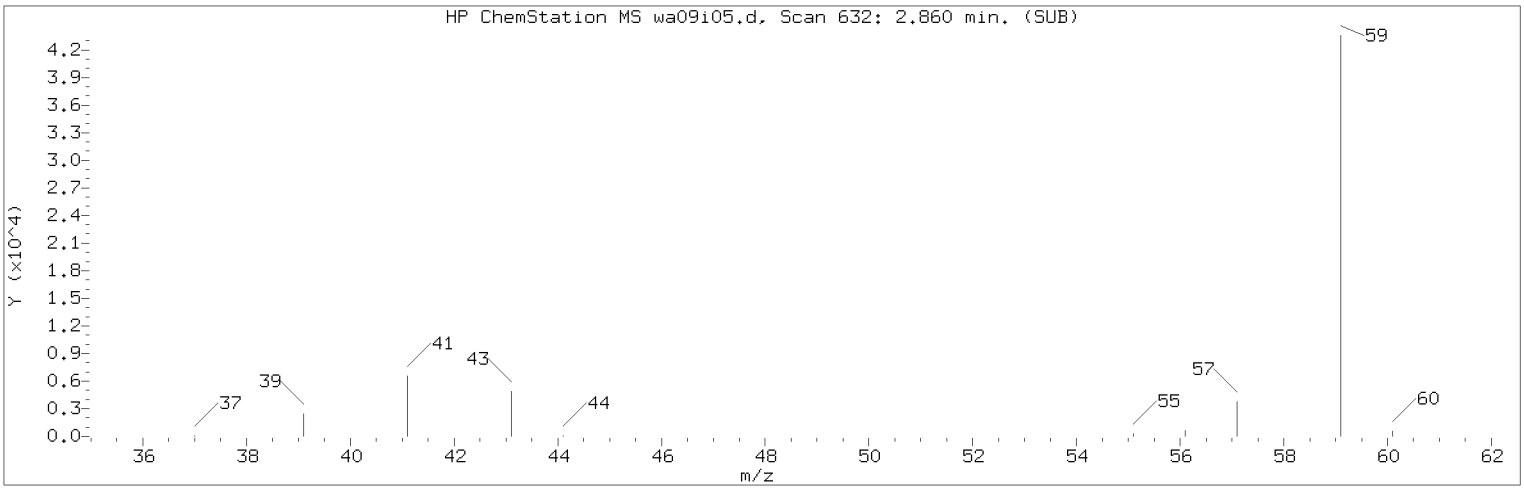
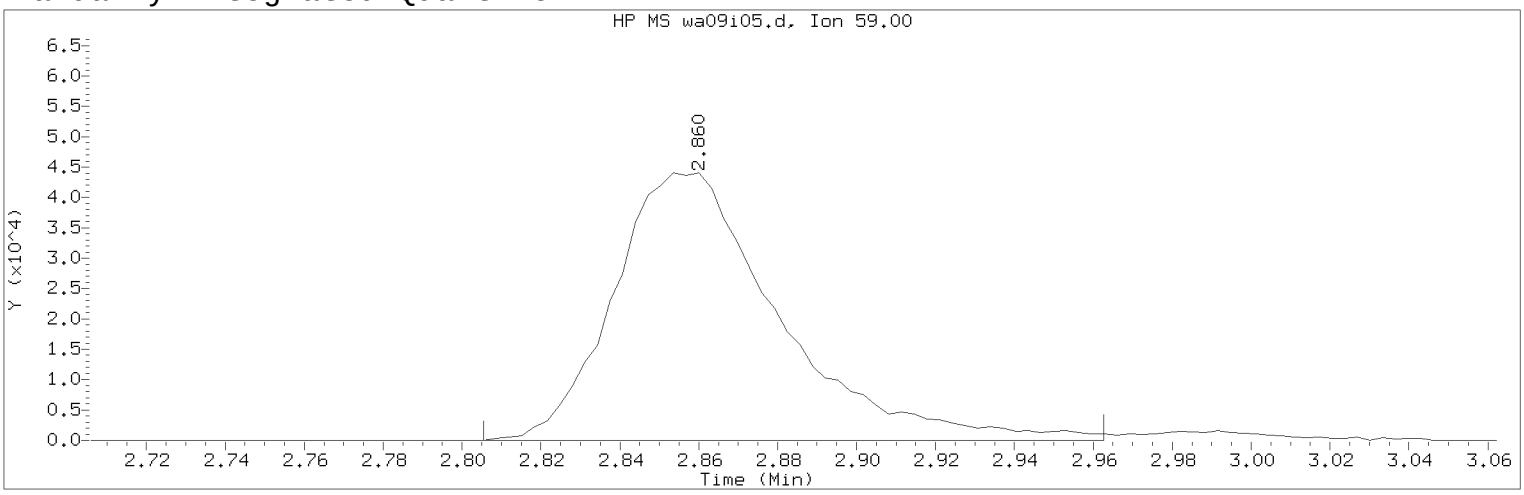
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:02
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD010 Lab Sample ID: VSTD010

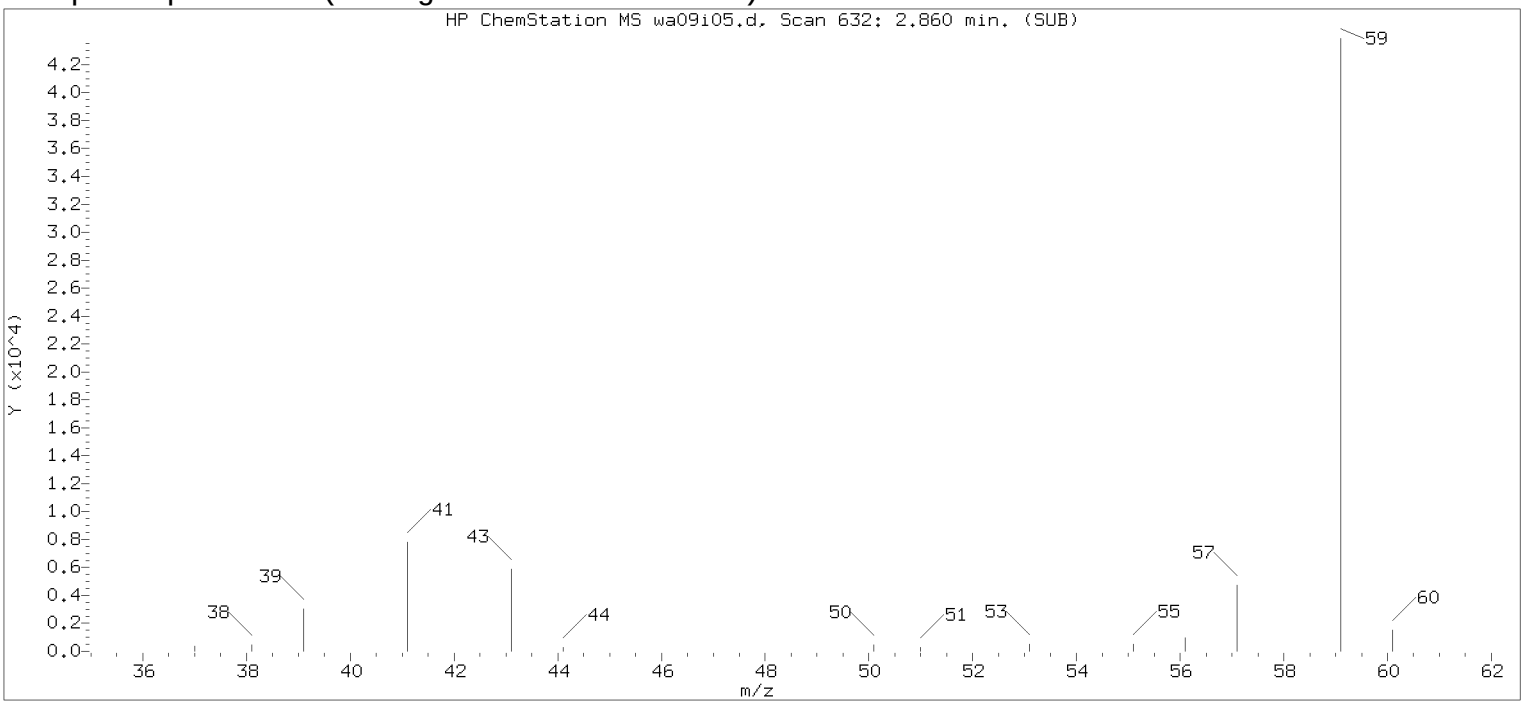
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 632
Retention Time (minutes): 2.860
Quant Ion : 59.00
Area (flag) : 128148M
On-Column Amount (ng) : 117.2284
Integration start scan : 614 Integration stop scan: 663
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

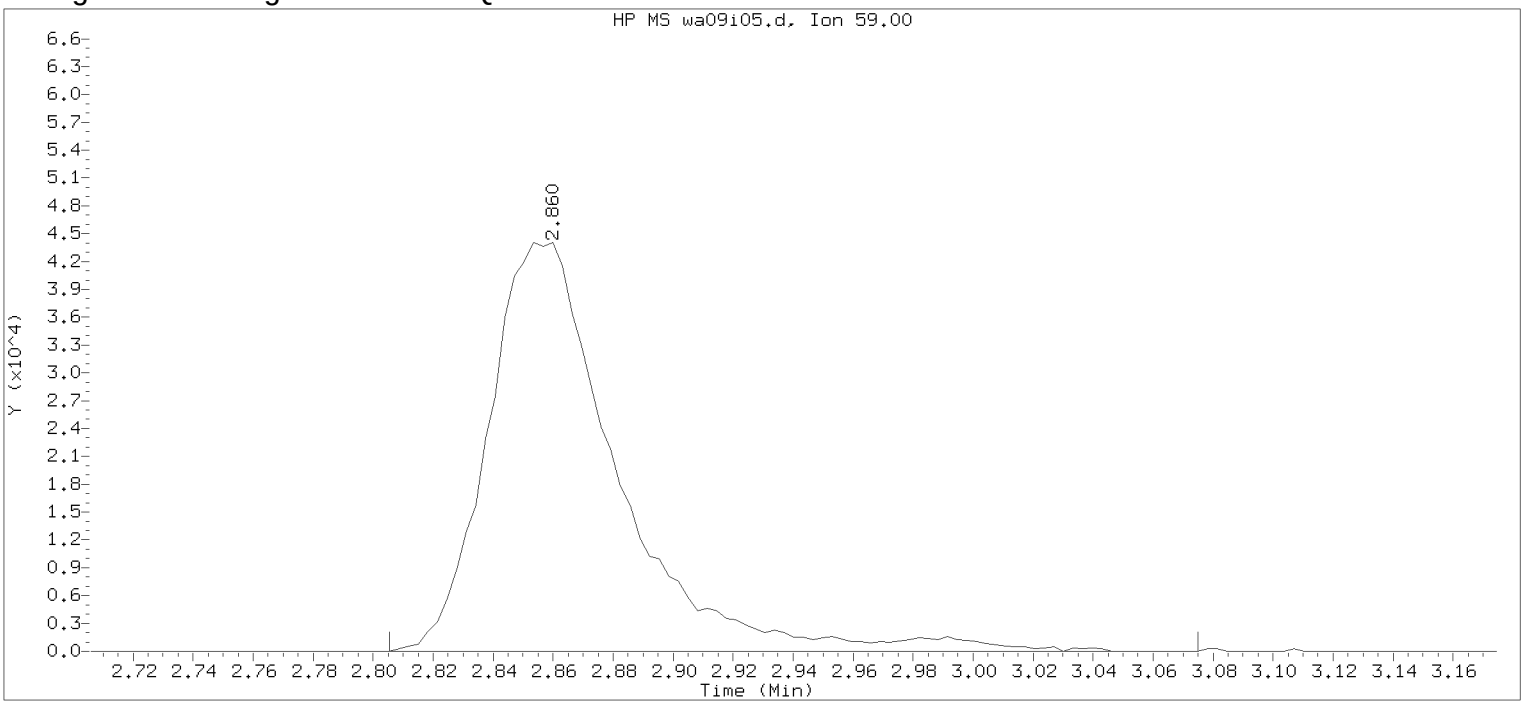
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:55.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



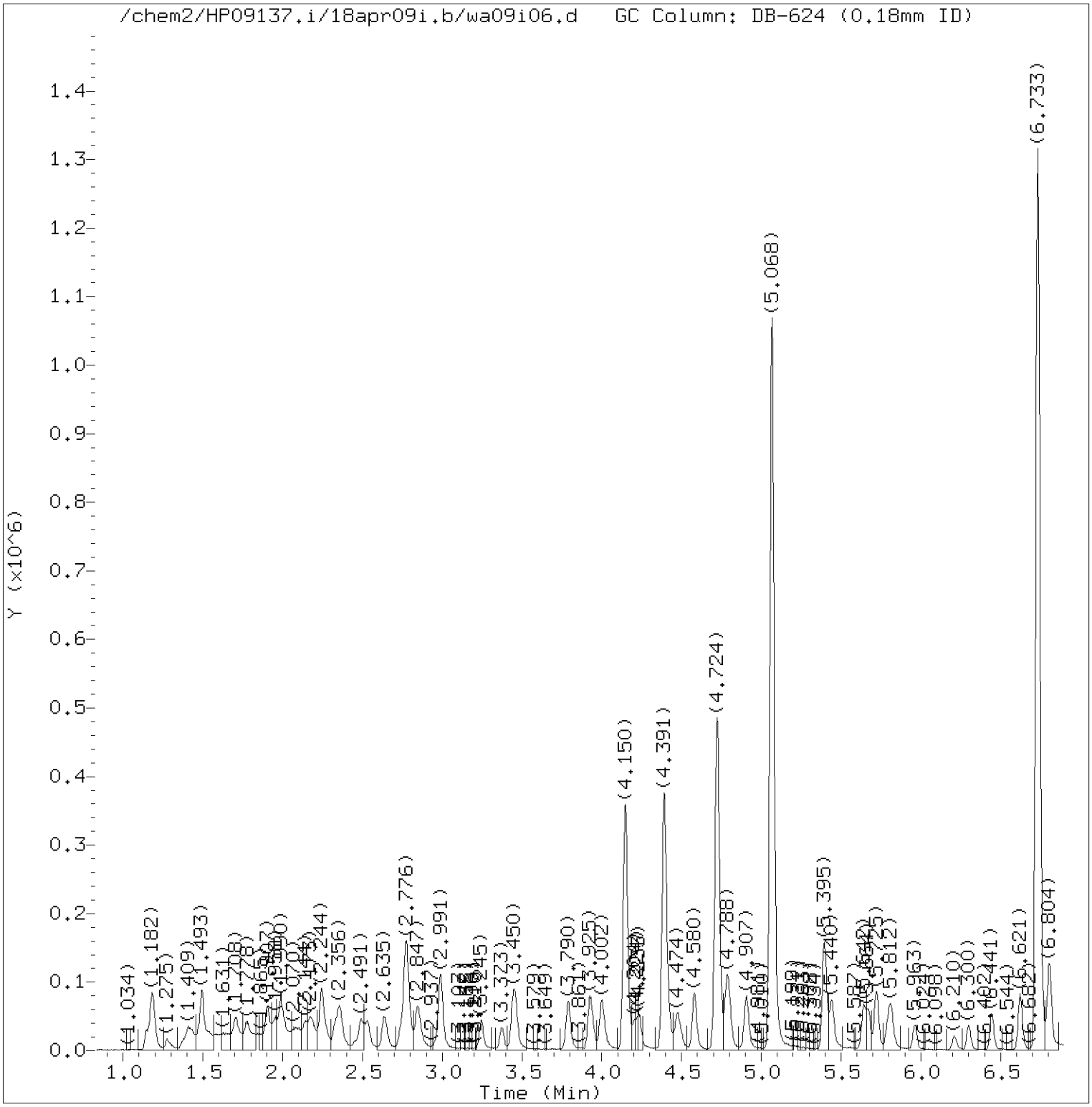
Data File: /chem2/HP09137.i/18apr09i.b/wa09i05.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 12:51 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:06
Date, time and analyst ID of latest file update: 09-Apr-2018 13:06 Automation

Sample Name: VSTD010 Lab Sample ID: VSTD010

Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 632
Retention Time (minutes): 2.860
Quant Ion : 59.00
Area : 131978
On-column Amount (ng) : 119.0893
Integration start scan : 614 Integration stop scan: 698
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327



Total Ion Chromatogram (TIC)

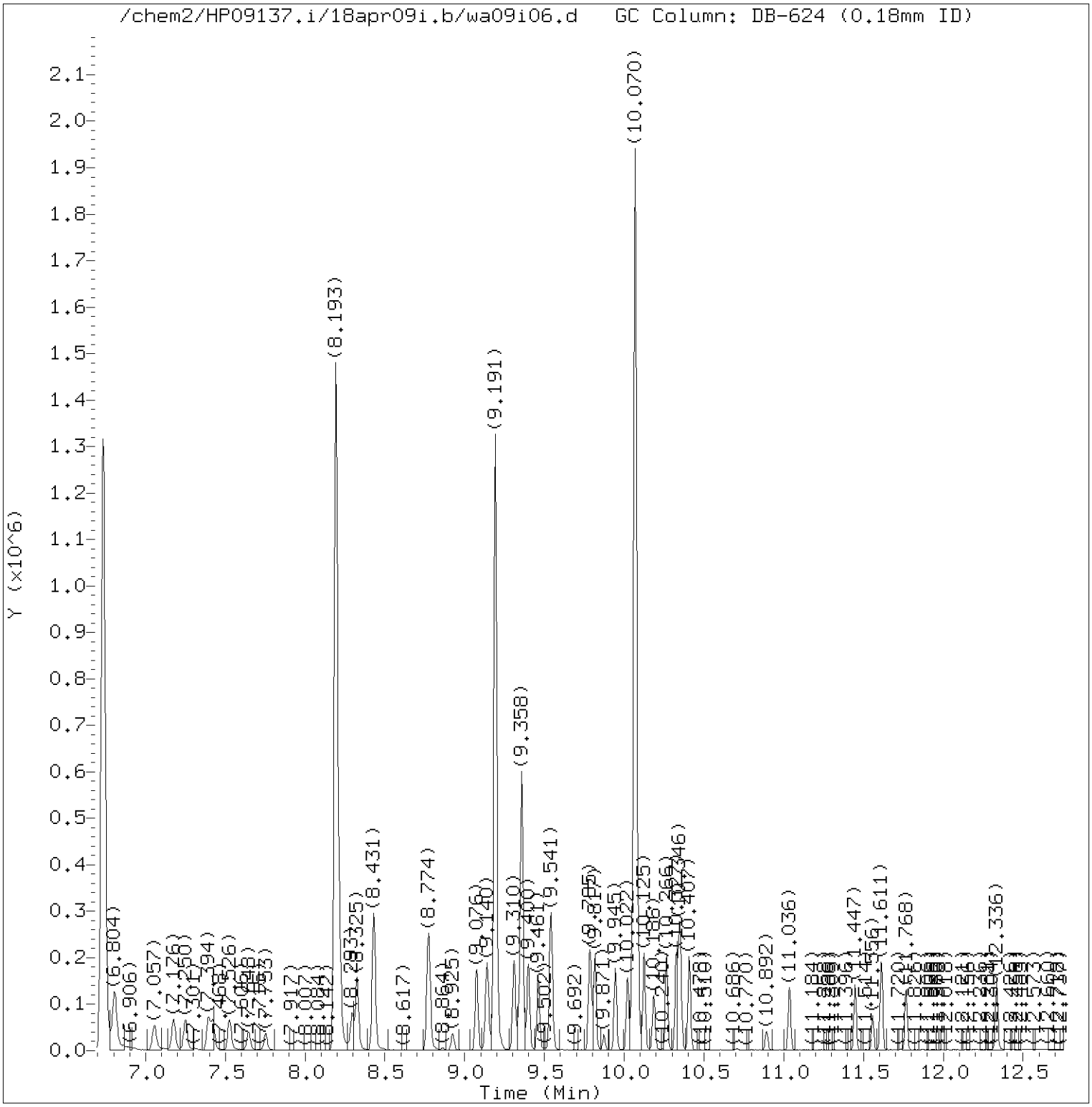
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	25530	3.808
4) Chloromethane	(2)	1.409	50	27960	3.893
6) Vinyl Chloride	(2)	1.483	62	28388	3.911
5) 1,3-Butadiene	(2)	1.496	39	22326M	4.197
8) Bromomethane	(2)	1.708	94	21246	4.029
9) Chloroethane	(2)	1.778	64	16528	3.814
10) Dichlorofluoromethane	(2)	1.900	67	39276	4.301
12) Trichlorofluoromethane	(2)	1.955	101	30376	3.763
11) n-Pentane	(2)	1.987	43	38686	4.515
13) Ethanol	(1)	2.083	45	19062	185.911
15) Freon 123a	(2)	2.170	67	25841	4.335
16) Acrolein	(1)	2.244	56	66847	35.199
17) 1,1-Dichloroethene	(2)	2.346	96	17108	3.806
17) 1,1-Dichloroethene	(2)	2.337	63	8139	3.897
19) Freon 113	(2)	2.353	101	16943	3.720
18) Acetone	(1)	2.372	58	6197	7.767
21) 2-Propanol	(1)	2.491	45	44667	80.969
22) Methyl Iodide	(2)	2.491	142	33382	3.824
23) Carbon Disulfide	(2)	2.533	76	56708	3.823
25) Allyl Chloride	(2)	2.635	41	28159	3.925
27) Methyl Acetate	(2)	2.651	43	24524	4.671
28) Methylene Chloride	(2)	2.741	84	20574	3.939
29)*t-Butyl alcohol-d10	(1)	2.773	65	234031	250.000
30) t-Butyl alcohol	(1)	2.847	59	86913	86.408
31) Acrylonitrile	(2)	2.963	53	10819	4.043
32) trans-1,2-Dichloroethene	(2)	2.991	96	19256	3.893
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	68828	4.104
34) n-Hexane	(2)	3.245	57	21599M	3.754
36) 1,1-Dichloroethane	(2)	3.373	63	32734	3.901
38) di-Isopropyl ether	(2)	3.444	45	62316	3.967
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	28547	3.850
40) Ethyl t-butyl ether	(2)	3.790	59	63836	4.080
45) 2,2-Dichloropropane	(2)	3.922	77	18228M	4.020
42) cis-1,2-Dichloroethene	(2)	3.925	96	22039	3.948
44) 2-Butanone	(2)	3.941	43	31974	8.573
47) Propionitrile	(1)	4.002	54	92386	73.471
43) 1,2-Dichloroethene (Total)	(2)		96	41295	7.841
48) Methacrylonitrile	(2)	4.147	67	129048	40.863

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.156	128	11063	3.894
50) Tetrahydrofuran	(1)	4.204	71	8716	6.482
51) Chloroform	(2)	4.236	83	33822	3.931
52)$Dibromofluoromethane	(2)	4.391	113	236165	50.371
52)$Dibromofluoromethane	(2)	4.391	111	241025	50.196
53) 1,1,1-Trichloroethane	(2)	4.416	97	31074	4.059
54) Cyclohexane	(2)	4.480	56	29383	3.772
54) Cyclohexane	(2)	4.477	84	26858	3.744
54) Cyclohexane	(2)	4.474	69	9428	3.722
55) 1,1-Dichloropropene	(2)	4.580	75	26243M	3.830
56) Carbon Tetrachloride	(2)	4.586	117	20842	3.595
58) Isobutyl Alcohol	(1)	4.715	41	65858	199.608
57)$1,2-Dichloroethane-d4	(2)	4.731	102	64185	52.139
57)$1,2-Dichloroethane-d4	(2)	4.727	65	288335	52.118
57)$1,2-Dichloroethane-d4	(2)	4.727	104	40530	50.829
60) Benzene	(2)	4.785	78	80753	3.920
61) 1,2-Dichloroethane	(2)	4.801	62	29891	4.161
61) 1,2-Dichloroethane	(2)	4.804	98	2546	3.597
65) t-Amyl methyl ether	(2)	4.907	73	65463	4.009
66)*Fluorobenzene	(2)	5.068	96	1028475	50.000
67) n-Heptane	(2)	5.071	43	20969	4.064
69) n-Butanol	(1)	5.398	56	112060	360.953
71) Trichloroethene	(2)	5.440	95	21276	3.890
72) Methylcyclohexane	(2)	5.642	83	28358	3.857
72) Methylcyclohexane	(2)	5.645	98	13401	3.878
73) 1,2-Dichloropropane	(2)	5.674	63	19754	3.787
74) Dibromomethane	(2)	5.790	93	14385	4.067
76) Methyl Methacrylate	(2)	5.812	69	22789	4.089
75) 1,4-Dioxane	(1)	5.835	88	12380M	145.990
78) Bromodichloromethane	(2)	5.963	83	26131	3.907
79) 2-Nitropropane	(2)	6.210	41	13256	7.159
80) 2-Chloroethyl Vinyl Ether	(2)	6.297	63	16789	3.951
81) cis-1,3-Dichloropropene	(2)	6.447	75	33212	3.766
82) 4-Methyl-2-pentanone	(2)	6.621	43	58104	7.556
83)$Toluene-d8	(3)	6.733	98	1012940	49.420
83)$Toluene-d8	(3)	6.733	100	672797	48.705
88) Toluene	(3)	6.810	92	54881	3.909
89) trans-1,3-Dichloropropene	(3)	7.054	75	30576	3.655

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.176	69	38708	3.998
92) 1,1,2-Trichloroethane	(3)	7.250	97	22108	4.006
90) 1,3-Dichloropropene (total)	(3)		100	63788	7.422
93) Tetrachloroethene	(3)	7.394	166	21957	3.843
94) 1,3-Dichloropropane	(3)	7.423	76	36512	4.003
96) 2-Hexanone	(3)	7.526	43	49505	8.033
97) Dibromochloromethane	(3)	7.648	129	20621	3.675
99) 1,2-Dibromoethane	(3)	7.750	107	23631	3.931
100)*Chlorobenzene-d5	(3)	8.193	117	799400	50.000
102) Chlorobenzene	(3)	8.219	112	63029	3.940
103) 1,1,1,2-Tetrachloroethane	(3)	8.299	131	19227	3.742
104) Ethylbenzene	(3)	8.325	91	101200	3.896
106) m+p-Xylene	(3)	8.431	106	82093	7.733
107) o-Xylene	(3)	8.767	106	40628	3.832
109) Styrene	(3)	8.780	104	68872	3.802
108) Xylene (Total)	(3)		106	122721	11.565
110) Bromoform	(3)	8.925	173	14740	3.660
111) Isopropylbenzene	(3)	9.076	105	98387	3.901
112) Cyclohexanone	(1)	9.140	55	67032	171.552
114)$4-Bromofluorobenzene	(3)	9.191	95	385130	49.748
114)$4-Bromofluorobenzene	(3)	9.191	174	312137	49.415
115) Bromobenzene	(4)	9.310	156	27328	3.971
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	36608	4.134
117) 1,2,3-Trichloropropane	(4)	9.342	110	11515	4.140
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	93033	38.217
119) n-Propylbenzene	(4)	9.400	91	115861	4.031
120) 2-Chlorotoluene	(4)	9.461	126	24788	3.919
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	83707	3.920
121) 4-Chlorotoluene	(4)	9.547	126	26624	3.933
124) tert-Butylbenzene	(4)	9.785	134	17653	3.728
125) Pentachloroethane	(4)	9.794	167	13678	3.742
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	89861	4.023
127) sec-Butylbenzene	(4)	9.945	105	96670	3.998
129) 1,3-Dichlorobenzene	(4)	10.022	146	51706	3.976
130) p-Isopropyltoluene	(4)	10.051	119	85854	3.947
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	421063	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	54636	4.039
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	92059	4.001

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

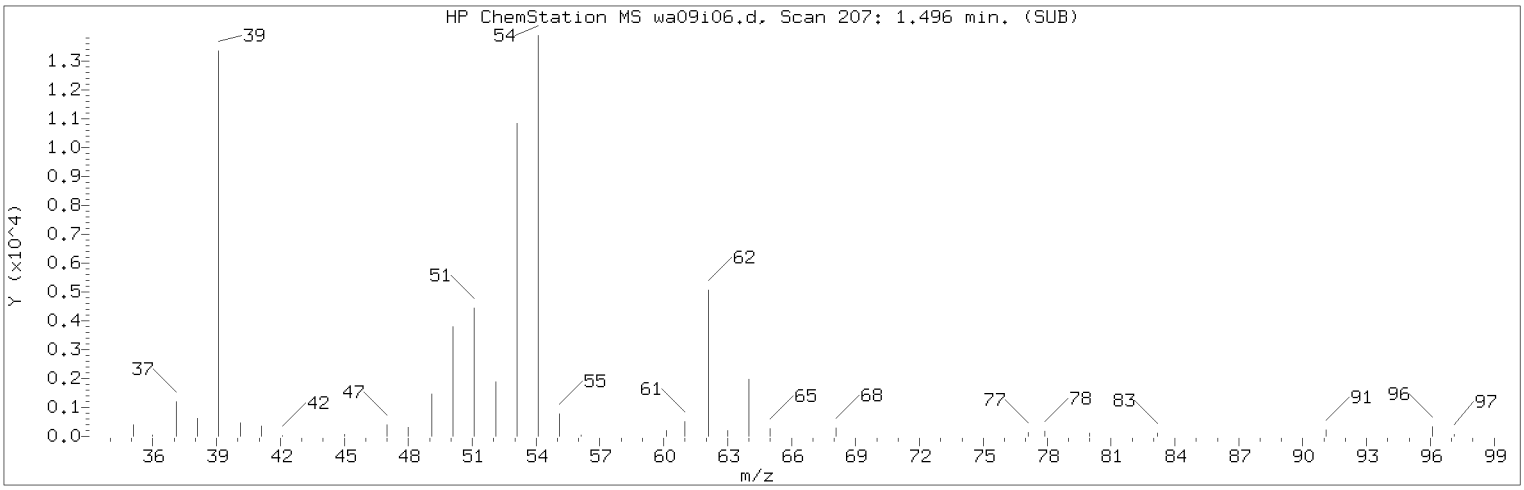
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

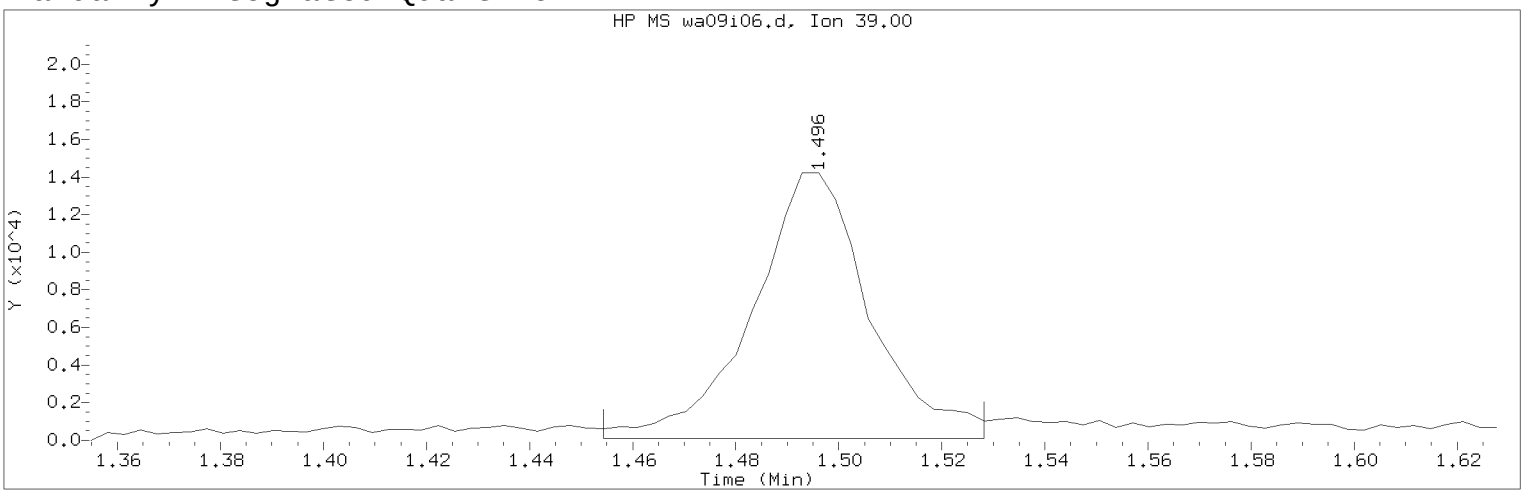
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	67876	3.790
136) 1,3-Diethylbenzene	(4)	10.266	119	50980	3.932
137) 1,4-Diethylbenzene	(4)	10.327	119	53189	3.957
139) n-Butylbenzene	(4)	10.343	92	40386	3.905
138) 1,2-Dichlorobenzene	(4)	10.353	146	52052	4.015
140) 1,2-Diethylbenzene	(4)	10.407	119	44156	3.967
141) Diethylbenzene (total)	(4)		100	148325	11.856
142) 1,2-Dibromo-3-chloropropane	(4)	10.889	75	8018	4.254
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	32885	3.990
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	33087	4.052
147) Hexachlorobutadiene	(4)	11.556	225	9888	4.086
148) Naphthalene	(4)	11.614	128	122512	4.135
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	30941	3.992
150) 2-Methylnaphthalene	(4)	12.336	142	55356	3.550

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

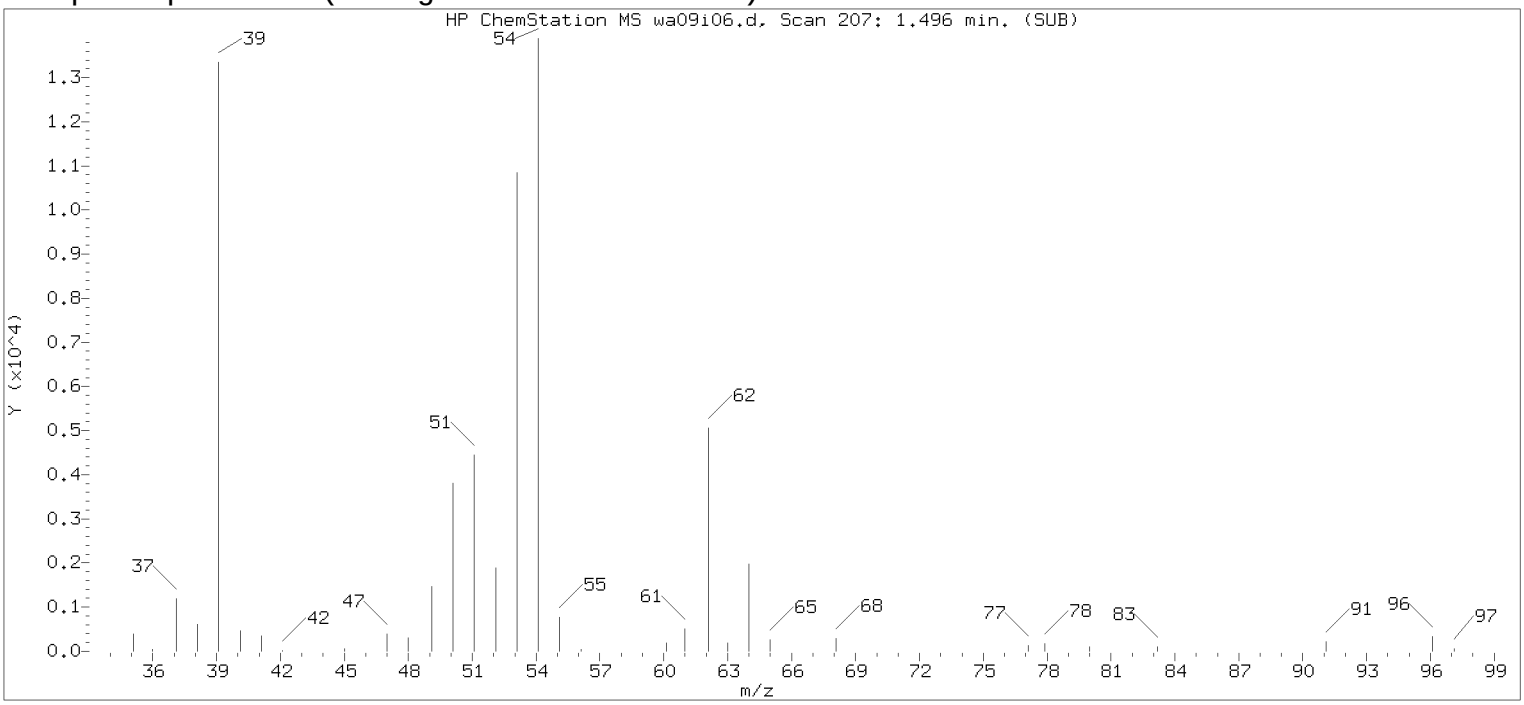
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 207
Retention Time (minutes): 1.496
Quant Ion : 39.00
Area (flag) : 22326M
On-Column Amount (ng) : 4.1973
Integration start scan : 193 Integration stop scan: 216
Y at integration start : 113 Y at integration end: 113

Reason for manual integration: improper integration

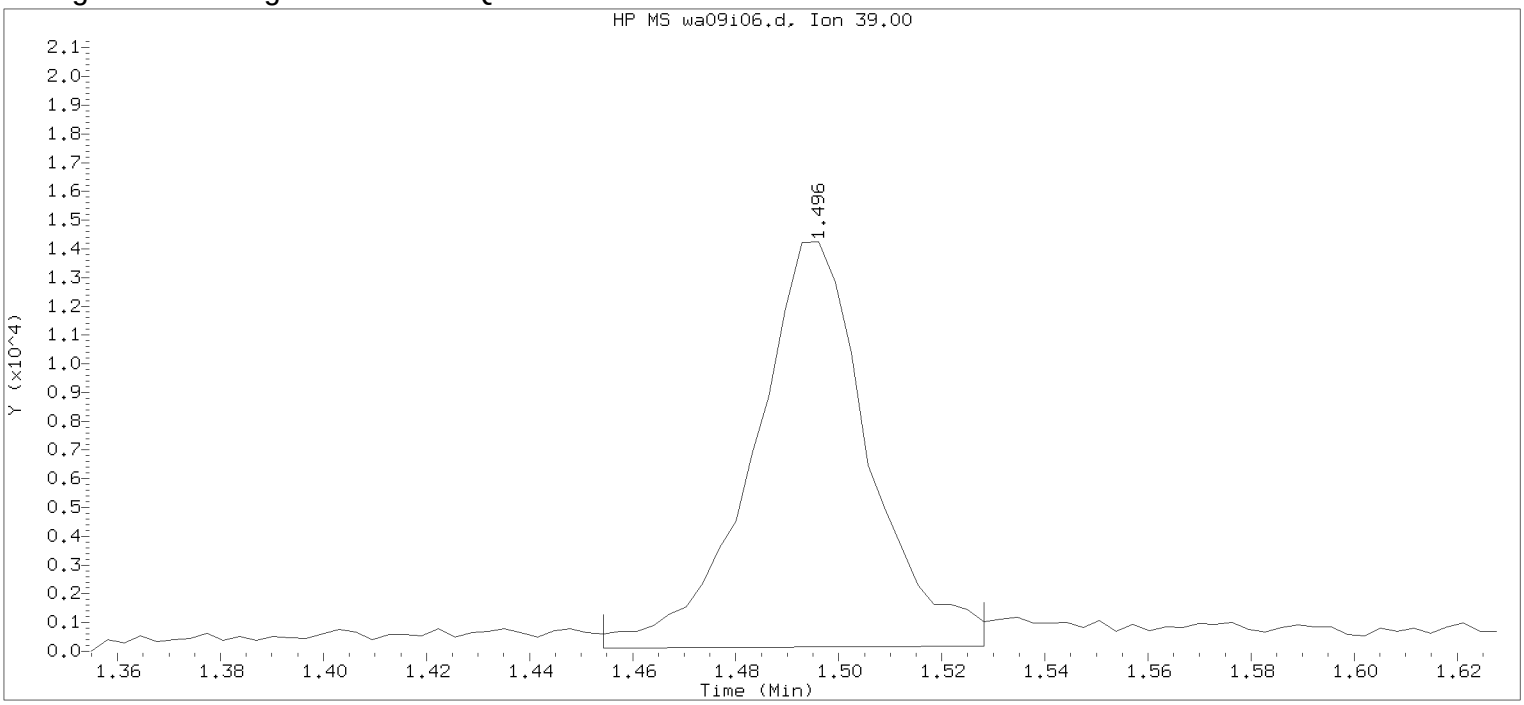
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

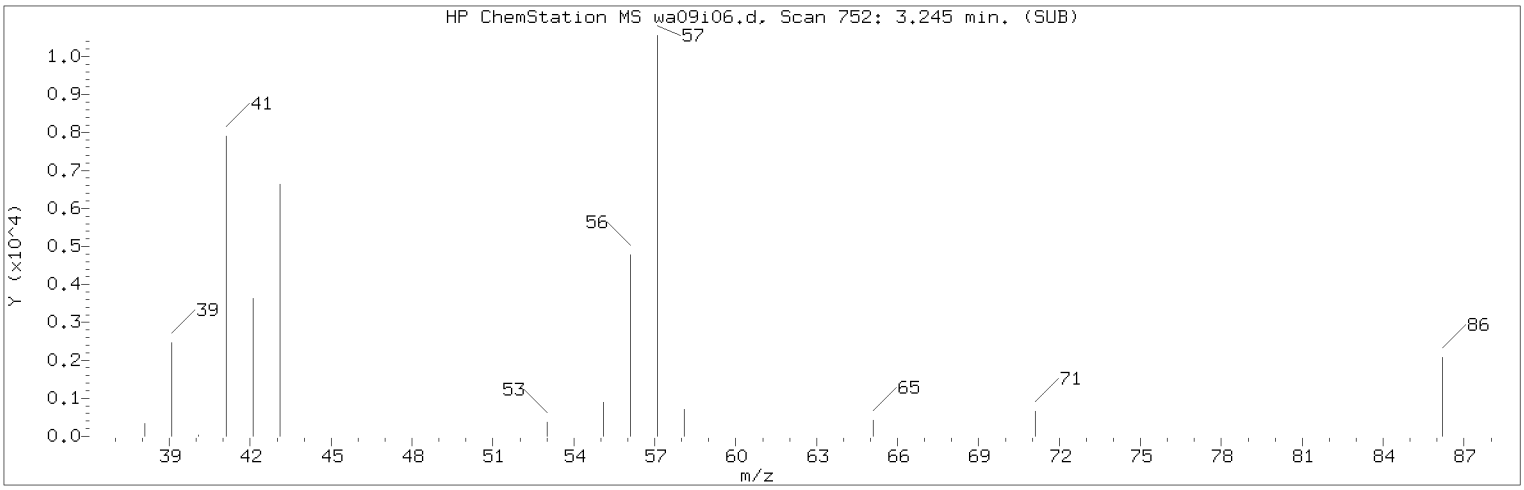
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:30
Date, time and analyst ID of latest file update: 09-Apr-2018 13:30 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

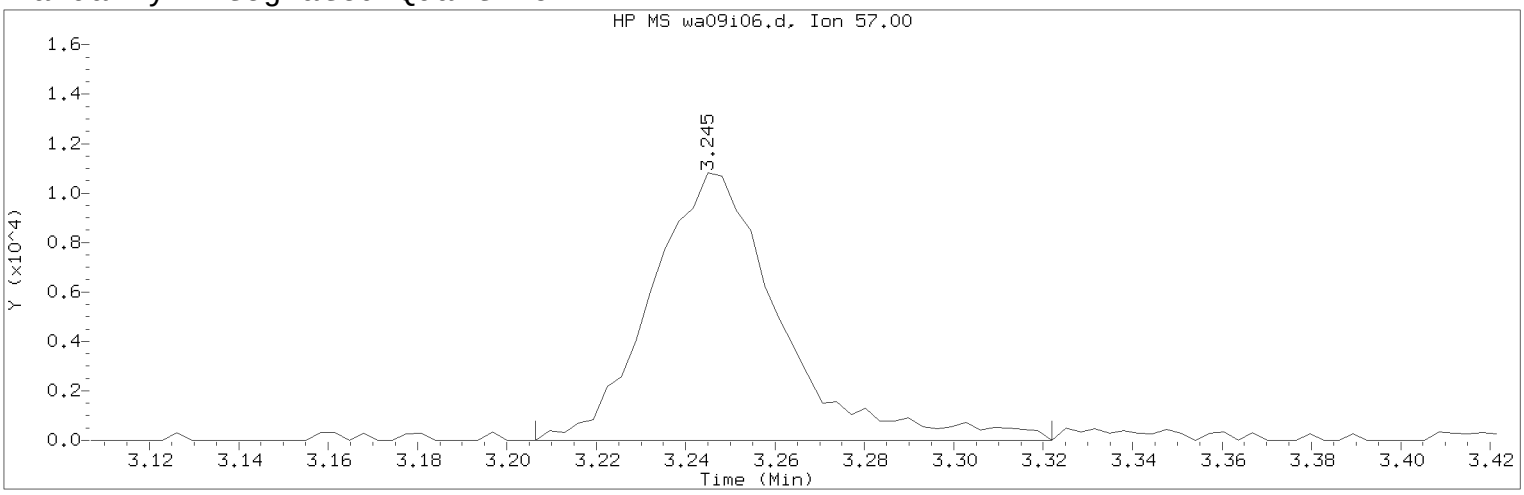
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 207
Retention Time (minutes): 1.496
Quant Ion : 39.00
Area : 22066
On-column Amount (ng) : 4.2749
Integration start scan : 193 Integration stop scan: 216
Y at integration start : 113 Y at integration end: 169

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

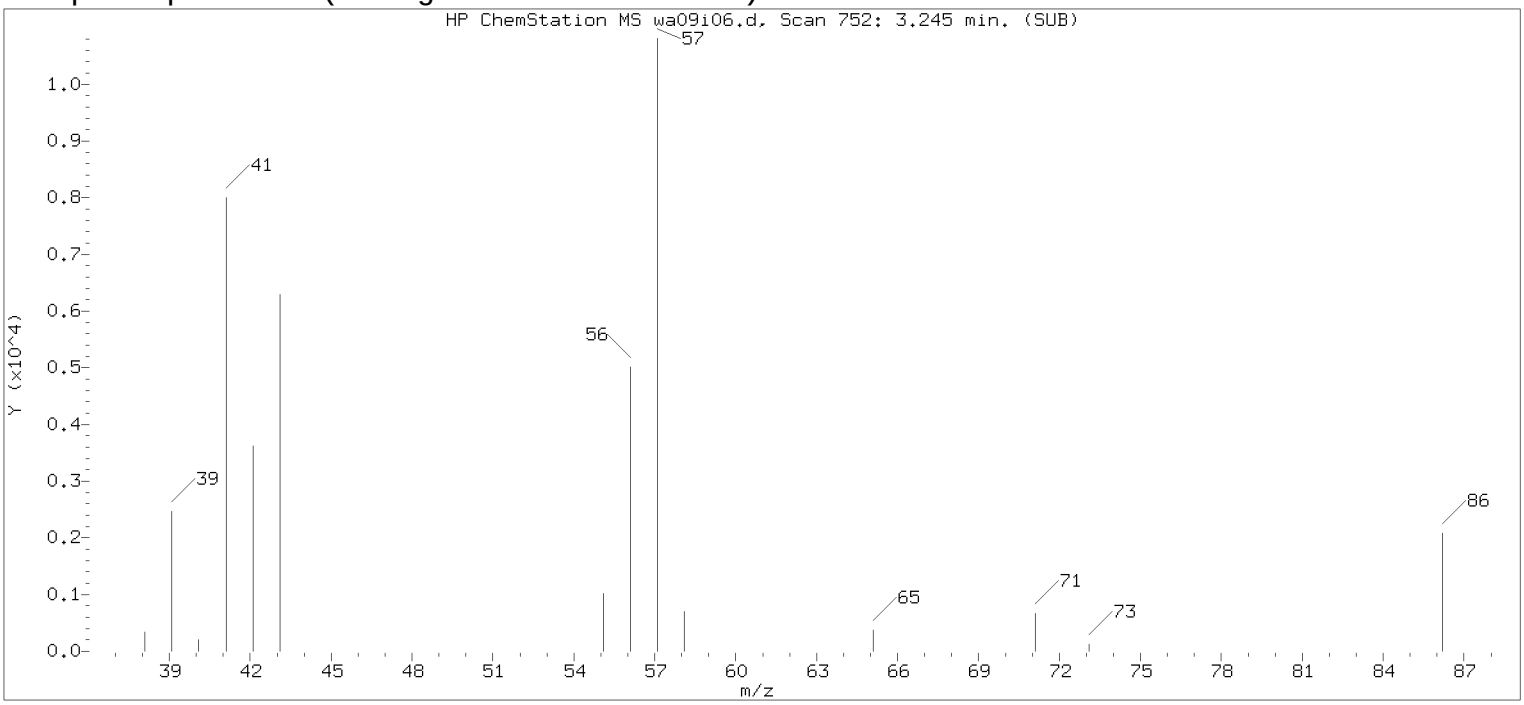
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 752
Retention Time (minutes): 3.245
Quant Ion : 57.00
Area (flag) : 21599M
On-Column Amount (ng) : 3.7543
Integration start scan : 739 Integration stop scan: 775
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

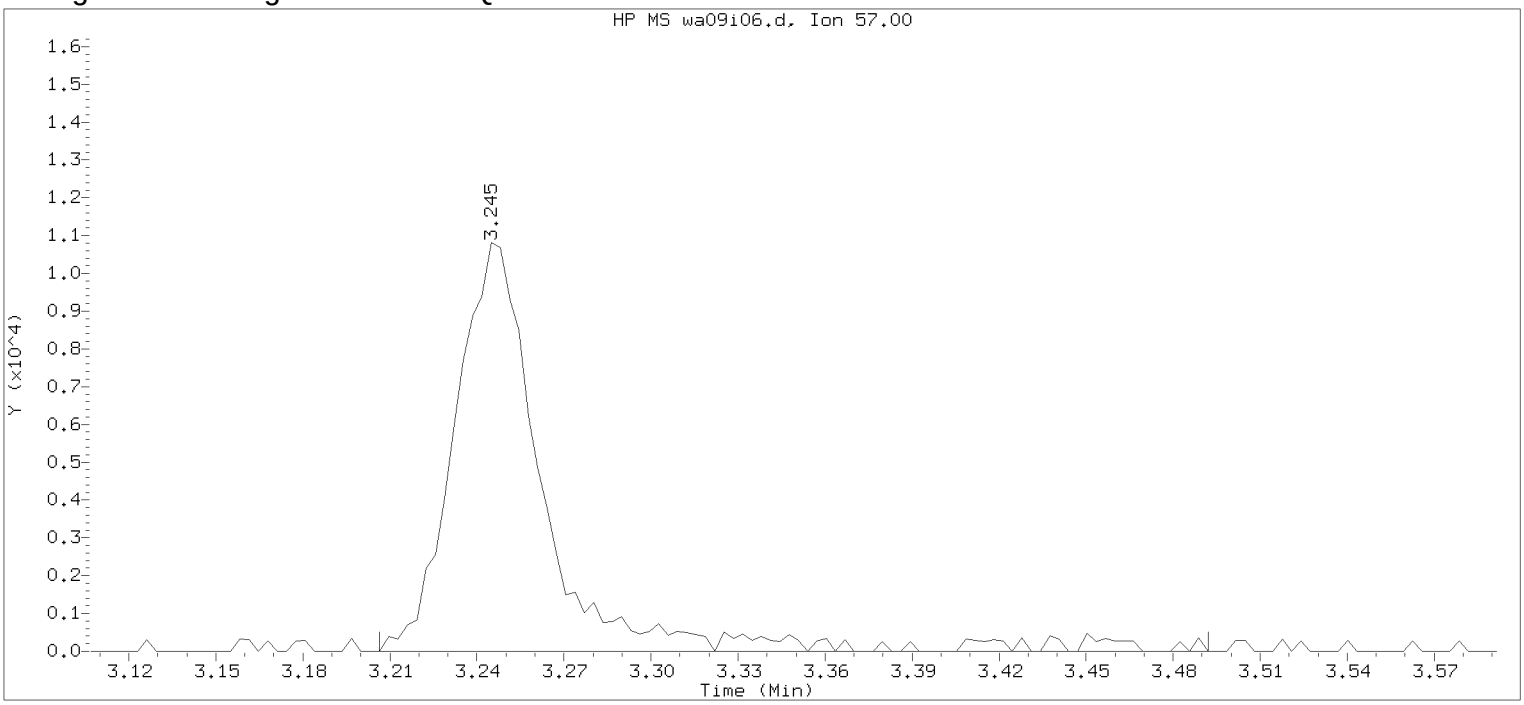
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

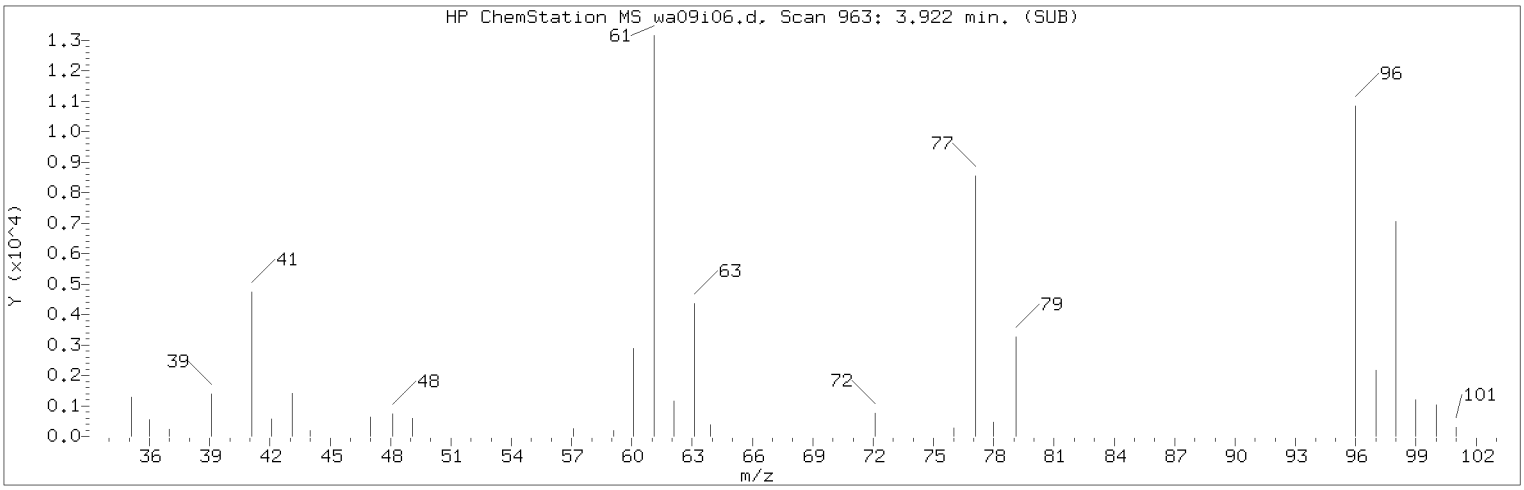
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:30
Date, time and analyst ID of latest file update: 09-Apr-2018 13:30 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

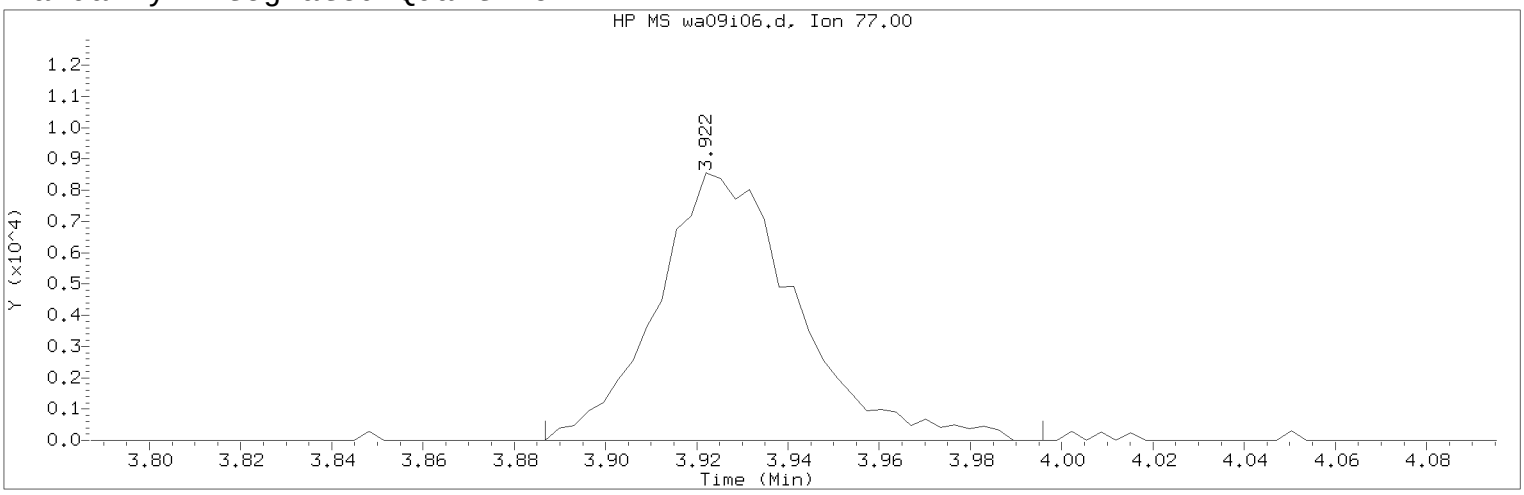
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 752
Retention Time (minutes): 3.245
Quant Ion : 57.00
Area : 23476
On-column Amount (ng) : 4.0115
Integration start scan : 739 Integration stop scan: 828
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

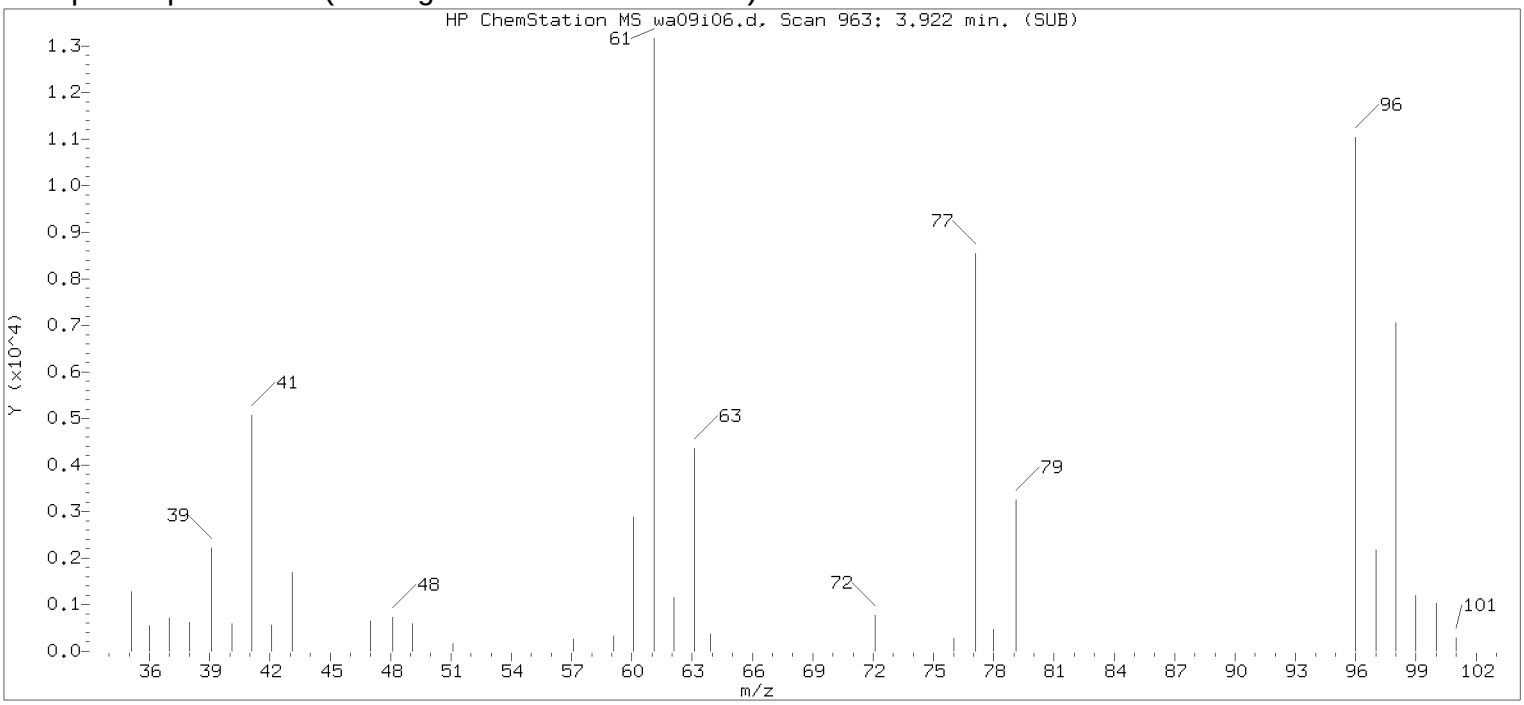
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 963
Retention Time (minutes): 3.922
Quant Ion : 77.00
Area (flag) : 18228M
On-Column Amount (ng) : 4.0200
Integration start scan : 951 Integration stop scan: 985
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

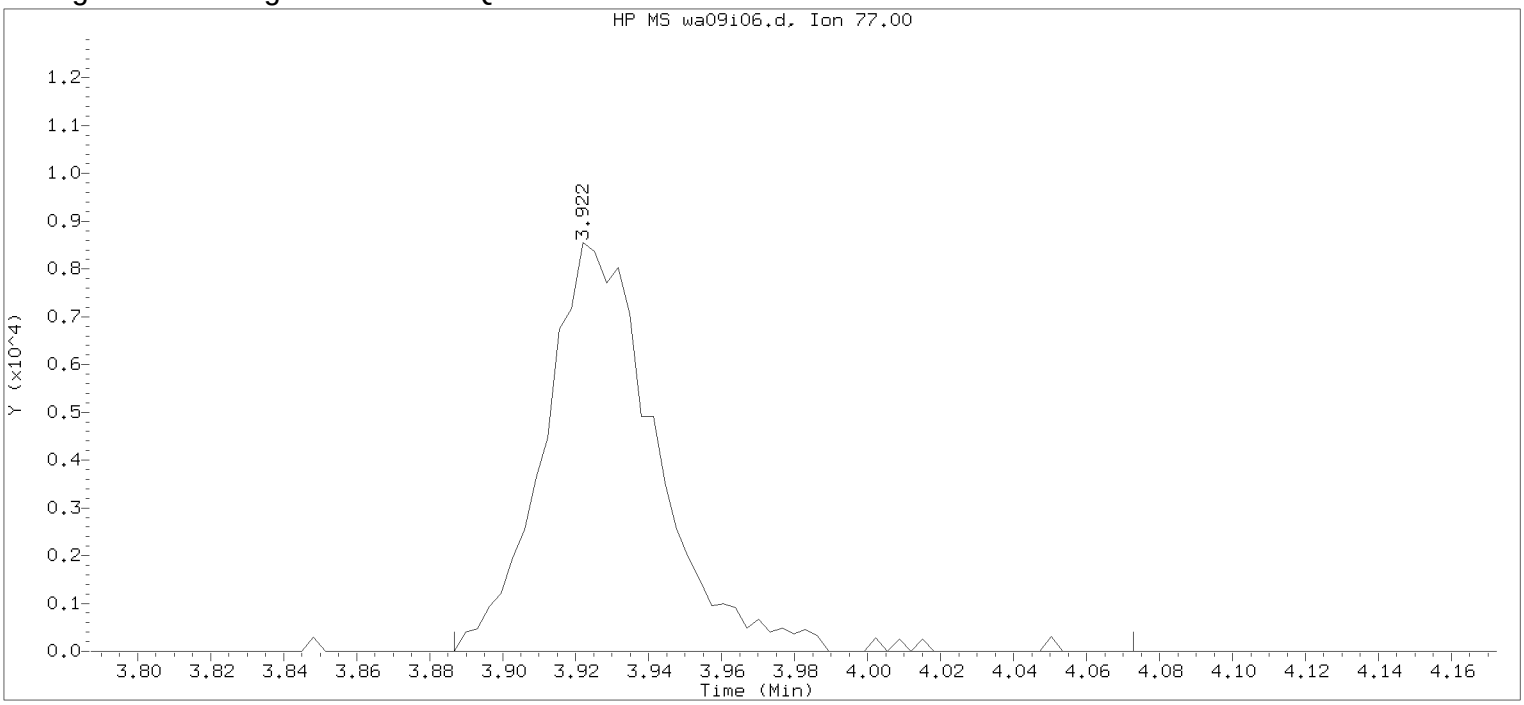
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

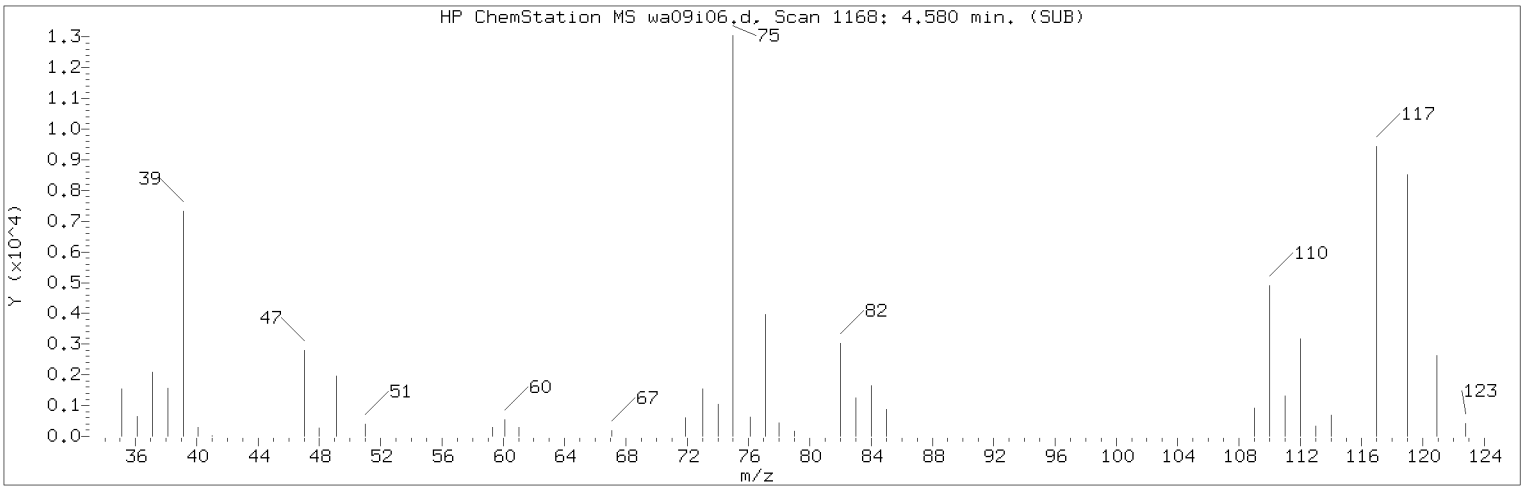
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:30
Date, time and analyst ID of latest file update: 09-Apr-2018 13:30 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

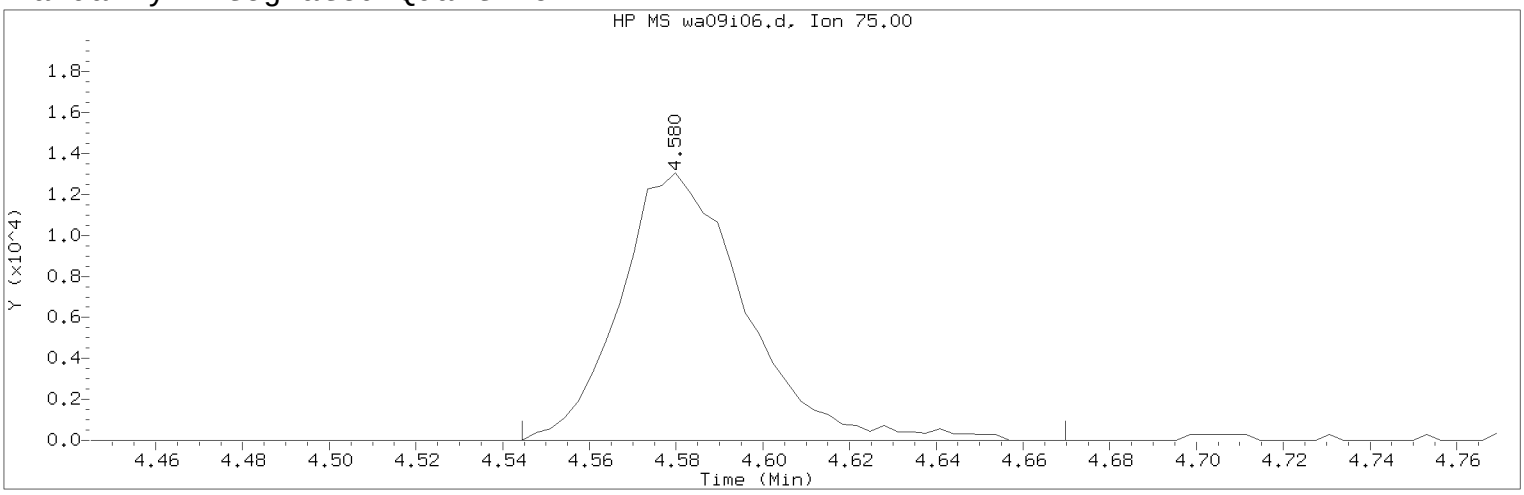
Compound Number : 45
Compound Name : 2,2-Dichloropropane
Scan Number : 963
Retention Time (minutes): 3.922
Quant Ion : 77.00
Area : 18440
On-column Amount (ng) : 4.0073
Integration start scan : 951 Integration stop scan: 1009
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

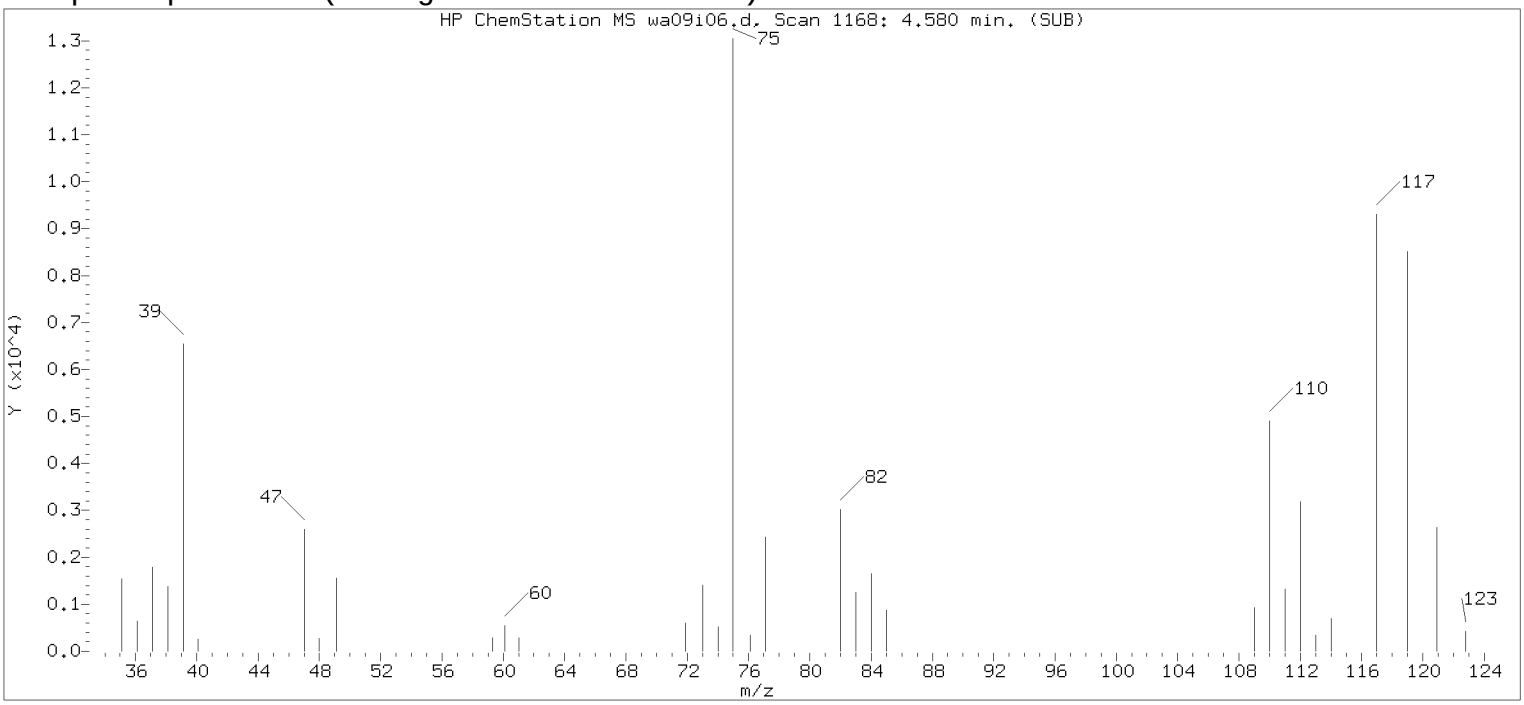
Compound Number : 55
Compound Name : 1,1-Dichloropropene
Scan Number : 1168
Retention Time (minutes): 4.580
Quant Ion : 75.00
Area (flag) : 26243M
On-Column Amount (ng) : 3.8304
Integration start scan : 1156 Integration stop scan: 1195
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

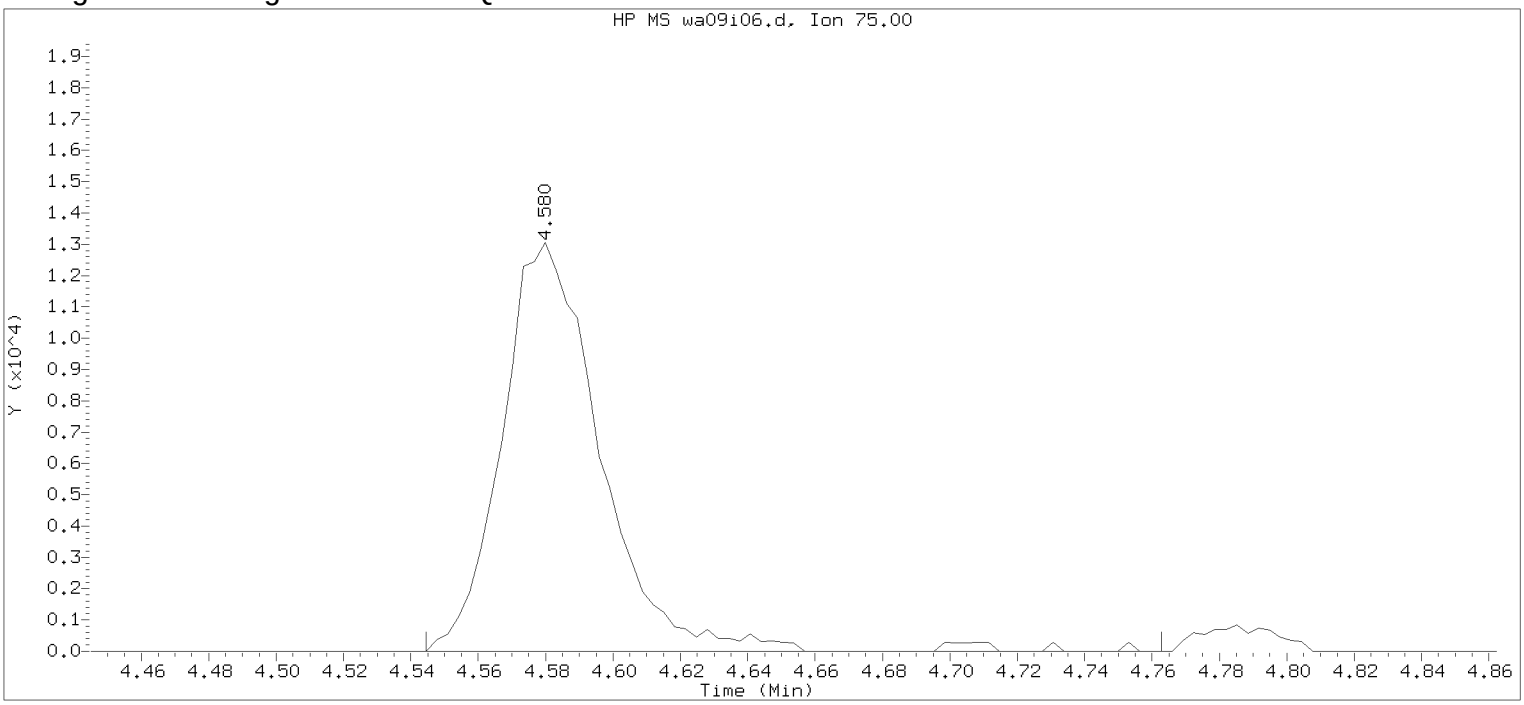
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

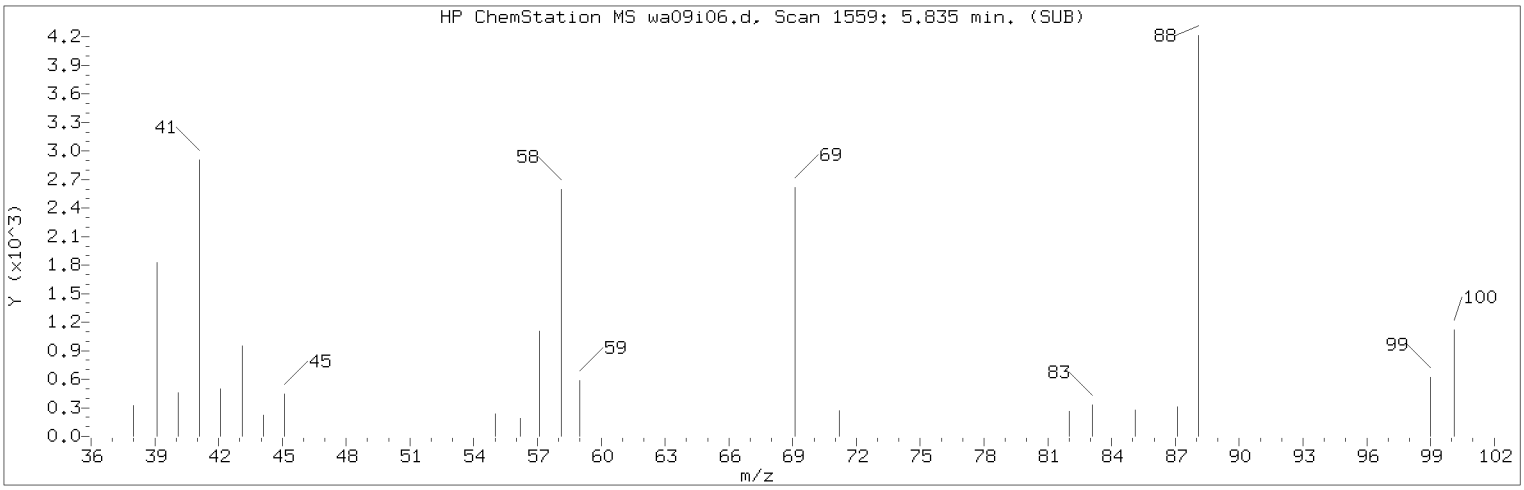
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:30
Date, time and analyst ID of latest file update: 09-Apr-2018 13:30 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

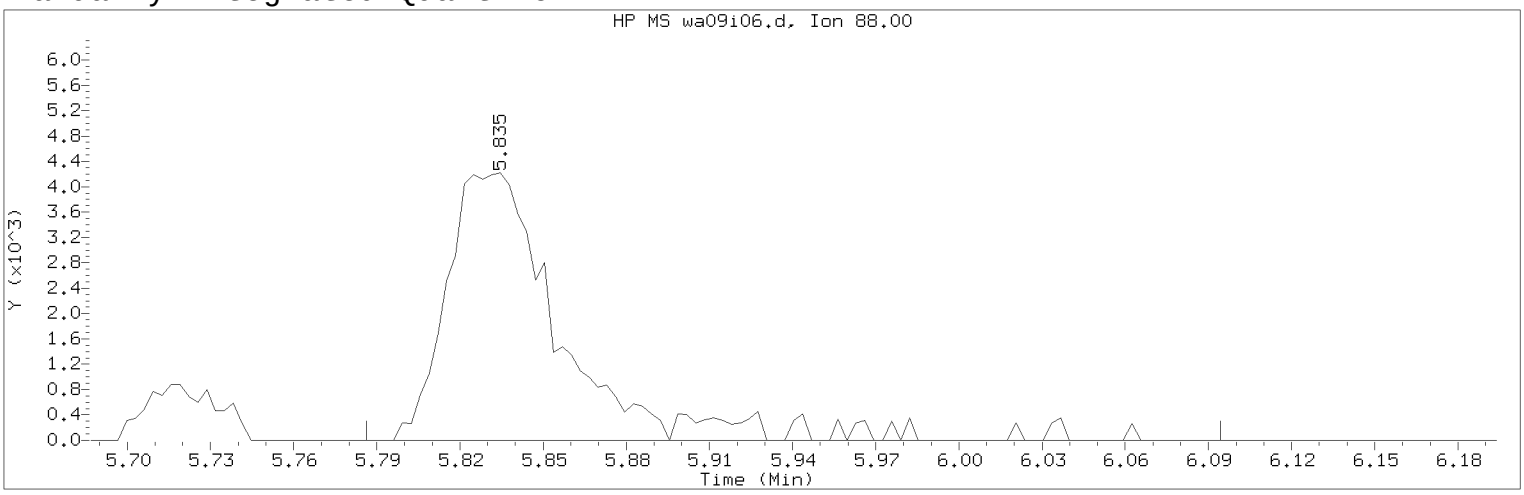
Compound Number : 55
Compound Name : 1,1-Dichloropropene
Scan Number : 1168
Retention Time (minutes): 4.580
Quant Ion : 75.00
Area : 26622
On-column Amount (ng) : 3.8151
Integration start scan : 1156 Integration stop scan: 1224
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD004 Lab Sample ID: VSTD004

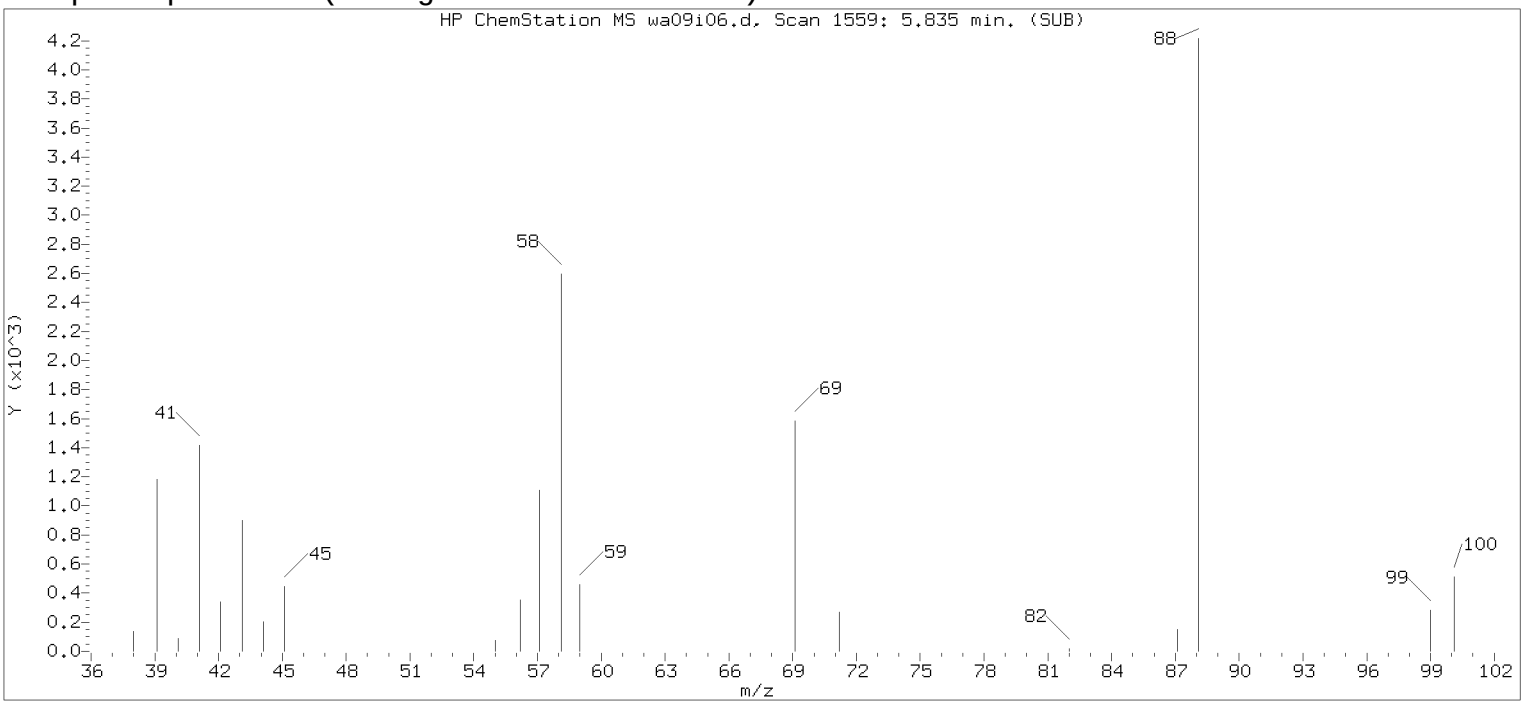
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area (flag) : 12380M
On-Column Amount (ng) : 145.9903
Integration start scan : 1543 Integration stop scan: 1639
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

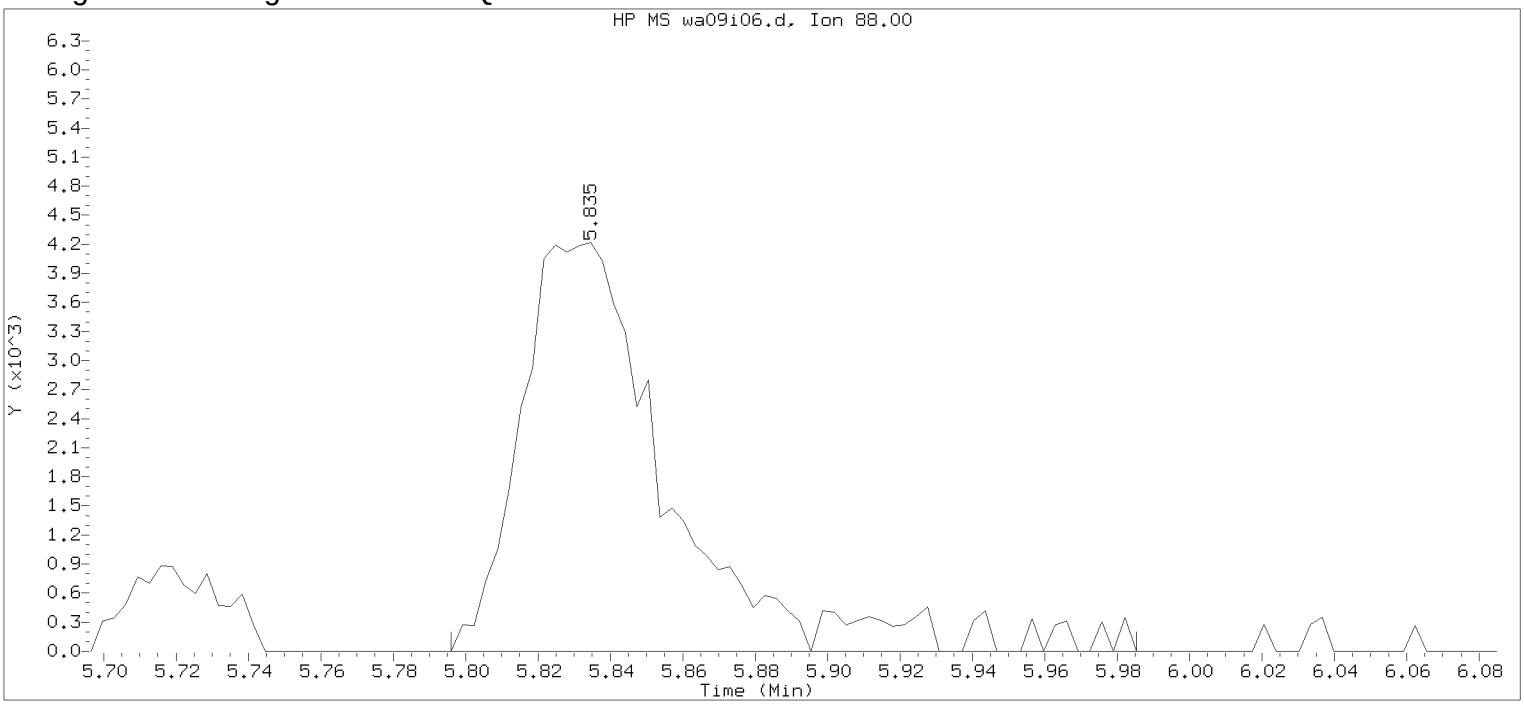
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



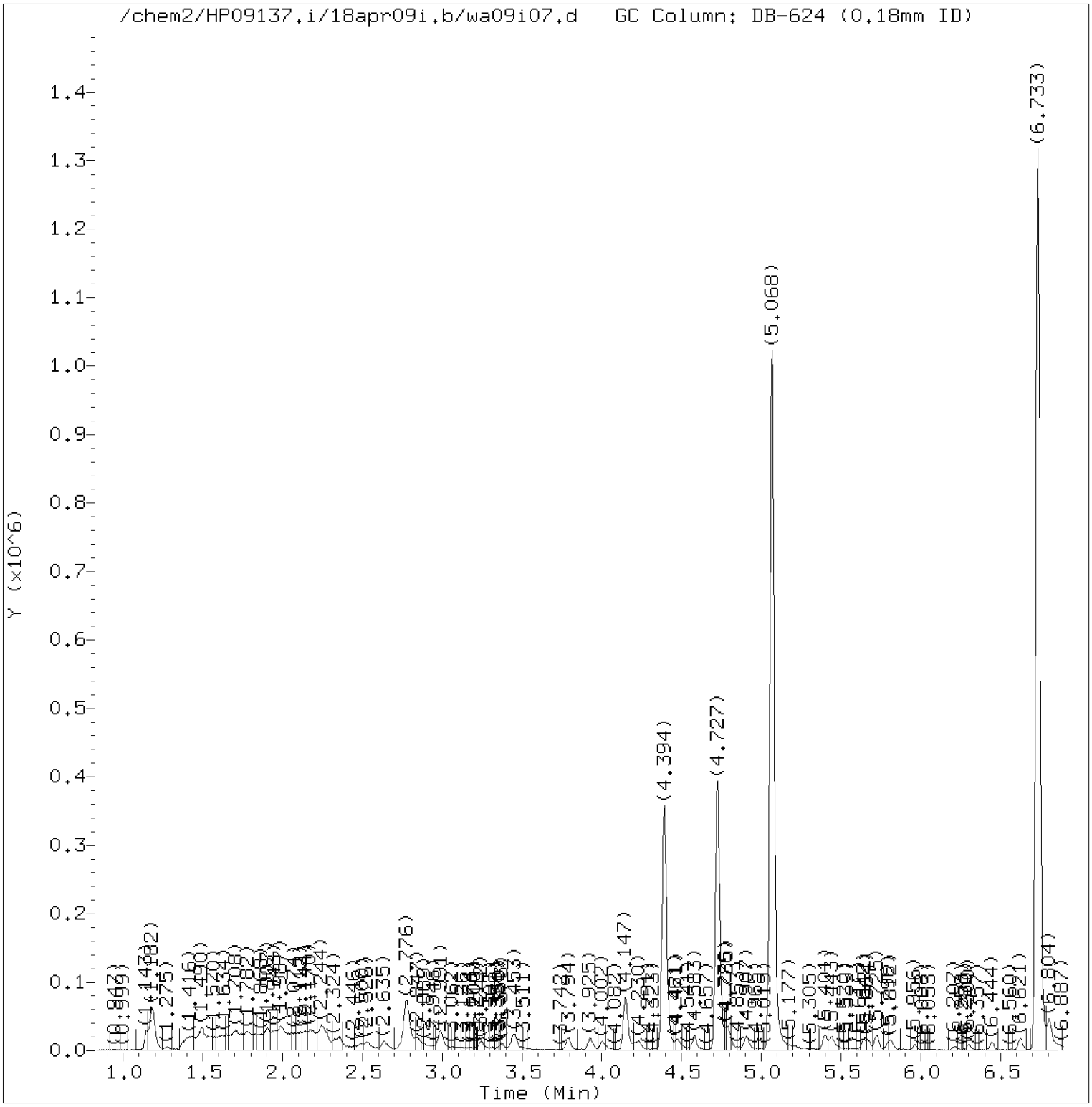
Data File: /chem2/HP09137.i/18apr09i.b/wa09i06.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:30
Date, time and analyst ID of latest file update: 09-Apr-2018 13:30 Automation

Sample Name: VSTD004 Lab Sample ID: VSTD004

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1559
Retention Time (minutes): 5.835
Quant Ion : 88.00
Area : 12155
On-column Amount (ng) : 145.4742
Integration start scan : 1546 Integration stop scan: 1605
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: 17 Page 262 of 432



Total Ion Chromatogram (TIC)

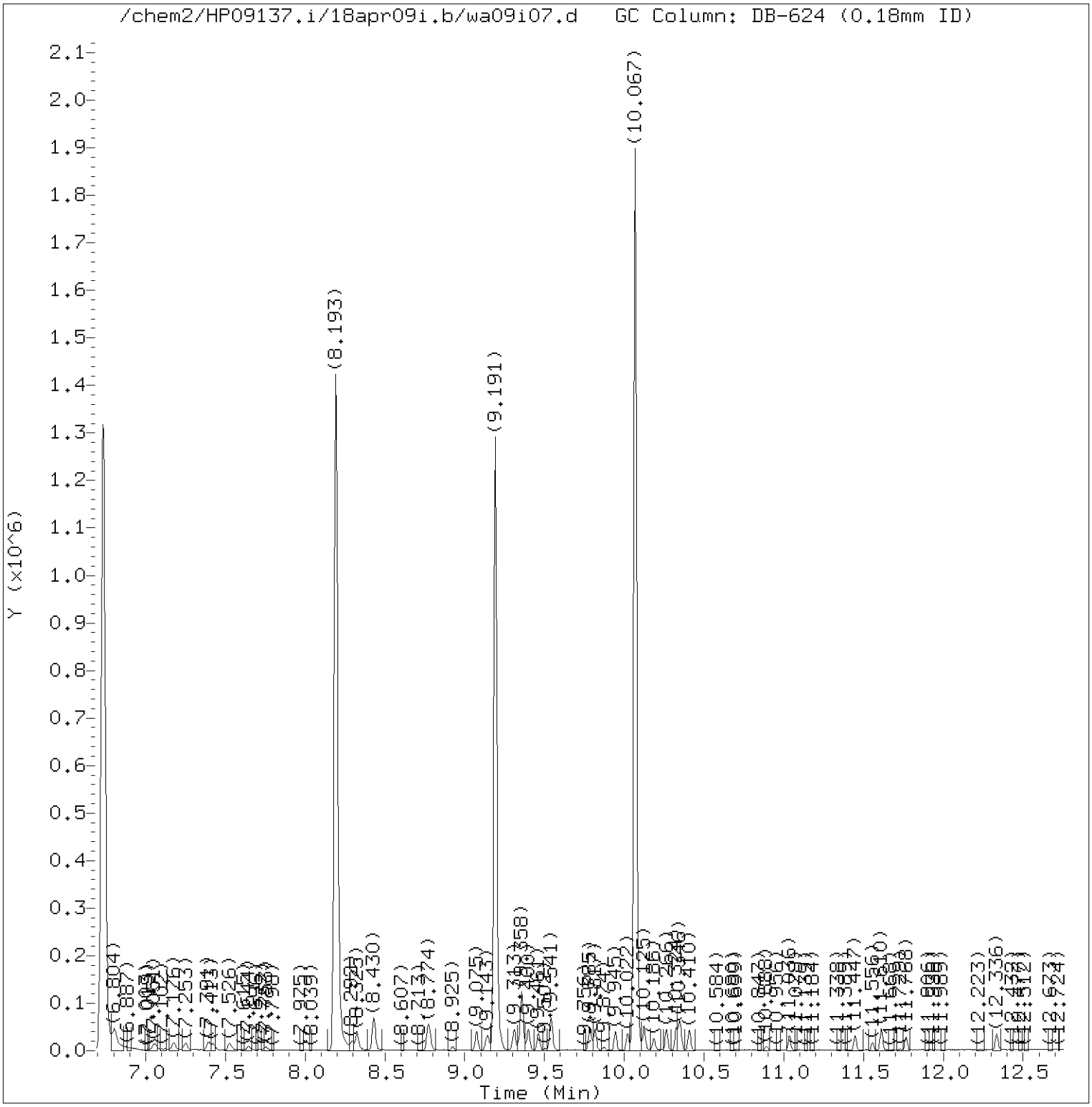
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.271	85	5588	0.835
4) Chloromethane	(2)	1.406	50	7141	0.996
6) Vinyl Chloride	(2)	1.490	62	6049	0.835
5) 1,3-Butadiene	(2)	1.496	39	6188M	1.165
8) Bromomethane	(2)	1.708	94	5073	0.964
9) Chloroethane	(2)	1.778	64	4030	0.932
10) Dichlorofluoromethane	(2)	1.904	67	11032	1.210
12) Trichlorofluoromethane	(2)	1.952	101	6324	0.785
11) n-Pentane	(2)	1.993	43	12517	1.463
13) Ethanol	(1)	2.086	45	6984M	54.207
15) Freon 123a	(2)	2.180	67	6042M	1.015
16) Acrolein	(1)	2.244	56	18742	13.790
17) 1,1-Dichloroethene	(2)	2.337	96	4097	0.913
17) 1,1-Dichloroethene	(2)	2.334	63	1888	0.905
19) Freon 113	(2)	2.362	101	3696	0.813
18) Acetone	(1)	2.372	58	1212M	2.123
22) Methyl Iodide	(2)	2.491	142	7729	0.887
21) 2-Propanol	(1)	2.500	45	8152	20.648
23) Carbon Disulfide	(2)	2.532	76	12612M	0.852
25) Allyl Chloride	(2)	2.635	41	7034	0.982
27) Methyl Acetate	(2)	2.651	43	5347	1.020
28) Methylene Chloride	(2)	2.744	84	5154M	0.988
29)*t-Butyl alcohol-d10	(1)	2.776	65	167487M	250.000
30) t-Butyl alcohol	(1)	2.847	59	12755M	17.719
31) Acrylonitrile	(2)	2.966	53	1954M	0.731
32) trans-1,2-Dichloroethene	(2)	2.991	96	4170	0.844
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	15568M	0.930
34) n-Hexane	(2)	3.248	57	5618M	0.978
36) 1,1-Dichloroethane	(2)	3.376	63	7380	0.881
38) di-Isopropyl ether	(2)	3.447	45	15501M	0.988
39) 2-Chloro-1,3-butadiene	(2)	3.460	53	6417M	0.867
40) Ethyl t-butyl ether	(2)	3.794	59	14317	0.917
42) cis-1,2-Dichloroethene	(2)	3.925	96	4779	0.858
45) 2,2-Dichloropropane	(2)	3.932	77	4176	0.922
44) 2-Butanone	(2)	3.951	43	7624	2.048
47) Propionitrile	(1)	4.009	54	17758	19.733
43) 1,2-Dichloroethene (Total)	(2)		96	8949	1.702
48) Methacrylonitrile	(2)	4.147	67	29002	9.199

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
49) Bromochloromethane	(2)	4.153	128	2539	0.895
50) Tetrahydrofuran	(1)	4.211	71	1816	1.887
51) Chloroform	(2)	4.236	83	7682	0.894
52)$Dibromofluoromethane	(2)	4.394	113	230546	49.254
52)$Dibromofluoromethane	(2)	4.394	111	235584	49.143
53) 1,1,1-Trichloroethane	(2)	4.419	97	6418M	0.840
54) Cyclohexane	(2)	4.474	56	6768M	0.870
54) Cyclohexane	(2)	4.474	84	5803	0.810
54) Cyclohexane	(2)	4.487	69	2348	0.928
55) 1,1-Dichloropropene	(2)	4.583	75	6175M	0.903
56) Carbon Tetrachloride	(2)	4.583	117	4804M	0.830
58) Isobutyl Alcohol	(1)	4.715	41	13166	55.759
57)$1,2-Dichloroethane-d4	(2)	4.727	102	61629	50.144
57)$1,2-Dichloroethane-d4	(2)	4.724	65	276412	50.045
57)$1,2-Dichloroethane-d4	(2)	4.731	104	39359	49.441
60) Benzene	(2)	4.785	78	18586M	0.904
61) 1,2-Dichloroethane	(2)	4.801	62	7363	1.027
61) 1,2-Dichloroethane	(2)	4.801	98	682	0.965
65) t-Amyl methyl ether	(2)	4.907	73	15044	0.923
66)*Fluorobenzene	(2)	5.068	96	1026790	50.000
67) n-Heptane	(2)	5.071	43	8505	1.651
69) n-Butanol	(1)	5.401	56	20717	93.244
71) Trichloroethene	(2)	5.446	95	4813	0.882
72) Methylcyclohexane	(2)	5.642	83	6605	0.900
72) Methylcyclohexane	(2)	5.642	98	2712	0.786
73) 1,2-Dichloropropane	(2)	5.677	63	4640	0.891
74) Dibromomethane	(2)	5.786	93	3057	0.866
76) Methyl Methacrylate	(2)	5.815	69	5477	0.984
75) 1,4-Dioxane	(1)	5.847	88	1803	29.709
78) Bromodichloromethane	(2)	5.960	83	5737	0.859
79) 2-Nitropropane	(2)	6.210	41	3489M	1.887
80) 2-Chloroethyl Vinyl Ether	(2)	6.297	63	3707	0.874
81) cis-1,3-Dichloropropene	(2)	6.444	75	7596	0.863
82) 4-Methyl-2-pentanone	(2)	6.621	43	14402	1.876
83)$Toluene-d8	(3)	6.733	98	1019127	49.624
83)$Toluene-d8	(3)	6.733	100	672370	48.578
88) Toluene	(3)	6.804	92	12696	0.903
89) trans-1,3-Dichloropropene	(3)	7.057	75	7469	0.891

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Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
91) Ethyl Methacrylate	(3)	7.179	69	8915	0.919
92) 1,1,2-Trichloroethane	(3)	7.246	97	4877	0.882
90) 1,3-Dichloropropene (total)	(3)		100	15065	1.754
93) Tetrachloroethene	(3)	7.397	166	5237	0.915
94) 1,3-Dichloropropane	(3)	7.423	76	8222	0.900
96) 2-Hexanone	(3)	7.526	43	11076	1.794
97) Dibromochloromethane	(3)	7.644	129	4539	0.807
99) 1,2-Dibromoethane	(3)	7.757	107	5258	0.873
100)*Chlorobenzene-d5	(3)	8.193	117	800980	50.000
102) Chlorobenzene	(3)	8.219	112	14709	0.918
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	4043	0.785
104) Ethylbenzene	(3)	8.328	91	23797	0.914
106) m+p-Xylene	(3)	8.430	106	18940	1.781
107) o-Xylene	(3)	8.771	106	9548	0.899
109) Styrene	(3)	8.783	104	15796	0.870
108) Xylene (Total)	(3)		106	28488	2.679
110) Bromoform	(3)	8.928	173	2965	0.735
111) Isopropylbenzene	(3)	9.075	105	22153	0.877
112) Cyclohexanone	(1)	9.143	55	14524M	51.939
114)$4-Bromofluorobenzene	(3)	9.191	95	380486	49.051
114)$4-Bromofluorobenzene	(3)	9.194	174	310716	49.093
115) Bromobenzene	(4)	9.310	156	6218	0.916
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	8337	0.954
117) 1,2,3-Trichloropropane	(4)	9.342	110	2782	1.014
118) trans-1,4-Dichloro-2-butene	(4)	9.361	53	20595	8.576
119) n-Propylbenzene	(4)	9.400	91	27043	0.954
120) 2-Chlorotoluene	(4)	9.461	126	5872	0.941
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	19043	0.904
121) 4-Chlorotoluene	(4)	9.547	126	6228	0.933
124) tert-Butylbenzene	(4)	9.785	134	4410	0.944
125) Pentachloroethane	(4)	9.794	167	2912	0.808
126) 1,2,4-Trimethylbenzene	(4)	9.820	105	20045	0.910
127) sec-Butylbenzene	(4)	9.945	105	21835	0.915
129) 1,3-Dichlorobenzene	(4)	10.022	146	12655	0.986
130) p-Isopropyltoluene	(4)	10.051	119	19801	0.923
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	415394	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	13068	0.979
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	21509	0.948

M = Compound was manually integrated.
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on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

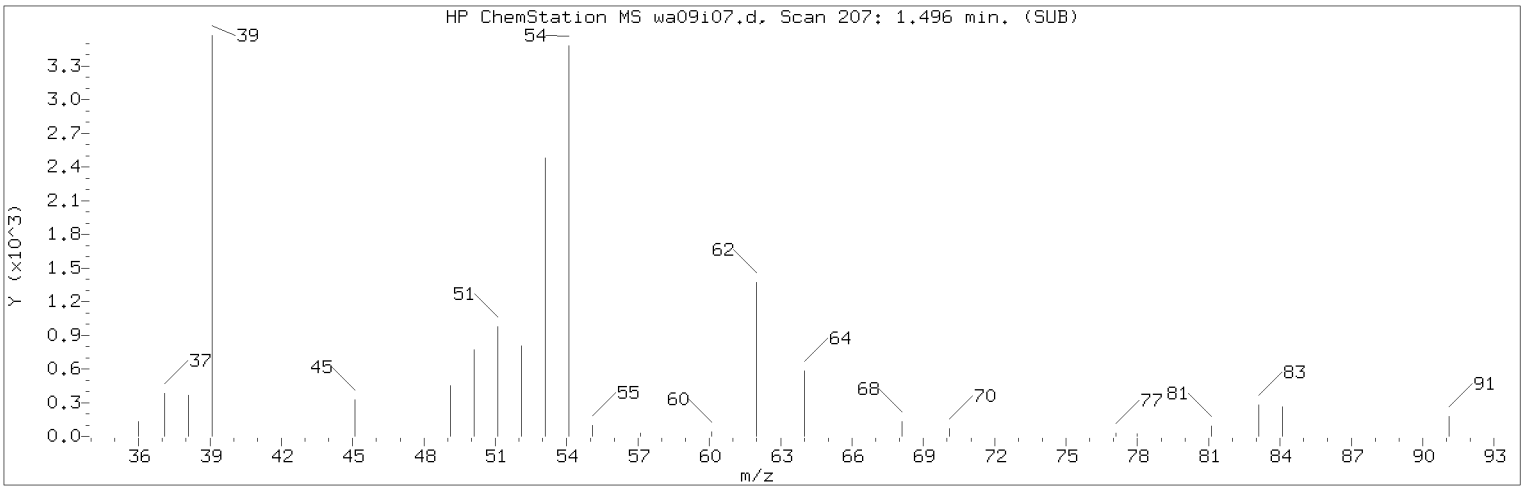
Sample Name: VSTD001 Lab Sample ID: VSTD001

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
135) Benzyl Chloride	(4)	10.186	91	14968	0.847
136) 1,3-Diethylbenzene	(4)	10.266	119	11530	0.901
137) 1,4-Diethylbenzene	(4)	10.324	119	12365	0.933
139) n-Butylbenzene	(4)	10.343	92	9592M	0.940
138) 1,2-Dichlorobenzene	(4)	10.353	146	12286	0.961
140) 1,2-Diethylbenzene	(4)	10.407	119	10319	0.940
141) Diethylbenzene (total)	(4)		100	34214	2.774
142) 1,2-Dibromo-3-chloropropane	(4)	10.888	75	1456	0.783
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	8019	0.986
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	7654	0.950
147) Hexachlorobutadiene	(4)	11.556	225	2478	1.038
148) Naphthalene	(4)	11.610	128	28920	0.989
149) 1,2,3-Trichlorobenzene	(4)	11.765	180	7563	0.989
150) 2-Methylnaphthalene	(4)	12.336	142	14691	0.955

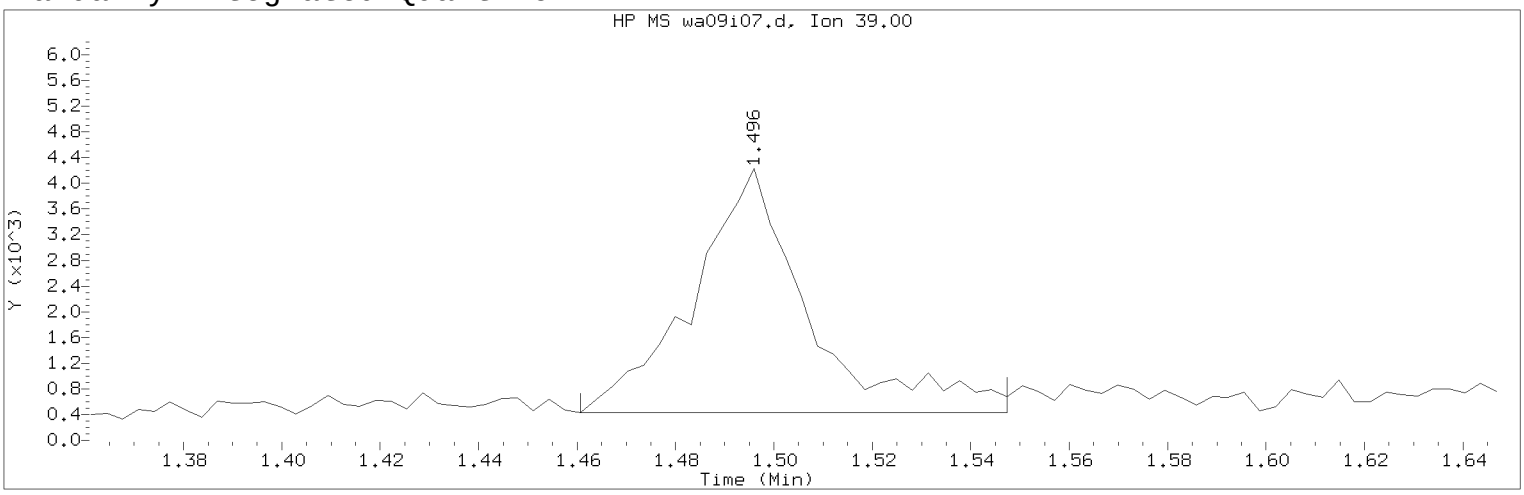
M = Compound was manually integrated.

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

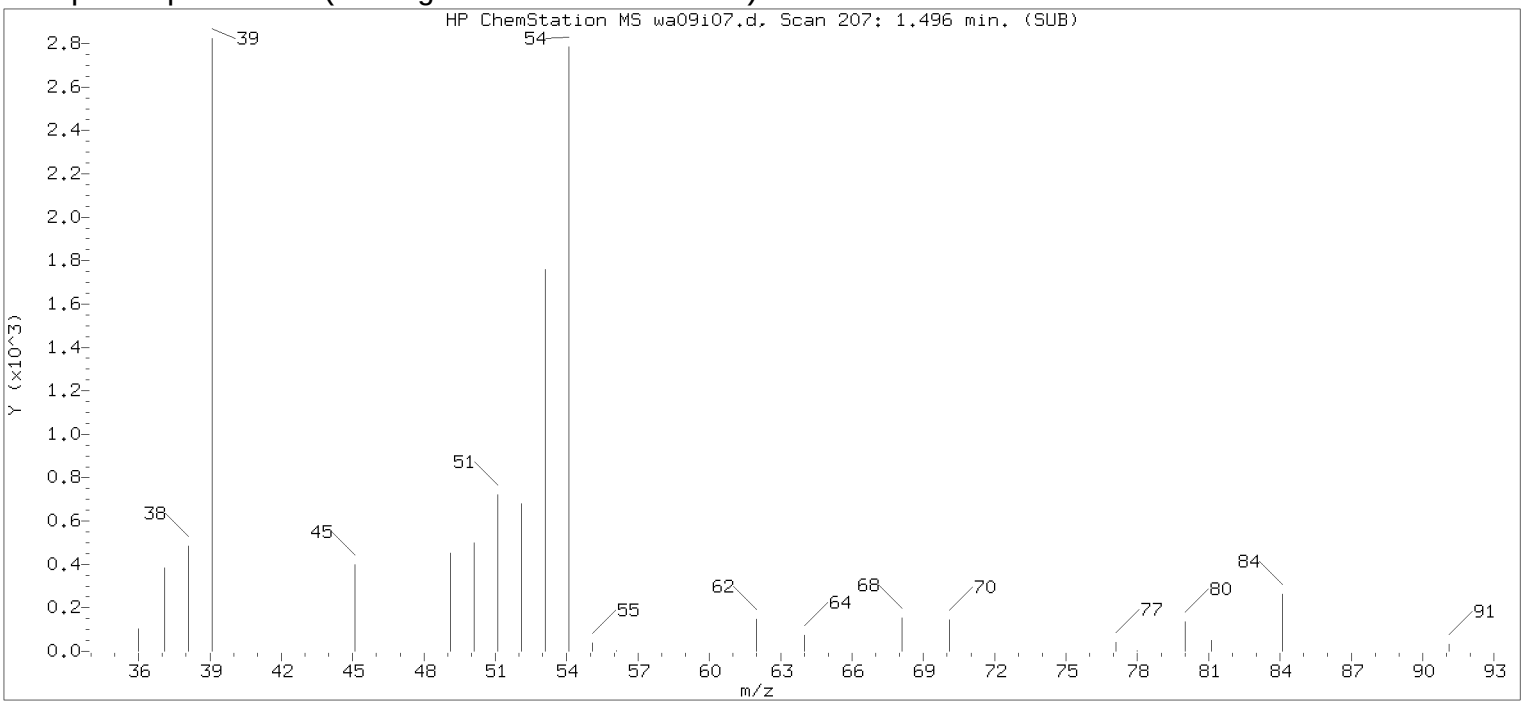
Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 207
Retention Time (minutes): 1.496
Quant Ion : 39.00
Area (flag) : 6188M
On-Column Amount (ng) : 1.1653
Integration start scan : 195 Integration stop scan: 222
Y at integration start : 434 Y at integration end: 434

Reason for manual integration: improper integration

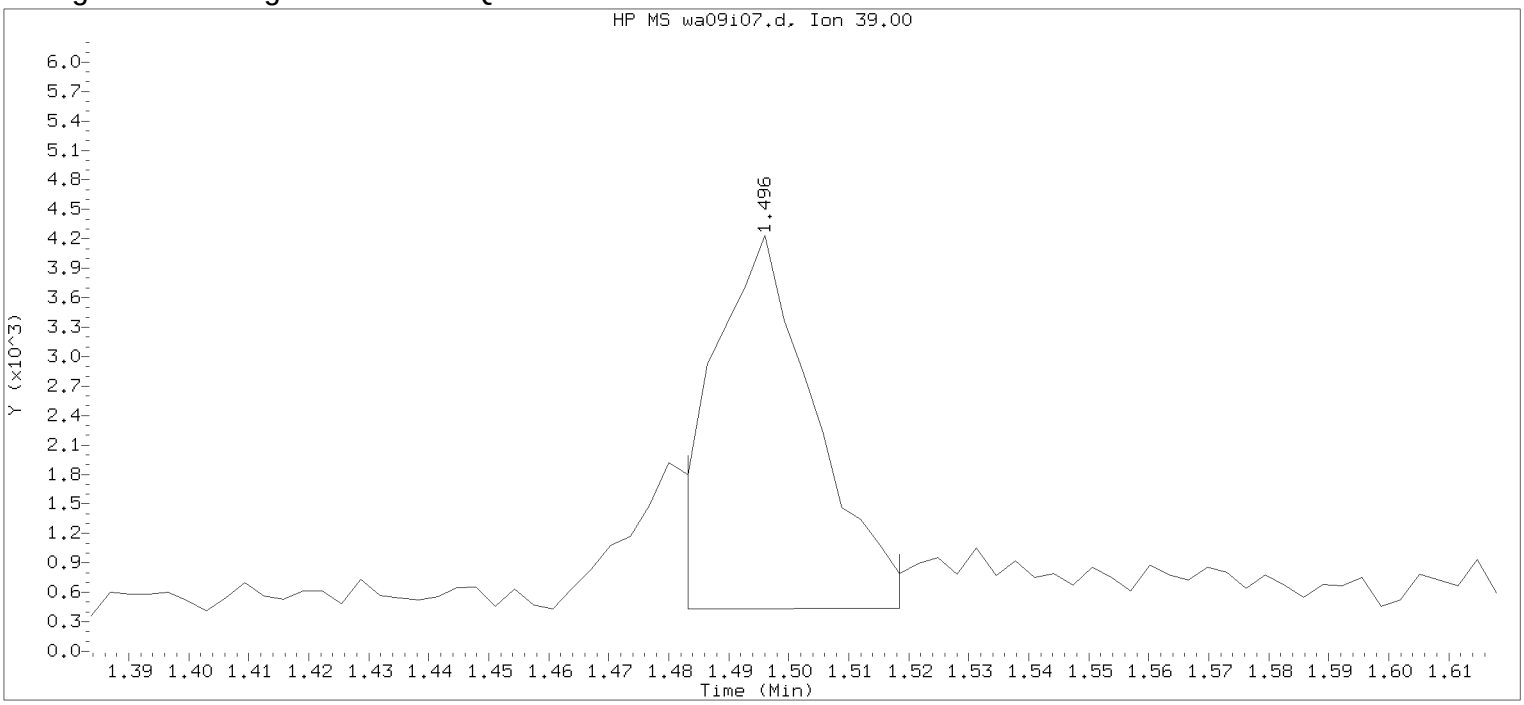
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 5
Compound Name : 1,3-Butadiene
Scan Number : 207
Retention Time (minutes): 1.496
Quant Ion : 39.00
Area : 4437
On-column Amount (ng) : 0.8785
Integration start scan : 202 Integration stop scan: 213
Y at integration start : 430 Y at integration end: 441

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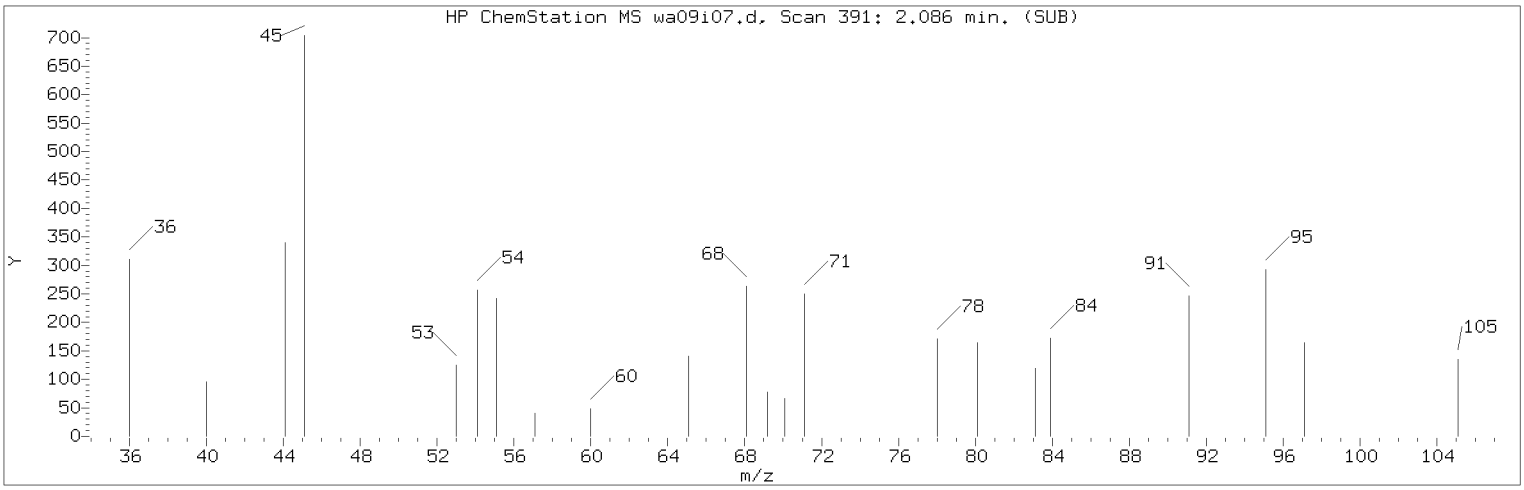
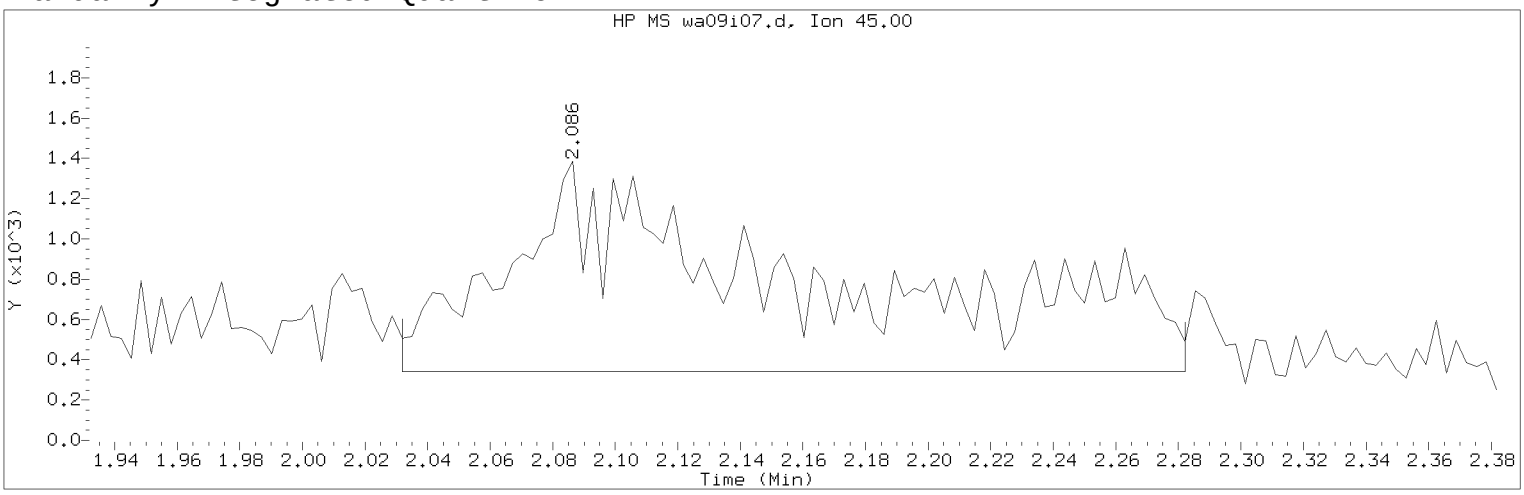
Target 3.5 esignature user id: 17 Page 270 of 432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

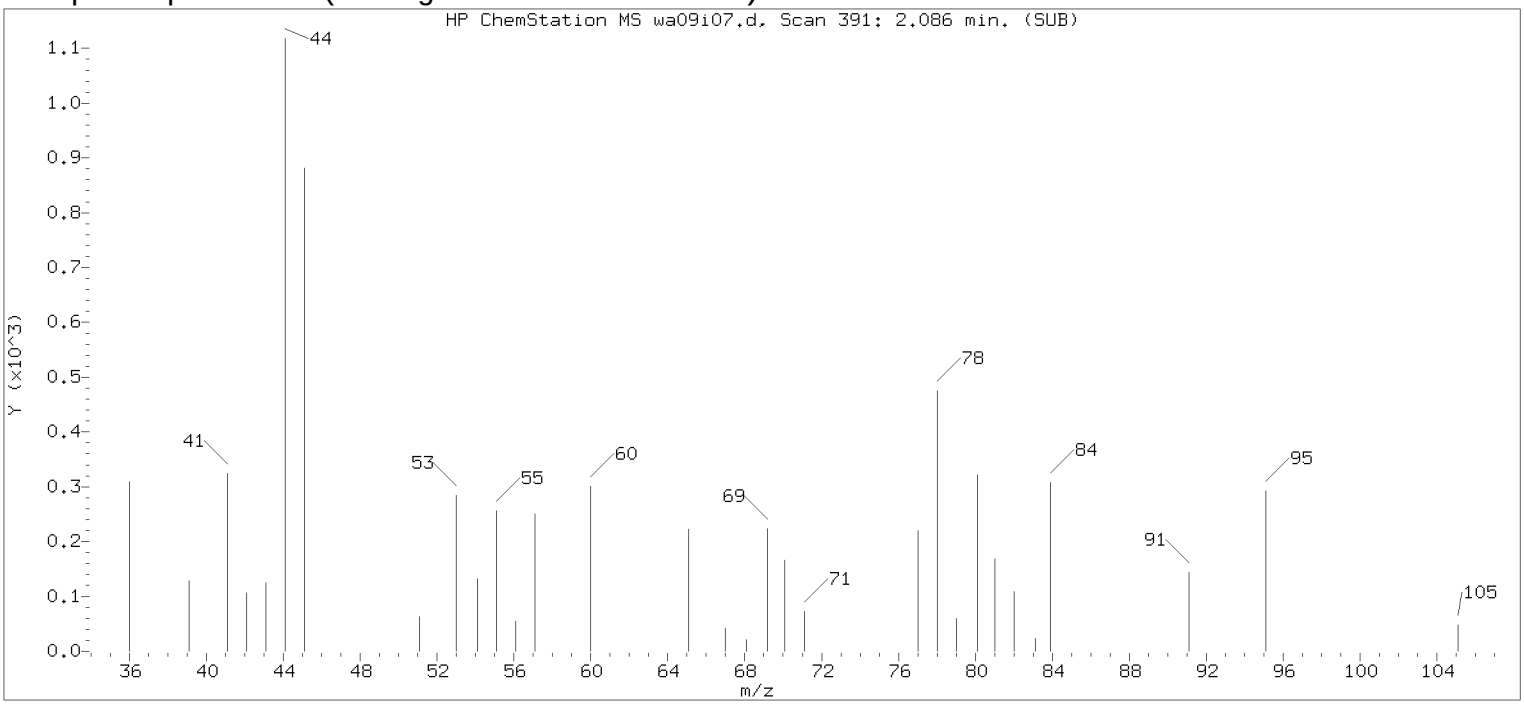
Compound Number : 13
Compound Name : Ethanol
Scan Number : 391
Retention Time (minutes): 2.086
Quant Ion : 45.00
Area (flag) : 6984M
On-Column Amount (ng) : 54.2074
Integration start scan : 373 Integration stop scan: 451
Y at integration start : 342 Y at integration end: 342

Reason for manual integration: improper integration

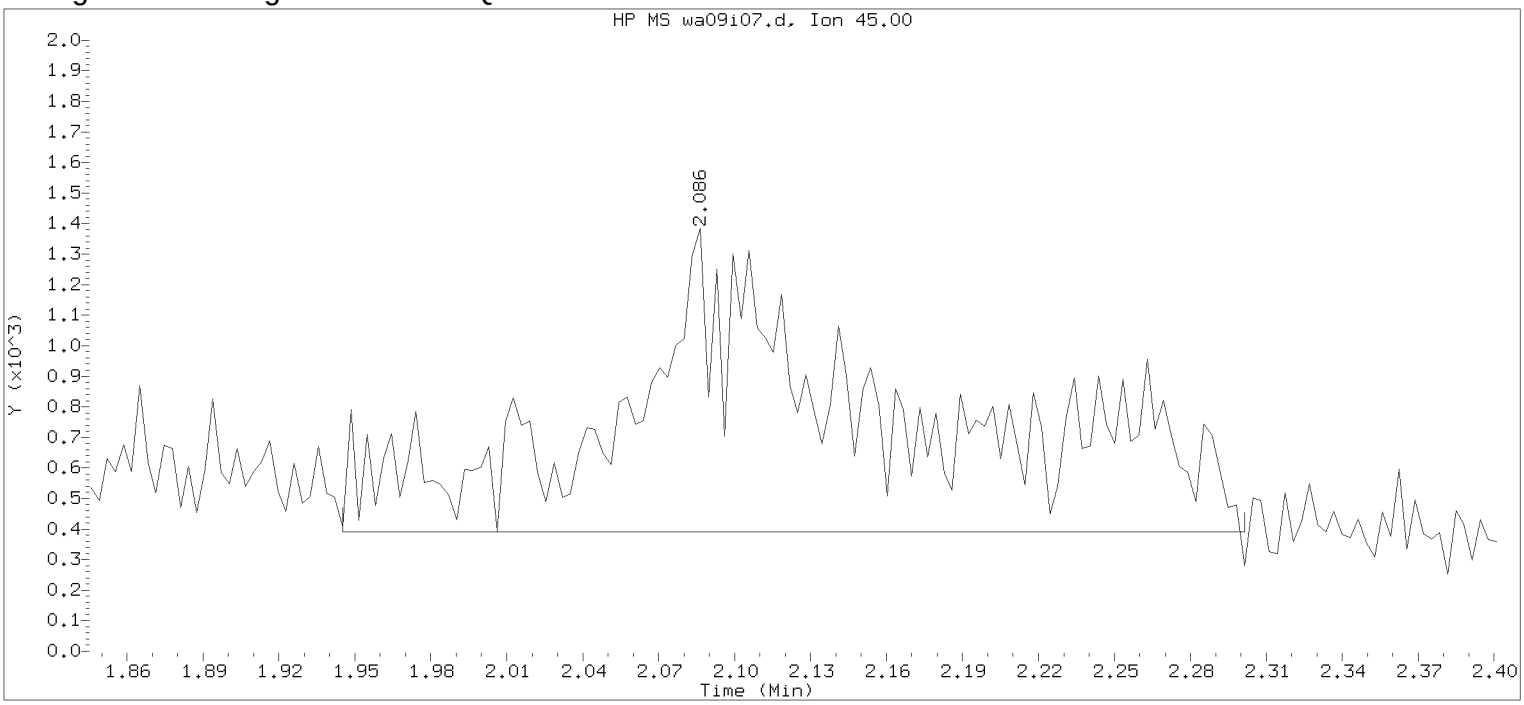
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 13
Compound Name : Ethanol
Scan Number : 391
Retention Time (minutes): 2.086
Quant Ion : 45.00
Area : 7551
On-column Amount (ng) : 158.7035
Integration start scan : 346 Integration stop scan: 457
Y at integration start : 390 Y at integration end: 390

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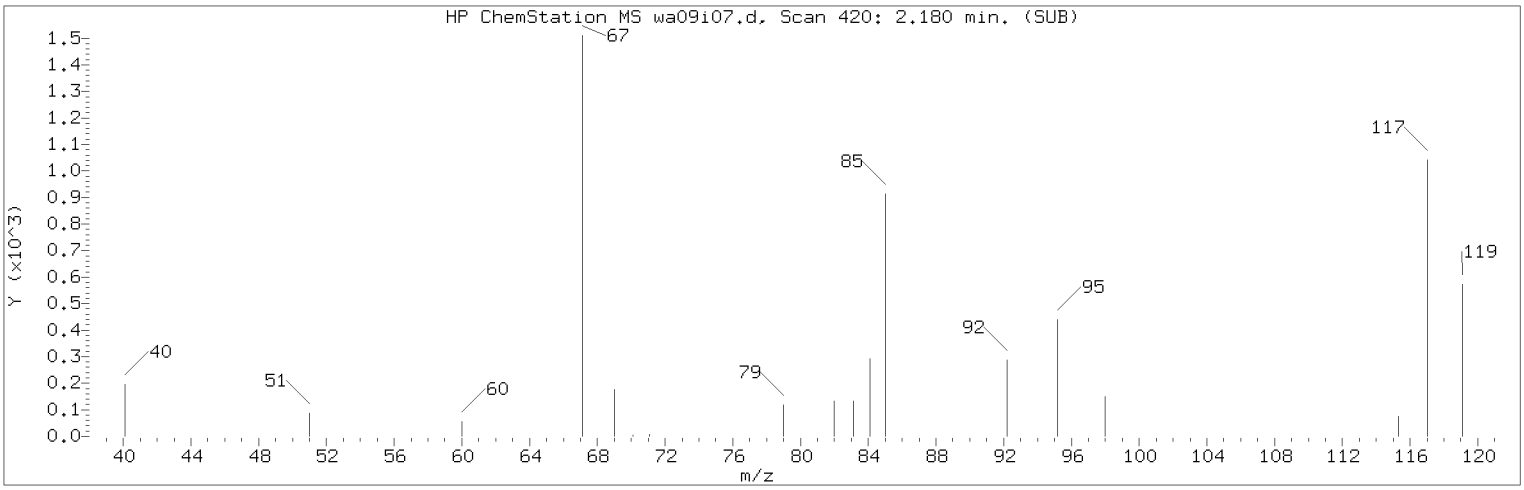
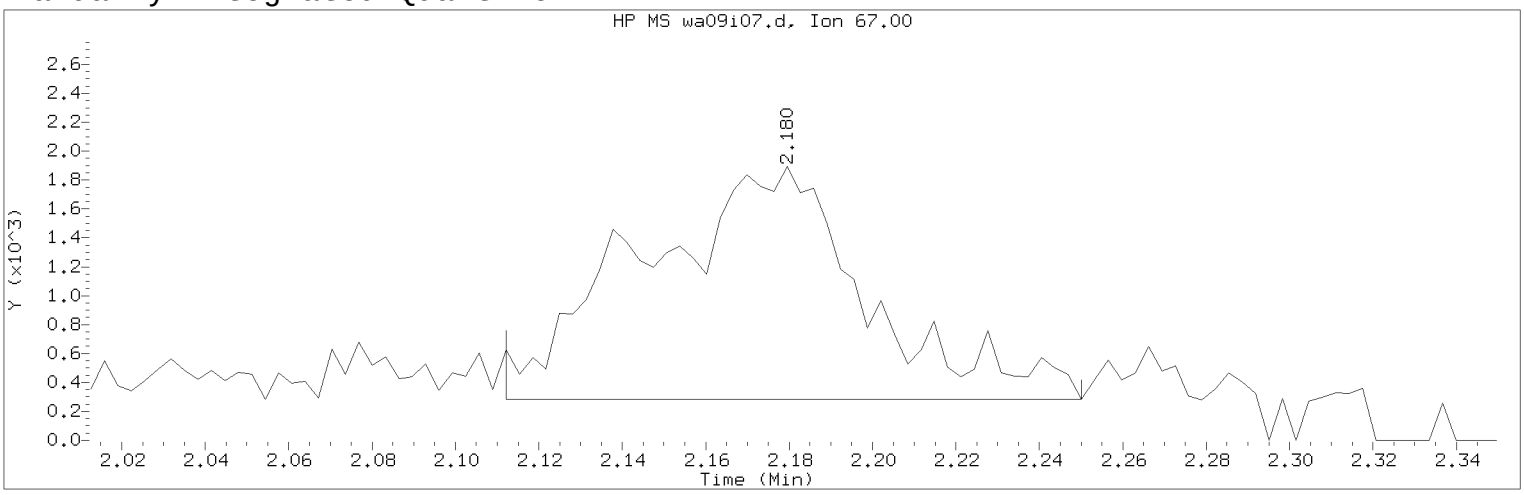
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

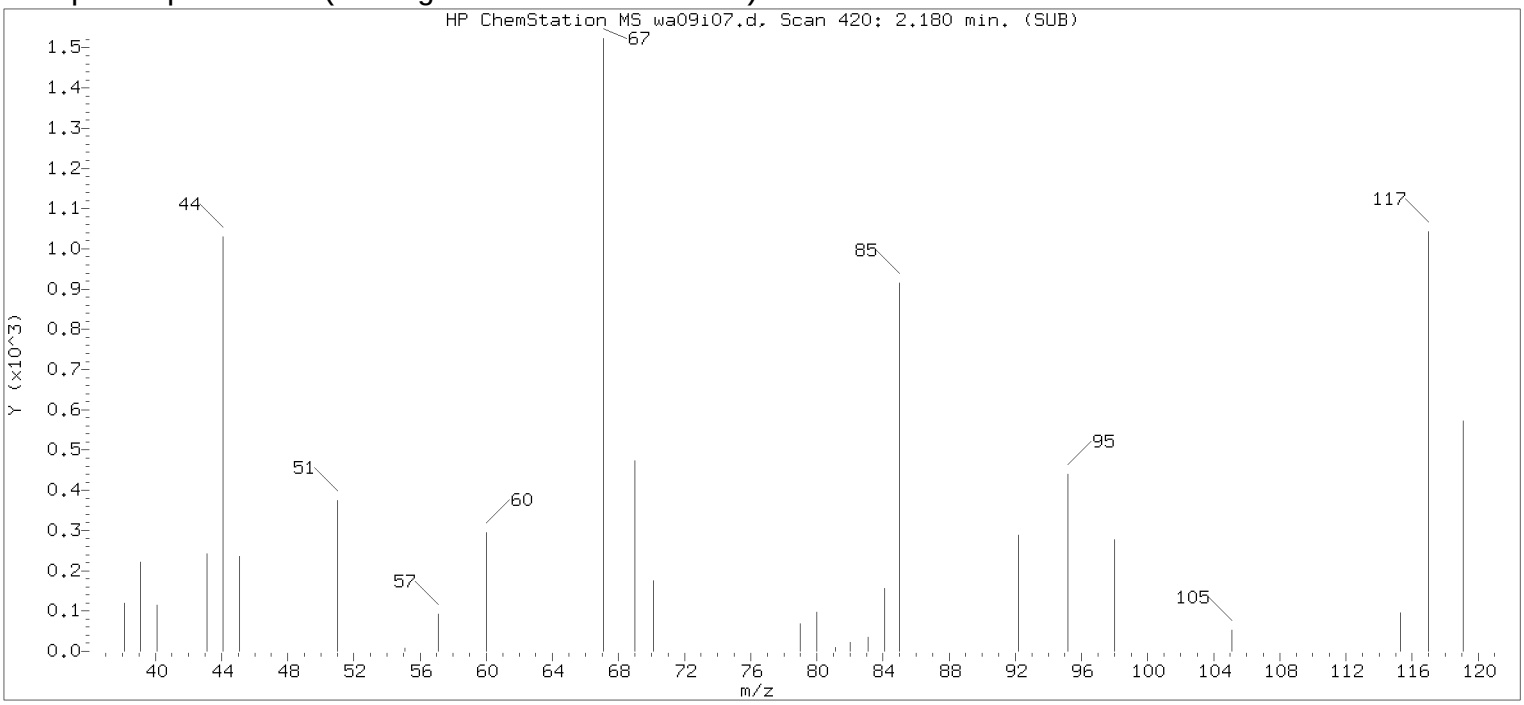
Compound Number : 15
Compound Name : Freon 123a
Scan Number : 420
Retention Time (minutes): 2.180
Quant Ion : 67.00
Area (flag) : 6042M
On-Column Amount (ng) : 1.0152
Integration start scan : 398 Integration stop scan: 441
Y at integration start : 285 Y at integration end: 285

Reason for manual integration: improper integration

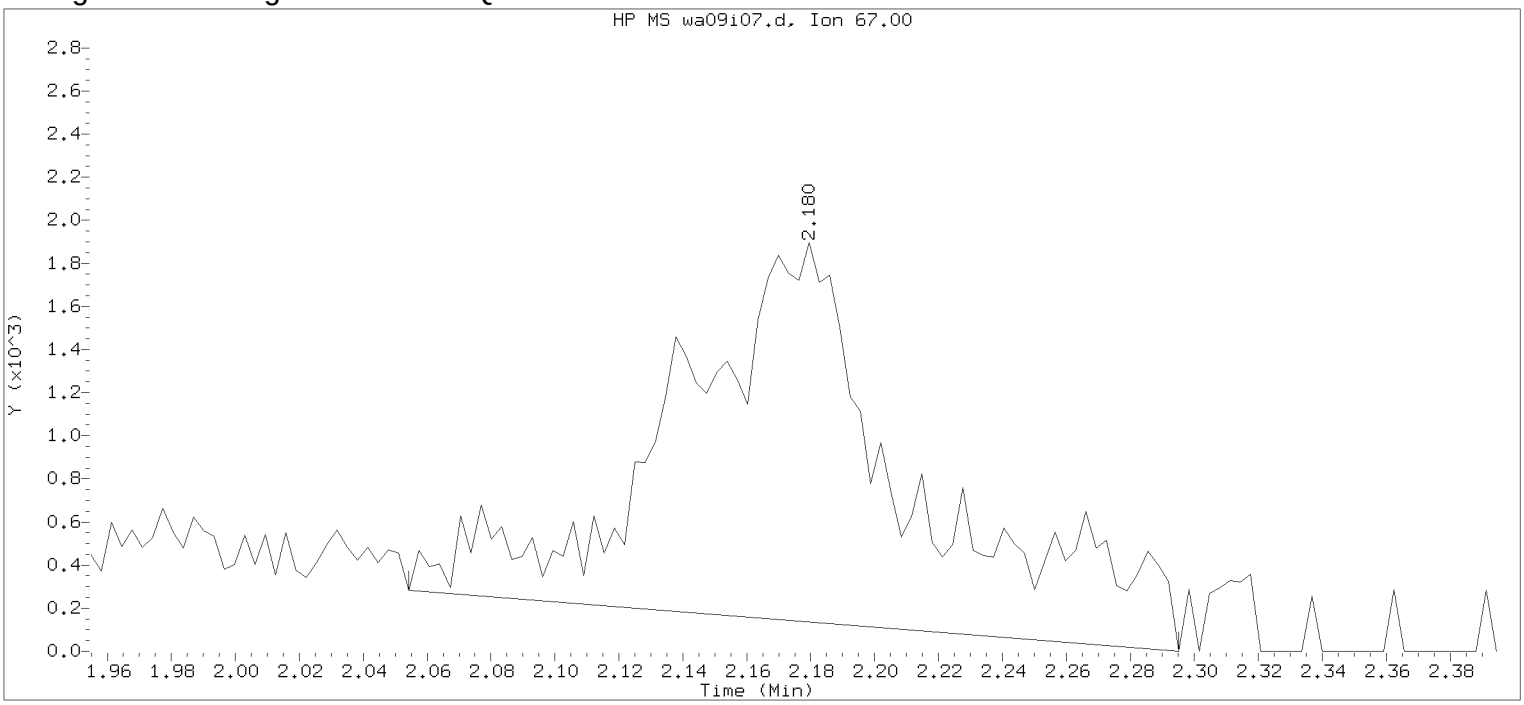
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 15
Compound Name : Freon 123a
Scan Number : 420
Retention Time (minutes): 2.180
Quant Ion : 67.00
Area : 9064
On-column Amount (ng) : 1.4200
Integration start scan : 380 Integration stop scan: 455
Y at integration start : 284 Y at integration end: 0

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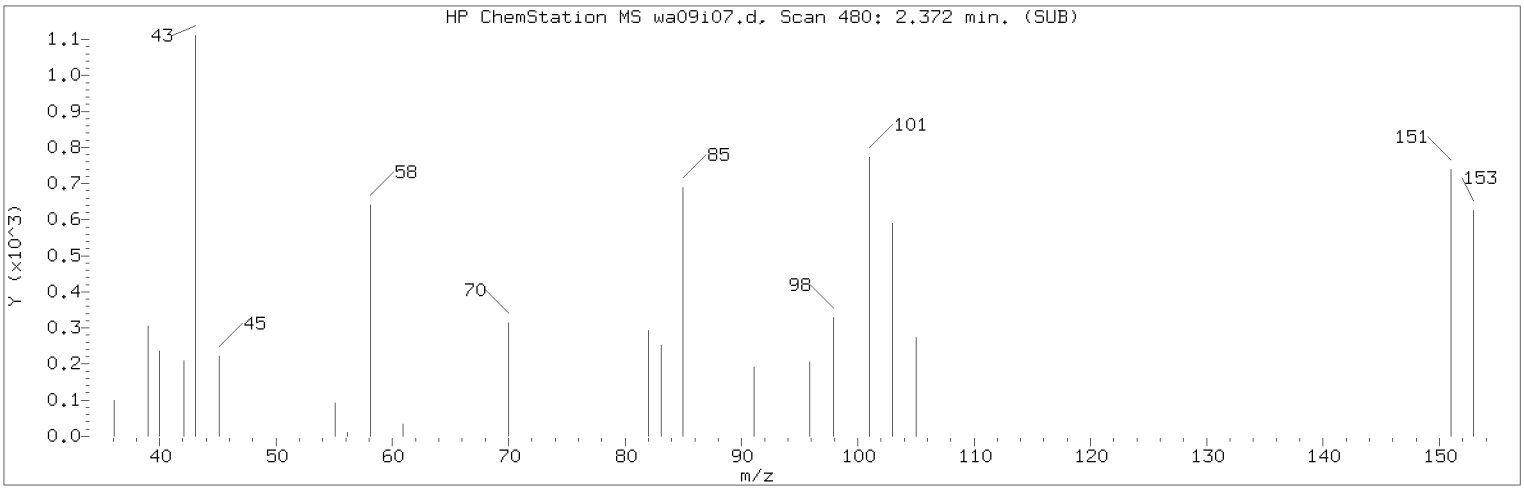
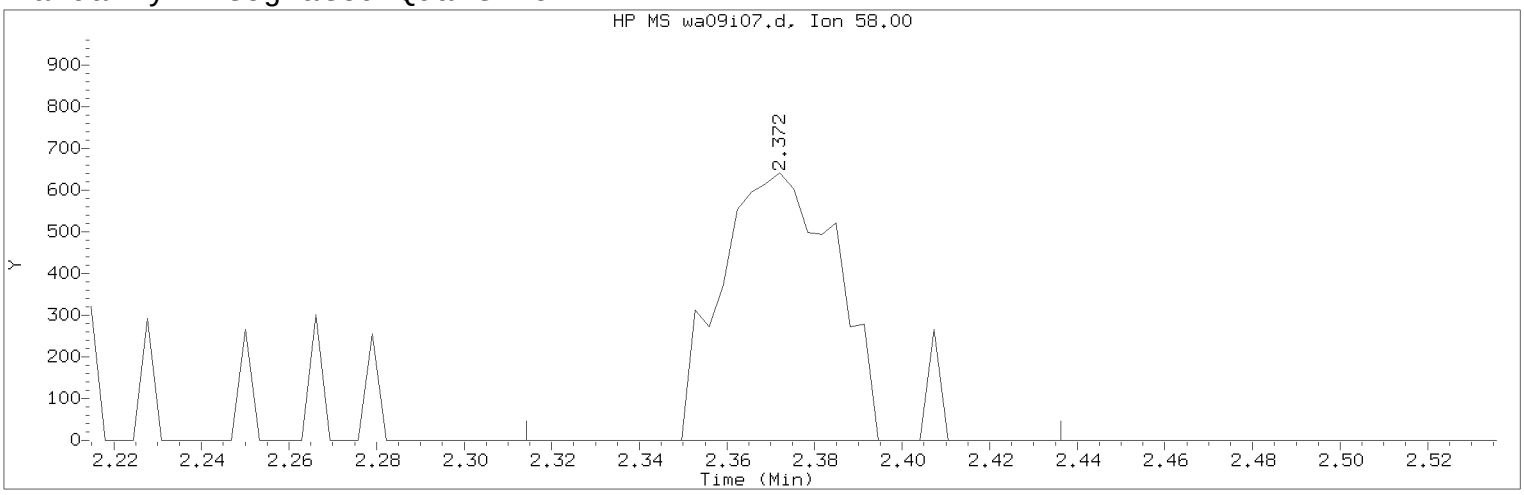
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

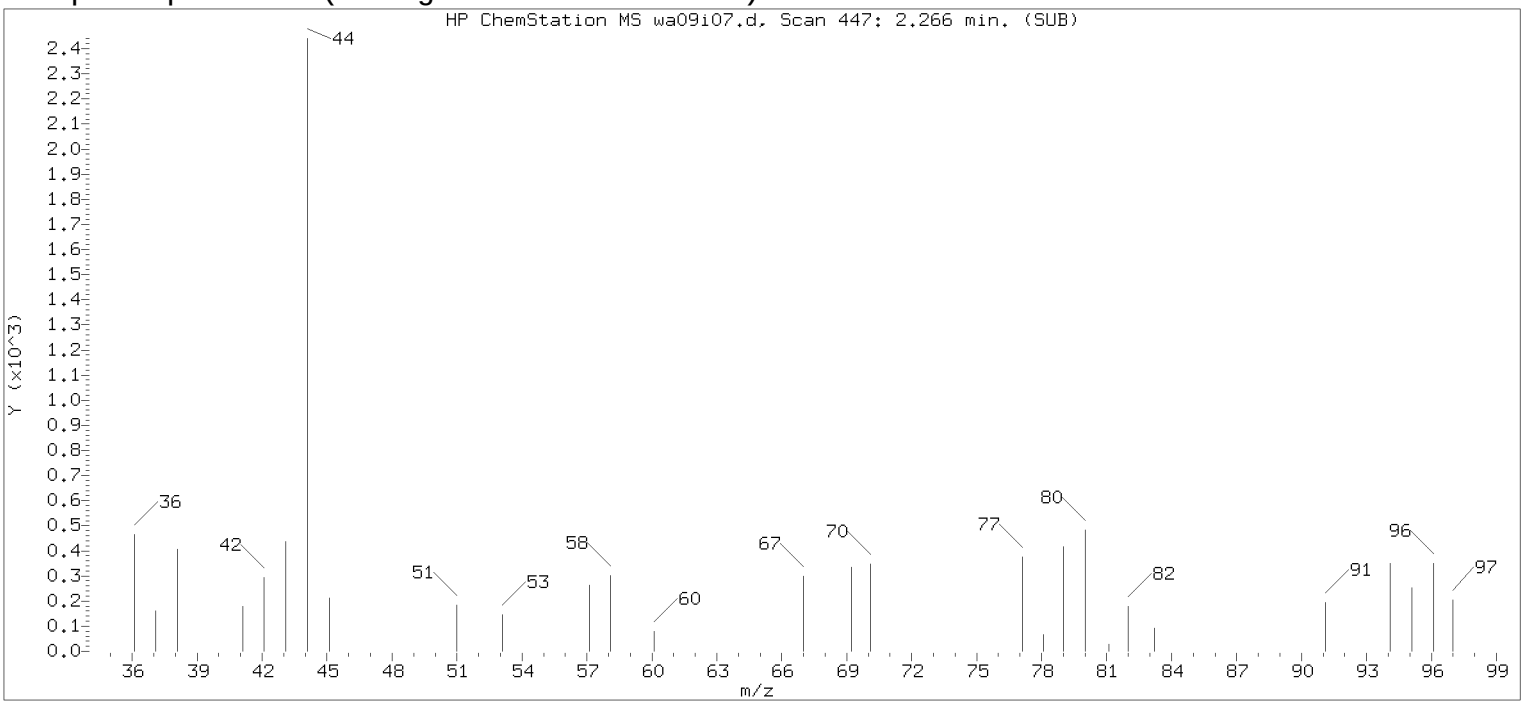
Compound Number : 18
Compound Name : Acetone
Scan Number : 480
Retention Time (minutes): 2.372
Quant Ion : 58.00
Area (flag) : 1212M
On-Column Amount (ng) : 2.1227
Integration start scan : 461 Integration stop scan: 499
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

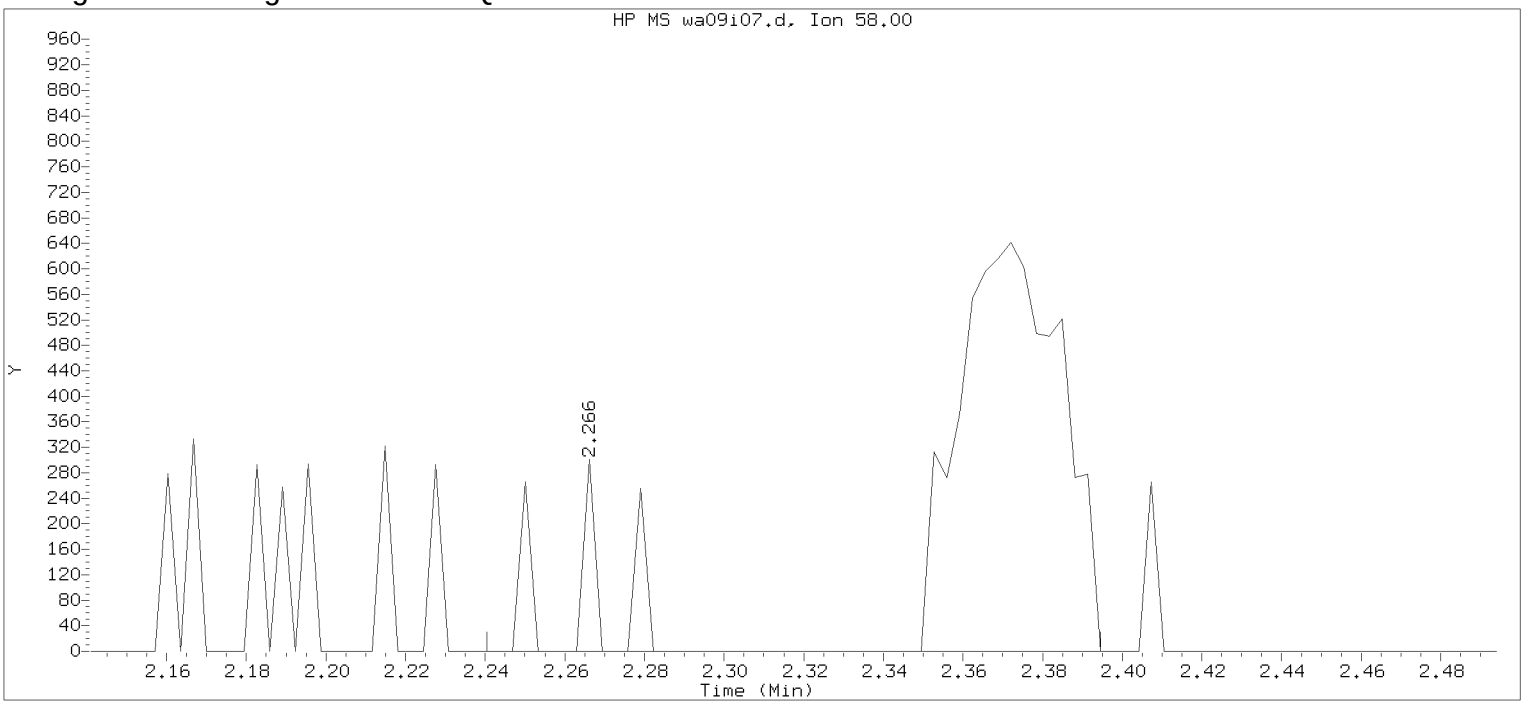
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

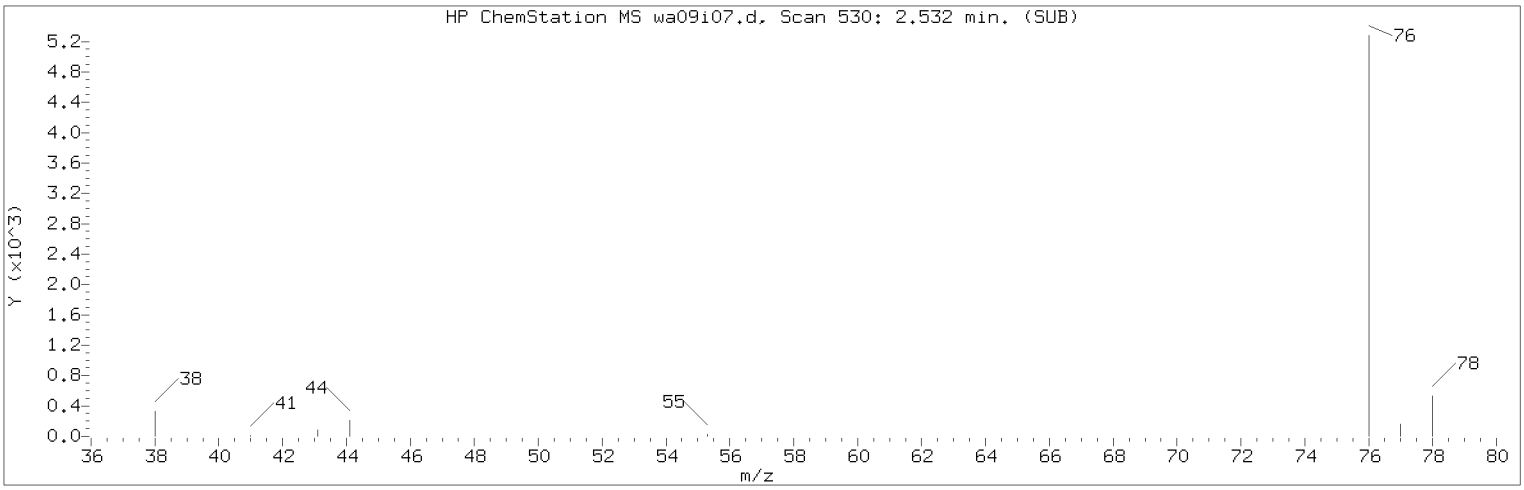
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

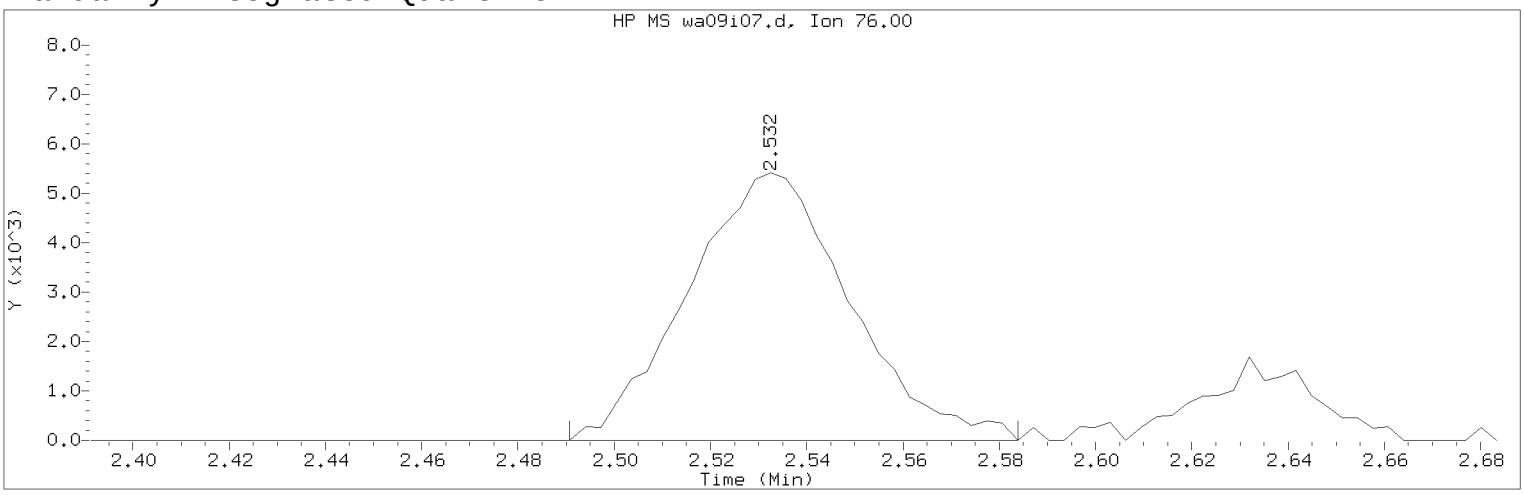
Compound Number : 18
Compound Name : Acetone
Scan Number : 447
Retention Time (minutes): 2.266
Quant Ion : 58.00
Area : 1319
On-column Amount (ng) : 2.5099
Integration start scan : 438 Integration stop scan: 486
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

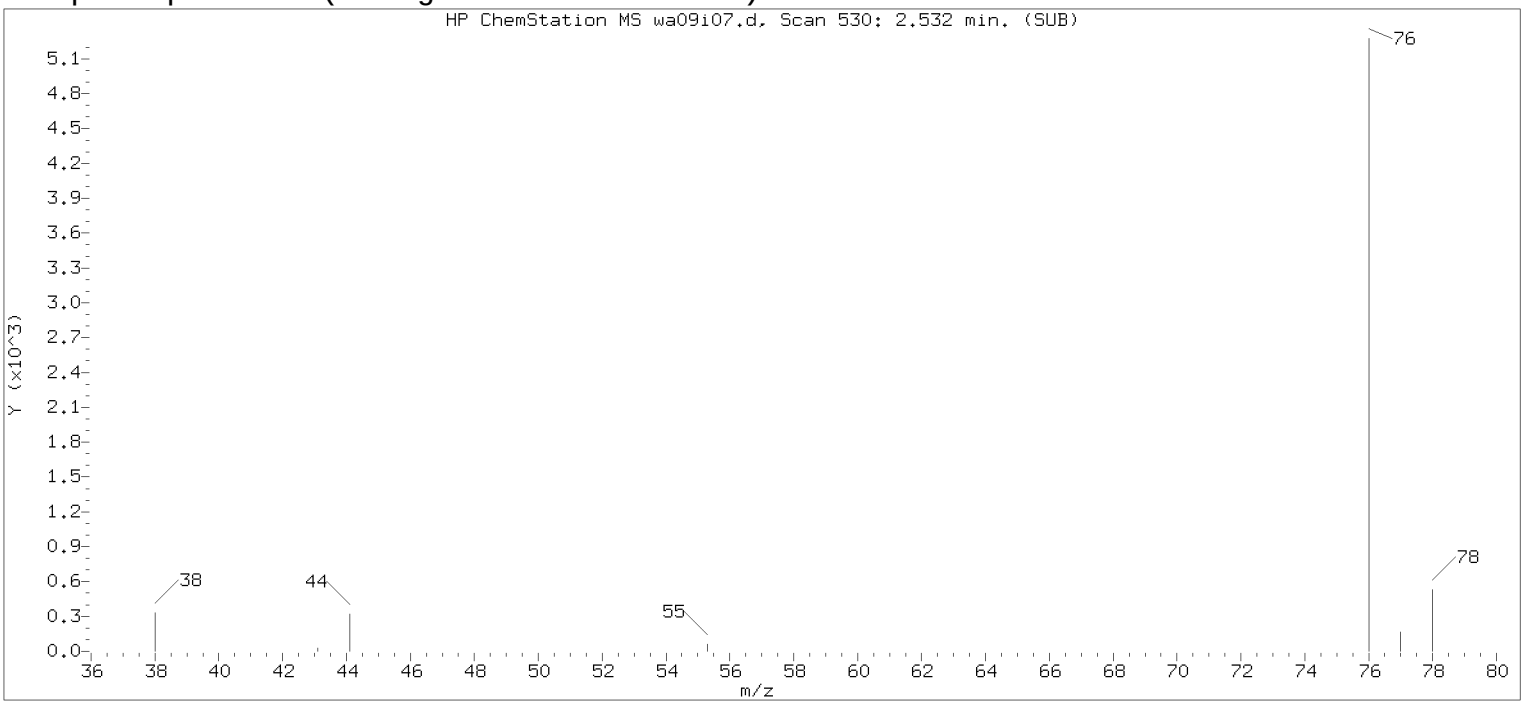
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 530
Retention Time (minutes): 2.532
Quant Ion : 76.00
Area (flag) : 12612M
On-Column Amount (ng) : 0.8517
Integration start scan : 516 Integration stop scan: 545
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

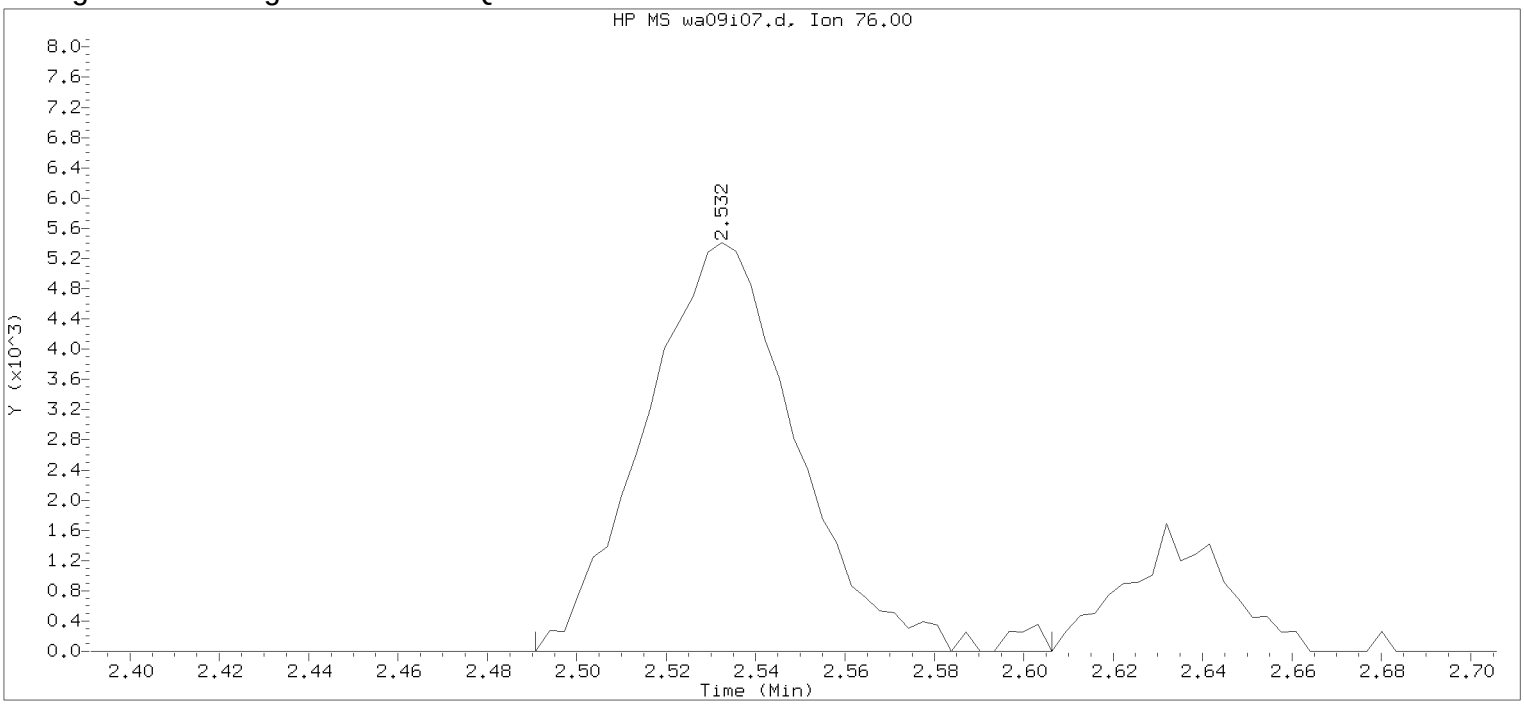
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

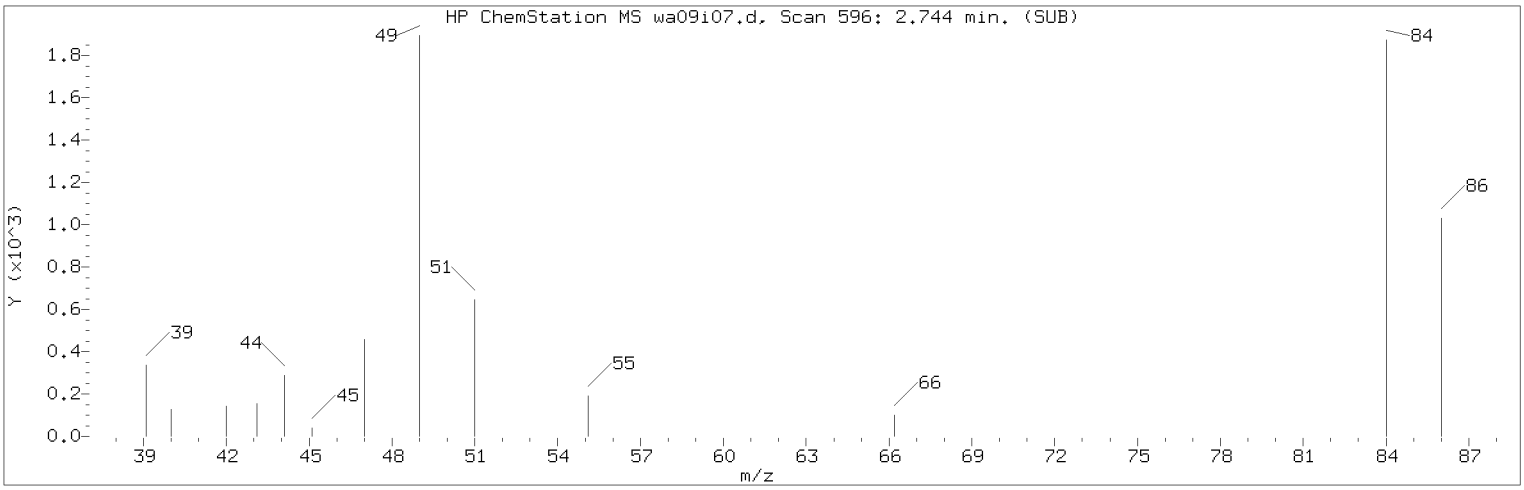
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

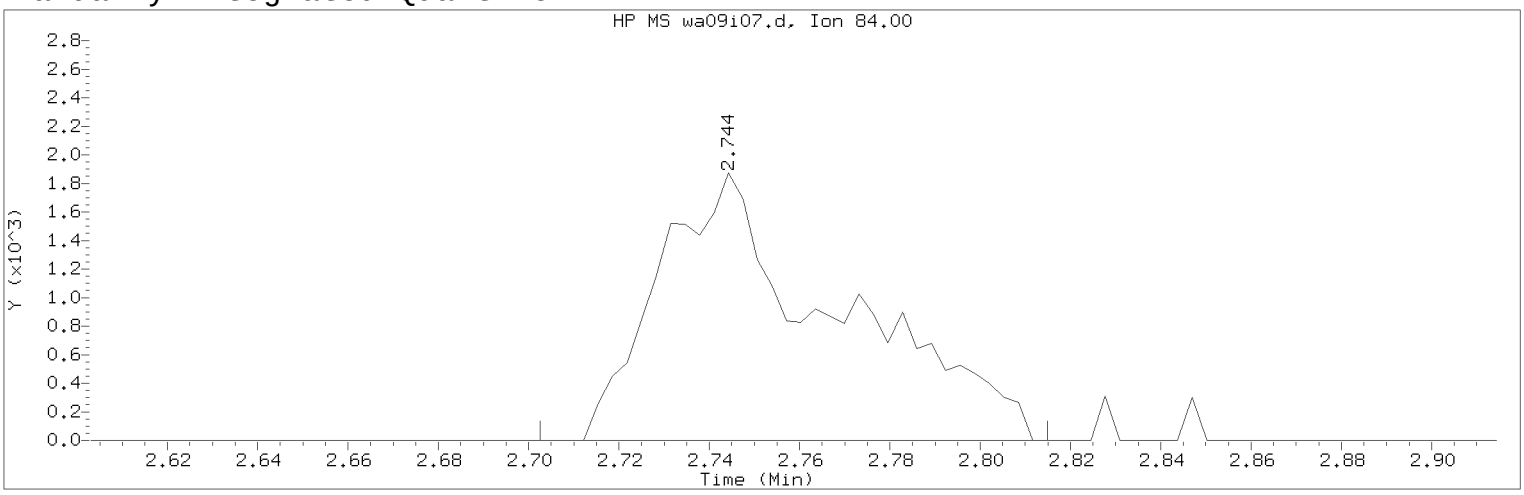
Compound Number : 23
Compound Name : Carbon Disulfide
Scan Number : 530
Retention Time (minutes): 2.532
Quant Ion : 76.00
Area : 12832
On-column Amount (ng) : 0.8648
Integration start scan : 516 Integration stop scan: 552
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

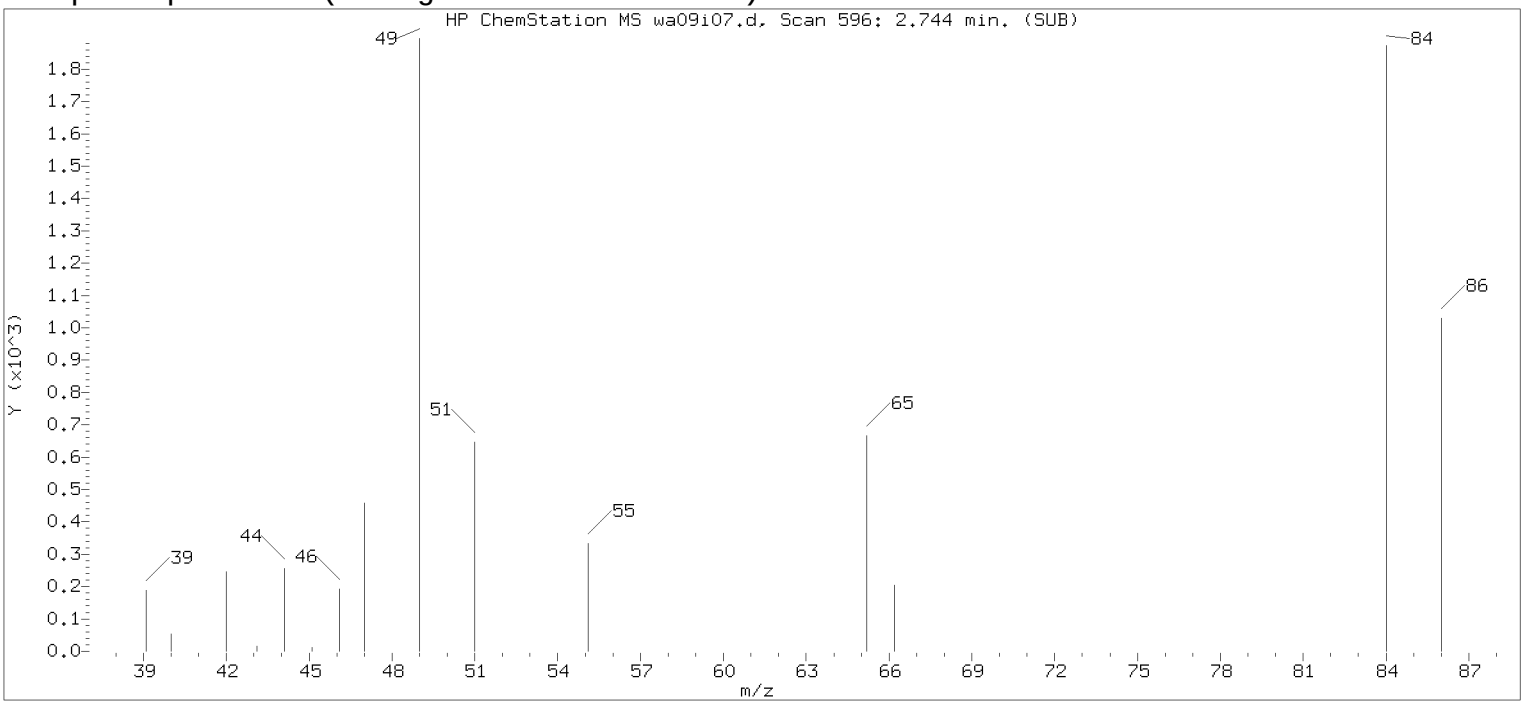
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area (flag) : 5154M
On-Column Amount (ng) : 0.9884
Integration start scan : 582 Integration stop scan: 617
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

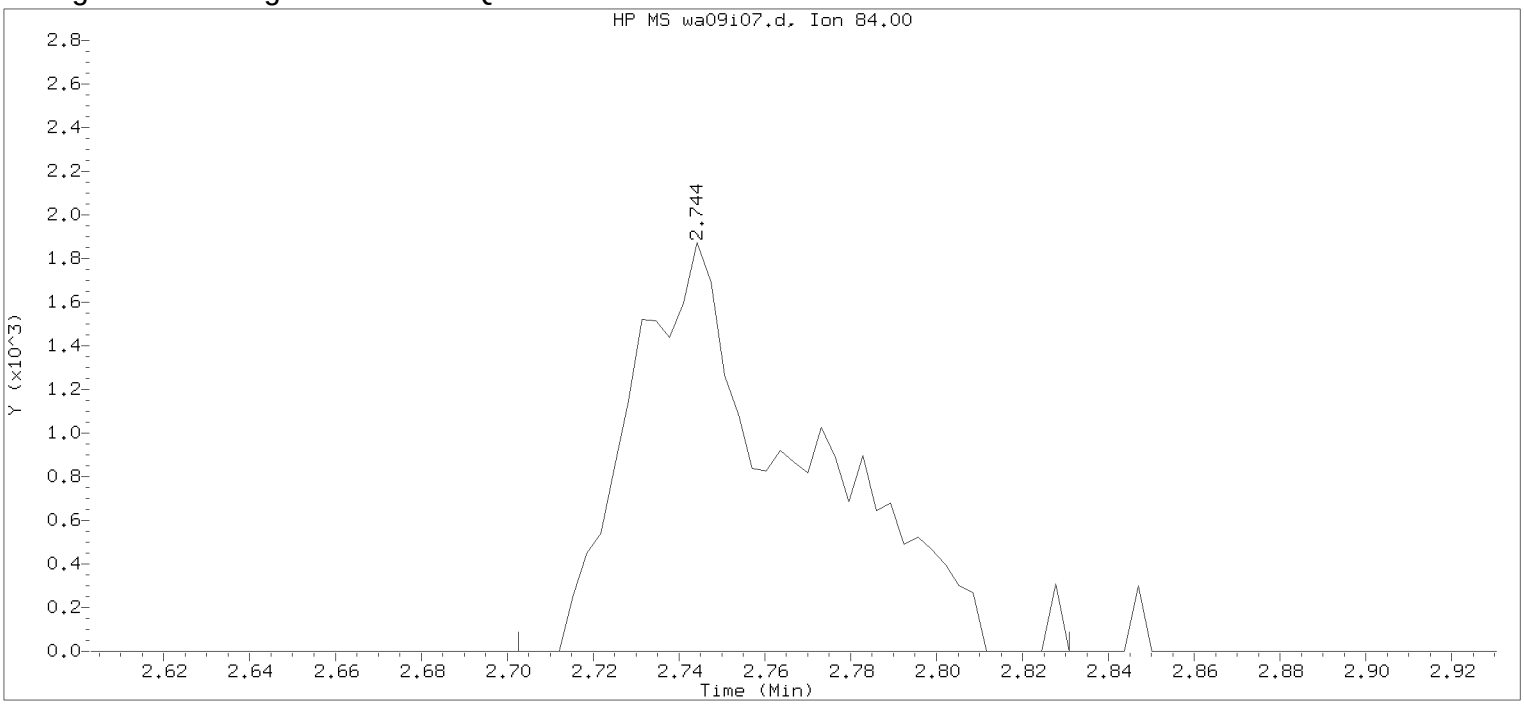
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

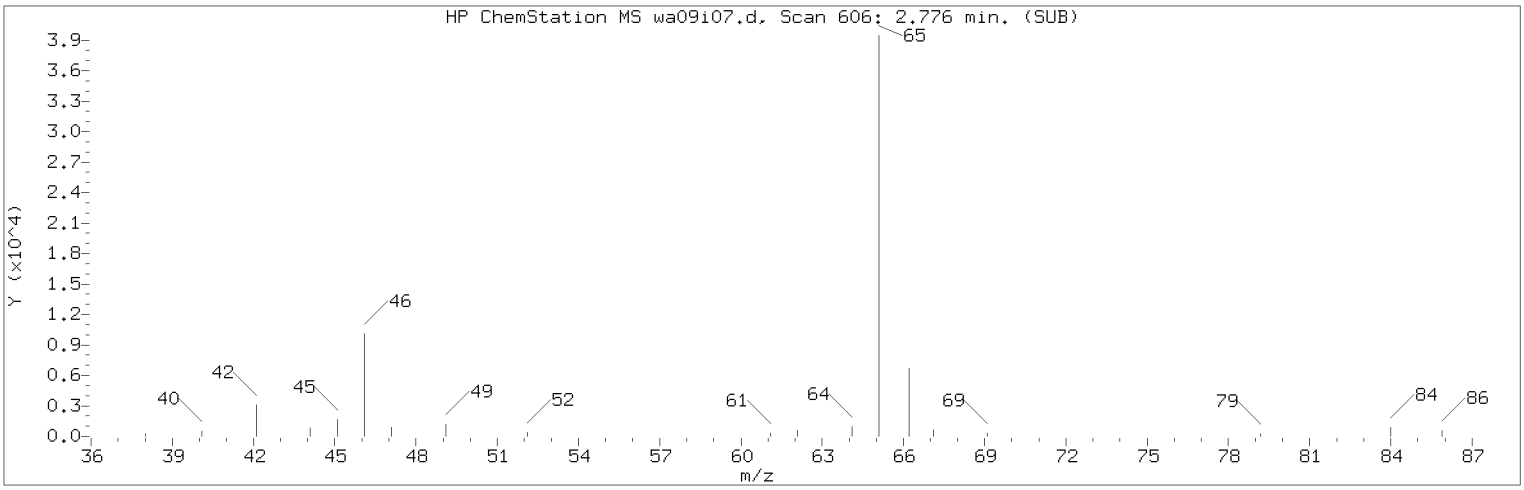
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

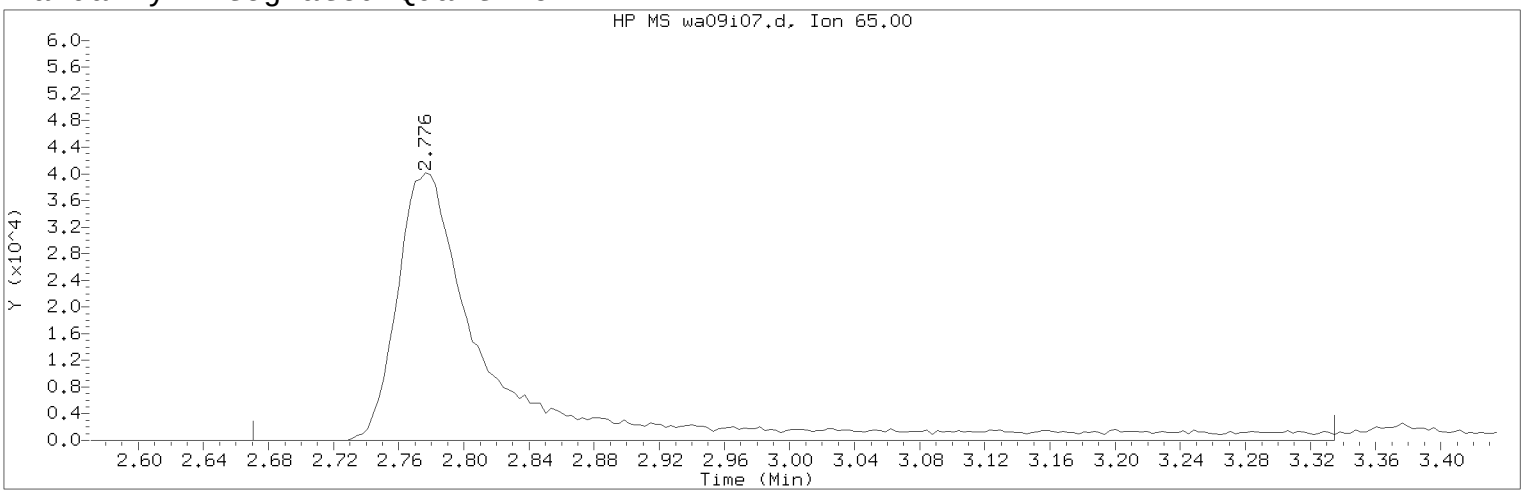
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 596
Retention Time (minutes): 2.744
Quant Ion : 84.00
Area : 5213
On-column Amount (ng) : 0.9981
Integration start scan : 582 Integration stop scan: 622
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

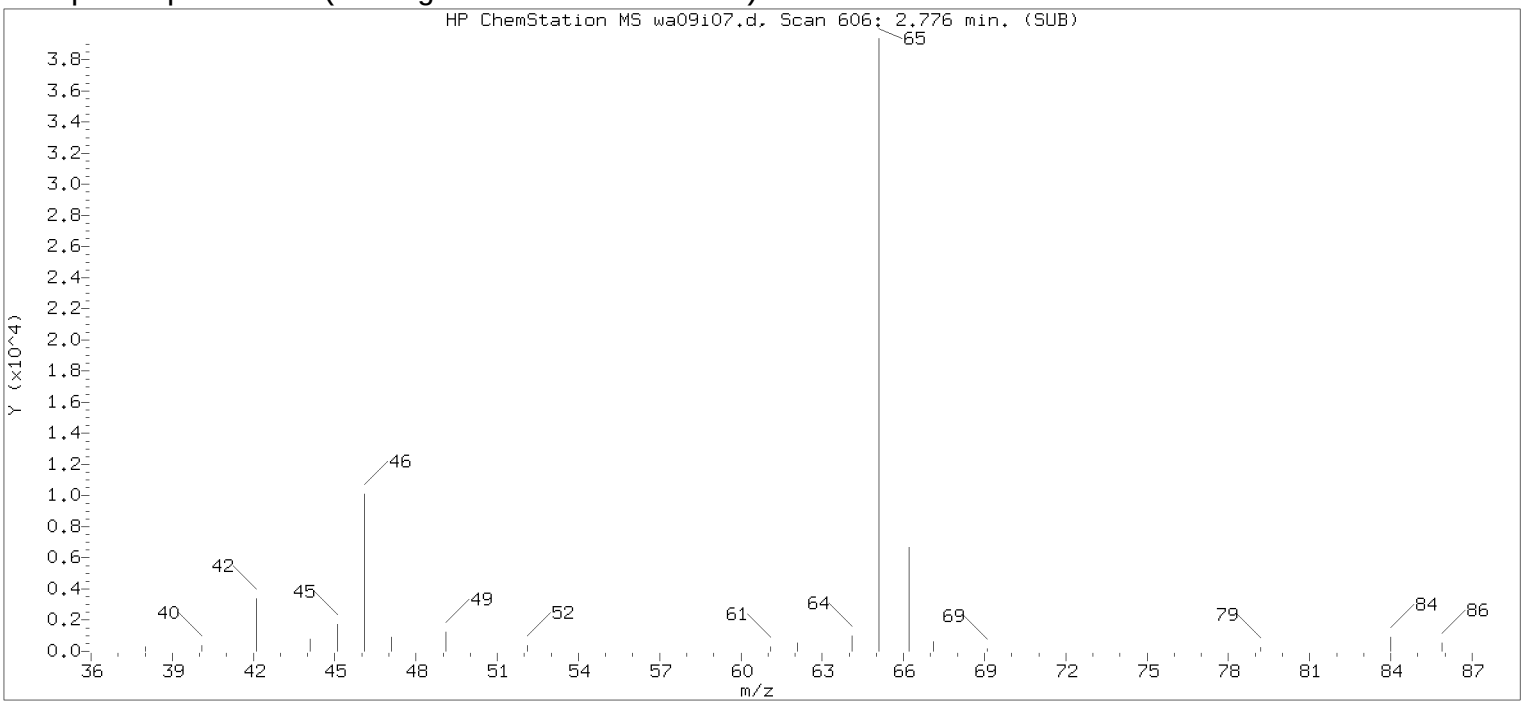
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 606
Retention Time (minutes): 2.776
Quant Ion : 65.00
Area (flag) : 167487M
On-Column Amount (ng) : 250.0000
Integration start scan : 572 Integration stop scan: 779
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

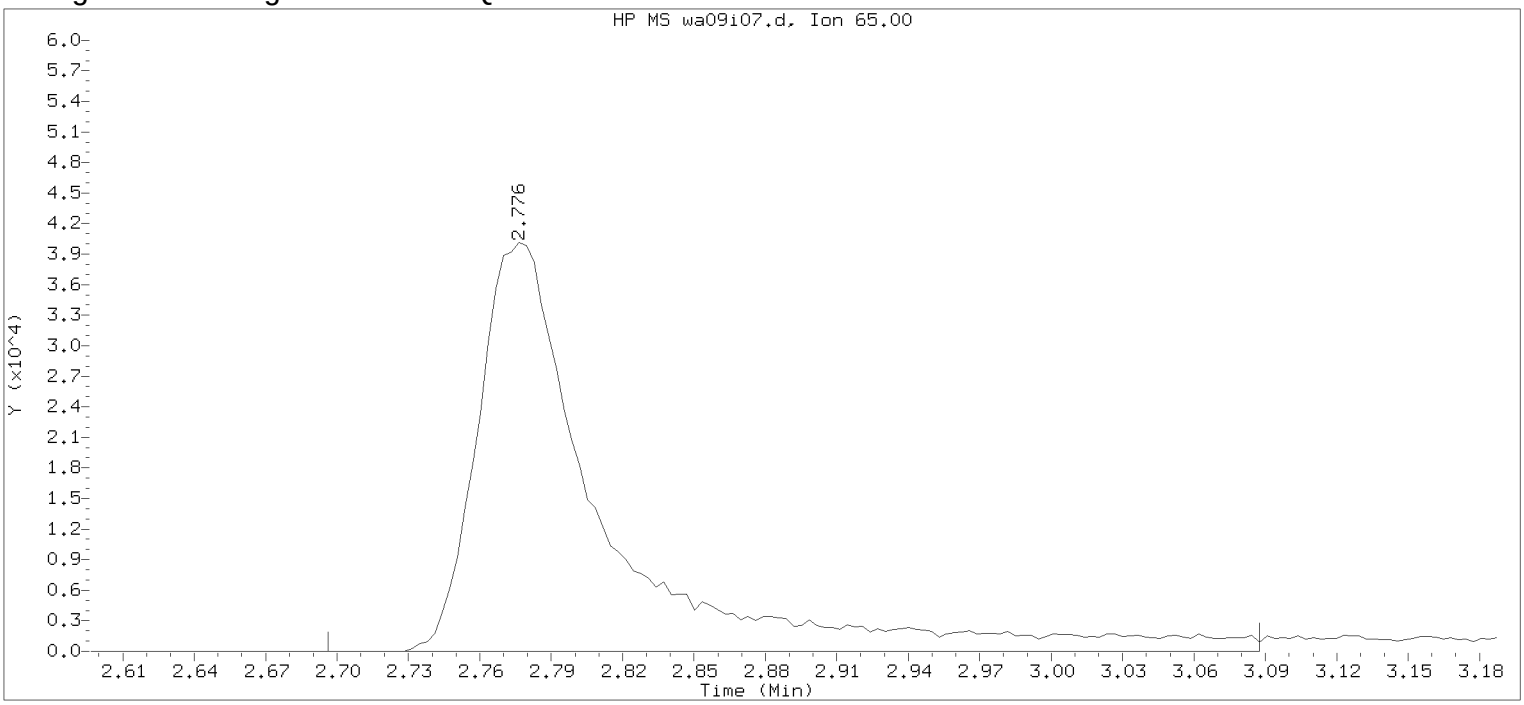
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

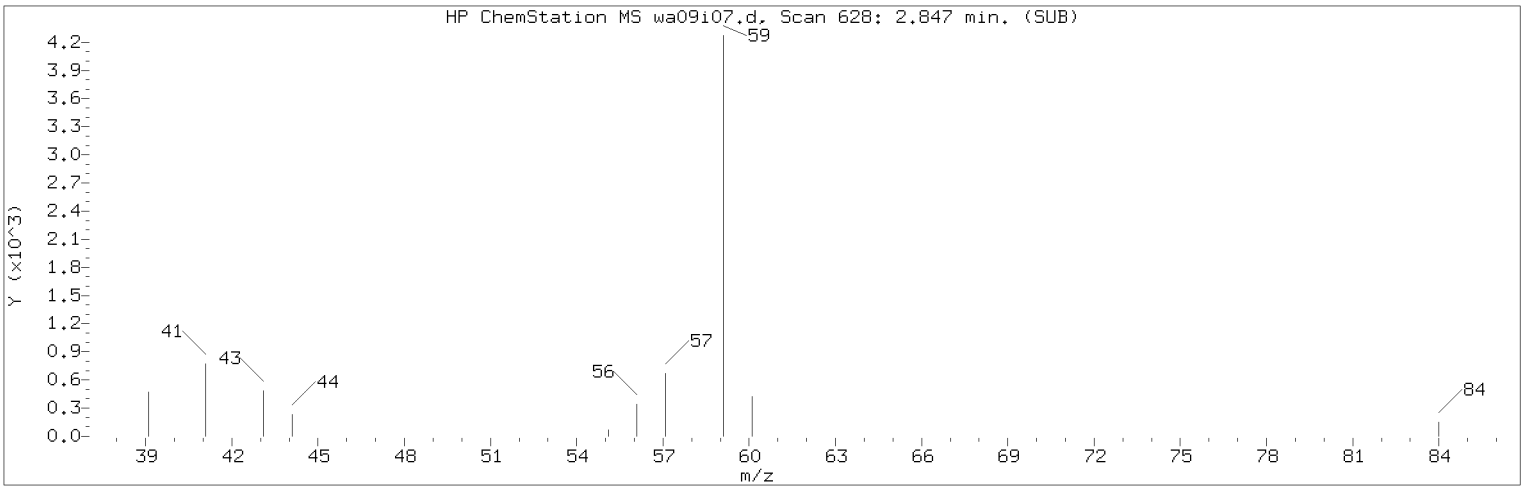
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

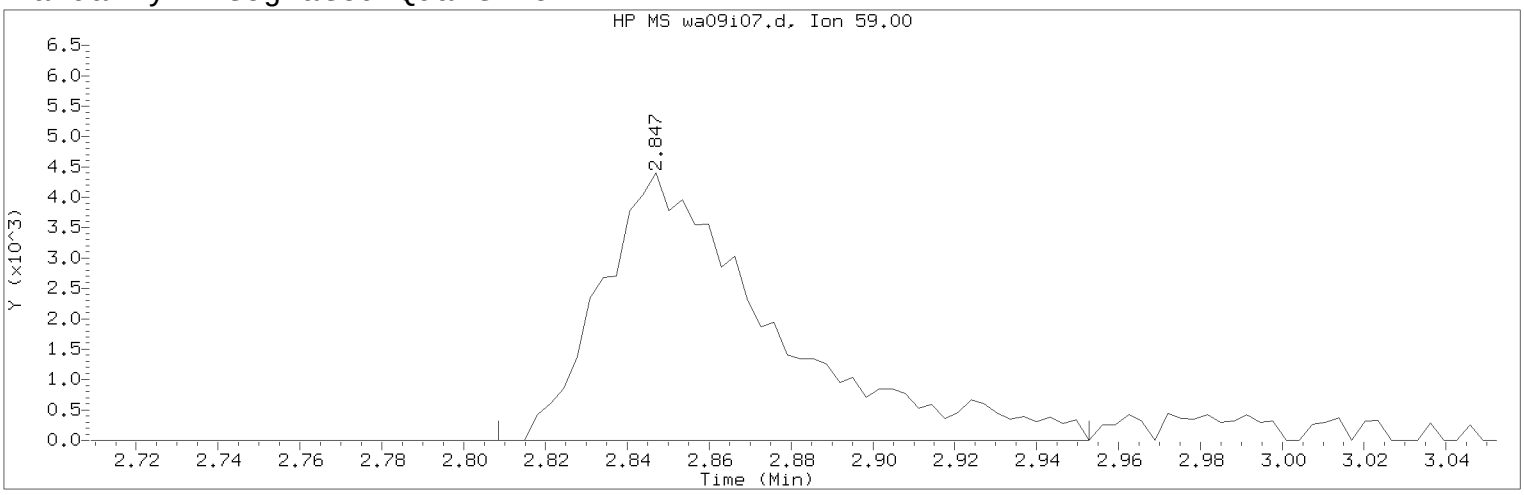
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 606
Retention Time (minutes): 2.776
Quant Ion : 65.00
Area : 149242
On-column Amount (ng) : 250.0000
Integration start scan : 580 Integration stop scan: 702
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

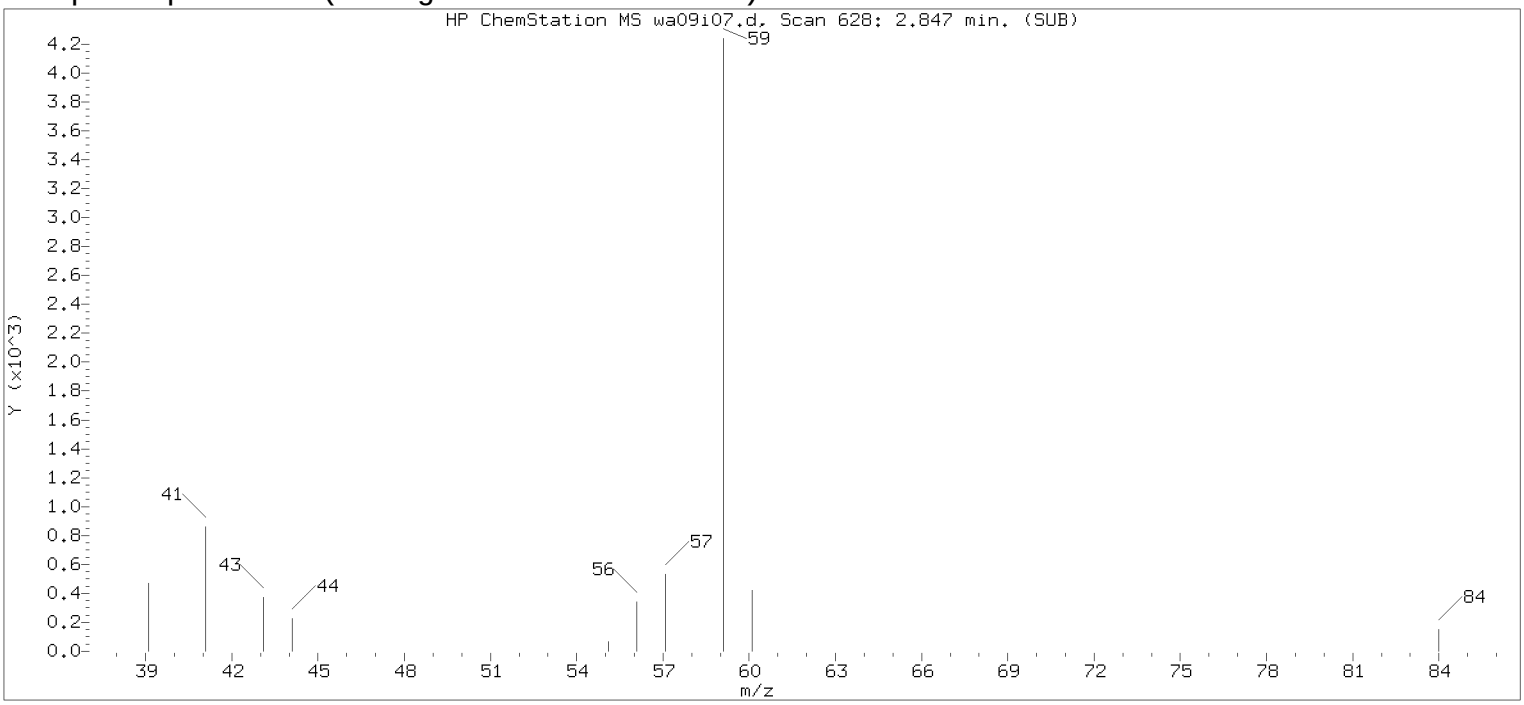
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 628
Retention Time (minutes): 2.847
Quant Ion : 59.00
Area (flag) : 12755M
On-Column Amount (ng) : 17.7192
Integration start scan : 615 Integration stop scan: 660
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

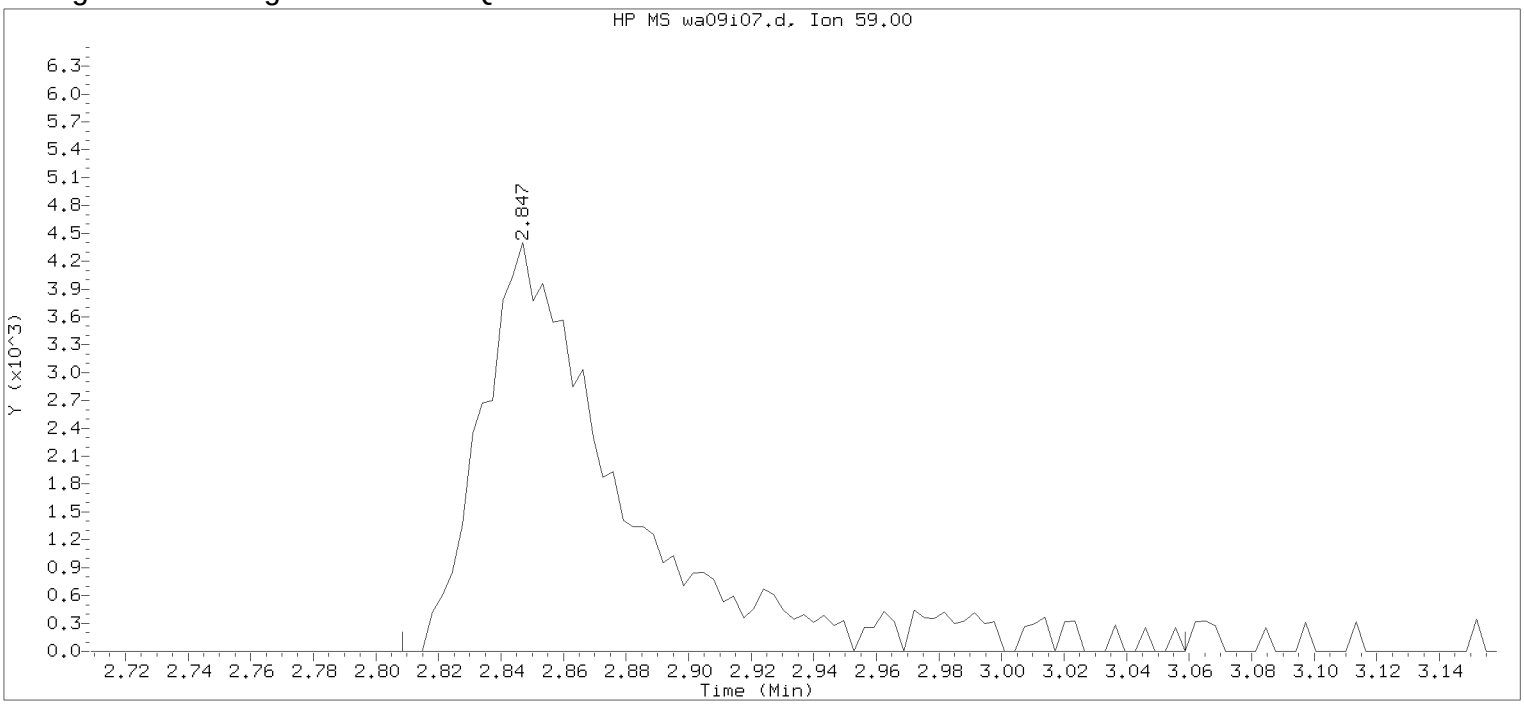
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

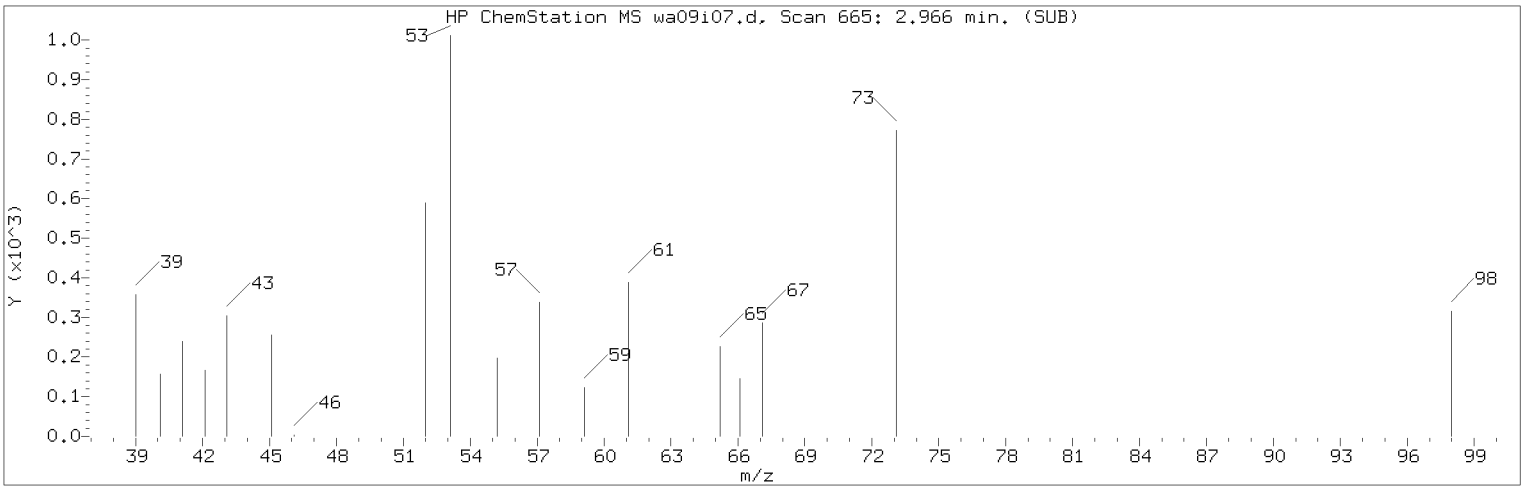
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

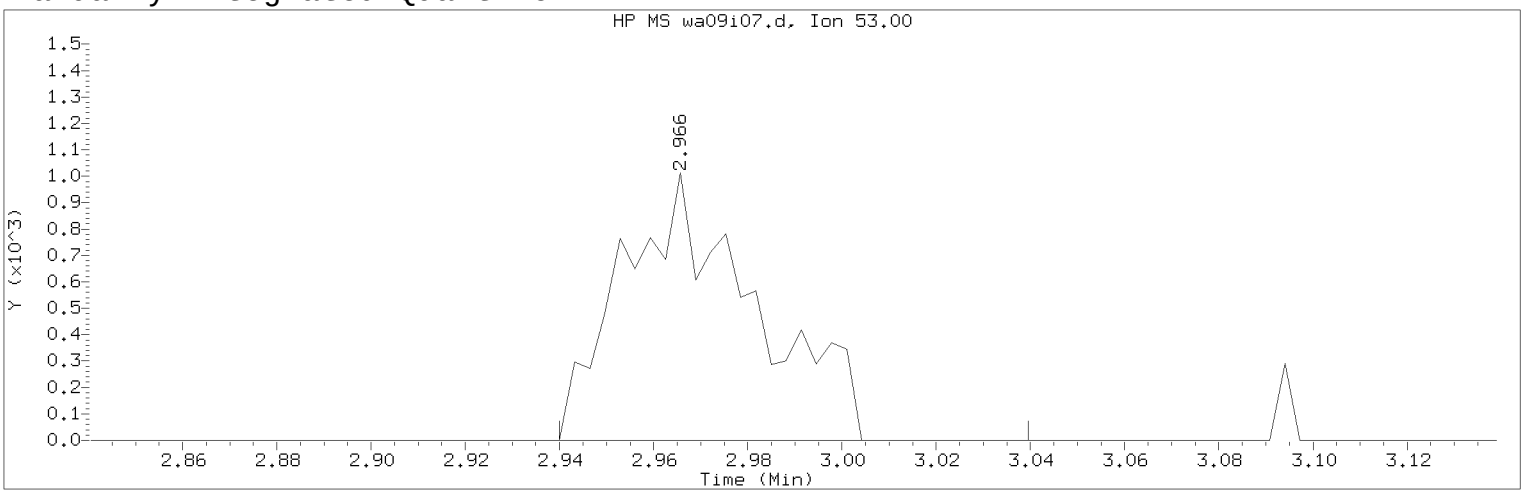
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 628
Retention Time (minutes): 2.847
Quant Ion : 59.00
Area : 14075
On-column Amount (ng) : 21.3006
Integration start scan : 615 Integration stop scan: 693
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

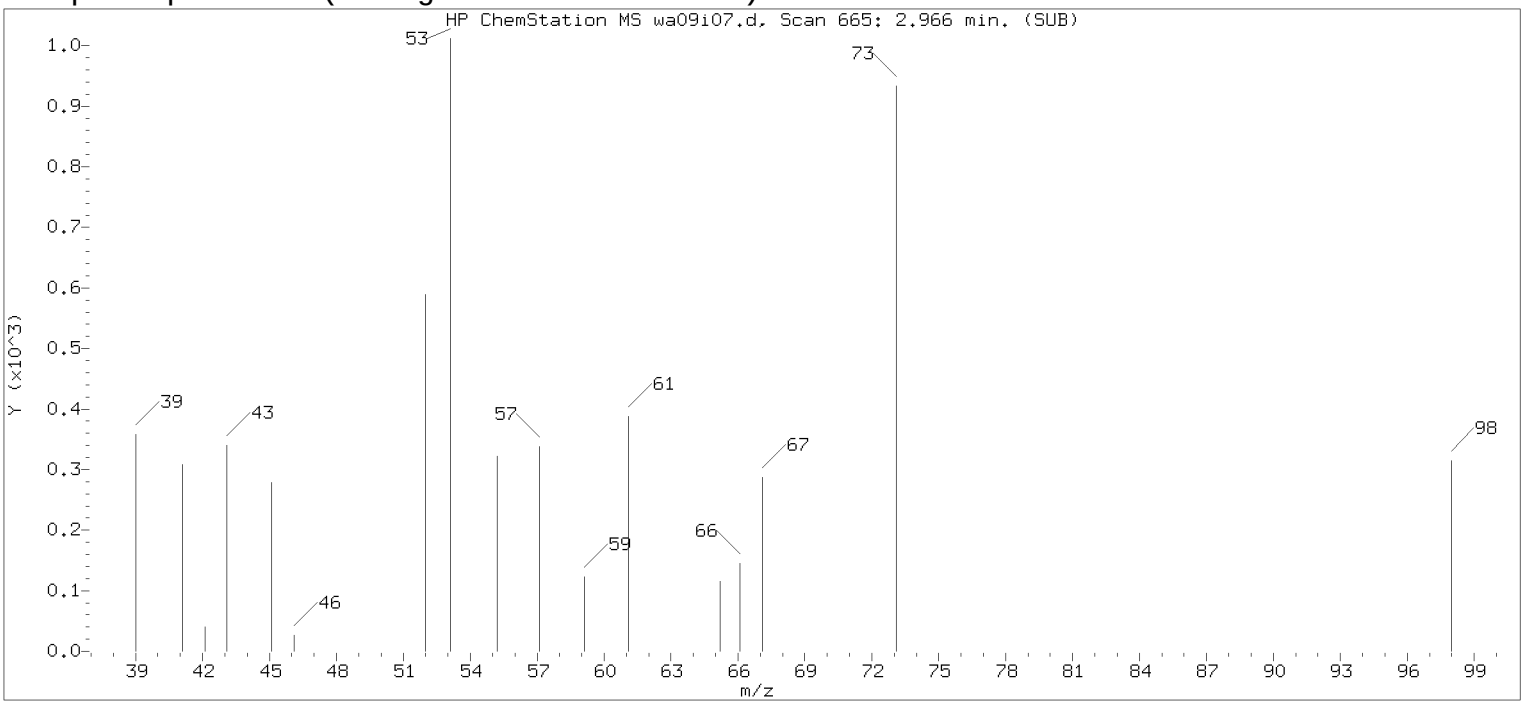
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 665
Retention Time (minutes): 2.966
Quant Ion : 53.00
Area (flag) : 1954M
On-Column Amount (ng) : 0.7314
Integration start scan : 656 Integration stop scan: 687
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

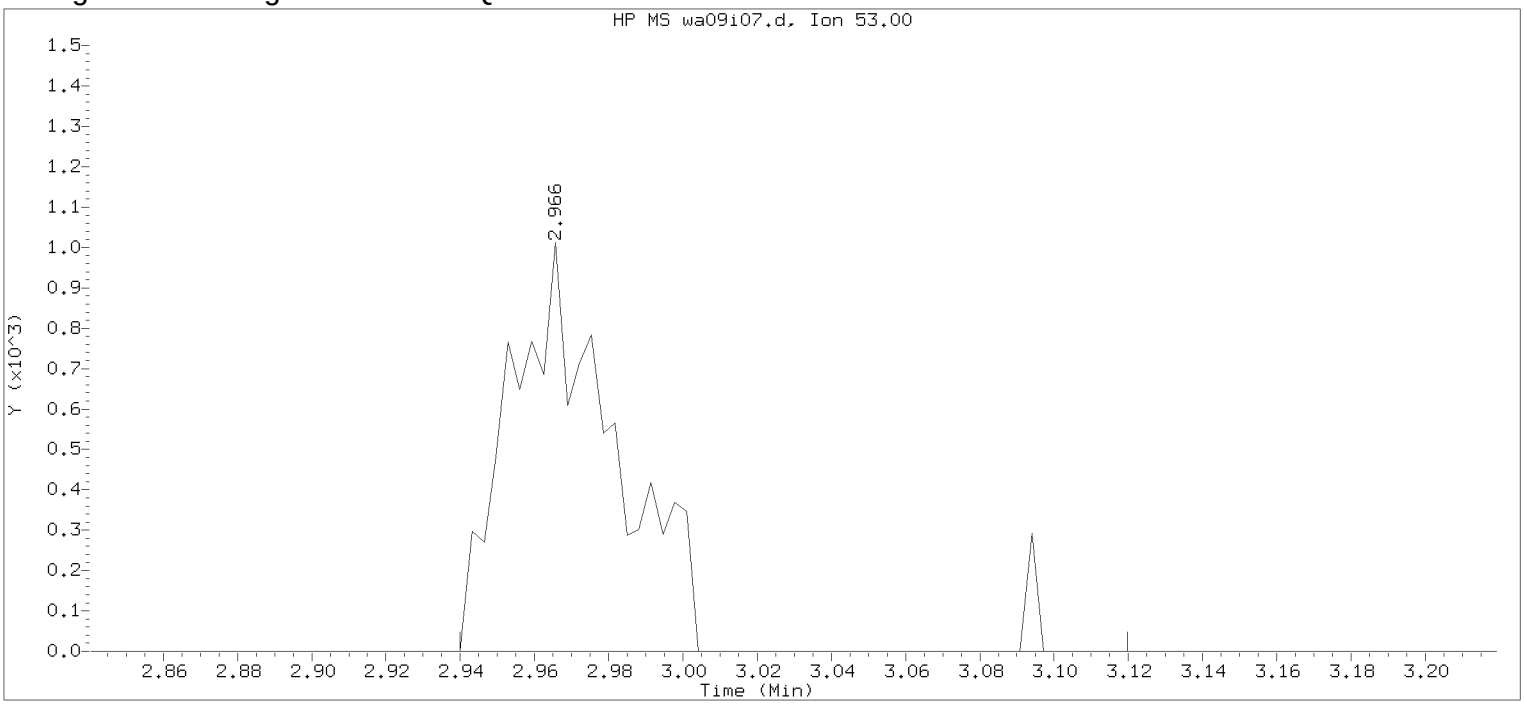
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

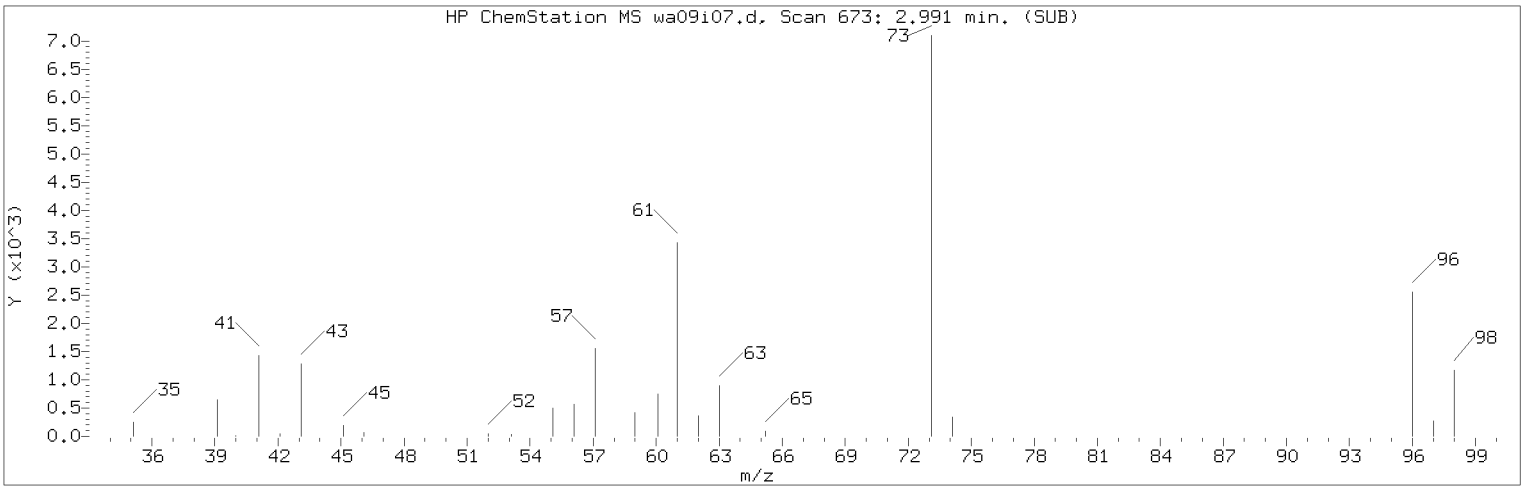
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

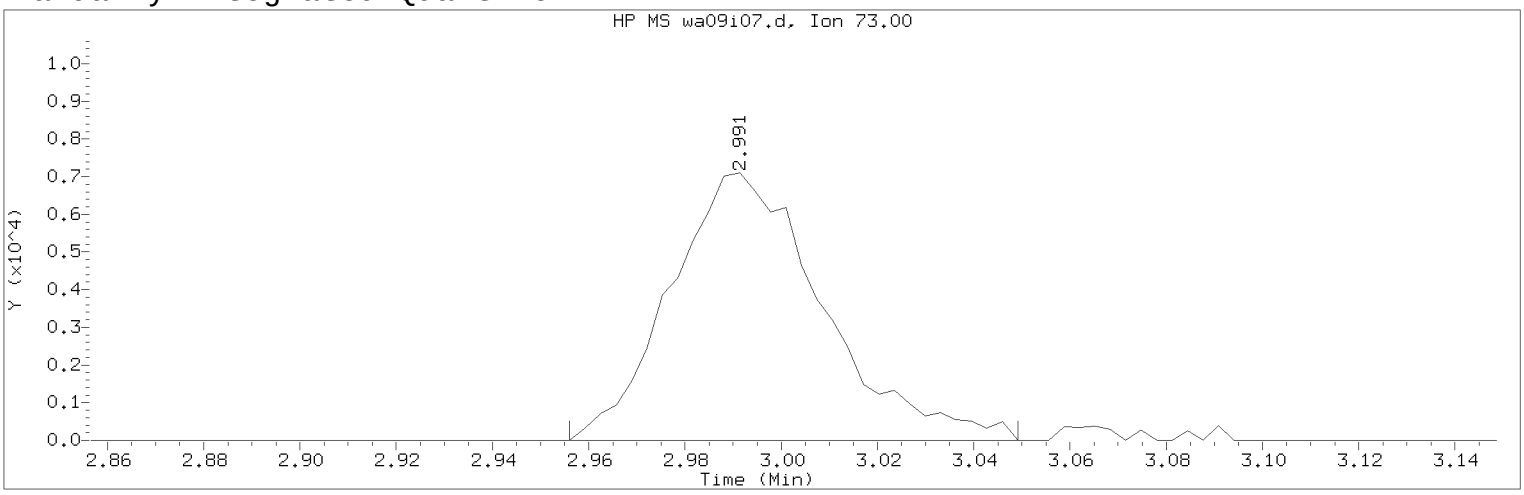
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 665
Retention Time (minutes): 2.966
Quant Ion : 53.00
Area : 2010
On-column Amount (ng) : 0.7801
Integration start scan : 656 Integration stop scan: 712
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

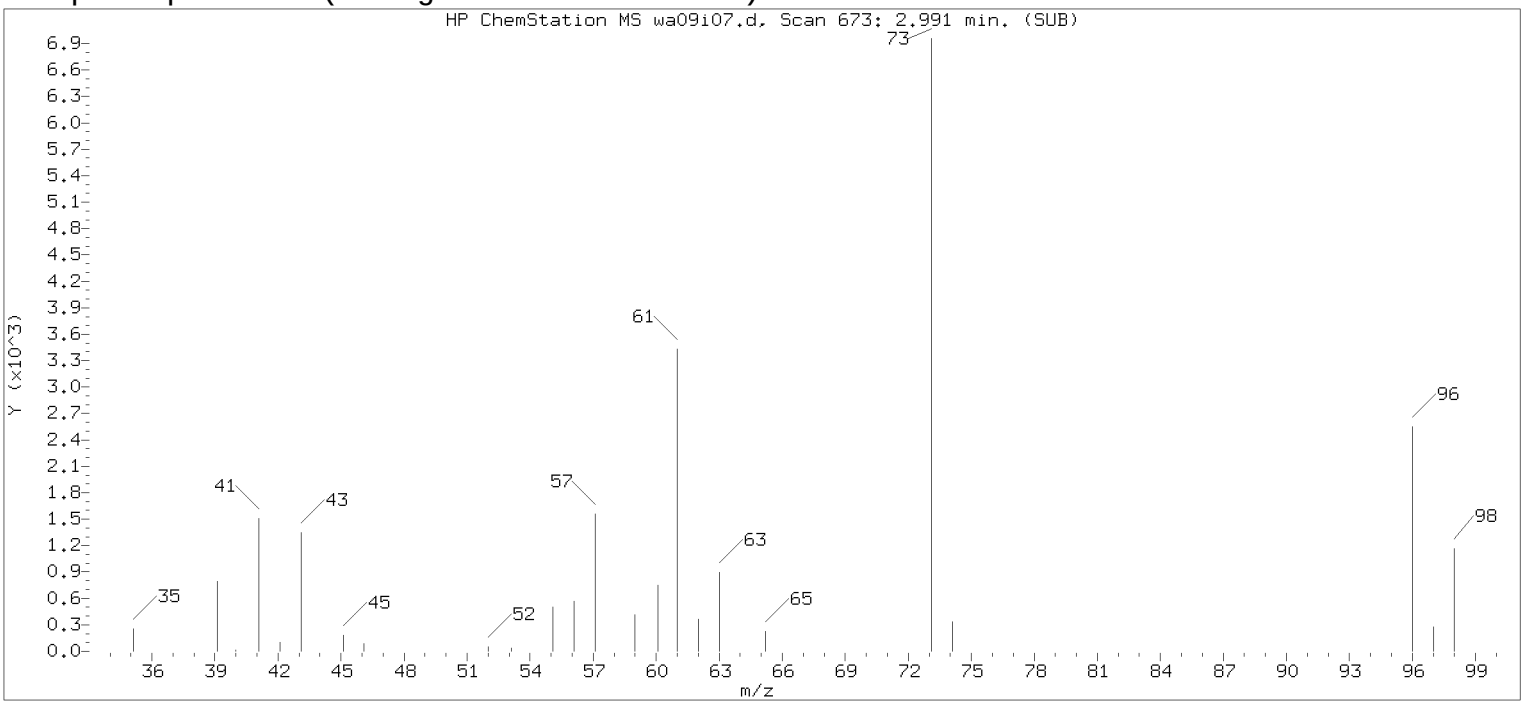
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 673
Retention Time (minutes): 2.991
Quant Ion : 73.00
Area (flag) : 15568M
On-Column Amount (ng) : 0.9299
Integration start scan : 661 Integration stop scan: 690
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

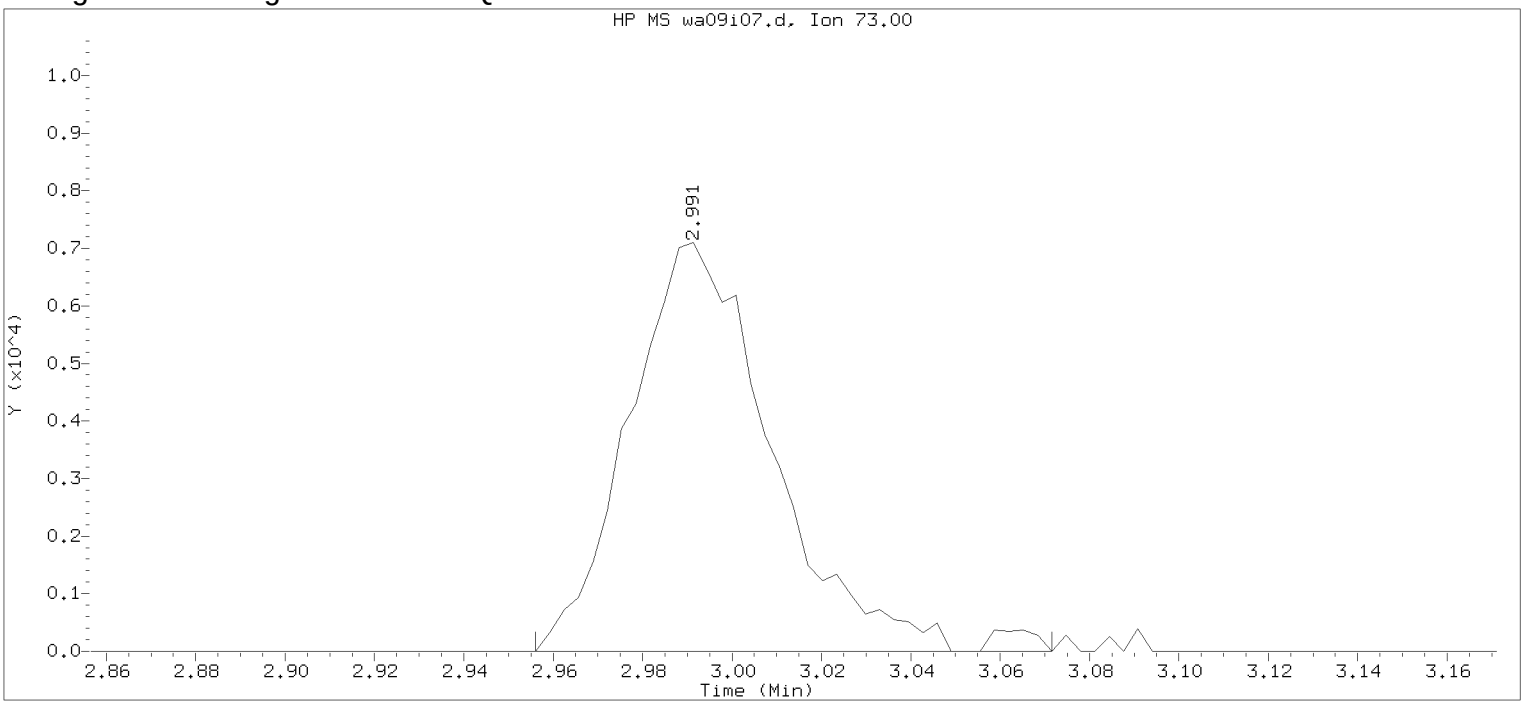
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

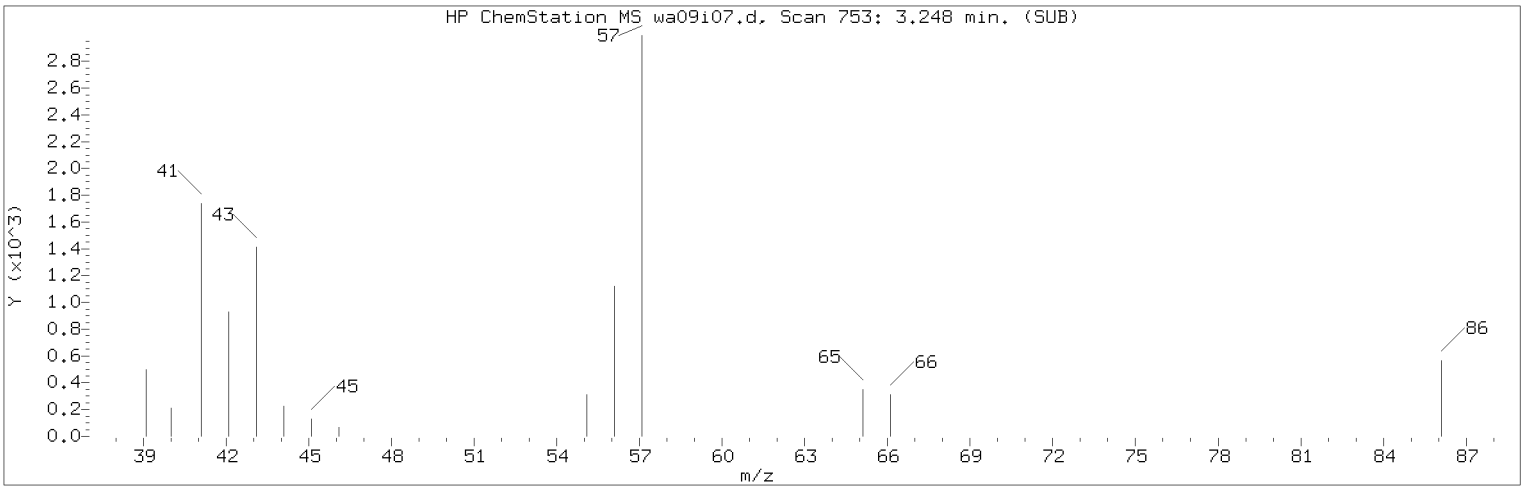
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

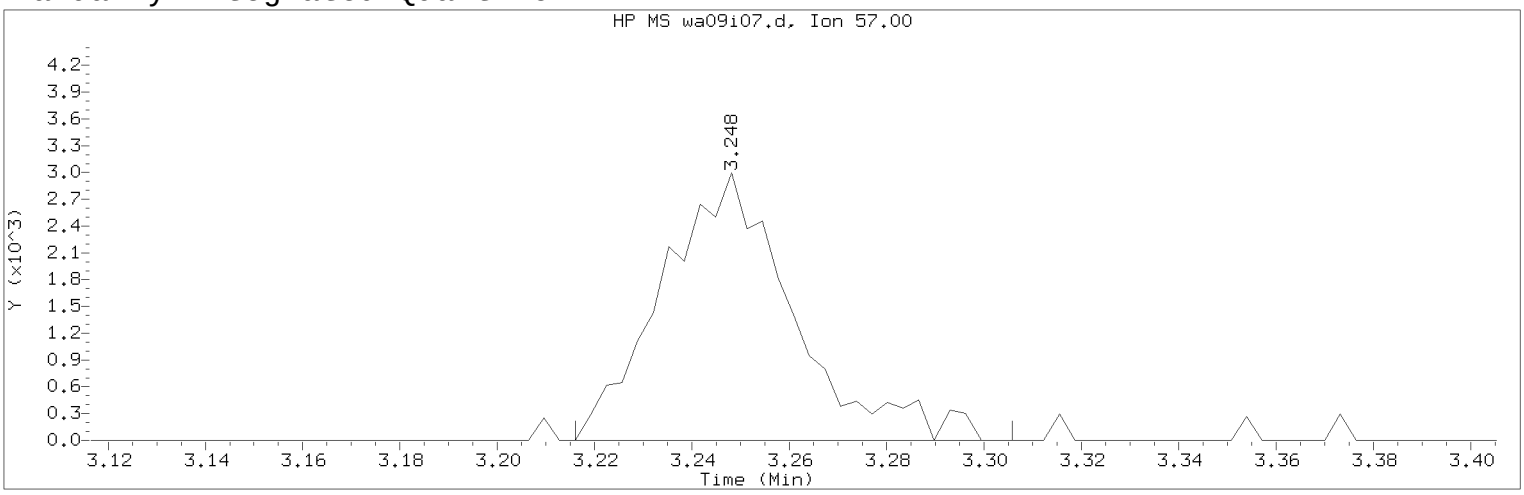
Compound Number : 33
Compound Name : Methyl Tertiary Butyl Ether
Scan Number : 673
Retention Time (minutes): 2.991
Quant Ion : 73.00
Area : 15830
On-column Amount (ng) : 0.9435
Integration start scan : 661 Integration stop scan: 697
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

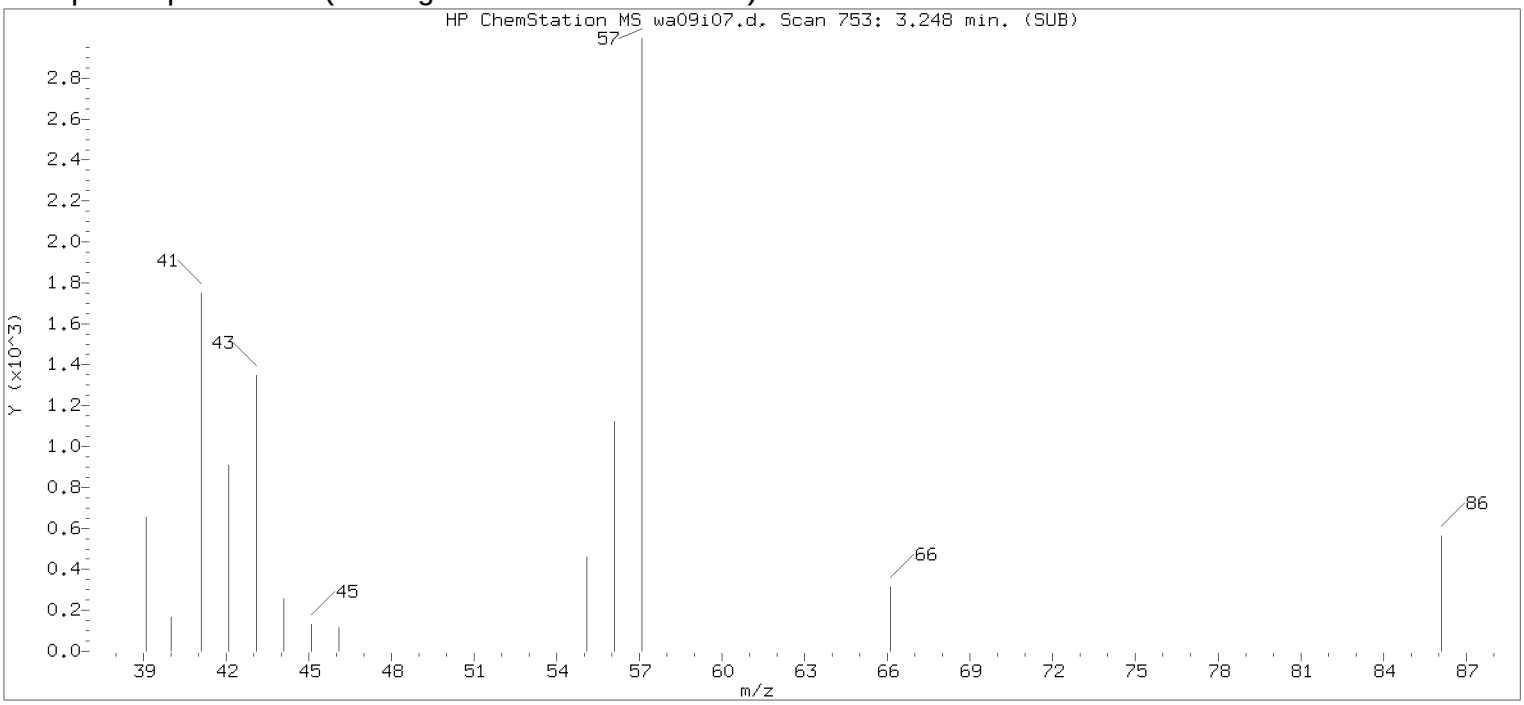
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 753
Retention Time (minutes): 3.248
Quant Ion : 57.00
Area (flag) : 5618M
On-Column Amount (ng) : 0.9781
Integration start scan : 742 Integration stop scan: 770
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

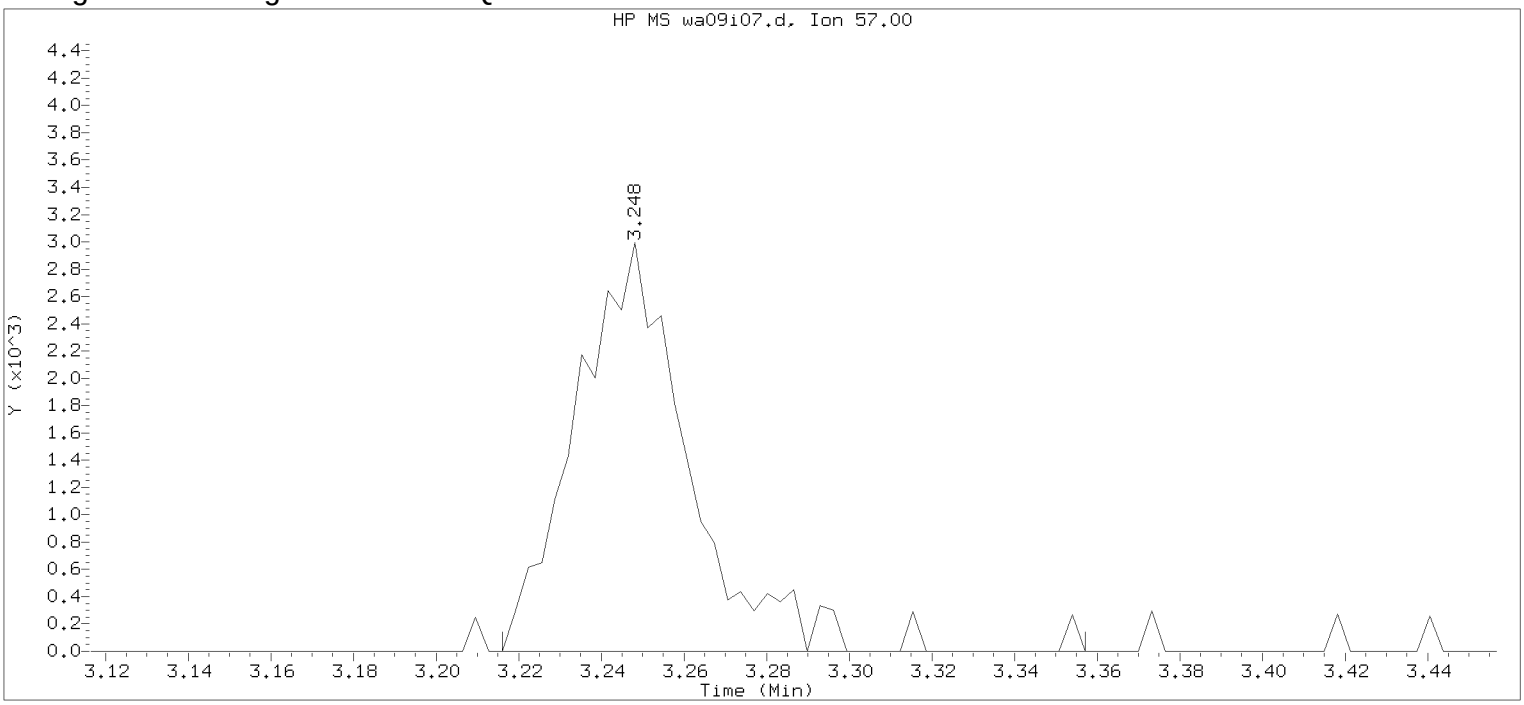
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

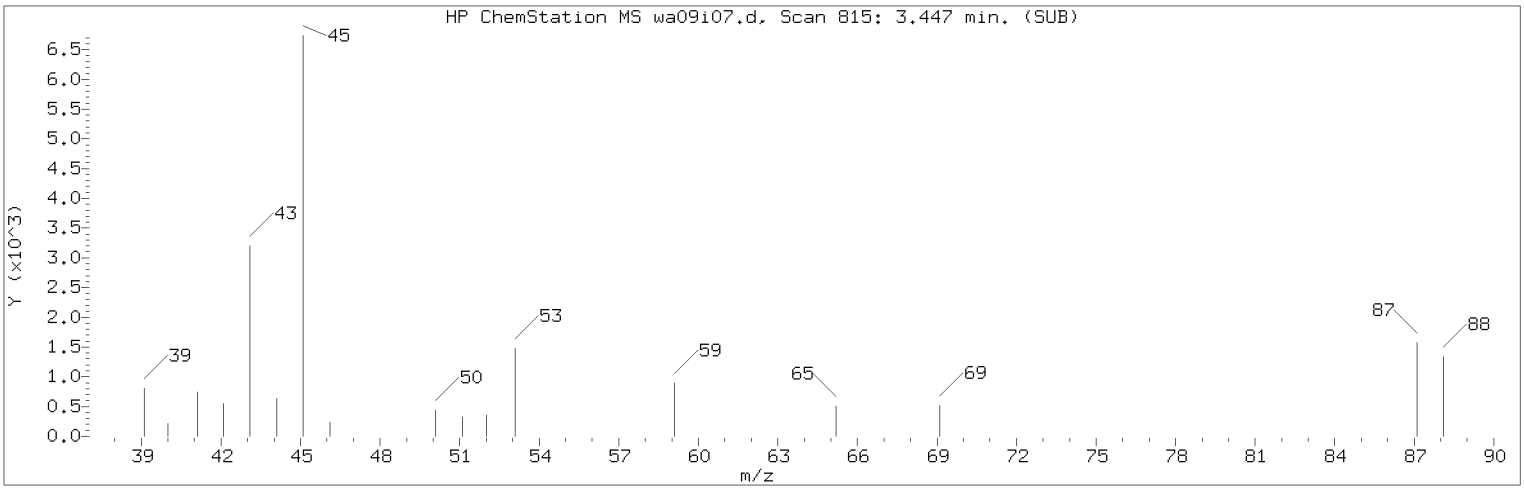
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

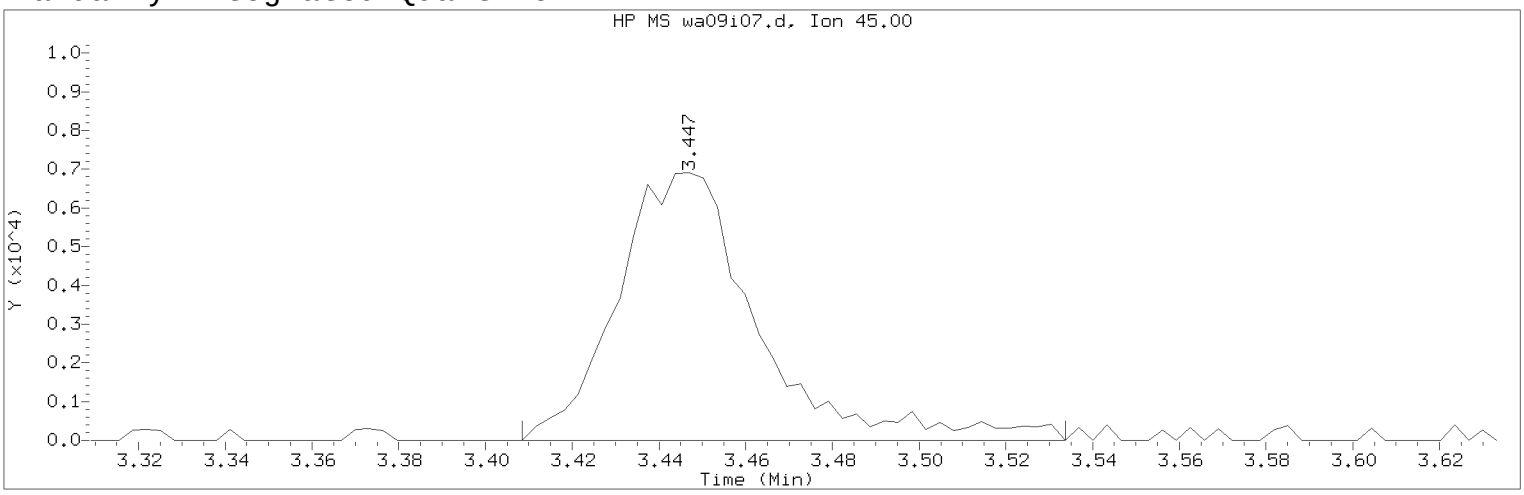
Compound Number : 34
Compound Name : n-Hexane
Scan Number : 753
Retention Time (minutes): 3.248
Quant Ion : 57.00
Area : 5726
On-column Amount (ng) : 0.9828
Integration start scan : 742 Integration stop scan: 786
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: 17 Page 290 of 432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

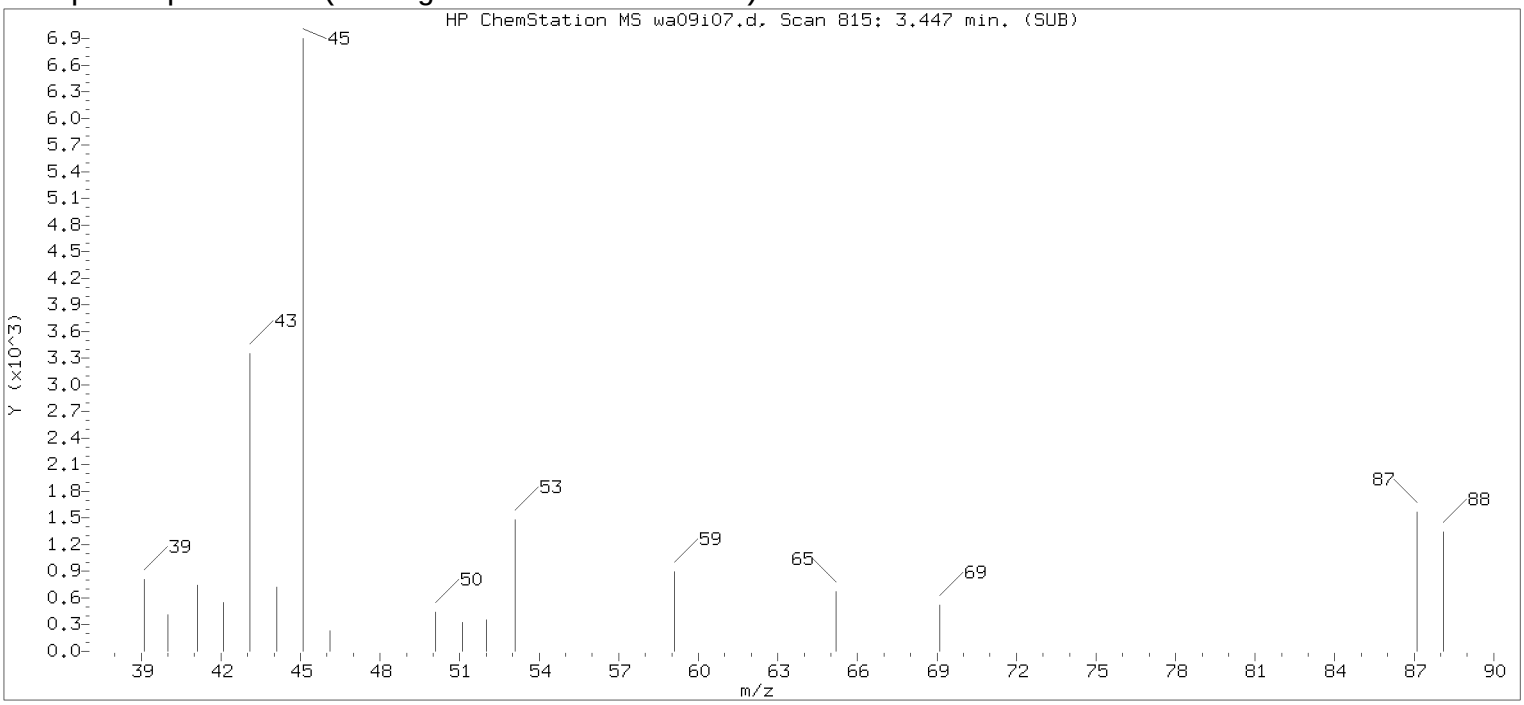
Compound Number : 38
Compound Name : di-Isopropyl ether
Scan Number : 815
Retention Time (minutes): 3.447
Quant Ion : 45.00
Area (flag) : 15501M
On-Column Amount (ng) : 0.9884
Integration start scan : 802 Integration stop scan: 841
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

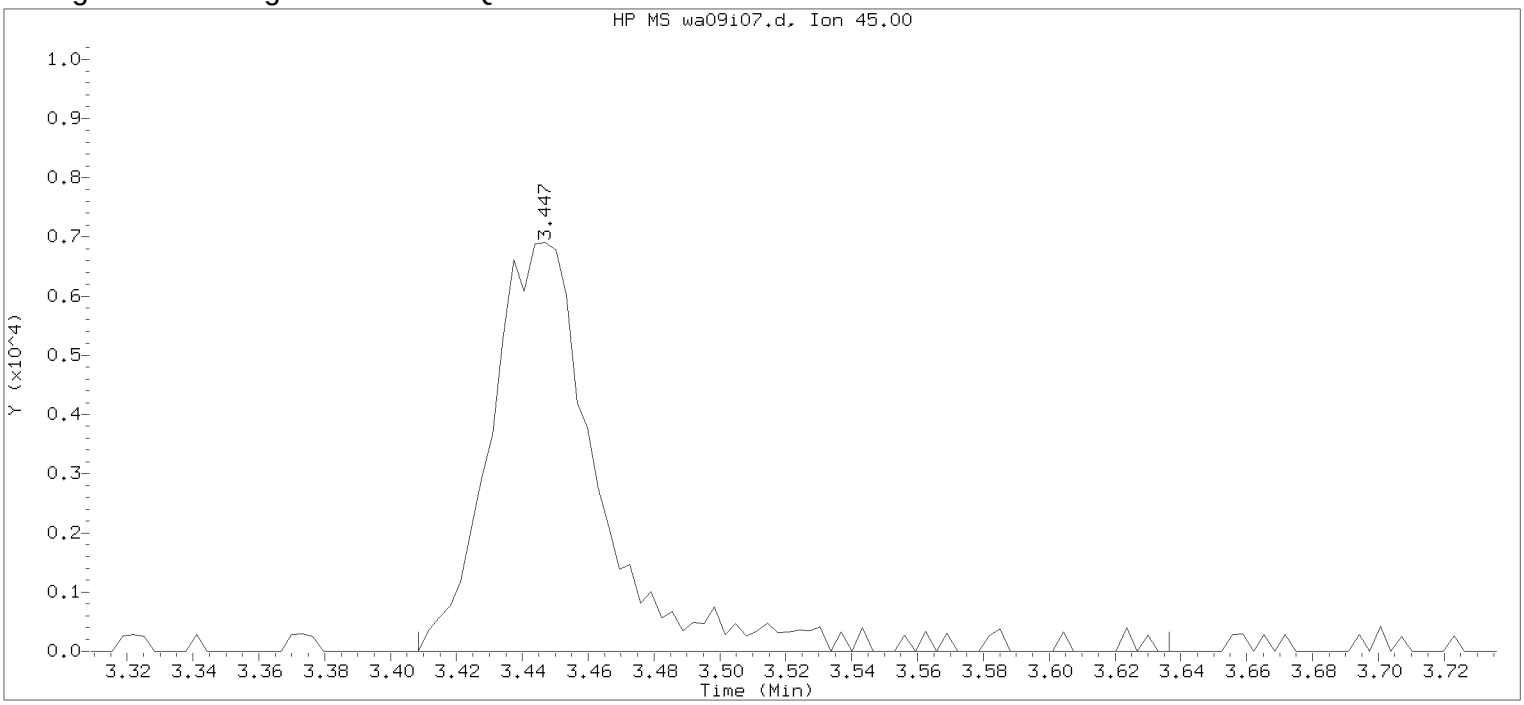
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

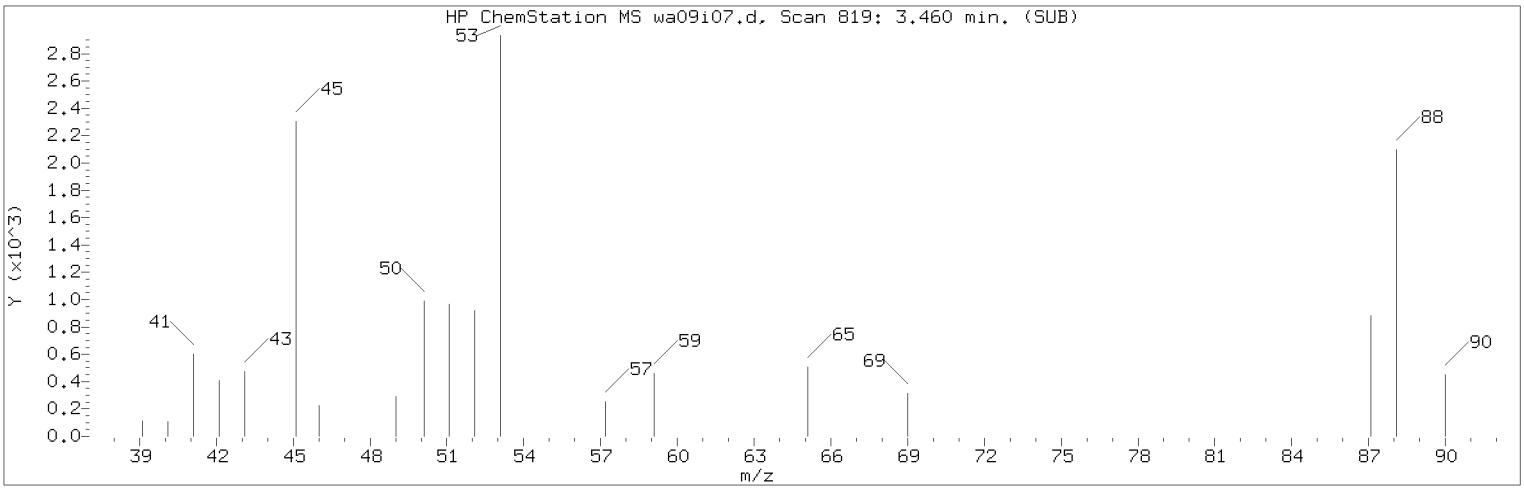
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

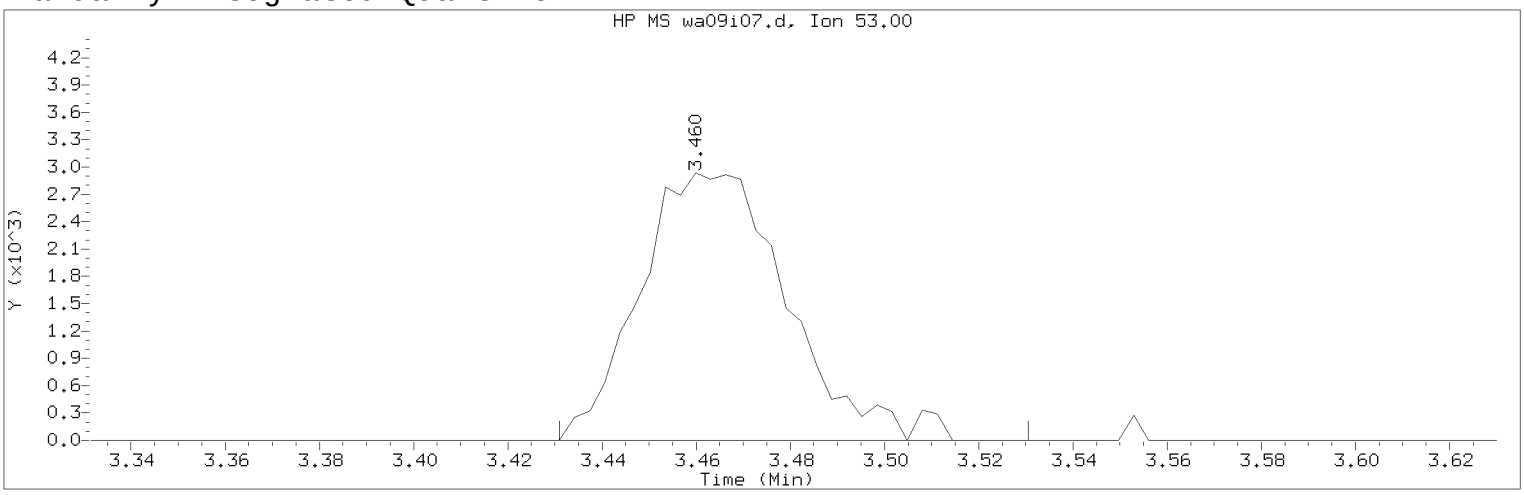
Compound Number : 38
Compound Name : di-Isopropyl ether
Scan Number : 815
Retention Time (minutes): 3.447
Quant Ion : 45.00
Area : 16126
On-column Amount (ng) : 1.0225
Integration start scan : 802 Integration stop scan: 873
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

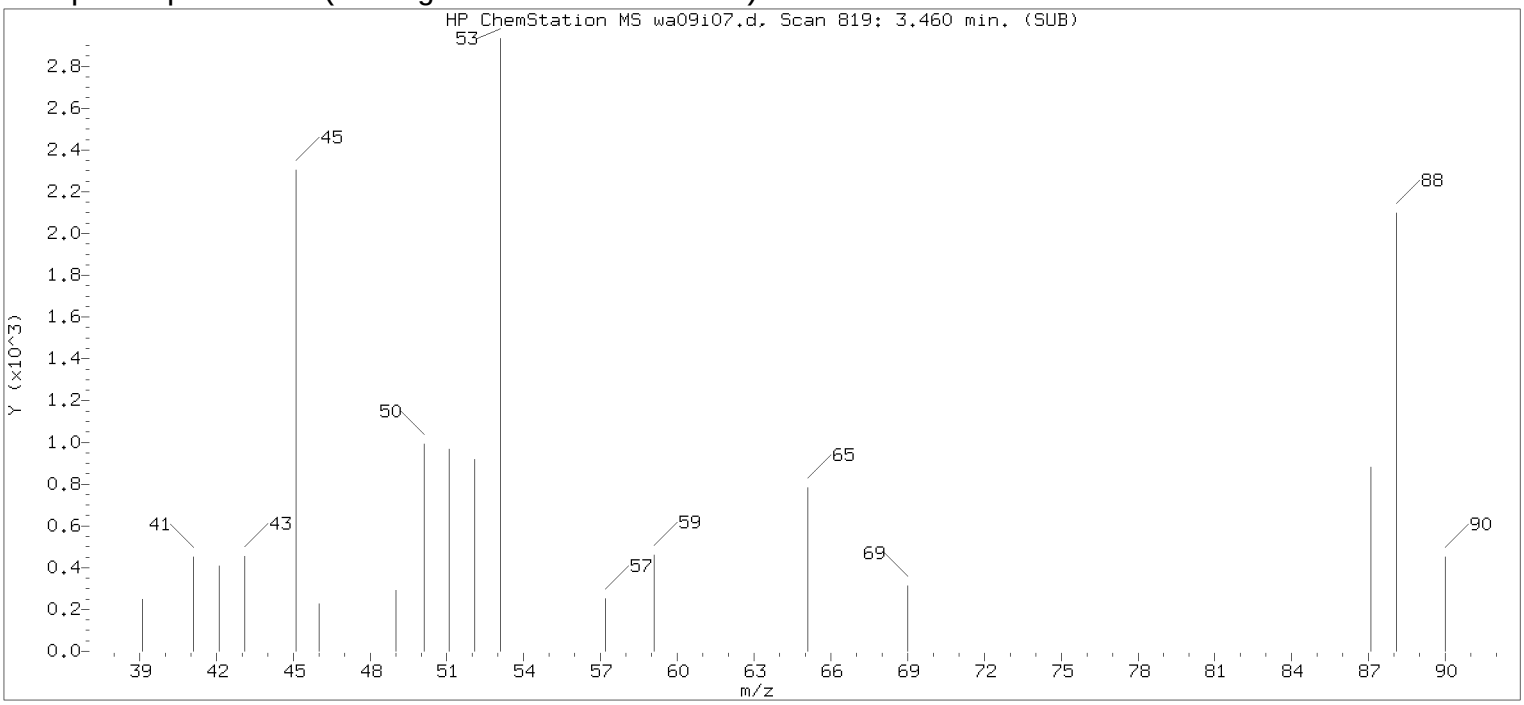
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 819
Retention Time (minutes): 3.460
Quant Ion : 53.00
Area (flag) : 6417M
On-Column Amount (ng) : 0.8668
Integration start scan : 809 Integration stop scan: 840
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

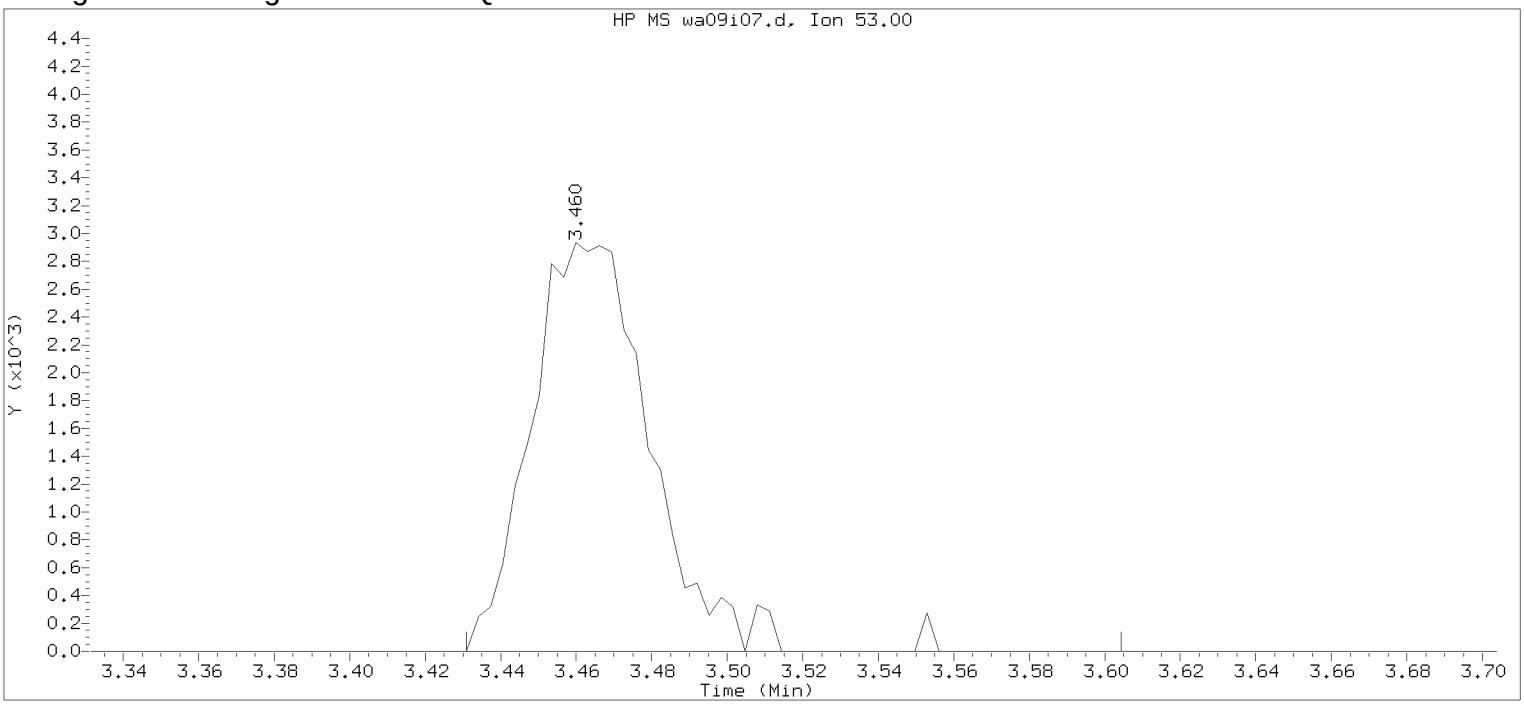
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

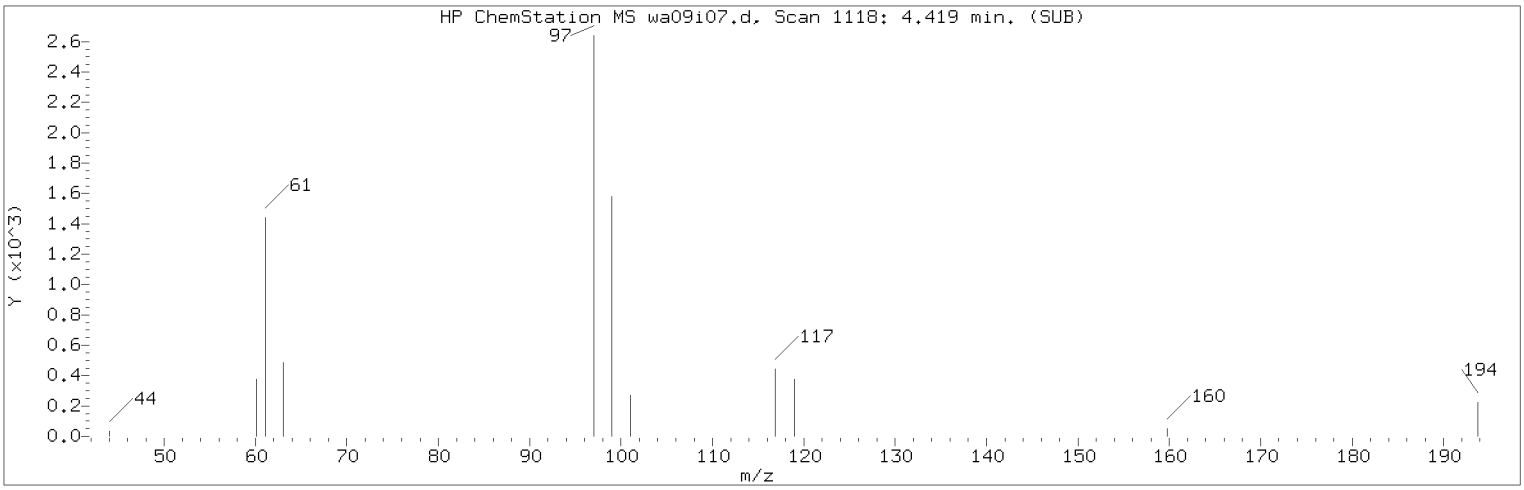
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

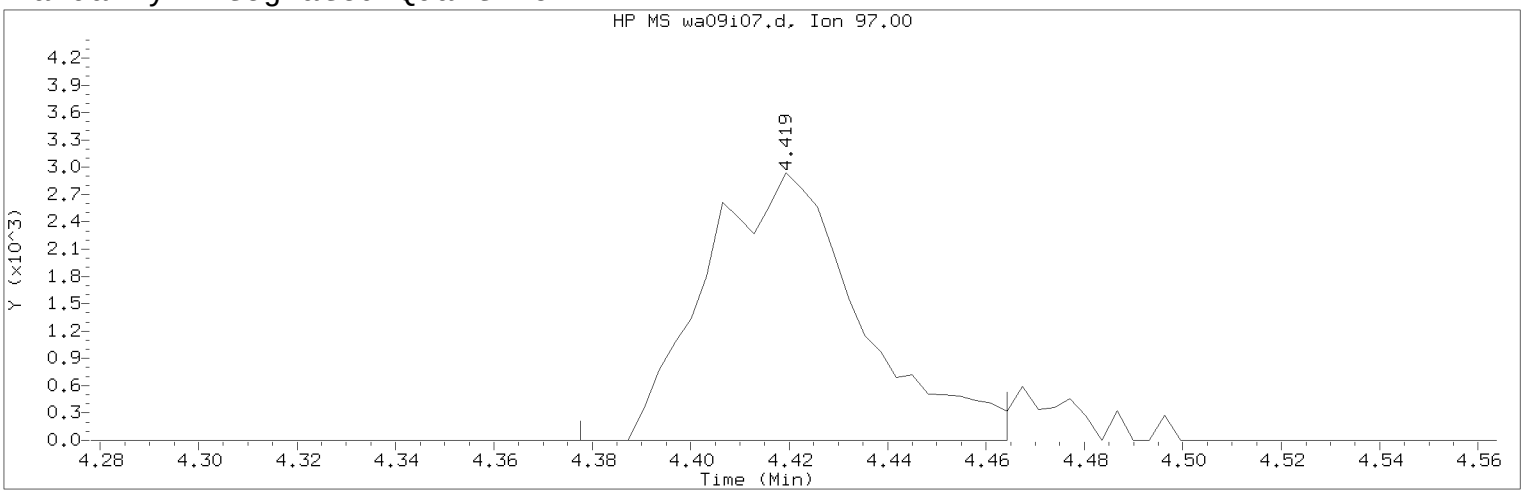
Compound Number : 39
Compound Name : 2-Chloro-1,3-butadiene
Scan Number : 819
Retention Time (minutes): 3.460
Quant Ion : 53.00
Area : 6471
On-column Amount (ng) : 0.8732
Integration start scan : 809 Integration stop scan: 863
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

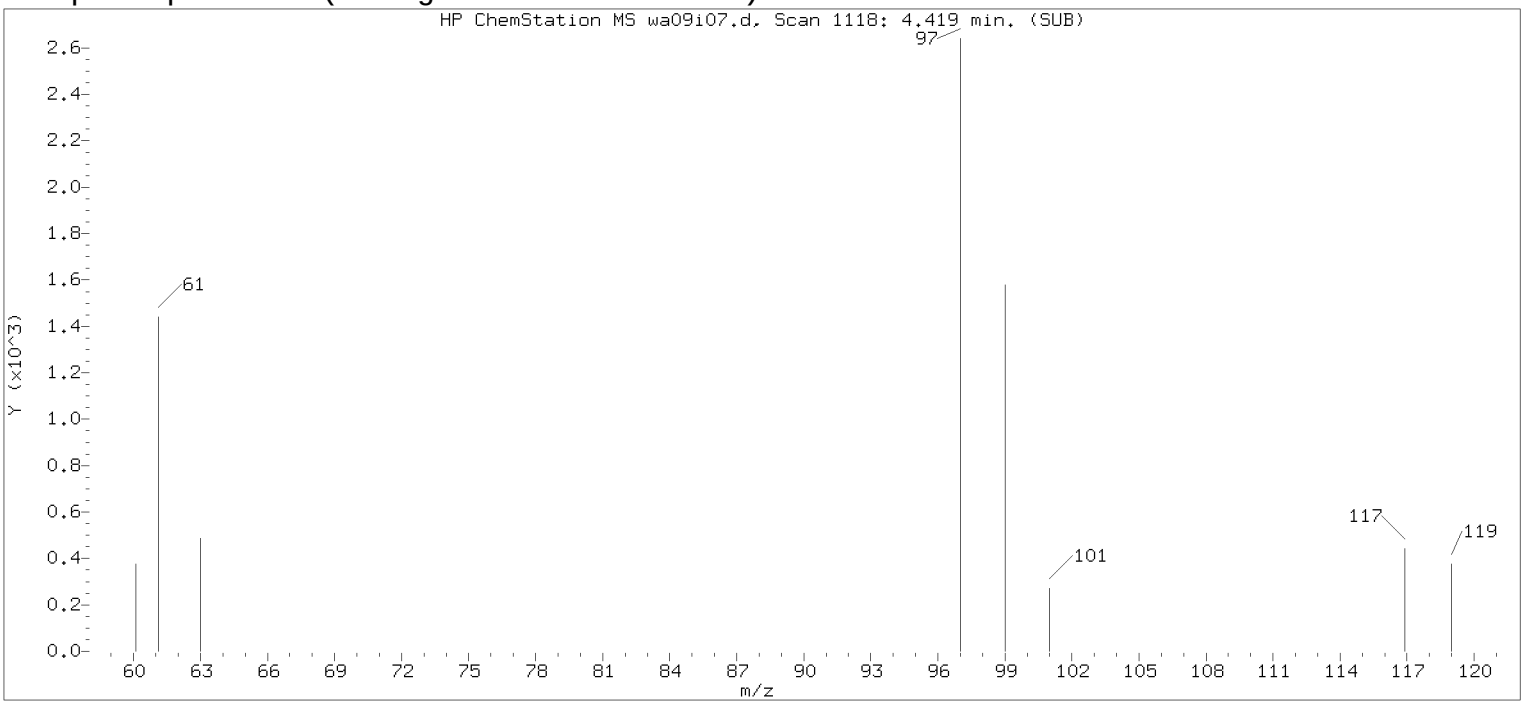
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1118
Retention Time (minutes): 4.419
Quant Ion : 97.00
Area (flag) : 6418M
On-Column Amount (ng) : 0.8397
Integration start scan : 1104 Integration stop scan: 1131
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

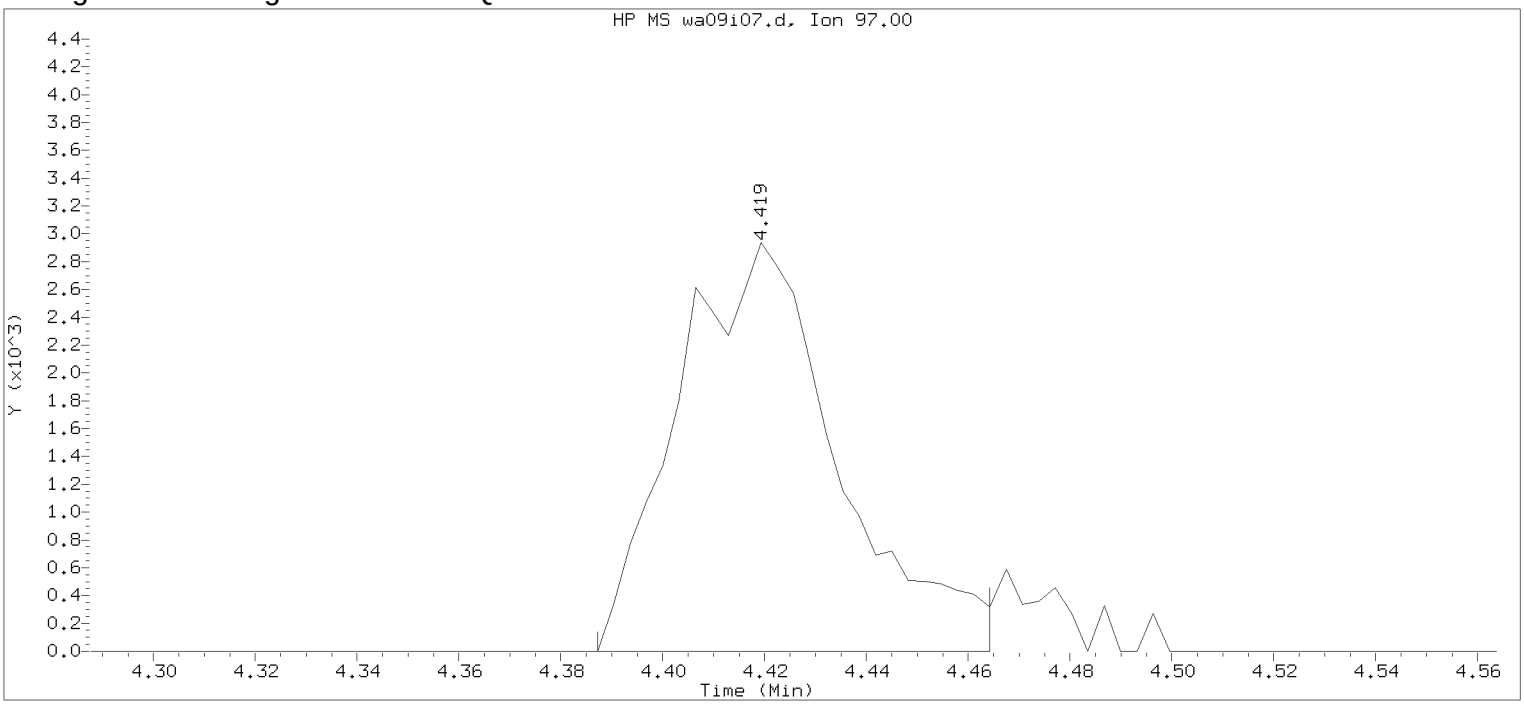
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

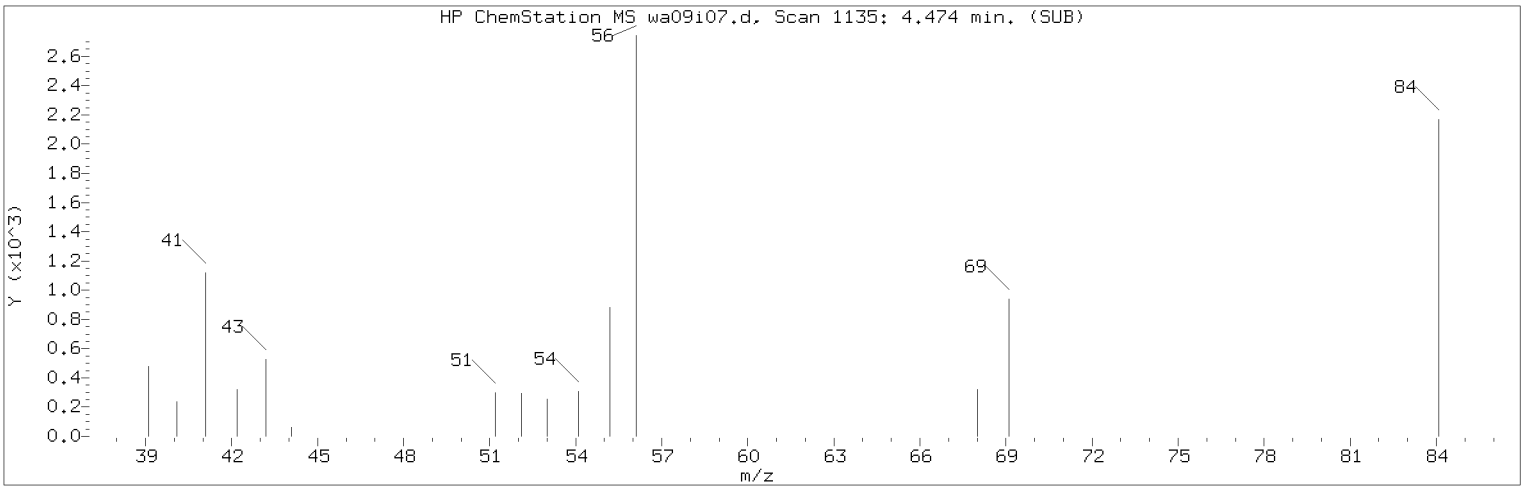
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

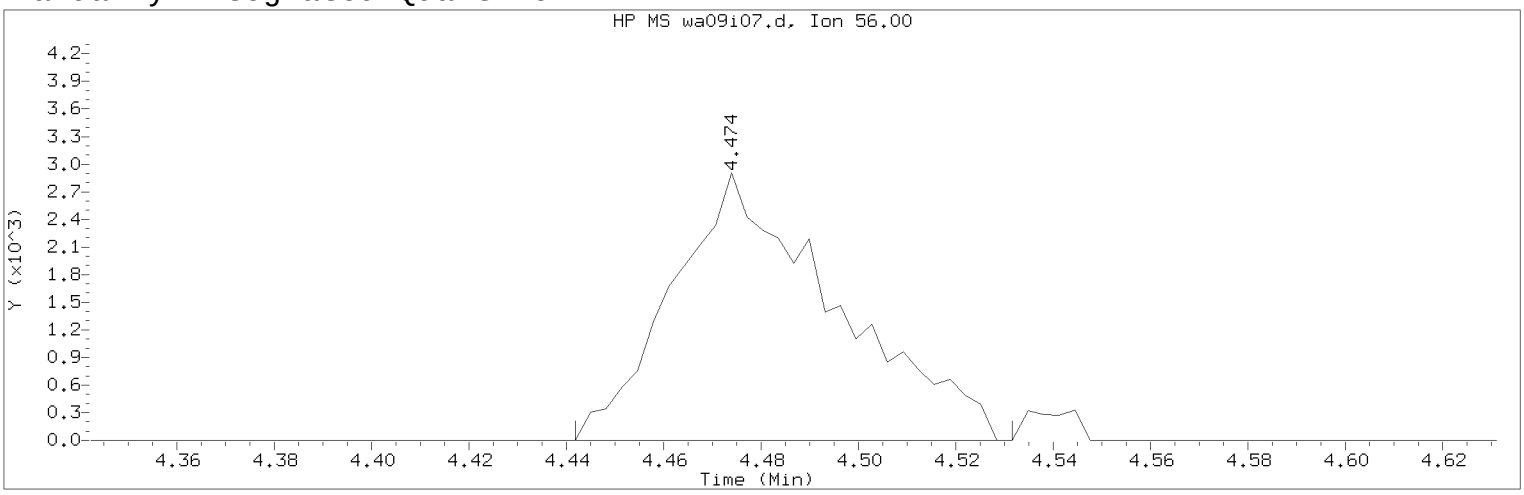
Compound Number : 53
Compound Name : 1,1,1-Trichloroethane
Scan Number : 1118
Retention Time (minutes): 4.419
Quant Ion : 97.00
Area : 6388
On-column Amount (ng) : 0.8362
Integration start scan : 1107 Integration stop scan: 1131
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

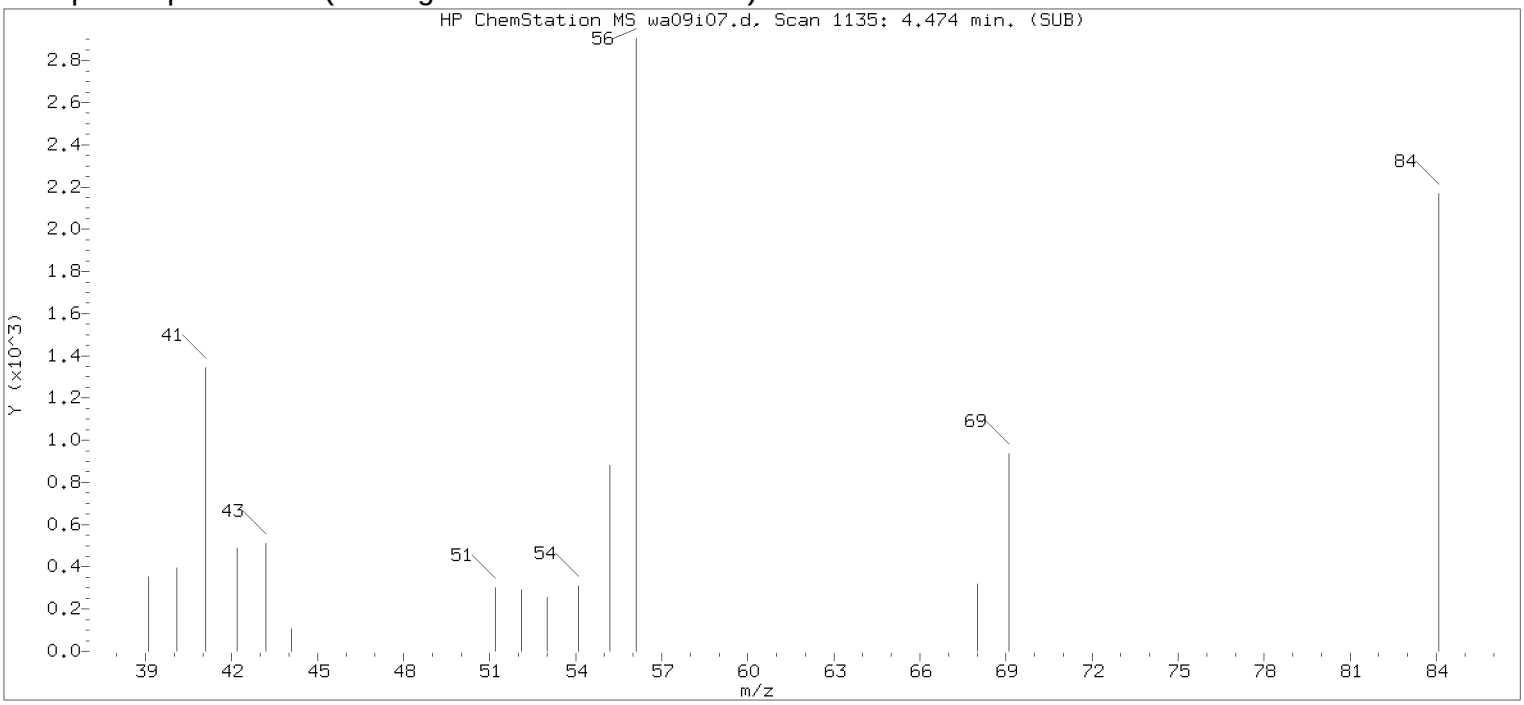
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 1135
Retention Time (minutes): 4.474
Quant Ion : 56.00
Area (flag) : 6768M
On-Column Amount (ng) : 0.8702
Integration start scan : 1124 Integration stop scan: 1152
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

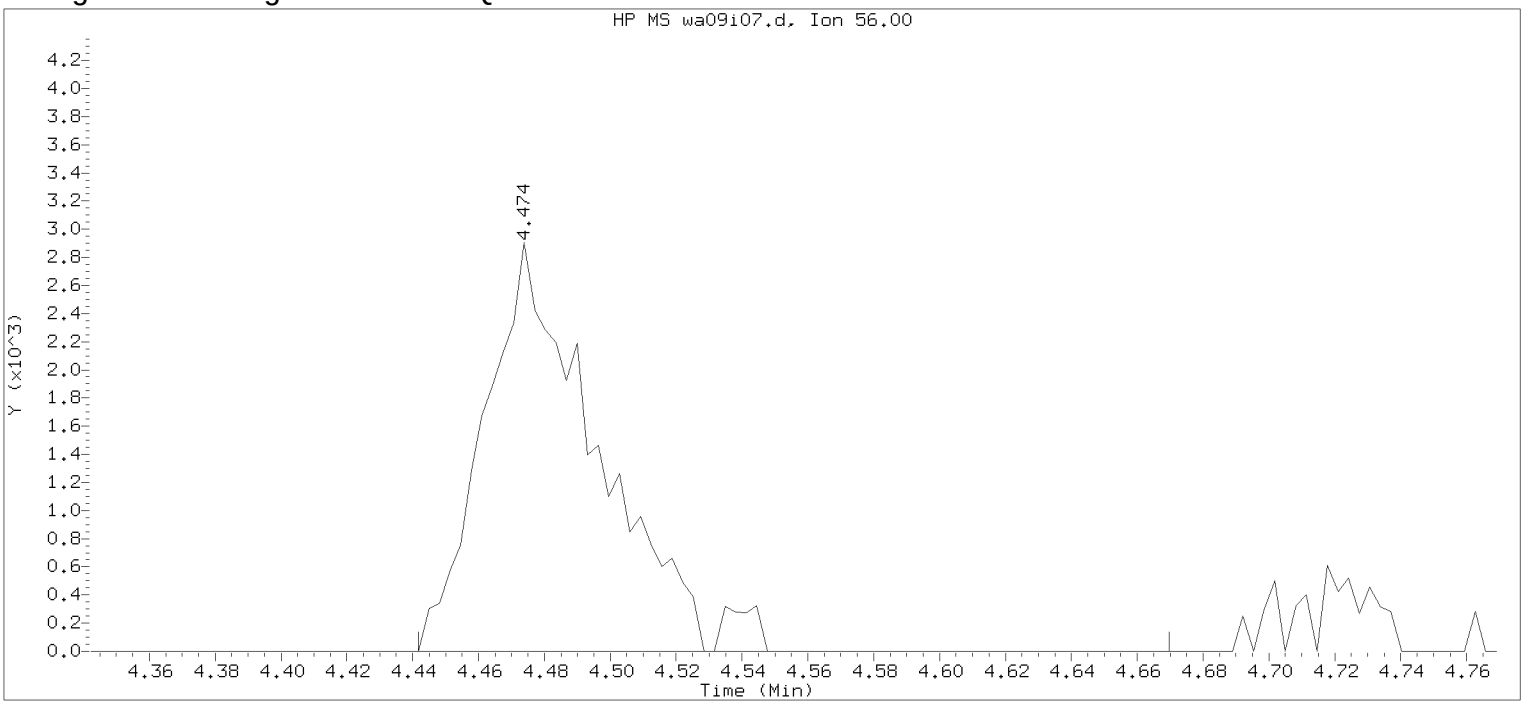
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

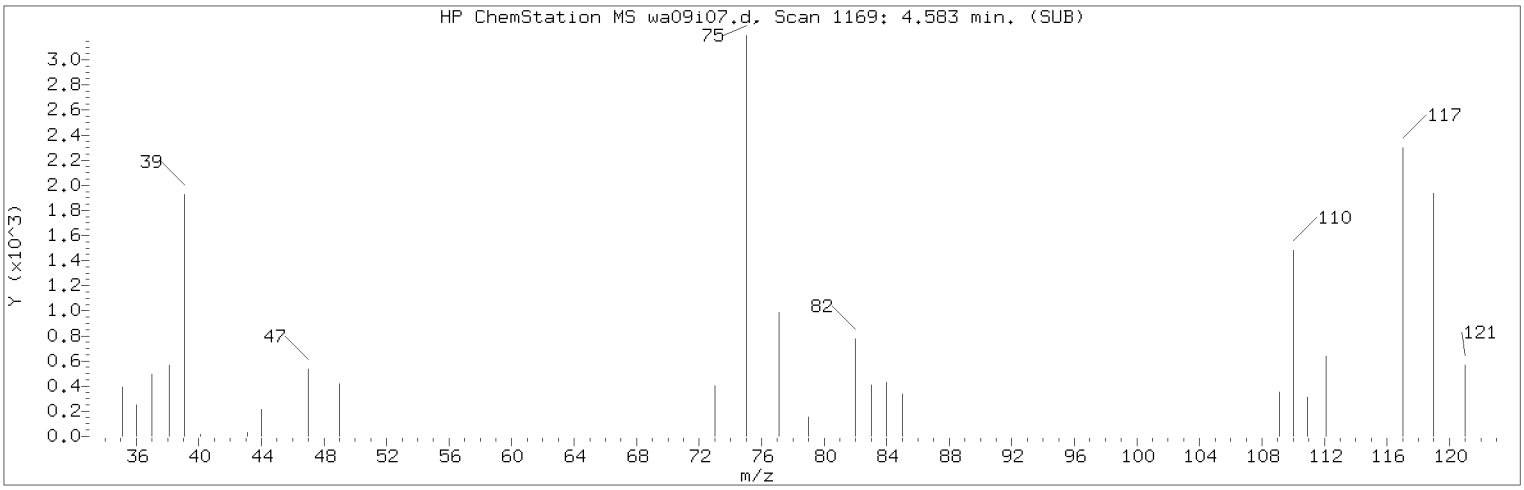
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

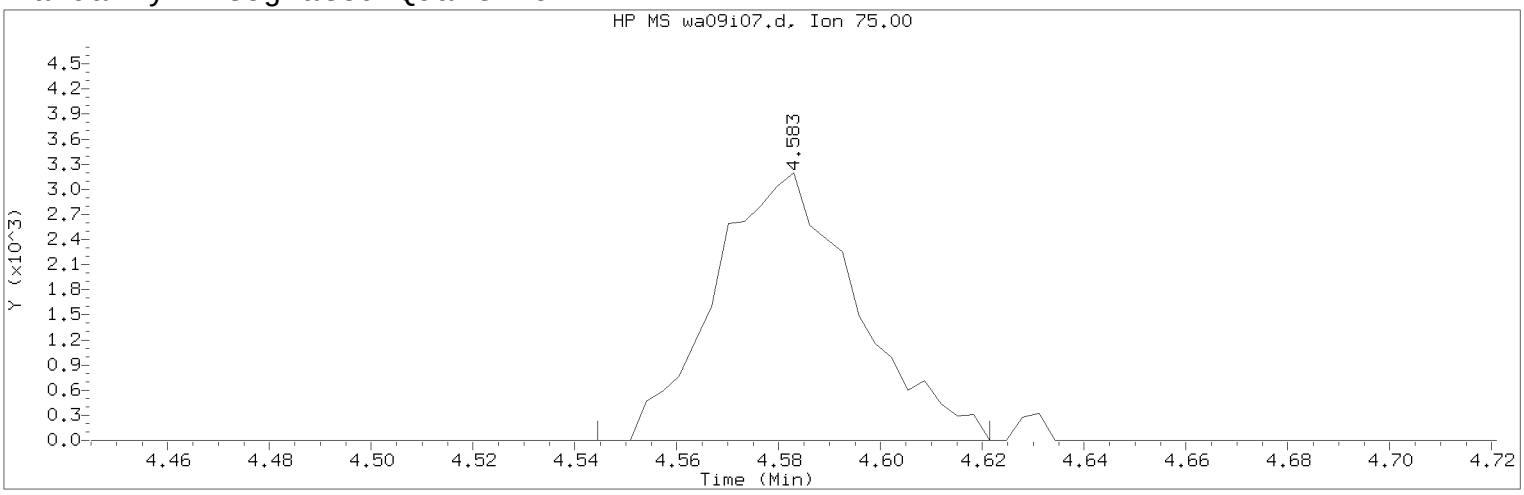
Compound Number : 54
Compound Name : Cyclohexane
Scan Number : 1135
Retention Time (minutes): 4.474
Quant Ion : 56.00
Area : 6999
On-column Amount (ng) : 0.8961
Integration start scan : 1124 Integration stop scan: 1195
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

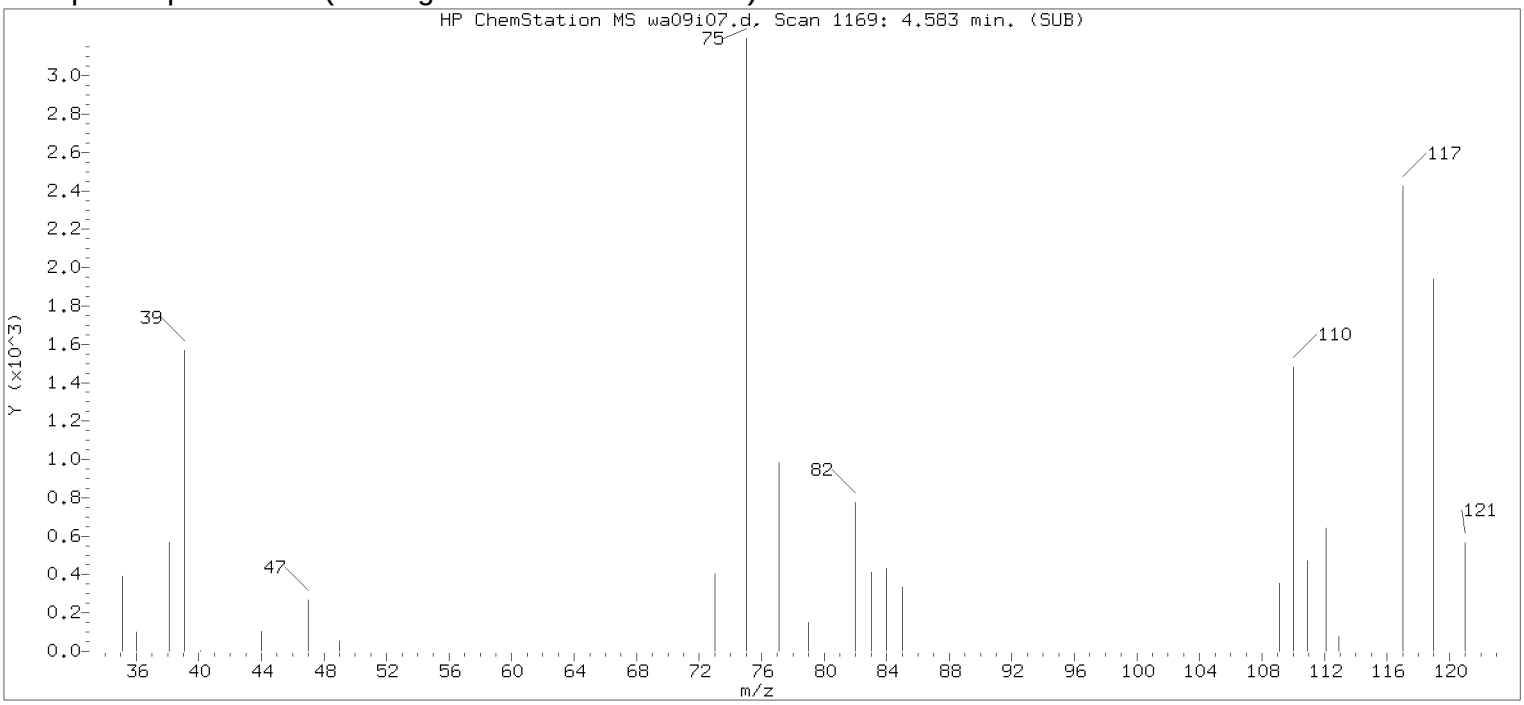
Compound Number : 55
Compound Name : 1,1-Dichloropropene
Scan Number : 1169
Retention Time (minutes): 4.583
Quant Ion : 75.00
Area (flag) : 6175M
On-Column Amount (ng) : 0.9028
Integration start scan : 1156 Integration stop scan: 1180
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

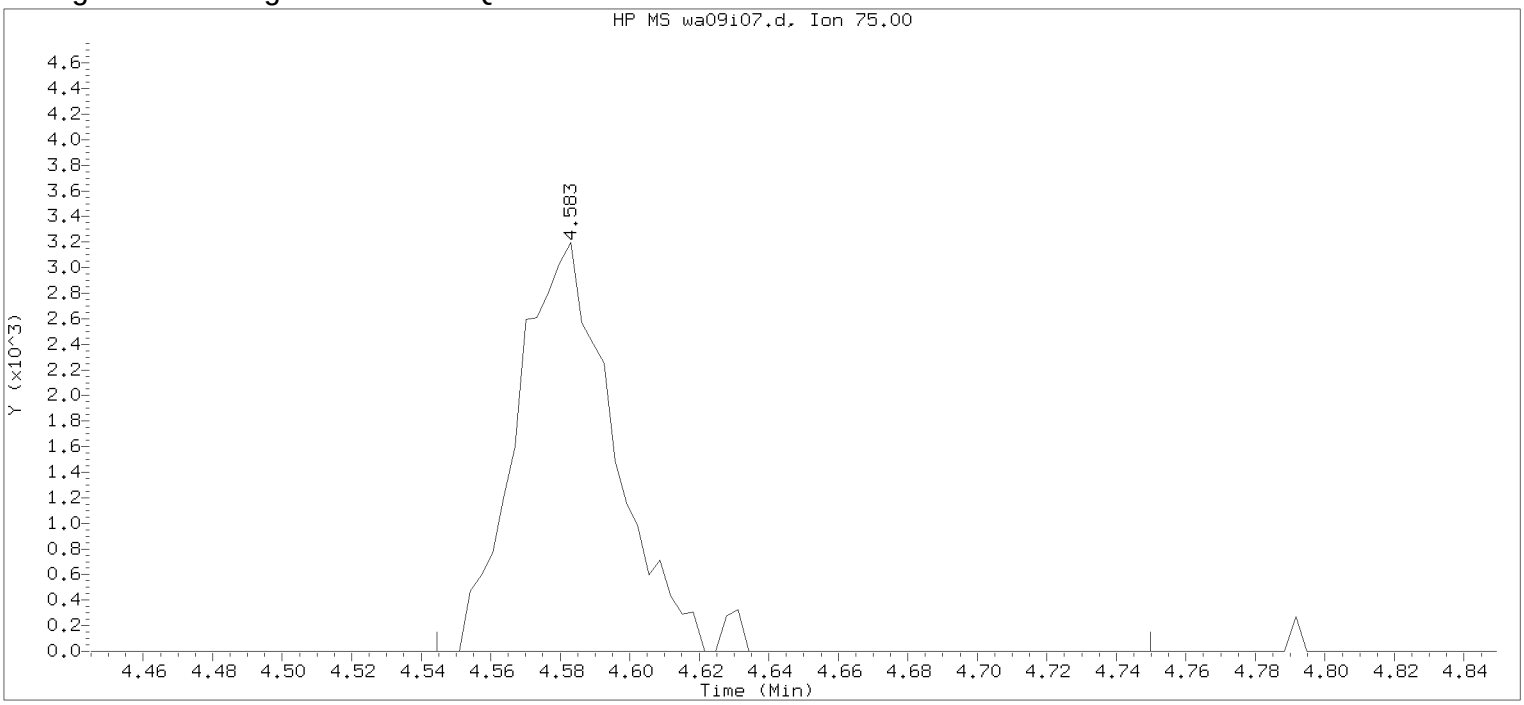
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

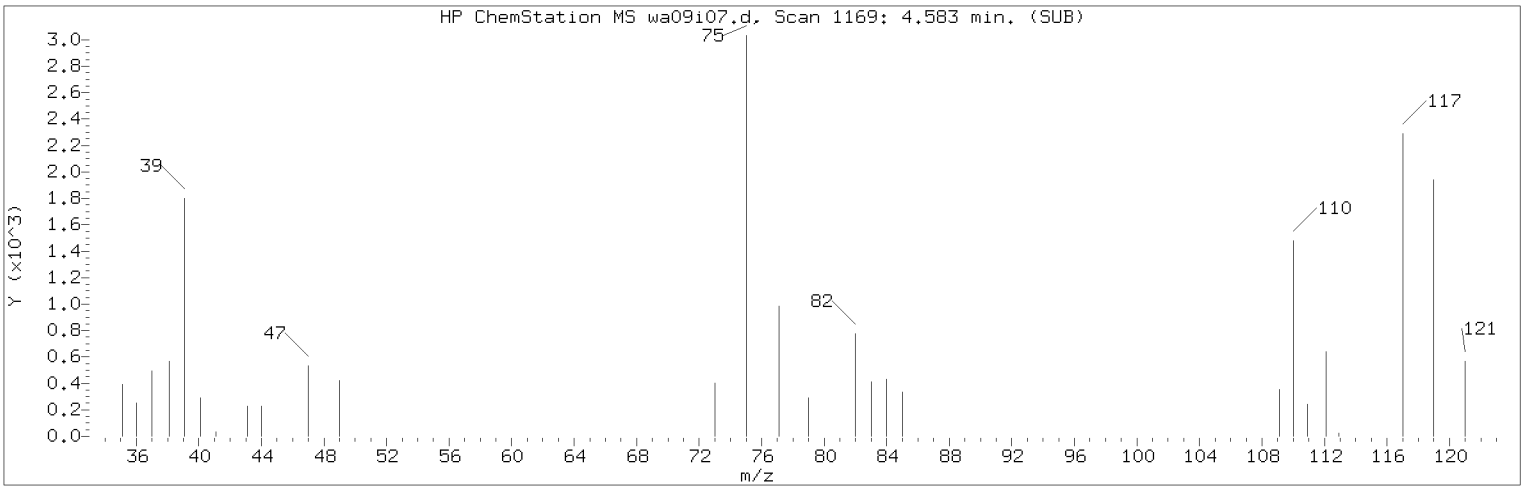
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

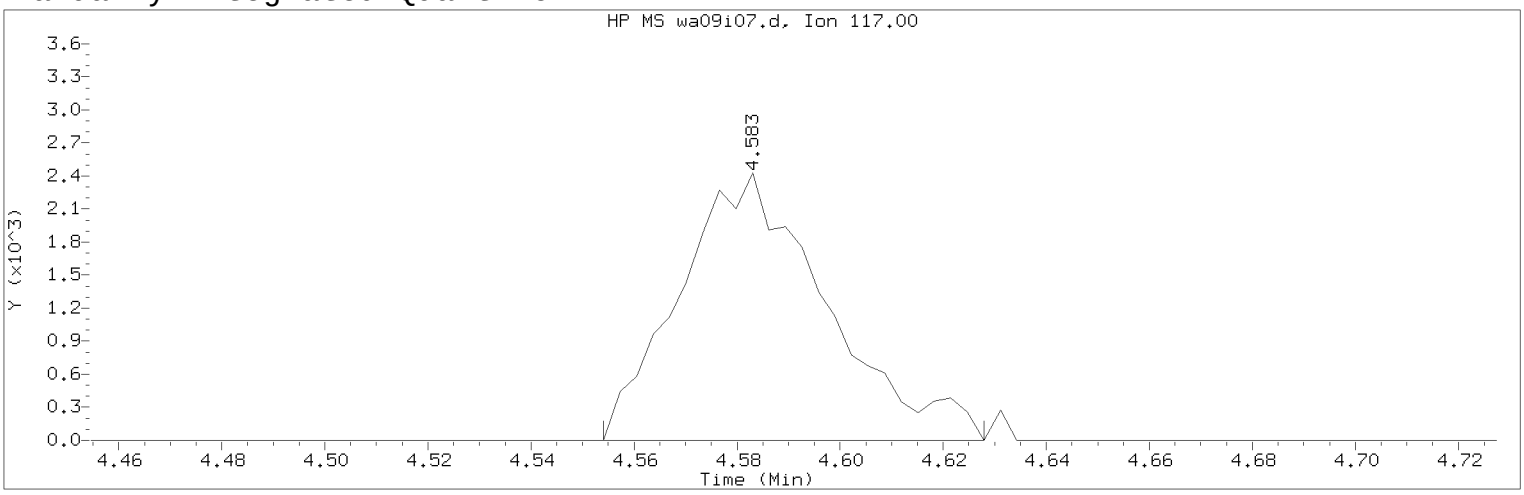
Compound Number : 55
Compound Name : 1,1-Dichloropropene
Scan Number : 1169
Retention Time (minutes): 4.583
Quant Ion : 75.00
Area : 6291
On-column Amount (ng) : 0.9158
Integration start scan : 1156 Integration stop scan: 1220
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: 17 Page 320 of 432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

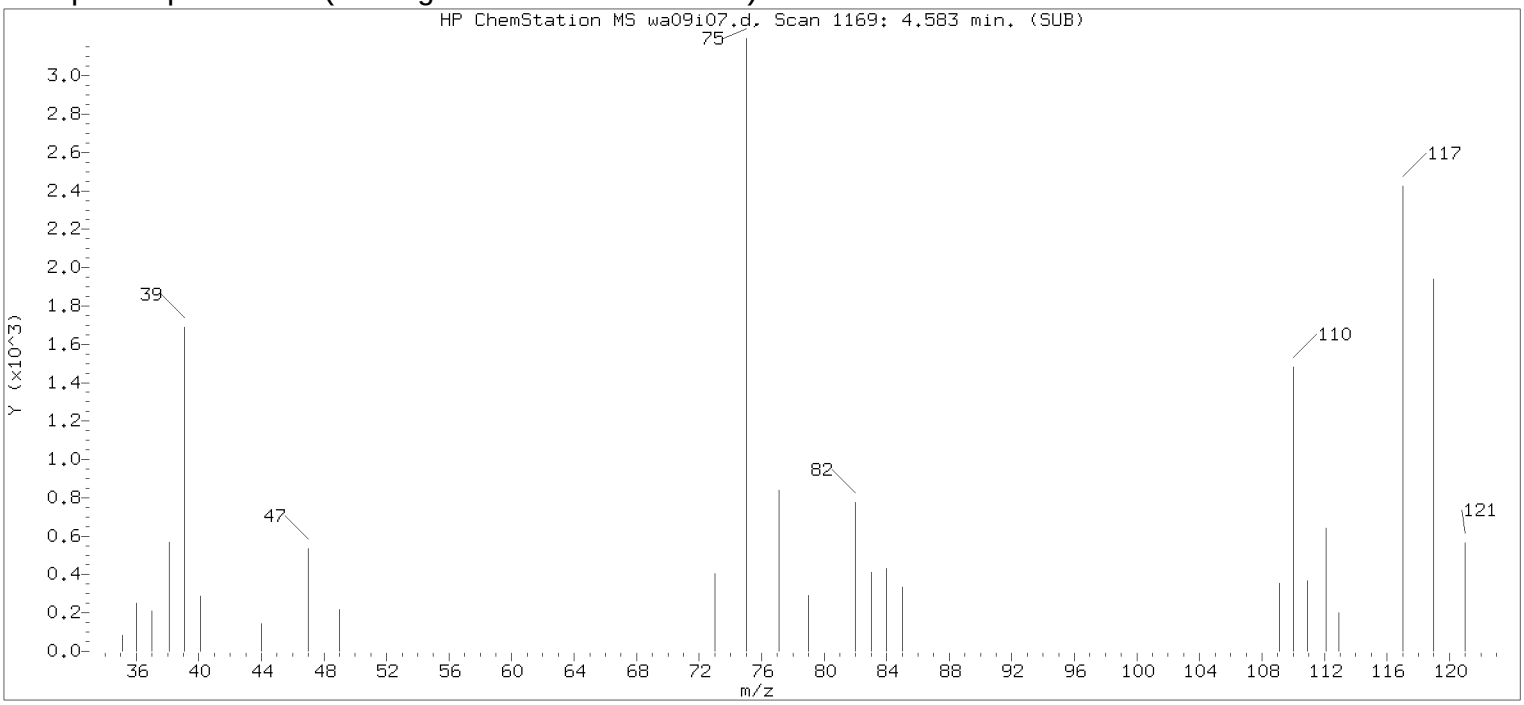
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 1169
Retention Time (minutes): 4.583
Quant Ion : 117.00
Area (flag) : 4804M
On-Column Amount (ng) : 0.8299
Integration start scan : 1159 Integration stop scan: 1182
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

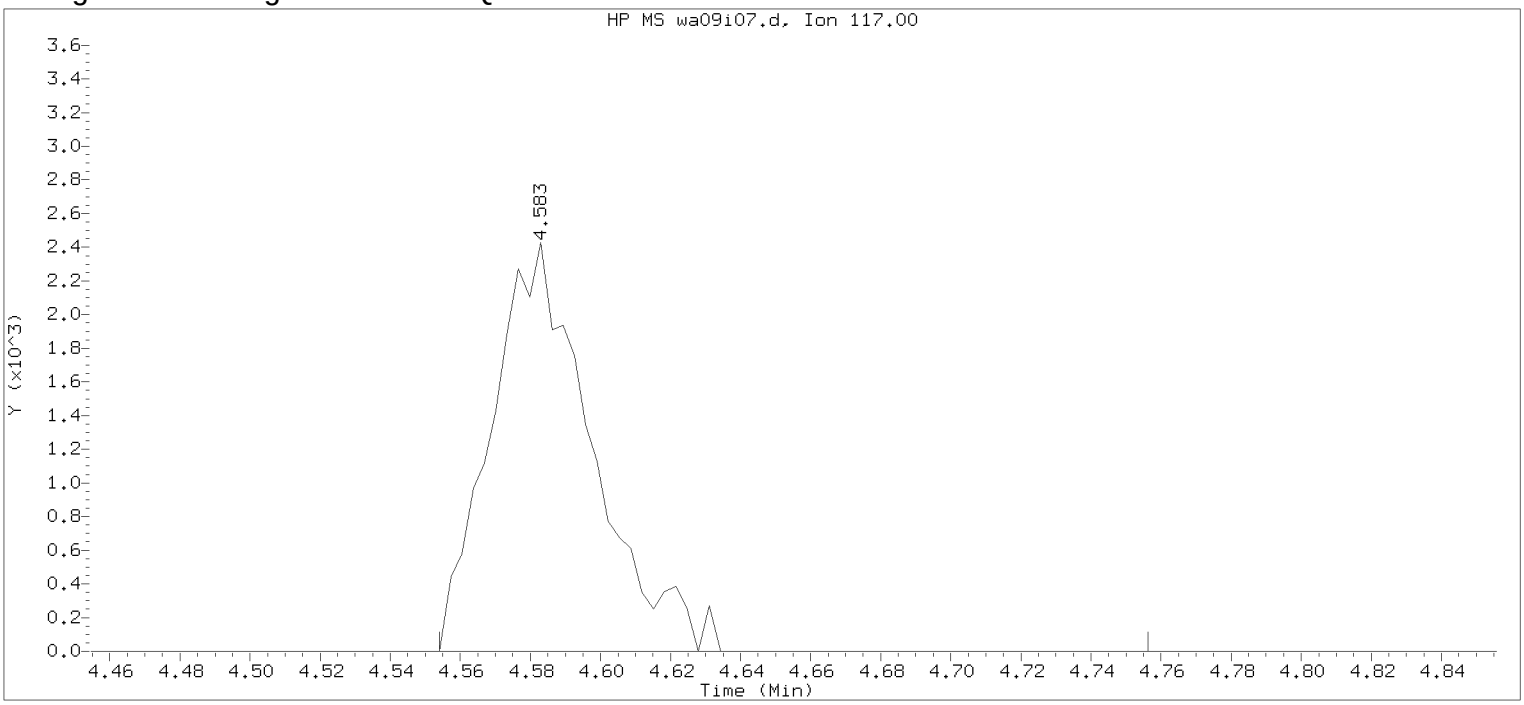
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

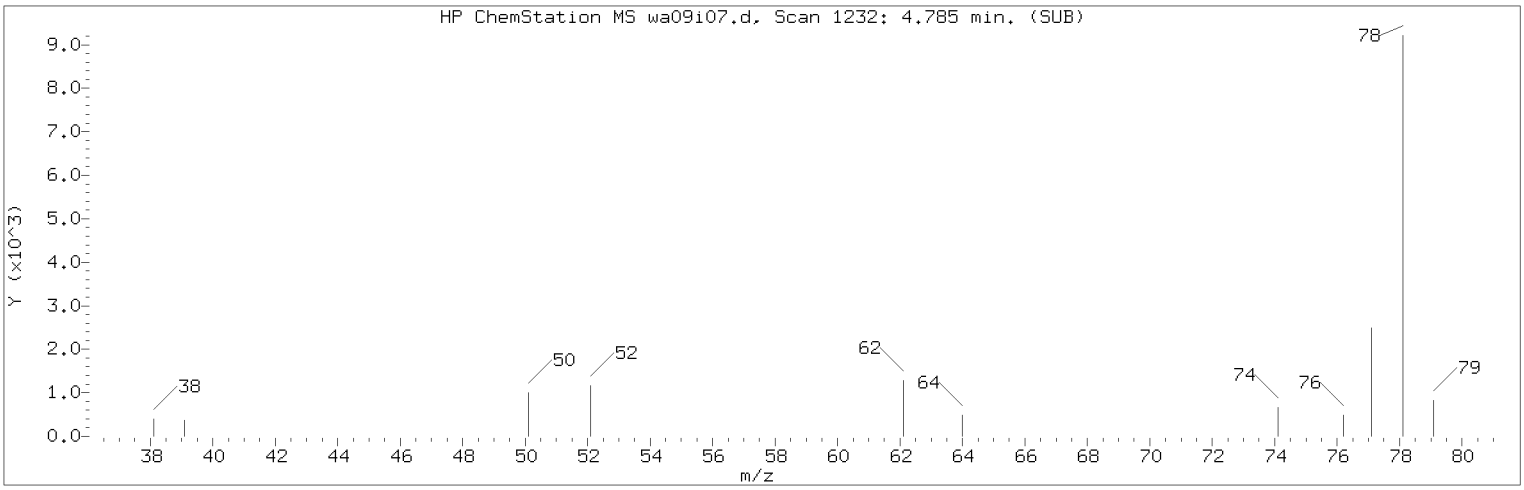
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

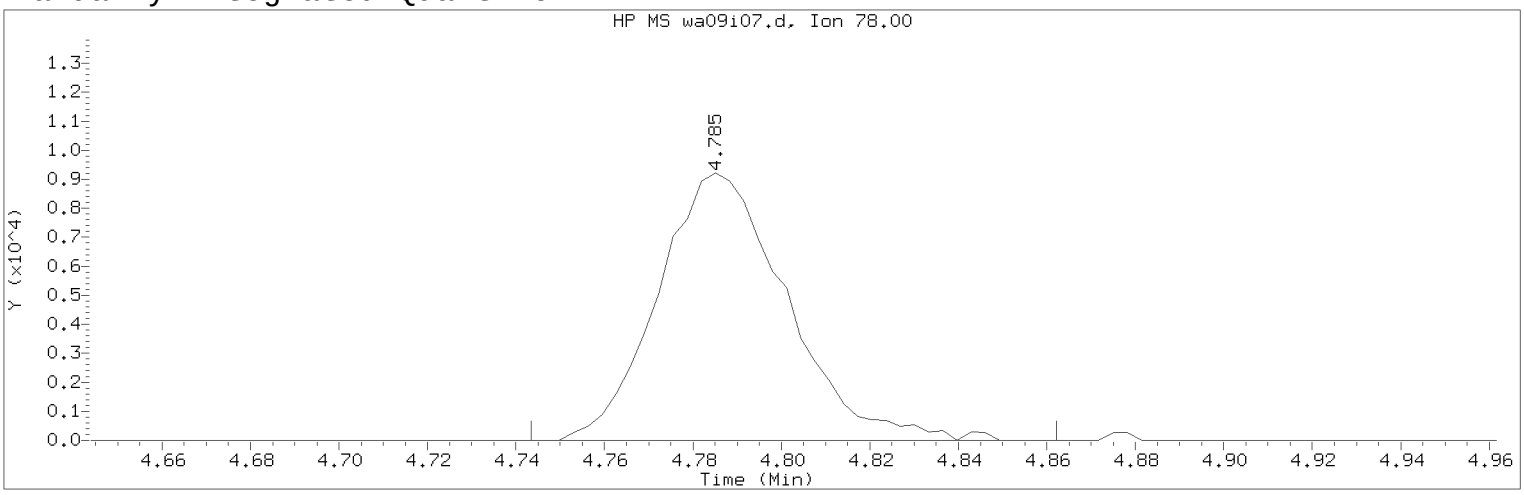
Compound Number : 56
Compound Name : Carbon Tetrachloride
Scan Number : 1169
Retention Time (minutes): 4.583
Quant Ion : 117.00
Area : 4856
On-column Amount (ng) : 0.8379
Integration start scan : 1159 Integration stop scan: 1222
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

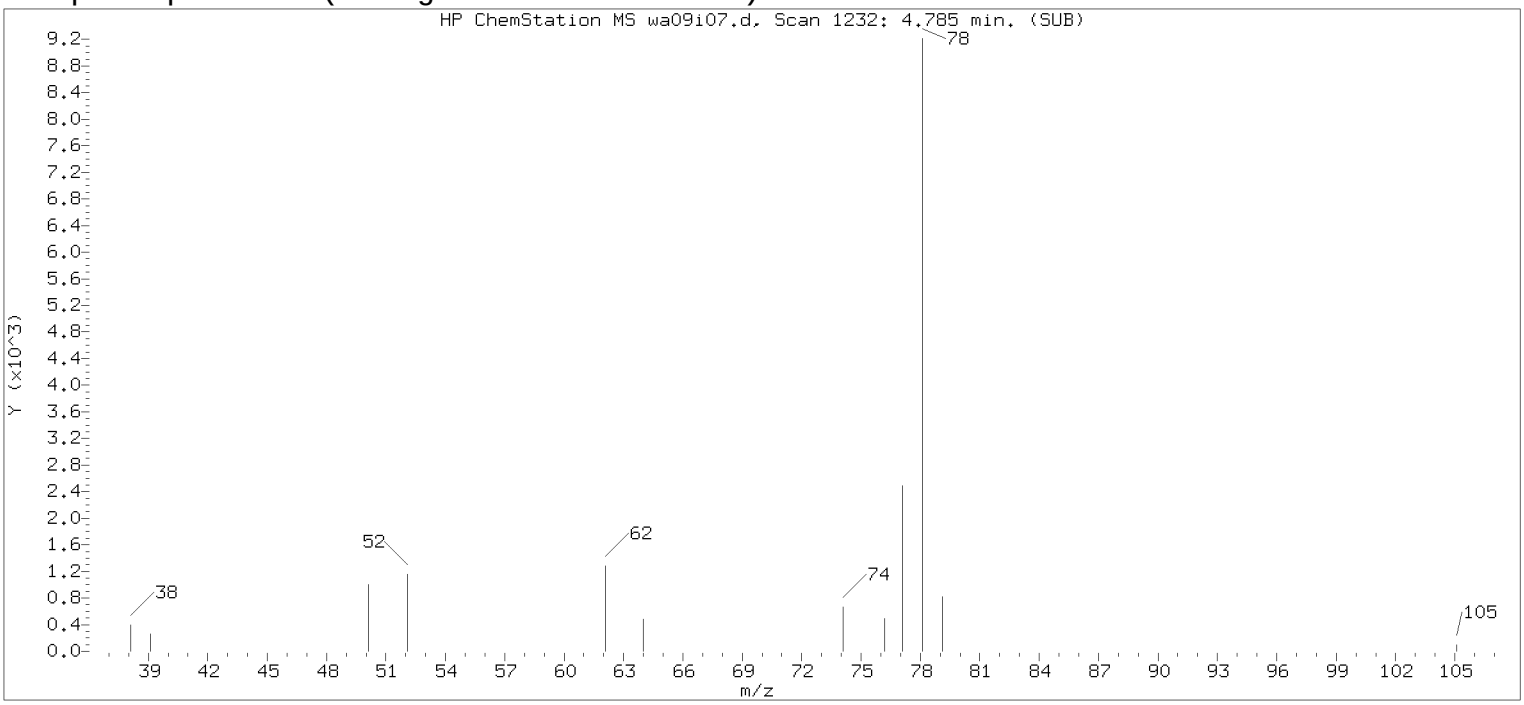
Compound Number : 60
Compound Name : Benzene
Scan Number : 1232
Retention Time (minutes): 4.785
Quant Ion : 78.00
Area (flag) : 18586M
On-Column Amount (ng) : 0.9037
Integration start scan : 1218 Integration stop scan: 1255
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

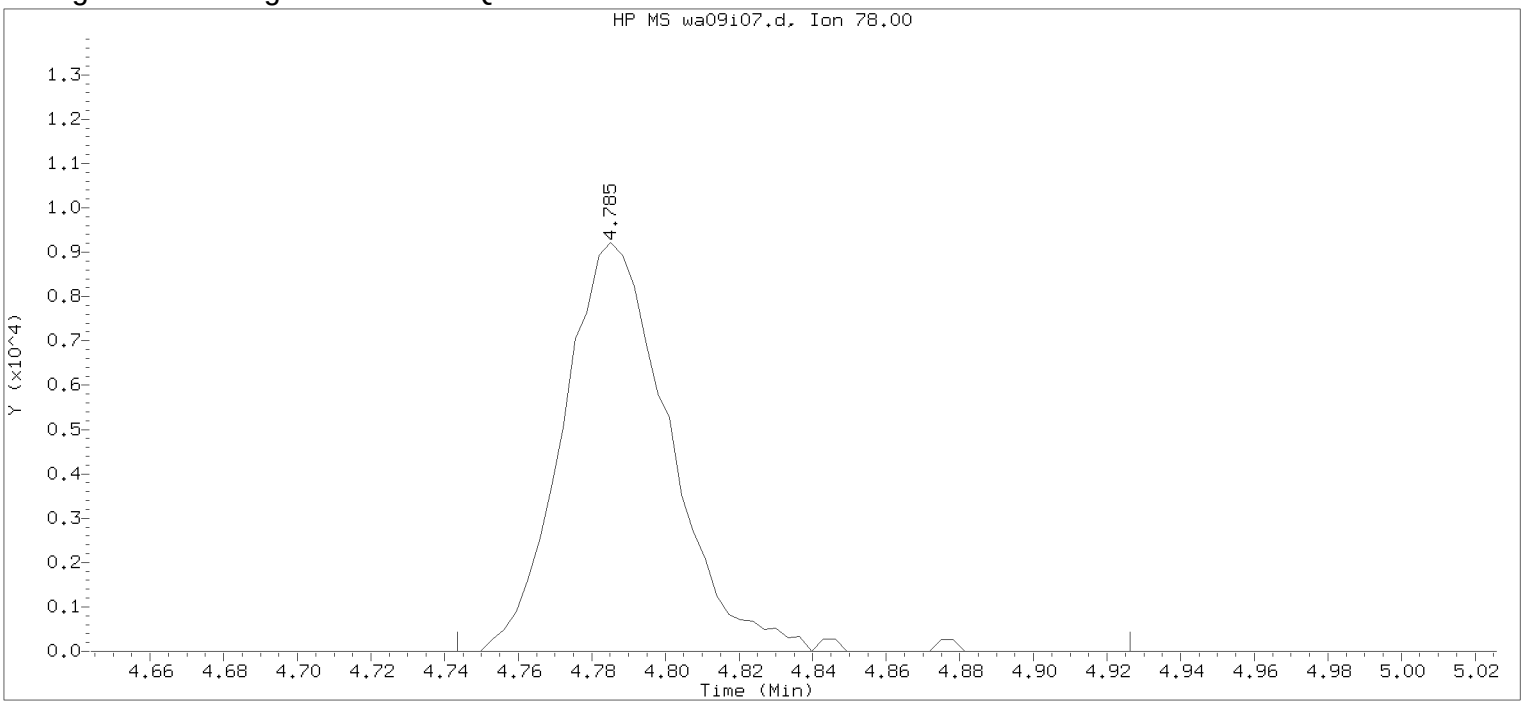
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

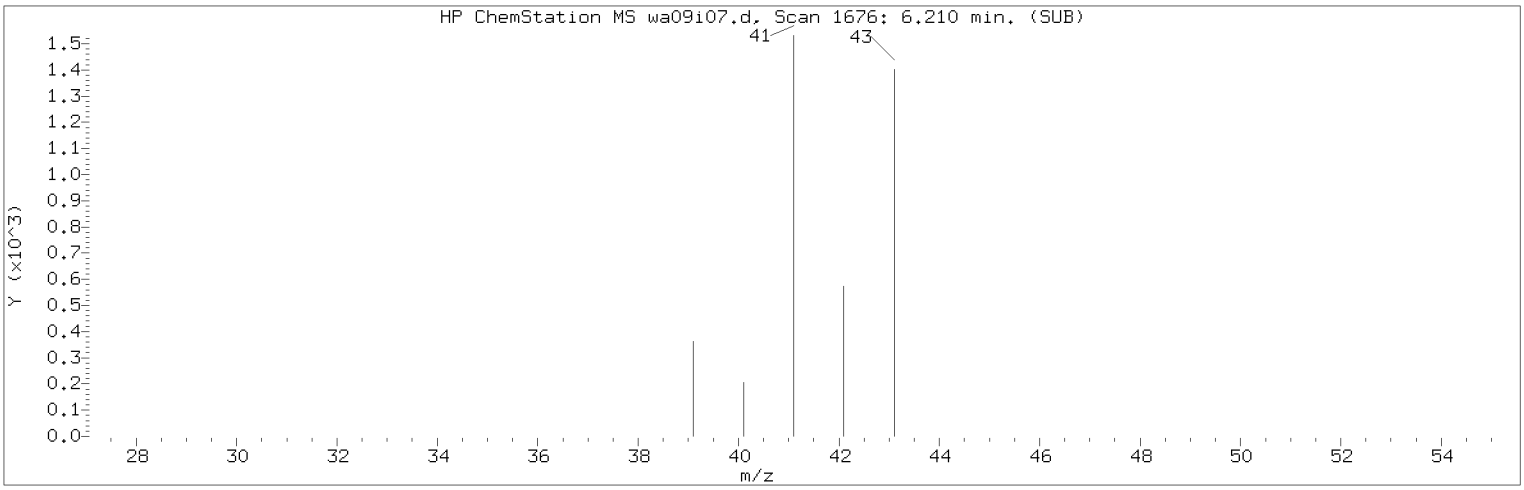
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

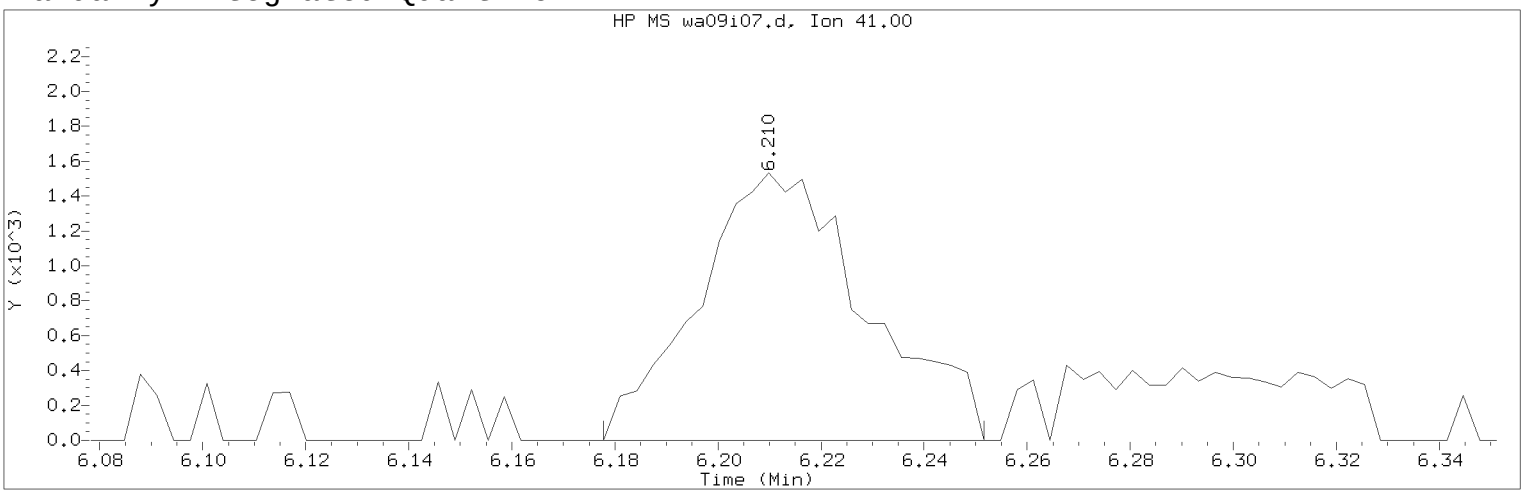
Compound Number : 60
Compound Name : Benzene
Scan Number : 1232
Retention Time (minutes): 4.785
Quant Ion : 78.00
Area : 18687
On-column Amount (ng) : 0.9080
Integration start scan : 1218 Integration stop scan: 1275
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

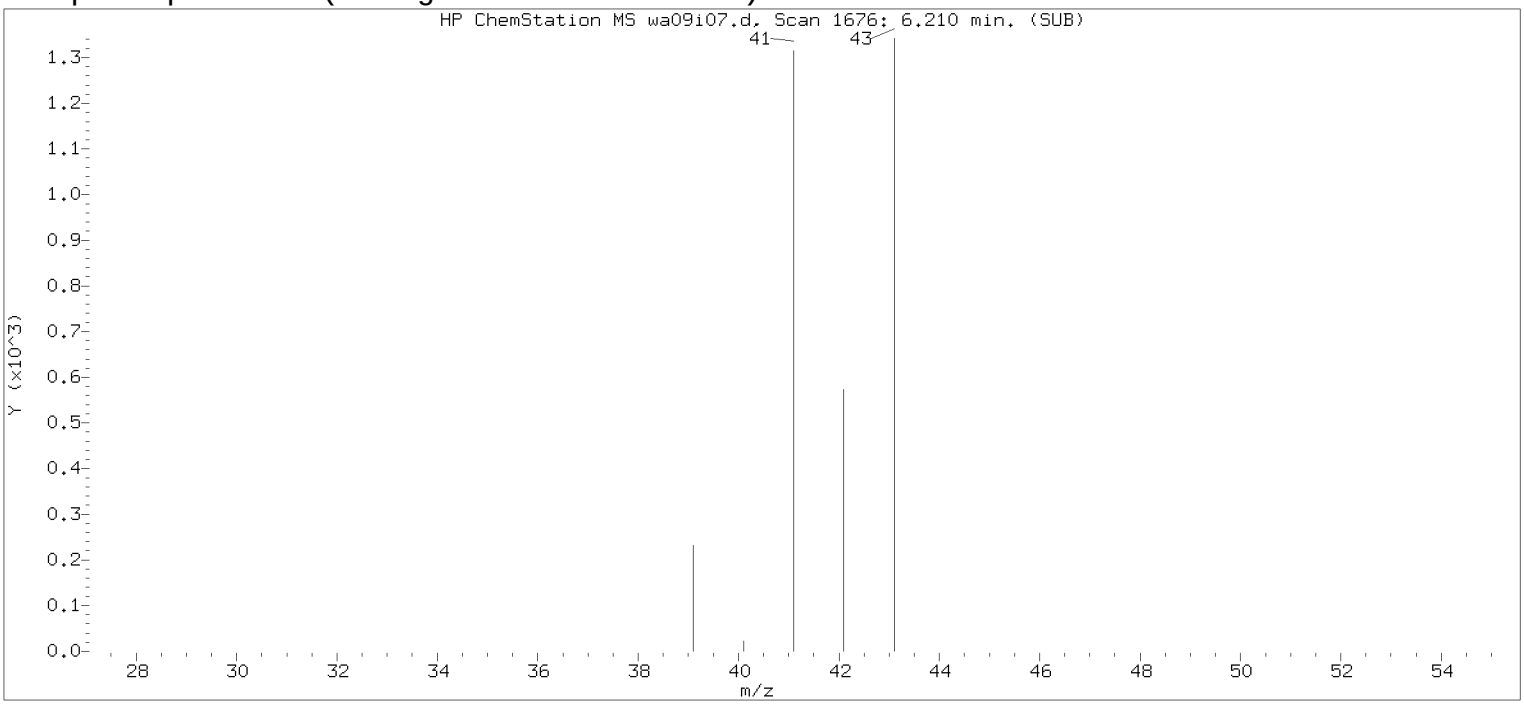
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1676
Retention Time (minutes): 6.210
Quant Ion : 41.00
Area (flag) : 3489M
On-Column Amount (ng) : 1.8873
Integration start scan : 1665 Integration stop scan: 1688
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

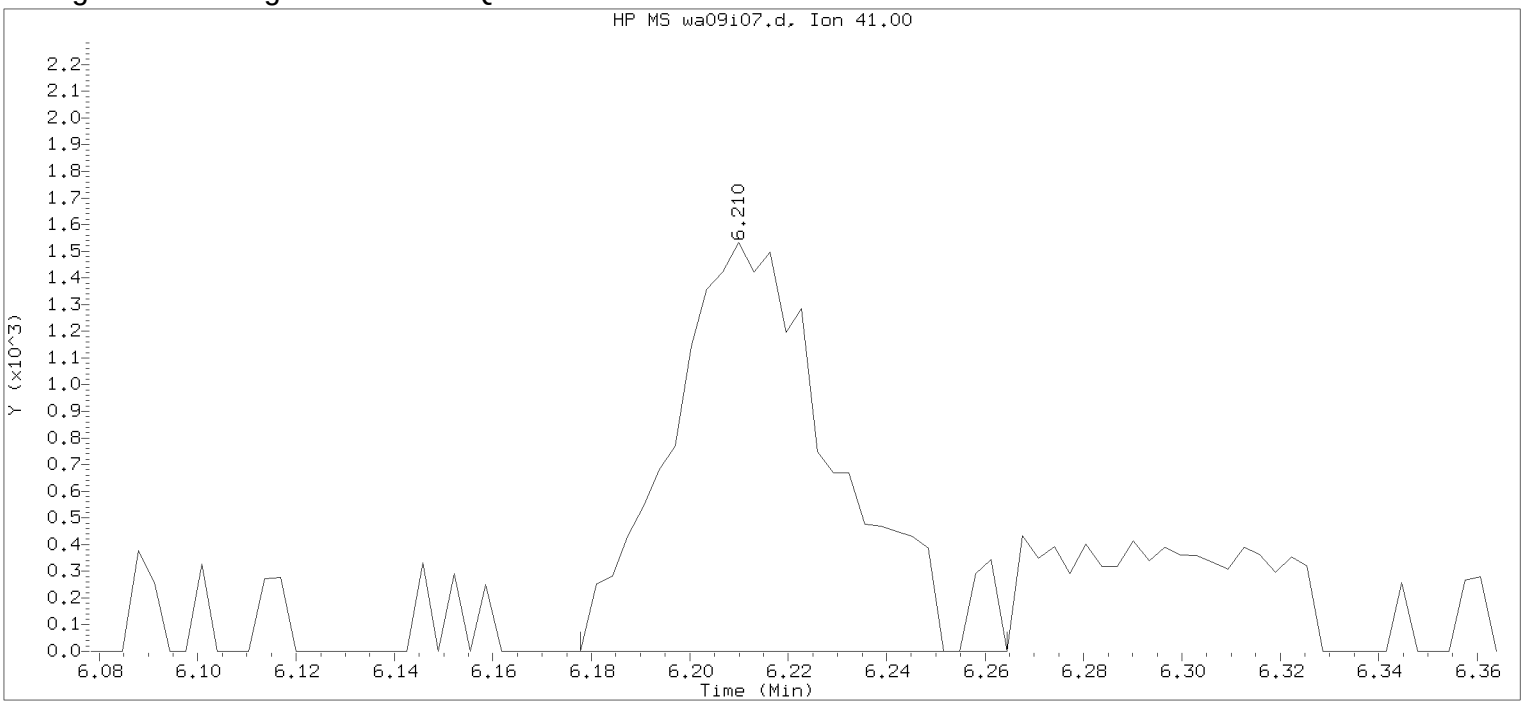
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

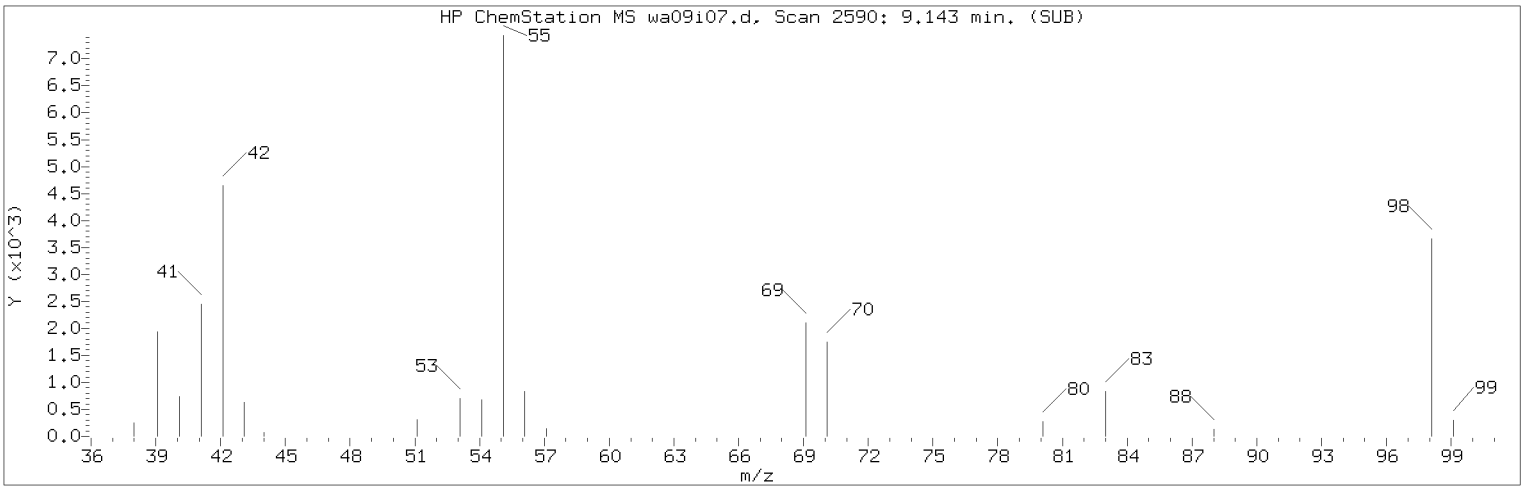
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

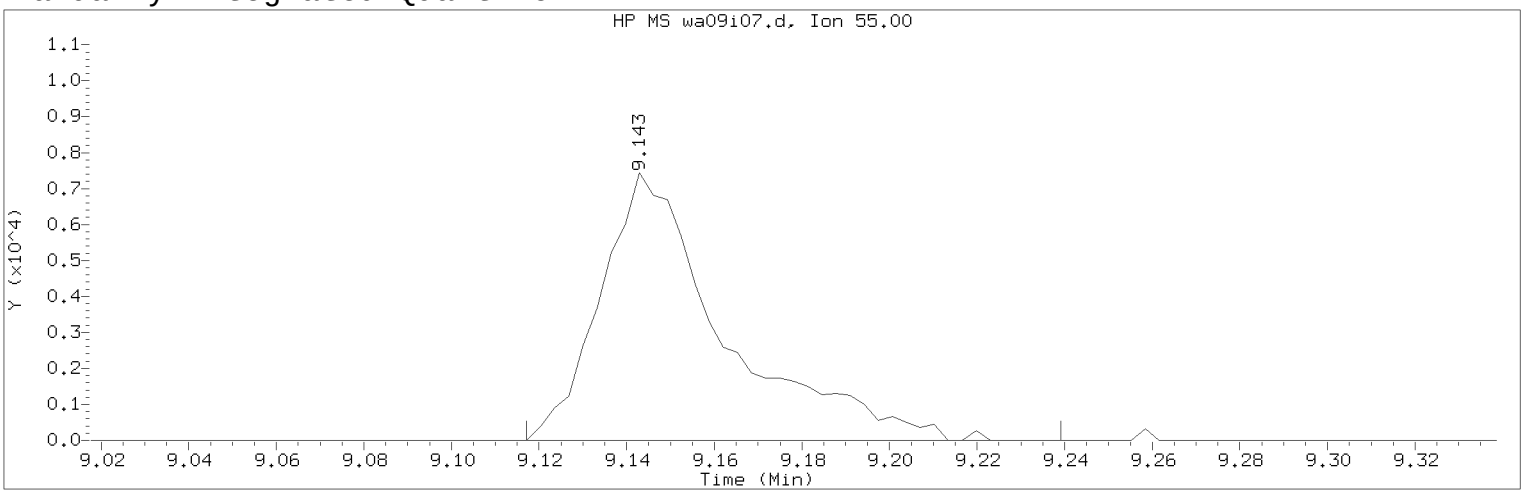
Compound Number : 79
Compound Name : 2-Nitropropane
Scan Number : 1676
Retention Time (minutes): 6.210
Quant Ion : 41.00
Area : 3611
On-column Amount (ng) : 1.9444
Integration start scan : 1665 Integration stop scan: 1692
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

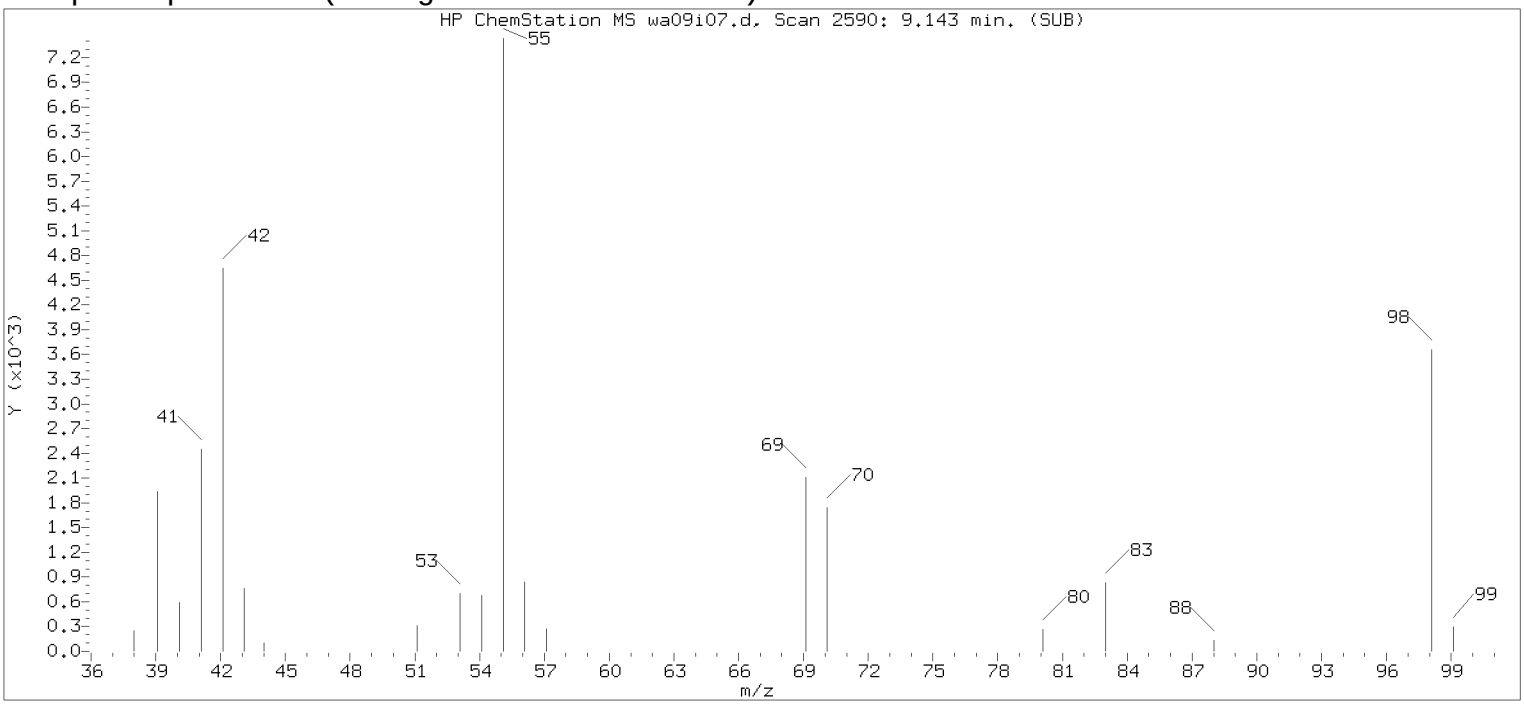
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2590
Retention Time (minutes): 9.143
Quant Ion : 55.00
Area (flag) : 14524M
On-Column Amount (ng) : 51.9388
Integration start scan : 2581 Integration stop scan: 2619
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

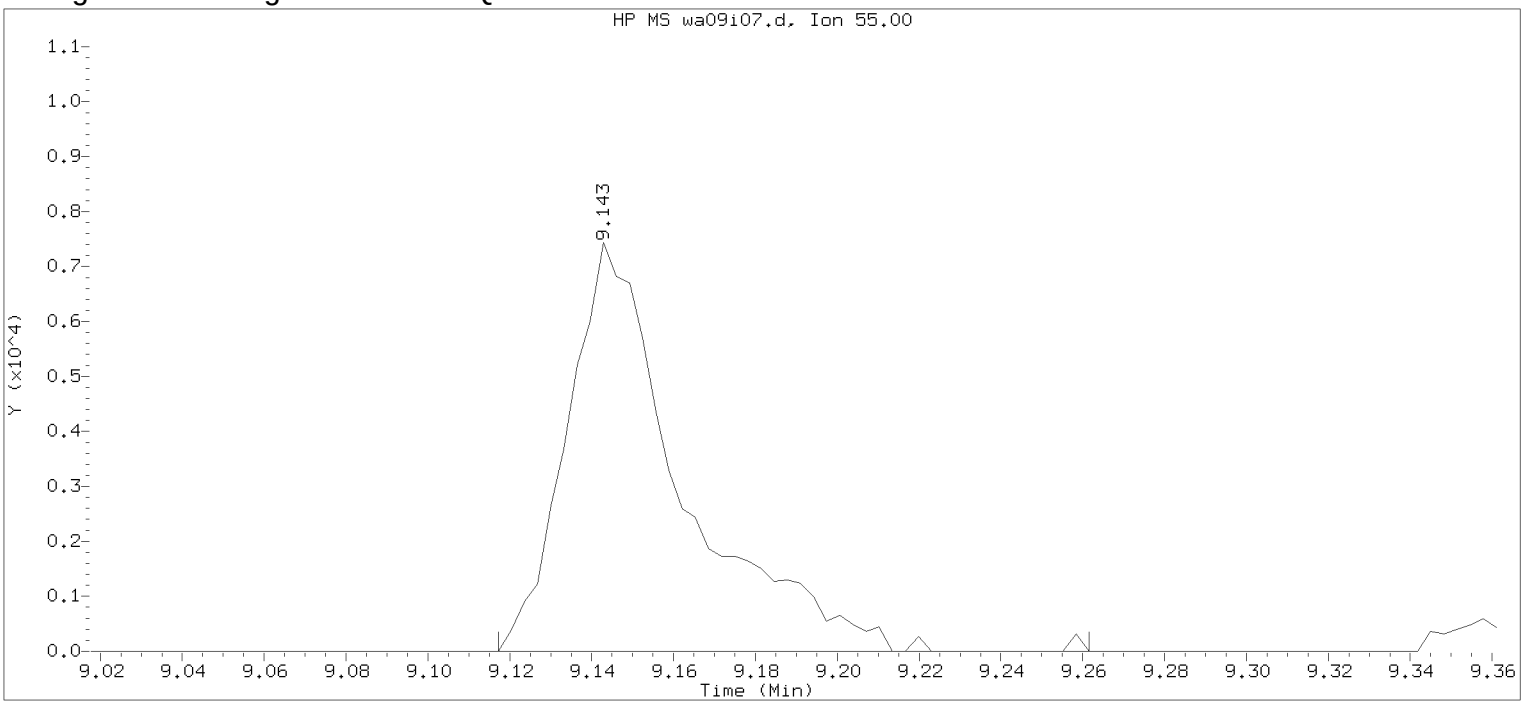
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

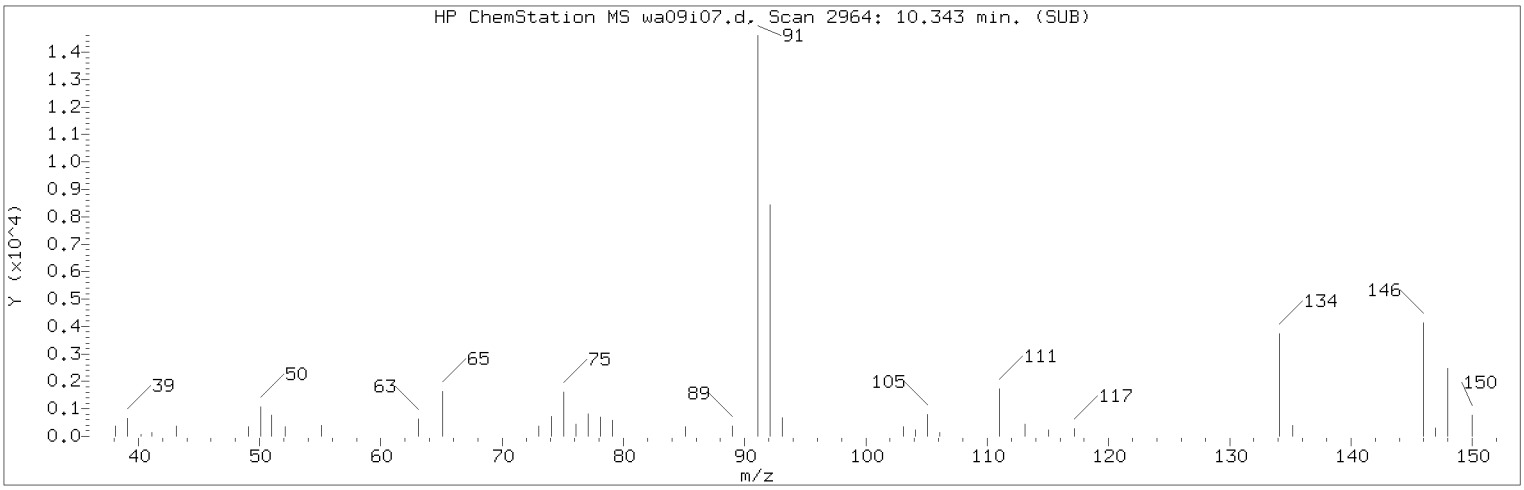
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

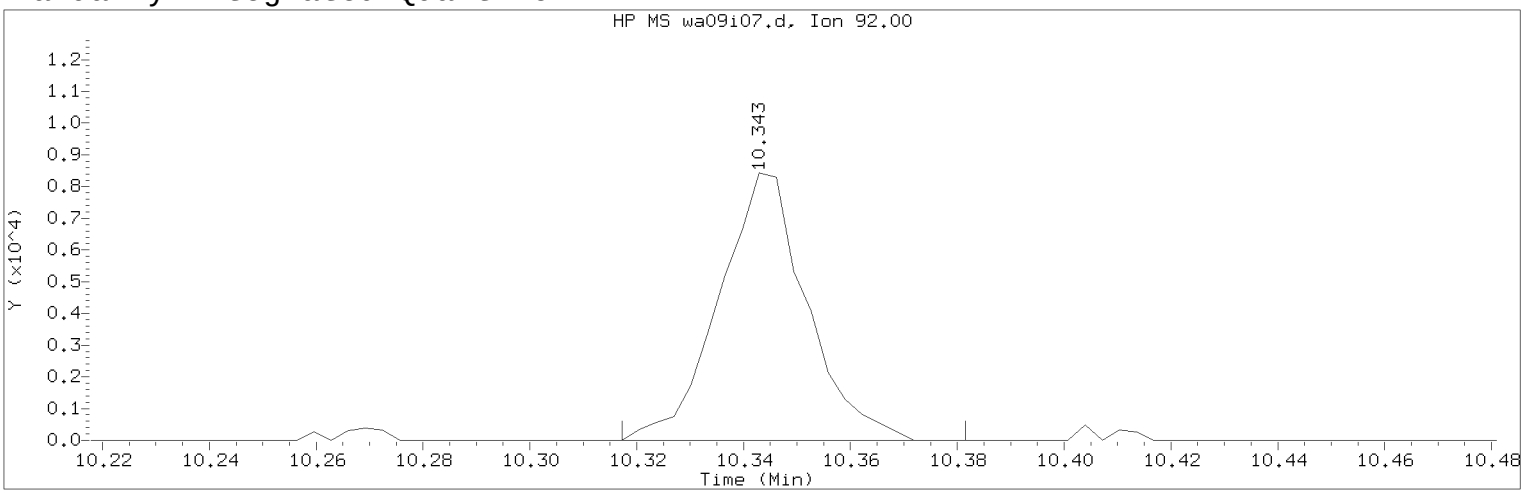
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2590
Retention Time (minutes): 9.143
Quant Ion : 55.00
Area : 14585
On-column Amount (ng) : 57.2754
Integration start scan : 2581 Integration stop scan: 2626
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:03
Date, time and analyst ID of latest file update: 09-Apr-2018 15:03 nsl01327

Sample Name: VSTD001 Lab Sample ID: VSTD001

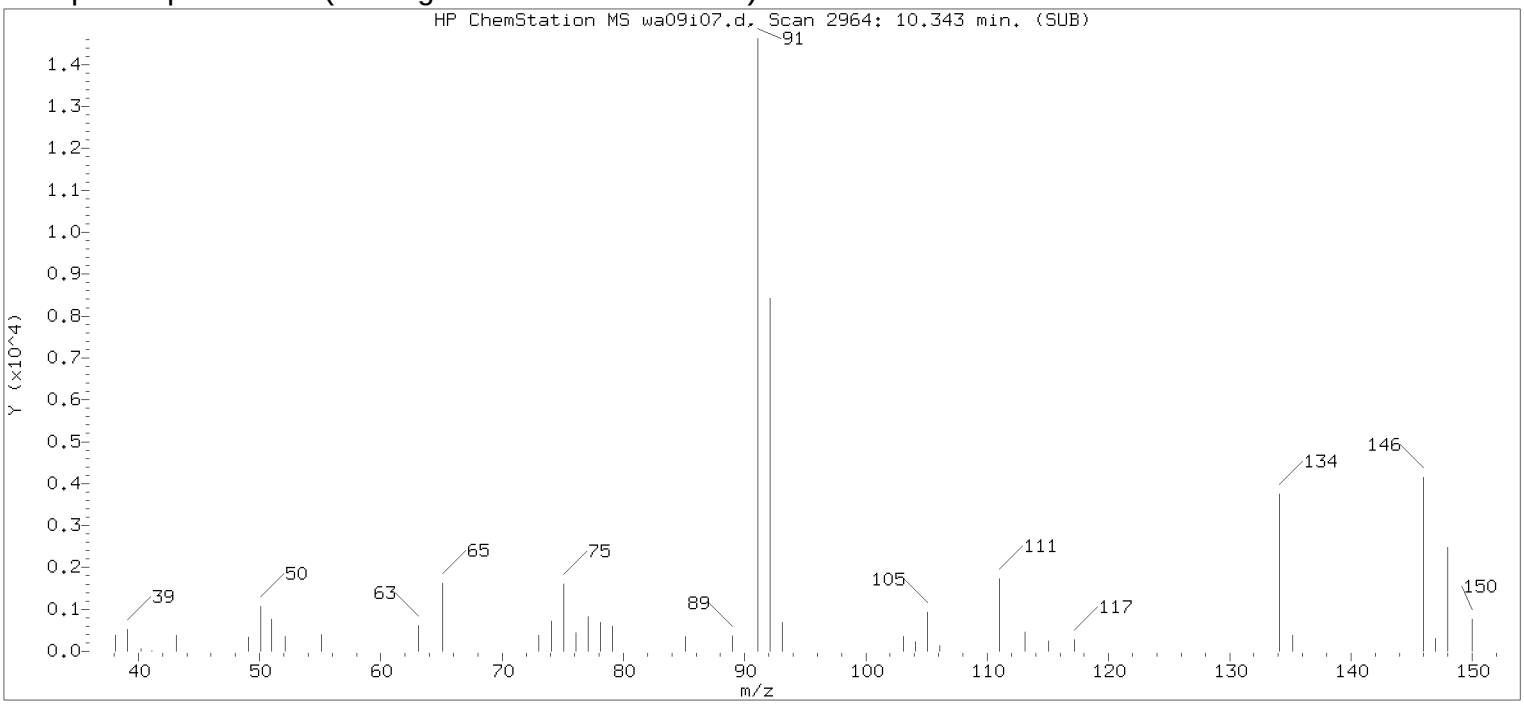
Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 2964
Retention Time (minutes): 10.343
Quant Ion : 92.00
Area (flag) : 9592M
On-Column Amount (ng) : 0.9401
Integration start scan : 2955 Integration stop scan: 2975
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

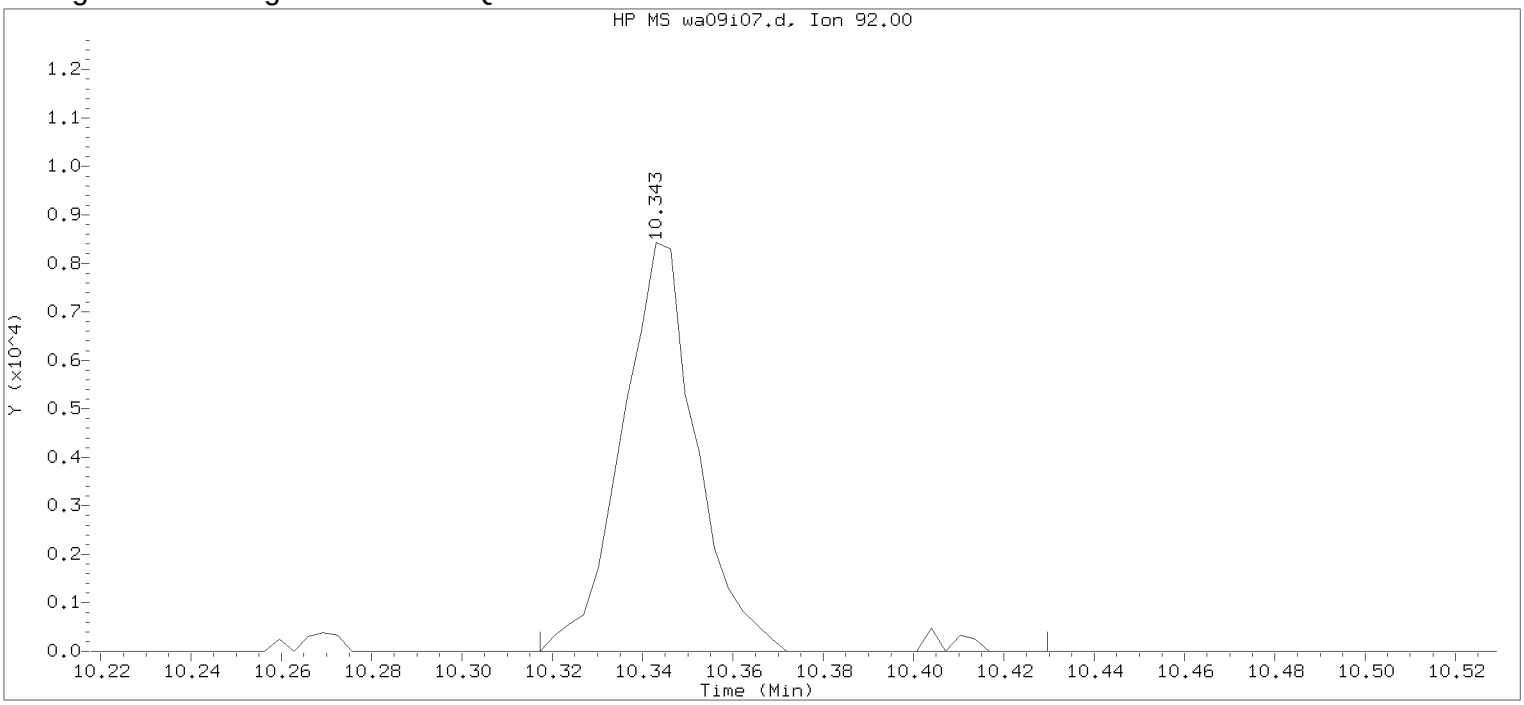
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 19:57.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



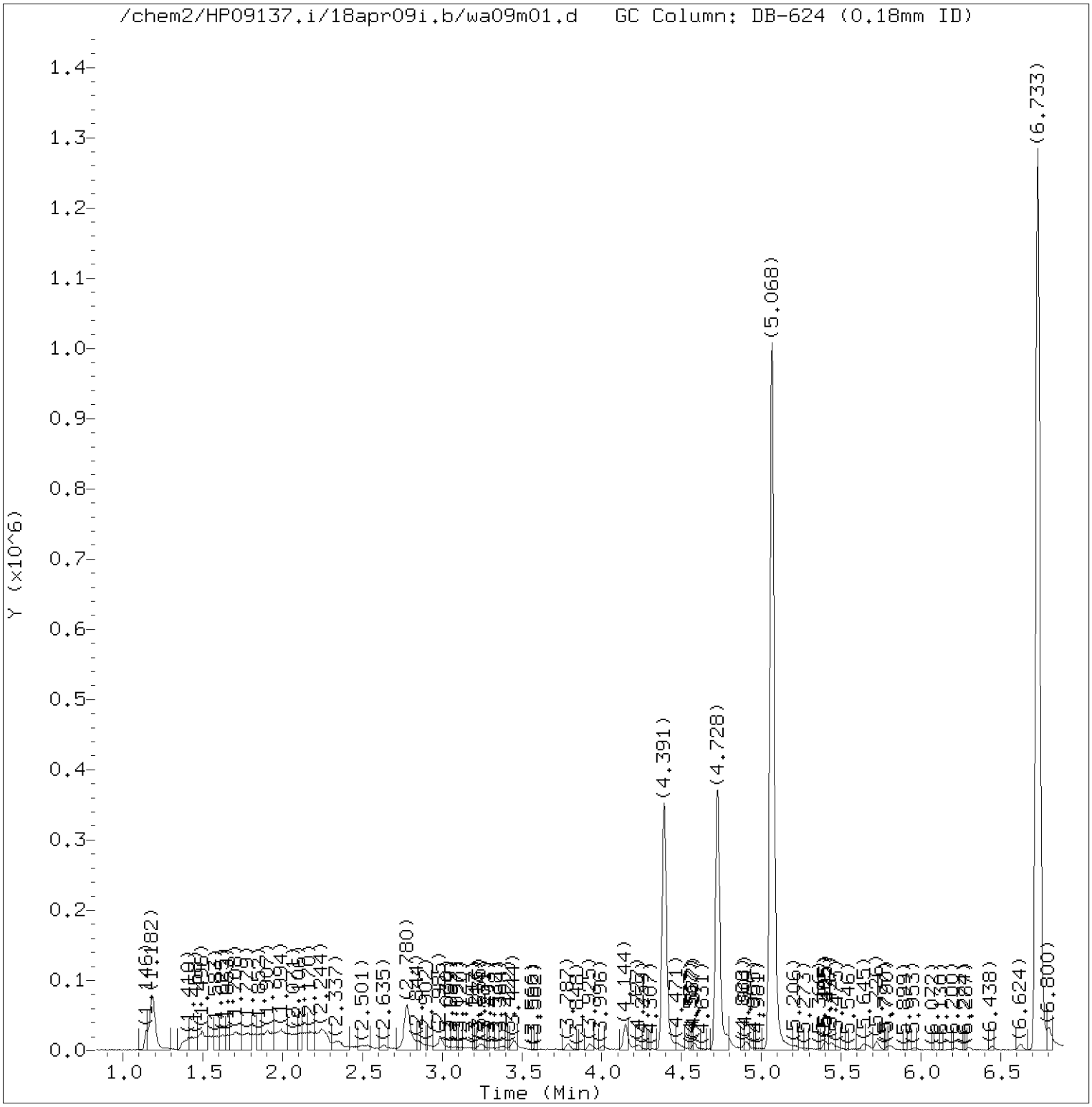
Data File: /chem2/HP09137.i/18apr09i.b/wa09i07.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 13:38 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 13:54
Date, time and analyst ID of latest file update: 09-Apr-2018 13:54 Automation

Sample Name: VSTD001 Lab Sample ID: VSTD001

Compound Number : 139
Compound Name : n-Butylbenzene
Scan Number : 2964
Retention Time (minutes): 10.343
Quant Ion : 92.00
Area : 9795
On-column Amount (ng) : 0.9574
Integration start scan : 2955 Integration stop scan: 2990
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327



Total Ion Chromatogram (TIC)

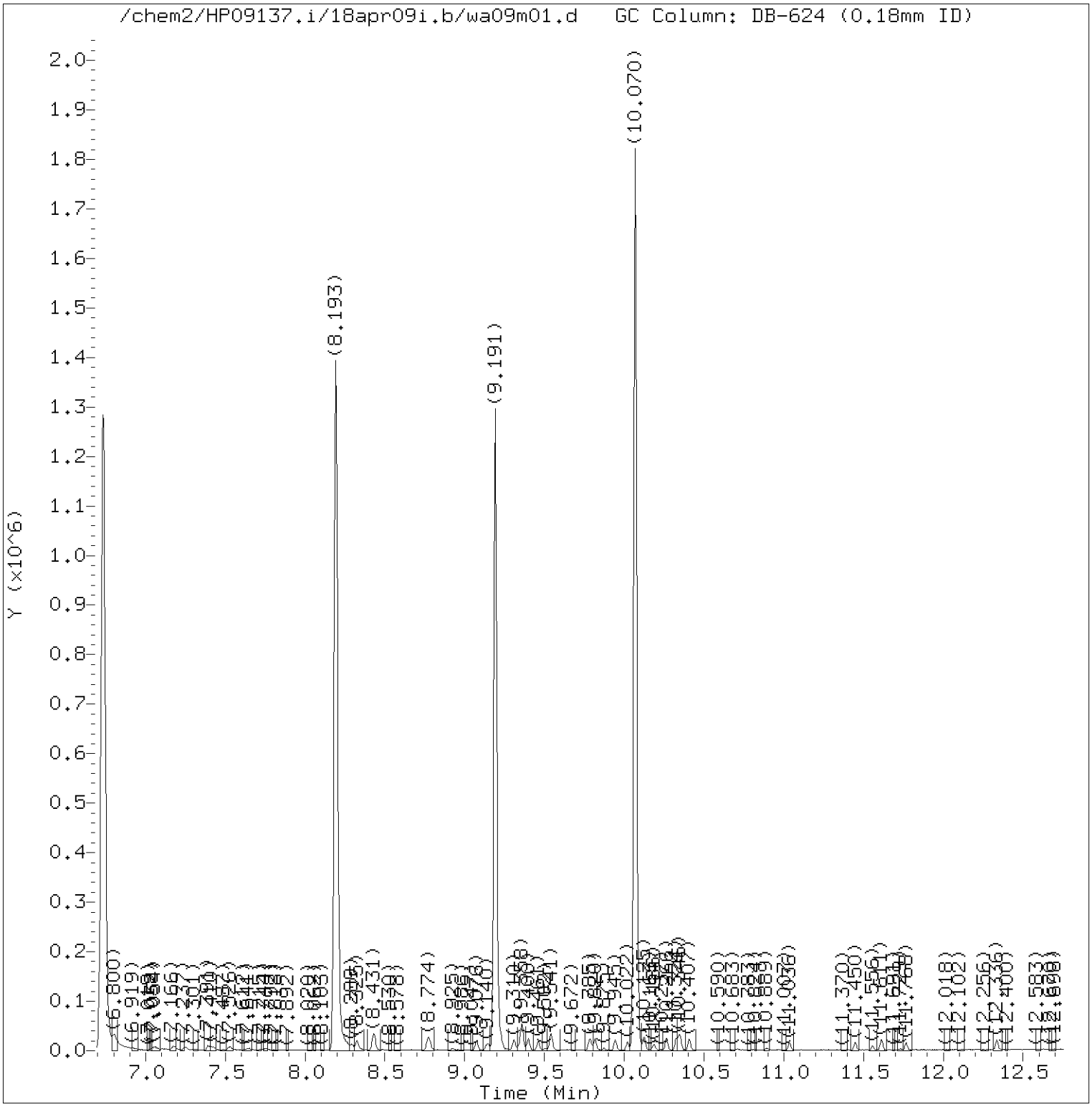
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.268	85	2353	0.352
4) Chloromethane	(2)	1.406	50	3785	0.529
6) Vinyl Chloride	(2)	1.483	62	3191	0.441
5) 1,3-Butadiene	(2)	1.496	39	3611	0.681
8) Bromomethane	(2)	1.714	94	3162	0.602
9) Chloroethane	(2)	1.772	64	2074	0.480
10) Dichlorofluoromethane	(2)	1.907	67	6010	0.661
12) Trichlorofluoromethane	(2)	1.949	101	2924	0.364
11) n-Pentane	(2)	1.990	43	6152	0.721
13) Ethanol	(1)	2.099	45	5611M	47.049
15) Freon 123a	(2)	2.176	67	8213	1.383
16) Acrolein	(1)	2.244	56	8881	7.710
17) 1,1-Dichloroethene	(2)	2.343	96	2058	0.460
19) Freon 113	(2)	2.350	101	1811	0.399
18) Acetone	(1)	2.379	58	483M	0.998
22) Methyl Iodide	(2)	2.488	142	3596	0.414
21) 2-Propanol	(1)	2.504	45	3645	10.893
23) Carbon Disulfide	(2)	2.529	76	6645	0.450
25) Allyl Chloride	(2)	2.635	41	5377	0.752
27) Methyl Acetate	(2)	2.658	43	4093	0.783
28) Methylene Chloride	(2)	2.744	84	2631	0.506
29)*t-Butyl alcohol-d10	(1)	2.780	65	141957	250.000
30) t-Butyl alcohol	(1)	2.850	59	5436M	8.910
31) Acrylonitrile	(2)	2.972	53	912M	0.342
33) Methyl Tertiary Butyl Ether	(2)	2.992	73	7673	0.459
32) trans-1,2-Dichloroethene	(2)	2.995	96	2162	0.439
34) n-Hexane	(2)	3.245	57	3205	0.559
36) 1,1-Dichloroethane	(2)	3.380	63	3553	0.425
38) di-Isopropyl ether	(2)	3.444	45	8478	0.542
39) 2-Chloro-1,3-butadiene	(2)	3.460	53	3379	0.457
40) Ethyl t-butyl ether	(2)	3.791	59	6895	0.442
45) 2,2-Dichloropropane	(2)	3.925	77	2088	0.462
42) cis-1,2-Dichloroethene	(2)	3.929	96	2481	0.446
44) 2-Butanone	(2)	3.948	43	4554M	1.226
47) Propionitrile	(1)	4.006	54	7309	9.583
43) 1,2-Dichloroethene (Total)	(2)		96	4643	0.885
48) Methacrylonitrile	(2)	4.153	67	13574	4.315
49) Bromochloromethane	(2)	4.156	128	1120	0.396

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.208	71	772	0.947
51) Chloroform	(2)	4.240	83	3945	0.460
52)$Dibromofluoromethane	(2)	4.394	113	227036	48.609
53) 1,1,1-Trichloroethane	(2)	4.423	97	3364	0.441
54) Cyclohexane	(2)	4.484	56	3656	0.471
55) 1,1-Dichloropropene	(2)	4.577	75	2955	0.433
56) Carbon Tetrachloride	(2)	4.583	117	2281	0.395
58) Isobutyl Alcohol	(1)	4.718	41	7651	38.230
57)$1,2-Dichloroethane-d4	(2)	4.728	102	60763	49.547
60) Benzene	(2)	4.782	78	9076	0.442
61) 1,2-Dichloroethane	(2)	4.801	62	3868	0.541
65) t-Amyl methyl ether	(2)	4.904	73	7649	0.470
67) n-Heptane	(2)	5.068	43	6002	1.168
66)*Fluorobenzene	(2)	5.068	96	1024564	50.000
69) n-Butanol	(1)	5.405	56	10460	55.545
71) Trichloroethene	(2)	5.443	95	2520	0.463
72) Methylcyclohexane	(2)	5.642	83	3505	0.479
73) 1,2-Dichloropropane	(2)	5.668	63	2281	0.439
74) Dibromomethane	(2)	5.796	93	1258	0.357
76) Methyl Methacrylate	(2)	5.815	69	2242M	0.404
75) 1,4-Dioxane	(1)	5.838	88	275	5.346
78) Bromodichloromethane	(2)	5.963	83	2768	0.415
79) 2-Nitropropane	(2)	6.216	41	1941	1.052
80) 2-Chloroethyl Vinyl Ether	(2)	6.303	63	1609	0.380
81) cis-1,3-Dichloropropene	(2)	6.447	75	3629	0.413
82) 4-Methyl-2-pentanone	(2)	6.624	43	7617	0.994
83)$Toluene-d8	(3)	6.733	98	1009322	49.337
88) Toluene	(3)	6.807	92	6627	0.473
89) trans-1,3-Dichloropropene	(3)	7.054	75	3354	0.402
91) Ethyl Methacrylate	(3)	7.179	69	4278	0.443
92) 1,1,2-Trichloroethane	(3)	7.250	97	2184	0.397
90) 1,3-Dichloropropene (total)	(3)		100	6983	0.815
93) Tetrachloroethene	(3)	7.388	166	2591	0.454
94) 1,3-Dichloropropane	(3)	7.426	76	4102	0.451
96) 2-Hexanone	(3)	7.526	43	6350	1.032
97) Dibromochloromethane	(3)	7.644	129	2180	0.389
99) 1,2-Dibromoethane	(3)	7.750	107	2506	0.418
100)*Chlorobenzene-d5	(3)	8.193	117	797877	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	8.216	112	7259	0.455
103) 1,1,1,2-Tetrachloroethane	(3)	8.293	131	2190	0.427
104) Ethylbenzene	(3)	8.325	91	12507	0.482
106) m+p-Xylene	(3)	8.427	106	9641	0.910
107) o-Xylene	(3)	8.771	106	4517	0.427
109) Styrene	(3)	8.784	104	7550	0.418
108) Xylene (Total)	(3)		106	14158	1.337
110) Bromoform	(3)	8.928	173	1553	0.386
111) Isopropylbenzene	(3)	9.076	105	11510	0.457
112) Cyclohexanone	(1)	9.146	55	6409	27.041
114)$4-Bromofluorobenzene	(3)	9.191	95	373720	48.366
116) 1,1,2,2-Tetrachloroethane	(4)	9.310	83	3989	0.463
115) Bromobenzene	(4)	9.310	156	3225	0.482
117) 1,2,3-Trichloropropane	(4)	9.342	110	1131	0.418
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	9460	3.994
119) n-Propylbenzene	(4)	9.400	91	14127	0.505
120) 2-Chlorotoluene	(4)	9.464	126	2858	0.464
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	10117	0.487
121) 4-Chlorotoluene	(4)	9.544	126	2953	0.448
124) tert-Butylbenzene	(4)	9.785	134	2336	0.507
125) Pentachloroethane	(4)	9.794	167	1419	0.399
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	10853	0.499
127) sec-Butylbenzene	(4)	9.945	105	12058	0.513
129) 1,3-Dichlorobenzene	(4)	10.025	146	6173	0.488
130) p-Isopropyltoluene	(4)	10.048	119	10945	0.517
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	409638	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	6519	0.495
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	11319	0.506
135) Benzyl Chloride	(4)	10.186	91	7403	0.425
136) 1,3-Diethylbenzene	(4)	10.266	119	6448	0.511
137) 1,4-Diethylbenzene	(4)	10.327	119	6683	0.511
139) n-Butylbenzene	(4)	10.343	92	5335	0.530
138) 1,2-Dichlorobenzene	(4)	10.353	146	6011	0.477
140) 1,2-Diethylbenzene	(4)	10.411	119	5553	0.513
141) Diethylbenzene (total)	(4)		100	18684	1.535
142) 1,2-Dibromo-3-chloropropane	(4)	10.889	75	765	0.417
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	4268	0.532
146) 1,2,4-Trichlorobenzene	(4)	11.450	180	4351	0.548

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

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on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

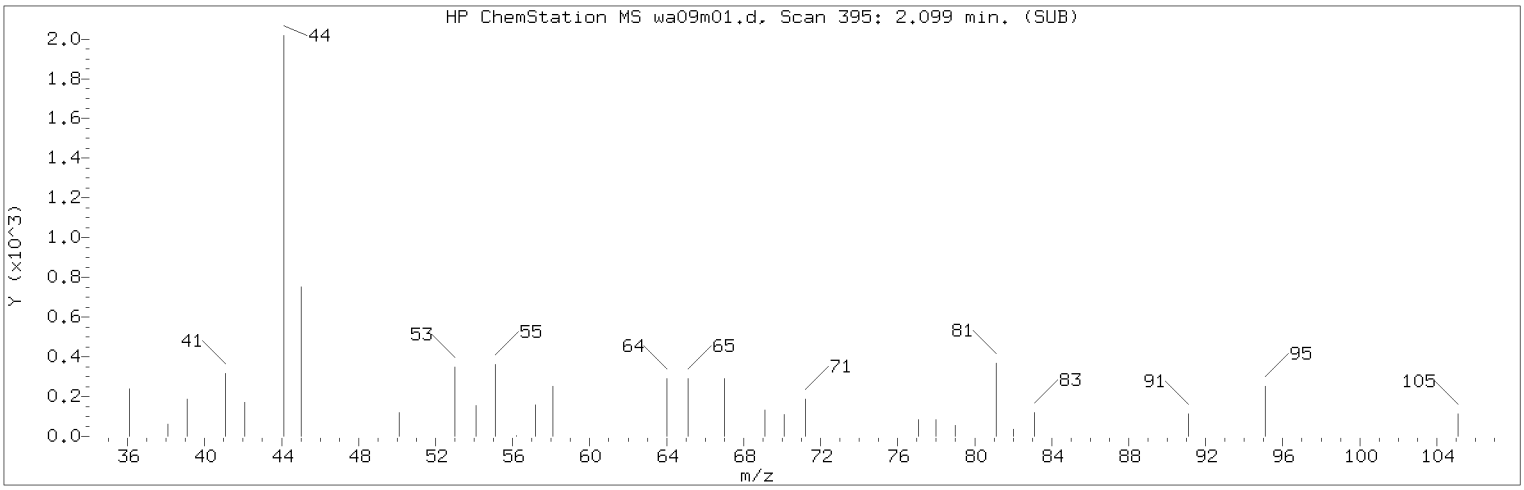
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

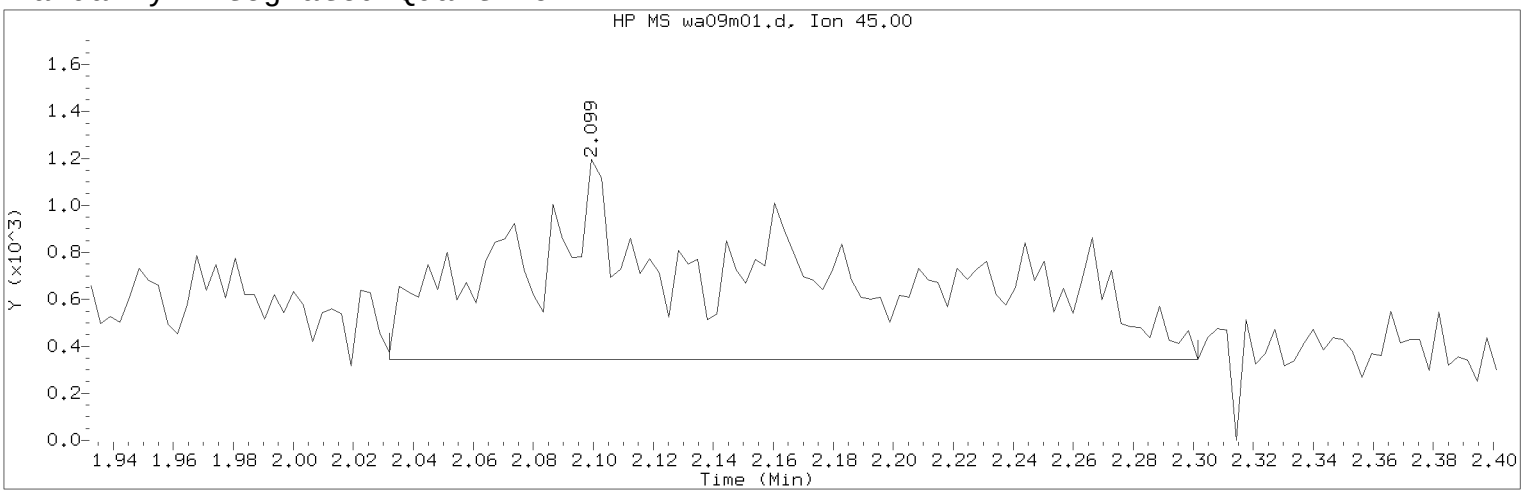
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	11.559	225	1448	0.615
148) Naphthalene	(4)	11.611	128	14753	0.512
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	4029	0.534
150) 2-Methylnaphthalene	(4)	12.339	142	8357	0.551

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

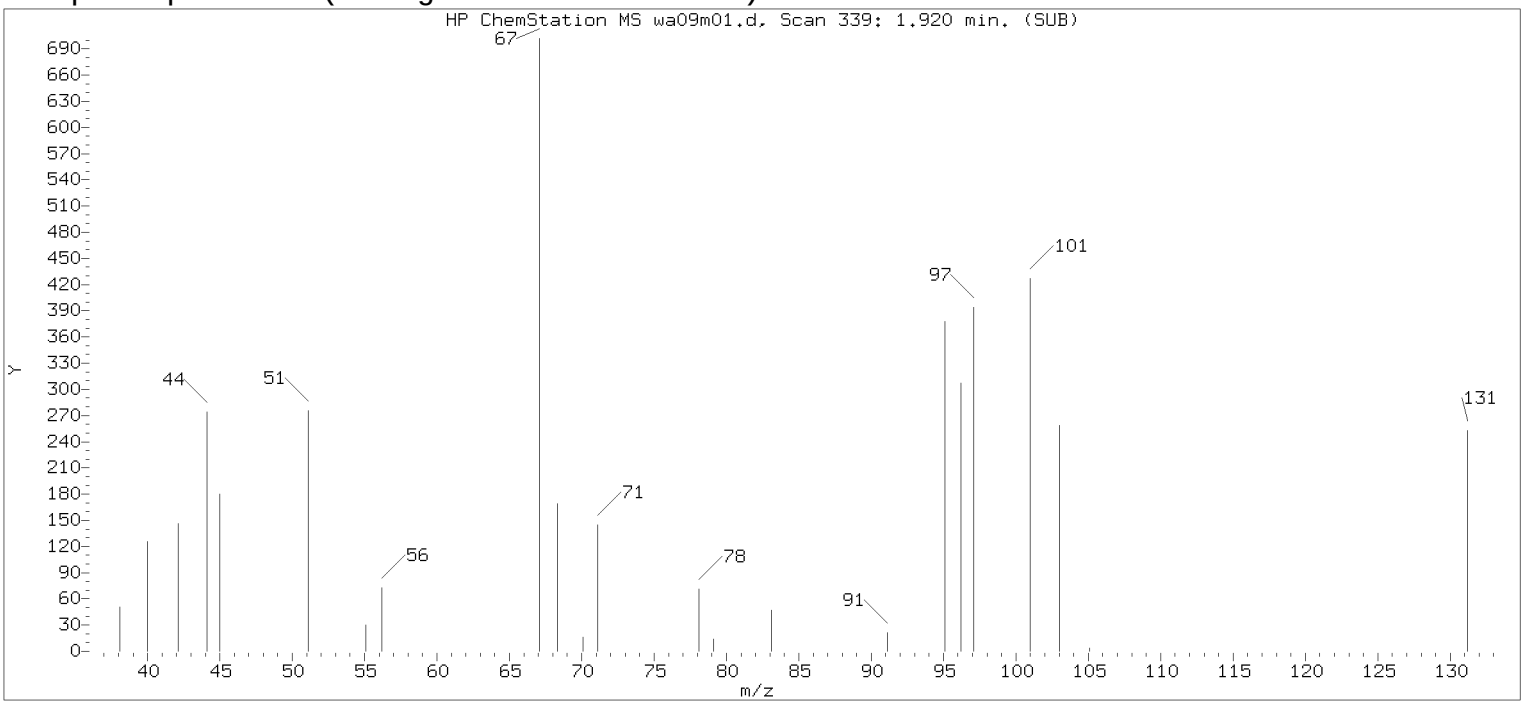
Compound Number : 13
Compound Name : Ethanol
Scan Number : 395
Retention Time (minutes): 2.099
Quant Ion : 45.00
Area (flag) : 5611M
On-Column Amount (ng) : 47.0493
Integration start scan : 373 Integration stop scan: 457
Y at integration start : 344 Y at integration end: 344

Reason for manual integration: improper integration

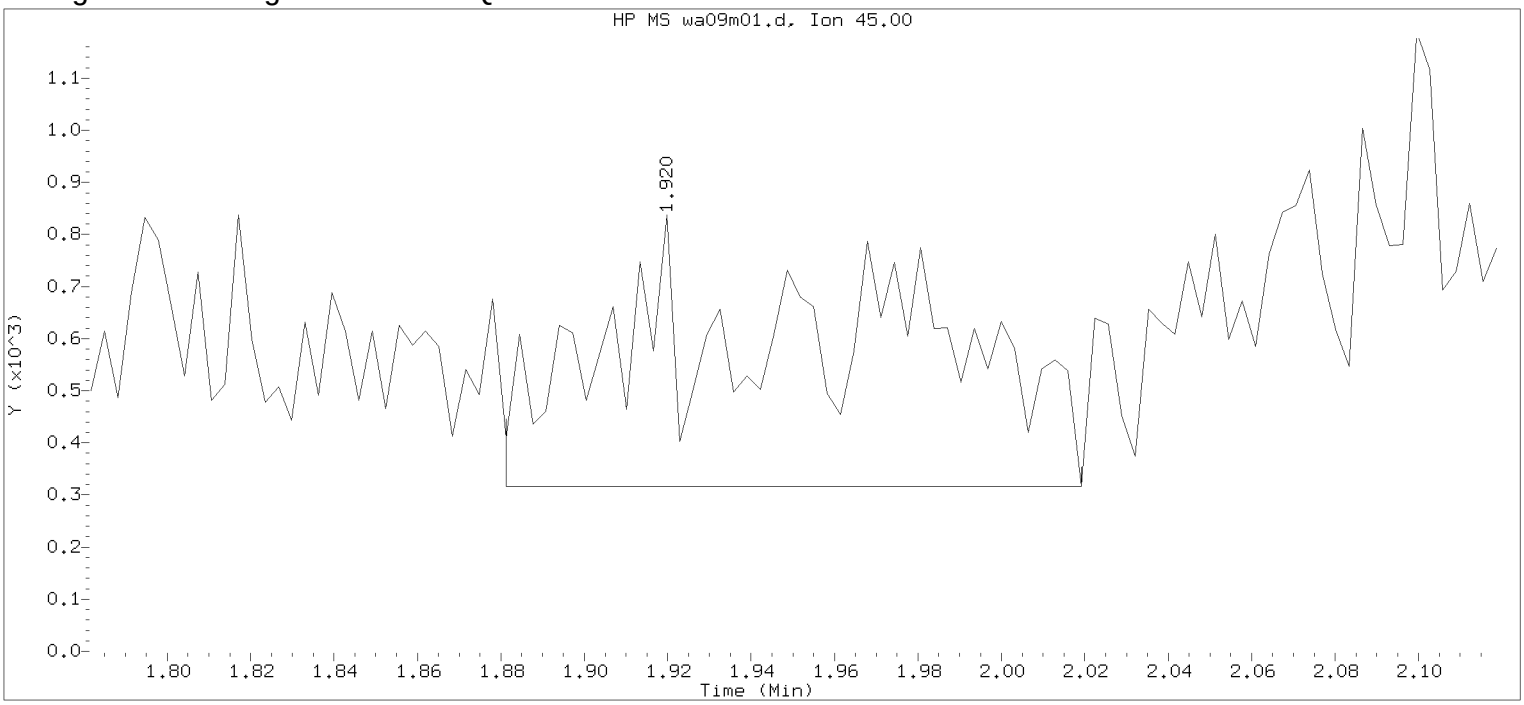
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

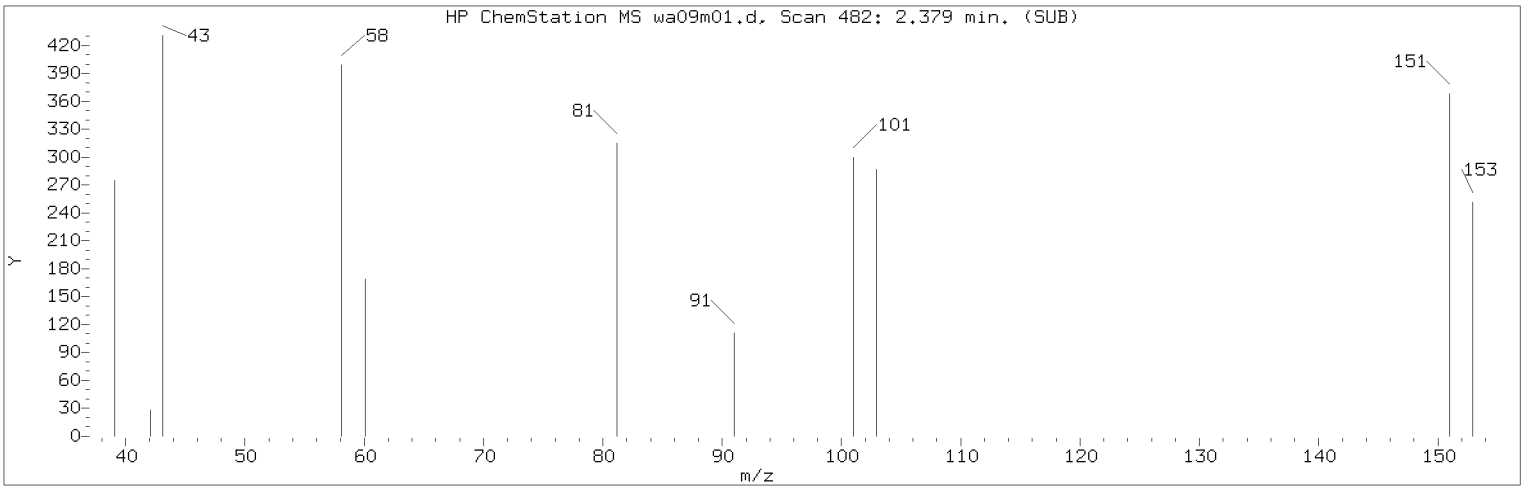
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

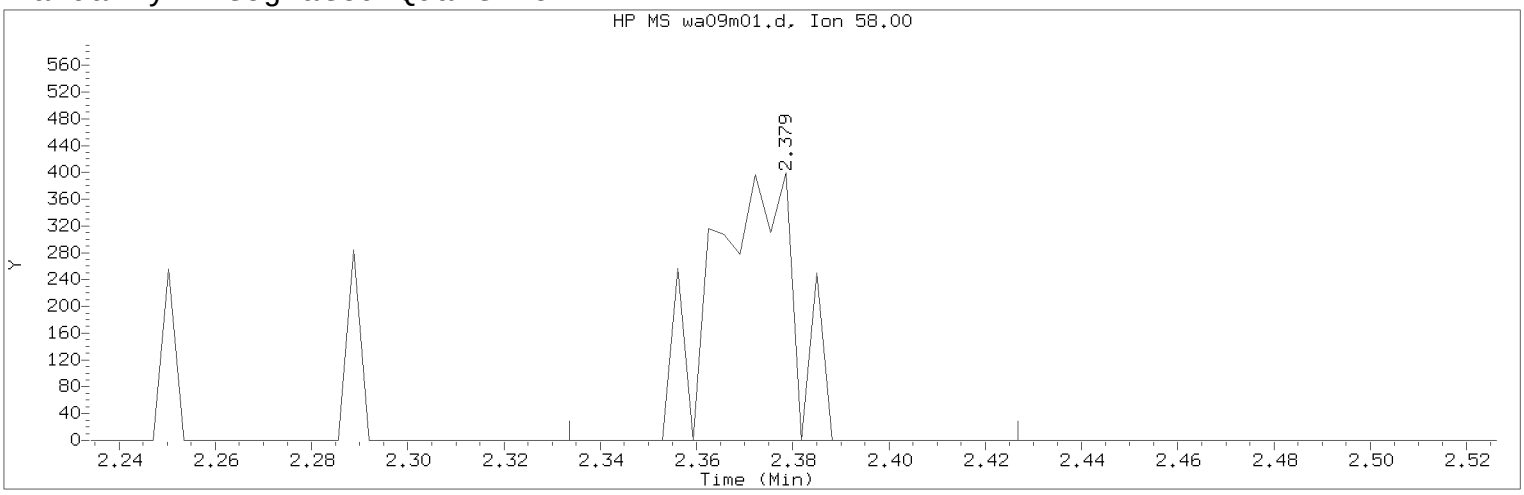
Compound Number : 13
Compound Name : Ethanol
Scan Number : 339
Retention Time (minutes): 1.920
Quant Ion : 45.00
Area : 2207
On-column Amount (ng) : 39.9750
Integration start scan : 326 Integration stop scan: 369
Y at integration start : 317 Y at integration end: 317

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

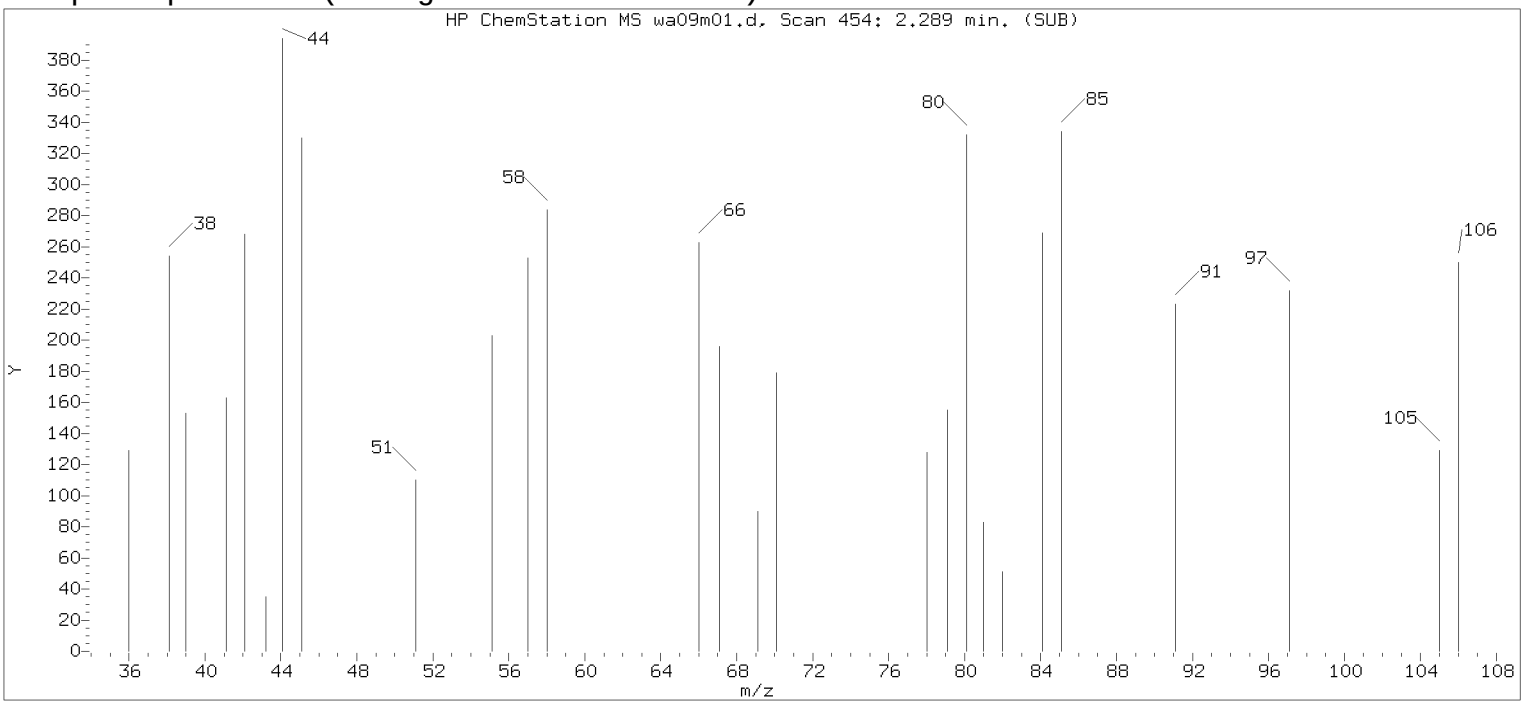
Compound Number : 18
Compound Name : Acetone
Scan Number : 482
Retention Time (minutes): 2.379
Quant Ion : 58.00
Area (flag) : 483M
On-Column Amount (ng) : 0.9981
Integration start scan : 467 Integration stop scan: 496
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

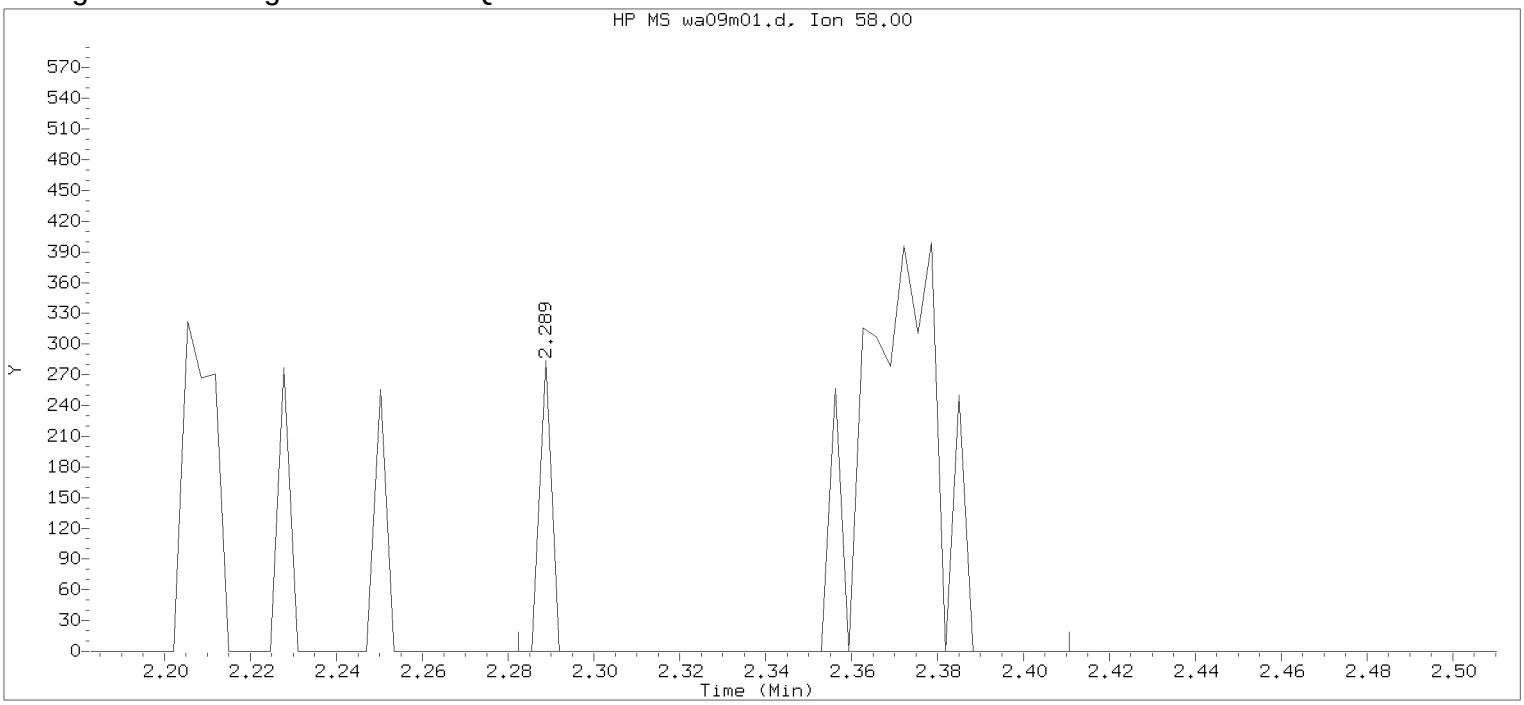
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 18
Compound Name : Acetone
Scan Number : 454
Retention Time (minutes): 2.289
Quant Ion : 58.00
Area : 538
On-column Amount (ng) : 1.0925
Integration start scan : 451 Integration stop scan: 491
Y at integration start : 0 Y at integration end: 0

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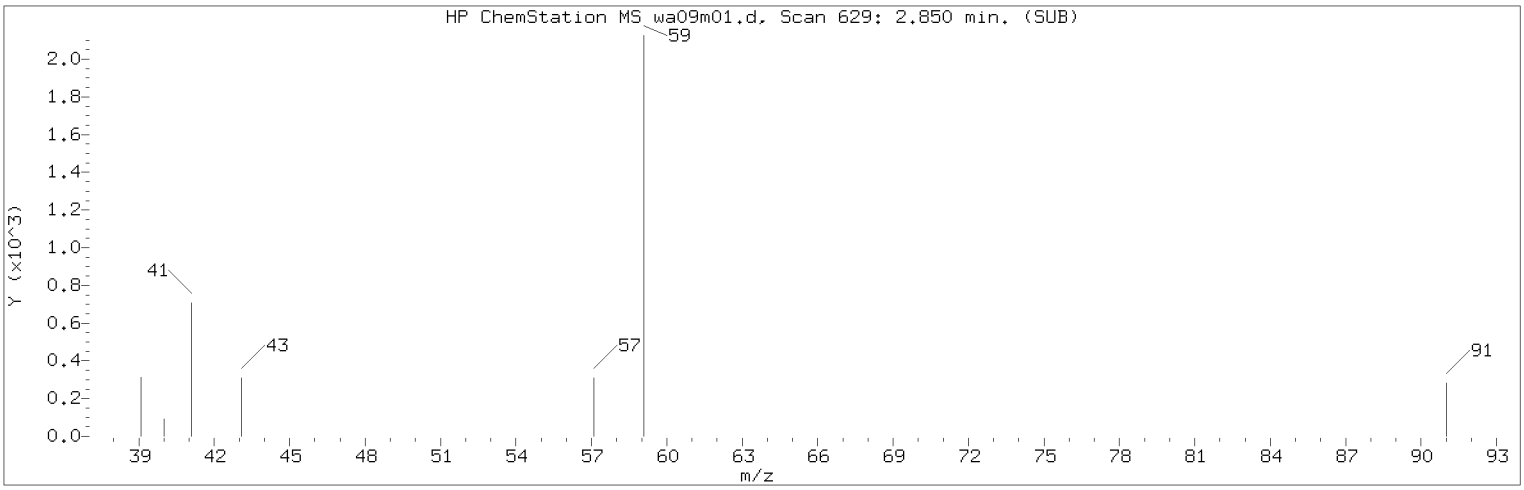
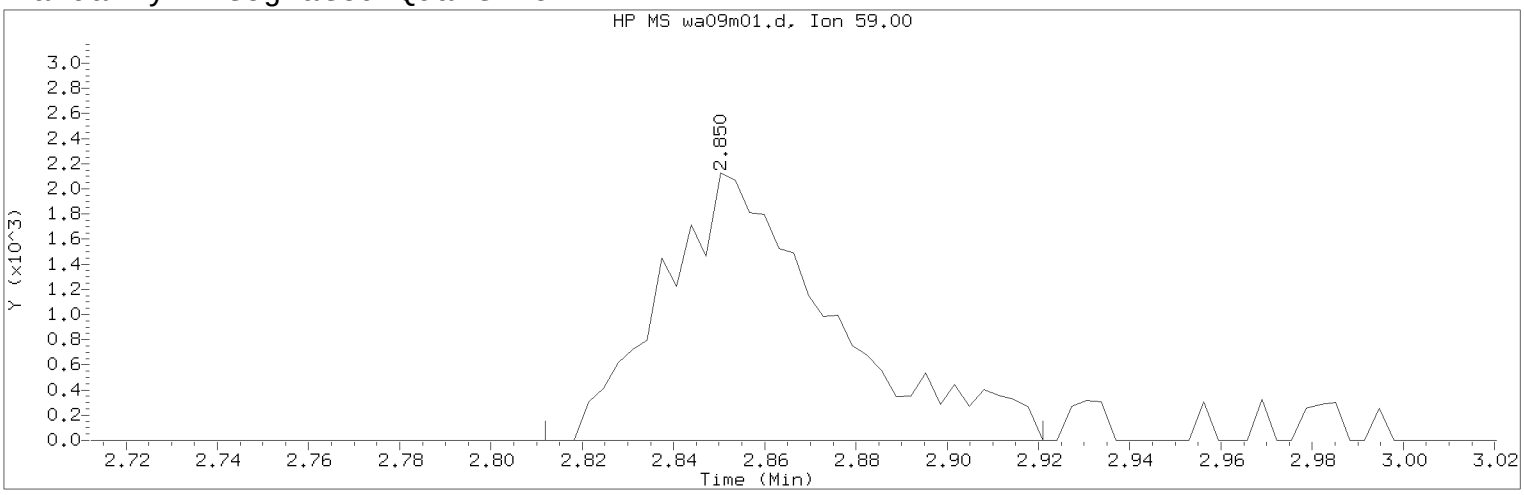
Target 3.5 esignature user id: 17 Page 320 of 432

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

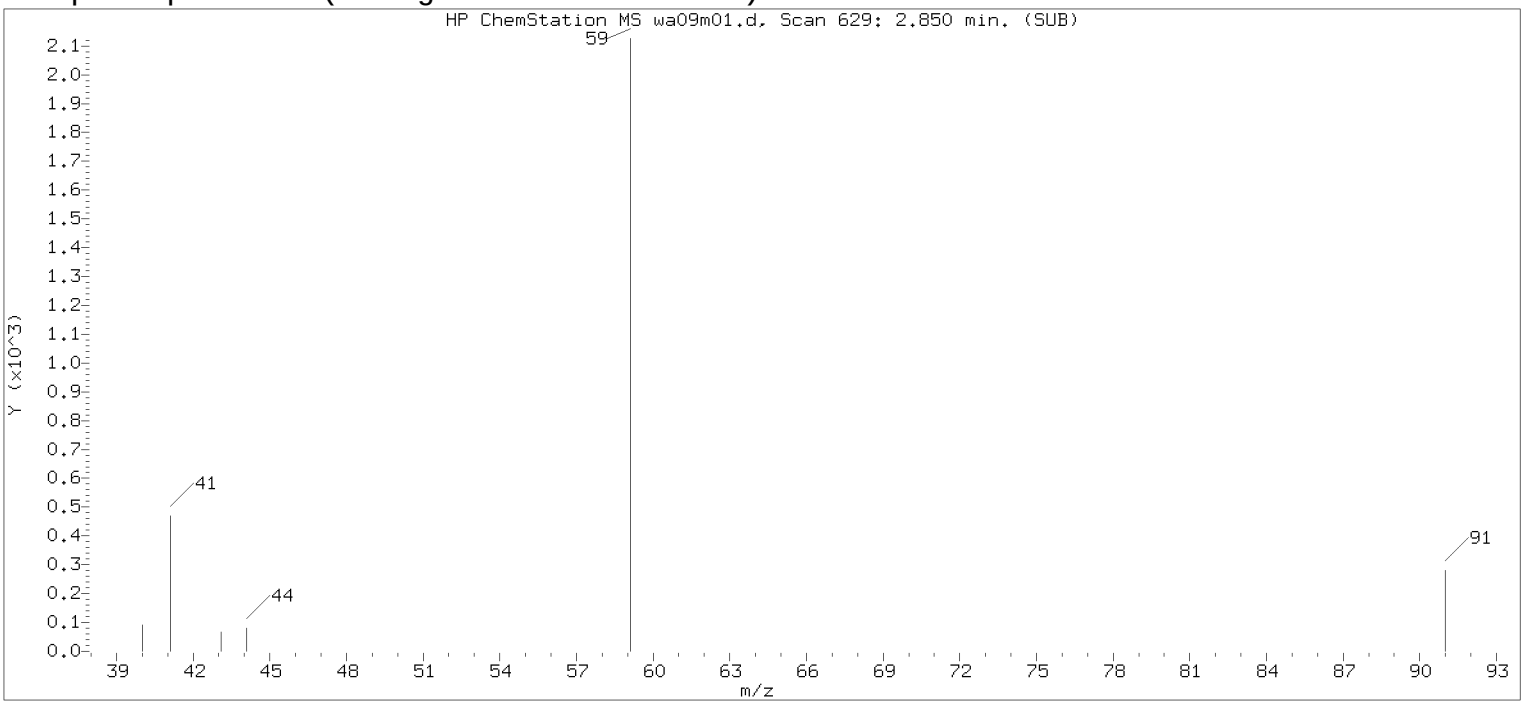
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 629
Retention Time (minutes): 2.850
Quant Ion : 59.00
Area (flag) : 5436M
On-Column Amount (ng) : 8.9098
Integration start scan : 616 Integration stop scan: 650
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

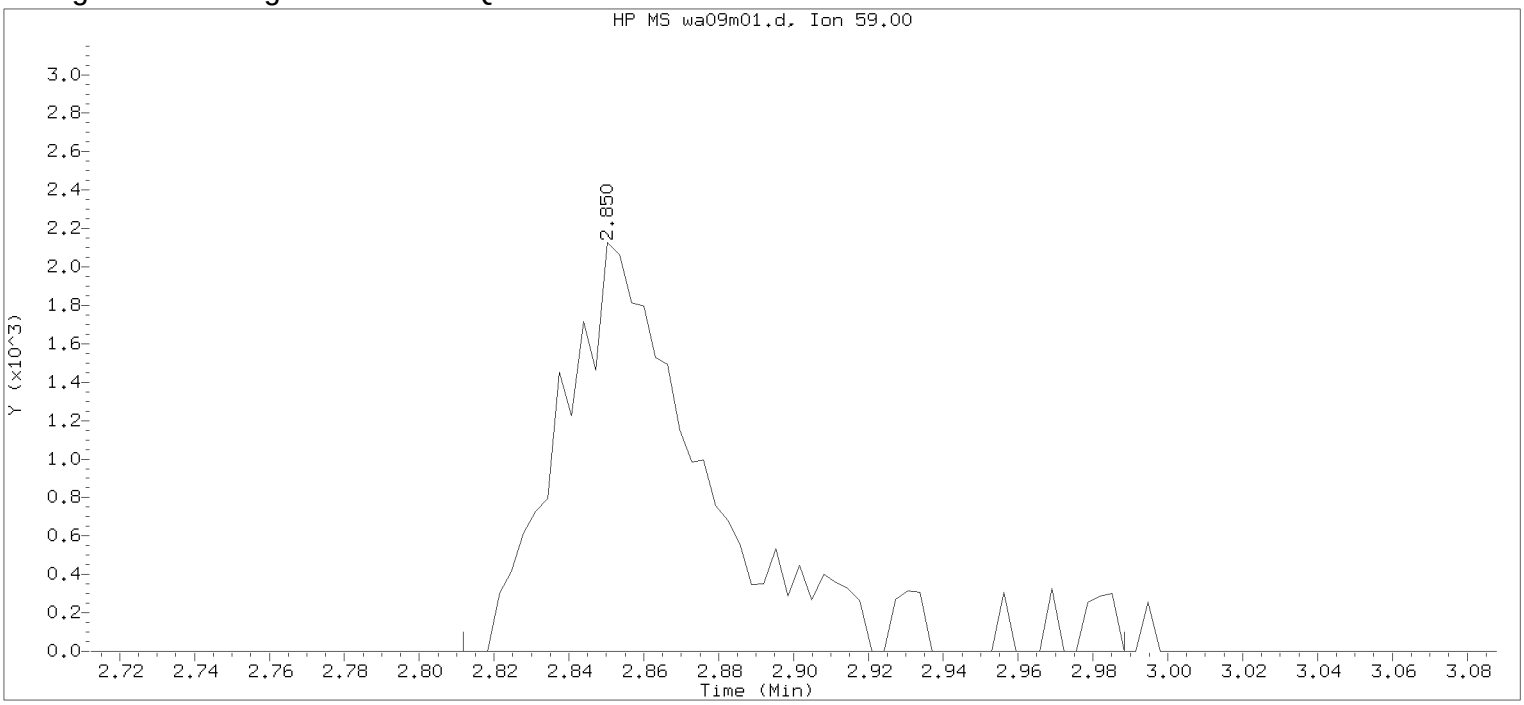
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 629
Retention Time (minutes): 2.850
Quant Ion : 59.00
Area : 5892
On-column Amount (ng) : 9.5108
Integration start scan : 616 Integration stop scan: 671
Y at integration start : 0 Y at integration end: 0

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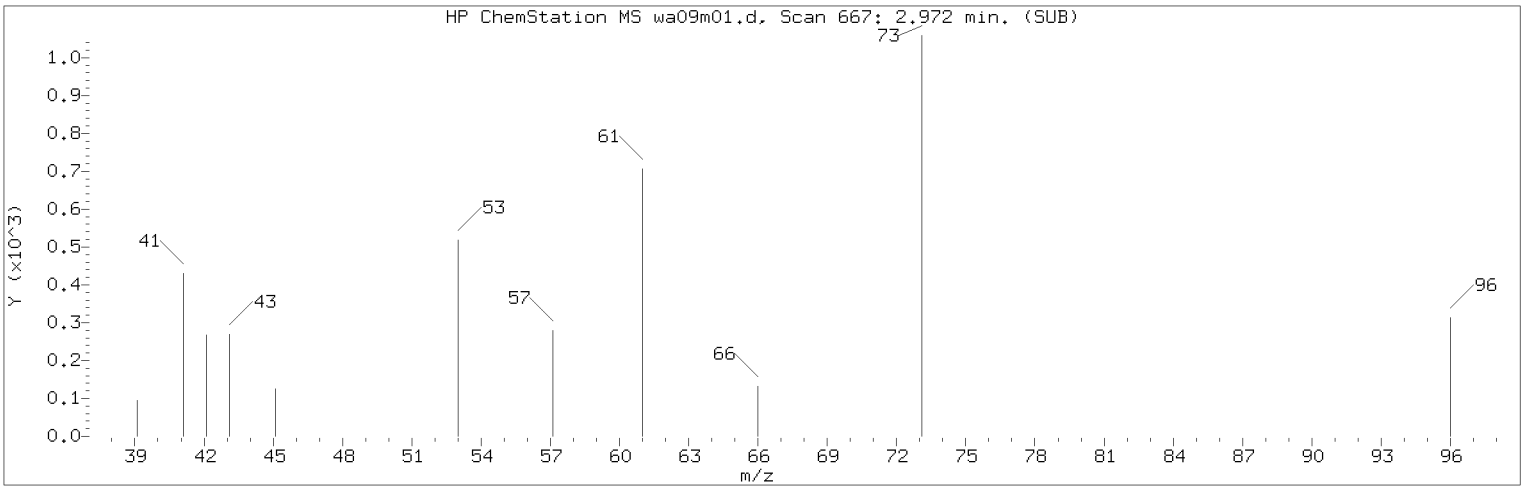
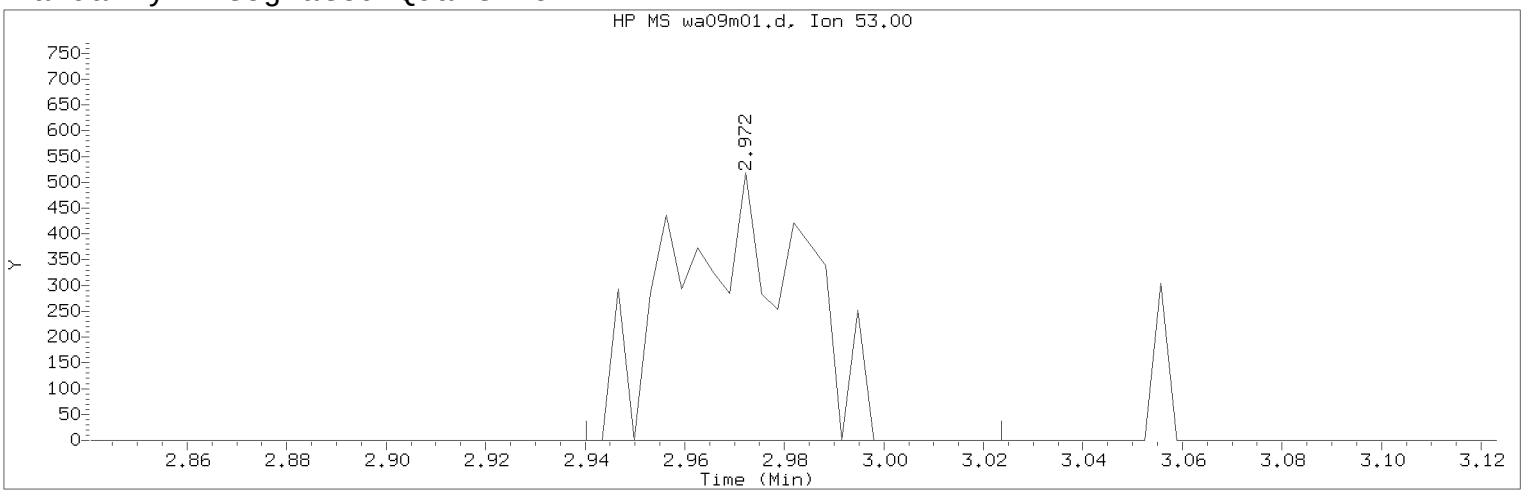
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

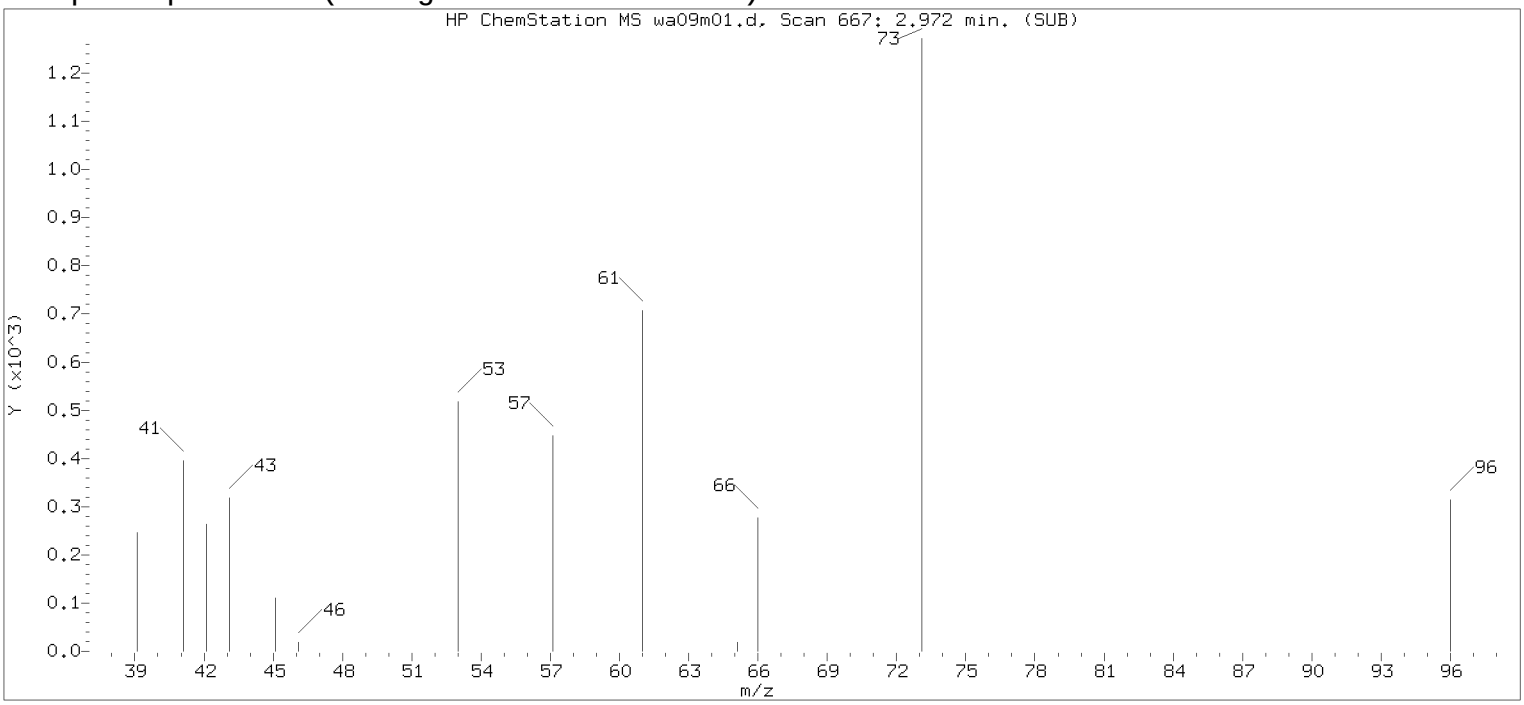
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 667
Retention Time (minutes): 2.972
Quant Ion : 53.00
Area (flag) : 912M
On-Column Amount (ng) : 0.3421
Integration start scan : 656 Integration stop scan: 682
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

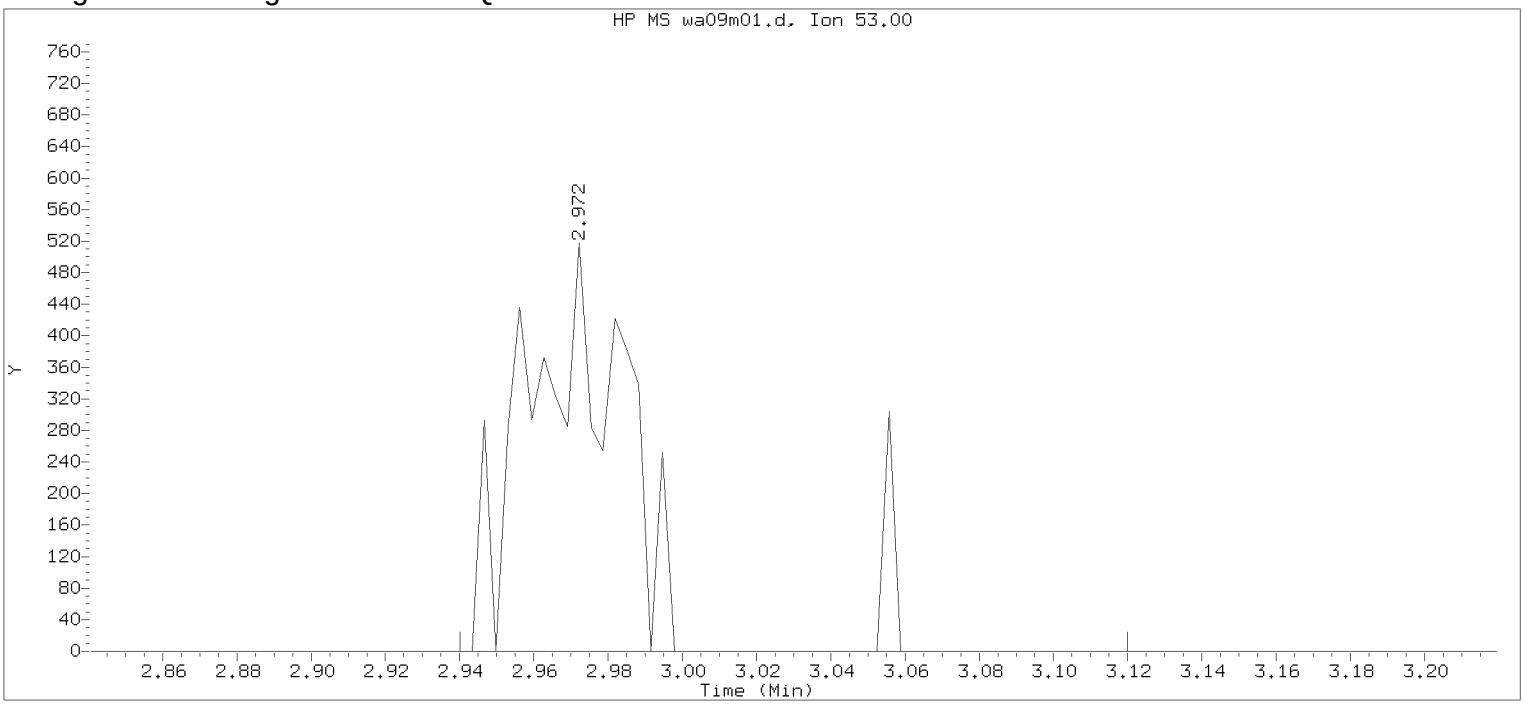
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

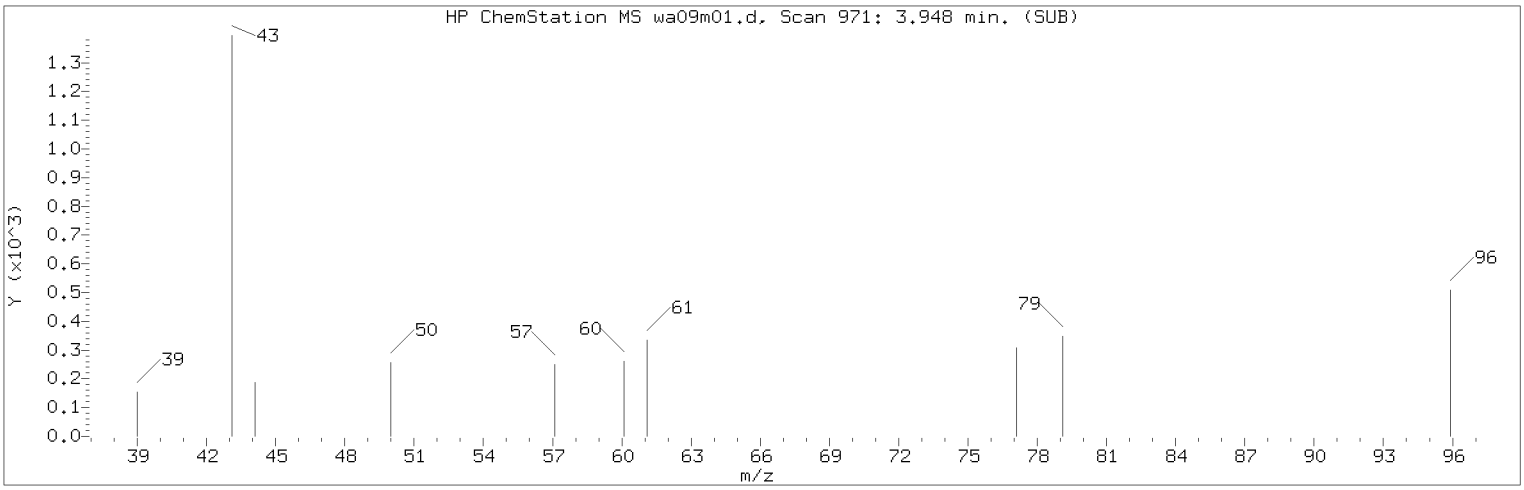
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

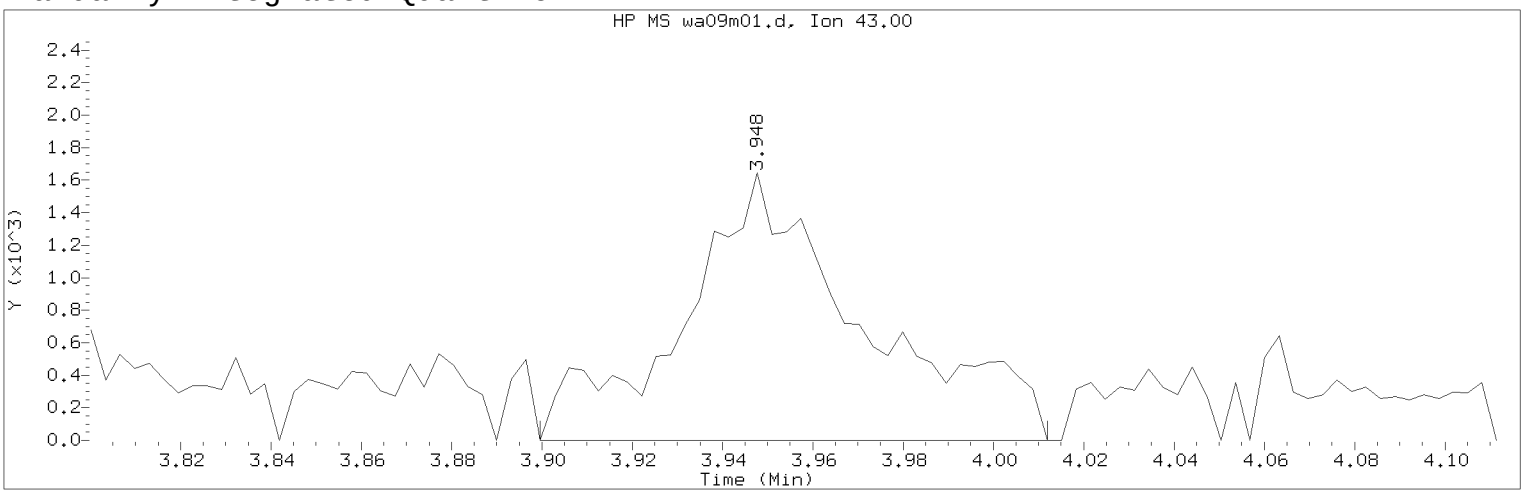
Compound Number : 31
Compound Name : Acrylonitrile
Scan Number : 667
Retention Time (minutes): 2.972
Quant Ion : 53.00
Area : 970
On-column Amount (ng) : 0.3786
Integration start scan : 656 Integration stop scan: 712
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

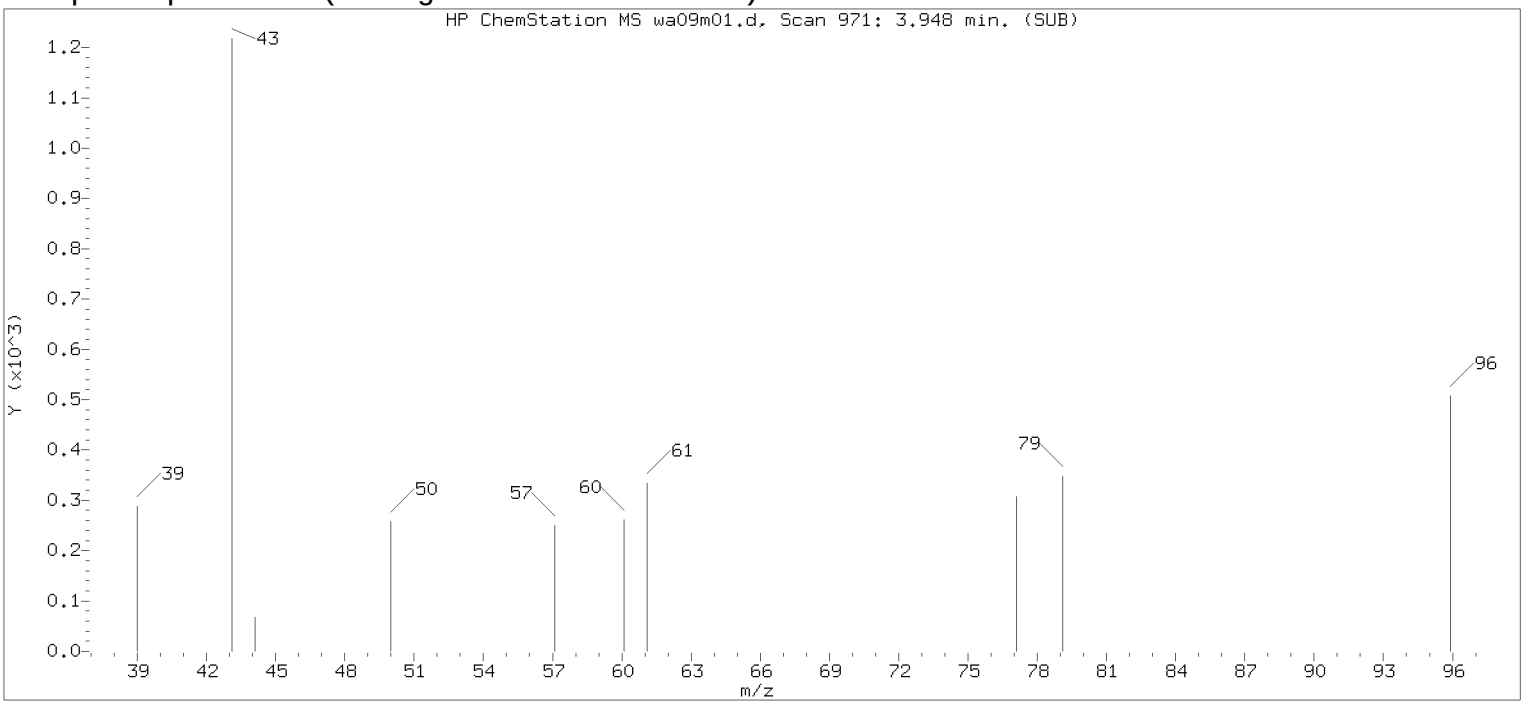
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 971
Retention Time (minutes): 3.948
Quant Ion : 43.00
Area (flag) : 4554M
On-Column Amount (ng) : 1.2257
Integration start scan : 955 Integration stop scan: 990
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

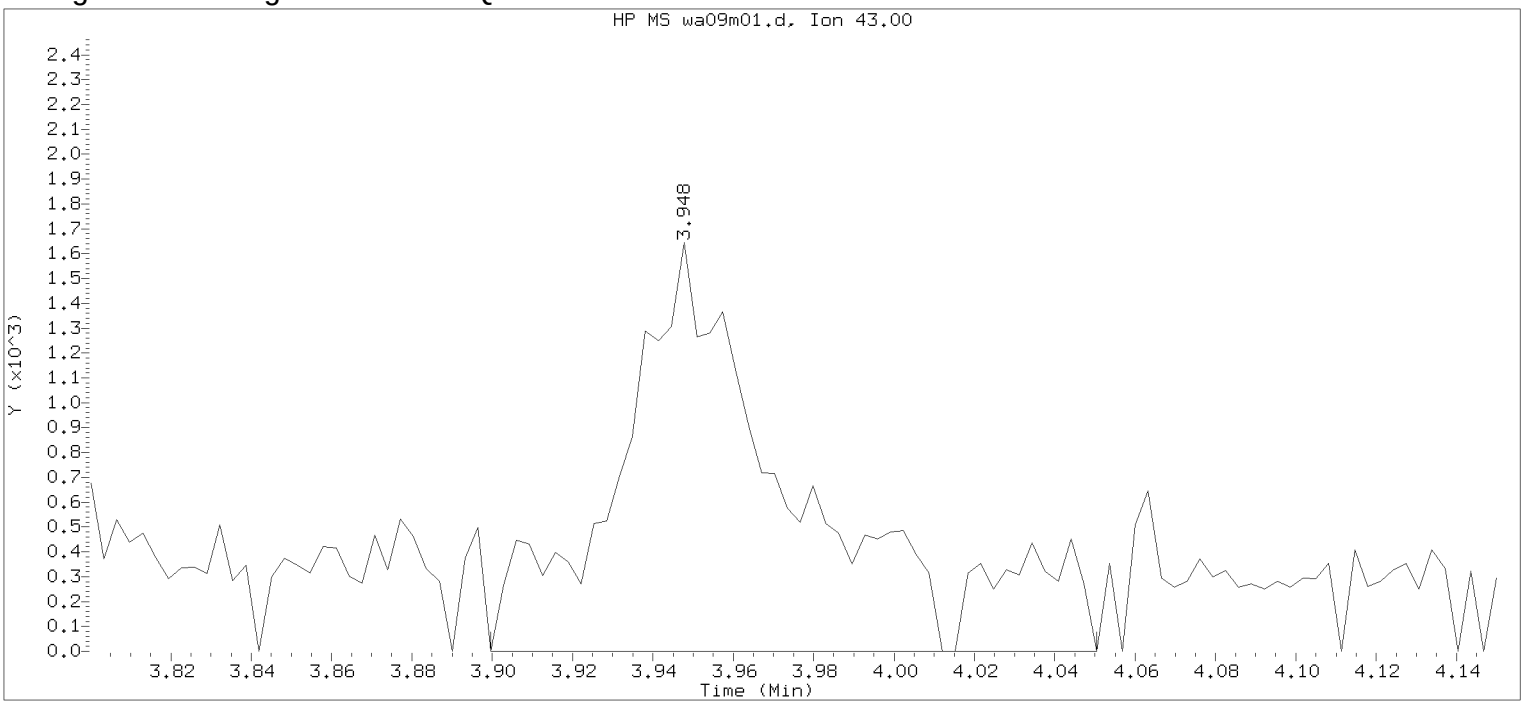
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

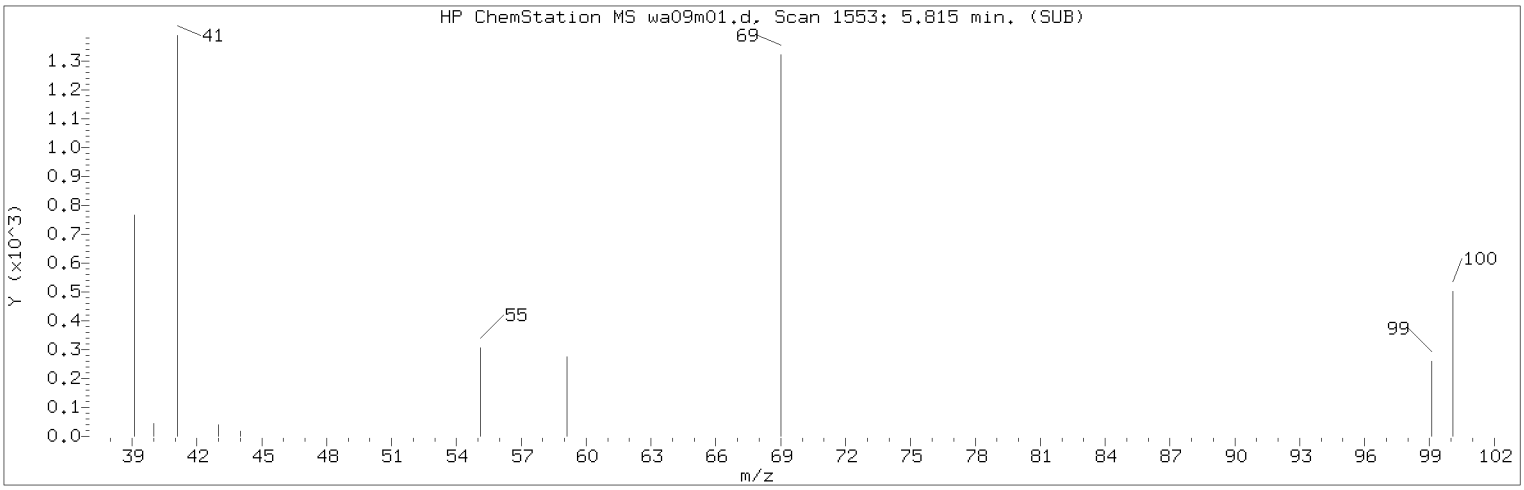
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

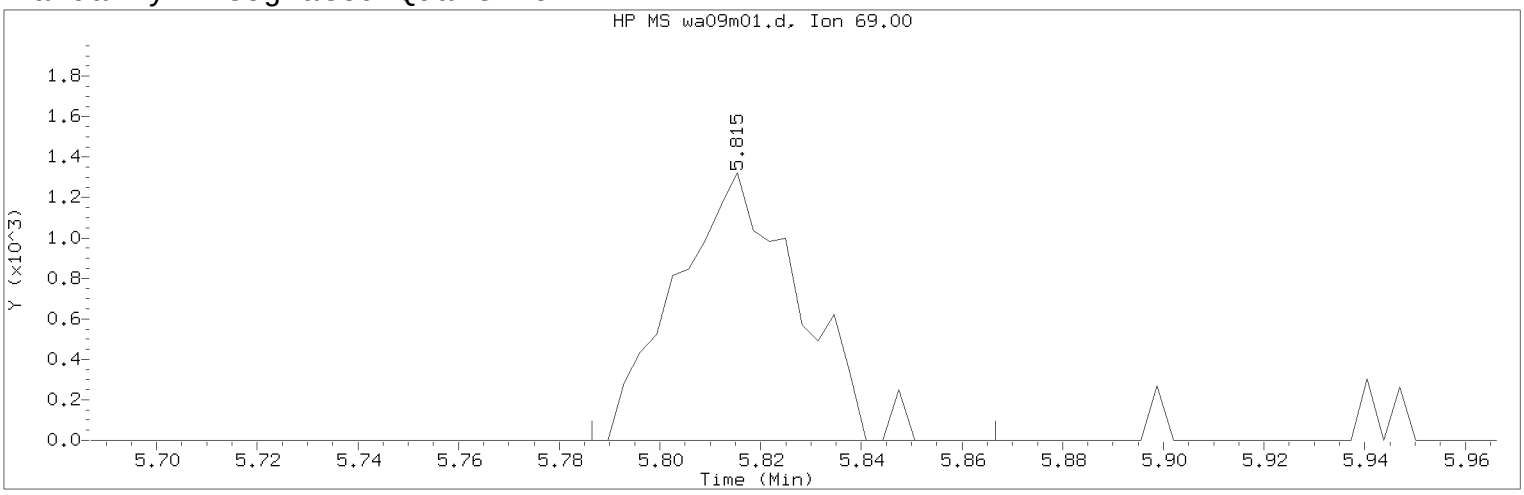
Compound Number : 44
Compound Name : 2-Butanone
Scan Number : 971
Retention Time (minutes): 3.948
Quant Ion : 43.00
Area : 5193
On-column Amount (ng) : 1.3978
Integration start scan : 955 Integration stop scan: 1002
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:06 nsl01327

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

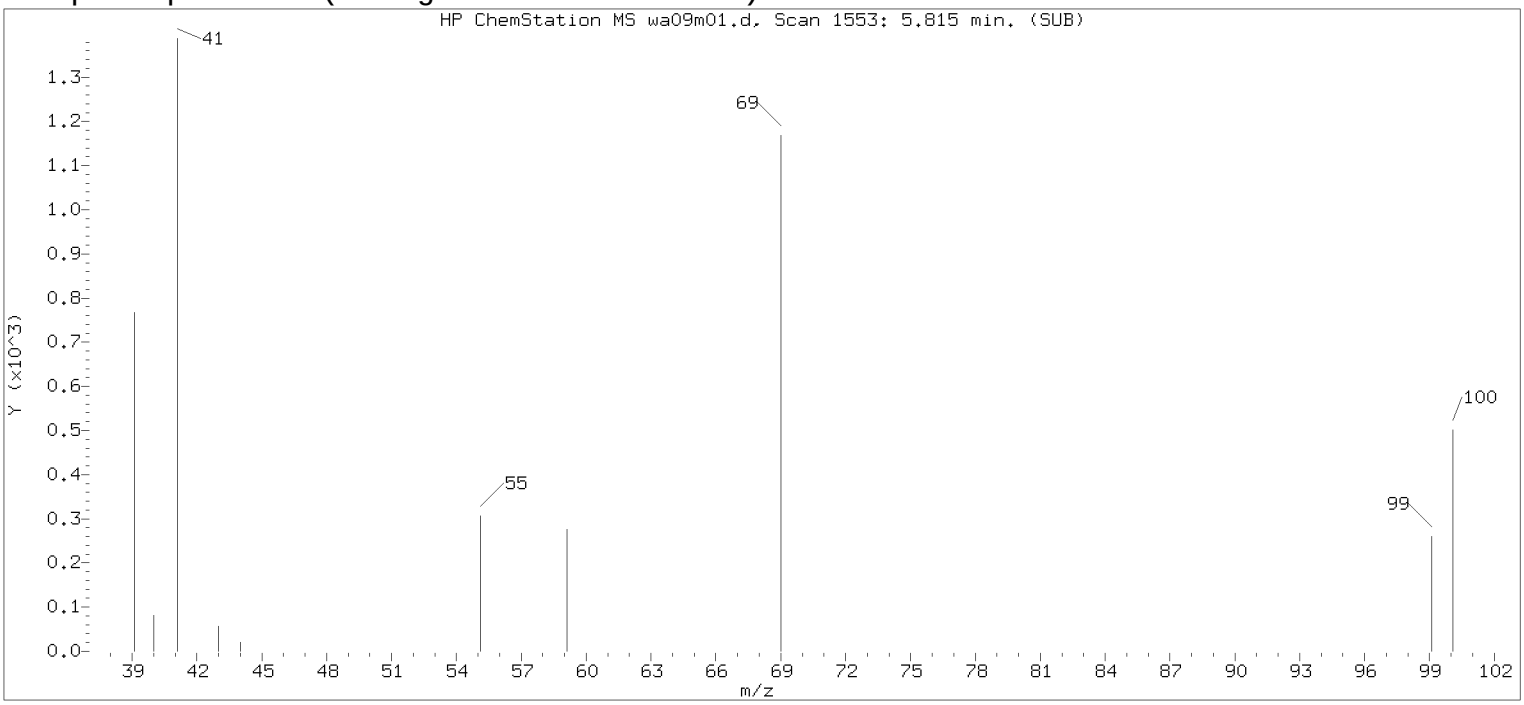
Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 1553
Retention Time (minutes): 5.815
Quant Ion : 69.00
Area (flag) : 2242M
On-Column Amount (ng) : 0.4039
Integration start scan : 1543 Integration stop scan: 1568
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

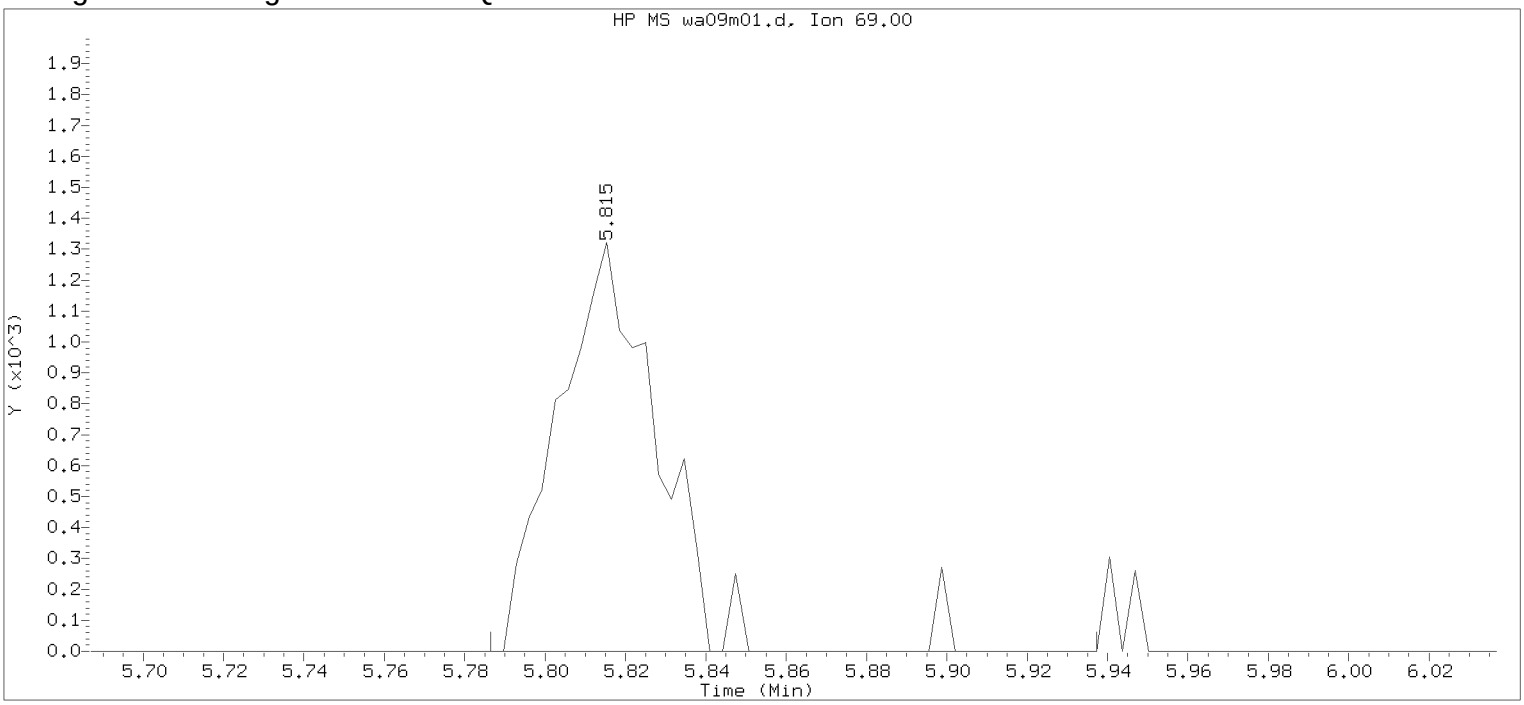
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:00.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



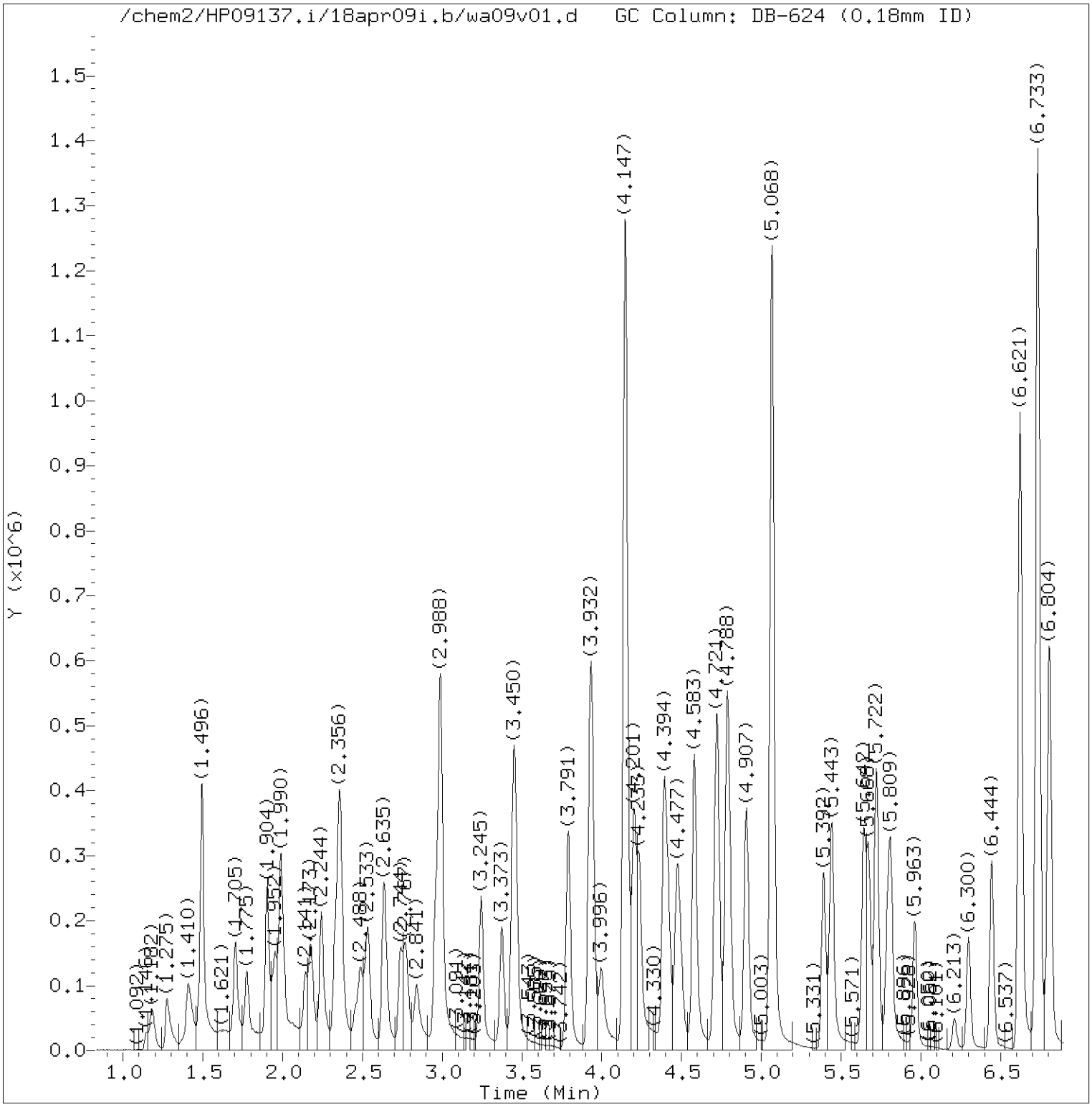
Data File: /chem2/HP09137.i/18apr09i.b/wa09m01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:02 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:13
Date, time and analyst ID of latest file update: 09-Apr-2018 14:17 Automation

Sample Name: VSTD0.5 Lab Sample ID: VSTD0.5

Compound Number : 76
Compound Name : Methyl Methacrylate
Scan Number : 1553
Retention Time (minutes): 5.815
Quant Ion : 69.00
Area : 2294
On-column Amount (ng) : 0.4134
Integration start scan : 1543 Integration stop scan: 1590
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:07.
Target 3.5 esignature user id: nsl01327



Total Ion Chromatogram (TIC)

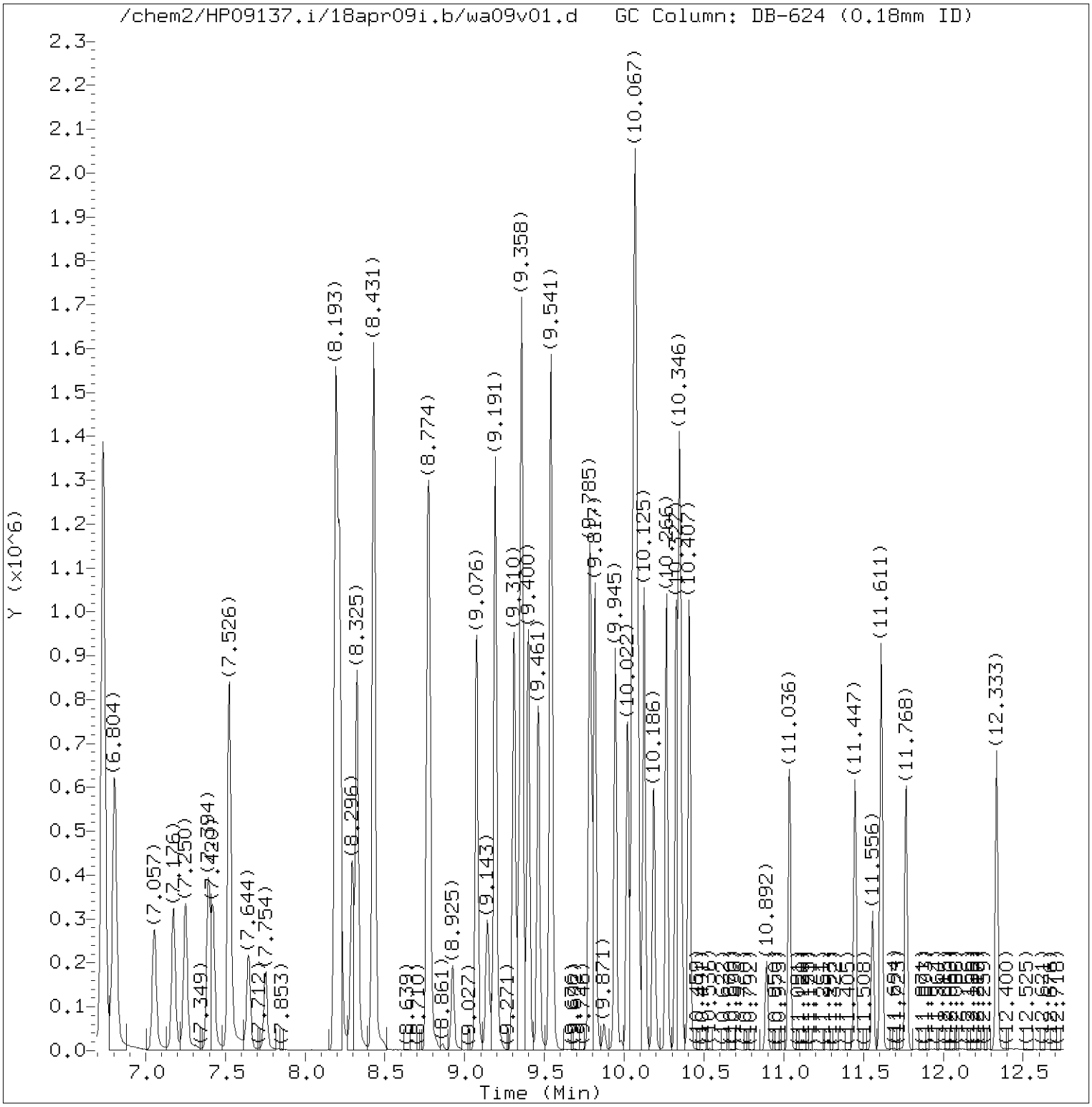
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Digitally signed by Nicole S. Lamoreaux
on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	126079	18.611
4) Chloromethane	(2)	1.410	50	140093	19.306
6) Vinyl Chloride	(2)	1.483	62	145549	19.846
5) 1,3-Butadiene	(2)	1.496	39	113259	21.075
8) Bromomethane	(2)	1.705	94	106449	19.981
9) Chloroethane	(2)	1.775	64	86946	19.859
10) Dichlorofluoromethane	(2)	1.904	67	211040	22.876
12) Trichlorofluoromethane	(2)	1.952	101	168733	20.692
11) n-Pentane	(2)	1.990	43	172616	19.940
13) Ethanol	(1)	2.061	45	28854M	507.521
15) Freon 123a	(2)	2.176	67	122924	20.410
16) Acrolein	(1)	2.244	56	180926M	136.615
17) 1,1-Dichloroethene	(2)	2.343	96	101135	22.271
19) Freon 113	(2)	2.353	101	98234	21.345
18) Acetone	(1)	2.366	58	78069	140.320
21) 2-Propanol	(1)	2.485	45	46635	121.224
22) Methyl Iodide	(2)	2.488	142	176756	20.043
23) Carbon Disulfide	(2)	2.536	76	305657	20.398
25) Allyl Chloride	(2)	2.632	41	150263	20.731
27) Methyl Acetate	(2)	2.648	43	91544	17.258
28) Methylene Chloride	(2)	2.738	84	106783	20.235
29)*t-Butyl alcohol-d10	(1)	2.767	65	163202	250.000
30) t-Butyl alcohol	(1)	2.841	59	137042	195.377
31) Acrylonitrile	(2)	2.959	53	216937	80.242
32) trans-1,2-Dichloroethene	(2)	2.985	96	109024	21.815
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	329612	19.455
34) n-Hexane	(2)	3.245	57	113896	19.595
36) 1,1-Dichloroethane	(2)	3.373	63	178000	20.996
38) di-Isopropyl ether	(2)	3.444	45	312286	19.678
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	152505	20.357
40) Ethyl t-butyl ether	(2)	3.791	59	304915	19.290
45) 2,2-Dichloropropane	(2)	3.922	77	98609	21.525
42) cis-1,2-Dichloroethene	(2)	3.925	96	122972	21.805
44) 2-Butanone	(2)	3.941	43	490772	130.241
47) Propionitrile	(1)	3.999	54	137684	157.016
43) 1,2-Dichloroethene (Total)	(2)		96	231996	43.620
48) Methacrylonitrile	(2)	4.147	67	460871	144.443
49) Bromochloromethane	(2)	4.153	128	58259	20.297

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

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Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.201	71	97084	103.540
51) Chloroform	(2)	4.237	83	179539	20.656
52)$Dibromofluoromethane	(2)	4.391	113	234624	49.531
53) 1,1,1-Trichloroethane	(2)	4.416	97	158595	20.503
54) Cyclohexane	(2)	4.477	56	160349	20.372
55) 1,1-Dichloropropene	(2)	4.583	75	143068	20.668
56) Carbon Tetrachloride	(2)	4.583	117	122011	20.828
58) Isobutyl Alcohol	(1)	4.708	41	107376	466.687
57)$1,2-Dichloroethane-d4	(2)	4.724	102	61224	49.225
60) Benzene	(2)	4.785	78	433728	20.840
61) 1,2-Dichloroethane	(2)	4.798	62	142431	19.627
65) t-Amyl methyl ether	(2)	4.907	73	319903	19.390
66)*Fluorobenzene	(2)	5.068	96	1039100	50.000
67) n-Heptane	(2)	5.071	43	103376	19.829
69) n-Butanol	(1)	5.389	56	223932	1034.343
71) Trichloroethene	(2)	5.440	95	113274	20.501
72) Methylcyclohexane	(2)	5.642	83	152297	20.501
73) 1,2-Dichloropropane	(2)	5.674	63	111651	21.186
74) Dibromomethane	(2)	5.790	93	72837	20.381
76) Methyl Methacrylate	(2)	5.812	69	106615	18.936
75) 1,4-Dioxane	(1)	5.825	88	33540M	567.171
78) Bromodichloromethane	(2)	5.963	83	137427	20.337
79) 2-Nitropropane	(2)	6.207	41	31920	17.062
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	83092	19.357
81) cis-1,3-Dichloropropene	(2)	6.444	75	181252	20.343
82) 4-Methyl-2-pentanone	(2)	6.621	43	739209	95.151
83)$Toluene-d8	(3)	6.733	98	1033305	50.182
88) Toluene	(3)	6.807	92	292602	20.745
89) trans-1,3-Dichloropropene	(3)	7.057	75	167788	19.967
91) Ethyl Methacrylate	(3)	7.173	69	186758	19.199
92) 1,1,2-Trichloroethane	(3)	7.250	97	114871	20.721
90) 1,3-Dichloropropene (total)	(3)		100	349040	40.310
93) Tetrachloroethene	(3)	7.397	166	120058	20.918
94) 1,3-Dichloropropane	(3)	7.423	76	187684	20.482
96) 2-Hexanone	(3)	7.526	43	576925	93.184
97) Dibromochloromethane	(3)	7.644	129	114018	20.224
99) 1,2-Dibromoethane	(3)	7.754	107	123656	20.477
100)*Chlorobenzene-d5	(3)	8.193	117	803093	50.000

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

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on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
102) Chlorobenzene	(3)	8.219	112	330062	20.540
103) 1,1,1,2-Tetrachloroethane	(3)	8.296	131	105149	20.371
104) Ethylbenzene	(3)	8.325	91	545980	20.922
106) m+p-Xylene	(3)	8.431	106	443285	41.564
107) o-Xylene	(3)	8.768	106	218021	20.467
109) Styrene	(3)	8.780	104	379283	20.840
108) Xylene (Total)	(3)		106	661306	62.031
110) Bromoform	(3)	8.925	173	77806	19.231
111) Isopropylbenzene	(3)	9.076	105	528555	20.859
112) Cyclohexanone	(1)	9.143	55	126601	464.620
114)$4-Bromofluorobenzene	(3)	9.191	95	384866	49.485
115) Bromobenzene	(4)	9.307	156	144264	20.976
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	180318	20.372
117) 1,2,3-Trichloropropane	(4)	9.345	110	57781	20.785
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	263378	108.252
119) n-Propylbenzene	(4)	9.400	91	610388	21.247
120) 2-Chlorotoluene	(4)	9.464	126	132351	20.936
122) 1,3,5-Trimethylbenzene	(4)	9.538	105	444654	20.832
121) 4-Chlorotoluene	(4)	9.547	126	139930	20.681
124) tert-Butylbenzene	(4)	9.782	134	96733	20.441
125) Pentachloroethane	(4)	9.794	167	73715	20.178
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	462089	20.700
127) sec-Butylbenzene	(4)	9.945	105	506097	20.942
129) 1,3-Dichlorobenzene	(4)	10.022	146	261647	20.132
130) p-Isopropyltoluene	(4)	10.051	119	452034	20.794
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	420832	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	276337	20.439
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	477018	20.745
135) Benzyl Chloride	(4)	10.186	91	350668	19.592
136) 1,3-Diethylbenzene	(4)	10.266	119	259555	20.028
137) 1,4-Diethylbenzene	(4)	10.324	119	267747	19.932
139) n-Butylbenzene	(4)	10.343	92	203127	19.651
138) 1,2-Dichlorobenzene	(4)	10.353	146	262695	20.273
140) 1,2-Diethylbenzene	(4)	10.407	119	220255	19.799
141) Diethylbenzene (total)	(4)		100	747557	59.760
142) 1,2-Dibromo-3-chloropropane	(4)	10.892	75	36244	19.241
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	157624	19.135
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	149640	18.336

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

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on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
147) Hexachlorobutadiene	(4)	11.559	225	43211	17.866
148) Naphthalene	(4)	11.611	128	554460	18.724
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	140647	18.156
150) 2-Methylnaphthalene	(4)	12.333	142	247339	15.869

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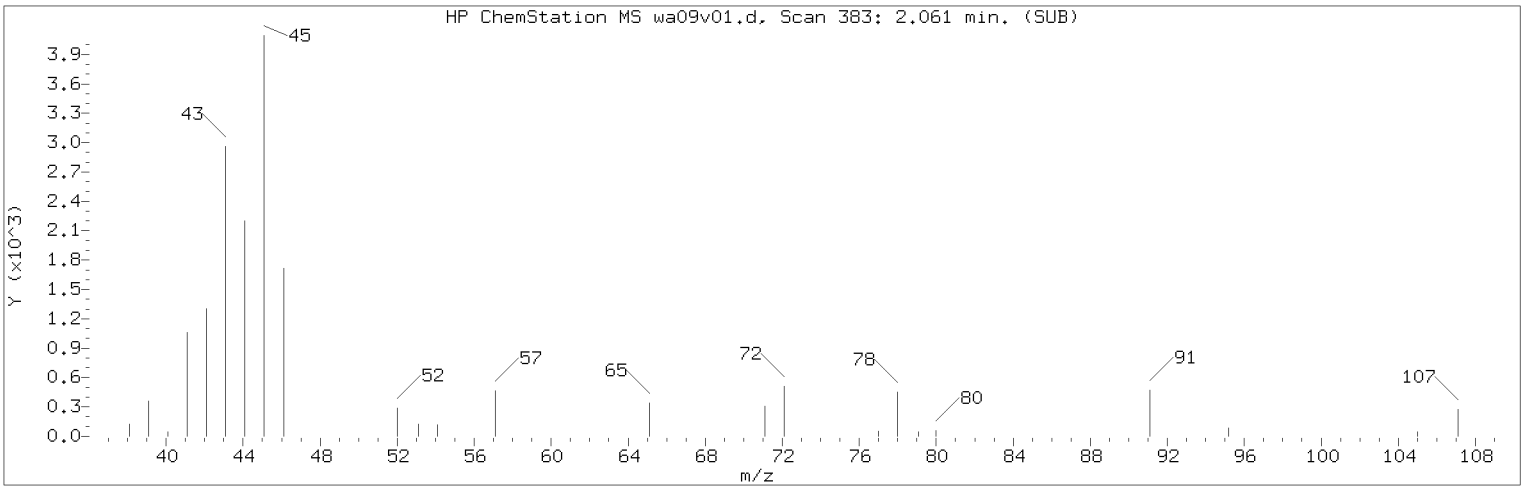
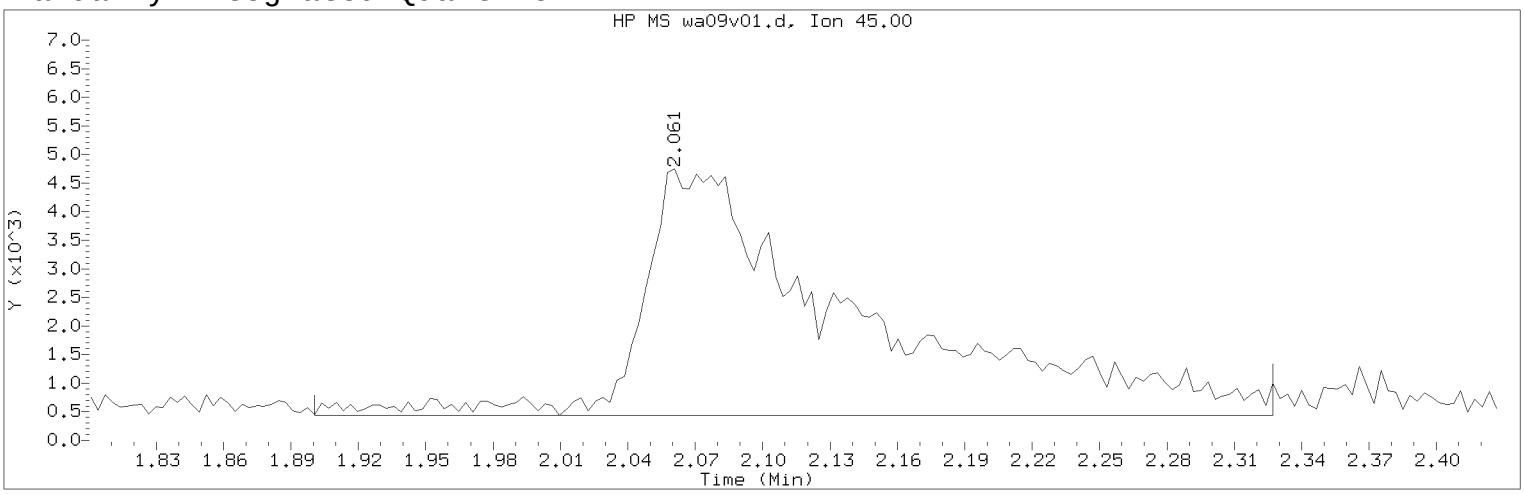
on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

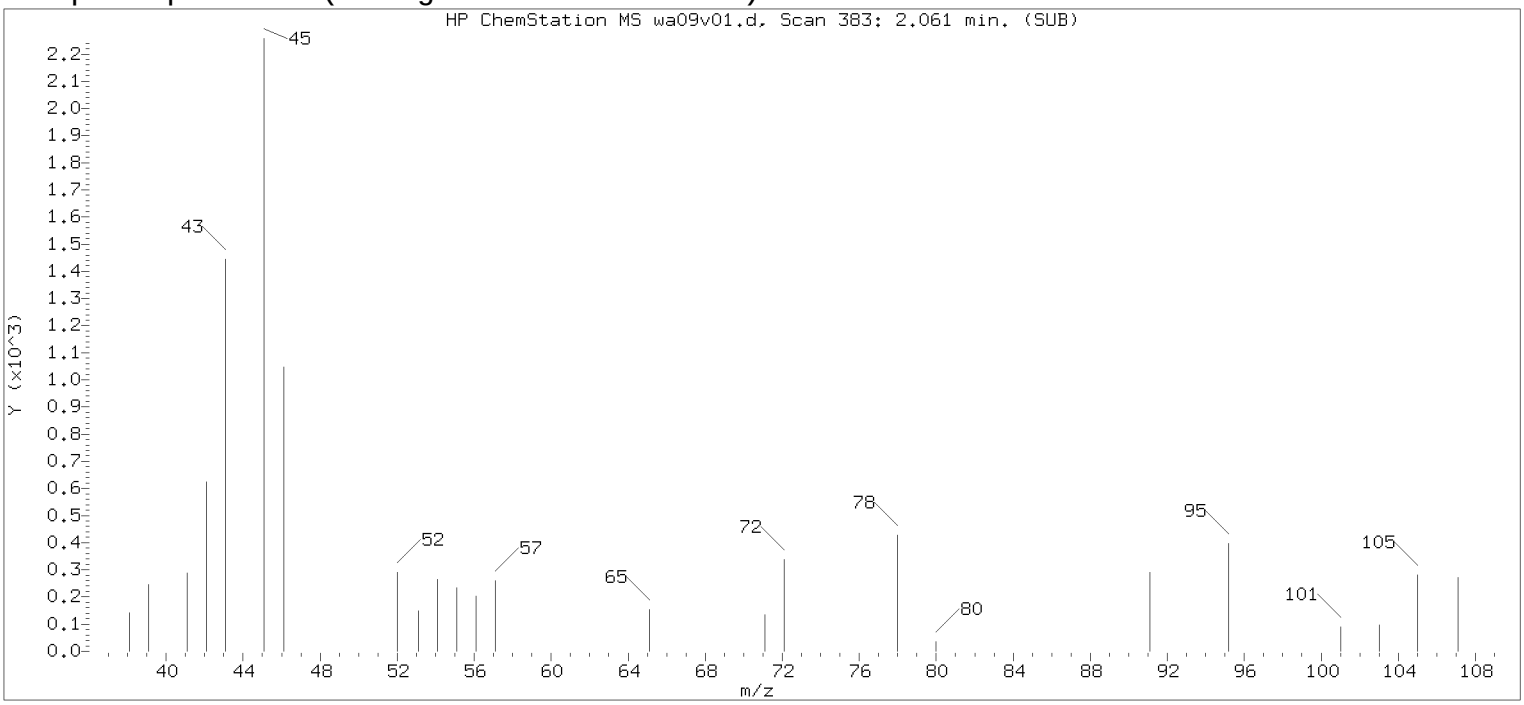
Compound Number : 13
Compound Name : Ethanol
Scan Number : 383
Retention Time (minutes): 2.061
Quant Ion : 45.00
Area (flag) : 28854M
On-Column Amount (ng) : 507.5205
Integration start scan : 332 Integration stop scan: 465
Y at integration start : 439 Y at integration end: 439

Reason for manual integration: improper integration

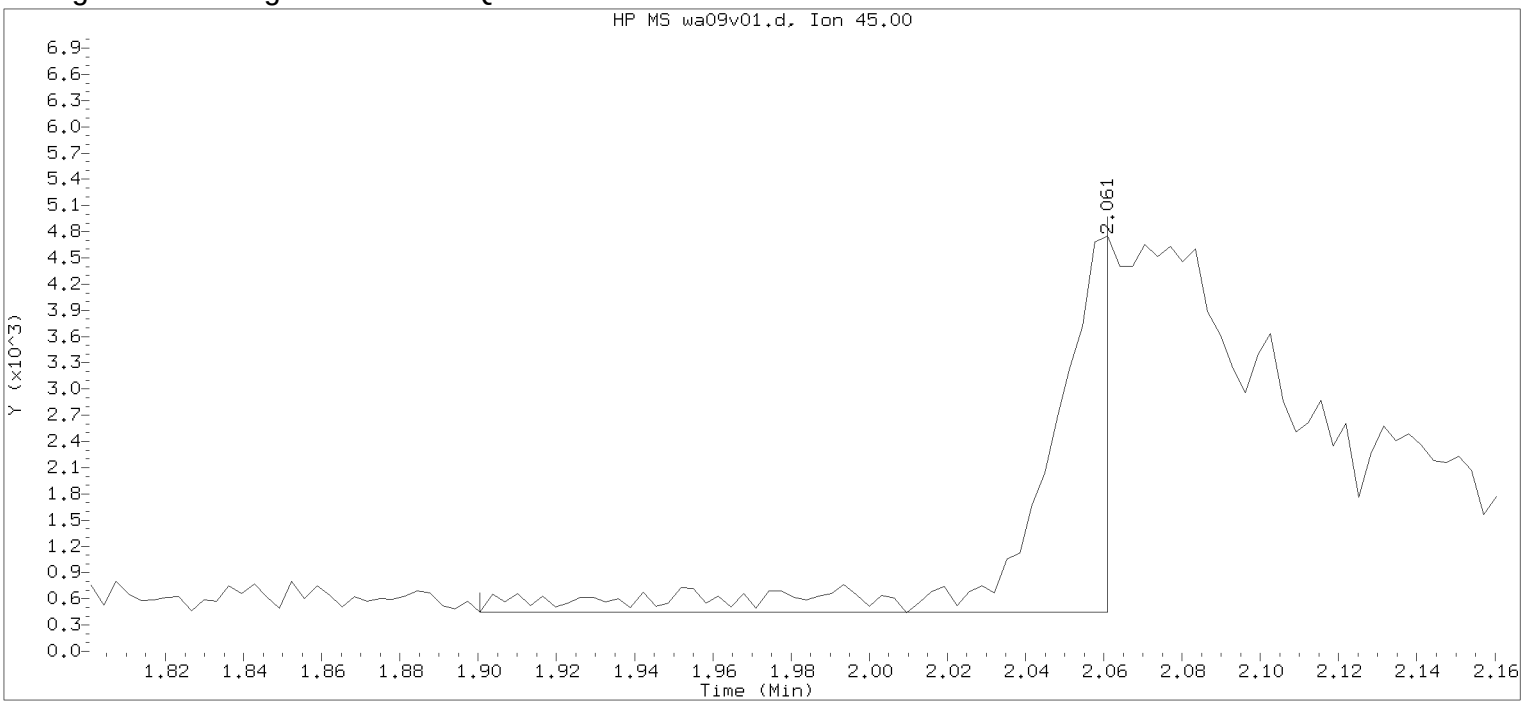
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

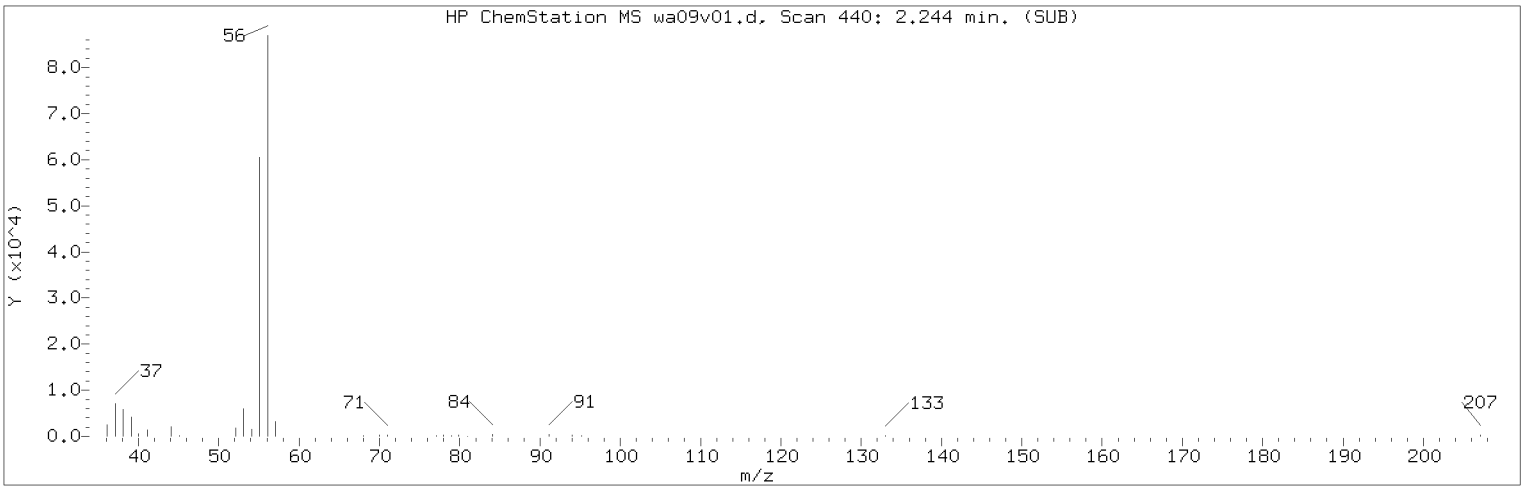
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:21
Date, time and analyst ID of latest file update: 09-Apr-2018 14:41 Automation

Sample Name: LCSWICV Lab Sample ID: LCSWICV

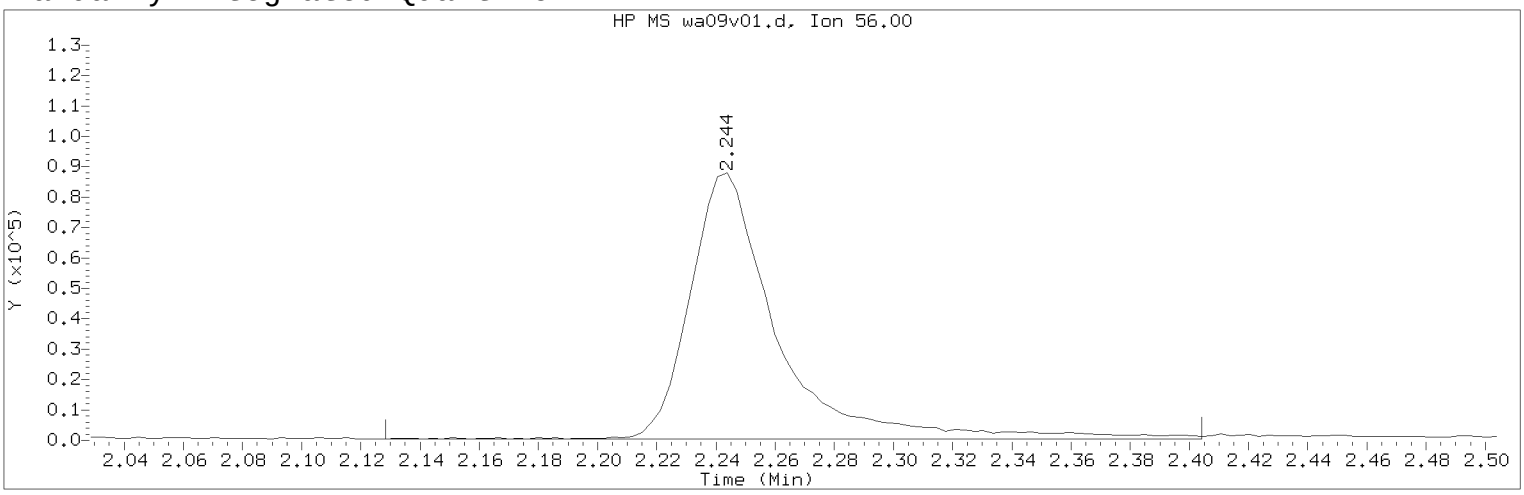
Compound Number : 13
Compound Name : Ethanol
Scan Number : 383
Retention Time (minutes): 2.061
Quant Ion : 45.00
Area : 4879
On-column Amount (ng) : 2.1372
Integration start scan : 332 Integration stop scan: 382
Y at integration start : 451 Y at integration end: 451

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

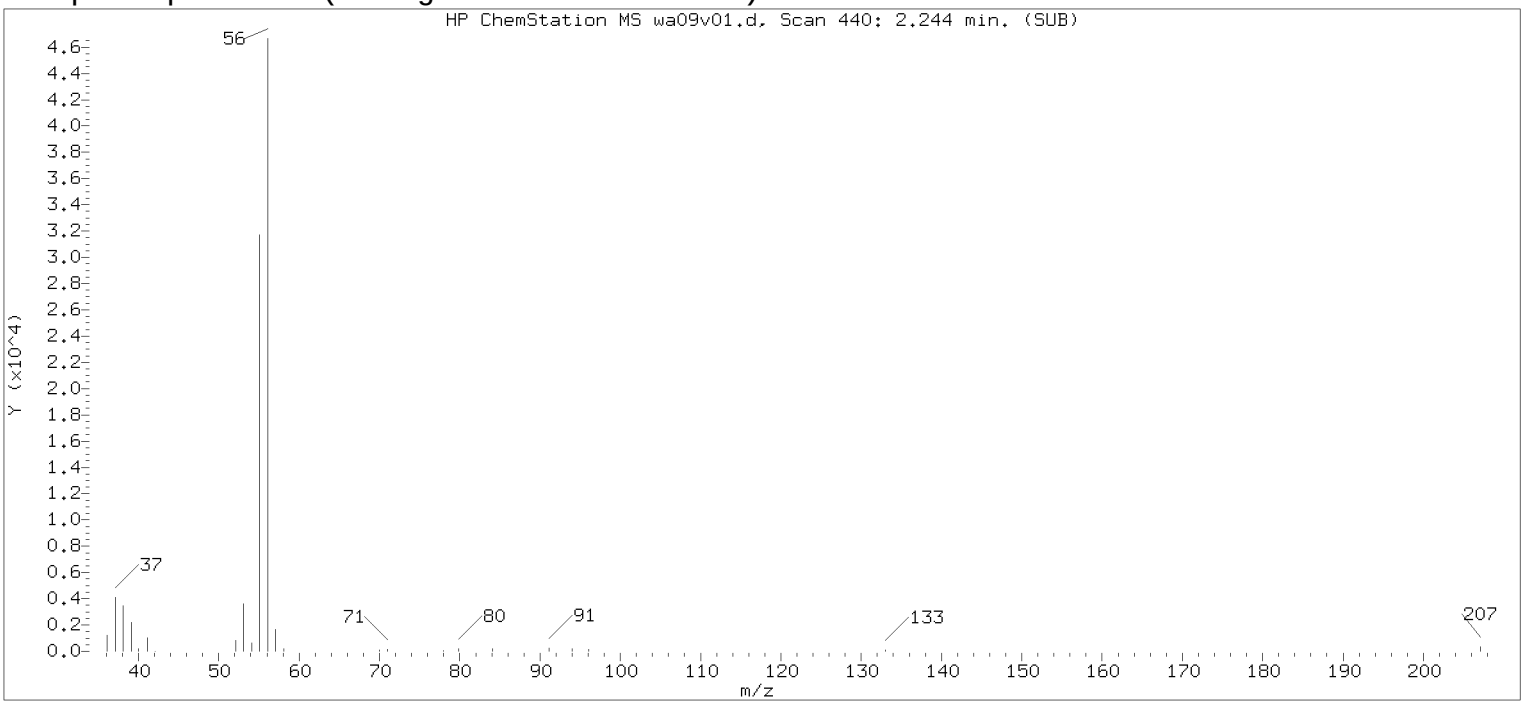
Compound Number : 16
Compound Name : Acrolein
Scan Number : 440
Retention Time (minutes): 2.244
Quant Ion : 56.00
Area (flag) : 180926M
On-Column Amount (ng) : 136.6153
Integration start scan : 403 Integration stop scan: 489
Y at integration start : 403 Y at integration end: 403

Reason for manual integration: improper integration

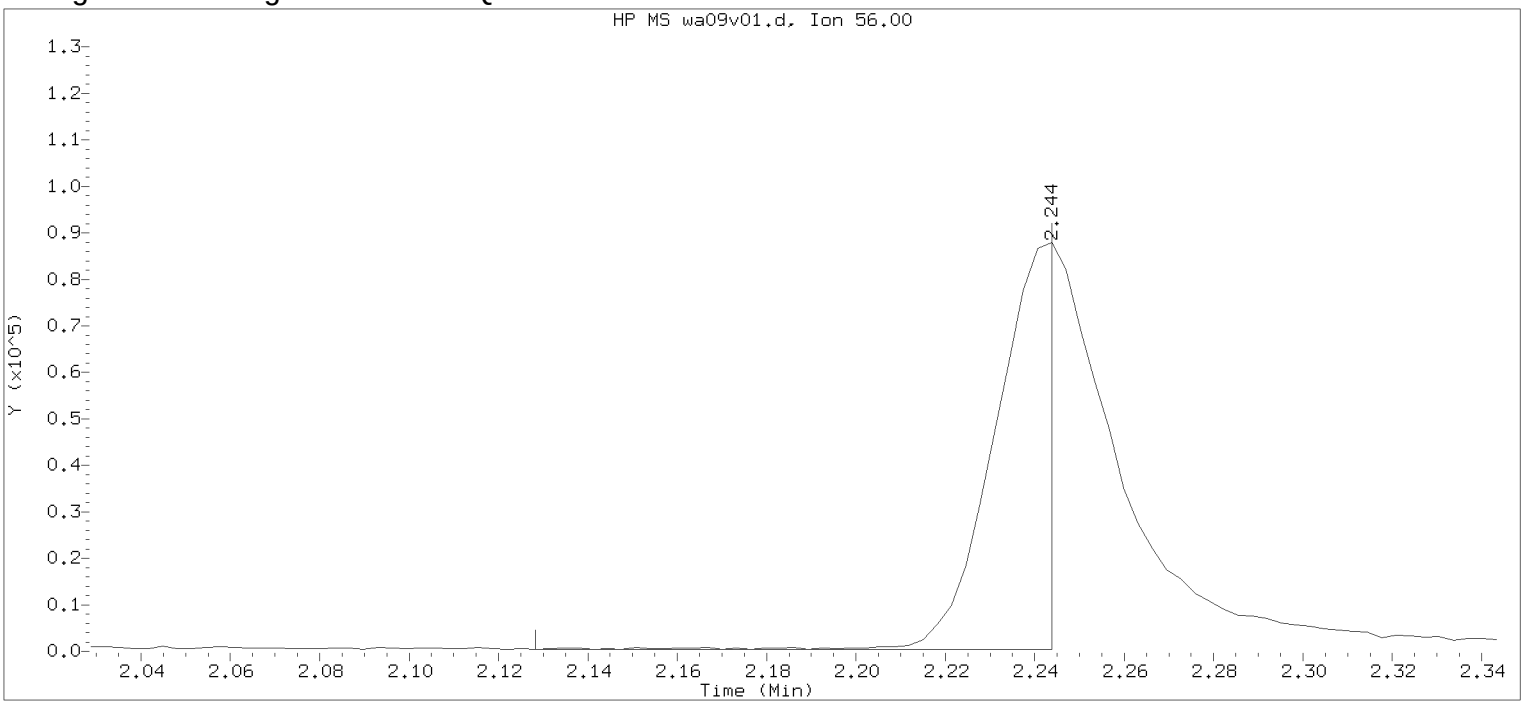
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

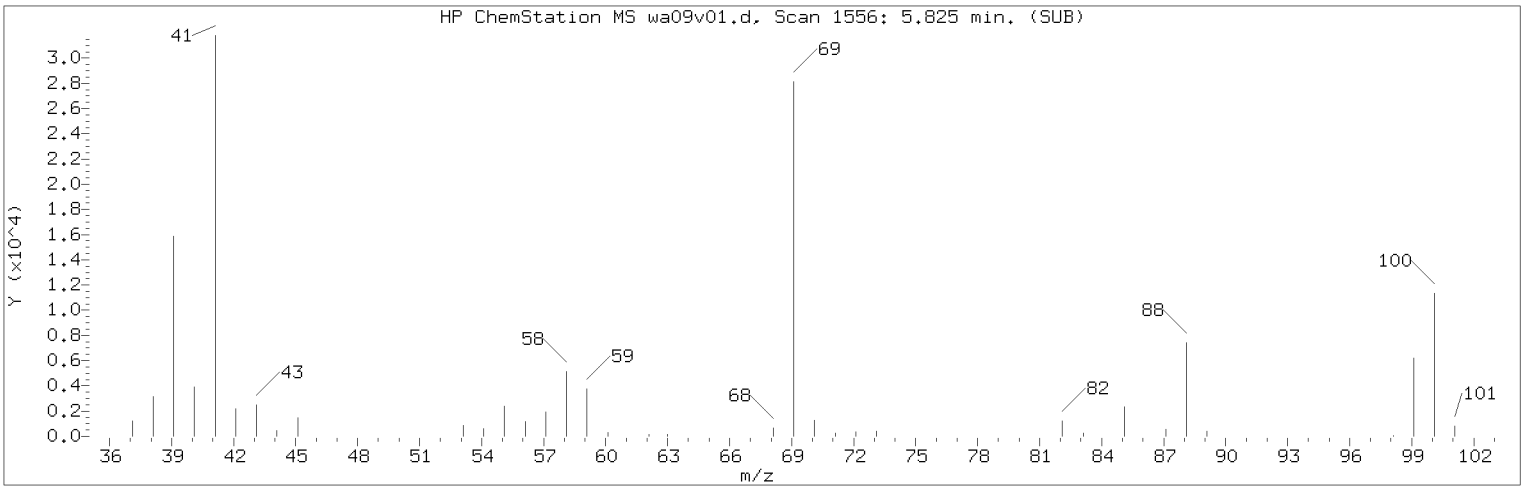
Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:21
Date, time and analyst ID of latest file update: 09-Apr-2018 14:41 Automation

Sample Name: LCSWICV Lab Sample ID: LCSWICV

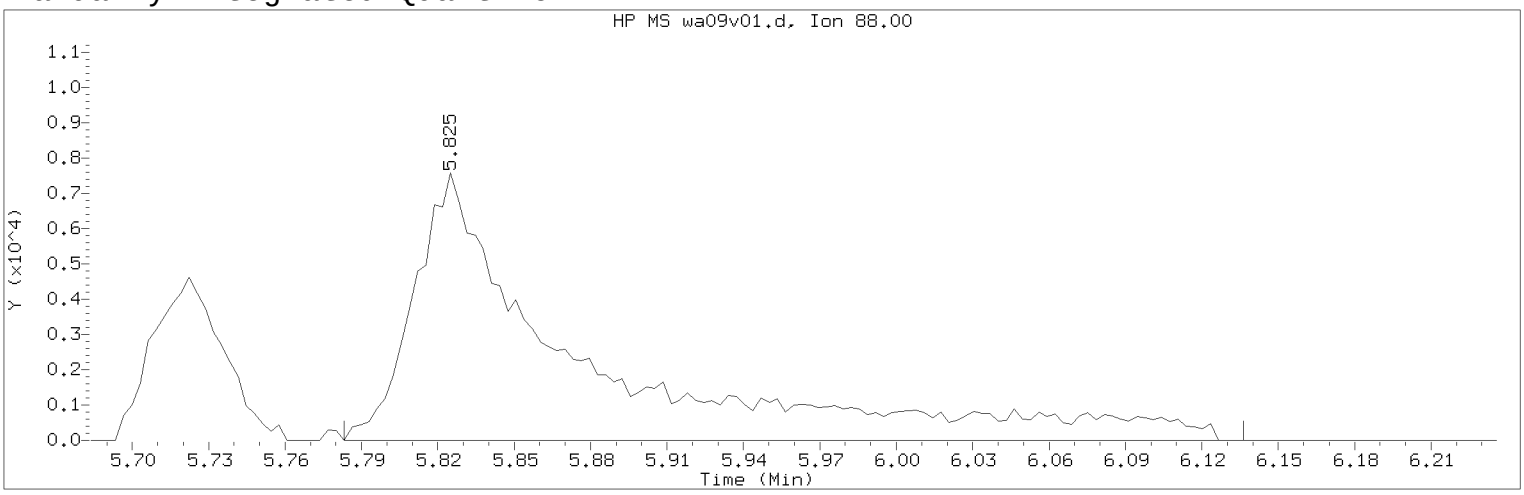
Compound Number : 16
Compound Name : Acrolein
Scan Number : 440
Retention Time (minutes): 2.244
Quant Ion : 56.00
Area : 74759
On-column Amount (ng) : 56.4496
Integration start scan : 403 Integration stop scan: 439
Y at integration start : 423 Y at integration end: 423

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 15:05
Date, time and analyst ID of latest file update: 09-Apr-2018 15:05 nsl01327

Sample Name: LCSWICV Lab Sample ID: LCSWICV

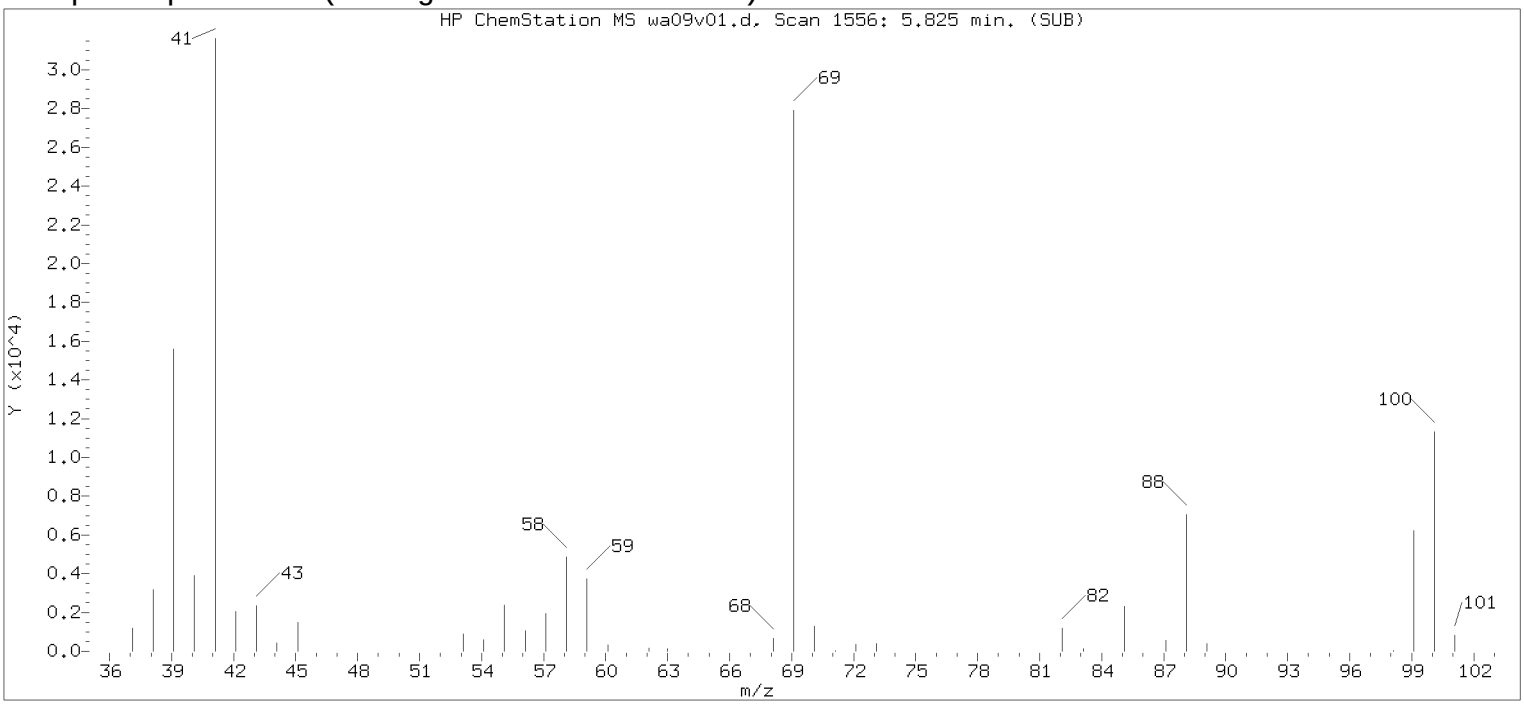
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1556
Retention Time (minutes): 5.825
Quant Ion : 88.00
Area (flag) : 33540M
On-Column Amount (ng) : 567.1712
Integration start scan : 1542 Integration stop scan: 1652
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

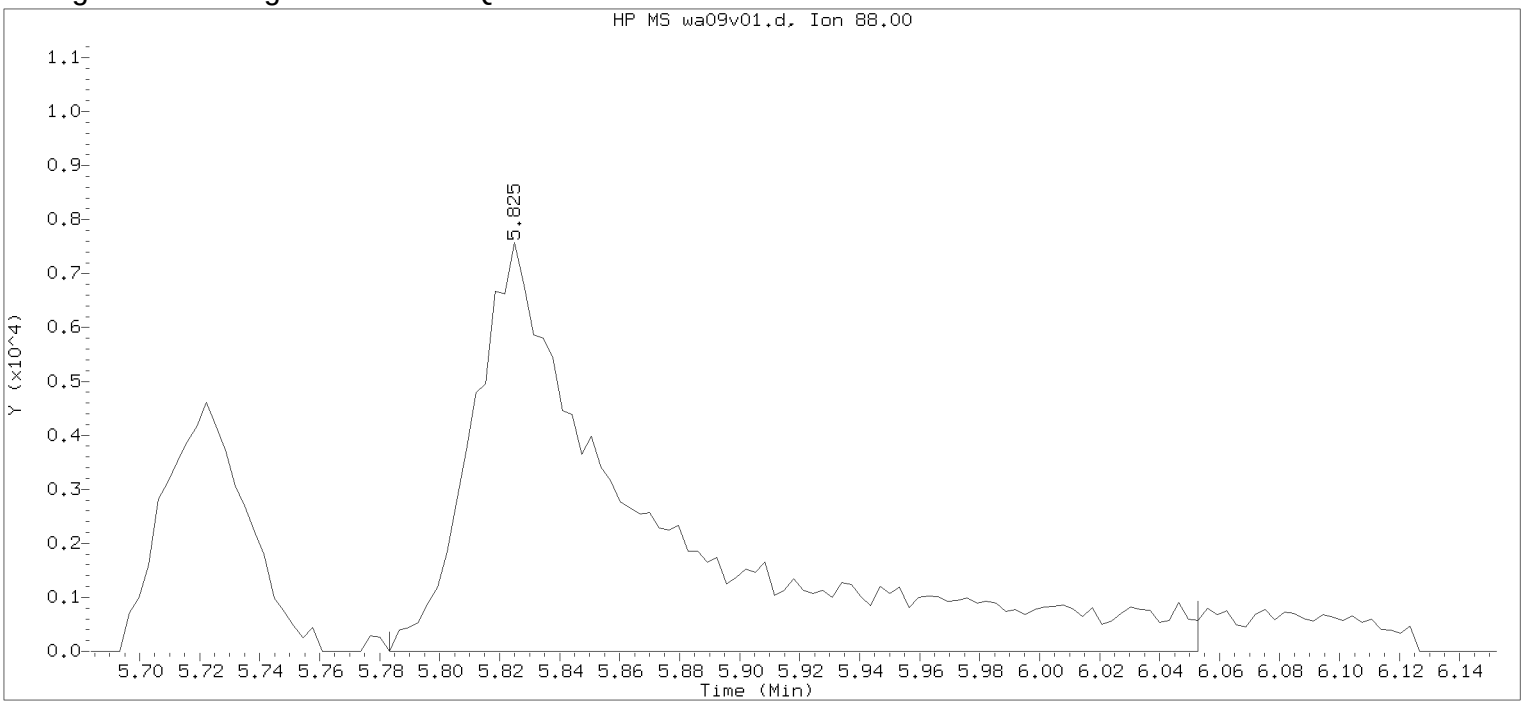
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Marla S. Brewer on 04/11/2018 at 20:10.
PARALLAX ID: msl01251

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr09i.b/wa09v01.d Instrument ID: HP09137.i
Injection date and time: 09-APR-2018 14:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr09i.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 09-APR-2018 14:21
Date, time and analyst ID of latest file update: 09-Apr-2018 14:41 Automation

Sample Name: LCSWICV Lab Sample ID: LCSWICV

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1556
Retention Time (minutes): 5.825
Quant Ion : 88.00
Area : 30973
On-column Amount (ng) : 523.7618
Integration start scan : 1542 Integration stop scan: 1626
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/09/2018 at 15:09.
Target 3.5 esignature user id: nsl01327

Data File: /chem2/HP09137.i/18apr23b.b/wa23t05.d

Date : 23-APR-2018 21:36

Client ID: BFBFeb13-18

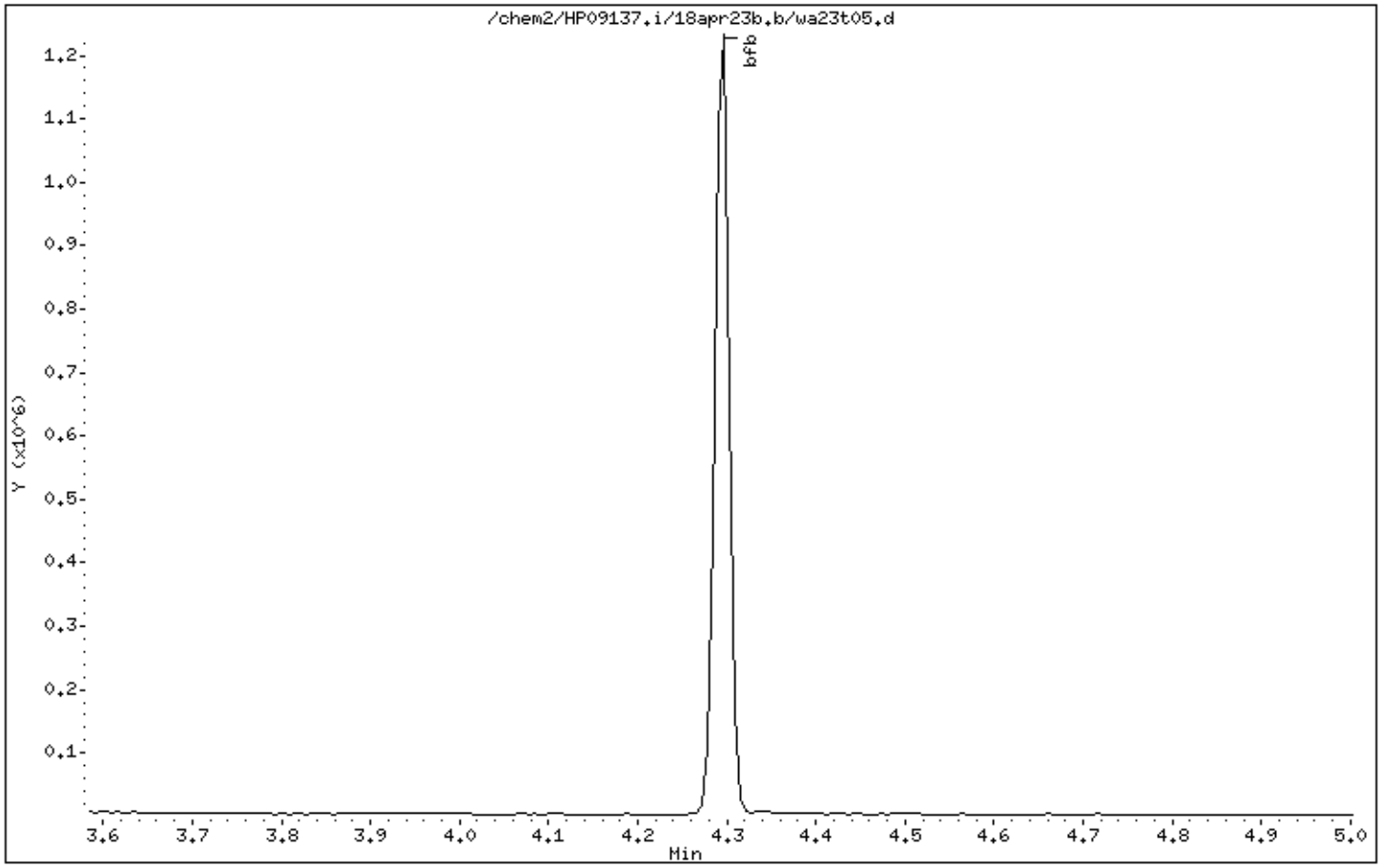
Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: kk10002

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP09137.i/18apr23b.b/wa23t05.d

Date : 23-APR-2018 21:36

Client ID: BFBFeb13-18

Instrument: HP09137.i

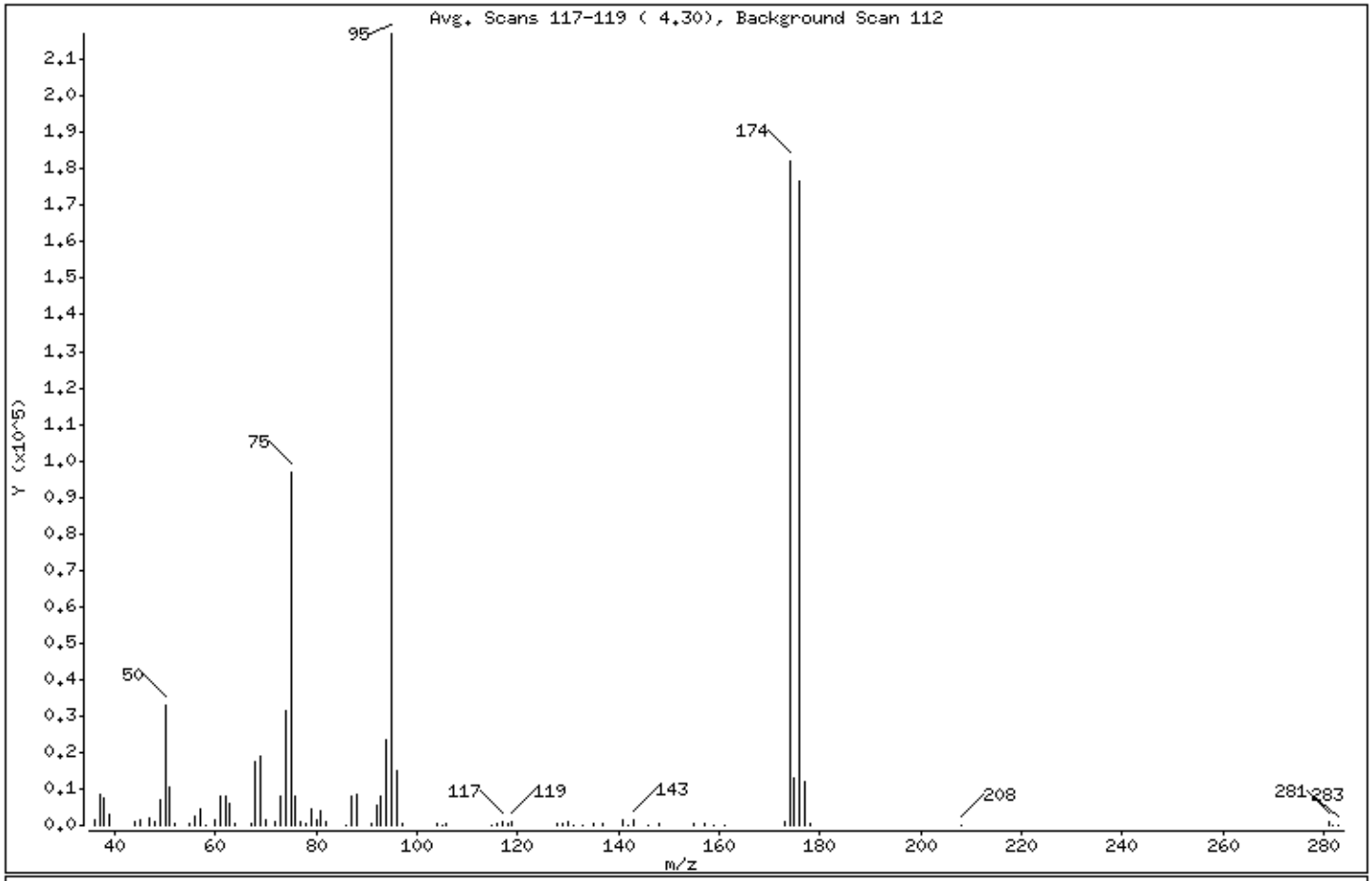
Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: kk10002

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	15.25
75	30.00 - 60.00% of mass 95	44.48
96	5.00 - 9.00% of mass 95	6.81
173	Less than 2.00% of mass 174	0.37 (0.44)
174	50.00 - 100.00% of mass 95	84.02
175	5.00 - 9.00% of mass 174	6.01 (7.16)
176	95.00 - 101.00% of mass 174	81.27 (96.73)
177	5.00 - 9.00% of mass 176	5.47 (6.73)

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Data File: /chem2/HP09137.i/18apr23b.b/wa23t05.d

Date : 23-APR-2018 21:36

Client ID: BFBFeb13-18 Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

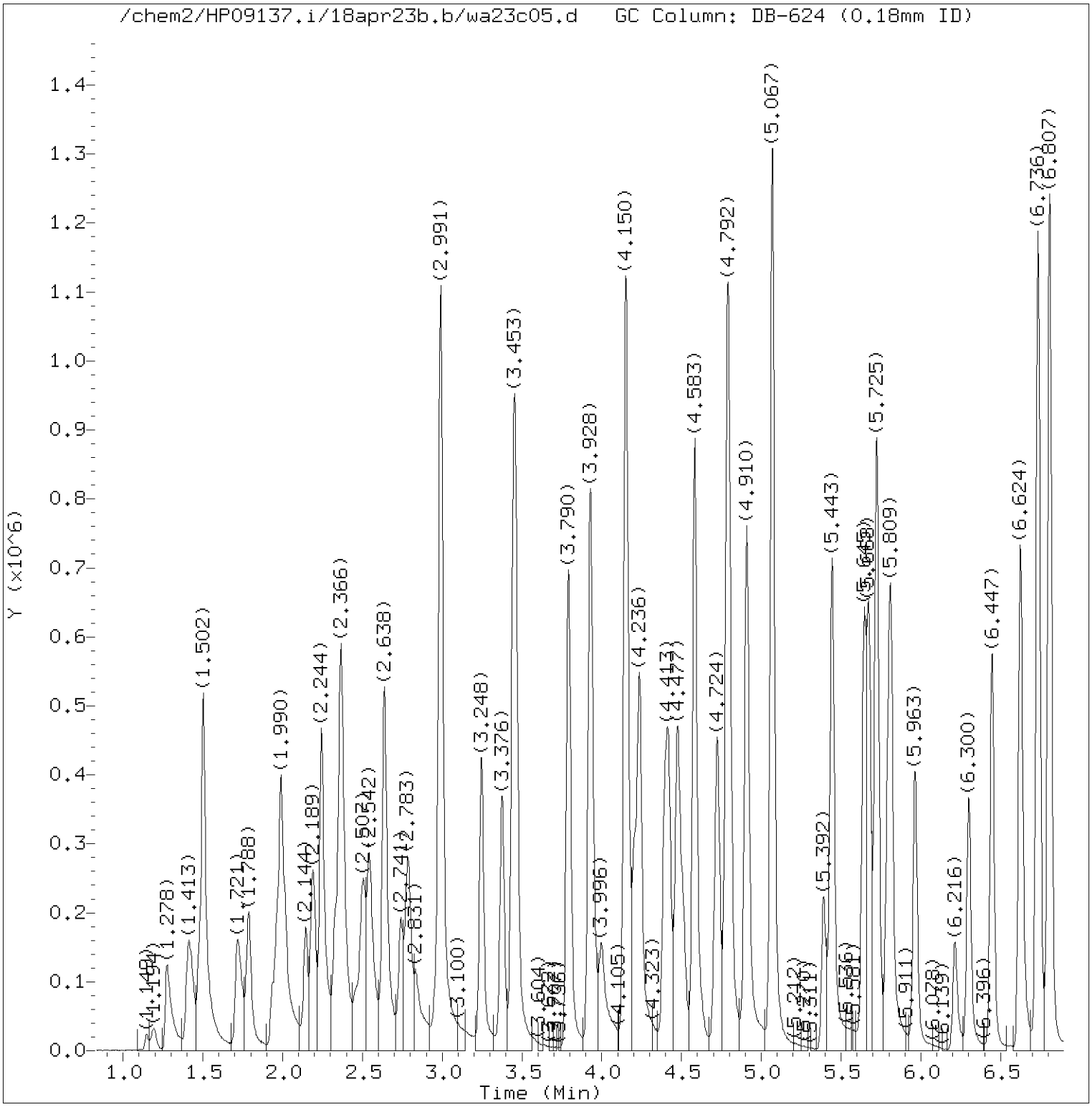
Operator: kk10002

Column phase: DB-624 Column diameter: 0.18

Data File: wa23t05.d
Spectrum: Avg. Scans 117-119 (4.30), Background Scan 112
Location of Maximum: 95.00
Number of points: 80

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1532	67.00	449	94.00	23288	143.00	1644
37.00	8328	68.00	17640	95.00	217088	146.00	188
38.00	7389	69.00	19040	96.00	14788	148.00	475
39.00	2791	70.00	1405	97.00	545	155.00	550
44.00	1056	72.00	980	104.00	703	157.00	365
45.00	1347	73.00	8147	105.00	214	159.00	114
47.00	2072	74.00	31480	106.00	677	161.00	98
48.00	997	75.00	96568	115.00	88	173.00	800
49.00	7203	76.00	8124	116.00	694	174.00	182400
50.00	33096	77.00	1055	117.00	974	175.00	13058
51.00	10235	78.00	722	118.00	638	176.00	176448
52.00	452	79.00	4293	119.00	945	177.00	11883
55.00	505	80.00	1358	128.00	713	178.00	318
56.00	2475	81.00	4232	129.00	275	208.00	15
57.00	4491	82.00	828	130.00	799	281.00	904
58.00	187	86.00	229	131.00	210	282.00	132
60.00	1558	87.00	8145	133.00	91	283.00	97
61.00	8220	88.00	8263	135.00	378		
62.00	8212	91.00	597	137.00	286		
63.00	6040	92.00	5247	141.00	1597		
64.00	501	93.00	7738	142.00	110		

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

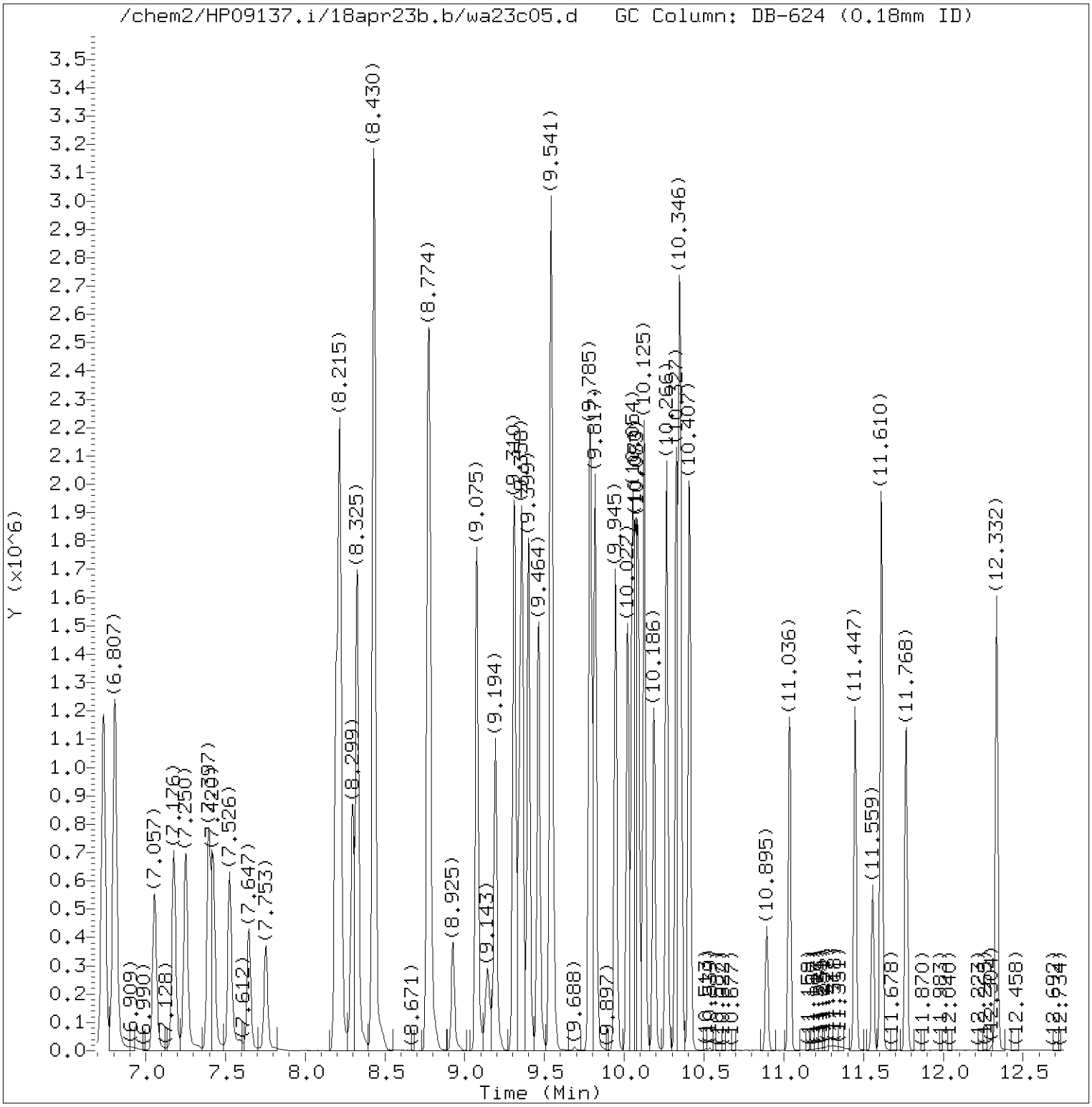
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.275	85	239659	41.348
4) Chloromethane	(2)	1.416	50	299589	48.256
6) Vinyl Chloride	(2)	1.483	62	294319	46.906
5) 1,3-Butadiene	(2)	1.502	39	187253	40.725
8) Bromomethane	(2)	1.717	94	206941	45.401
9) Chloroethane	(2)	1.788	64	176634	47.155
12) Trichlorofluoromethane	(2)	1.961	101	300372	43.052
11) n-Pentane	(2)	1.990	43	298634	40.321
13) Ethanol	(1)	2.045	45	45986	1102.050
15) Freon 123a	(2)	2.144	67	228511	44.345
16) Acrolein	(1)	2.244	56	567541	527.923
17) 1,1-Dichloroethene	(2)	2.359	96	191838	49.375
17) 1,1-Dichloroethene	(2)	2.359	63	88636	49.096
18) Acetone	(1)	2.366	58	45879	101.585
19) Freon 113	(2)	2.369	101	175514	44.574
21) 2-Propanol	(1)	2.471	45	60658	194.241
22) Methyl Iodide	(2)	2.500	142	372163	49.324
23) Carbon Disulfide	(2)	2.545	76	537139	41.896
25) Allyl Chloride	(2)	2.632	41	289832	46.735
27) Methyl Acetate	(2)	2.651	43	209646M	46.194
29)*t-Butyl alcohol-d10	(1)	2.763	65	132480	250.000
28) Methylene Chloride	(2)	2.783	84	232766M	51.554
30) t-Butyl alcohol	(1)	2.837	59	127479	223.889
31) Acrylonitrile	(2)	2.962	53	104711	45.269
32) trans-1,2-Dichloroethene	(2)	2.991	96	215617	50.425
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	695289	47.966
34) n-Hexane	(2)	3.245	57	212956	42.821
36) 1,1-Dichloroethane	(2)	3.376	63	366406	50.514
38) di-Isopropyl ether	(2)	3.447	45	660559	48.648
39) 2-Chloro-1,3-butadiene	(2)	3.466	53	307176	47.924
40) Ethyl t-butyl ether	(2)	3.790	59	653347	48.309
42) cis-1,2-Dichloroethene	(2)	3.925	96	244566	50.686
45) 2,2-Dichloropropane	(2)	3.925	77	205275	52.372
44) 2-Butanone	(2)	3.941	43	262656	81.469
47) Propionitrile	(1)	3.999	54	227999	320.309
43) 1,2-Dichloroethene (Total)	(2)		96	460183	101.110
48) Methacrylonitrile	(2)	4.150	67	353813	129.607
49) Bromochloromethane	(2)	4.153	128	125260	51.007

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

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
50) Tetrahydrofuran	(1)	4.207	71	79473	104.414
51) Chloroform	(2)	4.236	83	365980	49.214
52)$Dibromofluoromethane	(2)	4.394	113	201347	49.681
52)$Dibromofluoromethane	(2)	4.394	111	207585	50.012
53) 1,1,1-Trichloroethane	(2)	4.419	97	315162	47.621
54) Cyclohexane	(2)	4.477	56	301981	44.841
54) Cyclohexane	(2)	4.477	84	268468	43.299
54) Cyclohexane	(2)	4.477	69	96219	43.940
55) 1,1-Dichloropropene	(2)	4.583	75	289580	48.896
56) Carbon Tetrachloride	(2)	4.583	117	234455	46.778
58) Isobutyl Alcohol	(1)	4.708	41	137611	736.795
57)$1,2-Dichloroethane-d4	(2)	4.727	102	53341	50.126
57)$1,2-Dichloroethane-d4	(2)	4.727	65	232177	48.550
57)$1,2-Dichloroethane-d4	(2)	4.731	104	34829	50.530
60) Benzene	(2)	4.788	78	895920	50.313
61) 1,2-Dichloroethane	(2)	4.804	62	297792	47.962
61) 1,2-Dichloroethane	(2)	4.808	98	30573	49.973
65) t-Amyl methyl ether	(2)	4.910	73	658264	46.633
66)*Fluorobenzene	(2)	5.067	96	889036	50.000
67) n-Heptane	(2)	5.071	43	201840	45.252
69) n-Butanol	(1)	5.392	56	242194	1378.120
71) Trichloroethene	(2)	5.443	95	229975	48.648
72) Methylcyclohexane	(2)	5.645	83	291452	45.855
72) Methylcyclohexane	(2)	5.645	98	138261	46.286
73) 1,2-Dichloropropane	(2)	5.674	63	226676	50.272
74) Dibromomethane	(2)	5.793	93	153908	50.335
76) Methyl Methacrylate	(2)	5.815	69	243385	50.525
75) 1,4-Dioxane	(1)	5.825	88	41567M	865.934
78) Bromodichloromethane	(2)	5.963	83	271649	46.986
79) 2-Nitropropane	(2)	6.216	41	106005	66.226
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	178680	48.650
81) cis-1,3-Dichloropropene	(2)	6.447	75	369301	48.446
82) 4-Methyl-2-pentanone	(2)	6.624	43	565616	85.096
83)$Toluene-d8	(3)	6.736	98	879843	49.377
83)$Toluene-d8	(3)	6.736	100	594165	49.476
88) Toluene	(3)	6.807	92	594160	48.680
89) trans-1,3-Dichloropropene	(3)	7.057	75	337582	46.423
91) Ethyl Methacrylate	(3)	7.176	69	416555	49.486

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

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	706883	94.869
92) 1,1,2-Trichloroethane	(3)	7.253	97	244039	50.869
93) Tetrachloroethene	(3)	7.394	166	233156	46.944
94) 1,3-Dichloropropane	(3)	7.423	76	401193	50.594
96) 2-Hexanone	(3)	7.526	43	414336	77.335
97) Dibromochloromethane	(3)	7.647	129	233572	47.877
99) 1,2-Dibromoethane	(3)	7.753	107	264482	50.612
100)*Chlorobenzene-d5	(3)	8.193	117	694966	50.000
102) Chlorobenzene	(3)	8.219	112	675461	48.573
103) 1,1,1,2-Tetrachloroethane	(3)	8.299	131	212898	47.664
104) Ethylbenzene	(3)	8.328	91	1106422	48.995
106) m+p-Xylene	(3)	8.430	106	894758	96.949
107) o-Xylene	(3)	8.767	106	448128	48.614
109) Styrene	(3)	8.780	104	764831	48.563
108) Xylene (Total)	(3)		106	1342886	145.564
110) Bromoform	(3)	8.928	173	161219	46.047
111) Isopropylbenzene	(3)	9.075	105	1027796	46.872
112) Cyclohexanone	(1)	9.146	55	136072A	615.184
114)$4-Bromofluorobenzene	(3)	9.194	95	329614	48.975
114)$4-Bromofluorobenzene	(3)	9.194	174	264596	48.184
115) Bromobenzene	(4)	9.306	156	291129	50.852
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	411581	55.862
117) 1,2,3-Trichloropropane	(4)	9.345	110	126003	54.452
118) trans-1,4-Dichloro-2-butene	(4)	9.361	53	276498	136.524
119) n-Propylbenzene	(4)	9.399	91	1180816	49.379
120) 2-Chlorotoluene	(4)	9.464	126	259526	49.318
122) 1,3,5-Trimethylbenzene	(4)	9.537	105	855143	48.129
121) 4-Chlorotoluene	(4)	9.547	126	279404	49.608
124) tert-Butylbenzene	(4)	9.785	134	189176	48.024
125) Pentachloroethane	(4)	9.794	167	159611	52.487
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	897908	48.321
127) sec-Butylbenzene	(4)	9.945	105	930647	46.263
129) 1,3-Dichlorobenzene	(4)	10.022	146	520186	48.083
130) p-Isopropyltoluene	(4)	10.051	119	838997	46.365
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	350308	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	546022	48.516
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	1025158	53.559
135) Benzyl Chloride	(4)	10.186	91	693060	46.517

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

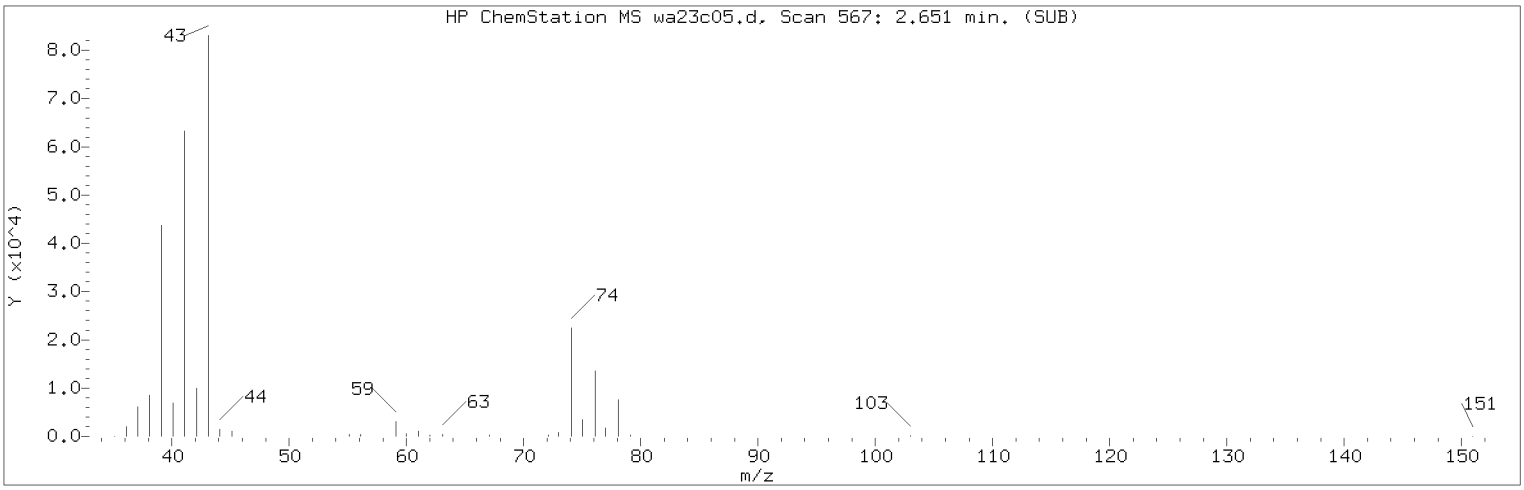
Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

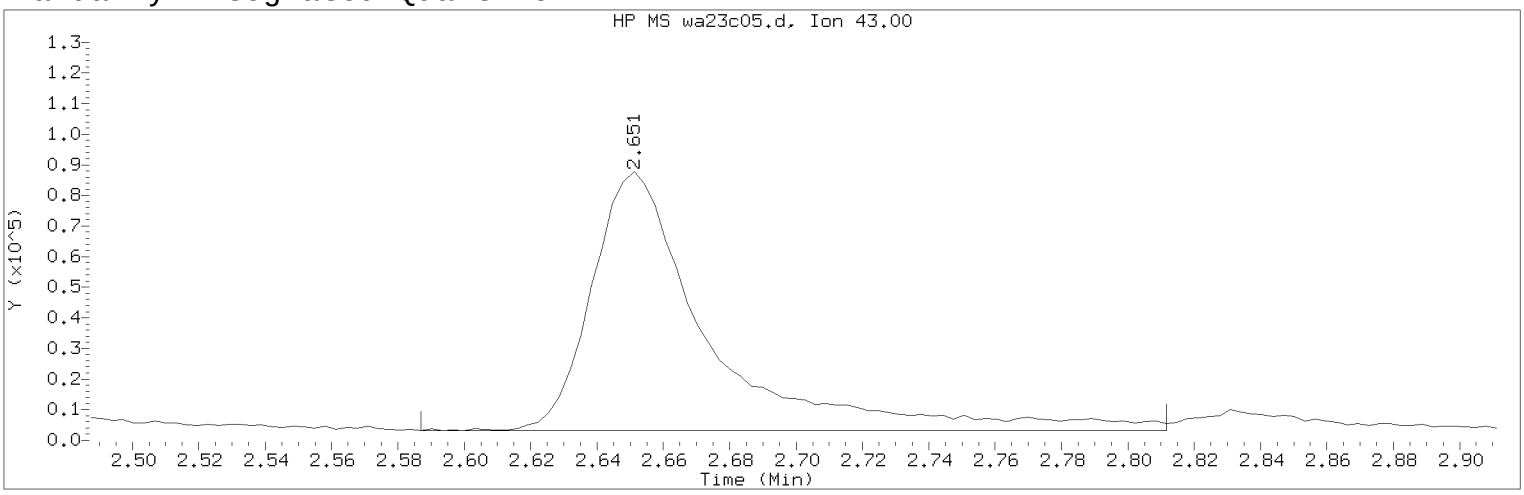
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
136) 1,3-Diethylbenzene	(4)	10.266	119	534527	49.550
137) 1,4-Diethylbenzene	(4)	10.327	119	556986	49.812
139) n-Butylbenzene	(4)	10.343	92	384987	44.743
138) 1,2-Dichlorobenzene	(4)	10.353	146	529145	49.058
140) 1,2-Diethylbenzene	(4)	10.407	119	463279	50.029
141) Diethylbenzene (total)	(4)		100	1554792	149.391
142) 1,2-Dibromo-3-chloropropane	(4)	10.895	75	80922	51.609
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	290114	42.309
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	285450	42.018
147) Hexachlorobutadiene	(4)	11.559	225	77900	38.692
148) Naphthalene	(4)	11.610	128	1199401	48.657
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	272704	42.290
150) 2-Methylnaphthalene	(4)	12.332	142	574827	44.306

Digitally signed by Kevin Kelly
on 04/23/2018 at 22:43.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

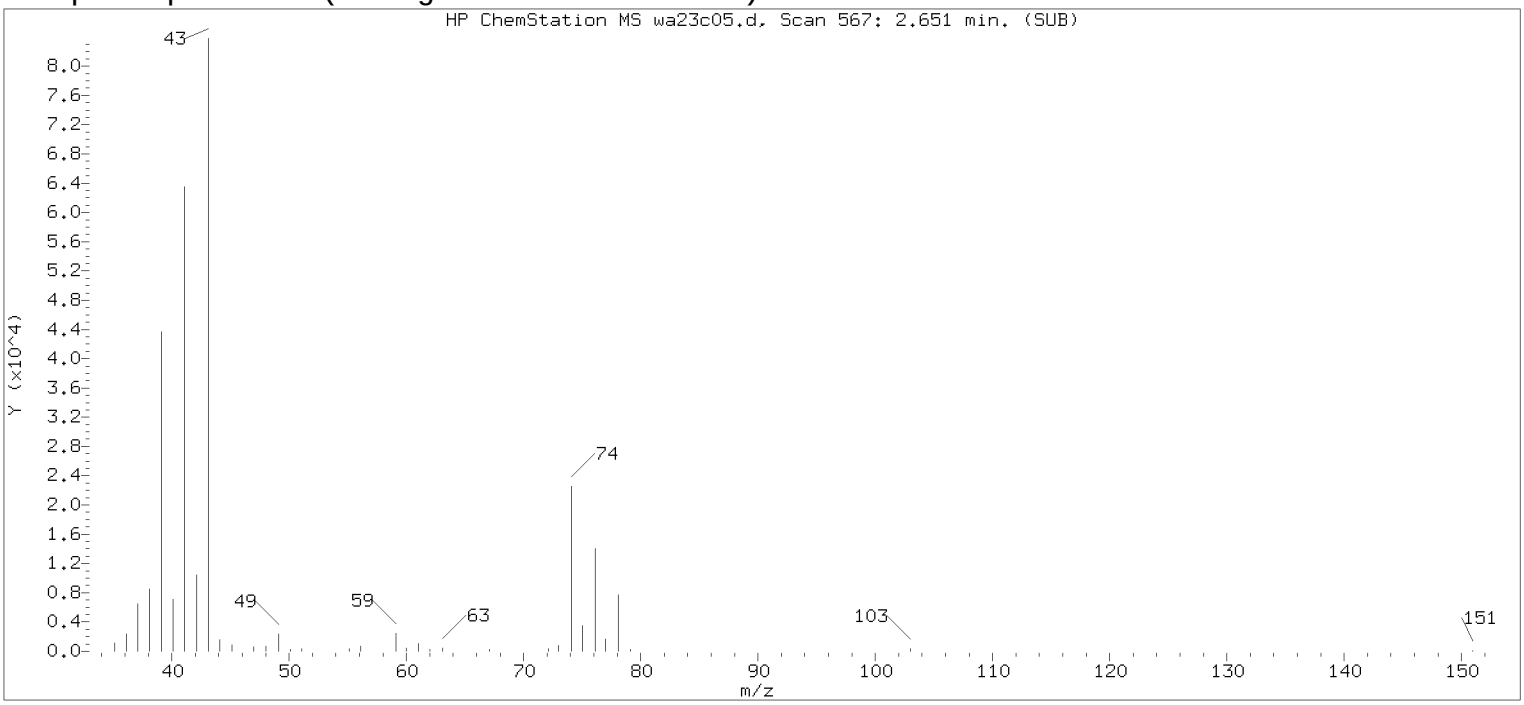
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 567
Retention Time (minutes): 2.651
Quant Ion : 43.00
Area (flag) : 209646M
On-Column Amount (ng) : 46.1941
Integration start scan : 546 Integration stop scan: 616
Y at integration start : 3163 Y at integration end: 3163

Reason for manual integration: improper integration

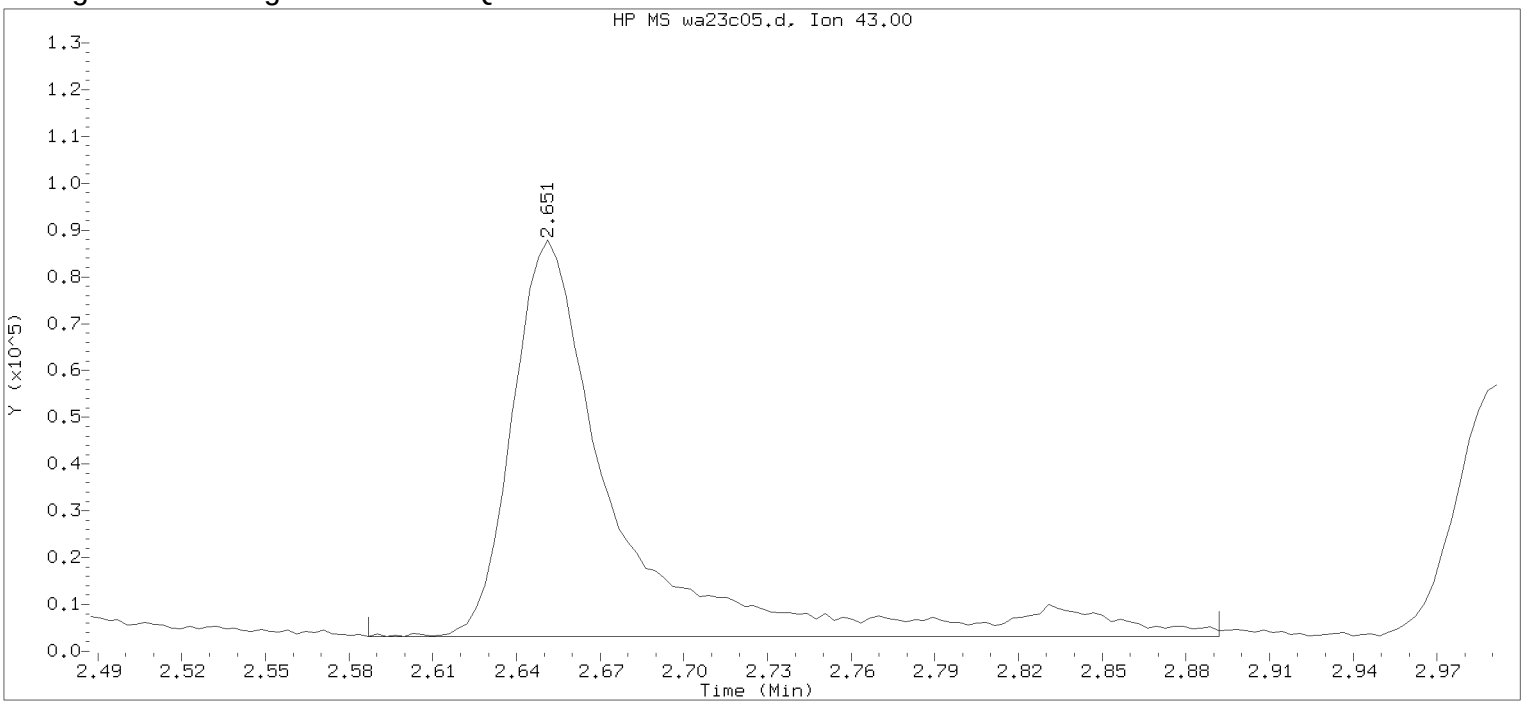
Analyst responsible for change: Digitally signed by Kevin Kelly on 04/23/2018 at 22:43. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

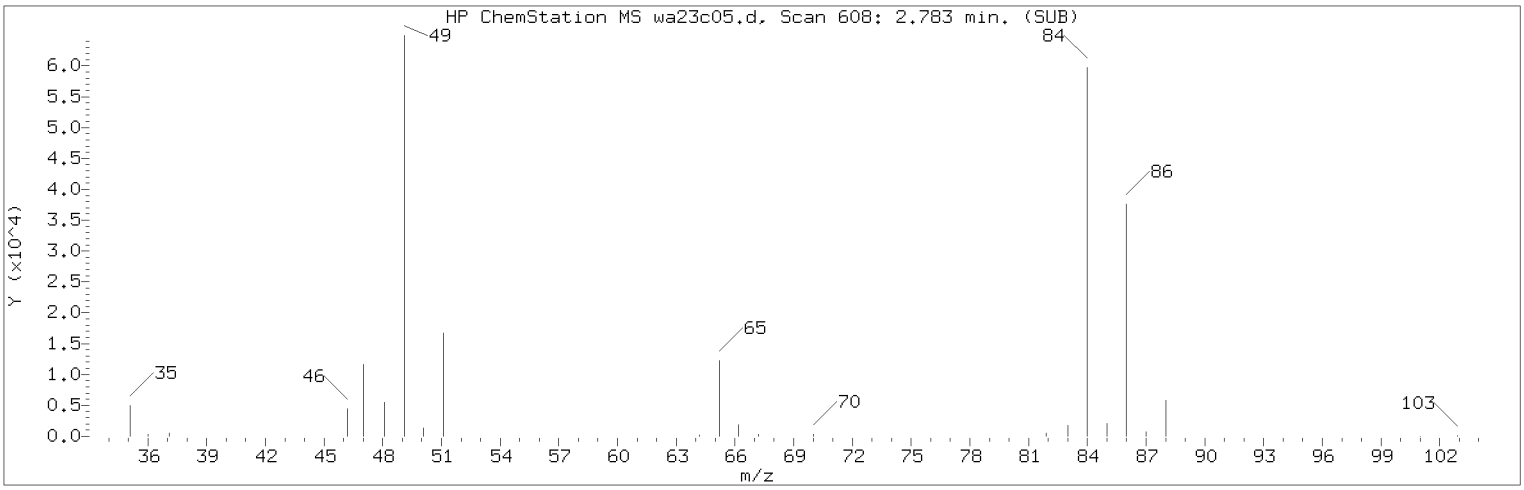
Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:38 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

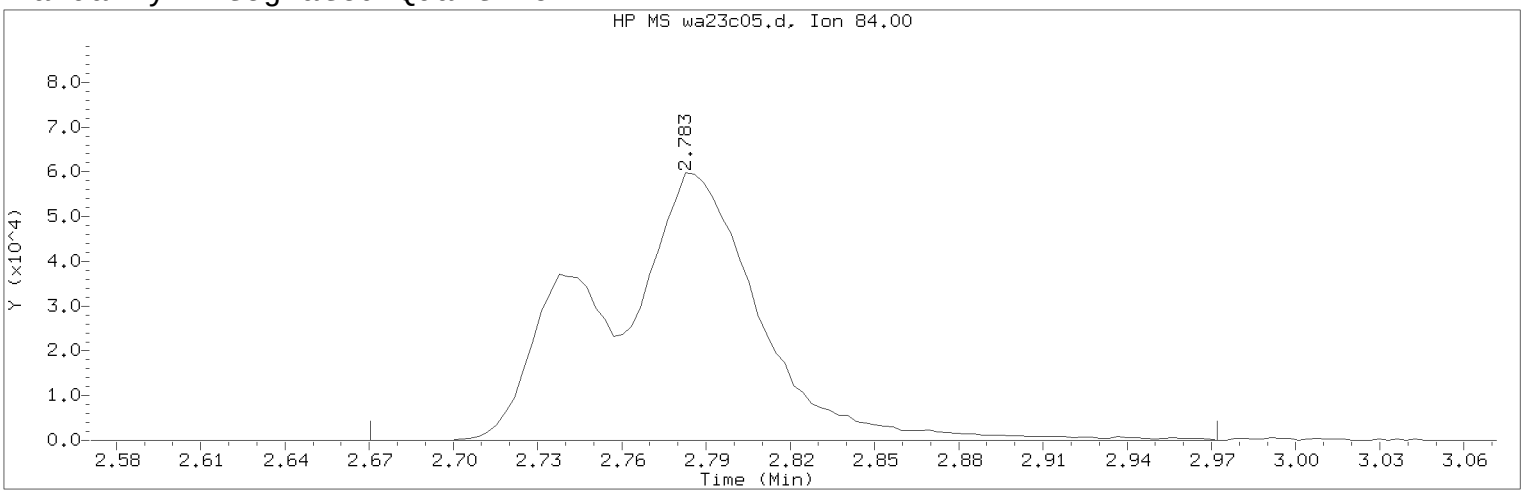
Compound Number : 27
Compound Name : Methyl Acetate
Scan Number : 567
Retention Time (minutes): 2.651
Quant Ion : 43.00
Area : 226420
On-column Amount (ng) : 49.8900
Integration start scan : 546 Integration stop scan: 641
Y at integration start : 3163 Y at integration end: 3163

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user id: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

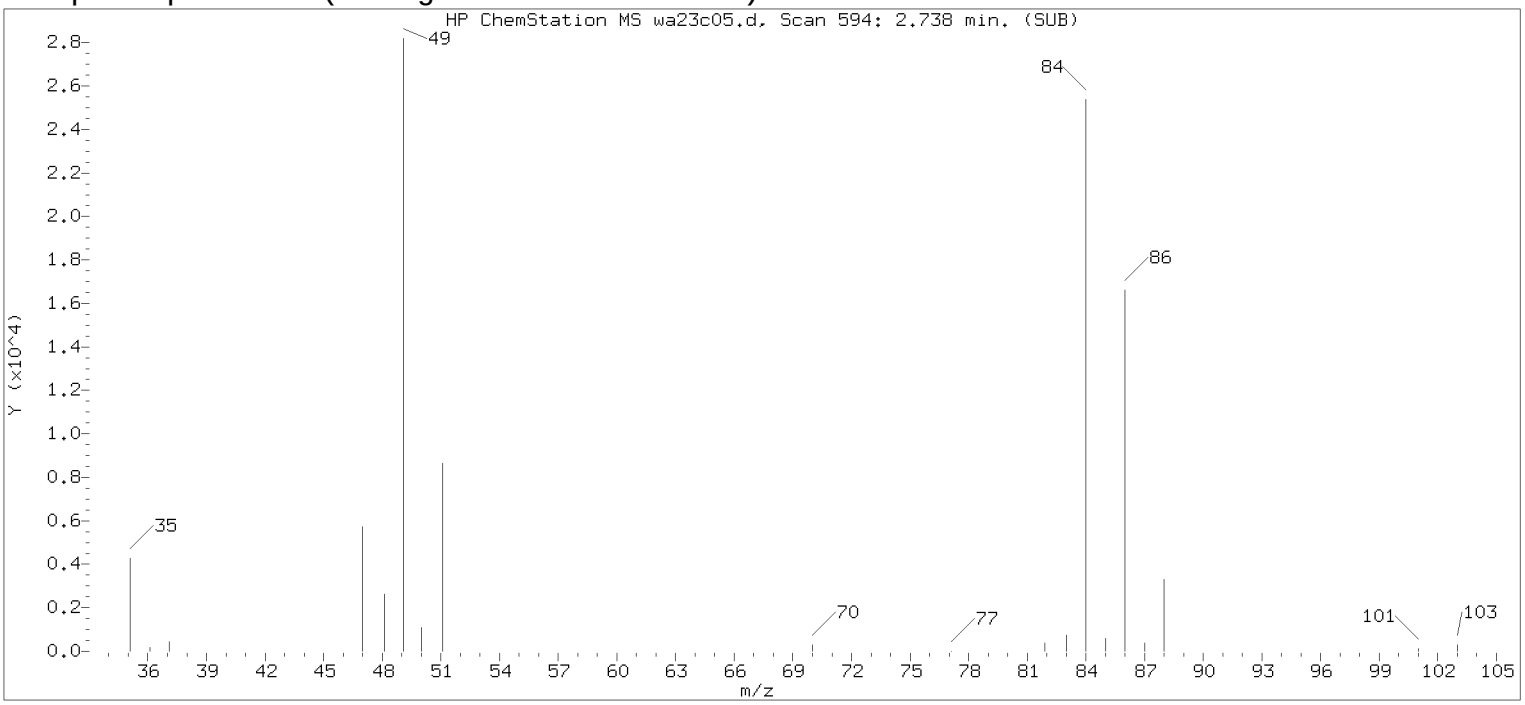
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 608
Retention Time (minutes): 2.783
Quant Ion : 84.00
Area (flag) : 232766M
On-Column Amount (ng) : 51.5542
Integration start scan : 572 Integration stop scan: 666
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

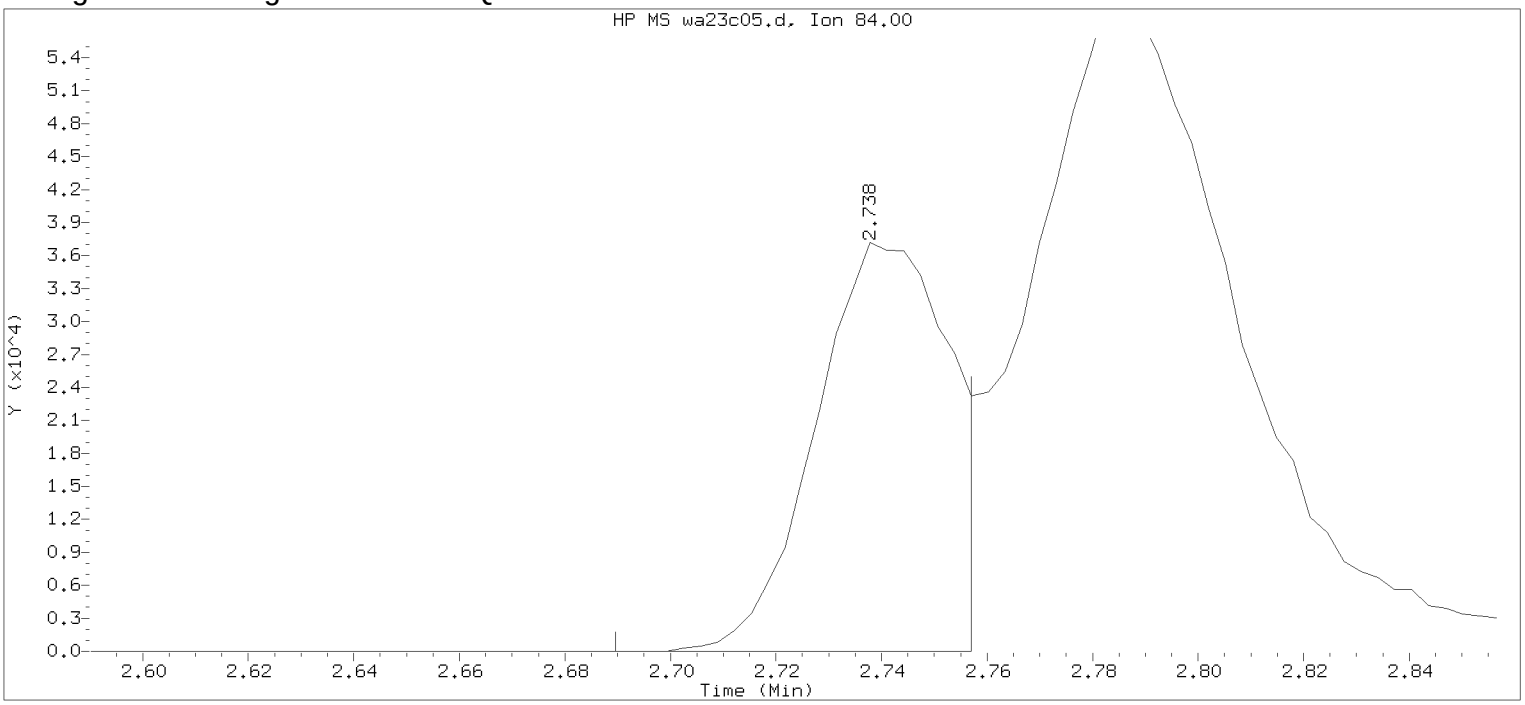
Analyst responsible for change: Digitally signed by Kevin Kelly on 04/23/2018 at 22:43. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

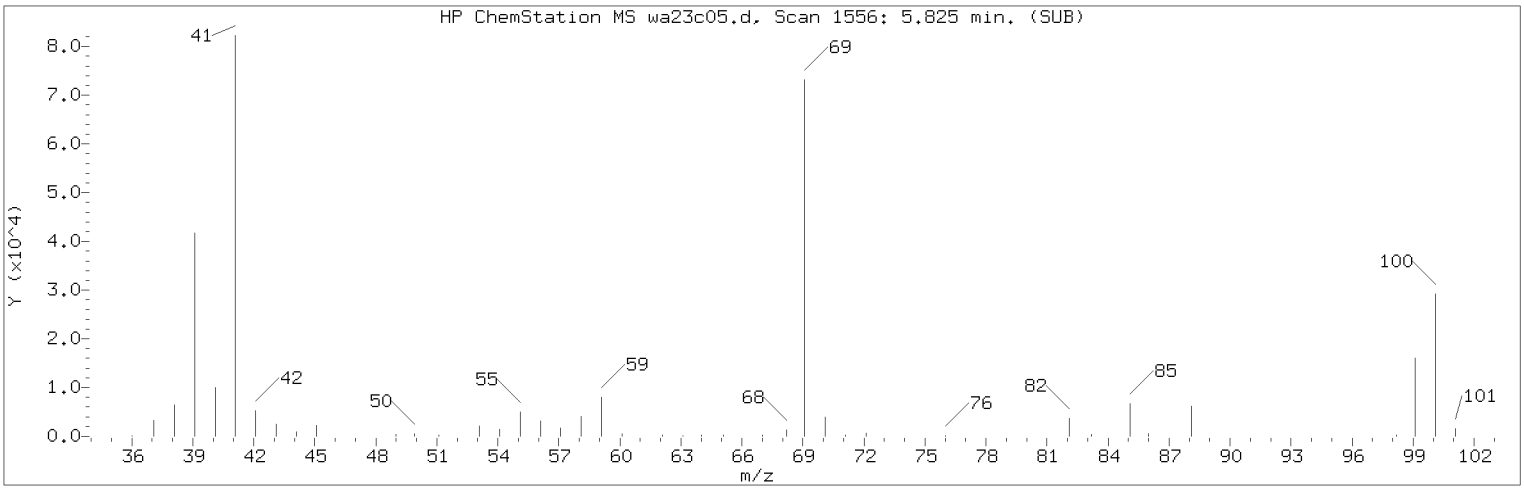
Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:38 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

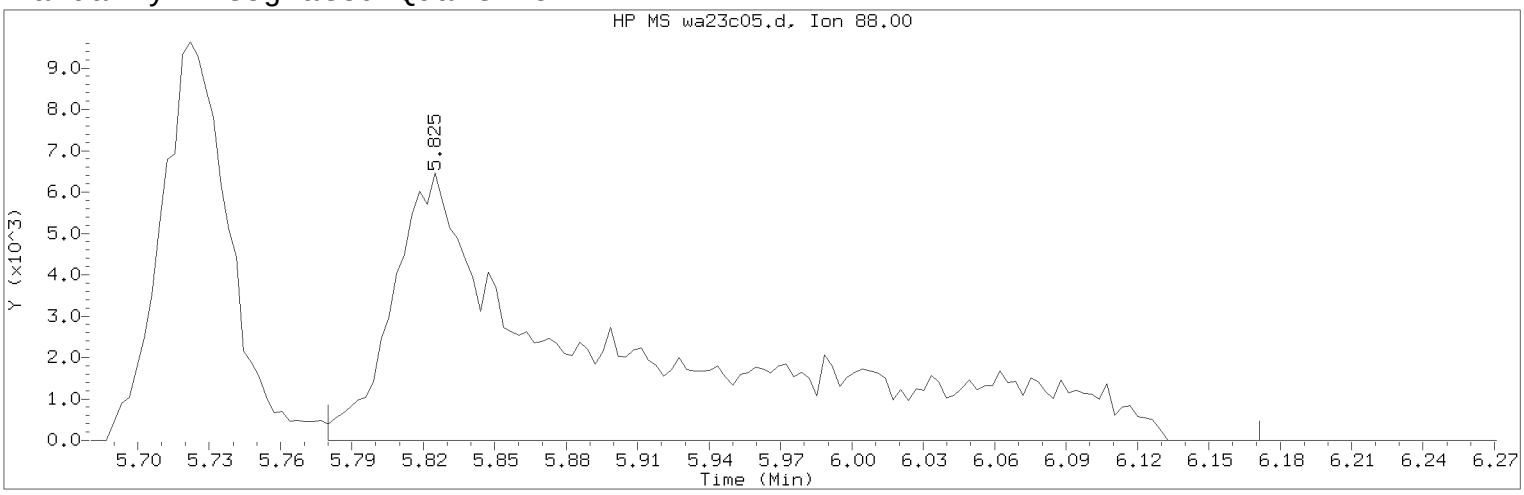
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 594
Retention Time (minutes): 2.738
Quant Ion : 84.00
Area : 64464
On-column Amount (ng) : 14.2780
Integration start scan : 578 Integration stop scan: 599
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user id: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

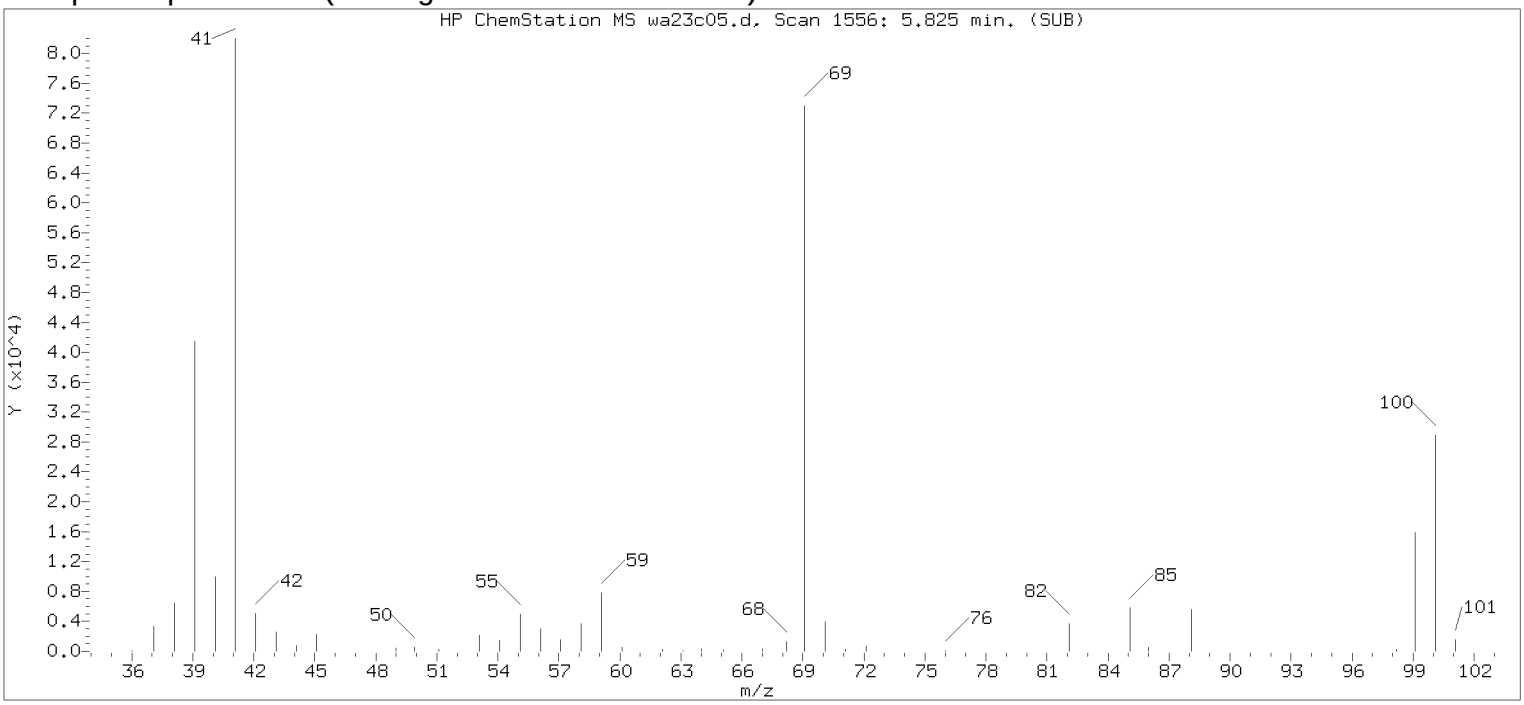
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1556
Retention Time (minutes): 5.825
Quant Ion : 88.00
Area (flag) : 41567M
On-Column Amount (ng) : 865.9337
Integration start scan : 1541 Integration stop scan: 1663
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

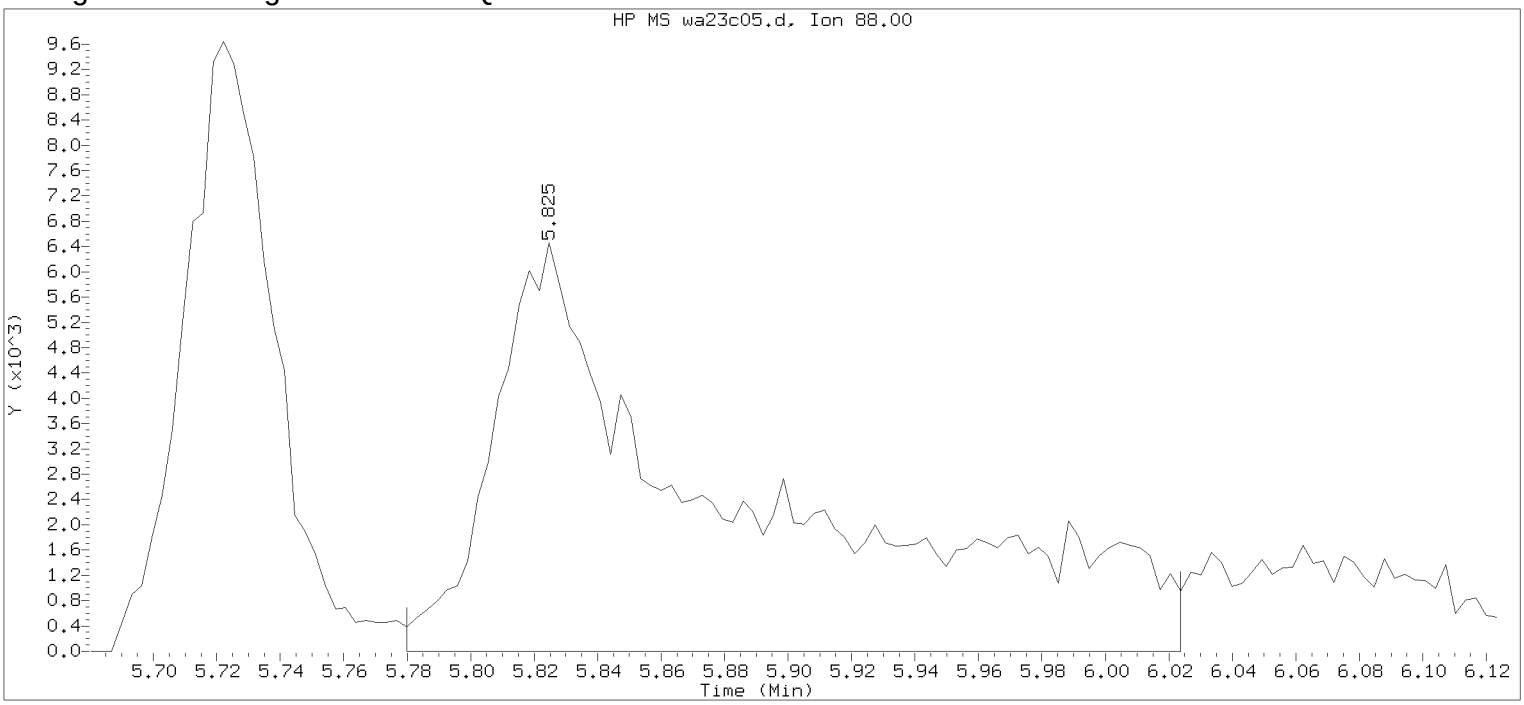
Analyst responsible for change: Digitally signed by Kevin Kelly on 04/23/2018 at 22:43. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

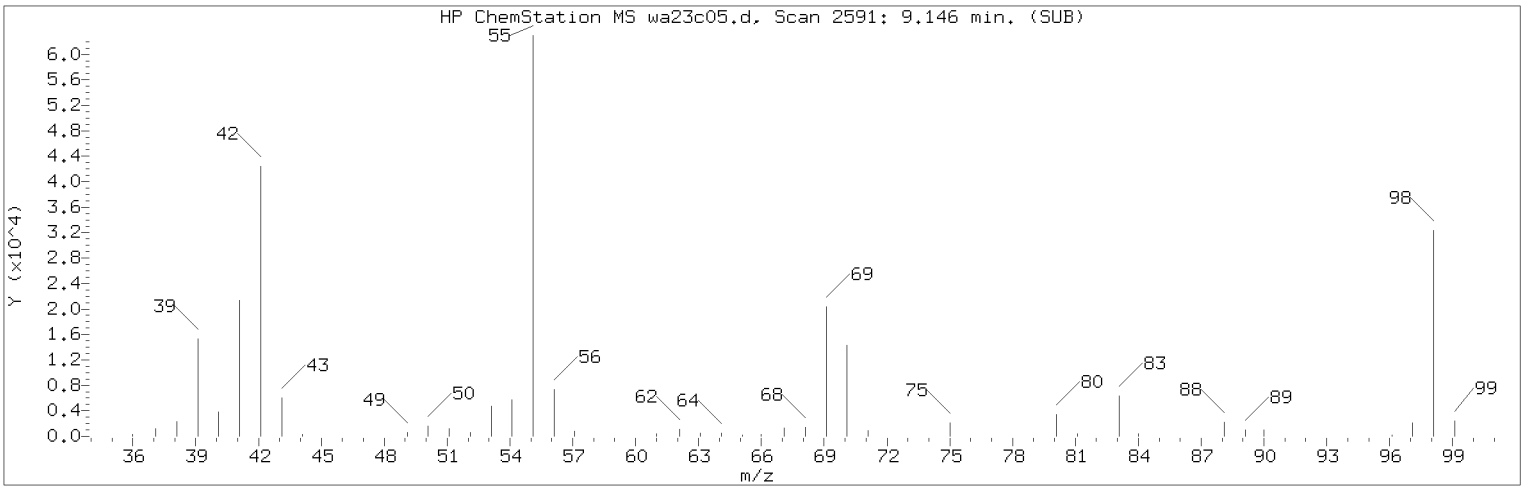
Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:38 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

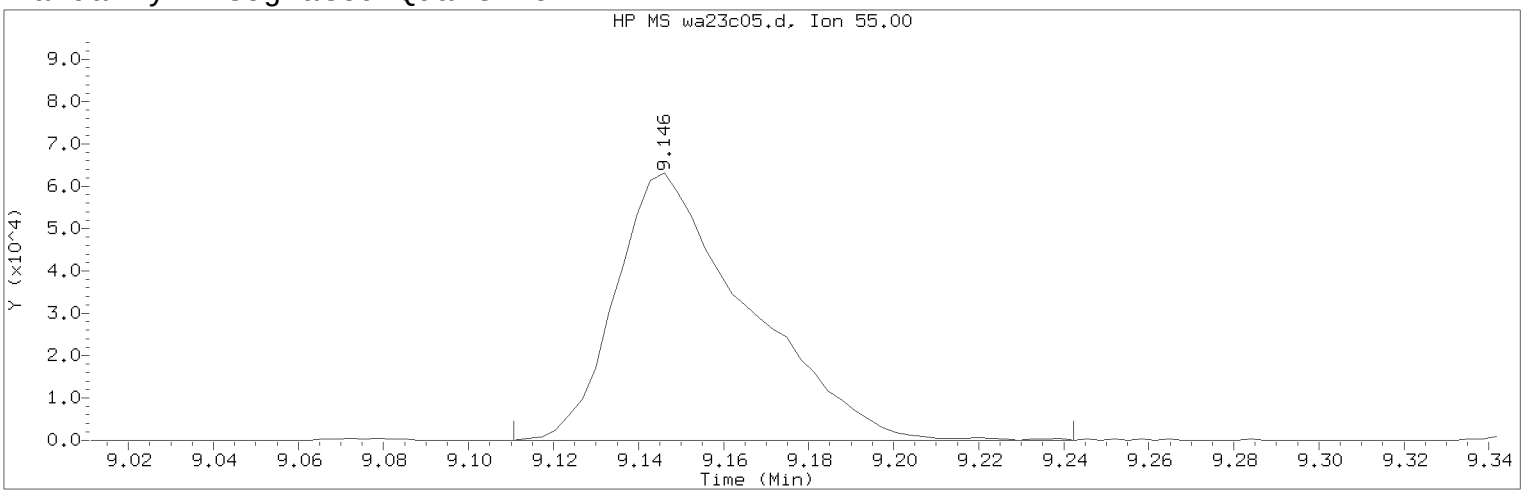
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1556
Retention Time (minutes): 5.825
Quant Ion : 88.00
Area : 34248
On-column Amount (ng) : 713.4457
Integration start scan : 1541 Integration stop scan: 1617
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user id: kkelly

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:43 kk10002

Sample Name: VSTD050 Lab Sample ID: VSTD050

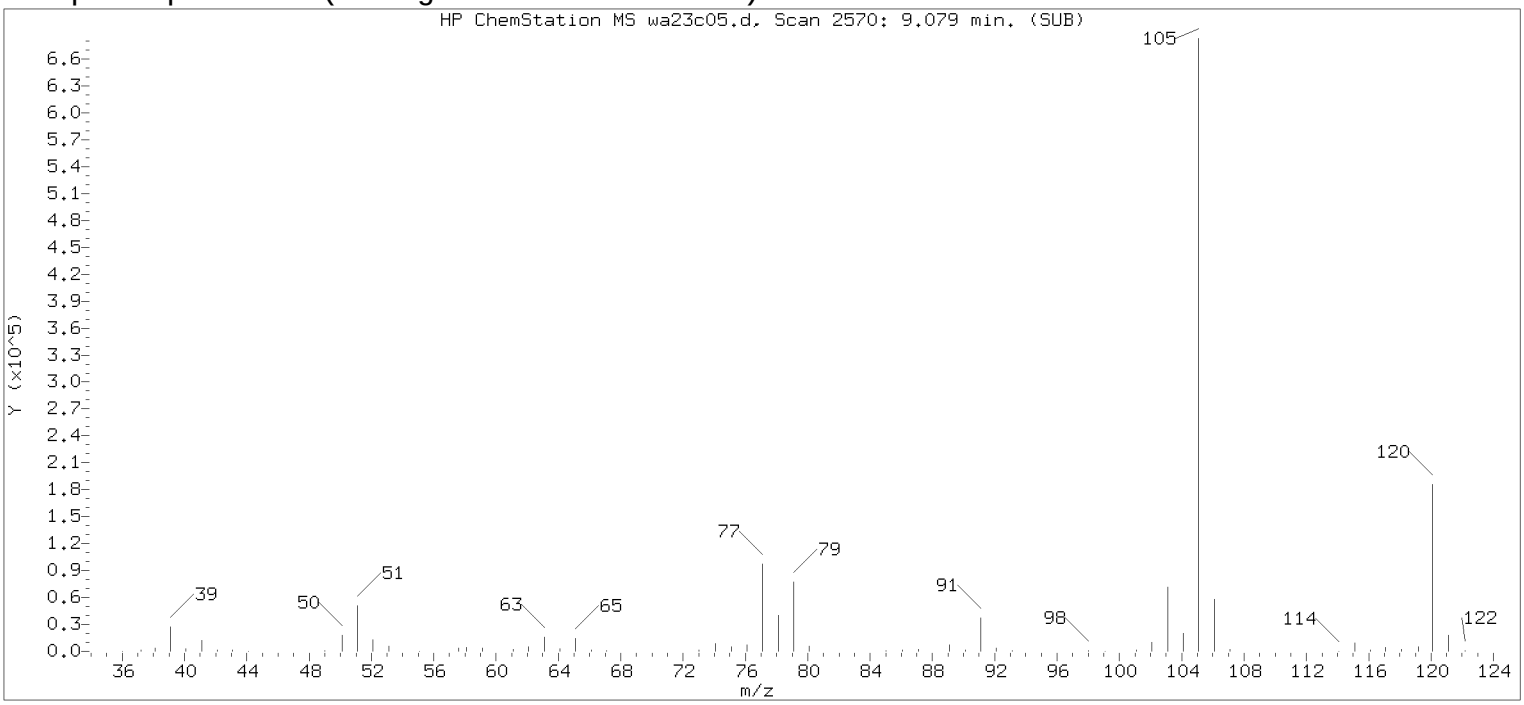
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2591
Retention Time (minutes): 9.146
Quant Ion : 55.00
Area (flag) : 136072A
On-Column Amount (ng) : 615.1838
Integration start scan : 2579 Integration stop scan: 2620
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

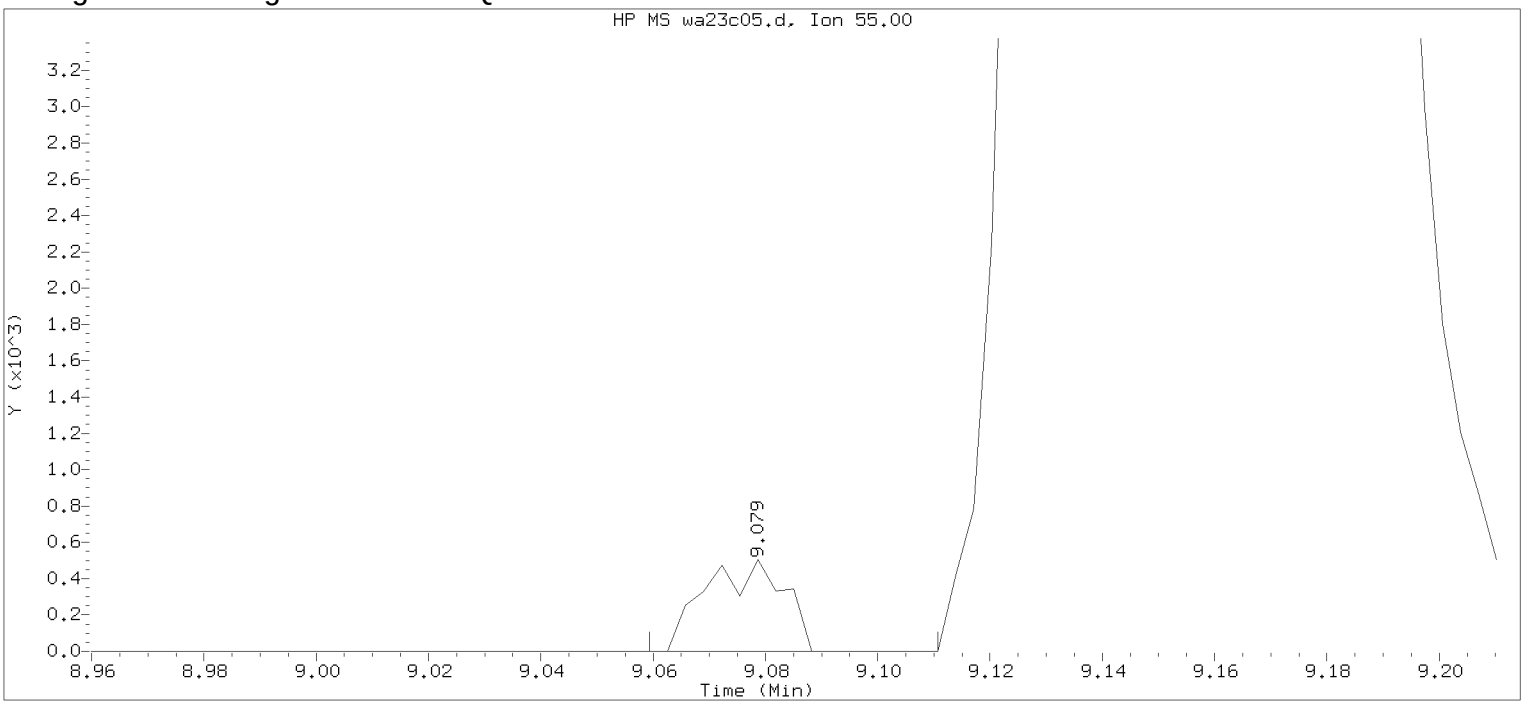
Analyst responsible for change: Digitally signed by Kevin Kelly on 04/23/2018 at 22:43. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23c05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:22 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 8260W-D
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 22:38 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2570
Retention Time (minutes): 9.079
Quant Ion : 55.00
Area : 489
On-column Amount (ng) : 2.2153
Integration start scan : 2563 Integration stop scan: 2579
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/23/2018 at 22:43.
Target 3.5 esignature user id: kkelly

Data File: /chem2/HP09137.i/18apr24a.b/wa24t01.d

Date : 24-APR-2018 07:38

Client ID: BFBFeb13-18

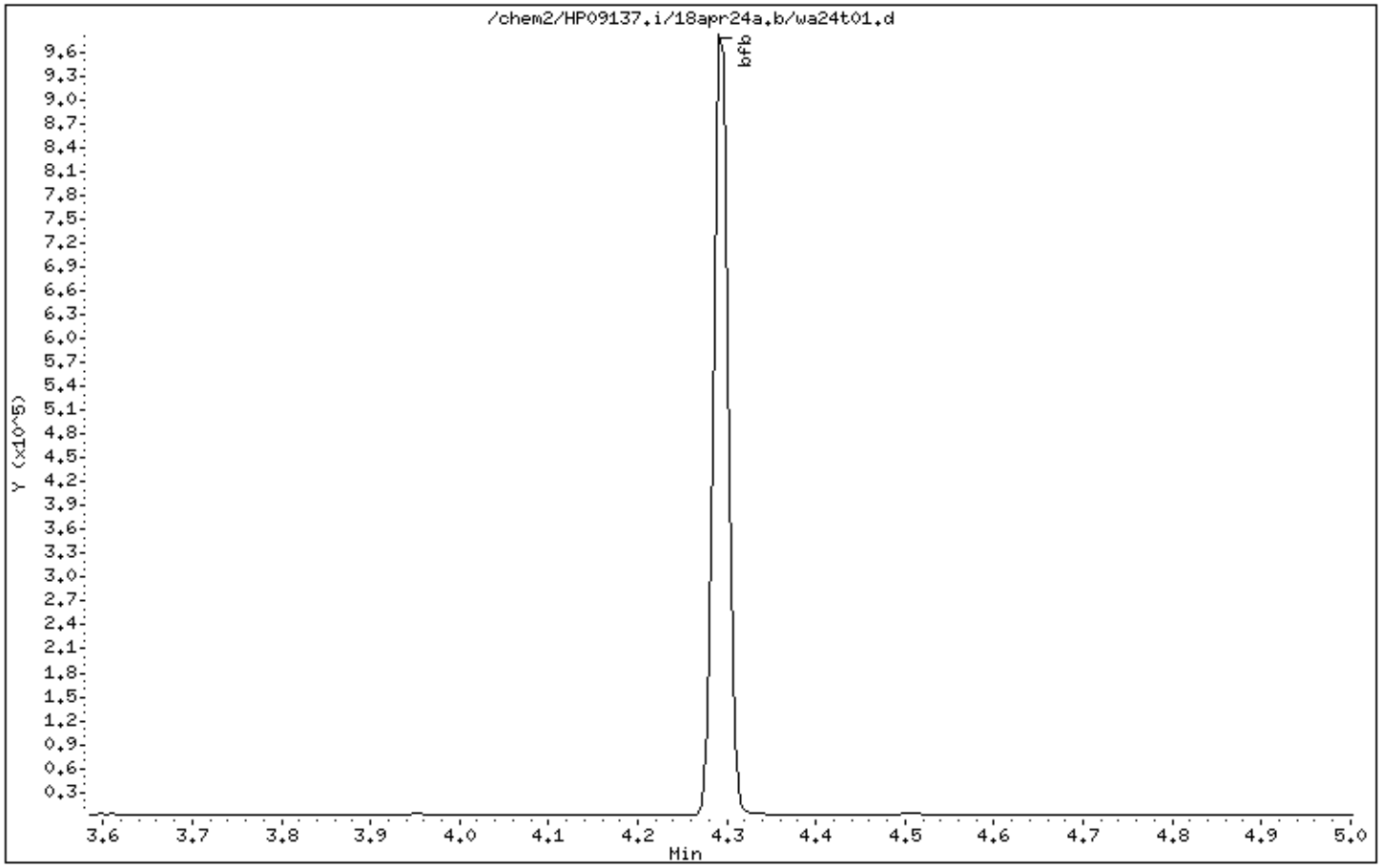
Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: NSL01327

Column phase: DB-624

Column diameter: 0.18



Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:10.
Target 3.5 esignature user ID: nsl01327

Data File: /chem2/HP09137.i/18apr24a.b/wa24t01.d

Date : 24-APR-2018 07:38

Client ID: BFBFeb13-18

Instrument: HP09137.i

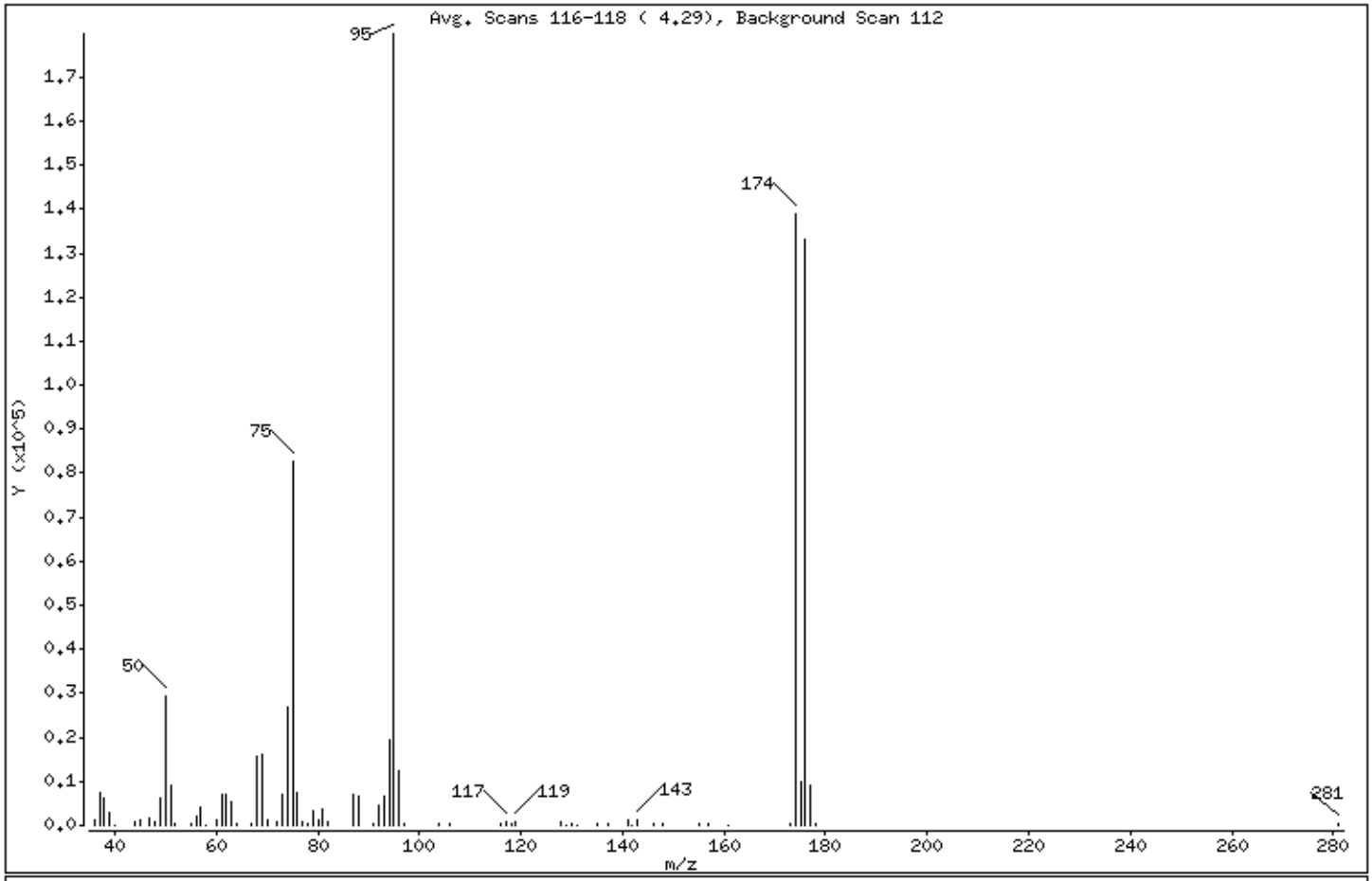
Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

Operator: NSL01327

Column phase: DB-624

Column diameter: 0.18

1 bfb



m/e	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE
95	Base Peak, 100% relative abundance	100.00
50	15.00 - 40.00% of mass 95	16.39
75	30.00 - 60.00% of mass 95	46.01
96	5.00 - 9.00% of mass 95	6.80
173	Less than 2.00% of mass 174	0.24 (0.31)
174	50.00 - 100.00% of mass 95	77.15
175	5.00 - 9.00% of mass 174	5.47 (7.09)
176	95.00 - 101.00% of mass 174	74.07 (96.00)
177	5.00 - 9.00% of mass 176	4.95 (6.68)

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:10.
Target 3.5 esignature user ID: nsl01327

Data File: /chem2/HP09137.i/18apr24a.b/wa24t01.d

Date : 24-APR-2018 07:38

Client ID: BFBFeb13-18 Instrument: HP09137.i

Sample Info: BFBFeb13-18;50NGBFB;1;3;;;;;;

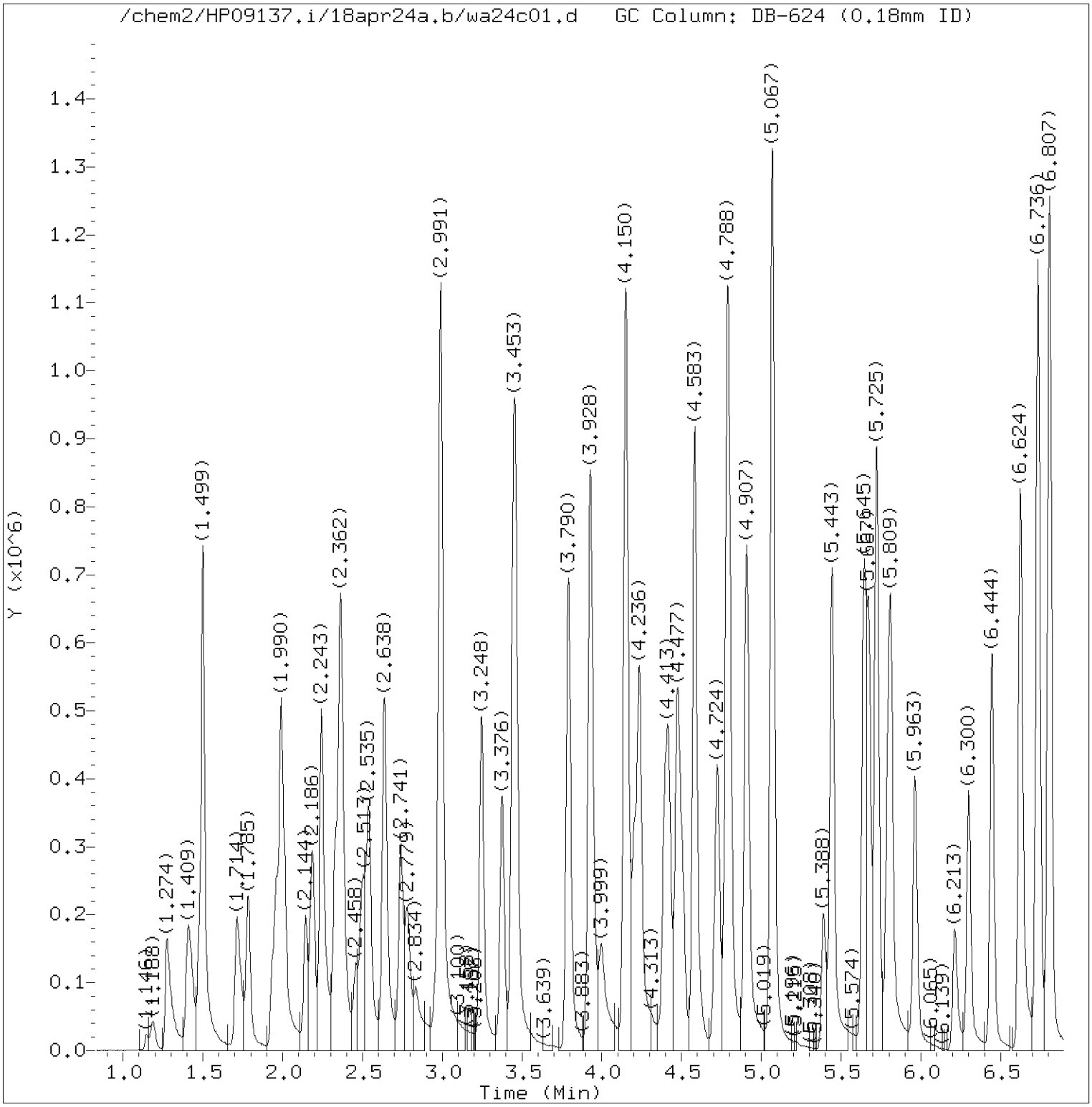
Operator: NSL01327

Column phase: DB-624 Column diameter: 0.18

Data File: wa24t01.d
Spectrum: Avg. Scans 116-118 (4.29), Background Scan 112
Location of Maximum: 95.00
Number of points: 73

m/z	Y	m/z	Y	m/z	Y	m/z	Y
36.00	1356	62.00	7197	88.00	6749	137.00	228
37.00	7269	63.00	5411	91.00	474	141.00	1323
38.00	6386	64.00	559	92.00	4437	142.00	83
39.00	2702	67.00	383	93.00	6620	143.00	1370
40.00	142	68.00	15690	94.00	19304	146.00	225
44.00	737	69.00	16290	95.00	179840	148.00	283
45.00	1350	70.00	1430	96.00	12227	155.00	433
47.00	1731	72.00	799	97.00	254	157.00	224
48.00	836	73.00	6894	104.00	549	161.00	206
49.00	6305	74.00	26840	106.00	557	173.00	432
50.00	29472	75.00	82752	116.00	356	174.00	138752
51.00	8935	76.00	7344	117.00	874	175.00	9835
52.00	418	77.00	961	118.00	378	176.00	133184
55.00	269	78.00	618	119.00	781	177.00	8895
56.00	2053	79.00	3339	128.00	631	178.00	311
57.00	3956	80.00	1097	129.00	198	281.00	617
58.00	93	81.00	3657	130.00	592		
60.00	1403	82.00	769	131.00	171		
61.00	7195	87.00	7159	135.00	207		

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:10.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

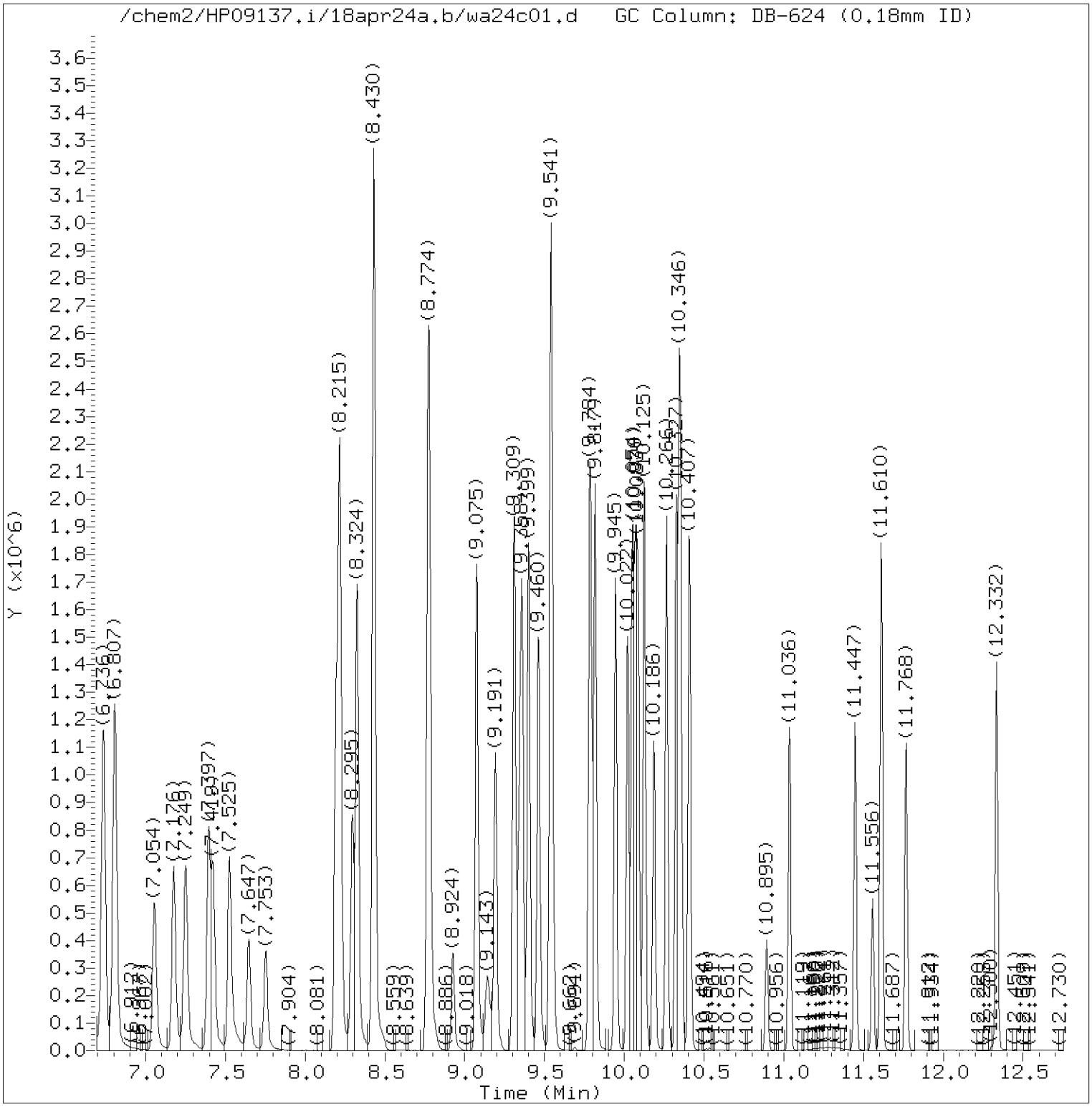
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.274	85	297216	51.667
4) Chloromethane	(2)	1.412	50	324541	52.671
6) Vinyl Chloride	(2)	1.483	62	321000	51.545
8) Bromomethane	(2)	1.714	94	223267	49.354
9) Chloroethane	(2)	1.785	64	192820	51.866
12) Trichlorofluoromethane	(2)	1.955	101	358309	51.745
11) n-Pentane	(2)	1.993	43	351867	47.868
13) Ethanol	(1)	2.054	45	44548	952.221
15) Freon 123a	(2)	2.186	67	245516	48.005
16) Acrolein	(1)	2.243	56	636861	537.119
17) 1,1-Dichloroethene	(2)	2.330	96	190396	49.375
17) 1,1-Dichloroethene	(2)	2.330	63	89460	49.928
18) Acetone	(1)	2.365	58	48588	97.543
19) Freon 113	(2)	2.369	101	210419	53.844
21) 2-Propanol	(1)	2.475	45	48984	142.220
22) Methyl Iodide	(2)	2.500	142	377188	50.369
23) Carbon Disulfide	(2)	2.539	76	596487	46.878
25) Allyl Chloride	(2)	2.635	41	293166	47.631
27) Methyl Acetate	(2)	2.651	43	223185	49.549
28) Methylene Chloride	(2)	2.741	84	224239M	50.042
29)*t-Butyl alcohol-d10	(1)	2.763	65	146116	250.000
30) t-Butyl alcohol	(1)	2.840	59	110562	176.057
31) Acrylonitrile	(2)	2.959	53	123283	53.701
32) trans-1,2-Dichloroethene	(2)	2.991	96	219722	51.774
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	697450	48.479
34) n-Hexane	(2)	3.248	57	246905	50.023
36) 1,1-Dichloroethane	(2)	3.373	63	369259	51.293
38) di-Isopropyl ether	(2)	3.447	45	668810	49.629
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	317336	49.884
40) Ethyl t-butyl ether	(2)	3.790	59	641940	47.825
42) cis-1,2-Dichloroethene	(2)	3.925	96	249300	52.058
45) 2,2-Dichloropropane	(2)	3.928	77	211501	54.369
44) 2-Butanone	(2)	3.944	43	309901	96.851
47) Propionitrile	(1)	3.999	54	231863	295.338
43) 1,2-Dichloroethene (Total)	(2)		96	469022	103.832
48) Methacrylonitrile	(2)	4.150	67	364926	134.690
49) Bromochloromethane	(2)	4.159	128	127597	52.352
50) Tetrahydrofuran	(1)	4.207	71	96487	114.937

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
51) Chloroform	(2)	4.236	83	371096	50.280
52)$Dibromofluoromethane	(2)	4.393	113	196531	48.860
52)$Dibromofluoromethane	(2)	4.393	111	200775	48.737
53) 1,1,1-Trichloroethane	(2)	4.419	97	319766	48.682
54) Cyclohexane	(2)	4.477	56	349792	52.334
54) Cyclohexane	(2)	4.480	84	312751	50.823
54) Cyclohexane	(2)	4.477	69	108907	50.111
55) 1,1-Dichloropropene	(2)	4.580	75	298743	50.825
56) Carbon Tetrachloride	(2)	4.583	117	237533	47.751
58) Isobutyl Alcohol	(1)	4.708	41	117775	571.741
57)$1,2-Dichloroethane-d4	(2)	4.724	102	52146	49.374
57)$1,2-Dichloroethane-d4	(2)	4.730	65	227968	48.031
57)$1,2-Dichloroethane-d4	(2)	4.727	104	34226	50.031
60) Benzene	(2)	4.788	78	915409	51.797
61) 1,2-Dichloroethane	(2)	4.801	62	304804	49.463
61) 1,2-Dichloroethane	(2)	4.804	98	30554	50.320
65) t-Amyl methyl ether	(2)	4.910	73	655489	46.788
66)*Fluorobenzene	(2)	5.067	96	882355	50.000
67) n-Heptane	(2)	5.074	43	218997	49.470
69) n-Butanol	(1)	5.388	56	222563	1148.231
71) Trichloroethene	(2)	5.443	95	235566	50.208
72) Methylcyclohexane	(2)	5.645	83	334866	53.084
72) Methylcyclohexane	(2)	5.645	98	156966	52.946
73) 1,2-Dichloropropane	(2)	5.674	63	234558	52.414
74) Dibromomethane	(2)	5.793	93	153754	50.666
76) Methyl Methacrylate	(2)	5.809	69	239608	50.117
75) 1,4-Dioxane	(1)	5.821	88	41725M	788.089
78) Bromodichloromethane	(2)	5.963	83	277496	48.360
79) 2-Nitropropane	(2)	6.213	41	120892	76.098
80) 2-Chloroethyl Vinyl Ether	(2)	6.300	63	184348	50.573
81) cis-1,3-Dichloropropene	(2)	6.444	75	371715	49.132
82) 4-Methyl-2-pentanone	(2)	6.624	43	716339	108.588
83)$Toluene-d8	(3)	6.736	98	881040	50.114
83)$Toluene-d8	(3)	6.733	100	586509	49.500
88) Toluene	(3)	6.807	92	606393	50.355
89) trans-1,3-Dichloropropene	(3)	7.054	75	334455	46.616
91) Ethyl Methacrylate	(3)	7.176	69	405788	48.860
92) 1,1,2-Trichloroethane	(3)	7.249	97	245519	51.871

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
90) 1,3-Dichloropropene (total)	(3)		100	706170	95.748
93) Tetrachloroethene	(3)	7.397	166	238914	48.755
94) 1,3-Dichloropropane	(3)	7.423	76	403656	51.594
96) 2-Hexanone	(3)	7.529	43	537907	101.760
97) Dibromochloromethane	(3)	7.647	129	223519	46.437
99) 1,2-Dibromoethane	(3)	7.753	107	261060	50.634
100)*Chlorobenzene-d5	(3)	8.193	117	685679	50.000
102) Chlorobenzene	(3)	8.218	112	683455	49.814
103) 1,1,1,2-Tetrachloroethane	(3)	8.295	131	210888	47.853
104) Ethylbenzene	(3)	8.324	91	1122404	50.376
106) m+p-Xylene	(3)	8.430	106	906246	99.524
107) o-Xylene	(3)	8.767	106	446897	49.137
109) Styrene	(3)	8.780	104	757581	48.754
108) Xylene (Total)	(3)		106	1353143	148.662
110) Bromoform	(3)	8.928	173	149189	43.188
111) Isopropylbenzene	(3)	9.075	105	1034170	47.802
112) Cyclohexanone	(1)	9.146	55	135030A	553.502
114)$4-Bromofluorobenzene	(3)	9.194	95	323572	48.728
114)$4-Bromofluorobenzene	(3)	9.194	174	263009	48.543
115) Bromobenzene	(4)	9.306	156	289558	51.184
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	383931	52.733
117) 1,2,3-Trichloropropane	(4)	9.345	110	119905	52.438
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	250325	125.083
119) n-Propylbenzene	(4)	9.399	91	1181533	50.001
120) 2-Chlorotoluene	(4)	9.460	126	259324	49.870
122) 1,3,5-Trimethylbenzene	(4)	9.537	105	856605	48.789
121) 4-Chlorotoluene	(4)	9.547	126	276515	49.683
124) tert-Butylbenzene	(4)	9.784	134	185253	47.592
125) Pentachloroethane	(4)	9.794	167	144216	47.993
126) 1,2,4-Trimethylbenzene	(4)	9.817	105	891022	48.525
127) sec-Butylbenzene	(4)	9.945	105	929676	46.769
129) 1,3-Dichlorobenzene	(4)	10.022	146	517878	48.444
130) p-Isopropyltoluene	(4)	10.051	119	815477	45.605
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	346158	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	538056	48.381
134) 1,2,3-Trimethylbenzene	(4)	10.128	105	947206	50.080
135) Benzyl Chloride	(4)	10.186	91	647090	43.952
136) 1,3-Diethylbenzene	(4)	10.266	119	490189	45.985

A = User selected an alternate hit.
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

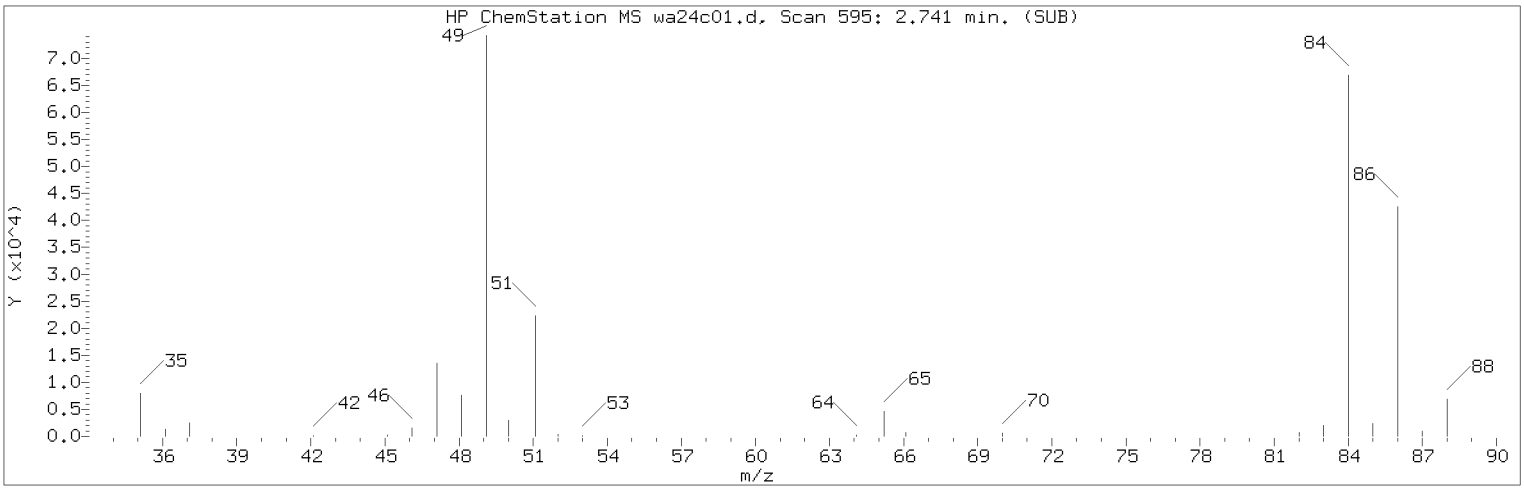
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

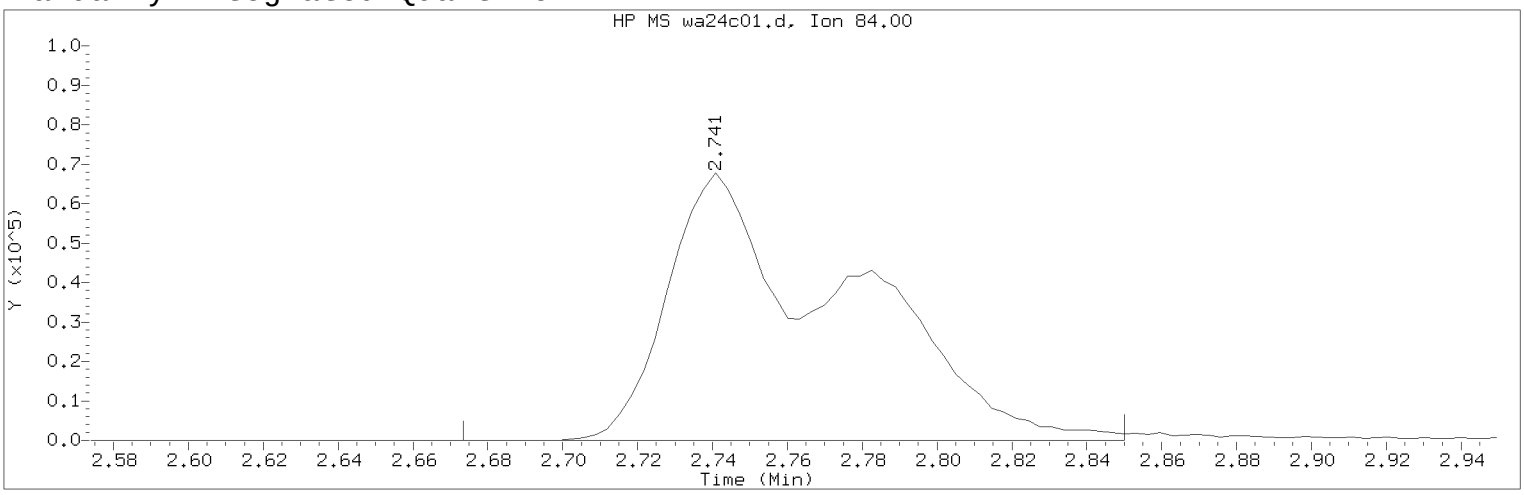
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
137) 1,4-Diethylbenzene	(4)	10.327	119	508924	46.059
139) n-Butylbenzene	(4)	10.343	92	374466	44.042
138) 1,2-Dichlorobenzene	(4)	10.352	146	520562	48.841
140) 1,2-Diethylbenzene	(4)	10.407	119	423002	46.227
141) Diethylbenzene (total)	(4)		100	1422115	138.271
142) 1,2-Dibromo-3-chloropropane	(4)	10.895	75	75998	49.049
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	279474	41.246
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	270917	40.357
147) Hexachlorobutadiene	(4)	11.559	225	73361	36.874
148) Naphthalene	(4)	11.610	128	1141130	46.848
149) 1,2,3-Trichlorobenzene	(4)	11.768	180	258745	40.606
150) 2-Methylnaphthalene	(4)	12.332	142	503021	39.236

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

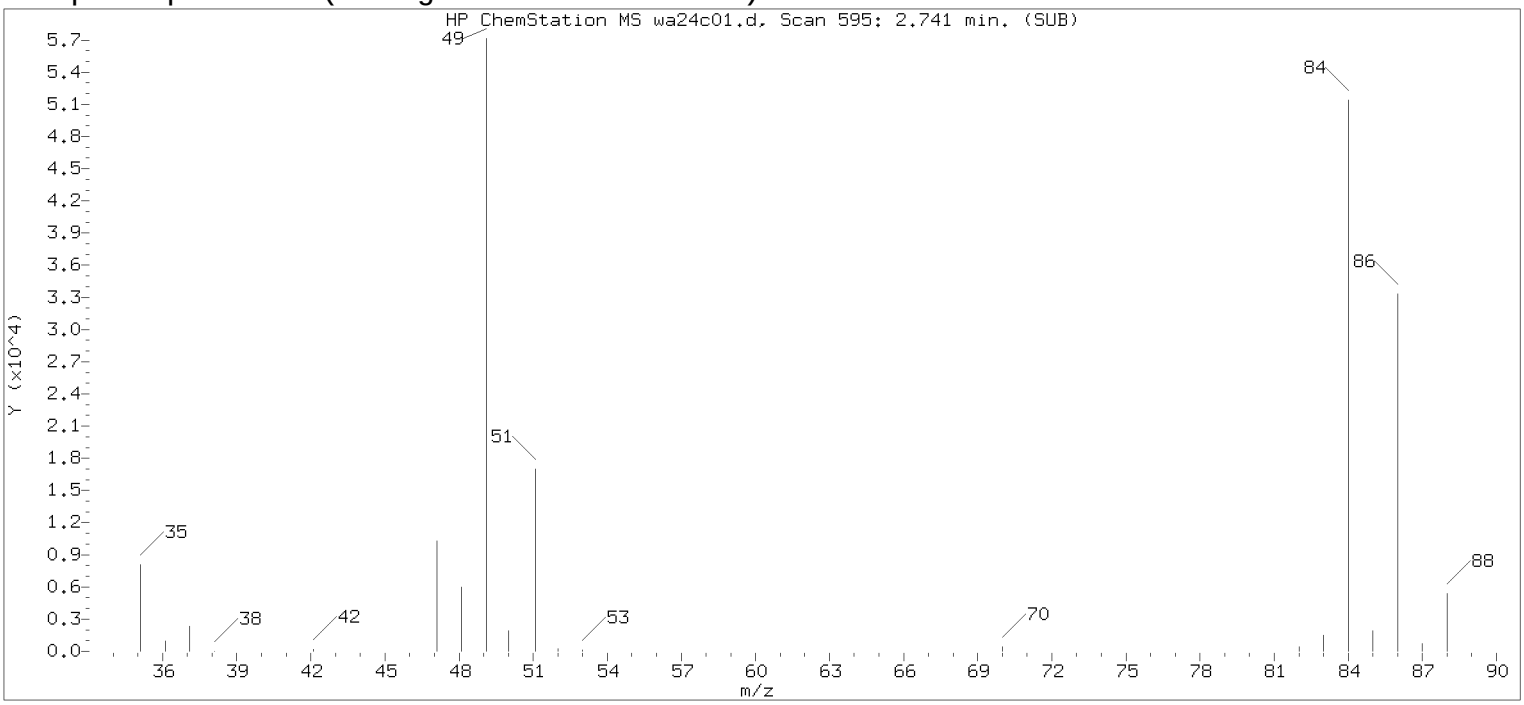
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 595
Retention Time (minutes): 2.741
Quant Ion : 84.00
Area (flag) : 224239M
On-Column Amount (ng) : 50.0418
Integration start scan : 573 Integration stop scan: 628
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

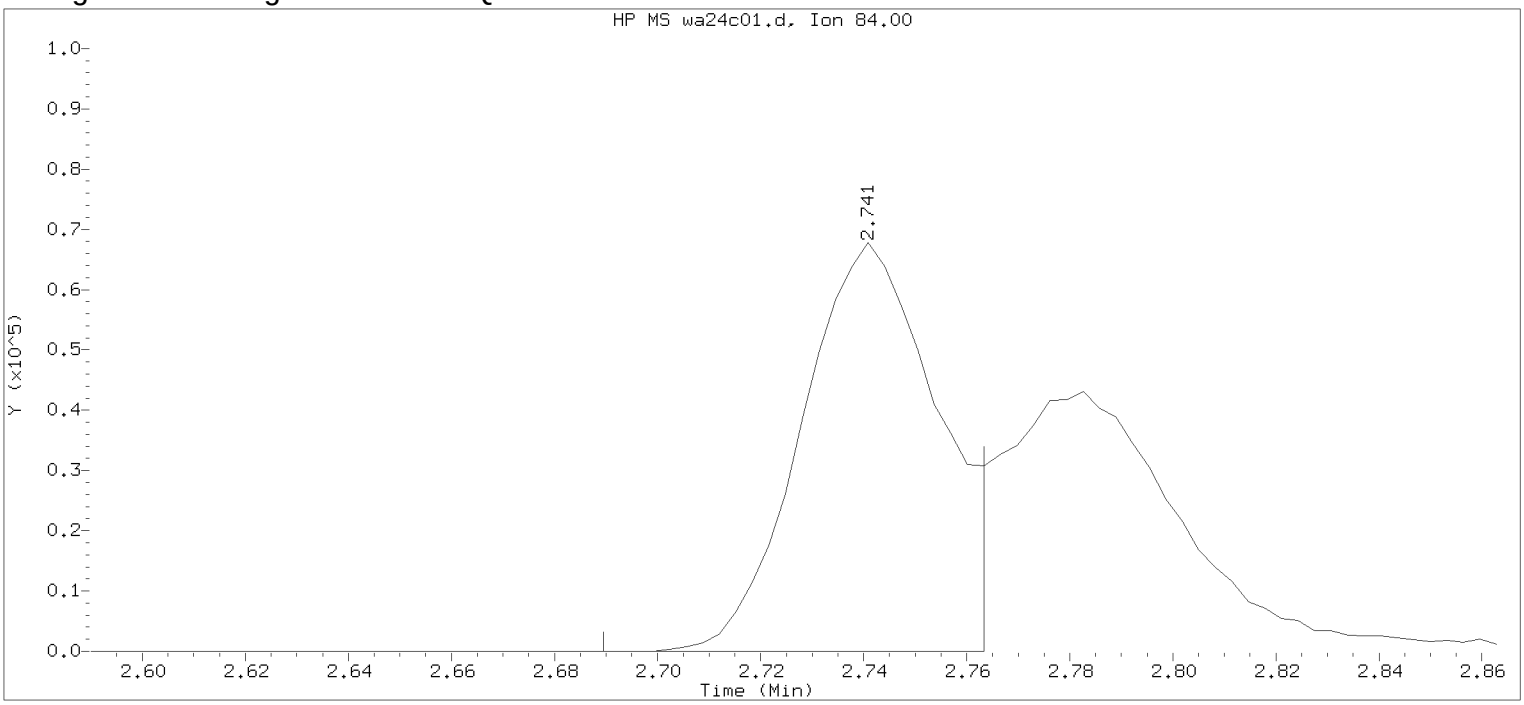
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

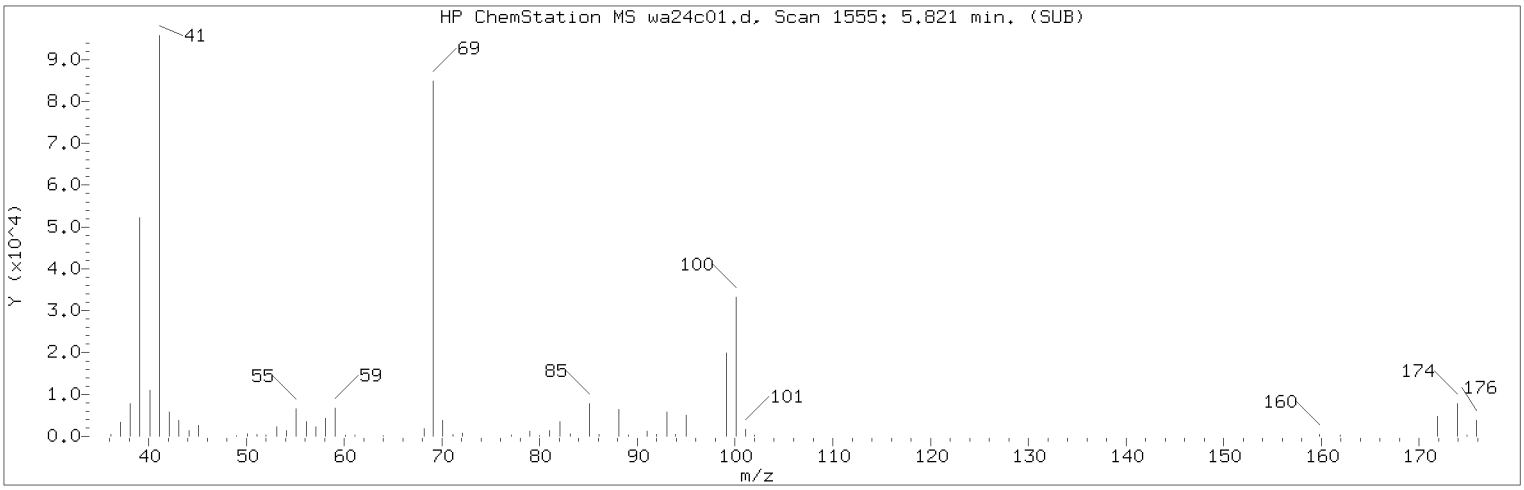
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 08:42
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

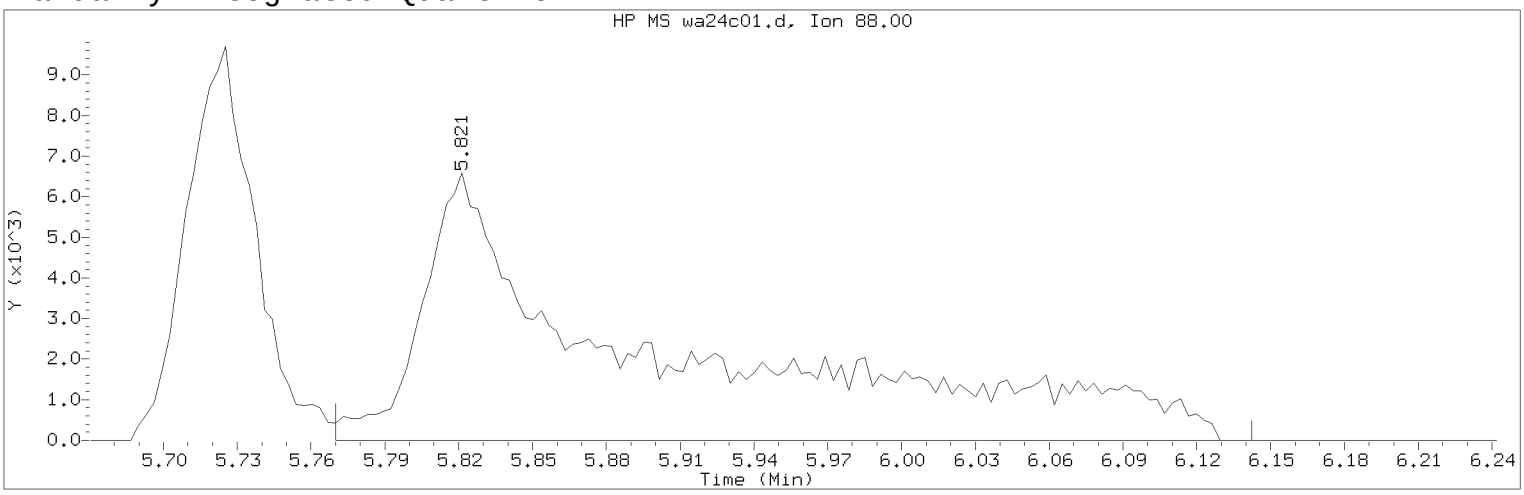
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 595
Retention Time (minutes): 2.741
Quant Ion : 84.00
Area : 123016
On-column Amount (ng) : 27.4525
Integration start scan : 578 Integration stop scan: 601
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

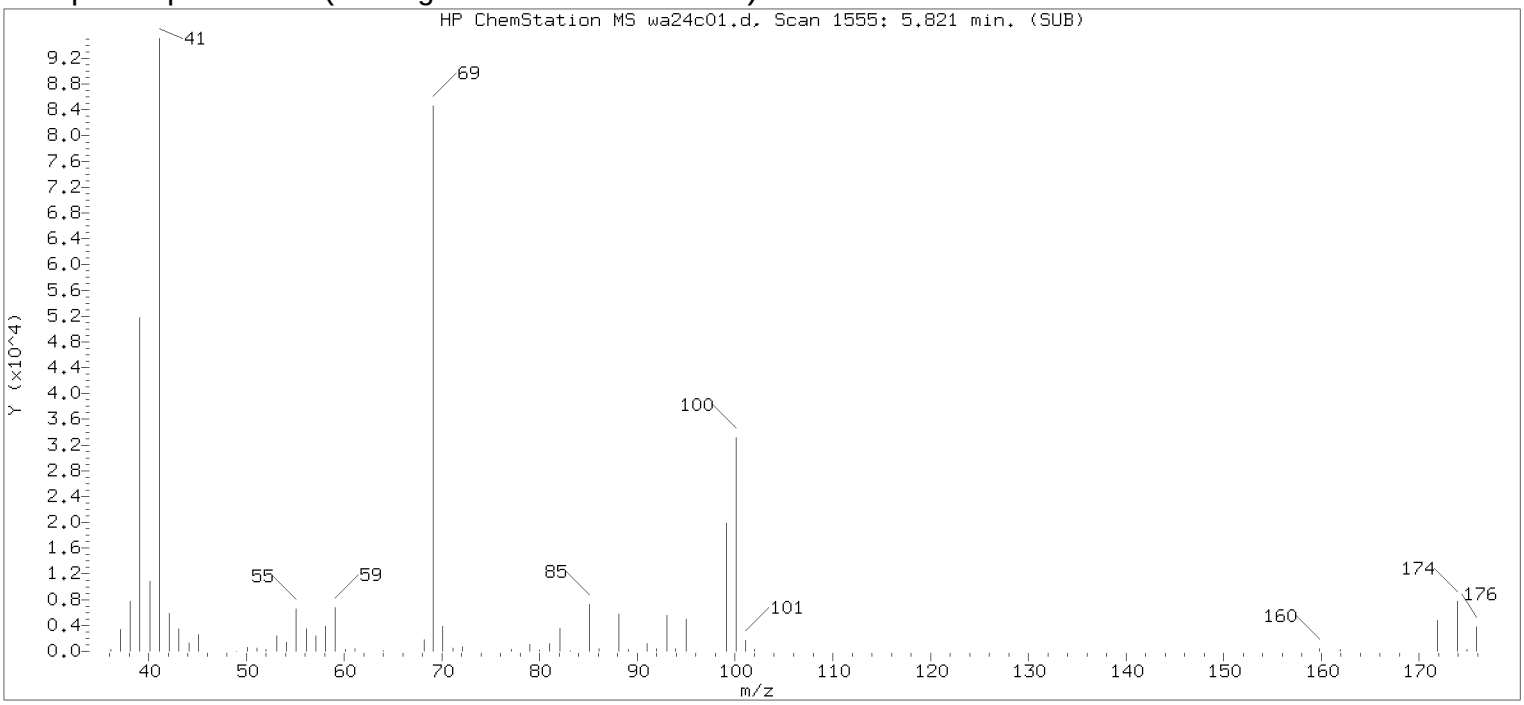
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1555
Retention Time (minutes): 5.821
Quant Ion : 88.00
Area (flag) : 41725M
On-Column Amount (ng) : 788.0895
Integration start scan : 1538 Integration stop scan: 1654
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

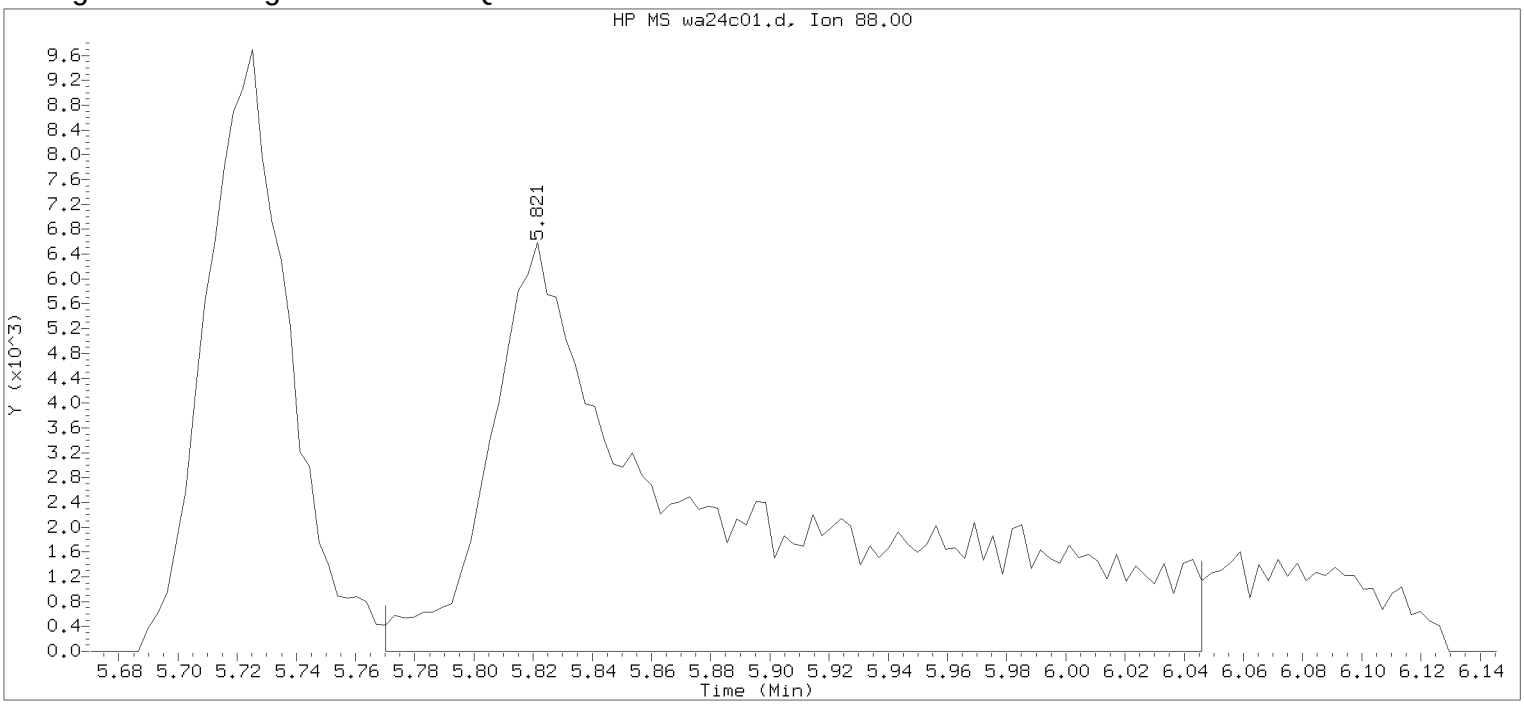
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

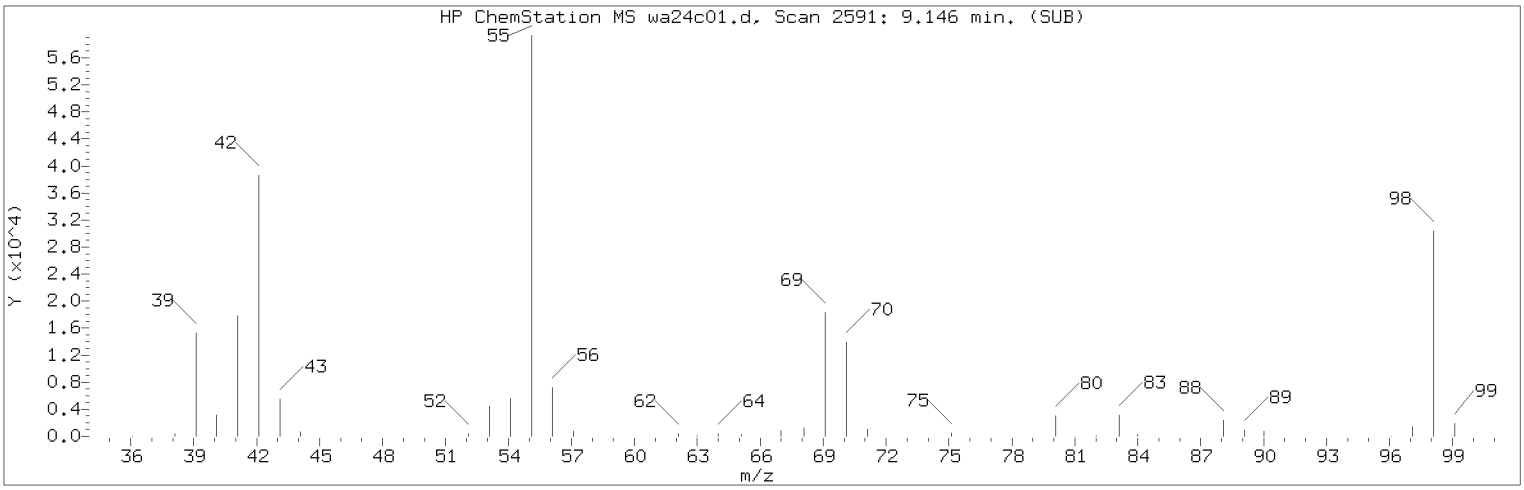
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 08:42
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

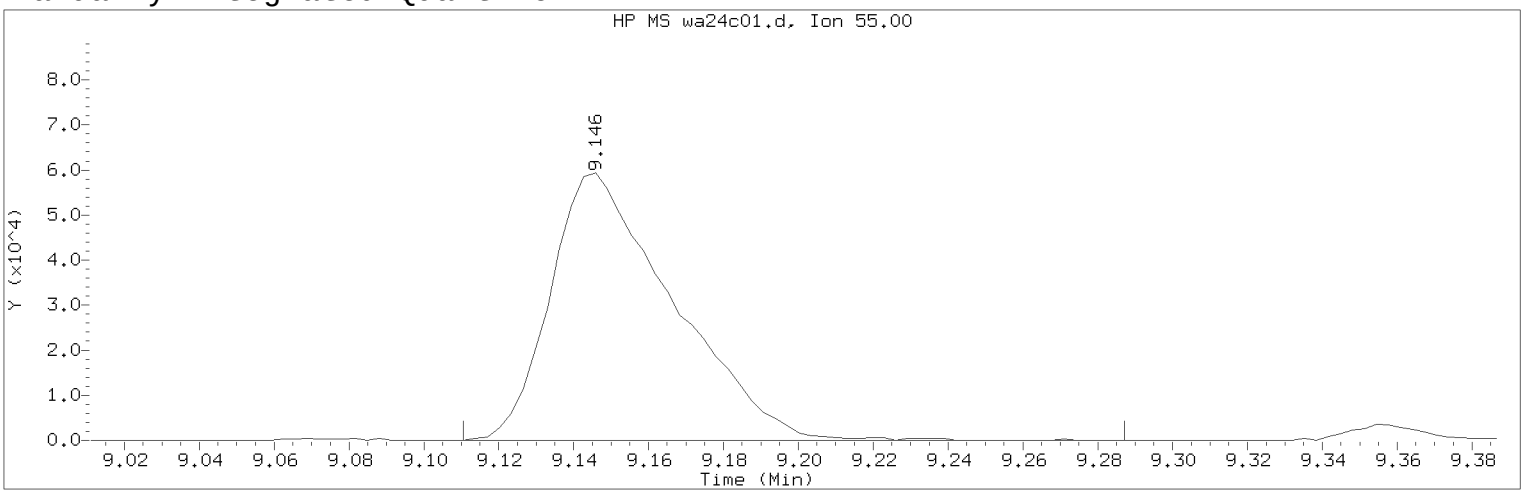
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1555
Retention Time (minutes): 5.821
Quant Ion : 88.00
Area : 36316
On-column Amount (ng) : 685.9358
Integration start scan : 1538 Integration stop scan: 1624
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:09 nsl01327

Sample Name: VSTD050 Lab Sample ID: VSTD050

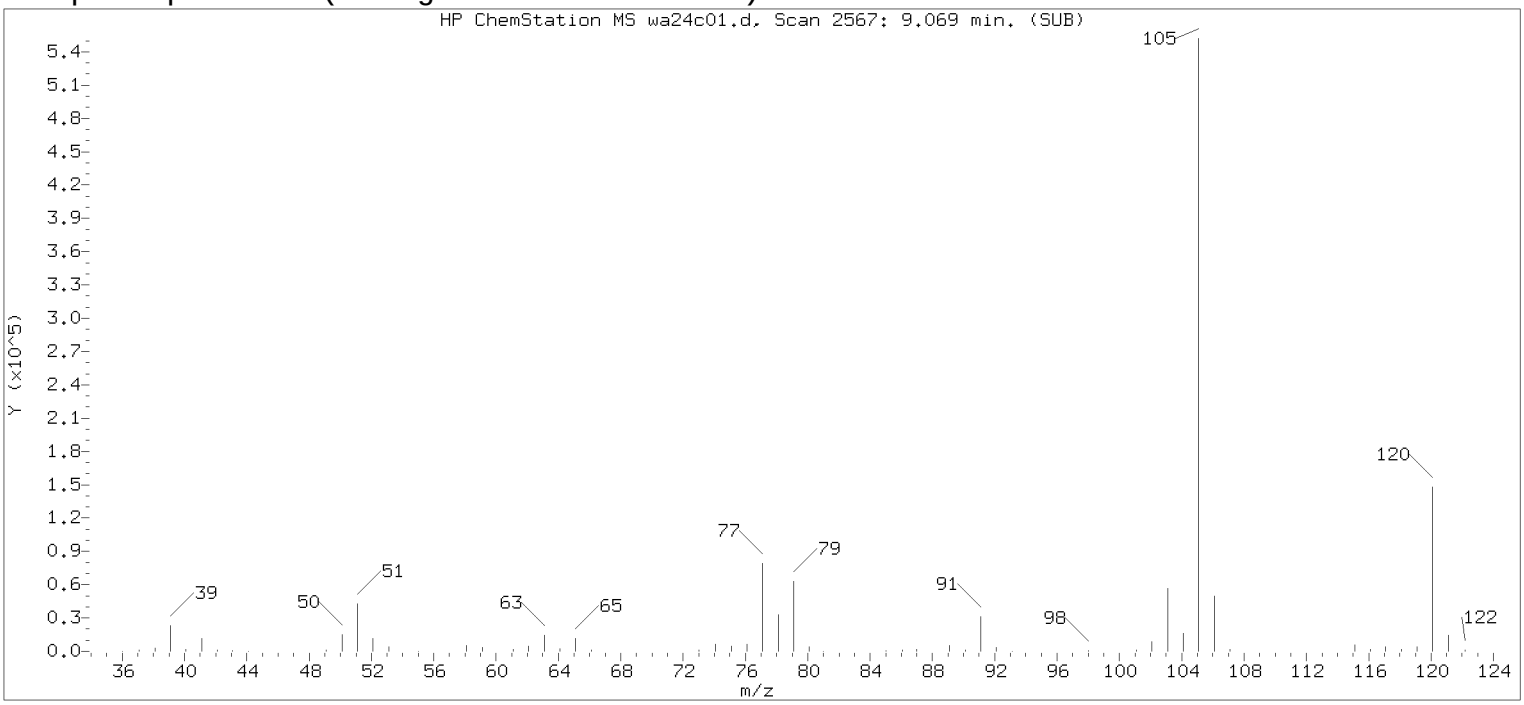
Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2591
Retention Time (minutes): 9.146
Quant Ion : 55.00
Area (flag) : 135030A
On-Column Amount (ng) : 553.5017
Integration start scan : 2579 Integration stop scan: 2634
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

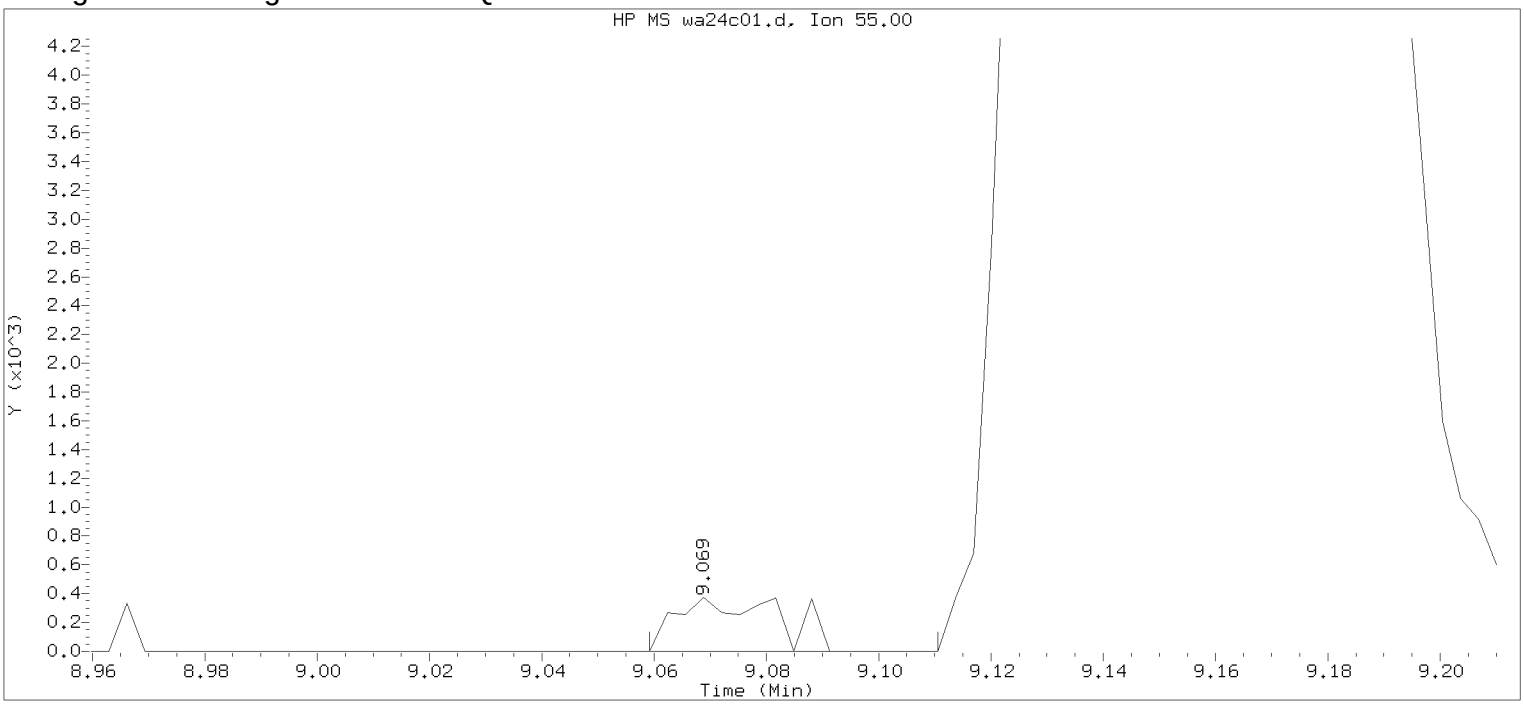
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24c01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:26 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 08:42
Date, time and analyst ID of latest file update: 24-Apr-2018 08:42 Automation

Sample Name: VSTD050 Lab Sample ID: VSTD050

Compound Number : 112
Compound Name : Cyclohexanone
Scan Number : 2567
Retention Time (minutes): 9.069
Quant Ion : 55.00
Area : 475
On-column Amount (ng) : 1.9509
Integration start scan : 2563 Integration stop scan: 2579
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:09.
Target 3.5 esignature user id: nsl01327

Raw QC Data

Volatiles by GC/MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW92

Data file: /chem2/HP09137.i/18apr23b.b/wa23b05.d
Injection date and time: **23-APR-2018 23:10**
Data file Sample Info. Line: VBLKW92;VBLKW92;1;3;;;;;;
Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:26 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.767(-0.003)	603	65	151377 (14)	250.00	
66) Fluorobenzene	5.071(-0.003)	1321	96	901332 (1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	701577 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.067(0.003)	2878	152	342162 (-2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	196913	47.924	96%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.724(0.001)	102	55989	51.897	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	890679	49.514	99%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	319178	46.977	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
23) Carbon Disulfide	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
71) Trichloroethene	(2)			Not Detected					0.5	1
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
78) Bromodichloromethane	(2)			Not Detected					0.5	1
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1

Digitally signed by Kevin Kelly on 04/23/2018 at 23:27. Target 3.5 esignature user ID: kk10002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW92

Data file: /chem2/HP09137.i/18apr23b.b/wa23b05.d
Injection date and time: **23-APR-2018 23:10**
Data file Sample Info. Line: VBLKW92;VBLKW92;1;3;;;;;;
Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:26 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

Bottle Code: Matrix: WATER Level: Low

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

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

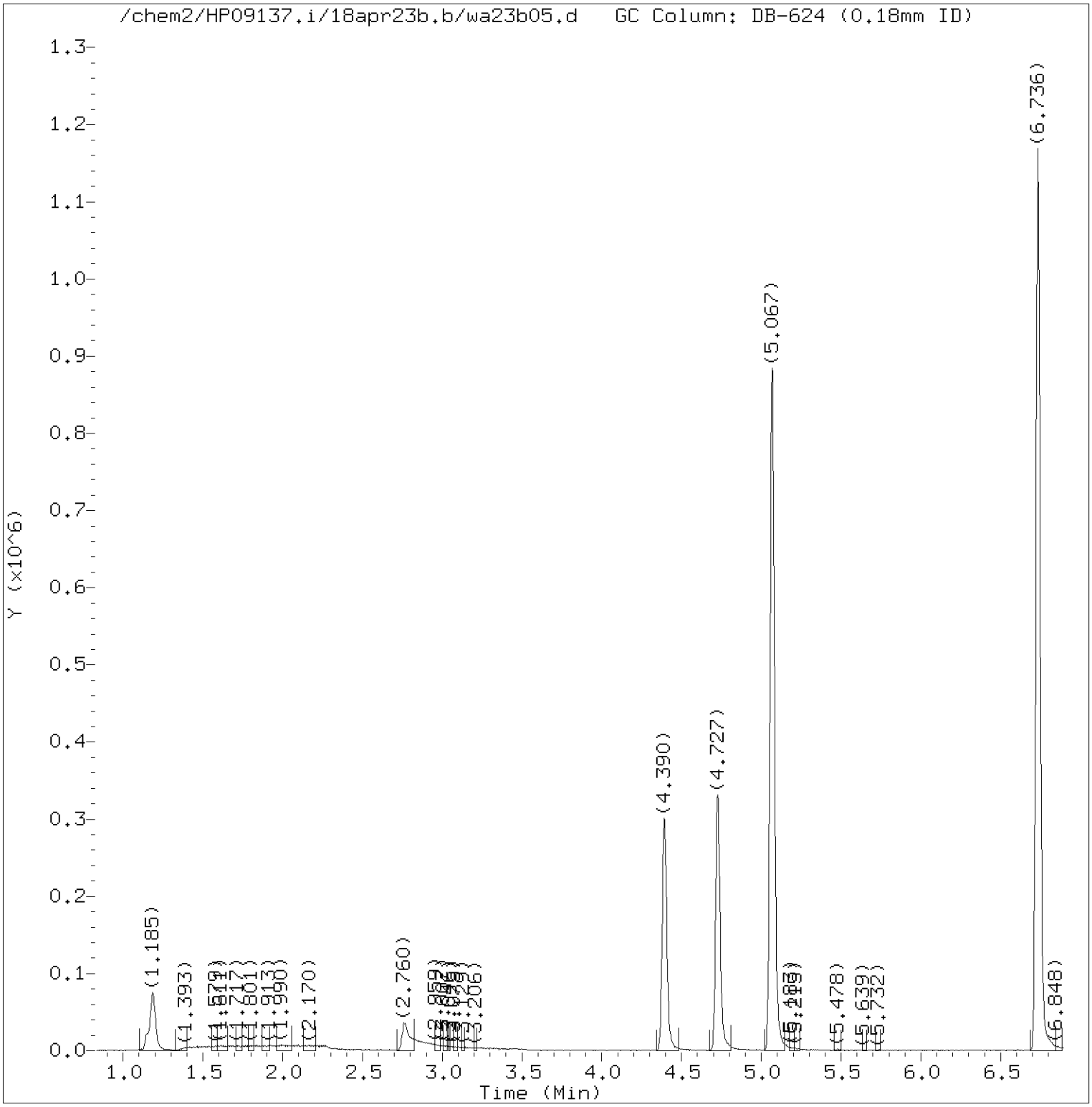
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT	(+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)				Not Detected					0.5	1
108) Xylene (Total)	(3)				Not Detected					0.5	1
109) Styrene	(3)				Not Detected					1	5
110) Bromoform	(3)				Not Detected					0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)				Not Detected					0.5	1

Total number of targets = 36

Digitally signed by Kevin Kelly on 04/23/2018 at 23:27. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

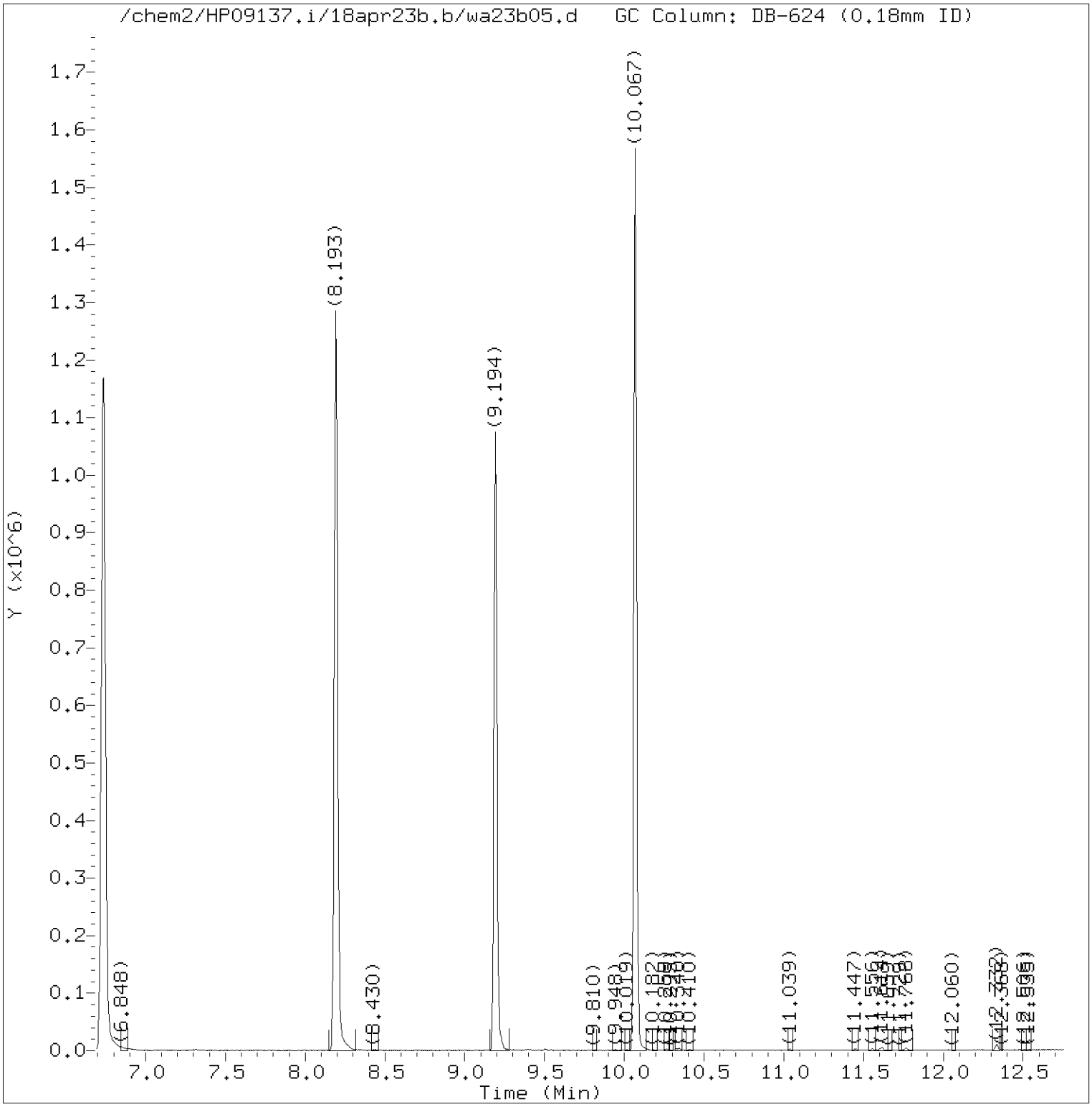
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23b05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:10 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:26 Automation

Sample Name: VBLKW92 Lab Sample ID: VBLKW92

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23b05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:10 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:26 Automation

Sample Name: VBLKW92 Lab Sample ID: VBLKW92

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23b05.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 23:10 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:26 Automation

Sample Name: VBLKW92 Lab Sample ID: VBLKW92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.767	65	151377	250.000
52)$Dibromofluoromethane	(2)	4.390	113	196913	47.924
57)$1,2-Dichloroethane-d4	(2)	4.724	102	55989	51.897
66)*Fluorobenzene	(2)	5.071	96	901332	50.000
83)$Toluene-d8	(3)	6.736	98	890679	49.514
100)*Chlorobenzene-d5	(3)	8.193	117	701577	50.000
114)$4-Bromofluorobenzene	(3)	9.194	95	319178	46.977
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	342162	50.000

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

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24b01.d
Injection date and time: **24-APR-2018 09:37**
Data file Sample Info. Line: VBLKW93;VBLKW93;1;3;;;;;;
Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.767(-0.003)	603	65	157198 (8)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	874300 (-1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	687161 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	334458 (-3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.397(-0.001)	113	192912	48.402	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(-0.001)	102	54370	51.954	104%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	866149	49.160	98%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	313963	47.179	94%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)			Not Detected					0.5	1
4) Chloromethane	(2)			Not Detected					0.5	1
6) Vinyl Chloride	(2)			Not Detected					0.5	1
8) Bromomethane	(2)			Not Detected					0.5	1
9) Chloroethane	(2)			Not Detected					0.5	1
11) n-Pentane	(2)			Not Detected					2	10
12) Trichlorofluoromethane	(2)			Not Detected					0.5	1
13) Ethanol	(1)			Not Detected					50	250
15) Freon 123a	(2)			Not Detected					2	5
16) Acrolein	(1)			Not Detected					40	100
17) 1,1-Dichloroethene	(2)			Not Detected					0.5	1
18) Acetone	(1)			Not Detected					6	20
19) Freon 113	(2)			Not Detected					2	10
21) 2-Propanol	(1)			Not Detected					50	100
22) Methyl Iodide	(2)			Not Detected					0.5	1
23) Carbon Disulfide	(2)			Not Detected					1	5
25) Allyl Chloride	(2)			Not Detected					1	5
27) Methyl Acetate	(2)			Not Detected					1	5
28) Methylene Chloride	(2)			Not Detected					0.5	1
30) t-Butyl alcohol	(1)			Not Detected					5	20
31) Acrylonitrile	(2)			Not Detected					4	20
32) trans-1,2-Dichloroethene	(2)			Not Detected					0.5	1
33) Methyl Tertiary Butyl Ether	(2)			Not Detected					0.5	1
34) n-Hexane	(2)			Not Detected					2	5
36) 1,1-Dichloroethane	(2)			Not Detected					0.5	1
38) di-Isopropyl ether	(2)			Not Detected					0.5	1
39) 2-Chloro-1,3-butadiene	(2)			Not Detected					1	5
40) Ethyl t-butyl ether	(2)			Not Detected					0.5	1
42) cis-1,2-Dichloroethene	(2)			Not Detected					0.5	1
43) 1,2-Dichloroethene (Total)	(2)			Not Detected					0.5	1
44) 2-Butanone	(2)			Not Detected					3	10

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:56. Target 3.5 esignature user ID: nsl01327

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24b01.d
Injection date and time: **24-APR-2018 09:37**
Data file Sample Info. Line: VBLKW93;VBLKW93;1;3;;;;;;
Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)			Not Detected					0.5	1
47) Propionitrile	(1)			Not Detected					30	100
48) Methacrylonitrile	(2)			Not Detected					10	50
49) Bromochloromethane	(2)			Not Detected					1	5
50) Tetrahydrofuran	(1)			Not Detected					4	10
51) Chloroform	(2)			Not Detected					0.5	1
53) 1,1,1-Trichloroethane	(2)			Not Detected					0.5	1
54) Cyclohexane	(2)			Not Detected					2	5
55) 1,1-Dichloropropene	(2)			Not Detected					1	5
56) Carbon Tetrachloride	(2)			Not Detected					0.5	1
58) Isobutyl Alcohol	(1)			Not Detected					100	250
60) Benzene	(2)			Not Detected					0.5	1
61) 1,2-Dichloroethane	(2)			Not Detected					0.5	1
65) t-Amyl methyl ether	(2)			Not Detected					0.5	1
67) n-Heptane	(2)			Not Detected					2	5
69) n-Butanol	(1)			Not Detected					100	250
71) Trichloroethene	(2)			Not Detected					0.5	1
72) Methylcyclohexane	(2)			Not Detected					1	5
73) 1,2-Dichloropropane	(2)			Not Detected					0.5	1
74) Dibromomethane	(2)			Not Detected					0.5	1
75) 1,4-Dioxane	(1)			Not Detected					70	250
76) Methyl Methacrylate	(2)			Not Detected					1	5
78) Bromodichloromethane	(2)			Not Detected					0.5	1
79) 2-Nitropropane	(2)			Not Detected					2	10
80) 2-Chloroethyl Vinyl Ether	(2)			Not Detected					2	10
81) cis-1,3-Dichloropropene	(2)			Not Detected					0.5	1
82) 4-Methyl-2-pentanone	(2)			Not Detected					3	10
88) Toluene	(3)			Not Detected					0.5	1
89) trans-1,3-Dichloropropene	(3)			Not Detected					0.5	1
90) 1,3-Dichloropropene (total)	(3)			Not Detected					1	5
91) Ethyl Methacrylate	(3)			Not Detected					1	5
92) 1,1,2-Trichloroethane	(3)			Not Detected					0.5	1
93) Tetrachloroethene	(3)			Not Detected					0.5	1
94) 1,3-Dichloropropane	(3)			Not Detected					0.5	1
96) 2-Hexanone	(3)			Not Detected					3	10
97) Dibromochloromethane	(3)			Not Detected					0.5	1
99) 1,2-Dibromoethane	(3)			Not Detected					0.5	1
102) Chlorobenzene	(3)			Not Detected					0.5	1
103) 1,1,1,2-Tetrachloroethane	(3)			Not Detected					0.5	1
104) Ethylbenzene	(3)			Not Detected					0.5	1
106) m+p-Xylene	(3)			Not Detected					0.5	1
107) o-Xylene	(3)			Not Detected					0.5	1
108) Xylene (Total)	(3)			Not Detected					0.5	1
109) Styrene	(3)			Not Detected					1	5
110) Bromoform	(3)			Not Detected					0.5	4
111) Isopropylbenzene	(3)			Not Detected					1	5
112) Cyclohexanone	(1)			Not Detected					25	100
115) Bromobenzene	(4)			Not Detected					1	5
116) 1,1,2,2-Tetrachloroethane	(4)			Not Detected					0.5	1
117) 1,2,3-Trichloropropane	(4)			Not Detected					1	5
118) trans-1,4-Dichloro-2-butene	(4)			Not Detected					15	50
119) n-Propylbenzene	(4)			Not Detected					1	5
120) 2-Chlorotoluene	(4)			Not Detected					1	5
121) 4-Chlorotoluene	(4)			Not Detected					1	5

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:56. Target 3.5 esignature user ID: nsl01327

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

VBLKW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24b01.d
Injection date and time: **24-APR-2018 09:37**
Data file Sample Info. Line: VBLKW93;VBLKW93;1;3;;;;;;
Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

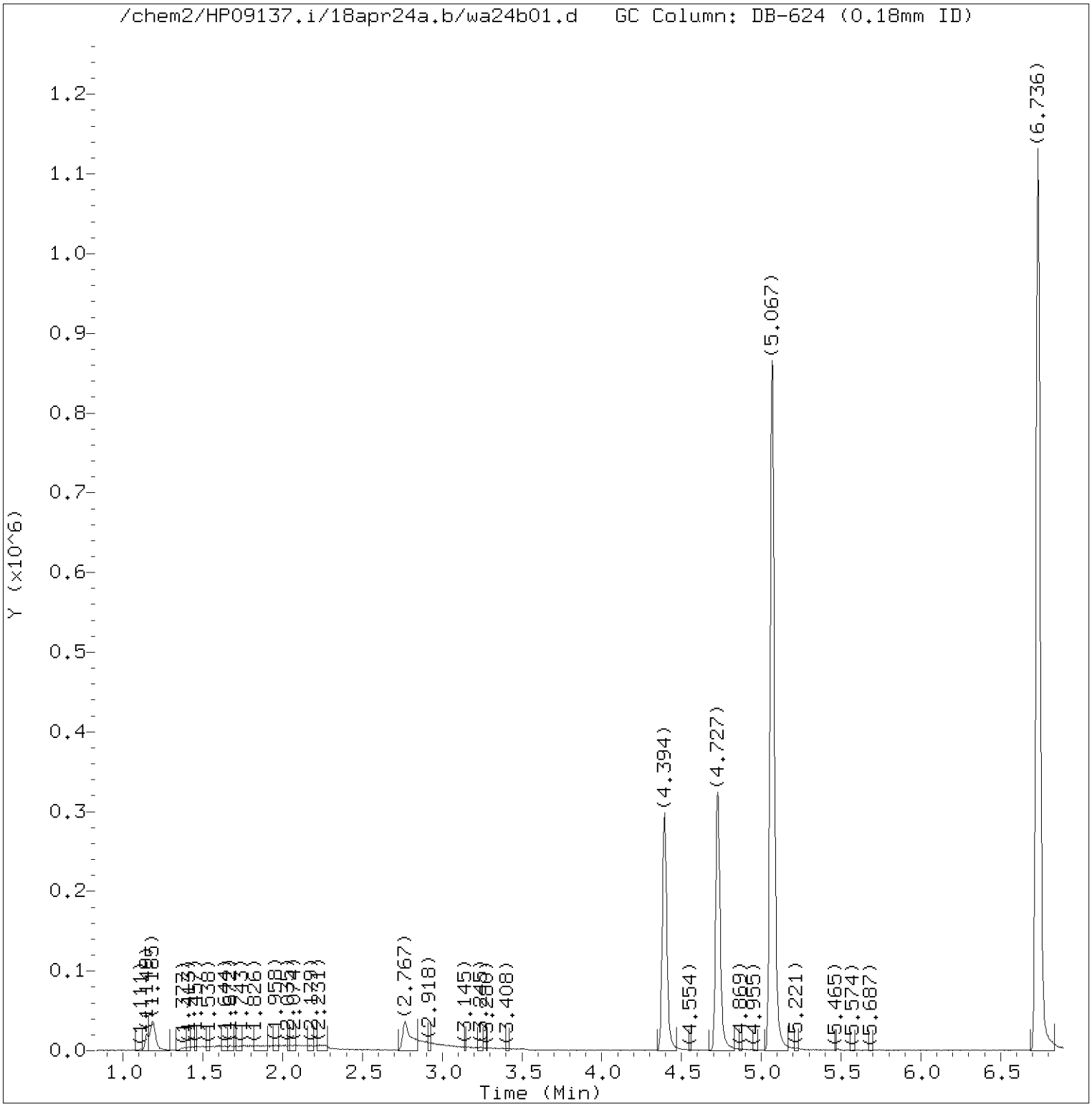
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)			Not Detected					1	5
124) tert-Butylbenzene	(4)			Not Detected					1	5
125) Pentachloroethane	(4)			Not Detected					1	5
126) 1,2,4-Trimethylbenzene	(4)			Not Detected					1	5
127) sec-Butylbenzene	(4)			Not Detected					1	5
129) 1,3-Dichlorobenzene	(4)			Not Detected					1	5
130) p-Isopropyltoluene	(4)			Not Detected					1	5
133) 1,4-Dichlorobenzene	(4)			Not Detected					1	5
134) 1,2,3-Trimethylbenzene	(4)			Not Detected					1	5
135) Benzyl Chloride	(4)			Not Detected					1	5
136) 1,3-Diethylbenzene	(4)			Not Detected					1	5
137) 1,4-Diethylbenzene	(4)			Not Detected					1	5
138) 1,2-Dichlorobenzene	(4)			Not Detected					1	5
139) n-Butylbenzene	(4)			Not Detected					1	5
140) 1,2-Diethylbenzene	(4)			Not Detected					1	5
141) Diethylbenzene (total)	(4)			Not Detected					1	5
142) 1,2-Dibromo-3-chloropropane	(4)			Not Detected					2	5
144) 1,3,5-Trichlorobenzene	(4)			Not Detected					1	5
146) 1,2,4-Trichlorobenzene	(4)			Not Detected					1	5
147) Hexachlorobutadiene	(4)			Not Detected					2	5
148) Naphthalene	(4)			Not Detected					1	5
149) 1,2,3-Trichlorobenzene	(4)			Not Detected					1	5
150) 2-Methylnaphthalene	(4)			Not Detected					2	5

Total number of targets = 108

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 09:56. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

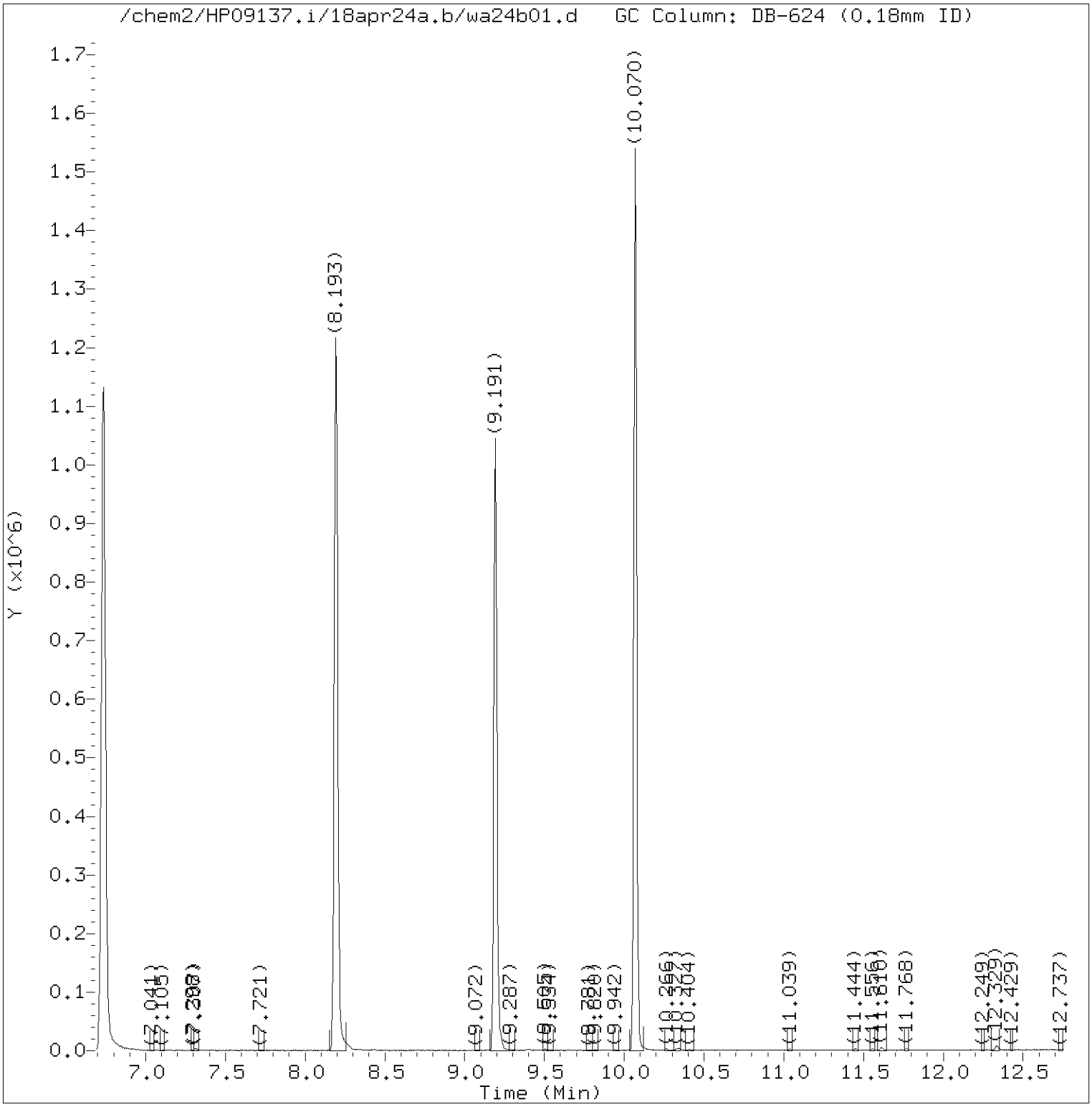
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24b01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:37 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: VBLKW93 Lab Sample ID: VBLKW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:56.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24b01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:37 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: VBLKW93 Lab Sample ID: VBLKW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:56.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24b01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:37 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: VBLKW93 Lab Sample ID: VBLKW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
29)*t-Butyl alcohol-d10	(1)	2.767	65	157198	250.000
52)$Dibromofluoromethane	(2)	4.397	113	192912	48.402
57)$1,2-Dichloroethane-d4	(2)	4.727	102	54370	51.954
66)*Fluorobenzene	(2)	5.067	96	874300	50.000
83)$Toluene-d8	(3)	6.736	98	866149	49.160
100)*Chlorobenzene-d5	(3)	8.193	117	687161	50.000
114)$4-Bromofluorobenzene	(3)	9.191	95	313963	47.179
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	334458	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 09:56.
Target 3.5 esignature user ID: nsl01327

99967MS

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9560426MS

Data file: /chem2/HP09137.i/18apr23b.b/wa23s35.d Injection date and time: **24-APR-2018 00:55**
Data file Sample Info. Line: 99967MS;9560426MS;1;3;MS;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.786(-0.022)	609	65	160247 (21)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	902441 (2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	690348 (-1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	351391 (0)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	200504	48.738	97%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.724(0.001)	102	53919	49.916	100%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	890808	50.327	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	324166	48.487	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)	1.406(0.001)	50	114680	18.198	18.20			0.5	1
6) Vinyl Chloride	(2)	1.483(0.000)	62	122197	19.185	19.19			0.5	1
8) Bromomethane	(2)	1.711(0.001)	94	87963	19.012	19.01			0.5	1
9) Chloroethane	(2)	1.781(0.001)	64	73211	19.255	19.25			0.5	1
17) 1,1-Dichloroethene	(2)	2.356(0.000)	96	93865	23.800	23.80			0.5	1
18) Acetone	(1)	2.375(0.003)	58	50537	92.509	92.51			6	20
23) Carbon Disulfide	(2)	2.536(0.001)	76	232900	17.896	17.90			1	5
28) Methylene Chloride	(2)	2.738(0.008)	84	98045M	21.393	21.39			0.5	1
32) trans-1,2-Dichloroethene	(2)	2.988(0.000)	96	96285	22.183	22.18			0.5	1
36) 1,1-Dichloroethane	(2)	3.373(0.000)	63	145898	19.815	19.82			0.5	1
42) cis-1,2-Dichloroethene	(2)	3.928(-0.000)	96	104636	21.363	21.36			0.5	1
44) 2-Butanone	(2)	3.944(-0.000)	43	330125	100.876	100.88			3	10
51) Chloroform	(2)	4.236(0.000)	83	153309	20.309	20.31			0.5	1
53) 1,1,1-Trichloroethane	(2)	4.416(0.000)	97	144485	21.507	21.51			0.5	1
56) Carbon Tetrachloride	(2)	4.583(0.000)	117	102235	20.095	20.09			0.5	1
60) Benzene	(2)	4.785(0.000)	78	388443	21.490	21.49			0.5	1
61) 1,2-Dichloroethane	(2)	4.801(0.000)	62	113742	18.047	18.05			0.5	1
71) Trichloroethene	(2)	5.440(0.000)	95	99727	20.782	20.78			0.5	1
73) 1,2-Dichloropropane	(2)	5.671(0.000)	63	96109	20.998	21.00			0.5	1
78) Bromodichloromethane	(2)	5.963(0.000)	83	104082	17.735	17.74			0.5	1
81) cis-1,3-Dichloropropene	(2)	6.444(0.000)	75	137068	17.714	17.71			0.5	1
82) 4-Methyl-2-pentanone	(2)	6.624(-0.000)	43	687345	101.874	101.87			3	10
88) Toluene	(3)	6.807(0.000)	92	256854	21.185	21.18			0.5	1
89) trans-1,3-Dichloropropene	(3)	7.057(0.000)	75	122690	16.985	16.98			0.5	1
92) 1,1,2-Trichloroethane	(3)	7.249(0.000)	97	96665	20.284	20.28			0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	104029	21.086	21.09			0.5	1
96) 2-Hexanone	(3)	7.525(0.000)	43	511639	96.136	96.14			3	10
97) Dibromochloromethane	(3)	7.647(0.000)	129	81720	16.863	16.86			0.5	1
102) Chlorobenzene	(3)	8.218(-0.000)	112	278829	20.185	20.19			0.5	1
104) Ethylbenzene	(3)	8.324(0.000)	91	470727	20.984	20.98			0.5	1
106) m+p-Xylene	(3)	8.430(-0.000)	106	379501	41.395	41.40			0.5	1

M = Compound was manually integrated.

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

99967MS Lancaster Laboratories 9560426MS

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s35.d Injection date and time: **24-APR-2018 00:55**
Data file Sample Info. Line: 99967MS;9560426MS;1;3;MS;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

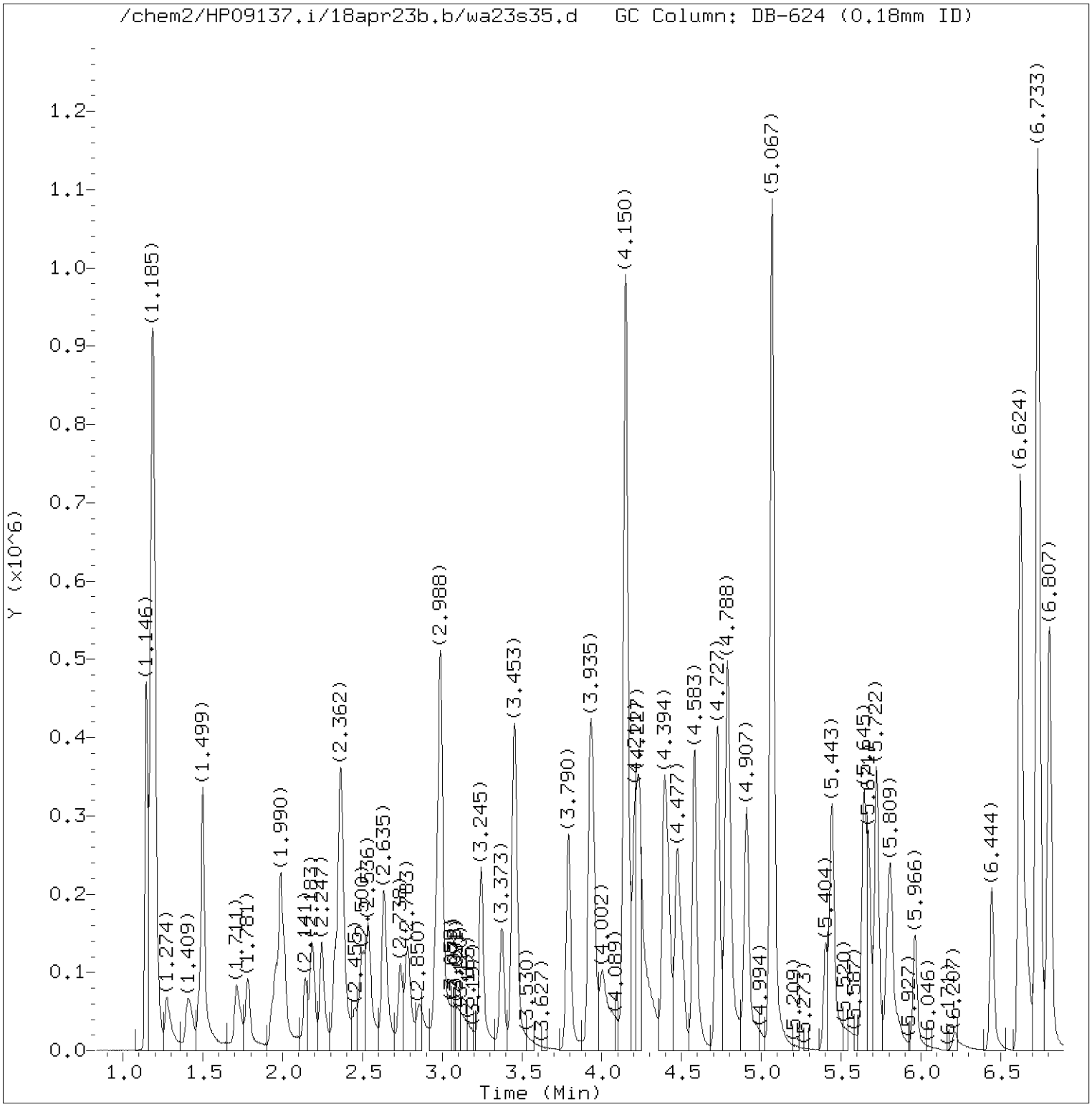
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)	8.767(-0.000)	106	182464	19.927	19.93			0.5	1
108) Xylene (Total)	(3)		106	561965	61.322	61.32			0.5	1
109) Styrene	(3)	8.780(-0.000)	104	303553	19.403	19.40			1	5
110) Bromoform	(3)	8.928(-0.000)	173	48887	14.056	14.06			0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)	9.313(0.000)	83	147395	19.943	19.94			0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

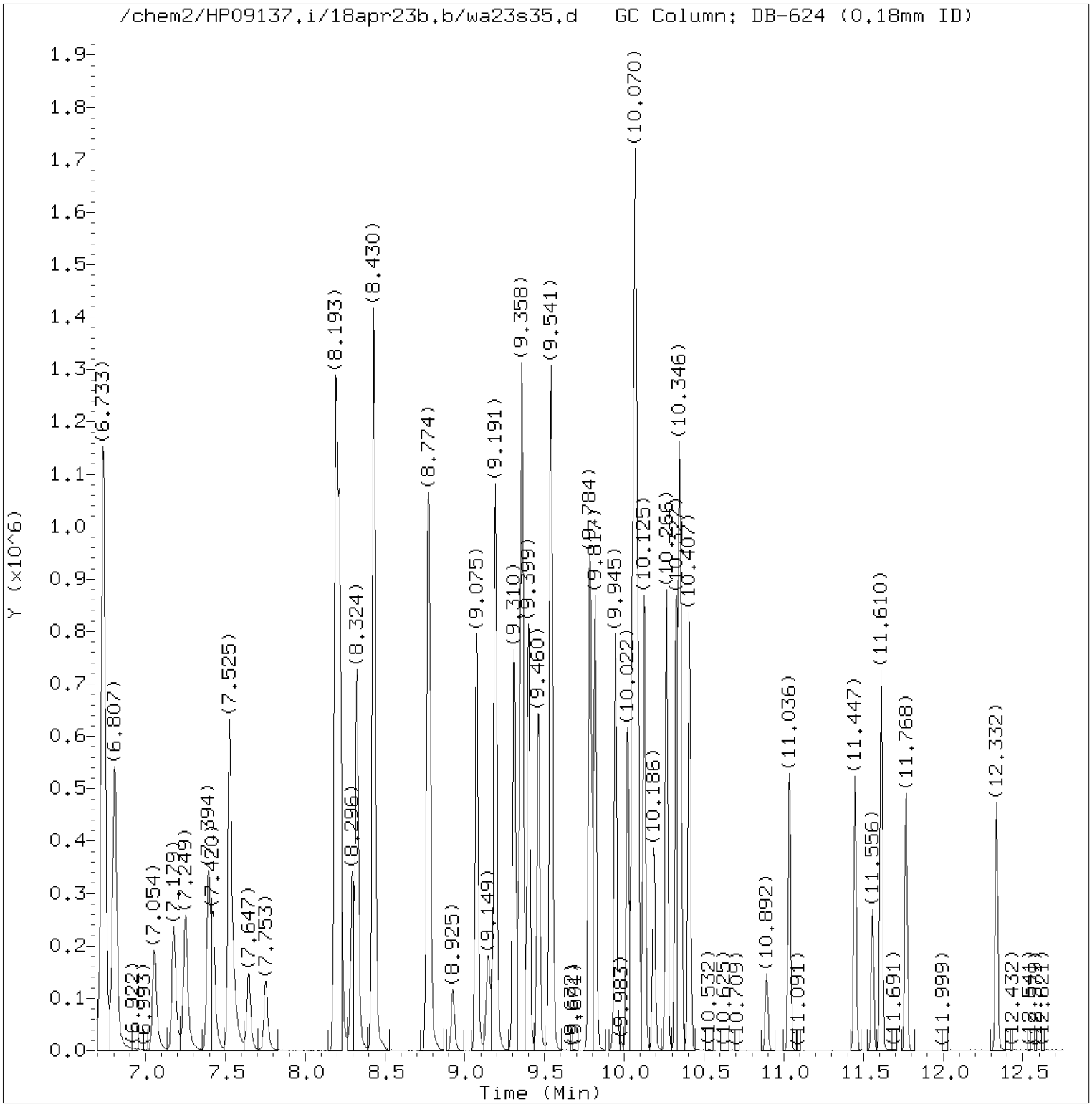
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Sample Name: 99967MS Lab Sample ID: 9560426MS

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Sample Name: 99967MS Lab Sample ID: 9560426MS

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Sample Name: 99967MS Lab Sample ID: 9560426MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Chloromethane	(2)	1.406	50	114680	18.198
6) Vinyl Chloride	(2)	1.483	62	122197	19.185
8) Bromomethane	(2)	1.711	94	87963	19.012
9) Chloroethane	(2)	1.781	64	73211	19.255
17) 1,1-Dichloroethene	(2)	2.356	96	93865	23.800
18) Acetone	(1)	2.375	58	50537	92.509
23) Carbon Disulfide	(2)	2.536	76	232900	17.896
28) Methylene Chloride	(2)	2.738	84	98045M	21.393
29)*t-Butyl alcohol-d10	(1)	2.786	65	160247	250.000
32) trans-1,2-Dichloroethene	(2)	2.988	96	96285	22.183
36) 1,1-Dichloroethane	(2)	3.373	63	145898	19.815
42) cis-1,2-Dichloroethene	(2)	3.928	96	104636	21.363
44) 2-Butanone	(2)	3.944	43	330125	100.876
51) Chloroform	(2)	4.236	83	153309	20.309
52)$Dibromofluoromethane	(2)	4.390	113	200504	48.738
53) 1,1,1-Trichloroethane	(2)	4.416	97	144485	21.507
56) Carbon Tetrachloride	(2)	4.583	117	102235	20.095
57)$1,2-Dichloroethane-d4	(2)	4.724	102	53919	49.916
60) Benzene	(2)	4.785	78	388443	21.490
61) 1,2-Dichloroethane	(2)	4.801	62	113742	18.047
66)*Fluorobenzene	(2)	5.067	96	902441	50.000
71) Trichloroethene	(2)	5.440	95	99727	20.782
73) 1,2-Dichloropropane	(2)	5.671	63	96109	20.998
78) Bromodichloromethane	(2)	5.963	83	104082	17.735
81) cis-1,3-Dichloropropene	(2)	6.444	75	137068	17.714
82) 4-Methyl-2-pentanone	(2)	6.624	43	687345	101.874
83)$Toluene-d8	(3)	6.733	98	890808	50.327
88) Toluene	(3)	6.807	92	256854	21.185
89) trans-1,3-Dichloropropene	(3)	7.057	75	122690	16.985
92) 1,1,2-Trichloroethane	(3)	7.249	97	96665	20.284
93) Tetrachloroethene	(3)	7.394	166	104029	21.086
96) 2-Hexanone	(3)	7.525	43	511639	96.136
97) Dibromochloromethane	(3)	7.647	129	81720	16.863
100)*Chlorobenzene-d5	(3)	8.193	117	690348	50.000
102) Chlorobenzene	(3)	8.219	112	278829	20.185
104) Ethylbenzene	(3)	8.324	91	470727	20.984
106) m+p-Xylene	(3)	8.430	106	379501	41.395
107) o-Xylene	(3)	8.767	106	182464	19.927

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

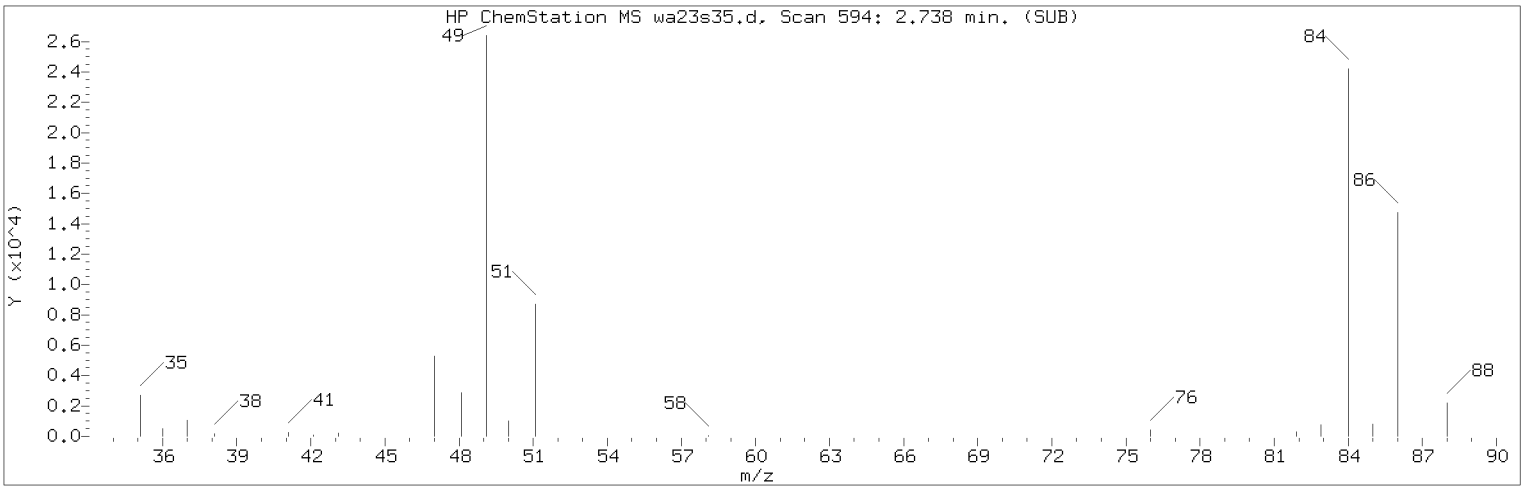
Sample Name: 99967MS Lab Sample ID: 9560426MS

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Styrene	(3)	8.780	104	303553	19.403
108) Xylene (Total)	(3)		106	561965	61.322
110) Bromoform	(3)	8.928	173	48887	14.056
114)$4-Bromofluorobenzene	(3)	9.191	95	324166	48.487
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	147395	19.943
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	351391	50.000

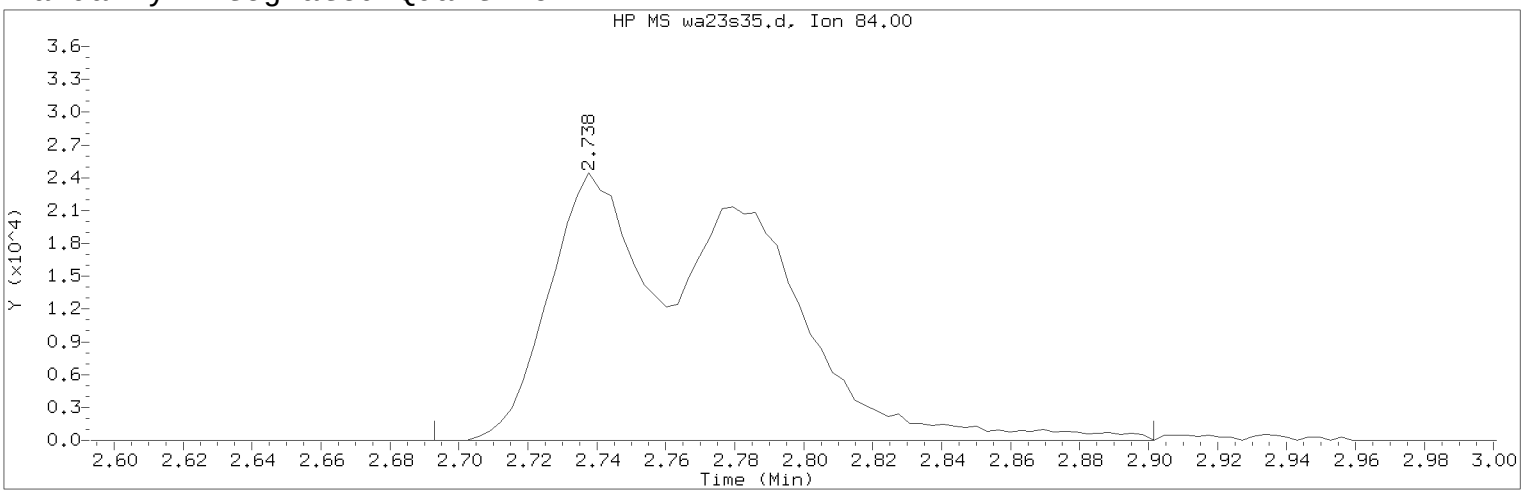
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 07:53 nsl01327

Sample Name: 99967MS Lab Sample ID: 9560426MS

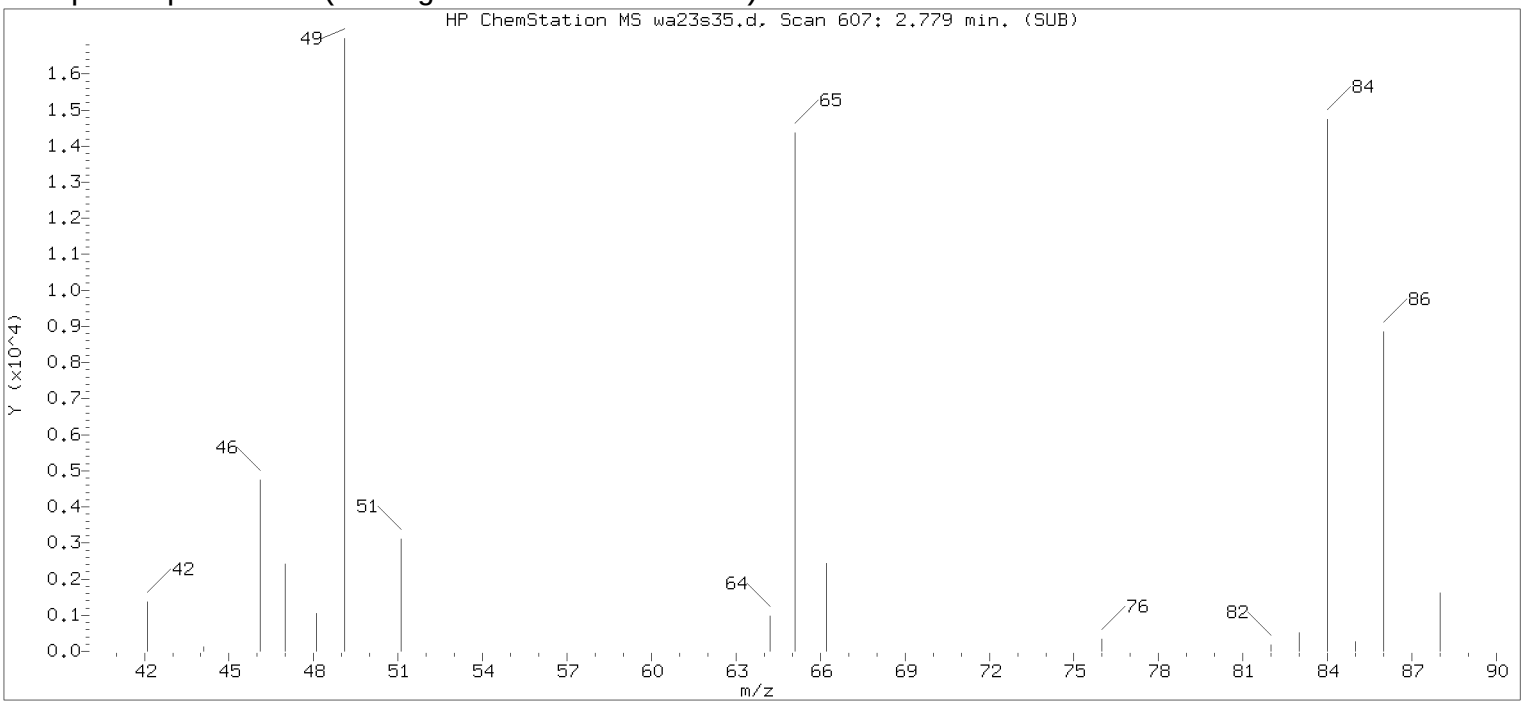
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 594
Retention Time (minutes): 2.738
Quant Ion : 84.00
Area (flag) : 98045M
On-Column Amount (ng) : 21.3931
Integration start scan : 579 Integration stop scan: 644
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

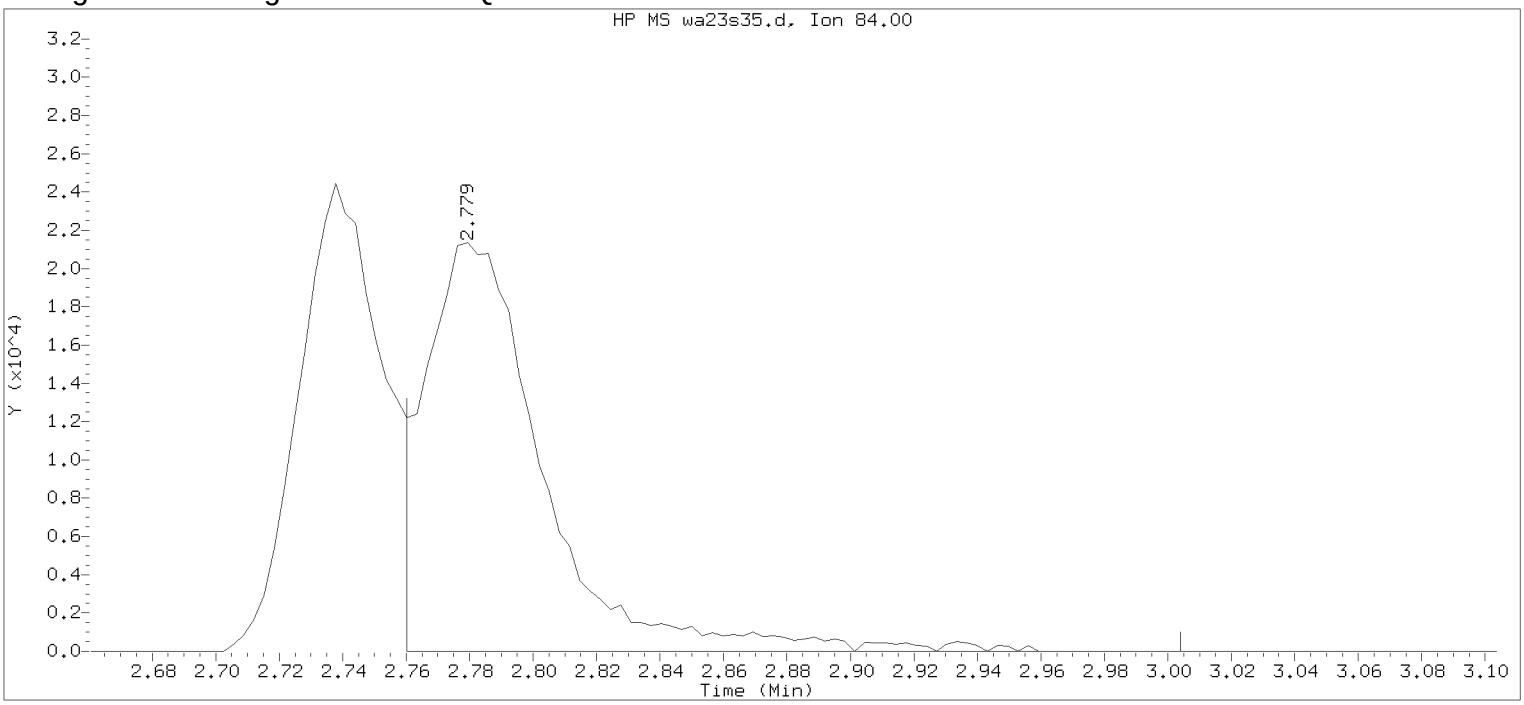
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23s35.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 00:55 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:10 Automation

Sample Name: 99967MS Lab Sample ID: 9560426MS

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 607
Retention Time (minutes): 2.779
Quant Ion : 84.00
Area : 55154
On-column Amount (ng) : 12.0345
Integration start scan : 600 Integration stop scan: 676
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01.
Target 3.5 esignature user id: 17 Page 292 of 432

99967MSD

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

9560427MSD

Data file: /chem2/HP09137.i/18apr23b.b/wa23s36.d Injection date and time: **24-APR-2018 01:19**
Data file Sample Info. Line: 99967MSD;9560427MSD;1;3;MSD;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.763(0.000)	602	65	164664 (24)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	901165 (1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	702681 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	360809 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.000)	113	203537	49.545	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.724(0.001)	102	57085	52.923	106%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	898088	49.847	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	330460	48.561	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)	1.412(0.000)	50	116827	18.564	18.56			0.5	1
6) Vinyl Chloride	(2)	1.483(0.000)	62	119160	18.735	18.74			0.5	1
8) Bromomethane	(2)	1.714(0.000)	94	87172	18.868	18.87			0.5	1
9) Chloroethane	(2)	1.781(0.001)	64	73871	19.456	19.46			0.5	1
17) 1,1-Dichloroethene	(2)	2.356(0.000)	96	95636	24.283	24.28			0.5	1
18) Acetone	(1)	2.365(0.000)	58	53173	94.724	94.72			6	20
23) Carbon Disulfide	(2)	2.535(0.001)	76	240625	18.516	18.52			1	5
28) Methylene Chloride	(2)	2.741(0.008)	84	96870	21.166	21.17			0.5	1
32) trans-1,2-Dichloroethene	(2)	2.988(0.000)	96	97955	22.600	22.60			0.5	1
36) 1,1-Dichloroethane	(2)	3.373(0.000)	63	149372	20.316	20.32			0.5	1
42) cis-1,2-Dichloroethene	(2)	3.925(0.000)	96	107616	22.003	22.00			0.5	1
44) 2-Butanone	(2)	3.941(0.000)	43	332824	101.844	101.84			3	10
51) Chloroform	(2)	4.236(0.000)	83	155337	20.607	20.61			0.5	1
53) 1,1,1-Trichloroethane	(2)	4.416(0.000)	97	148155	22.085	22.08			0.5	1
56) Carbon Tetrachloride	(2)	4.580(0.000)	117	103778	20.427	20.43			0.5	1
60) Benzene	(2)	4.785(0.000)	78	392291	21.734	21.73			0.5	1
61) 1,2-Dichloroethane	(2)	4.804(0.000)	62	120549	19.154	19.15			0.5	1
71) Trichloroethene	(2)	5.440(0.000)	95	101835	21.252	21.25			0.5	1
73) 1,2-Dichloropropane	(2)	5.674(-0.000)	63	98731	21.602	21.60			0.5	1
78) Bromodichloromethane	(2)	5.963(-0.000)	83	106114	18.107	18.11			0.5	1
81) cis-1,3-Dichloropropene	(2)	6.444(0.000)	75	141514	18.314	18.31			0.5	1
82) 4-Methyl-2-pentanone	(2)	6.624(-0.000)	43	691567	102.644	102.64			3	10
88) Toluene	(3)	6.806(0.000)	92	261543	21.193	21.19			0.5	1
89) trans-1,3-Dichloropropene	(3)	7.057(0.000)	75	124178	16.889	16.89			0.5	1
92) 1,1,2-Trichloroethane	(3)	7.252(0.000)	97	97970	20.197	20.20			0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	104323	20.774	20.77			0.5	1
96) 2-Hexanone	(3)	7.525(0.000)	43	518833	95.776	95.78			3	10
97) Dibromochloromethane	(3)	7.647(0.000)	129	83670	16.962	16.96			0.5	1
102) Chlorobenzene	(3)	8.218(-0.000)	112	282289	20.077	20.08			0.5	1
104) Ethylbenzene	(3)	8.324(0.000)	91	477160	20.898	20.90			0.5	1
106) m+p-Xylene	(3)	8.430(0.000)	106	386989	41.471	41.47			0.5	1

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

99967MSD Lancaster Laboratories 9560427MSD

Analysis Summary for GC/MS Volatiles

Data file: /chem2/HP09137.i/18apr23b.b/wa23s36.d Injection date and time: **24-APR-2018 01:19**
Data file Sample Info. Line: 99967MSD;9560427MSD;1;3;MSD;AMW17;;;wa23b05; Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

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

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

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

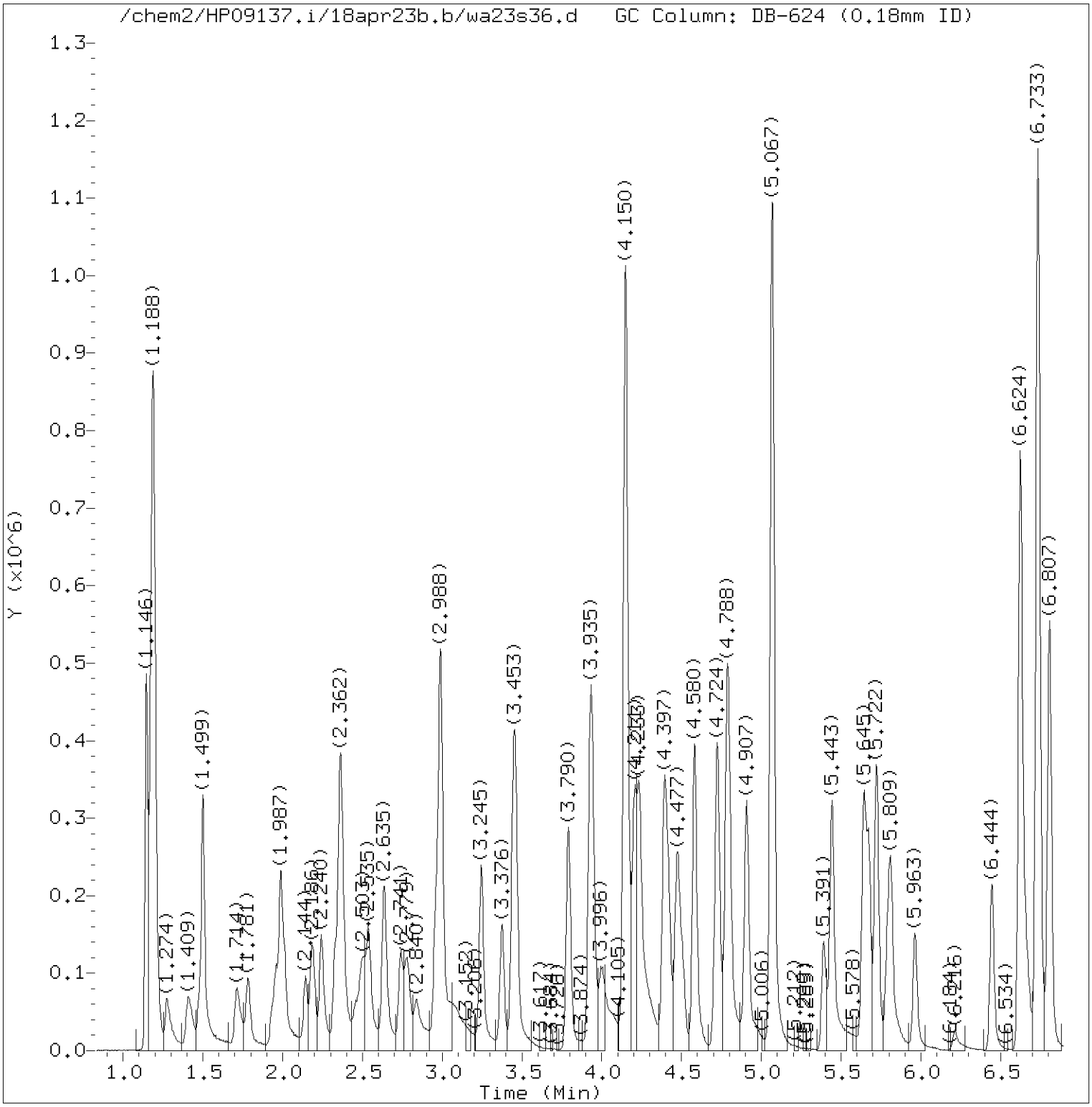
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)	8.767(0.000)	106	184240	19.767	19.77			0.5	1
108) Xylene (Total)	(3)		106	571229	61.238	61.24			0.5	1
109) Styrene	(3)	8.780(0.000)	104	310294	19.486	19.49			1	5
110) Bromoform	(3)	8.928(0.000)	173	50198	14.180	14.18			0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)	9.313(0.000)	83	149720	19.729	19.73			0.5	1

Total number of targets = 36

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 08:01. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

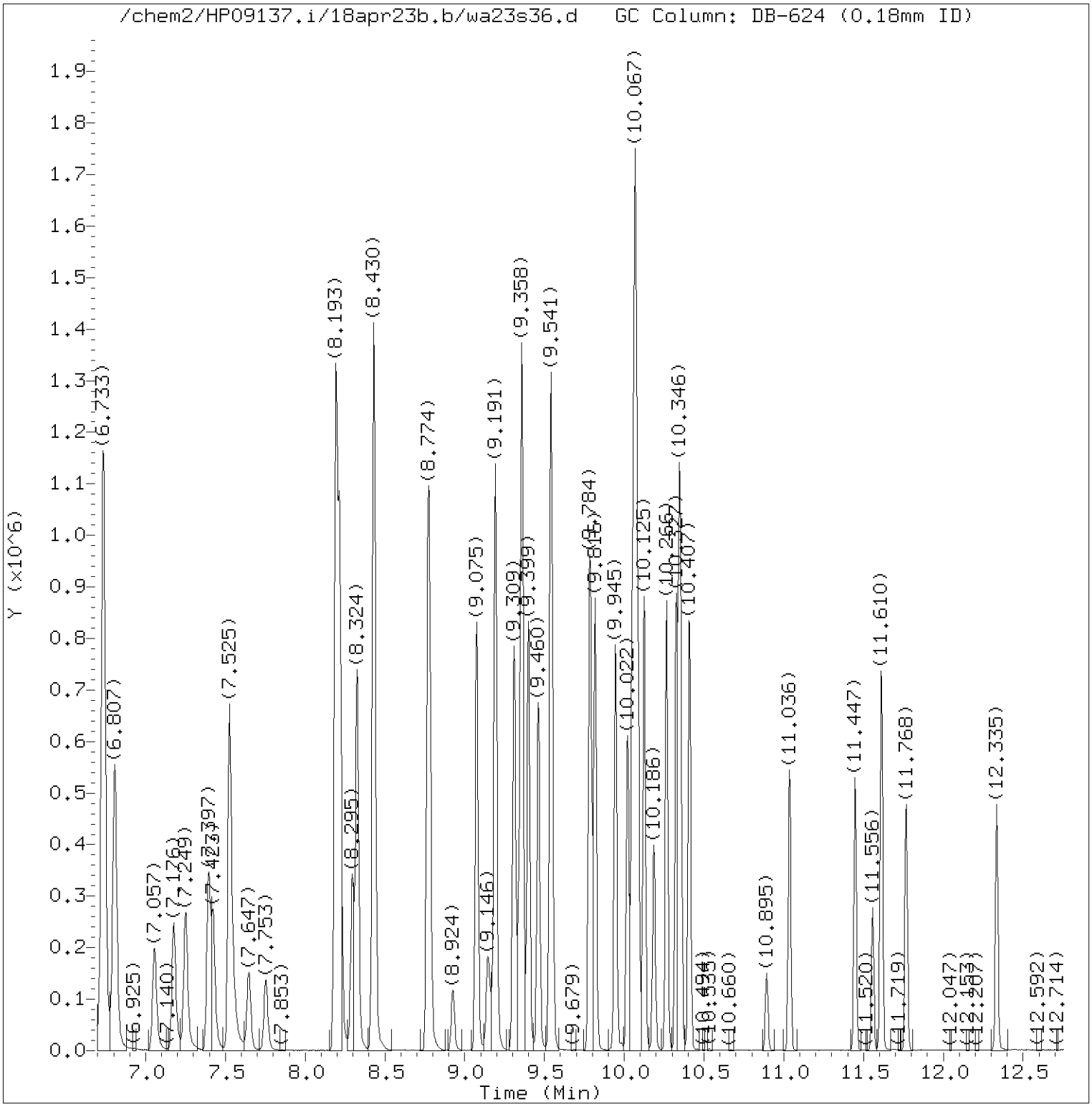
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s36.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:19 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Sample Name: 99967MSD Lab Sample ID: 9560427MSD

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s36.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:19 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Sample Name: 99967MSD Lab Sample ID: 9560427MSD

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s36.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:19 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Sample Name: 99967MSD Lab Sample ID: 9560427MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Chloromethane	(2)	1.412	50	116827	18.564
6) Vinyl Chloride	(2)	1.483	62	119160	18.735
8) Bromomethane	(2)	1.714	94	87172	18.868
9) Chloroethane	(2)	1.781	64	73871	19.456
17) 1,1-Dichloroethene	(2)	2.356	96	95636	24.283
18) Acetone	(1)	2.365	58	53173	94.724
23) Carbon Disulfide	(2)	2.535	76	240625	18.516
28) Methylene Chloride	(2)	2.741	84	96870	21.166
29)*t-Butyl alcohol-d10	(1)	2.763	65	164664	250.000
32) trans-1,2-Dichloroethene	(2)	2.988	96	97955	22.600
36) 1,1-Dichloroethane	(2)	3.373	63	149372	20.316
42) cis-1,2-Dichloroethene	(2)	3.925	96	107616	22.003
44) 2-Butanone	(2)	3.941	43	332824	101.844
51) Chloroform	(2)	4.236	83	155337	20.607
52)$Dibromofluoromethane	(2)	4.393	113	203537	49.545
53) 1,1,1-Trichloroethane	(2)	4.416	97	148155	22.085
56) Carbon Tetrachloride	(2)	4.580	117	103778	20.427
57)$1,2-Dichloroethane-d4	(2)	4.724	102	57085	52.923
60) Benzene	(2)	4.785	78	392291	21.734
61) 1,2-Dichloroethane	(2)	4.804	62	120549	19.154
66)*Fluorobenzene	(2)	5.067	96	901165	50.000
71) Trichloroethene	(2)	5.440	95	101835	21.252
73) 1,2-Dichloropropane	(2)	5.674	63	98731	21.602
78) Bromodichloromethane	(2)	5.963	83	106114	18.107
81) cis-1,3-Dichloropropene	(2)	6.444	75	141514	18.314
82) 4-Methyl-2-pentanone	(2)	6.624	43	691567	102.644
83)$Toluene-d8	(3)	6.736	98	898088	49.847
88) Toluene	(3)	6.807	92	261543	21.193
89) trans-1,3-Dichloropropene	(3)	7.057	75	124178	16.889
92) 1,1,2-Trichloroethane	(3)	7.253	97	97970	20.197
93) Tetrachloroethene	(3)	7.394	166	104323	20.774
96) 2-Hexanone	(3)	7.525	43	518833	95.776
97) Dibromochloromethane	(3)	7.647	129	83670	16.962
100)*Chlorobenzene-d5	(3)	8.193	117	702681	50.000
102) Chlorobenzene	(3)	8.218	112	282289	20.077
104) Ethylbenzene	(3)	8.324	91	477160	20.898
106) m+p-Xylene	(3)	8.430	106	386989	41.471
107) o-Xylene	(3)	8.767	106	184240	19.767

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s36.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 01:19 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 24-Apr-2018 01:34 Automation

Sample Name: 99967MSD Lab Sample ID: 9560427MSD

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Styrene	(3)	8.780	104	310294	19.486
108) Xylene (Total)	(3)		106	571229	61.238
110) Bromoform	(3)	8.928	173	50198	14.180
114)$4-Bromofluorobenzene	(3)	9.191	95	330460	48.561
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	149720	19.729
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	360809	50.000

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 08:01.
Target 3.5 esignature user ID: nsl01327

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSW92

Data file: /chem2/HP09137.i/18apr23b.b/wa23s31.d
Injection date and time: **23-APR-2018 22:46**
Data file Sample Info. Line: LCSW92;LCSW92;1;3;LCS;;;;wa23b05;
Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.767(-0.003)	603	65	173185 (31)	250.00	
66) Fluorobenzene	5.067(0.000)	1320	96	908534 (2)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	703250 (1)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	361999 (3)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	203606	49.160	98%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.724(0.001)	102	52633	48.399	97%		80 - 120
83) Toluene-d8	(3)	6.736(0.000)	98	906142	50.254	101%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	333768	49.008	98%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
4) Chloromethane	(2)	1.406(0.001)	50	104502	16.471	16.47			0.5	1
6) Vinyl Chloride	(2)	1.483(0.000)	62	103755	16.181	16.18			0.5	1
8) Bromomethane	(2)	1.714(0.000)	94	80174	17.212	17.21			0.5	1
9) Chloroethane	(2)	1.785(0.000)	64	64823	16.934	16.93			0.5	1
17) 1,1-Dichloroethene	(2)	2.359(0.000)	96	81667	20.568	20.57			0.5	1
18) Acetone	(1)	2.365(0.000)	58	50680	85.841	85.84			6	20
23) Carbon Disulfide	(2)	2.542(0.000)	76	200241	15.283	15.28			1	5
28) Methylene Chloride	(2)	2.779(0.000)	84	96100M	20.828	20.83			0.5	1
32) trans-1,2-Dichloroethene	(2)	2.991(0.000)	96	88100	20.161	20.16			0.5	1
36) 1,1-Dichloroethane	(2)	3.373(0.000)	63	145445	19.621	19.62			0.5	1
42) cis-1,2-Dichloroethene	(2)	3.928(-0.000)	96	100801	20.442	20.44			0.5	1
44) 2-Butanone	(2)	3.941(0.000)	43	353563	107.313	107.31			3	10
51) Chloroform	(2)	4.236(0.000)	83	147985	19.473	19.47			0.5	1
53) 1,1,1-Trichloroethane	(2)	4.416(0.000)	97	131112	19.386	19.39			0.5	1
56) Carbon Tetrachloride	(2)	4.583(0.000)	117	88472	17.273	17.27			0.5	1
60) Benzene	(2)	4.785(0.000)	78	366027	20.114	20.11			0.5	1
61) 1,2-Dichloroethane	(2)	4.801(0.000)	62	119417	18.820	18.82			0.5	1
71) Trichloroethene	(2)	5.443(0.000)	95	90997	18.836	18.84			0.5	1
73) 1,2-Dichloropropane	(2)	5.674(-0.000)	63	93739	20.343	20.34			0.5	1
78) Bromodichloromethane	(2)	5.963(-0.000)	83	102221	17.301	17.30			0.5	1
81) cis-1,3-Dichloropropene	(2)	6.444(0.000)	75	138837	17.822	17.82			0.5	1
82) 4-Methyl-2-pentanone	(2)	6.624(-0.000)	43	703545	103.575	103.58			3	10
88) Toluene	(3)	6.810(-0.000)	92	239383	19.382	19.38			0.5	1
89) trans-1,3-Dichloropropene	(3)	7.054(0.000)	75	126401	17.178	17.18			0.5	1
92) 1,1,2-Trichloroethane	(3)	7.249(0.000)	97	96418	19.861	19.86			0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	92671	18.439	18.44			0.5	1
96) 2-Hexanone	(3)	7.528(-0.000)	43	535036	98.688	98.69			3	10
97) Dibromochloromethane	(3)	7.650(-0.000)	129	82659	16.744	16.74			0.5	1
102) Chlorobenzene	(3)	8.218(-0.000)	112	266175	18.916	18.92			0.5	1
104) Ethylbenzene	(3)	8.328(-0.000)	91	445212	19.483	19.48			0.5	1
106) m+p-Xylene	(3)	8.433(-0.000)	106	354703	37.980	37.98			0.5	1

M = Compound was manually integrated.

Digitally signed by Kevin Kelly on 04/23/2018 at 23:27. Target 3.5 esignature user ID: kk10002

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSW92

Data file: /chem2/HP09137.i/18apr23b.b/wa23s31.d
Injection date and time: **23-APR-2018 22:46**
Data file Sample Info. Line: LCSW92;LCSW92;1;3;LCS;;;;wa23b05;
Instrument ID: **HP09137.i** Batch: **W181132AA**
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Blank Data file reference: **/chem2/HP09137.i/18apr23b.b/wa23b05.d**

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: **10438**
Calibration date and time (Last Method Edit): 23-APR-2018 22:38
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr23b.b/wa23c05.d**

Bottle Code: Matrix: WATER Level: Low

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

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

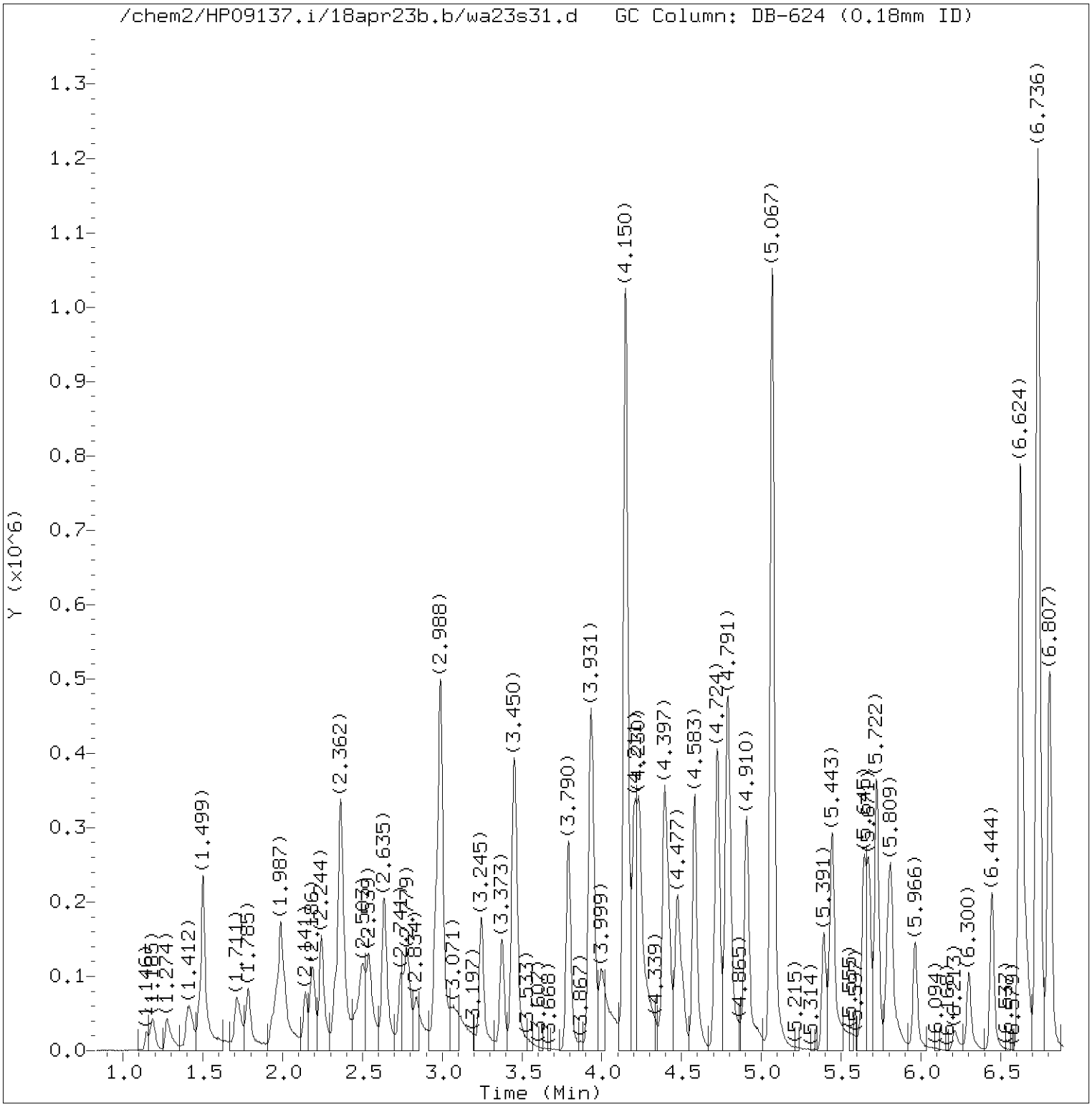
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
107) o-Xylene	(3)	8.767(-0.000)	106	171720	18.409	18.41			0.5	1
108) Xylene (Total)	(3)		106	526423	56.390	56.39			0.5	1
109) Styrene	(3)	8.780(-0.000)	104	291772	18.308	18.31			1	5
110) Bromoform	(3)	8.928(-0.000)	173	50703	14.311	14.31			0.5	4
116) 1,1,2,2-Tetrachloroethane	(4)	9.313(0.000)	83	150545	19.773	19.77			0.5	1

Total number of targets = 36

Digitally signed by Kevin Kelly on 04/23/2018 at 23:27. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

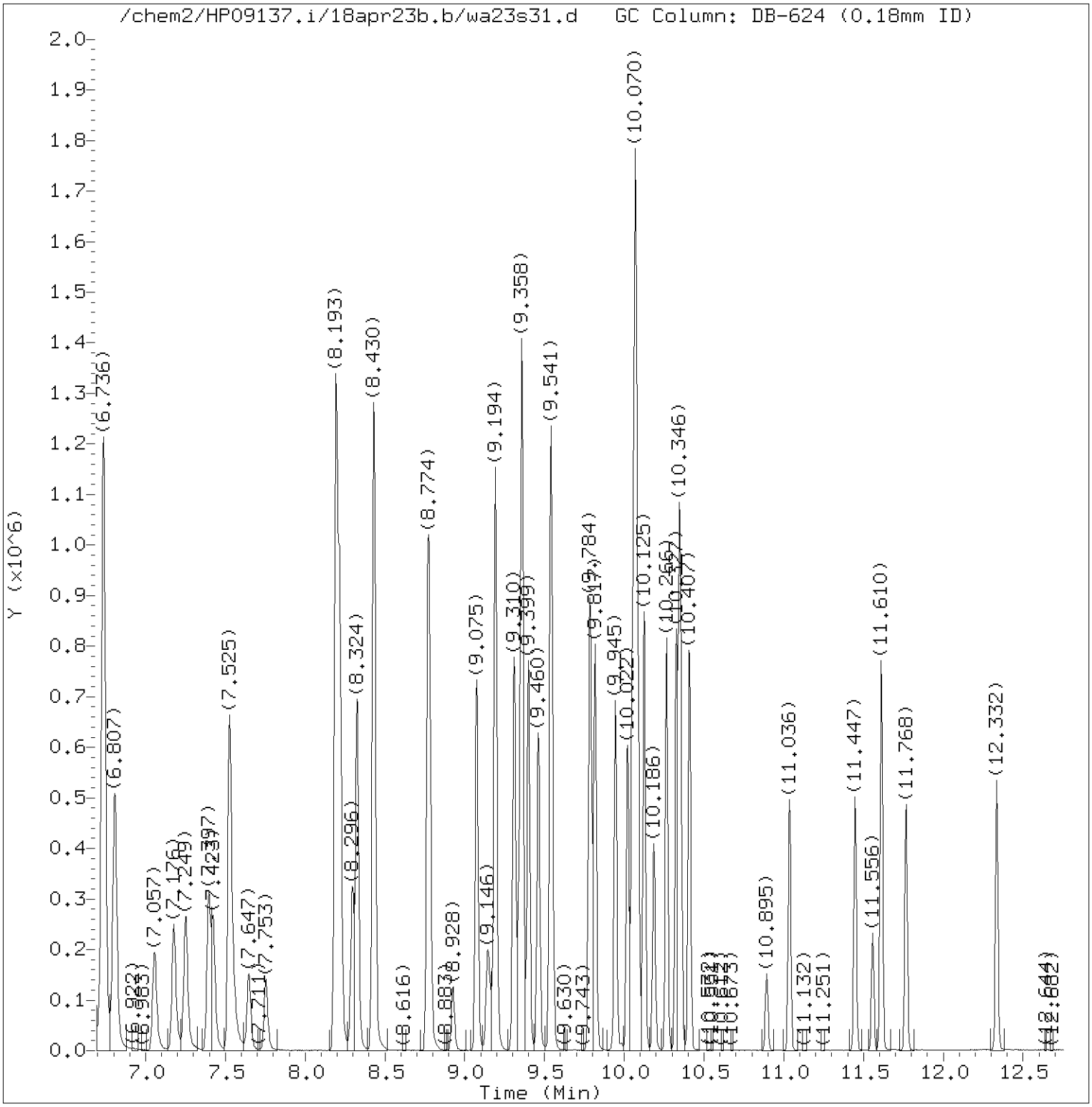
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Sample Name: LCSW92 Lab Sample ID: LCSW92

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Sample Name: LCSW92 Lab Sample ID: LCSW92

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Sample Name: LCSW92 Lab Sample ID: LCSW92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
4) Chloromethane	(2)	1.406	50	104502	16.471
6) Vinyl Chloride	(2)	1.483	62	103755	16.181
8) Bromomethane	(2)	1.714	94	80174	17.212
9) Chloroethane	(2)	1.785	64	64823	16.934
17) 1,1-Dichloroethene	(2)	2.359	96	81667	20.568
18) Acetone	(1)	2.365	58	50680	85.841
23) Carbon Disulfide	(2)	2.542	76	200241	15.283
29)*t-Butyl alcohol-d10	(1)	2.767	65	173185	250.000
28) Methylene Chloride	(2)	2.779	84	96100M	20.828
32) trans-1,2-Dichloroethene	(2)	2.991	96	88100	20.161
36) 1,1-Dichloroethane	(2)	3.373	63	145445	19.621
42) cis-1,2-Dichloroethene	(2)	3.928	96	100801	20.442
44) 2-Butanone	(2)	3.941	43	353563	107.313
51) Chloroform	(2)	4.236	83	147985	19.473
52)$Dibromofluoromethane	(2)	4.390	113	203606	49.160
53) 1,1,1-Trichloroethane	(2)	4.416	97	131112	19.386
56) Carbon Tetrachloride	(2)	4.583	117	88472	17.273
57)$1,2-Dichloroethane-d4	(2)	4.724	102	52633	48.399
60) Benzene	(2)	4.785	78	366027	20.114
61) 1,2-Dichloroethane	(2)	4.801	62	119417	18.820
66)*Fluorobenzene	(2)	5.067	96	908534	50.000
71) Trichloroethene	(2)	5.443	95	90997	18.836
73) 1,2-Dichloropropane	(2)	5.674	63	93739	20.343
78) Bromodichloromethane	(2)	5.963	83	102221	17.301
81) cis-1,3-Dichloropropene	(2)	6.444	75	138837	17.822
82) 4-Methyl-2-pentanone	(2)	6.624	43	703545	103.575
83)$Toluene-d8	(3)	6.736	98	906142	50.254
88) Toluene	(3)	6.810	92	239383	19.382
89) trans-1,3-Dichloropropene	(3)	7.054	75	126401	17.178
92) 1,1,2-Trichloroethane	(3)	7.249	97	96418	19.861
93) Tetrachloroethene	(3)	7.394	166	92671	18.439
96) 2-Hexanone	(3)	7.529	43	535036	98.688
97) Dibromochloromethane	(3)	7.651	129	82659	16.744
100)*Chlorobenzene-d5	(3)	8.193	117	703250	50.000
102) Chlorobenzene	(3)	8.219	112	266175	18.916
104) Ethylbenzene	(3)	8.328	91	445212	19.483
106) m+p-Xylene	(3)	8.433	106	354703	37.980
107) o-Xylene	(3)	8.767	106	171720	18.409

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

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on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

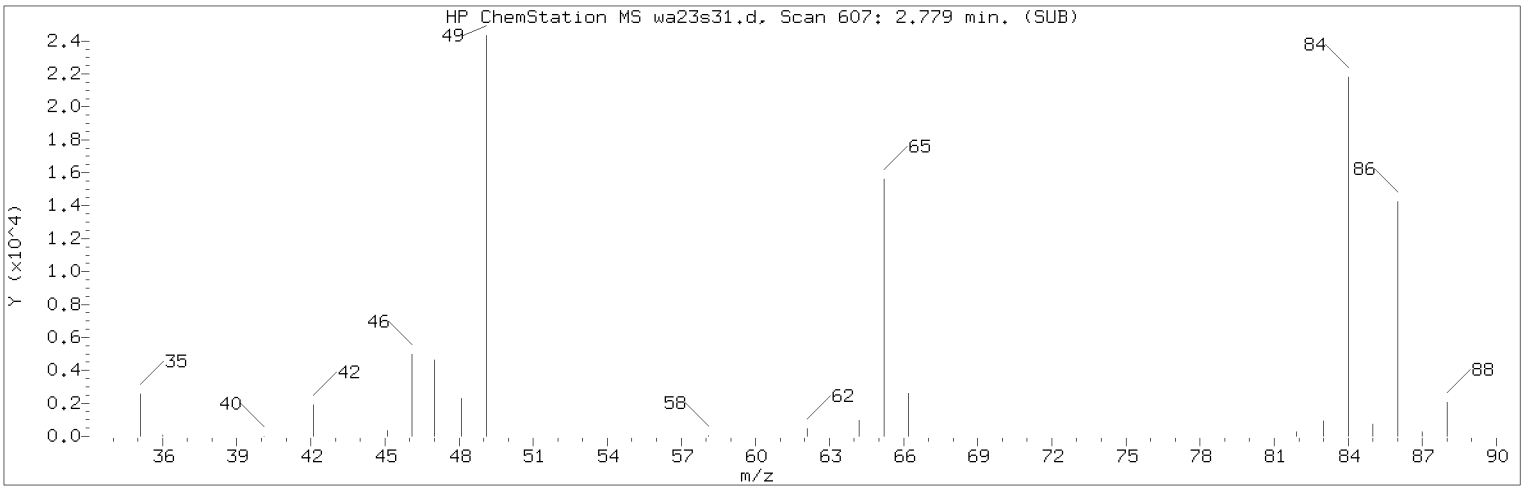
Sample Name: LCSW92 Lab Sample ID: LCSW92

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
109) Styrene	(3)	8.780	104	291772	18.308
108) Xylene (Total)	(3)		106	526423	56.390
110) Bromoform	(3)	8.928	173	50703	14.311
114)$4-Bromofluorobenzene	(3)	9.194	95	333768	49.008
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	150545	19.773
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	361999	50.000

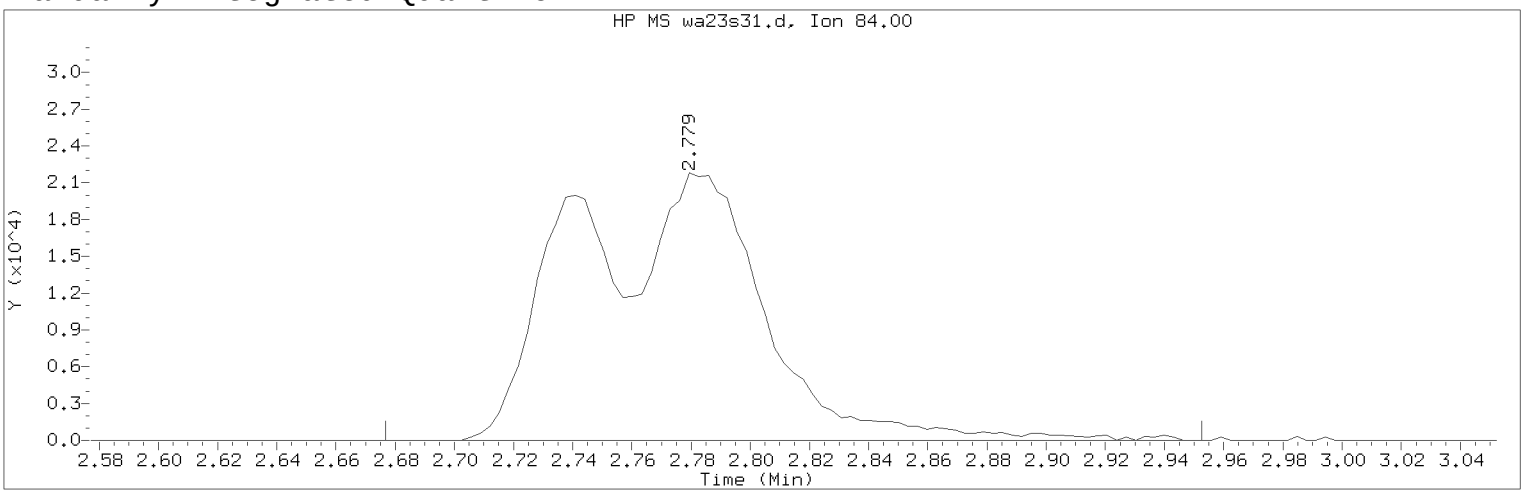
* = Compound is an internal standard.
$ = Compound is a surrogate standard.

Digitally signed by Kevin Kelly
on 04/23/2018 at 23:27.
Target 3.5 esignature user ID: kk10002

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:27 kk10002

Sample Name: LCSW92 Lab Sample ID: LCSW92

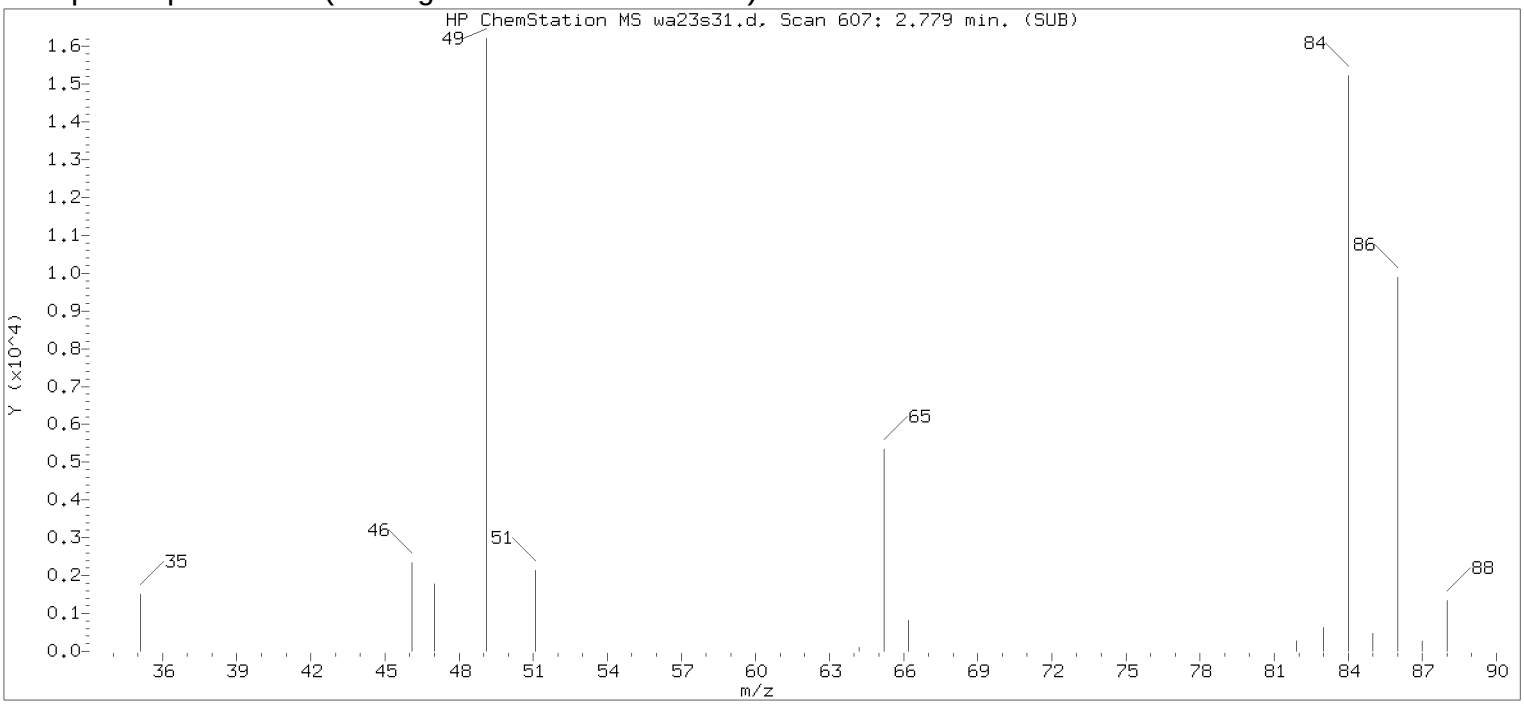
Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 607
Retention Time (minutes): 2.779
Quant Ion : 84.00
Area (flag) : 96100M
On-Column Amount (ng) : 20.8279
Integration start scan : 574 Integration stop scan: 660
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

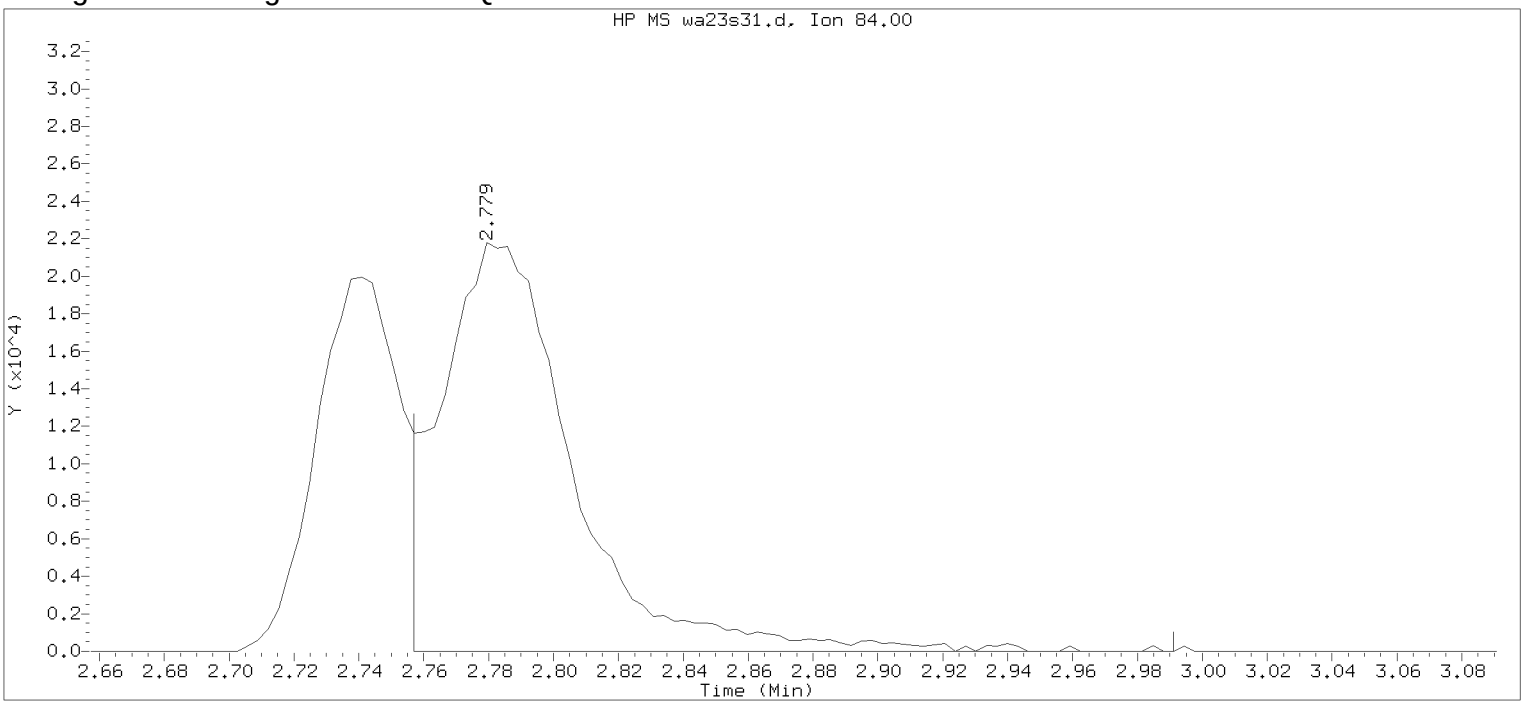
Analyst responsible for change: Digitally signed by Kevin Kelly on 04/23/2018 at 23:27. Target 3.5 esignature user ID: kk10002

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 20:38.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr23b.b/wa23s31.d Instrument ID: HP09137.i
Injection date and time: 23-APR-2018 22:46 Analyst ID: kk10002

Method used: /chem2/HP09137.i/18apr23b.b/m8260b5.m Sublist used: 10438
Calibration date and time: 23-APR-2018 22:38
Date, time and analyst ID of latest file update: 23-Apr-2018 23:02 Automation

Sample Name: LCSW92 Lab Sample ID: LCSW92

Compound Number : 28
Compound Name : Methylene Chloride
Scan Number : 607
Retention Time (minutes): 2.779
Quant Ion : 84.00
Area : 61297
On-column Amount (ng) : 13.2850
Integration start scan : 599 Integration stop scan: 672
Y at integration start : 0 Y at integration end: 0

Digitally signed by Kevin Kelly on 04/23/2018 at 23:27.
Target 3.5 esignature user id: kkelly

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l01.d
Injection date and time: **24-APR-2018 08:50**
Data file Sample Info. Line: LCSW93;LCSW93;1;3;LCS;;;;wa24b01;
Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.766(-0.003)	603	65	175437 (20)	250.00	
66) Fluorobenzene	5.070(-0.003)	1321	96	876800 (-1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	686165 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.067(0.003)	2878	152	351430 (2)	50.00	

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.390(0.001)	113	198485	49.658	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.727(0.000)	102	56051	53.407	107%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	876260	49.807	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.191(0.000)	95	320262	48.195	96%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.274(0.000)	85	110228	19.283	19.28			0.5	1
4) Chloromethane	(2)	1.412(0.000)	50	126021	20.582	20.58			0.5	1
6) Vinyl Chloride	(2)	1.483(0.000)	62	124607	20.136	20.14			0.5	1
8) Bromomethane	(2)	1.714(0.000)	94	87358	19.433	19.43			0.5	1
9) Chloroethane	(2)	1.784(0.000)	64	71596	19.380	19.38			0.5	1
11) n-Pentane	(2)	1.990(0.000)	43	143926	19.704	19.70			2	10
12) Trichlorofluoromethane	(2)	1.964(-0.001)	101	135512	19.694	19.69			0.5	1
13) Ethanol	(1)	2.051(0.002)	45	18941	274.533	274.53			50	250
15) Freon 123a	(2)	2.179(0.001)	67	98464	19.375	19.37			2	5
16) Acrolein	(1)	2.247(-0.000)	56	163819	115.071	115.07			40	100
17) 1,1-Dichloroethene	(2)	2.362(-0.006)	96	82422	21.510	21.51			0.5	1
18) Acetone	(1)	2.365(0.000)	58	76646	128.155	128.15			6	20
19) Freon 113	(2)	2.368(0.000)	101	84335	21.717	21.72			2	10
21) 2-Propanol	(1)	2.478(-0.000)	45	27206	65.788	65.79		J	50	100
22) Methyl Iodide	(2)	2.500(0.000)	142	145406	19.540	19.54			0.5	1
23) Carbon Disulfide	(2)	2.545(-0.000)	76	211337	16.714	16.71			1	5
25) Allyl Chloride	(2)	2.635(0.000)	41	109295	17.870	17.87			1	5
27) Methyl Acetate	(2)	2.648(0.000)	43	94418	21.095	21.09			1	5
28) Methylene Chloride	(2)	2.741(0.000)	84	89745	20.155	20.15			0.5	1
30) t-Butyl alcohol	(1)	2.840(0.001)	59	102855M	136.411	136.41			5	20
31) Acrylonitrile	(2)	2.962(-0.000)	53	235347	103.165	103.17			4	20
32) trans-1,2-Dichloroethene	(2)	2.991(0.000)	96	86996	20.629	20.63			0.5	1
33) Methyl Tertiary Butyl Ether	(2)	2.991(0.000)	73	287113	20.083	20.08			0.5	1
34) n-Hexane	(2)	3.245(0.001)	57	101789	20.753	20.75			2	5
36) 1,1-Dichloroethane	(2)	3.376(-0.000)	63	143373	20.042	20.04			0.5	1
38) di-Isopropyl ether	(2)	3.444(0.001)	45	275053	20.540	20.54			0.5	1
39) 2-Chloro-1,3-butadiene	(2)	3.466(-0.000)	53	128117	20.267	20.27			1	5
40) Ethyl t-butyl ether	(2)	3.790(0.000)	59	261802	19.628	19.63			0.5	1
42) cis-1,2-Dichloroethene	(2)	3.925(0.000)	96	99235	20.853	20.85			0.5	1
43) 1,2-Dichloroethene (Total)	(2)		96	186231	41.482	41.48			0.5	1
44) 2-Butanone	(2)	3.941(0.001)	43	476950	150.003	150.00			3	10

M = Compound was manually integrated.

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l01.d Injection date and time: **24-APR-2018 08:50**
Data file Sample Info. Line: LCSW93;LCSW93;1;3;LCS;;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
45) 2,2-Dichloropropane	(2)	3.928(0.000)	77	80126	20.728	20.73			0.5	1
47) Propionitrile	(1)	3.999(0.001)	54	156068	165.569	165.57			30	100
48) Methacrylonitrile	(2)	4.150(0.000)	67	448499	166.585	166.58			10	50
49) Bromochloromethane	(2)	4.159(0.000)	128	47585	19.647	19.65			1	5
50) Tetrahydrofuran	(1)	4.204(0.002)	71	98241	97.467	97.47			4	10
51) Chloroform	(2)	4.239(-0.000)	83	144291	19.674	19.67			0.5	1
53) 1,1,1-Trichloroethane	(2)	4.419(0.000)	97	129276	19.806	19.81			0.5	1
54) Cyclohexane	(2)	4.477(0.000)	56	137134	20.647	20.65			2	5
55) 1,1-Dichloropropene	(2)	4.583(-0.000)	75	116398	19.928	19.93			1	5
56) Carbon Tetrachloride	(2)	4.583(0.000)	117	86906	17.581	17.58			0.5	1
58) Isobutyl Alcohol	(1)	4.714(-0.000)	41	104066	420.757	420.76			100	250
60) Benzene	(2)	4.788(0.000)	78	358434	20.410	20.41			0.5	1
61) 1,2-Dichloroethane	(2)	4.801(0.000)	62	118268	19.314	19.31			0.5	1
65) t-Amyl methyl ether	(2)	4.907(0.001)	73	272903	19.603	19.60			0.5	1
67) n-Heptane	(2)	5.070(0.001)	43	92539	21.036	21.04			2	5
69) n-Butanol	(1)	5.391(0.001)	56	194925	837.568	837.57			100	250
71) Trichloroethene	(2)	5.440(0.001)	95	90019	19.308	19.31			0.5	1
72) Methylcyclohexane	(2)	5.645(0.000)	83	120113	19.161	19.16			1	5
73) 1,2-Dichloropropane	(2)	5.674(0.000)	63	91060	20.477	20.48			0.5	1
74) Dibromomethane	(2)	5.792(0.000)	93	60838	20.175	20.17			0.5	1
75) 1,4-Dioxane	(1)	5.821(0.002)	88	34061M	535.812	535.81			70	250
76) Methyl Methacrylate	(2)	5.815(-0.000)	69	93553	19.692	19.69			1	5
78) Bromodichloromethane	(2)	5.962(0.000)	83	99395	17.432	17.43			0.5	1
79) 2-Nitropropane	(2)	6.210(0.001)	41	20695	13.109	13.11			2	10
80) 2-Chloroethyl Vinyl Ether	(2)	6.299(0.000)	63	69348	19.145	19.15			2	10
81) cis-1,3-Dichloropropene	(2)	6.447(0.000)	75	132886	17.676	17.68			0.5	1
82) 4-Methyl-2-pentanone	(2)	6.624(0.000)	43	672646	102.610	102.61			3	10
88) Toluene	(3)	6.806(0.000)	92	237165	19.680	19.68			0.5	1
89) trans-1,3-Dichloropropene	(3)	7.054(0.000)	75	120473	16.780	16.78			0.5	1
90) 1,3-Dichloropropene (total)	(3)		100	253359	34.455	34.46			1	5
91) Ethyl Methacrylate	(3)	7.176(0.000)	69	152636	18.366	18.37			1	5
92) 1,1,2-Trichloroethane	(3)	7.249(0.000)	97	95505	20.163	20.16			0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	92635	18.891	18.89			0.5	1
94) 1,3-Dichloropropane	(3)	7.423(0.000)	76	152295	19.452	19.45			0.5	1
96) 2-Hexanone	(3)	7.525(0.000)	43	505789	95.616	95.62			3	10
97) Dibromochloromethane	(3)	7.647(0.000)	129	79394	16.483	16.48			0.5	1
99) 1,2-Dibromoethane	(3)	7.753(0.000)	107	100273	19.435	19.43			0.5	1
102) Chlorobenzene	(3)	8.218(0.000)	112	261978	19.081	19.08			0.5	1
103) 1,1,1,2-Tetrachloroethane	(3)	8.295(-0.000)	131	76225	17.284	17.28			0.5	1
104) Ethylbenzene	(3)	8.328(-0.000)	91	432758	19.409	19.41			0.5	1
106) m+p-Xylene	(3)	8.430(-0.000)	106	347029	38.084	38.08			0.5	1
107) o-Xylene	(3)	8.767(-0.000)	106	168601	18.525	18.52			0.5	1
108) Xylene (Total)	(3)		106	515630	56.609	56.61			0.5	1
109) Styrene	(3)	8.780(-0.000)	104	284405	18.290	18.29			1	5
110) Bromoform	(3)	8.924(0.000)	173	49527	14.327	14.33			0.5	4
111) Isopropylbenzene	(3)	9.075(-0.000)	105	410459	18.959	18.96			1	5
112) Cyclohexanone	(1)	9.146(0.003)	55	118198	403.530	403.53			25	100
115) Bromobenzene	(4)	9.306(-0.000)	156	111614	19.434	19.43			1	5
116) 1,1,2,2-Tetrachloroethane	(4)	9.313(-0.000)	83	148523	20.094	20.09			0.5	1
117) 1,2,3-Trichloropropane	(4)	9.345(-0.000)	110	48037	20.693	20.69			1	5
118) trans-1,4-Dichloro-2-butene	(4)	9.358(-0.000)	53	206956	101.861	101.86			15	50
119) n-Propylbenzene	(4)	9.399(-0.000)	91	478759	19.957	19.96			1	5
120) 2-Chlorotoluene	(4)	9.460(-0.000)	126	101304	19.189	19.19			1	5
121) 4-Chlorotoluene	(4)	9.547(-0.000)	126	108433	19.191	19.19			1	5

M = Compound was manually integrated.

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11. Target 3.5 esignature user ID: nsl01327

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCSW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l01.d
Injection date and time: **24-APR-2018 08:50**
Data file Sample Info. Line: LCSW93;LCSW93;1;3;LCS;;;;wa24b01;
Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

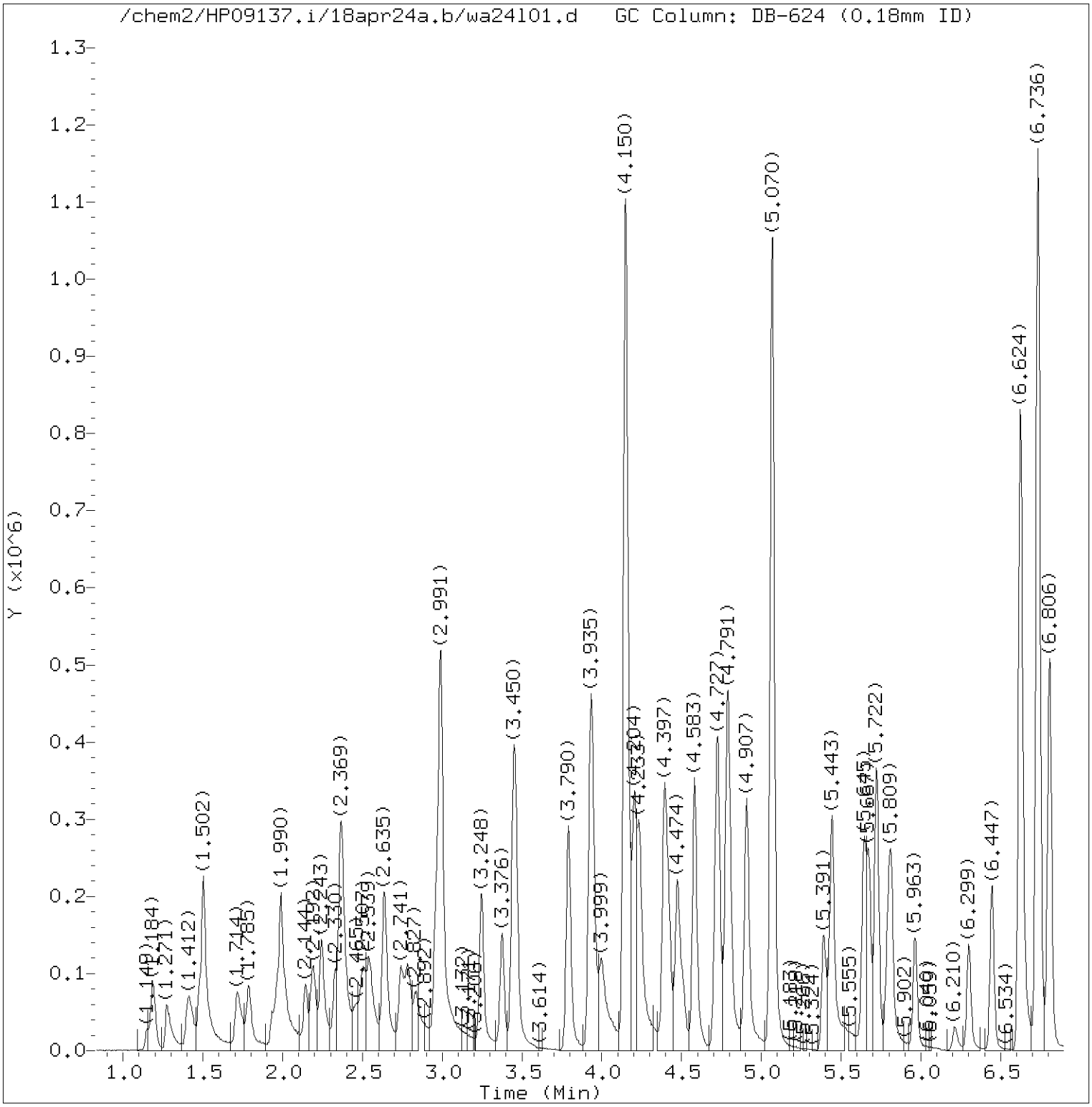
Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
122) 1,3,5-Trimethylbenzene	(4)	9.537(-0.000)	105	338668	19.000	19.00			1	5
124) tert-Butylbenzene	(4)	9.784(-0.000)	134	73347	18.560	18.56			1	5
125) Pentachloroethane	(4)	9.794(-0.000)	167	49754	16.309	16.31			1	5
126) 1,2,4-Trimethylbenzene	(4)	9.816(-0.000)	105	356011	19.098	19.10			1	5
127) sec-Butylbenzene	(4)	9.945(-0.000)	105	379686	18.814	18.81			1	5
129) 1,3-Dichlorobenzene	(4)	10.022(-0.000)	146	200202	18.447	18.45			1	5
130) p-Isopropyltoluene	(4)	10.051(-0.000)	119	334352	18.418	18.42			1	5
133) 1,4-Dichlorobenzene	(4)	10.086(-0.000)	146	211516	18.734	18.73			1	5
134) 1,2,3-Trimethylbenzene	(4)	10.124(-0.000)	105	366377	19.080	19.08			1	5
135) Benzyl Chloride	(4)	10.185(-0.000)	91	228526	15.289	15.29			1	5
136) 1,3-Diethylbenzene	(4)	10.266(-0.000)	119	191578	17.702	17.70			1	5
137) 1,4-Diethylbenzene	(4)	10.323(-0.000)	119	196686	17.534	17.53			1	5
138) 1,2-Dichlorobenzene	(4)	10.352(-0.000)	146	201272	18.601	18.60			1	5
139) n-Butylbenzene	(4)	10.343(-0.000)	92	154782	17.931	17.93			1	5
140) 1,2-Diethylbenzene	(4)	10.407(-0.000)	119	167068	17.984	17.98			1	5
141) Diethylbenzene (total)	(4)		100	555332	53.220	53.22			1	5
142) 1,2-Dibromo-3-chloropropane	(4)	10.891(-0.000)	75	27836	17.696	17.70			2	5
144) 1,3,5-Trichlorobenzene	(4)	11.036(-0.000)	180	118589	17.239	17.24			1	5
146) 1,2,4-Trichlorobenzene	(4)	11.446(-0.000)	180	115621	16.965	16.97			1	5
147) Hexachlorobutadiene	(4)	11.556(-0.000)	225	31635	15.662	15.66			2	5
148) Naphthalene	(4)	11.610(-0.000)	128	454330	18.372	18.37			1	5
149) 1,2,3-Trichlorobenzene	(4)	11.767(-0.000)	180	109110	16.866	16.87			1	5
150) 2-Methylnaphthalene	(4)	12.332(-0.000)	142	175584	13.490	13.49			2	5

Total number of targets = 108

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11. Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

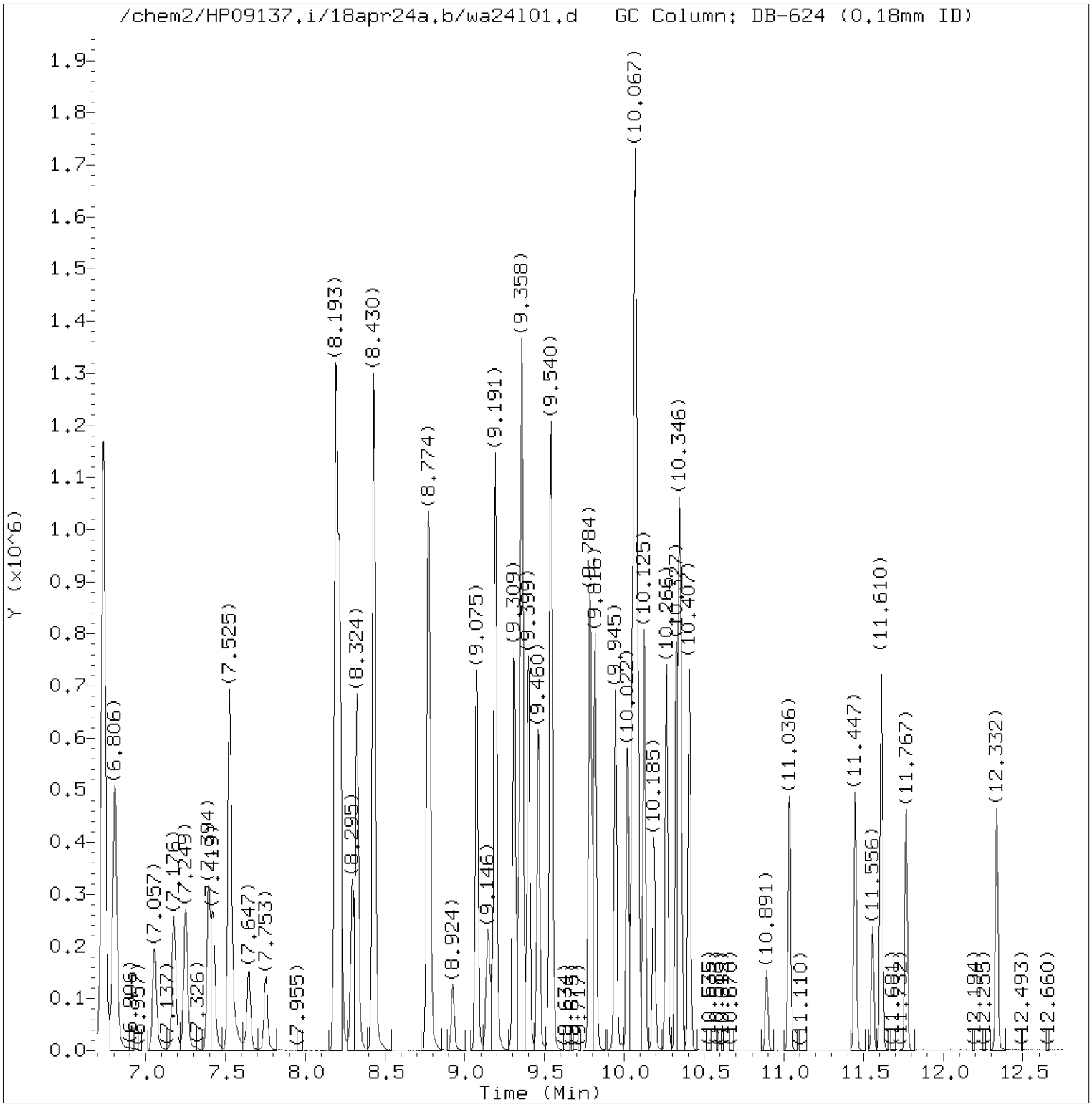
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.274	85	110228	19.283
4) Chloromethane	(2)	1.412	50	126021	20.582
6) Vinyl Chloride	(2)	1.483	62	124607	20.136
8) Bromomethane	(2)	1.714	94	87358	19.433
9) Chloroethane	(2)	1.785	64	71596	19.380
12) Trichlorofluoromethane	(2)	1.964	101	135512	19.694
11) n-Pentane	(2)	1.990	43	143926	19.704
13) Ethanol	(1)	2.051	45	18941	274.533
15) Freon 123a	(2)	2.179	67	98464	19.375
16) Acrolein	(1)	2.247	56	163819	115.071
17) 1,1-Dichloroethene	(2)	2.362	96	82422	21.510
18) Acetone	(1)	2.365	58	76646	128.155
19) Freon 113	(2)	2.369	101	84335	21.717
21) 2-Propanol	(1)	2.478	45	27206	65.788
22) Methyl Iodide	(2)	2.500	142	145406	19.540
23) Carbon Disulfide	(2)	2.545	76	211337	16.714
25) Allyl Chloride	(2)	2.635	41	109295	17.870
27) Methyl Acetate	(2)	2.648	43	94418	21.095
28) Methylene Chloride	(2)	2.741	84	89745	20.155
29)*t-Butyl alcohol-d10	(1)	2.766	65	175437	250.000
30) t-Butyl alcohol	(1)	2.840	59	102855M	136.411
31) Acrylonitrile	(2)	2.962	53	235347	103.165
32) trans-1,2-Dichloroethene	(2)	2.991	96	86996	20.629
33) Methyl Tertiary Butyl Ether	(2)	2.991	73	287113	20.083
34) n-Hexane	(2)	3.245	57	101789	20.753
36) 1,1-Dichloroethane	(2)	3.376	63	143373	20.042
38) di-Isopropyl ether	(2)	3.444	45	275053	20.540
39) 2-Chloro-1,3-butadiene	(2)	3.466	53	128117	20.267
40) Ethyl t-butyl ether	(2)	3.790	59	261802	19.628
42) cis-1,2-Dichloroethene	(2)	3.925	96	99235	20.853
45) 2,2-Dichloropropane	(2)	3.928	77	80126	20.728
44) 2-Butanone	(2)	3.941	43	476950	150.003
47) Propionitrile	(1)	3.999	54	156068	165.569
43) 1,2-Dichloroethene (Total)	(2)		96	186231	41.482
48) Methacrylonitrile	(2)	4.150	67	448499	166.585
49) Bromochloromethane	(2)	4.159	128	47585	19.647
50) Tetrahydrofuran	(1)	4.204	71	98241	97.467
51) Chloroform	(2)	4.239	83	144291	19.674

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.390	113	198485	49.658
53) 1,1,1-Trichloroethane	(2)	4.419	97	129276	19.806
54) Cyclohexane	(2)	4.477	56	137134	20.647
56) Carbon Tetrachloride	(2)	4.583	117	86906	17.581
55) 1,1-Dichloropropene	(2)	4.583	75	116398	19.928
58) Isobutyl Alcohol	(1)	4.714	41	104066	420.757
57)$1,2-Dichloroethane-d4	(2)	4.727	102	56051	53.407
60) Benzene	(2)	4.788	78	358434	20.410
61) 1,2-Dichloroethane	(2)	4.801	62	118268	19.314
65) t-Amyl methyl ether	(2)	4.907	73	272903	19.603
66)*Fluorobenzene	(2)	5.070	96	876800	50.000
67) n-Heptane	(2)	5.070	43	92539	21.036
69) n-Butanol	(1)	5.391	56	194925	837.568
71) Trichloroethene	(2)	5.439	95	90019	19.308
72) Methylcyclohexane	(2)	5.645	83	120113	19.161
73) 1,2-Dichloropropane	(2)	5.674	63	91060	20.477
74) Dibromomethane	(2)	5.792	93	60838	20.175
76) Methyl Methacrylate	(2)	5.815	69	93553	19.692
75) 1,4-Dioxane	(1)	5.821	88	34061M	535.812
78) Bromodichloromethane	(2)	5.963	83	99395	17.432
79) 2-Nitropropane	(2)	6.210	41	20695	13.109
80) 2-Chloroethyl Vinyl Ether	(2)	6.299	63	69348	19.145
81) cis-1,3-Dichloropropene	(2)	6.447	75	132886	17.676
82) 4-Methyl-2-pentanone	(2)	6.624	43	672646	102.610
83)$Toluene-d8	(3)	6.733	98	876260	49.807
88) Toluene	(3)	6.806	92	237165	19.680
89) trans-1,3-Dichloropropene	(3)	7.054	75	120473	16.780
91) Ethyl Methacrylate	(3)	7.176	69	152636	18.366
92) 1,1,2-Trichloroethane	(3)	7.249	97	95505	20.163
90) 1,3-Dichloropropene (total)	(3)		100	253359	34.455
93) Tetrachloroethene	(3)	7.394	166	92635	18.891
94) 1,3-Dichloropropane	(3)	7.423	76	152295	19.452
96) 2-Hexanone	(3)	7.525	43	505789	95.616
97) Dibromochloromethane	(3)	7.647	129	79394	16.483
99) 1,2-Dibromoethane	(3)	7.753	107	100273	19.435
100)*Chlorobenzene-d5	(3)	8.193	117	686165	50.000
102) Chlorobenzene	(3)	8.218	112	261978	19.081
103) 1,1,1,2-Tetrachloroethane	(3)	8.295	131	76225	17.284

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) Ethylbenzene	(3)	8.328	91	432758	19.409
106) m+p-Xylene	(3)	8.430	106	347029	38.084
107) o-Xylene	(3)	8.767	106	168601	18.525
109) Styrene	(3)	8.780	104	284405	18.290
108) Xylene (Total)	(3)		106	515630	56.609
110) Bromoform	(3)	8.924	173	49527	14.327
111) Isopropylbenzene	(3)	9.075	105	410459	18.959
112) Cyclohexanone	(1)	9.146	55	118198	403.530
114)$4-Bromofluorobenzene	(3)	9.191	95	320262	48.195
115) Bromobenzene	(4)	9.306	156	111614	19.434
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	148523	20.094
117) 1,2,3-Trichloropropane	(4)	9.345	110	48037	20.693
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	206956	101.861
119) n-Propylbenzene	(4)	9.399	91	478759	19.957
120) 2-Chlorotoluene	(4)	9.460	126	101304	19.189
122) 1,3,5-Trimethylbenzene	(4)	9.537	105	338668	19.000
121) 4-Chlorotoluene	(4)	9.547	126	108433	19.191
124) tert-Butylbenzene	(4)	9.784	134	73347	18.560
125) Pentachloroethane	(4)	9.794	167	49754	16.309
126) 1,2,4-Trimethylbenzene	(4)	9.816	105	356011	19.098
127) sec-Butylbenzene	(4)	9.945	105	379686	18.814
129) 1,3-Dichlorobenzene	(4)	10.022	146	200202	18.447
130) p-Isopropyltoluene	(4)	10.051	119	334352	18.418
131)*1,4-Dichlorobenzene-d4	(4)	10.067	152	351430	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	211516	18.734
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	366377	19.080
135) Benzyl Chloride	(4)	10.185	91	228526	15.289
136) 1,3-Diethylbenzene	(4)	10.266	119	191578	17.702
137) 1,4-Diethylbenzene	(4)	10.323	119	196686	17.534
139) n-Butylbenzene	(4)	10.343	92	154782	17.931
138) 1,2-Dichlorobenzene	(4)	10.352	146	201272	18.601
140) 1,2-Diethylbenzene	(4)	10.407	119	167068	17.984
141) Diethylbenzene (total)	(4)		100	555332	53.220
142) 1,2-Dibromo-3-chloropropane	(4)	10.891	75	27836	17.696
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	118589	17.239
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	115621	16.965
147) Hexachlorobutadiene	(4)	11.556	225	31635	15.662
148) Naphthalene	(4)	11.610	128	454330	18.372

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

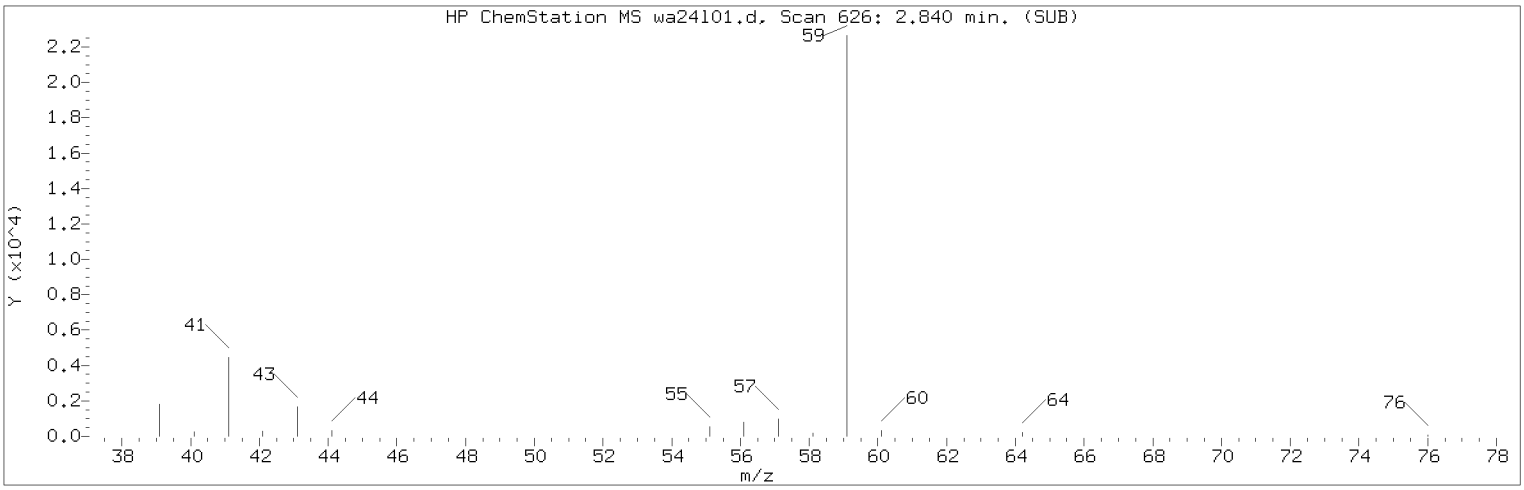
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

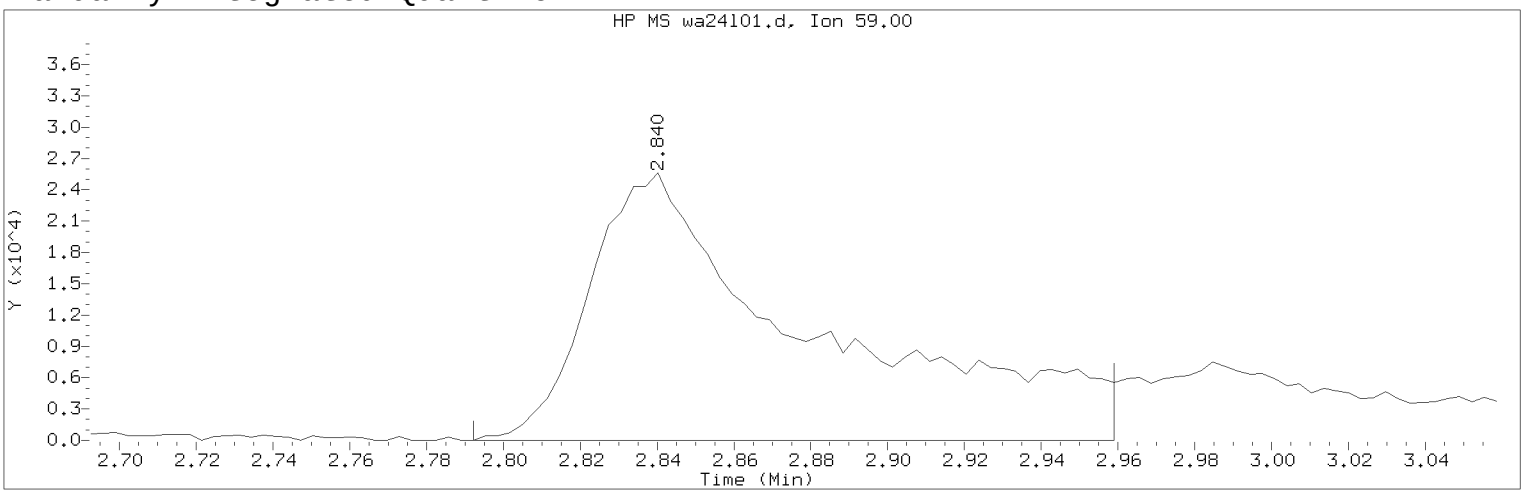
Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
149) 1,2,3-Trichlorobenzene	(4)	11.767	180	109110	16.866
150) 2-Methylnaphthalene	(4)	12.332	142	175584	13.490

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

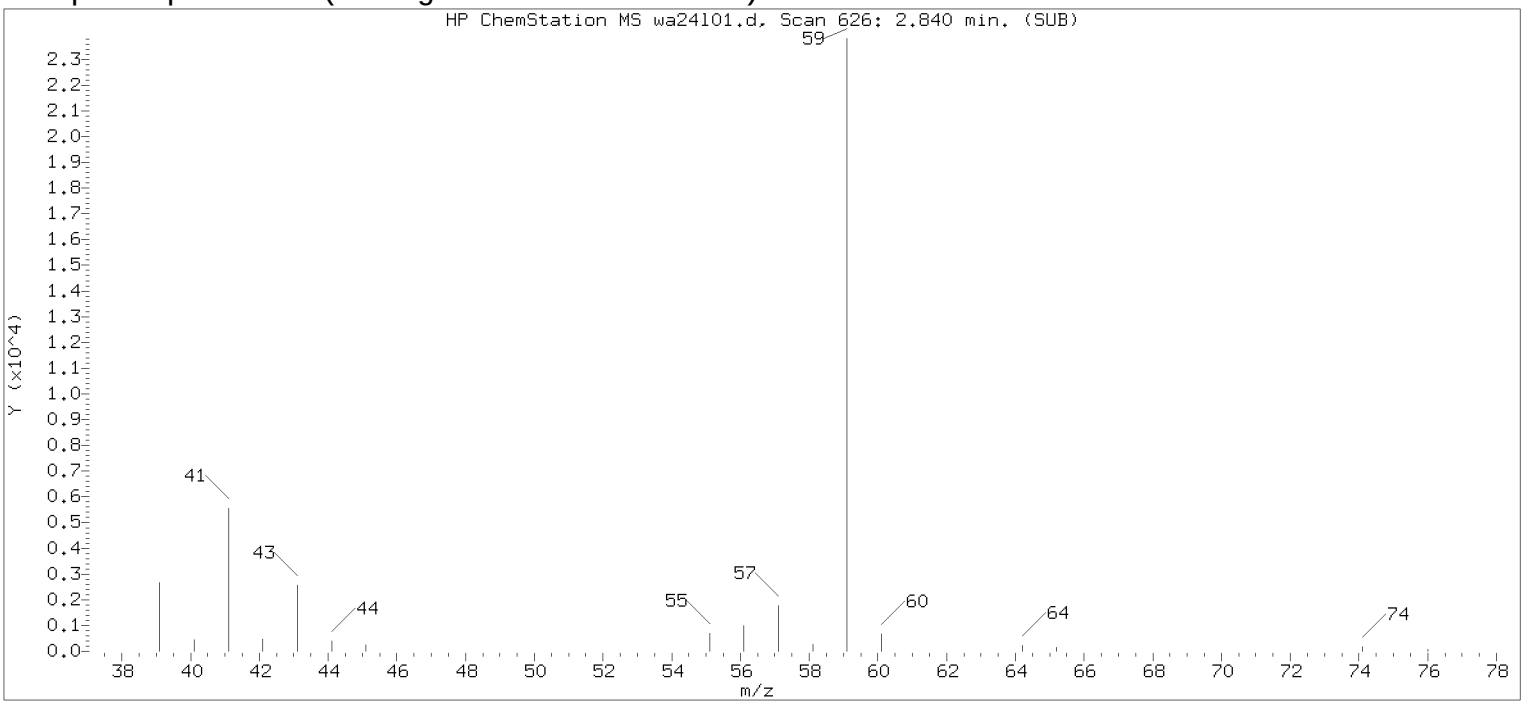
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 626
Retention Time (minutes): 2.840
Quant Ion : 59.00
Area (flag) : 102855M
On-Column Amount (ng) : 136.4107
Integration start scan : 610 Integration stop scan: 662
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

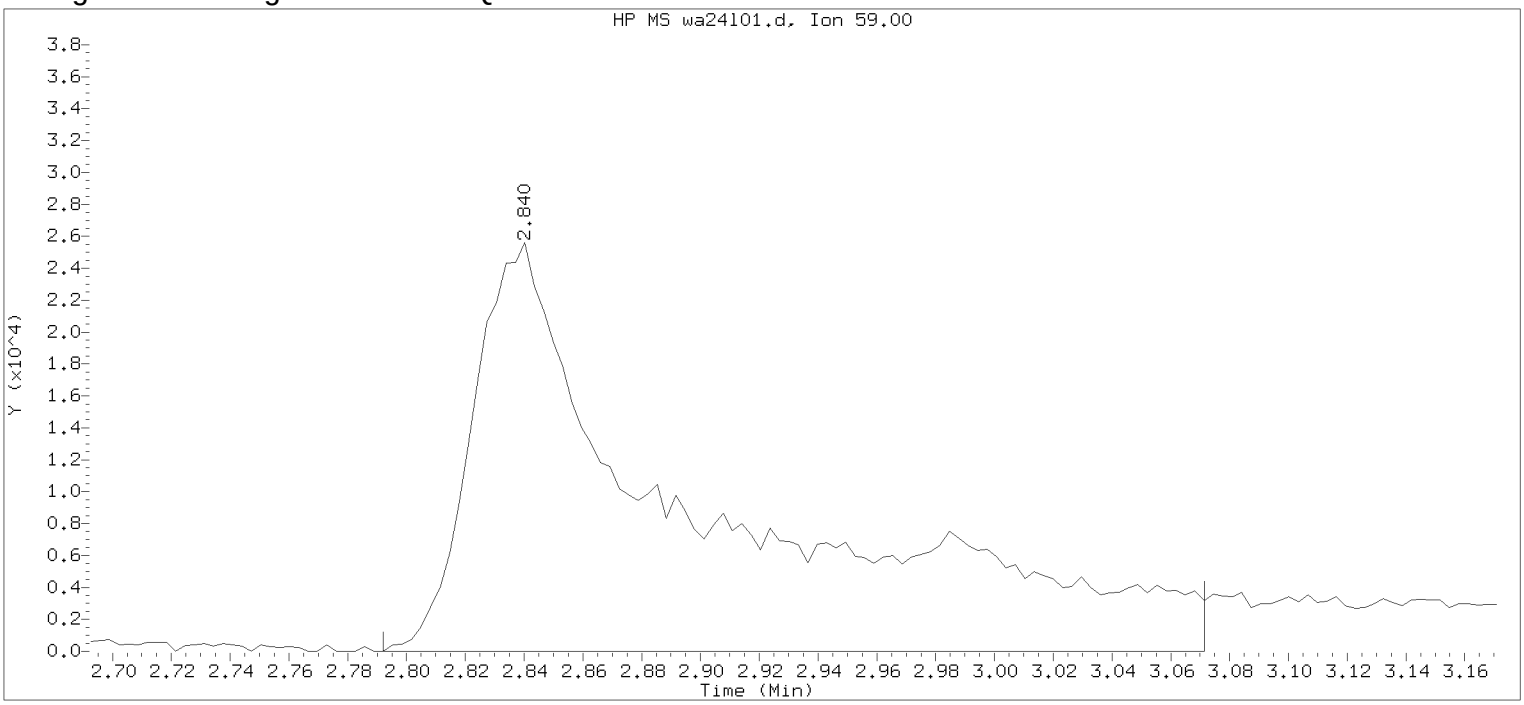
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

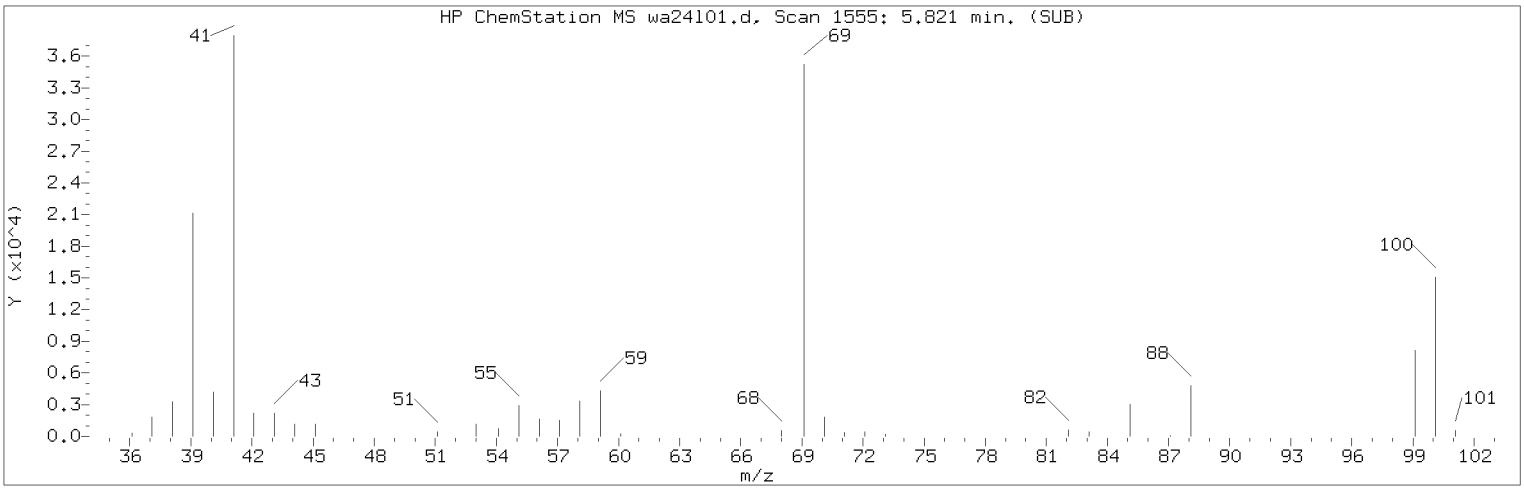
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 08:42
Date, time and analyst ID of latest file update: 24-Apr-2018 09:05 Automation

Sample Name: LCSW93 Lab Sample ID: LCSW93

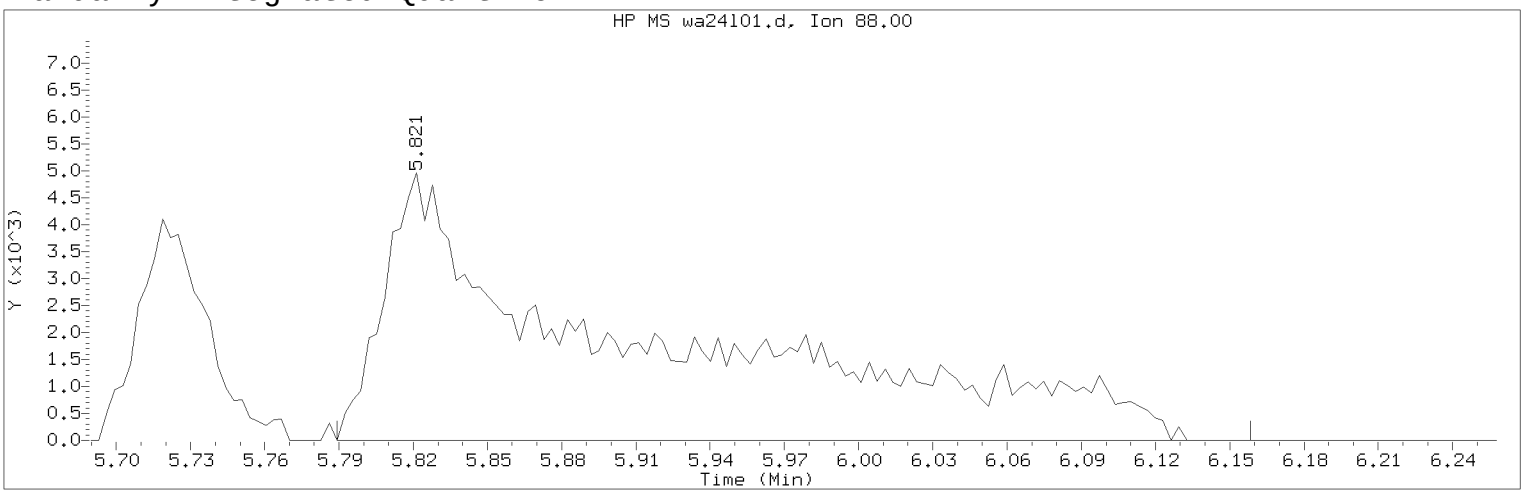
Compound Number : 30
Compound Name : t-Butyl alcohol
Scan Number : 626
Retention Time (minutes): 2.840
Quant Ion : 59.00
Area : 135886
On-column Amount (ng) : 180.2181
Integration start scan : 610 Integration stop scan: 697
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:56 nsl01327

Sample Name: LCSW93 Lab Sample ID: LCSW93

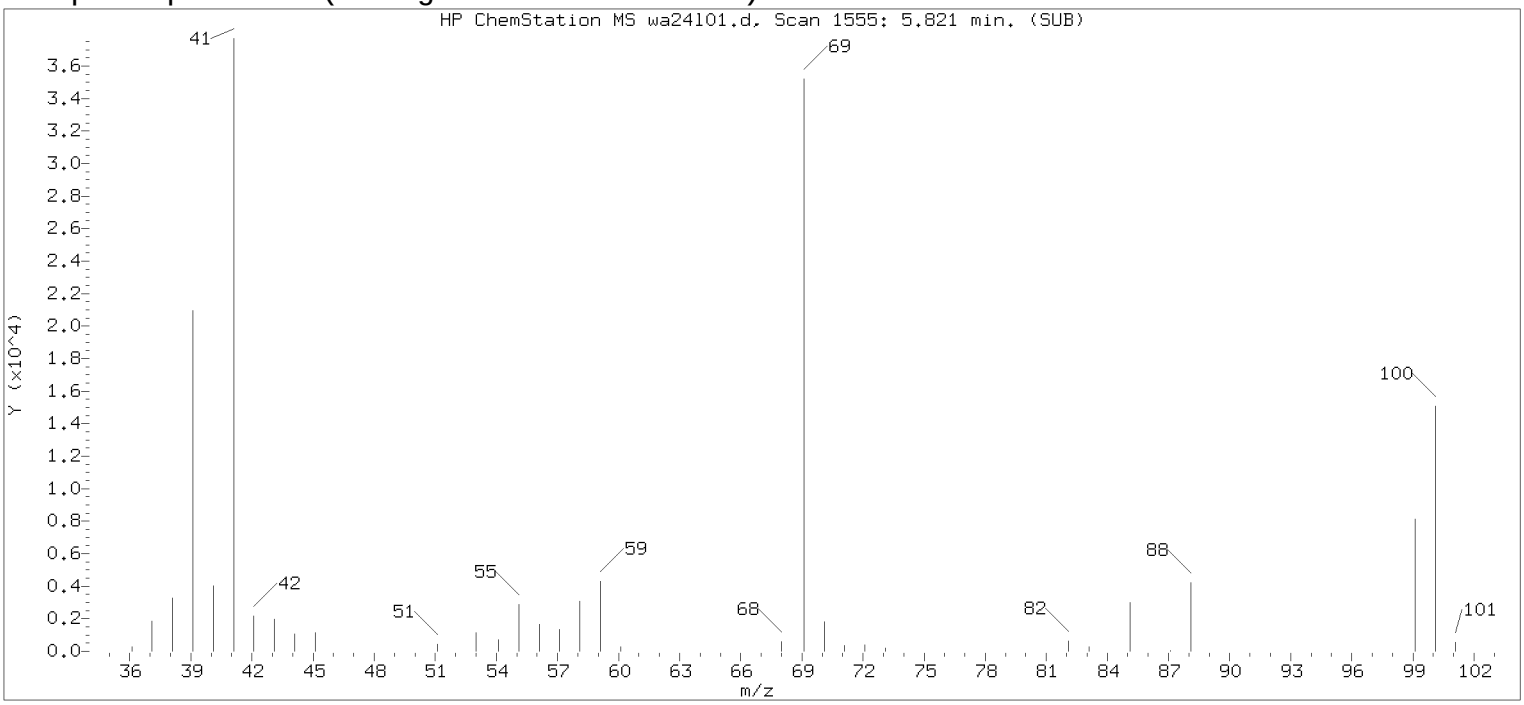
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1555
Retention Time (minutes): 5.821
Quant Ion : 88.00
Area (flag) : 34061M
On-Column Amount (ng) : 535.8124
Integration start scan : 1544 Integration stop scan: 1659
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

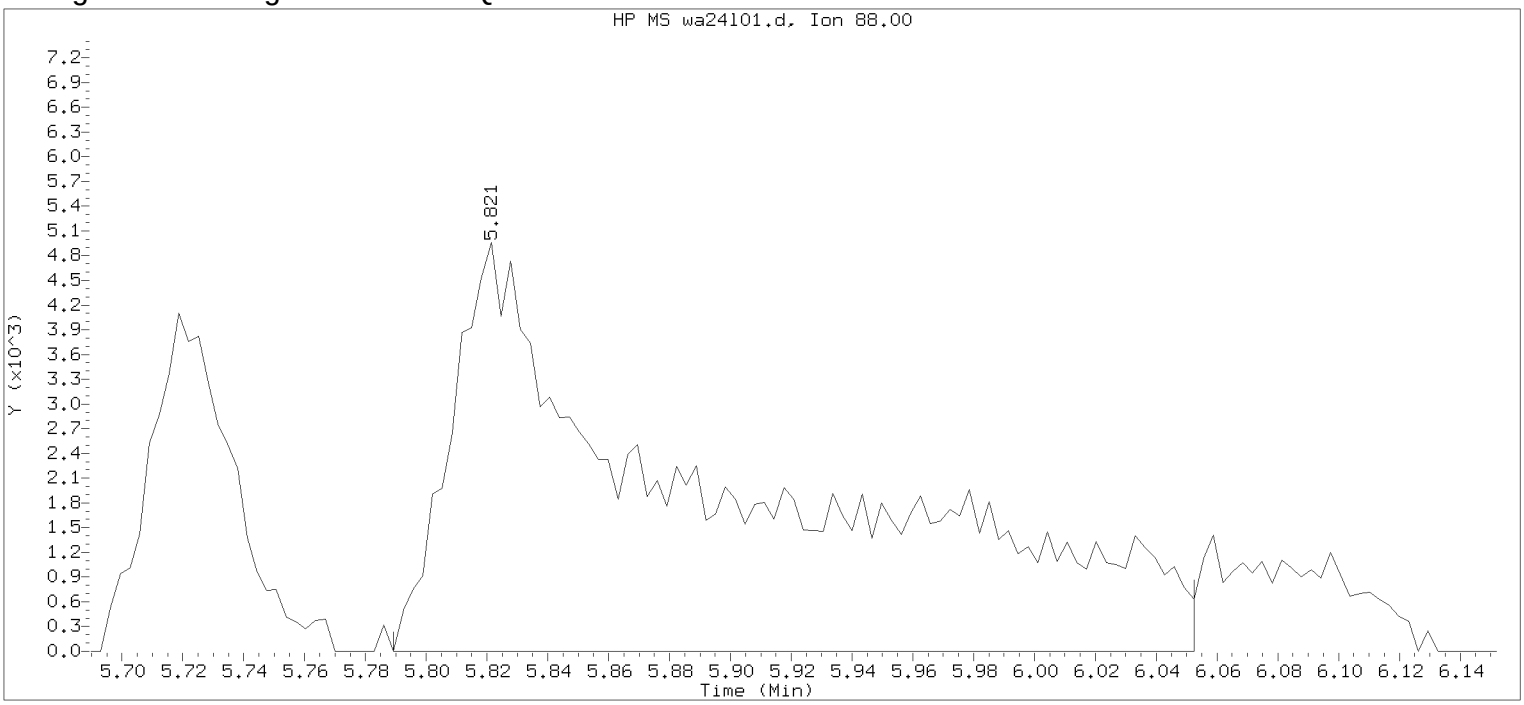
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l01.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 08:50 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 08:42
Date, time and analyst ID of latest file update: 24-Apr-2018 09:05 Automation

Sample Name: LCSW93 Lab Sample ID: LCSW93

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1555
Retention Time (minutes): 5.821
Quant Ion : 88.00
Area : 30222
On-column Amount (ng) : 475.4262
Integration start scan : 1544 Integration stop scan: 1626
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:11.
Target 3.5 esignature user id: nsl01327

Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l02.d Injection date and time: **24-APR-2018 09:14**
Data file Sample Info. Line: LCDW93;LCDW93;1;3;LCSD;;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Analysis Comments:

Internal Standards	RT (+/-RT)	Scan	QIon	Area(+/- %Change)	Conc. (on-column)	QC Flag
29) t-Butyl alcohol-d10	2.773(-0.010)	605	65	160364M (10)	250.00	
66) Fluorobenzene	5.070(-0.003)	1321	96	877075 (-1)	50.00	
100) Chlorobenzene-d5	8.193(0.000)	2294	117	687652 (0)	50.00	
131) 1,4-Dichlorobenzene-d4	10.070(0.000)	2879	152	348507 (1)	50.00	

M = Internal Standard was manually integrated

Surrogate Standards	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	%Rec.	QC flags	QC Limits
52) Dibromofluoromethane	(2)	4.393(0.001)	113	198513	49.649	99%		80 - 120
57) 1,2-Dichloroethane-d4	(2)	4.730(-0.001)	102	55329	52.703	105%		80 - 120
83) Toluene-d8	(3)	6.733(0.000)	98	881455	49.993	100%		80 - 120
114) 4-Bromofluorobenzene	(3)	9.194(0.000)	95	323593	48.591	97%		80 - 120

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
3) Dichlorodifluoromethane	(2)	1.274(0.000)	85	109358	19.125	19.12			0.5	1
4) Chloromethane	(2)	1.409(0.000)	50	120731	19.712	19.71			0.5	1
6) Vinyl Chloride	(2)	1.483(0.000)	62	121423	19.615	19.62			0.5	1
8) Bromomethane	(2)	1.714(0.000)	94	87406	19.438	19.44			0.5	1
9) Chloroethane	(2)	1.781(0.000)	64	72155	19.526	19.53			0.5	1
11) n-Pentane	(2)	1.990(0.000)	43	144712	19.805	19.81			2	10
12) Trichlorofluoromethane	(2)	1.955(0.000)	101	137282	19.945	19.94			0.5	1
13) Ethanol	(1)	2.073(-0.004)	45	16743	262.603	262.60			50	250
15) Freon 123a	(2)	2.144(0.008)	67	99194	19.512	19.51			2	5
16) Acrolein	(1)	2.247(0.001)	56	163224	125.430	125.43			40	100
17) 1,1-Dichloroethene	(2)	2.349(-0.003)	96	78713	20.535	20.54			0.5	1
18) Acetone	(1)	2.368(0.001)	58	83319	152.406	152.41			6	20
19) Freon 113	(2)	2.362(0.001)	101	85113	21.910	21.91			2	10
21) 2-Propanol	(1)	2.497(-0.004)	45	32796	86.760	86.76		J	50	100
22) Methyl Iodide	(2)	2.500(0.000)	142	147268	19.784	19.78			0.5	1
23) Carbon Disulfide	(2)	2.535(0.000)	76	226840	17.935	17.93			1	5
25) Allyl Chloride	(2)	2.635(0.000)	41	109364	17.875	17.88			1	5
27) Methyl Acetate	(2)	2.651(0.000)	43	82266	18.374	18.37			1	5
28) Methylene Chloride	(2)	2.744(-0.000)	84	89859	20.174	20.17			0.5	1
30) t-Butyl alcohol	(1)	2.853(-0.001)	59	89997	130.577	130.58			5	20
31) Acrylonitrile	(2)	2.962(-0.000)	53	232005	101.668	101.67			4	20
32) trans-1,2-Dichloroethene	(2)	2.988(0.001)	96	87257	20.684	20.68			0.5	1
33) Methyl Tertiary Butyl Ether	(2)	2.994(-0.000)	73	289164	20.221	20.22			0.5	1
34) n-Hexane	(2)	3.245(0.001)	57	98628	20.102	20.10			2	5
36) 1,1-Dichloroethane	(2)	3.376(-0.000)	63	143577	20.064	20.06			0.5	1
38) di-Isopropyl ether	(2)	3.447(0.000)	45	273551	20.421	20.42			0.5	1
39) 2-Chloro-1,3-butadiene	(2)	3.463(0.000)	53	130223	20.594	20.59			1	5
40) Ethyl t-butyl ether	(2)	3.790(0.000)	59	258406	19.367	19.37			0.5	1
42) cis-1,2-Dichloroethene	(2)	3.925(0.000)	96	99124	20.823	20.82			0.5	1
43) 1,2-Dichloroethene (Total)	(2)		96	186381	41.508	41.51			0.5	1

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l02.d Injection date and time: **24-APR-2018 09:14**
Data file Sample Info. Line: LCDW93;LCDW93;1;3;LCSD;;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
44) 2-Butanone	(2)	3.944(0.000)	43	468894	147.423	147.42			3	10
45) 2,2-Dichloropropane	(2)	3.928(0.000)	77	82257	21.273	21.27			0.5	1
47) Propionitrile	(1)	4.002(0.003)	54	151296	175.593	175.59			30	100
48) Methacrylonitrile	(2)	4.150(0.000)	67	446643	165.843	165.84			10	50
49) Bromochloromethane	(2)	4.156(0.001)	128	45991	18.983	18.98			1	5
50) Tetrahydrofuran	(1)	4.207(0.005)	71	96055	104.256	104.26			4	10
51) Chloroform	(2)	4.233(0.001)	83	144646	19.716	19.72			0.5	1
53) 1,1,1-Trichloroethane	(2)	4.416(0.001)	97	130082	19.923	19.92			0.5	1
54) Cyclohexane	(2)	4.477(0.000)	56	135719	20.428	20.43			2	5
55) 1,1-Dichloropropene	(2)	4.583(-0.000)	75	113873	19.490	19.49			1	5
56) Carbon Tetrachloride	(2)	4.583(0.000)	117	87160	17.627	17.63			0.5	1
58) Isobutyl Alcohol	(1)	4.718(0.002)	41	103814	459.190	459.19			100	250
60) Benzene	(2)	4.785(0.001)	78	357185	20.332	20.33			0.5	1
61) 1,2-Dichloroethane	(2)	4.804(-0.000)	62	115486	18.854	18.85			0.5	1
65) t-Amyl methyl ether	(2)	4.907(0.001)	73	270663	19.436	19.44			0.5	1
67) n-Heptane	(2)	5.070(0.001)	43	88714	20.161	20.16			2	5
69) n-Butanol	(1)	5.401(0.002)	56	182085	855.936	855.94			100	250
71) Trichloroethene	(2)	5.443(0.000)	95	90253	19.352	19.35			0.5	1
72) Methylcyclohexane	(2)	5.645(0.000)	83	118553	18.907	18.91			1	5
73) 1,2-Dichloropropane	(2)	5.670(0.001)	63	91254	20.514	20.51			0.5	1
74) Dibromomethane	(2)	5.792(0.000)	93	60563	20.077	20.08			0.5	1
75) 1,4-Dioxane	(1)	5.831(0.003)	88	32832M	565.024	565.02			70	250
76) Methyl Methacrylate	(2)	5.815(-0.000)	69	92820	19.531	19.53			1	5
78) Bromodichloromethane	(2)	5.962(0.000)	83	100131	17.555	17.56			0.5	1
79) 2-Nitropropane	(2)	6.213(0.000)	41	19733	12.496	12.50			2	10
80) 2-Chloroethyl Vinyl Ether	(2)	6.299(0.000)	63	67627	18.664	18.66			2	10
81) cis-1,3-Dichloropropene	(2)	6.444(0.000)	75	131682	17.510	17.51			0.5	1
82) 4-Methyl-2-pentanone	(2)	6.627(0.000)	43	663485	101.181	101.18			3	10
88) Toluene	(3)	6.806(0.000)	92	236787	19.606	19.61			0.5	1
89) trans-1,3-Dichloropropene	(3)	7.057(-0.000)	75	120941	16.808	16.81			0.5	1
90) 1,3-Dichloropropene (total)	(3)		100	252623	34.318	34.32			1	5
91) Ethyl Methacrylate	(3)	7.176(0.000)	69	152828	18.349	18.35			1	5
92) 1,1,2-Trichloroethane	(3)	7.249(0.000)	97	95533	20.125	20.13			0.5	1
93) Tetrachloroethene	(3)	7.394(0.000)	166	92408	18.804	18.80			0.5	1
94) 1,3-Dichloropropane	(3)	7.423(0.000)	76	154752	19.723	19.72			0.5	1
96) 2-Hexanone	(3)	7.525(0.000)	43	503680	95.011	95.01			3	10
97) Dibromochloromethane	(3)	7.647(0.000)	129	79341	16.436	16.44			0.5	1
99) 1,2-Dibromoethane	(3)	7.753(0.000)	107	100556	19.447	19.45			0.5	1
102) Chlorobenzene	(3)	8.218(0.000)	112	261151	18.979	18.98			0.5	1
103) 1,1,1,2-Tetrachloroethane	(3)	8.295(-0.000)	131	76475	17.303	17.30			0.5	1
104) Ethylbenzene	(3)	8.324(-0.000)	91	427146	19.116	19.12			0.5	1
106) m+p-Xylene	(3)	8.430(0.000)	106	345727	37.859	37.86			0.5	1
107) o-Xylene	(3)	8.770(-0.000)	106	167823	18.400	18.40			0.5	1
108) Xylene (Total)	(3)		106	513550	56.258	56.26			0.5	1
109) Styrene	(3)	8.780(-0.000)	104	280984	18.031	18.03			1	5
110) Bromoform	(3)	8.928(0.000)	173	48594	14.027	14.03			0.5	4
111) Isopropylbenzene	(3)	9.075(-0.000)	105	404658	18.650	18.65			1	5
112) Cyclohexanone	(1)	9.149(0.010)	55	132474	494.778	494.78			25	100
115) Bromobenzene	(4)	9.309(-0.000)	156	110401	19.384	19.38			1	5
116) 1,1,2,2-Tetrachloroethane	(4)	9.313(0.000)	83	146354	19.966	19.97			0.5	1
117) 1,2,3-Trichloropropane	(4)	9.342(0.000)	110	47397	20.588	20.59			1	5
118) trans-1,4-Dichloro-2-butene	(4)	9.358(-0.000)	53	205335	101.910	101.91			15	50
119) n-Propylbenzene	(4)	9.399(-0.000)	91	472436	19.858	19.86			1	5
120) 2-Chlorotoluene	(4)	9.463(-0.000)	126	101594	19.406	19.41			1	5

M = Compound was manually integrated.

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Lancaster Laboratories
Analysis Summary for GC/MS Volatiles

LCDW93

Data file: /chem2/HP09137.i/18apr24a.b/wa24l02.d Injection date and time: **24-APR-2018 09:14**
Data file Sample Info. Line: LCDW93;LCDW93;1;3;LCSD;;;;wa24b01; Instrument ID: **HP09137.i** Batch: **W181141AA**
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Blank Data file reference: **/chem2/HP09137.i/18apr24a.b/wa24b01.d**

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: **8260W-BUT**
Calibration date and time (Last Method Edit): 24-APR-2018 09:55
Mid Level Daily Calibration Standard Reference: **/chem2/HP09137.i/18apr24a.b/wa24c01.d**

Bottle Code: Matrix: WATER Level: Low

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

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

Volume Purged (Vt): 5 ml Sample Volume (Vo): 5 ml

Target Compounds	I.S. Ref.	RT (+/-RRT)	QIon	Area	Conc. (on-column)	Conc. (in sample)	Blank Conc.	Qual.	Reporting Limit (in sample)	LOQ
121) 4-Chlorotoluene	(4)	9.547(0.000)	126	107596	19.202	19.20			1	5
122) 1,3,5-Trimethylbenzene	(4)	9.537(-0.000)	105	335753	18.994	18.99			1	5
124) tert-Butylbenzene	(4)	9.784(-0.000)	134	74097	18.908	18.91			1	5
125) Pentachloroethane	(4)	9.794(0.000)	167	48555	16.050	16.05			1	5
126) 1,2,4-Trimethylbenzene	(4)	9.816(0.000)	105	348188	18.835	18.83			1	5
127) sec-Butylbenzene	(4)	9.945(-0.000)	105	375016	18.739	18.74			1	5
129) 1,3-Dichlorobenzene	(4)	10.022(0.000)	146	198647	18.457	18.46			1	5
130) p-Isopropyltoluene	(4)	10.051(0.000)	119	328997	18.275	18.28			1	5
133) 1,4-Dichlorobenzene	(4)	10.086(-0.000)	146	210571	18.807	18.81			1	5
134) 1,2,3-Trimethylbenzene	(4)	10.124(0.000)	105	360541	18.934	18.93			1	5
135) Benzyl Chloride	(4)	10.185(-0.000)	91	225065	15.184	15.18			1	5
136) 1,3-Diethylbenzene	(4)	10.266(-0.000)	119	184861	17.225	17.23			1	5
137) 1,4-Diethylbenzene	(4)	10.323(0.000)	119	189488	17.034	17.03			1	5
138) 1,2-Dichlorobenzene	(4)	10.352(-0.000)	146	200816	18.714	18.71			1	5
139) n-Butylbenzene	(4)	10.343(-0.000)	92	149451	17.459	17.46			1	5
140) 1,2-Diethylbenzene	(4)	10.407(-0.000)	119	163228	17.718	17.72			1	5
141) Diethylbenzene (total)	(4)		100	537577	51.977	51.98			1	5
142) 1,2-Dibromo-3-chloropropane	(4)	10.891(0.000)	75	27408	17.570	17.57			2	5
144) 1,3,5-Trichlorobenzene	(4)	11.036(-0.000)	180	115988	17.003	17.00			1	5
146) 1,2,4-Trichlorobenzene	(4)	11.446(-0.000)	180	110167	16.300	16.30			1	5
147) Hexachlorobutadiene	(4)	11.556(0.000)	225	30801	15.377	15.38			2	5
148) Naphthalene	(4)	11.610(-0.000)	128	437310	17.832	17.83			1	5
149) 1,2,3-Trichlorobenzene	(4)	11.767(-0.000)	180	106006	16.524	16.52			1	5
150) 2-Methylnaphthalene	(4)	12.335(-0.000)	142	158030	12.243	12.24			2	5

Total number of targets = 108

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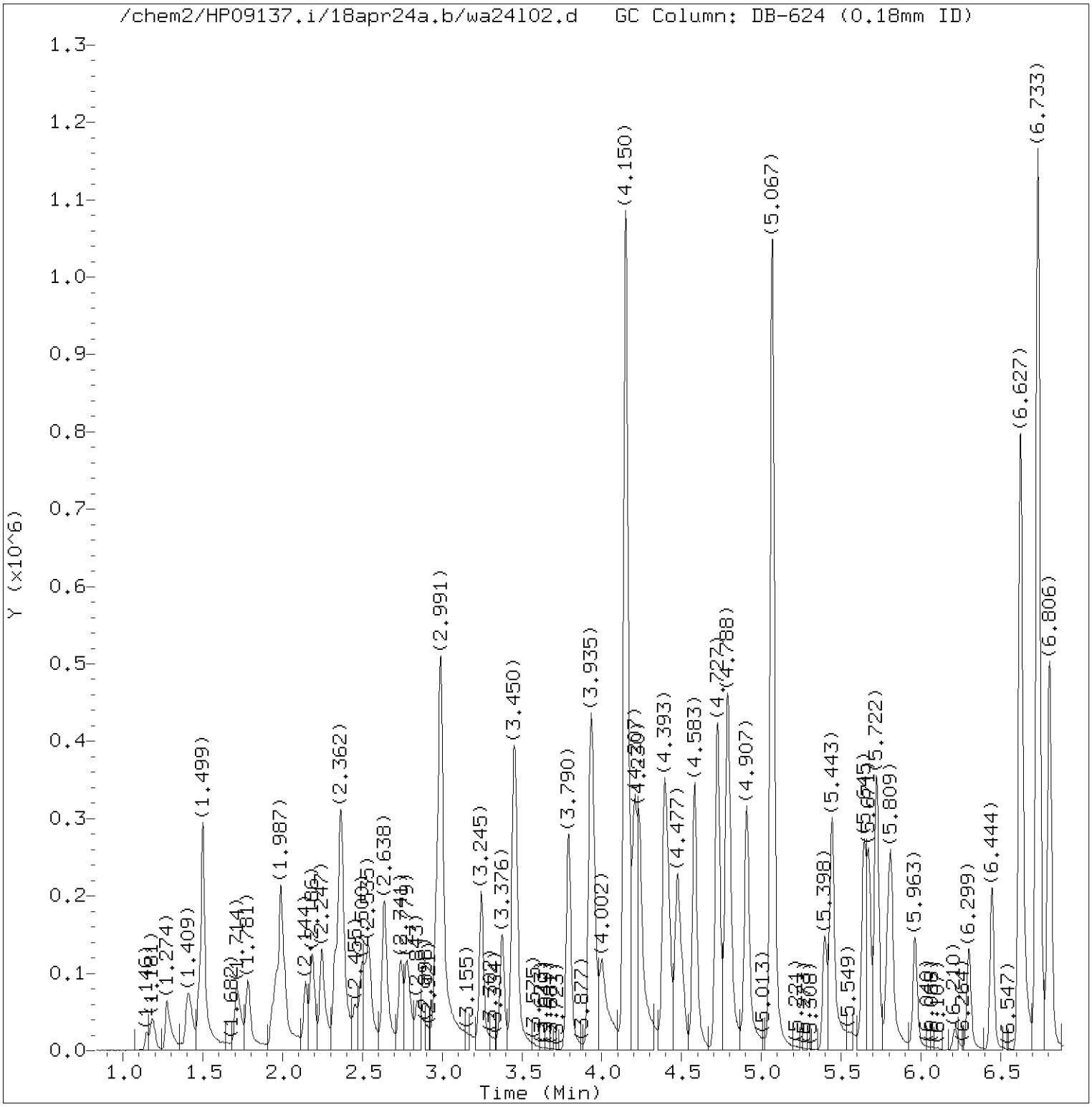
Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16. PARALLAX ID: jeb12641



Total Ion Chromatogram (TIC)

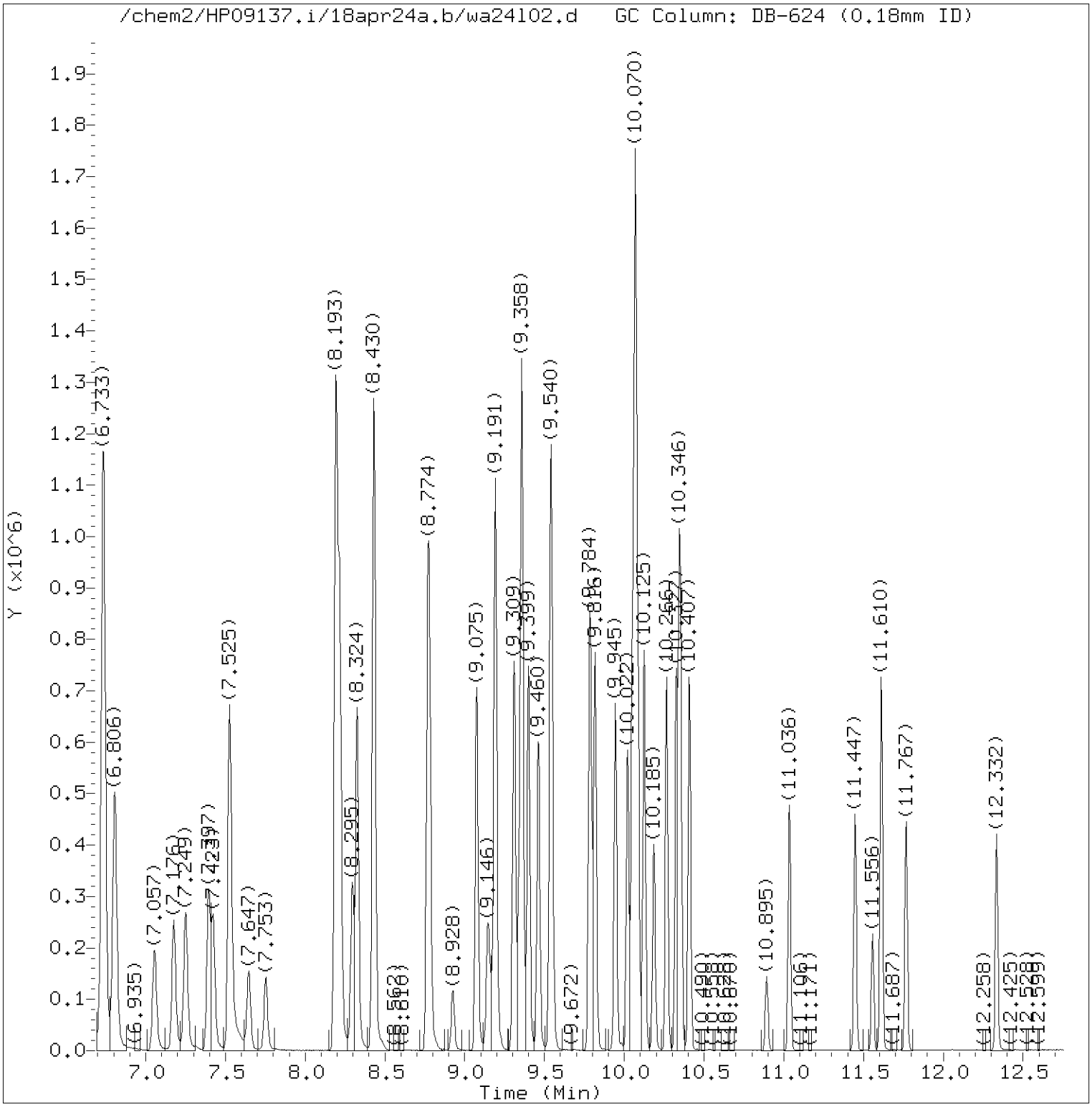
Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327



Total Ion Chromatogram (TIC)

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
3) Dichlorodifluoromethane	(2)	1.274	85	109358	19.125
4) Chloromethane	(2)	1.409	50	120731	19.712
6) Vinyl Chloride	(2)	1.483	62	121423	19.615
8) Bromomethane	(2)	1.714	94	87406	19.438
9) Chloroethane	(2)	1.781	64	72155	19.526
12) Trichlorofluoromethane	(2)	1.955	101	137282	19.945
11) n-Pentane	(2)	1.990	43	144712	19.805
13) Ethanol	(1)	2.073	45	16743	262.603
15) Freon 123a	(2)	2.144	67	99194	19.512
16) Acrolein	(1)	2.247	56	163224	125.430
17) 1,1-Dichloroethene	(2)	2.349	96	78713	20.535
19) Freon 113	(2)	2.362	101	85113	21.910
18) Acetone	(1)	2.369	58	83319	152.406
21) 2-Propanol	(1)	2.497	45	32796	86.760
22) Methyl Iodide	(2)	2.500	142	147268	19.784
23) Carbon Disulfide	(2)	2.535	76	226840	17.935
25) Allyl Chloride	(2)	2.635	41	109364	17.875
27) Methyl Acetate	(2)	2.651	43	82266	18.374
28) Methylene Chloride	(2)	2.744	84	89859	20.174
29)*t-Butyl alcohol-d10	(1)	2.773	65	160364M	250.000
30) t-Butyl alcohol	(1)	2.853	59	89997	130.577
31) Acrylonitrile	(2)	2.962	53	232005	101.668
32) trans-1,2-Dichloroethene	(2)	2.988	96	87257	20.684
33) Methyl Tertiary Butyl Ether	(2)	2.994	73	289164	20.221
34) n-Hexane	(2)	3.245	57	98628	20.102
36) 1,1-Dichloroethane	(2)	3.376	63	143577	20.064
38) di-Isopropyl ether	(2)	3.447	45	273551	20.421
39) 2-Chloro-1,3-butadiene	(2)	3.463	53	130223	20.594
40) Ethyl t-butyl ether	(2)	3.790	59	258406	19.367
42) cis-1,2-Dichloroethene	(2)	3.925	96	99124	20.823
45) 2,2-Dichloropropane	(2)	3.928	77	82257	21.273
44) 2-Butanone	(2)	3.944	43	468894	147.423
47) Propionitrile	(1)	4.002	54	151296	175.593
43) 1,2-Dichloroethene (Total)	(2)		96	186381	41.508
48) Methacrylonitrile	(2)	4.150	67	446643	165.843
49) Bromochloromethane	(2)	4.156	128	45991	18.983
50) Tetrahydrofuran	(1)	4.207	71	96055	104.256
51) Chloroform	(2)	4.233	83	144646	19.716

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

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on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
52)$Dibromofluoromethane	(2)	4.393	113	198513	49.649
53) 1,1,1-Trichloroethane	(2)	4.416	97	130082	19.923
54) Cyclohexane	(2)	4.477	56	135719	20.428
56) Carbon Tetrachloride	(2)	4.583	117	87160	17.627
55) 1,1-Dichloropropene	(2)	4.583	75	113873	19.490
58) Isobutyl Alcohol	(1)	4.718	41	103814	459.190
57)$1,2-Dichloroethane-d4	(2)	4.730	102	55329	52.703
60) Benzene	(2)	4.785	78	357185	20.332
61) 1,2-Dichloroethane	(2)	4.804	62	115486	18.854
65) t-Amyl methyl ether	(2)	4.907	73	270663	19.436
66)*Fluorobenzene	(2)	5.070	96	877075	50.000
67) n-Heptane	(2)	5.070	43	88714	20.161
69) n-Butanol	(1)	5.401	56	182085	855.936
71) Trichloroethene	(2)	5.443	95	90253	19.352
72) Methylcyclohexane	(2)	5.645	83	118553	18.907
73) 1,2-Dichloropropane	(2)	5.671	63	91254	20.514
74) Dibromomethane	(2)	5.792	93	60563	20.077
76) Methyl Methacrylate	(2)	5.815	69	92820	19.531
75) 1,4-Dioxane	(1)	5.831	88	32832M	565.024
78) Bromodichloromethane	(2)	5.963	83	100131	17.555
79) 2-Nitropropane	(2)	6.213	41	19733	12.496
80) 2-Chloroethyl Vinyl Ether	(2)	6.299	63	67627	18.664
81) cis-1,3-Dichloropropene	(2)	6.444	75	131682	17.510
82) 4-Methyl-2-pentanone	(2)	6.627	43	663485	101.181
83)$Toluene-d8	(3)	6.733	98	881455	49.993
88) Toluene	(3)	6.806	92	236787	19.606
89) trans-1,3-Dichloropropene	(3)	7.057	75	120941	16.808
91) Ethyl Methacrylate	(3)	7.176	69	152828	18.349
92) 1,1,2-Trichloroethane	(3)	7.249	97	95533	20.125
90) 1,3-Dichloropropene (total)	(3)		100	252623	34.318
93) Tetrachloroethene	(3)	7.394	166	92408	18.804
94) 1,3-Dichloropropane	(3)	7.423	76	154752	19.723
96) 2-Hexanone	(3)	7.525	43	503680	95.011
97) Dibromochloromethane	(3)	7.647	129	79341	16.436
99) 1,2-Dibromoethane	(3)	7.753	107	100556	19.447
100)*Chlorobenzene-d5	(3)	8.193	117	687652	50.000
102) Chlorobenzene	(3)	8.218	112	261151	18.979
103) 1,1,1,2-Tetrachloroethane	(3)	8.295	131	76475	17.303

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

Digitally signed by Nicole S. Lamoreaux
on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
104) Ethylbenzene	(3)	8.324	91	427146	19.116
106) m+p-Xylene	(3)	8.430	106	345727	37.859
107) o-Xylene	(3)	8.770	106	167823	18.400
109) Styrene	(3)	8.780	104	280984	18.031
108) Xylene (Total)	(3)		106	513550	56.258
110) Bromoform	(3)	8.928	173	48594	14.027
111) Isopropylbenzene	(3)	9.075	105	404658	18.650
112) Cyclohexanone	(1)	9.149	55	132474	494.778
114)$4-Bromofluorobenzene	(3)	9.194	95	323593	48.591
115) Bromobenzene	(4)	9.309	156	110401	19.384
116) 1,1,2,2-Tetrachloroethane	(4)	9.313	83	146354	19.966
117) 1,2,3-Trichloropropane	(4)	9.342	110	47397	20.588
118) trans-1,4-Dichloro-2-butene	(4)	9.358	53	205335	101.910
119) n-Propylbenzene	(4)	9.399	91	472436	19.858
120) 2-Chlorotoluene	(4)	9.463	126	101594	19.406
122) 1,3,5-Trimethylbenzene	(4)	9.537	105	335753	18.994
121) 4-Chlorotoluene	(4)	9.547	126	107596	19.202
124) tert-Butylbenzene	(4)	9.784	134	74097	18.908
125) Pentachloroethane	(4)	9.794	167	48555	16.050
126) 1,2,4-Trimethylbenzene	(4)	9.816	105	348188	18.835
127) sec-Butylbenzene	(4)	9.945	105	375016	18.739
129) 1,3-Dichlorobenzene	(4)	10.022	146	198647	18.457
130) p-Isopropyltoluene	(4)	10.051	119	328997	18.275
131)*1,4-Dichlorobenzene-d4	(4)	10.070	152	348507	50.000
133) 1,4-Dichlorobenzene	(4)	10.086	146	210571	18.807
134) 1,2,3-Trimethylbenzene	(4)	10.125	105	360541	18.934
135) Benzyl Chloride	(4)	10.185	91	225065	15.184
136) 1,3-Diethylbenzene	(4)	10.266	119	184861	17.225
137) 1,4-Diethylbenzene	(4)	10.323	119	189488	17.034
139) n-Butylbenzene	(4)	10.343	92	149451	17.459
138) 1,2-Dichlorobenzene	(4)	10.352	146	200816	18.714
140) 1,2-Diethylbenzene	(4)	10.407	119	163228	17.718
141) Diethylbenzene (total)	(4)		100	537577	51.977
142) 1,2-Dibromo-3-chloropropane	(4)	10.891	75	27408	17.570
144) 1,3,5-Trichlorobenzene	(4)	11.036	180	115988	17.003
146) 1,2,4-Trichlorobenzene	(4)	11.447	180	110167	16.300
147) Hexachlorobutadiene	(4)	11.556	225	30801	15.377
148) Naphthalene	(4)	11.610	128	437310	17.832

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

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on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Quant Report

Target Revision 3.5

Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

Compounds	I.S. Ref.	RT	QIon	Area	On-Column Amount (ng)
149) 1,2,3-Trichlorobenzene	(4)	11.767	180	106006	16.524
150) 2-Methylnaphthalene	(4)	12.335	142	158030	12.243

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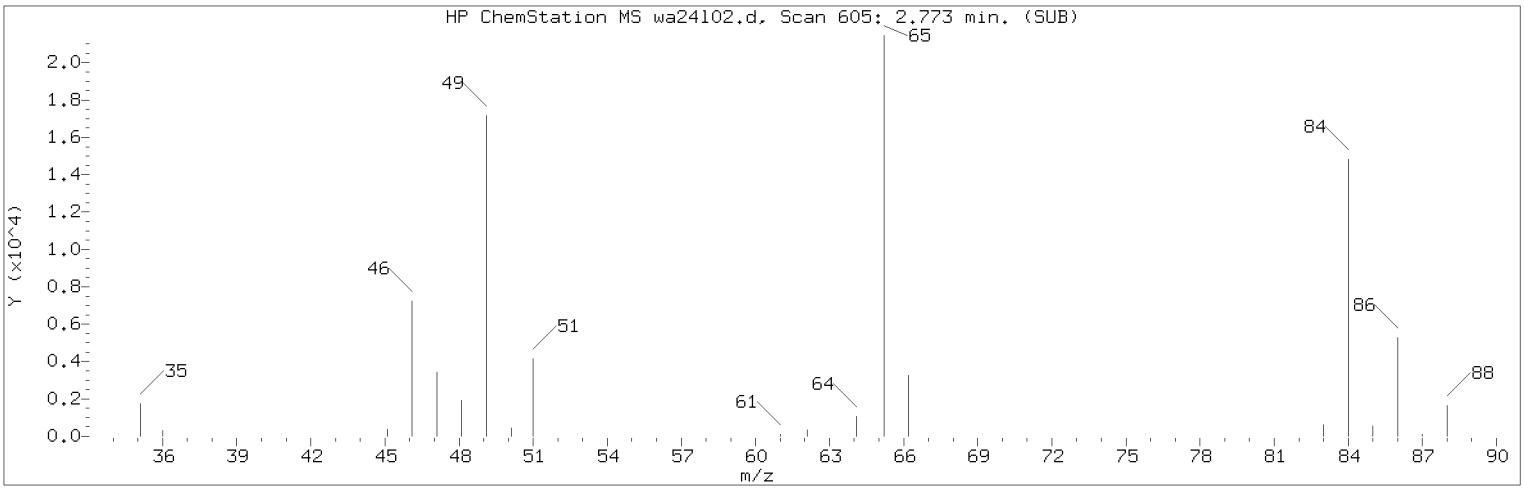
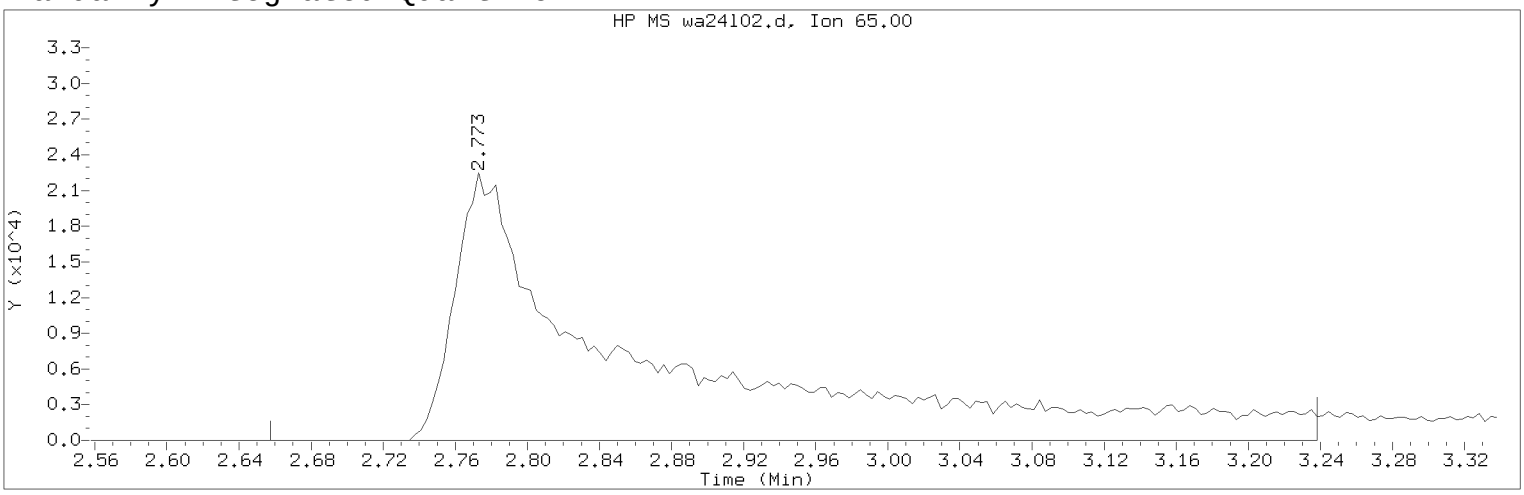
Target 3.5 esignature user ID: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

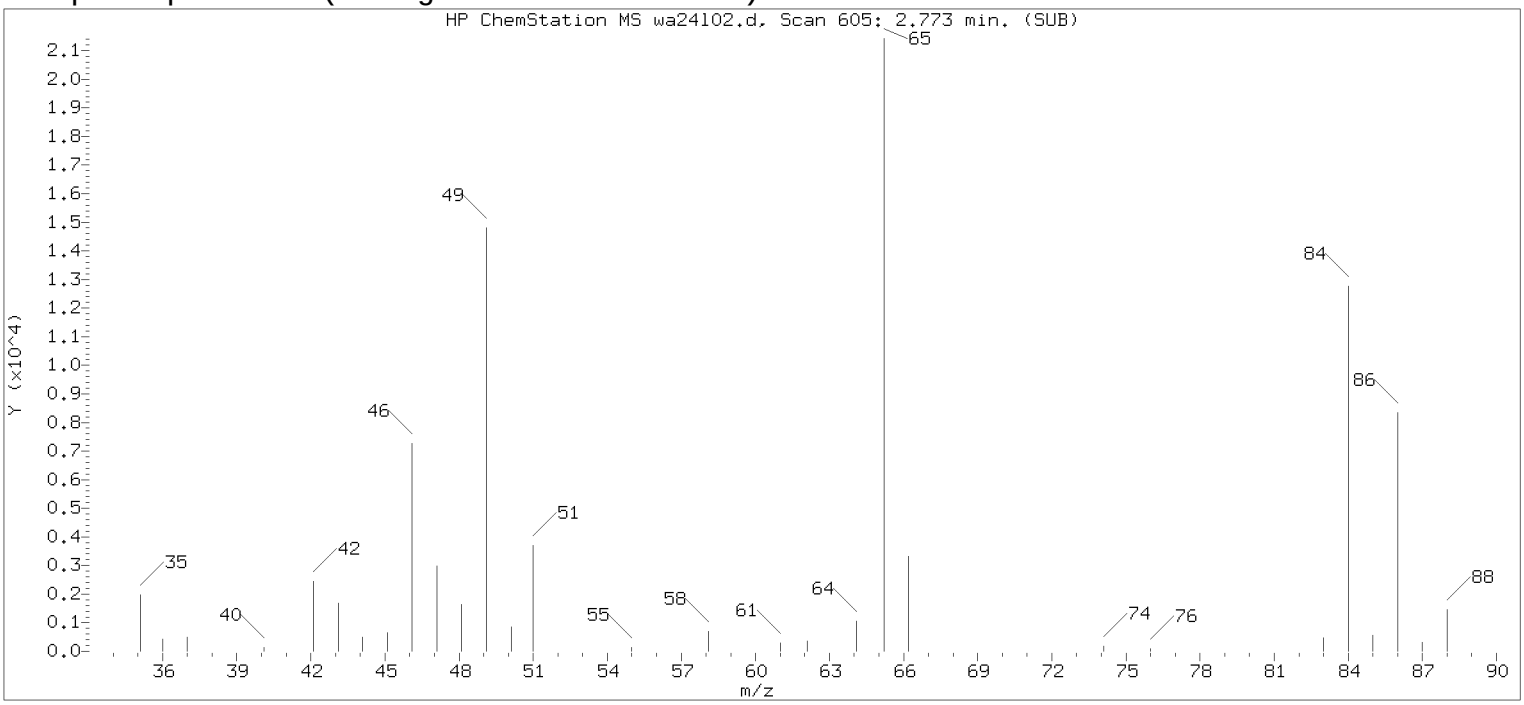
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 605
Retention Time (minutes): 2.773
Quant Ion : 65.00
Area (flag) : 160364M
On-Column Amount (ng) : 250.0000
Integration start scan : 568 Integration stop scan: 749
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

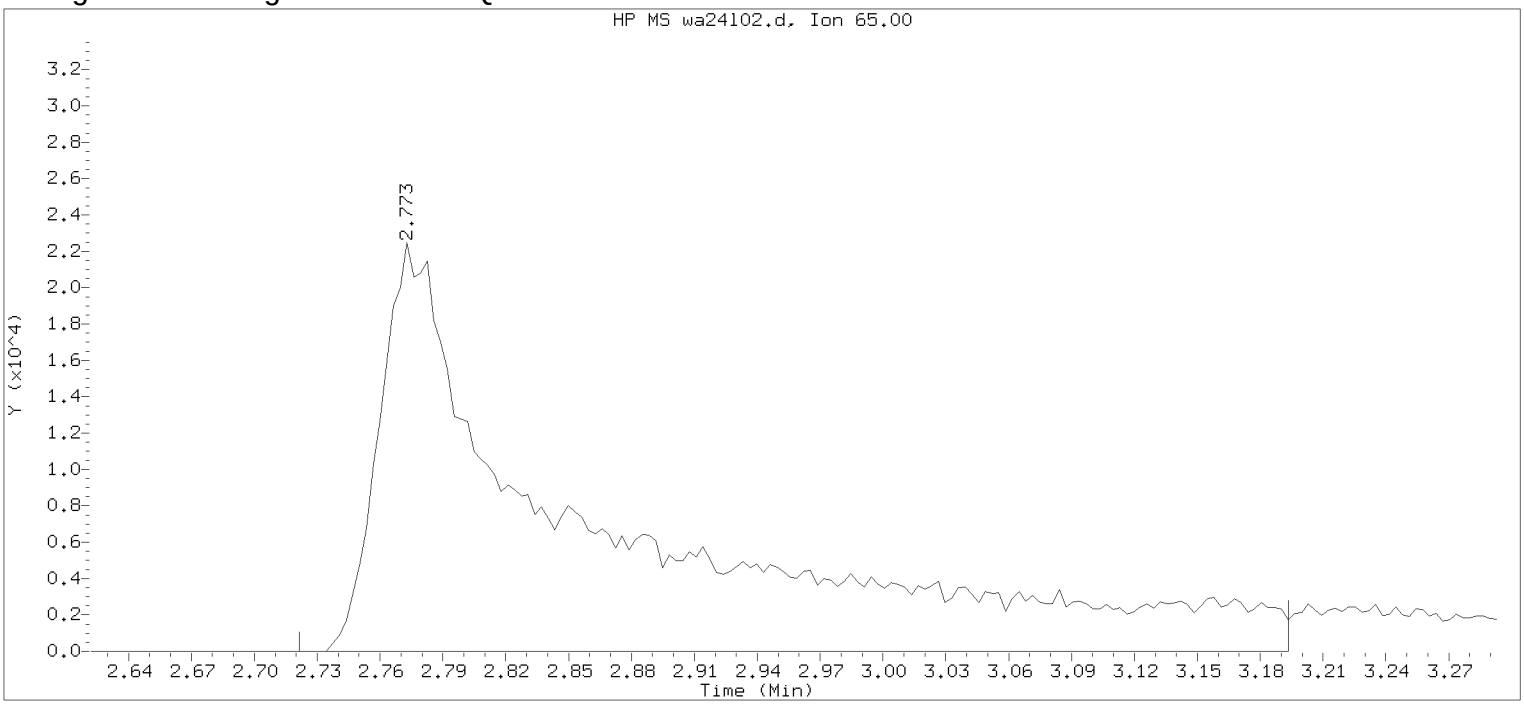
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

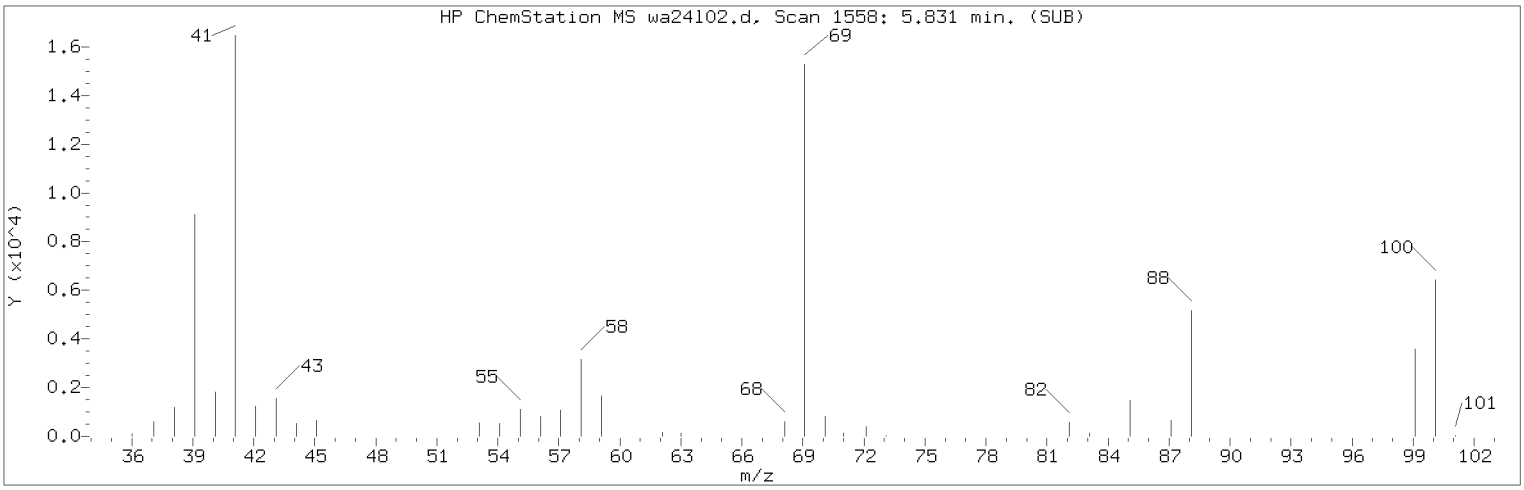
Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:29 Automation

Sample Name: LCDW93 Lab Sample ID: LCDW93

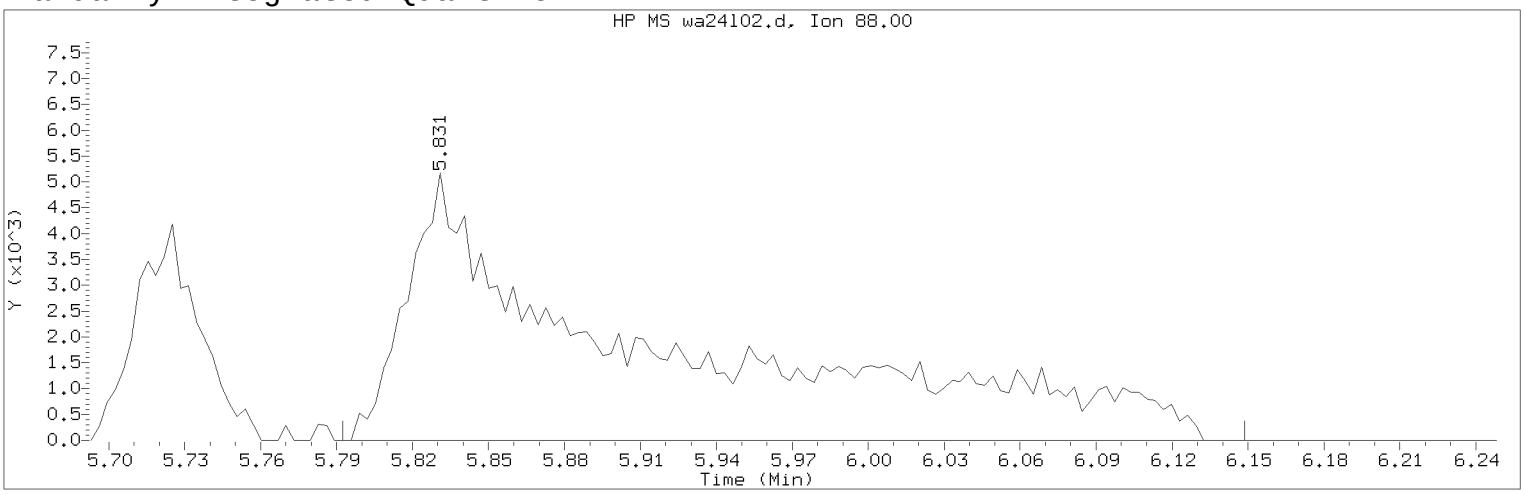
Compound Number : 29
Compound Name : t-Butyl alcohol-d10
Scan Number : 605
Retention Time (minutes): 2.773
Quant Ion : 65.00
Area : 154108
On-column Amount (ng) : 250.0000
Integration start scan : 588 Integration stop scan: 735
Y at integration start : 0 Y at integration end: 0

Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:12.
Target 3.5 esignature user id: nsl01327

Sample Spectrum (Background Subtracted)



Manually Integrated Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W-BUT
Calibration date and time: 24-APR-2018 09:55
Date, time and analyst ID of latest file update: 24-Apr-2018 09:57 nsl01327

Sample Name: LCDW93 Lab Sample ID: LCDW93

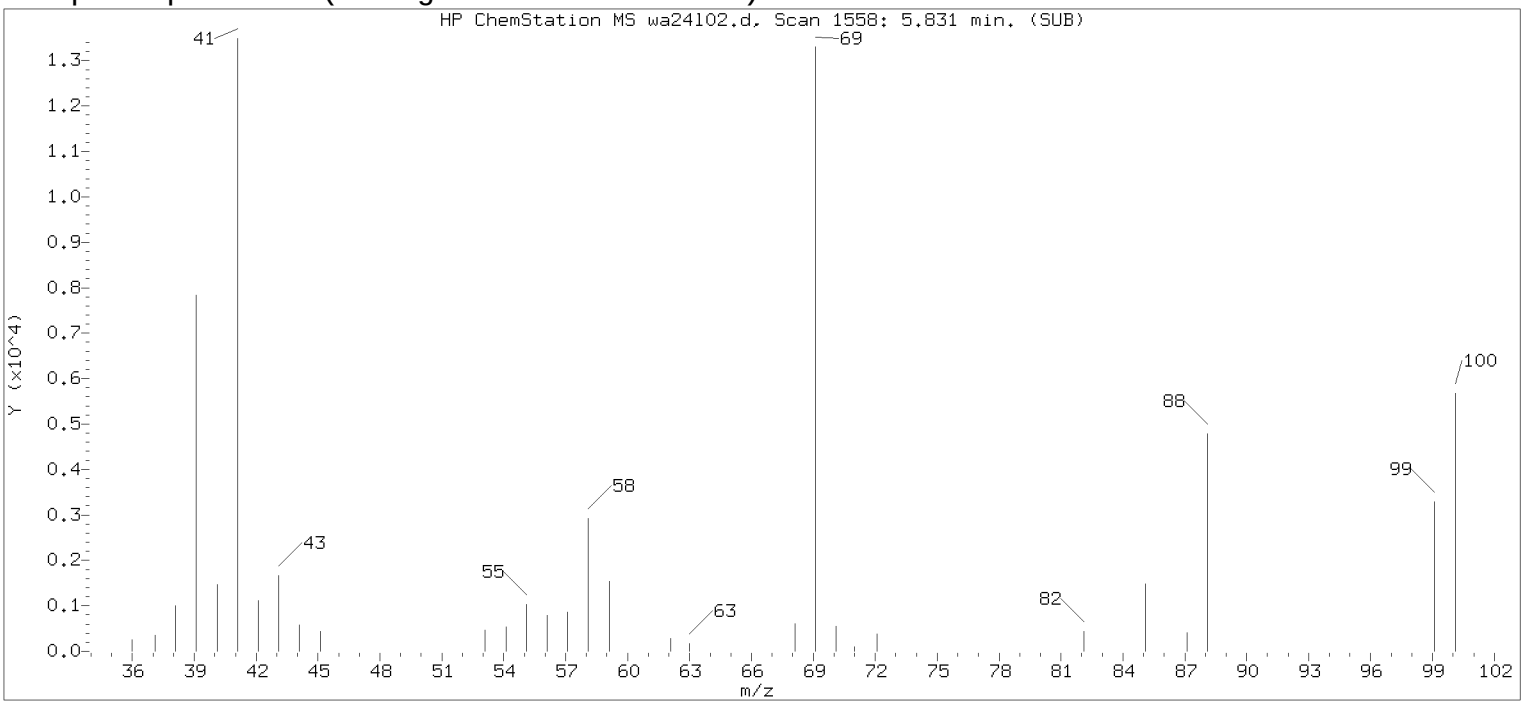
Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1558
Retention Time (minutes): 5.831
Quant Ion : 88.00
Area (flag) : 32832M
On-Column Amount (ng) : 565.0242
Integration start scan : 1545 Integration stop scan: 1656
Y at integration start : 0 Y at integration end: 0

Reason for manual integration: improper integration

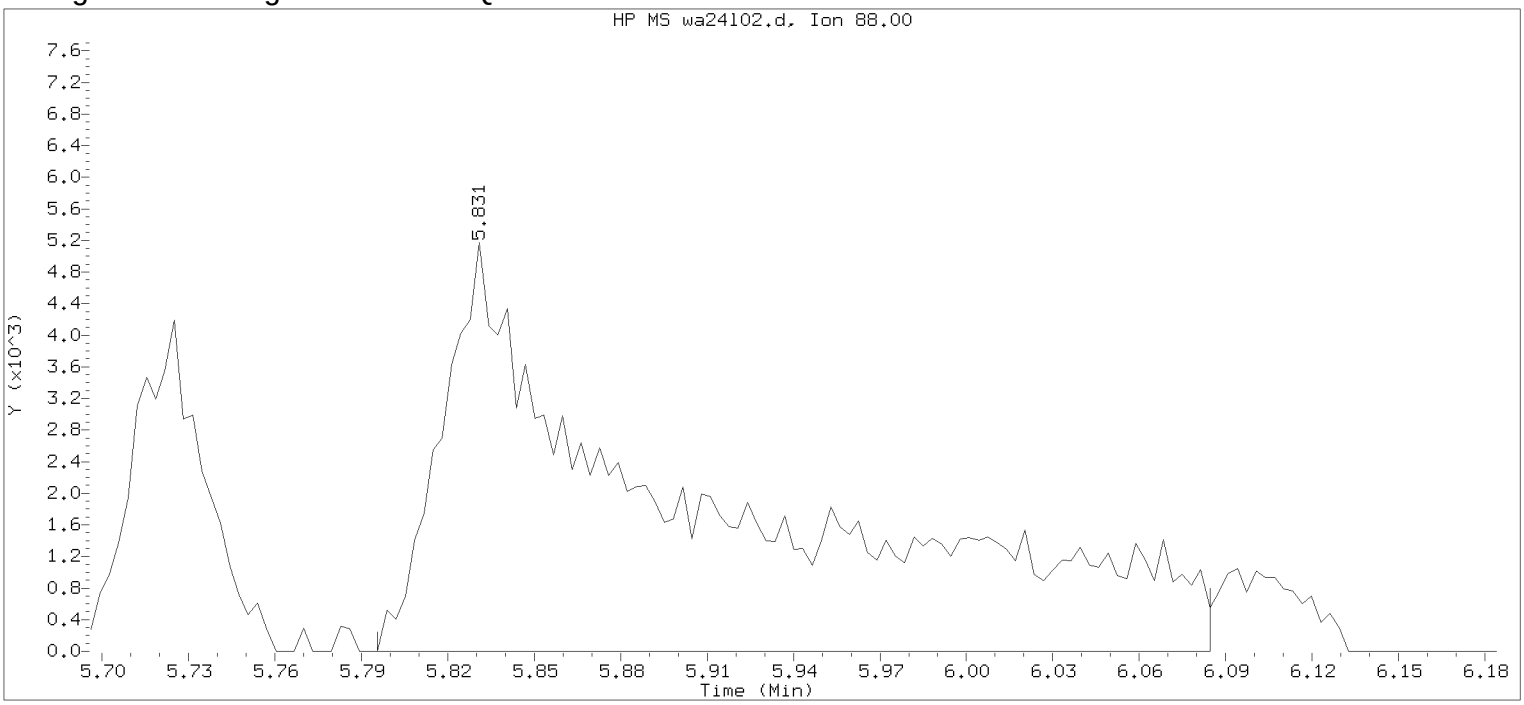
Analyst responsible for change: Digitally signed by Nicole S. Lamoreaux on 04/24/2018 at 10:12.
Target 3.5 esignature user ID: nsl01327

Secondary review performed and digitally signed by Joshua E. Berrios on 04/24/2018 at 21:16.
PARALLAX ID: jeb12641

Sample Spectrum (Background Subtracted)



Original Integration of Quant Ion



Data File: /chem2/HP09137.i/18apr24a.b/wa24l02.d Instrument ID: HP09137.i
Injection date and time: 24-APR-2018 09:14 Analyst ID: nsl01327

Method used: /chem2/HP09137.i/18apr24a.b/m8260b5.m Sublist used: 8260W
Calibration date and time: 24-APR-2018 09:06
Date, time and analyst ID of latest file update: 24-Apr-2018 09:29 Automation

Sample Name: LCDW93 Lab Sample ID: LCDW93

Compound Number : 75
Compound Name : 1,4-Dioxane
Scan Number : 1558
Retention Time (minutes): 5.831
Quant Ion : 88.00
Area : 30774
On-column Amount (ng) : 551.1195
Integration start scan : 1546 Integration stop scan: 1636
Y at integration start : 0 Y at integration end: 0

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Target 3.5 esignature user id: 17 Page 432