Apex Laboratories, LLC
6700 SW Sandburg St. Tigard, Oregon 97223
503.718.2323

Level IV Data Package for

Anchor QEA, LLC

Gasco PreRD_DG 2019 - 5c. PW in Contact with NAPL

Apex Laboratories Work Order #:

A9J1114

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard, OR 97223 phone 503-718-2323

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APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Analytical Case Narrative

APEX LABORATORIES, LLC
6700 SW Sandburg St Tigard, OR 97223 phone 503-718-2323

Analytical Case Narrative

Client: Anchor QEA, LLC Date: 12/24/2019
Project: Gasco PreRD_DG 2019 - 5c. PW in Contact with NAPL
Apex Work Order Number: A9J1114

This data package contains data associated with analysis of samples for the above referenced Apex work order numbers. The data package Table of Contents, along with the PDF bookmarks, allow for ease of navigation and location of items within the data deliverable.

The Sample Receipt Documentation section of this package contains sample receipt information, including sample temperature and condition of receipt documented on Cooler Receipt Form(s). Apex analyzed the samples by the methods indicated on the Chain of Custody. Any additional analyses requested are indicated on the Apex Work Order.

If any anomalies were encountered during analysis that could potentially impact data quality, sample results are qualified and/or a separate Case Narrative is included in the Analytical Report. Please refer to the Notes and Definition section of the Analytical Report(s) for Qualifier explanations, Conventions, and the Blank Policy.

Data represented in this package are in compliance with the referenced method(s), both technically and for completeness, for all conditions other than those stated above and/or noted by qualification of the reported data. The signature below verifies that the Laboratory Director or his designee has authorized release of this data package.

Estella Rieben,
Quality Systems Manager
Apex Laboratories, LLC

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Analytical Report

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Wednesday, December 4, 2019

Ryan Barth
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A9J1114 - Gasco PreRD_DG 2019 - 5c. PW in Contact with NAPL - [none]

Thank you for using Apex Laboratories. We greatly appreciate your business and strive to provide the highest quality services to the environmental industry.

Enclosed are the results of analyses for work order A9J1114, which was received by the laboratory on 10/31/2019 at 7:35:00AM.

If you have any questions concerning this report or the services we offer, please feel free to contact me by email at: dthomas@apex-labs.com, or by phone at 503-718-2323.

Please note: All samples will be disposed of within 30 days of sample receipt, unless prior arrangements have been made.

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	2.3 degC

This Final Report is the official version of the data results for this sample submission, unless superseded by a subsequent, labeled amended report.
All other deliverables derived from this data, including Electronic Data Deliverables (EDDs), CLP-like forms, client requested summary sheets, and all other products are considered secondary to this report.

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
PDI-TB-1910300000	A9J1114-01	WQ	10/30/19 00:00	10/31/19 07:35
PDI-028PW-9-11-191030	A9J1114-02	WX	10/30/19 14:11	10/31/19 07:35
PDI-037PW-04-06-191028	A9J1114-03	WX	10/28/19 14:42	10/31/19 07:35
PDI-038PW-9-11-191030	A9J1114-04	WX	10/30/19 15:34	10/31/19 07:35
PDI-045PW-04-06-191029	A9J1114-05	WX	10/29/19 15:20	10/31/19 07:35
PDI-059PW-04-06-191030	A9J1114-06	WX	10/30/19 09:16	10/31/19 07:35
PDI-059PW-10-12-191030	A9J1114-07	WX	10/30/19 10:18	10/31/19 07:35

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Darwin Thomas, Business Development Director

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-TB-1910300000 (A9J1114-01)				**Matrix: WQ**		**Batch: 9110371**		
Acetone	ND	10.0	20.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Benzene	ND	0.100	0.200	ug/L	1	11/01/19 21:31	EPA 8260C	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Bromoform	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Bromomethane	ND	5.00	5.00	ug/L	1	11/01/19 21:31	EPA 8260C	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Chloroethane	ND	5.00	5.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Chloroform	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Chloromethane	ND	2.50	5.00	ug/L	1	11/01/19 21:31	EPA 8260C	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-TB-1910300000 (A9J1114-01)				**Matrix: WQ**		**Batch: 9110371**		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Ethylbenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/01/19 21:31	EPA 8260C	
n-Hexane	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Methylene chloride	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Naphthalene	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Styrene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
Tetrahydrofuran	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Toluene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/01/19 21:31	EPA 8260C	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	1.00	2.00	ug/L	1	11/01/19 21:31	EPA 8260C	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	

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Darwin Thomas, Business Development Director

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-TB-1910300000 (A9J1114-01)				**Matrix: WQ**		**Batch: 9110371**		
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
Isobutyl alcohol	ND	250	250	ug/L	1	11/01/19 21:31	EPA 8260C	
m,p-Xylene	ND	0.500	1.00	ug/L	1	11/01/19 21:31	EPA 8260C	
o-Xylene	ND	0.250	0.500	ug/L	1	11/01/19 21:31	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	5.00	10.0	ug/L	1	11/01/19 21:31	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits: 80-120 %*	*1*	*11/01/19 21:31*	*EPA 8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*11/01/19 21:31*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*11/01/19 21:31*	*EPA 8260C*	
PDI-028PW-9-11-191030 (A9J1114-02)				**Matrix: WX**		**Batch: 9110371**		
Acetone	ND	10.0	20.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Benzene	**0.250**	0.100	0.200	ug/L	1	11/01/19 21:58	EPA 8260C	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Bromoform	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Bromomethane	ND	5.00	5.00	ug/L	1	11/01/19 21:58	EPA 8260C	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
n-Butylbenzene	ND	1.00	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
sec-Butylbenzene	**0.580**	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	**J**
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Chloroethane	ND	5.00	5.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Chloroform	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Chloromethane	ND	2.50	5.00	ug/L	1	11/01/19 21:58	EPA 8260C	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-028PW-9-11-191030 (A9J1114-02)				**Matrix: WX**		**Batch: 9110371**		
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Ethylbenzene	**0.470**	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	**J**
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/01/19 21:58	EPA 8260C	
n-Hexane	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Isopropylbenzene	**4.34**	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Methylene chloride	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Naphthalene	**62.3**	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	
n-Propylbenzene	**2.67**	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Styrene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
Tetrahydrofuran	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Toluene	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-028PW-9-11-191030 (A9J1114-02)				**Matrix: WX**		**Batch: 9110371**		
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/01/19 21:58	EPA 8260C	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	1.00	2.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,2,4-Trimethylbenzene	**3.17**	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
1,3,5-Trimethylbenzene	**2.06**	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	
Isobutyl alcohol	ND	250	250	ug/L	1	11/01/19 21:58	EPA 8260C	
m,p-Xylene	**0.860**	0.500	1.00	ug/L	1	11/01/19 21:58	EPA 8260C	**J**
o-Xylene	**0.630**	0.250	0.500	ug/L	1	11/01/19 21:58	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	5.00	10.0	ug/L	1	11/01/19 21:58	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*105 %*	*Limits:* *80-120 %*	*1*	*11/01/19 21:58*	*EPA 8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*11/01/19 21:58*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*98 %*	*80-120 %*	*1*	*11/01/19 21:58*	*EPA 8260C*	
PDI-037PW-04-06-191028 (A9J1114-03)				**Matrix: WX**		**Batch: 9110370**		
Acetone	ND	1000	2000	ug/L	100	11/01/19 15:06	EPA 8260C	
Acrylonitrile	ND	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	
Benzene	**314**	10.0	20.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Bromobenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Bromochloromethane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Bromodichloromethane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Bromoform	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Bromomethane	ND	500	500	ug/L	100	11/01/19 15:06	EPA 8260C	
2-Butanone (MEK)	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
n-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
sec-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
tert-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Carbon disulfide	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
Carbon tetrachloride	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Chlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-037PW-04-06-191028 (A9J1114-03)				**Matrix: WX**		**Batch: 9110370**		
Chloroethane	ND	500	500	ug/L	100	11/01/19 15:06	EPA 8260C	
Chloroform	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Chloromethane	ND	250	500	ug/L	100	11/01/19 15:06	EPA 8260C	
2-Chlorotoluene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
4-Chlorotoluene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Dibromochloromethane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	250	500	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Dibromomethane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,3-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,4-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Dichlorodifluoromethane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1-Dichloroethane	ND	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1-Dichloroethene	**21.9**	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	**J**
trans-1,2-Dichloroethene	**130**	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2-Dichloropropane	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,3-Dichloropropane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
2,2-Dichloropropane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
cis-1,3-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
trans-1,3-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Ethylbenzene	**212**	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Hexachlorobutadiene	ND	250	500	ug/L	100	11/01/19 15:06	EPA 8260C	
n-Hexane	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
2-Hexanone	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
Isopropylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
4-Isopropyltoluene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Methylene chloride	ND	250	500	ug/L	100	11/01/19 15:06	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Naphthalene	**9490**	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-037PW-04-06-191028 (A9J1114-03)				**Matrix: WX**		**Batch: 9110370**		
n-Propylbenzene	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Styrene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Tetrachloroethene (PCE)	ND	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Tetrahydrofuran	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
Toluene	**101**	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2,3-Trichlorobenzene	ND	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2,4-Trichlorobenzene	ND	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1,1-Trichloroethane	ND	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1,2-Trichloroethane	ND	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Trichloroethene (TCE)	**3850**	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
Trichlorofluoromethane	ND	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2,3-Trichloropropane	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	100	200	ug/L	100	11/01/19 15:06	EPA 8260C	
1,2,4-Trimethylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
1,3,5-Trimethylbenzene	ND	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	
Isobutyl alcohol	ND	25000	25000	ug/L	100	11/01/19 15:06	EPA 8260C	
Vinyl chloride	**5300**	20.0	40.0	ug/L	100	11/01/19 15:06	EPA 8260C	
m,p-Xylene	**98.9**	50.0	100	ug/L	100	11/01/19 15:06	EPA 8260C	**J**
o-Xylene	**65.8**	25.0	50.0	ug/L	100	11/01/19 15:06	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	500	1000	ug/L	100	11/01/19 15:06	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*106 %*	*Limits:*	*80-120 %*	*1*	*11/01/19 15:06*	*EPA 8260C*	
Toluene-d8 (Surr)			*102 %*		*80-120 %*	*1*	*11/01/19 15:06*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*	*1*	*11/01/19 15:06*	*EPA 8260C*	
PDI-037PW-04-06-191028 (A9J1114-03RE1)				**Matrix: WX**		**Batch: 9110413**		
cis-1,2-Dichloroethene	**32300**	200	400	ug/L	1000	11/04/19 13:36	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*104 %*	*Limits:*	*80-120 %*	*1*	*11/04/19 13:36*	*EPA 8260C*	
Toluene-d8 (Surr)			*103 %*		*80-120 %*	*1*	*11/04/19 13:36*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*	*1*	*11/04/19 13:36*	*EPA 8260C*	
PDI-038PW-9-11-191030 (A9J1114-04)				**Matrix: WX**		**Batch: 9110371**		

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-038PW-9-11-191030 (A9J1114-04)				**Matrix: WX**		**Batch: 9110371**		
Acetone	ND	10.0	20.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Benzene	**0.240**	0.100	0.200	ug/L	1	11/01/19 22:25	EPA 8260C	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Bromoform	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Bromomethane	ND	5.00	5.00	ug/L	1	11/01/19 22:25	EPA 8260C	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Chloroethane	ND	5.00	5.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Chloroform	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Chloromethane	ND	2.50	5.00	ug/L	1	11/01/19 22:25	EPA 8260C	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-038PW-9-11-191030 (A9J1114-04)				**Matrix: WX**		**Batch: 9110371**		
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Ethylbenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/01/19 22:25	EPA 8260C	
n-Hexane	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Isopropylbenzene	**0.540**	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	**J**
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Methylene chloride	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
Naphthalene	**6.35**	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Styrene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
Tetrahydrofuran	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Toluene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/01/19 22:25	EPA 8260C	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	1.00	2.00	ug/L	1	11/01/19 22:25	EPA 8260C	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-038PW-9-11-191030 (A9J1114-04)				**Matrix: WX**		**Batch: 9110371**		
1,3,5-Trimethylbenzene	**0.520**	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	**J**
Isobutyl alcohol	ND	250	250	ug/L	1	11/01/19 22:25	EPA 8260C	
m,p-Xylene	ND	0.500	1.00	ug/L	1	11/01/19 22:25	EPA 8260C	
o-Xylene	ND	0.250	0.500	ug/L	1	11/01/19 22:25	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	5.00	10.0	ug/L	1	11/01/19 22:25	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits: 80-120 %*	*1*	*11/01/19 22:25*	*EPA 8260C*	
Toluene-d8 (Surr)			*99 %*	*80-120 %*	*1*	*11/01/19 22:25*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*	*1*	*11/01/19 22:25*	*EPA 8260C*	
PDI-045PW-04-06-191029 (A9J1114-05)				**Matrix: WX**		**Batch: 9110370**		
Acetone	ND	10.0	20.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Benzene	**17.5**	0.100	0.200	ug/L	1	11/01/19 18:41	EPA 8260C	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Bromoform	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Bromomethane	ND	5.00	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Chloroethane	ND	5.00	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Chloroform	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Chloromethane	ND	2.50	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-045PW-04-06-191029 (A9J1114-05)				**Matrix: WX**		**Batch: 9110370**		
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
cis-1,2-Dichloroethene	**0.339**	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Ethylbenzene	**0.378**	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
n-Hexane	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Isopropylbenzene	**1.11**	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Methylene chloride	ND	2.50	5.00	ug/L	1	11/01/19 18:41	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Naphthalene	**12.2**	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	
n-Propylbenzene	**0.474**	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
Styrene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
Tetrahydrofuran	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Toluene	**0.813**	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-045PW-04-06-191029 (A9J1114-05)				**Matrix: WX**		**Batch: 9110370**		
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/01/19 18:41	EPA 8260C	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	1.00	2.00	ug/L	1	11/01/19 18:41	EPA 8260C	
1,2,4-Trimethylbenzene	**0.979**	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	
Isobutyl alcohol	ND	250	250	ug/L	1	11/01/19 18:41	EPA 8260C	
m,p-Xylene	**0.643**	0.500	1.00	ug/L	1	11/01/19 18:41	EPA 8260C	**J**
o-Xylene	**1.33**	0.250	0.500	ug/L	1	11/01/19 18:41	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	5.00	10.0	ug/L	1	11/01/19 18:41	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*103 %*	*Limits: 80-120 %*	*1*	*11/01/19 18:41*	*EPA 8260C*	
Toluene-d8 (Surr)			*101 %*	*80-120 %*	*1*	*11/01/19 18:41*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*11/01/19 18:41*	*EPA 8260C*	
PDI-059PW-04-06-191030 (A9J1114-06)				**Matrix: WX**		**Batch: 9110371**		**V-25**
Acetone	ND	1000	2000	ug/L	100	11/01/19 22:52	EPA 8260C	
Acrylonitrile	ND	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
Benzene	**257**	10.0	20.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Bromobenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Bromochloromethane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Bromodichloromethane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Bromoform	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Bromomethane	ND	500	500	ug/L	100	11/01/19 22:52	EPA 8260C	
2-Butanone (MEK)	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
n-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
sec-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
tert-Butylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Carbon disulfide	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
Carbon tetrachloride	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Chlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-059PW-04-06-191030 (A9J1114-06)				**Matrix: WX**		**Batch: 9110371**		**V-25**
Chloroethane	ND	500	500	ug/L	100	11/01/19 22:52	EPA 8260C	
Chloroform	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Chloromethane	ND	250	500	ug/L	100	11/01/19 22:52	EPA 8260C	
2-Chlorotoluene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
4-Chlorotoluene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Dibromochloromethane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	250	500	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Dibromomethane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,3-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,4-Dichlorobenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Dichlorodifluoromethane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1-Dichloroethane	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1-Dichloroethene	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
cis-1,2-Dichloroethene	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
trans-1,2-Dichloroethene	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2-Dichloropropane	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,3-Dichloropropane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
2,2-Dichloropropane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
cis-1,3-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
trans-1,3-Dichloropropene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Ethylbenzene	**78.0**	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Hexachlorobutadiene	ND	250	500	ug/L	100	11/01/19 22:52	EPA 8260C	
n-Hexane	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
2-Hexanone	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
Isopropylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
4-Isopropyltoluene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Methylene chloride	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-059PW-04-06-191030 (A9J1114-06)				**Matrix: WX**		**Batch: 9110371**		**V-25**
Naphthalene	**4100**	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
n-Propylbenzene	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Styrene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Tetrachloroethene (PCE)	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Tetrahydrofuran	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
Toluene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2,3-Trichlorobenzene	ND	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2,4-Trichlorobenzene	ND	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1,1-Trichloroethane	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1,2-Trichloroethane	ND	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Trichloroethene (TCE)	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
Trichlorofluoromethane	ND	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2,3-Trichloropropane	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	100	200	ug/L	100	11/01/19 22:52	EPA 8260C	
1,2,4-Trimethylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
1,3,5-Trimethylbenzene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
Isobutyl alcohol	ND	25000	25000	ug/L	100	11/01/19 22:52	EPA 8260C	
Vinyl chloride	ND	20.0	40.0	ug/L	100	11/01/19 22:52	EPA 8260C	
m,p-Xylene	ND	50.0	100	ug/L	100	11/01/19 22:52	EPA 8260C	
o-Xylene	**29.0**	25.0	50.0	ug/L	100	11/01/19 22:52	EPA 8260C	**J**
trans-1,4-Dichloro-2-butene	ND	500	1000	ug/L	100	11/01/19 22:52	EPA 8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 99 %*		*Limits: 80-120 %*	*1*	*11/01/19 22:52*	*EPA 8260C*	
Toluene-d8 (Surr)		*101 %*		*80-120 %*	*1*	*11/01/19 22:52*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)		*100 %*		*80-120 %*	*1*	*11/01/19 22:52*	*EPA 8260C*	
PDI-059PW-10-12-191030 (A9J1114-07)				**Matrix: WX**		**Batch: 9110371**		
Acetone	ND	10.0	20.0	ug/L	1	11/01/19 23:19	EPA 8260C	
Acrylonitrile	ND	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Benzene	**18.9**	0.100	0.200	ug/L	1	11/01/19 23:19	EPA 8260C	
Bromobenzene	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Bromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-059PW-10-12-191030 (A9J1114-07)				**Matrix: WX**		**Batch: 9110371**		
Bromodichloromethane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Bromoform	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Bromomethane	ND	5.00	5.00	ug/L	1	11/01/19 23:19	EPA 8260C	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
sec-Butylbenzene	**7.16**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
tert-Butylbenzene	**1.32**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Carbon disulfide	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Chlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Chloroethane	ND	5.00	5.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Chloroform	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Chloromethane	ND	2.50	5.00	ug/L	1	11/01/19 23:19	EPA 8260C	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Dibromomethane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
cis-1,2-Dichloroethene	**0.660**	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-059PW-10-12-191030 (A9J1114-07)				**Matrix: WX**		**Batch: 9110371**		
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Ethylbenzene	**5.33**	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	11/01/19 23:19	EPA 8260C	
n-Hexane	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
2-Hexanone	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
Isopropylbenzene	**17.8**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Methylene chloride	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Naphthalene	**168**	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
n-Propylbenzene	**2.79**	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Styrene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
Tetrahydrofuran	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	
Toluene	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	11/01/19 23:19	EPA 8260C	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	ND	1.00	2.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,2,4-Trimethylbenzene	**7.87**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
1,3,5-Trimethylbenzene	**2.41**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
Isobutyl alcohol	ND	250	250	ug/L	1	11/01/19 23:19	EPA 8260C	
m,p-Xylene	**2.40**	0.500	1.00	ug/L	1	11/01/19 23:19	EPA 8260C	
o-Xylene	**3.27**	0.250	0.500	ug/L	1	11/01/19 23:19	EPA 8260C	
trans-1,4-Dichloro-2-butene	ND	5.00	10.0	ug/L	1	11/01/19 23:19	EPA 8260C	

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-059PW-10-12-191030 (A9J1114-07)				**Matrix: WX**		**Batch: 9110371**		
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*	*Limits: 80-120 %*	*1*	*11/01/19 23:19*	*EPA 8260C*	
Toluene-d8 (Surr)			*98 %*	*80-120 %*	*1*	*11/01/19 23:19*	*EPA 8260C*	
4-Bromofluorobenzene (Surr)			*101 %*	*80-120 %*	*1*	*11/01/19 23:19*	*EPA 8260C*	

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6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Vinyl Chloride by EPA 8260C SIM

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-TB-1910300000 (A9J1114-01)				**Matrix: WQ**		**Batch: 9110483**		
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	11/05/19 14:04	EPA 8260C SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*97 %*	*Limits: 70-130 %*	*1*	*11/05/19 14:04*	*EPA 8260C SIM*	
Toluene-d8 (Surr)			*96 %*	*70-130 %*	*1*	*11/05/19 14:04*	*EPA 8260C SIM*	
4-Bromofluorobenzene (Surr)			*95 %*	*70-130 %*	*1*	*11/05/19 14:04*	*EPA 8260C SIM*	
PDI-028PW-9-11-191030 (A9J1114-02)				**Matrix: WX**		**Batch: 9110483**		
Vinyl chloride	**0.0890**	0.0100	0.0200	ug/L	1	11/05/19 14:58	EPA 8260C SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits: 70-130 %*	*1*	*11/05/19 14:58*	*EPA 8260C SIM*	
Toluene-d8 (Surr)			*94 %*	*70-130 %*	*1*	*11/05/19 14:58*	*EPA 8260C SIM*	
4-Bromofluorobenzene (Surr)			*90 %*	*70-130 %*	*1*	*11/05/19 14:58*	*EPA 8260C SIM*	
PDI-038PW-9-11-191030 (A9J1114-04)				**Matrix: WX**		**Batch: 9110483**		
Vinyl chloride	**0.336**	0.0100	0.0200	ug/L	1	11/05/19 15:25	EPA 8260C SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*99 %*	*Limits: 70-130 %*	*1*	*11/05/19 15:25*	*EPA 8260C SIM*	
Toluene-d8 (Surr)			*95 %*	*70-130 %*	*1*	*11/05/19 15:25*	*EPA 8260C SIM*	
4-Bromofluorobenzene (Surr)			*90 %*	*70-130 %*	*1*	*11/05/19 15:25*	*EPA 8260C SIM*	
PDI-045PW-04-06-191029 (A9J1114-05)				**Matrix: WX**		**Batch: 9110483**		
Vinyl chloride	**0.313**	0.0100	0.0200	ug/L	1	11/05/19 15:51	EPA 8260C SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 70-130 %*	*1*	*11/05/19 15:51*	*EPA 8260C SIM*	
Toluene-d8 (Surr)			*95 %*	*70-130 %*	*1*	*11/05/19 15:51*	*EPA 8260C SIM*	
4-Bromofluorobenzene (Surr)			*90 %*	*70-130 %*	*1*	*11/05/19 15:51*	*EPA 8260C SIM*	
PDI-059PW-10-12-191030 (A9J1114-07)				**Matrix: WX**		**Batch: 9110483**		
Vinyl chloride	**0.0478**	0.0100	0.0200	ug/L	1	11/05/19 17:12	EPA 8260C SIM	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery:*	*100 %*	*Limits: 70-130 %*	*1*	*11/05/19 17:12*	*EPA 8260C SIM*	
Toluene-d8 (Surr)			*94 %*	*70-130 %*	*1*	*11/05/19 17:12*	*EPA 8260C SIM*	
4-Bromofluorobenzene (Surr)			*89 %*	*70-130 %*	*1*	*11/05/19 17:12*	*EPA 8260C SIM*	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-028PW-9-11-191030 (A9J1114-02RE1)				**Matrix: WX**		**Batch: 9110387**		
Acenaphthene	**83.6**	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Acenaphthylene	ND	3.68	3.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	R-02
Anthracene	**6.54**	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Benz(a)anthracene	**0.795**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	**J**
Benzo(a)pyrene	**0.862**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Benzo(b)fluoranthene	**0.566**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	**J**
Benzo(k)fluoranthene	**0.574**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	**J**
Benzo(g,h,i)perylene	ND	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Chrysene	**0.692**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	**J**
Dibenz(a,h)anthracene	ND	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Fluoranthene	**3.00**	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Fluorene	**26.2**	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Indeno(1,2,3-cd)pyrene	**0.526**	0.421	0.841	ug/L	50	11/01/19 19:36	EPA 8270D LVI	**J**
2-Methylnaphthalene	**53.9**	1.68	3.36	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Naphthalene	**58.4**	1.68	3.36	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Phenanthrene	**46.3**	1.68	3.36	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Pyrene	**3.10**	0.841	1.68	ug/L	50	11/01/19 19:36	EPA 8270D LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*131 %*	*Limits:*	*80-120 %*	*50*	*11/01/19 19:36*	*EPA 8270D LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*160 %*		*80-143 %*	*50*	*11/01/19 19:36*	*EPA 8270D LVI*	*S-05*
PDI-038PW-9-11-191030 (A9J1114-04RE1)				**Matrix: WX**		**Batch: 9110387**		
Acenaphthene	**65.0**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Acenaphthylene	**2.36**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Anthracene	**4.32**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Benz(a)anthracene	ND	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Benzo(a)pyrene	**0.463**	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	**J**
Benzo(b)fluoranthene	**0.442**	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	**J**
Benzo(k)fluoranthene	ND	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Benzo(g,h,i)perylene	ND	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Chrysene	ND	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Dibenz(a,h)anthracene	ND	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Fluoranthene	**2.55**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Fluorene	**13.9**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

ANALYTICAL SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
PDI-038PW-9-11-191030 (A9J1114-04RE1)				**Matrix: WX**		**Batch: 9110387**		
Indeno(1,2,3-cd)pyrene	ND	0.423	0.846	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
2-Methylnaphthalene	**3.15**	1.69	3.38	ug/L	50	11/01/19 20:08	EPA 8270D LVI	**J**
Naphthalene	**4.63**	1.69	3.38	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Phenanthrene	**32.0**	1.69	3.38	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Pyrene	**2.39**	0.846	1.69	ug/L	50	11/01/19 20:08	EPA 8270D LVI	
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*127 %*	*Limits: 80-120 %*	*50*	*11/01/19 20:08*	*EPA 8270D LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*139 %*	*80-143 %*	*50*	*11/01/19 20:08*	*EPA 8270D LVI*	*S-05*
PDI-059PW-10-12-191030 (A9J1114-07RE1)				**Matrix: WX**		**Batch: 9110387**		
Acenaphthene	**161**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Acenaphthylene	**4.64**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Anthracene	**3.53**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Benz(a)anthracene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Benzo(a)pyrene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Benzo(b)fluoranthene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Benzo(k)fluoranthene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Benzo(g,h,i)perylene	ND	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Chrysene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Dibenz(a,h)anthracene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Fluoranthene	**1.71**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Fluorene	**31.7**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Indeno(1,2,3-cd)pyrene	ND	0.417	0.834	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
2-Methylnaphthalene	**68.5**	1.67	3.34	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Naphthalene	**151**	1.67	3.34	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Phenanthrene	**41.7**	1.67	3.34	ug/L	50	11/01/19 20:40	EPA 8270D LVI	
Pyrene	**1.55**	0.834	1.67	ug/L	50	11/01/19 20:40	EPA 8270D LVI	**J**
Surrogate: Acenaphthylene-d8 (Surr)		*Recovery:*	*109 %*	*Limits: 80-120 %*	*50*	*11/01/19 20:40*	*EPA 8270D LVI*	*S-05*
Benzo(a)pyrene-d12 (Surr)			*126 %*	*80-143 %*	*50*	*11/01/19 20:40*	*EPA 8270D LVI*	*S-05*

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Blank (9110370-BLK1)			Prepared: 11/01/19 11:04		Analyzed: 11/01/19 12:25							
EPA 8260C												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darwin Thomas, Business Development Director

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Blank (9110370-BLK1)			Prepared: 11/01/19 11:04		Analyzed: 11/01/19 12:25							
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 107 %* *Limits: 80-120 %* *Dilution: 1x*

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Blank (9110370-BLK1)					Prepared: 11/01/19 11:04 Analyzed: 11/01/19 12:25							
Surr: Toluene-d8 (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*103 %*	*80-120 %*			*"*					
LCS (9110370-BS1)					Prepared: 11/01/19 11:04 Analyzed: 11/01/19 11:31							
EPA 8260C												
Acetone	34.8	10.0	20.0	ug/L	1	40.0	---	87	80-120%	---	---	
Acrylonitrile	21.0	1.00	2.00	ug/L	1	20.0	---	105	80-120%	---	---	
Benzene	19.7	0.100	0.200	ug/L	1	20.0	---	98	80-120%	---	---	
Bromobenzene	19.9	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Bromochloromethane	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Bromodichloromethane	20.7	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
Bromoform	24.7	0.500	1.00	ug/L	1	20.0	---	**123**	**80-120%**	---	---	Q-56
Bromomethane	23.6	5.00	5.00	ug/L	1	20.0	---	118	80-120%	---	---	
2-Butanone (MEK)	38.7	5.00	10.0	ug/L	1	40.0	---	97	80-120%	---	---	
n-Butylbenzene	20.5	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
sec-Butylbenzene	19.1	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
tert-Butylbenzene	18.2	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Carbon disulfide	18.8	5.00	10.0	ug/L	1	20.0	---	94	80-120%	---	---	
Carbon tetrachloride	20.3	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Chlorobenzene	20.0	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Chloroethane	16.9	5.00	5.00	ug/L	1	20.0	---	84	80-120%	---	---	
Chloroform	20.0	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Chloromethane	17.2	2.50	5.00	ug/L	1	20.0	---	86	80-120%	---	---	
2-Chlorotoluene	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Chlorotoluene	18.8	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Dibromochloromethane	25.3	0.500	1.00	ug/L	1	20.0	---	**126**	**80-120%**	---	---	Q-56
1,2-Dibromo-3-chloropropane	19.7	2.50	5.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dibromoethane (EDB)	20.1	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
Dibromomethane	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dichlorobenzene	19.7	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
1,3-Dichlorobenzene	19.9	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
1,4-Dichlorobenzene	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Dichlorodifluoromethane	19.5	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,1-Dichloroethane	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
LCS (9110370-BS1)			Prepared: 11/01/19 11:04		Analyzed: 11/01/19 11:31							
1,2-Dichloroethane (EDC)	19.0	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	
1,1-Dichloroethene	19.1	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
cis-1,2-Dichloroethene	19.4	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
trans-1,2-Dichloroethene	19.7	0.200	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
1,2-Dichloropropane	20.2	0.250	0.500	ug/L	1	20.0	---	101	80-120%	---	---	
1,3-Dichloropropane	20.1	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
2,2-Dichloropropane	17.5	0.500	1.00	ug/L	1	20.0	---	87	80-120%	---	---	
1,1-Dichloropropene	19.1	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
cis-1,3-Dichloropropene	19.3	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
trans-1,3-Dichloropropene	18.9	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Ethylbenzene	19.1	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Hexachlorobutadiene	18.9	2.50	5.00	ug/L	1	20.0	---	95	80-120%	---	---	
2-Hexanone	38.0	5.00	10.0	ug/L	1	40.0	---	95	80-120%	---	---	
Isopropylbenzene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
4-Isopropyltoluene	20.0	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
Methylene chloride	19.3	2.50	5.00	ug/L	1	20.0	---	97	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	39.0	5.00	10.0	ug/L	1	40.0	---	97	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	17.6	0.500	1.00	ug/L	1	20.0	---	88	80-120%	---	---	
Naphthalene	18.7	1.00	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
n-Propylbenzene	19.1	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Styrene	19.8	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,1,1,2-Tetrachloroethane	21.4	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
1,1,2,2-Tetrachloroethane	19.9	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
Tetrachloroethene (PCE)	20.2	0.200	0.400	ug/L	1	20.0	---	101	80-120%	---	---	
Toluene	19.0	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2,3-Trichlorobenzene	19.8	1.00	2.00	ug/L	1	20.0	---	99	80-120%	---	---	
1,2,4-Trichlorobenzene	19.3	1.00	2.00	ug/L	1	20.0	---	97	80-120%	---	---	
1,1,1-Trichloroethane	18.4	0.200	0.400	ug/L	1	20.0	---	92	80-120%	---	---	
1,1,2-Trichloroethane	21.2	0.250	0.500	ug/L	1	20.0	---	106	80-120%	---	---	
Trichloroethene (TCE)	20.9	0.200	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
Trichlorofluoromethane	20.9	1.00	2.00	ug/L	1	20.0	---	105	80-120%	---	---	
1,2,3-Trichloropropane	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,2,4-Trimethylbenzene	19.7	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,3,5-Trimethylbenzene	19.3	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
LCS (9110370-BS1)			Prepared: 11/01/19 11:04 Analyzed: 11/01/19 11:31									
Vinyl chloride	19.5	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
m,p-Xylene	38.4	0.500	1.00	ug/L	1	40.0	---	96	80-120%	---	---	
o-Xylene	18.9	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*101 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*				*"*			
Duplicate (9110370-DUP1)			Prepared: 11/01/19 12:15 Analyzed: 11/01/19 15:33									
QC Source Sample: PDI-037PW-04-06-191028 (A9J1114-03)												
EPA 8260C												
Acetone	ND	1000	2000	ug/L	100	---	ND	---	---	---	30%	
Acrylonitrile	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
Benzene	**321**	10.0	20.0	ug/L	100	---	314	---	---	2	30%	
Bromobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Bromochloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromodichloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromoform	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromomethane	ND	500	500	ug/L	100	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
n-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Carbon disulfide	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Chlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Chloroethane	ND	500	500	ug/L	100	---	ND	---	---	---	30%	
Chloroform	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Chloromethane	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Dibromochloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Dibromomethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Duplicate (9110370-DUP1)			Prepared: 11/01/19 12:15 Analyzed: 11/01/19 15:33									
QC Source Sample: PDI-037PW-04-06-191028 (A9J1114-03)												
1,2-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethene	**22.5**	20.0	40.0	ug/L	100	---	21.9	---	---	3	30%	J
cis-1,2-Dichloroethene	**32000**	20.0	40.0	ug/L	100	---	31100	---	---	3	30%	E
trans-1,2-Dichloroethene	**138**	20.0	40.0	ug/L	100	---	130	---	---	6	30%	
1,2-Dichloropropane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Ethylbenzene	**212**	25.0	50.0	ug/L	100	---	212	---	---	0.1	30%	
Hexachlorobutadiene	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
2-Hexanone	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Isopropylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Methylene chloride	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Naphthalene	**9760**	100	200	ug/L	100	---	9490	---	---	3	30%	
n-Propylbenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Styrene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
Toluene	**104**	50.0	100	ug/L	100	---	101	---	---	3	30%	
1,2,3-Trichlorobenzene	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Duplicate (9110370-DUP1)			Prepared: 11/01/19 12:15 Analyzed: 11/01/19 15:33									
QC Source Sample: PDI-037PW-04-06-191028 (A9J1114-03)												
1,1,2-Trichloroethane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Trichloroethene (TCE)	**3980**	20.0	40.0	ug/L	100	---	3850	---	---	3	30%	
Trichlorofluoromethane	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Vinyl chloride	**5600**	20.0	40.0	ug/L	100	---	5300	---	---	6	30%	
m,p-Xylene	**103**	50.0	100	ug/L	100	---	98.9	---	---	4	30%	
o-Xylene	**69.9**	25.0	50.0	ug/L	100	---	65.8	---	---	6	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 106 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*102 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*				*"*			
Matrix Spike (9110370-MS1)			Prepared: 11/01/19 12:15 Analyzed: 11/01/19 21:49									
QC Source Sample: Non-SDG (A9J1116-02)												
EPA 8260C												
Acetone	40.9	10.0	20.0	ug/L	1	40.0	ND	102	39-160%	---	---	
Acrylonitrile	21.2	1.00	2.00	ug/L	1	20.0	ND	106	63-135%	---	---	
Benzene	21.3	0.100	0.200	ug/L	1	20.0	ND	106	79-120%	---	---	
Bromobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Bromochloromethane	23.5	0.500	1.00	ug/L	1	20.0	ND	118	78-123%	---	---	
Bromodichloromethane	21.4	0.500	1.00	ug/L	1	20.0	ND	107	79-125%	---	---	
Bromoform	24.2	0.500	1.00	ug/L	1	20.0	ND	121	66-130%	---	---	Q-54b
Bromomethane	25.5	5.00	5.00	ug/L	1	20.0	ND	127	53-141%	---	---	
2-Butanone (MEK)	39.7	5.00	10.0	ug/L	1	40.0	ND	99	56-143%	---	---	
n-Butylbenzene	21.1	0.500	1.00	ug/L	1	20.0	ND	105	75-128%	---	---	
sec-Butylbenzene	20.2	0.500	1.00	ug/L	1	20.0	ND	101	77-126%	---	---	
tert-Butylbenzene	19.0	0.500	1.00	ug/L	1	20.0	ND	95	78-124%	---	---	
Carbon disulfide	20.5	5.00	10.0	ug/L	1	20.0	ND	102	64-133%	---	---	
Carbon tetrachloride	22.0	0.500	1.00	ug/L	1	20.0	ND	110	72-136%	---	---	
Chlorobenzene	20.7	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
Chloroethane	19.8	5.00	5.00	ug/L	1	20.0	ND	99	60-138%	---	---	
Chloroform	21.0	0.500	1.00	ug/L	1	20.0	ND	105	79-124%	---	---	

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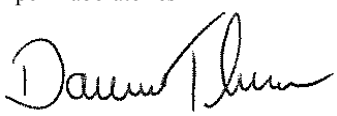

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Darwin Thomas, Business Development Director

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Matrix Spike (9110370-MS1)			Prepared: 11/01/19 12:15		Analyzed: 11/01/19 21:49							
QC Source Sample: Non-SDG (A9J1116-02)												
Chloromethane	20.6	2.50	5.00	ug/L	1	20.0	ND	103	50-139%	---	---	
2-Chlorotoluene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	79-122%	---	---	
4-Chlorotoluene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	78-122%	---	---	
Dibromochloromethane	25.1	0.500	1.00	ug/L	1	20.0	ND	125	74-126%	---	---	Q-54e
1,2-Dibromo-3-chloropropane	20.0	2.50	5.00	ug/L	1	20.0	ND	100	62-128%	---	---	
1,2-Dibromoethane (EDB)	20.1	0.250	0.500	ug/L	1	20.0	ND	100	77-121%	---	---	
Dibromomethane	22.2	0.500	1.00	ug/L	1	20.0	ND	111	79-123%	---	---	
1,2-Dichlorobenzene	20.3	0.250	0.500	ug/L	1	20.0	ND	102	80-120%	---	---	
1,3-Dichlorobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	---	---	
1,4-Dichlorobenzene	20.4	0.250	0.500	ug/L	1	20.0	ND	102	79-120%	---	---	
Dichlorodifluoromethane	25.9	0.500	1.00	ug/L	1	20.0	ND	129	32-152%	---	---	
1,1-Dichloroethane	20.0	0.200	0.400	ug/L	1	20.0	ND	100	77-125%	---	---	
1,2-Dichloroethane (EDC)	19.3	0.200	0.400	ug/L	1	20.0	ND	96	73-128%	---	---	
1,1-Dichloroethene	20.7	0.200	0.400	ug/L	1	20.0	ND	104	71-131%	---	---	
cis-1,2-Dichloroethene	20.4	0.200	0.400	ug/L	1	20.0	ND	102	78-123%	---	---	
trans-1,2-Dichloroethene	21.5	0.200	0.400	ug/L	1	20.0	ND	107	75-124%	---	---	
1,2-Dichloropropane	20.7	0.250	0.500	ug/L	1	20.0	ND	104	78-122%	---	---	
1,3-Dichloropropane	20.4	0.500	1.00	ug/L	1	20.0	ND	102	80-120%	---	---	
2,2-Dichloropropane	15.7	0.500	1.00	ug/L	1	20.0	ND	79	60-139%	---	---	
1,1-Dichloropropene	20.8	0.500	1.00	ug/L	1	20.0	ND	104	79-125%	---	---	
cis-1,3-Dichloropropene	18.3	0.500	1.00	ug/L	1	20.0	ND	91	75-124%	---	---	
trans-1,3-Dichloropropene	18.3	0.500	1.00	ug/L	1	20.0	ND	91	73-127%	---	---	
Ethylbenzene	20.0	0.250	0.500	ug/L	1	20.0	ND	100	79-121%	---	---	
Hexachlorobutadiene	19.5	2.50	5.00	ug/L	1	20.0	ND	98	66-134%	---	---	
2-Hexanone	38.4	5.00	10.0	ug/L	1	40.0	ND	96	57-139%	---	---	
Isopropylbenzene	20.4	0.500	1.00	ug/L	1	20.0	ND	102	72-131%	---	---	
4-Isopropyltoluene	20.5	0.500	1.00	ug/L	1	20.0	ND	103	77-127%	---	---	
Methylene chloride	19.7	2.50	5.00	ug/L	1	20.0	ND	99	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	39.1	5.00	10.0	ug/L	1	40.0	ND	98	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	17.9	0.500	1.00	ug/L	1	20.0	ND	90	71-124%	---	---	
Naphthalene	19.0	1.00	2.00	ug/L	1	20.0	ND	95	61-128%	---	---	
n-Propylbenzene	20.2	0.250	0.500	ug/L	1	20.0	ND	101	76-126%	---	---	
Styrene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	78-123%	---	---	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110370 - EPA 5030B							**Water**					
Matrix Spike (9110370-MS1)			Prepared: 11/01/19 12:15		Analyzed: 11/01/19 21:49							
QC Source Sample: Non-SDG (A9J1116-02)												
1,1,1,2-Tetrachloroethane	21.8	0.200	0.400	ug/L	1	20.0	ND	109	78-124%	---	---	
1,1,2,2-Tetrachloroethane	20.6	0.250	0.500	ug/L	1	20.0	ND	103	71-121%	---	---	
Tetrachloroethene (PCE)	21.6	0.200	0.400	ug/L	1	20.0	ND	108	74-129%	---	---	
Toluene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	80-121%	---	---	
1,2,3-Trichlorobenzene	20.2	1.00	2.00	ug/L	1	20.0	ND	101	69-129%	---	---	
1,2,4-Trichlorobenzene	19.7	1.00	2.00	ug/L	1	20.0	ND	98	69-130%	---	---	
1,1,1-Trichloroethane	20.0	0.200	0.400	ug/L	1	20.0	ND	100	74-131%	---	---	
1,1,2-Trichloroethane	21.2	0.250	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
Trichloroethene (TCE)	21.7	0.200	0.400	ug/L	1	20.0	ND	108	79-123%	---	---	
Trichlorofluoromethane	23.3	1.00	2.00	ug/L	1	20.0	ND	116	65-141%	---	---	
1,2,3-Trichloropropane	20.3	0.500	1.00	ug/L	1	20.0	ND	101	73-122%	---	---	
1,2,4-Trimethylbenzene	20.4	0.500	1.00	ug/L	1	20.0	ND	102	76-124%	---	---	
1,3,5-Trimethylbenzene	20.2	0.500	1.00	ug/L	1	20.0	ND	101	75-124%	---	---	
Vinyl chloride	23.4	0.200	0.400	ug/L	1	20.0	ND	117	58-137%	---	---	
m,p-Xylene	40.6	0.500	1.00	ug/L	1	40.0	ND	102	80-121%	---	---	
o-Xylene	20.0	0.250	0.500	ug/L	1	20.0	ND	100	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 105 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*96 %*		*80-120 %*			*"*				

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Blank (9110371-BLK1)			Prepared: 11/01/19 13:33		Analyzed: 11/01/19 14:45							
EPA 8260C												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Blank (9110371-BLK1)			Prepared: 11/01/19 13:33		Analyzed: 11/01/19 14:45							
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 104 %* *Limits: 80-120 %* *Dilution: 1x*

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Blank (9110371-BLK1)				Prepared: 11/01/19 13:33 Analyzed: 11/01/19 14:45								
Surr: Toluene-d8 (Surr)			*Recovery: 100 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*			*"*					
LCS (9110371-BS1)				Prepared: 11/01/19 13:33 Analyzed: 11/01/19 13:50								
EPA 8260C												
Acetone	38.8	10.0	20.0	ug/L	1	40.0	---	97	80-120%	---	---	
Acrylonitrile	21.2	1.00	2.00	ug/L	1	20.0	---	106	80-120%	---	---	
Benzene	21.5	0.100	0.200	ug/L	1	20.0	---	108	80-120%	---	---	
Bromobenzene	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Bromochloromethane	21.0	0.500	1.00	ug/L	1	20.0	---	105	80-120%	---	---	
Bromodichloromethane	22.0	0.500	1.00	ug/L	1	20.0	---	110	80-120%	---	---	
Bromoform	19.8	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
Bromomethane	19.4	5.00	5.00	ug/L	1	20.0	---	97	80-120%	---	---	
2-Butanone (MEK)	43.3	5.00	10.0	ug/L	1	40.0	---	108	80-120%	---	---	
n-Butylbenzene	24.5	0.500	1.00	ug/L	1	20.0	---	**123**	**80-120%**	---	---	Q-56
sec-Butylbenzene	22.9	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
tert-Butylbenzene	23.2	0.500	1.00	ug/L	1	20.0	---	116	80-120%	---	---	
Carbon disulfide	21.1	5.00	10.0	ug/L	1	20.0	---	106	80-120%	---	---	
Carbon tetrachloride	23.5	0.500	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
Chlorobenzene	20.8	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Chloroethane	21.4	5.00	5.00	ug/L	1	20.0	---	107	80-120%	---	---	
Chloroform	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
Chloromethane	19.0	2.50	5.00	ug/L	1	20.0	---	95	80-120%	---	---	
2-Chlorotoluene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
4-Chlorotoluene	22.8	0.500	1.00	ug/L	1	20.0	---	114	80-120%	---	---	
Dibromochloromethane	21.2	0.500	1.00	ug/L	1	20.0	---	106	80-120%	---	---	
1,2-Dibromo-3-chloropropane	21.4	2.50	5.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dibromoethane (EDB)	21.8	0.250	0.500	ug/L	1	20.0	---	109	80-120%	---	---	
Dibromomethane	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichlorobenzene	22.2	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
1,3-Dichlorobenzene	22.4	0.250	0.500	ug/L	1	20.0	---	112	80-120%	---	---	
1,4-Dichlorobenzene	20.0	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Dichlorodifluoromethane	20.6	0.500	1.00	ug/L	1	20.0	---	103	80-120%	---	---	
1,1-Dichloroethane	20.7	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
LCS (9110371-BS1)			Prepared: 11/01/19 13:33		Analyzed: 11/01/19 13:50							
1,2-Dichloroethane (EDC)	21.2	0.200	0.400	ug/L	1	20.0	---	106	80-120%	---	---	
1,1-Dichloroethene	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
cis-1,2-Dichloroethene	21.8	0.200	0.400	ug/L	1	20.0	---	109	80-120%	---	---	
trans-1,2-Dichloroethene	21.5	0.200	0.400	ug/L	1	20.0	---	107	80-120%	---	---	
1,2-Dichloropropane	20.5	0.250	0.500	ug/L	1	20.0	---	102	80-120%	---	---	
1,3-Dichloropropane	21.6	0.500	1.00	ug/L	1	20.0	---	108	80-120%	---	---	
2,2-Dichloropropane	25.0	0.500	1.00	ug/L	1	20.0	---	**125**	**80-120%**	---	---	Q-56
1,1-Dichloropropene	23.8	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
cis-1,3-Dichloropropene	21.7	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
trans-1,3-Dichloropropene	23.6	0.500	1.00	ug/L	1	20.0	---	118	80-120%	---	---	
Ethylbenzene	21.5	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Hexachlorobutadiene	23.7	2.50	5.00	ug/L	1	20.0	---	118	80-120%	---	---	
2-Hexanone	44.6	5.00	10.0	ug/L	1	40.0	---	112	80-120%	---	---	
Isopropylbenzene	22.6	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
4-Isopropyltoluene	23.0	0.500	1.00	ug/L	1	20.0	---	115	80-120%	---	---	
Methylene chloride	21.6	5.00	10.0	ug/L	1	20.0	---	108	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	44.0	5.00	10.0	ug/L	1	40.0	---	110	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	22.5	0.500	1.00	ug/L	1	20.0	---	113	80-120%	---	---	
Naphthalene	22.0	1.00	2.00	ug/L	1	20.0	---	110	80-120%	---	---	
n-Propylbenzene	22.2	0.250	0.500	ug/L	1	20.0	---	111	80-120%	---	---	
Styrene	21.4	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,1,1,2-Tetrachloroethane	22.3	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,2,2-Tetrachloroethane	21.4	0.250	0.500	ug/L	1	20.0	---	107	80-120%	---	---	
Tetrachloroethene (PCE)	21.7	0.200	0.400	ug/L	1	20.0	---	108	80-120%	---	---	
Toluene	20.4	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	25.0	1.00	2.00	ug/L	1	20.0	---	**125**	**80-120%**	---	---	Q-56
1,2,4-Trichlorobenzene	24.1	1.00	2.00	ug/L	1	20.0	---	120	80-120%	---	---	
1,1,1-Trichloroethane	22.4	0.200	0.400	ug/L	1	20.0	---	112	80-120%	---	---	
1,1,2-Trichloroethane	21.6	0.250	0.500	ug/L	1	20.0	---	108	80-120%	---	---	
Trichloroethene (TCE)	20.5	0.200	0.400	ug/L	1	20.0	---	103	80-120%	---	---	
Trichlorofluoromethane	21.8	1.00	2.00	ug/L	1	20.0	---	109	80-120%	---	---	
1,2,3-Trichloropropane	21.3	0.500	1.00	ug/L	1	20.0	---	107	80-120%	---	---	
1,2,4-Trimethylbenzene	23.3	0.500	1.00	ug/L	1	20.0	---	117	80-120%	---	---	
1,3,5-Trimethylbenzene	23.6	0.500	1.00	ug/L	1	20.0	---	118	80-120%	---	---	

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
LCS (9110371-BS1)			Prepared: 11/01/19 13:33 Analyzed: 11/01/19 13:50									
Vinyl chloride	20.7	0.200	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
m,p-Xylene	45.7	0.500	1.00	ug/L	1	40.0	---	114	80-120%	---	---	
o-Xylene	23.3	0.250	0.500	ug/L	1	20.0	---	117	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 97 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				
Duplicate (9110371-DUP1)			Prepared: 11/01/19 13:33 Analyzed: 11/01/19 21:04									
QC Source Sample: Non-SDG (A9K0018-01)												
Acetone	ND	100	200	ug/L	10	---	ND	---	---	---	30%	
Acrylonitrile	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
Benzene	ND	1.00	2.00	ug/L	10	---	ND	---	---	---	30%	
Bromobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Bromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromodichloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromoform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Bromomethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
n-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Carbon disulfide	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Chlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Chloroethane	ND	50.0	50.0	ug/L	10	---	ND	---	---	---	30%	
Chloroform	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Chloromethane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Dibromochloromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Dibromomethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Duplicate (9110371-DUP1)			Prepared: 11/01/19 13:33		Analyzed: 11/01/19 21:04							
QC Source Sample: Non-SDG (A9K0018-01)												
1,3-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	**15.3**	2.00	4.00	ug/L	10	---	15.7	---	---	3	30%	
trans-1,2-Dichloroethene	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Ethylbenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	25.0	50.0	ug/L	10	---	ND	---	---	---	30%	
2-Hexanone	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Isopropylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Methylene chloride	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	50.0	100	ug/L	10	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Naphthalene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
n-Propylbenzene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Styrene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	**7.40**	2.00	4.00	ug/L	10	---	7.80	---	---	5	30%	
Toluene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Duplicate (9110371-DUP1)			Prepared: 11/01/19 13:33		Analyzed: 11/01/19 21:04							
QC Source Sample: Non-SDG (A9K0018-01)												
Trichloroethene (TCE)	**159**	2.00	4.00	ug/L	10	---	160	---	---	0.6	30%	
Trichlorofluoromethane	ND	10.0	20.0	ug/L	10	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
Vinyl chloride	ND	2.00	4.00	ug/L	10	---	ND	---	---	---	30%	
m,p-Xylene	ND	5.00	10.0	ug/L	10	---	ND	---	---	---	30%	
o-Xylene	ND	2.50	5.00	ug/L	10	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*108 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				
Matrix Spike (9110371-MS1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:13							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
EPA 8260C												
Acetone	41.7	10.0	20.0	ug/L	1	40.0	ND	104	39-160%	---	---	
Acrylonitrile	21.2	1.00	2.00	ug/L	1	20.0	ND	106	63-135%	---	---	
Benzene	22.0	0.100	0.200	ug/L	1	20.0	ND	110	79-120%	---	---	
Bromobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	---	---	
Bromochloromethane	20.7	0.500	1.00	ug/L	1	20.0	ND	104	78-123%	---	---	
Bromodichloromethane	21.0	0.500	1.00	ug/L	1	20.0	ND	105	79-125%	---	---	
Bromoform	19.2	0.500	1.00	ug/L	1	20.0	ND	96	66-130%	---	---	
Bromomethane	17.6	5.00	5.00	ug/L	1	20.0	ND	88	53-141%	---	---	
2-Butanone (MEK)	42.9	5.00	10.0	ug/L	1	40.0	ND	107	56-143%	---	---	
n-Butylbenzene	24.4	0.500	1.00	ug/L	1	20.0	ND	122	75-128%	---	---	Q-54a
sec-Butylbenzene	23.3	0.500	1.00	ug/L	1	20.0	ND	117	77-126%	---	---	
tert-Butylbenzene	23.4	0.500	1.00	ug/L	1	20.0	ND	117	78-124%	---	---	
Carbon disulfide	21.5	5.00	10.0	ug/L	1	20.0	ND	108	64-133%	---	---	
Carbon tetrachloride	23.0	0.500	1.00	ug/L	1	20.0	ND	115	72-136%	---	---	
Chlorobenzene	20.9	0.250	0.500	ug/L	1	20.0	ND	105	80-120%	---	---	
Chloroethane	23.6	5.00	5.00	ug/L	1	20.0	ND	118	60-138%	---	---	
Chloroform	21.2	0.500	1.00	ug/L	1	20.0	ND	106	79-124%	---	---	
Chloromethane	25.4	2.50	5.00	ug/L	1	20.0	ND	127	50-139%	---	---	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Matrix Spike (9110371-MS1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:13							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
2-Chlorotoluene	23.1	0.500	1.00	ug/L	1	20.0	ND	115	79-122%	---	---	
4-Chlorotoluene	23.0	0.500	1.00	ug/L	1	20.0	ND	115	78-122%	---	---	
Dibromochloromethane	20.6	0.500	1.00	ug/L	1	20.0	ND	103	74-126%	---	---	
1,2-Dibromo-3-chloropropane	21.2	2.50	5.00	ug/L	1	20.0	ND	106	62-128%	---	---	
1,2-Dibromoethane (EDB)	22.2	0.250	0.500	ug/L	1	20.0	ND	111	77-121%	---	---	
Dibromomethane	19.9	0.500	1.00	ug/L	1	20.0	ND	99	79-123%	---	---	
1,2-Dichlorobenzene	22.4	0.250	0.500	ug/L	1	20.0	ND	112	80-120%	---	---	
1,3-Dichlorobenzene	22.4	0.250	0.500	ug/L	1	20.0	ND	112	80-120%	---	---	
1,4-Dichlorobenzene	20.0	0.250	0.500	ug/L	1	20.0	ND	100	79-120%	---	---	
Dichlorodifluoromethane	27.6	0.500	1.00	ug/L	1	20.0	ND	138	32-152%	---	---	
1,1-Dichloroethane	22.8	0.200	0.400	ug/L	1	20.0	2.01	104	77-125%	---	---	
1,2-Dichloroethane (EDC)	20.2	0.200	0.400	ug/L	1	20.0	ND	101	73-128%	---	---	
1,1-Dichloroethene	23.6	0.200	0.400	ug/L	1	20.0	1.02	113	71-131%	---	---	
cis-1,2-Dichloroethene	223	0.200	0.400	ug/L	1	20.0	202	109	78-123%	---	---	E
trans-1,2-Dichloroethene	39.5	0.200	0.400	ug/L	1	20.0	16.7	114	75-124%	---	---	
1,2-Dichloropropane	20.8	0.250	0.500	ug/L	1	20.0	ND	104	78-122%	---	---	
1,3-Dichloropropane	21.7	0.500	1.00	ug/L	1	20.0	ND	108	80-120%	---	---	
2,2-Dichloropropane	19.0	0.500	1.00	ug/L	1	20.0	ND	95	60-139%	---	---	Q-54d
1,1-Dichloropropene	24.4	0.500	1.00	ug/L	1	20.0	ND	122	79-125%	---	---	
cis-1,3-Dichloropropene	19.8	0.500	1.00	ug/L	1	20.0	ND	99	75-124%	---	---	
trans-1,3-Dichloropropene	22.0	0.500	1.00	ug/L	1	20.0	ND	110	73-127%	---	---	
Ethylbenzene	22.0	0.250	0.500	ug/L	1	20.0	ND	110	79-121%	---	---	
Hexachlorobutadiene	23.6	2.50	5.00	ug/L	1	20.0	ND	118	66-134%	---	---	
2-Hexanone	45.9	5.00	10.0	ug/L	1	40.0	ND	115	57-139%	---	---	
Isopropylbenzene	23.9	0.500	1.00	ug/L	1	20.0	ND	120	72-131%	---	---	
4-Isopropyltoluene	23.5	0.500	1.00	ug/L	1	20.0	ND	118	77-127%	---	---	
Methylene chloride	21.9	5.00	10.0	ug/L	1	20.0	ND	109	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	44.8	5.00	10.0	ug/L	1	40.0	ND	112	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	23.2	0.500	1.00	ug/L	1	20.0	ND	116	71-124%	---	---	
Naphthalene	23.6	1.00	2.00	ug/L	1	20.0	ND	118	61-128%	---	---	
n-Propylbenzene	22.2	0.250	0.500	ug/L	1	20.0	ND	111	76-126%	---	---	
Styrene	21.8	0.500	1.00	ug/L	1	20.0	ND	109	78-123%	---	---	
1,1,1,2-Tetrachloroethane	21.8	0.200	0.400	ug/L	1	20.0	ND	109	78-124%	---	---	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Matrix Spike (9110371-MS1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:13							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
1,1,2,2-Tetrachloroethane	21.0	0.250	0.500	ug/L	1	20.0	ND	105	71-121%	---	---	
Tetrachloroethene (PCE)	21.9	0.200	0.400	ug/L	1	20.0	0.230	109	74-129%	---	---	
Toluene	20.8	0.500	1.00	ug/L	1	20.0	ND	104	80-121%	---	---	
1,2,3-Trichlorobenzene	25.3	1.00	2.00	ug/L	1	20.0	ND	127	69-129%	---	---	Q-54c
1,2,4-Trichlorobenzene	25.4	1.00	2.00	ug/L	1	20.0	ND	127	69-130%	---	---	
1,1,1-Trichloroethane	22.2	0.200	0.400	ug/L	1	20.0	ND	111	74-131%	---	---	
1,1,2-Trichloroethane	21.2	0.250	0.500	ug/L	1	20.0	ND	106	80-120%	---	---	
Trichloroethene (TCE)	31.6	0.200	0.400	ug/L	1	20.0	10.2	107	79-123%	---	---	
Trichlorofluoromethane	22.3	1.00	2.00	ug/L	1	20.0	ND	112	65-141%	---	---	
1,2,3-Trichloropropane	20.4	0.500	1.00	ug/L	1	20.0	ND	102	73-122%	---	---	
1,2,4-Trimethylbenzene	23.5	0.500	1.00	ug/L	1	20.0	ND	118	76-124%	---	---	
1,3,5-Trimethylbenzene	23.7	0.500	1.00	ug/L	1	20.0	ND	118	75-124%	---	---	
Vinyl chloride	29.2	0.200	0.400	ug/L	1	20.0	5.36	119	58-137%	---	---	
m,p-Xylene	46.4	0.500	1.00	ug/L	1	40.0	ND	116	80-121%	---	---	
o-Xylene	24.3	0.250	0.500	ug/L	1	20.0	ND	122	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*99 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*				*"*			
Matrix Spike Dup (9110371-MSD1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:40							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
Acetone	41.0	10.0	20.0	ug/L	1	40.0	ND	103	39-160%	2	30%	
Acrylonitrile	21.1	1.00	2.00	ug/L	1	20.0	ND	106	63-135%	0.3	30%	
Benzene	21.8	0.100	0.200	ug/L	1	20.0	ND	109	79-120%	1	30%	
Bromobenzene	20.8	0.250	0.500	ug/L	1	20.0	ND	104	80-120%	3	30%	
Bromochloromethane	20.8	0.500	1.00	ug/L	1	20.0	ND	104	78-123%	0.3	30%	
Bromodichloromethane	20.8	0.500	1.00	ug/L	1	20.0	ND	104	79-125%	1	30%	
Bromoform	18.3	0.500	1.00	ug/L	1	20.0	ND	91	66-130%	5	30%	
Bromomethane	17.4	5.00	5.00	ug/L	1	20.0	ND	87	53-141%	1	30%	
2-Butanone (MEK)	43.6	5.00	10.0	ug/L	1	40.0	ND	109	56-143%	2	30%	
n-Butylbenzene	23.5	0.500	1.00	ug/L	1	20.0	ND	117	75-128%	4	30%	Q-54a
sec-Butylbenzene	22.4	0.500	1.00	ug/L	1	20.0	ND	112	77-126%	4	30%	
tert-Butylbenzene	22.7	0.500	1.00	ug/L	1	20.0	ND	114	78-124%	3	30%	

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Darwin Thomas, Business Development Director

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Matrix Spike Dup (9110371-MSD1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:40							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
Carbon disulfide	21.8	5.00	10.0	ug/L	1	20.0	ND	109	64-133%	1	30%	
Carbon tetrachloride	22.7	0.500	1.00	ug/L	1	20.0	ND	114	72-136%	1	30%	
Chlorobenzene	20.1	0.250	0.500	ug/L	1	20.0	ND	101	80-120%	4	30%	
Chloroethane	23.7	5.00	5.00	ug/L	1	20.0	ND	118	60-138%	0.1	30%	
Chloroform	21.0	0.500	1.00	ug/L	1	20.0	ND	105	79-124%	0.8	30%	
Chloromethane	25.2	2.50	5.00	ug/L	1	20.0	ND	126	50-139%	0.8	30%	
2-Chlorotoluene	22.2	0.500	1.00	ug/L	1	20.0	ND	111	79-122%	4	30%	
4-Chlorotoluene	22.5	0.500	1.00	ug/L	1	20.0	ND	113	78-122%	2	30%	
Dibromochloromethane	19.7	0.500	1.00	ug/L	1	20.0	ND	99	74-126%	4	30%	
1,2-Dibromo-3-chloropropane	20.4	2.50	5.00	ug/L	1	20.0	ND	102	62-128%	4	30%	
1,2-Dibromoethane (EDB)	21.4	0.250	0.500	ug/L	1	20.0	ND	107	77-121%	4	30%	
Dibromomethane	19.8	0.500	1.00	ug/L	1	20.0	ND	99	79-123%	0.6	30%	
1,2-Dichlorobenzene	21.7	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	3	30%	
1,3-Dichlorobenzene	21.5	0.250	0.500	ug/L	1	20.0	ND	108	80-120%	4	30%	
1,4-Dichlorobenzene	19.2	0.250	0.500	ug/L	1	20.0	ND	96	79-120%	4	30%	
Dichlorodifluoromethane	27.3	0.500	1.00	ug/L	1	20.0	ND	137	32-152%	1	30%	
1,1-Dichloroethane	22.9	0.200	0.400	ug/L	1	20.0	2.01	104	77-125%	0.3	30%	
1,2-Dichloroethane (EDC)	20.2	0.200	0.400	ug/L	1	20.0	ND	101	73-128%	0.2	30%	
1,1-Dichloroethene	23.8	0.200	0.400	ug/L	1	20.0	1.02	114	71-131%	0.8	30%	
cis-1,2-Dichloroethene	230	0.200	0.400	ug/L	1	20.0	202	**142**	**78-123%**	3	30%	E, Q-03
trans-1,2-Dichloroethene	40.2	0.200	0.400	ug/L	1	20.0	16.7	117	75-124%	2	30%	
1,2-Dichloropropane	20.8	0.250	0.500	ug/L	1	20.0	ND	104	78-122%	0.4	30%	
1,3-Dichloropropane	21.0	0.500	1.00	ug/L	1	20.0	ND	105	80-120%	3	30%	
2,2-Dichloropropane	18.8	0.500	1.00	ug/L	1	20.0	ND	94	60-139%	0.8	30%	Q-54d
1,1-Dichloropropene	24.1	0.500	1.00	ug/L	1	20.0	ND	121	79-125%	1	30%	
cis-1,3-Dichloropropene	19.6	0.500	1.00	ug/L	1	20.0	ND	98	75-124%	1	30%	
trans-1,3-Dichloropropene	21.6	0.500	1.00	ug/L	1	20.0	ND	108	73-127%	2	30%	
Ethylbenzene	21.2	0.250	0.500	ug/L	1	20.0	ND	106	79-121%	4	30%	
Hexachlorobutadiene	22.4	2.50	5.00	ug/L	1	20.0	ND	112	66-134%	5	30%	
2-Hexanone	45.1	5.00	10.0	ug/L	1	40.0	ND	113	57-139%	2	30%	
Isopropylbenzene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	72-131%	5	30%	
4-Isopropyltoluene	22.5	0.500	1.00	ug/L	1	20.0	ND	113	77-127%	4	30%	
Methylene chloride	21.5	5.00	10.0	ug/L	1	20.0	ND	108	74-124%	2	30%	

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110371 - EPA 5030B							**Water**					
Matrix Spike Dup (9110371-MSD1)			Prepared: 11/01/19 13:33		Analyzed: 11/02/19 00:40							
QC Source Sample: Non-SDG (A9J1110-09RE1)												
4-Methyl-2-pentanone (MiBK)	44.2	5.00	10.0	ug/L	1	40.0	ND	111	67-130%	1	30%	
Methyl tert-butyl ether (MTBE)	23.1	0.500	1.00	ug/L	1	20.0	ND	116	71-124%	0.5	30%	
Naphthalene	22.7	1.00	2.00	ug/L	1	20.0	ND	114	61-128%	4	30%	
n-Propylbenzene	21.8	0.250	0.500	ug/L	1	20.0	ND	109	76-126%	2	30%	
Styrene	21.1	0.500	1.00	ug/L	1	20.0	ND	106	78-123%	3	30%	
1,1,1,2-Tetrachloroethane	21.0	0.200	0.400	ug/L	1	20.0	ND	105	78-124%	4	30%	
1,1,2,2-Tetrachloroethane	20.5	0.250	0.500	ug/L	1	20.0	ND	102	71-121%	3	30%	
Tetrachloroethene (PCE)	20.9	0.200	0.400	ug/L	1	20.0	0.230	103	74-129%	5	30%	
Toluene	20.0	0.500	1.00	ug/L	1	20.0	ND	100	80-121%	3	30%	
1,2,3-Trichlorobenzene	24.3	1.00	2.00	ug/L	1	20.0	ND	121	69-129%	4	30%	Q-54c
1,2,4-Trichlorobenzene	23.9	1.00	2.00	ug/L	1	20.0	ND	120	69-130%	6	30%	
1,1,1-Trichloroethane	22.1	0.200	0.400	ug/L	1	20.0	ND	110	74-131%	0.5	30%	
1,1,2-Trichloroethane	20.7	0.250	0.500	ug/L	1	20.0	ND	103	80-120%	3	30%	
Trichloroethene (TCE)	30.9	0.200	0.400	ug/L	1	20.0	10.2	104	79-123%	2	30%	
Trichlorofluoromethane	21.9	1.00	2.00	ug/L	1	20.0	ND	109	65-141%	2	30%	
1,2,3-Trichloropropane	19.5	0.500	1.00	ug/L	1	20.0	ND	98	73-122%	4	30%	
1,2,4-Trimethylbenzene	22.8	0.500	1.00	ug/L	1	20.0	ND	114	76-124%	3	30%	
1,3,5-Trimethylbenzene	23.0	0.500	1.00	ug/L	1	20.0	ND	115	75-124%	3	30%	
Vinyl chloride	29.4	0.200	0.400	ug/L	1	20.0	5.36	120	58-137%	0.8	30%	
m,p-Xylene	45.1	0.500	1.00	ug/L	1	40.0	ND	113	80-121%	3	30%	
o-Xylene	23.7	0.250	0.500	ug/L	1	20.0	ND	119	78-122%	2	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 98 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*99 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*101 %*		*80-120 %*			*"*				

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Blank (9110413-BLK1)			Prepared: 11/04/19 09:00		Analyzed: 11/04/19 11:22							
EPA 8260C												
Acetone	ND	10.0	20.0	ug/L	1	---	---	---	---	---	---	
Acrylonitrile	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
Benzene	ND	0.100	0.200	ug/L	1	---	---	---	---	---	---	
Bromobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Bromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromodichloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromoform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Bromomethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
2-Butanone (MEK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
n-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
sec-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
tert-Butylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Carbon disulfide	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Carbon tetrachloride	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Chloroethane	ND	5.00	5.00	ug/L	1	---	---	---	---	---	---	
Chloroform	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Chloromethane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Chlorotoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Dibromochloromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dibromomethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	

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Darwin Thomas, Business Development Director

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Blank (9110413-BLK1)			Prepared: 11/04/19 09:00		Analyzed: 11/04/19 11:22							
1,2-Dichloropropane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
1,3-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
2,2-Dichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Ethylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
2-Hexanone	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Isopropylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
4-Isopropyltoluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Methylene chloride	ND	2.50	5.00	ug/L	1	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	5.00	10.0	ug/L	1	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
n-Propylbenzene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Styrene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Toluene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
Trichlorofluoromethane	ND	1.00	2.00	ug/L	1	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
Vinyl chloride	ND	0.200	0.400	ug/L	1	---	---	---	---	---	---	
m,p-Xylene	ND	0.500	1.00	ug/L	1	---	---	---	---	---	---	
o-Xylene	ND	0.250	0.500	ug/L	1	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 104 %* *Limits: 80-120 %* *Dilution: 1x*

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Blank (9110413-BLK1)				Prepared: 11/04/19 09:00 Analyzed: 11/04/19 11:22								
Surr: Toluene-d8 (Surr)			*Recovery: 102 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*			*"*					
LCS (9110413-BS1)				Prepared: 11/04/19 09:00 Analyzed: 11/04/19 10:28								
EPA 8260C												
Acetone	36.1	10.0	20.0	ug/L	1	40.0	---	90	80-120%	---	---	
Acrylonitrile	21.4	1.00	2.00	ug/L	1	20.0	---	107	80-120%	---	---	
Benzene	19.4	0.100	0.200	ug/L	1	20.0	---	97	80-120%	---	---	
Bromobenzene	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Bromochloromethane	21.9	0.500	1.00	ug/L	1	20.0	---	109	80-120%	---	---	
Bromodichloromethane	20.5	0.500	1.00	ug/L	1	20.0	---	102	80-120%	---	---	
Bromoform	23.8	0.500	1.00	ug/L	1	20.0	---	119	80-120%	---	---	
Bromomethane	22.9	5.00	5.00	ug/L	1	20.0	---	114	80-120%	---	---	
2-Butanone (MEK)	39.5	5.00	10.0	ug/L	1	40.0	---	99	80-120%	---	---	
n-Butylbenzene	20.2	0.500	1.00	ug/L	1	20.0	---	101	80-120%	---	---	
sec-Butylbenzene	19.1	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
tert-Butylbenzene	18.2	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
Carbon disulfide	18.4	5.00	10.0	ug/L	1	20.0	---	92	80-120%	---	---	
Carbon tetrachloride	19.5	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Chlorobenzene	19.2	0.250	0.500	ug/L	1	20.0	---	96	80-120%	---	---	
Chloroethane	16.1	5.00	5.00	ug/L	1	20.0	---	80	80-120%	---	---	
Chloroform	19.5	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
Chloromethane	17.3	2.50	5.00	ug/L	1	20.0	---	87	80-120%	---	---	
2-Chlorotoluene	18.6	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
4-Chlorotoluene	18.9	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
Dibromochloromethane	24.3	0.500	1.00	ug/L	1	20.0	---	**122**	**80-120%**	---	---	Q-56
1,2-Dibromo-3-chloropropane	20.2	2.50	5.00	ug/L	1	20.0	---	101	80-120%	---	---	
1,2-Dibromoethane (EDB)	19.5	0.250	0.500	ug/L	1	20.0	---	98	80-120%	---	---	
Dibromomethane	20.8	0.500	1.00	ug/L	1	20.0	---	104	80-120%	---	---	
1,2-Dichlorobenzene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
1,3-Dichlorobenzene	19.4	0.250	0.500	ug/L	1	20.0	---	97	80-120%	---	---	
1,4-Dichlorobenzene	19.1	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Dichlorodifluoromethane	18.6	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
1,1-Dichloroethane	19.0	0.200	0.400	ug/L	1	20.0	---	95	80-120%	---	---	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
LCS (9110413-BS1)			Prepared: 11/04/19 09:00		Analyzed: 11/04/19 10:28							
1,2-Dichloroethane (EDC)	18.7	0.200	0.400	ug/L	1	20.0	---	94	80-120%	---	---	
1,1-Dichloroethene	18.6	0.200	0.400	ug/L	1	20.0	---	93	80-120%	---	---	
cis-1,2-Dichloroethene	19.2	0.200	0.400	ug/L	1	20.0	---	96	80-120%	---	---	
trans-1,2-Dichloroethene	19.6	0.200	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
1,2-Dichloropropane	19.8	0.250	0.500	ug/L	1	20.0	---	99	80-120%	---	---	
1,3-Dichloropropane	19.7	0.500	1.00	ug/L	1	20.0	---	99	80-120%	---	---	
2,2-Dichloropropane	18.1	0.500	1.00	ug/L	1	20.0	---	91	80-120%	---	---	
1,1-Dichloropropene	18.6	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
cis-1,3-Dichloropropene	19.3	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	
trans-1,3-Dichloropropene	18.7	0.500	1.00	ug/L	1	20.0	---	94	80-120%	---	---	
Ethylbenzene	18.4	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
Hexachlorobutadiene	18.4	2.50	5.00	ug/L	1	20.0	---	92	80-120%	---	---	
2-Hexanone	37.8	5.00	10.0	ug/L	1	40.0	---	94	80-120%	---	---	
Isopropylbenzene	18.7	0.500	1.00	ug/L	1	20.0	---	93	80-120%	---	---	
4-Isopropyltoluene	19.4	0.500	1.00	ug/L	1	20.0	---	97	80-120%	---	---	
Methylene chloride	18.8	2.50	5.00	ug/L	1	20.0	---	94	80-120%	---	---	
4-Methyl-2-pentanone (MiBK)	39.8	5.00	10.0	ug/L	1	40.0	---	99	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	17.9	0.500	1.00	ug/L	1	20.0	---	89	80-120%	---	---	
Naphthalene	18.1	1.00	2.00	ug/L	1	20.0	---	91	80-120%	---	---	
n-Propylbenzene	19.0	0.250	0.500	ug/L	1	20.0	---	95	80-120%	---	---	
Styrene	19.1	0.500	1.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,1,1,2-Tetrachloroethane	20.8	0.200	0.400	ug/L	1	20.0	---	104	80-120%	---	---	
1,1,2,2-Tetrachloroethane	20.7	0.250	0.500	ug/L	1	20.0	---	104	80-120%	---	---	
Tetrachloroethene (PCE)	19.5	0.200	0.400	ug/L	1	20.0	---	97	80-120%	---	---	
Toluene	18.4	0.500	1.00	ug/L	1	20.0	---	92	80-120%	---	---	
1,2,3-Trichlorobenzene	18.9	1.00	2.00	ug/L	1	20.0	---	95	80-120%	---	---	
1,2,4-Trichlorobenzene	18.7	1.00	2.00	ug/L	1	20.0	---	94	80-120%	---	---	
1,1,1-Trichloroethane	18.2	0.200	0.400	ug/L	1	20.0	---	91	80-120%	---	---	
1,1,2-Trichloroethane	20.1	0.250	0.500	ug/L	1	20.0	---	100	80-120%	---	---	
Trichloroethene (TCE)	19.9	0.200	0.400	ug/L	1	20.0	---	99	80-120%	---	---	
Trichlorofluoromethane	19.2	1.00	2.00	ug/L	1	20.0	---	96	80-120%	---	---	
1,2,3-Trichloropropane	20.0	0.500	1.00	ug/L	1	20.0	---	100	80-120%	---	---	
1,2,4-Trimethylbenzene	19.6	0.500	1.00	ug/L	1	20.0	---	98	80-120%	---	---	
1,3,5-Trimethylbenzene	19.3	0.500	1.00	ug/L	1	20.0	---	96	80-120%	---	---	

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Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
LCS (9110413-BS1)			Prepared: 11/04/19 09:00 Analyzed: 11/04/19 10:28									
Vinyl chloride	19.6	0.200	0.400	ug/L	1	20.0	---	98	80-120%	---	---	
m,p-Xylene	37.2	0.500	1.00	ug/L	1	40.0	---	93	80-120%	---	---	
o-Xylene	18.5	0.250	0.500	ug/L	1	20.0	---	92	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*100 %*		*80-120 %*				*"*			
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*				*"*			
Duplicate (9110413-DUP1)			Prepared: 11/04/19 11:08 Analyzed: 11/04/19 15:50									
QC Source Sample: Non-SDG (A9K0039-06)												
Acetone	ND	1000	2000	ug/L	100	---	ND	---	---	---	30%	
Acrylonitrile	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
Benzene	**1520**	10.0	20.0	ug/L	100	---	1470	---	---	3	30%	
Bromobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Bromochloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromodichloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromoform	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Bromomethane	ND	500	500	ug/L	100	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
n-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Carbon disulfide	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Chlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Chloroethane	ND	500	500	ug/L	100	---	ND	---	---	---	30%	
Chloroform	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Chloromethane	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Dibromochloromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Dibromomethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Duplicate (9110413-DUP1)			Prepared: 11/04/19 11:08 Analyzed: 11/04/19 15:50									
QC Source Sample: Non-SDG (A9K0039-06)												
1,3-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Ethylbenzene	**208**	25.0	50.0	ug/L	100	---	198	---	---	5	30%	
Hexachlorobutadiene	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
2-Hexanone	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Isopropylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Methylene chloride	ND	250	500	ug/L	100	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	500	1000	ug/L	100	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Naphthalene	**9360**	100	200	ug/L	100	---	9120	---	---	3	30%	
n-Propylbenzene	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Styrene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
Toluene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	25.0	50.0	ug/L	100	---	ND	---	---	---	30%	

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Darwin Thomas, Business Development Director

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Duplicate (9110413-DUP1)			Prepared: 11/04/19 11:08 Analyzed: 11/04/19 15:50									
QC Source Sample: Non-SDG (A9K0039-06)												
Trichloroethene (TCE)	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	100	200	ug/L	100	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	50.0	100	ug/L	100	---	ND	---	---	---	30%	
Vinyl chloride	ND	20.0	40.0	ug/L	100	---	ND	---	---	---	30%	
m,p-Xylene	**168**	50.0	100	ug/L	100	---	165	---	---	2	30%	
o-Xylene	**82.6**	25.0	50.0	ug/L	100	---	80.2	---	---	3	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*		*Limits: 80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*103 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*		*"*					
Matrix Spike (9110413-MS1)			Prepared: 11/04/19 11:08 Analyzed: 11/04/19 16:44									
QC Source Sample: Non-SDG (A9K0039-07)												
EPA 8260C												
Acetone	3650	1000	2000	ug/L	100	4000	ND	91	39-160%	---	---	
Acrylonitrile	2180	100	200	ug/L	100	2000	ND	109	63-135%	---	---	
Benzene	8980	10.0	20.0	ug/L	100	2000	6830	108	79-120%	---	---	
Bromobenzene	2060	25.0	50.0	ug/L	100	2000	ND	103	80-120%	---	---	
Bromochloromethane	2320	50.0	100	ug/L	100	2000	ND	116	78-123%	---	---	
Bromodichloromethane	2190	50.0	100	ug/L	100	2000	ND	110	79-125%	---	---	
Bromoform	2430	50.0	100	ug/L	100	2000	ND	121	66-130%	---	---	
Bromomethane	2410	500	500	ug/L	100	2000	ND	120	53-141%	---	---	
2-Butanone (MEK)	4030	500	1000	ug/L	100	4000	ND	101	56-143%	---	---	
n-Butylbenzene	2270	50.0	100	ug/L	100	2000	ND	113	75-128%	---	---	
sec-Butylbenzene	2080	50.0	100	ug/L	100	2000	ND	104	77-126%	---	---	
tert-Butylbenzene	1960	50.0	100	ug/L	100	2000	ND	98	78-124%	---	---	
Carbon disulfide	2010	500	1000	ug/L	100	2000	ND	101	64-133%	---	---	
Carbon tetrachloride	2190	50.0	100	ug/L	100	2000	ND	109	72-136%	---	---	
Chlorobenzene	2070	25.0	50.0	ug/L	100	2000	ND	104	80-120%	---	---	
Chloroethane	1670	500	500	ug/L	100	2000	ND	84	60-138%	---	---	
Chloroform	2150	50.0	100	ug/L	100	2000	ND	108	79-124%	---	---	
Chloromethane	1920	250	500	ug/L	100	2000	ND	96	50-139%	---	---	

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Darwin Thomas, Business Development Director

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Matrix Spike (9110413-MS1)			Prepared: 11/04/19 11:08		Analyzed: 11/04/19 16:44							
QC Source Sample: Non-SDG (A9K0039-07)												
2-Chlorotoluene	2010	50.0	100	ug/L	100	2000	ND	101	79-122%	---	---	
4-Chlorotoluene	2010	50.0	100	ug/L	100	2000	ND	101	78-122%	---	---	
Dibromochloromethane	2540	50.0	100	ug/L	100	2000	ND	**127**	**74-126%**	---	---	Q-54
1,2-Dibromo-3-chloropropane	2020	250	500	ug/L	100	2000	ND	101	62-128%	---	---	
1,2-Dibromoethane (EDB)	2040	25.0	50.0	ug/L	100	2000	ND	102	77-121%	---	---	
Dibromomethane	2170	50.0	100	ug/L	100	2000	ND	109	79-123%	---	---	
1,2-Dichlorobenzene	2060	25.0	50.0	ug/L	100	2000	ND	103	80-120%	---	---	
1,3-Dichlorobenzene	2050	25.0	50.0	ug/L	100	2000	ND	103	80-120%	---	---	
1,4-Dichlorobenzene	2040	25.0	50.0	ug/L	100	2000	ND	102	79-120%	---	---	
Dichlorodifluoromethane	2090	50.0	100	ug/L	100	2000	ND	104	32-152%	---	---	
1,1-Dichloroethane	2100	20.0	40.0	ug/L	100	2000	ND	105	77-125%	---	---	
1,2-Dichloroethane (EDC)	1990	20.0	40.0	ug/L	100	2000	ND	99	73-128%	---	---	
1,1-Dichloroethene	2110	20.0	40.0	ug/L	100	2000	ND	106	71-131%	---	---	
cis-1,2-Dichloroethene	2100	20.0	40.0	ug/L	100	2000	ND	105	78-123%	---	---	
trans-1,2-Dichloroethene	2190	20.0	40.0	ug/L	100	2000	ND	110	75-124%	---	---	
1,2-Dichloropropane	2150	25.0	50.0	ug/L	100	2000	ND	108	78-122%	---	---	
1,3-Dichloropropane	2100	50.0	100	ug/L	100	2000	ND	105	80-120%	---	---	
2,2-Dichloropropane	1810	50.0	100	ug/L	100	2000	ND	90	60-139%	---	---	
1,1-Dichloropropene	2120	50.0	100	ug/L	100	2000	ND	106	79-125%	---	---	
cis-1,3-Dichloropropene	1960	50.0	100	ug/L	100	2000	ND	98	75-124%	---	---	
trans-1,3-Dichloropropene	1920	50.0	100	ug/L	100	2000	ND	96	73-127%	---	---	
Ethylbenzene	2340	25.0	50.0	ug/L	100	2000	289	102	79-121%	---	---	
Hexachlorobutadiene	1970	250	500	ug/L	100	2000	ND	98	66-134%	---	---	
2-Hexanone	4000	500	1000	ug/L	100	4000	ND	100	57-139%	---	---	
Isopropylbenzene	2090	50.0	100	ug/L	100	2000	ND	105	72-131%	---	---	
4-Isopropyltoluene	2110	50.0	100	ug/L	100	2000	ND	106	77-127%	---	---	
Methylene chloride	2020	250	500	ug/L	100	2000	ND	101	74-124%	---	---	
4-Methyl-2-pentanone (MiBK)	4070	500	1000	ug/L	100	4000	ND	102	67-130%	---	---	
Methyl tert-butyl ether (MTBE)	1850	50.0	100	ug/L	100	2000	ND	92	71-124%	---	---	
Naphthalene	15100	100	200	ug/L	100	2000	12500	**129**	**61-128%**	---	---	Q-03
n-Propylbenzene	2070	25.0	50.0	ug/L	100	2000	ND	103	76-126%	---	---	
Styrene	2050	50.0	100	ug/L	100	2000	ND	102	78-123%	---	---	
1,1,1,2-Tetrachloroethane	2220	20.0	40.0	ug/L	100	2000	ND	111	78-124%	---	---	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110413 - EPA 5030B							**Water**					
Matrix Spike (9110413-MS1)			Prepared: 11/04/19 11:08 Analyzed: 11/04/19 16:44									
QC Source Sample: Non-SDG (A9K0039-07)												
1,1,2,2-Tetrachloroethane	2150	25.0	50.0	ug/L	100	2000	ND	108	71-121%	---	---	
Tetrachloroethene (PCE)	2120	20.0	40.0	ug/L	100	2000	ND	106	74-129%	---	---	
Toluene	2700	50.0	100	ug/L	100	2000	681	101	80-121%	---	---	
1,2,3-Trichlorobenzene	2160	100	200	ug/L	100	2000	ND	108	69-129%	---	---	
1,2,4-Trichlorobenzene	2050	100	200	ug/L	100	2000	ND	102	69-130%	---	---	
1,1,1-Trichloroethane	2010	20.0	40.0	ug/L	100	2000	ND	101	74-131%	---	---	
1,1,2-Trichloroethane	2130	25.0	50.0	ug/L	100	2000	ND	106	80-120%	---	---	
Trichloroethene (TCE)	2170	20.0	40.0	ug/L	100	2000	ND	108	79-123%	---	---	
Trichlorofluoromethane	2180	100	200	ug/L	100	2000	ND	109	65-141%	---	---	
1,2,3-Trichloropropane	2010	50.0	100	ug/L	100	2000	ND	101	73-122%	---	---	
1,2,4-Trimethylbenzene	2150	50.0	100	ug/L	100	2000	ND	108	76-124%	---	---	
1,3,5-Trimethylbenzene	2080	50.0	100	ug/L	100	2000	ND	104	75-124%	---	---	
Vinyl chloride	2220	20.0	40.0	ug/L	100	2000	ND	111	58-137%	---	---	
m,p-Xylene	4660	50.0	100	ug/L	100	4000	518	103	80-121%	---	---	
o-Xylene	2290	25.0	50.0	ug/L	100	2000	238	102	78-122%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 104 %*		*Limits: 80-120 %*			*Dilution: 1x*				
Toluene-d8 (Surr)			*100 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*			*"*				

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6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Vinyl Chloride by EPA 8260C SIM

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110483 - EPA 5030B												**Water**
Blank (9110483-BLK1)			Prepared: 11/05/19 12:14 Analyzed: 11/05/19 13:35									
EPA 8260C SIM												
Vinyl chloride	ND	0.0100	0.0200	ug/L	1	---	---	---	---	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 70-130 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*97 %*		*70-130 %*				*"*			
4-Bromofluorobenzene (Surr)			*96 %*		*70-130 %*				*"*			
LCS (9110483-BS1)			Prepared: 11/05/19 12:14 Analyzed: 11/05/19 13:08									
EPA 8260C SIM												
Vinyl chloride	0.199	0.0100	0.0200	ug/L	1	0.200	---	100	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 100 %*		*Limits: 70-130 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*97 %*		*70-130 %*				*"*			
4-Bromofluorobenzene (Surr)			*95 %*		*70-130 %*				*"*			
Duplicate (9110483-DUP1)			Prepared: 11/05/19 13:35 Analyzed: 11/05/19 16:18									
QC Source Sample: PDI-045PW-04-06-191029 (A9J1114-05)												
EPA 8260C SIM												
Vinyl chloride	**0.327**	0.0100	0.0200	ug/L	1	---	0.313	---	---	4	30%	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 99 %*		*Limits: 70-130 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*94 %*		*70-130 %*				*"*			
4-Bromofluorobenzene (Surr)			*91 %*		*70-130 %*				*"*			
Matrix Spike (9110483-MS1)			Prepared: 11/05/19 13:35 Analyzed: 11/05/19 18:06									
QC Source Sample: Non-SDG (A9K0039-03)												
EPA 8260C SIM												
Vinyl chloride	0.190	0.0100	0.0200	ug/L	1	0.200	ND	95	58-137%	---	---	
Surr: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*		*Limits: 70-130 %*				*Dilution: 1x*			
Toluene-d8 (Surr)			*94 %*		*70-130 %*				*"*			
4-Bromofluorobenzene (Surr)			*91 %*		*70-130 %*				*"*			

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110387 - EPA 3511 (Bottle Extraction)							**Water**					
Blank (9110387-BLK2)			Prepared: 11/01/19 12:28 Analyzed: 11/01/19 15:20									
EPA 8270D LVI												
Acenaphthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00800	0.0160	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Naphthalene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Phenanthrene	ND	0.0320	0.0640	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.0160	0.0320	ug/L	1	---	---	---	---	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Benzo(a)pyrene-d12 (Surr)			*106 %*		*80-143 %*				*"*			
LCS (9110387-BS1)			Prepared: 11/01/19 12:28 Analyzed: 11/01/19 15:52									
EPA 8270D LVI												
Acenaphthene	1.46	0.0160	0.0320	ug/L	1	1.60	---	92	78-135%	---	---	
Acenaphthylene	1.61	0.0160	0.0320	ug/L	1	1.60	---	101	80-126%	---	---	
Anthracene	1.55	0.0160	0.0320	ug/L	1	1.60	---	97	80-120%	---	---	
Benz(a)anthracene	1.59	0.00800	0.0160	ug/L	1	1.60	---	99	76-124%	---	---	
Benzo(a)pyrene	1.69	0.00800	0.0160	ug/L	1	1.60	---	106	71-127%	---	---	
Benzo(b)fluoranthene	1.60	0.00800	0.0160	ug/L	1	1.60	---	100	68-120%	---	---	
Benzo(k)fluoranthene	1.65	0.00800	0.0160	ug/L	1	1.60	---	103	72-120%	---	---	
Carbazole	1.44	0.0160	0.0320	ug/L	1	1.60	---	90	80-122%	---	---	

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6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110387 - EPA 3511 (Bottle Extraction)							**Water**					
LCS (9110387-BS1)			Prepared: 11/01/19 12:28		Analyzed: 11/01/19 15:52							
Dibenzofuran	1.32	0.0160	0.0320	ug/L	1	1.60	---	82	75-122%	---	---	
Benzo(g,h,i)perylene	1.47	0.0160	0.0320	ug/L	1	1.60	---	92	71-120%	---	---	
Chrysene	1.49	0.00800	0.0160	ug/L	1	1.60	---	93	71-121%	---	---	
Dibenz(a,h)anthracene	1.55	0.00800	0.0160	ug/L	1	1.60	---	97	69-122%	---	---	
Fluoranthene	1.50	0.0160	0.0320	ug/L	1	1.60	---	94	80-120%	---	---	
Fluorene	1.32	0.0160	0.0320	ug/L	1	1.60	---	83	78-129%	---	---	
Indeno(1,2,3-cd)pyrene	1.38	0.00800	0.0160	ug/L	1	1.60	---	86	72-132%	---	---	
1-Methylnaphthalene	1.46	0.0320	0.0640	ug/L	1	1.60	---	91	76-150%	---	---	
2-Methylnaphthalene	1.39	0.0320	0.0640	ug/L	1	1.60	---	87	80-158%	---	---	
Naphthalene	1.49	0.0320	0.0640	ug/L	1	1.60	---	93	80-132%	---	---	
Phenanthrene	1.44	0.0320	0.0640	ug/L	1	1.60	---	90	80-120%	---	---	
Pyrene	1.48	0.0160	0.0320	ug/L	1	1.60	---	93	73-127%	---	---	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 104 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Benzo(a)pyrene-d12 (Surr)			*109 %*		*80-143 %*				*"*			
LCS Dup (9110387-BSD1)			Prepared: 11/01/19 12:28		Analyzed: 11/01/19 16:24							**Q-19**
EPA 8270D LVI												
Acenaphthene	1.48	0.0160	0.0320	ug/L	1	1.60	---	93	78-135%	1	30%	
Acenaphthylene	1.62	0.0160	0.0320	ug/L	1	1.60	---	101	80-126%	0.8	30%	
Anthracene	1.59	0.0160	0.0320	ug/L	1	1.60	---	99	80-120%	3	30%	
Benz(a)anthracene	1.61	0.00800	0.0160	ug/L	1	1.60	---	100	76-124%	1	30%	
Benzo(a)pyrene	1.71	0.00800	0.0160	ug/L	1	1.60	---	107	71-127%	1	30%	
Benzo(b)fluoranthene	1.58	0.00800	0.0160	ug/L	1	1.60	---	99	68-120%	1	30%	
Benzo(k)fluoranthene	1.66	0.00800	0.0160	ug/L	1	1.60	---	104	72-120%	0.2	30%	
Carbazole	1.46	0.0160	0.0320	ug/L	1	1.60	---	91	80-122%	2	30%	
Dibenzofuran	1.37	0.0160	0.0320	ug/L	1	1.60	---	86	75-122%	4	30%	
Benzo(g,h,i)perylene	1.54	0.0160	0.0320	ug/L	1	1.60	---	97	71-120%	5	30%	
Chrysene	1.52	0.00800	0.0160	ug/L	1	1.60	---	95	71-121%	3	30%	
Dibenz(a,h)anthracene	1.53	0.00800	0.0160	ug/L	1	1.60	---	96	69-122%	0.9	30%	
Fluoranthene	1.51	0.0160	0.0320	ug/L	1	1.60	---	95	80-120%	0.6	30%	
Fluorene	1.37	0.0160	0.0320	ug/L	1	1.60	---	86	78-129%	4	30%	
Indeno(1,2,3-cd)pyrene	1.44	0.00800	0.0160	ug/L	1	1.60	---	90	72-132%	5	30%	
1-Methylnaphthalene	1.52	0.0320	0.0640	ug/L	1	1.60	---	95	76-150%	4	30%	
2-Methylnaphthalene	1.49	0.0320	0.0640	ug/L	1	1.60	---	93	80-158%	7	30%	

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6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

QUALITY CONTROL (QC) SAMPLE RESULTS

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9110387 - EPA 3511 (Bottle Extraction)							**Water**					
LCS Dup (9110387-BSD1)			Prepared: 11/01/19 12:28		Analyzed: 11/01/19 16:24							**Q-19**
Naphthalene	1.48	0.0320	0.0640	ug/L	1	1.60	---	93	80-132%	0.5	30%	
Phenanthrene	1.47	0.0320	0.0640	ug/L	1	1.60	---	92	80-120%	3	30%	
Pyrene	1.47	0.0160	0.0320	ug/L	1	1.60	---	92	73-127%	0.8	30%	
Surr: Acenaphthylene-d8 (Surr)			*Recovery: 103 %*		*Limits: 80-120 %*				*Dilution: 1x*			
Benzo(a)pyrene-d12 (Surr)			*109 %*		*80-143 %*				*"*			

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SAMPLE PREPARATION INFORMATION

Volatile Organic Compounds by EPA 8260C

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9110370							
A9J1114-03	WX	EPA 8260C	10/28/19 14:42	11/01/19 12:15	5mL/5mL	5mL/5mL	1.00
A9J1114-05	WX	EPA 8260C	10/29/19 15:20	11/01/19 12:15	5mL/5mL	5mL/5mL	1.00
Batch: 9110371							
A9J1114-01	WQ	EPA 8260C	10/30/19 00:00	11/01/19 13:33	5mL/5mL	5mL/5mL	1.00
A9J1114-02	WX	EPA 8260C	10/30/19 14:11	11/01/19 13:33	5mL/5mL	5mL/5mL	1.00
A9J1114-04	WX	EPA 8260C	10/30/19 15:34	11/01/19 13:33	5mL/5mL	5mL/5mL	1.00
A9J1114-06	WX	EPA 8260C	10/30/19 09:16	11/01/19 13:33	5mL/5mL	5mL/5mL	1.00
A9J1114-07	WX	EPA 8260C	10/30/19 10:18	11/01/19 13:33	5mL/5mL	5mL/5mL	1.00
Batch: 9110413							
A9J1114-03RE1	WX	EPA 8260C	10/28/19 14:42	11/04/19 11:08	5mL/5mL	5mL/5mL	1.00

Vinyl Chloride by EPA 8260C SIM

Prep: EPA 5030B

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9110483							
A9J1114-01	WQ	EPA 8260C SIM	10/30/19 00:00	11/05/19 13:35	5mL/5mL	5mL/5mL	1.00
A9J1114-02	WX	EPA 8260C SIM	10/30/19 14:11	11/05/19 13:35	5mL/5mL	5mL/5mL	1.00
A9J1114-04	WX	EPA 8260C SIM	10/30/19 15:34	11/05/19 13:35	5mL/5mL	5mL/5mL	1.00
A9J1114-05	WX	EPA 8260C SIM	10/29/19 15:20	11/05/19 13:35	5mL/5mL	5mL/5mL	1.00
A9J1114-07	WX	EPA 8260C SIM	10/30/19 10:18	11/05/19 13:35	5mL/5mL	5mL/5mL	1.00

Polyaromatic Hydrocarbons (PAHs) by EPA 8270D (Large Volume Injection)

Prep: EPA 3511 (Bottle Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9110387							
A9J1114-02RE1	WX	EPA 8270D LVI	10/30/19 14:11	11/01/19 12:28	118.89mL/5mL	125mL/5mL	1.05
A9J1114-04RE1	WX	EPA 8270D LVI	10/30/19 15:34	11/01/19 12:28	118.17mL/5mL	125mL/5mL	1.06
A9J1114-07RE1	WX	EPA 8270D LVI	10/30/19 10:18	11/01/19 12:28	119.94mL/5mL	125mL/5mL	1.04

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QUALIFIER DEFINITIONS

Client Sample and Quality Control (QC) Sample Qualifier Definitions:

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E	Estimated Value. The result is above the calibration range of the instrument.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
Q-03	Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-54	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +2%. The results are reported as Estimated Values.
Q-54a	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +2.6%. The results are reported as Estimated Values.
Q-54b	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +3%. The results are reported as Estimated Values.
Q-54c	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +4.9%. The results are reported as Estimated Values.
Q-54d	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +5.1%. The results are reported as Estimated Values.
Q-54e	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +6%. The results are reported as Estimated Values.
Q-56	Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260C
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
V-25	SIM Analysis was not performed due to the high analyte concentration in this sample.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

DET Analyte DETECTED at or above the detection or reporting limit.

ND Analyte NOT DETECTED at or above the detection or reporting limit.

NR Result Not Reported

RPD Relative Percent Difference. RPDs for Matrix Spikes and Matrix Spike Duplicates are based on concentration, not recovery.

Detection Limits: Limit of Detection (LOD)

Limits of Detection (LODs) are normally set at a level of one half the validated Limit of Quantitation (LOQ).
If no value is listed ('-----'), then the data has not been evaluated below the Reporting Limit.

Reporting Limits: Limit of Quantitation (LOQ)

Validated Limits of Quantitation (LOQs) are reported as the Reporting Limits for all analyses where the LOQ, MRL, PQL or CRL are requested. The LOQ represents a level at or above the low point of the calibration curve, that has been validated according to Apex Laboratories' comprehensive LOQ policies and procedures.

Reporting Conventions:

Basis: Results for soil samples are generally reported on a 100% dry weight basis.
The Result Basis is listed following the units as " dry", " wet", or " " (blank) designation.

" dry" Sample results and Reporting Limits are reported on a dry weight basis. (i.e. "ug/kg dry")
See Percent Solids section for details of dry weight analysis.

" wet" Sample results and Reporting Limits for this analysis are normally dry weight corrected, but have not been modified in this case.

" " Results without 'wet' or 'dry' designation are not normally dry weight corrected. These results are considered 'As Received'.

QC Source:

In cases where there is insufficient sample provided for Sample Duplicates and/or Matrix Spikes, a Lab Control Sample Duplicate (LCS Dup) may be analyzed to demonstrate accuracy and precision of the extraction batch.

Non-Client Batch QC Samples (Duplicates and Matrix Spike/Duplicates) may not be included in this report. Please request a Full QC report if this data is required.

Miscellaneous Notes:

" --- " QC results are not applicable. For example, % Recoveries for Blanks and Duplicates, % RPD for Blanks, Blank Spikes and Matrix Spikes, etc.

" *** " Used to indicate a possible discrepancy with the Sample and Sample Duplicate results when the %RPD is not available. In this case, either the Sample or the Sample Duplicate has a reportable result for this analyte, while the other is Non Detect (ND).

Blanks:

Standard practice is to evaluate the results from Blank QC Samples down to a level equal to ½ the Reporting Limit (RL).
-For Blank hits falling between ½ the RL and the RL (J flagged hits), the associated sample and QC data will receive a 'B-02' qualifier.
-For Blank hits above the RL, the associated sample and QC data will receive a 'B' qualifier, per Apex Laboratories' Blank Policy.
For further details, please request a copy of this document.

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

Sample results flagged with a 'B' or 'B-02' qualifier are potentially biased high if the sample results are less than ten times the level found in the blank for inorganic analyses, or less than five times the level found in the blank for organic analyses.

'B' and 'B-02' qualifications are only applied to sample results detected above the Reporting Level.

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

Water samples containing significant amounts of sediment are decanted or separated prior to extraction, and only the water portion analyzed, unless otherwise directed by the client.

Soil and Sediment Samples:

Soil and Sediment samples containing significant amounts of water are decanted prior to extraction, and only the solid portion analyzed, unless otherwise directed by the client.

Sampling and Preservation Notes:

Certain regulatory programs, such as National Pollutant Discharge Elimination System (NPDES), require that activities such as sample filtration (for dissolved metals, orthophosphate, hexavalent chromium, etc.) and testing of short hold analytes (pH, Dissolved Oxygen, etc.) be performed in the field (on-site) within a short time window. In addition, sample matrix spikes are required for some analyses, and sufficient volume must be provided, and billable site specific QC requested, if this is required. All regulatory permits should be reviewed to ensure that these requirements are being met.

Data users should be aware of which regulations pertain to the samples they submit for testing. If related sample collection activities are not approved for a particular regulatory program, results should be considered estimates. Apex Laboratories will qualify these analytes according to the most stringent requirements, however results for samples that are for non-regulatory purposes may be acceptable.

Samples that have been filtered and preserved at Apex Laboratories per client request are listed in the preparation section of the report with the date and time of filtration listed.

Apex Laboratories maintains detailed records on sample receipt, including client label verification, cooler temperature, sample preservation, hold time compliance and field filtration. Data is qualified as necessary, and the lack of qualification indicates compliance with required parameters.

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LABORATORY ACCREDITATION INFORMATION

TNI Certification ID: OR100062 (Primary Accreditation) - EPA ID: OR01039

All methods and analytes reported from work performed at Apex Laboratories are included on Apex Laboratories' ORELAP Scope of Certification, with the exception of any analyte(s) listed below:

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

All reported analytes are included in Apex Laboratories' current ORELAP scope.

Secondary Accreditations

Apex Laboratories also maintains reciprocal accreditation with non-TNI states (Washington DOE), as well as other state specific accreditations not listed here.

Subcontract Laboratory Accreditations

Subcontracted data falls outside of Apex Laboratories' Scope of Accreditation.
Please see the Subcontract Laboratory report for full details, or contact your Project Manager for more information.

Field Testing Parameters

Results for Field Tested data are provded by the client or sampler, and fall outside of Apex Laboratories' Scope of Accreditation.

Apex Laboratories

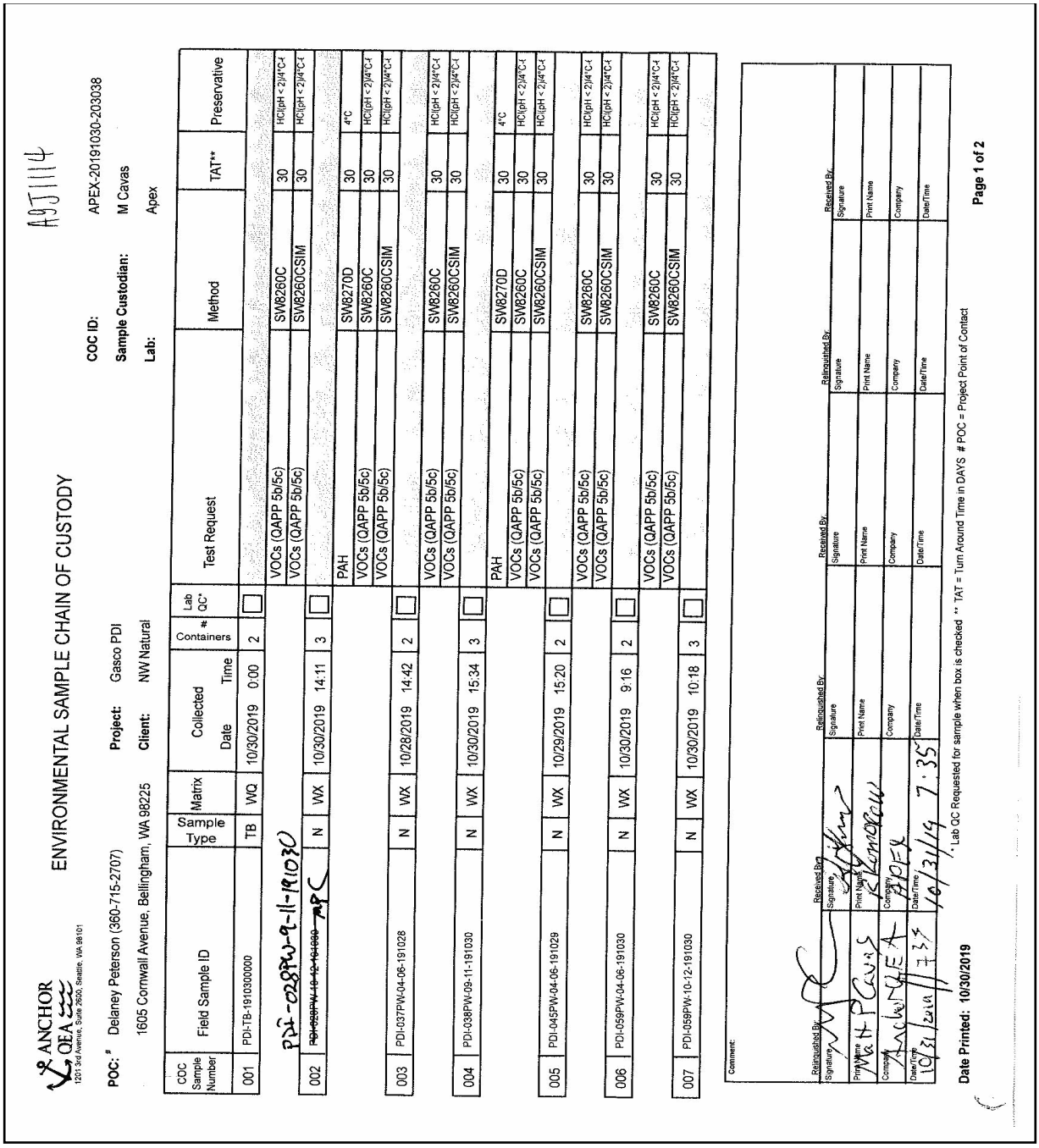
The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**



ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

A9J1114

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: Gasco PDI
Client: NW Natural

COC ID: APEX-20191030-203038
Sample Custodian: M Cavas
Lab: Apex

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	PDI-TB-1910300000	TB	WQ	10/30/2019	0:00	2	☐	VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
	PDI-028PW-9-11-191030 MPC							VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f
002	~~PDI-028PW-10-12-191030~~	N	WX	10/30/2019	14:11	3	☐	PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
003	PDI-037PW-04-06-191028	N	WX	10/28/2019	14:42	2	☐	VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f
004	PDI-038PW-09-11-191030	N	WX	10/30/2019	15:34	3	☐	VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f
005	PDI-045PW-04-06-191029	N	WX	10/29/2019	15:20	2	☐	PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
006	PDI-059PW-04-06-191030	N	WX	10/30/2019	9:16	2	☐	VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f
007	PDI-058PW-10-12-191030	N	WX	10/30/2019	10:18	3	☐	VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f

Comment:

Relinquished By: Signature / Print Name / Company / Date/Time — Received By: Signature / Print Name / Company / Date/Time — Relinquished By: Signature / Print Name / Company / Date/Time — Received By: Signature / Print Name / Company / Date/Time

Print Name: MATT PEARS — Company: APEX — Date/Time: 10/31/19 7:35

Date Printed: 10/30/2019

*. Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Page 1 of 2

Apex Laboratories

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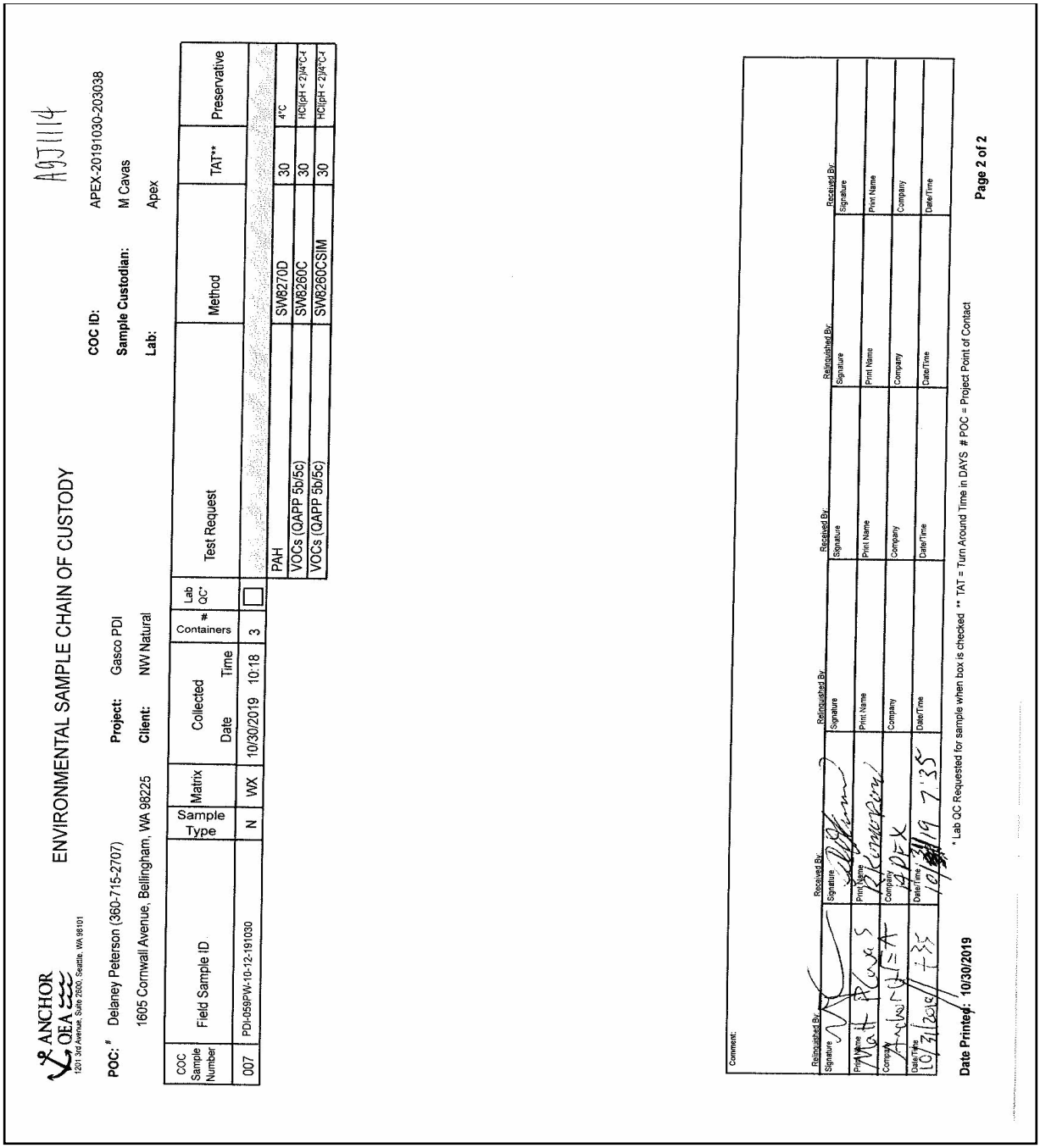
Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**



ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9J1114

ANCHOR QEA LLC
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: Gasco PDI
Client: NW Natural

COC ID: APEX-20191030-203038
Sample Custodian: M Cavas
Lab: Apex

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
007	PDI-059PW-10-12-191030	N	WX	10/30/2019	10:18	3	☐	PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f

Comment:

Relinquished By: Signature / Print Name / Company / Date/Time
Received By: Signature / Print Name / Company / Date/Time
Relinquished By: Signature / Print Name / Company / Date/Time
Received By: Signature / Print Name / Company / Date/Time
Relinquished By: Signature / Print Name / Company / Date/Time
Received By: Signature / Print Name / Company / Date/Time

*Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

Date Printed: 10/30/2019

Page 2 of 2

Apex Laboratories

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

APEX LABS COOLER RECEIPT FORM

Client: Anchor Element WO#: A9J1114

Project/Project #: Gasco PDI

Delivery Info:

Date/time received: 10/31/19 @ 735 By: RIC

Delivered by: Apex X Client ESS FedEx UPS Swift Senvoy SDS Other

Cooler Inspection Date/time inspected: 10/31/19 @ 840 By: (SO)

Chain of Custody included? Yes X No Custody seals? Yes No X

Signed/dated by client? Yes X No

Signed/dated by Apex? Yes X No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	real						
Condition:	good						

Cooler out of temp? (Y(N) Possible reason why:

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/(NA)

Out of temperature samples form initiated? Yes/No/(NA)

Samples Inspection: Date/time inspected: 10/31/19 @ 1241 By: (SO)

All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes No X Comments: See form

COC/container discrepancies form initiated? Yes X No NA

Containers/volumes received appropriate for analysis? Yes X No Comments:

Do VOA vials have visible headspace? Yes X No NA

Comments 1/3 VOAs PDI-059PW-04-010-191030 has HS

Water samples: pH checked: Yes No NA X pH appropriate? Yes No NA X

Comments:

Additional information: TB # 21169

Labeled by: (S) Witness: JS Cooler Inspected by: (SO) See Project Contact Form: Y

Apex Laboratories

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Gasco PreRD DG 2019 - 5c. PW in Contact with NAPL**	
6720 SW Macadam Ave. Suite 125	Project Number: **[none]**	**Report ID:**
Portland, OR 97219	Project Manager: **Ryan Barth**	**A9J1114 - 12 04 19 1428**

WO# A9J1114

COC/Container Discrepancies

COC Reads	Container Reads/Comments
PDI-028PW-9-11-191030, 3 containers	5 containers received
PDI-037PW-04-06-191028, 2 containers	3 containers received
PDI-038PW-09-11-191030, 3 containers	5 containers received
PDI-045PW-04-06-191029, 2 containers	3 containers received
PDI-059PW-04-06-191030, 2 containers	3 containers received
PDI-059PW-10-12-191030, 3 containers	5 containers received

Apex Laboratories

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Sample Receipt Documentation
(Work orders, Chain of Custody & Cooler Receipt Forms)

A9J1114

Apex Laboratories

Client: Anchor QEA, LLC
Project: Gasco PreRD_DG 2019 - 5c. PW in Contact with NAPL
Project Manager: Darwin Thomas
Project Number: [none]

Report To:
Anchor QEA, LLC
Ryan Barth
6720 SW Macadam Ave. Suite 125
Portland, OR 97219
Phone: (503) 670-1108
Fax: na

Invoice To:
Anchor QEA, LLC Seattle
Accounts Payable
1201 3rd Avenue, Suite 2600
Seattle, WA 98101
Phone :(206) 287-9130
Fax: (206) 287-9131

Date Due: 11/14/19 17:00 (10 day TAT)
Received By: Russ Komorow
Date Received: 10/31/19 07:35
Logged In By: Susan L. Treat
Date Logged In: 10/31/19 12:49

Cooler #1 received at 2.3°C

Custody Seals	No	Containers Intact	Yes	COC/Labels Agree	Yes	PH Confirmed	No	Received On Ice	Yes
Temperature OK	Yes								

Analysis	Due	TAT	Expires	Comments
A9J1114-01 PDI-TB-1910300000 [Water] Sampled 10/30/19 00:00				**TB# 2169**
(GMT-08:00) Pacific Time (US & Canada) 2 Containers				
Project Mgmt				
Data Package	01/02/20 17:00	10	02/06/20 00:00	
Volatiles				
8260C Full List	11/13/19 17:00	10	11/13/19 00:00	All Compounds. SIM if VC ND - Determine List
8260C SIM - VC Only	11/13/19 17:00	10	11/13/19 00:00	Needs 0.022ug/L RL
A9J1114-02 PDI-028PW-9-11-191030 [Water] Sampled 10/30/19 14:11				**CoC lists 3 containers, received 5**
(GMT-08:00) Pacific Time (US & Canada) 5 Containers				
Semivols (Scan)				
8270D PAH (125ml) LL	11/13/19 17:00	10	11/06/19 14:11	
Volatiles				
8260C Full List	11/13/19 17:00	10	11/13/19 14:11	All Compounds. SIM if VC ND - Determine List
8260C SIM - VC Only	11/13/19 17:00	10	11/13/19 14:11	Needs 0.022ug/L RL
A9J1114-03 PDI-037PW-04-06-191028 [Water] Sampled 10/28/19 14:42				**CoC lists 2 containers, received 3**
(GMT-08:00) Pacific Time (US & Canada) 3 Containers				
Volatiles				
8260C Full List	11/13/19 17:00	10	11/11/19 14:42	All Compounds. SIM if VC ND - Determine List
~~8260C SIM - VC Only~~	11/13/19 17:00	10	11/11/19 14:42	Needs 0.022ug/L RL
A9J1114-04 PDI-038PW-9-11-191030 [Water] Sampled 10/30/19 15:34				**CoC lists 3 containers, received 5**
(GMT-08:00) Pacific Time (US & Canada) 5 Containers				
Semivols (Scan)				
8270D PAH (125ml) LL	11/13/19 17:00	10	11/06/19 15:34	
Volatiles				
8260C Full List	11/13/19 17:00	10	11/13/19 15:34	All Compounds. SIM if VC ND - Determine List
8260C SIM - VC Only	11/13/19 17:00	10	11/13/19 15:34	Needs 0.022ug/L RL

A9J1114

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Gasco PreRD_DG 2019 - 5c. PW in Contact with NAPL**	**Project Number:**	**[none]**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**
A9J1114-05 PDI-045PW-04-06-191029 [Water] Sampled 10/29/19 15:20				**CoC lists 2 containers, received 3**
(GMT-08:00) Pacific Time (US & Canada) 3 Containers				
Volatiles				
8260C Full List	11/13/19 17:00	10	11/12/19 15:20	All Compounds. SIM if VC ND - Determine List
8260C SIM - VC Only	11/13/19 17:00	10	11/12/19 15:20	Needs 0.022ug/L RL
A9J1114-06 PDI-059PW-04-06-191030 [Water] Sampled 10/30/19 09:16				**CoC lists 2 containers, received 3**
(GMT-08:00) Pacific Time (US & Canada) 3 Containers				
Volatiles				
8260C Full List	11/13/19 17:00	10	11/13/19 09:16	HS in C container, All Compounds. SIM if VC ND - Determine I
~~8260C SIM - VC Only~~	11/13/19 17:00	10	11/13/19 09:16	HS in C container, Needs 0.022ug/L RL
A9J1114-07 PDI-059PW-10-12-191030 [Water] Sampled 10/30/19 10:18				**CoC lists 3 containers, received 5**
(GMT-08:00) Pacific Time (US & Canada) 5 Containers				
Semivols (Scan)				
8270D PAH (125ml) LL	11/13/19 17:00	10	11/06/19 10:18	
Volatiles				
8260C Full List	11/13/19 17:00	10	11/13/19 10:18	All Compounds. SIM if VC ND - Determine List
8260C SIM - VC Only	11/13/19 17:00	10	11/13/19 10:18	Needs 0.022ug/L RL

Reviewed By

Date

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9J1114

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: Gasco PDI
Client: NW Natural

COC ID: APEX-20191030-203038
Sample Custodian: M Cavas
Lab: Apex

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
001	PDI-TB-1910300000	TB	WQ	10/30/2019	0:00	2	☐				
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
002	PDI-028PW-9-11-191030 ~~PDI-028PW-10-12-191030~~ MPC	N	WX	10/30/2019	14:11	3	☐				
								PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
003	PDI-037PW-04-06-191028	N	WX	10/28/2019	14:42	2	☐				
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
004	PDI-038PW-09-11-191030	N	WX	10/30/2019	15:34	3	☐				
								PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
005	PDI-045PW-04-06-191029	N	WX	10/29/2019	15:20	2	☐				
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
006	PDI-059PW-04-06-191030	N	WX	10/30/2019	9:16	2	☐				
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-(
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-(
007	PDI-059PW-10-12-191030	N	WX	10/30/2019	10:18	3	☐				

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature:	Signature:	Signature	Signature	Signature	Signature
Print Name: Matt P Cavas	Print Name: K Komorow	Print Name	Print Name	Print Name	Print Name
Company: Anchor QEA	Company: APEX	Company	Company	Company	Company
Date/Time: 10/31/2019 7:35	Date/Time: 10/31/19 7:35	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 10/30/2019

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

ANCHOR QEA
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9J1114

COC ID: APEX-20191030-203038

POC: # Delaney Peterson (360-715-2707)
1605 Cornwall Avenue, Bellingham, WA 98225

Project: Gasco PDI
Client: NW Natural

Sample Custodian: M Cavas
Lab: Apex

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
007	PDI-059PW-10-12-191030	N	WX	10/30/2019	10:18	3	☐	PAH	SW8270D	30	4°C
								VOCs (QAPP 5b/5c)	SW8260C	30	HCl(pH < 2)/4°C-f
								VOCs (QAPP 5b/5c)	SW8260CSIM	30	HCl(pH < 2)/4°C-f

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name: Matt Plavas	Print Name: R Kumorow	Print Name	Print Name	Print Name	Print Name
Company: Anchor QEA	Company: APEX	Company	Company	Company	Company
Date/Time: 10/31/2019 1735	Date/Time: 10/31/19 7:35	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 10/30/2019

* Lab QC Requested for sample when box is checked ** TAT = Turn Around Time in DAYS # POC = Project Point of Contact

APEX LABS COOLER RECEIPT FORM

Client: Anchor Element WO#: A9J1114

Project/Project #: Gasco PDI

Delivery Info:

Date/time received: 10/31/19 @ 735 By: RC

Delivered by: Apex X Client ___ ESS ___ FedEx ___ UPS ___ Swift ___ Senvoy ___ SDS ___ Other ___

Cooler Inspection Date/time inspected: 10/31/19 @ 840 By: (SC)

Chain of Custody included? Yes X No ___ Custody seals? Yes ___ No X

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.3						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Real						
Condition:	Good						

Cooler out of temp? (Y/(N)) Possible reason why: ___

If some coolers are in temp and some out, were green dots applied to out of temperature samples? Yes/No/(NA)

Out of temperature samples form initiated? Yes/No/(NA)

Samples Inspection: Date/time inspected: 10/31/19 @ 1241 By: (SC)

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes ___ No X Comments: See form

COC/container discrepancies form initiated? Yes X No ___ NA ___

Containers/volumes received appropriate for analysis? Yes X No ___ Comments: ___

Do VOA vials have visible headspace? Yes X No ___ NA ___

Comments 13 VOAs PDI-059PW-04-010-191030 has HS

Water samples: pH checked: Yes ___ No ___ NA X pH appropriate? Yes ___ No ___ NA X

Comments: ___

Additional information: TB# 2469

Labeled by: (SC) Witness: JS Cooler Inspected by: (SC) See Project Contact Form: Y

WO# A9J1114

COC/Container Discrepancies

COC Reads	Container Reads/Comments
PDI-028PW-9-11-191030, 3 containers	5 containers received
PDI-037PW-04-06-191028, 2 containers	3 containers received
PDI-038PW-09-11-191030, 3 containers	5 containers received
PDI-045PW-04-06-191029, 2 containers	3 containers received
PDI-059PW-04-06-191030, 2 containers	3 containers received
PDI-059PW-10-12-191030, 3 containers	5 containers received

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

CLP-Like Forms

Apex Laboratories

SDG: Gasco PreRD_DG 2019

CLASS: GCMS

METHOD: EPA 8260C

ANALYSES DATA PACKAGE COVER PAGE

EPA 8260C

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC

SDG: Gasco PreRD_DG 2019
Project: Gasco PreRD_DG 2019 - 5c. PW in Contact with NA

Client Sample Id:	Lab Sample Id:	Matrix
PDI-TB-1910300000	A9J1114-01	WQ
PDI-028PW-9-11-191030	A9J1114-02	WX
PDI-037PW-04-06-191028	A9J1114-03	WX
PDI-038PW-9-11-191030	A9J1114-04	WX
PDI-045PW-04-06-191029	A9J1114-05	WX
PDI-059PW-04-06-191030	A9J1114-06	WX
PDI-059PW-10-12-191030	A9J1114-07	WX

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 12/18/2019 10:34AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: Apex Laboratories **SDG:** Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC **Project:** Gasco_PreRD_DG 2019 - 5c. PW in Contac

Batch Matrix: Water

Analyte	MDL	MRL	Units
Acetone	10.0	20.0	ug/L
Acrylonitrile	1.00	2.00	ug/L
Benzene	0.100	0.200	ug/L
Bromobenzene	0.250	0.500	ug/L
Bromochloromethane	0.500	1.00	ug/L
Bromodichloromethane	0.500	1.00	ug/L
Bromoform	0.500	1.00	ug/L
Bromomethane	5.00	5.00	ug/L
2-Butanone (MEK)	5.00	10.0	ug/L
n-Butylbenzene	0.500	1.00	ug/L
sec-Butylbenzene	0.500	1.00	ug/L
tert-Butylbenzene	0.500	1.00	ug/L
Carbon disulfide	5.00	10.0	ug/L
Carbon tetrachloride	0.500	1.00	ug/L
Chlorobenzene	0.250	0.500	ug/L
Chloroethane	5.00	5.00	ug/L
Chloroform	0.500	1.00	ug/L
Chloromethane	2.50	5.00	ug/L
2-Chlorotoluene	0.500	1.00	ug/L
4-Chlorotoluene	0.500	1.00	ug/L
Dibromochloromethane	0.500	1.00	ug/L
1,2-Dibromo-3-chloropropane	2.50	5.00	ug/L
1,2-Dibromoethane (EDB)	0.250	0.500	ug/L
Dibromomethane	0.500	1.00	ug/L
1,2-Dichlorobenzene	0.250	0.500	ug/L
1,3-Dichlorobenzene	0.250	0.500	ug/L
1,4-Dichlorobenzene	0.250	0.500	ug/L
Dichlorodifluoromethane	0.500	1.00	ug/L
1,1-Dichloroethane	0.200	0.400	ug/L
1,2-Dichloroethane (EDC)	0.200	0.400	ug/L
1,1-Dichloroethene	0.200	0.400	ug/L
cis-1,2-Dichloroethene	0.200	0.400	ug/L
trans-1,2-Dichloroethene	0.200	0.400	ug/L
1,2-Dichloropropane	0.250	0.500	ug/L
1,3-Dichloropropane	0.500	1.00	ug/L
2,2-Dichloropropane	0.500	1.00	ug/L
1,1-Dichloropropene	0.500	1.00	ug/L

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C

Laboratory: Apex Laboratories **SDG:** Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC **Project:** Gasco_PreRD_DG 2019 - 5c. PW in Contac

Batch Matrix: Water

Analyte	MDL	MRL	Units
cis-1,3-Dichloropropene	0.500	1.00	ug/L
trans-1,3-Dichloropropene	0.500	1.00	ug/L
Ethylbenzene	0.250	0.500	ug/L
Hexachlorobutadiene	2.50	5.00	ug/L
n-Hexane	5.00	10.0	ug/L
2-Hexanone	5.00	10.0	ug/L
Isopropylbenzene	0.500	1.00	ug/L
4-Isopropyltoluene	0.500	1.00	ug/L
Methylene chloride	1.50	3.00	ug/L
4-Methyl-2-pentanone (MiBK)	5.00	10.0	ug/L
Methyl tert-butyl ether (MTBE)	0.500	1.00	ug/L
Naphthalene	1.00	2.00	ug/L
n-Propylbenzene	0.250	0.500	ug/L
Styrene	0.500	1.00	ug/L
1,1,1,2-Tetrachloroethane	0.200	0.400	ug/L
1,1,2,2-Tetrachloroethane	0.250	0.500	ug/L
Tetrachloroethene (PCE)	0.200	0.400	ug/L
Tetrahydrofuran	5.00	10.0	ug/L
Toluene	0.500	1.00	ug/L
1,2,3-Trichlorobenzene	1.00	2.00	ug/L
1,2,4-Trichlorobenzene	1.00	2.00	ug/L
1,1,1-Trichloroethane	0.200	0.400	ug/L
1,1,2-Trichloroethane	0.250	0.500	ug/L
Trichloroethene (TCE)	0.200	0.400	ug/L
Trichlorofluoromethane	1.00	2.00	ug/L
1,2,3-Trichloropropane	0.500	1.00	ug/L
1,1,2-Trichloro-1,2,2-trifluoroethane (Fr	1.00	2.00	ug/L
1,2,4-Trimethylbenzene	0.500	1.00	ug/L
1,3,5-Trimethylbenzene	0.500	1.00	ug/L
Isobutyl alcohol	250	250	ug/L
Vinyl chloride	0.200	0.400	ug/L
m,p-Xylene	0.500	1.00	ug/L
o-Xylene	0.250	0.500	ug/L
trans-1,4-Dichloro-2-butene	5.00	10.0	ug/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-TB-1910300000

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WQ	Laboratory ID:	A9J1114-01	File ID:	VG19110120.D
Sampled:	10/30/19 00:00	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 21:31
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	10.0	U
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	0.100	U
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	0.500	U
135-98-8	sec-Butylbenzene	1	0.500	U
98-06-6	tert-Butylbenzene	1	0.500	U
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.200	U
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	0.250	U

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-TB-1910300000

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WQ	Laboratory ID:	A9J1114-01	File ID:	VG19110120.D
Sampled:	10/30/19 00:00	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 21:31
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
110-54-3	n-Hexane	1	5.00	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	0.500	U
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	5.00	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	1.00	U
103-65-1	n-Propylbenzene	1	0.250	U
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
109-99-9	Tetrahydrofuran	1	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1	0.500	U
108-67-8	1,3,5-Trimethylbenzene	1	0.500	U
78-83-1	Isobutyl alcohol	1	250	U
108-88-3	Toluene	1	0.500	U
179601-23-1	m,p-Xylene	1	0.500	U
95-47-6	o-Xylene	1	0.250	U
110-57-6	trans-1,4-Dichloro-2-butene	1	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	52.5	105	80 - 120	
Toluene-d8 (Surr)	50.0	49.7	99	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.7	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	83035	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	257028	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	129739	12.287	121794	12.287	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-028PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-02	File ID:	VG19110121.D
Sampled:	10/30/19 14:11	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 21:58
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	10.0	U
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	0.250	
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	1.00	U
135-98-8	sec-Butylbenzene	1	0.580	J
98-06-6	tert-Butylbenzene	1	0.500	U
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.200	U
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	0.470	J

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-028PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-02	File ID:	VG19110121.D
Sampled:	10/30/19 14:11	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 21:58
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
110-54-3	n-Hexane	1	5.00	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	4.34	
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	5.00	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	62.3	
103-65-1	n-Propylbenzene	1	2.67	
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
109-99-9	Tetrahydrofuran	1	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1	3.17	
108-67-8	1,3,5-Trimethylbenzene	1	2.06	
78-83-1	Isobutyl alcohol	1	250	U
108-88-3	Toluene	1	0.500	U
179601-23-1	m,p-Xylene	1	0.860	J
95-47-6	o-Xylene	1	0.630	
110-57-6	trans-1,4-Dichloro-2-butene	1	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	52.6	105	80 - 120	
Toluene-d8 (Surr)	50.0	48.8	98	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.1	98	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	79662	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	253717	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	135199	12.287	121794	12.287	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-037PW-04-06-191028

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-03	File ID:	VI19110111.D
Sampled:	10/28/19 14:42	Prepared:	11/01/19 12:15	Analyzed:	11/01/19 15:06
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110370 Sequence: 9K01026 Calibration: A9J2503 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	100	1000	U
107-13-1	Acrylonitrile	100	100	U
71-43-2	Benzene	100	314	D
108-86-1	Bromobenzene	100	25.0	U
74-97-5	Bromochloromethane	100	50.0	U
75-27-4	Bromodichloromethane	100	50.0	U
75-25-2	Bromoform	100	50.0	U
74-83-9	Bromomethane	100	500	U
78-93-3	2-Butanone (MEK)	100	500	U
104-51-8	n-Butylbenzene	100	50.0	U
135-98-8	sec-Butylbenzene	100	50.0	U
98-06-6	tert-Butylbenzene	100	50.0	U
75-15-0	Carbon disulfide	100	500	U
56-23-5	Carbon tetrachloride	100	50.0	U
108-90-7	Chlorobenzene	100	25.0	U
75-00-3	Chloroethane	100	500	U
67-66-3	Chloroform	100	50.0	U
74-87-3	Chloromethane	100	250	U
95-49-8	2-Chlorotoluene	100	50.0	U
106-43-4	4-Chlorotoluene	100	50.0	U
124-48-1	Dibromochloromethane	100	50.0	U
96-12-8	1,2-Dibromo-3-chloropropane	100	250	U
106-93-4	1,2-Dibromoethane (EDB)	100	25.0	U
74-95-3	Dibromomethane	100	50.0	U
95-50-1	1,2-Dichlorobenzene	100	25.0	U
541-73-1	1,3-Dichlorobenzene	100	25.0	U
106-46-7	1,4-Dichlorobenzene	100	25.0	U
75-71-8	Dichlorodifluoromethane	100	50.0	U
75-34-3	1,1-Dichloroethane	100	20.0	U
107-06-2	1,2-Dichloroethane (EDC)	100	20.0	U
75-35-4	1,1-Dichloroethene	100	21.9	JD
156-60-5	trans-1,2-Dichloroethene	100	130	D
78-87-5	1,2-Dichloropropane	100	25.0	U
142-28-9	1,3-Dichloropropane	100	50.0	U
594-20-7	2,2-Dichloropropane	100	50.0	U
563-58-6	1,1-Dichloropropene	100	50.0	U
10061-01-5	cis-1,3-Dichloropropene	100	50.0	U
10061-02-6	trans-1,3-Dichloropropene	100	50.0	U
100-41-4	Ethylbenzene	100	212	D
87-68-3	Hexachlorobutadiene	100	250	U

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-037PW-04-06-191028

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-03	File ID:	VI19110111.D
Sampled:	10/28/19 14:42	Prepared:	11/01/19 12:15	Analyzed:	11/01/19 15:06
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110370 Sequence: 9K01026 Calibration: A9J2503 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
110-54-3	n-Hexane	100	500	U
591-78-6	2-Hexanone	100	500	U
98-82-8	Isopropylbenzene	100	50.0	U
99-87-6	4-Isopropyltoluene	100	50.0	U
75-09-2	Methylene chloride	100	250	U
108-10-1	4-Methyl-2-pentanone (MiBK)	100	500	U
1634-04-4	Methyl tert-butyl ether (MTBE)	100	50.0	U
91-20-3	Naphthalene	100	9490	D
103-65-1	n-Propylbenzene	100	25.0	U
100-42-5	Styrene	100	50.0	U
630-20-6	1,1,1,2-Tetrachloroethane	100	20.0	U
79-34-5	1,1,2,2-Tetrachloroethane	100	25.0	U
127-18-4	Tetrachloroethene (PCE)	100	20.0	U
109-99-9	Tetrahydrofuran	100	500	U
87-61-6	1,2,3-Trichlorobenzene	100	100	U
120-82-1	1,2,4-Trichlorobenzene	100	100	U
71-55-6	1,1,1-Trichloroethane	100	20.0	U
79-00-5	1,1,2-Trichloroethane	100	25.0	U
79-01-6	Trichloroethene (TCE)	100	3850	D
75-69-4	Trichlorofluoromethane	100	100	U
96-18-4	1,2,3-Trichloropropane	100	50.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	100	100	U
95-63-6	1,2,4-Trimethylbenzene	100	50.0	U
108-67-8	1,3,5-Trimethylbenzene	100	50.0	U
78-83-1	Isobutyl alcohol	100	25000	U
108-88-3	Toluene	100	101	D
75-01-4	Vinyl chloride	100	5300	D
179601-23-1	m,p-Xylene	100	98.9	JD
95-47-6	o-Xylene	100	65.8	D
110-57-6	trans-1,4-Dichloro-2-butene	100	500	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	52.8	106	80 - 120	
Toluene-d8 (Surr)	50.0	51.0	102	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.5	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	106125	6.217	111917	6.217	
Chlorobenzene-d5 (ISTD)	292016	9.916	312123	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	136121	11.856	154133	11.856	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-037PW-04-06-191028

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-03RE1	File ID:	VI19110412.D
Sampled:	10/28/19 14:42	Prepared:	11/04/19 11:08	Analyzed:	11/04/19 13:36
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110413 Sequence: 9K04028 Calibration: A9J2503 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
156-59-2	cis-1,2-Dichloroethene	1000	32300	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	51.9	104	80 - 120	
Toluene-d8 (Surr)	50.0	51.3	103	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.6	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	102850	6.217	116594	6.217	
Chlorobenzene-d5 (ISTD)	278955	9.916	325714	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	125978	11.856	155936	11.856	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-038PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-04	File ID:	VG19110122.D
Sampled:	10/30/19 15:34	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 22:25
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	10.0	U
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	0.240	
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	0.500	U
135-98-8	sec-Butylbenzene	1	0.500	U
98-06-6	tert-Butylbenzene	1	0.500	U
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.200	U
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	0.250	U

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-038PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-04	File ID:	VG19110122.D
Sampled:	10/30/19 15:34	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 22:25
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806
Instrument:	VOA-GCMS7				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
110-54-3	n-Hexane	1	5.00	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	0.540	J
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	5.00	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	6.35	
103-65-1	n-Propylbenzene	1	0.250	U
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
109-99-9	Tetrahydrofuran	1	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1	0.500	U
108-67-8	1,3,5-Trimethylbenzene	1	0.520	J
78-83-1	Isobutyl alcohol	1	250	U
108-88-3	Toluene	1	0.500	U
179601-23-1	m,p-Xylene	1	0.500	U
95-47-6	o-Xylene	1	0.250	U
110-57-6	trans-1,4-Dichloro-2-butene	1	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.8	102	80 - 120	
Toluene-d8 (Surr)	50.0	49.6	99	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.9	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	92125	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	279516	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	143891	12.287	121794	12.287	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-045PW-04-06-191029

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-05	File ID:	VI19110119.D
Sampled:	10/29/19 15:20	Prepared:	11/01/19 12:15	Analyzed:	11/01/19 18:41
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110370 Sequence: 9K01026 Calibration: A9J2503 Instrument: VOA-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	10.0	U
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	17.5	
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	0.500	U
135-98-8	sec-Butylbenzene	1	0.500	U
98-06-6	tert-Butylbenzene	1	0.500	U
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.339	J
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	0.378	J

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-045PW-04-06-191029

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-05	File ID:	VI19110119.D
Sampled:	10/29/19 15:20	Prepared:	11/01/19 12:15	Analyzed:	11/01/19 18:41
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Batch:	9110370	Sequence:	9K01026	Calibration:	A9J2503
Instrument:	VOA-GCMS9				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
110-54-3	n-Hexane	1	5.00	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	1.11	
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	2.50	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	12.2	
103-65-1	n-Propylbenzene	1	0.474	J
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
109-99-9	Tetrahydrofuran	1	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1	0.979	J
108-67-8	1,3,5-Trimethylbenzene	1	0.500	U
78-83-1	Isobutyl alcohol	1	250	U
108-88-3	Toluene	1	0.813	J
179601-23-1	m,p-Xylene	1	0.643	J
95-47-6	o-Xylene	1	1.33	
110-57-6	trans-1,4-Dichloro-2-butene	1	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	51.6	103	80 - 120	
Toluene-d8 (Surr)	50.0	50.3	101	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.3	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	107082	6.217	111917	6.217	
Chlorobenzene-d5 (ISTD)	294447	9.916	312123	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	141334	11.856	154133	11.856	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-059PW-04-06-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-06	File ID:	VG19110123.D
Sampled:	10/30/19 09:16	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 22:52
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110371 Sequence: 9K01040 Calibration: A9J2806 Instrument: VOA-GCMS7

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	100	1000	U
107-13-1	Acrylonitrile	100	100	U
71-43-2	Benzene	100	257	D
108-86-1	Bromobenzene	100	25.0	U
74-97-5	Bromochloromethane	100	50.0	U
75-27-4	Bromodichloromethane	100	50.0	U
75-25-2	Bromoform	100	50.0	U
74-83-9	Bromomethane	100	500	U
78-93-3	2-Butanone (MEK)	100	500	U
104-51-8	n-Butylbenzene	100	50.0	U
135-98-8	sec-Butylbenzene	100	50.0	U
98-06-6	tert-Butylbenzene	100	50.0	U
75-15-0	Carbon disulfide	100	500	U
56-23-5	Carbon tetrachloride	100	50.0	U
108-90-7	Chlorobenzene	100	25.0	U
75-00-3	Chloroethane	100	500	U
67-66-3	Chloroform	100	50.0	U
74-87-3	Chloromethane	100	250	U
95-49-8	2-Chlorotoluene	100	50.0	U
106-43-4	4-Chlorotoluene	100	50.0	U
124-48-1	Dibromochloromethane	100	50.0	U
96-12-8	1,2-Dibromo-3-chloropropane	100	250	U
106-93-4	1,2-Dibromoethane (EDB)	100	25.0	U
74-95-3	Dibromomethane	100	50.0	U
95-50-1	1,2-Dichlorobenzene	100	25.0	U
541-73-1	1,3-Dichlorobenzene	100	25.0	U
106-46-7	1,4-Dichlorobenzene	100	25.0	U
75-71-8	Dichlorodifluoromethane	100	50.0	U
75-34-3	1,1-Dichloroethane	100	20.0	U
107-06-2	1,2-Dichloroethane (EDC)	100	20.0	U
75-35-4	1,1-Dichloroethene	100	20.0	U
156-59-2	cis-1,2-Dichloroethene	100	20.0	U
156-60-5	trans-1,2-Dichloroethene	100	20.0	U
78-87-5	1,2-Dichloropropane	100	25.0	U
142-28-9	1,3-Dichloropropane	100	50.0	U
594-20-7	2,2-Dichloropropane	100	50.0	U
563-58-6	1,1-Dichloropropene	100	50.0	U
10061-01-5	cis-1,3-Dichloropropene	100	50.0	U
10061-02-6	trans-1,3-Dichloropropene	100	50.0	U
100-41-4	Ethylbenzene	100	78.0	D

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-059PW-04-06-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-06	File ID:	VG19110123.D
Sampled:	10/30/19 09:16	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 22:52
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806
Instrument:	VOA-GCMS7				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	100	250	U
110-54-3	n-Hexane	100	500	U
591-78-6	2-Hexanone	100	500	U
98-82-8	Isopropylbenzene	100	50.0	U
99-87-6	4-Isopropyltoluene	100	50.0	U
75-09-2	Methylene chloride	100	500	U
108-10-1	4-Methyl-2-pentanone (MiBK)	100	500	U
1634-04-4	Methyl tert-butyl ether (MTBE)	100	50.0	U
91-20-3	Naphthalene	100	4100	D
103-65-1	n-Propylbenzene	100	25.0	U
100-42-5	Styrene	100	50.0	U
630-20-6	1,1,1,2-Tetrachloroethane	100	20.0	U
79-34-5	1,1,2,2-Tetrachloroethane	100	25.0	U
127-18-4	Tetrachloroethene (PCE)	100	20.0	U
109-99-9	Tetrahydrofuran	100	500	U
87-61-6	1,2,3-Trichlorobenzene	100	100	U
120-82-1	1,2,4-Trichlorobenzene	100	100	U
71-55-6	1,1,1-Trichloroethane	100	20.0	U
79-00-5	1,1,2-Trichloroethane	100	25.0	U
79-01-6	Trichloroethene (TCE)	100	20.0	U
75-69-4	Trichlorofluoromethane	100	100	U
96-18-4	1,2,3-Trichloropropane	100	50.0	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	100	100	U
95-63-6	1,2,4-Trimethylbenzene	100	50.0	U
108-67-8	1,3,5-Trimethylbenzene	100	50.0	U
78-83-1	Isobutyl alcohol	100	25000	U
108-88-3	Toluene	100	50.0	U
75-01-4	Vinyl chloride	100	20.0	U
179601-23-1	m,p-Xylene	100	50.0	U
95-47-6	o-Xylene	100	29.0	JD
110-57-6	trans-1,4-Dichloro-2-butene	100	500	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	49.7	99	80 - 120	
Toluene-d8 (Surr)	50.0	50.3	101	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.9	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	81645	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	239328	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	120754	12.287	121794	12.287	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-059PW-10-12-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-07	File ID:	VG19110124.D
Sampled:	10/30/19 10:18	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 23:19
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806
Instrument:	VOA-GCMS7				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
67-64-1	Acetone	1	10.0	U
107-13-1	Acrylonitrile	1	1.00	U
71-43-2	Benzene	1	18.9	
108-86-1	Bromobenzene	1	0.250	U
74-97-5	Bromochloromethane	1	0.500	U
75-27-4	Bromodichloromethane	1	0.500	U
75-25-2	Bromoform	1	0.500	U
74-83-9	Bromomethane	1	5.00	U
78-93-3	2-Butanone (MEK)	1	5.00	U
104-51-8	n-Butylbenzene	1	0.500	U
135-98-8	sec-Butylbenzene	1	7.16	
98-06-6	tert-Butylbenzene	1	1.32	
75-15-0	Carbon disulfide	1	5.00	U
56-23-5	Carbon tetrachloride	1	0.500	U
108-90-7	Chlorobenzene	1	0.250	U
75-00-3	Chloroethane	1	5.00	U
67-66-3	Chloroform	1	0.500	U
74-87-3	Chloromethane	1	2.50	U
95-49-8	2-Chlorotoluene	1	0.500	U
106-43-4	4-Chlorotoluene	1	0.500	U
124-48-1	Dibromochloromethane	1	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	1	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	1	0.250	U
74-95-3	Dibromomethane	1	0.500	U
95-50-1	1,2-Dichlorobenzene	1	0.250	U
541-73-1	1,3-Dichlorobenzene	1	0.250	U
106-46-7	1,4-Dichlorobenzene	1	0.250	U
75-71-8	Dichlorodifluoromethane	1	0.500	U
75-34-3	1,1-Dichloroethane	1	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	1	0.200	U
75-35-4	1,1-Dichloroethene	1	0.200	U
156-59-2	cis-1,2-Dichloroethene	1	0.660	
156-60-5	trans-1,2-Dichloroethene	1	0.200	U
78-87-5	1,2-Dichloropropane	1	0.250	U
142-28-9	1,3-Dichloropropane	1	0.500	U
594-20-7	2,2-Dichloropropane	1	0.500	U
563-58-6	1,1-Dichloropropene	1	0.500	U
10061-01-5	cis-1,3-Dichloropropene	1	0.500	U
10061-02-6	trans-1,3-Dichloropropene	1	0.500	U
100-41-4	Ethylbenzene	1	5.33	

ORGANIC ANALYSIS DATA SHEET

EPA 8260C

PDI-059PW-10-12-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-07	File ID:	VG19110124.D
Sampled:	10/30/19 10:18	Prepared:	11/01/19 13:33	Analyzed:	11/01/19 23:19
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806
Instrument:	VOA-GCMS7				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
87-68-3	Hexachlorobutadiene	1	2.50	U
110-54-3	n-Hexane	1	5.00	U
591-78-6	2-Hexanone	1	5.00	U
98-82-8	Isopropylbenzene	1	17.8	
99-87-6	4-Isopropyltoluene	1	0.500	U
75-09-2	Methylene chloride	1	5.00	U
108-10-1	4-Methyl-2-pentanone (MiBK)	1	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	1	0.500	U
91-20-3	Naphthalene	1	168	
103-65-1	n-Propylbenzene	1	2.79	
100-42-5	Styrene	1	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	1	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	1	0.250	U
127-18-4	Tetrachloroethene (PCE)	1	0.200	U
109-99-9	Tetrahydrofuran	1	5.00	U
87-61-6	1,2,3-Trichlorobenzene	1	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1	1.00	U
71-55-6	1,1,1-Trichloroethane	1	0.200	U
79-00-5	1,1,2-Trichloroethane	1	0.250	U
79-01-6	Trichloroethene (TCE)	1	0.200	U
75-69-4	Trichlorofluoromethane	1	1.00	U
96-18-4	1,2,3-Trichloropropane	1	0.500	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	1	1.00	U
95-63-6	1,2,4-Trimethylbenzene	1	7.87	
108-67-8	1,3,5-Trimethylbenzene	1	2.41	
78-83-1	Isobutyl alcohol	1	250	U
108-88-3	Toluene	1	0.500	U
179601-23-1	m,p-Xylene	1	2.40	
95-47-6	o-Xylene	1	3.27	
110-57-6	trans-1,4-Dichloro-2-butene	1	5.00	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	49.2	98	80 - 120	
Toluene-d8 (Surr)	50.0	49.1	98	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	50.4	101	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	94118	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	277979	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	145141	12.287	121794	12.287	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Batch: 9110370 Batch Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9110370-BLK1	VI19110105.D	11/01/19 11:04	
LCS	9110370-BS1	VI19110103.D	11/01/19 11:04	
PDI-037PW-04-06-191028 (Dup)	9110370-DUP1	VI19110112.D	11/01/19 12:15	
PDI-037PW-04-06-191028	A9J1114-03	VI19110111.D	11/01/19 12:15	
PDI-045PW-04-06-191029	A9J1114-05	VI19110119.D	11/01/19 12:15	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

PREPARATION BATCH SUMMARY

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Batch: 9110371 Batch Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9110371-BLK1	VG19110105.D	11/01/19 13:33	
LCS	9110371-BS1	VG19110103.D	11/01/19 13:33	
PDI-TB-1910300000	A9J1114-01	VG19110120.D	11/01/19 13:33	
PDI-028PW-9-11-191030	A9J1114-02	VG19110121.D	11/01/19 13:33	
PDI-038PW-9-11-191030	A9J1114-04	VG19110122.D	11/01/19 13:33	
PDI-059PW-04-06-191030	A9J1114-06	VG19110123.D	11/01/19 13:33	
PDI-059PW-10-12-191030	A9J1114-07	VG19110124.D	11/01/19 13:33	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

PREPARATION BATCH SUMMARY

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Batch: 9110413 Batch Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9110413-BLK1	VI19110407.D	11/04/19 09:00	
LCS	9110413-BS1	VI19110405.D	11/04/19 09:00	
PDI-037PW-04-06-191028	A9J1114-03RE1	VI19110412.D	11/04/19 11:08	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110370-BLK1	File ID:	VI19110105.D
Prepared:	11/01/19 11:04	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 12:25	Instrument:	VOA-GCMS9		
Batch:	9110370	Sequence:	9K01026	Calibration:	A9J2503

CAS NO.	COMPOUND	CONC. (ug/L)	Q
67-64-1	Acetone	10.0	U
107-13-1	Acrylonitrile	1.00	U
71-43-2	Benzene	0.100	U
108-86-1	Bromobenzene	0.250	U
74-97-5	Bromochloromethane	0.500	U
75-27-4	Bromodichloromethane	0.500	U
75-25-2	Bromoform	0.500	U
74-83-9	Bromomethane	5.00	U
78-93-3	2-Butanone (MEK)	5.00	U
104-51-8	n-Butylbenzene	0.500	U
135-98-8	sec-Butylbenzene	0.500	U
98-06-6	tert-Butylbenzene	0.500	U
75-15-0	Carbon disulfide	5.00	U
56-23-5	Carbon tetrachloride	0.500	U
108-90-7	Chlorobenzene	0.250	U
75-00-3	Chloroethane	5.00	U
67-66-3	Chloroform	0.500	U
74-87-3	Chloromethane	2.50	U
95-49-8	2-Chlorotoluene	0.500	U
106-43-4	4-Chlorotoluene	0.500	U
124-48-1	Dibromochloromethane	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.250	U
74-95-3	Dibromomethane	0.500	U
95-50-1	1,2-Dichlorobenzene	0.250	U
541-73-1	1,3-Dichlorobenzene	0.250	U
106-46-7	1,4-Dichlorobenzene	0.250	U
75-71-8	Dichlorodifluoromethane	0.500	U
75-34-3	1,1-Dichloroethane	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	0.200	U
75-35-4	1,1-Dichloroethene	0.200	U
156-59-2	cis-1,2-Dichloroethene	0.200	U
156-60-5	trans-1,2-Dichloroethene	0.200	U
78-87-5	1,2-Dichloropropane	0.250	U
142-28-9	1,3-Dichloropropane	0.500	U

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110370-BLK1	File ID:	VI19110105.D
Prepared:	11/01/19 11:04	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 12:25	Instrument:	VOA-GCMS9		
Batch:	9110370	Sequence:	9K01026	Calibration:	A9J2503

CAS NO.	COMPOUND	CONC. (ug/L)	Q
594-20-7	2,2-Dichloropropane	0.500	U
563-58-6	1,1-Dichloropropene	0.500	U
10061-01-5	cis-1,3-Dichloropropene	0.500	U
10061-02-6	trans-1,3-Dichloropropene	0.500	U
100-41-4	Ethylbenzene	0.250	U
87-68-3	Hexachlorobutadiene	2.50	U
591-78-6	2-Hexanone	5.00	U
98-82-8	Isopropylbenzene	0.500	U
99-87-6	4-Isopropyltoluene	0.500	U
75-09-2	Methylene chloride	2.50	U
108-10-1	4-Methyl-2-pentanone (MiBK)	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	0.500	U
91-20-3	Naphthalene	1.00	U
103-65-1	n-Propylbenzene	0.250	U
100-42-5	Styrene	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	0.250	U
127-18-4	Tetrachloroethene (PCE)	0.200	U
87-61-6	1,2,3-Trichlorobenzene	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1.00	U
71-55-6	1,1,1-Trichloroethane	0.200	U
79-00-5	1,1,2-Trichloroethane	0.250	U
79-01-6	Trichloroethene (TCE)	0.200	U
75-69-4	Trichlorofluoromethane	1.00	U
96-18-4	1,2,3-Trichloropropane	0.500	U
95-63-6	1,2,4-Trimethylbenzene	0.500	U
108-67-8	1,3,5-Trimethylbenzene	0.500	U
108-88-3	Toluene	0.500	U
75-01-4	Vinyl chloride	0.200	U
179601-23-1	m,p-Xylene	0.500	U
95-47-6	o-Xylene	0.250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	53.7	107	80 - 120	
Toluene-d8 (Surr)	50.0	50.9	102	80 - 120	

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110370-BLK1	File ID:	VI19110105.D
Prepared:	11/01/19 11:04	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 12:25	Instrument:	VOA-GCMS9		
Batch:	9110370	Sequence:	9K01026	Calibration:	A9J2503

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	51.4	103	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	110933	6.223	111917	6.217	
Chlorobenzene-d5 (ISTD)	311286	9.916	312123	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	139970	11.856	154133	11.856	

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110371-BLK1	File ID:	VG19110105.D
Prepared:	11/01/19 13:33	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 14:45	Instrument:	VOA-GCMS7		
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806

CAS NO.	COMPOUND	CONC. (ug/L)	Q
67-64-1	Acetone	10.0	U
107-13-1	Acrylonitrile	1.00	U
71-43-2	Benzene	0.100	U
108-86-1	Bromobenzene	0.250	U
74-97-5	Bromochloromethane	0.500	U
75-27-4	Bromodichloromethane	0.500	U
75-25-2	Bromoform	0.500	U
74-83-9	Bromomethane	5.00	U
78-93-3	2-Butanone (MEK)	5.00	U
104-51-8	n-Butylbenzene	0.500	U
135-98-8	sec-Butylbenzene	0.500	U
98-06-6	tert-Butylbenzene	0.500	U
75-15-0	Carbon disulfide	5.00	U
56-23-5	Carbon tetrachloride	0.500	U
108-90-7	Chlorobenzene	0.250	U
75-00-3	Chloroethane	5.00	U
67-66-3	Chloroform	0.500	U
74-87-3	Chloromethane	2.50	U
95-49-8	2-Chlorotoluene	0.500	U
106-43-4	4-Chlorotoluene	0.500	U
124-48-1	Dibromochloromethane	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.250	U
74-95-3	Dibromomethane	0.500	U
95-50-1	1,2-Dichlorobenzene	0.250	U
541-73-1	1,3-Dichlorobenzene	0.250	U
106-46-7	1,4-Dichlorobenzene	0.250	U
75-71-8	Dichlorodifluoromethane	0.500	U
75-34-3	1,1-Dichloroethane	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	0.200	U
75-35-4	1,1-Dichloroethene	0.200	U
156-59-2	cis-1,2-Dichloroethene	0.200	U
156-60-5	trans-1,2-Dichloroethene	0.200	U
78-87-5	1,2-Dichloropropane	0.250	U
142-28-9	1,3-Dichloropropane	0.500	U

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110371-BLK1	File ID:	VG19110105.D
Prepared:	11/01/19 13:33	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 14:45	Instrument:	VOA-GCMS7		
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806

CAS NO.	COMPOUND	CONC. (ug/L)	Q
594-20-7	2,2-Dichloropropane	0.500	U
563-58-6	1,1-Dichloropropene	0.500	U
10061-01-5	cis-1,3-Dichloropropene	0.500	U
10061-02-6	trans-1,3-Dichloropropene	0.500	U
100-41-4	Ethylbenzene	0.250	U
87-68-3	Hexachlorobutadiene	2.50	U
591-78-6	2-Hexanone	5.00	U
98-82-8	Isopropylbenzene	0.500	U
99-87-6	4-Isopropyltoluene	0.500	U
75-09-2	Methylene chloride	5.00	U
108-10-1	4-Methyl-2-pentanone (MiBK)	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	0.500	U
91-20-3	Naphthalene	1.00	U
103-65-1	n-Propylbenzene	0.250	U
100-42-5	Styrene	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	0.250	U
127-18-4	Tetrachloroethene (PCE)	0.200	U
87-61-6	1,2,3-Trichlorobenzene	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1.00	U
71-55-6	1,1,1-Trichloroethane	0.200	U
79-00-5	1,1,2-Trichloroethane	0.250	U
79-01-6	Trichloroethene (TCE)	0.200	U
75-69-4	Trichlorofluoromethane	1.00	U
96-18-4	1,2,3-Trichloropropane	0.500	U
95-63-6	1,2,4-Trimethylbenzene	0.500	U
108-67-8	1,3,5-Trimethylbenzene	0.500	U
108-88-3	Toluene	0.500	U
75-01-4	Vinyl chloride	0.200	U
179601-23-1	m,p-Xylene	0.500	U
95-47-6	o-Xylene	0.250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	52.1	104	80 - 120	
Toluene-d8 (Surr)	50.0	50.2	100	80 - 120	

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110371-BLK1	File ID:	VG19110105.D
Prepared:	11/01/19 13:33	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/01/19 14:45	Instrument:	VOA-GCMS7		
Batch:	9110371	Sequence:	9K01040	Calibration:	A9J2806

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	49.9	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	81069	6.855	82691	6.855	
Chlorobenzene-d5 (ISTD)	246440	10.446	241922	10.446	
1,4-Dichlorobenzene-d4 (ISTD)	122146	12.287	121794	12.287	

METHOD BLANK DATA SHEET
EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110413-BLK1	File ID:	VI19110407.D
Prepared:	11/04/19 09:00	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/04/19 11:22	Instrument:	VOA-GCMS9		
Batch:	9110413	Sequence:	9K04028	Calibration:	A9J2503

CAS NO.	COMPOUND	CONC. (ug/L)	Q
67-64-1	Acetone	10.0	U
107-13-1	Acrylonitrile	1.00	U
71-43-2	Benzene	0.100	U
108-86-1	Bromobenzene	0.250	U
74-97-5	Bromochloromethane	0.500	U
75-27-4	Bromodichloromethane	0.500	U
75-25-2	Bromoform	0.500	U
74-83-9	Bromomethane	5.00	U
78-93-3	2-Butanone (MEK)	5.00	U
104-51-8	n-Butylbenzene	0.500	U
135-98-8	sec-Butylbenzene	0.500	U
98-06-6	tert-Butylbenzene	0.500	U
75-15-0	Carbon disulfide	5.00	U
56-23-5	Carbon tetrachloride	0.500	U
108-90-7	Chlorobenzene	0.250	U
75-00-3	Chloroethane	5.00	U
67-66-3	Chloroform	0.500	U
74-87-3	Chloromethane	2.50	U
95-49-8	2-Chlorotoluene	0.500	U
106-43-4	4-Chlorotoluene	0.500	U
124-48-1	Dibromochloromethane	0.500	U
96-12-8	1,2-Dibromo-3-chloropropane	2.50	U
106-93-4	1,2-Dibromoethane (EDB)	0.250	U
74-95-3	Dibromomethane	0.500	U
95-50-1	1,2-Dichlorobenzene	0.250	U
541-73-1	1,3-Dichlorobenzene	0.250	U
106-46-7	1,4-Dichlorobenzene	0.250	U
75-71-8	Dichlorodifluoromethane	0.500	U
75-34-3	1,1-Dichloroethane	0.200	U
107-06-2	1,2-Dichloroethane (EDC)	0.200	U
75-35-4	1,1-Dichloroethene	0.200	U
156-59-2	cis-1,2-Dichloroethene	0.200	U
156-60-5	trans-1,2-Dichloroethene	0.200	U
78-87-5	1,2-Dichloropropane	0.250	U
142-28-9	1,3-Dichloropropane	0.500	U

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110413-BLK1	File ID:	VI19110407.D
Prepared:	11/04/19 09:00	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/04/19 11:22	Instrument:	VOA-GCMS9		
Batch:	9110413	Sequence:	9K04028	Calibration:	A9J2503

CAS NO.	COMPOUND	CONC. (ug/L)	Q
594-20-7	2,2-Dichloropropane	0.500	U
563-58-6	1,1-Dichloropropene	0.500	U
10061-01-5	cis-1,3-Dichloropropene	0.500	U
10061-02-6	trans-1,3-Dichloropropene	0.500	U
100-41-4	Ethylbenzene	0.250	U
87-68-3	Hexachlorobutadiene	2.50	U
591-78-6	2-Hexanone	5.00	U
98-82-8	Isopropylbenzene	0.500	U
99-87-6	4-Isopropyltoluene	0.500	U
75-09-2	Methylene chloride	2.50	U
108-10-1	4-Methyl-2-pentanone (MiBK)	5.00	U
1634-04-4	Methyl tert-butyl ether (MTBE)	0.500	U
91-20-3	Naphthalene	1.00	U
103-65-1	n-Propylbenzene	0.250	U
100-42-5	Styrene	0.500	U
630-20-6	1,1,1,2-Tetrachloroethane	0.200	U
79-34-5	1,1,2,2-Tetrachloroethane	0.250	U
127-18-4	Tetrachloroethene (PCE)	0.200	U
87-61-6	1,2,3-Trichlorobenzene	1.00	U
120-82-1	1,2,4-Trichlorobenzene	1.00	U
71-55-6	1,1,1-Trichloroethane	0.200	U
79-00-5	1,1,2-Trichloroethane	0.250	U
79-01-6	Trichloroethene (TCE)	0.200	U
75-69-4	Trichlorofluoromethane	1.00	U
96-18-4	1,2,3-Trichloropropane	0.500	U
95-63-6	1,2,4-Trimethylbenzene	0.500	U
108-67-8	1,3,5-Trimethylbenzene	0.500	U
108-88-3	Toluene	0.500	U
75-01-4	Vinyl chloride	0.200	U
179601-23-1	m,p-Xylene	0.500	U
95-47-6	o-Xylene	0.250	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	52.2	104	80 - 120	
Toluene-d8 (Surr)	50.0	51.2	102	80 - 120	

METHOD BLANK DATA SHEET

EPA 8260C

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110413-BLK1	File ID:	VI19110407.D
Prepared:	11/04/19 09:00	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/04/19 11:22	Instrument:	VOA-GCMS9		
Batch:	9110413	Sequence:	9K04028	Calibration:	A9J2503

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	49.9	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	113410	6.217	116594	6.217	
Chlorobenzene-d5 (ISTD)	311790	9.916	325714	9.916	
1,4-Dichlorobenzene-d4 (ISTD)	140834	11.856	155936	11.856	

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110370	Laboratory ID:	9110370-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	40.0	34.8	87	80 - 120
Acrylonitrile	20.0	21.0	105	80 - 120
Benzene	20.0	19.7	98	80 - 120
Bromobenzene	20.0	19.9	99	80 - 120
Bromochloromethane	20.0	22.6	113	80 - 120
Bromodichloromethane	20.0	20.7	103	80 - 120
Bromoform	20.0	24.7	123 *	80 - 120
Bromomethane	20.0	23.6	118	80 - 120
2-Butanone (MEK)	40.0	38.7	97	80 - 120
n-Butylbenzene	20.0	20.5	103	80 - 120
sec-Butylbenzene	20.0	19.1	96	80 - 120
tert-Butylbenzene	20.0	18.2	91	80 - 120
Carbon disulfide	20.0	18.8	94	80 - 120
Carbon tetrachloride	20.0	20.3	102	80 - 120
Chlorobenzene	20.0	20.0	100	80 - 120
Chloroethane	20.0	16.9	84	80 - 120
Chloroform	20.0	20.0	100	80 - 120
Chloromethane	20.0	17.2	86	80 - 120
2-Chlorotoluene	20.0	18.7	94	80 - 120
4-Chlorotoluene	20.0	18.8	94	80 - 120
Dibromochloromethane	20.0	25.3	126 *	80 - 120
1,2-Dibromo-3-chloropropane	20.0	19.7	99	80 - 120
1,2-Dibromoethane (EDB)	20.0	20.1	101	80 - 120
Dibromomethane	20.0	21.2	106	80 - 120
1,2-Dichlorobenzene	20.0	19.7	98	80 - 120
1,3-Dichlorobenzene	20.0	19.9	100	80 - 120
1,4-Dichlorobenzene	20.0	19.5	98	80 - 120
Dichlorodifluoromethane	20.0	19.5	97	80 - 120
1,1-Dichloroethane	20.0	19.2	96	80 - 120
1,2-Dichloroethane (EDC)	20.0	19.0	95	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110370	Laboratory ID:	9110370-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	20.0	19.1	96	80 - 120
cis-1,2-Dichloroethene	20.0	19.4	97	80 - 120
trans-1,2-Dichloroethene	20.0	19.7	99	80 - 120
1,2-Dichloropropane	20.0	20.2	101	80 - 120
1,3-Dichloropropane	20.0	20.1	100	80 - 120
2,2-Dichloropropane	20.0	17.5	87	80 - 120
1,1-Dichloropropene	20.0	19.1	96	80 - 120
cis-1,3-Dichloropropene	20.0	19.3	97	80 - 120
trans-1,3-Dichloropropene	20.0	18.9	94	80 - 120
Ethylbenzene	20.0	19.1	95	80 - 120
Hexachlorobutadiene	20.0	18.9	95	80 - 120
2-Hexanone	40.0	38.0	95	80 - 120
Isopropylbenzene	20.0	19.4	97	80 - 120
4-Isopropyltoluene	20.0	20.0	100	80 - 120
Methylene chloride	20.0	19.3	97	80 - 120
4-Methyl-2-pentanone (MiBK)	40.0	39.0	97	80 - 120
Methyl tert-butyl ether (MTBE)	20.0	17.6	88	80 - 120
Naphthalene	20.0	18.7	94	80 - 120
n-Propylbenzene	20.0	19.1	95	80 - 120
Styrene	20.0	19.8	99	80 - 120
1,1,1,2-Tetrachloroethane	20.0	21.4	107	80 - 120
1,1,2,2-Tetrachloroethane	20.0	19.9	99	80 - 120
Tetrachloroethene (PCE)	20.0	20.2	101	80 - 120
1,2,3-Trichlorobenzene	20.0	19.8	99	80 - 120
1,2,4-Trichlorobenzene	20.0	19.3	97	80 - 120
1,1,1-Trichloroethane	20.0	18.4	92	80 - 120
1,1,2-Trichloroethane	20.0	21.2	106	80 - 120
Trichloroethene (TCE)	20.0	20.9	104	80 - 120
Trichlorofluoromethane	20.0	20.9	105	80 - 120
1,2,3-Trichloropropane	20.0	19.6	98	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110370	Laboratory ID:	9110370-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	20.0	19.7	98	80 - 120
1,3,5-Trimethylbenzene	20.0	19.3	97	80 - 120
Toluene	20.0	19.0	95	80 - 120
Vinyl chloride	20.0	19.5	97	80 - 120
m,p-Xylene	40.0	38.4	96	80 - 120
o-Xylene	20.0	18.9	95	80 - 120

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110371	Laboratory ID:	9110371-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	40.0	38.8	97	80 - 120
Acrylonitrile	20.0	21.2	106	80 - 120
Benzene	20.0	21.5	108	80 - 120
Bromobenzene	20.0	21.6	108	80 - 120
Bromochloromethane	20.0	21.0	105	80 - 120
Bromodichloromethane	20.0	22.0	110	80 - 120
Bromoform	20.0	19.8	99	80 - 120
Bromomethane	20.0	19.4	97	80 - 120
2-Butanone (MEK)	40.0	43.3	108	80 - 120
n-Butylbenzene	20.0	24.5	123 *	80 - 120
sec-Butylbenzene	20.0	22.9	114	80 - 120
tert-Butylbenzene	20.0	23.2	116	80 - 120
Carbon disulfide	20.0	21.1	106	80 - 120
Carbon tetrachloride	20.0	23.5	118	80 - 120
Chlorobenzene	20.0	20.8	104	80 - 120
Chloroethane	20.0	21.4	107	80 - 120
Chloroform	20.0	21.6	108	80 - 120
Chloromethane	20.0	19.0	95	80 - 120
2-Chlorotoluene	20.0	22.6	113	80 - 120
4-Chlorotoluene	20.0	22.8	114	80 - 120
Dibromochloromethane	20.0	21.2	106	80 - 120
1,2-Dibromo-3-chloropropane	20.0	21.4	107	80 - 120
1,2-Dibromoethane (EDB)	20.0	21.8	109	80 - 120
Dibromomethane	20.0	21.4	107	80 - 120
1,2-Dichlorobenzene	20.0	22.2	111	80 - 120
1,3-Dichlorobenzene	20.0	22.4	112	80 - 120
1,4-Dichlorobenzene	20.0	20.0	100	80 - 120
Dichlorodifluoromethane	20.0	20.6	103	80 - 120
1,1-Dichloroethane	20.0	20.7	103	80 - 120
1,2-Dichloroethane (EDC)	20.0	21.2	106	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110371	Laboratory ID:	9110371-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	20.0	21.7	108	80 - 120
cis-1,2-Dichloroethene	20.0	21.8	109	80 - 120
trans-1,2-Dichloroethene	20.0	21.5	107	80 - 120
1,2-Dichloropropane	20.0	20.5	102	80 - 120
1,3-Dichloropropane	20.0	21.6	108	80 - 120
2,2-Dichloropropane	20.0	25.0	125 *	80 - 120
1,1-Dichloropropene	20.0	23.8	119	80 - 120
cis-1,3-Dichloropropene	20.0	21.7	109	80 - 120
trans-1,3-Dichloropropene	20.0	23.6	118	80 - 120
Ethylbenzene	20.0	21.5	108	80 - 120
Hexachlorobutadiene	20.0	23.7	118	80 - 120
2-Hexanone	40.0	44.6	112	80 - 120
Isopropylbenzene	20.0	22.6	113	80 - 120
4-Isopropyltoluene	20.0	23.0	115	80 - 120
Methylene chloride	20.0	21.6	108	80 - 120
4-Methyl-2-pentanone (MiBK)	40.0	44.0	110	80 - 120
Methyl tert-butyl ether (MTBE)	20.0	22.5	113	80 - 120
Naphthalene	20.0	22.0	110	80 - 120
n-Propylbenzene	20.0	22.2	111	80 - 120
Styrene	20.0	21.4	107	80 - 120
1,1,1,2-Tetrachloroethane	20.0	22.3	112	80 - 120
1,1,2,2-Tetrachloroethane	20.0	21.4	107	80 - 120
Tetrachloroethene (PCE)	20.0	21.7	108	80 - 120
1,2,3-Trichlorobenzene	20.0	25.0	125 *	80 - 120
1,2,4-Trichlorobenzene	20.0	24.1	120	80 - 120
1,1,1-Trichloroethane	20.0	22.4	112	80 - 120
1,1,2-Trichloroethane	20.0	21.6	108	80 - 120
Trichloroethene (TCE)	20.0	20.5	103	80 - 120
Trichlorofluoromethane	20.0	21.8	109	80 - 120
1,2,3-Trichloropropane	20.0	21.3	107	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110371	Laboratory ID:	9110371-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	20.0	23.3	117	80 - 120
1,3,5-Trimethylbenzene	20.0	23.6	118	80 - 120
Toluene	20.0	20.4	102	80 - 120
Vinyl chloride	20.0	20.7	104	80 - 120
m,p-Xylene	40.0	45.7	114	80 - 120
o-Xylene	20.0	23.3	117	80 - 120

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110413	Laboratory ID:	9110413-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	40.0	36.1	90	80 - 120
Acrylonitrile	20.0	21.4	107	80 - 120
Benzene	20.0	19.4	97	80 - 120
Bromobenzene	20.0	19.5	98	80 - 120
Bromochloromethane	20.0	21.9	109	80 - 120
Bromodichloromethane	20.0	20.5	102	80 - 120
Bromoform	20.0	23.8	119	80 - 120
Bromomethane	20.0	22.9	114	80 - 120
2-Butanone (MEK)	40.0	39.5	99	80 - 120
n-Butylbenzene	20.0	20.2	101	80 - 120
sec-Butylbenzene	20.0	19.1	95	80 - 120
tert-Butylbenzene	20.0	18.2	91	80 - 120
Carbon disulfide	20.0	18.4	92	80 - 120
Carbon tetrachloride	20.0	19.5	98	80 - 120
Chlorobenzene	20.0	19.2	96	80 - 120
Chloroethane	20.0	16.1	80	80 - 120
Chloroform	20.0	19.5	98	80 - 120
Chloromethane	20.0	17.3	87	80 - 120
2-Chlorotoluene	20.0	18.6	93	80 - 120
4-Chlorotoluene	20.0	18.9	95	80 - 120
Dibromochloromethane	20.0	24.3	122 *	80 - 120
1,2-Dibromo-3-chloropropane	20.0	20.2	101	80 - 120
1,2-Dibromoethane (EDB)	20.0	19.5	98	80 - 120
Dibromomethane	20.0	20.8	104	80 - 120
1,2-Dichlorobenzene	20.0	19.0	95	80 - 120
1,3-Dichlorobenzene	20.0	19.4	97	80 - 120
1,4-Dichlorobenzene	20.0	19.1	95	80 - 120
Dichlorodifluoromethane	20.0	18.6	93	80 - 120
1,1-Dichloroethane	20.0	19.0	95	80 - 120
1,2-Dichloroethane (EDC)	20.0	18.7	94	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110413	Laboratory ID:	9110413-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	20.0	18.6	93	80 - 120
cis-1,2-Dichloroethene	20.0	19.2	96	80 - 120
trans-1,2-Dichloroethene	20.0	19.6	98	80 - 120
1,2-Dichloropropane	20.0	19.8	99	80 - 120
1,3-Dichloropropane	20.0	19.7	99	80 - 120
2,2-Dichloropropane	20.0	18.1	91	80 - 120
1,1-Dichloropropene	20.0	18.6	93	80 - 120
cis-1,3-Dichloropropene	20.0	19.3	96	80 - 120
trans-1,3-Dichloropropene	20.0	18.7	94	80 - 120
Ethylbenzene	20.0	18.4	92	80 - 120
Hexachlorobutadiene	20.0	18.4	92	80 - 120
2-Hexanone	40.0	37.8	94	80 - 120
Isopropylbenzene	20.0	18.7	93	80 - 120
4-Isopropyltoluene	20.0	19.4	97	80 - 120
Methylene chloride	20.0	18.8	94	80 - 120
4-Methyl-2-pentanone (MiBK)	40.0	39.8	99	80 - 120
Methyl tert-butyl ether (MTBE)	20.0	17.9	89	80 - 120
Naphthalene	20.0	18.1	91	80 - 120
n-Propylbenzene	20.0	19.0	95	80 - 120
Styrene	20.0	19.1	95	80 - 120
1,1,1,2-Tetrachloroethane	20.0	20.8	104	80 - 120
1,1,2,2-Tetrachloroethane	20.0	20.7	104	80 - 120
Tetrachloroethene (PCE)	20.0	19.5	97	80 - 120
1,2,3-Trichlorobenzene	20.0	18.9	95	80 - 120
1,2,4-Trichlorobenzene	20.0	18.7	94	80 - 120
1,1,1-Trichloroethane	20.0	18.2	91	80 - 120
1,1,2-Trichloroethane	20.0	20.1	100	80 - 120
Trichloroethene (TCE)	20.0	19.9	99	80 - 120
Trichlorofluoromethane	20.0	19.2	96	80 - 120
1,2,3-Trichloropropane	20.0	20.0	100	80 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110413	Laboratory ID:	9110413-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	20.0	19.6	98	80 - 120
1,3,5-Trimethylbenzene	20.0	19.3	96	80 - 120
Toluene	20.0	18.4	92	80 - 120
Vinyl chloride	20.0	19.6	98	80 - 120
m,p-Xylene	40.0	37.2	93	80 - 120
o-Xylene	20.0	18.5	92	80 - 120

* = Values outside of QC limits

DUPLICATES

PDI-037PW-04-06-191028

EPA 8260C

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Water
Batch: 9110370
Preparation: EPA 5030B
Source Sample Name: PDI-037PW-04-06-191028

SDG: Gasco_PreRD_DG 2019
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac
Laboratory ID: 9110370-DUP1
Lab Source ID: A9J1114-03
Initial/Final: 5 mL / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Acetone	30	75.6		ND				EPA 8260C
Acrylonitrile	30	0.00		ND				EPA 8260C
Benzene	30	314		321		2		EPA 8260C
Bromobenzene	30	0.00		ND				EPA 8260C
Bromochloromethane	30	0.00		ND				EPA 8260C
Bromodichloromethane	30	0.00		ND				EPA 8260C
Bromoform	30	0.00		ND				EPA 8260C
Bromomethane	30	0.00		ND				EPA 8260C
2-Butanone (MEK)	30	0.00		ND				EPA 8260C
n-Butylbenzene	30	0.00		ND				EPA 8260C
sec-Butylbenzene	30	0.00		ND				EPA 8260C
tert-Butylbenzene	30	0.00		ND				EPA 8260C
Carbon disulfide	30	0.00		ND				EPA 8260C
Carbon tetrachloride	30	0.00		ND				EPA 8260C
Chlorobenzene	30	0.00		ND				EPA 8260C
Chloroethane	30	86.8		ND				EPA 8260C
Chloroform	30	0.00		ND				EPA 8260C
Chloromethane	30	8.40		ND				EPA 8260C
2-Chlorotoluene	30	0.00		ND				EPA 8260C
4-Chlorotoluene	30	0.00		ND				EPA 8260C
Dibromochloromethane	30	0.00		ND				EPA 8260C
1,2-Dibromo-3-chloropropane	30	0.00		ND				EPA 8260C
1,2-Dibromoethane (EDB)	30	0.00		ND				EPA 8260C
Dibromomethane	30	0.00		ND				EPA 8260C
1,2-Dichlorobenzene	30	0.00		ND				EPA 8260C
1,3-Dichlorobenzene	30	0.00		ND				EPA 8260C
1,4-Dichlorobenzene	30	0.00		ND				EPA 8260C
Dichlorodifluoromethane	30	0.00		ND				EPA 8260C
1,1-Dichloroethane	30	0.00		ND				EPA 8260C
1,2-Dichloroethane (EDC)	30	0.00		ND				EPA 8260C
1,1-Dichloroethene	30	21.9		22.5		3		EPA 8260C
cis-1,2-Dichloroethene	30	31100		32000		3		EPA 8260C

DUPLICATES

EPA 8260C

PDI-037PW-04-06-191028

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Water
Batch: 9110370
Preparation: EPA 5030B
Source Sample Name: PDI-037PW-04-06-191028

SDG: Gasco_PreRD_DG 2019
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac
Laboratory ID: 9110370-DUP1
Lab Source ID: A9J1114-03
Initial/Final: 5 mL / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
trans-1,2-Dichloroethene	30	130		138		6		EPA 8260C
1,2-Dichloropropane	30	0.00		ND				EPA 8260C
1,3-Dichloropropane	30	0.00		ND				EPA 8260C
2,2-Dichloropropane	30	0.00		ND				EPA 8260C
1,1-Dichloropropene	30	0.00		ND				EPA 8260C
cis-1,3-Dichloropropene	30	0.00		ND				EPA 8260C
trans-1,3-Dichloropropene	30	0.00		ND				EPA 8260C
Ethylbenzene	30	212		212		0.1		EPA 8260C
Hexachlorobutadiene	30	0.00		ND				EPA 8260C
2-Hexanone	30	0.00		ND				EPA 8260C
Isopropylbenzene	30	8.50		ND				EPA 8260C
4-Isopropyltoluene	30	0.00		ND				EPA 8260C
Methylene chloride	30	0.00		ND				EPA 8260C
4-Methyl-2-pentanone (MiBK)	30	0.00		ND				EPA 8260C
Methyl tert-butyl ether (MTBE)	30	0.00		ND				EPA 8260C
Naphthalene	30	9490		9760		3		EPA 8260C
n-Propylbenzene	30	0.00		ND				EPA 8260C
Styrene	30	0.00		ND				EPA 8260C
1,1,1,2-Tetrachloroethane	30	0.00		ND				EPA 8260C
1,1,2,2-Tetrachloroethane	30	0.00		ND				EPA 8260C
Tetrachloroethene (PCE)	30	0.00		ND				EPA 8260C
1,2,3-Trichlorobenzene	30	0.00		ND				EPA 8260C
1,2,4-Trichlorobenzene	30	0.00		ND				EPA 8260C
1,1,1-Trichloroethane	30	0.00		ND				EPA 8260C
1,1,2-Trichloroethane	30	0.00		ND				EPA 8260C
Trichloroethene (TCE)	30	3850		3980		3		EPA 8260C
Trichlorofluoromethane	30	0.00		ND				EPA 8260C
1,2,3-Trichloropropane	30	0.00		ND				EPA 8260C
1,2,4-Trimethylbenzene	30	35.2		ND				EPA 8260C
1,3,5-Trimethylbenzene	30	9.40		ND				EPA 8260C
Toluene	30	101		104		3		EPA 8260C
Vinyl chloride	30	5300		5600		6		EPA 8260C

DUPLICATES

EPA 8260C

PDI-037PW-04-06-191028

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Water
Batch: 9110370
Preparation: EPA 5030B
Source Sample Name: PDI-037PW-04-06-191028

SDG: Gasco_PreRD_DG 2019
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac
Laboratory ID: 9110370-DUP1
Lab Source ID: A9J1114-03
Initial/Final: 5 mL / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
m,p-Xylene	30	98.9		103		4		EPA 8260C
o-Xylene	30	65.8		69.9		6		EPA 8260C

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9J24043	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9J24043-TUN1	VI19102415.D	10/24/19 15:01
Initial Cal Blank	9J24043-ICB1	VI19102416.D	10/24/19 15:28
Cal Standard	9J24043-CAL1	VI19102417.D	10/24/19 15:55
Cal Standard	9J24043-CAL2	VI19102418.D	10/24/19 16:21
Cal Standard	9J24043-CAL3	VI19102419.D	10/24/19 16:48
Cal Standard	9J24043-CAL4	VI19102420.D	10/24/19 17:15
Cal Standard	9J24043-CAL5	VI19102421.D	10/24/19 17:42
Cal Standard	9J24043-CAL6	VI19102422.D	10/24/19 18:09
Cal Standard	9J24043-CAL7	VI19102423.D	10/24/19 18:36
Cal Standard	9J24043-CAL8	VI19102424.D	10/24/19 19:03
Cal Standard	9J24043-CAL9	VI19102425.D	10/24/19 19:30
Cal Standard	9J24043-CALA	VI19102427.D	10/24/19 20:24
Cal Standard	9J24043-CALB	VI19102429.D	10/24/19 21:17
Initial Cal Check	9J24043-ICV1	VI19102432.D	10/24/19 22:38
Initial Cal Check	9J24043-ICV2	VI19102433.D	10/24/19 23:05

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9J25051	Instrument:	VOA-GCMS7
Matrix:	Water	Calibration:	A9J2806

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9J25051-TUN1	VG19102512.D	10/25/19 15:58
Initial Cal Blank	9J25051-ICB1	VG19102513.D	10/25/19 16:25
Cal Standard	9J25051-CAL1	VG19102514.D	10/25/19 16:53
Cal Standard	9J25051-CAL2	VG19102515.D	10/25/19 17:20
Cal Standard	9J25051-CAL3	VG19102516.D	10/25/19 17:47
Cal Standard	9J25051-CAL4	VG19102517.D	10/25/19 18:14
Cal Standard	9J25051-CAL5	VG19102518.D	10/25/19 18:41
Cal Standard	9J25051-CAL6	VG19102519.D	10/25/19 19:08
Cal Standard	9J25051-CAL7	VG19102520.D	10/25/19 19:35
Cal Standard	9J25051-CAL8	VG19102521.D	10/25/19 20:02
Cal Standard	9J25051-CAL9	VG19102522.D	10/25/19 20:29
Cal Standard	9J25051-CALA	VG19102524.D	10/25/19 21:22
Cal Standard	9J25051-CALB	VG19102526.D	10/25/19 22:16
Initial Cal Check	9J25051-ICV1	VG19102529.D	10/25/19 23:37

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9K01026-TUN1	VI19110102.D	11/01/19 11:04
Calibration Check	9K01026-CCV1	VI19110103.D	11/01/19 11:31
Blank	9110370-BLK1	VI19110105.D	11/01/19 12:25
PDI-037PW-04-06-191028	A9J1114-03	VI19110111.D	11/01/19 15:06
PDI-037PW-04-06-191028 (Dup)	9110370-DUP1	VI19110112.D	11/01/19 15:33
PDI-045PW-04-06-191029	A9J1114-05	VI19110119.D	11/01/19 18:41

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01040	Instrument:	VOA-GCMS7
Matrix:	Water	Calibration:	A9J2806

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9K01040-TUN1	VG19110102.D	11/01/19 13:23
Calibration Check	9K01040-CCV1	VG19110103.D	11/01/19 13:50
Blank	9110371-BLK1	VG19110105.D	11/01/19 14:45
PDI-TB-1910300000	A9J1114-01	VG19110120.D	11/01/19 21:31
PDI-028PW-9-11-191030	A9J1114-02	VG19110121.D	11/01/19 21:58
PDI-038PW-9-11-191030	A9J1114-04	VG19110122.D	11/01/19 22:25
PDI-059PW-04-06-191030	A9J1114-06	VG19110123.D	11/01/19 22:52
PDI-059PW-10-12-191030	A9J1114-07	VG19110124.D	11/01/19 23:19

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K04028	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9K04028-TUN1	VI19110404.D	11/04/19 10:01
Calibration Check	9K04028-CCV1	VI19110405.D	11/04/19 10:28
Blank	9110413-BLK1	VI19110407.D	11/04/19 11:22
PDI-037PW-04-06-191028	A9J1114-03RE1	VI19110412.D	11/04/19 13:36

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	VI19102415.D	Injection Date:	10/24/19
Instrument ID:	VOA-GCMS9	Injection Time:	15:01
Sequence:	9J24043	Lab Sample ID:	9J24043-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	117.89	PASS
m/z 96	5 - 9% of m/z 95	6.78	PASS
m/z 173	Less than 2% of m/z 174	0.39	PASS
m/z 174	50 - 200% of m/z 95	84.82	PASS
m/z 175	5 - 9% of m/z 174	7.17	PASS
m/z 176	95 - 105% of m/z 174	96.98	PASS
m/z 177	5 - 10% of m/z 176	6.50	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	VG19102512.D	Injection Date:	10/25/19
Instrument ID:	VOA-GCMS7	Injection Time:	15:58
Sequence:	9J25051	Lab Sample ID:	9J25051-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	102.51	PASS
m/z 96	5 - 9% of m/z 95	6.72	PASS
m/z 173	Less than 2% of m/z 174	0.57	PASS
m/z 174	50 - 200% of m/z 95	97.55	PASS
m/z 175	5 - 9% of m/z 174	7.02	PASS
m/z 176	95 - 105% of m/z 174	97.45	PASS
m/z 177	5 - 10% of m/z 176	6.60	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	VI19110102.D	Injection Date:	11/01/19
Instrument ID:	VOA-GCMS9	Injection Time:	11:04
Sequence:	9K01026	Lab Sample ID:	9K01026-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	113.50	PASS
m/z 96	5 - 9% of m/z 95	6.78	PASS
m/z 173	Less than 2% of m/z 174	0.44	PASS
m/z 174	50 - 200% of m/z 95	88.10	PASS
m/z 175	5 - 9% of m/z 174	7.01	PASS
m/z 176	95 - 105% of m/z 174	96.53	PASS
m/z 177	5 - 10% of m/z 176	6.57	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	VG19110102.D	Injection Date:	11/01/19
Instrument ID:	VOA-GCMS7	Injection Time:	13:23
Sequence:	9K01040	Lab Sample ID:	9K01040-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	103.39	PASS
m/z 96	5 - 9% of m/z 95	6.70	PASS
m/z 173	Less than 2% of m/z 174	0.60	PASS
m/z 174	50 - 200% of m/z 95	96.72	PASS
m/z 175	5 - 9% of m/z 174	7.17	PASS
m/z 176	95 - 105% of m/z 174	96.93	PASS
m/z 177	5 - 10% of m/z 176	6.47	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	VI19110404.D	Injection Date:	11/04/19
Instrument ID:	VOA-GCMS9	Injection Time:	10:01
Sequence:	9K04028	Lab Sample ID:	9K04028-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	120.73	PASS
m/z 96	5 - 9% of m/z 95	6.68	PASS
m/z 173	Less than 2% of m/z 174	0.23	PASS
m/z 174	50 - 200% of m/z 95	82.83	PASS
m/z 175	5 - 9% of m/z 174	7.13	PASS
m/z 176	95 - 105% of m/z 174	96.86	PASS
m/z 177	5 - 10% of m/z 176	6.72	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2503 Date: 10/25/19 11:16 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.4381557	Ave	8.726481	3.941	0.1038258			20	
Acrylonitrile	0.4849865	Ave	11.08293	4.750125	0.1281226			20	
Benzene	3.820688	Ave	4.855279	6.122454	7.160173E-02			20	
Bromobenzene	0.7749402	Ave	14.31895	10.05382	33.16625			20	
Bromochloromethane	0.6103182	Ave	13.73188	5.448	7.661655E-02			20	
Bromodichloromethane	1.098802	Ave	11.01114	7.379667	2.037338E-02			20	
Bromoform	0.182038	XXX	24.41413	10.536	1.629623E-03				
Bromomethane	0.6401472	Ave	11.51384	2.36225	0.232942			20	
2-Butanone (MEK)	0.6946318	Ave	5.120943	5.8565	0.1061664			20	
n-Butylbenzene	1.881239	Ave	14.34203	10.95	33.16625			20	
sec-Butylbenzene	2.797882	Ave	6.314986	11.619	1.773395E-02			20	
tert-Butylbenzene	1.267951	Ave	6.052616	11.4814	2.127617E-02			20	
Carbon disulfide	2.187166	Ave	5.635077	3.2495	0.1633375			20	
Carbon tetrachloride	0.958096	Ave	12.51546	5.66	5.110175E-02			20	
Chlorobenzene	0.9385266	Ave	6.796258	9.928546	1.897513E-02			20	
Chloroethane	0.4990649	Ave	11.22963	2.5024	0.5517427			20	
Chloroform	1.575216	Ave	8.981395	5.5286	0.067176			20	
Chloromethane	1.083839	Ave	14.44663	1.8957	0.2651835			20	
2-Chlorotoluene	0.7160324	Ave	4.343511	11.20522	7.542282E-03			20	
4-Chlorotoluene	2.045294	Ave	4.371039	11.3384	2.743013E-02			20	
Dibromochloromethane	0.2635059	Ave	14.58007	9.187714	2.999687E-02			20	
1,2-Dibromo-3-chloropropane	0.213378	Ave	16.5588	12.799	1.549583E-02			20	
1,2-Dibromoethane (EDB)	0.3548813	Ave	11.70069	9.423667	2.718156E-02			20	
Dibromomethane	0.613177	Ave	13.36088	7.197333	0.035724			20	
1,2-Dichlorobenzene	1.311055	Ave	6.282742	12.1838	9.168253E-03			20	
1,3-Dichlorobenzene	1.350049	Ave	5.926199	11.7975	1.944351E-02			20	
1,4-Dichlorobenzene	1.407811	Ave	7.702776	10.78391	33.16626			20	
Dichlorodifluoromethane	0.8173215	Ave	13.91607	1.68	0.3532017			20	
1,1-Dichloroethane	1.611254	Ave	4.087724	4.684	6.282645E-02			20	
1,2-Dichloroethane (EDC)	1.251571	Ave	4.756875	6.338556	5.089469E-02			20	
1,1-Dichloroethene	1.185277	Ave	4.829149	3.232	0.1325109			20	
cis-1,2-Dichloroethene	1.243807	Ave	4.983881	5.243	6.806309E-02			20	
trans-1,2-Dichloroethene	1.160081	Ave	12.53727	4.0402	0.1157964			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2503 Date: 10/25/19 11:16 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dichloropropane	0.9529922	Ave	6.181257	7.309333	4.176568E-02			20	
1,3-Dichloropropane	0.5622635	Ave	6.984495	9.289	1.625701E-02			20	
2,2-Dichloropropane	1.051426	Ave	5.306826	5.351	5.789193E-02			20	
1,1-Dichloropropene	1.276879	Ave	5.297634	5.864	7.149465E-02			20	
cis-1,3-Dichloropropene	0.4943363	Ave	9.88405	8.090778	1.687355E-02			20	
trans-1,3-Dichloropropene	0.4384672	Ave	14.34003	8.8375	2.503515E-02			20	
Ethylbenzene	1.541948	Ave	3.605451	9.952	2.233646E-03			20	
Hexachlorobutadiene	0.183193	Ave	7.660033	13.30475	1.768887E-02			20	
n-Hexane	0.1766211	Ave	9.349684	4.1225	0.1006313			20	
2-Hexanone	0.3270741	Ave	8.407905	9.655333	4.249128E-02			20	
Isopropylbenzene	1.373353	Ave	9.366214	10.7316	1.248468E-02			20	
4-Isopropyltoluene	2.213644	Ave	12.8808	11.72809	1.621363E-02			20	
Methylene chloride	2.303504	XXX	106.1101	2.111364	95.74276				
4-Methyl-2-pentanone (MiBK)	0.4463673	Ave	9.088647	8.7997	0.0581443			20	
Methyl tert-butyl ether (MTBE)	2.696465	Ave	4.583572	4.167666	4.929023E-02			20	
Naphthalene	2.402403	Ave	14.83266	13.62756	2.239306E-02			20	
n-Propylbenzene	3.322886	Ave	4.437601	11.07445	2.757102E-02			20	
Styrene	0.9048037	Ave	11.92922	10.514	2.753921E-02			20	
1,1,1,2-Tetrachloroethane	0.2737028	Ave	14.89731	9.988889	9.127631E-03			20	
1,1,2,2-Tetrachloroethane	0.6542208	Ave	7.065101	11.1386	1.610871E-02			20	
Tetrachloroethene (PCE)	0.3422483	Ave	13.47971	8.7972	4.042701E-02			20	
Tetrahydrofuran	0.4610548	Ave	5.938304	5.70075	8.794712E-02			20	
1,2,3-Trichlorobenzene	0.7173915	Ave	14.15743	13.785	1.406697E-02			20	
1,2,4-Trichlorobenzene	0.7556	Ave	12.49162	13.34567	1.673266E-02			20	
1,1,1-Trichloroethane	1.329679	Ave	7.371644	5.732667	5.450977E-02			20	
1,1,2-Trichloroethane	0.3259471	Ave	10.621	9.0054	3.795045E-02			20	
Trichloroethene (TCE)	0.9844716	Ave	10.55293	6.743	6.329732E-02			20	
Trichlorofluoromethane	1.229565	Ave	5.615088	2.664667	0.2626576			20	
1,2,3-Trichloropropane	0.3181506	Ave	9.473753	11.248	0.0139849			20	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freo	0.8522469	Ave	6.067761	3.287125	0.1690957			20	
1,2,4-Trimethylbenzene	2.284364	Ave	8.297743	11.53618	0.0334269			20	
1,3,5-Trimethylbenzene	2.270723	Ave	6.723342	11.23	1.456535E-02			20	
Isobutyl alcohol	6.959143E-02	Ave	14.50852	6.375667	8.718278E-02			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2503 Date: 10/25/19 11:16 Instrument: VOA-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Toluene	1.470311	Ave	3.413471	8.356909	3.263244E-02			20	
Vinyl chloride	1.085853	Ave	7.669225	1.9992	0.2472262			20	
m,p-Xylene	1.135467	Ave	6.122052	10.086	1.858078E-02			20	
o-Xylene	1.125697	Ave	7.834778	10.46518	2.767706E-02			20	
trans-1,4-Dichloro-2-butene	0.2276592	Ave	8.273218	11.27912	0.0247595			20	
1,4-Difluorobenzene (Surr)	3.158849	Ave	0.8371465	6.780727	4.460955E-02			20	
Toluene-d8 (Surr)	1.312366	Ave	1.829616	8.297273	1.899629E-02			20	
4-Bromofluorobenzene (Surr)	0.8078842	Ave	3.581646	10.974	1.572481E-02			20	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2503
Instrument: VOA-GCMS9
Calibration Date: 10/25/19 11:16

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	0.2	~~0~~	0.4	~~1.27191~~	0.8	~~0.9019065~~	2	~~0.6333859~~	4	0.5103123	10	0.4663994
Acrylonitrile	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.3774463	2	0.439796	5	0.4887848
Benzene	0.1	3.949114	0.2	3.449838	0.4	3.773943	1	3.582293	2	4.047071	5	3.909918
Bromobenzene	0.1	0.4438685	0.2	0.7998756	0.4	0.813191	1	0.7709458	2	0.829978	5	0.8194271
Bromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.4364424	1	0.5118792	2	0.6045221	5	0.6460679
Bromodichloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.8929768	1	0.9733461	2	1.056278	5	1.082875
Bromoform	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.127897	2	0.1486966	5	0.1561683
Bromomethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0.9365094~~	1	0.7596322	2	0.7085477	5	0.7010179
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.6247684	4	0.7043731	10	0.704351
n-Butylbenzene	0.1	1.356663	0.2	1.490509	0.4	1.735117	1	1.735322	2	1.903182	5	2.011097
sec-Butylbenzene	0.1	~~0~~	0.2	2.408885	0.4	2.77879	1	2.587183	2	2.821997	5	2.836939
tert-Butylbenzene	0.1	~~0~~	0.2	1.114641	0.4	1.159843	1	1.233166	2	1.32449	5	1.325973
Carbon disulfide	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	1.97039	2	2.201688	5	2.167372
Carbon tetrachloride	0.1	~~0~~	0.2	~~0~~	0.4	~~0.6898245~~	1	0.7716967	2	0.9028342	5	0.8969462
Chlorobenzene	0.1	0.7802924	0.2	0.8622852	0.4	0.9452326	1	0.9282586	2	0.9824385	5	0.9841268
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	0.5731564	5	0.5313936
Chloroform	0.1	~~0~~	0.2	1.278444	0.4	1.442157	1	1.439553	2	1.642071	5	1.638231
Chloromethane	0.1	~~2.062841~~	0.2	1.457034	0.4	1.268027	1	1.037116	2	1.070268	5	1.024232
2-Chlorotoluene	0.1	~~0~~	0.2	~~0~~	0.4	0.6682106	1	0.6632912	2	0.747231	5	0.7155799
4-Chlorotoluene	0.1	~~0~~	0.2	1.888595	0.4	2.024148	1	1.896457	2	2.098766	5	2.131864
Dibromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2144395	1	0.2170227	2	0.2550763	5	0.2669179
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.155231	2	0.1801808	5	0.1923253
1,2-Dibromoethane (EDB)	0.1	~~0~~	0.2	~~0.2302178~~	0.4	0.2611491	1	0.3101703	2	0.3777447	5	0.3752701
Dibromomethane	0.1	~~0~~	0.2	~~0~~	0.4	0.4219315	1	0.5536741	2	0.6216716	5	0.6326457
1,2-Dichlorobenzene	0.1	~~0~~	0.2	1.155376	0.4	1.1933	1	1.267546	2	1.4067	5	1.371939
1,3-Dichlorobenzene	0.1	~~0~~	0.2	1.164634	0.4	1.312258	1	1.267546	2	1.382342	5	1.389706
1,4-Dichlorobenzene	0.1	1.113251	0.2	1.342384	0.4	1.453521	1	1.450559	2	1.531358	5	1.43969
Dichlorodifluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.6273162	1	0.6820747	2	0.8419081	5	0.8116386
1,1-Dichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	1.47676	1	1.582172	2	1.630788	5	1.649131
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	~~0~~	0.4	1.197705	1	1.130185	2	1.292084	5	1.293487
1,1-Dichloroethene	0.1	~~0~~	0.2	~~0~~	0.4	1.158637	1	1.066846	2	1.187607	5	1.199982

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9J2503

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: VOA-GCMS9

Calibration Date: 10/25/19 11:16

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	0.1	~~0~~	0.2	~~0~~	0.4	1.125151	1	1.18232	2	1.256431	5	1.257454
trans-1,2-Dichloroethene	0.1	~~0~~	0.2	0.7840541	0.4	1.074921	1	1.144834	2	1.241764	5	1.232772
1,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.8896281	1	0.8376206	2	0.9867768	5	0.9816233
1,3-Dichloropropane	0.1	~~0~~	0.2	0.4686871	0.4	0.5320649	1	0.5407066	2	0.5784137	5	0.5844158
2,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.9521365	1	0.9979059	2	1.077715	5	1.062337
1,1-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	1.170916	1	1.184475	2	1.291633	5	1.299252
cis-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	0.4305776	1	0.4290582	2	0.4683396	5	0.4737993
trans-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	~~0.259026~~	1	0.3413804	2	0.3778287	5	0.4039065
Ethylbenzene	0.1	1.531324	0.2	1.514156	0.4	1.521884	1	1.409441	2	1.608459	5	1.560351
Hexachlorobutadiene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1538419	2	0.1724793	5	0.1914088
n-Hexane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1538223	2	0.1599874	5	0.1653905
2-Hexanone	0.2	~~0~~	0.4	~~0~~	0.8	0.2857779	2	0.2836256	4	0.3194751	10	0.3283863
Isopropylbenzene	0.1	~~0~~	0.2	1.111482	0.4	1.302349	1	1.232637	2	1.370678	5	1.391896
4-Isopropyltoluene	0.1	1.72178	0.2	1.701587	0.4	2.078051	1	2.113503	2	2.242947	5	2.338924
Methylene chloride	0.1	8.716474	0.2	4.79362	0.4	2.953521	1	1.697216	2	1.387986	5	1.130439
4-Methyl-2-pentanone (MiBK)	0.2	~~0~~	0.4	0.3671932	0.8	0.4059489	2	0.4055702	4	0.463008	10	0.4692208
Methyl tert-butyl ether (MTBE)	0.1	~~0~~	0.2	~~0~~	0.4	2.577354	1	2.494334	2	2.698123	5	2.694172
Naphthalene	0.1	~~0~~	0.2	~~1.710845~~	0.4	1.867086	1	1.856174	2	2.278947	5	2.318902
n-Propylbenzene	0.1	3.124978	0.2	3.053229	0.4	3.293656	1	3.18102	2	3.455317	5	3.384023
Styrene	0.1	~~0~~	0.2	~~0.6221656~~	0.4	0.7031919	1	0.7847566	2	0.8700975	5	0.8903592
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	~~0.1064448~~	0.4	0.1995774	1	0.237454	2	0.2506264	5	0.2657525
1,1,2,2-Tetrachloroethane	0.1	~~0~~	0.2	0.564727	0.4	0.6236013	1	0.6514839	2	0.7178576	5	0.6939363
Tetrachloroethene (PCE)	0.1	~~0~~	0.2	0.2203159	0.4	0.334186	1	0.3207882	2	0.363807	5	0.361185
Tetrahydrofuran	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.4071766	2	0.4614586	5	0.460499
1,2,3-Trichlorobenzene	0.1	~~0~~	0.2	0.4832581	0.4	0.6384711	1	0.6525257	2	0.7294995	5	0.733346
1,2,4-Trichlorobenzene	0.1	~~0~~	0.2	~~0.4517815~~	0.4	0.571557	1	0.6365512	2	0.7241263	5	0.7835424
1,1,1-Trichloroethane	0.1	~~0~~	0.2	~~0~~	0.4	1.129616	1	1.250829	2	1.339697	5	1.347356
1,1,2-Trichloroethane	0.1	~~0~~	0.2	0.2376442	0.4	0.3044617	1	0.3127443	2	0.3470986	5	0.3441696
Trichloroethene (TCE)	0.1	~~0~~	0.2	0.8101892	0.4	0.8014466	1	0.9332747	2	1.032584	5	1.02153
Trichlorofluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	1.06934	1	1.199555	2	1.278771	5	1.282407
1,2,3-Trichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.2518569	1	0.308031	2	0.3465705	5	0.3427733

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9J2503

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: VOA-GCMS9

Calibration Date: 10/25/19 11:16

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	0	0.2	0	0.4	0	1	0.739812	2	0.8581551	5	0.8597423
1,2,4-Trimethylbenzene	0.1	1.918657	0.2	1.973767	0.4	2.218385	1	2.194417	2	2.323724	5	2.412245
1,3,5-Trimethylbenzene	0.1	1.990249	0.2	2.086712	0.4	2.127307	1	2.15205	2	2.344321	5	2.348653
Isobutyl alcohol	2.5	0	5	0	10	5.232844E-02	25	5.377317E-02	50	7.191985E-02	125	7.462391E-02
Toluene	0.1	1.589846	0.2	1.439067	0.4	1.488338	1	1.454325	2	1.498804	5	1.474176
Vinyl chloride	0.1	0	0.2	0.8842388	0.4	1.079386	1	1.012987	2	1.13503	5	1.139807
m,p-Xylene	0.2	1.111917	0.4	1.019064	0.8	1.103408	2	1.028726	4	1.137348	10	1.146239
o-Xylene	0.1	0.9509814	0.2	1.007512	0.4	1.106168	1	1.066613	2	1.142302	5	1.147321
trans-1,4-Dichloro-2-butene	0.1	0	0.2	0	0.4	0	1	0.1844019	2	0.2351664	5	0.2321581
Xylenes, total	0.3	1.058272	0.6	1.015214	1.2	1.104328	3	1.041355	6	1.139	15	1.1466
1,4-Difluorobenzene (Surr)	50	3.139024	50	3.131529	50	3.145975	50	3.159536	50	3.133965	50	3.188163
Toluene-d8 (Surr)	50	1.320931	50	1.332765	50	1.345328	50	1.320856	50	1.326656	50	1.321953
4-Bromofluorobenzene (Surr)	50	0.831108	50	0.83824	50	0.8349678	50	0.8234743	50	0.8250562	50	0.8153522

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2503
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 10/25/19 11:16

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	20	0.4208047	40	0.4379215	100	0.4062135	200	0.4214387	400	0.4040001		
Acrylonitrile	10	0.4839382	20	0.510938	50	0.5073464	100	0.5472144	200	0.5244282		
Benzene	10	3.71399	20	3.910312	50	3.758482	100	4.021863	200	3.910748		
Bromobenzene	10	0.8116476	20	0.8248016	50	0.7979914	100	0.8125525	200	0.8000635		
Bromochloromethane	10	0.6360537	20	0.6880193	50	0.670835	100	0.6770888	200	0.6219556		
Bromodichloromethane	10	1.065191	20	1.149694	50	1.154771	100	1.259583	200	1.254501		
Bromoform	10	0.1710337	20	0.1941106	50	0.2213234	100	0.2550363	200	~~0.2652962~~		
Bromomethane	10	0.6240222	20	0.613824	50	0.5786916	100	0.559171	200	0.5762707		
2-Butanone (MEK)	20	0.6623274	40	0.7169769	100	0.7014442	200	0.7409523	400	0.7018611		
n-Butylbenzene	10	1.99427	20	2.159924	50	2.059682	100	2.128511	200	2.119352		
sec-Butylbenzene	10	2.81396	20	2.983258	50	2.858129	100	2.970663	200	2.919011		
tert-Butylbenzene	10	1.287102	20	1.348068	50	1.277748	100	1.320476	200	1.288007		
Carbon disulfide	10	2.083659	20	2.199571	50	2.200441	100	2.374055	200	2.300151		
Carbon tetrachloride	10	0.8859942	20	0.9772165	50	0.9911705	100	1.10568	200	1.13323		
Chlorobenzene	10	0.964716	20	0.9849133	50	0.9397401	100	0.9805969	200	0.9711928		
Chloroethane	10	0.5022193	20	0.4415022	50	0.4470532	100	~~0.2401397~~	200	~~0.1149038~~		
Chloroform	10	1.606991	20	1.695617	50	1.617019	100	1.719146	200	1.672928		
Chloromethane	10	0.9543993	20	1.002215	50	1.02872	100	1.012394	200	0.9839853		
2-Chlorotoluene	10	0.7246255	20	0.753079	50	0.7192168	100	0.7296301	200	0.7234272		
4-Chlorotoluene	10	2.068894	20	2.142822	50	2.055647	100	2.109797	200	2.035946		
Dibromochloromethane	10	0.2750349	20	0.3006581	50	0.3153921	100	~~0.3498031~~	200	~~0.3577943~~		
1,2-Dibromo-3-chloropropane	10	0.2088932	20	0.2265966	50	0.2430718	100	0.2500107	200	0.2507144		
1,2-Dibromoethane (EDB)	10	0.3657542	20	0.3809676	50	0.3656071	100	0.3823937	200	0.374875		
Dibromomethane	10	0.620451	20	0.6564151	50	0.6422796	100	0.6921751	200	0.6773489		
1,2-Dichlorobenzene	10	1.344536	20	1.383179	50	1.337138	100	1.34539	200	1.305442		
1,3-Dichlorobenzene	10	1.383876	20	1.422364	50	1.383071	100	1.412214	200	1.382476		
1,4-Dichlorobenzene	10	1.4332	20	1.477561	50	1.40642	100	1.43615	200	1.401823		
Dichlorodifluoromethane	10	0.7702707	20	0.8002687	50	0.9462965	100	0.9472046	200	0.9289152		
1,1-Dichloroethane	10	1.57298	20	1.670729	50	1.581787	100	1.69618	200	1.640758		
1,2-Dichloroethane (EDC)	10	1.230146	20	1.306225	50	1.244865	100	1.313294	200	1.256151		
1,1-Dichloroethene	10	1.158212	20	1.202649	50	1.192087	100	1.279045	200	1.222424		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2503
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 10/25/19 11:16

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	10	1.221133	20	1.297951	50	1.237722	100	1.328041	200	1.288062		
trans-1,2-Dichloroethene	10	1.163696	20	1.246953	50	1.187512	100	1.276224	200	1.248076		
1,2-Dichloropropane	10	0.9316968	20	0.9879811	50	0.9436935	100	1.023882	200	0.9940276		
1,3-Dichloropropane	10	0.5810448	20	0.5999811	50	0.5714957	100	0.5947856	200	0.5710394		
2,2-Dichloropropane	10	1.006011	20	1.073208	50	1.060734	100	1.128816	200	1.103972		
1,1-Dichloropropene	10	1.245451	20	1.31263	50	1.271224	100	1.375599	200	1.340734		
cis-1,3-Dichloropropene	10	0.4871928	20	0.5248817	50	0.5196585	100	0.5592496	200	0.5562698		
trans-1,3-Dichloropropene	10	0.420384	20	0.4647208	50	0.4732454	100	0.5133554	200	0.5129165		
Ethylbenzene	10	1.534653	20	1.591212	50	1.51604	100	1.593904	200	1.579999		
Hexachlorobutadiene	10	0.1832255	20	0.1987915	50	0.1886455	100	0.1899254	200	0.1872258		
n-Hexane	10	0.1715019	20	0.1847766	50	0.1830155	100	0.1960907	200	0.1983837		
2-Hexanone	20	0.3346914	40	0.3562764	100	0.3495076	200	0.3584297	400	0.3274972		
Isopropylbenzene	10	1.385292	20	1.48775	50	1.427172	100	1.52791	200	1.496359		
4-Isopropyltoluene	10	2.299635	20	2.496553	50	2.392121	100	2.488563	200	2.476425		
Methylene chloride	10	0.9651129	20	0.9696546	50	0.8867644	100	0.9336364	200	0.9041251		
4-Methyl-2-pentanone (MiBK)	20	0.463578	40	0.4905843	100	0.4738401	200	0.4839134	400	0.440816		
Methyl tert-butyl ether (MTBE)	10	2.617041	20	2.750498	50	2.706966	100	2.888391	200	2.841303		
Naphthalene	10	2.423483	20	2.669354	50	2.689107	100	2.754697	200	2.76388		
n-Propylbenzene	10	3.317662	20	3.47486	50	3.358109	100	3.500901	200	3.407993		
Styrene	10	0.9113808	20	0.9785717	50	0.9560498	100	1.026099	200	1.022727		
1,1,1,2-Tetrachloroethane	10	0.2716306	20	0.2958062	50	0.2960372	100	0.3236666	200	0.3227747		
1,1,2,2-Tetrachloroethane	10	0.6734578	20	0.6896682	50	0.6735685	100	0.6510233	200	0.6028843		
Tetrachloroethene (PCE)	10	0.3532076	20	0.3701403	50	0.3520966	100	0.3717106	200	0.3750457		
Tetrahydrofuran	10	0.4410839	20	0.4743964	50	0.4676093	100	0.4995178	200	0.4766965		
1,2,3-Trichlorobenzene	10	0.7470093	20	0.7972934	50	0.7789871	100	0.7980403	200	0.8154843		
1,2,4-Trichlorobenzene	10	0.7751567	20	0.8404523	50	0.8118984	100	0.8232022	200	0.8339134		
1,1,1-Trichloroethane	10	1.284351	20	1.37893	50	1.353967	100	1.452812	200	1.429553		
1,1,2-Trichloroethane	10	0.3420675	20	0.3514489	50	0.3350179	100	0.34682	200	0.3379984		
Trichloroethene (TCE)	10	0.9969135	20	1.053302	50	1.025866	100	1.095246	200	1.074364		
Trichlorofluoromethane	10	1.234525	20	1.29357	50	1.258953	100	1.250083	200	1.198884		
1,2,3-Trichloropropane	10	0.3405154	20	0.3331167	50	0.3272536	100	0.3185251	200	0.2947126		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2503
Instrument: VOA-GCMS9
Matrix:
Calibration Date: 10/25/19 11:16

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.8337868	20	0.8832046	50	0.8458685	100	0.9115538	200	0.8858524		
1,2,4-Trimethylbenzene	10	2.375163	20	2.49055	50	2.370189	100	2.445452	200	2.405457		
1,3,5-Trimethylbenzene	10	2.34199	20	2.452223	50	2.344405	100	2.400473	200	2.389567		
Isobutyl alcohol	250	6.680838E-02	500	7.430831E-02	1250	0.0777889	2500	8.037486E-02	5000	7.439707E-02		
Toluene	10	1.44486	20	1.492292	50	1.390623	100	1.461836	200	1.439258		
Vinyl chloride	10	1.069188	20	1.110172	50	1.15024	100	1.154176	200	1.123309		
m,p-Xylene	20	1.134823	40	1.209186	100	1.149737	200	1.230376	400	1.219314		
o-Xylene	10	1.141456	20	1.216423	50	1.157582	100	1.23274	200	1.213571		
trans-1,4-Dichloro-2-butene	10	0.2340582	20	0.2393777	50	0.2430465	100	0.2342091	200	0.2188557		
Xylenes, total	30	1.137034	60	1.211598	150	1.152352	300	1.231164	600	1.2174		
1,4-Difluorobenzene (Surr)	50	3.124014	50	3.157501	50	3.200969	50	3.186536	50	3.180128		
Toluene-d8 (Surr)	50	1.327143	50	1.301918	50	1.292388	50	1.274013	50	1.27207		
4-Bromofluorobenzene (Surr)	50	0.8117213	50	0.7980421	50	0.7955945	50	0.7620051	50	0.7511646		

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2806 Date: 10/28/19 15:00 Instrument: VOA-GCMS7

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.5212378	Ave	12.24469	4.399571	4.228294E-02			20	
Acrylonitrile	0.5574115	Ave	9.39262	5.290889	0.1029047			20	
Benzene	3.868793	Ave	4.48288	6.753636	3.804909E-02			20	
Bromobenzene	0.8218198	Ave	3.52401	11.531	2.118865E-02			20	
Bromochloromethane	0.7756687	Ave	10.12456	6.039182	0.0440532			20	
Bromodichloromethane	1.068179	Ave	11.67966	8.0754	2.087683E-02			20	
Bromoform	0.2289095	XXX	26.09491	11.0384	2.089594E-02				
Bromomethane	0.517163	Ave	14.94038	2.55025	8.457331E-02			20	
2-Butanone (MEK)	0.7376484	Ave	11.50974	6.477667	8.502402E-02			20	
n-Butylbenzene	1.48992	Ave	14.57563	12.4874	0.0146839			20	
sec-Butylbenzene	2.215616	Ave	12.80614	12.06189	6.46642E-03			20	
tert-Butylbenzene	0.9741728	Ave	13.06213	11.9318	1.970923E-02			20	
Carbon disulfide	1.766781	Ave	12.55216	3.587364	4.730388E-02			20	
Carbon tetrachloride	0.9094392	Ave	14.58477	6.263333	2.588236E-02			20	
Chlorobenzene	0.9753339	Ave	4.881342	10.46909	2.274811E-02			20	
Chloroethane	0.2667461	XXX	25.90978	2.7235	0.101013				
Chloroform	1.653334	Ave	4.809425	6.135455	2.677078E-02			20	
Chloromethane	1.138735	Ave	11.7184	1.984667	0.1013725			20	
2-Chlorotoluene	0.6250556	Ave	10.96653	11.6662	0.0163082			20	
4-Chlorotoluene	1.678914	Ave	11.77291	11.79464	3.107112E-02			20	
Dibromochloromethane	0.3001277	XXX	23.35353	9.791	3.503297E-02				
1,2-Dibromo-3-chloropropane	0.2311938	Ave	12.68899	13.281	6.599533E-03			20	
1,2-Dibromoethane (EDB)	0.3475344	Ave	11.04558	10.0052	2.612032E-02			20	
Dibromomethane	0.6528318	Ave	9.686012	7.8833	0.0665799			20	
1,2-Dichlorobenzene	1.276234	Ave	6.22037	12.63218	2.949553E-02			20	
1,3-Dichlorobenzene	1.300388	Ave	6.677976	12.23809	1.557844E-02			20	
1,4-Dichlorobenzene	1.46702	Ave	9.268635	12.30491	1.623973E-02			20	
Dichlorodifluoromethane	0.8385151	Ave	11.31733	1.728	1.589732E-02			20	
1,1-Dichloroethane	1.643822	Ave	5.193786	5.215	1.380961E-02			20	
1,2-Dichloroethane (EDC)	1.320497	Ave	5.825746	6.9836	3.045285E-02			20	
1,1-Dichloroethene	1.164311	Ave	3.691381	3.586091	8.459877E-02			20	
cis-1,2-Dichloroethene	1.226086	Ave	5.418573	5.823363	6.733462E-02			20	
trans-1,2-Dichloroethene	1.205939	Ave	5.437876	4.508545	4.262563E-02			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2806 Date: 10/28/19 15:00 Instrument: VOA-GCMS7

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dichloropropane	0.9818468	Ave	4.65306	7.995	3.697503E-02			20	
1,3-Dichloropropane	0.5334665	Ave	7.841064	9.879	5.434745E-03			20	
2,2-Dichloropropane	0.7464754	Ave	11.51494	5.935	8.521709E-03			20	
1,1-Dichloropropene	1.117273	Ave	14.77979	5.890909	33.16628			20	
cis-1,3-Dichloropropene	0.3670468	XXX	29.10246	7.999455	33.16627				
trans-1,3-Dichloropropene	0.329242	XXX	28.72698	9.4727	4.427135E-02				
Ethylbenzene	1.431264	Ave	4.421097	10.489	9.109568E-03			20	
Hexachlorobutadiene	0.1990527	Ave	7.48929	13.82967	1.515939E-02			20	
n-Hexane	0.1366191	Ave	11.92	4.609429	6.865667E-02			20	
2-Hexanone	0.3164998	Ave	14.2931	10.21025	3.253315E-02			20	
Isopropylbenzene	1.195893	Ave	14.1133	11.22	0.0101996			20	
4-Isopropyltoluene	1.866341	Ave	13.21301	12.165	1.826879E-02			20	
Methylene chloride	2.660943	XXX	114.1275	4.319	2.738578E-03				
4-Methyl-2-pentanone (MiBK)	0.4336261	Ave	10.32156	9.438	4.801495E-02			20	
Methyl tert-butyl ether (MTBE)	2.274264	Ave	10.47576	4.664273	8.786302E-02			20	
Naphthalene	1.780337	XXX	39.32956	12.7811	35.13642				
n-Propylbenzene	2.746304	Ave	6.258646	11.54318	2.126082E-02			20	
Styrene	0.700965	XXX	27.00773	10.01291	33.16625				
1,1,1,2-Tetrachloroethane	0.2927014	Ave	11.67651	10.5244	2.322249E-02			20	
1,1,2,2-Tetrachloroethane	1.046042	Ave	7.594941	11.60127	2.692099E-02			20	
Tetrachloroethene (PCE)	0.3972145	Ave	4.493883	9.435636	3.398277E-02			20	
Tetrahydrofuran	0.4834205	Ave	11.4925	6.308333	0.1046341			20	
1,2,3-Trichlorobenzene	0.731515	Ave	14.26179	14.39663	8.632796E-03			20	
1,2,4-Trichlorobenzene	0.7474933	Ave	12.91965	13.872	1.493619E-02			20	
1,1,1-Trichloroethane	1.243426	Ave	7.480642	6.341909	3.141699E-02			20	
1,1,2-Trichloroethane	0.3451211	Ave	7.299699	9.625182	4.504584E-02			20	
Trichloroethene (TCE)	1.129911	Ave	3.802178	7.407273	0.0412526			20	
Trichlorofluoromethane	1.048982	Ave	7.634995	2.919727	0.1398042			20	
1,2,3-Trichloropropane	0.3174995	Ave	6.668702	11.7074	0.0209883			20	
1,1,2-Trichloro-1,2,2-trifluoroethane (Freo	0.9542881	Ave	5.327337	3.6604	9.227282E-02			20	
1,2,4-Trimethylbenzene	2.008294	Ave	13.57578	11.982	1.681713E-02			20	
1,3,5-Trimethylbenzene	1.93783	Ave	13.81605	11.69	2.438445E-02			20	
Isobutyl alcohol	8.281385E-02	Ave	3.118201	7.042286	4.469815E-02			20	

INITIAL CALIBRATION DATA (Summary)

EPA 8260C

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9J2806 Date: 10/28/19 15:00 Instrument: VOA-GCMS7

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Toluene	1.496776	Ave	9.340881	9.045636	3.126956E-02			20	
Vinyl chloride	0.9721377	Ave	6.774546	2.112	1.971954E-02			20	
m,p-Xylene	0.9843935	Ave	10.14885	10.6125	2.643532E-02			20	
o-Xylene	0.9323227	Ave	14.42396	10.97	1.241418E-02			20	
trans-1,4-Dichloro-2-butene	8.679495E-02	XXX	24.8776	11.7355	2.590702E-02				
1,4-Difluorobenzene (Surr)	3.434838	Ave	2.39639	7.452455	2.666068E-02			20	
Toluene-d8 (Surr)	1.303604	Ave	1.324623	8.989546	1.052868E-02			20	
4-Bromofluorobenzene (Surr)	0.8443165	Ave	1.917845	11.446	2.428221E-02			20	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Calibration: A9J2806

SDG: Gasco_PreRD_DG 2019
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Instrument: VOA-GCMS7
Calibration Date: 10/28/19 15:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	0.2	~~2.997839~~	0.4	~~1.713337~~	0.8	~~1.136654~~	2	~~0.7673304~~	4	0.6473772	10	0.5525141
Acrylonitrile	0.1	~~0~~	0.2	~~0~~	0.4	0.4655018	1	0.4730353	2	0.5666593	5	0.5876066
Benzene	0.1	3.648532	0.2	3.788669	0.4	3.688943	1	3.70402	2	4.042758	5	4.102439
Bromobenzene	0.1	0.8227003	0.2	0.7918414	0.4	0.7825261	1	0.8235687	2	0.8444631	5	0.8597267
Bromochloromethane	0.1	0.6565034	0.2	0.7331918	0.4	0.8433236	1	0.8453158	2	0.8673089	5	0.8600337
Bromodichloromethane	0.1	~~0~~	0.2	0.8620372	0.4	0.8943375	1	1.009825	2	1.069267	5	1.082702
Bromoform	0.1	~~0~~	0.2	0.1350044	0.4	0.166842	1	0.1745911	2	0.2058274	5	0.2212466
Bromomethane	0.1	~~0.8772745~~	0.2	~~0.7025143~~	0.4	~~0.6615865~~	1	0.5868825	2	0.6431289	5	0.5848752
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	0.5428198	2	0.6614525	4	0.7473759	10	0.7766667
n-Butylbenzene	0.1	~~1.199124~~	0.2	1.168424	0.4	1.171651	1	1.283373	2	1.409698	5	1.54614
sec-Butylbenzene	0.1	~~1.688088~~	0.2	~~1.573505~~	0.4	1.661264	1	1.884085	2	2.113126	5	2.324817
tert-Butylbenzene	0.1	~~0.6209059~~	0.2	0.8101616	0.4	0.77825	1	0.8532335	2	0.9540115	5	0.9987592
Carbon disulfide	0.1	1.998559	0.2	1.788497	0.4	1.527229	1	1.489122	2	1.634946	5	1.609743
Carbon tetrachloride	0.1	~~0~~	0.2	0.7362595	0.4	0.7126004	1	0.7895306	2	0.9055437	5	0.9561076
Chlorobenzene	0.1	1.051419	0.2	0.9843234	0.4	0.9535335	1	0.998601	2	1.026842	5	1.008311
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0.2917357~~	1	0.2692487	2	0.4052235	5	0.3331116
Chloroform	0.1	1.545398	0.2	1.687261	0.4	1.568677	1	1.659893	2	1.782656	5	1.738475
Chloromethane	0.1	~~2.608584~~	0.2	~~1.898936~~	0.4	1.457085	1	1.153842	2	1.209135	5	1.148968
2-Chlorotoluene	0.1	~~0.3725435~~	0.2	0.4946464	0.4	0.5142009	1	0.6151735	2	0.633238	5	0.6531664
4-Chlorotoluene	0.1	1.474651	0.2	1.443228	0.4	1.350178	1	1.545165	2	1.700078	5	1.8079
Dibromochloromethane	0.1	~~7.985459E-02~~	0.2	0.1823567	0.4	0.2243919	1	0.2434149	2	0.2811408	5	0.2994233
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0.129352~~	1	~~0.1668644~~	2	0.193951	5	0.19972
1,2-Dibromoethane (EDB)	0.1	~~0~~	0.2	0.2881438	0.4	0.2951413	1	0.3088631	2	0.344321	5	0.3664434
Dibromomethane	0.1	~~0.3718249~~	0.2	0.5061784	0.4	0.5802831	1	0.6597447	2	0.6810368	5	0.6943686
1,2-Dichlorobenzene	0.1	1.199124	0.2	1.18878	0.4	1.124614	1	1.258158	2	1.356564	5	1.34984
1,3-Dichlorobenzene	0.1	1.199124	0.2	1.266132	0.4	1.145995	1	1.211065	2	1.364435	5	1.40146
1,4-Dichlorobenzene	0.1	1.746298	0.2	1.64475	0.4	1.490221	1	1.449496	2	1.517934	5	1.495713
Dichlorodifluoromethane	0.1	~~0~~	0.2	0.8068177	0.4	0.6456447	1	0.7559457	2	0.9133868	5	0.8792723
1,1-Dichloroethane	0.1	1.748739	0.2	1.558416	0.4	1.562301	1	1.702016	2	1.766644	5	1.718761
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	1.251641	0.4	1.281724	1	1.321766	2	1.474491	5	1.400494
1,1-Dichloroethene	0.1	1.208431	0.2	1.082915	0.4	1.147813	1	1.139042	2	1.19639	5	1.182339

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9J2806

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: VOA-GCMS7

Calibration Date: 10/28/19 15:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	0.1	1.150333	0.2	1.128931	0.4	1.181291	1	1.160103	2	1.27384	5	1.273662
trans-1,2-Dichloroethene	0.1	1.254909	0.2	1.070644	0.4	1.149407	1	1.152134	2	1.272206	5	1.223903
1,2-Dichloropropane	0.1	0.9179429	0.2	1.003154	0.4	0.9325979	1	0.9506245	2	1.055215	5	1.018336
1,3-Dichloropropane	0.1	0.5038444	0.2	0.467478	0.4	0.4651512	1	0.5177723	2	0.5653423	5	0.5662596
2,2-Dichloropropane	0.1	~~0~~	0.2	0.6687691	0.4	0.5755005	1	0.7269146	2	0.7611012	5	0.748284
1,1-Dichloropropene	0.1	0.766889	0.2	0.9417987	0.4	0.9899885	1	1.059918	2	1.100639	5	1.179845
cis-1,3-Dichloropropene	0.1	0.228156	0.2	0.2387765	0.4	0.2703262	1	0.2835464	2	0.3361229	5	0.3581763
trans-1,3-Dichloropropene	0.1	~~0~~	0.2	0.2125816	0.4	0.2111924	1	0.2430398	2	0.2791733	5	0.3160379
Ethylbenzene	0.1	1.437383	0.2	1.394374	0.4	1.308337	1	1.355847	2	1.486374	5	1.494428
Hexachlorobutadiene	0.1	~~0~~	0.2	~~0~~	0.4	0.172113	1	0.1850341	2	0.2022601	5	0.2077534
n-Hexane	0.1	~~0~~	0.2	~~0~~	0.4	~~1.594184E-02~~	1	~~9.563168E-02~~	2	0.1117632	5	0.120419
2-Hexanone	0.2	~~0~~	0.4	~~0.1526356~~	0.8	~~0.1892812~~	2	0.2332882	4	0.2734346	10	0.2993631
Isopropylbenzene	0.1	~~0.7453095~~	0.2	~~0.835214~~	0.4	~~0.8051708~~	1	0.888708	2	1.018097	5	1.153789
4-Isopropyltoluene	0.1	~~1.253454~~	0.2	~~1.203029~~	0.4	~~1.169513~~	1	1.397582	2	1.615238	5	1.841942
Methylene chloride	0.1	10.56796	0.2	5.957567	0.4	3.256919	1	1.978096	2	1.555535	5	1.220459
4-Methyl-2-pentanone (MiBK)	0.2	~~0.3004054~~	0.4	~~0.3329774~~	0.8	0.3532192	2	0.3698106	4	0.4235695	10	0.4344467
Methyl tert-butyl ether (MTBE)	0.1	2.068276	0.2	1.978698	0.4	1.981571	1	2.040712	2	2.191475	5	2.304705
Naphthalene	0.1	~~0~~	0.2	0.9221186	0.4	0.9781576	1	1.054212	2	1.309115	5	1.513609
n-Propylbenzene	0.1	2.728105	0.2	2.581118	0.4	2.417065	1	2.594927	2	2.851976	5	2.843087
Styrene	0.1	0.4258911	0.2	0.4765455	0.4	0.4746548	1	0.5470271	2	0.6590195	5	0.7721758
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	0.229709	0.4	0.2565987	1	0.2706068	2	0.2817967	5	0.2955706
1,1,2,2-Tetrachloroethane	0.1	0.9740461	0.2	0.993364	0.4	1.033747	1	1.045684	2	1.208531	5	1.113851
Tetrachloroethene (PCE)	0.1	0.4087794	0.2	0.4312082	0.4	0.3822581	1	0.3803123	2	0.4111083	5	0.4093443
Tetrahydrofuran	0.1	~~0~~	0.2	~~0~~	0.4	0.3937635	1	0.4144039	2	0.4584907	5	0.4759756
1,2,3-Trichlorobenzene	0.1	~~0~~	0.2	~~0.3826894~~	0.4	~~0.4650258~~	1	0.5365618	2	0.6260222	5	0.6996962
1,2,4-Trichlorobenzene	0.1	~~0.4773214~~	0.2	~~0.4641127~~	0.4	~~0.4906824~~	1	0.5940374	2	0.63455	5	0.6800503
1,1,1-Trichloroethane	0.1	1.185192	0.2	1.067576	0.4	1.168537	1	1.152703	2	1.295081	5	1.295751
1,1,2-Trichloroethane	0.1	0.3099118	0.2	0.3143387	0.4	0.3210124	1	0.3302416	2	0.3813765	5	0.3707776
Trichloroethene (TCE)	0.1	1.179382	0.2	1.174948	0.4	1.178102	1	1.116272	2	1.150639	5	1.134836
Trichlorofluoromethane	0.1	0.9586112	0.2	1.036899	0.4	1.03622	1	1.077564	2	1.178089	5	1.133886
1,2,3-Trichloropropane	0.1	~~0~~	0.2	0.3134796	0.4	0.3100172	1	0.32965	2	0.3551031	5	0.3380367

INITIAL CALIBRATION DATA

EPA 8260C

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9J2806

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: VOA-GCMS7

Calibration Date: 10/28/19 15:00

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	~~0~~	0.2	0.9786117	0.4	0.9214386	1	0.9079317	2	1.036261	5	1.024036
1,2,4-Trimethylbenzene	0.1	~~1.494055~~	0.2	~~1.424907~~	0.4	~~1.320246~~	1	1.475452	2	1.72085	5	2.035299
1,3,5-Trimethylbenzene	0.1	~~1.34659~~	0.2	~~1.463583~~	0.4	1.483806	1	1.537748	2	1.820559	5	2.002052
Isobutyl alcohol	2.5	~~0~~	5	~~6.209122E-02~~	10	~~0.066063~~	25	~~7.245238E-02~~	50	8.423419E-02	125	8.238368E-02
Toluene	0.1	1.884188	0.2	1.545498	0.4	1.434524	1	1.450925	2	1.508345	5	1.485719
Vinyl chloride	0.1	0.8366062	0.2	0.9602052	0.4	0.8704247	1	0.9574553	2	1.024823	5	1.021067
m,p-Xylene	0.2	~~0.8745978~~	0.4	~~0.8412589~~	0.8	0.8202183	2	0.8476388	4	0.9639348	10	1.026511
o-Xylene	0.1	~~0.7186913~~	0.2	~~0.7536069~~	0.4	0.7323095	1	0.7771273	2	0.8531509	5	0.9304556
trans-1,4-Dichloro-2-butene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	5.599229E-02	2	6.865909E-02	5	0.073175
Xylenes, total	0.3	~~0.822629~~	0.6	~~0.8120416~~	1.2	0.7909153	3	0.824135	6	0.9270069	15	0.9944926
1,4-Difluorobenzene (Surr)	50	3.554949	50	3.532303	50	3.513582	50	3.523948	50	3.452805	50	3.389735
Toluene-d8 (Surr)	50	1.296584	50	1.291106	50	1.307175	50	1.305784	50	1.295163	50	1.291052
4-Bromofluorobenzene (Surr)	50	0.8541958	50	0.8431869	50	0.8326677	50	0.8324829	50	0.8219324	50	0.8368039

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2806
Instrument: VOA-GCMS7
Matrix:
Calibration Date: 10/28/19 15:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acetone	20	0.5158074	40	0.5122915	100	0.4638585	200	0.4629002	400	0.4939158		
Acrylonitrile	10	0.5808163	20	0.6059846	50	0.5590582	100	0.5739099	200	0.6041316		
Benzene	10	4.046922	20	4.040493	50	3.702856	100	3.820292	200	3.9708		
Bromobenzene	10	0.845751	20	0.8507604	50	0.7805468	100	0.7983021	200	0.8398308		
Bromochloromethane	10	0.8273237	20	0.8006078	50	0.7049403	100	0.6933171	200	0.7004896		
Bromodichloromethane	10	1.084359	20	1.123625	50	1.089593	100	1.18006	200	1.285987		
Bromoform	10	0.2339122	20	0.2602797	50	0.2738054	100	0.3012767	200	0.3163095		
Bromomethane	10	0.4965416	20	0.4829827	50	0.4408259	100	0.4385817	200	0.4634857		
2-Butanone (MEK)	20	0.7819228	40	0.8100795	100	0.7542591	200	0.7615709	400	0.8026888		
n-Butylbenzene	10	1.656928	20	1.719453	50	1.572982	100	1.642084	200	1.728464		
sec-Butylbenzene	10	2.358742	20	2.421665	50	2.246315	100	2.376209	200	2.554323		
tert-Butylbenzene	10	1.016121	20	1.065694	50	1.011303	100	1.070005	200	1.184189		
Carbon disulfide	10	1.619537	20	1.726553	50	1.844831	100	2.018486	200	2.177092		
Carbon tetrachloride	10	0.9830819	20	1.013194	50	1.006465	100	1.08217	200	~~1.181908~~		
Chlorobenzene	10	0.9799901	20	0.9770285	50	0.8921065	100	0.9101455	200	0.9463727		
Chloroethane	10	0.2420858	20	0.2338362	50	0.2376335	100	0.2103812	200	0.2024484		
Chloroform	10	1.682757	20	1.702189	50	1.545665	100	1.59295	200	1.680757		
Chloromethane	10	1.069357	20	1.064027	50	1.072199	100	1.024838	200	1.049163		
2-Chlorotoluene	10	0.6645967	20	0.6749353	50	0.6320912	100	0.6627118	200	0.7057959		
4-Chlorotoluene	10	1.798538	20	1.838023	50	1.720901	100	1.80565	200	1.983741		
Dibromochloromethane	10	0.3137089	20	0.3336866	50	0.3364318	100	0.3708082	200	0.4159135		
1,2-Dibromo-3-chloropropane	10	0.2195351	20	0.2318754	50	0.245547	100	0.2514351	200	0.2762928		
1,2-Dibromoethane (EDB)	10	0.3636175	20	0.3768149	50	0.3545711	100	0.3718391	200	0.4055889		
Dibromomethane	10	0.6990957	20	0.6896293	50	0.6428286	100	0.669715	200	0.7054383		
1,2-Dichlorobenzene	10	1.357071	20	1.355602	50	1.263792	100	1.273501	200	1.311528		
1,3-Dichlorobenzene	10	1.380614	20	1.368502	50	1.271229	100	1.321239	200	1.374477		
1,4-Dichlorobenzene	10	1.421286	20	1.396459	50	1.288965	100	1.315406	200	1.370687		
Dichlorodifluoromethane	10	0.8211124	20	0.7842883	50	0.9656432	100	0.8992034	200	0.9138369		
1,1-Dichloroethane	10	1.642119	20	1.650376	50	1.507823	100	1.571536	200	1.653312		
1,2-Dichloroethane (EDC)	10	1.341815	20	1.340565	50	1.212785	100	1.254037	200	1.325653		
1,1-Dichloroethene	10	1.138998	20	1.167653	50	1.124781	100	1.183727	200	1.235331		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2806
Instrument: VOA-GCMS7
Matrix:
Calibration Date: 10/28/19 15:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
cis-1,2-Dichloroethene	10	1.265278	20	1.287771	50	1.187504	100	1.248622	200	1.329615		
trans-1,2-Dichloroethene	10	1.212376	20	1.247607	50	1.166772	100	1.220069	200	1.295298		
1,2-Dichloropropane	10	1.001137	20	1.013367	50	0.9257692	100	0.9633477	200	1.018823		
1,3-Dichloropropane	10	0.5648402	20	0.565099	50	0.520158	100	0.5440788	200	0.588108		
2,2-Dichloropropane	10	0.7441545	20	0.7662676	50	0.7508371	100	0.8180727	200	0.9048527		
1,1-Dichloropropene	10	1.224167	20	1.273816	50	1.198928	100	1.246935	200	1.307078		
cis-1,3-Dichloropropene	10	0.400197	20	0.441685	50	0.4415735	100	0.485535	200	0.5534196		
trans-1,3-Dichloropropene	10	0.344507	20	0.3743477	50	0.3874372	100	0.4310489	200	0.4930537		
Ethylbenzene	10	1.467942	20	1.482409	50	1.38843	100	1.426423	200	1.501954		
Hexachlorobutadiene	10	0.2181958	20	0.218334	50	0.1947408	100	0.1965904	200	0.1964524		
n-Hexane	10	0.1351764	20	0.1365822	50	0.1439341	100	0.1500388	200	0.1584198		
2-Hexanone	20	0.3157699	40	0.3538592	100	0.3491217	200	0.3489869	400	0.3581746		
Isopropylbenzene	10	1.224823	20	1.300678	50	1.263094	100	1.326311	200	1.391644		
4-Isopropyltoluene	10	1.959216	20	2.04132	50	1.911128	100	2.0193	200	2.145		
Methylene chloride	10	1.069304	20	0.99229	50	0.886769	100	0.8848963	200	0.9005785		
4-Methyl-2-pentanone (MiBK)	20	0.4490796	40	0.4844679	100	0.4596659	200	0.461342	400	0.4670334		
Methyl tert-butyl ether (MTBE)	10	2.408645	20	2.482441	50	2.371312	100	2.511276	200	2.677796		
Naphthalene	10	1.978917	20	2.39942	50	2.495922	100	2.500899	200	2.650999		
n-Propylbenzene	10	2.831153	20	2.893809	50	2.661464	100	2.779822	200	3.026822		
Styrene	10	0.8245543	20	0.8725139	50	0.8474136	100	0.8844132	200	0.9264057		
1,1,1,2-Tetrachloroethane	10	0.3079811	20	0.3115797	50	0.3035766	100	0.321126	200	0.3484684		
1,1,2,2-Tetrachloroethane	10	1.119421	20	1.095633	50	0.9922765	100	0.9571512	200	0.9727559		
Tetrachloroethene (PCE)	10	0.403159	20	0.3979547	50	0.3713887	100	0.3787743	200	0.3950724		
Tetrahydrofuran	10	0.4855928	20	0.5232049	50	0.5054963	100	0.5237677	200	0.5700887		
1,2,3-Trichlorobenzene	10	0.8065948	20	0.8448931	50	0.7840004	100	0.7594958	200	0.7948554		
1,2,4-Trichlorobenzene	10	0.7880565	20	0.8425034	50	0.8109664	100	0.7969258	200	0.832857		
1,1,1-Trichloroethane	10	1.285755	20	1.28757	50	1.229631	100	1.309357	200	1.400534		
1,1,2-Trichloroethane	10	0.3660086	20	0.3633929	50	0.3319863	100	0.3414721	200	0.3658141		
Trichloroethene (TCE)	10	1.134892	20	1.095253	50	1.038084	100	1.093193	200	1.133417		
Trichlorofluoromethane	10	1.104362	20	1.068352	50	1.069672	100	0.9713392	200	0.9038099		
1,2,3-Trichloropropane	10	0.3275228	20	0.3229548	50	0.2952299	100	0.2922159	200	0.2907847		

INITIAL CALIBRATION DATA (Continued)

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9J2806
Instrument: VOA-GCMS7
Matrix:
Calibration Date: 10/28/19 15:00

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.9806605	20	0.9541151	50	0.8921915	100	0.8969068	200	0.9507282		
1,2,4-Trimethylbenzene	10	2.190452	20	2.238419	50	2.049746	100	2.116599	200	2.239534		
1,3,5-Trimethylbenzene	10	2.136704	20	2.184059	50	2.008561	100	2.0718	200	2.195182		
Isobutyl alcohol	250	8.171645E-02	500	8.636196E-02	1250	8.512646E-02	2500	0.0809654	5000	7.890881E-02		
Toluene	10	1.462536	20	1.466865	50	1.342798	100	1.392038	200	1.491101		
Vinyl chloride	10	0.9795551	20	0.9760282	50	1.049403	100	0.9952516	200	1.022696		
m,p-Xylene	20	1.052391	40	1.09046	100	1.019522	200	1.054472	400	~~1.086608~~		
o-Xylene	10	0.9696409	20	1.057255	50	1.040255	100	1.098387	200	~~1.16924~~		
trans-1,4-Dichloro-2-butene	10	7.905236E-02	20	9.275018E-02	50	9.597499E-02	100	0.107338	200	0.1214177		
Xylenes, total	30	1.024807	60	1.079392	150	1.026433	300	1.06911	600	~~1.114152~~		
1,4-Difluorobenzene (Surr)	50	3.391032	50	3.361232	50	3.353739	50	3.372958	50	3.336935		
Toluene-d8 (Surr)	50	1.295394	50	1.301669	50	1.294086	50	1.309748	50	1.351879		
4-Bromofluorobenzene (Surr)	50	0.8421702	50	0.8369897	50	0.8460535	50	0.8591534	50	0.8818453		

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS9	Calibration:	A9J2503
Lab File ID:	VI19102432.D		
Sequence:	9J24043	Inject Date:	10/24/19
Lab Sample ID:	9J24043-ICV1	Inject Time:	22:38

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	37.6	-6.0	70 - 130
Acrylonitrile	20.0	19.6	-2.1	70 - 130
Benzene	20.0	19.7	-1.6	70 - 130
Bromobenzene	20.0	21.0	4.9	70 - 130
Bromochloromethane	20.0	22.1	10.3	70 - 130
Bromodichloromethane	20.0	20.8	3.8	70 - 130
Bromoform	20.0	21.4	6.9	70 - 130
Bromomethane	20.0	22.6	13.2	70 - 130
2-Butanone (MEK)	40.0	37.9	-5.3	70 - 130
n-Butylbenzene	20.0	22.3	11.3	70 - 130
sec-Butylbenzene	20.0	20.5	2.3	70 - 130
tert-Butylbenzene	20.0	20.4	1.8	70 - 130
Carbon disulfide	20.0	18.4	-8.2	70 - 130
Carbon tetrachloride	20.0	20.7	3.5	70 - 130
Chlorobenzene	20.0	20.6	3.0	70 - 130
Chloroethane	20.0	17.5	-12.4	70 - 130
Chloroform	20.0	20.9	4.3	70 - 130
Chloromethane	20.0	20.7	3.6	70 - 130
2-Chlorotoluene	20.0	19.9	-0.3	70 - 130
4-Chlorotoluene	20.0	20.6	2.8	70 - 130
Dibromochloromethane	20.0	23.7	18.7	70 - 130
1,2-Dibromo-3-chloropropane	20.0	20.0	0.2	70 - 130
1,2-Dibromoethane (EDB)	20.0	20.7	3.3	70 - 130
Dibromomethane	20.0	21.1	5.6	70 - 130
1,2-Dichlorobenzene	20.0	20.8	4.1	70 - 130
1,3-Dichlorobenzene	20.0	20.8	4.2	70 - 130
1,4-Dichlorobenzene	20.0	20.5	2.4	70 - 130
Dichlorodifluoromethane	20.0	25.2	26.2	70 - 130
1,1-Dichloroethane	20.0	20.5	2.6	70 - 130
1,2-Dichloroethane (EDC)	20.0	20.2	0.8	70 - 130
1,1-Dichloroethene	20.0	19.7	-1.4	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS9	Calibration:	A9J2503
Lab File ID:	VI19102432.D		
Sequence:	9J24043	Inject Date:	10/24/19
Lab Sample ID:	9J24043-ICV1	Inject Time:	22:38

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
cis-1,2-Dichloroethene	20.0	20.0	0.2	70 - 130
trans-1,2-Dichloroethene	20.0	21.0	4.9	70 - 130
1,2-Dichloropropane	20.0	20.3	1.4	70 - 130
1,3-Dichloropropane	20.0	20.5	2.4	70 - 130
2,2-Dichloropropane	20.0	17.7	-11.4	70 - 130
1,1-Dichloropropene	20.0	19.6	-2.0	70 - 130
cis-1,3-Dichloropropene	20.0	19.9	-0.6	70 - 130
trans-1,3-Dichloropropene	20.0	20.7	3.5	70 - 130
Ethylbenzene	20.0	20.1	0.7	70 - 130
Hexachlorobutadiene	20.0	21.9	9.3	70 - 130
2-Hexanone	40.0	40.6	1.4	70 - 130
Isopropylbenzene	20.0	20.9	4.7	70 - 130
4-Isopropyltoluene	20.0	21.7	8.3	70 - 130
Methylene chloride	20.0	20.0	-0.2	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	41.0	2.6	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	19.6	-2.1	70 - 130
Naphthalene	20.0	21.9	9.6	70 - 130
n-Propylbenzene	20.0	20.1	0.5	70 - 130
Styrene	20.0	20.9	4.3	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.8	8.9	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.3	1.7	70 - 130
Tetrachloroethene (PCE)	20.0	20.9	4.4	70 - 130
1,2,3-Trichlorobenzene	20.0	22.6	13.0	70 - 130
1,2,4-Trichlorobenzene	20.0	22.3	11.3	70 - 130
1,1,1-Trichloroethane	20.0	19.9	-0.3	70 - 130
1,1,2-Trichloroethane	20.0	21.2	6.2	70 - 130
Trichloroethene (TCE)	20.0	21.2	6.2	70 - 130
Trichlorofluoromethane	20.0	20.7	3.4	70 - 130
1,2,3-Trichloropropane	20.0	20.7	3.3	70 - 130
1,2,4-Trimethylbenzene	20.0	20.7	3.6	70 - 130
1,3,5-Trimethylbenzene	20.0	20.7	3.3	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS9	Calibration:	A9J2503
Lab File ID:	VI19102432.D		
Sequence:	9J24043	Inject Date:	10/24/19
Lab Sample ID:	9J24043-ICV1	Inject Time:	22:38

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Toluene	20.0	19.4	-3.1	70 - 130
Vinyl chloride	20.0	22.1	10.6	70 - 130
m,p-Xylene	40.0	40.9	2.3	70 - 130
o-Xylene	20.0	21.0	4.9	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS7	Calibration:	A9J2806
Lab File ID:	VG19102529.D		
Sequence:	9J25051	Inject Date:	10/25/19
Lab Sample ID:	9J25051-ICV1	Inject Time:	23:37

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	38.5	-3.7	70 - 130
Acrylonitrile	20.0	20.4	2.2	70 - 130
Benzene	20.0	20.4	2.0	70 - 130
Bromobenzene	20.0	20.2	1.2	70 - 130
Bromochloromethane	20.0	20.7	3.4	70 - 130
Bromodichloromethane	20.0	20.7	3.4	70 - 130
Bromoform	20.0	19.5	-2.6	70 - 130
Bromomethane	20.0	18.6	-6.9	70 - 130
2-Butanone (MEK)	40.0	42.4	6.1	70 - 130
n-Butylbenzene	20.0	23.0	14.9	70 - 130
sec-Butylbenzene	20.0	21.3	6.4	70 - 130
tert-Butylbenzene	20.0	21.7	8.4	70 - 130
Carbon disulfide	20.0	18.9	-5.3	70 - 130
Carbon tetrachloride	20.0	21.7	8.6	70 - 130
Chlorobenzene	20.0	19.9	-0.7	70 - 130
Chloroethane	20.0	18.9	-5.6	70 - 130
Chloroform	20.0	20.1	0.4	70 - 130
Chloromethane	20.0	21.8	8.9	70 - 130
2-Chlorotoluene	20.0	21.5	7.3	70 - 130
4-Chlorotoluene	20.0	21.9	9.6	70 - 130
Dibromochloromethane	20.0	20.8	3.8	70 - 130
1,2-Dibromo-3-chloropropane	20.0	19.9	-0.7	70 - 130
1,2-Dibromoethane (EDB)	20.0	21.5	7.4	70 - 130
Dibromomethane	20.0	20.4	2.2	70 - 130
1,2-Dichlorobenzene	20.0	21.2	6.2	70 - 130
1,3-Dichlorobenzene	20.0	21.3	6.4	70 - 130
1,4-Dichlorobenzene	20.0	19.2	-4.0	70 - 130
Dichlorodifluoromethane	20.0	24.5	22.4	70 - 130
1,1-Dichloroethane	20.0	20.1	0.6	70 - 130
1,2-Dichloroethane (EDC)	20.0	20.0	0.05	70 - 130
1,1-Dichloroethene	20.0	20.2	1.0	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS7	Calibration:	A9J2806
Lab File ID:	VG19102529.D		
Sequence:	9J25051	Inject Date:	10/25/19
Lab Sample ID:	9J25051-ICV1	Inject Time:	23:37

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
cis-1,2-Dichloroethene	20.0	20.7	3.6	70 - 130
trans-1,2-Dichloroethene	20.0	20.7	3.4	70 - 130
1,2-Dichloropropane	20.0	20.3	1.6	70 - 130
1,3-Dichloropropane	20.0	21.1	5.3	70 - 130
2,2-Dichloropropane	20.0	18.7	-6.7	70 - 130
1,1-Dichloropropene	20.0	22.2	11.0	70 - 130
cis-1,3-Dichloropropene	20.0	20.3	1.4	70 - 130
trans-1,3-Dichloropropene	20.0	22.8	14.2	70 - 130
Ethylbenzene	20.0	20.6	3.2	70 - 130
Hexachlorobutadiene	20.0	21.5	7.4	70 - 130
n-Hexane	20.0	18.8	-5.8	70 - 130
2-Hexanone	40.0	44.8	11.9	70 - 130
Isopropylbenzene	20.0	21.8	8.8	70 - 130
4-Isopropyltoluene	20.0	21.6	8.2	70 - 130
Methylene chloride	20.0	20.9	4.4	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	43.9	9.8	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	21.4	7.2	70 - 130
Naphthalene	20.0	20.7	3.7	70 - 130
n-Propylbenzene	20.0	20.5	2.7	70 - 130
Styrene	20.0	21.1	5.6	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.0	4.9	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.0	-0.2	70 - 130
Tetrachloroethene (PCE)	20.0	20.0	0.2	70 - 130
Tetrahydrofuran	20.0	21.2	6.2	70 - 130
1,2,3-Trichlorobenzene	20.0	23.1	15.3	70 - 130
1,2,4-Trichlorobenzene	20.0	22.7	13.4	70 - 130
1,1,1-Trichloroethane	20.0	20.2	0.9	70 - 130
1,1,2-Trichloroethane	20.0	21.0	5.2	70 - 130
Trichloroethene (TCE)	20.0	19.8	-0.8	70 - 130
Trichlorofluoromethane	20.0	20.0	0.2	70 - 130
1,2,3-Trichloropropane	20.0	19.9	-0.4	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS7	Calibration:	A9J2806
Lab File ID:	VG19102529.D		
Sequence:	9J25051	Inject Date:	10/25/19
Lab Sample ID:	9J25051-ICV1	Inject Time:	23:37

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	20.0	18.4	-8.1	70 - 130
1,2,4-Trimethylbenzene	20.0	21.7	8.5	70 - 130
1,3,5-Trimethylbenzene	20.0	22.1	10.6	70 - 130
Isobutyl alcohol	500	530	6.0	70 - 130
Toluene	20.0	19.4	-3.1	70 - 130
Vinyl chloride	20.0	22.3	11.7	70 - 130
m,p-Xylene	40.0	44.2	10.4	70 - 130
o-Xylene	20.0	22.9	14.6	70 - 130
trans-1,4-Dichloro-2-butene	20.0	16.7	-16.5	70 - 130
Xylenes, total	60.0	67.1	11.8	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9J24043	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9J24043-ICV1)				Lab File ID: VI19102432.D		Analyzed: 10/24/19 22:38		
1,4-Difluorobenzene (Surr)	50.0	101	70 - 130	6.782	6.780727	0.0013	+/-1.0	
Toluene-d8 (Surr)	50.0	99	70 - 130	8.297	8.297273	-0.0003	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	70 - 130	10.974	10.974	0.0000	+/-1.0	
Initial Cal Check (9J24043-ICV2)				Lab File ID: VI19102433.D		Analyzed: 10/24/19 23:05		
1,4-Difluorobenzene (Surr)	50.0	101	70 - 130	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	101	70 - 130	8.297	8.297273	-0.0003	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	102	70 - 130	10.974	10.974	0.0000	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9J25051	Instrument:	VOA-GCMS7
Matrix:	Water	Calibration:	A9J2806

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9J25051-ICV1)				Lab File ID: VG19102529.D		Analyzed: 10/25/19 23:37		
1,4-Difluorobenzene (Surr)	50.0	98	70 - 130	7.453	7.452455	0.0005	+/-1.0	
Toluene-d8 (Surr)	50.0	99	70 - 130	8.995	8.989546	0.0055	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	98	70 - 130	11.446	11.446	0.0000	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9110370-BS1)			Lab File ID: VI19110103.D		Analyzed: 11/01/19 11:31			
1,4-Difluorobenzene (Surr)	50.0	103	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.297	8.297273	-0.0003	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	80 - 120	10.974	10.974	0.0000	+/-1.0	
Blank (9110370-BLK1)			Lab File ID: VI19110105.D		Analyzed: 11/01/19 12:25			
1,4-Difluorobenzene (Surr)	50.0	107	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.303	8.297273	0.0057	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	103	80 - 120	10.974	10.974	0.0000	+/-1.0	
PDI-037PW-04-06-191028 (A9J1114-03)			Lab File ID: VI19110111.D		Analyzed: 11/01/19 15:06			
1,4-Difluorobenzene (Surr)	50.0	106	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.297	8.297273	-0.0003	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	10.974	10.974	0.0000	+/-1.0	
Duplicate (9110370-DUP1)			Lab File ID: VI19110112.D		Analyzed: 11/01/19 15:33			
1,4-Difluorobenzene (Surr)	50.0	106	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.297	8.297273	-0.0003	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	10.974	10.974	0.0000	+/-1.0	
PDI-045PW-04-06-191029 (A9J1114-05)			Lab File ID: VI19110119.D		Analyzed: 11/01/19 18:41			
1,4-Difluorobenzene (Surr)	50.0	103	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.303	8.297273	0.0057	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	10.974	10.974	0.0000	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence: 9K01040
Instrument: VOA-GCMS7
Matrix: Water
Calibration: A9J2806

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9110371-BS1)			Lab File ID: VG19110103.D		Analyzed: 11/01/19 13:50			
1,4-Difluorobenzene (Surr)	50.0	97	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	99	80 - 120	8.983	8.989546	-0.0065	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	11.44	11.446	-0.0060	+/-1.0	
Blank (9110371-BLK1)			Lab File ID: VG19110105.D		Analyzed: 11/01/19 14:45			
1,4-Difluorobenzene (Surr)	50.0	104	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.983	8.989546	-0.0065	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	11.44	11.446	-0.0060	+/-1.0	
PDI-TB-1910300000 (A9J1114-01)			Lab File ID: VG19110120.D		Analyzed: 11/01/19 21:31			
1,4-Difluorobenzene (Surr)	50.0	105	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	99	80 - 120	8.989	8.989546	-0.0005	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	11.446	11.446	0.0000	+/-1.0	
PDI-028PW-9-11-191030 (A9J1114-02)			Lab File ID: VG19110121.D		Analyzed: 11/01/19 21:58			
1,4-Difluorobenzene (Surr)	50.0	105	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	98	80 - 120	8.989	8.989546	-0.0005	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	98	80 - 120	11.44	11.446	-0.0060	+/-1.0	
PDI-038PW-9-11-191030 (A9J1114-04)			Lab File ID: VG19110122.D		Analyzed: 11/01/19 22:25			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	99	80 - 120	8.989	8.989546	-0.0005	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	11.44	11.446	-0.0060	+/-1.0	
PDI-059PW-04-06-191030 (A9J1114-06)			Lab File ID: VG19110123.D		Analyzed: 11/01/19 22:52			
1,4-Difluorobenzene (Surr)	50.0	99	80 - 120	7.446	7.452455	-0.0065	+/-1.0	
Toluene-d8 (Surr)	50.0	101	80 - 120	8.989	8.989546	-0.0005	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	11.446	11.446	0.0000	+/-1.0	
PDI-059PW-10-12-191030 (A9J1114-07)			Lab File ID: VG19110124.D		Analyzed: 11/01/19 23:19			
1,4-Difluorobenzene (Surr)	50.0	98	80 - 120	7.447	7.452455	-0.0055	+/-1.0	
Toluene-d8 (Surr)	50.0	98	80 - 120	8.989	8.989546	-0.0005	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	101	80 - 120	11.44	11.446	-0.0060	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K04028	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9110413-BS1)			Lab File ID: VI19110405.D		Analyzed: 11/04/19 10:28			
1,4-Difluorobenzene (Surr)	50.0	103	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	100	80 - 120	8.303	8.297273	0.0057	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	97	80 - 120	10.974	10.974	0.0000	+/-1.0	
Blank (9110413-BLK1)			Lab File ID: VI19110407.D		Analyzed: 11/04/19 11:22			
1,4-Difluorobenzene (Surr)	50.0	104	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	102	80 - 120	8.304	8.297273	0.0067	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.974	10.974	0.0000	+/-1.0	
PDI-037PW-04-06-191028 (A9J1114-03RE1)			Lab File ID: VI19110412.D		Analyzed: 11/04/19 13:36			
1,4-Difluorobenzene (Surr)	50.0	104	80 - 120	6.783	6.780727	0.0023	+/-1.0	
Toluene-d8 (Surr)	50.0	103	80 - 120	8.304	8.297273	0.0067	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	10.974	10.974	0.0000	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01026	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9110370-BS1)			Lab File ID: VI19110103.D			Analyzed: 11/01/19 11:31			
Pentafluorobenzene (ISTD)	111917	6.217	111917	6.217	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	312123	9.916	312123	9.916	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	154133	11.856	154133	11.856	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9K01026-CCV1)			Lab File ID: VI19110103.D			Analyzed: 11/01/19 11:31			
Pentafluorobenzene (ISTD)	111917	6.217	112406	6.211	100	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (ISTD)	312123	9.916	307093	9.91	102	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	154133	11.856	151591	11.85	102	50 - 200	0.0060	+/-0.50	
Blank (9110370-BLK1)			Lab File ID: VI19110105.D			Analyzed: 11/01/19 12:25			
Pentafluorobenzene (ISTD)	110933	6.223	111917	6.217	99	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (ISTD)	311286	9.916	312123	9.916	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	139970	11.856	154133	11.856	91	50 - 200	0.0000	+/-0.50	
PDI-037PW-04-06-191028 (A9J1114-03)			Lab File ID: VI19110111.D			Analyzed: 11/01/19 15:06			
Pentafluorobenzene (ISTD)	106125	6.217	111917	6.217	95	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	292016	9.916	312123	9.916	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	136121	11.856	154133	11.856	88	50 - 200	0.0000	+/-0.50	
Duplicate (9110370-DUP1)			Lab File ID: VI19110112.D			Analyzed: 11/01/19 15:33			
Pentafluorobenzene (ISTD)	105828	6.217	111917	6.217	95	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	292137	9.916	312123	9.916	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	133894	11.856	154133	11.856	87	50 - 200	0.0000	+/-0.50	
PDI-045PW-04-06-191029 (A9J1114-05)			Lab File ID: VI19110119.D			Analyzed: 11/01/19 18:41			
Pentafluorobenzene (ISTD)	107082	6.217	111917	6.217	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	294447	9.916	312123	9.916	94	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	141334	11.856	154133	11.856	92	50 - 200	0.0000	+/-0.50	
Matrix Spike (9110370-MS1)			Lab File ID: VI19110126.D			Analyzed: 11/01/19 21:49			
Pentafluorobenzene (ISTD)	107331	6.217	111917	6.217	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	306349	9.916	312123	9.916	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	150876	11.856	154133	11.856	98	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01040	Instrument:	VOA-GCMS7
Matrix:	Water	Calibration:	A9J2806

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9110371-BS1)			Lab File ID: VG19110103.D			Analyzed: 11/01/19 13:50			
Pentafluorobenzene (ISTD)	82691	6.855	82691	6.855	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	241922	10.446	241922	10.446	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	121794	12.287	121794	12.287	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9K01040-CCV1)			Lab File ID: VG19110103.D			Analyzed: 11/01/19 13:50			
Pentafluorobenzene (ISTD)	82691	6.855	86706	6.861	95	50 - 200	-0.0060	+/-0.50	
Chlorobenzene-d5 (ISTD)	241922	10.446	253314	10.452	96	50 - 200	-0.0060	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	121794	12.287	128679	12.293	95	50 - 200	-0.0060	+/-0.50	
Blank (9110371-BLK1)			Lab File ID: VG19110105.D			Analyzed: 11/01/19 14:45			
Pentafluorobenzene (ISTD)	81069	6.855	82691	6.855	98	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	246440	10.446	241922	10.446	102	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	122146	12.287	121794	12.287	100	50 - 200	0.0000	+/-0.50	
Duplicate (9110371-DUP1)			Lab File ID: VG19110119.D			Analyzed: 11/01/19 21:04			
Pentafluorobenzene (ISTD)	77826	6.855	82691	6.855	94	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	237602	10.446	241922	10.446	98	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	119623	12.287	121794	12.287	98	50 - 200	0.0000	+/-0.50	
PDI-TB-1910300000 (A9J1114-01)			Lab File ID: VG19110120.D			Analyzed: 11/01/19 21:31			
Pentafluorobenzene (ISTD)	83035	6.855	82691	6.855	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	257028	10.446	241922	10.446	106	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	129739	12.287	121794	12.287	107	50 - 200	0.0000	+/-0.50	
PDI-028PW-9-11-191030 (A9J1114-02)			Lab File ID: VG19110121.D			Analyzed: 11/01/19 21:58			
Pentafluorobenzene (ISTD)	79662	6.855	82691	6.855	96	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	253717	10.446	241922	10.446	105	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	135199	12.287	121794	12.287	111	50 - 200	0.0000	+/-0.50	
PDI-038PW-9-11-191030 (A9J1114-04)			Lab File ID: VG19110122.D			Analyzed: 11/01/19 22:25			
Pentafluorobenzene (ISTD)	92125	6.855	82691	6.855	111	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	279516	10.446	241922	10.446	116	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	143891	12.287	121794	12.287	118	50 - 200	0.0000	+/-0.50	
PDI-059PW-04-06-191030 (A9J1114-06)			Lab File ID: VG19110123.D			Analyzed: 11/01/19 22:52			
Pentafluorobenzene (ISTD)	81645	6.855	82691	6.855	99	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	239328	10.446	241922	10.446	99	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	120754	12.287	121794	12.287	99	50 - 200	0.0000	+/-0.50	
PDI-059PW-10-12-191030 (A9J1114-07)			Lab File ID: VG19110124.D			Analyzed: 11/01/19 23:19			
Pentafluorobenzene (ISTD)	94118	6.855	82691	6.855	114	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	277979	10.446	241922	10.446	115	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	145141	12.287	121794	12.287	119	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01040	Instrument:	VOA-GCMS7
Matrix:	Water	Calibration:	A9J2806

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (9110371-MS1)			Lab File ID: VG19110126.D			Analyzed: 11/02/19 00:13			
Pentafluorobenzene (ISTD)	100404	6.855	82691	6.855	121	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	290472	10.446	241922	10.446	120	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	148223	12.287	121794	12.287	122	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (9110371-MSD1)			Lab File ID: VG19110127.D			Analyzed: 11/02/19 00:40			
Pentafluorobenzene (ISTD)	89312	6.855	82691	6.855	108	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	262905	10.446	241922	10.446	109	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	133168	12.287	121794	12.287	109	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K04028	Instrument:	VOA-GCMS9
Matrix:	Water	Calibration:	A9J2503

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9110413-BS1)			Lab File ID: VI19110405.D			Analyzed: 11/04/19 10:28			
Pentafluorobenzene (ISTD)	116594	6.217	116594	6.217	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	325714	9.916	325714	9.916	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	155936	11.856	155936	11.856	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9K04028-CCV1)			Lab File ID: VI19110405.D			Analyzed: 11/04/19 10:28			
Pentafluorobenzene (ISTD)	116594	6.217	112406	6.211	104	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (ISTD)	325714	9.916	307093	9.91	106	50 - 200	0.0060	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	155936	11.856	151591	11.85	103	50 - 200	0.0060	+/-0.50	
Blank (9110413-BLK1)			Lab File ID: VI19110407.D			Analyzed: 11/04/19 11:22			
Pentafluorobenzene (ISTD)	113410	6.217	116594	6.217	97	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	311790	9.916	325714	9.916	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	140834	11.856	155936	11.856	90	50 - 200	0.0000	+/-0.50	
PDI-037PW-04-06-191028 (A9J1114-03RE1)			Lab File ID: VI19110412.D			Analyzed: 11/04/19 13:36			
Pentafluorobenzene (ISTD)	102850	6.217	116594	6.217	88	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	278955	9.916	325714	9.916	86	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	125978	11.856	155936	11.856	81	50 - 200	0.0000	+/-0.50	
Duplicate (9110413-DUP1)			Lab File ID: VI19110417.D			Analyzed: 11/04/19 15:50			
Pentafluorobenzene (ISTD)	107983	6.217	116594	6.217	93	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	294112	9.916	325714	9.916	90	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	134847	11.856	155936	11.856	86	50 - 200	0.0000	+/-0.50	
Matrix Spike (9110413-MS1)			Lab File ID: VI19110419.D			Analyzed: 11/04/19 16:44			
Pentafluorobenzene (ISTD)	107670	6.217	116594	6.217	92	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	301513	9.916	325714	9.916	93	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	145920	11.856	155936	11.856	94	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

EPA 8260C

Laboratory: Apex Laboratories

SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PDI-TB-1910300000	10/30/19 00:00	10/31/19 07:35	11/01/19 13:33	2.56	14.00	11/01/19 21:31	2.90	14.00	
PDI-028PW-9-11-191030	10/30/19 14:11	10/31/19 07:35	11/01/19 13:33	1.97	14.00	11/01/19 21:58	2.32	14.00	
PDI-037PW-04-06-191028	10/28/19 14:42	10/31/19 07:35	11/01/19 12:15	3.90	14.00	11/01/19 15:06	4.02	14.00	
PDI-037PW-04-06-191028	10/28/19 14:42	10/31/19 07:35	11/04/19 11:08	6.85	14.00	11/04/19 13:36	6.95	14.00	
PDI-038PW-9-11-191030	10/30/19 15:34	10/31/19 07:35	11/01/19 13:33	1.92	14.00	11/01/19 22:25	2.29	14.00	
PDI-045PW-04-06-191029	10/29/19 15:20	10/31/19 07:35	11/01/19 12:15	2.87	14.00	11/01/19 18:41	3.14	14.00	
PDI-059PW-04-06-191030	10/30/19 09:16	10/31/19 07:35	11/01/19 13:33	2.18	14.00	11/01/19 22:52	2.57	14.00	
PDI-059PW-10-12-191030	10/30/19 10:18	10/31/19 07:35	11/01/19 13:33	2.14	14.00	11/01/19 23:19	2.54	14.00	

Apex Laboratories

SDG: Gasco PreRD_DG 2019

CLASS: GCMS

METHOD: EPA 8260C SIM

ANALYSES DATA PACKAGE COVER PAGE

EPA 8260C SIM

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
SDG: Gasco PreRD_DG 2019
Project: Gasco PreRD_DG 2019 - 5c. PW in Contact with NA

Client Sample Id:	Lab Sample Id:	Matrix
PDI-TB-1910300000	A9J1114-01	WQ
PDI-028PW-9-11-191030	A9J1114-02	WX
PDI-038PW-9-11-191030	A9J1114-04	WX
PDI-045PW-04-06-191029	A9J1114-05	WX
PDI-059PW-10-12-191030	A9J1114-07	WX

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 
Name: David G. Jack

Forms Created: 12/18/2019 10:34AM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8260C SIM

Laboratory: Apex Laboratories

SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac

Batch Matrix: Water

Analyte	MDL	MRL	Units
Vinyl chloride	0.0100	0.0200	ug/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 8260C SIM

PDI-TB-1910300000

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WQ	Laboratory ID:	A9J1114-01	File ID:	7H19110511.D
Sampled:	10/30/19 00:00	Prepared:	11/05/19 13:35	Analyzed:	11/05/19 14:04
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110483 Sequence: 9K05040 Calibration: A9G1805 Instrument: VOA-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	1	0.0100	U

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2250	97	70 - 130	
Toluene-d8 (Surr)	2330	2250	96	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2200	95	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	20798	6.317	21016	6.316	
Chlorobenzene-d5 (ISTD)	31171	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	13551	12.738	13984	12.738	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C SIM

PDI-028PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-02	File ID:	7H19110513.D
Sampled:	10/30/19 14:11	Prepared:	11/05/19 13:35	Analyzed:	11/05/19 14:58
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110483 Sequence: 9K05040 Calibration: A9G1805 Instrument: VOA-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	1	0.0890	

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2310	99	70 - 130	
Toluene-d8 (Surr)	2330	2190	94	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2090	90	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	21155	6.317	21016	6.316	
Chlorobenzene-d5 (ISTD)	33917	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	16492	12.739	13984	12.738	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C SIM

PDI-038PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-04	File ID:	7H19110514.D
Sampled:	10/30/19 15:34	Prepared:	11/05/19 13:35	Analyzed:	11/05/19 15:25
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110483 Sequence: 9K05040 Calibration: A9G1805 Instrument: VOA-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	1	0.336	

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2310	99	70 - 130	
Toluene-d8 (Surr)	2330	2210	95	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2100	90	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	21911	6.316	21016	6.316	
Chlorobenzene-d5 (ISTD)	34834	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	16568	12.738	13984	12.738	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C SIM

PDI-045PW-04-06-191029

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-05	File ID:	7H19110515.D
Sampled:	10/29/19 15:20	Prepared:	11/05/19 13:35	Analyzed:	11/05/19 15:51
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch: 9110483 Sequence: 9K05040 Calibration: A9G1805 Instrument: VOA-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	1	0.313	

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2320	100	70 - 130	
Toluene-d8 (Surr)	2330	2210	95	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2100	90	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	21713	6.316	21016	6.316	
Chlorobenzene-d5 (ISTD)	34609	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	16723	12.738	13984	12.738	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8260C SIM

PDI-059PW-10-12-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-07	File ID:	7H19110518.D
Sampled:	10/30/19 10:18	Prepared:	11/05/19 13:35	Analyzed:	11/05/19 17:12
		Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

Batch:	9110483	Sequence:	9K05040	Calibration:	A9G1805	Instrument:	VOA-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	1	0.0478	

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2330	100	70 - 130	
Toluene-d8 (Surr)	2330	2190	94	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2080	89	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	22152	6.317	21016	6.316	
Chlorobenzene-d5 (ISTD)	35814	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	17499	12.738	13984	12.738	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8260C SIM

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Batch: 9110483 Batch Matrix: Water Preparation: EPA 5030B

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9110483-BLK1	7H19110510.D	11/05/19 12:14	
LCS	9110483-BS1	7H19110509.D	11/05/19 12:14	
PDI-045PW-04-06-191029 (Dup)	9110483-DUP1	7H19110516.D	11/05/19 13:35	
PDI-TB-1910300000	A9J1114-01	7H19110511.D	11/05/19 13:35	
PDI-028PW-9-11-191030	A9J1114-02	7H19110513.D	11/05/19 13:35	
PDI-038PW-9-11-191030	A9J1114-04	7H19110514.D	11/05/19 13:35	
PDI-045PW-04-06-191029	A9J1114-05	7H19110515.D	11/05/19 13:35	
PDI-059PW-10-12-191030	A9J1114-07	7H19110518.D	11/05/19 13:35	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
EPA 8260C SIM

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110483-BLK1	File ID:	7H19110510.D
Prepared:	11/05/19 12:14	Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL
Analyzed:	11/05/19 13:35	Instrument:	VOA-GCMS8		
Batch:	9110483	Sequence:	9K05040	Calibration:	A9G1805

CAS NO.	COMPOUND	CONC. (ug/L)	Q
75-01-4	Vinyl chloride	0.0100	U

SYSTEM MONITORING COMPOUND	ADDED (ng/L)	CONC (ng/L)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	2330	2330	100	70 - 130	
Toluene-d8 (Surr)	2330	2250	97	70 - 130	
4-Bromofluorobenzene (Surr)	2330	2230	96	70 - 130	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	20981	6.317	21016	6.316	
Chlorobenzene-d5 (ISTD)	32773	10.423	32497	10.423	
1,4-Dichlorobenzene-d4 (ISTD)	14034	12.738	13984	12.738	

LCS / LCS DUPLICATE RECOVERY

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110483	Laboratory ID:	9110483-BS1
Preparation:	EPA 5030B	Initial/Final:	5 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Vinyl chloride	0.200	0.199	100	80 - 120

* = Values outside of QC limits

PDI-045PW-04-06-191029

DUPLICATES

EPA 8260C SIM

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Water
Batch: 9110483
Preparation: EPA 5030B
Source Sample Name: PDI-045PW-04-06-191029

SDG: Gasco_PreRD_DG 2019
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac
Laboratory ID: 9110483-DUP1
Lab Source ID: A9J1114-05
Initial/Final: 5 mL / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/L)	C	DUPLICATE CONCENTRATION (ug/L)	C	RPD %	Q	METHOD
Vinyl chloride	30	0.313		0.327		4		EPA 8260C SIM

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9G12037	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9G12037-TUN1	7H19071223.D	07/12/19 21:48
Initial Cal Blank	9G12037-ICB1	7H19071224.D	07/12/19 22:14
Cal Standard	9G12037-CAL1	7H19071225.D	07/12/19 22:41
Cal Standard	9G12037-CAL2	7H19071226.D	07/12/19 23:08
Cal Standard	9G12037-CAL3	7H19071227.D	07/12/19 23:35
Cal Standard	9G12037-CAL4	7H19071228.D	07/13/19 00:02
Cal Standard	9G12037-CAL5	7H19071229.D	07/13/19 00:29
Cal Standard	9G12037-CAL6	7H19071230.D	07/13/19 00:55
Cal Standard	9G12037-CAL7	7H19071231.D	07/13/19 01:22
Cal Standard	9G12037-CAL8	7H19071233.D	07/13/19 02:16
Initial Cal Check	9G12037-ICV1	7H19071236.D	07/13/19 03:37

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K05040	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9K05040-TUN1	7H19110507.D	11/05/19 12:14
Calibration Check	9K05040-CCV1	7H19110509.D	11/05/19 13:08
Blank	9110483-BLK1	7H19110510.D	11/05/19 13:35
PDI-TB-1910300000	A9J1114-01	7H19110511.D	11/05/19 14:04
PDI-028PW-9-11-191030	A9J1114-02	7H19110513.D	11/05/19 14:58
PDI-038PW-9-11-191030	A9J1114-04	7H19110514.D	11/05/19 15:25
PDI-045PW-04-06-191029	A9J1114-05	7H19110515.D	11/05/19 15:51
PDI-045PW-04-06-191029 (Dup)	9110483-DUP1	7H19110516.D	11/05/19 16:18
PDI-059PW-10-12-191030	A9J1114-07	7H19110518.D	11/05/19 17:12

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	7H19071223.D	Injection Date:	07/12/19
Instrument ID:	VOA-GCMS8	Injection Time:	21:48
Sequence:	9G12037	Lab Sample ID:	9G12037-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	119.44	PASS
m/z 96	5 - 9% of m/z 95	5.43	PASS
m/z 173	Less than 2% of m/z 174	0.00	PASS
m/z 174	50 - 200% of m/z 95	83.72	PASS
m/z 175	5 - 9% of m/z 174	6.72	PASS
m/z 176	95 - 105% of m/z 174	97.20	PASS
m/z 177	5 - 10% of m/z 176	6.49	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	7H19110507.D	Injection Date:	11/05/19
Instrument ID:	VOA-GCMS8	Injection Time:	12:14
Sequence:	9K05040	Lab Sample ID:	9K05040-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 95	50 - 200% of m/z 174	136.11	PASS
m/z 96	5 - 9% of m/z 95	6.75	PASS
m/z 173	Less than 2% of m/z 174	0.00	PASS
m/z 174	50 - 200% of m/z 95	73.47	PASS
m/z 175	5 - 9% of m/z 174	7.82	PASS
m/z 176	95 - 105% of m/z 174	98.17	PASS
m/z 177	5 - 10% of m/z 176	6.65	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8260C SIM

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9G1805 Date: 07/18/19 16:21 Instrument: VOA-GCMS8

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Vinyl chloride	0.7805914	Ave	10.68351	2.048375	8.445938E-02			15	
1,4-Difluorobenzene (Surr)	1.736168	Ave	1.726277	6.898	3.784712E-02			15	
Toluene-d8 (Surr)	1.583056	Ave	1.287577	8.435375	3.321227E-02			15	
4-Bromofluorobenzene (Surr)	0.8802649	Ave	2.649547	11.72925	1.097538E-02			15	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8260C SIM

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9G1805

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: VOA-GCMS8

Calibration Date: 07/18/19 16:21

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF
Vinyl chloride	10	0.6398107	20	0.7566287	50	0.767281	100	0.7906594	200	0.8740636	500	0.8892956
1,4-Difluorobenzene (Surr)	2330	1.745443	2330	1.745099	2330	1.728046	2330	1.731561	2330	1.742052	2330	1.753473
Toluene-d8 (Surr)	2330	1.612339	2330	1.592369	2330	1.597718	2330	1.588997	2330	1.562774	2330	1.583607
4-Bromofluorobenzene (Surr)	2330	0.8943576	2330	0.899473	2330	0.8907054	2330	0.9009711	2330	0.8848997	2330	0.873193

INITIAL CALIBRATION DATA (Continued)

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration:	A9G1805	Instrument:	VOA-GCMS8
Matrix:		Calibration Date:	07/18/19 16:21

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF	ng/L	RF
Vinyl chloride	1000	0.7048767	2000	0.8221154								
1,4-Difluorobenzene (Surr)	2330	1.670408	2330	1.773266								
Toluene-d8 (Surr)	2330	1.547145	2330	1.579503								
4-Bromofluorobenzene (Surr)	2330	0.8304405	2330	0.8680786								

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	VOA-GCMS8	Calibration:	A9G1805
Lab File ID:	7H19071236.D		
Sequence:	9G12037	Inject Date:	07/13/19
Lab Sample ID:	9G12037-ICV1	Inject Time:	03:37

ANALYTE	EXPECTED (ng/L)	FOUND (ng/L)	% DRIFT	QC LIMIT
Vinyl chloride	200	237	18.5	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9G12037	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Surrogate Compound	Spike Level ng/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9G12037-ICV1)				Lab File ID: 7H19071236.D		Analyzed: 07/13/19 03:37		
1,4-Difluorobenzene (Surr)	2330	102	70 - 130	6.9	6.898	0.0020	+/-1.0	
Toluene-d8 (Surr)	2330	98	70 - 130	8.438	8.435375	0.0026	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	101	70 - 130	11.729	11.72925	-0.0003	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K05040	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Surrogate Compound	Spike Level ng/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9110483-BS1)			Lab File ID: 7H19110509.D		Analyzed: 11/05/19 13:08			
1,4-Difluorobenzene (Surr)	2330	100	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	97	70 - 130	8.422	8.435375	-0.0134	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	95	70 - 130	11.719	11.72925	-0.0103	+/-1.0	
Blank (9110483-BLK1)			Lab File ID: 7H19110510.D		Analyzed: 11/05/19 13:35			
1,4-Difluorobenzene (Surr)	2330	100	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	97	70 - 130	8.422	8.435375	-0.0134	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	96	70 - 130	11.718	11.72925	-0.0113	+/-1.0	
PDI-TB-1910300000 (A9J1114-01)			Lab File ID: 7H19110511.D		Analyzed: 11/05/19 14:04			
1,4-Difluorobenzene (Surr)	2330	97	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	96	70 - 130	8.422	8.435375	-0.0134	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	95	70 - 130	11.719	11.72925	-0.0103	+/-1.0	
PDI-028PW-9-11-191030 (A9J1114-02)			Lab File ID: 7H19110513.D		Analyzed: 11/05/19 14:58			
1,4-Difluorobenzene (Surr)	2330	99	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	94	70 - 130	8.422	8.435375	-0.0134	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	90	70 - 130	11.719	11.72925	-0.0103	+/-1.0	
PDI-038PW-9-11-191030 (A9J1114-04)			Lab File ID: 7H19110514.D		Analyzed: 11/05/19 15:25			
1,4-Difluorobenzene (Surr)	2330	99	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	95	70 - 130	8.421	8.435375	-0.0144	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	90	70 - 130	11.718	11.72925	-0.0113	+/-1.0	
PDI-045PW-04-06-191029 (A9J1114-05)			Lab File ID: 7H19110515.D		Analyzed: 11/05/19 15:51			
1,4-Difluorobenzene (Surr)	2330	100	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	95	70 - 130	8.421	8.435375	-0.0144	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	90	70 - 130	11.718	11.72925	-0.0113	+/-1.0	
Duplicate (9110483-DUP1)			Lab File ID: 7H19110516.D		Analyzed: 11/05/19 16:18			
1,4-Difluorobenzene (Surr)	2330	99	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	94	70 - 130	8.421	8.435375	-0.0144	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	91	70 - 130	11.718	11.72925	-0.0113	+/-1.0	
PDI-059PW-10-12-191030 (A9J1114-07)			Lab File ID: 7H19110518.D		Analyzed: 11/05/19 17:12			
1,4-Difluorobenzene (Surr)	2330	100	70 - 130	6.889	6.898	-0.0090	+/-1.0	
Toluene-d8 (Surr)	2330	94	70 - 130	8.422	8.435375	-0.0134	+/-1.0	
4-Bromofluorobenzene (Surr)	2330	89	70 - 130	11.718	11.72925	-0.0113	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K05040	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9110483-BS1)			Lab File ID: 7H19110509.D			Analyzed: 11/05/19 13:08			
Pentafluorobenzene (ISTD)	21016	6.316	21016	6.316	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	32497	10.423	32497	10.423	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	13984	12.738	13984	12.738	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9K05040-CCV1)			Lab File ID: 7H19110509.D			Analyzed: 11/05/19 13:08			
Pentafluorobenzene (ISTD)	21016	6.316	17647	6.327	119	50 - 200	-0.0110	+/-0.50	
Chlorobenzene-d5 (ISTD)	32497	10.423	26428	10.434	123	50 - 200	-0.0110	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	13984	12.738	10417	12.749	134	50 - 200	-0.0110	+/-0.50	
Blank (9110483-BLK1)			Lab File ID: 7H19110510.D			Analyzed: 11/05/19 13:35			
Pentafluorobenzene (ISTD)	20981	6.317	21016	6.316	100	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	32773	10.423	32497	10.423	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	14034	12.738	13984	12.738	100	50 - 200	0.0000	+/-0.50	
PDI-TB-1910300000 (A9J1114-01)			Lab File ID: 7H19110511.D			Analyzed: 11/05/19 14:04			
Pentafluorobenzene (ISTD)	20798	6.317	21016	6.316	99	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	31171	10.423	32497	10.423	96	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	13551	12.738	13984	12.738	97	50 - 200	0.0000	+/-0.50	
PDI-028PW-9-11-191030 (A9J1114-02)			Lab File ID: 7H19110513.D			Analyzed: 11/05/19 14:58			
Pentafluorobenzene (ISTD)	21155	6.317	21016	6.316	101	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	33917	10.423	32497	10.423	104	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	16492	12.739	13984	12.738	118	50 - 200	0.0010	+/-0.50	
PDI-038PW-9-11-191030 (A9J1114-04)			Lab File ID: 7H19110514.D			Analyzed: 11/05/19 15:25			
Pentafluorobenzene (ISTD)	21911	6.316	21016	6.316	104	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	34834	10.423	32497	10.423	107	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	16568	12.738	13984	12.738	118	50 - 200	0.0000	+/-0.50	
PDI-045PW-04-06-191029 (A9J1114-05)			Lab File ID: 7H19110515.D			Analyzed: 11/05/19 15:51			
Pentafluorobenzene (ISTD)	21713	6.316	21016	6.316	103	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	34609	10.423	32497	10.423	106	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	16723	12.738	13984	12.738	120	50 - 200	0.0000	+/-0.50	
Duplicate (9110483-DUP1)			Lab File ID: 7H19110516.D			Analyzed: 11/05/19 16:18			
Pentafluorobenzene (ISTD)	22102	6.316	21016	6.316	105	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	35256	10.423	32497	10.423	108	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	16733	12.738	13984	12.738	120	50 - 200	0.0000	+/-0.50	
PDI-059PW-10-12-191030 (A9J1114-07)			Lab File ID: 7H19110518.D			Analyzed: 11/05/19 17:12			
Pentafluorobenzene (ISTD)	22152	6.317	21016	6.316	105	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	35814	10.423	32497	10.423	110	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	17499	12.738	13984	12.738	125	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8260C SIM

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K05040	Instrument:	VOA-GCMS8
Matrix:	Water	Calibration:	A9G1805

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Matrix Spike (9110483-MS1)			Lab File ID: 7H19110520.D			Analyzed: 11/05/19 18:06			
Pentafluorobenzene (ISTD)	22192	6.316	21016	6.316	106	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	35696	10.423	32497	10.423	110	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	16791	12.738	13984	12.738	120	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

EPA 8260C SIM

Laboratory: Apex Laboratories

SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PDI-TB-1910300000	10/30/19 00:00	10/31/19 07:35	11/05/19 13:35	6.57	14.00	11/05/19 14:04	6.59	14.00	
PDI-028PW-9-11-191030	10/30/19 14:11	10/31/19 07:35	11/05/19 13:35	5.98	14.00	11/05/19 14:58	6.03	14.00	
PDI-038PW-9-11-191030	10/30/19 15:34	10/31/19 07:35	11/05/19 13:35	5.92	14.00	11/05/19 15:25	5.99	14.00	
PDI-045PW-04-06-191029	10/29/19 15:20	10/31/19 07:35	11/05/19 13:35	6.93	14.00	11/05/19 15:51	7.02	14.00	
PDI-059PW-10-12-191030	10/30/19 10:18	10/31/19 07:35	11/05/19 13:35	6.14	14.00	11/05/19 17:12	6.29	14.00	

Apex Laboratories

SDG: Gasco PreRD_DG 2019

CLASS: GCMS

METHOD: EPA 8270D LVI

ANALYSES DATA PACKAGE COVER PAGE

EPA 8270D LVI

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

SDG: Gasco PreRD_DG 2019

Project: Gasco PreRD_DG 2019 - 5c. PW in Contact with NA

Client Sample Id:	Lab Sample Id:	Matrix
PDI-028PW-9-11-191030	A9J1114-02	WX
PDI-038PW-9-11-191030	A9J1114-04	WX
PDI-059PW-10-12-191030	A9J1114-07	WX

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hardcopy data package and in computer-readable data submitted on diskette has been autorized by the Laboratory Manager or the Manager's designee, as verified by the following signatures.

Signature: 

Name: David G. Jack

Forms Created: 12/18/2019 10:34AM

Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D LVI

Laboratory: Apex Laboratories

SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contac

Batch Matrix: Water

Analyte	MDL	MRL	Units
Acenaphthene	0.0160	0.0320	ug/L
Acenaphthylene	0.0160	0.0320	ug/L
Anthracene	0.0160	0.0320	ug/L
Benz(a)anthracene	0.00800	0.0160	ug/L
Benzo(a)pyrene	0.00800	0.0160	ug/L
Benzo(b)fluoranthene	0.00800	0.0160	ug/L
Benzo(k)fluoranthene	0.00800	0.0160	ug/L
Carbazole	0.0160	0.0320	ug/L
Dibenzofuran	0.0160	0.0320	ug/L
Benzo(g,h,i)perylene	0.0160	0.0320	ug/L
Chrysene	0.00800	0.0160	ug/L
Dibenz(a,h)anthracene	0.00800	0.0160	ug/L
Fluoranthene	0.0160	0.0320	ug/L
Fluorene	0.0160	0.0320	ug/L
Indeno(1,2,3-cd)pyrene	0.00800	0.0160	ug/L
1-Methylnaphthalene	0.0320	0.0640	ug/L
2-Methylnaphthalene	0.0320	0.0640	ug/L
Naphthalene	0.0320	0.0640	ug/L
Phenanthrene	0.0320	0.0640	ug/L
Pyrene	0.0160	0.0320	ug/L

Note: MDLs are listed only if the corresponding analyte was evalutated to the MDL in this report .

ORGANIC ANALYSIS DATA SHEET

EPA 8270D LVI

PDI-028PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-02RE1	File ID:	H11011915.D
Sampled:	10/30/19 14:11	Prepared:	11/01/19 12:28	Analyzed:	11/01/19 19:36
		Preparation:	EPA 3511 (Bottle Extraction	Initial/Final:	118.89 mL / 5 mL

Batch: 9110387 Sequence: 9K01025 Calibration: A9G0205 Instrument: SV-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
83-32-9	Acenaphthene	50	83.6	D
208-96-8	Acenaphthylene	50	3.68	U
120-12-7	Anthracene	50	6.54	D
56-55-3	Benz(a)anthracene	50	0.795	JD
50-32-8	Benzo(a)pyrene	50	0.862	D
205-99-2	Benzo(b)fluoranthene	50	0.566	JD
207-08-9	Benzo(k)fluoranthene	50	0.574	JD
191-24-2	Benzo(g,h,i)perylene	50	0.841	U
218-01-9	Chrysene	50	0.692	JD
53-70-3	Dibenz(a,h)anthracene	50	0.421	U
206-44-0	Fluoranthene	50	3.00	D
86-73-7	Fluorene	50	26.2	D
193-39-5	Indeno(1,2,3-cd)pyrene	50	0.526	JD
91-57-6	2-Methylnaphthalene	50	53.9	D
91-20-3	Naphthalene	50	58.4	D
85-01-8	Phenanthrene	50	46.3	D
129-00-0	Pyrene	50	3.10	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Acenaphthylene-d8 (Surr)	4.21	5.51	131	80 - 120	D
Benzo(a)pyrene-d12 (Surr)	4.21	6.73	160	80 - 143	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
2-Fluorobiphenyl (ISTD)	160548	7.954	130799	7.954	
p-Terphenyl-d14 (ISTD)	268500	11.387	223432	11.387	
Naphthalene-d8 (ISTD)	129724	7.039	119820	7.039	
Acenaphthene-d10 (ISTD)	126422	8.549	102141	8.549	
Phenanthrene-d10 (ISTD)	286732	9.849	236517	9.849	
Chrysene-d12 (ISTD)	237098	13.125	232989	13.125	
Perylene-d12 (ISTD)	207477	16.373	220662	16.368	
Dibenz(a,h)anthracene-d14 (ISTD)	177486	18.692	203097	18.687	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D LVI

PDI-038PW-9-11-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-04RE1	File ID:	H11011916.D
Sampled:	10/30/19 15:34	Prepared:	11/01/19 12:28	Analyzed:	11/01/19 20:08
		Preparation:	EPA 3511 (Bottle Extraction	Initial/Final:	118.17 mL / 5 mL

Batch: 9110387 Sequence: 9K01025 Calibration: A9G0205 Instrument: SV-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
83-32-9	Acenaphthene	50	65.0	D
208-96-8	Acenaphthylene	50	2.36	D
120-12-7	Anthracene	50	4.32	D
56-55-3	Benz(a)anthracene	50	0.423	U
50-32-8	Benzo(a)pyrene	50	0.463	JD
205-99-2	Benzo(b)fluoranthene	50	0.442	JD
207-08-9	Benzo(k)fluoranthene	50	0.423	U
191-24-2	Benzo(g,h,i)perylene	50	0.846	U
218-01-9	Chrysene	50	0.423	U
53-70-3	Dibenz(a,h)anthracene	50	0.423	U
206-44-0	Fluoranthene	50	2.55	D
86-73-7	Fluorene	50	13.9	D
193-39-5	Indeno(1,2,3-cd)pyrene	50	0.423	U
91-57-6	2-Methylnaphthalene	50	3.15	JD
91-20-3	Naphthalene	50	4.63	D
85-01-8	Phenanthrene	50	32.0	D
129-00-0	Pyrene	50	2.39	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Acenaphthylene-d8 (Surr)	4.23	5.36	127	80 - 120	D
Benzo(a)pyrene-d12 (Surr)	4.23	5.87	139	80 - 143	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
2-Fluorobiphenyl (ISTD)	171775	7.954	130799	7.954	
p-Terphenyl-d14 (ISTD)	244565	11.392	223432	11.387	
Naphthalene-d8 (ISTD)	142927	7.039	119820	7.039	
Acenaphthene-d10 (ISTD)	129248	8.549	102141	8.549	
Phenanthrene-d10 (ISTD)	272758	9.849	236517	9.849	
Chrysene-d12 (ISTD)	224066	13.125	232989	13.125	
Perylene-d12 (ISTD)	199434	16.373	220662	16.368	
Dibenz(a,h)anthracene-d14 (ISTD)	173283	18.692	203097	18.687	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D LVI

PDI-059PW-10-12-191030

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	WX	Laboratory ID:	A9J1114-07RE1	File ID:	H11011917.D
Sampled:	10/30/19 10:18	Prepared:	11/01/19 12:28	Analyzed:	11/01/19 20:40
		Preparation:	EPA 3511 (Bottle Extraction	Initial/Final:	119.94 mL / 5 mL

Batch: 9110387 Sequence: 9K01025 Calibration: A9G0205 Instrument: SV-GCMS8

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
83-32-9	Acenaphthene	50	161	D
208-96-8	Acenaphthylene	50	4.64	D
120-12-7	Anthracene	50	3.53	D
56-55-3	Benz(a)anthracene	50	0.417	U
50-32-8	Benzo(a)pyrene	50	0.417	U
205-99-2	Benzo(b)fluoranthene	50	0.417	U
207-08-9	Benzo(k)fluoranthene	50	0.417	U
191-24-2	Benzo(g,h,i)perylene	50	0.834	U
218-01-9	Chrysene	50	0.417	U
53-70-3	Dibenz(a,h)anthracene	50	0.417	U
206-44-0	Fluoranthene	50	1.71	D
86-73-7	Fluorene	50	31.7	D
193-39-5	Indeno(1,2,3-cd)pyrene	50	0.417	U
91-57-6	2-Methylnaphthalene	50	68.5	D
91-20-3	Naphthalene	50	151	D
85-01-8	Phenanthrene	50	41.7	D
129-00-0	Pyrene	50	1.55	JD

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Acenaphthylene-d8 (Surr)	4.17	4.55	109	80 - 120	D
Benzo(a)pyrene-d12 (Surr)	4.17	5.26	126	80 - 143	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
2-Fluorobiphenyl (ISTD)	181564	7.953	130799	7.954	
p-Terphenyl-d14 (ISTD)	245695	11.387	223432	11.387	
Naphthalene-d8 (ISTD)	153970	7.034	119820	7.039	
Acenaphthene-d10 (ISTD)	129606	8.549	102141	8.549	
Phenanthrene-d10 (ISTD)	262788	9.849	236517	9.849	
Chrysene-d12 (ISTD)	216648	13.125	232989	13.125	
Perylene-d12 (ISTD)	182983	16.368	220662	16.368	
Dibenz(a,h)anthracene-d14 (ISTD)	154516	18.687	203097	18.687	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8270D LVI

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Batch: 9110387 Batch Matrix: Water Preparation: EPA 3511 (Bottle Extraction)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9110387-BLK2	H11011907.D	11/01/19 12:28	
LCS	9110387-BS1	H11011908.D	11/01/19 12:28	
LCS Dup	9110387-BSD1	H11011909.D	11/01/19 12:28	
PDI-028PW-9-11-191030	A9J1114-02RE1	H11011915.D	11/01/19 12:28	
PDI-038PW-9-11-191030	A9J1114-04RE1	H11011916.D	11/01/19 12:28	
PDI-059PW-10-12-191030	A9J1114-07RE1	H11011917.D	11/01/19 12:28	

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

METHOD BLANK DATA SHEET
EPA 8270D LVI

Laboratory:	Apex Laboratories			SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC			Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water	Laboratory ID:	9110387-BLK2	File ID:	H11011907.D
Prepared:	11/01/19 12:28	Preparation:	EPA 3511 (Bottle Extraction	Initial/Final:	125 mL / 5 mL
Analyzed:	11/01/19 15:20	Instrument:	SV-GCMS8		
Batch:	9110387	Sequence:	9K01025	Calibration:	A9G0205

CAS NO.	COMPOUND	CONC. (ug/L)	Q
83-32-9	Acenaphthene	0.0160	U
208-96-8	Acenaphthylene	0.0160	U
120-12-7	Anthracene	0.0160	U
56-55-3	Benz(a)anthracene	0.00800	U
50-32-8	Benzo(a)pyrene	0.00800	U
205-99-2	Benzo(b)fluoranthene	0.00800	U
207-08-9	Benzo(k)fluoranthene	0.00800	U
86-74-8	Carbazole	0.0160	U
132-64-9	Dibenzofuran	0.0160	U
191-24-2	Benzo(g,h,i)perylene	0.0160	U
218-01-9	Chrysene	0.00800	U
53-70-3	Dibenz(a,h)anthracene	0.00800	U
206-44-0	Fluoranthene	0.0160	U
86-73-7	Fluorene	0.0160	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.00800	U
90-12-0	1-Methylnaphthalene	0.0320	U
91-57-6	2-Methylnaphthalene	0.0320	U
91-20-3	Naphthalene	0.0320	U
85-01-8	Phenanthrene	0.0320	U
129-00-0	Pyrene	0.0160	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Acenaphthylene-d8 (Surr)	4.00	4.11	103	80 - 120	
Benzo(a)pyrene-d12 (Surr)	4.00	4.26	106	80 - 143	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
2-Fluorobiphenyl (ISTD)	114000	7.953	130799	7.954	
p-Terphenyl-d14 (ISTD)	222855	11.392	223432	11.387	
Naphthalene-d8 (ISTD)	120412	7.039	119820	7.039	
Acenaphthene-d10 (ISTD)	103427	8.549	102141	8.549	
Phenanthrene-d10 (ISTD)	271208	9.849	236517	9.849	
Chrysene-d12 (ISTD)	269896	13.125	232989	13.125	
Perylene-d12 (ISTD)	260445	16.373	220662	16.368	
Dibenz(a,h)anthracene-d14 (ISTD)	224436	18.687	203097	18.687	

LCS / LCS DUPLICATE RECOVERY

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110387	Laboratory ID:	9110387-BS1
Preparation:	EPA 3511 (Bottle Extraction)	Initial/Final:	125 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	1.60	1.46	92	78 - 135
Acenaphthylene	1.60	1.61	101	80 - 126
Anthracene	1.60	1.55	97	80 - 120
Benz(a)anthracene	1.60	1.59	99	76 - 124
Benzo(a)pyrene	1.60	1.69	106	71 - 127
Benzo(b)fluoranthene	1.60	1.60	100	68 - 120
Benzo(k)fluoranthene	1.60	1.65	103	72 - 120
Carbazole	1.60	1.44	90	80 - 122
Dibenzofuran	1.60	1.32	82	75 - 122
Benzo(g,h,i)perylene	1.60	1.47	92	71 - 120
Chrysene	1.60	1.49	93	71 - 121
Dibenz(a,h)anthracene	1.60	1.55	97	69 - 122
Fluoranthene	1.60	1.50	94	80 - 120
Fluorene	1.60	1.32	83	78 - 129
Indeno(1,2,3-cd)pyrene	1.60	1.38	86	72 - 132
1-Methylnaphthalene	1.60	1.46	91	76 - 150
2-Methylnaphthalene	1.60	1.39	87	80 - 158
Naphthalene	1.60	1.49	93	80 - 132
Phenanthrene	1.60	1.44	90	80 - 120
Pyrene	1.60	1.48	93	73 - 127

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Matrix:	Water		
Batch:	9110387	Laboratory ID:	9110387-BSD1
Preparation:	EPA 3511 (Bottle Extraction)	Initial/Final:	125 mL / 5 mL

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS
Acenaphthene	1.60	1.48	93	1	30	78 - 135
Acenaphthylene	1.60	1.62	101	0.8	30	80 - 126
Anthracene	1.60	1.59	99	3	30	80 - 120
Benz(a)anthracene	1.60	1.61	100	1	30	76 - 124
Benzo(a)pyrene	1.60	1.71	107	1	30	71 - 127
Benzo(b)fluoranthene	1.60	1.58	99	1	30	68 - 120
Benzo(k)fluoranthene	1.60	1.66	104	0.2	30	72 - 120
Carbazole	1.60	1.46	91	2	30	80 - 122
Dibenzofuran	1.60	1.37	86	4	30	75 - 122
Benzo(g,h,i)perylene	1.60	1.54	97	5	30	71 - 120
Chrysene	1.60	1.52	95	3	30	71 - 121
Dibenz(a,h)anthracene	1.60	1.53	96	0.9	30	69 - 122
Fluoranthene	1.60	1.51	95	0.6	30	80 - 120
Fluorene	1.60	1.37	86	4	30	78 - 129
Indeno(1,2,3-cd)pyrene	1.60	1.44	90	5	30	72 - 132
1-Methylnaphthalene	1.60	1.52	95	4	30	76 - 150
2-Methylnaphthalene	1.60	1.49	93	7	30	80 - 158
Naphthalene	1.60	1.48	93	0.5	30	80 - 132
Phenanthrene	1.60	1.47	92	3	30	80 - 120
Pyrene	1.60	1.47	92	0.8	30	73 - 127

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9G01051	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9G01051-TUN1	H06011909.D	07/01/19 13:14
Initial Cal Blank	9G01051-ICB1	H06011910.D	07/01/19 13:45
Cal Standard	9G01051-CAL1	H06011911.D	07/01/19 14:19
Cal Standard	9G01051-CAL2	H06011912.D	07/01/19 14:52
Cal Standard	9G01051-CAL3	H06011913.D	07/01/19 15:26
Cal Standard	9G01051-CAL4	H06011914.D	07/01/19 16:00
Cal Standard	9G01051-CAL5	H06011915.D	07/01/19 16:34
Cal Standard	9G01051-CAL6	H06011916.D	07/01/19 17:07
Cal Standard	9G01051-CAL7	H06011917.D	07/01/19 17:41
Cal Standard	9G01051-CAL8	H06011918.D	07/01/19 18:15
Cal Standard	9G01051-CAL9	H06011919.D	07/01/19 18:48
Cal Standard	9G01051-CALA	H06011920.D	07/01/19 19:22
Initial Cal Check	9G01051-ICV1	H06011922.D	07/01/19 20:29

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

ANALYSIS BATCH (SEQUENCE) SUMMARY
EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01025	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9K01025-TUN1	H11011902.D	11/01/19 10:35
Calibration Check	9K01025-CCV1	H11011903.D	11/01/19 11:04
Calibration Blank	9K01025-CCB1	H11011904.D	11/01/19 11:36
Blank	9110387-BLK2	H11011907.D	11/01/19 15:20
LCS	9110387-BS1	H11011908.D	11/01/19 15:52
LCS Dup	9110387-BSD1	H11011909.D	11/01/19 16:24
PDI-028PW-9-11-191030	A9J1114-02RE1	H11011915.D	11/01/19 19:36
PDI-038PW-9-11-191030	A9J1114-04RE1	H11011916.D	11/01/19 20:08
PDI-059PW-10-12-191030	A9J1114-07RE1	H11011917.D	11/01/19 20:40

Note: Client samples are listed only if they are included in this report.
Duplicates and Matrix Spike/Duplicates QC Samples are only listed if sourced from a sample included in this report.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	H06011909.D	Injection Date:	07/01/19
Instrument ID:	SV-GCMS8	Injection Time:	13:14
Sequence:	9G01051	Lab Sample ID:	9G01051-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 127			
m/z 275			
m/z 51			
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.47	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.73	PASS
m/z 365	1 - 100% of m/z 198	3.26	PASS
m/z 441	Less than 24% of m/z 443	91.90	FAIL
m/z 442	50 - 200% of m/z 198	97.87	PASS
m/z 443	15 - 24% of m/z 442	19.30	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Lab File ID:	H11011902.D	Injection Date:	11/01/19
Instrument ID:	SV-GCMS8	Injection Time:	10:35
Sequence:	9K01025	Lab Sample ID:	9K01025-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Base peak, 100% relative abundance	100.00	PASS
m/z 70	Less than 2% of m/z 69	0.50	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.64	PASS
m/z 365	1 - 100% of m/z 198	3.61	PASS
m/z 441	Less than 150% of m/z 443	87.06	PASS
m/z 442	0.1 - 200% of m/z 198	93.31	PASS
m/z 443	15 - 24% of m/z 442	19.21	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8270D LVI

Laboratory: Apex Laboratories SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Calibration: A9G0205 Date: 07/02/19 10:26 Instrument: SV-GCMS8

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.482551	Ave	8.12736	8.6405	1.828437E-02			20	
Acenaphthylene	1.987626	Ave	8.271464	8.4895	3.066437E-02			20	
Anthracene	1.065167	Ave	8.166666	9.982	1.990427E-02			20	
Benz(a)anthracene	1.259126	XXX	29.23508	13.2425	4.205589E-02				
Benzo(a)pyrene	0.9209893	XXX	24.35267	16.387	7.086465E-02				
Benzo(b)fluoranthene	1.09267	XXX	12.51359	15.6493	4.706557E-02				
Benzo(k)fluoranthene	1.084583	XXX	16.64787	15.7132	5.739162E-02				
Benzo(g,h,i)perylene	1.048624	Ave	13.46843	19.3604	6.924035E-02			20	
Chrysene	1.107706	Ave	3.932071	13.3142	4.015189E-02			20	
Dibenz(a,h)anthracene	1.179609	Ave	5.877574	18.905	5.692891E-02			20	
Acenaphthylene-d8 (Surr)	2.062679	XXX	26.52464	8.477125	1.877549E-02				
Benzo(a)pyrene-d12 (Surr)	0.7469368	XXX	24.05391	16.33189	5.895378E-02				
Fluoranthene	1.193601	Ave	6.398959	11.043	2.572266E-02			20	
Fluorene	1.835019	Ave	5.257799	9.092	1.911781E-02			20	
Indeno(1,2,3-cd)pyrene	1.183314	Ave	10.2981	18.8405	6.160266E-02			20	
2-Methylnaphthalene	0.8960954	Ave	4.728381	7.706	1.459133E-02			20	
Naphthalene	1.160382	Ave	6.845047	7.116333	3.016061E-02			20	
Phenanthrene	1.199406	Ave	4.821378	9.935333	1.964393E-02			20	
Pyrene	1.294321	Ave	6.157387	11.3	2.640219E-02			20	

Note: ** Quad COD may be incorrect if weighting (1/a) or (1/a2) used. Weighting not shown here. Please see instrument calibration printouts for validation.

INITIAL CALIBRATION DATA

EPA 8270D LVI

Laboratory: Apex Laboratories

Client: Anchor QEA, LLC

Calibration: A9G0205

SDG: Gasco_PreRD_DG 2019

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v

Instrument: SV-GCMS8

Calibration Date: 07/02/19 10:26

	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
Compound	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	0.2	1.797631	0.4	1.536309	1	1.506743	5	1.431563	10	1.386939	20	1.401152
Acenaphthylene	0.2	1.885751	0.4	1.793886	1	1.726476	5	1.902376	10	1.937729	20	2.042648
Anthracene	0.2	1.047268	0.4	0.9731504	1	0.9172834	5	0.9972427	10	1.028322	20	1.091342
Benz(a)anthracene	0.2	2.222233	0.4	1.526264	1	1.138185	5	1.007324	10	1.002176	20	1.099135
Benzo(a)pyrene	0.2	0.689826	0.4	0.6026056	1	0.6731104	5	0.7771845	10	0.8783749	20	1.01504
Benzo(b)fluoranthene	0.2	1.064262	0.4	0.8973741	1	0.9225464	5	0.9517365	10	1.042232	20	1.149141
Benzo(k)fluoranthene	0.2	1.005216	0.4	0.8095244	1	0.8316281	5	0.9514722	10	1.061267	20	1.168104
Benzo(b+k)fluoranthene(s)	0.4	1.034739	0.8	0.8538122	2	0.8770872	10	0.9701855	20	1.060047	40	1.165059
Carbazole	0.2	1.045001	0.4	0.9364067	1	0.971837	5	0.9497321	10	0.9984631	20	1.040637
Dibenzofuran	0.2	2.578955	0.4	1.931173	1	2.003068	5	2.022522	10	2.072003	20	2.165169
Benzo(g,h,i)perylene	0.2	0.9240648	0.4	0.8327234	1	0.8707652	5	0.9869583	10	1.024433	20	1.093365
Chrysene	0.2	1.205533	0.4	1.10729	1	1.032736	5	1.110874	10	1.07874	20	1.113565
Dibenz(a,h)anthracene	0.2	1.2141	0.4	1.14616	1	1.039234	5	1.144258	10	1.117611	20	1.17371
Acenaphthylene-d8 (Surr)	0.2	~~18.05562~~	0.4	~~8.05549~~	1	3.40261	5	2.053182	10	1.852492	20	1.847836
Benzo(a)pyrene-d12 (Surr)	0.2	~~0.5918966~~	0.4	0.5103996	1	0.4865575	5	0.6274779	10	0.6690759	20	0.7897078
Fluoranthene	0.2	1.277349	0.4	1.104537	1	1.079563	5	1.11098	10	1.148438	20	1.206549
Fluorene	0.2	1.991493	0.4	1.791271	1	1.679687	5	1.735981	10	1.755439	20	1.902745
Indeno(1,2,3-cd)pyrene	0.2	1.492331	0.4	1.26391	1	1.098418	5	1.072731	10	1.095853	20	1.128461
1-Methylnaphthalene	0.2	0.8754438	0.4	0.8339054	1	0.8446123	5	0.8790779	10	0.8323503	20	0.7942816
2-Methylnaphthalene	0.2	0.9483975	0.4	0.9497256	1	0.9384027	5	0.8750005	10	0.8386276	20	0.8401992
Naphthalene	0.2	~~1.730991~~	0.4	1.324562	1	1.264175	5	1.158621	10	1.124728	20	1.129577
Phenanthrene	0.2	~~1.674041~~	0.4	1.341701	1	1.197648	5	1.155219	10	1.154177	20	1.194768
Pyrene	0.2	1.494963	0.4	1.253182	1	1.26325	5	1.214334	10	1.221458	20	1.264836

INITIAL CALIBRATION DATA (Continued)

EPA 8270D LVI

Laboratory: Apex Laboratories
SDG: Gasco_PreRD_DG 2019
Client: Anchor QEA, LLC
Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact v
Calibration: A9G0205
Instrument: SV-GCMS8
Matrix:
Calibration Date: 07/02/19 10:26

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF	ng/mL	RF
Acenaphthene	50	1.407463	100	1.424151	150	1.466065	200	1.46749				
Acenaphthylene	50	2.063247	100	2.125467	150	2.199355	200	2.199328				
Anthracene	50	1.115806	100	1.134513	150	1.172817	200	1.173924				
Benz(a)anthracene	50	1.114758	100	1.138049	150	1.17855	200	1.164585				
Benzo(a)pyrene	50	1.075684	100	1.139758	150	1.184476	200	1.173834				
Benzo(b)fluoranthene	50	1.179914	100	1.201659	150	1.261135	200	1.2567				
Benzo(k)fluoranthene	50	1.194218	100	1.241463	150	1.291927	200	1.291015				
Benzo(b+k)fluoranthene(s)	100	1.190974	200	1.22481	300	1.278874	400	1.276175				
Carbazole	50	1.076175	100	1.085179	150	1.126172	200	1.100569				
Dibenzofuran	50	2.051315	100	2.107993	150	2.162882	200	2.087682				
Benzo(g,h,i)perylene	50	1.161312	100	1.191226	150	1.207128	200	1.194269				
Chrysene	50	1.080277	100	1.112452	150	1.121047	200	1.114547				
Dibenz(a,h)anthracene	50	1.20965	100	1.25015	150	1.259561	200	1.241658				
Acenaphthylene-d8 (Surr)	50	1.786552	100	1.823671	150	1.868231	200	1.866858				
Benzo(a)pyrene-d12 (Surr)	50	0.845845	100	0.9084021	150	0.9437987	200	0.9411671				
Fluoranthene	50	1.22002	100	1.246797	150	1.275586	200	1.266187				
Fluorene	50	1.825339	100	1.868812	150	1.937909	200	1.861517				
Indeno(1,2,3-cd)pyrene	50	1.150167	100	1.165178	150	1.191326	200	1.174769				
1-Methylnaphthalene	50	0.8367006	100	0.8514005	150	0.8428837	200	0.8915204				
2-Methylnaphthalene	50	0.8699424	100	0.8875959	150	0.8852018	200	0.9278611				
Naphthalene	50	1.097759	100	1.107663	150	1.129502	200	1.10685				
Phenanthrene	50	1.156864	100	1.177038	150	1.20962	200	1.207623				
Pyrene	50	1.284128	100	1.314648	150	1.326137	200	1.306272				

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contac
Instrument ID:	SV-GCMS8	Calibration:	A9G0205
Lab File ID:	H06011922.D		
Sequence:	9G01051	Inject Date:	07/01/19
Lab Sample ID:	9G01051-ICV1	Inject Time:	20:29

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	50.0	46.1	-7.7	70 - 130
Acenaphthylene	50.0	52.1	4.1	70 - 130
Anthracene	50.0	51.6	3.2	70 - 130
Benz(a)anthracene	50.0	53.7	7.4	70 - 130
Benzo(a)pyrene	50.0	58.6	17.2	70 - 130
Benzo(b)fluoranthene	50.0	56.3	12.6	70 - 130
Benzo(k)fluoranthene	50.0	57.7	15.3	70 - 130
Carbazole	50.0	50.1	0.2	70 - 130
Dibenzofuran	50.0	47.4	-5.2	70 - 130
Benzo(g,h,i)perylene	50.0	50.1	0.3	70 - 130
Chrysene	50.0	51.8	3.6	70 - 130
Dibenz(a,h)anthracene	50.0	46.8	-6.4	70 - 130
Acenaphthylene-d8 (Surr)	50.0	50.3	0.6	0 - 200
Benzo(a)pyrene-d12 (Surr)	50.0	55.2	10.4	0 - 200
Fluoranthene	50.0	50.9	1.8	70 - 130
Fluorene	50.0	48.8	-2.4	70 - 130
Indeno(1,2,3-cd)pyrene	50.0	43.9	-12.2	70 - 130
1-Methylnaphthalene	50.0	50.6	1.2	70 - 130
2-Methylnaphthalene	50.0	49.0	-2.0	70 - 130
Naphthalene	50.0	46.5	-7.0	70 - 130
Phenanthrene	50.0	47.6	-4.8	70 - 130
Pyrene	50.0	49.1	-1.9	70 - 130

CONTINUING CALIBRATION CHECK

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Instrument ID:	SV-GCMS8	Calibration:	A9G0205
Lab File ID:	H11011903.D	Calibration Date:	07/02/19 10:26
Sequence:	9K01025	Injection Date:	11/01/19
Lab Sample ID:	9K01025-CCV1	Injection Time:	11:04

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	50.0	47.4		1.482551	1.405058	-5.2	20
Acenaphthylene	Ave	50.0	51.5		1.987626	2.046974	3.0	20
Anthracene	Ave	50.0	51.2		1.065167	1.09149	2.5	20
Benz(a)anthracene	XXX	50.0	52.4	4.8				20
Benzo(a)pyrene	XXX	50.0	54.2	8.4				20
Benzo(b)fluoranthene	XXX	50.0	52.4	4.7				20
Benzo(k)fluoranthene	XXX	50.0	53.7	7.3				20
Carbazole	Ave	50.0	48.4		1.033017	1.000858	-3.1	20
Dibenzofuran	Ave	50.0	46.4		2.118276	1.967633	-7.1	20
Benzo(g,h,i)perylene	Ave	50.0	53.4		1.048624	1.120863	6.9	20
Chrysene	Ave	50.0	48.1		1.107706	1.065913	-3.8	20
Dibenz(a,h)anthracene	Ave	50.0	52.1		1.179609	1.22829	4.1	20
Fluoranthene	Ave	50.0	49.5		1.193601	1.180955	-1.1	20
Fluorene	Ave	50.0	47.2		1.835019	1.733525	-5.5	20
Indeno(1,2,3-cd)pyrene	Ave	50.0	48.6		1.183314	1.151292	-2.7	20
1-Methylnaphthalene	Ave	50.0	51.5		0.8482177	0.8732933	3.0	20
2-Methylnaphthalene	Ave	50.0	48.6		0.8960954	0.8705225	-2.9	20
Naphthalene	Ave	50.0	46.6		1.160382	1.082207	-6.7	20
Phenanthrene	Ave	50.0	47.2		1.199406	1.13257	-5.6	20
Pyrene	Ave	50.0	48.6		1.294321	1.257795	-2.8	20

** Quadratic Curve fit may be weighted (1/a or 1/a2).

* = Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9G01051	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9G01051-ICV1)			Lab File ID: H06011922.D		Analyzed: 07/01/19 20:29			
Acenaphthylene-d8 (Surr)	50.0	101	0 - 200	8.477	8.477125	-0.0001	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	50.0	110	0 - 200	16.33	16.33189	-0.0019	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01025	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9K01025-CCV1)			Lab File ID: H11011903.D		Analyzed: 11/01/19 11:04			
Acenaphthylene-d8 (Surr)	50.0	99	0 - 200	8.411	8.477125	-0.0661	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	50.0	110	0 - 200	16.178	16.33189	-0.1539	+/-1.0	
Calibration Blank (9K01025-CCB1)			Lab File ID: H11011904.D		Analyzed: 11/01/19 11:36			
Acenaphthylene-d8 (Surr)			80 - 120	8.416	8.477125	-0.0611	+/-1.0	
Benzo(a)pyrene-d12 (Surr)			80 - 143	0	16.33189	-16.3319	+/-1.0	
Blank (9110387-BLK2)			Lab File ID: H11011907.D		Analyzed: 11/01/19 15:20			
Acenaphthylene-d8 (Surr)	4.00	103	80 - 120	8.411	8.477125	-0.0661	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	4.00	106	80 - 143	16.182	16.33189	-0.1499	+/-1.0	
LCS (9110387-BS1)			Lab File ID: H11011908.D		Analyzed: 11/01/19 15:52			
Acenaphthylene-d8 (Surr)	4.00	104	80 - 120	8.411	8.477125	-0.0661	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	4.00	109	80 - 143	16.187	16.33189	-0.1449	+/-1.0	
LCS Dup (9110387-BSD1)			Lab File ID: H11011909.D		Analyzed: 11/01/19 16:24			
Acenaphthylene-d8 (Surr)	4.00	103	80 - 120	8.411	8.477125	-0.0661	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	4.00	109	80 - 143	16.187	16.33189	-0.1449	+/-1.0	
PDI-028PW-9-11-191030 (A9J1114-02RE1)			Lab File ID: H11011915.D		Analyzed: 11/01/19 19:36			
Acenaphthylene-d8 (Surr)	4.21	131	80 - 120	8.415	8.477125	-0.0621	+/-1.0	*
Benzo(a)pyrene-d12 (Surr)	4.21	160	80 - 143	16.182	16.33189	-0.1499	+/-1.0	*
PDI-038PW-9-11-191030 (A9J1114-04RE1)			Lab File ID: H11011916.D		Analyzed: 11/01/19 20:08			
Acenaphthylene-d8 (Surr)	4.23	127	80 - 120	8.415	8.477125	-0.0621	+/-1.0	*
Benzo(a)pyrene-d12 (Surr)	4.23	139	80 - 143	16.182	16.33189	-0.1499	+/-1.0	
PDI-059PW-10-12-191030 (A9J1114-07RE1)			Lab File ID: H11011917.D		Analyzed: 11/01/19 20:40			
Acenaphthylene-d8 (Surr)	4.17	109	80 - 120	8.415	8.477125	-0.0621	+/-1.0	
Benzo(a)pyrene-d12 (Surr)	4.17	126	80 - 143	16.182	16.33189	-0.1499	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01025	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9K01025-CCV1)			Lab File ID: H11011903.D			Analyzed: 11/01/19 11:04			
2-Fluorobiphenyl (ISTD)	130799	7.954				50 - 200	7.9540	+/-0.50	*
p-Terphenyl-d14 (ISTD)	223432	11.387				50 - 200	11.3870	+/-0.50	*
Naphthalene-d8 (ISTD)	119820	7.039	222732	7.101	54	10 - 500	-0.0620	+/-0.50	
Acenaphthene-d10 (ISTD)	102141	8.549	177842	8.615	57	10 - 500	-0.0660	+/-0.50	
Phenanthrene-d10 (ISTD)	236517	9.849	449650	9.915	53	10 - 500	-0.0660	+/-0.50	
Chrysene-d12 (ISTD)	232989	13.125	443314	13.263	53	10 - 500	-0.1380	+/-0.50	
Perylene-d12 (ISTD)	220662	16.368	394032	16.525	56	10 - 500	-0.1570	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	203097	18.687	345981	18.839	59	10 - 500	-0.1520	+/-0.50	
Calibration Blank (9K01025-CCB1)			Lab File ID: H11011904.D			Analyzed: 11/01/19 11:36			
2-Fluorobiphenyl (ISTD)	129484	7.954	130799	7.954	99	50 - 200	0.0000	+/-0.50	
p-Terphenyl-d14 (ISTD)	200132	11.387	223432	11.387	90	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	108035	7.039	119820	7.039	90	10 - 500	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	88546	8.549	102141	8.549	87	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	197253	9.849	236517	9.849	83	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	167963	13.125	232989	13.125	72	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	145787	16.368	220662	16.368	66	10 - 500	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	111867	18.687	203097	18.687	55	10 - 500	0.0000	+/-0.50	
Blank (9110387-BLK2)			Lab File ID: H11011907.D			Analyzed: 11/01/19 15:20			
2-Fluorobiphenyl (ISTD)	114000	7.953	130799	7.954	87	50 - 200	-0.0010	+/-0.50	
p-Terphenyl-d14 (ISTD)	222855	11.392	223432	11.387	100	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	120412	7.039	119820	7.039	100	10 - 500	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	103427	8.549	102141	8.549	101	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	271208	9.849	236517	9.849	115	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	269896	13.125	232989	13.125	116	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	260445	16.373	220662	16.368	118	10 - 500	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	224436	18.687	203097	18.687	111	10 - 500	0.0000	+/-0.50	
LCS (9110387-BS1)			Lab File ID: H11011908.D			Analyzed: 11/01/19 15:52			
2-Fluorobiphenyl (ISTD)	162438	7.954	130799	7.954	124	50 - 200	0.0000	+/-0.50	
p-Terphenyl-d14 (ISTD)	230183	11.387	223432	11.387	103	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	196206	7.039	119820	7.039	164	10 - 500	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	137197	8.549	102141	8.549	134	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	280806	9.849	236517	9.849	119	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	295660	13.125	232989	13.125	127	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	279845	16.373	220662	16.368	127	10 - 500	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	229532	18.687	203097	18.687	113	10 - 500	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D LVI

Laboratory:	Apex Laboratories	SDG:	Gasco_PreRD_DG 2019
Client:	Anchor QEA, LLC	Project:	Gasco_PreRD_DG 2019 - 5c. PW in Contact with NA
Sequence:	9K01025	Instrument:	SV-GCMS8
Matrix:	Water	Calibration:	A9G0205

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (9110387-BSD1)			Lab File ID: H11011909.D			Analyzed: 11/01/19 16:24			
2-Fluorobiphenyl (ISTD)	155059	7.954	130799	7.954	119	50 - 200	0.0000	+/-0.50	
p-Terphenyl-d14 (ISTD)	246153	11.387	223432	11.387	110	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	169648	7.034	119820	7.039	142	10 - 500	-0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	128600	8.549	102141	8.549	126	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	284664	9.849	236517	9.849	120	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	298042	13.125	232989	13.125	128	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	279387	16.373	220662	16.368	127	10 - 500	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	233831	18.687	203097	18.687	115	10 - 500	0.0000	+/-0.50	
PDI-028PW-9-11-191030 (A9J1114-02RE1)			Lab File ID: H11011915.D			Analyzed: 11/01/19 19:36			
2-Fluorobiphenyl (ISTD)	160548	7.954	130799	7.954	123	50 - 200	0.0000	+/-0.50	
p-Terphenyl-d14 (ISTD)	268500	11.387	223432	11.387	120	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	129724	7.039	119820	7.039	108	10 - 500	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	126422	8.549	102141	8.549	124	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	286732	9.849	236517	9.849	121	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	237098	13.125	232989	13.125	102	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	207477	16.373	220662	16.368	94	10 - 500	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	177486	18.692	203097	18.687	87	10 - 500	0.0050	+/-0.50	
PDI-038PW-9-11-191030 (A9J1114-04RE1)			Lab File ID: H11011916.D			Analyzed: 11/01/19 20:08			
2-Fluorobiphenyl (ISTD)	171775	7.954	130799	7.954	131	50 - 200	0.0000	+/-0.50	
p-Terphenyl-d14 (ISTD)	244565	11.392	223432	11.387	109	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	142927	7.039	119820	7.039	119	10 - 500	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	129248	8.549	102141	8.549	127	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	272758	9.849	236517	9.849	115	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	224066	13.125	232989	13.125	96	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	199434	16.373	220662	16.368	90	10 - 500	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	173283	18.692	203097	18.687	85	10 - 500	0.0050	+/-0.50	
PDI-059PW-10-12-191030 (A9J1114-07RE1)			Lab File ID: H11011917.D			Analyzed: 11/01/19 20:40			
2-Fluorobiphenyl (ISTD)	181564	7.953	130799	7.954	139	50 - 200	-0.0010	+/-0.50	
p-Terphenyl-d14 (ISTD)	245695	11.387	223432	11.387	110	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	153970	7.034	119820	7.039	129	10 - 500	-0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	129606	8.549	102141	8.549	127	10 - 500	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	262788	9.849	236517	9.849	111	10 - 500	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	216648	13.125	232989	13.125	93	10 - 500	0.0000	+/-0.50	
Perylene-d12 (ISTD)	182983	16.368	220662	16.368	83	10 - 500	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	154516	18.687	203097	18.687	76	10 - 500	0.0000	+/-0.50	

HOLDING TIME SUMMARY

EPA 8270D LVI

Laboratory: Apex Laboratories

SDG: Gasco_PreRD_DG 2019

Client: Anchor QEA, LLC

Project: Gasco_PreRD_DG 2019 - 5c. PW in Contact with N

Sample Name	Date Collected	Date Received	Date Prepared	Days to Prep	Max Days to Prep	Date Analyzed	Days to Analysis	Max Days to Analysis	Q
PDI-028PW-9-11-191030	10/30/19 14:11	10/31/19 07:35	11/01/19 12:28	1.93	7.00	11/01/19 19:36	0.30	40.00	
PDI-038PW-9-11-191030	10/30/19 15:34	10/31/19 07:35	11/01/19 12:28	1.87	7.00	11/01/19 20:08	0.32	40.00	
PDI-059PW-10-12-191030	10/30/19 10:18	10/31/19 07:35	11/01/19 12:28	2.09	7.00	11/01/19 20:40	0.34	40.00	

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Raw Data

APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 5035A/8260C
Benchsheet & Analysis Sequence Data

Batch 9110370
Sequence 9K01026 (A9J1114-03,05)

PREPARATION BENCH SHEET

BATCH #: 9110370 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9110370-BLK1		QC	11/01/19 11:04	5	5							
9110370-BS1		QC	11/01/19 11:04	5	5	A19J352		5				
9110370-BS2		QC	11/01/19 11:04	5	5	A19J354		5				
A9J1079-01RE1	C	8260C Full List	11/01/19 12:15	5	5					DP-1	1X RR1	<2
A9J1079-01RE1	C	NWTPH-Gx	11/01/19 12:15	5	5					DP-1	1X RR1	<2
A9J1079-02RE1	B	8260C Full List	11/01/19 12:15	5	5					DP-2	1X RR1	<2
A9J1079-02RE1	B	NWTPH-Gx	11/01/19 12:15	5	5					DP-2	1X RR1	<2
A9J1079-03RE1	B	8260C Full List	11/01/19 12:15	5	5					DP-3	1X RR1	<2
A9J1079-03RE1	B	NWTPH-Gx	11/01/19 12:15	5	5					DP-3	1X RR1	<2
A9J1079-04RE1	B	8260C Full List	11/01/19 12:15	5	5					DP-4	1X RR1	<2
A9J1079-04RE1	B	NWTPH-Gx	11/01/19 12:15	5	5					DP-4	1X RR1	<2
A9J1093-06RE1	B	8260C RBDM List	11/01/19 12:15	5	5					B17-W	1X RR1	<2
A9J1093-06RE1	B	NWTPH-Gx	11/01/19 12:15	5	5					B17-W	1X RR1	<2
A9J1110-10	A	8260C Full List	11/01/19 12:15	5	5					GW-DUP-4-1019	custom	<2
A9J1110-15	A	8260C Full List	11/01/19 12:15	5	5					Trip Blank #2176	custom	<2
A9J1114-03	A	8260C Full List	11/01/19 12:15	5	5					PDI-037PW-04-06-191028	All Compounds. SIM if VC ND - D	<2
A9J1114-03	A	8260C RBDM List	11/01/19 12:15	5	5					PDI-037PW-04-06-191028	Added for BatchQC in: 9110370	<2
A9J1114-03	A	8260C Halo Short	11/01/19 12:15	5	5					PDI-037PW-04-06-191028	Added for BatchQC in: 9110370	<2
A9J1114-03	A	NWTPH-Gx	11/01/19 12:15	5	5					PDI-037PW-04-06-191028	Added for BatchQC in: 9110370	<2
9110370-DUP1		QC	11/01/19 12:15	5	5		A9J1114-03					<2
A9J1114-05	A	8260C Full List	11/01/19 12:15	5	5					PDI-045PW-04-06-191029	All Compounds. SIM if VC ND - D	<2
A9J1115-01	A	8260C Full List	11/01/19 12:15	5	5					JN-103019-MW-6R		<2

11/04/19

Prepared By: Date

11/4/19

Reviewed By: Date

PREPARATION BENCH SHEET

BATCH #: 9110370 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9J1115-02	A	8260C Full List	11/01/19 12:15	5	5					JN-103019-MW-13		<2
A9J1115-06	A	8260C Full List	11/01/19 12:15	5	5					Trip Blank		<2
A9J1116-01	A	8260C Full List	11/01/19 12:15	5	5					BHSWF-103019-MW-10		<2
A9J1116-02	A	8260C Full List	11/01/19 12:15	5	5					BHSWF-103019-MW-3		<2
A9J1116-02	A	8260C RBDM List	11/01/19 12:15	5	5					BHSWF-103019-MW-3	Added for BatchQC in: 9110370	<2
A9J1116-02	A	8260C Halo Short	11/01/19 12:15	5	5					BHSWF-103019-MW-3	Added for BatchQC in: 9110370	<2
A9J1116-02	A	NWTPH-Gx	11/01/19 12:15	5	5					BHSWF-103019-MW-3	Added for BatchQC in: 9110370	<2
9110370-MS1		QC	11/01/19 12:15	5	5	A19J352	A9J1116-02	5				<2
A9J1132-01	A	8260C Halo Short	11/01/19 12:15	5	5					MPW-2-102919-Z-1	PCE, TCE, c/t 1-2 DCE, VC only,	<2
A9J1132-02	A	8260C Halo Short	11/01/19 12:15	5	5					MPW-2-102919-Z-3	PCE, TCE, c/t 1-2 DCE, VC only,	<2
A9J1132-03	A	8260C Halo Short	11/01/19 12:15	5	5					MPW-2-102919-Z-5	PCE, TCE, c/t 1-2 DCE, VC only,	<2

*pH <2 verified 11/04/19

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description

Analyte Spike(s)

Std ID	Exp. Date	Description
A19J352	11/09/19	8260 Cal. Std. B VOCR+OXY Spike (20-40ug/r
A19J354	04/21/20	Prim NWTPH-Gx Spike (500 ug/mL)

Surrogate(s)

Std ID	Exp. Date	Description

GCMS9

Prepared By: Date

Reviewed By: 11/4/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9K01026	Instrument:	VOA-GCMS9
Date:	11/01/19 10:07	Calibration:	A9J2503

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9K01026-IBL1	Water	QC	QC			A19I040	
2	9K01026-TUN1	Water	QC	QC			A19I040	
3	9K01026-CCV1	Water	QC	QC			A19I040	
4	9110370-BS1	Water	QC	QC		9110370	A19I040	
5	9K01026-CCV2	Water	QC	QC			A19I040	
6	9110370-BS2	Water	QC	QC		9110370	A19I040	
7	9110370-BLK1	Water	QC	QC		9110370	A19I040	
8	A9J1093-06RE1	Water	8260C RBDM List		11/05/19	9110370	A19I040	
"	"	Water	NWTPH-Gx	"	11/05/19	9110370	A19I040	
9	A9J1079-01RE1	Water	8260C Full List		11/12/19	9110370	A19I040	
"	"	Water	NWTPH-Gx	"	11/06/19	9110370	A19I040	
10	A9J1079-02RE1	Water	8260C Full List		11/12/19	9110370	A19I040	
"	"	Water	NWTPH-Gx	"	11/06/19	9110370	A19I040	
11	A9J1079-03RE1	Water	8260C Full List		11/12/19	9110370	A19I040	
"	"	Water	NWTPH-Gx	"	11/06/19	9110370	A19I040	
12	A9J1079-04RE1	Water	8260C Full List		11/12/19	9110370	A19I040	
"	"	Water	NWTPH-Gx	"	11/06/19	9110370	A19I040	
13	A9J1114-03	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110370	A19I040	
"	"	Water	8260C RBDM List	(QC Source)		9110370	A19I040	
"	"	Water	8260C Halo Short	(QC Source)		9110370	A19I040	
"	"	Water	NWTPH-Gx	(QC Source)		9110370	A19I040	
14	9110370-DUP1	Water	QC	QC		9110370	A19I040	
15	9K01026-IBL2	Water	QC	QC			A19I040	
16	A9J1110-15	Water	8260C Full List		11/13/19	9110370	A19I040	
17	A9J1110-10	Water	8260C Full List		11/13/19	9110370	A19I040	
18	A9J1132-01	Water	8260C Halo Short		11/13/19	9110370	A19I040	
19	A9J1132-02	Water	8260C Halo Short		11/13/19	9110370	A19I040	
20	A9J1132-03	Water	8260C Halo Short		11/13/19	9110370	A19I040	
21	A9J1114-05	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110370	A19I040	
22	9K01026-IBL3	Water	QC	QC			A19I040	
23	A9J1115-06	Water	8260C Full List		11/13/19	9110370	A19I040	
24	A9J1115-01	Water	8260C Full List		11/13/19	9110370	A19I040	
25	A9J1115-02	Water	8260C Full List		11/13/19	9110370	A19I040	
26	A9J1116-01	Water	8260C Full List		11/13/19	9110370	A19I040	
27	A9J1116-02	Water	8260C Full List		11/13/19	9110370	A19I040	
"	"	Water	8260C RBDM List	(QC Source)		9110370	A19I040	
"	"	Water	8260C Halo Short	(QC Source)		9110370	A19I040	
"	"	Water	NWTPH-Gx	(QC Source)		9110370	A19I040	
28	9110370-MS1	Water	QC	QC		9110370	A19I040	
29	9K01026-IBL4	Water	QC	QC			A19I040	
30	9K01026-IBL5	Water	QC	QC			A19I040	
31	9K01026-IBL6	Water	QC	QC			A19I040	
32	A9J0203-01	Water	8260C Full List		10/18/19	9110372	A19I040	
33	A9J0203-02	Water	8260C Full List		10/18/19	9110372	A19I040	
34	A9J0203-07	Water	8260C Full List		10/18/19	9110372	A19I040	

Data Entered By: 11/04/19 kl

Data Reviewed By: 11/4/19

Comments: DCM → MRL 1 MRL1 to 2.5ppb/5ppb.
AJF1132 — PCE/TCE/cis-12DCE/VC
VC → 0.2ppb.

Title: **LOQ study for EPA 8260C, Water**

Analysis:	EPA 8260C	**Extraction:**	EPA 5030B
Analyst:	TNL	**Extractionist:**	tnl
Analyzed On:	03/15/19 10:51	**Extracted On:**	03/15/19 08:58
Instrument:	VOA-GCMS9	**Batch(s):**	0801, 9070561, 90711
Sequence:	9C15010	**Matrix:**	Water
Section:	Volatiles	**Initial Amount:**	5
		Initial Units:	mL
Study Type:	LOQ	**Final Amount:**	5
Document ID:	LOQ19V043	**Final Units:**	mL
Study Comments:			
Reviewed by:		**Date:**	

MDL

Analyte *(italic indicates quadratic curve)*	Validated LOQ (ug/L)	Analyte Qualifier/ comment
1,1-Dichloroethane	.2	
1,1-Dichloroethene	.2	
1,1-Dichloropropene	.4	
1,1,1-Trichloroethane	.4	
1,1,1,2-Tetrachloroethane	1	PASSES 0.4PPB 59%RECOVERY
1,1,2-Trichloro-1,2,2-trifluoroethan	1	
1,1,2-Trichloroethane	.2	
1,1,2,2-Tetrachloroethane	.2	
1,2-Dibromo-3-chloropropane	5	
1,2-Dibromoethane (EDB)	.4	
1,2-Dichlorobenzene	.2	
1,2-Dichloroethane (EDC)	.4	
1,2-Dichloropropane	.4	
1,2,3-Trichlorobenzene	.4	
1,2,3-Trichloropropane	.4	
1,2,4-Trichlorobenzene	.4	
1,2,4-Trimethylbenzene	.2	
1,3-Dichlorobenzene	.2	
1,3-Dichloropropane	.4	
1,3,5-Trimethylbenzene	.2	
1,4-Dichlorobenzene	.2	
2-Butanone (MEK)	2	
2-Chloroethyl vinyl ether	1	
2-Chlorotoluene	.4	
2-Hexanone	.8	
2,2-Dichloropropane	1	
4-Chlorotoluene	.2	
4-Isopropyltoluene	.2	
4-Methyl-2-pentanone (MiBK)	.8	
Acetone	4	
Acrolein	2	
Acrylonitrile	1	

VC @ 0.2ppb
10/04/19 bm

Benzene	.2	
Bromobenzene	.2	
Bromochloromethane	.4	
Bromodichloromethane	.4	
Bromoform	1	
Bromomethane	1	
Carbon disulfide	.4	
Carbon tetrachloride	.4	
Chlorobenzene	.2	
Chloroethane	2	
Chloroform	.2	
Chloromethane	.4	
cis-1,2-Dichloroethene	.2	
cis-1,3-Dichloropropene	.4	
Dibromochloromethane	1	
Dibromomethane	.4	
Dichlorodifluoromethane	.4	
Diisopropyl ether (DIPE)	.25	0.5 MDL = 0.096333349
Ethanol	62.5	125 MDL = 13.3008828262
Ethyl-tert-butyl ether (ETBE)	.25	
Ethylbenzene	.2	
Hexachlorobutadiene	1	
Iodomethane	5	
Isobutyl alcohol	50	
Isopropylbenzene	.2	
m,p-Xylene	.4	
Methyl tert-butyl ether (MTBE)	.2	
Methylene chloride	.4	
n-Butylbenzene	.2	
n-Hexane	2	
n-Propylbenzene	.2	
Naphthalene	1	
o-Xylene	.2	
sec-Butylbenzene	.2	
Styrene	.2	
tert-Amyl methyl ether (TAME)	.25	0.5 MDL = 0.0629975021
tert-Butanol (TBA)	12.5	125 MDL = 21.5287968397
tert-Butylbenzene	.2	
Tetrachloroethene (PCE)	.4	
Tetrahydrofuran	2	
Toluene	.2	
trans-1,2-Dichloroethene	.2	
trans-1,3-Dichloropropene	5	
trans-1,4-Dichloro-2-butene	1	
Trichloroethene (TCE)	.4	
Trichlorofluoromethane	.4	
Vinyl acetate	No spikes met criteria	NR
Vinyl chloride	.2	

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019
Response Via : Initial Calibration

Calibration Files
0.1 =VI19102417.D 0.2 =VI19102418.D 0.5 =VI19102419.D 1 =VI19102420.D 2 =VI19102421.D 5 =VI19102422.D
10 =VI19102423.D 20 =VI19102424.D 50 =VI19102425.D 100 =VI19102427.D 200 =VI19102429.D

		Compound	0.1	0.2	0.5	1	2	5	10	20	50	100	200	Avg	%RSD
1)	I	Pentafluorobenzene...	----------	ISTD	----------										
2)		Dichlorodifluo...			0.627	0.682	0.842	0.812	0.770	0.800	0.946	0.947	0.929	0.817	13.92
3)	P	Chloromethane		1.457	1.268	1.037	1.070	1.024	0.954	1.002	1.029	1.012	0.984	1.084	14.45
4)	C	Vinyl Chloride		0.884	1.079	1.013	1.135	1.140	1.069	1.110	1.150	1.154	1.123	1.086	7.67
5)		Bromomethane				0.760	0.709	0.701	0.624	0.614	0.579	0.559	0.576	0.640	11.51
6)		Chloroethane					0.573	0.531	0.502	0.442	0.447			0.499	11.23
7)		Trichlorofluor...			1.069	1.200	1.279	1.282	1.235	1.294	1.259	1.250	1.199	1.230	5.62
8)		Ethanol			0.023	0.024	0.026	0.025	0.024	0.025	0.023	0.023		0.024	5.02
9)	C	1,1-Dichloroet...			1.159	1.067	1.188	1.200	1.158	1.203	1.192	1.279	1.222	1.185	4.83
10)		Carbon Disulfide				1.970	2.202	2.167	2.084	2.200	2.200	2.374	2.300	2.187	5.64
11)		Freon 113				0.740	0.858	0.860	0.834	0.883	0.846	0.912	0.886	0.852	6.07
12)		Iodomethane						0.083	0.133	0.255	0.499	0.685	0.750	0.401	71.16
13)		Acrolein				0.181	0.209	0.222	0.206	0.233	0.247	0.268	0.251	0.227	12.43
14)		Methylene Chlo...	8.716	4.794	2.954	1.697	1.388	1.130	0.965	0.970	0.887	0.934	0.904	2.304	106.11
15)		Acetone					0.510	0.466	0.421	0.438	0.406	0.421	0.404	0.438	8.73
16)		t-1,2-Dichloro...		0.784	1.075	1.145	1.242	1.233	1.164	1.247	1.188	1.276	1.248	1.160	12.54
17)		n-Hexane				0.154	0.160	0.165	0.172	0.185	0.183	0.196	0.198	0.177	9.35
18)		Methyl-tert-bu...			2.577	2.494	2.698	2.694	2.617	2.750	2.707	2.888	2.841	2.696	4.58
19)		tert-Butanol ...	0.170	0.163	0.180	0.179	0.210	0.208	0.199	0.219	0.203	0.205		0.194	9.71
20)		Diisopropyl et...			2.849	2.764	2.983	3.090	2.914	3.102	2.767	2.742		2.901	5.01
21)	P	1,1-Dichloroet...			1.477	1.582	1.631	1.649	1.573	1.671	1.582	1.696	1.641	1.611	4.09
22)		Acrylonitrile				0.377	0.440	0.489	0.484	0.511	0.507	0.547	0.524	0.485	11.08
23)		Ethyl-tert-but...				2.497	2.839	2.908	2.849	2.978	2.730	2.719		2.789	5.66
24)		Vinyl Acetate				1.560	1.772	1.844	1.813	2.005	2.128	2.333	2.113	1.946	12.62
25)		c-1,2-Dichloro...			1.125	1.182	1.256	1.257	1.221	1.298	1.238	1.328	1.288	1.244	4.98
26)		2,2-Dichloropr...			0.952	0.998	1.078	1.062	1.006	1.073	1.061	1.129	1.104	1.051	5.31
27)		Bromochloromet...			0.436	0.512	0.605	0.646	0.636	0.688	0.671	0.677	0.622	0.610	13.73
28)	C	Chloroform		1.278	1.442	1.440	1.642	1.638	1.607	1.696	1.617	1.719	1.673	1.575	8.98
29)		Carbon Tetrach...				0.772	0.903	0.897	0.886	0.977	0.991	1.106	1.133	0.958	12.52
30)		Tetrahydrofuran				0.407	0.461	0.460	0.441	0.474	0.468	0.500	0.477	0.461	5.94
31)		1,1,1-Trichlor...			1.130	1.251	1.340	1.347	1.284	1.379	1.354	1.453	1.430	1.330	7.37
32)	S	Dibromofluorom...	0.960	0.964	0.965	0.962	0.982	0.984	0.967	0.975	1.010	1.016	1.023	0.982	2.38
33)		1,1-Dichloropr...			1.171	1.184	1.292	1.299	1.245	1.313	1.271	1.376	1.341	1.277	5.30
34)		2-Butanone (MEK)				0.625	0.704	0.704	0.662	0.717	0.701	0.741	0.702	0.695	5.12
35)		Benzene	3.949	3.450	3.774	3.582	4.047	3.910	3.714	3.910	3.758	4.022	3.911	3.821	4.86
36)		tert-Amyl meth...			2.590	2.520	2.704	2.683	2.610	2.695	2.456	2.481		2.592	3.80
37)		1,2-Dichloroet...			1.198	1.130	1.292	1.293	1.230	1.306	1.245	1.313	1.256	1.252	4.76
38)		iso-Butyl Alcohol			0.052	0.054	0.072	0.075	0.067	0.074	0.078	0.080	0.074	0.070	14.51
39)	S	1,4-Difluorobe...	3.139	3.132	3.146	3.160	3.134	3.188	3.124	3.158	3.201	3.187	3.180	3.159	0.84
40)		Trichloroethen...		0.810	0.801	0.933	1.033	1.022	0.997	1.053	1.026	1.095	1.074	0.984	10.55
41)		Tert-Amyl-Ethy...				1.637	1.938	1.921	1.876	2.019	1.845	1.866		1.872	6.33

Method Path : C:\msdchem\1\methods\
Method File : VI191025W.M
Title : EPA 8260: Volatile Organic Compounds

42)		Dibromomethane			0.422	0.554	0.622	0.633	0.620	0.656	0.642	0.692	0.677	0.613	13.36
43)	C	1,2-Dichloropr...			0.890	0.838	0.987	0.982	0.932	0.988	0.944	1.024	0.994	0.953	6.18
44)		Bromodichlorom...			0.893	0.973	1.056	1.083	1.065	1.150	1.155	1.260	1.255	1.099	11.01
45)		Chlorobenzene-d5 (I)	----------ISTD----------												
46)		2-Chloroethyl ...				0.222	0.217	0.253	0.251	0.271	0.275	0.292	0.273	0.257	10.27
47)		c-1,3-Dichloro...			0.431	0.429	0.468	0.474	0.487	0.525	0.520	0.559	0.556	0.494	9.88
48)	S	Toluene-d8 (S)	1.321	1.333	1.345	1.321	1.327	1.322	1.327	1.302	1.292	1.274	1.272	1.312	1.83
49)	C	Toluene	1.590	1.439	1.488	1.454	1.499	1.474	1.445	1.492	1.391	1.462	1.439	1.470	3.41
50)		Tetrachloroeth...		0.220	0.334	0.321	0.364	0.361	0.353	0.370	0.352	0.372	0.375	0.342	13.48
51)		4-Methyl-2-Pen...		0.367	0.406	0.406	0.463	0.469	0.464	0.491	0.474	0.484	0.441	0.446	9.09
52)		t-1,3-Dichloro...				0.341	0.378	0.404	0.420	0.465	0.473	0.513	0.513	0.438	14.34
53)		1,1,2-Trichlor...		0.238	0.304	0.313	0.347	0.344	0.342	0.351	0.335	0.347	0.338	0.326	10.62
54)		Dibromochlorom...			0.214	0.217	0.255	0.267	0.275	0.301	0.315			0.264	14.58
55)		1,3-Dichloropr...		0.469	0.532	0.541	0.578	0.584	0.581	0.600	0.571	0.595	0.571	0.562	6.98
56)		1,2-Dibromoeth...			0.261	0.310	0.378	0.375	0.366	0.381	0.366	0.382	0.375	0.355	11.70
57)		2-Hexanone			0.286	0.284	0.319	0.328	0.335	0.356	0.350	0.358	0.327	0.327	8.41
58)	P	Chlorobenzene	0.780	0.862	0.945	0.928	0.982	0.984	0.965	0.985	0.940	0.981	0.971	0.939	6.80
59)	C	Ethylbenzene	1.531	1.514	1.522	1.409	1.608	1.560	1.535	1.591	1.516	1.594	1.580	1.542	3.61
60)		1,1,1,2-Tetrac...			0.200	0.237	0.251	0.266	0.272	0.296	0.296	0.324	0.323	0.274	14.90
61)		m,p-Xylenes (2)	1.112	1.019	1.103	1.029	1.137	1.146	1.135	1.209	1.150	1.230	1.219	1.135	6.12
62)		o-Xylene	0.951	1.008	1.106	1.067	1.142	1.147	1.141	1.216	1.158	1.233	1.214	1.126	7.83
63)		Styrene			0.703	0.785	0.870	0.890	0.911	0.979	0.956	1.026	1.023	0.905	11.93
64)	P	Bromoform				0.128	0.149	0.156	0.171	0.194	0.221	0.255		0.182	24.41
65)		Isopropylbenzene		1.111	1.302	1.233	1.371	1.392	1.385	1.488	1.427	1.528	1.496	1.373	9.37
66)	I	1,4-Dichlorobenzen...	----------ISTD----------												
67)	S	4-Bromofluorob...	0.831	0.838	0.835	0.823	0.825	0.815	0.812	0.798	0.796	0.762	0.751	0.808	3.58
68)		Bromobenzene	0.444	0.800	0.813	0.771	0.830	0.819	0.812	0.825	0.798	0.813	0.800	0.775	14.32
69)		n-Propylbenzene	3.125	3.053	3.294	3.181	3.455	3.384	3.318	3.475	3.358	3.501	3.408	3.323	4.44
70)	P	1,1,2,2-Tetrac...		0.565	0.624	0.651	0.718	0.694	0.673	0.690	0.674	0.651	0.603	0.654	7.07
71)		2-Chlorotoluene			0.668	0.663	0.747	0.716	0.725	0.753	0.719	0.730	0.723	0.716	4.34
72)		1,3,5-Trimethy...	1.990	2.087	2.127	2.152	2.344	2.349	2.342	2.452	2.344	2.400	2.390	2.271	6.72
73)		1,2,3-Trichlor...			0.252	0.308	0.347	0.343	0.341	0.333	0.327	0.319	0.295	0.318	9.47
74)		t-1,4-Dichloro...				0.184	0.235	0.232	0.234	0.239	0.243	0.234	0.219	0.228	8.27
75)		4-Chlorotoluene		1.889	2.024	1.896	2.099	2.132	2.069	2.143	2.056	2.110	2.036	2.045	4.37
76)		tert-Butylbenzene		1.115	1.160	1.233	1.324	1.326	1.287	1.348	1.278	1.320	1.288	1.268	6.05
77)		1,2,4-Trimethy...	1.919	1.974	2.218	2.194	2.324	2.412	2.375	2.491	2.370	2.445	2.405	2.284	8.30
78)		sec-Butylbenzene		2.409	2.779	2.587	2.822	2.837	2.814	2.983	2.858	2.971	2.919	2.798	6.32
79)		4-Isopropyltol...	1.722	1.702	2.078	2.114	2.243	2.339	2.300	2.497	2.392	2.489	2.476	2.214	12.88
80)		1,3-Dichlorobe...		1.165	1.312	1.268	1.382	1.390	1.384	1.422	1.383	1.412	1.382	1.350	5.93
81)		1,4-Dichlorobe...	1.113	1.342	1.454	1.451	1.531	1.440	1.433	1.478	1.406	1.436	1.402	1.408	7.70
82)		n-Butylbenzene	1.357	1.491	1.735	1.735	1.903	2.011	1.994	2.160	2.060	2.129	2.119	1.881	14.34
83)		1,2-Dichlorobe...		1.155	1.193	1.268	1.407	1.372	1.345	1.383	1.337	1.345	1.305	1.311	6.28
84)		1,2-Dibromo-3-...					0.180	0.192	0.209	0.227	0.243	0.250	0.251	0.222	12.86
85)		Hexachlorobuta...				0.154	0.172	0.191	0.183	0.199	0.189	0.190	0.187	0.183	7.66
86)		1,2,4-Trichlor...			0.572	0.637	0.724	0.784	0.775	0.840	0.812	0.823	0.834	0.756	12.49
87)		Naphthalene			1.867	1.856	2.279	2.319	2.423	2.669	2.689	2.755	2.764	2.402	14.83
88)		1,2,3-Trichlor...		0.483	0.638	0.653	0.729	0.733	0.747	0.797	0.779	0.798	0.815	0.717	14.16

(#) = Out of Range

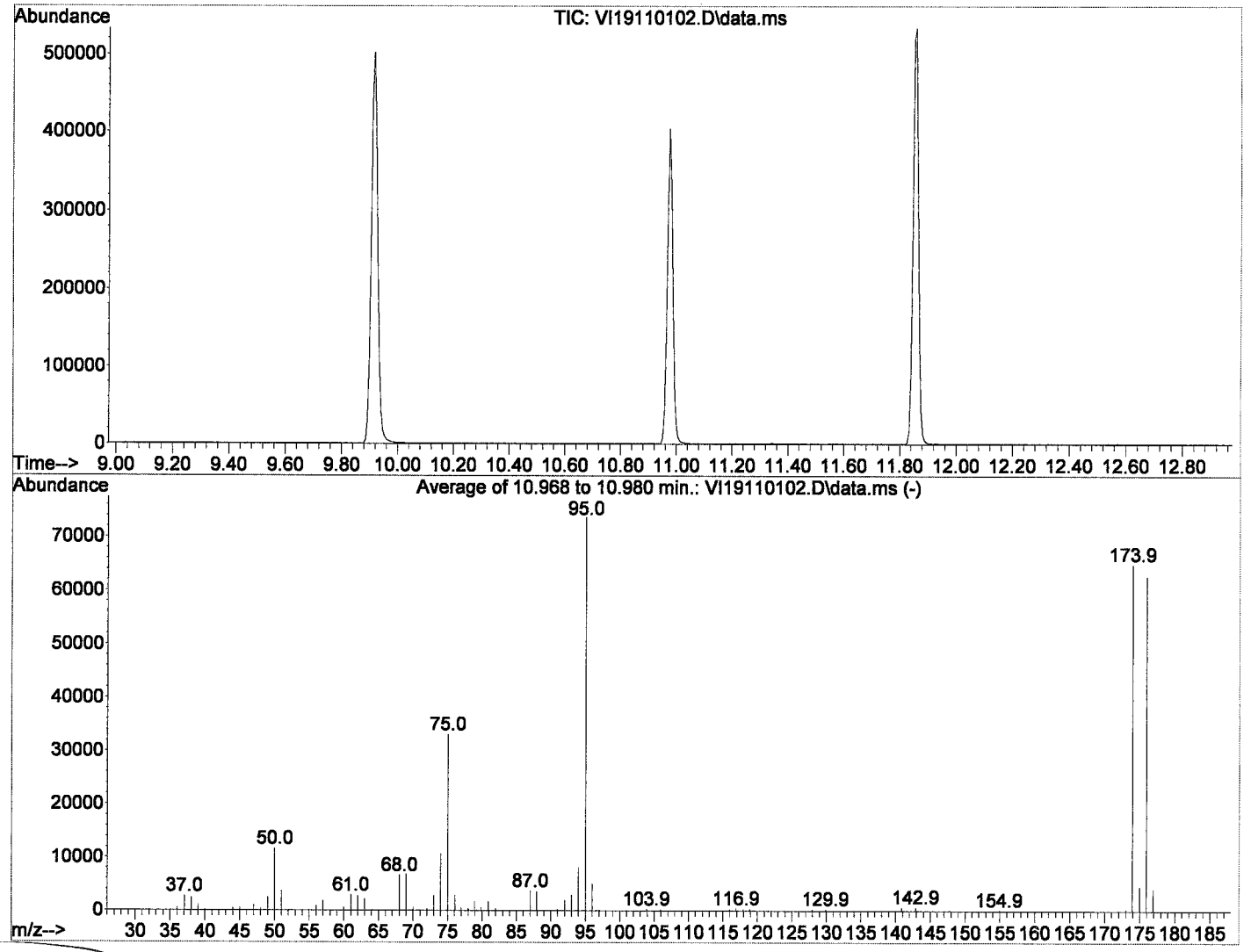
BFB

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110102.D
Acq On : 1 Nov 2019 11:04 am
Operator : tb
Sample : 9K01026-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019

11/1/19



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	113.5	73691	PASS
96	95	5	9	6.8	4998	PASS
173	174	0.00	2	0.4	284	PASS
174	95	50	200	88.1	64925	PASS
175	174	5	9	7.0	4553	PASS
176	174	95	105	96.5	62669	PASS
177	176	5	10	6.6	4116	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110102.D
Acq On : 1 Nov 2019 11:04 am
Operator : tb
Sample : 9K01026-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:44:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/1/19

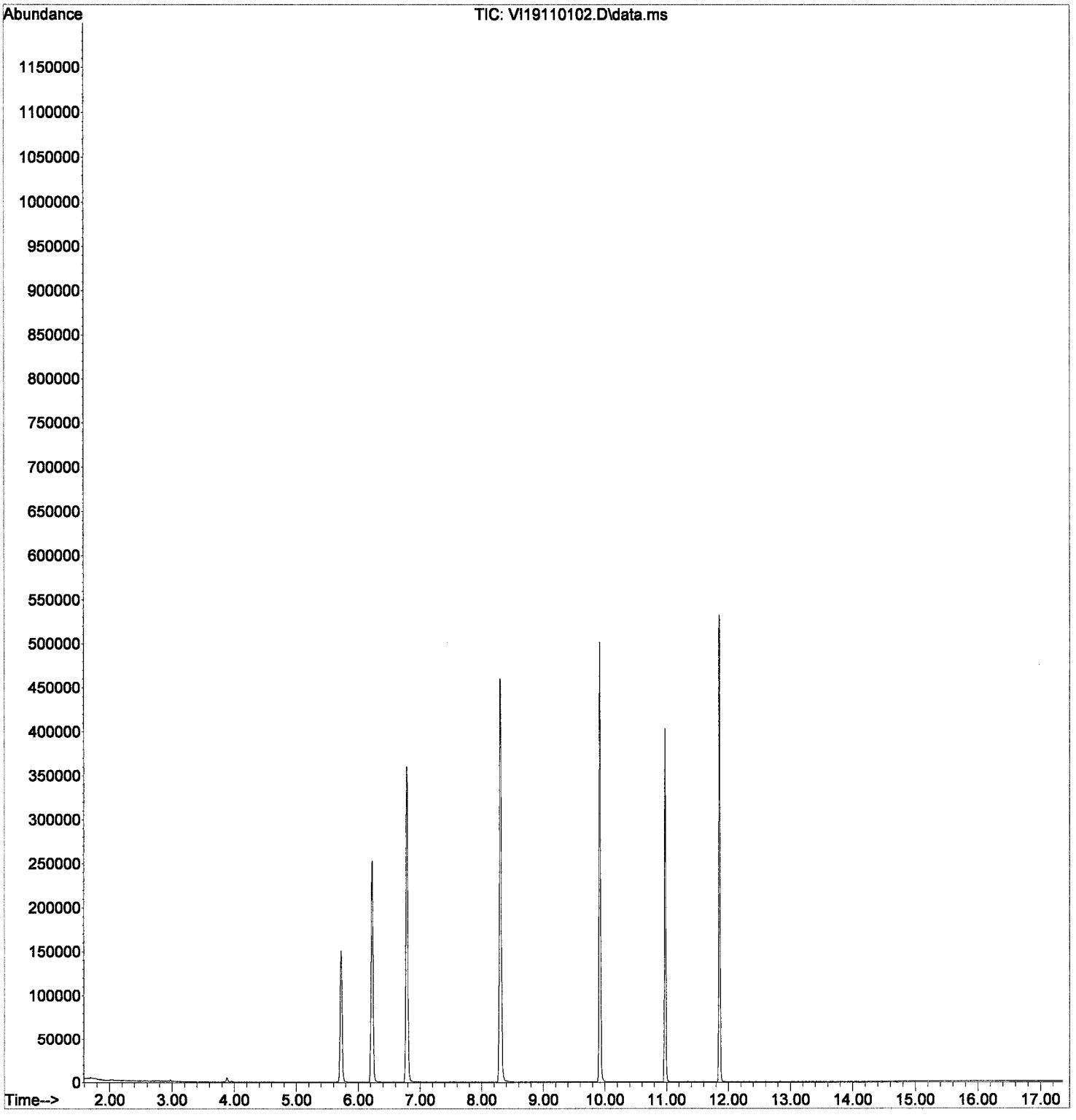
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	99	103992	50.00	ug/L	# 0.01
45) Chlorobenzene-d5 (I)	9.916	117	286738	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	128654	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	105979	51.87	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	347032	52.82	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	386675	51.38	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	105380	50.69	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.904	50	220	0.10	ug/L #	47
6) Chloroethane	2.482	64	453	0.44	ug/L #	36
14) Methylene Chloride	3.881	84	2593	0.50	ug/L #	77
15) Acetone	3.954	43	1061	1.16	ug/L	87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110102.D
Acq On : 1 Nov 2019 11:04 am
Operator : tb
Sample : 9K01026-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:44:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110103.D
Acq On : 1 Nov 2019 11:31 am
Operator : tb
Sample : 9110370-BS1
Misc : 1X 5mL 20/40PPB VOCR A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:04:37 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/1/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	100	0.00	
2		Dichlorodifluoromethane	20.000	19.468	2.7	99	0.01	
3	P	Chloromethane	20.000	17.224	13.9	93	0.00	
4	C	Vinyl Chloride	20.000	19.474	2.6	95	0.00	
5		Bromomethane	20.000	23.612	-18.1	123	0.01	
6		Chloroethane	20.000	16.869	15.7	95	0.01	
7		Trichlorofluoromethane	20.000	20.905	-4.5	99	0.01	
8		Ethanol	1250.000	1055.633	15.5	81	0.00	
9	C	1,1-Dichloroethene	20.000	19.123	4.4	94	0.00	
10		Carbon Disulfide	20.000	18.769	6.2	93	0.01	
11		Freon 113	20.000	20.181	-0.9	97	0.01	
12		Iodomethane	20.000	11.379	43.1#	57	0.01	NR
13		Acrolein	20.000	18.714	6.4	91	0.01	
14		Methylene Chloride	20.000	19.327	3.4	94	0.00	
15		Acetone	40.000	34.800	13.0	87	0.00	
16		t-1,2-Dichloroethene	20.000	19.708	1.5	91	0.01	
17		n-Hexane	20.000	21.126	-5.6	101	0.00	
18		Methyl-tert-butyl-ether	20.000	17.593	12.0	86	0.00	
19		tert-Butanol (TBA)	1250.000	1016.472	18.7	72	0.00	
20		Diisopropyl ether (DIPE)	5.000	4.072	18.6	76	0.00	
21	P	1,1-Dichloroethane	20.000	19.241	3.8	92	0.01	
22		Acrylonitrile	20.000	21.019	-5.1	99	0.00	
23		Ethyl-tert-butyl ether (ET	5.000	3.844	23.1#	72	0.00	NR
24		Vinyl Acetate	20.000	18.166	9.2	88	0.00	
25		c-1,2-Dichloroethene	20.000	19.381	3.1	92	0.00	
26		2,2-Dichloropropane	20.000	17.484	12.6	85	0.00	
27		Bromochloromethane	20.000	22.616	-13.1	100	0.00	
28	C	Chloroform	20.000	19.958	0.2	92	0.00	
29		Carbon Tetrachloride	20.000	20.317	-1.6	99	0.00	
30		Tetrahydrofuran	20.000	18.965	5.2	92	0.00	
31		1,1,1-Trichloroethane	20.000	18.367	8.2	88	0.00	
32	S	Dibromofluoromethane (S)	50.000	51.310	-2.6	103	0.00	
33		1,1-Dichloropropene	20.000	19.131	4.3	93	0.00	
34		2-Butanone (MEK)	40.000	38.721	3.2	93	0.00	
35		Benzene	20.000	19.695	1.5	96	0.00	
36		tert-Amyl methyl ether (TA	5.000	3.828	23.4#	73	0.00	NR
37		1,2-Dichloroethane (EDC)	20.000	18.965	5.2	90	0.00	
38		iso-Butyl Alcohol	500.000	469.252	6.1	88	0.00	
39	S	1,4-Difluorobenzene (S)	50.000	51.531	-3.1	103	0.00	
40		Trichloroethene (TCE)	20.000	20.862	-4.3	97	0.00	
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	3.670	26.6#	68	0.00	NR
42		Dibromomethane	20.000	21.160	-5.8	98	0.00	
43	C	1,2-Dichloropropane	20.000	20.188	-0.9	97	0.00	
44		Bromodichloromethane	20.000	20.697	-3.5	98	0.00	
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	102	0.00	
46		2-Chloroethyl Vinyl Ether	20.000	18.315	8.4	88	0.00	
47		c-1,3-Dichloropropene	20.000	19.303	3.5	92	0.00	
48	S	Toluene-d8 (S)	50.000	50.446	-0.9	103	0.00	
49	C	Toluene	20.000	18.985	5.1	95	0.00	
50		Tetrachloroethene (PCE)	20.000	20.204	-1.0	95	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110103.D
Acq On : 1 Nov 2019 11:31 am
Operator : tb
Sample : 9110370-BS1
Misc : 1X 5mL 20/40PPB VOCR A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:04:37 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
51		4-Methyl-2-Pentanone (MIBK)	40.000	38.955	2.6	90	0.00	
52		t-1,3-Dichloropropene	20.000	18.871	5.6	90	0.00	
53		1,1,2-Trichloroethane	20.000	21.210	-6.1	100	0.00	
54		Dibromochloromethane	20.000	25.270	-26.3#	113	0.00	-Q56
55		1,3-Dichloropropane	20.000	20.061	-0.3	96	0.00	
56		1,2-Dibromoethane (EDB)	20.000	20.110	-0.5	95	0.00	
57		2-Hexanone	40.000	38.007	5.0	89	0.00	
58	P	Chlorobenzene	20.000	20.002	-0.0	97	0.00	
59	C	Ethylbenzene	20.000	19.066	4.7	94	0.00	
60		1,1,1,2-Tetrachloroethane	20.000	21.365	-6.8	100	0.00	
61		m,p-Xylenes (2)	40.000	38.375	4.1	92	0.00	
62		o-Xylene	20.000	18.947	5.3	89	0.00	
63		Styrene	20.000	19.849	0.8	93	0.00	
64	P	Bromoform	20.000	24.671	-23.4#	127	0.00	-Q56
65		Isopropylbenzene	20.000	19.367	3.2	91	0.00	
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	102	0.00	
67	S	4-Bromofluorobenzene (S)	50.000	48.536	2.9	100	0.00	
68		Bromobenzene	20.000	19.877	0.6	95	0.00	
69		n-Propylbenzene	20.000	19.061	4.7	93	0.00	
70	P	1,1,2,2-Tetrachloroethane	20.000	19.856	0.7	96	0.00	
71		2-Chlorotoluene	20.000	18.709	6.5	90	0.00	
72		1,3,5-Trimethylbenzene	20.000	19.342	3.3	91	0.00	
73		1,2,3-Trichloropropane	20.000	19.580	2.1	95	0.00	
74		t-1,4-Dichloro-2-butene	20.000	19.303	3.5	93	0.00	
75		4-Chlorotoluene	20.000	18.789	6.1	91	0.00	
76		tert-Butylbenzene	20.000	18.160	9.2	87	0.00	
77		1,2,4-Trimethylbenzene	20.000	19.700	1.5	92	0.00	
78		sec-Butylbenzene	20.000	19.130	4.4	91	0.00	
79		4-Isopropyltoluene	20.000	19.973	0.1	90	0.00	
80		1,3-Dichlorobenzene	20.000	19.943	0.3	96	0.00	
81		1,4-Dichlorobenzene	20.000	19.520	2.4	95	0.00	
82		n-Butylbenzene	20.000	20.539	-2.7	91	0.00	
83		1,2-Dichlorobenzene	20.000	19.674	1.6	95	0.00	
84		1,2-Dibromo-3-Chloropropane	20.000	19.701	1.5	98	0.00	
85		Hexachlorobutadiene	20.000	18.901	5.5	89	0.00	
86		1,2,4-Trichlorobenzene	20.000	19.330	3.4	88	0.00	
87		Naphthalene	20.000	18.735	6.3	86	0.00	
88		1,2,3-Trichlorobenzene	20.000	19.761	1.2	90	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110103.D
Acq On : 1 Nov 2019 11:31 am
Operator : tb
Sample : 9110370-BS1
Misc : 1X 5mL 20/40PPB VOCR A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:04:37 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/1/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	111917	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.916	117	312123	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	154133	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	112832	51.31	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	364356	51.53	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	413275	50.45	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	120876	48.54	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	35615	19.47	ug/L		97
3) Chloromethane	1.897	50	41785	17.22	ug/L		95
4) Vinyl Chloride	2.001	62	47331	19.47	ug/L		95
5) Bromomethane	2.366	96	33833	23.61	ug/L		96
6) Chloroethane	2.500	64	18844	16.87	ug/L		83
7) Trichlorofluoromethane	2.670	101	57535	20.91	ug/L		97
8) Ethanol	3.236	45	56775	1055.63	ug/L		90
9) 1,1-Dichloroethene	3.236	61	50733	19.12	ug/L		89
10) Carbon Disulfide	3.254	76	91885	18.77	ug/L		99
11) Freon 113	3.291	101	38498	20.18	ug/L		97
12) Iodomethane	3.394	142	6557	11.38	ug/L		91
13) Acrolein	3.625	56	9516	18.71	ug/L		75
14) Methylene Chloride	3.875	84	41196	19.33	ug/L		88
15) Acetone	3.942	43	34130	34.80	ug/L		86
16) t-1,2-Dichloroethene	4.045	61	51175	19.71	ug/L		89
17) n-Hexane	4.124	86	8352	21.13	ug/L	#	92
18) Methyl-tert-butyl-ether	4.167	73	106185	17.59	ug/L		91
19) tert-Butanol (TBA)	4.294	59	440436	1016.47	ug/L		90
20) Diisopropyl ether (DIPE)	4.568	45	26444	4.07	ug/L		93
21) 1,1-Dichloroethane	4.690	63	69393	19.24	ug/L		98
22) Acrylonitrile	4.751	53	22817	21.02	ug/L		95
23) Ethyl-tert-butyl ether...	4.945	59	23994	3.84	ug/L		96
24) Vinyl Acetate	4.957	43	79130	18.17	ug/L		97
25) c-1,2-Dichloroethene	5.243	61	53957	19.38	ug/L		89
26) 2,2-Dichloropropane	5.353	77	41147	17.48	ug/L		89
27) Bromochloromethane	5.450	130	30896	22.62	ug/L		93
28) Chloroform	5.529	83	70369	19.96	ug/L		97
29) Carbon Tetrachloride	5.663	117	43571	20.32	ug/L		97
30) Tetrahydrofuran	5.706	42	19572	18.97	ug/L		88
31) 1,1,1-Trichloroethane	5.736	97	54664	18.37	ug/L		98
33) 1,1-Dichloropropene	5.864	75	54679	19.13	ug/L		96
34) 2-Butanone (MEK)	5.858	43	60204	38.72	ug/L		98
35) Benzene	6.126	78	168434	19.70	ug/L		96
36) tert-Amyl methyl ether...	6.253	73	22210	3.83	ug/L		89
37) 1,2-Dichloroethane (EDC)	6.345	62	53128	18.96	ug/L		93
38) iso-Butyl Alcohol	6.375	43	73095	469.25	ug/L		97
40) Trichloroethene (TCE)	6.746	130	45971	20.86	ug/L		93
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	15376	3.67	ug/L		83
42) Dibromomethane	7.202	93	29042	21.16	ug/L		98
43) 1,2-Dichloropropane	7.312	63	43064	20.19	ug/L		90
44) Bromodichloromethane	7.385	83	50903	20.70	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.024	63	29345	18.32	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	59568	19.30	ug/L		84

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110103.D
Acq On : 1 Nov 2019 11:31 am
Operator : tb
Sample : 9110370-BS1
Misc : 1X 5mL 20/40PPB VOCR A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:04:37 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

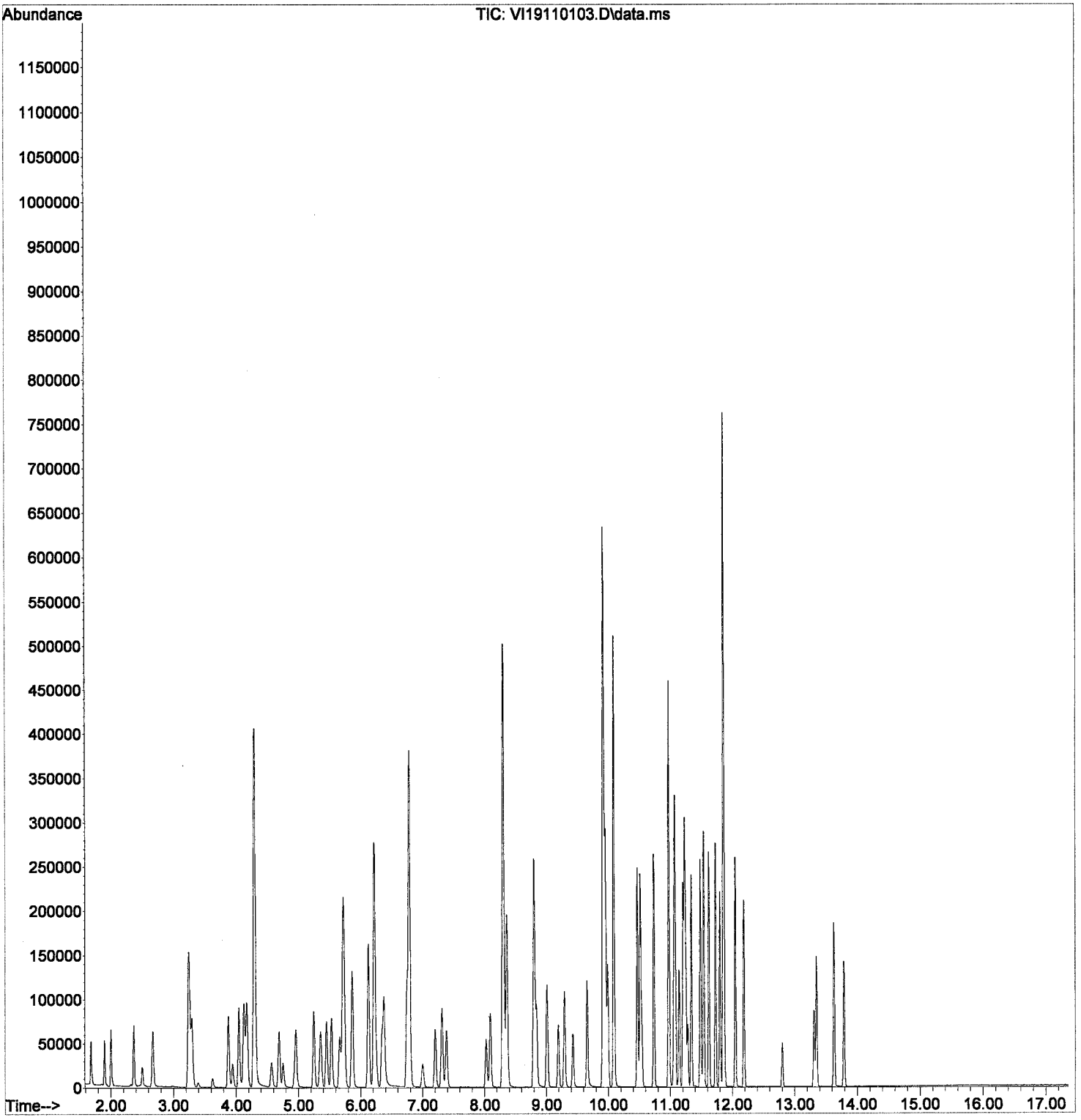
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	174250	18.98	ug/L		99
50) Tetrachloroethene (PCE)	8.796	166	43166	20.20	ug/L		93
51) 4-Methyl-2-Pentanone (...	8.802	43	108546	38.96	ug/L		92
52) t-1,3-Dichloropropene	8.839	75	51653	18.87	ug/L		97
53) 1,1,2-Trichloroethane	9.009	97	43156	21.21	ug/L		91
54) Dibromochloromethane	9.192	129	41567	25.27	ug/L		98
55) 1,3-Dichloropropane	9.289	76	70411	20.06	ug/L		89
56) 1,2-Dibromoethane (EDB)	9.423	107	44550	20.11	ug/L		95
57) 2-Hexanone	9.654	43	77600	38.01	ug/L		89
58) Chlorobenzene	9.928	112	117184	20.00	ug/L		99
59) Ethylbenzene	9.952	91	183522	19.07	ug/L		97
60) 1,1,1,2-Tetrachloroethane	9.989	131	36504	21.37	ug/L		96
61) m,p-Xylenes (2)	10.086	91	272006	38.37	ug/L		99
62) o-Xylene	10.469	91	133142	18.95	ug/L		97
63) Styrene	10.512	104	112113	19.85	ug/L		99
64) Bromoform	10.536	173	30243	24.67	ug/L		94
65) Isopropylbenzene	10.731	105	166039	19.37	ug/L		99
68) Bromobenzene	11.059	156	47483	19.88	ug/L		84
69) n-Propylbenzene	11.078	91	195249	19.06	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.138	85	40045	19.86	ug/L		94
71) 2-Chlorotoluene	11.205	126	41296	18.71	ug/L		97
72) 1,3,5-Trimethylbenzene	11.230	105	135393	19.34	ug/L		96
73) 1,2,3-Trichloropropane	11.248	110	19203	19.58	ug/L		96
74) t-1,4-Dichloro-2-butene	11.278	53	13547	19.30	ug/L	#	71
75) 4-Chlorotoluene	11.339	91	118462	18.79	ug/L		99
76) tert-Butylbenzene	11.485	91	70982	18.16	ug/L		97
77) 1,2,4-Trimethylbenzene	11.540	105	138723	19.70	ug/L		97
78) sec-Butylbenzene	11.619	105	164994	19.13	ug/L		98
79) 4-Isopropyltoluene	11.729	119	136295	19.97	ug/L		97
80) 1,3-Dichlorobenzene	11.795	146	82996	19.94	ug/L		99
81) 1,4-Dichlorobenzene	11.868	146	84715	19.52	ug/L		97
82) n-Butylbenzene	12.045	91	119110	20.54	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	79515	19.67	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	13463	19.70	ug/L		92
85) Hexachlorobutadiene	13.304	223	10674	18.90	ug/L		97
86) 1,2,4-Trichlorobenzene	13.347	180	45024	19.33	ug/L		95
87) Naphthalene	13.627	128	138751	18.74	ug/L		98
88) 1,2,3-Trichlorobenzene	13.785	180	43700	19.76	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110103.D
Acq On : 1 Nov 2019 11:31 am
Operator : tb
Sample : 9110370-BS1
Misc : 1X 5mL 20/40PPB VOCR A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:04:37 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110104.D
Acq On : 1 Nov 2019 11:58 am
Operator : tb
Sample : 9110370-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:16:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	109	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	50.499	-1.0	111	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	48.513	3.0	107	0.00
4	H	NWTPH-Gx (TPH)	500.000	472.408	5.5	104	0.00
5	H	TPHg (C5-C9)	500.000	486.083	2.8	107	0.00
6	H	TPHg (C6-C10)	500.000	488.473	2.3	108	0.00
7	H	CA-LUFT (C5-C12)	500.000	477.004	4.6	106	0.00
8		Benzene (NR)	-1.000	0.000	0.0	111	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	109	0.00
10		Toluene (NR)	-1.000	0.000	0.0	107	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	109	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	109	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	108	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110104.D
Acq On : 1 Nov 2019 11:58 am
Operator : tb
Sample : 9110370-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:16:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

11/1/19

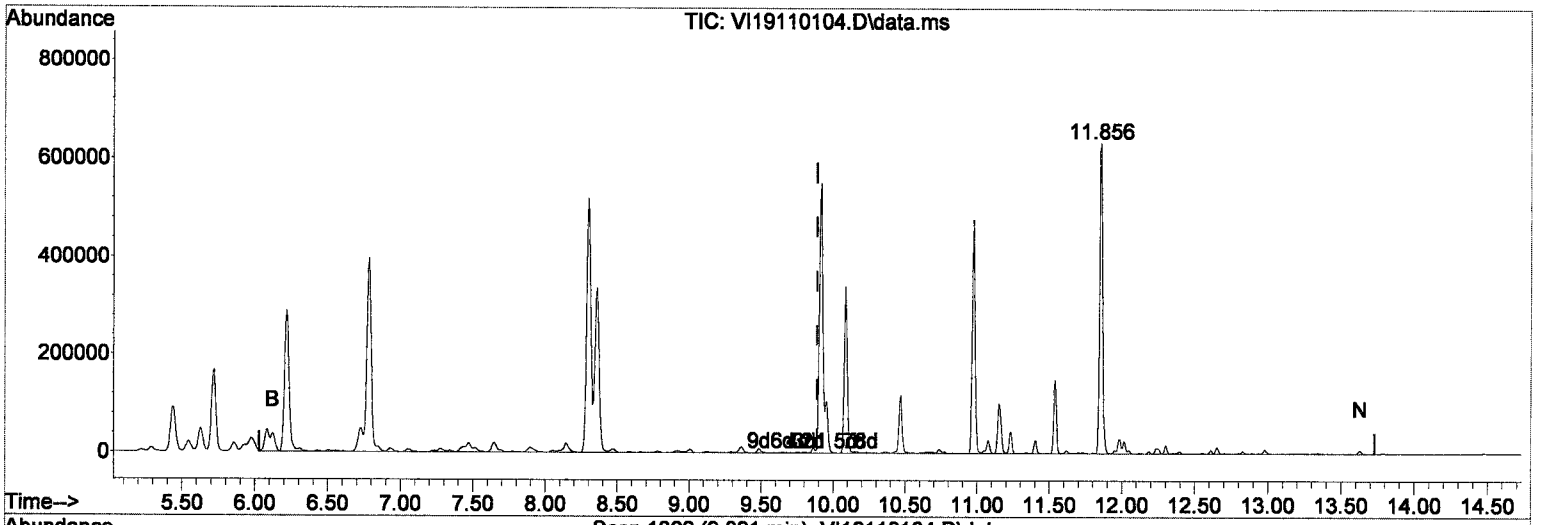
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	234055	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	384315	50.50	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	123258	48.51	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	431331	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	325291	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	243089	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3103464m	472.41	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4433433m	486.08	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3776203m	488.47	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	5161258m	477.00	ug/L	

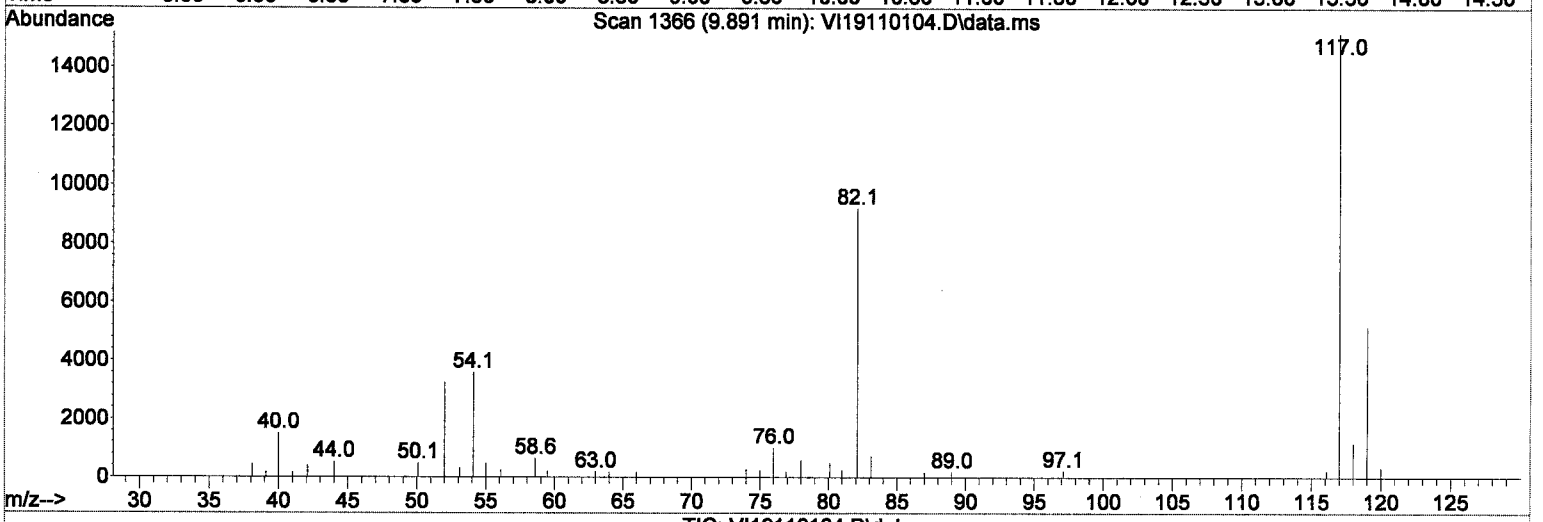
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110104.D
Acq On : 1 Nov 2019 11:58 am
Operator : tb
Sample : 9110370-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 12:16:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19110104.D\data.ms

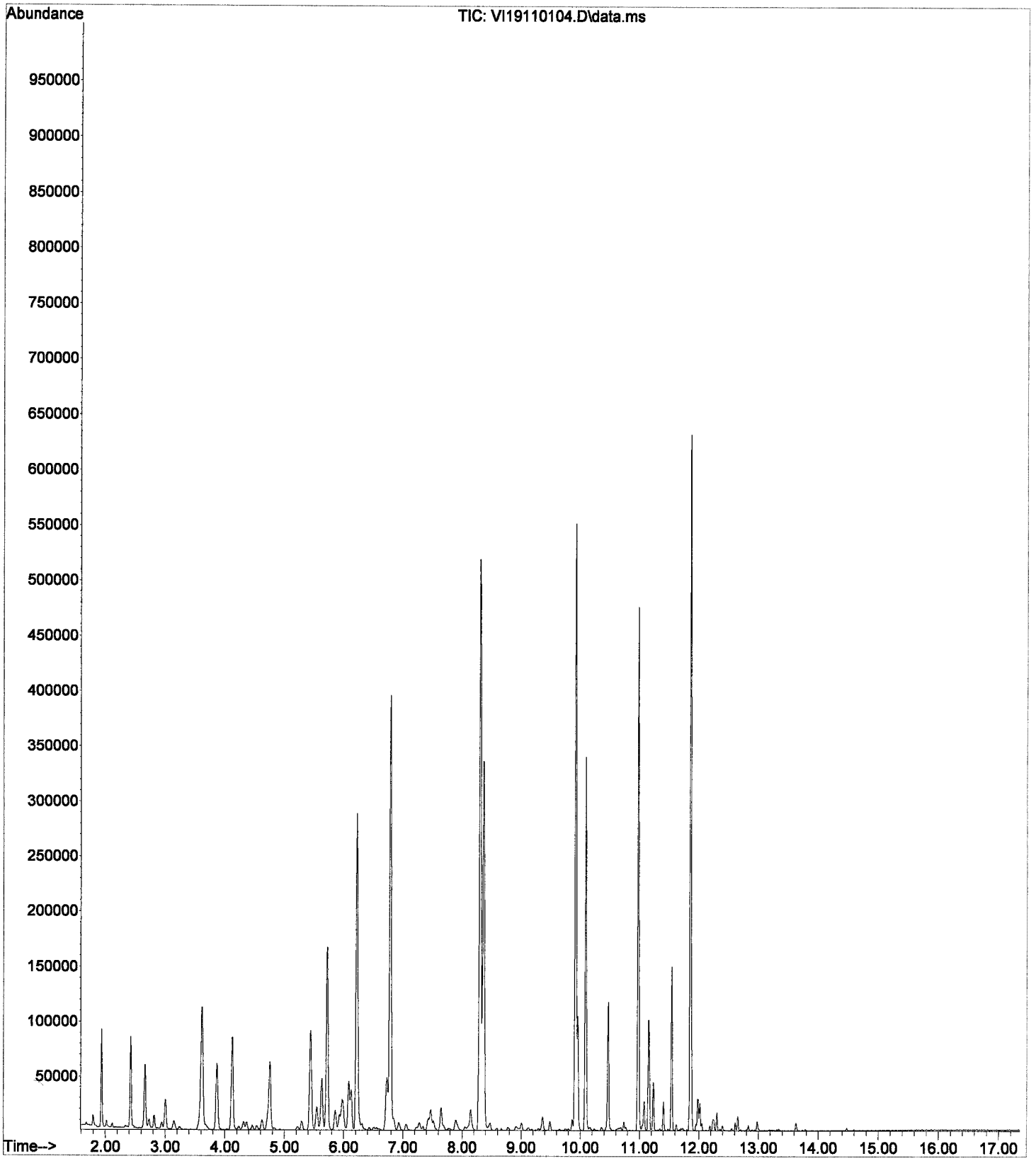
(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 472.41 ug/L m

response 3103464

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\data\2019-11\9K01026\VI19110104.D
Operator : tb
Acquired : 1 Nov 2019 11:58 am using AcqMethod VI1611RUN.M
Instrument : VOA-GCMS9
Sample Name: 9110370-BS2
Misc Info : 1X 5mL 500PPB GX A19J354
Vial Number: 4



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110105.D
Acq On : 1 Nov 2019 12:25 pm
Operator : tb
Sample : 9110370-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

11/1/19

Quant Time: Nov 01 15:45:22 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	227702	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	376562	50.86	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	116182	47.00	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	415765	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	311286	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	219664	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-4417m	23.98	ug/L	CMSL
5) TPHg (C5-C9)	9.890	TIC	345323m	13.29	ug/L	
6) TPHg (C6-C10)	9.890	TIC	335009m	16.81	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	356197m	18.42	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110105.D
Acq On : 1 Nov 2019 12:25 pm
Operator : tb
Sample : 9110370-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

11/1/19

Quant Time: Nov 01 15:45:36 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	99	110933	50.00	ug/L	# 0.01
45) Chlorobenzene-d5 (I)	9.916	117	311286	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	139970	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	114334	52.45	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	376341	53.70	ug/L	0.00
48) Toluene-d8 (S)	8.303	98	415765	50.89	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	116182	51.37	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.910	50	233	0.10	ug/L	# 47
6) Chloroethane	2.488	64	428	0.39	ug/L	# 36
14) Methylene Chloride	3.881	84	792	Below Cal		# 73
15) Acetone	3.954	43	663	0.68	ug/L	# 44

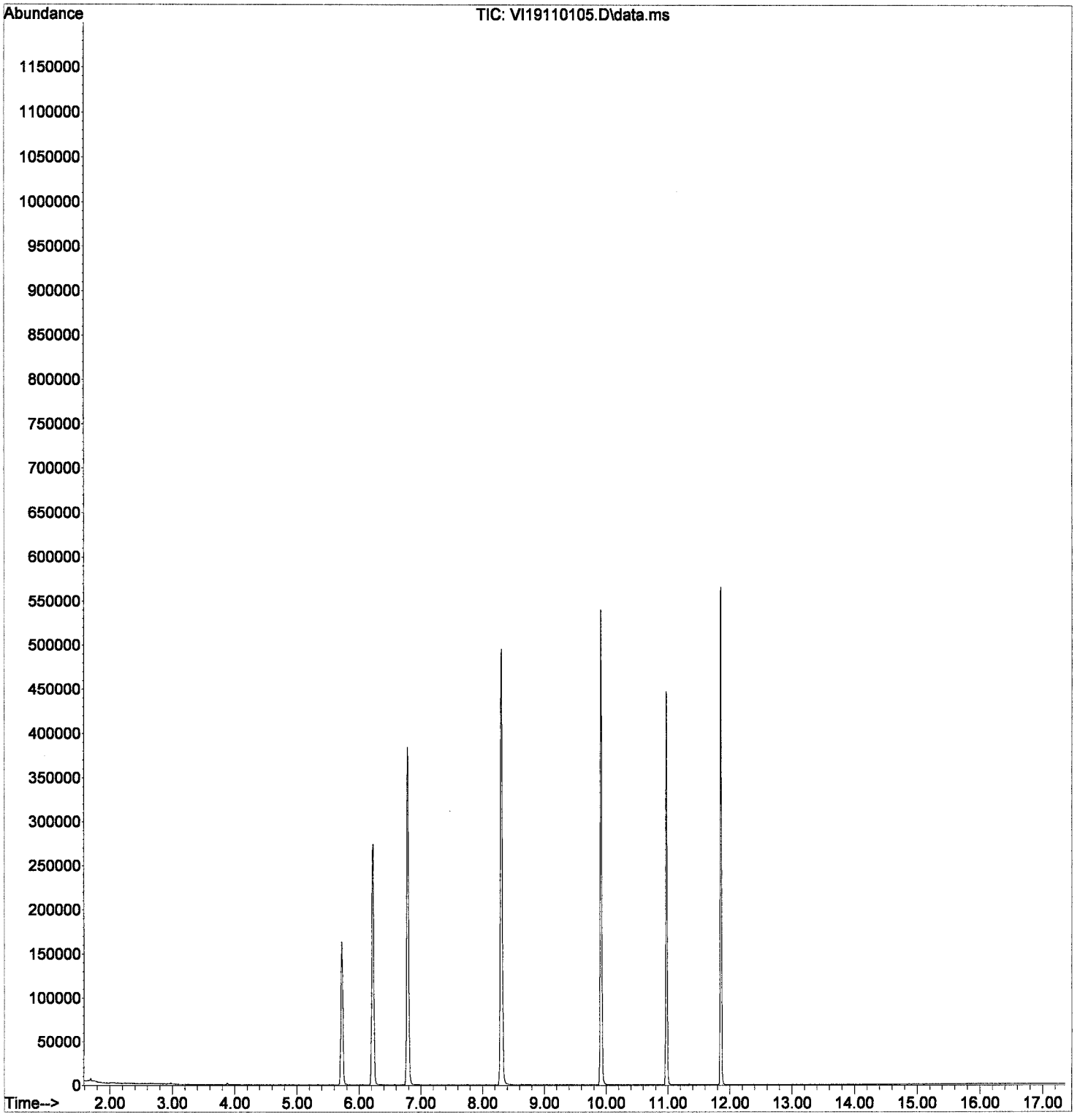
LMBC

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110105.D
Acq On : 1 Nov 2019 12:25 pm
Operator : tb
Sample : 9110370-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:36 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:47:33 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

11/1/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	212015	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	354287	51.39	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	108791	47.27	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	390545	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	292016	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	214159	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	1869735m	323.15	ug/L	
5) TPHg (C5-C9)	9.890	TIC	3623316m	435.99	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3603693m	516.13	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	3754687m	380.15	ug/L	

QC only

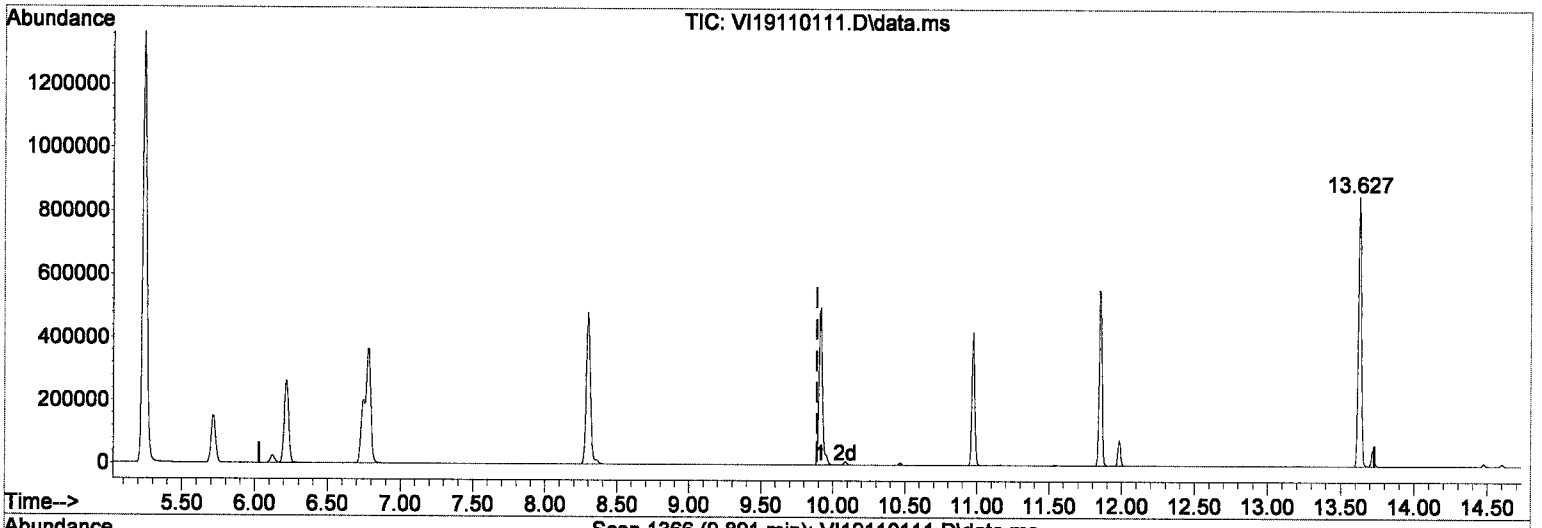
NR

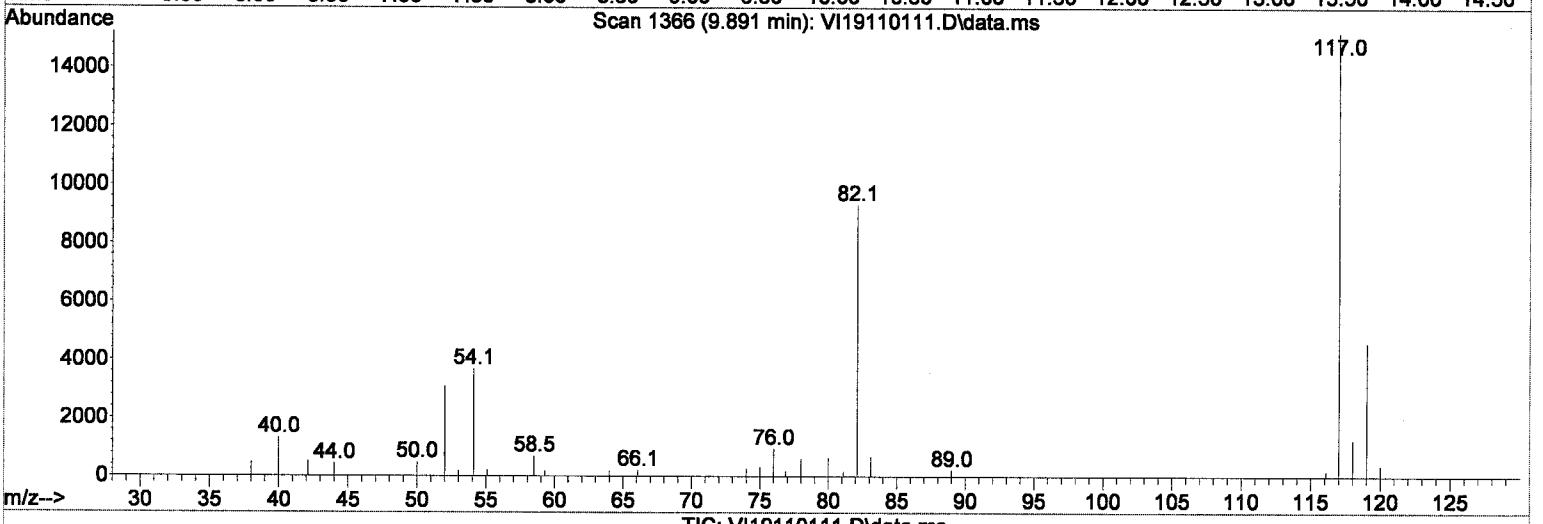
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:47:33 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19110111.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 323.15 ug/L m

response 1869735

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.61#
0.00	0.00	2.08#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

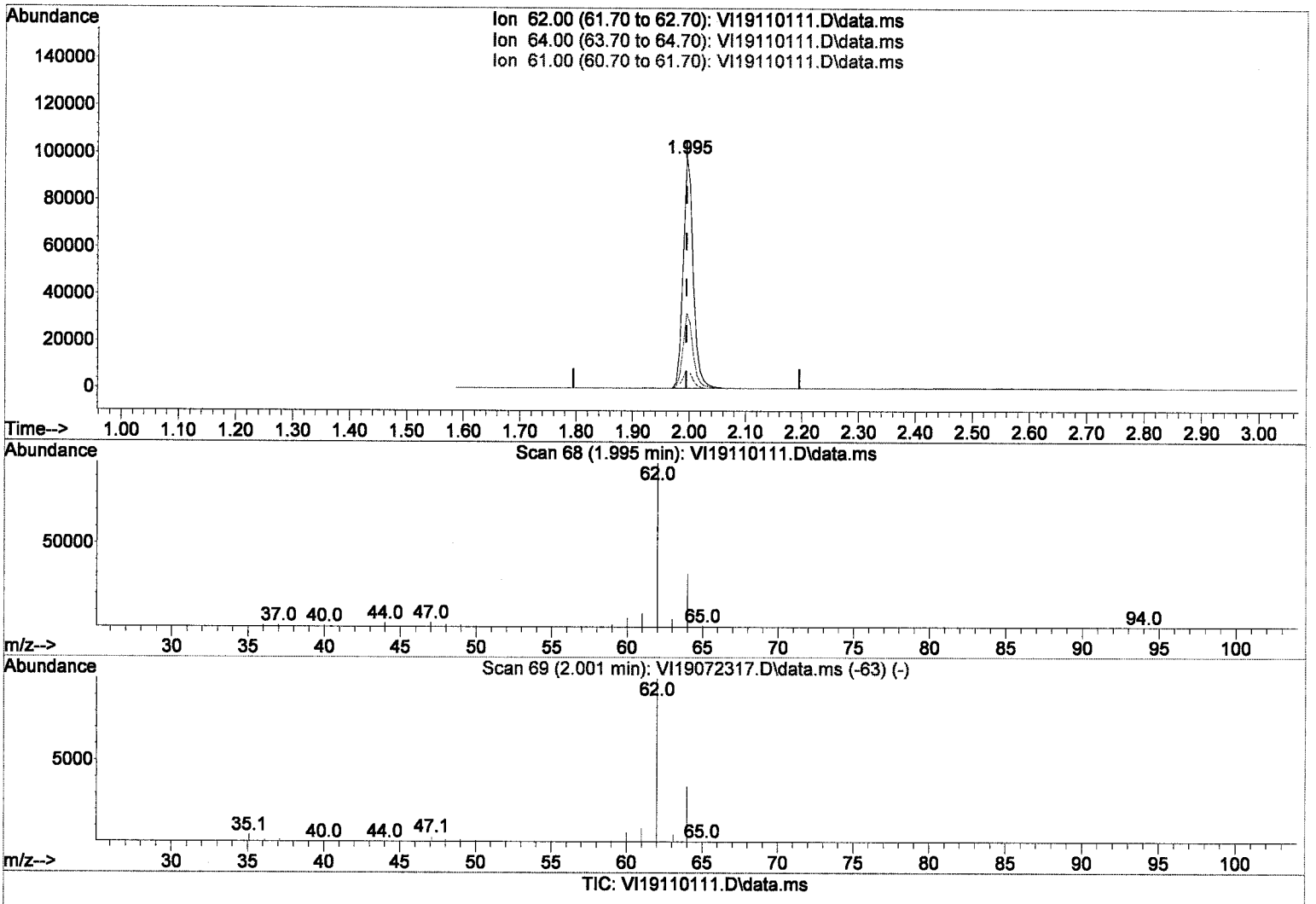
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.217	99	106125	50.00 ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.916	117	292016	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	136121	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.712	111	104898	50.31 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	354287	52.84 ug/L	0.00
48) Toluene-d8 (S)	8.297	98	390545	50.95 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	108791	49.46 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.898	50	194	0.08 ug/L #	47
4) Vinyl Chloride	1.995	62	122124	52.99 ug/L	97
6) Chloroethane	2.469	64	919	0.87 ug/L #	36
9) 1,1-Dichloroethene	3.230	61	551	0.22 ug/L #	72
11) Freon 113	3.279	101	249	0.14 ug/L #	70
14) Methylene Chloride	3.869	84	947	Below Cal	82
15) Acetone	3.936	43	703	0.76 ug/L #	44
16) t-1,2-Dichloroethene	4.039	61	3194	1.30 ug/L	92
25) c-1,2-Dichloroethene	5.244	61	821347	311.12 ug/L	88
35) Benzene	6.120	78	25480	3.14 ug/L	96
40) Trichloroethene (TCE)	6.740	130	80512	38.53 ug/L	94
49) Toluene	8.358	91	8655	1.01 ug/L	95
59) Ethylbenzene	9.952	91	19107	2.12 ug/L	96
61) m,p-Xylenes (2)	10.086	91	6556	0.99 ug/L	99
62) o-Xylene	10.469	91	4326	0.66 ug/L	96
65) Isopropylbenzene	10.731	105	679	0.08 ug/L	54
72) 1,3,5-Trimethylbenzene	11.230	105	579	0.09 ug/L	81
77) 1,2,4-Trimethylbenzene	11.540	105	2187	0.35 ug/L	91
82) n-Butylbenzene	11.984	91	5062	0.99 ug/L #	40
87) Naphthalene	13.627	128	620726	94.91 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



TIC: VI19110111.D\data.ms

(4) Vinyl Chloride (C)

1.995min (-0.000) 52.99 ug/L

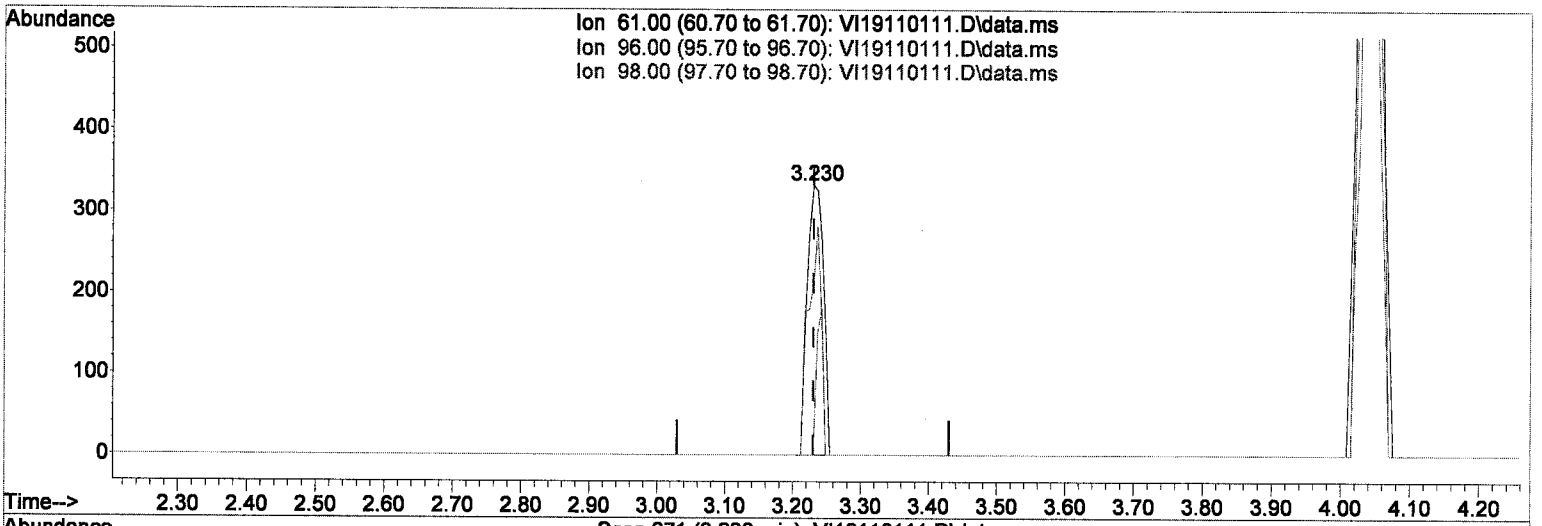
response 122124

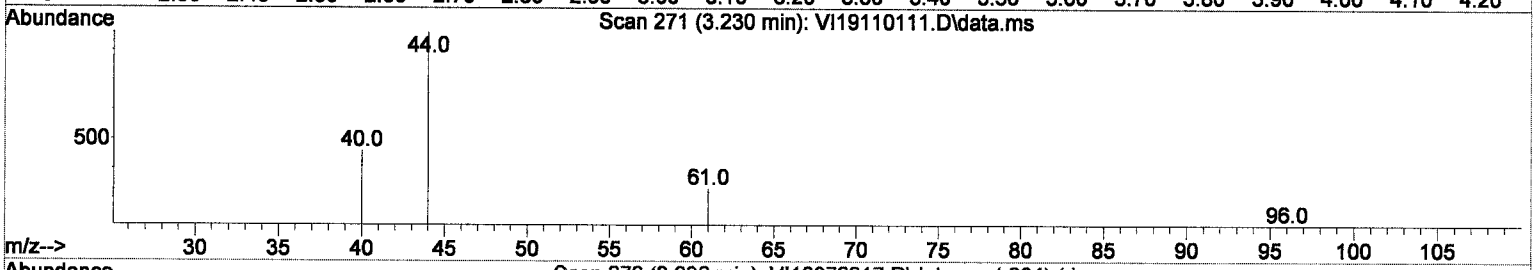
Ion	Exp%	Act%
62.00	100.00	100.00
64.00	31.60	32.42
61.00	11.60	8.39
0.00	0.00	0.00

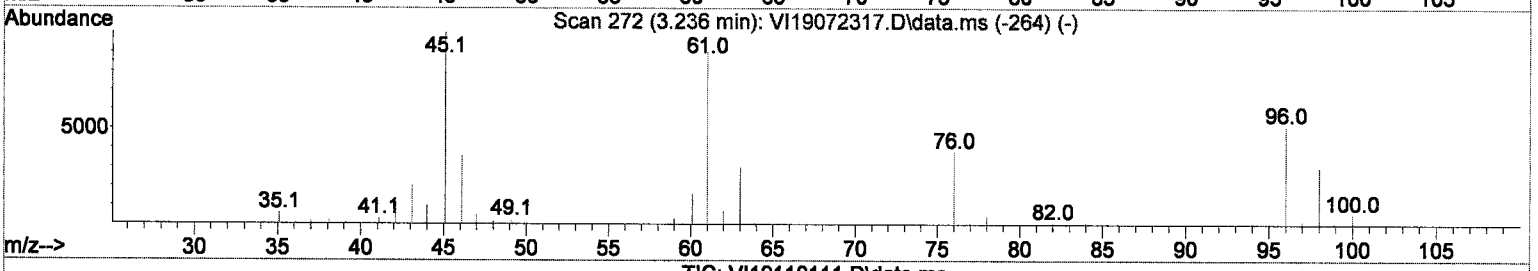
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(9) 1,1-Dichloroethene (C)

3.230min (-0.000) 0.22 ug/L

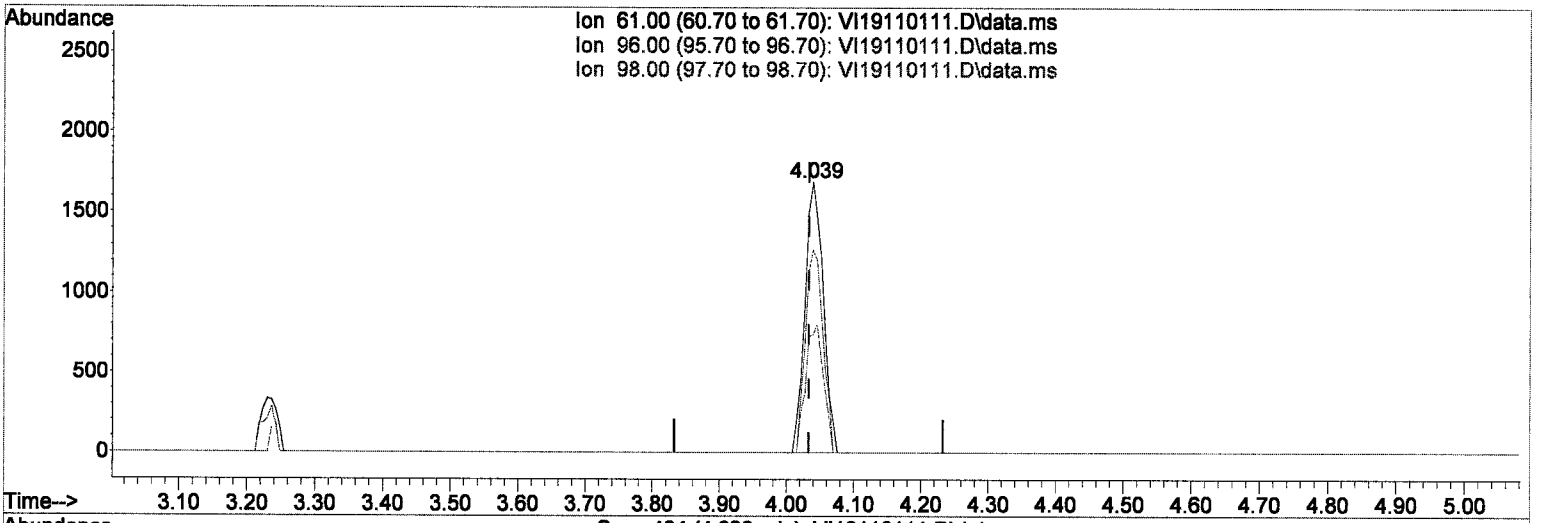
response 551

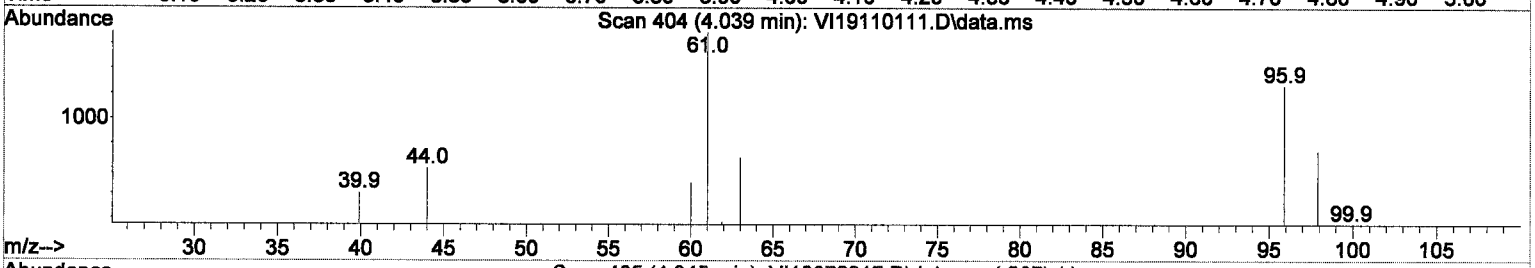
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	58.30	62.76
98.00	36.70	0.00#
0.00	0.00	0.00

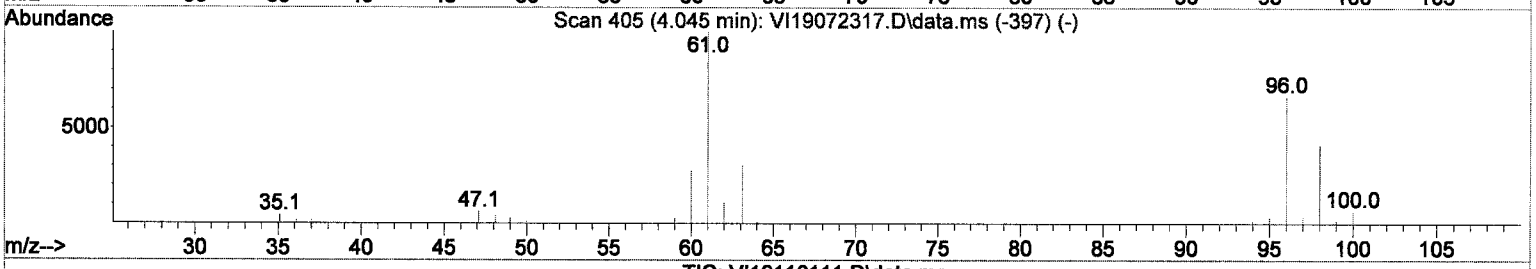
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(16) t-1,2-Dichloroethene

4.039min (+ 0.006) 1.30 ug/L

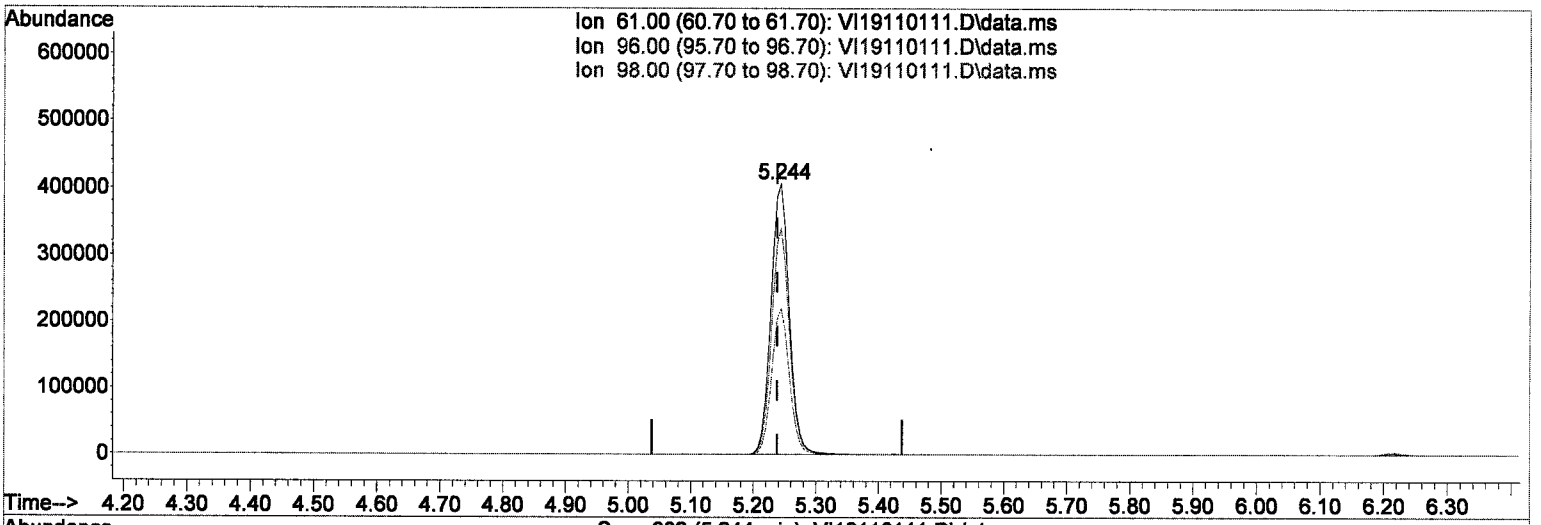
response 3194

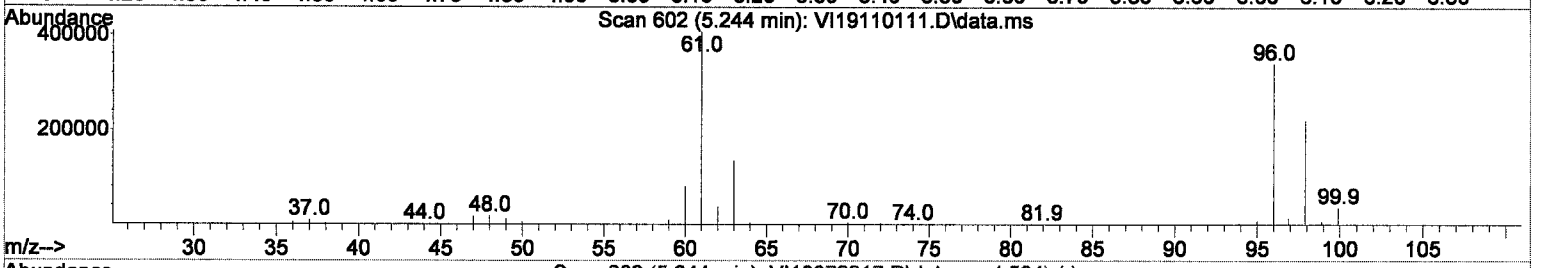
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	66.00	74.90
98.00	42.60	43.81
0.00	0.00	0.00

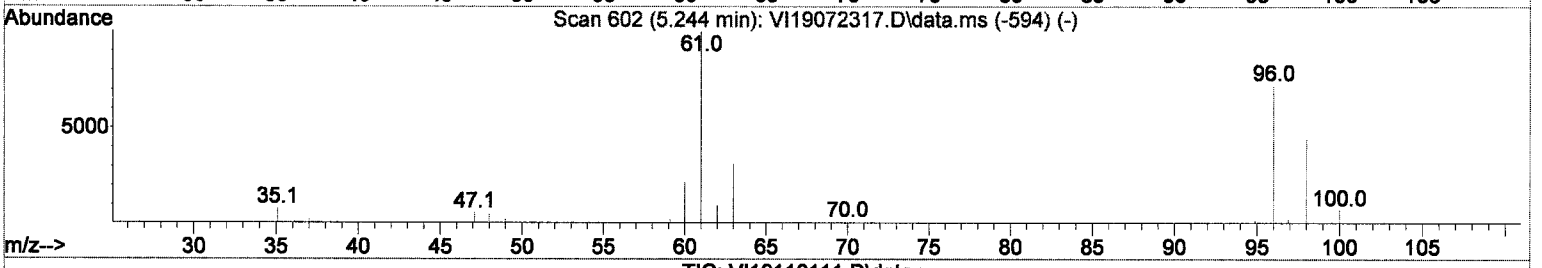
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(25) c-1,2-Dichloroethene

5.244min (+ 0.006) 311.12 ug/L

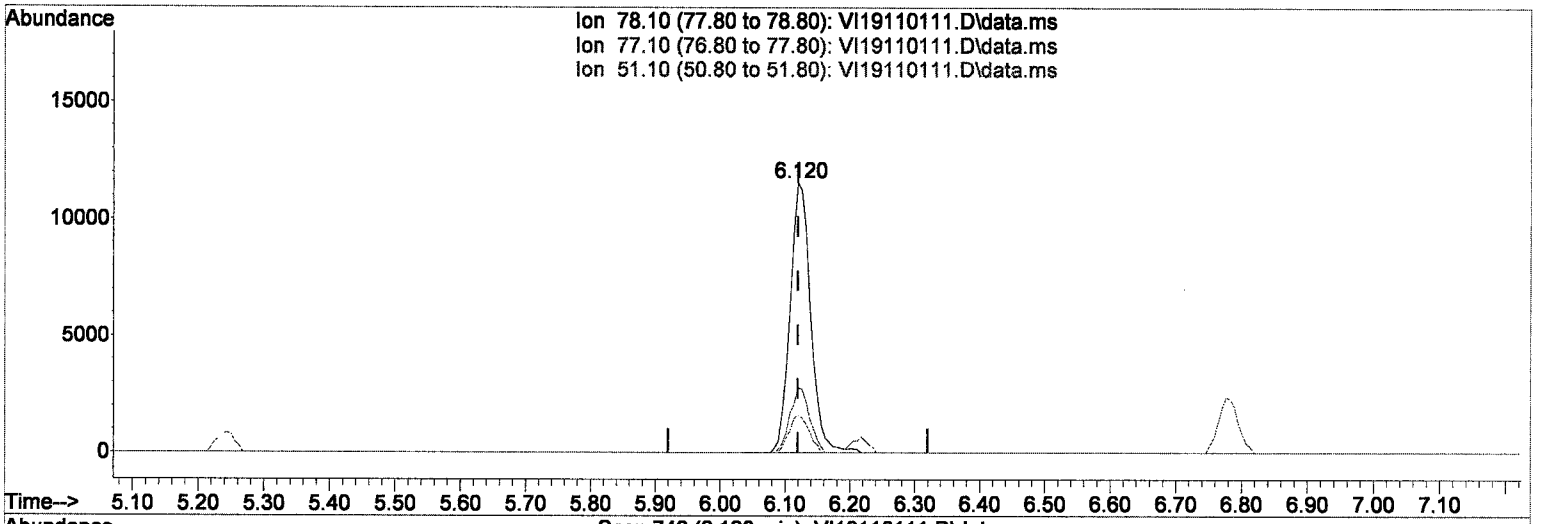
response 821347

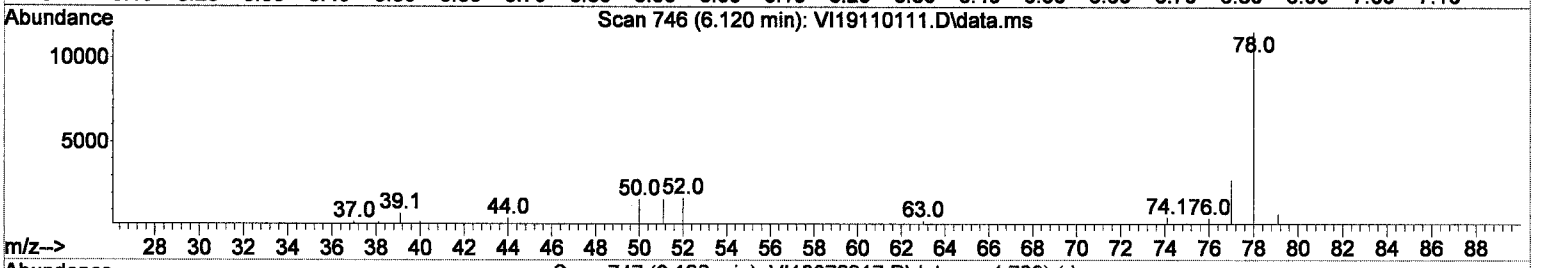
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	71.40	83.58
98.00	48.00	54.15
0.00	0.00	0.00

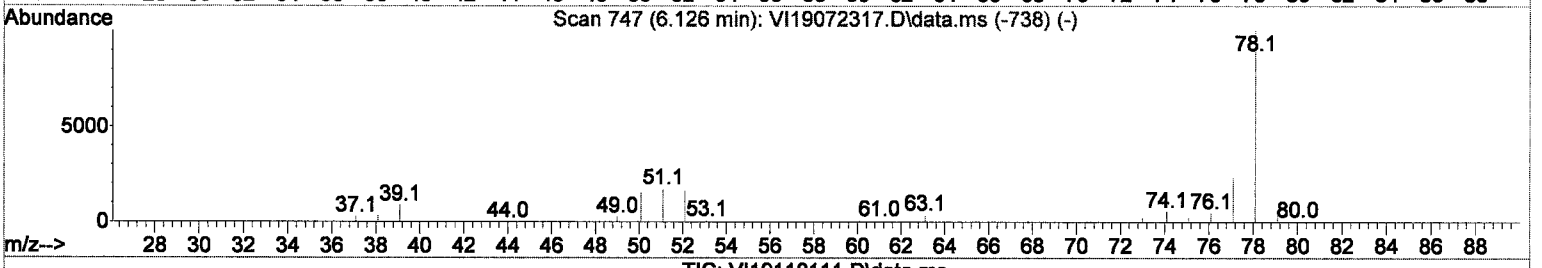
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(35) Benzene

6.120min (-0.000) 3.14 ug/L

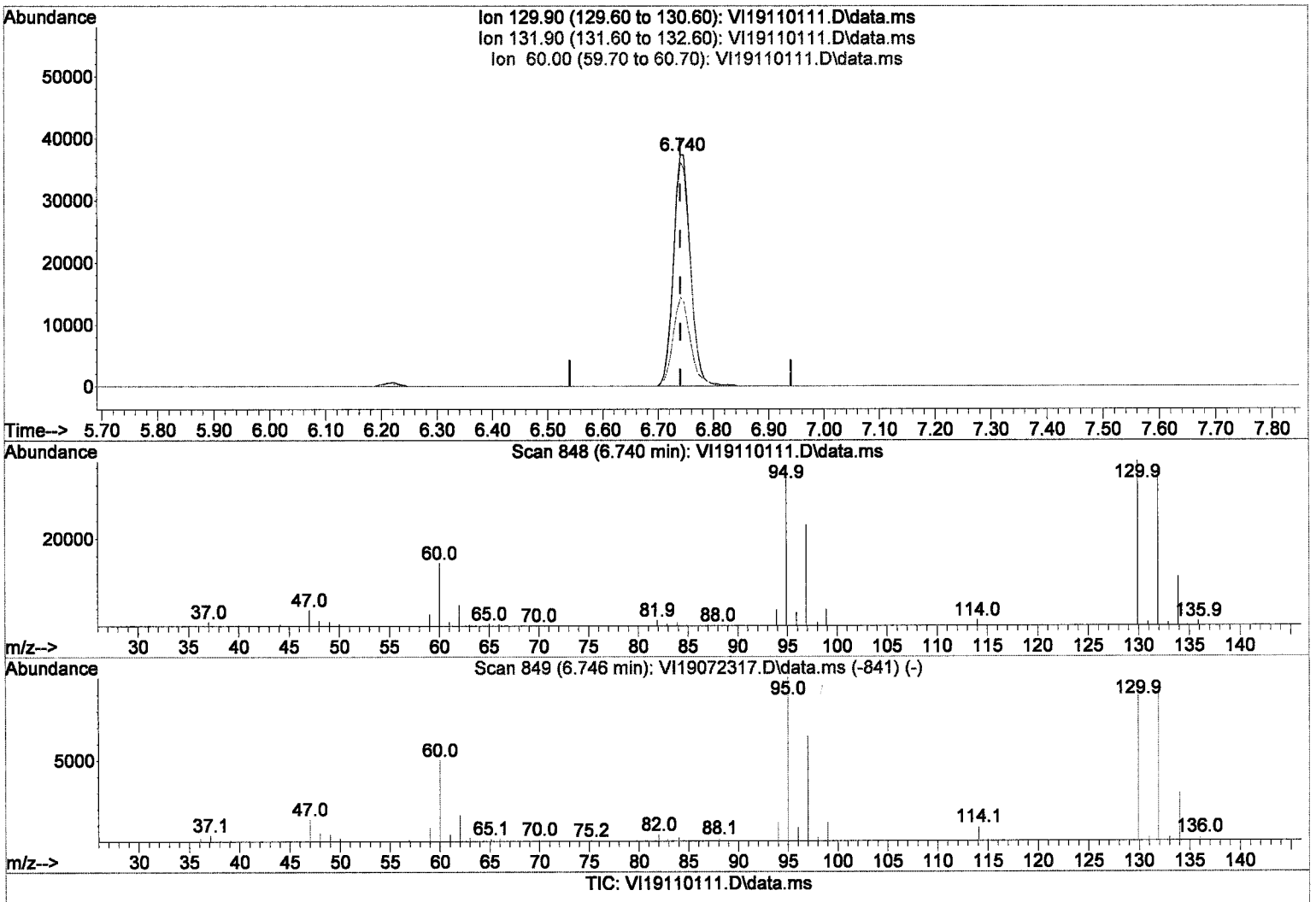
response 25480

Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	23.98
51.10	17.20	13.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



TIC: VI19110111.D\data.ms

(40) Trichloroethene (TCE)

6.740min (-0.000) 38.53 ug/L

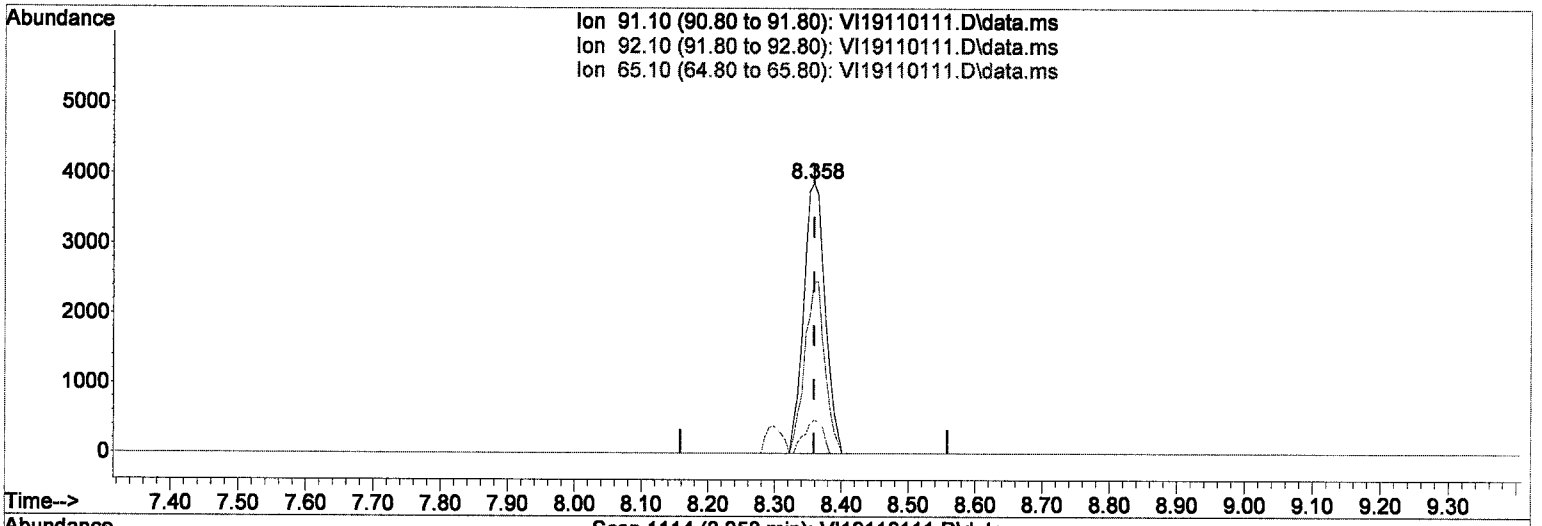
response 80512

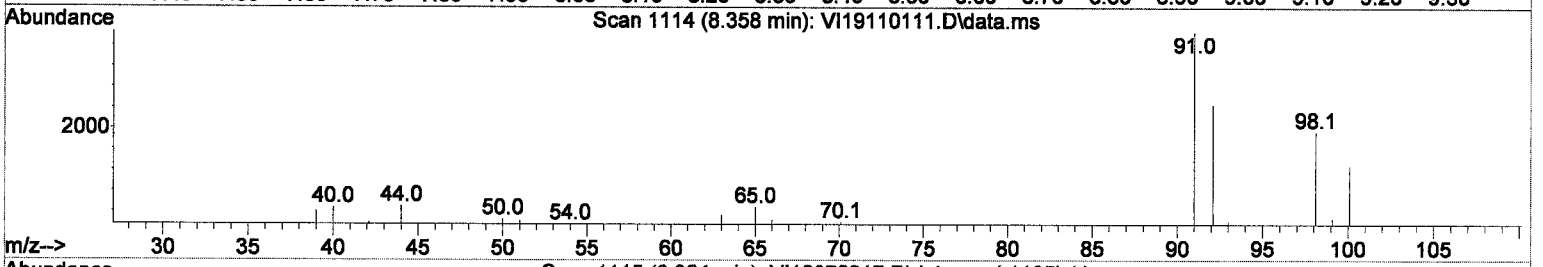
Ion	Exp%	Act%
129.90	100.00	100.00
131.90	90.90	96.68
60.00	42.70	38.50
0.00	0.00	0.00

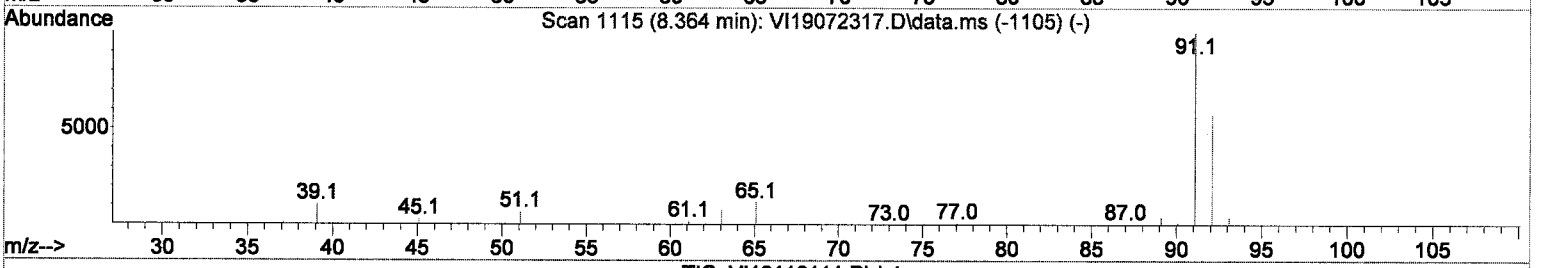
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(49) Toluene (C)

8.358min (-0.000) 1.01 ug/L

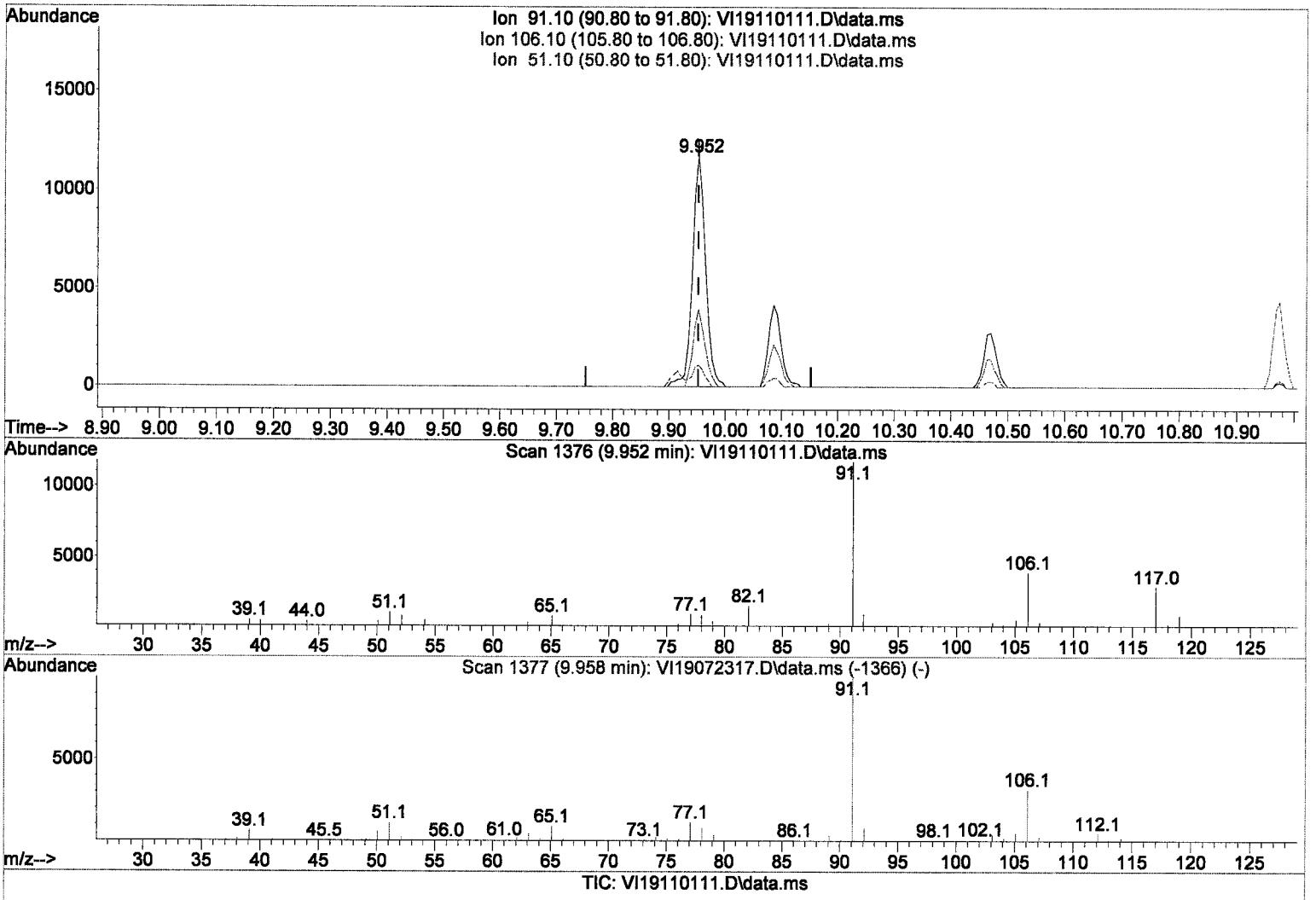
response 8655

Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	63.69
65.10	10.30	12.33
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



(59) Ethylbenzene (C)

9.952min (-0.000) 2.12 ug/L

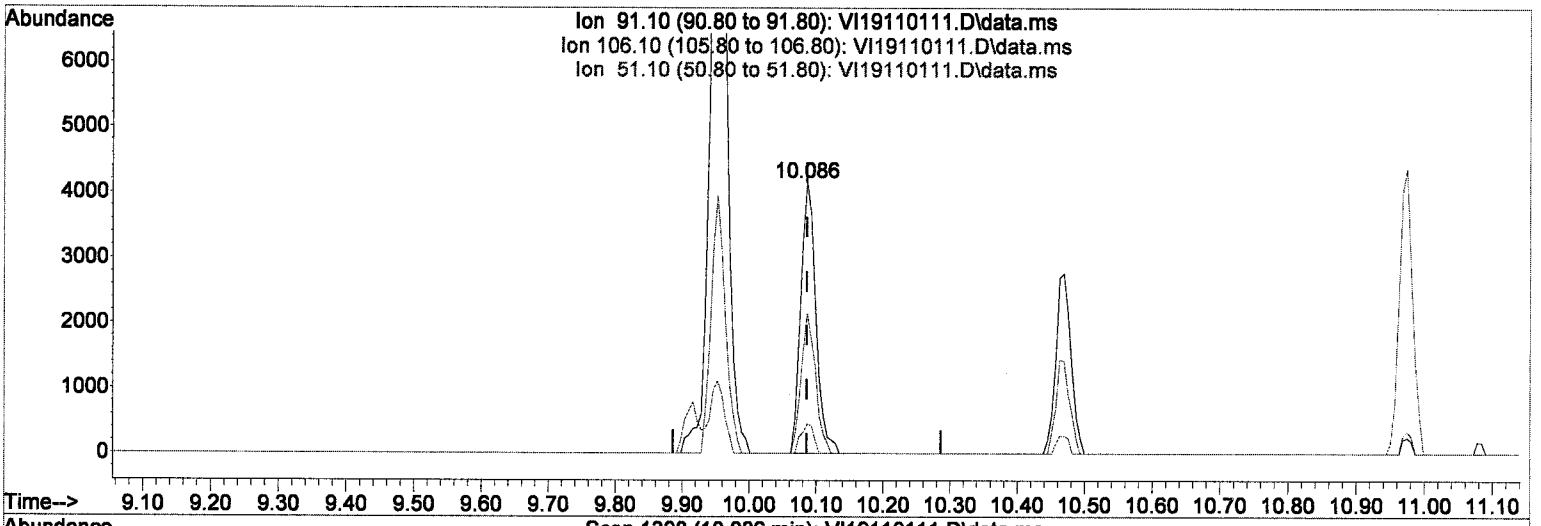
response 19107

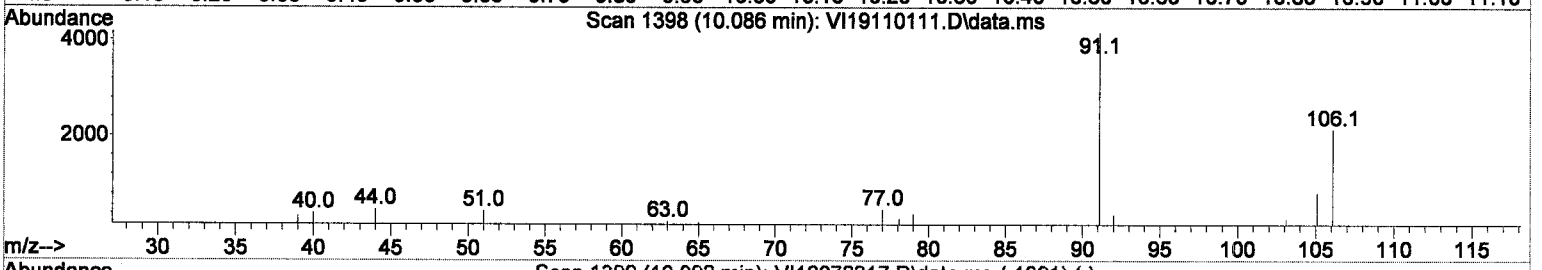
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	33.57
51.10	10.40	9.42
0.00	0.00	0.00

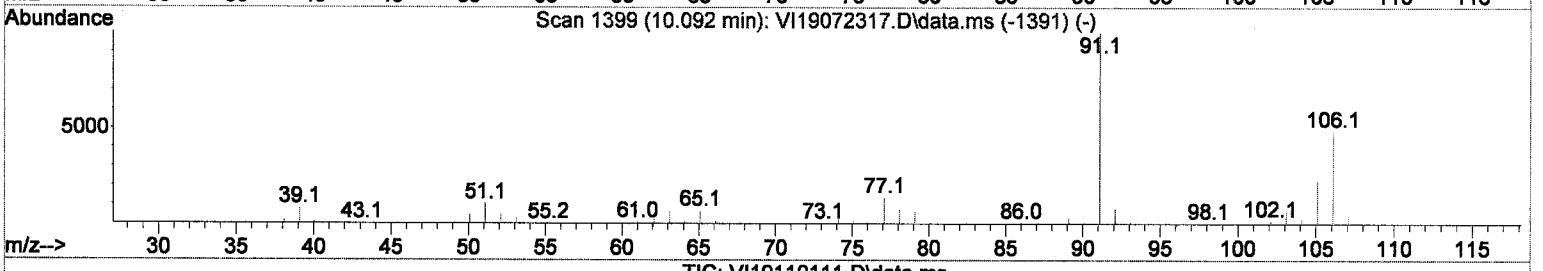
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(61) m,p-Xylenes (2)

10.086min (+ 0.000) 0.99 ug/L

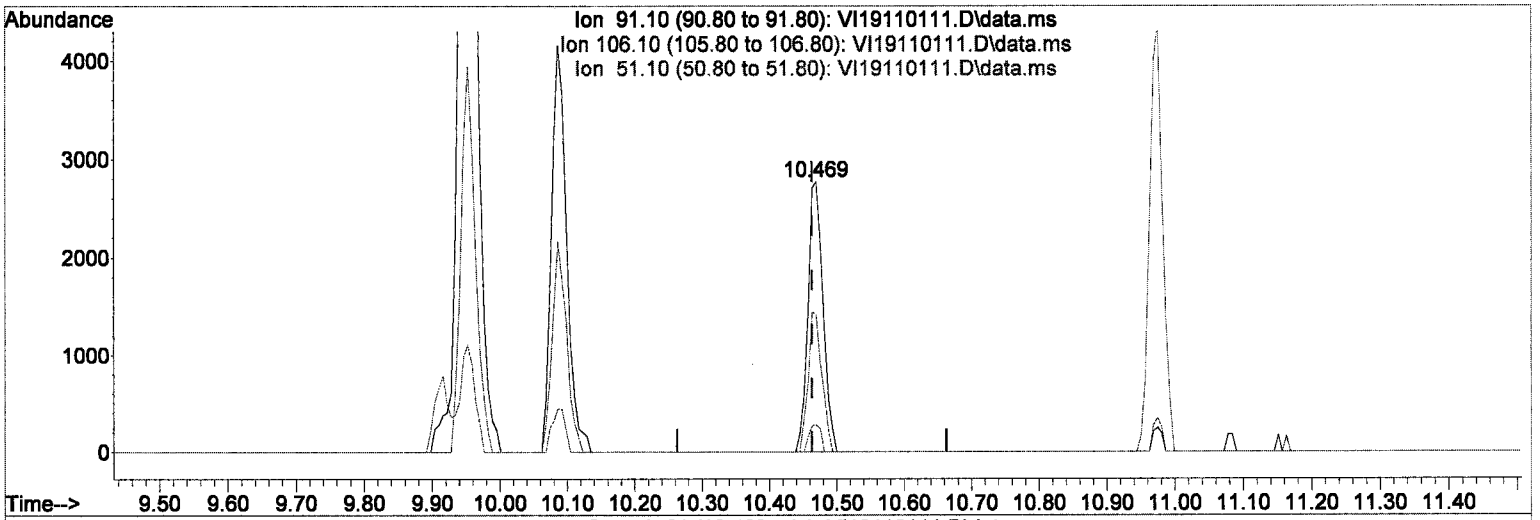
response 6556

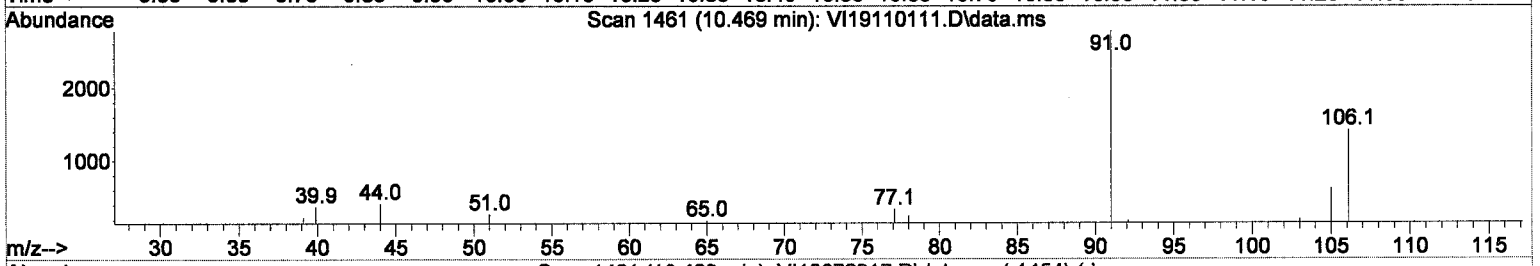
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	51.83
51.10	9.80	10.78
0.00	0.00	0.00

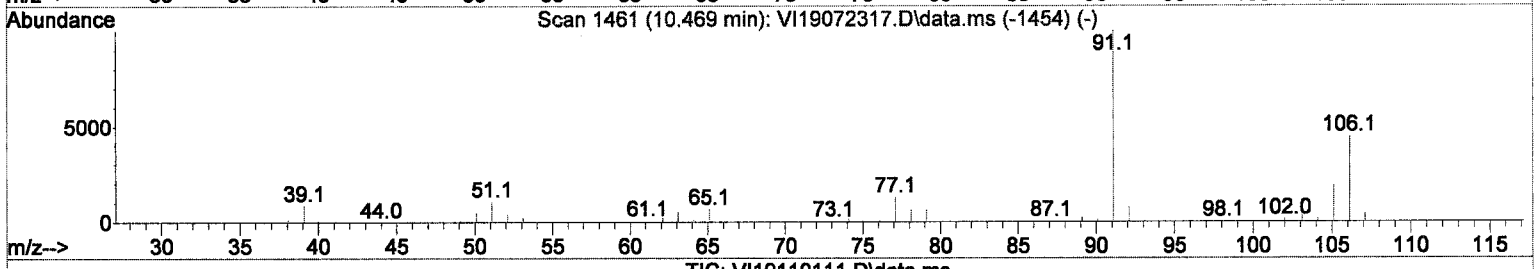
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(62) o-Xylene

10.469min (+ 0.006) 0.66 ug/L

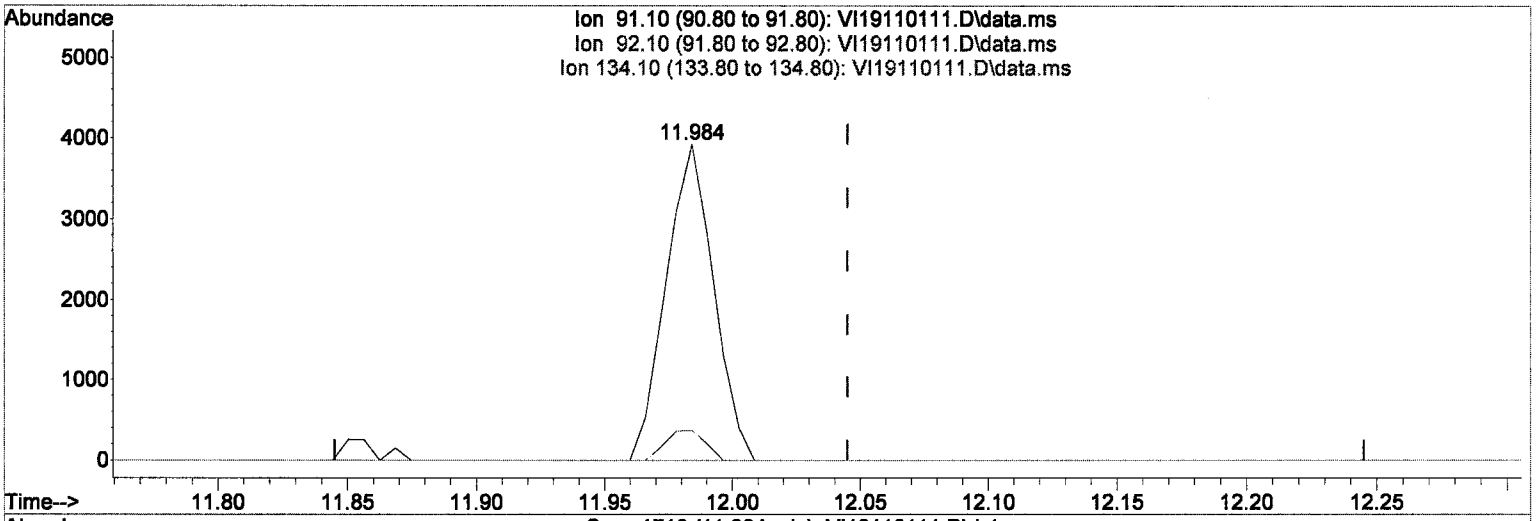
response 4326

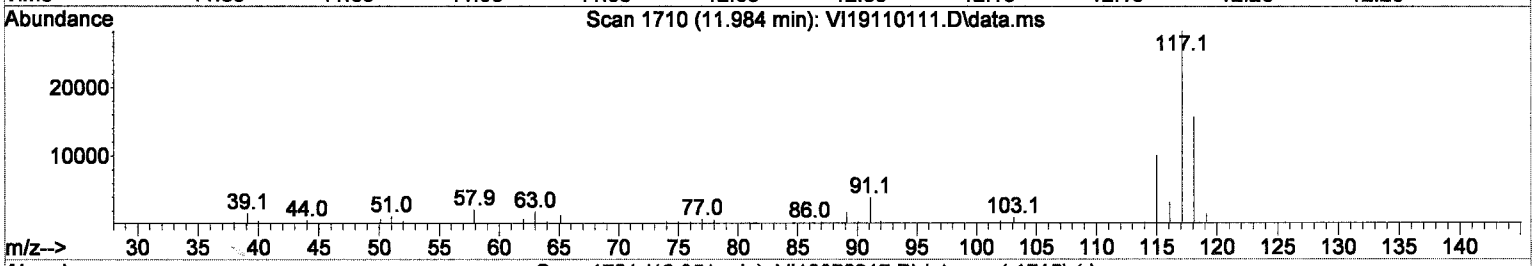
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	51.19
51.10	10.20	10.00
0.00	0.00	0.00

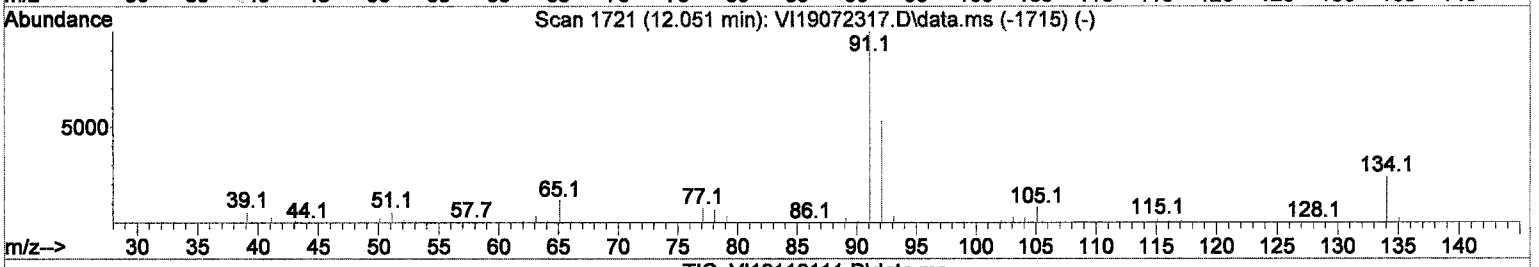
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(82) n-Butylbenzene

11.984min (-0.061) 0.99 ug/L

response 5062

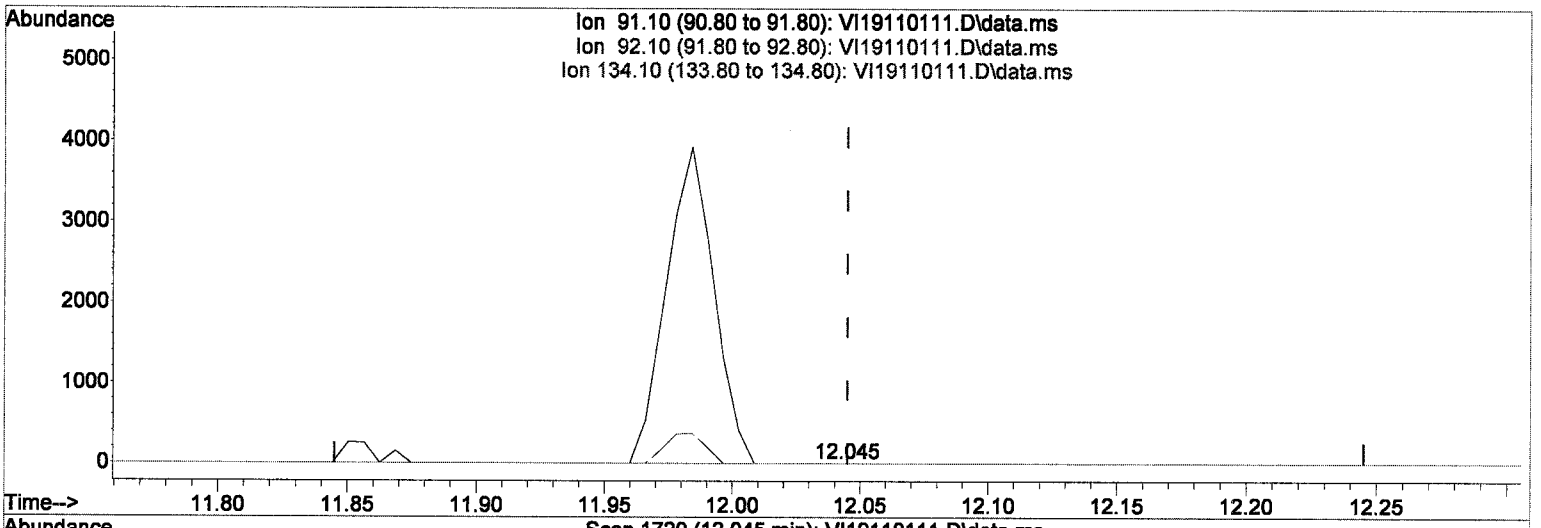
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	9.56#
134.10	28.20	0.00
0.00	0.00	0.00

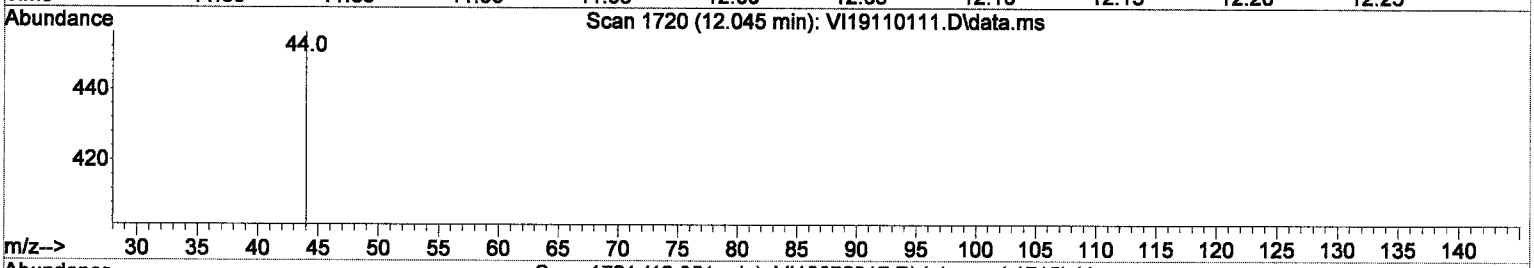
MI

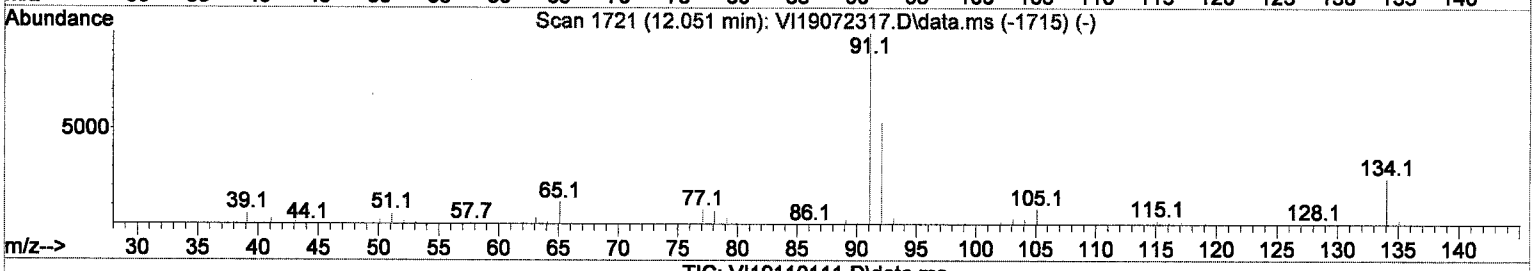
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(82) n-Butylbenzene

12.045min (-0.000) 0.00 ug/L (m)

response 0

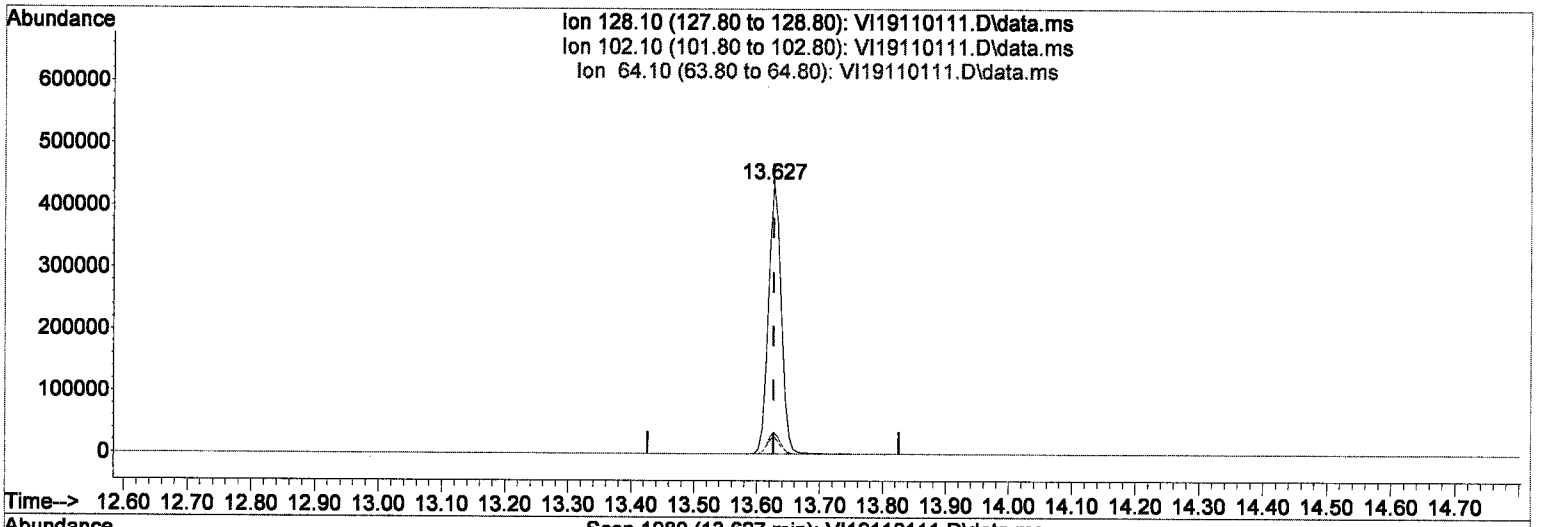
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

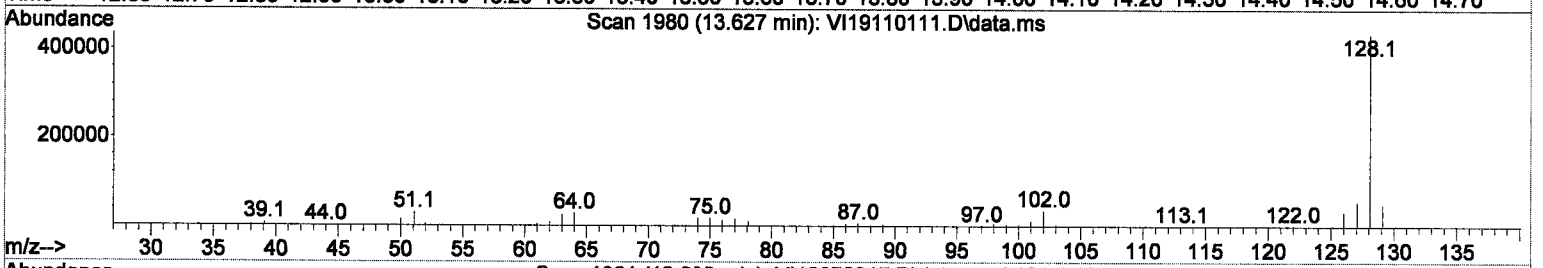
11/1/19

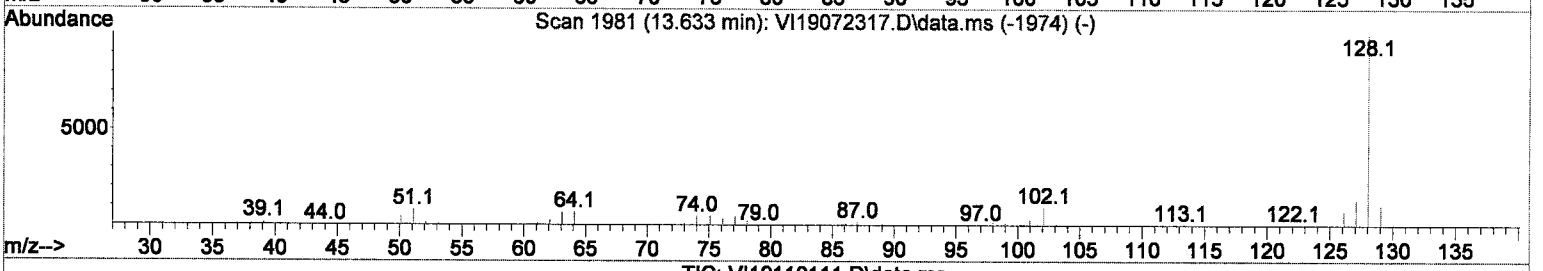
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110111.D\data.ms

(87) Naphthalene

13.627min (+ 0.001) 94.91 ug/L

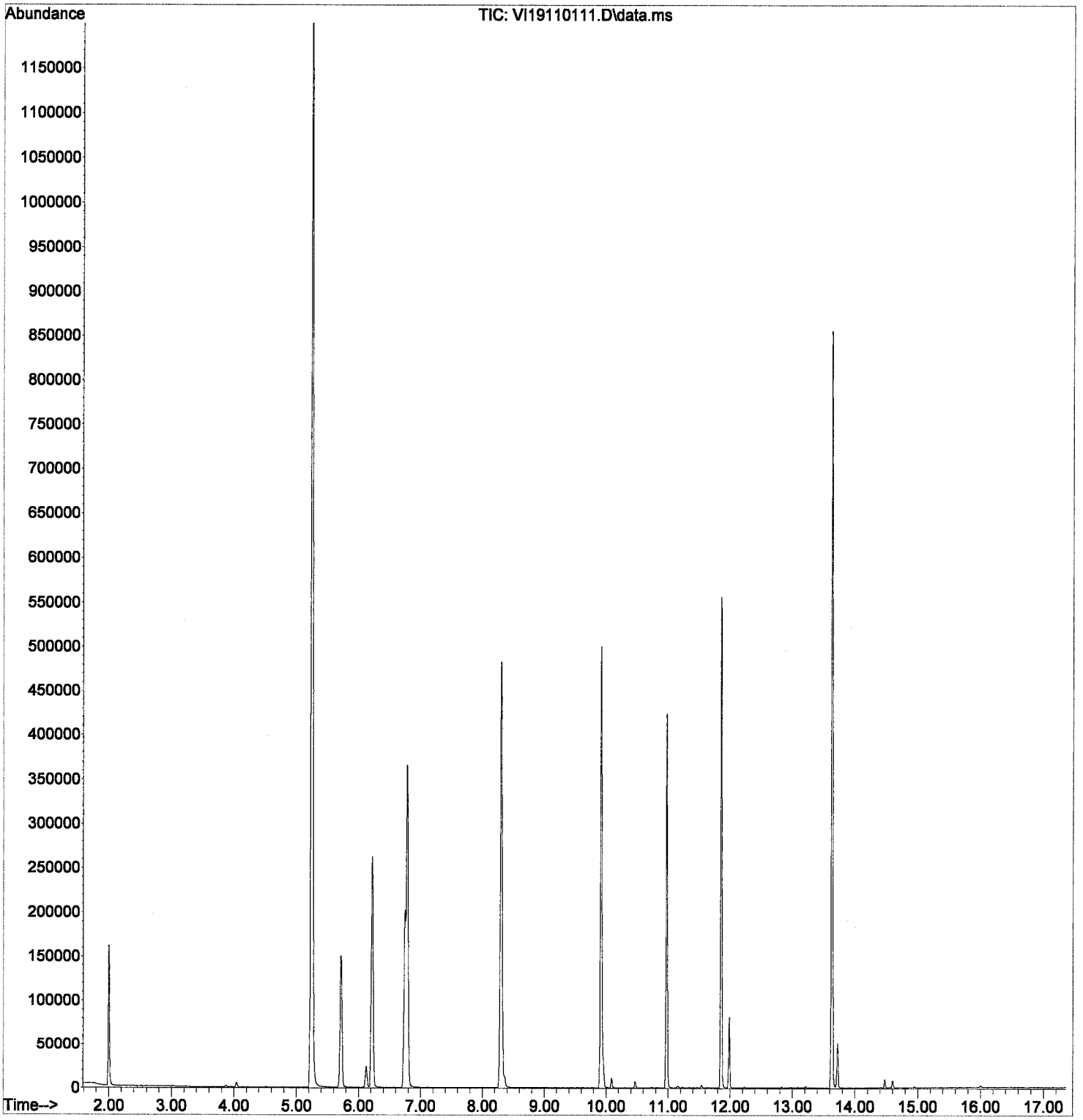
response 620726

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	8.06
64.10	4.70	6.54
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110111.D
Acq On : 1 Nov 2019 3:06 pm
Operator : tb
Sample : A9J1114-03@100
Misc : 100X 500uL50mL 8260/QC
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 15:45:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:59 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

11/1/19

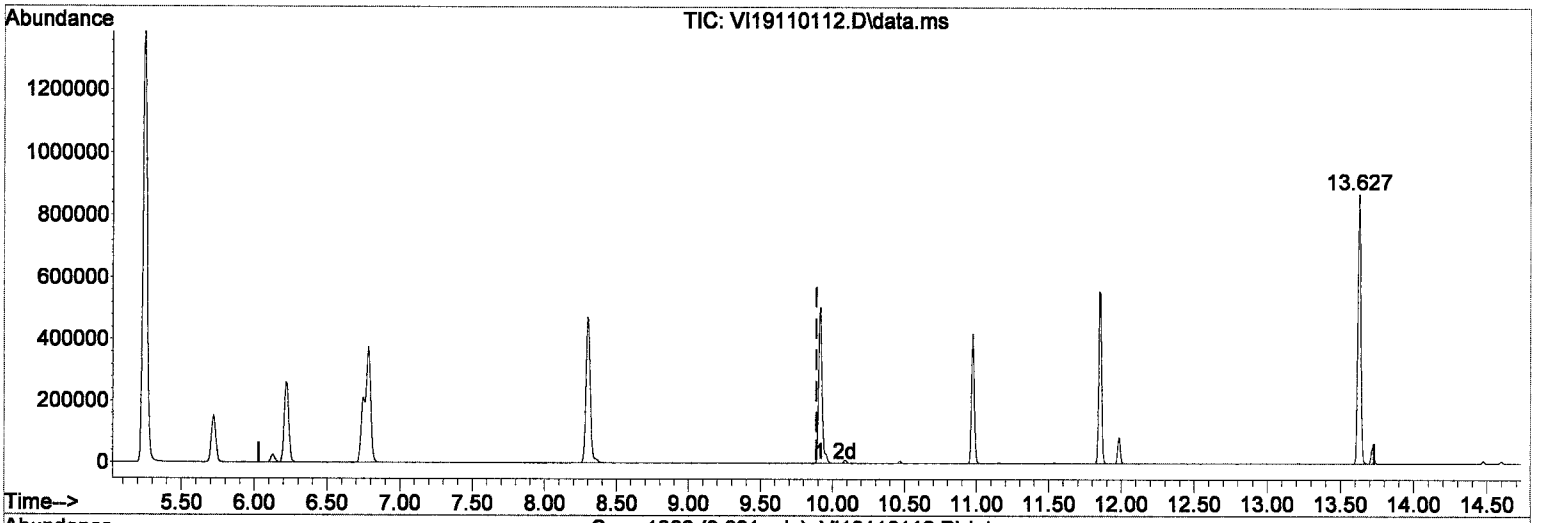
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	212118	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	355774	51.58	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	109025	47.35	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	390643	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	292276	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	209831	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	1876598m	324.09	ug/L	
5) TPHg (C5-C9)	9.890	TIC	3680350m	443.04	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3669234m	525.76	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	3815913m	386.40	ug/L	

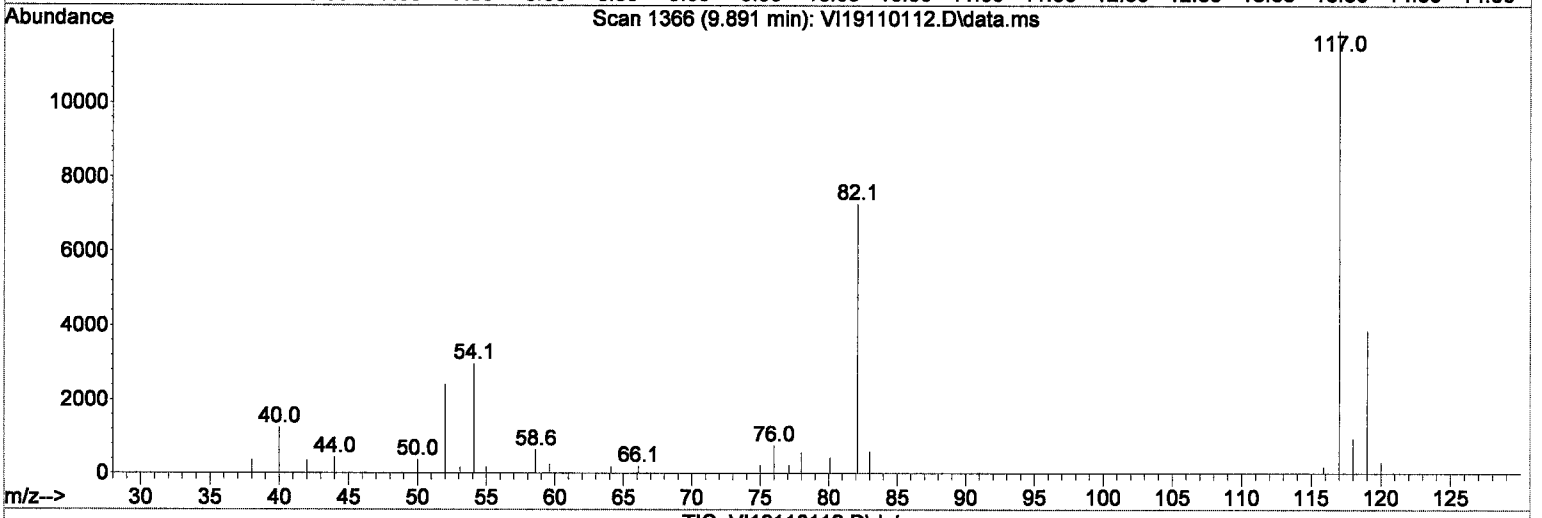
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:59 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19110112.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 324.09 ug/L m

response 1876598

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.61#
0.00	0.00	2.11#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/1/19

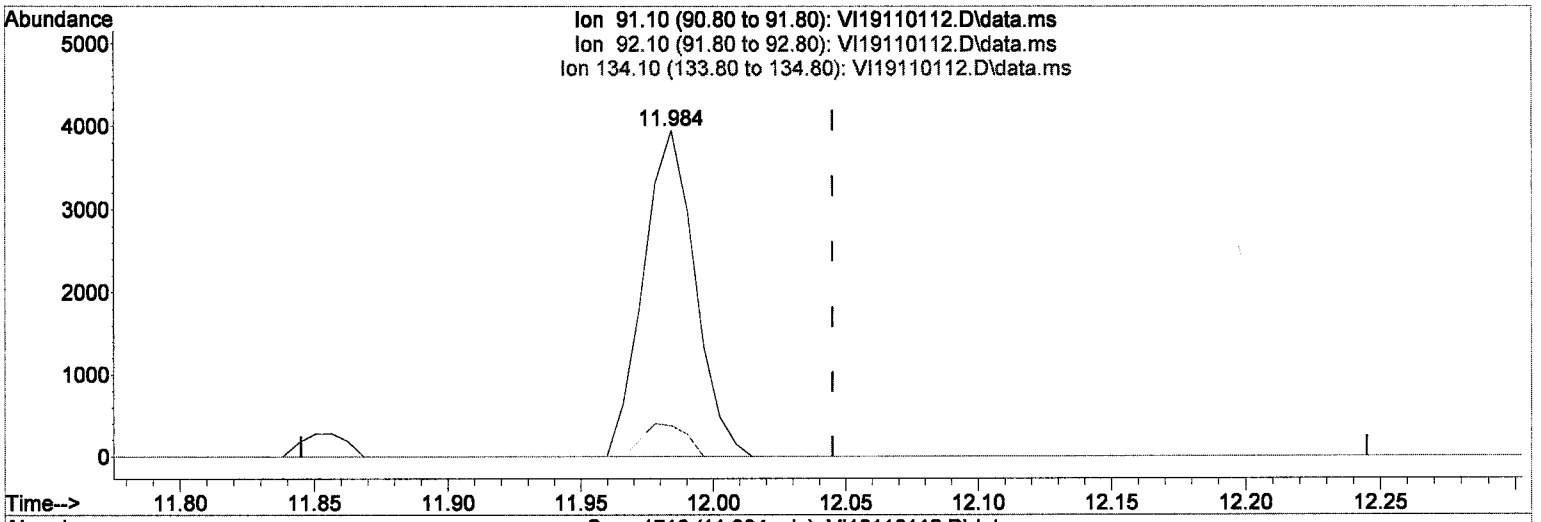
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.217	99	105828	50.00 ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.916	117	292137	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	133894	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	106117	51.03 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	355303	53.14 ug/L	0.00
48) Toluene-d8 (S)	8.297	98	390643	50.95 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	109025	50.39 ug/L	0.00
Target Compounds					Qvalue
4) Vinyl Chloride	2.007	62	128706	56.00 ug/L	96
6) Chloroethane	2.475	64	770	0.73 ug/L #	36 <CMDL
9) 1,1-Dichloroethene	3.242	61	564	0.22 ug/L #	75
11) Freon 113	3.303	101	375	0.21 ug/L #	67 <CMDL
14) Methylene Chloride	3.881	84	869	Below Cal	84
15) Acetone	3.954	43	663	0.71 ug/L #	44
16) t-1,2-Dichloroethene	4.051	61	3384	1.38 ug/L	93
25) c-1,2-Dichloroethene	5.250	61	842355	319.97 ug/L E	87
35) Benzene	6.126	78	25925	3.21 ug/L	97
40) Trichloroethene (TCE)	6.746	130	82931	39.80 ug/L	95
49) Toluene	8.364	91	8926	1.04 ug/L	98
59) Ethylbenzene	9.952	91	19092	2.12 ug/L	97
61) m,p-Xylenes (2)	10.086	91	6833	1.03 ug/L	96
62) o-Xylene	10.469	91	4598	0.70 ug/L	96
65) Isopropylbenzene	10.731	105	696	0.09 ug/L	83 <CMDL
72) 1,3,5-Trimethylbenzene	11.230	105	494	0.08 ug/L	93
77) 1,2,4-Trimethylbenzene	11.534	105	2171	0.35 ug/L	84
82) n-Butylbenzene	~~11.984~~	~~91~~	~~5357~~	~~1.06 ug/L #~~	~~40~~ MD <MDL
87) Naphthalene	13.627	128	627685	97.57 ug/L	98

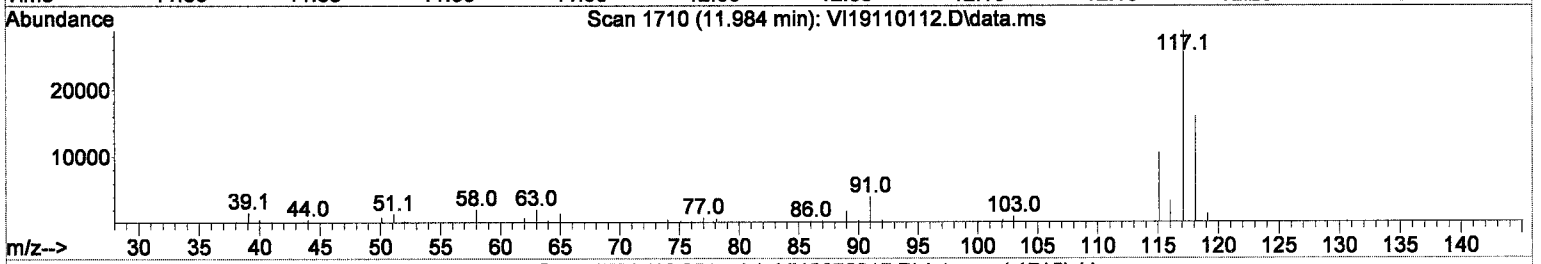
(#) = qualifier out of range (m) = manual integration (+) = signals summed

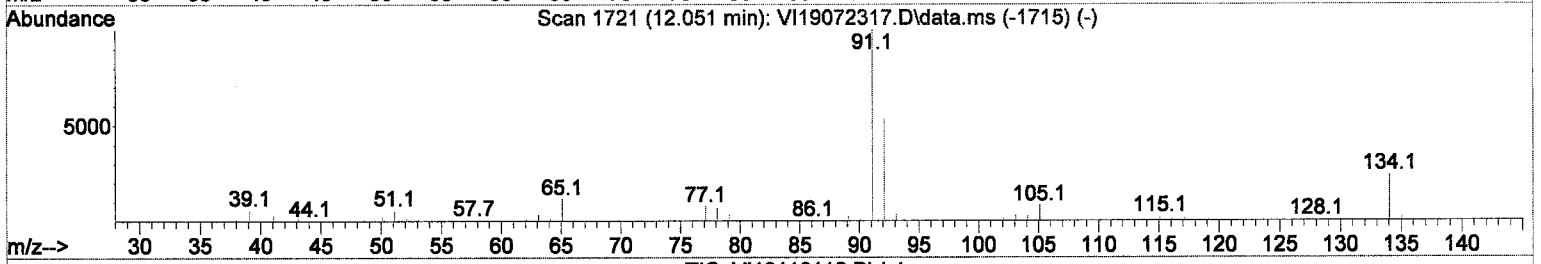
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110112.D\data.ms

(82) n-Butylbenzene

11.984min (-0.061) 1.06 ug/L

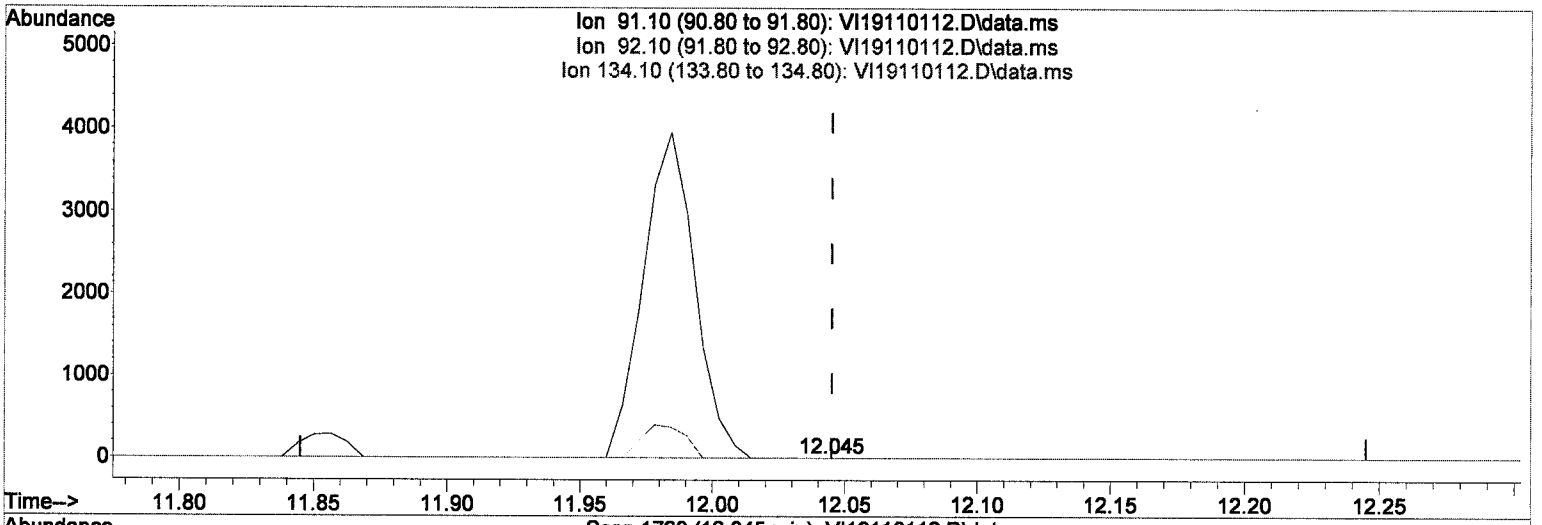
response 5357

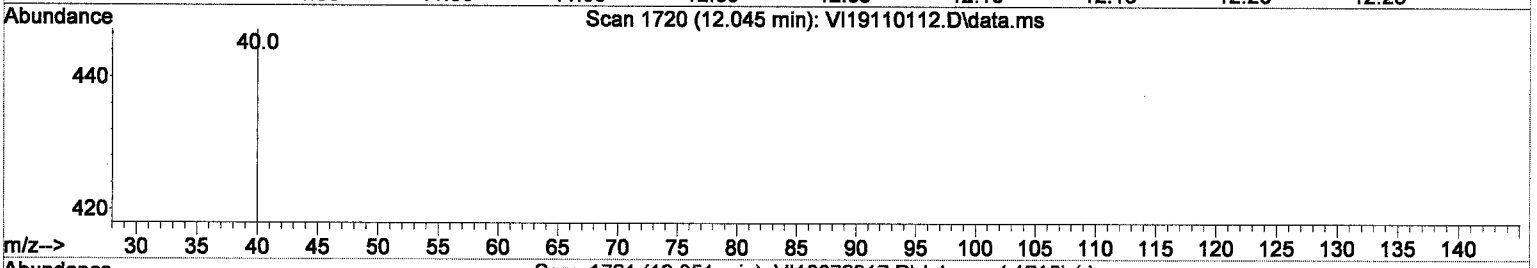
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	55.90	9.54#
134.10	28.20	0.00
0.00	0.00	0.00

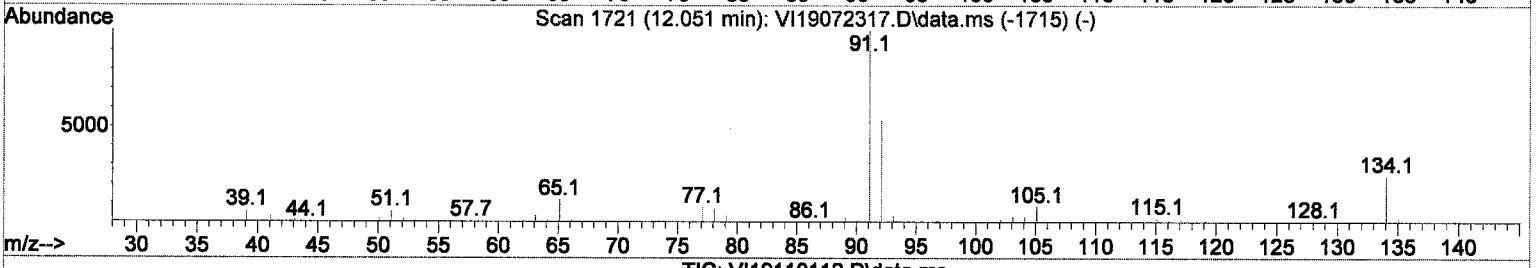
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110112.D\data.ms

(82) n-Butylbenzene

12.045min (-0.000) 0.00 ug/L m

response 0

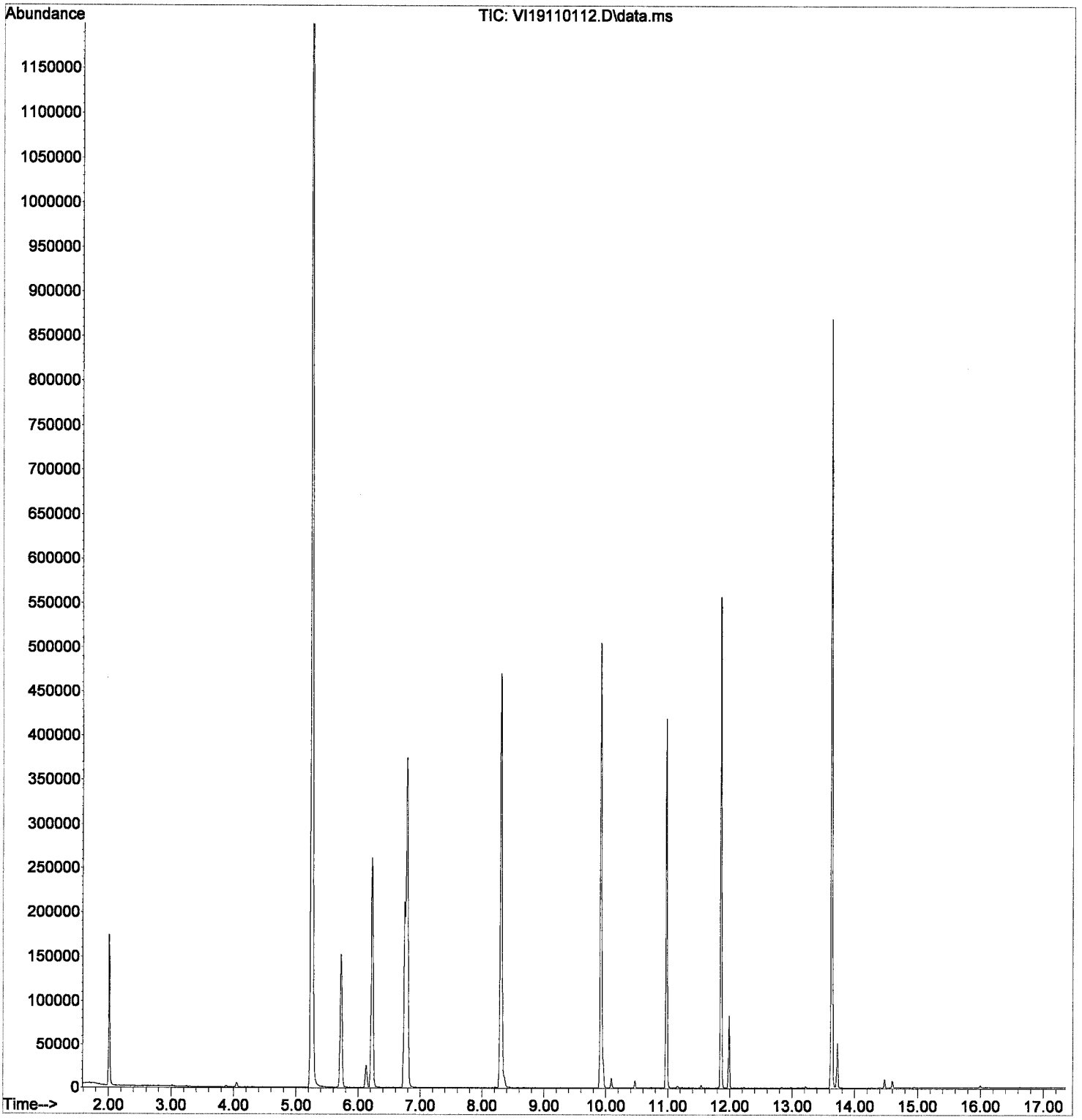
Ion	Exp%	Act%
91.10	100.00	0.00
92.10	55.90	0.00#
134.10	28.20	0.00
0.00	0.00	0.00

11/1/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110112.D
Acq On : 1 Nov 2019 3:33 pm
Operator : tb
Sample : 9110370-DUP1@100
Misc : 100X 500uL50mL J1114-03
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 01 16:23:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

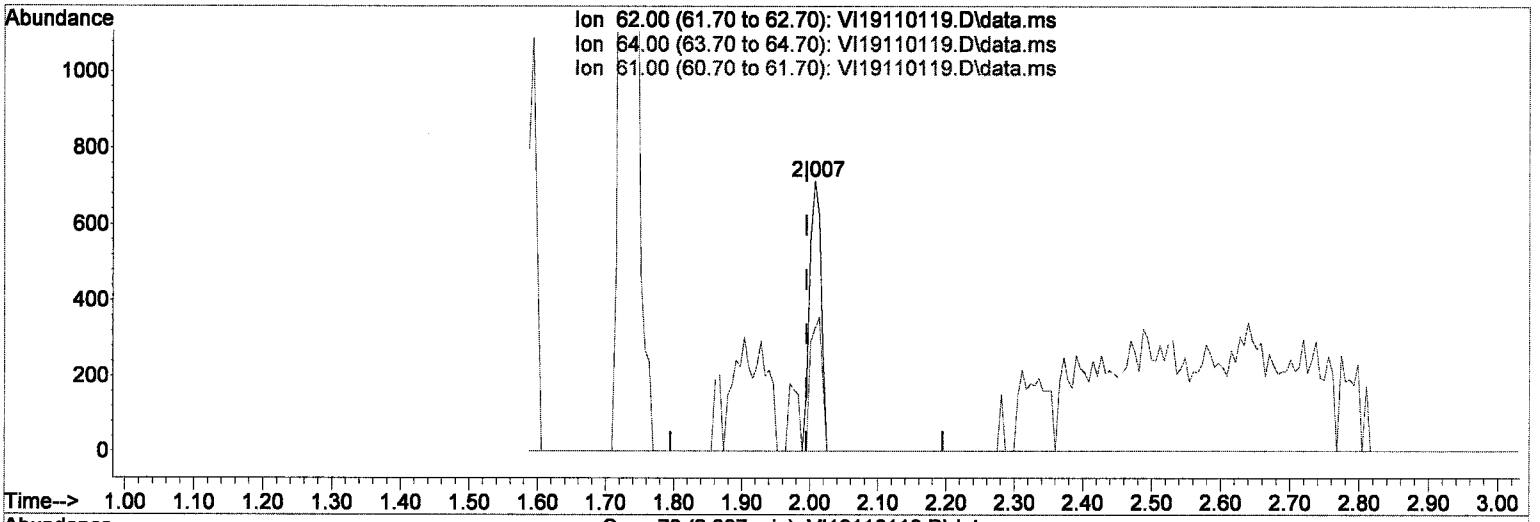
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	107082	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.916	117	294447	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	141334	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	106614	50.67	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	349069	51.60	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	389109	50.35	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112485	49.26	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.910	50	368	0.16	ug/L	#	47
4) Vinyl Chloride	2.007	62	841	0.36	ug/L		73
5) Bromomethane	2.372	96	128	0.09	ug/L	#	63
6) Chloroethane	2.530	64	395	0.37	ug/L	#	36
14) Methylene Chloride	3.875	84	337	Below Cal		#	61
15) Acetone	3.948	43	4982	5.31	ug/L		100
19) tert-Butanol (TBA)	4.300	59	207	0.50	ug/L		46
25) c-1,2-Dichloroethene	5.250	61	904	0.34	ug/L		90
35) Benzene	6.126	78	143039	17.48	ug/L		96
36) tert-Amyl methyl ether...	6.132	73	2169	0.39	ug/L	#	46
49) Toluene	8.364	91	7038	0.81	ug/L		98
57) 2-Hexanone	9.660	43	282	0.15	ug/L	#	1
59) Ethylbenzene	9.958	91	3432	0.38	ug/L		98
61) m,p-Xylenes (2)	10.092	91	4298	0.64	ug/L		94
62) o-Xylene	10.469	91	8823	1.33	ug/L		96
65) Isopropylbenzene	10.737	105	8998	1.11	ug/L		95
69) n-Propylbenzene	11.078	91	4452	0.47	ug/L		95
72) 1,3,5-Trimethylbenzene	11.230	105	2512	0.39	ug/L		98
74) t-1,4-Dichloro-2-butene	11.400	53	126	0.20	ug/L	#	25
75) 4-Chlorotoluene	11.406	91	1521	0.26	ug/L		85
76) tert-Butylbenzene	11.540	91	612	0.17	ug/L	#	65
77) 1,2,4-Trimethylbenzene	11.540	105	6319	0.98	ug/L		98
78) sec-Butylbenzene	11.619	105	1008	0.13	ug/L		66
79) 4-Isopropyltoluene	11.698	119	1426	0.23	ug/L		88
82) n-Butylbenzene	12.045	91	764	0.14	ug/L		75
87) Naphthalene	13.627	128	82541	12.15	ug/L		98

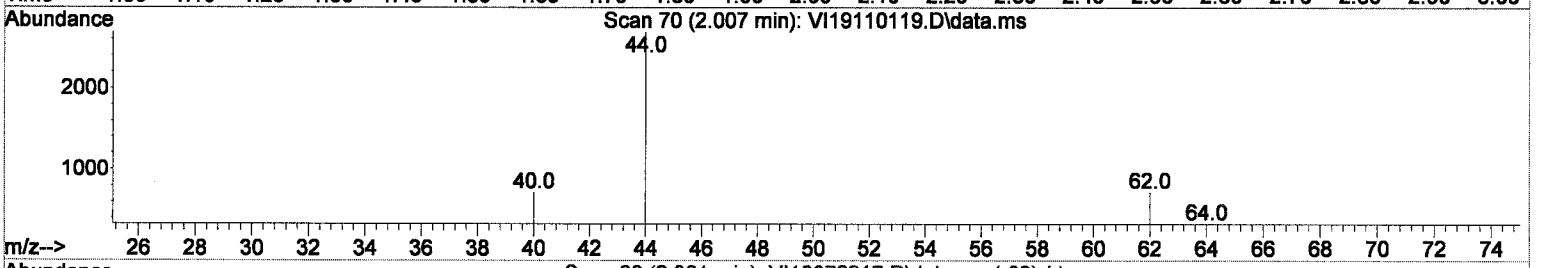
(#) = qualifier out of range (m) = manual integration (+) = signals summed

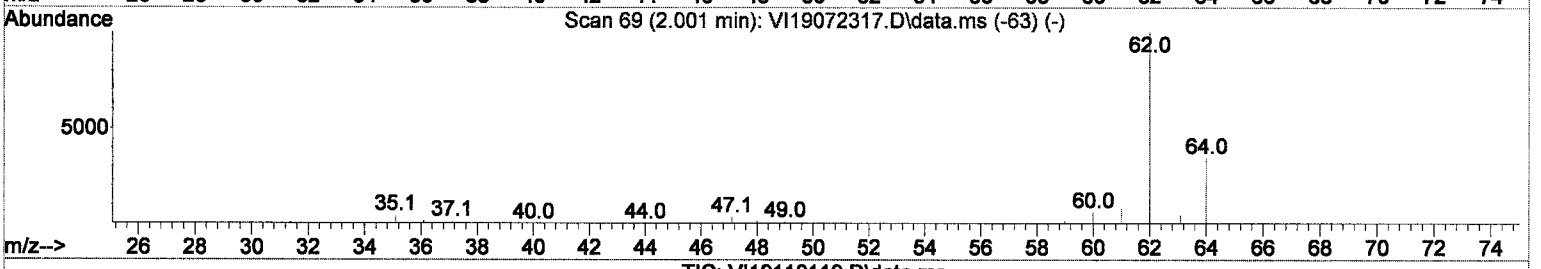
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(4) Vinyl Chloride (C)

2.007min (+ 0.012) 0.36 ug/L

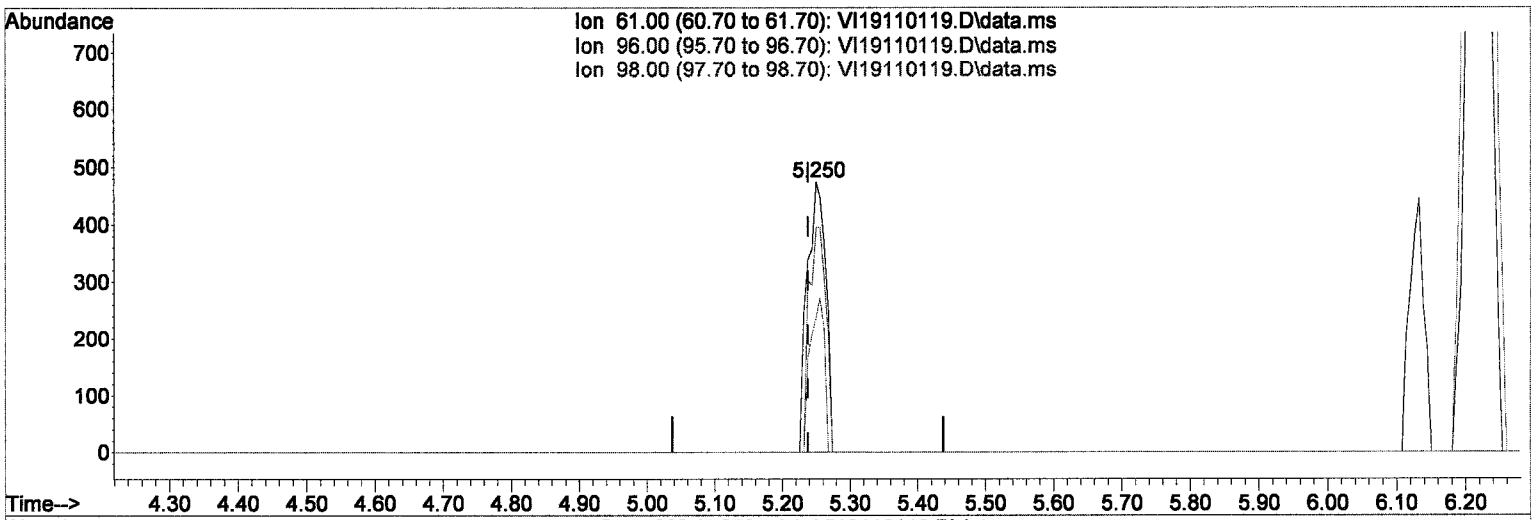
response 841

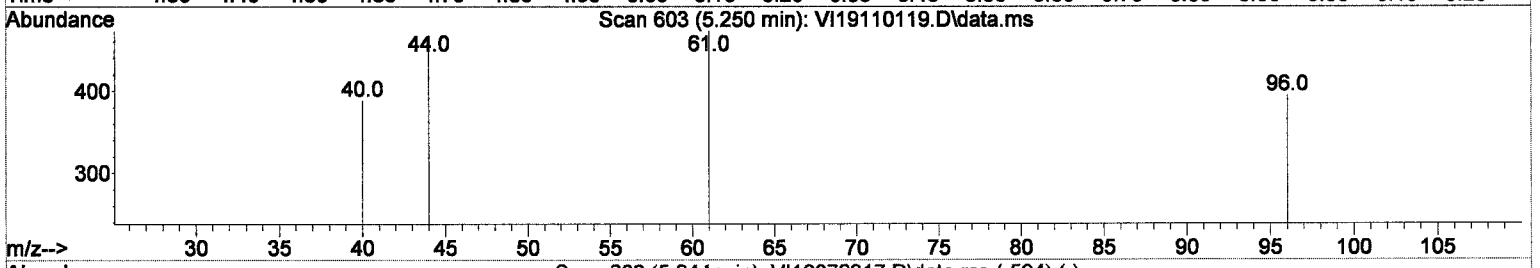
Ion	Exp%	Act%
62.00	100.00	100.00
64.00	31.60	45.86
61.00	11.60	0.00
0.00	0.00	0.00

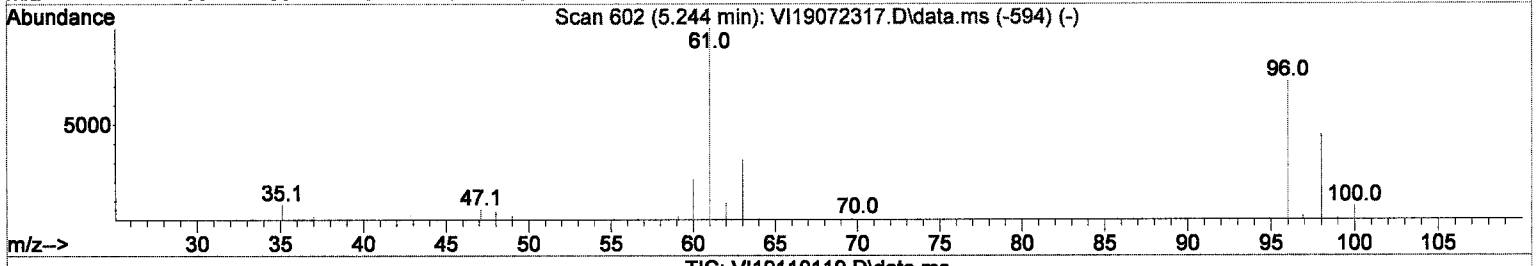
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(25) c-1,2-Dichloroethene

5.250min (+ 0.012) 0.34 ug/L

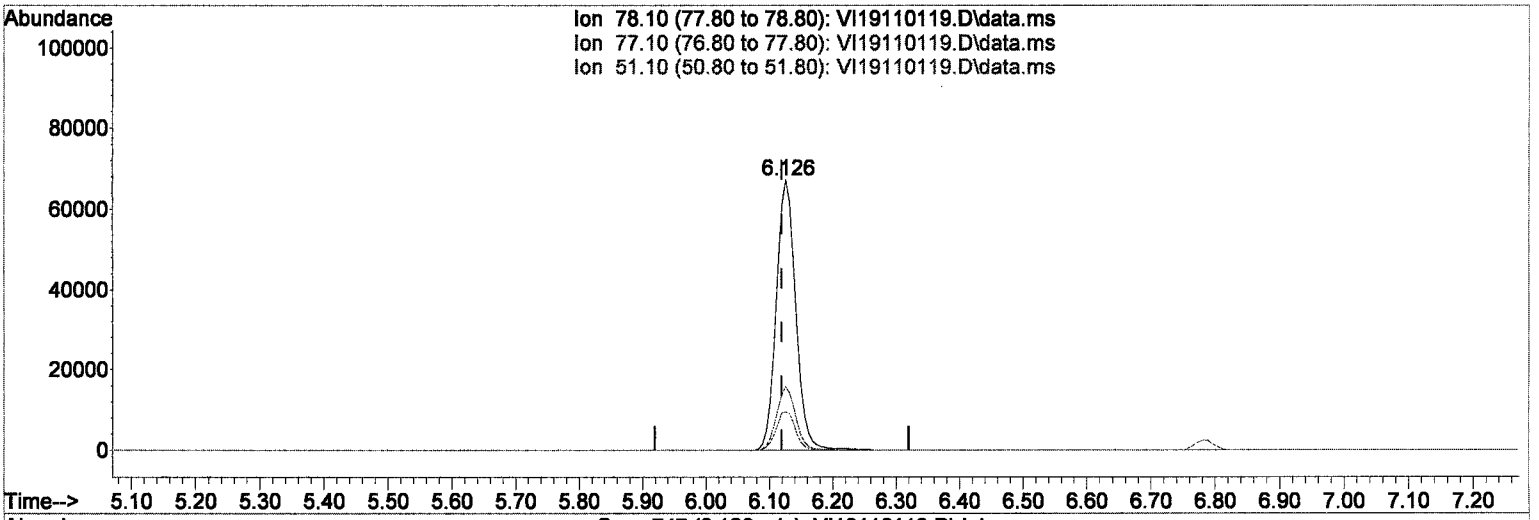
response 904

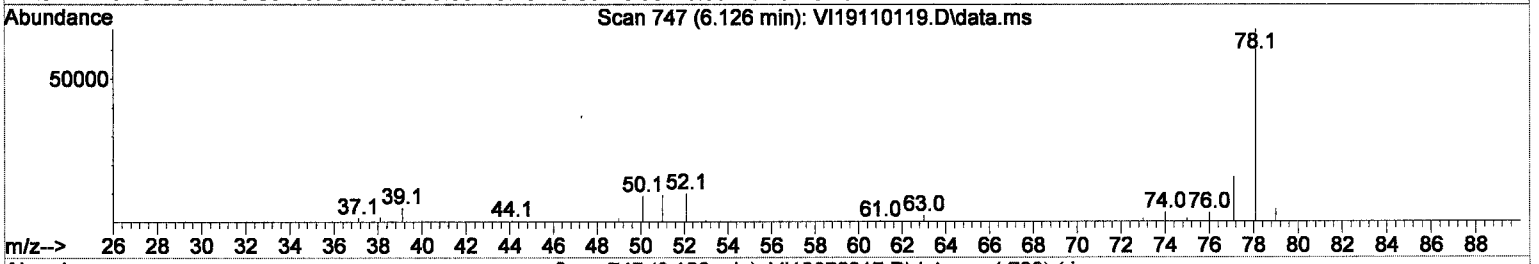
Ion	Exp%	Act%
61.00	100.00	100.00
96.00	71.40	83.30
98.00	48.00	50.32
0.00	0.00	0.00

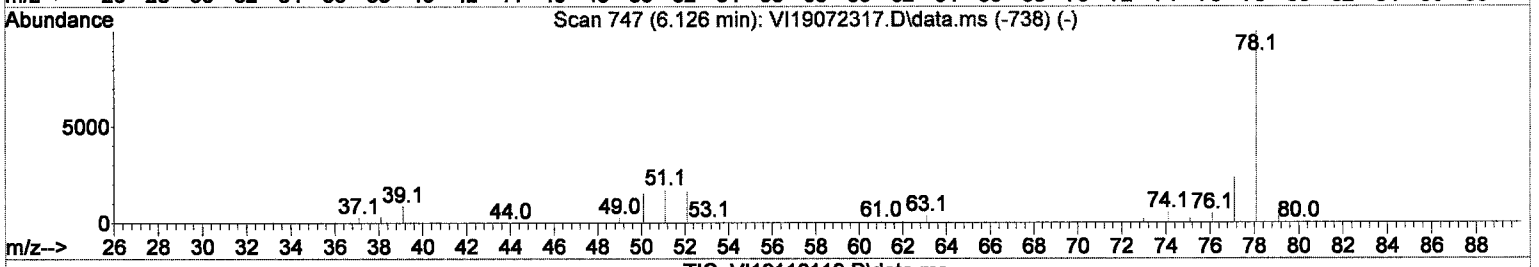
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(35) Benzene

6.126min (+ 0.006) 17.48 ug/L

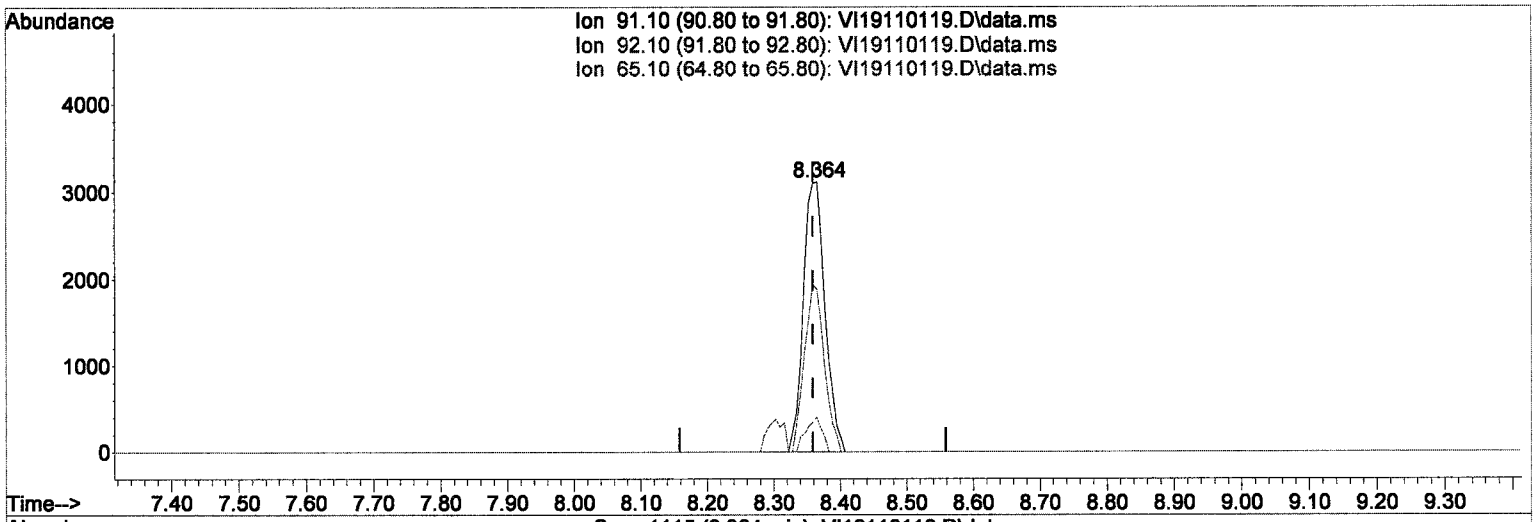
response 143039

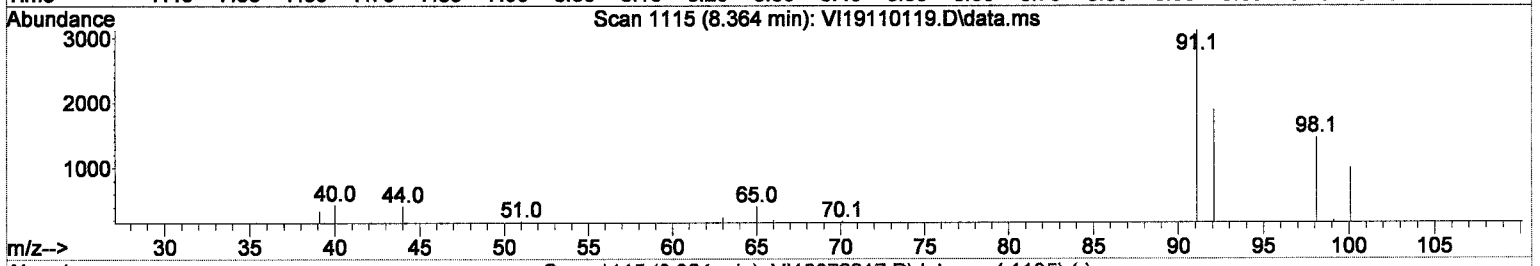
Ion	Exp%	Act%
78.10	100.00	100.00
77.10	24.70	23.39
51.10	17.20	14.10
0.00	0.00	0.00

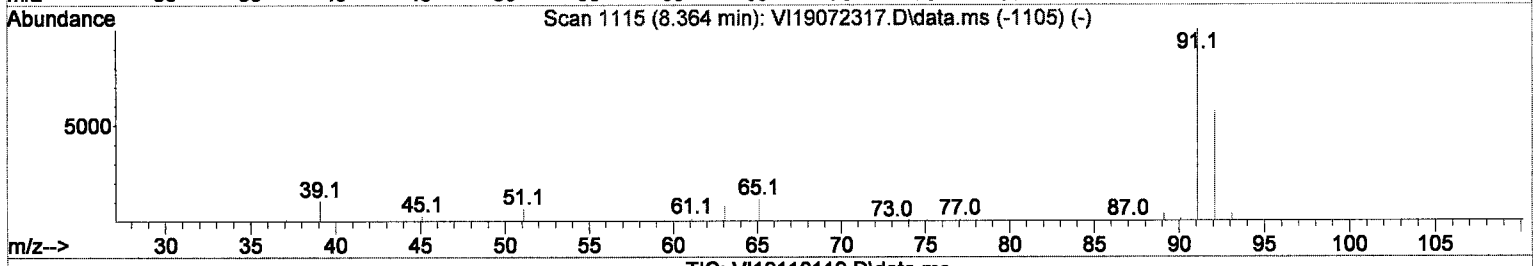
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(49) Toluene (C)

8.364min (+ 0.006) 0.81 ug/L

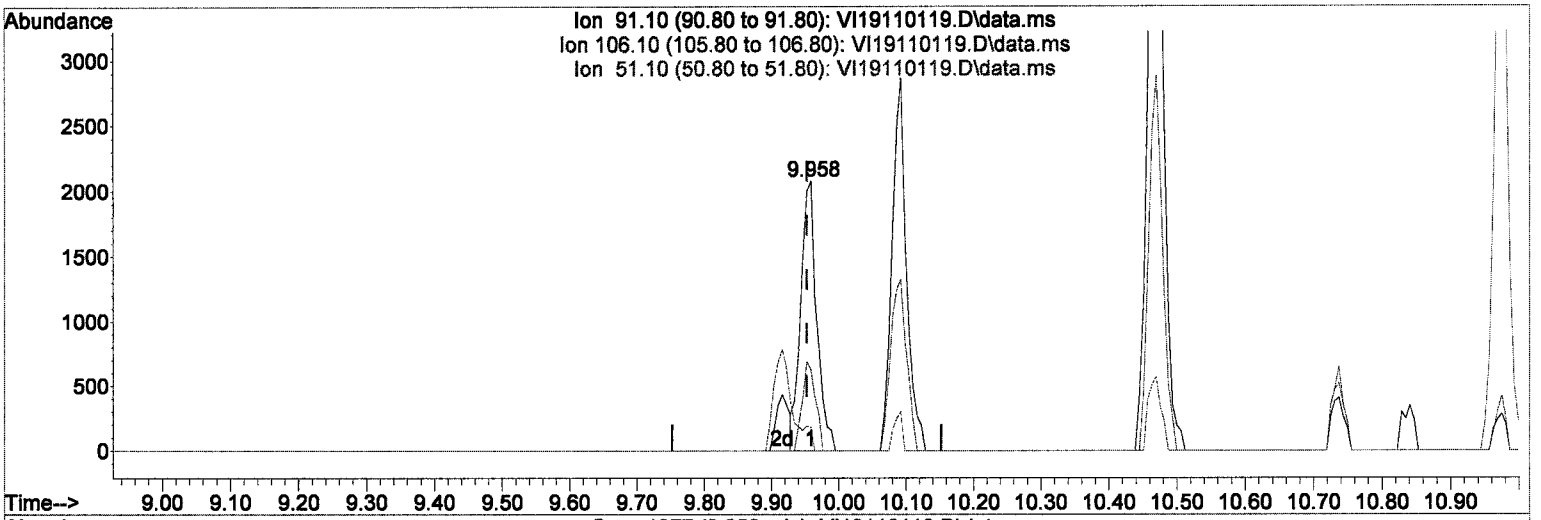
response 7038

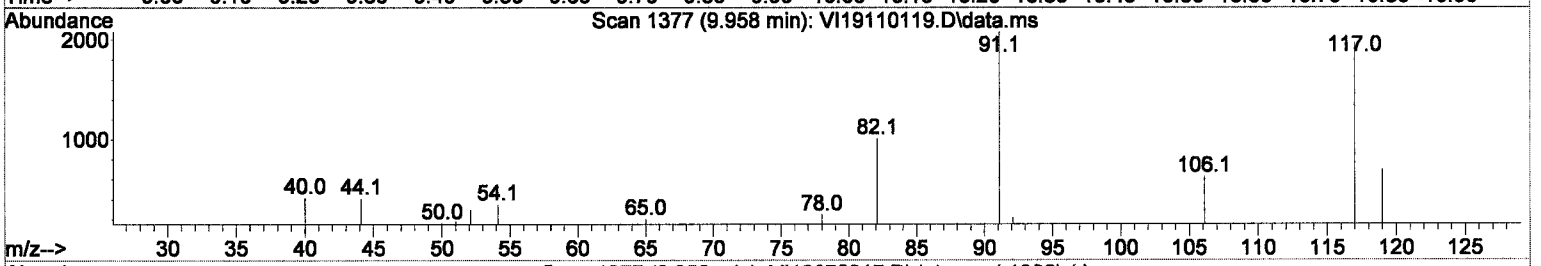
Ion	Exp%	Act%
91.10	100.00	100.00
92.10	59.80	60.46
65.10	10.30	13.01
0.00	0.00	0.00

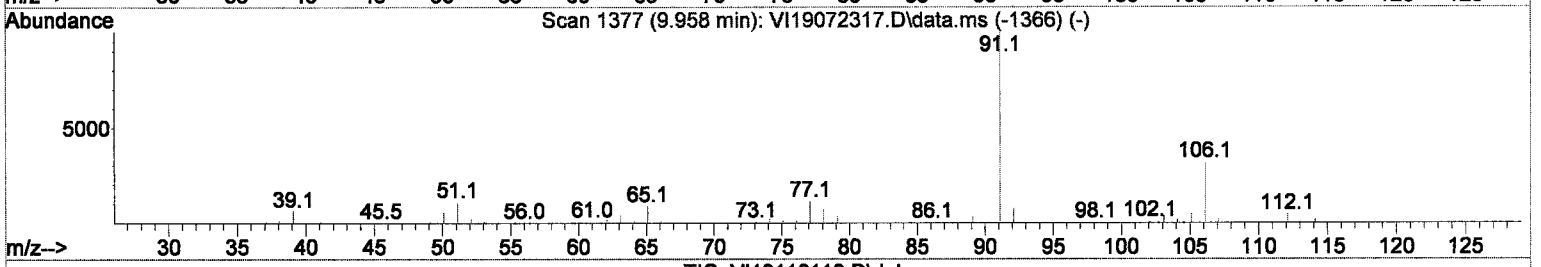
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(59) Ethylbenzene (C)

9.958min (+ 0.006) 0.38 ug/L

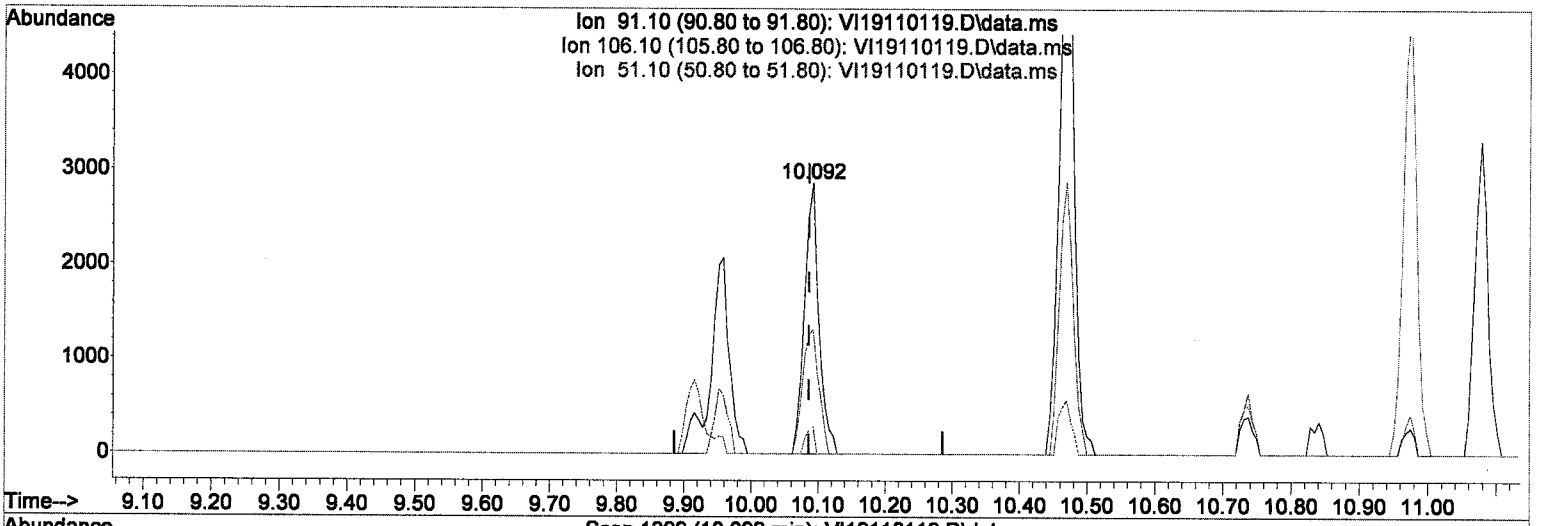
response 3432

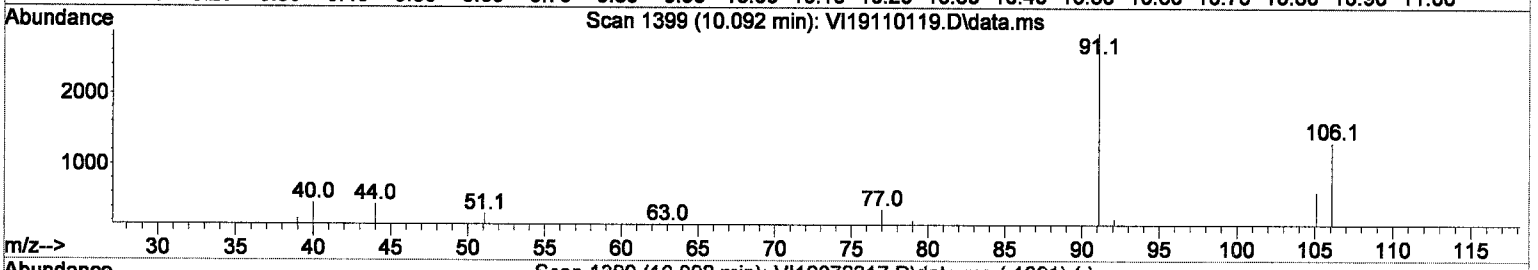
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	30.02
51.10	10.40	8.67
0.00	0.00	0.00

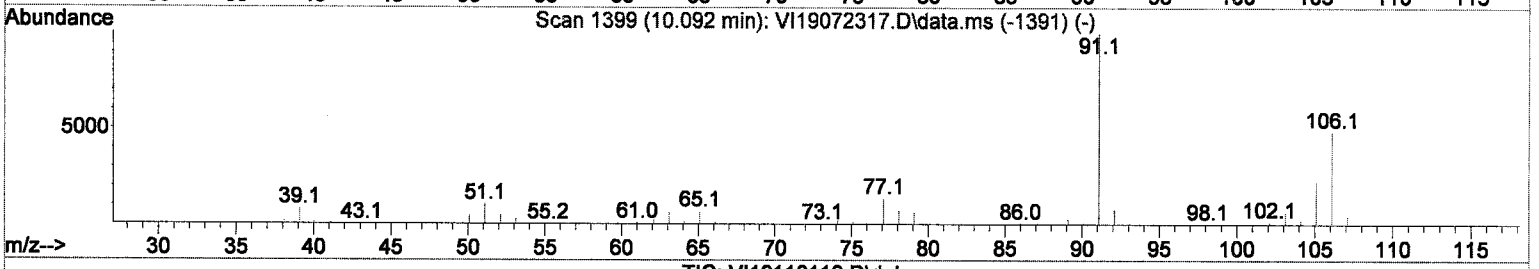
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(61) m,p-Xylenes (2)

10.092min (+ 0.006) 0.64 ug/L

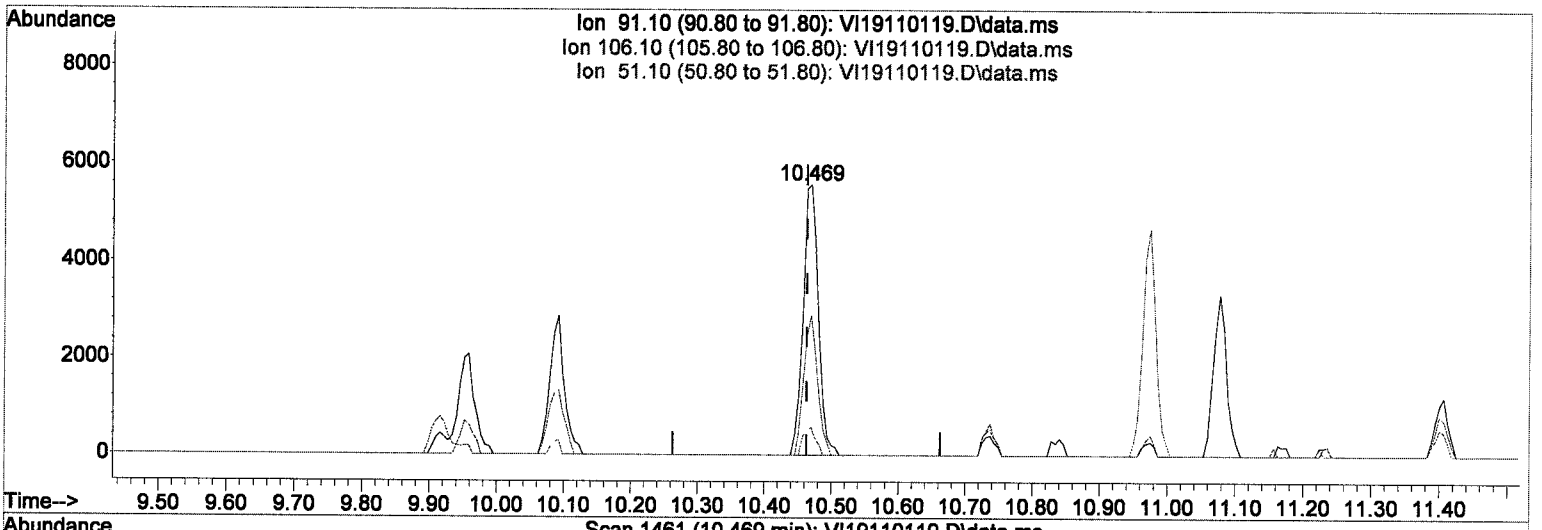
response 4298

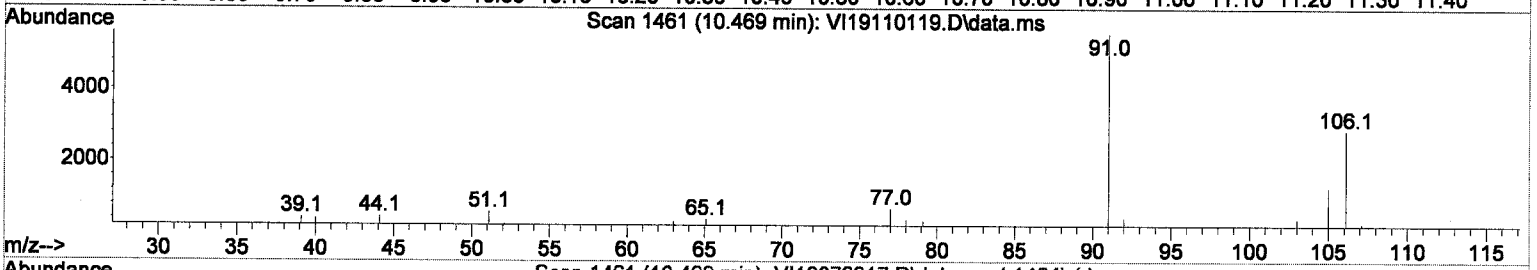
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	51.20	46.21
51.10	9.80	10.42
0.00	0.00	0.00

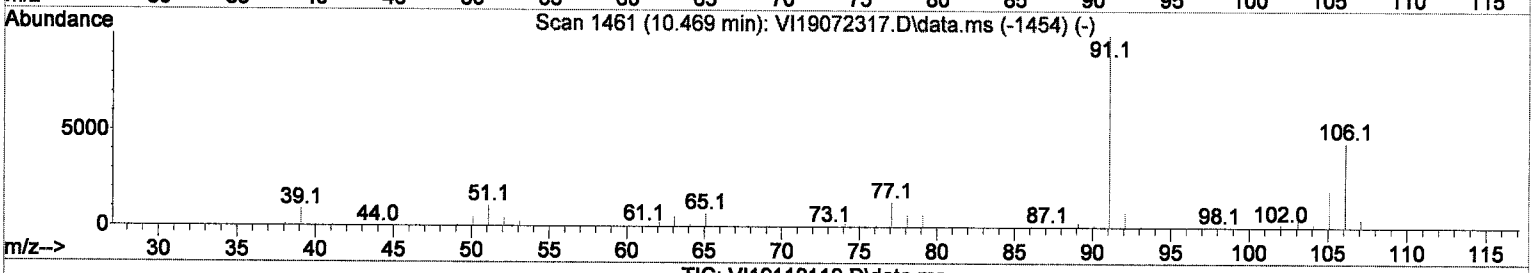
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(62) o-Xylene

10.469min (+ 0.006) 1.33 ug/L

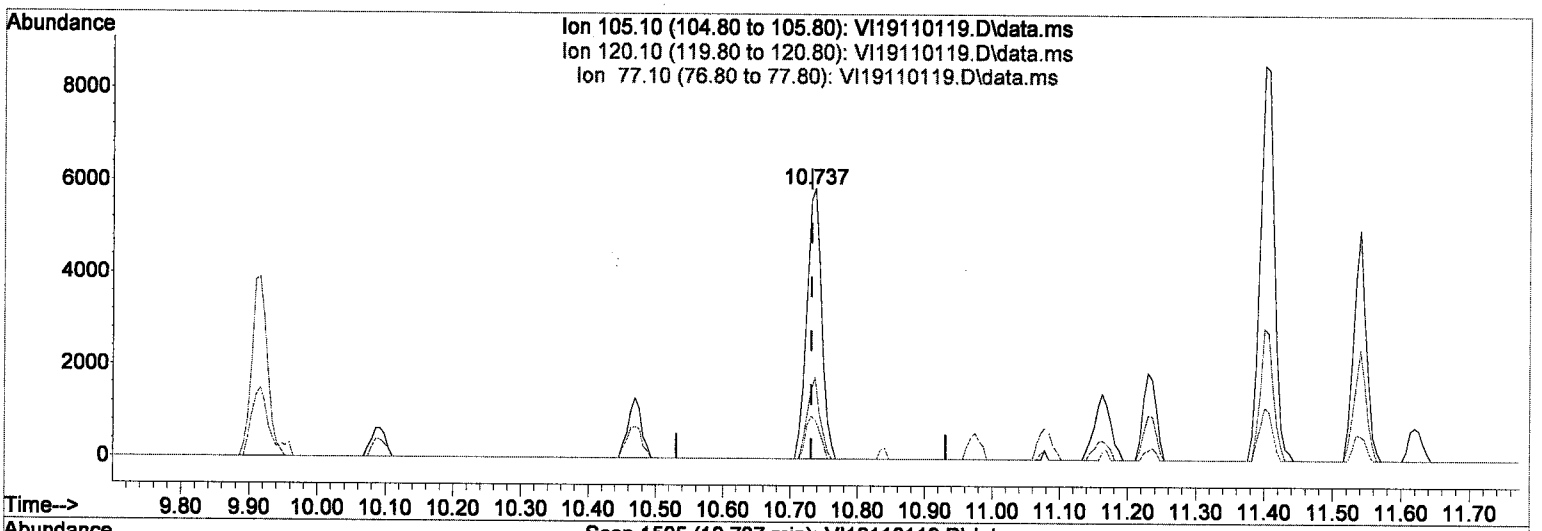
response 8823

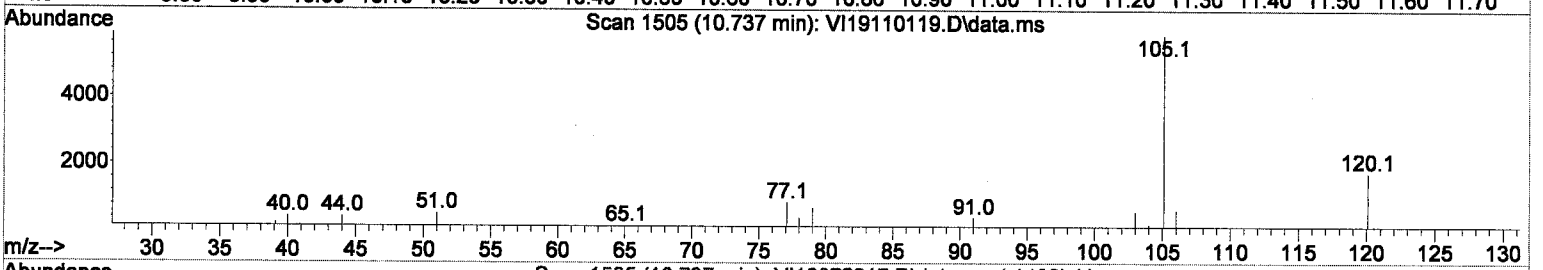
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	48.30	51.73
51.10	10.20	10.25
0.00	0.00	0.00

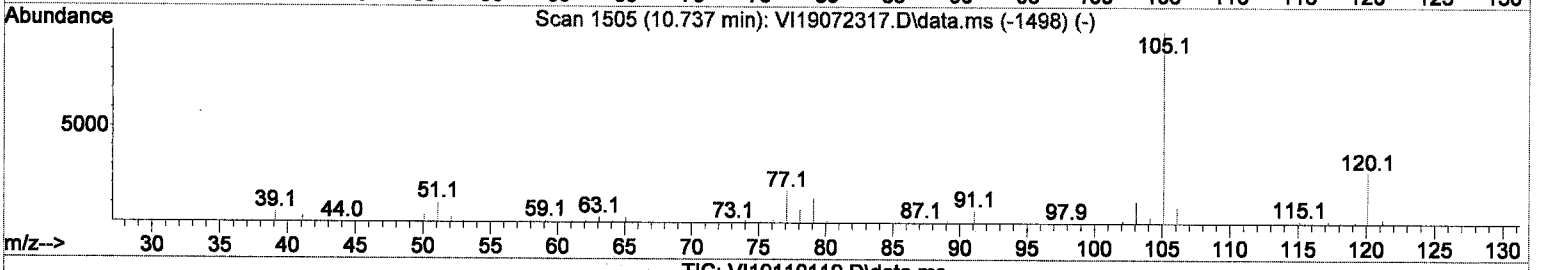
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(65) Isopropylbenzene

10.737min (+ 0.006) 1.11 ug/L

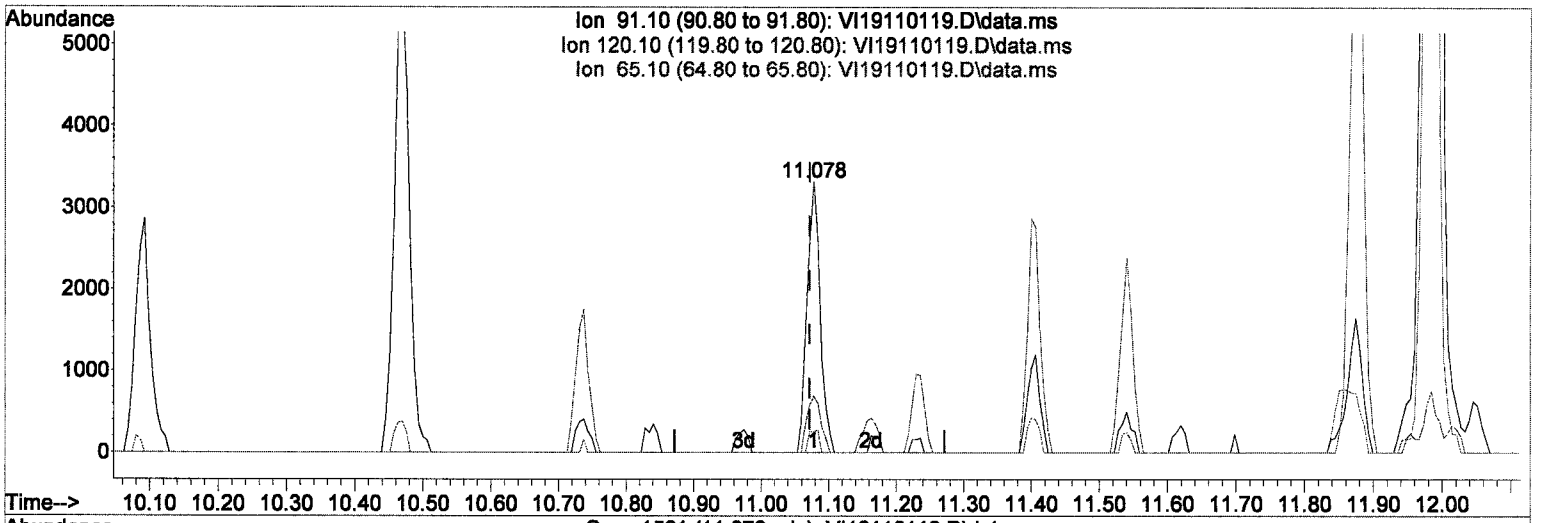
response 8998

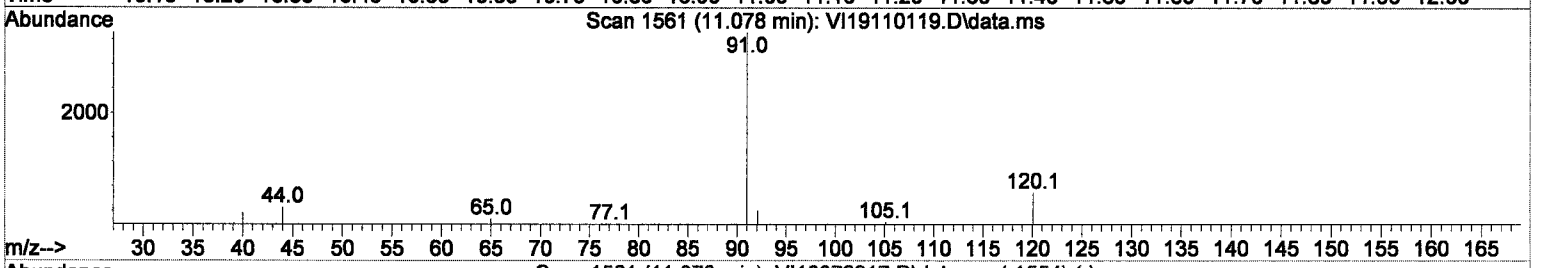
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	26.40	29.93
77.10	15.50	14.80
0.00	0.00	0.00

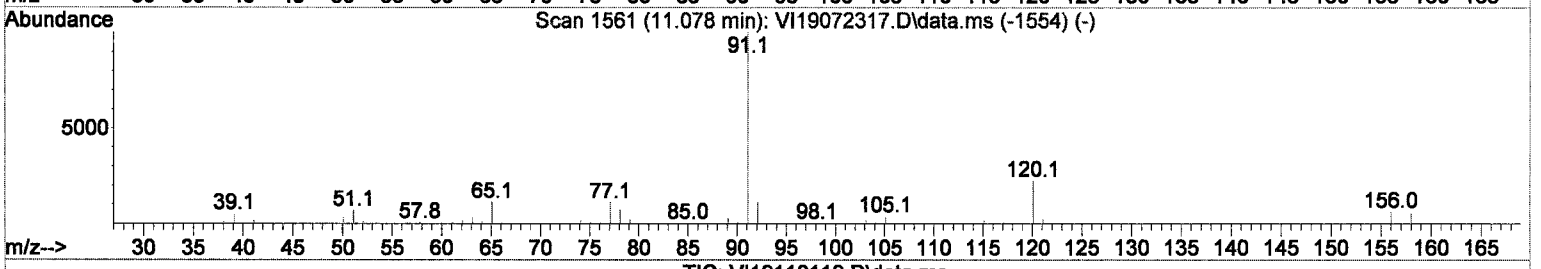
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(69) n-Propylbenzene

11.078min (+ 0.006) 0.47 ug/L

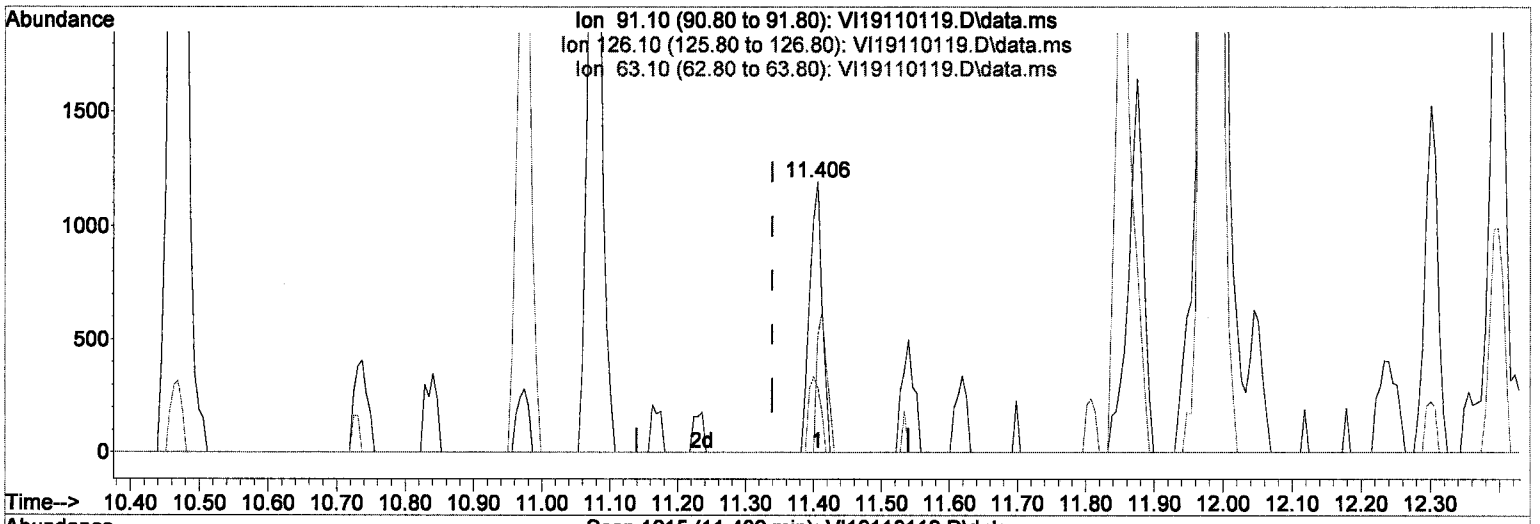
response 4452

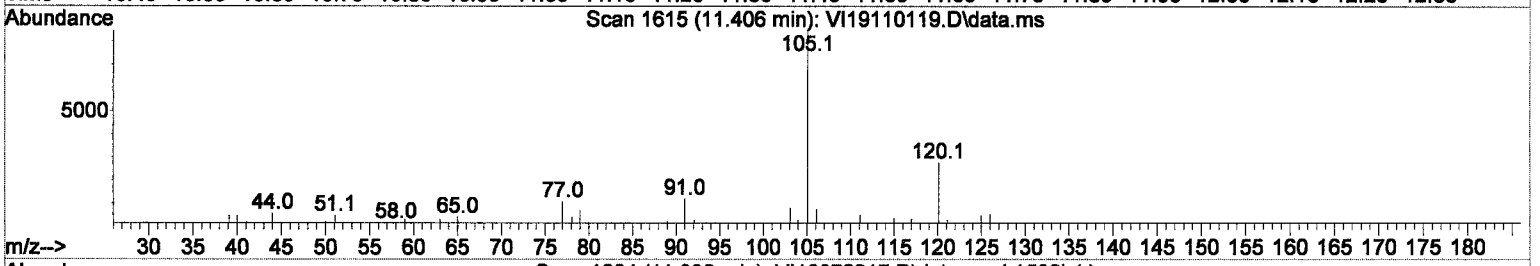
Ion	Exp%	Act%
91.10	100.00	100.00
120.10	23.50	20.83
65.10	9.80	7.73
0.00	0.00	0.00

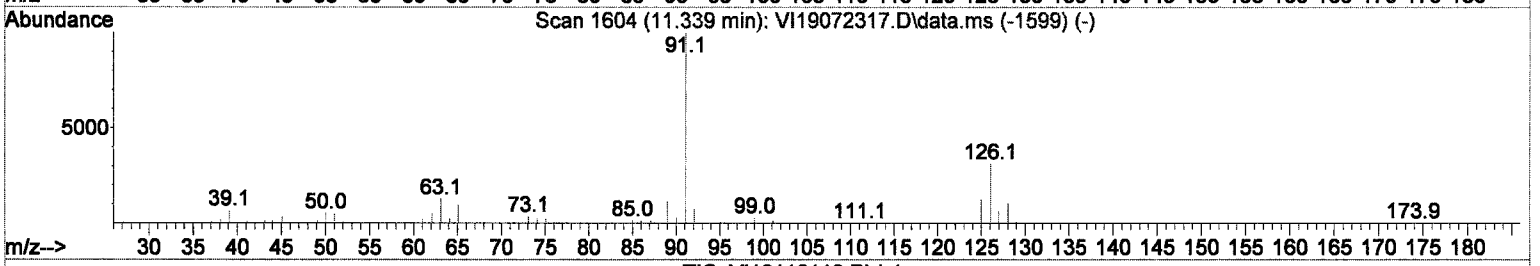
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(75) 4-Chlorotoluene

11.406min (+ 0.067) 0.26 ug/L

response 1521

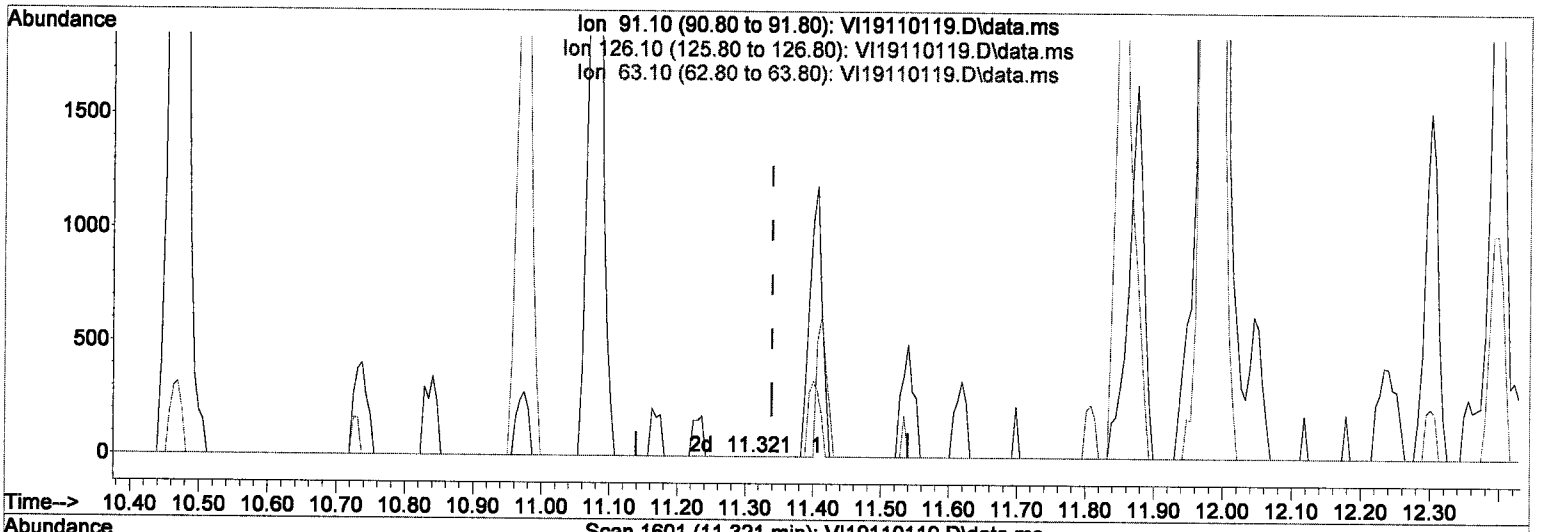
Ion	Exp%	Act%
91.10	100.00	100.00
126.10	37.20	43.37
63.10	12.10	24.08
0.00	0.00	0.00

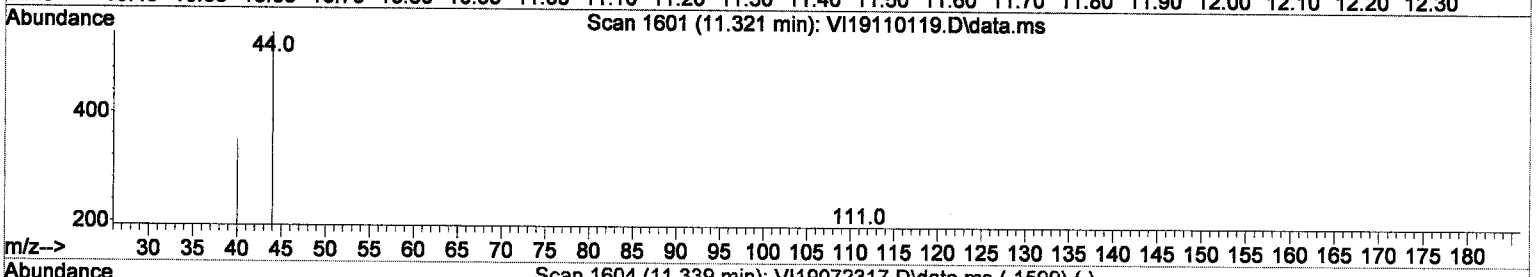
MI 11/4/19 mc

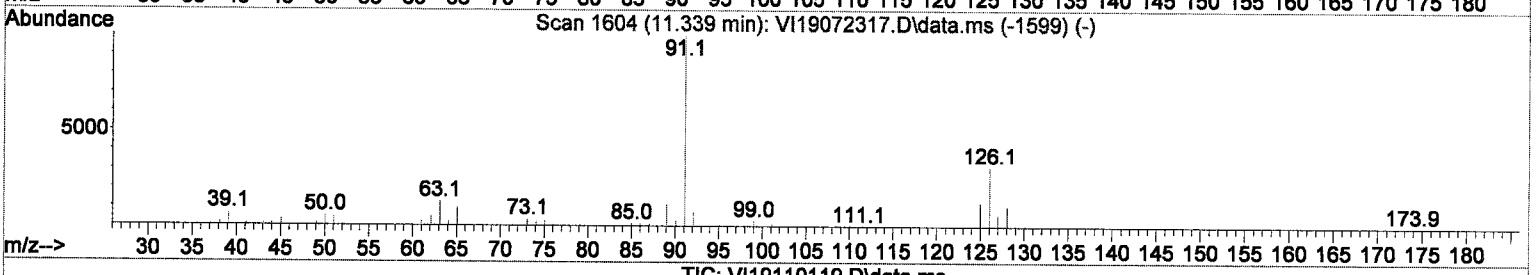
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(75) 4-Chlorotoluene

11.321min (-0.018) 0.00 ug/L m

response 0

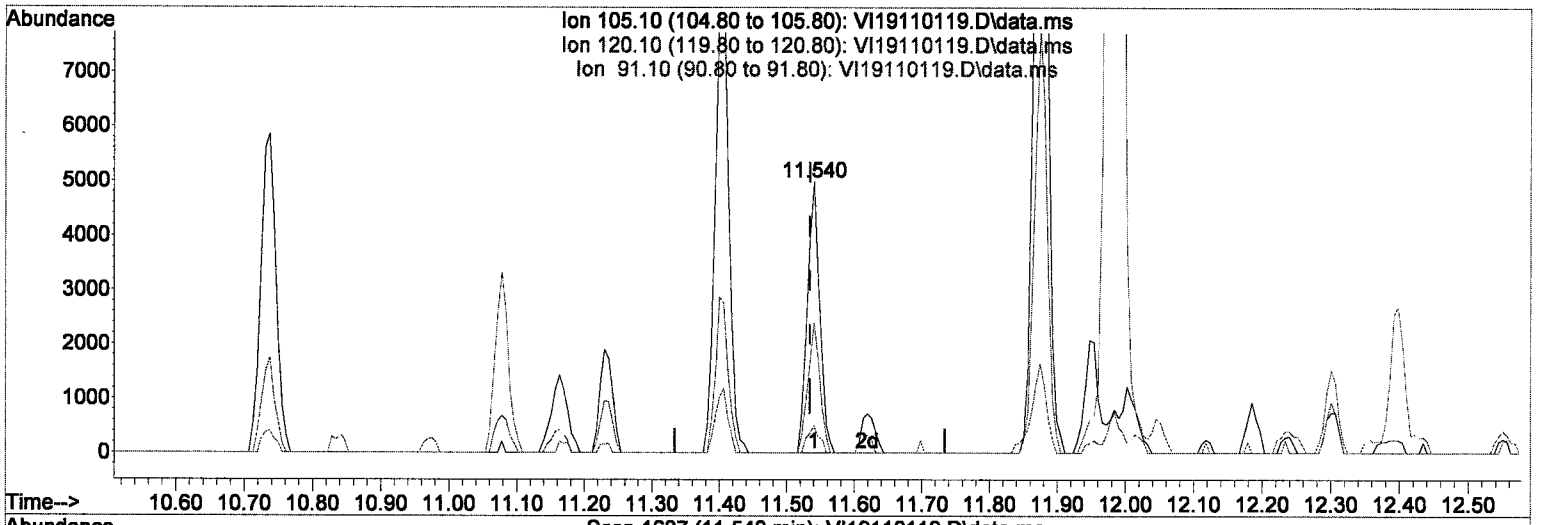
Ion	Exp%	Act%
91.10	100.00	0.00
126.10	37.20	0.00#
63.10	12.10	0.00
0.00	0.00	0.00

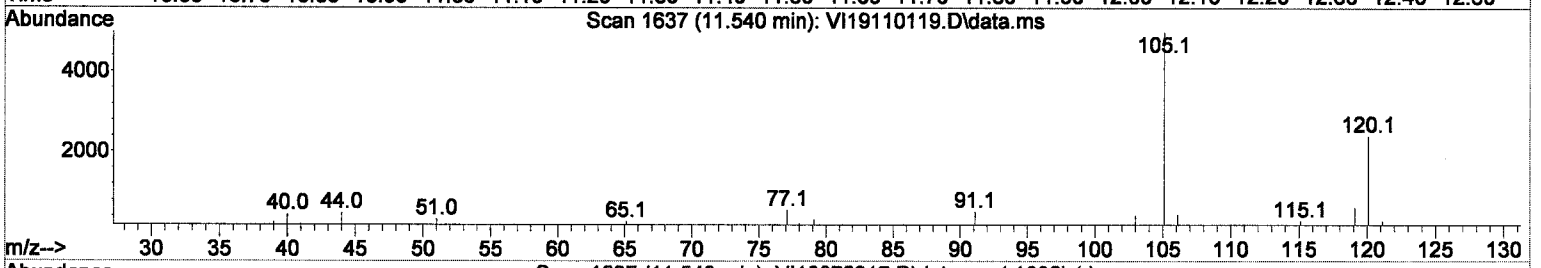
ND
11/4/19 bm

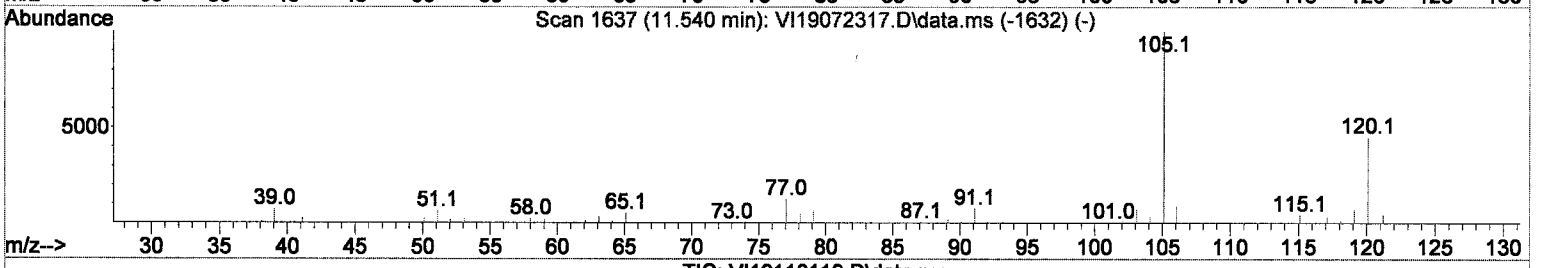
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.540min (+ 0.006) 0.98 ug/L

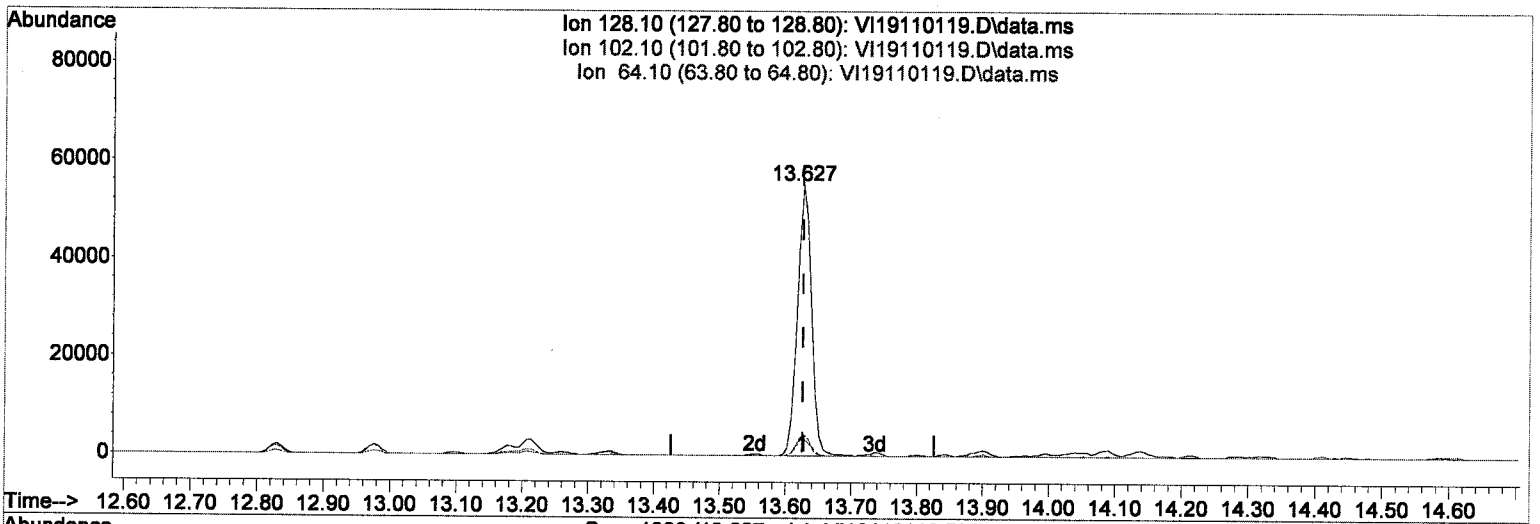
response 6319

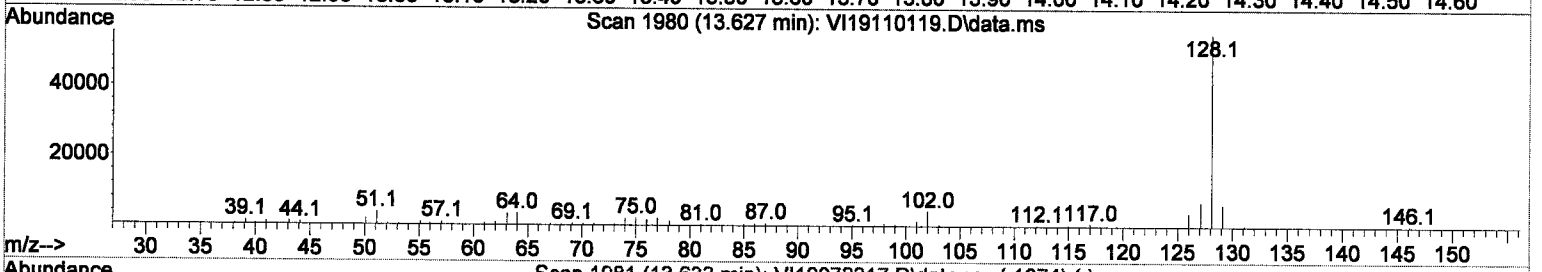
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	49.80	47.96
91.10	10.50	9.95
0.00	0.00	0.00

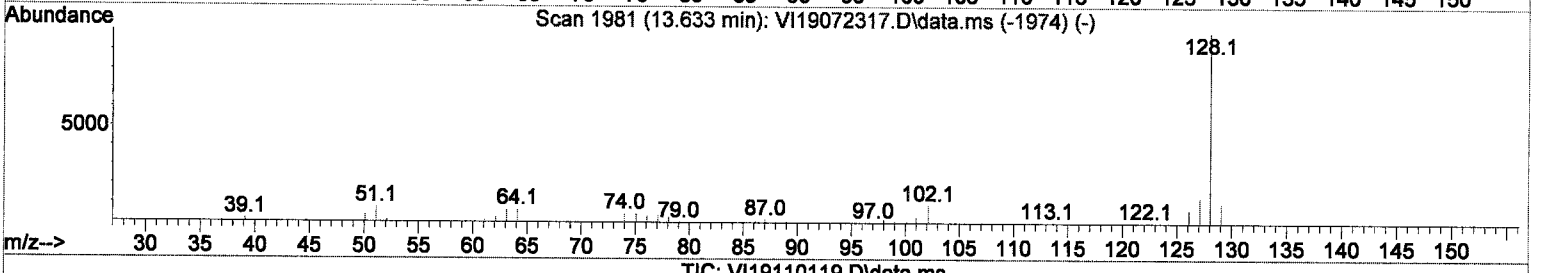
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110119.D\data.ms

(87) Naphthalene

13.627min (+ 0.001) 12.15 ug/L

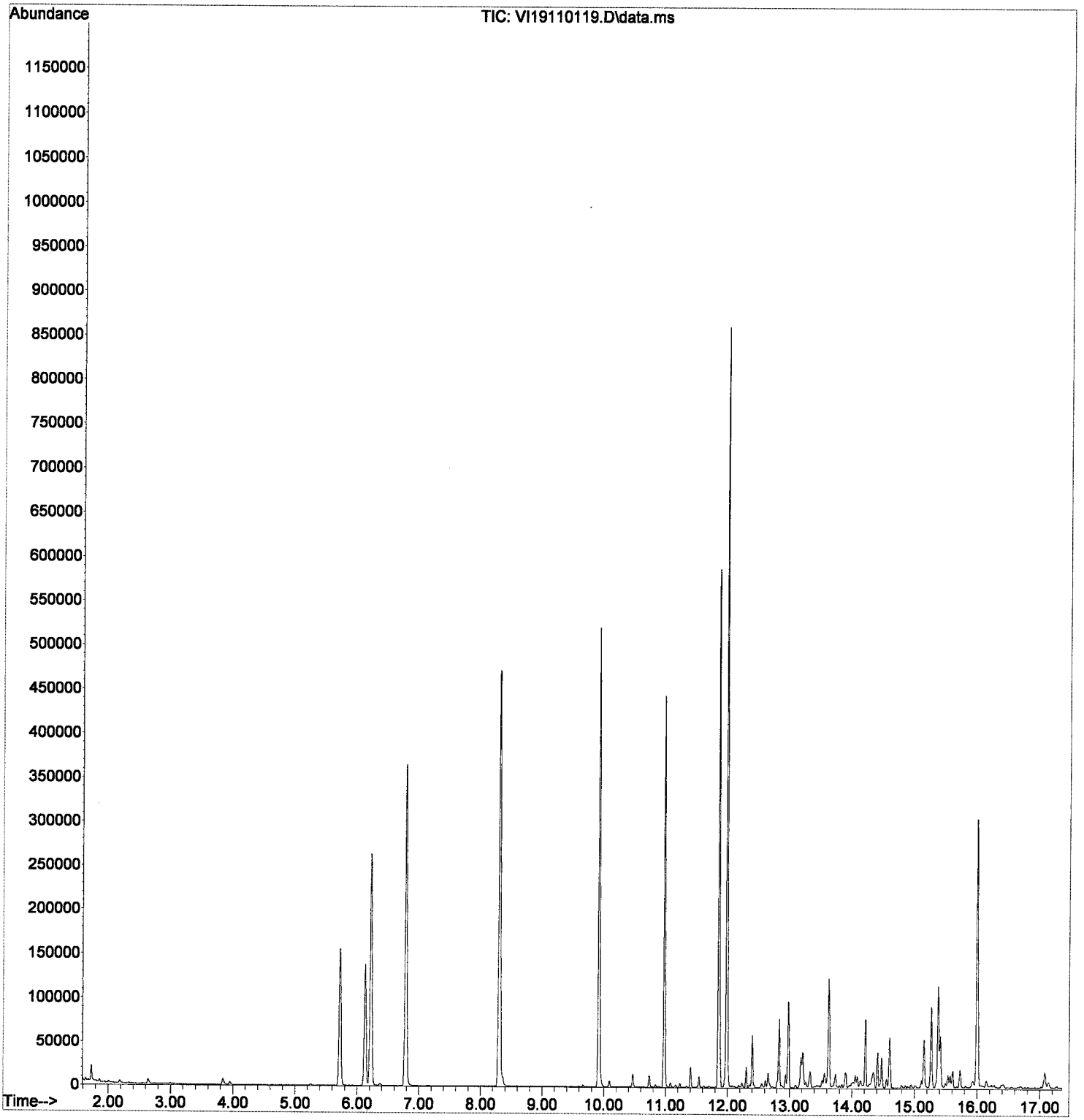
response 82541

Ion	Exp%	Act%
128.10	100.00	100.00
102.10	7.60	7.87
64.10	4.70	6.26
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01026\
Data File : VI19110119.D
Acq On : 1 Nov 2019 6:41 pm
Operator : tb
Sample : A9J1114-05
Misc : 1X 5mL 8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 09:05:18 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 5035A/8260C
Benchsheet & Analysis Sequence Data

Batch 9110371
Sequence 9K01040 (A9J1114-01,02,04,06,07)

PREPARATION BENCH SHEET

Apex Laboratories

NOV 0 5 2019

BATCH #: 9110371 (Water)

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9110371-BLK1		QC	11/01/19 13:33	5	5							
9110371-BS1		QC	11/01/19 13:33	5	5	A19J484		5				
9110371-BS2		QC	11/01/19 13:33	5	5	A19J354		5				
A9J1062-01RE1	B	8260C Full List	11/01/19 13:33	5	5					BHSWF-102919-MW-4	1X RR1	<2
A9J1062-02	A	8260C Full List	11/01/19 13:33	5	5					BHSWF-102919-MW-4 Dup		<2
A9J1062-03RE1	B	8260C Full List	11/01/19 13:33	5	5					BHSWF-102919-MW-2	1X RR1	<2
A9J1062-04RE1	B	8260C Full List	11/01/19 13:33	5	5					BHSWF-102919-MW-5	1X RR1	<2
A9J1062-05RE1	B	8260C Full List	11/01/19 13:33	5	5					BHSWF-102919-MW-1	1X RR1	<2
A9J1110-01RE1	B	8260C Full List	11/01/19 13:33	5	5					GW-PW-92A-1019	1X RR3	<2
A9J1110-09RE1	B	8260C Full List	11/01/19 13:33	5	5					GW-PW-86A-1019	1X RR1/RR3	<2
A9J1110-09RE1	B	8260C RBDM List	11/01/19 13:33	5	5					GW-PW-86A-1019	Added for BatchQC in: 9110371	<2
A9J1110-09RE1	B	8260C Halo Short	11/01/19 13:33	5	5					GW-PW-86A-1019	Added for BatchQC in: 9110371	<2
9110371-MS1		QC	11/01/19 13:33	5	5	A19J484	A9J1110-09RE1	5				<2
9110371-MSD1		QC	11/01/19 13:33	5	5	A19J484	A9J1110-09RE1	5				
A9J1111-01RE1	B	8260C RBDM List	11/01/19 13:33	5	5					15103 4602-TANKS	100X B,T,X RR2	<2
A9J1114-01	B	8260C Full List	11/01/19 13:33	5	5					PDI-TB-1910300000	All Compounds. SIM if VC ND - D	<2
A9J1114-02	C	8260C Full List	11/01/19 13:33	5	5					PDI-028PW-9-11-191030	All Compounds. SIM if VC ND - D	<2
A9J1114-04	B	8260C Full List	11/01/19 13:33	5	5					PDI-038PW-9-11-191030	All Compounds. SIM if VC ND - D	<2
A9J1114-06	B	8260C Full List	11/01/19 13:33	5	5					PDI-059PW-04-06-191030	HS in C container, All Compounds	<2
A9J1114-07	B	8260C Full List	11/01/19 13:33	5	5					PDI-059PW-10-12-191030	All Compounds. SIM if VC ND - D	<2
A9K0016-01	A	8260C Full List	11/01/19 13:33	5	5					SW-4-110119		<2
A9K0016-02	A	8260C Full List	11/01/19 13:33	5	5					SW-5B-110119		<2

Prepared By: 11/4/19 Date

Reviewed By: 11/4/19 Date

Printed: 11/4/2019 10:21:49AM

PREPARATION BENCH SHEET

BATCH #: 9110371 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9K0016-03	A	8260C Full List	11/01/19 13:33	5	5					SW-8-110119		<2
A9K0018-01	A	8260C Full List	11/01/19 13:33	5	5					Influent-110119	Added for BatchQC in: 9110371	<2
A9K0018-01	A	8260C RBDM List	11/01/19 13:33	5	5					Influent-110119	Added for BatchQC in: 9110371	<2
A9K0018-01	A	8260C Halo Short	11/01/19 13:33	5	5					Influent-110119	Custom:TCE,PCE,VC,cis & trans-1	<2
9110371-DUP1		QC	11/01/19 13:33	5	5		A9K0018-01					<2
A9K0018-02	A	8260C Halo Short	11/01/19 13:33	5	5					Effluent-110119	Custom:TCE,PCE,VC,cis & trans-1	<2

*pH <2 verified JB 11/4/19

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description

Analyte Spike(s)

Std ID	Exp. Date	Description
A19J354	04/21/20	Prim NWTPH-Gx Spike (500 ug/mL)
A19J484	04/09/20	8260 Cal. Std. B VOC+OXY Spike (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

GCMS7

Prepared By: Date

Reviewed By: 11/4/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9K01040	Instrument:	VOA-GCMS7
Date:	11/01/19 12:50	Calibration:	A9J2806

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9K01040-IBL1	Water	QC	QC			A19F381	
2	9K01040-TUN1	Water	QC	QC			A19F381	
3	9K01040-CCV1	Water	QC	QC			A19F381	
4	9110371-BS1	Water	QC	QC		9110371	A19F381	
5	9K01040-CCV2	Water	QC	QC			A19F381	
6	9110371-BS2	Water	QC	QC		9110371	A19F381	
7	9110371-BLK1	Water	QC	QC		9110371	A19F381	
8	A9J1062-01RE1	Water	8260C Full List		11/12/19	9110371	A19F381	
9	A9J1062-02	Water	8260C Full List		11/12/19	9110371	A19F381	
10	A9J1062-03RE1	Water	8260C Full List		11/12/19	9110371	A19F381	
11	A9J1062-04RE1	Water	8260C Full List		11/12/19	9110371	A19F381	
12	A9J1062-05RE1	Water	8260C Full List		11/12/19	9110371	A19F381	
13	A9J1110-01RE1	Water	8260C Full List		11/13/19	9110371	A19F381	
14	A9J1111-01RE1	Water	8260C RBDM List		11/07/19	9110371	A19F381	
15	9K01040-IBL2	Water	QC	QC			A19F381	
16	A9K0016-01	Water	8260C Full List		11/14/19	9110371	A19F381	
17	A9K0016-02	Water	8260C Full List		11/14/19	9110371	A19F381	
18	A9K0016-03	Water	8260C Full List		11/14/19	9110371	A19F381	
19	A9K0018-02	Water	8260C Halo Short		11/14/19	9110371	A19F381	
20	A9K0018-01	Water	8260C Halo Short		11/14/19	9110371	A19F381	
"	"	Water	8260C Full List	(QC Source)		9110371	A19F381	
"	"	Water	8260C RBDM List	(QC Source)		9110371	A19F381	
21	9110371-DUP1	Water	QC	QC		9110371	A19F381	
22	A9J1114-01	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110371	A19F381	
23	A9J1114-02	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110371	A19F381	
24	A9J1114-04	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110371	A19F381	
25	A9J1114-06	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110371	A19F381	
26	A9J1114-07	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110371	A19F381	
27	A9J1110-09RE1	Water	8260C Full List		11/13/19	9110371	A19F381	
"	"	Water	8260C RBDM List	(QC Source)		9110371	A19F381	
"	"	Water	8260C Halo Short	(QC Source)		9110371	A19F381	
28	9110371-MS1	Water	QC	QC		9110371	A19F381	
29	9110371-MSD1	Water	QC	QC		9110371	A19F381	
30	9K01040-IBL3	Water	QC	QC			A19F381	
31	9K01040-IBL4	Water	QC	QC			A19F381	
32	9K01040-IBL5	Water	QC	QC			A19F381	
33	9K01040-IBL6	Water	QC	QC			A19F381	

Data Entered By: 11/4/19

Data Reviewed By: 11/4/19

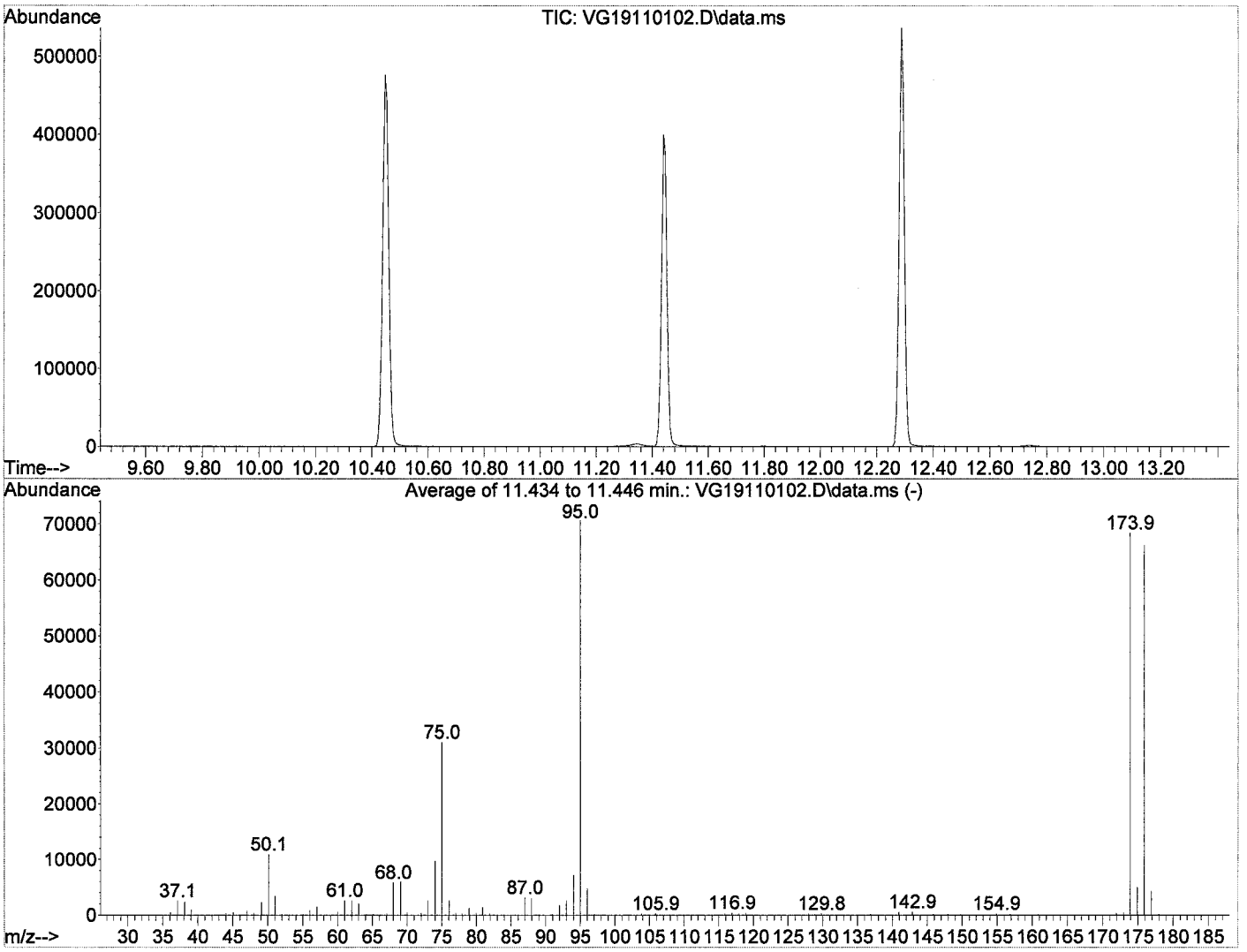
Comments: ↑DCM to 5/10 ppb ✓

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110102.D
Acq On : 1 Nov 2019 1:23 pm
Operator : tb
Sample : 9K01040-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Mon Oct 28 11:12:23 2019

11/1/19



AutoFind: Scans 1607, 1608, 1609; Background Corrected with Scan 1600

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	103.4	70640	PASS
96	95	5	9	6.7	4735	PASS
173	174	0.00	2	0.6	409	PASS
174	95	50	200	96.7	68325	PASS
175	174	5	9	7.2	4899	PASS
176	174	95	105	96.9	66229	PASS
177	176	5	10	6.5	4286	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110102.D
Acq On : 1 Nov 2019 1:23 pm
Operator : tb
Sample : 9K01040-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:45:41 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

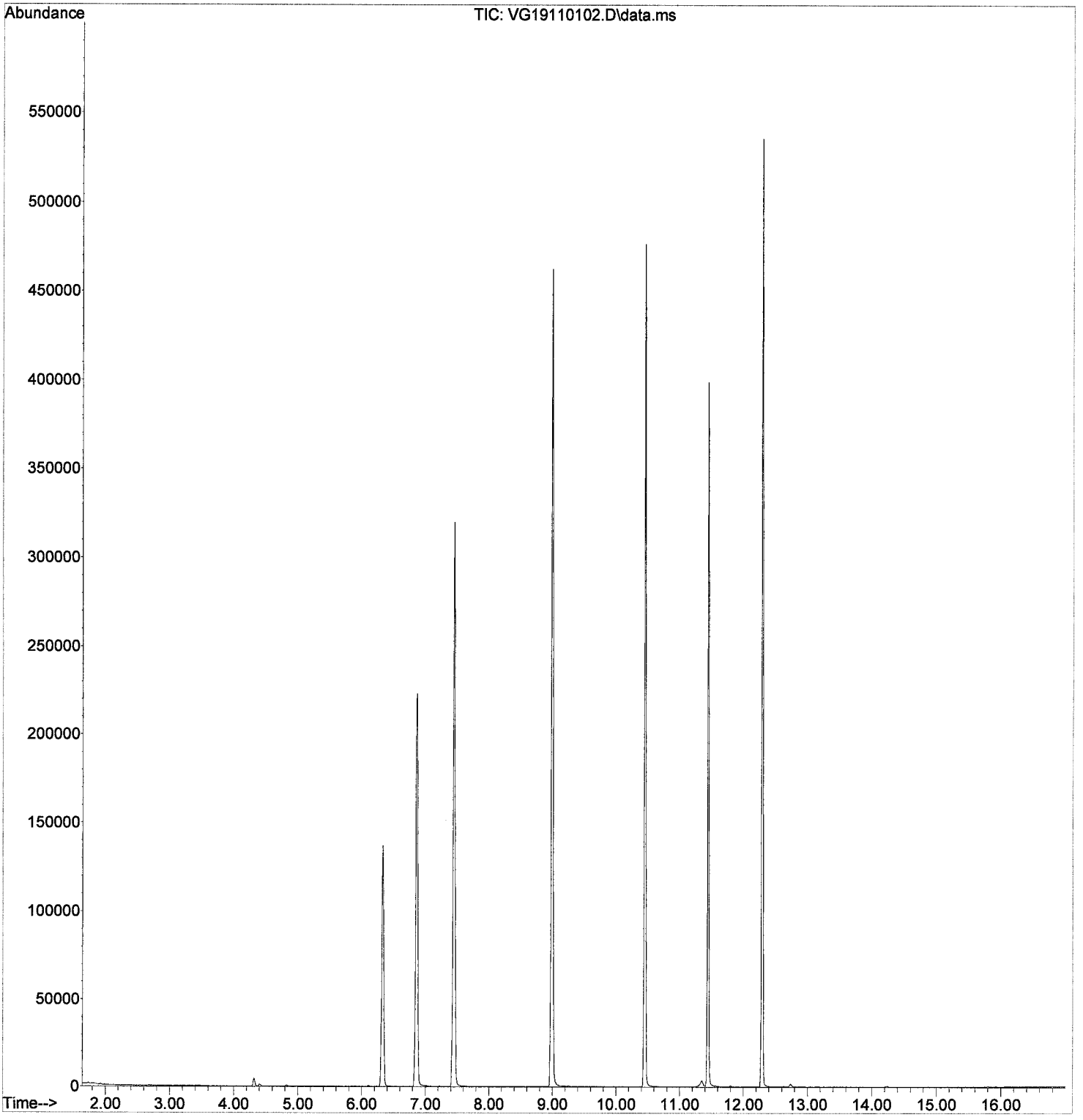
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	84141	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.446	117	262902	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.287	152	131253	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.325	111	92845	52.42	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	306453	53.02	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	340135	49.62	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	111920	50.50	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.984	50	269	0.14	ug/L		85
6) Chloroethane	2.722	64	30	Below Cal		#	47
8) Ethanol	3.636	45	10	0.23	ug/L	#	29
14) Methylene Chloride	4.319	84	2341	0.43	ug/L		87
15) Acetone	4.404	43	1369	1.56	ug/L		91
19) tert-Butanol (TBA)	4.825	59	568	1.71	ug/L	#	58
87) Naphthalene	14.207	128	45	0.28	ug/L		79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110102.D
Acq On : 1 Nov 2019 1:23 pm
Operator : tb
Sample : 9K01040-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:45:41 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110103.D
Acq On : 1 Nov 2019 1:50 pm
Operator : tb
Sample : 9110371-BS1
Misc : 1X 5mL 20/40PPB VOCRO A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:38:15 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

11/1/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	95	0.00	
2		Dichlorodifluoromethane	20.000	20.600	-3.0	105	0.00	
3	P	Chloromethane	20.000	18.957	5.2	97	0.00	
4	C	Vinyl Chloride	20.000	20.700	-3.5	98	0.00	
5		Bromomethane	20.000	19.411	2.9	99	0.00	
6		Chloroethane	20.000	21.373	-6.9	104	0.00	
7		Trichlorofluoromethane	20.000	21.758	-8.8	102	0.00	
8		Ethanol	1250.000	1175.397	6.0	85	0.00	
9	C	1,1-Dichloroethene	20.000	21.662	-8.3	103	0.00	
10		Carbon Disulfide	20.000	21.108	-5.5	103	0.00	
11		Freon 113	20.000	21.650	-8.2	103	0.00	
12		Iodomethane	20.000	15.427	22.9#	80	0.00	-NR
13		Acrolein	20.000	19.181	4.1	93	0.00	
14		Methylene Chloride	20.000	21.647	-8.2	99	0.00	
15		Acetone	40.000	38.746	3.1	94	0.00	
16		t-1,2-Dichloroethene	20.000	21.479	-7.4	99	0.00	
17		n-Hexane	20.000	23.749	-18.7	113	0.00	
18		Methyl-tert-butyl-ether	20.000	22.538	-12.7	98	0.00	
19		tert-Butanol (TBA)	1250.000	1261.697	-0.9	84	0.00	
20		Diisopropyl ether (DIPE)	5.000	4.697	6.1	80	0.00	
21	P	1,1-Dichloroethane	20.000	20.675	-3.4	98	0.00	
22		Acrylonitrile	20.000	21.188	-5.9	93	0.00	
23		Vinyl Acetate	20.000	19.159	4.2	92	0.00	
24		Ethyl-tert-butyl ether (ETB	5.000	5.031	-0.6	83	0.00	
25		c-1,2-Dichloroethene	20.000	21.797	-9.0	99	0.00	
26		2,2-Dichloropropane	20.000	25.028	-25.1#	116	0.00	-Q5C
27		Bromochloromethane	20.000	20.993	-5.0	97	0.00	
28	C	Chloroform	20.000	21.559	-7.8	100	-0.01	
29		Carbon Tetrachloride	20.000	23.528	-17.6	101	0.00	
30		Tetrahydrofuran	20.000	20.781	-3.9	92	0.00	
31		1,1,1-Trichloroethane	20.000	22.406	-12.0	103	0.00	
32	S	Dibromofluoromethane (S)	50.000	49.892	0.2	97	0.00	
33		1,1-Dichloropropene	20.000	23.804	-19.0	100	0.00	
34		2-Butanone (MEK)	40.000	43.267	-8.2	94	0.00	
35		Benzene	20.000	21.542	-7.7	98	0.00	
36		tert-Amyl methyl ether (TAM	5.000	4.630	7.4	86	0.00	
37		1,2-Dichloroethane (EDC)	20.000	21.216	-6.1	100	0.00	
38		iso-Butyl Alcohol	500.000	511.634	-2.3	94	0.00	
39	S	1,4-Difluorobenzene (S)	50.000	48.477	3.0	94	0.00	
40		Trichloroethene (TCE)	20.000	20.517	-2.6	101	0.00	
41		tert-Amyl ethyl ether (TAEE	5.000	4.739	5.2	84	-0.01	
42		Dibromomethane	20.000	21.426	-7.1	97	-0.01	
43	C	1,2-Dichloropropane	20.000	20.491	-2.5	95	0.00	
44		Bromodichloromethane	20.000	22.050	-10.3	100	0.00	
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	96	0.00	
46		2-Chloroethyl Vinyl Ether	20.000	18.777	6.1	92	0.00	
47		c-1,3-Dichloropropene	20.000	21.713	-8.6	99	-0.01	
48	S	Toluene-d8 (S)	50.000	49.531	0.9	95	0.00	
49	C	Toluene	20.000	20.446	-2.2	100	0.00	
50		Tetrachloroethene (PCE)	20.000	21.695	-8.5	103	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110103.D
Acq On : 1 Nov 2019 1:50 pm
Operator : tb
Sample : 9110371-BS1
Misc : 1X 5mL 20/40PPB VOCRO A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:38:15 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
51		4-Methyl-2-Pentanone (MIBK)	40.000	44.028	-10.1	94	0.00	
52		t-1,3-Dichloropropene	20.000	23.555	-17.8	102	0.00	
53		1,1,2-Trichloroethane	20.000	21.550	-7.8	98	0.00	
54		Dibromochloromethane	20.000	21.152	-5.8	99	0.00	
55		1,3-Dichloropropane	20.000	21.595	-8.0	97	0.00	
56		1,2-Dibromoethane (EDB)	20.000	21.809	-9.0	96	0.00	
57		2-Hexanone	40.000	44.652	-11.6	95	0.00	
58	P	Chlorobenzene	20.000	20.775	-3.9	99	0.00	
59	C	Ethylbenzene	20.000	21.541	-7.7	99	0.00	
60		1,1,1,2-Tetrachloroethane	20.000	22.331	-11.7	100	0.00	
61		m,p-Xylenes (2)	40.000	45.682	-14.2	98	0.00	
62		o-Xylene	20.000	23.310	-16.5	98	0.00	
63		Styrene	20.000	21.425	-7.1	98	0.00	
64	P	Bromoform	20.000	19.775	1.1	96	0.00	
65		Isopropylbenzene	20.000	22.648	-13.2	99	0.00	
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	95	0.00	
67	S	4-Bromofluorobenzene (S)	50.000	50.359	-0.7	96	0.00	
68		Bromobenzene	20.000	21.640	-8.2	99	0.00	
69		n-Propylbenzene	20.000	22.203	-11.0	100	0.00	
70	P	1,1,2,2-Tetrachloroethane	20.000	21.440	-7.2	97	0.00	
71		2-Chlorotoluene	20.000	22.561	-12.8	99	0.00	
72		1,3,5-Trimethylbenzene	20.000	23.555	-17.8	99	0.00	
73		1,2,3-Trichloropropane	20.000	21.342	-6.7	99	0.00	
74		t-1,4-Dichloro-2-butene	20.000	21.023	-5.1	98	0.00	
75		4-Chlorotoluene	20.000	22.786	-13.9	98	0.00	
76		tert-Butylbenzene	20.000	23.156	-15.8	100	0.00	
77		1,2,4-Trimethylbenzene	20.000	23.324	-16.6	99	0.00	
78		sec-Butylbenzene	20.000	22.892	-14.5	99	0.00	
79		4-Isopropyltoluene	20.000	22.952	-14.8	99	0.00	
80		1,3-Dichlorobenzene	20.000	22.408	-12.0	101	0.00	
81		1,4-Dichlorobenzene	20.000	19.948	0.3	99	0.00	
82		n-Butylbenzene	20.000	24.524	-22.6#	101	0.00	-QSL
83		1,2-Dichlorobenzene	20.000	22.206	-11.0	99	0.00	
84		1,2-Dibromo-3-Chloropropane	20.000	21.349	-6.7	101	0.00	
85		Hexachlorobutadiene	20.000	23.656	-18.3	102	0.00	
86		1,2,4-Trichlorobenzene	20.000	24.058	-20.3#	101	0.00	
87		Naphthalene	20.000	22.016	-10.1	100	0.00	
88		1,2,3-Trichlorobenzene	20.000	24.986	-24.9#	102	0.00	-QSL

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110103.D
Acq On : 1 Nov 2019 1:50 pm
Operator : tb
Sample : 9110371-BS1
Misc : 1X 5mL 20/40PPB VOCRO A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

11/1/19

Quant Time: Nov 01 16:38:15 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.855	99	82691	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.446	117	241922	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.287	152	121794	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.325	111	86849	49.89	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	275379	48.48	ug/L		0.00
48) Toluene-d8 (S)	8.983	98	312415	49.53	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.440	174	103570	50.36	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.722	85	28567	20.60	ug/L		98
3) Chloromethane	1.984	50	35701	18.96	ug/L		98
4) Vinyl Chloride	2.112	62	33280	20.70	ug/L		96
5) Bromomethane	2.545	96	16602	19.41	ug/L		100
6) Chloroethane	2.722	64	8465	21.37	ug/L		95
7) Trichlorofluoromethane	2.911	101	37746	21.76	ug/L		99
8) Ethanol	3.636	45	50978	1175.40	ug/L		86
9) 1,1-Dichloroethene	3.582	61	41712	21.66	ug/L		96
10) Carbon Disulfide	3.582	76	61677	21.11	ug/L		98
11) Freon 113	3.655	101	34169	21.65	ug/L		96
12) Iodomethane	3.746	142	9427	15.43	ug/L		98
13) Acrolein	4.027	56	8157	19.18	ug/L		98
14) Methylene Chloride	4.313	84	33913	21.65	ug/L		94
15) Acetone	4.398	43	33400	38.75	ug/L		100
16) t-1,2-Dichloroethene	4.502	61	42837	21.48	ug/L		95
17) n-Hexane	4.600	86	5366	23.75	ug/L	#	53
18) Methyl-tert-butyl-ether	4.654	73	84770	22.54	ug/L		97
19) tert-Butanol (TBA)	4.819	59	411788	1261.70	ug/L	#	84
20) Diisopropyl ether (DIPE)	5.106	45	19380	4.70	ug/L		98
21) 1,1-Dichloroethane	5.209	63	56208	20.68	ug/L		98
22) Acrylonitrile	5.282	53	19532	21.19	ug/L		100
23) Vinyl Acetate	5.520	43	56551	19.16	ug/L		98
24) Ethyl-tert-butyl ether...	5.514	59	17870	5.03	ug/L		96
25) c-1,2-Dichloroethene	5.819	61	44198	21.80	ug/L		94
26) 2,2-Dichloropropane	5.929	77	30898	25.03	ug/L		70
27) Bromochloromethane	6.032	49	26930	20.99	ug/L		81
28) Chloroform	6.124	83	58948	21.56	ug/L		98
29) Carbon Tetrachloride	6.258	117	35387	23.53	ug/L		98
30) Tetrahydrofuran	6.301	42	16614	20.78	ug/L		88
31) 1,1,1-Trichloroethane	6.337	97	46076	22.41	ug/L		95
33) 1,1-Dichloropropene	6.471	75	43984	23.80	ug/L		99
34) 2-Butanone (MEK)	6.471	43	52783	43.27	ug/L		96
35) Benzene	6.746	78	137833	21.54	ug/L		98
36) tert-Amyl methyl ether...	6.892	73	16957	4.63	ug/L		78
37) 1,2-Dichloroethane (EDC)	6.977	62	46333	21.22	ug/L		99
38) iso-Butyl Alcohol	7.038	43	70073	511.63	ug/L		90
40) Trichloroethene (TCE)	7.404	130	38339	20.52	ug/L		97
41) tert-Amyl ethyl ether ...	7.678	59	11157	4.74	ug/L		92
42) Dibromomethane	7.873	93	23133	21.43	ug/L		98
43) 1,2-Dichloropropane	7.989	63	33274	20.49	ug/L		97
44) Bromodichloromethane	8.068	83	38953	22.05	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.733	63	18684	18.78	ug/L	#	1
47) c-1,3-Dichloropropene	8.788	75	44348	21.71	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110103.D
Acq On : 1 Nov 2019 1:50 pm
Operator : tb
Sample : 9110371-BS1
Misc : 1X 5mL 20/40PPB VOCRO A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:38:15 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

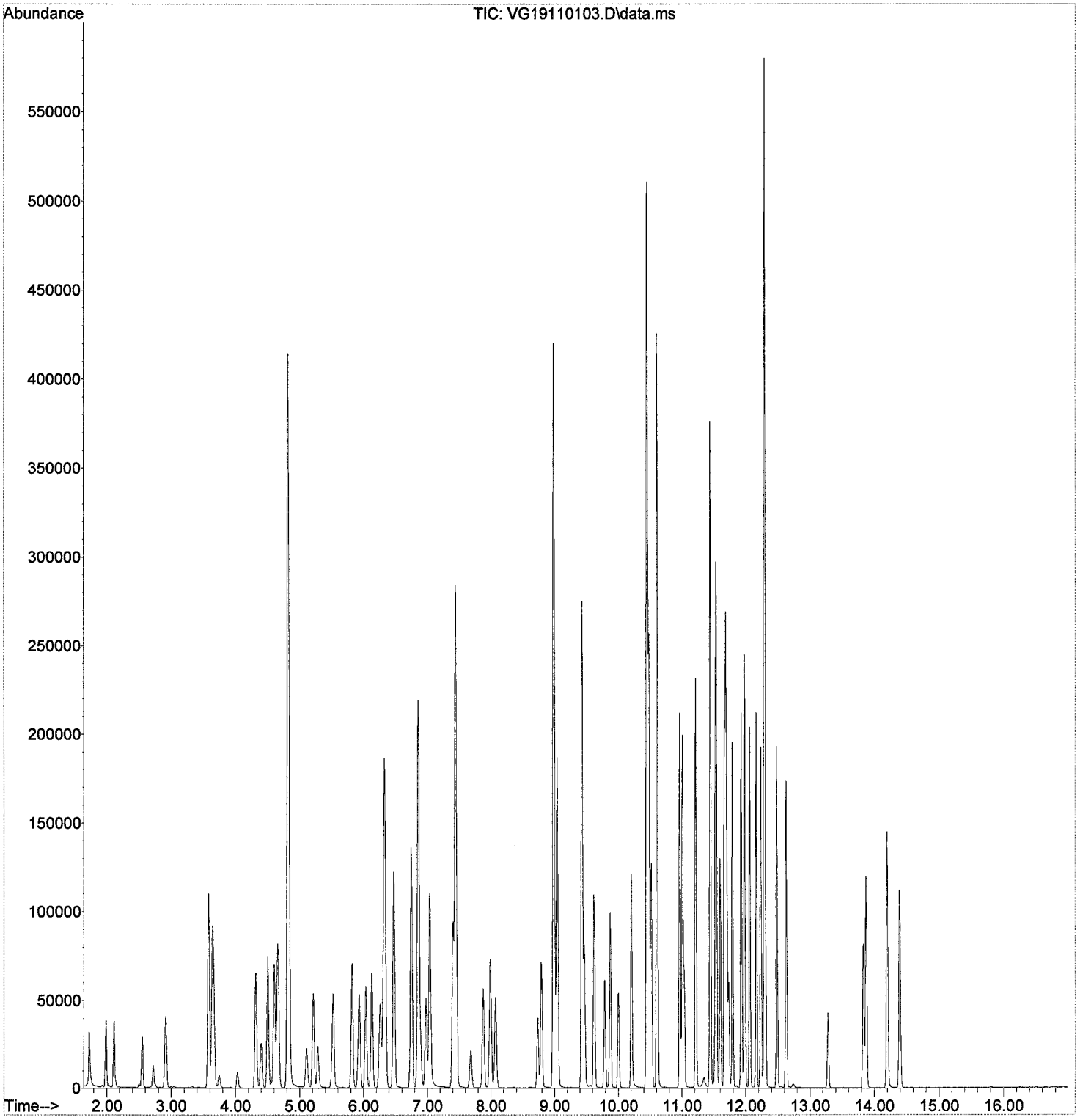
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
49) Toluene	9.038	91	148071	20.45 ug/L		99
50) Tetrachloroethene (PCE)	9.428	166	41696	21.70 ug/L		97
51) 4-Methyl-2-Pentanone (...	9.428	43	92374	44.03 ug/L		95
52) t-1,3-Dichloropropene	9.465	75	38570	23.56 ug/L		97
53) 1,1,2-Trichloroethane	9.617	97	35986	21.55 ug/L		96
54) Dibromochloromethane	9.788	129	33371	21.15 ug/L		99
55) 1,3-Dichloropropane	9.873	76	55741	21.60 ug/L		98
56) 1,2-Dibromoethane (EDB)	10.001	107	36672	21.81 ug/L		98
57) 2-Hexanone	10.202	43	68378	44.65 ug/L		99
58) Chlorobenzene	10.464	112	98041	20.78 ug/L		98
59) Ethylbenzene	10.483	91	149173	21.54 ug/L		98
60) 1,1,1,2-Tetrachloroethane	10.519	131	31626	22.33 ug/L		98
61) m,p-Xylenes (2)	10.605	91	217581	45.68 ug/L		99
62) o-Xylene	10.964	91	105152	23.31 ug/L		99
63) Styrene	11.007	104	86809	21.43 ug/L		94
64) Bromoform	11.031	173	25301	19.78 ug/L		96
65) Isopropylbenzene	11.214	105	131046	22.65 ug/L		100
68) Bromobenzene	11.525	156	43321	21.64 ug/L		98
69) n-Propylbenzene	11.537	91	148534	22.20 ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	54631	21.44 ug/L		99
71) 2-Chlorotoluene	11.665	126	34350	22.56 ug/L		87
72) 1,3,5-Trimethylbenzene	11.684	105	111185	23.55 ug/L		94
73) 1,2,3-Trichloropropane	11.702	110	16506	21.34 ug/L		97
74) t-1,4-Dichloro-2-butene	11.732	88	4657	21.02 ug/L	#	79
75) 4-Chlorotoluene	11.787	91	93186	22.79 ug/L		98
76) tert-Butylbenzene	11.927	91	54949	23.16 ug/L		98
77) 1,2,4-Trimethylbenzene	11.976	105	114100	23.32 ug/L		97
78) sec-Butylbenzene	12.062	105	123547	22.89 ug/L		98
79) 4-Isopropyltoluene	12.159	119	104344	22.95 ug/L		99
80) 1,3-Dichlorobenzene	12.232	146	70980	22.41 ug/L		100
81) 1,4-Dichlorobenzene	12.299	146	71285	19.95 ug/L		98
82) n-Butylbenzene	12.482	91	89004	24.52 ug/L		98
83) 1,2-Dichlorobenzene	12.629	146	69033	22.21 ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	12023	21.35 ug/L		96
85) Hexachlorobutadiene	13.830	223	11470	23.66 ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	43804	24.06 ug/L		97
87) Naphthalene	14.195	128	123892	22.02 ug/L		98
88) 1,2,3-Trichlorobenzene	14.390	180	44523	24.99 ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110103.D
Acq On : 1 Nov 2019 1:50 pm
Operator : tb
Sample : 9110371-BS1
Misc : 1X 5mL 20/40PPB VOCRO A19J352
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

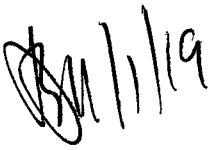
Quant Time: Nov 01 16:38:15 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110104.D
Acq On : 1 Nov 2019 2:17 pm
Operator : tb
Sample : 9110371-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:02 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	102	-0.02
2	S	1,4-Difluorobenzene (Sur)	50.000	50.102	-0.2	102	-0.01
3	S	4-Bromofluorobenzene (Sur)	50.000	48.715	2.6	100	-0.01
4	H	NWTPH-Gx (TPH)	500.000	482.921	3.4	101	0.00
5	H	TPHg (C5-C9)	500.000	502.647	-0.5	103	0.00
6	H	TPHg (C6-C10)	500.000	507.448	-1.5	104	0.00
7	H	CA-LUFT (C5-C12)	500.000	487.658	2.5	102	0.00
8		Benzene (NR)	-1.000	0.000	0.0	104	-0.01
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	100	-0.02
10		Toluene (NR)	-1.000	0.000	0.0	100	-0.01
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	99	-0.01
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	97	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110104.D
Acq On : 1 Nov 2019 2:17 pm
Operator : tb
Sample : 9110371-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:02 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

11/1/19

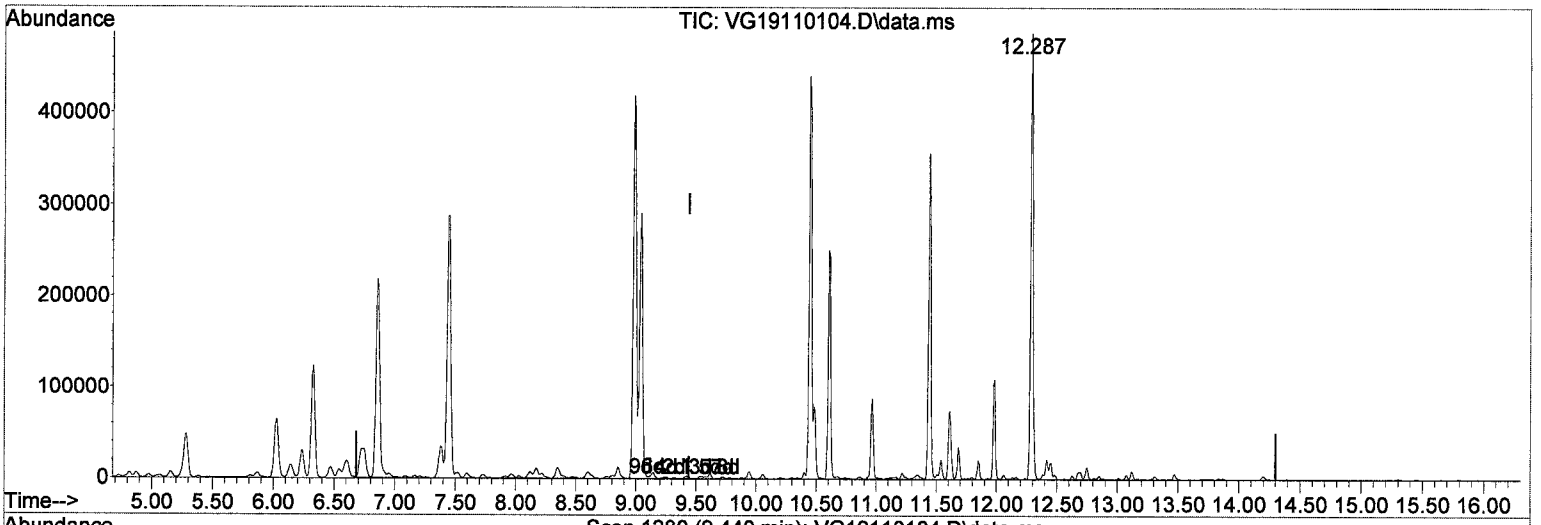
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.855	168	186879	50.00	ug/L	-0.02
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.447	114	279896	50.10	ug/L	-0.01
3) 4-Bromofluorobenzene (...	11.440	174	99145	48.71	ug/L	-0.01
9) Toluene-d8 (NR)	8.983	98	310727	0.00	ug/L	-0.02
11) Chlorobenzene-d5 (NR)	10.446	117	237414	0.00	ug/L	-0.01
12) 1,4-Dichlorobenzene-d4...	12.287	150	183252	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	2270338m	482.92	ug/L	
5) TPHg (C5-C9)	9.940	TIC	3126148m	502.65	ug/L	
6) TPHg (C6-C10)	9.940	TIC	2643894m	507.45	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	3706766m	487.66	ug/L	

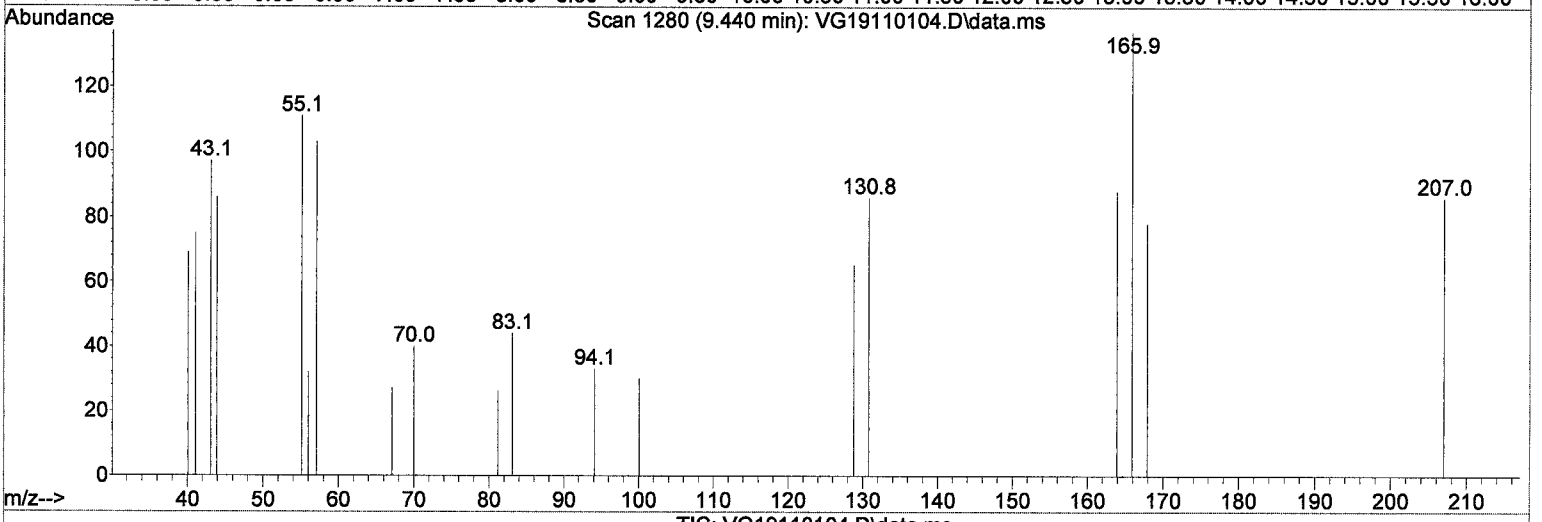
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110104.D
Acq On : 1 Nov 2019 2:17 pm
Operator : tb
Sample : 9110371-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:02 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration





TIC: VG19110104.D\data.ms

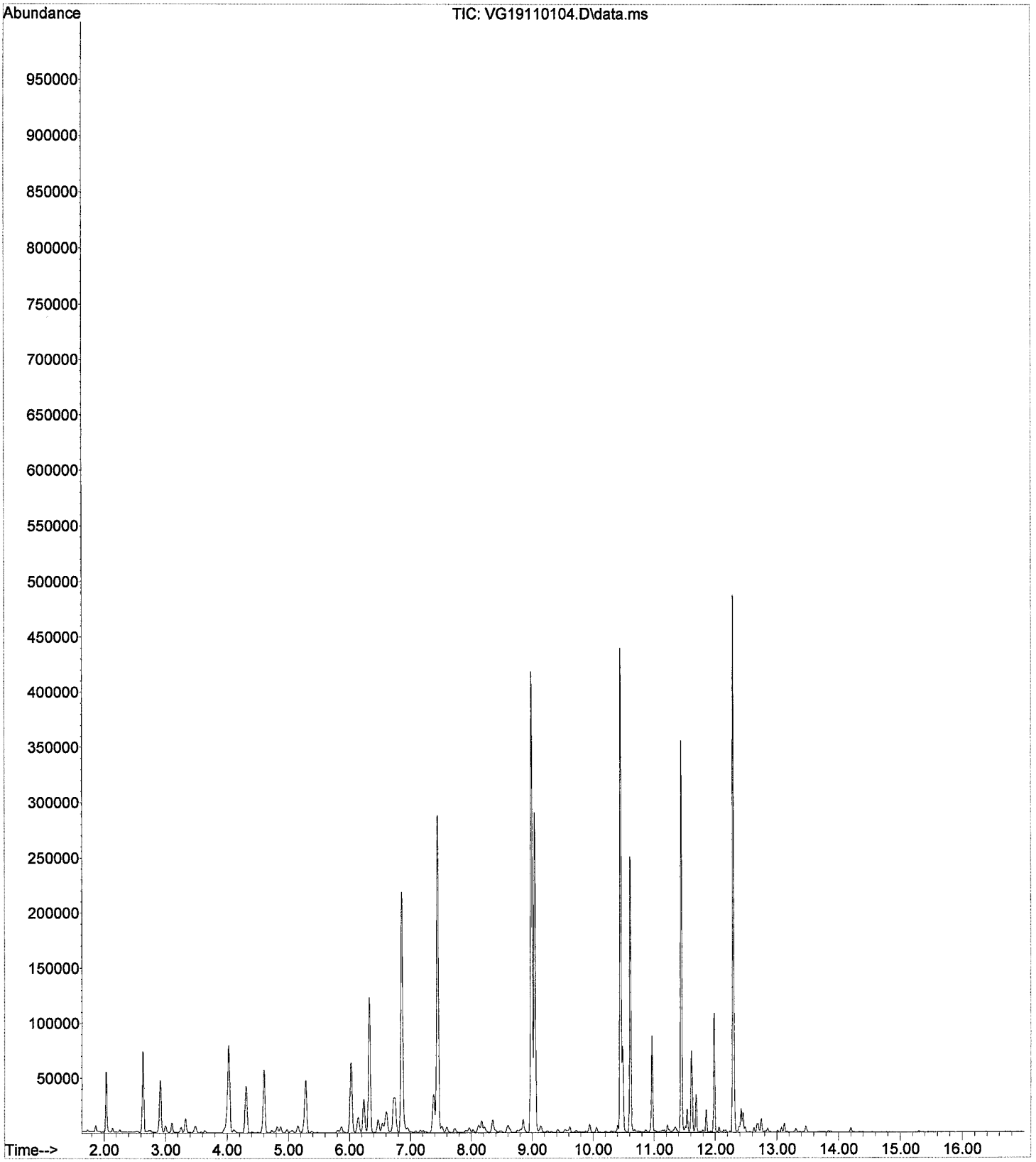
(4) NWTPH-Gx (TPH) (H)

9.440min (0.000) 482.92 ug/L m

response 2270338

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\data\2019-11\9K01040\VG19110104.D
Operator : tb
Acquired : 1 Nov 2019 2:17 pm using AcqMethod VG1808RUN.M
Instrument : VOA-GCMS7
Sample Name: 9110371-BS2
Misc Info : 1X 5mL 500PPB GX A19J354
Vial Number: 4



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110105.D
Acq On : 1 Nov 2019 2:45 pm
Operator : tb
Sample : 9110371-BLK1
Misc : 1X 5mL DI H2O
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:24 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

11/1/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.861	168	183118	50.00	ug/L	-0.01
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.447	114	290560	53.08	ug/L	-0.01
3) 4-Bromofluorobenzene (...	11.440	174	102872	51.58	ug/L	-0.01
9) Toluene-d8 (NR)	8.983	98	322788	0.00	ug/L	-0.02
11) Chlorobenzene-d5 (NR)	10.446	117	246947	0.00	ug/L	-0.01
12) 1,4-Dichlorobenzene-d4...	12.287	150	190552	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	8684m	17.86	ug/L	LMDC
5) TPHg (C5-C9)	9.940	TIC	304920m	20.36	ug/L	
6) TPHg (C6-C10)	9.940	TIC	299772m	24.27	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	290307m	19.83	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110105.D
Acq On : 1 Nov 2019 2:45 pm
Operator : tb
Sample : 9110371-BLK1
Misc : 1X 5mL DI H2O
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:32 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

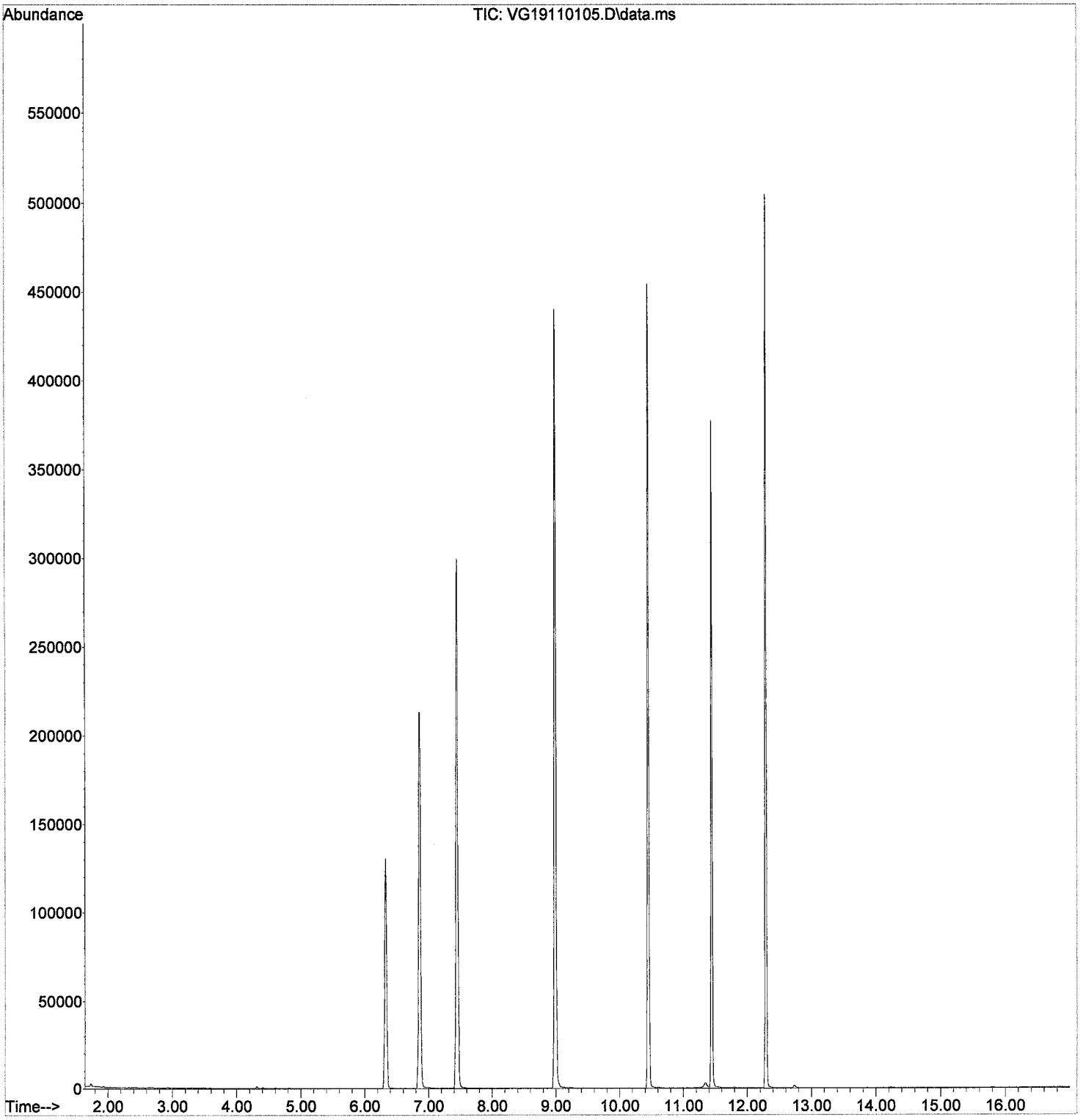
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.855	99	81069	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.446	117	246440	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.287	152	122146	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.325	111	88182	51.67	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	290381	52.14	ug/L		0.00
48) Toluene-d8 (S)	8.983	98	322213	50.15	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.440	174	102872	49.87	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.978	50	261	0.14	ug/L		70
6) Chloroethane	2.825	64	11	Below Cal		#	47
8) Ethanol	3.618	45	10	0.24	ug/L	#	29
12) Iodomethane	3.752	142	10	2.11	ug/L	#	47
14) Methylene Chloride	4.319	84	623	Below Cal		#	73
15) Acetone	4.404	43	702	0.83	ug/L		97
19) tert-Butanol (TBA)	4.819	59	114	0.36	ug/L	#	1
87) Naphthalene	14.220	128	127	0.30	ug/L		79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110105.D
Acq On : 1 Nov 2019 2:45 pm
Operator : tb
Sample : 9110371-BLK1
Misc : 1X 5mL DI H2O
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 01 16:46:32 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110120.D
Acq On : 1 Nov 2019 9:31 pm
Operator : tb
Sample : A9J1114-01
Misc : 1X 5mL 8260
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

11/4/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.855	99	83035	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.446	117	257028	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.287	152	129739	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.325	111	90761	51.92	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	299471	52.50	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	333170	49.72	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	108917	49.72	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.984	50	373	0.20	ug/L		90
6) Chloroethane	2.813	64	10	Below Cal		#	47
8) Ethanol	3.649	45	12	0.28	ug/L	#	29
14) Methylene Chloride	4.319	84	577	Below Cal			83
15) Acetone	4.392	43	8063	9.31	ug/L		100
19) tert-Butanol (TBA)	4.825	59	876	2.67	ug/L	#	64
38) iso-Butyl Alcohol	7.050	43	275	2.00	ug/L		95

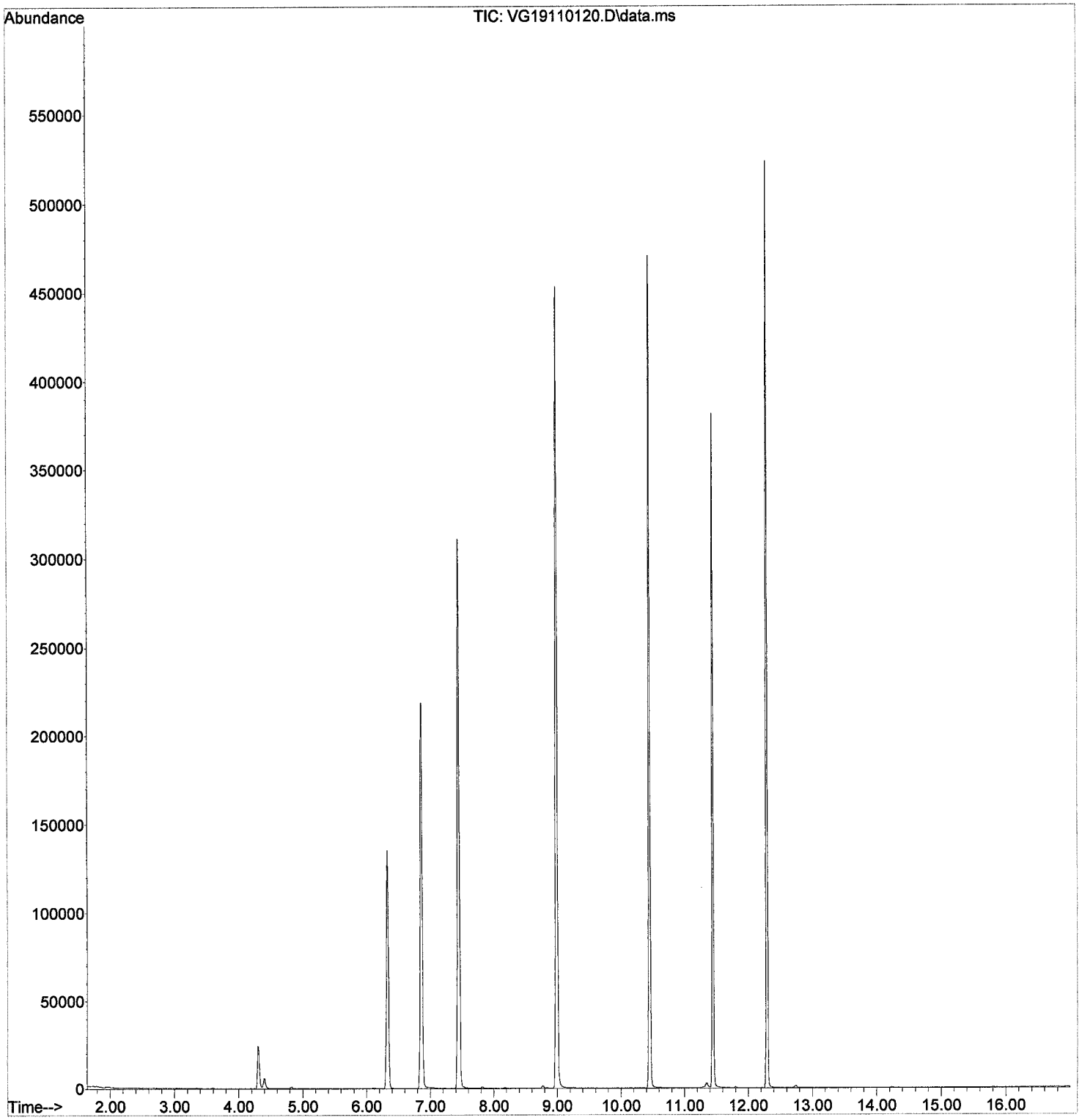
LMDL

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110120.D
Acq On : 1 Nov 2019 9:31 pm
Operator : tb
Sample : A9J1114-01
Misc : 1X 5mL 8260
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

11/4/19

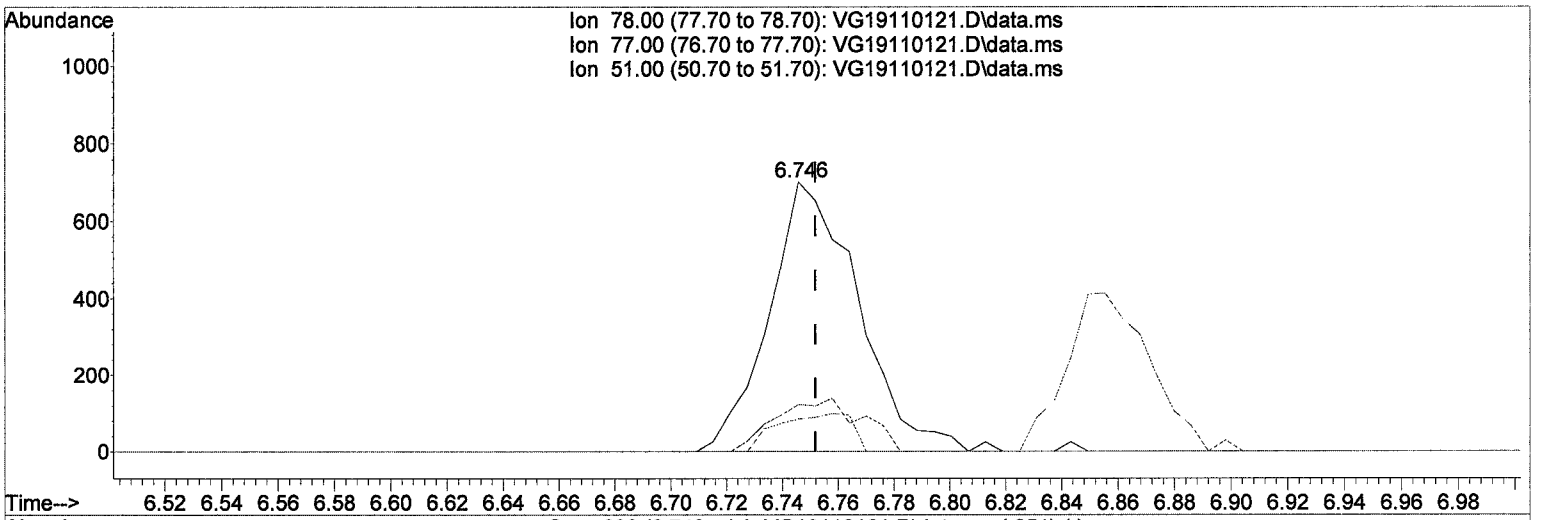
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) Pentafluorobenzene (I)	6.855	99	79662	50.00	ug/L		0.00	
45) Chlorobenzene-d5 (I)	10.446	117	253717	50.00	ug/L		0.00	
66) 1,4-Dichlorobenzene-d4...	12.287	152	135199	50.00	ug/L		0.00	
System Monitoring Compounds								
32) Dibromofluoromethane (S)	6.325	111	87398	52.12	ug/L		0.00	
39) 1,4-Difluorobenzene (S)	7.447	114	288112	52.65	ug/L		0.00	
48) Toluene-d8 (S)	8.989	98	322551	48.76	ug/L		0.00	
67) 4-Bromofluorobenzene (S)	11.440	174	112020	49.07	ug/L		0.00	
Target Compounds							Qvalue	
3) Chloromethane	1.984	50	343	0.19	ug/L		70	< MRL
4) Vinyl Chloride	2.112	62	157	0.10	ug/L		75	
6) Chloroethane	2.746	64	23	Below Cal		#	47	
14) Methylene Chloride	4.319	84	210	Below Cal			86	
15) Acetone	4.399	43	4082	4.92	ug/L		88	
25) c-1,2-Dichloroethene	5.819	61	203	0.10	ug/L		79	
35) Benzene	6.746	78	1563	0.25	ug/L		89	
49) Toluene	9.038	91	1033	0.14	ug/L		93	< MRL
57) 2-Hexanone	10.214	43	345	0.21	ug/L	#	7	
58) Chlorobenzene	10.464	112	432	0.09	ug/L	#	43	
59) Ethylbenzene	10.489	91	3424	0.47	ug/L		96	
61) m,p-Xylenes (2)	10.611	91	4271	0.86	ug/L		100	
62) o-Xylene	10.964	91	2981	0.63	ug/L		99	
65) Isopropylbenzene	11.214	105	26362	4.34	ug/L		99	
69) n-Propylbenzene	11.537	91	19820	2.67	ug/L		97	
71) 2-Chlorotoluene	11.598	126	337	0.20	ug/L	#	1	< MDL
72) 1,3,5-Trimethylbenzene	11.684	105	10804	2.06	ug/L		91	
76) tert-Butylbenzene	11.946	91	568	0.22	ug/L	#	11	< MDL
77) 1,2,4-Trimethylbenzene	11.982	105	17207	3.17	ug/L		98	
78) sec-Butylbenzene	12.062	105	3497	0.58	ug/L		85	
79) 4-Isopropyltoluene	~~12.135~~	~~119~~	~~4676~~	~~0.93~~	~~ug/L~~		~~98~~	MI < MDL
82) n-Butylbenzene	12.482	91	2588	0.64	ug/L		94	↑ MDL = MRL QSC
87) Naphthalene	14.195	128	405018	62.33	ug/L		97	

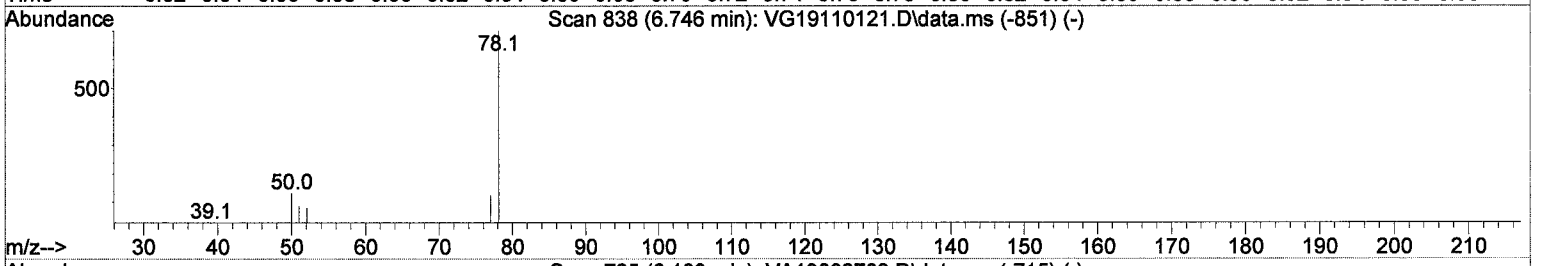
(#) = qualifier out of range (m) = manual integration (+) = signals summed

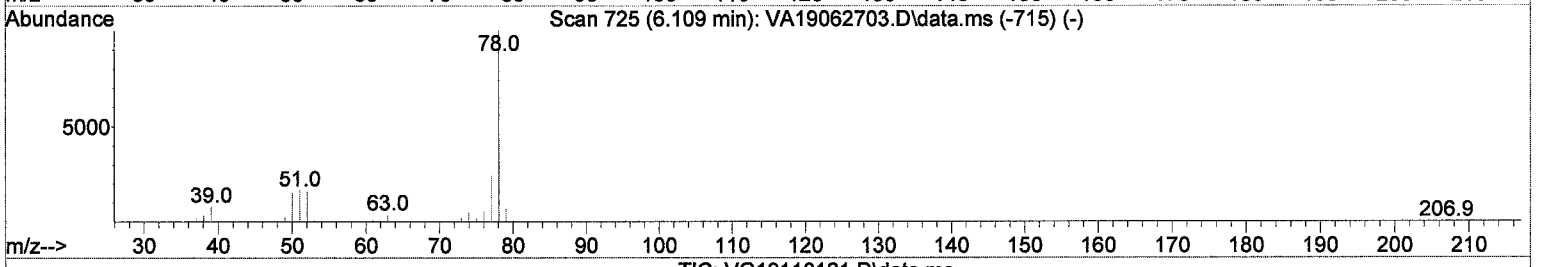
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(35) Benzene

6.746min (-0.006) 0.25 ug/L

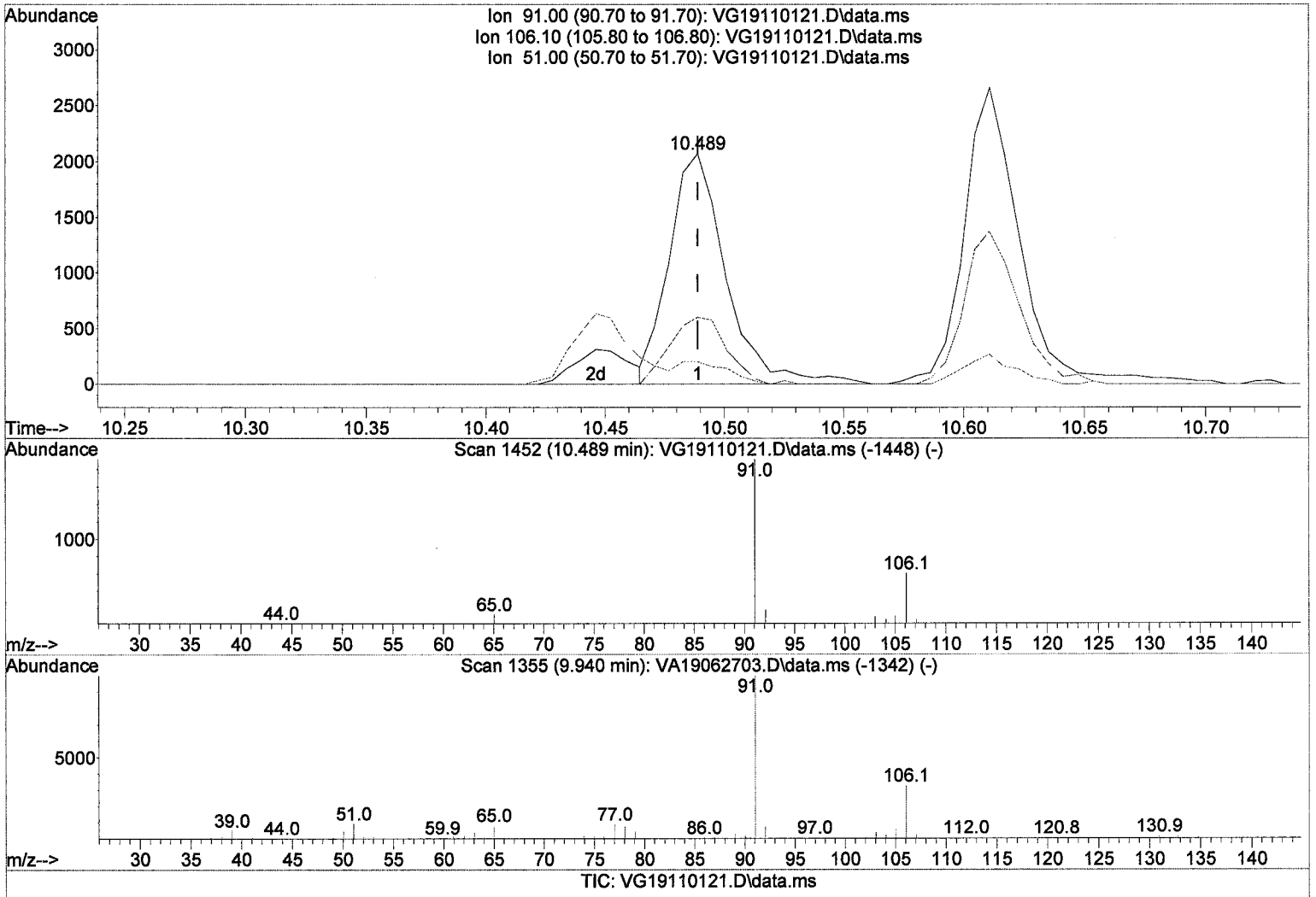
response 1563

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	23.60	17.55
51.00	16.20	12.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110121.D\data.ms

(59) Ethylbenzene (C)

10.489min (-0.000) 0.47 ug/L

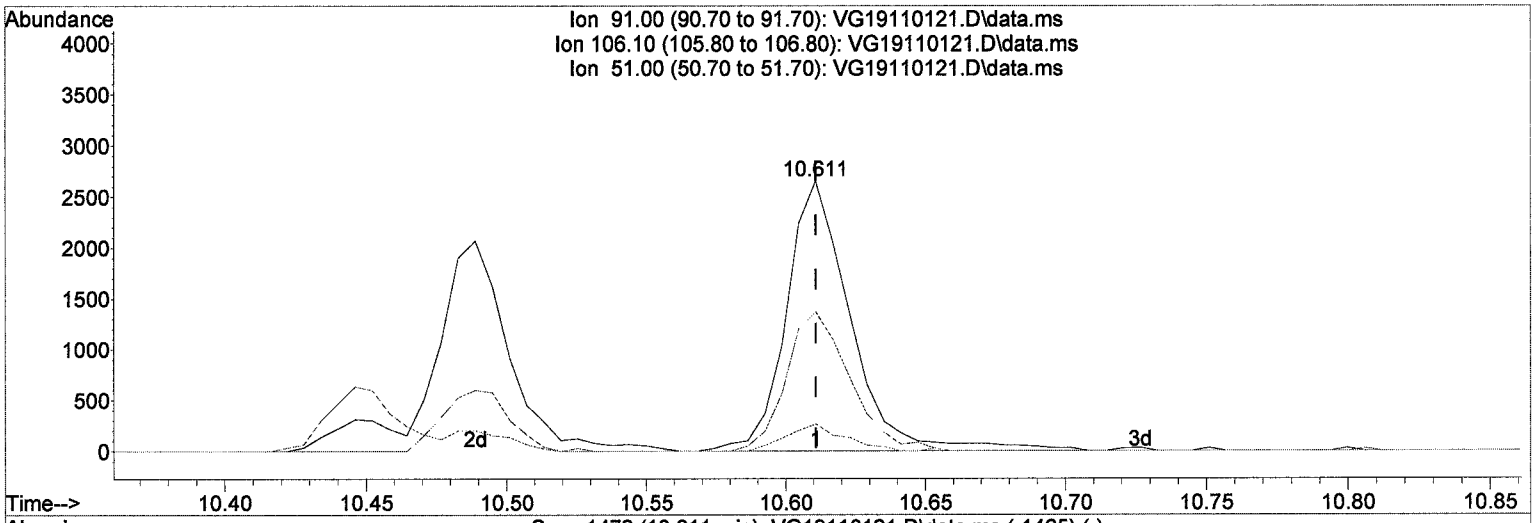
response 3424

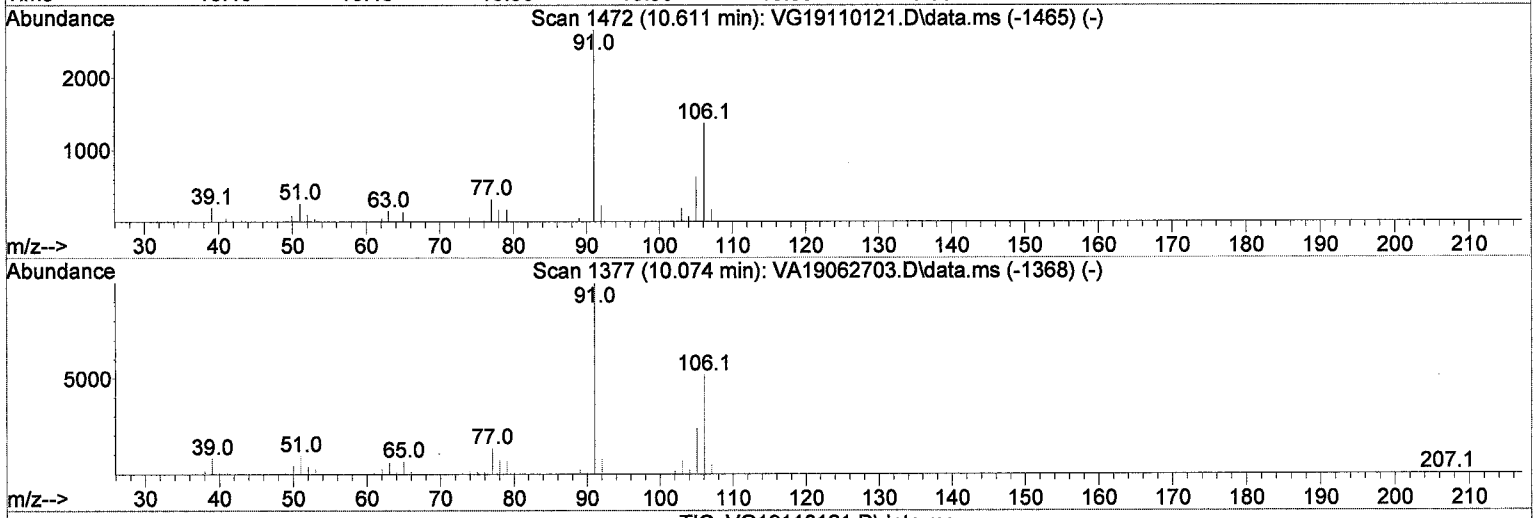
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	29.07
51.00	9.80	9.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration





TIC: VG19110121.D\data.ms

(61) m,p-Xylenes (2)

10.611min (0.000) 0.86 ug/L

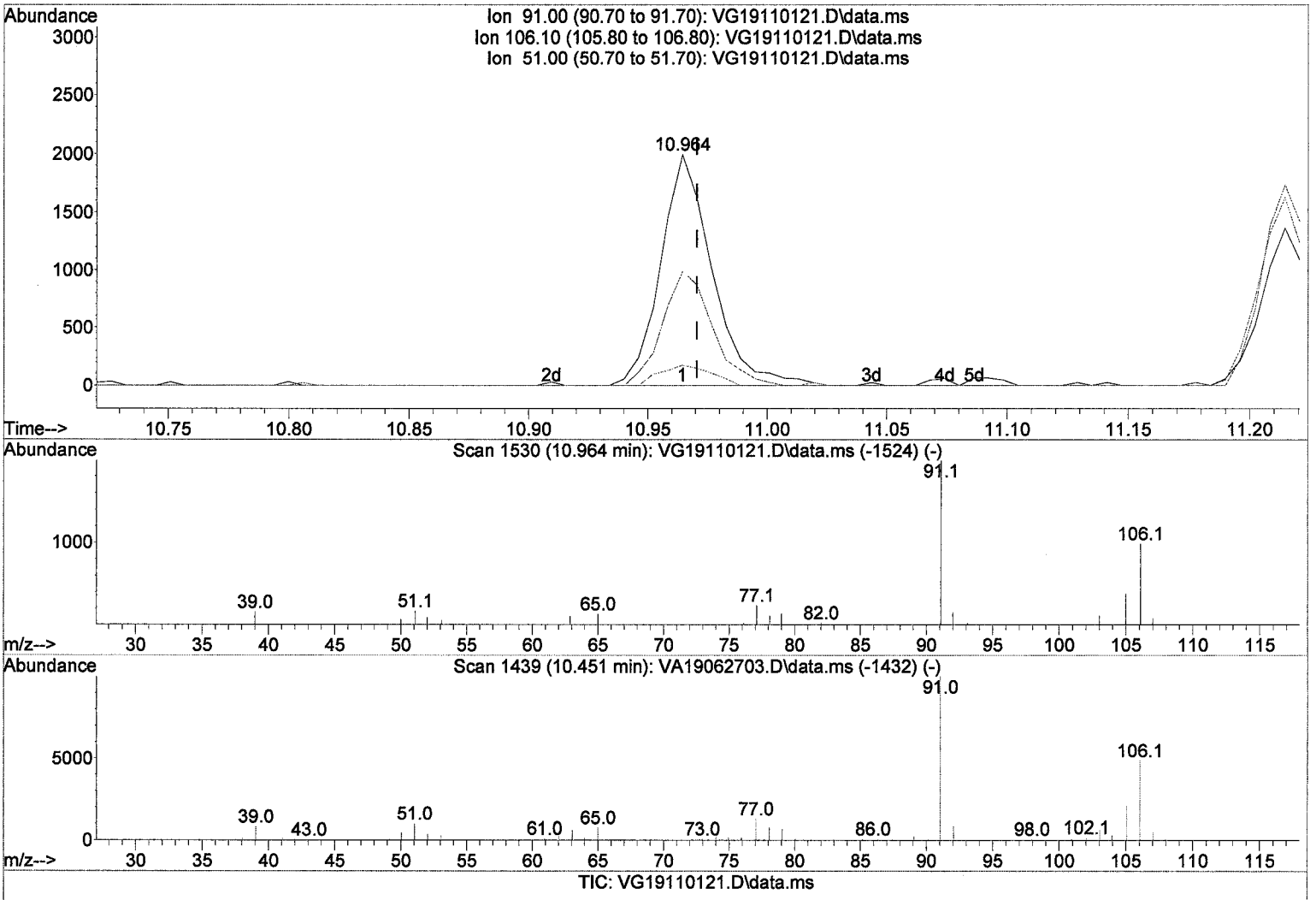
response 4271

Ion	Exp%	Act%
91.00	100.00	100.00
106.10	51.80	51.56
51.00	9.80	10.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110121.D\data.ms

(62) o-Xylene

10.964min (-0.006) 0.63 ug/L

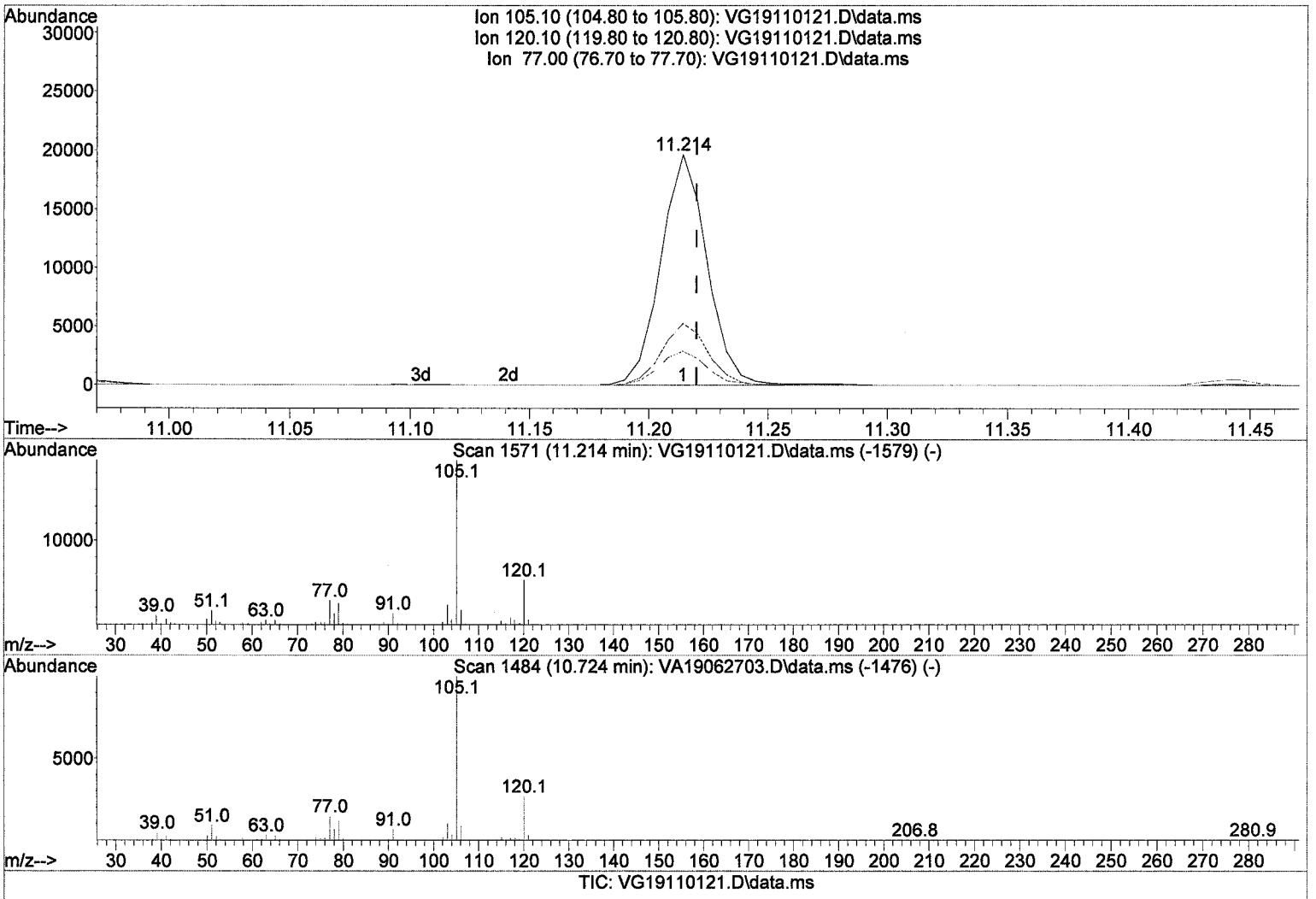
response 2981

Ion	Exp%	Act%
91.00	100.00	100.00
106.10	49.80	49.52
51.00	9.70	8.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110121.D\data.ms

(65) Isopropylbenzene

11.214min (-0.006) 4.34 ug/L

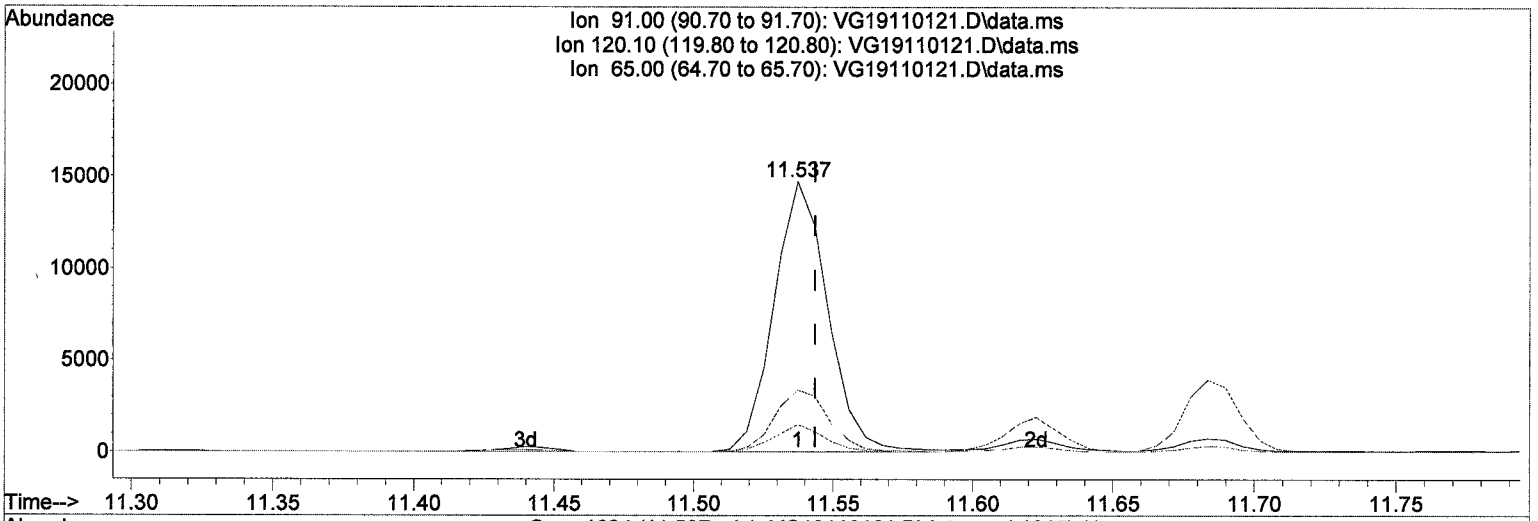
response 26362

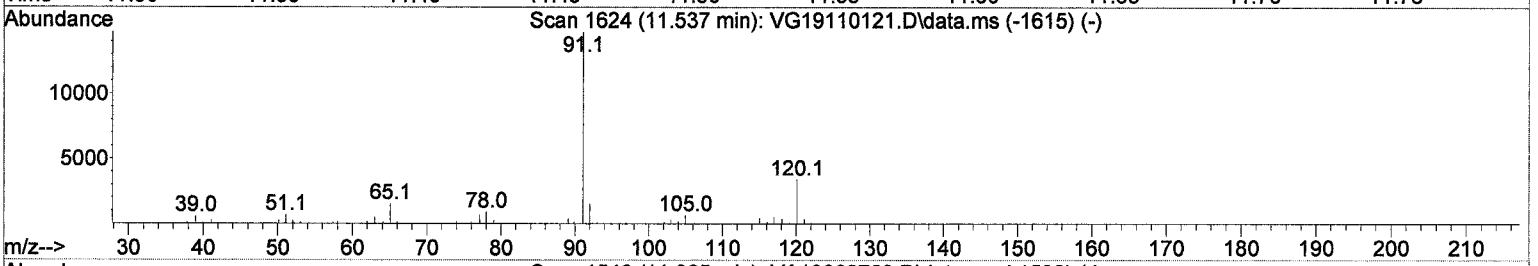
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	27.80	26.81
77.00	14.50	14.65
0.00	0.00	0.00

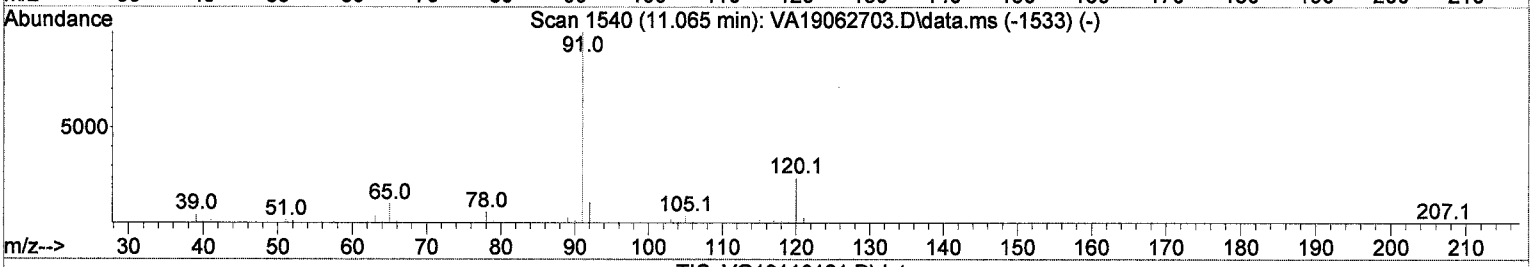
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(69) n-Propylbenzene

11.537min (-0.006) 2.67 ug/L

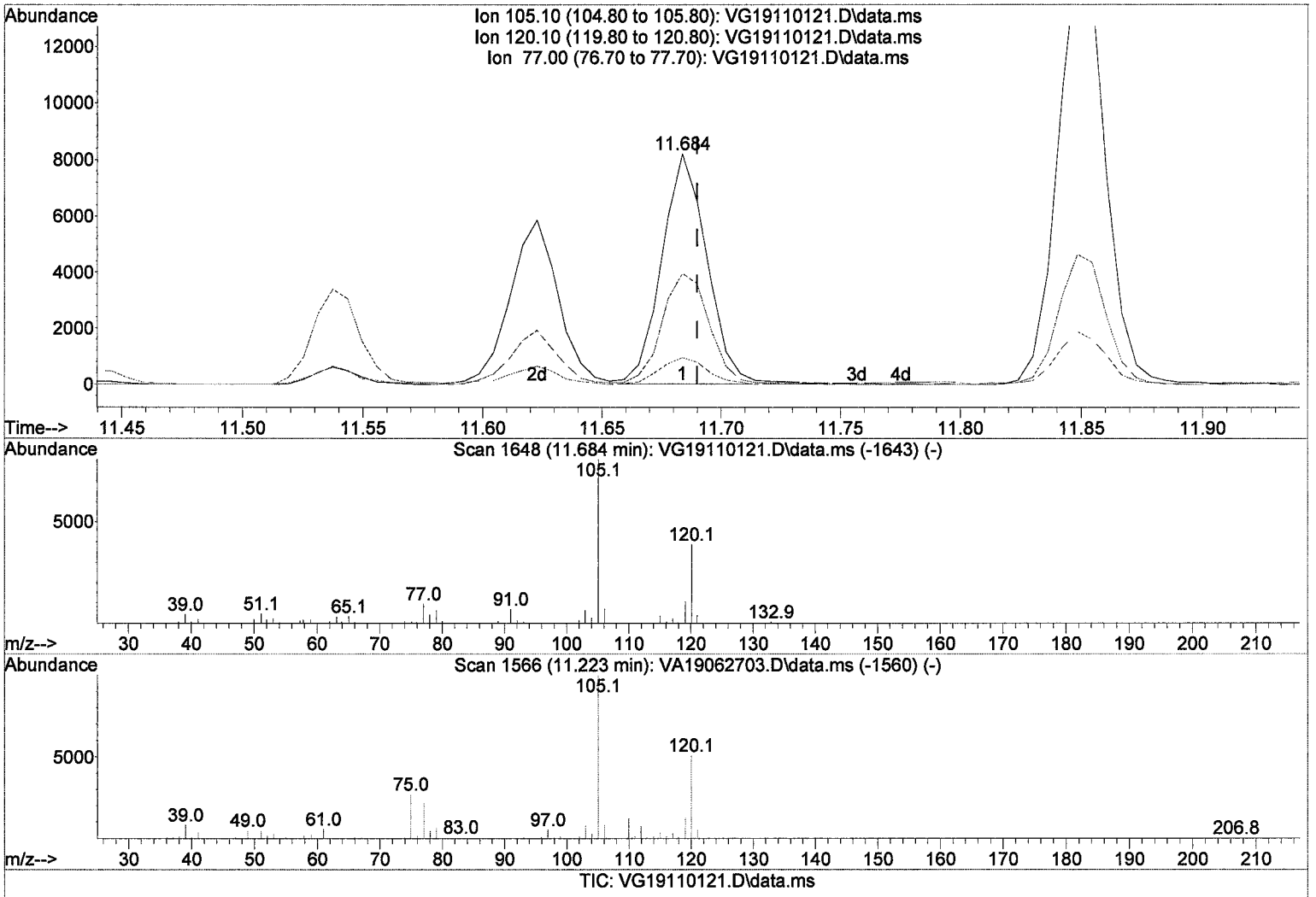
response 19820

Ion	Exp%	Act%
91.00	100.00	100.00
120.10	25.20	23.00
65.00	10.10	10.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110121.D\data.ms

(72) 1,3,5-Trimethylbenzene

11.684min (-0.006) 2.06 ug/L

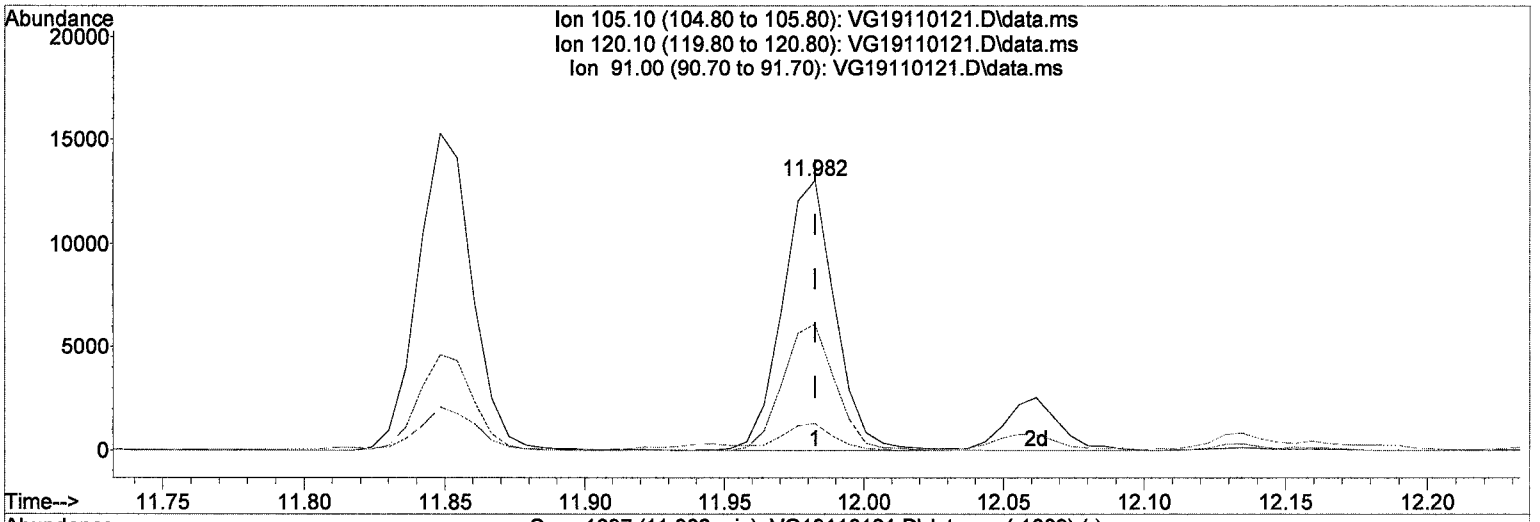
response 10804

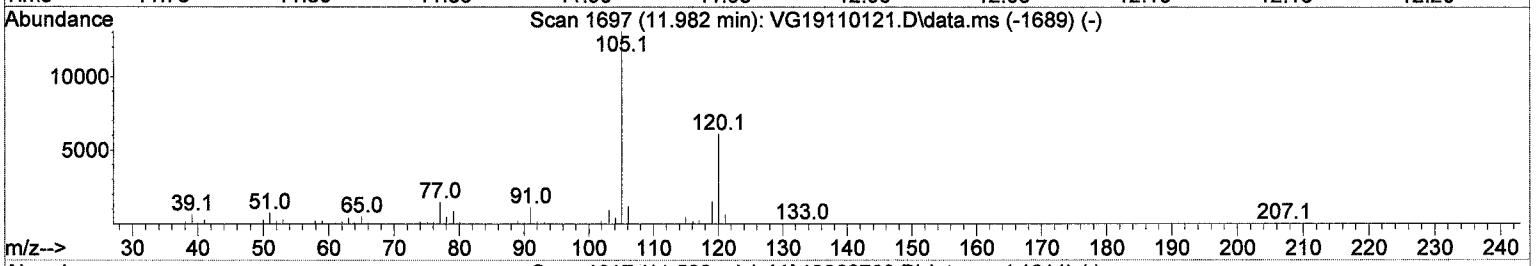
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	52.80	48.48
77.00	19.20	11.66
0.00	0.00	0.00

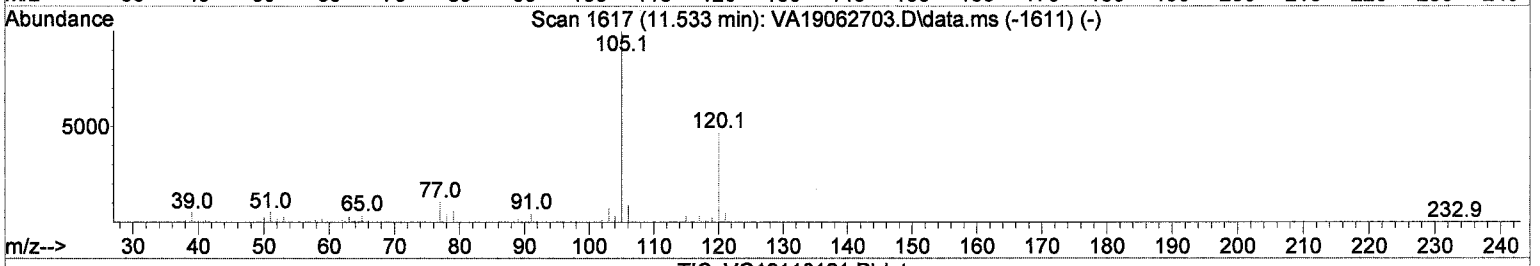
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.982min (0.000) 3.17 ug/L

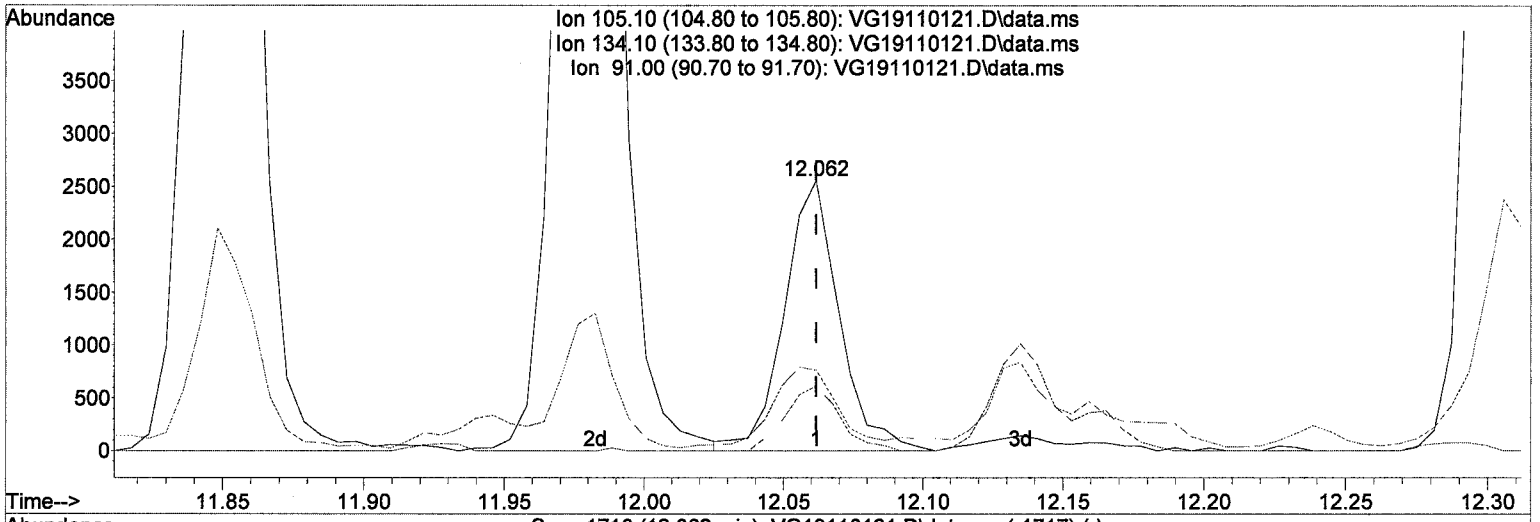
response 17207

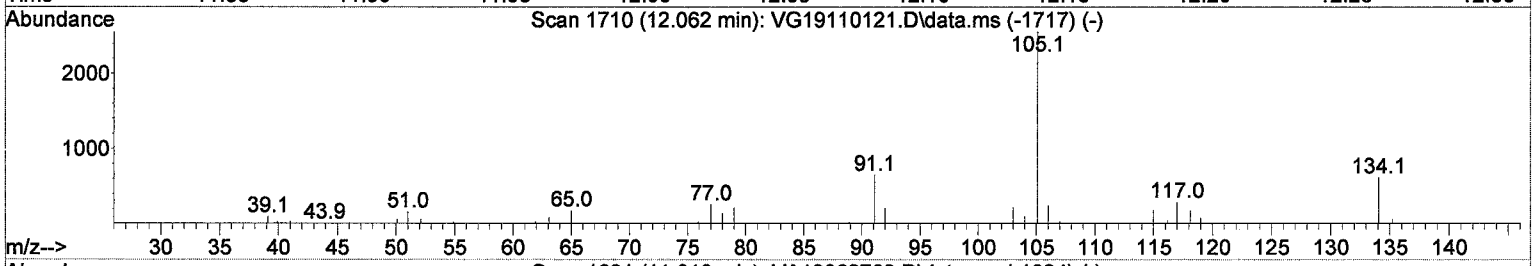
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	48.60	46.78
91.00	9.80	9.53
0.00	0.00	0.00

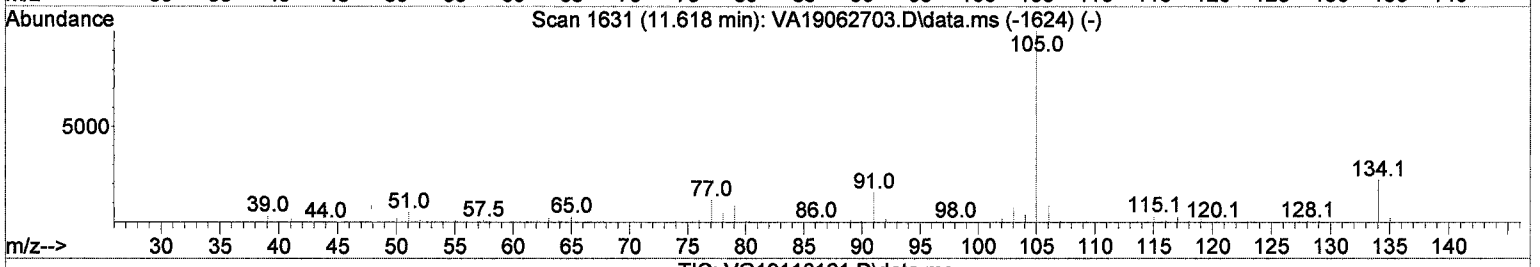
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(78) sec-Butylbenzene

12.062min (0.000) 0.58 ug/L

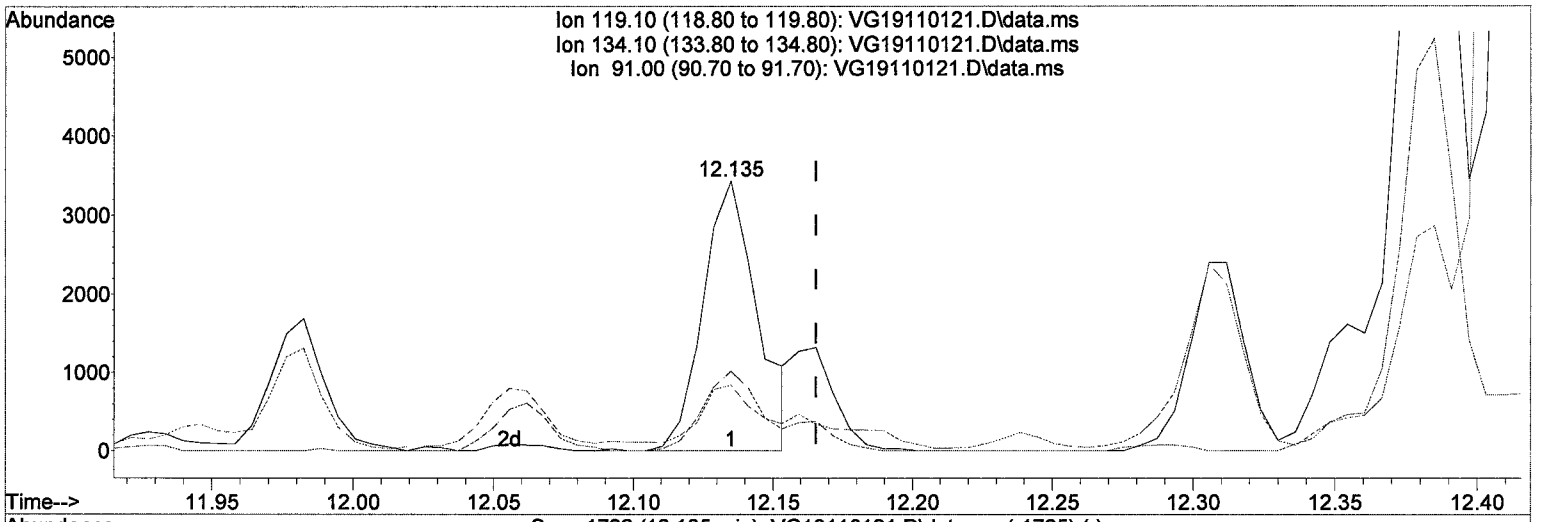
response 3497

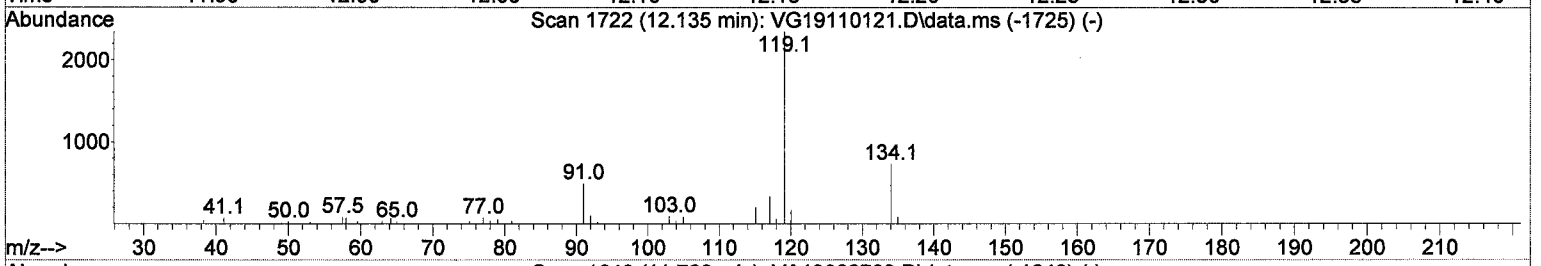
Ion	Exp%	Act%
105.10	100.00	100.00
134.10	21.70	24.04
91.00	14.90	27.63
0.00	0.00	0.00

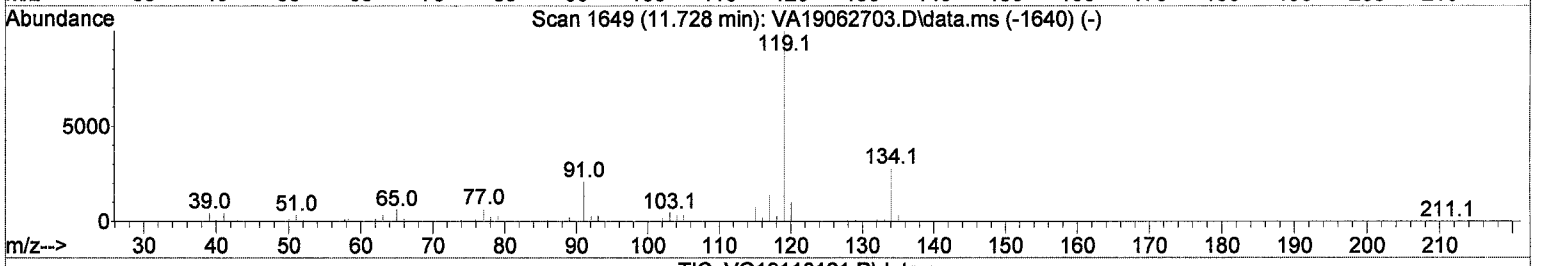
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(79) 4-Isopropyltoluene

12.135min (-0.030) 0.93 ug/L

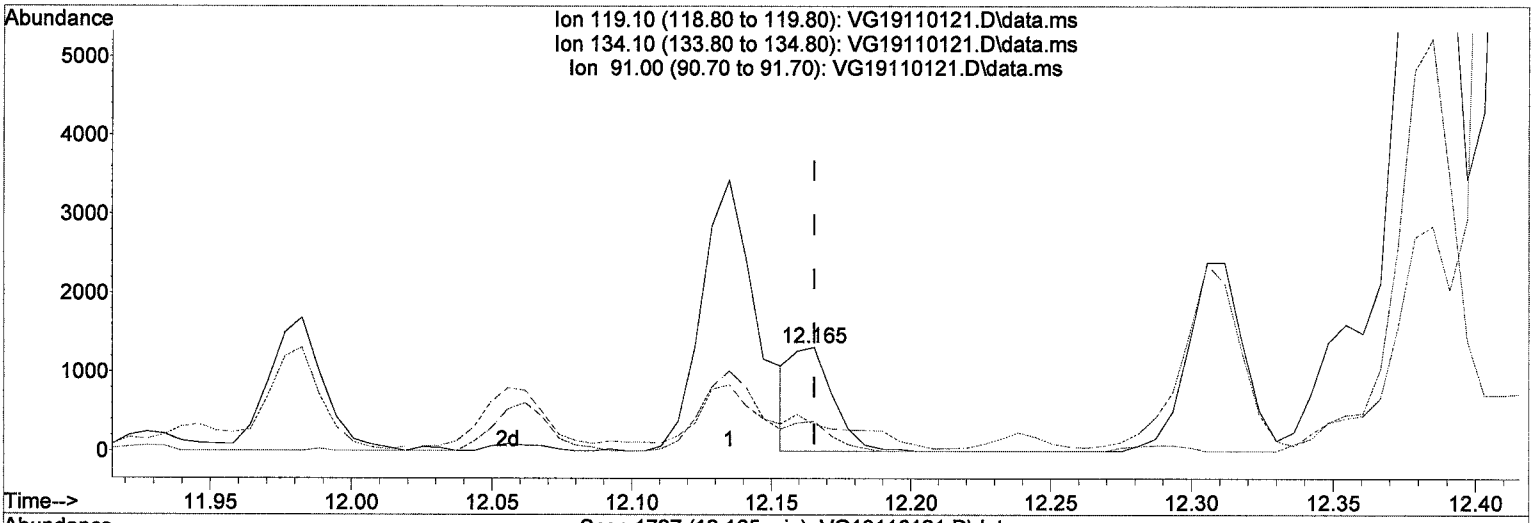
response 4676

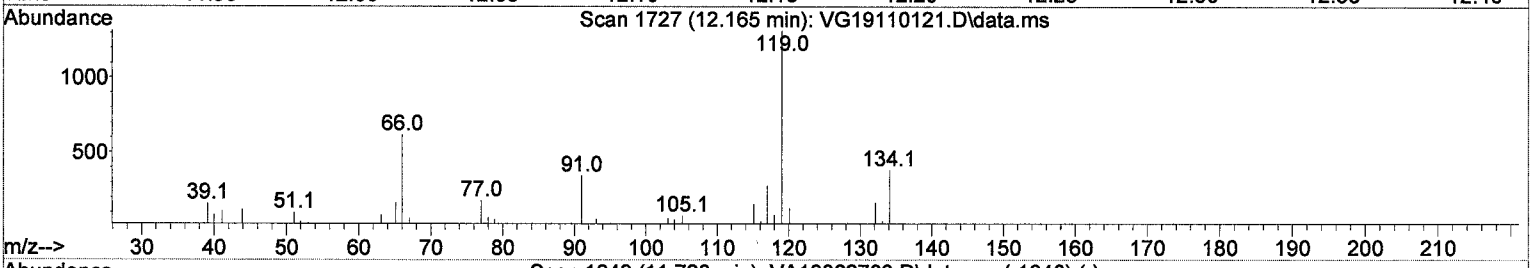
Ion	Exp%	Act%
119.10	100.00	100.00
134.10	26.60	28.02
91.00	21.70	21.66
0.00	0.00	0.00

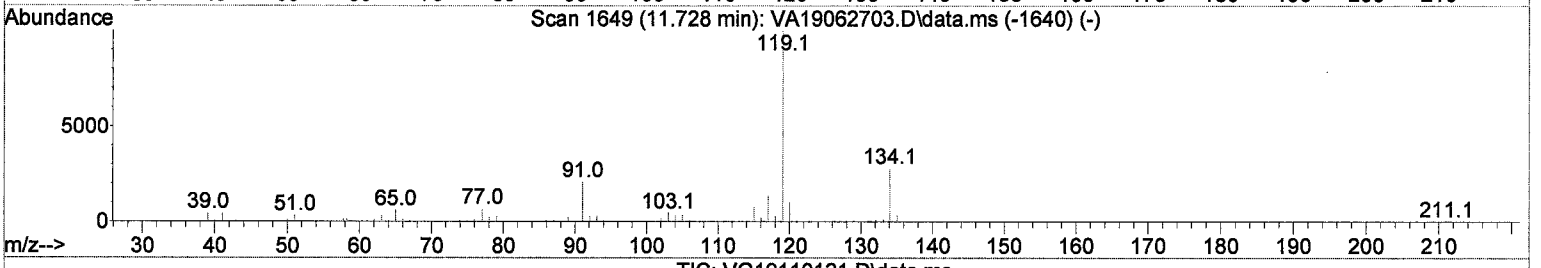
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(79) 4-Isopropyltoluene

12.165min (-0.000) 0.27 ug/L (m)

response 1372

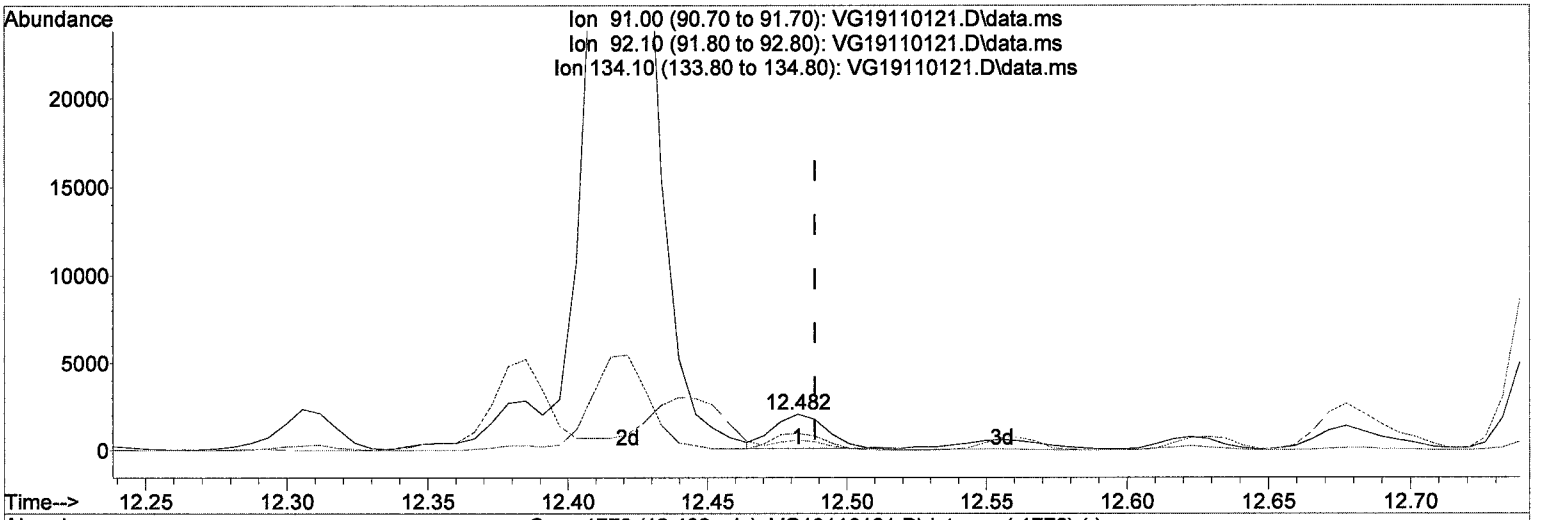
Ion	Exp%	Act%
119.10	100.00	100.00
134.10	26.60	29.08
91.00	21.70	26.12
0.00	0.00	0.00

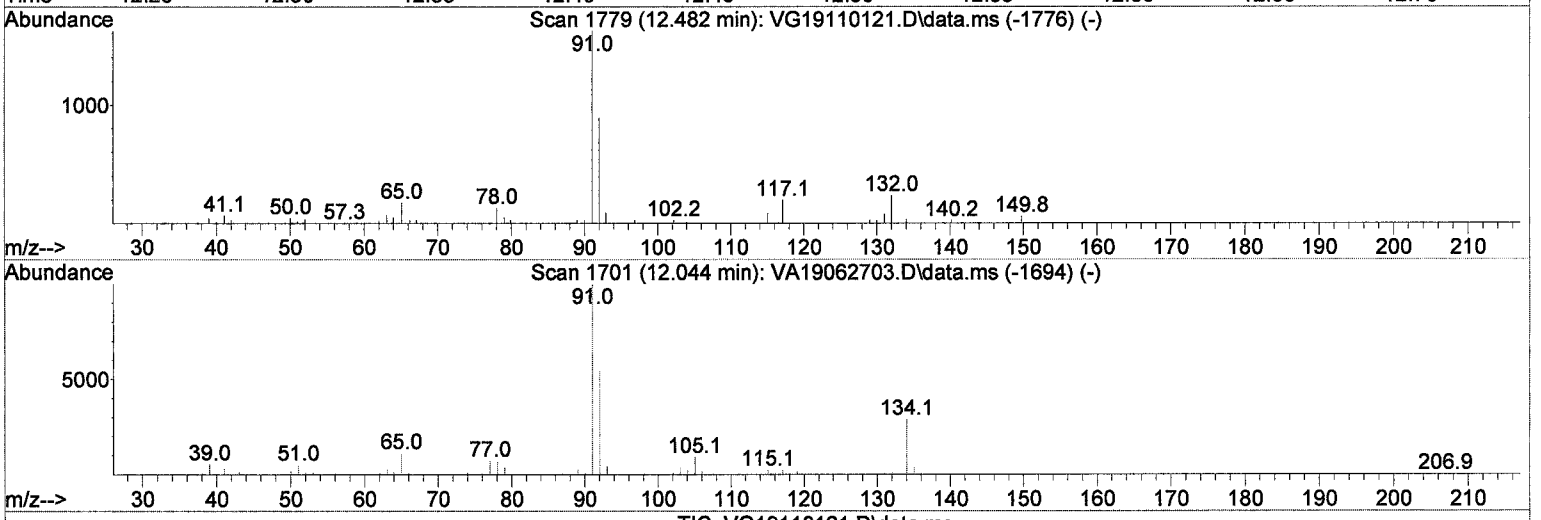
11/4/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration





TIC: VG19110121.D\data.ms

(82) n-Butylbenzene

12.482min (-0.006) 0.64 ug/L

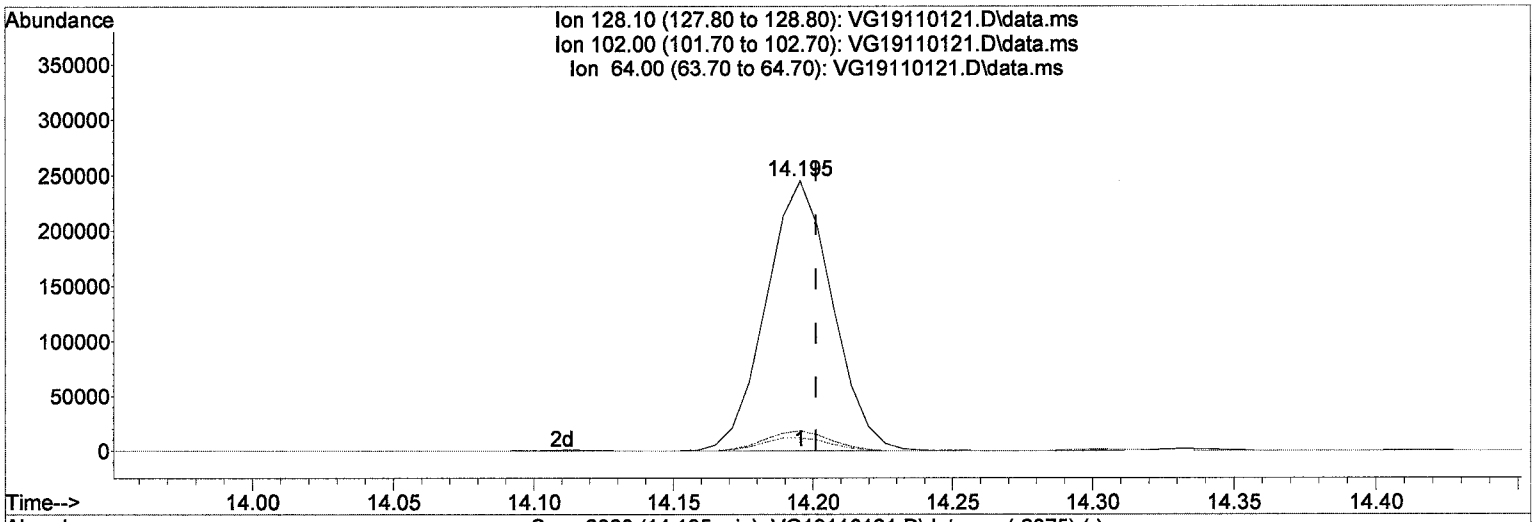
response 2588

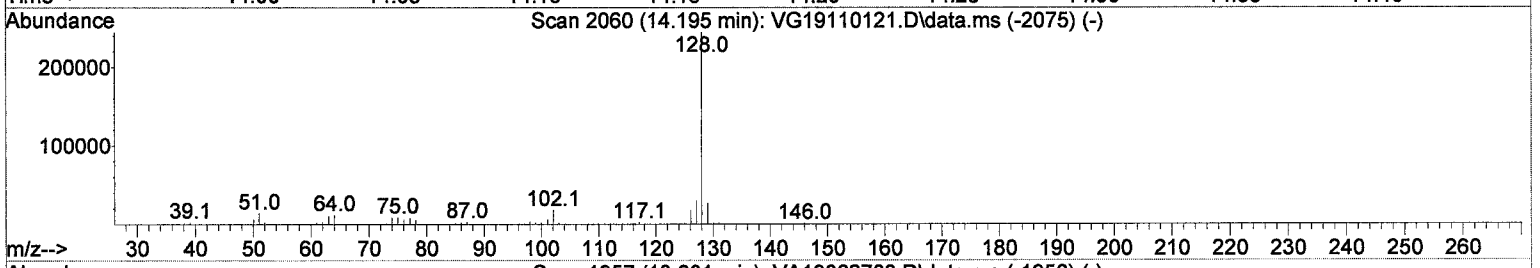
Ion	Exp%	Act%
91.00	100.00	100.00
92.10	53.50	47.30
134.10	30.00	29.97
0.00	0.00	0.00

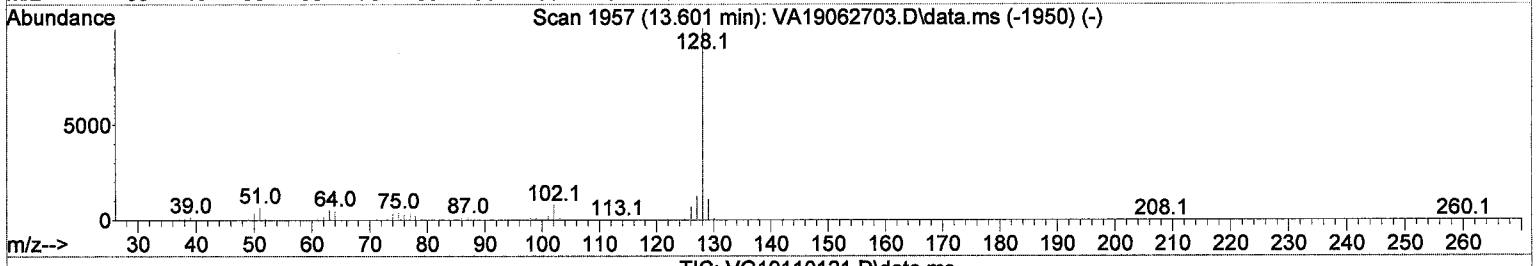
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110121.D\data.ms

(87) Naphthalene

14.195min (-0.006) 62.33 ug/L

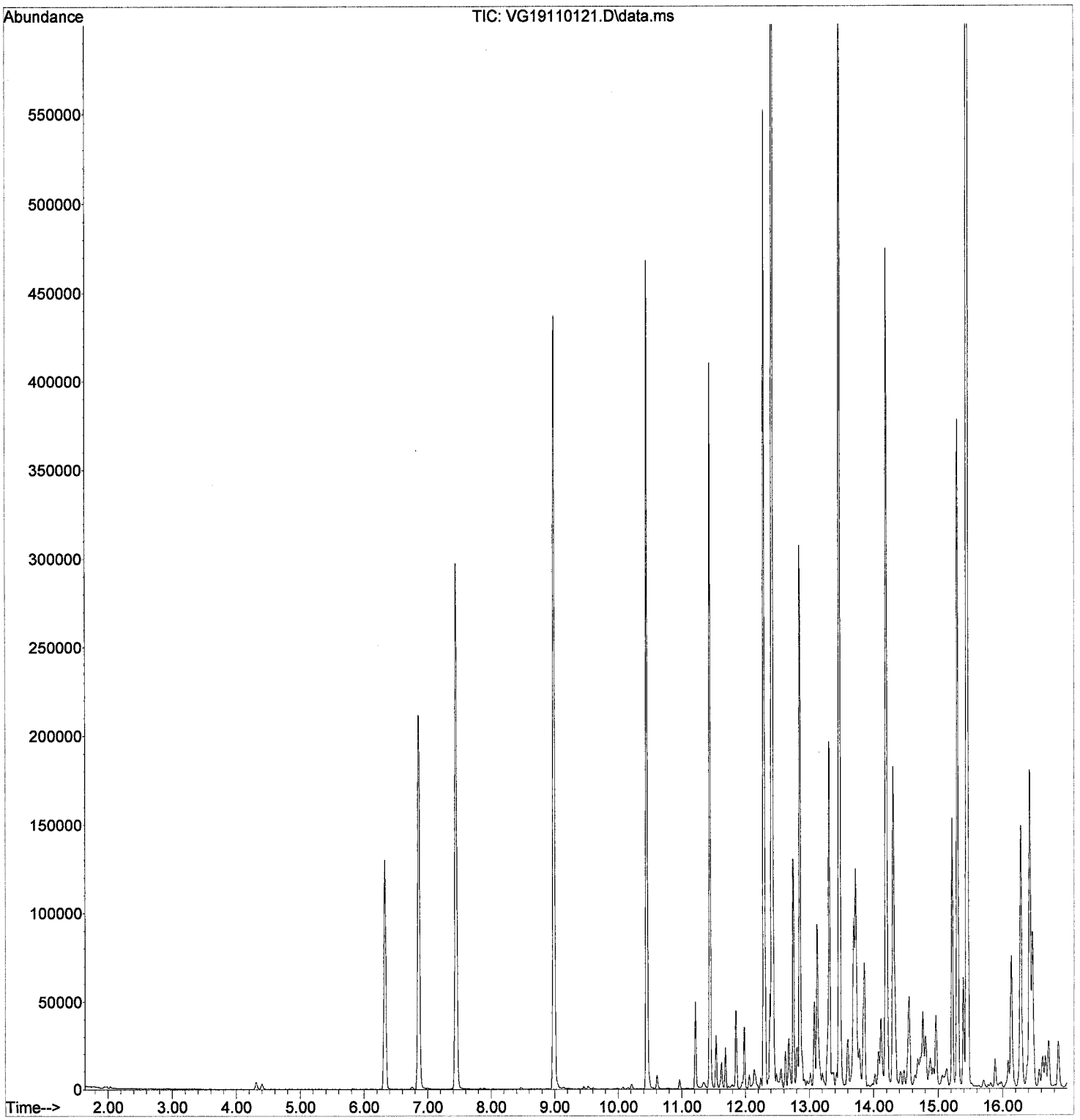
response 405018

Ion	Exp%	Act%
128.10	100.00	100.00
102.00	7.90	7.41
64.00	6.30	4.85
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110121.D
Acq On : 1 Nov 2019 9:58 pm
Operator : tb
Sample : A9J1114-02
Misc : 1X 5mL 8260
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:07 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

11/4/19

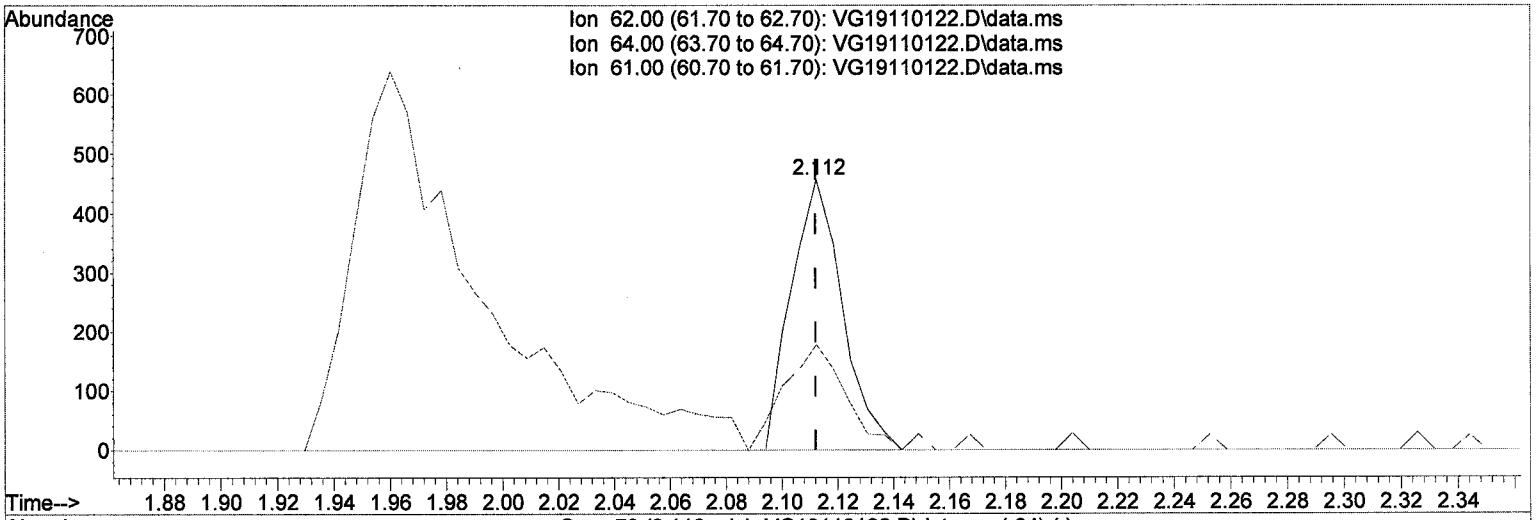
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
Internal Standards						
1) Pentafluorobenzene (I)	6.855	99	92125	50.00 ug/L	0.00	
45) Chlorobenzene-d5 (I)	10.446	117	279516	50.00 ug/L	0.00	
66) 1,4-Dichlorobenzene-d4...	12.287	152	143891	50.00 ug/L	0.00	
System Monitoring Compounds						
32) Dibromofluoromethane (S)	6.325	111	94821	48.89 ug/L	0.00	
39) 1,4-Difluorobenzene (S)	7.447	114	321808	50.85 ug/L	0.00	
48) Toluene-d8 (S)	8.989	98	361312	49.58 ug/L	0.00	
67) 4-Bromofluorobenzene (S)	11.440	174	121325	49.93 ug/L	0.00	
Target Compounds					Qvalue	
3) Chloromethane	1.984	50	446	0.21 ug/L	96	< MRL
4) Vinyl Chloride	2.112	62	586	0.33 ug/L	90	
6) Chloroethane	2.734	64	87	Below Cal #	47	< MDL
8) Ethanol	3.630	45	104	2.15 ug/L #	29	
14) Methylene Chloride	4.319	84	208	Below Cal #	67	
15) Acetone	4.398	43	7081	7.37 ug/L	97	
19) tert-Butanol (TBA)	4.831	59	240	0.66 ug/L #	78	
34) 2-Butanone (MEK)	6.490	43	421	0.31 ug/L	52	
35) Benzene	6.758	78	1719	0.24 ug/L	93	
38) iso-Butyl Alcohol	7.069	43	44	0.29 ug/L #	22	< MDL
46) 2-Chloroethyl Vinyl Ether	8.703	63	11	0.42 ug/L #	1	
47) c-1,3-Dichloropropene	8.812	75	34	0.11 ug/L #	33	
57) 2-Hexanone	10.214	43	269	0.15 ug/L #	16	
61) m,p-Xylenes (2)	10.611	91	683	0.12 ug/L	91	
62) o-Xylene	10.964	91	854	0.16 ug/L	95	
65) Isopropylbenzene	11.214	105	3630	0.54 ug/L	97	
69) n-Propylbenzene	11.537	91	1494	0.19 ug/L	92	
72) 1,3,5-Trimethylbenzene	11.684	105	2900	0.52 ug/L	92	
77) 1,2,4-Trimethylbenzene	11.982	105	1796	0.31 ug/L	98	< MDL
78) sec-Butylbenzene	12.056	105	1020	0.16 ug/L	79	
79) 4-Isopropyltoluene	12.135	119	609	0.11 ug/L	87	
82) n-Butylbenzene	12.482	91	509	0.12 ug/L	89	
87) Naphthalene	14.195	128	40387	6.35 ug/L	97	

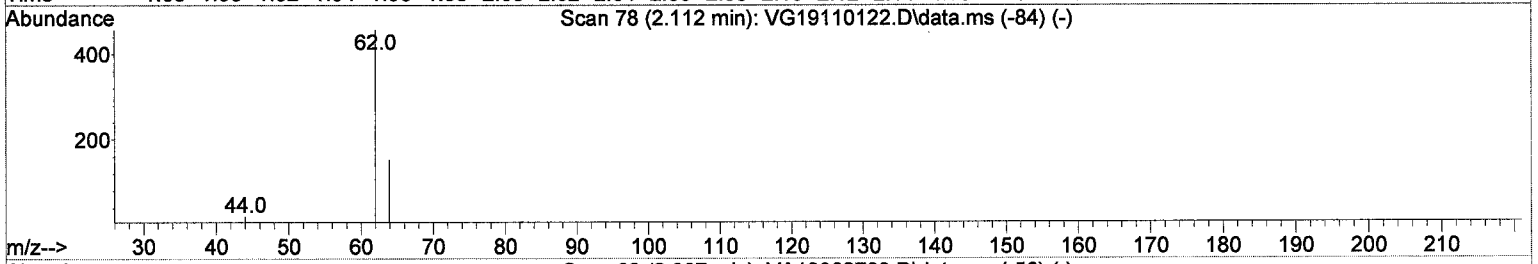
(#) = qualifier out of range (m) = manual integration (+) = signals summed

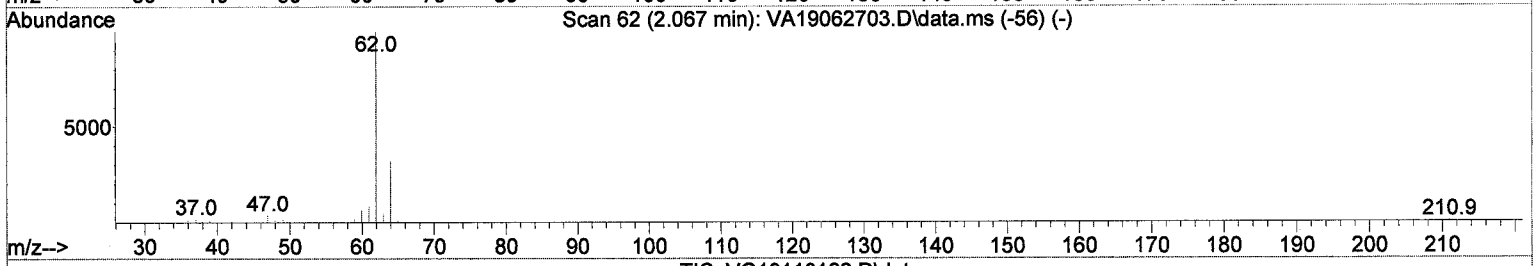
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110122.D\data.ms

(4) Vinyl Chloride (C)

2.112min (+ 0.000) 0.33 ug/L

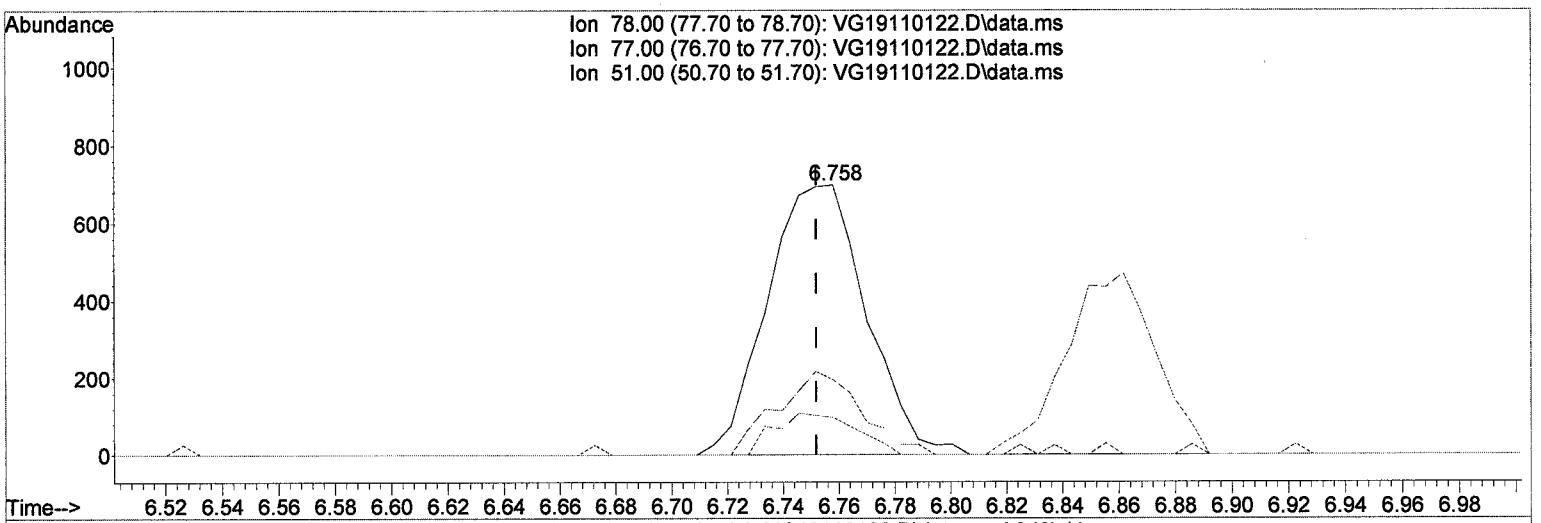
response 586

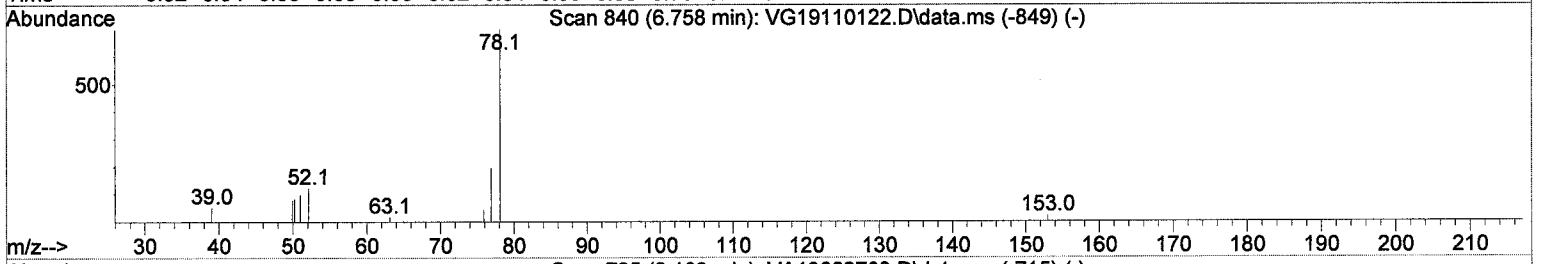
Ion	Exp%	Act%
62.00	100.00	100.00
64.00	35.50	39.17
61.00	8.30	0.00
0.00	0.00	0.00

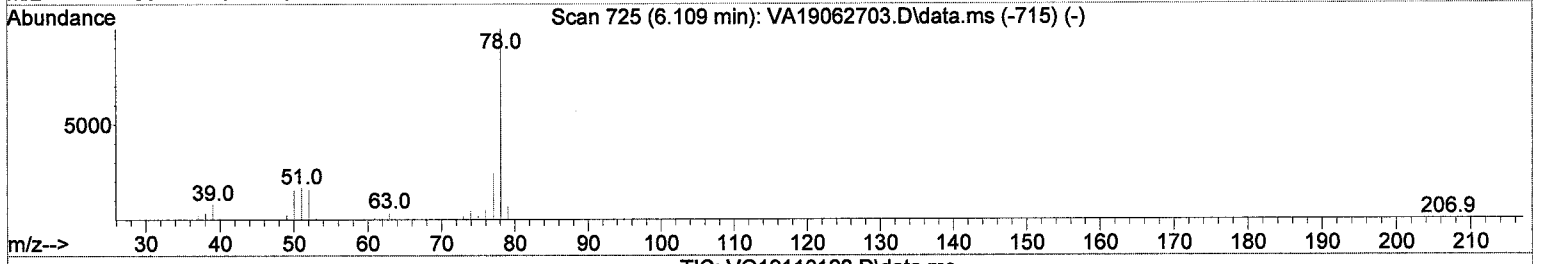
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110122.D\data.ms

(35) Benzene

6.758min (+ 0.006) 0.24 ug/L

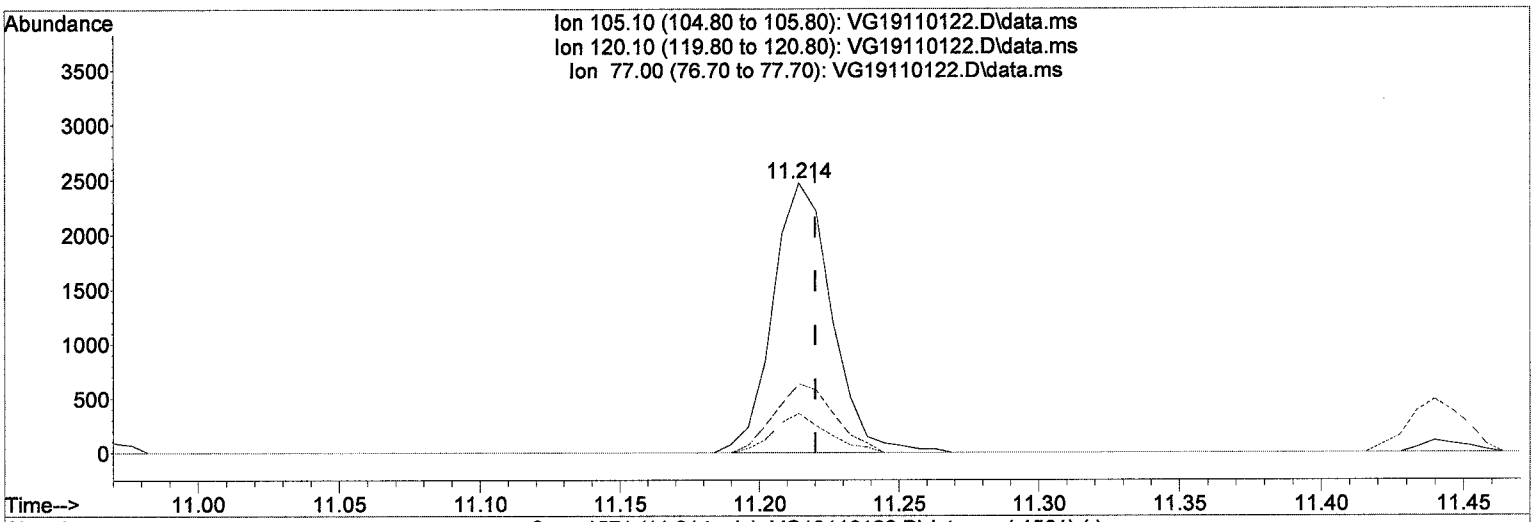
response 1719

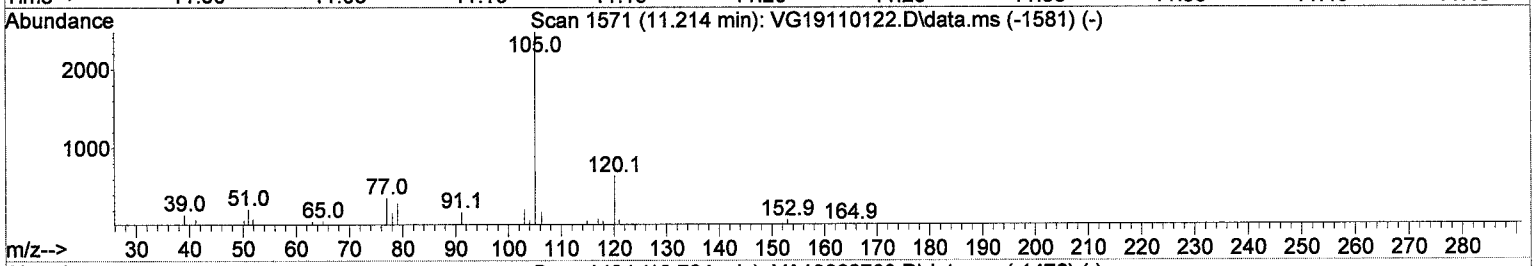
Ion	Exp%	Act%
78.00	100.00	100.00
77.00	23.60	27.94
51.00	16.20	13.90
0.00	0.00	0.00

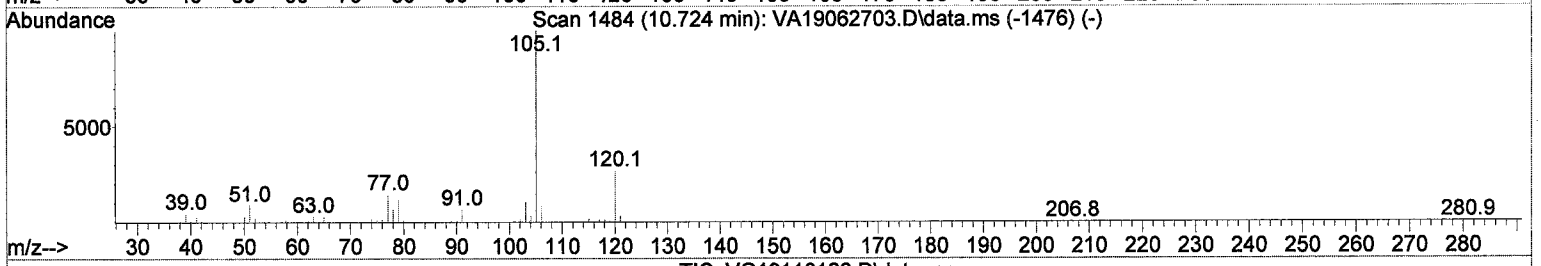
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110122.D\data.ms

(65) Isopropylbenzene

11.214min (-0.006) 0.54 ug/L

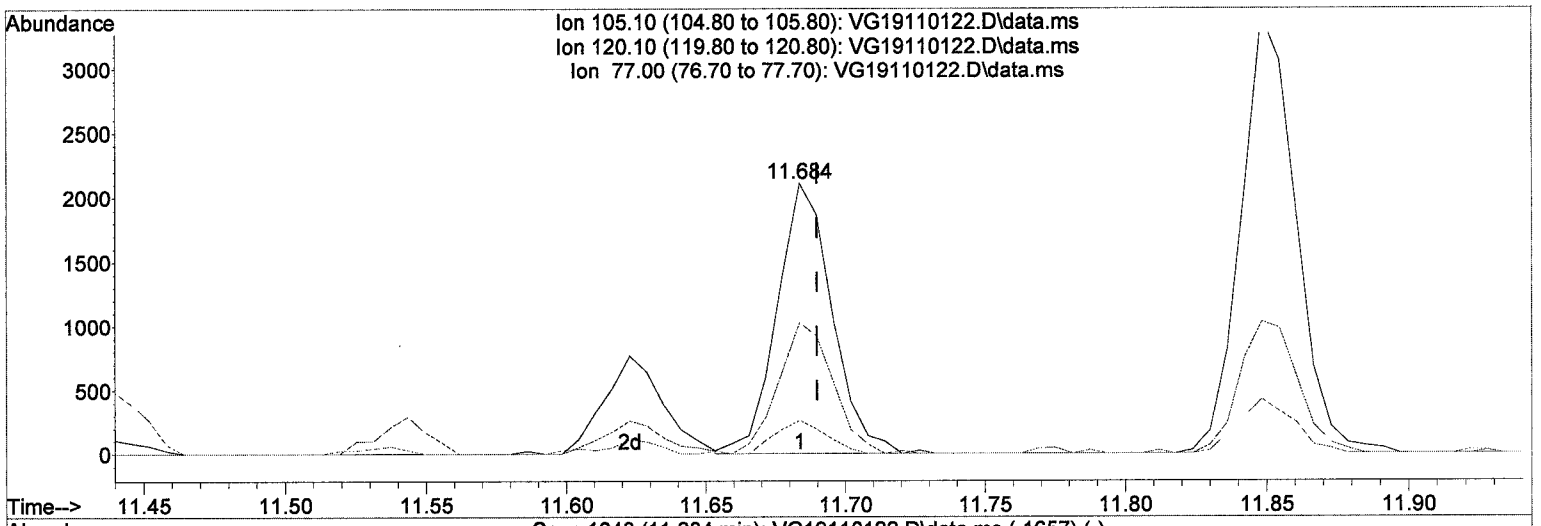
response 3630

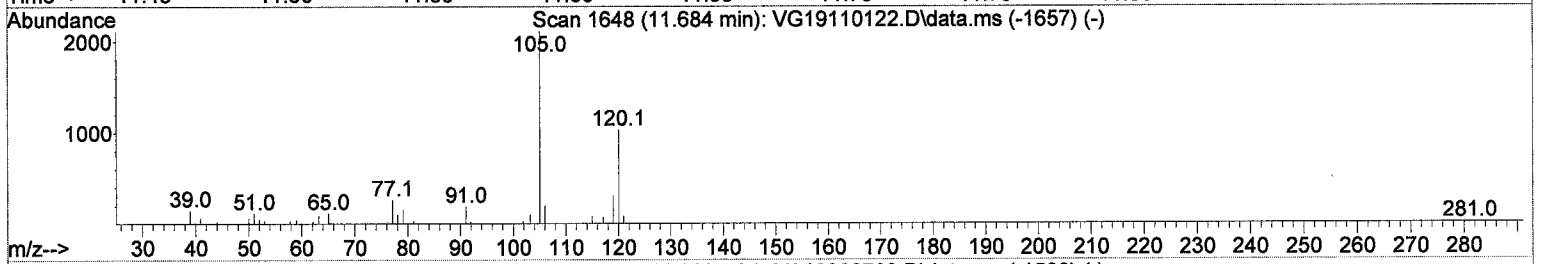
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	27.80	25.72
77.00	14.50	14.58
0.00	0.00	0.00

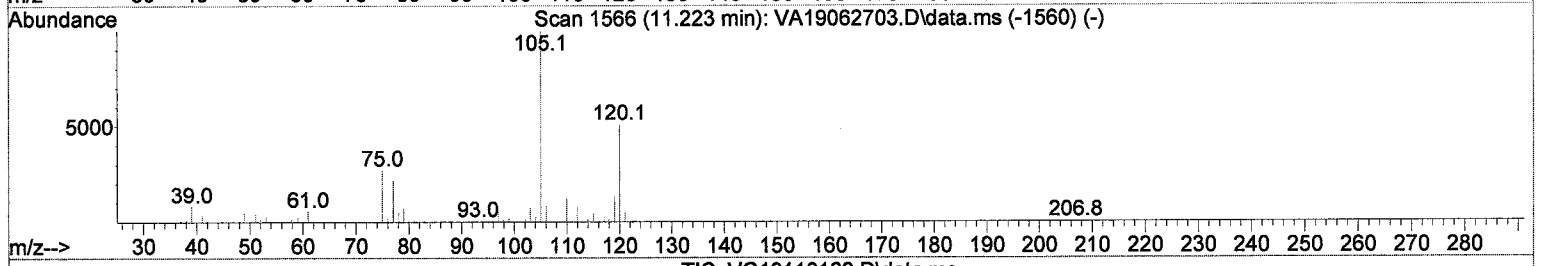
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110122.D\data.ms

(72) 1,3,5-Trimethylbenzene

11.684min (-0.006) 0.52 ug/L

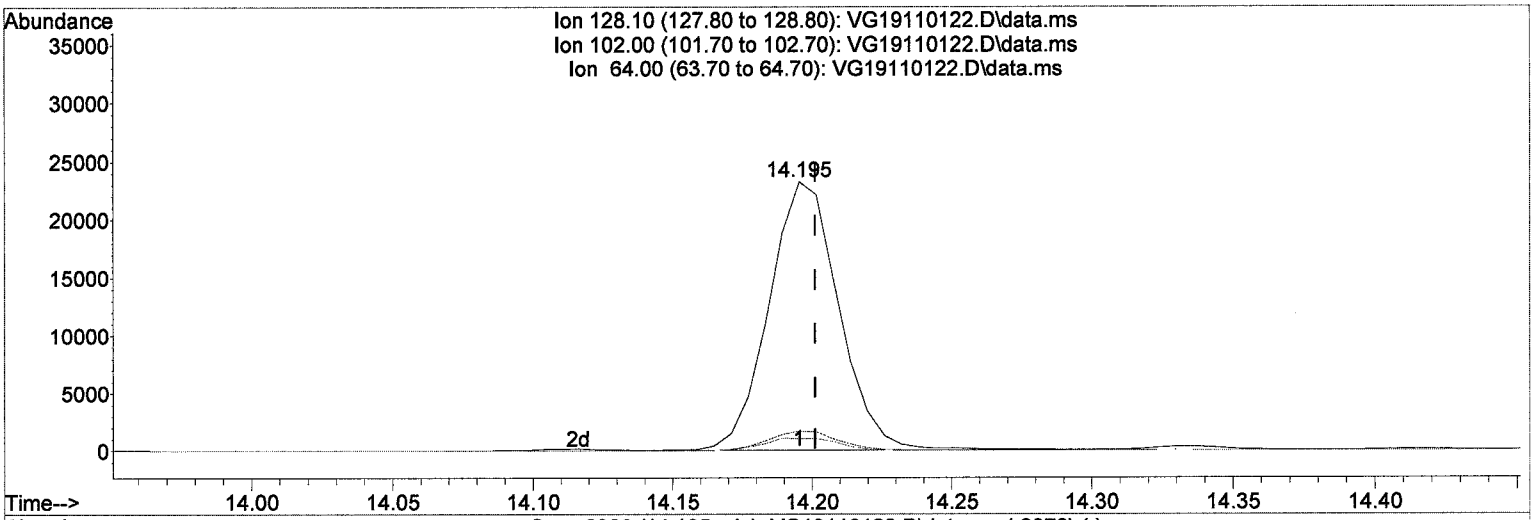
response 2900

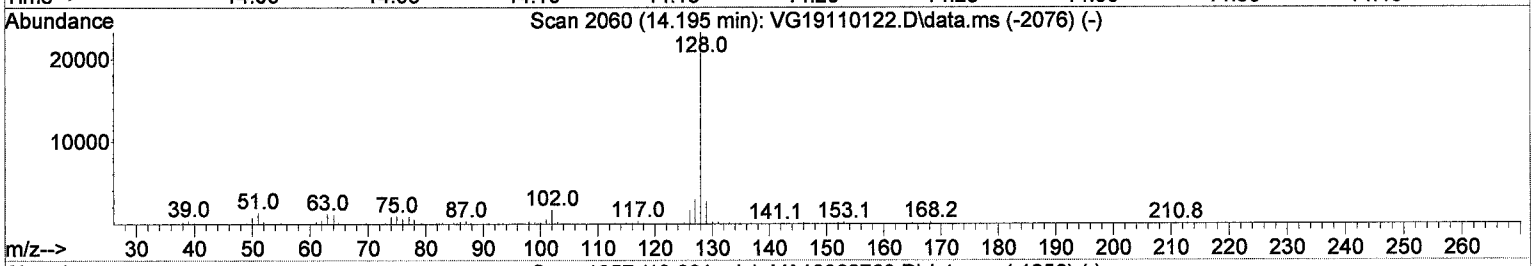
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	52.80	48.86
77.00	19.20	12.42
0.00	0.00	0.00

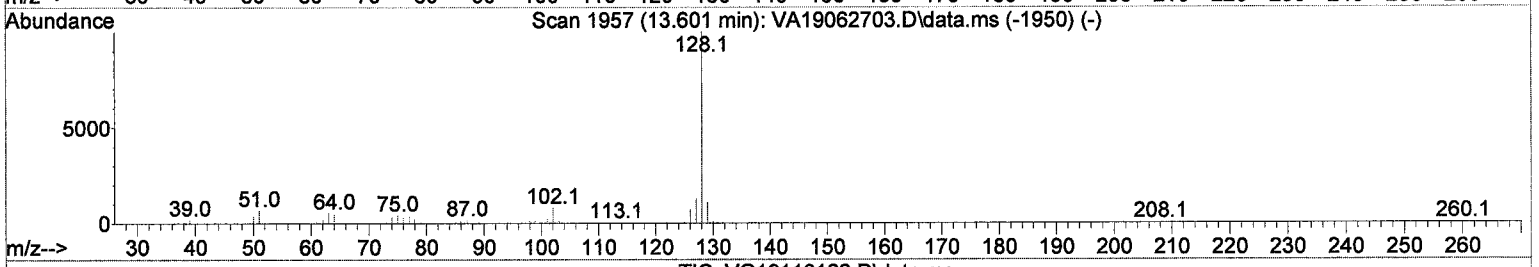
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110122.D\data.ms

(87) Naphthalene

14.195min (-0.006) 6.35 ug/L

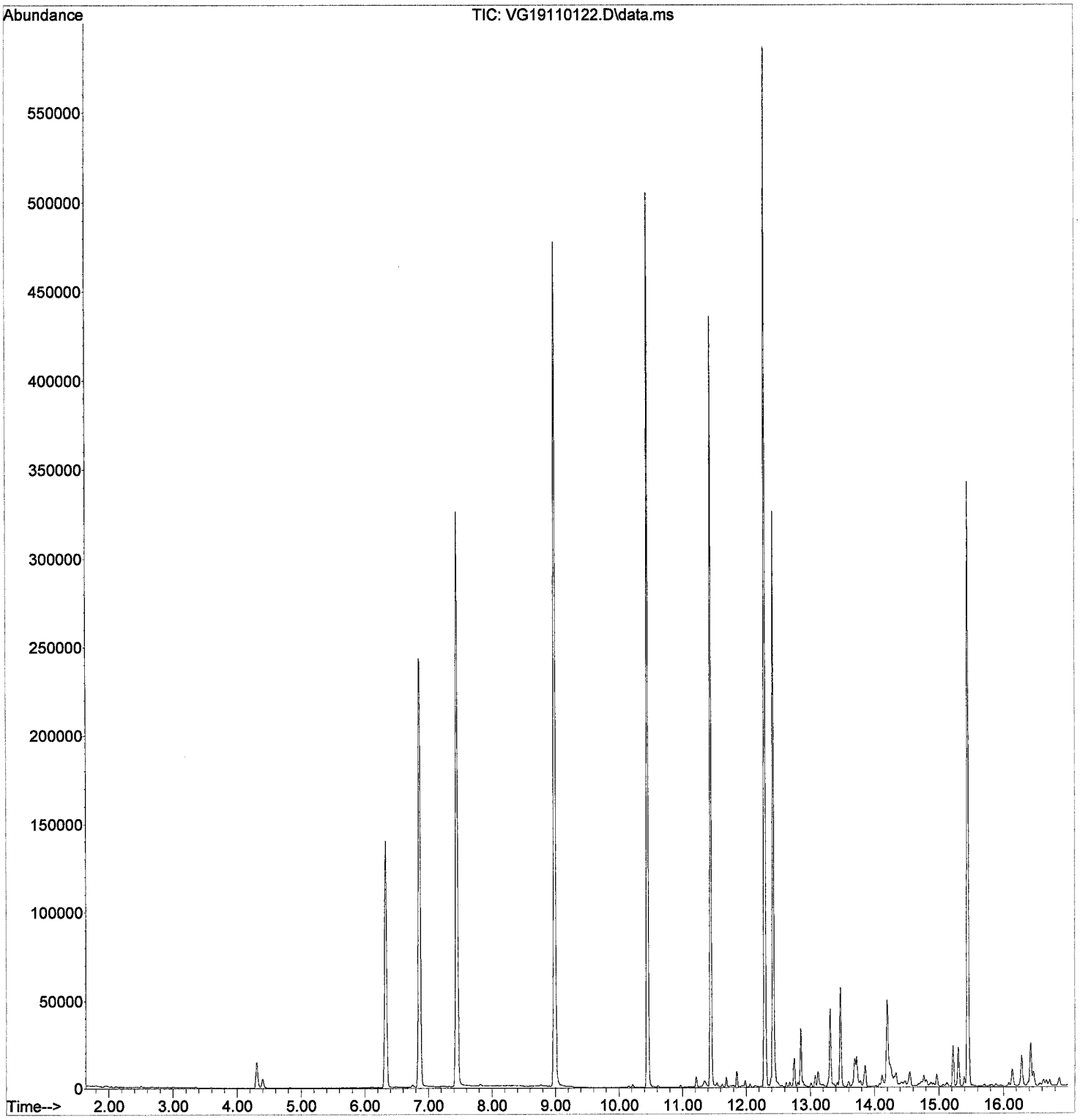
response 40387

Ion	Exp%	Act%
128.10	100.00	100.00
102.00	7.90	7.29
64.00	6.30	4.57
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110122.D
Acq On : 1 Nov 2019 10:25 pm
Operator : tb
Sample : A9J1114-04
Misc : 1X 5mL 8260
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:10 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

11/4/19

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) Pentafluorobenzene (I)	6.855	99	81645	50.00	ug/L		0.00	
45) Chlorobenzene-d5 (I)	10.446	117	239328	50.00	ug/L		0.00	
66) 1,4-Dichlorobenzene-d4...	12.287	152	120754	50.00	ug/L		0.00	
System Monitoring Compounds								
32) Dibromofluoromethane (S)	6.325	111	82918	48.24	ug/L		0.00	
39) 1,4-Difluorobenzene (S)	7.446	114	278664	49.68	ug/L		0.00	
48) Toluene-d8 (S)	8.989	98	314076	50.33	ug/L		0.00	
67) 4-Bromofluorobenzene (S)	11.446	174	101731	49.89	ug/L		0.00	
Target Compounds							Qvalue	
3) Chloromethane	1.984	50	246	0.13	ug/L		85	<MDL
6) Chloroethane	2.722	64	41	Below Cal		#	47	
8) Ethanol	3.630	45	79	1.84	ug/L	#	29	
14) Methylene Chloride	4.319	84	795	Below Cal			84	
15) Acetone	4.398	43	827	0.97	ug/L		88	
19) tert-Butanol (TBA)	4.825	59	293	0.91	ug/L	#	70	
35) Benzene	6.745	78	16206	2.57	ug/L		98	
46) 2-Chloroethyl Vinyl Ether	8.684	63	10	0.42	ug/L	#	1	<MDL
47) c-1,3-Dichloropropene	8.800	75	10	0.10	ug/L	#	33	
59) Ethylbenzene	10.489	91	5350	0.78	ug/L		96	
62) o-Xylene	10.970	91	1283	0.29	ug/L		95	
63) Styrene	10.964	104	10	0.10	ug/L	#	1	<MDL
65) Isopropylbenzene	11.214	105	720	0.13	ug/L		98	
72) 1,3,5-Trimethylbenzene	11.690	105	440	0.09	ug/L		93	
77) 1,2,4-Trimethylbenzene	11.982	105	1201	0.25	ug/L		95	
87) Naphthalene	14.195	128	233499	40.99	ug/L		97	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
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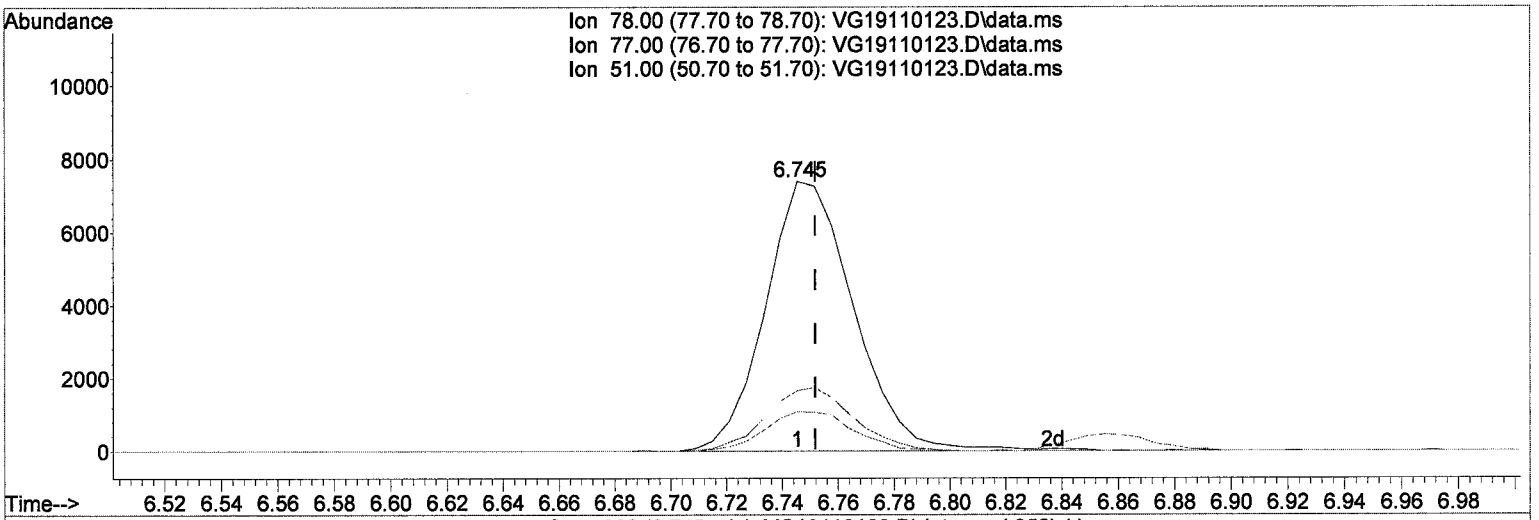

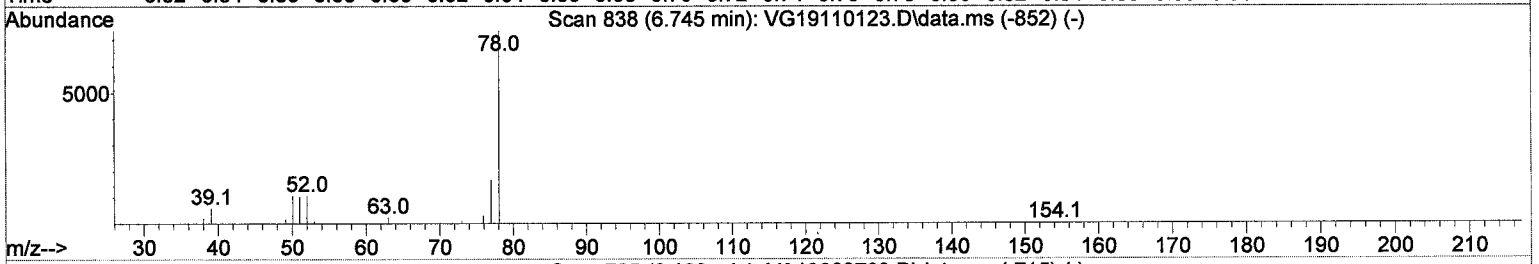

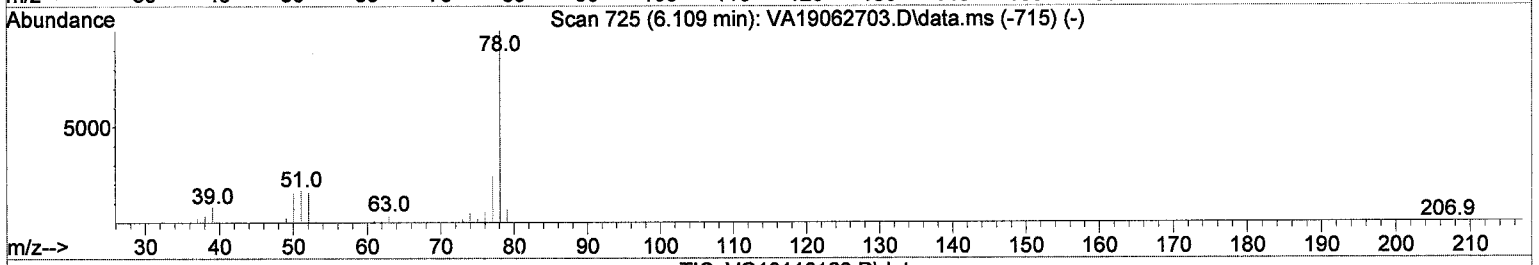

TIC: VG19110123.D\data.ms

(35) Benzene

6.745min (-0.006) 2.57 ug/L

response 16206

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	23.60	22.68
51.00	16.20	14.78
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
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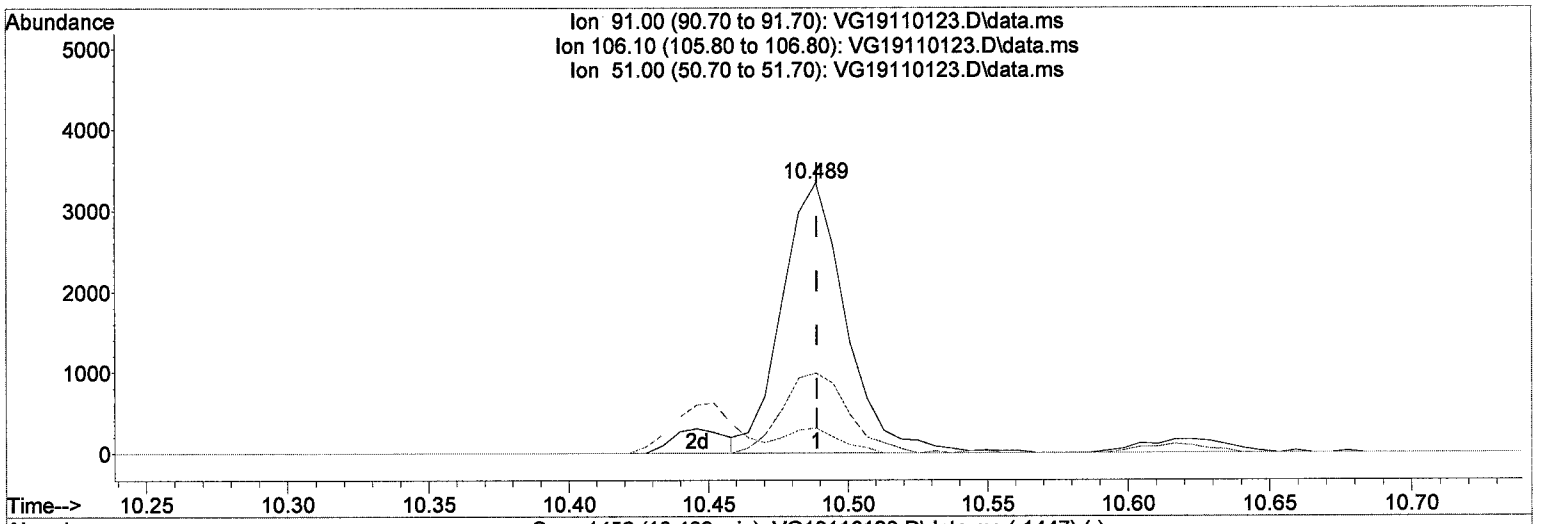
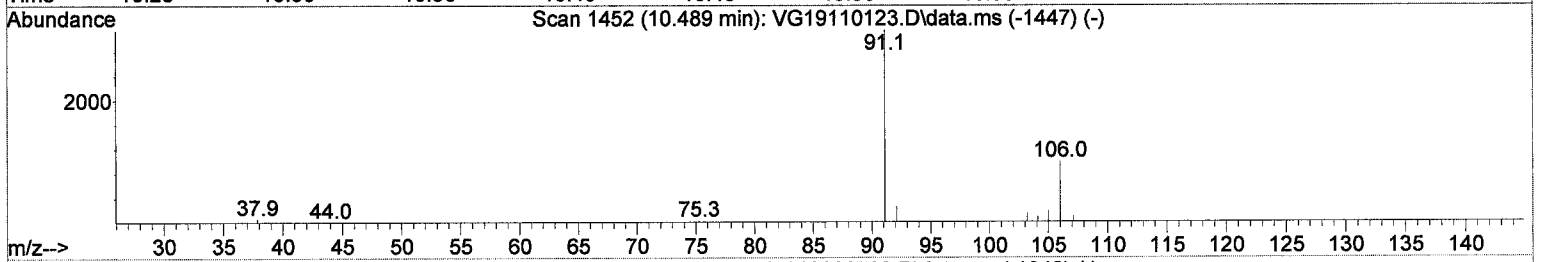
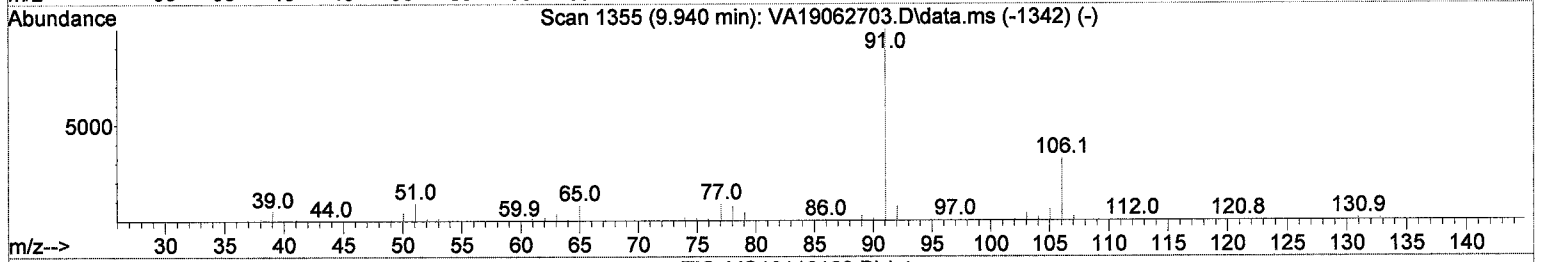






TIC: VG19110123.D\data.ms

(59) Ethylbenzene (C)

10.489min (-0.000) 0.78 ug/L

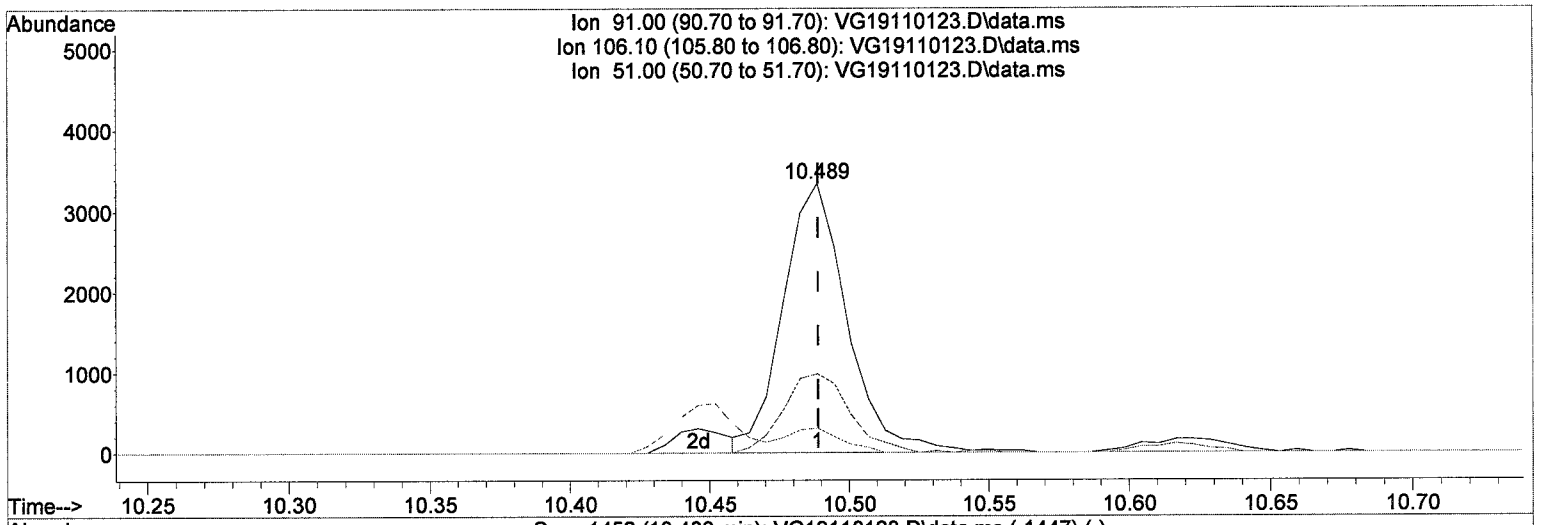
response 5350

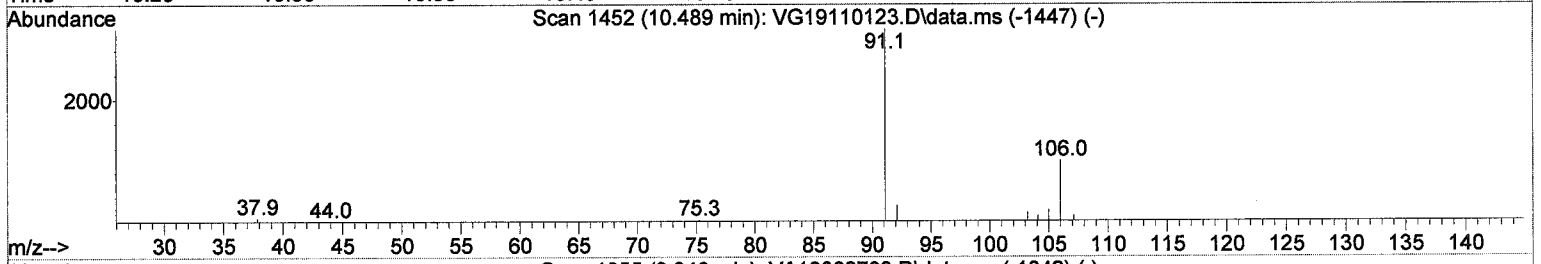
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	29.46
51.00	9.80	9.26
0.00	0.00	0.00

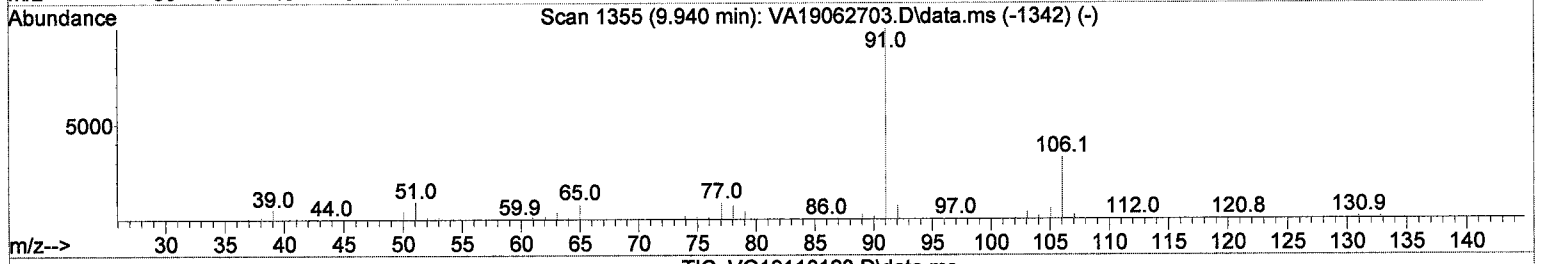
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110123.D\data.ms

(59) Ethylbenzene (C)

10.489min (-0.000) 0.78 ug/L

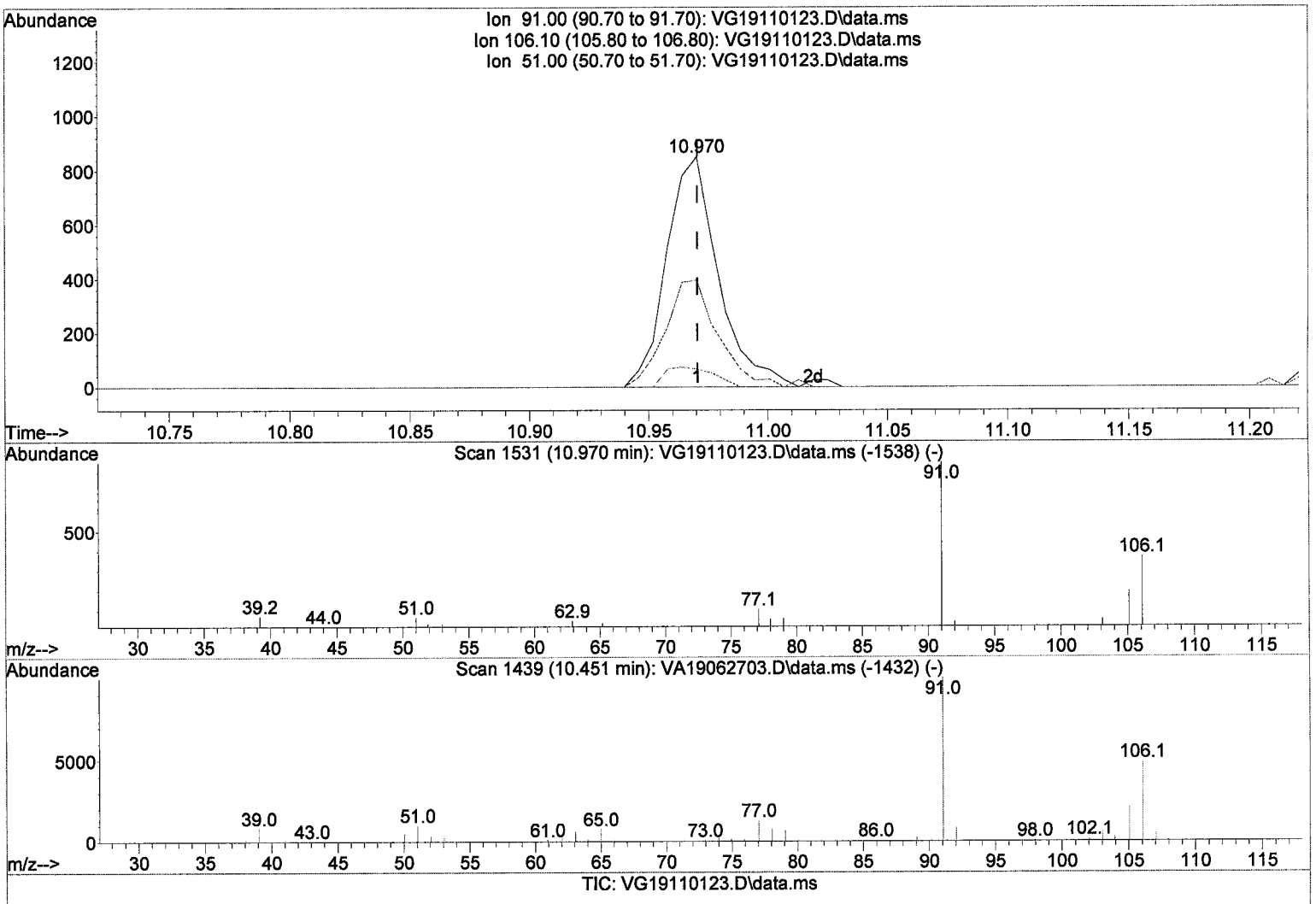
response 5350

Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	29.46
51.00	9.80	9.26
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110123.D\data.ms

(62) o-Xylene

10.970min (-0.000) 0.29 ug/L

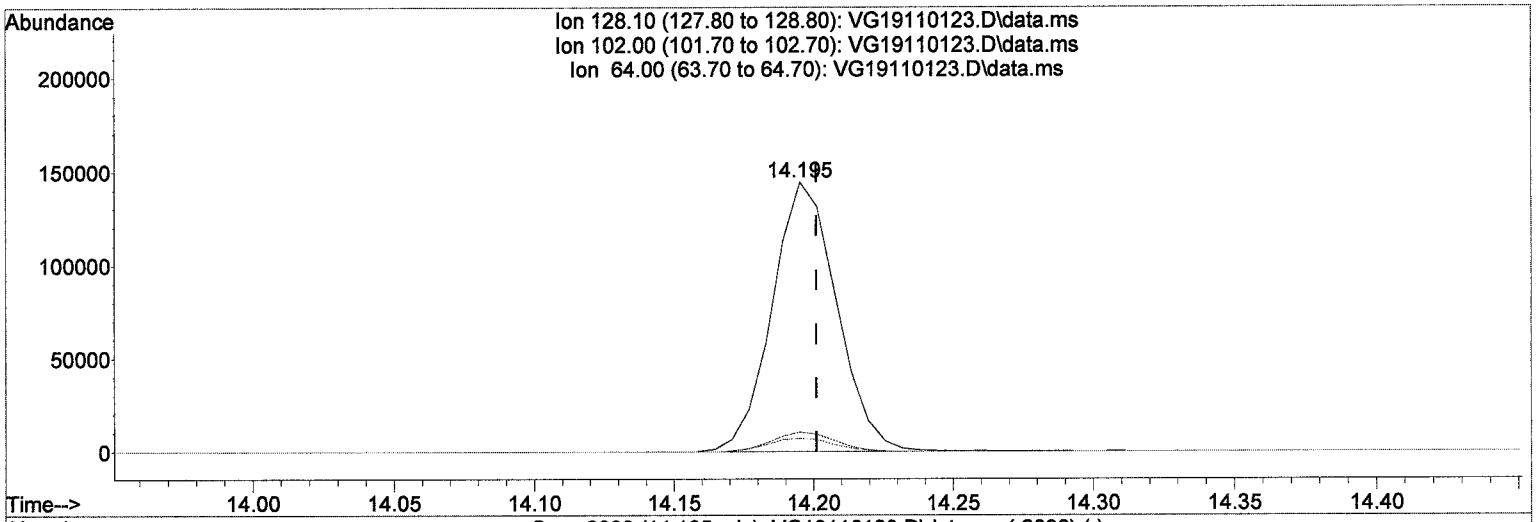
response 1283

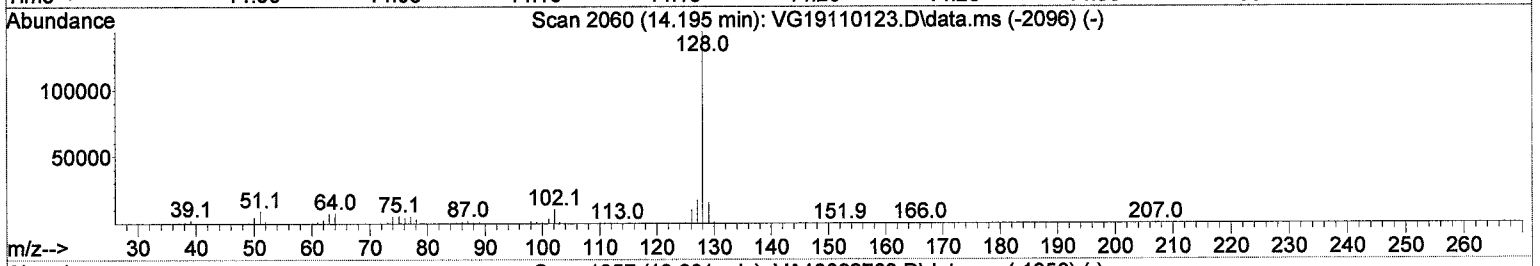
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	49.80	46.47
51.00	9.70	7.65
0.00	0.00	0.00

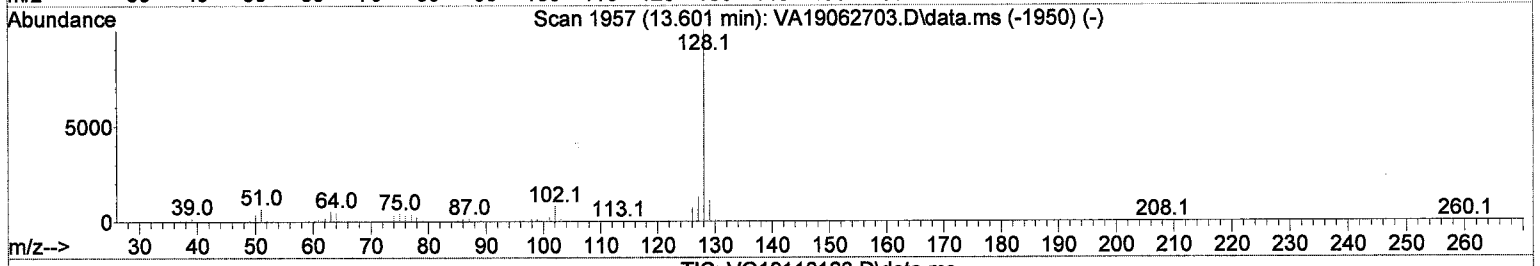
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110123.D\data.ms

(87) Naphthalene

14.195min (-0.006) 40.99 ug/L

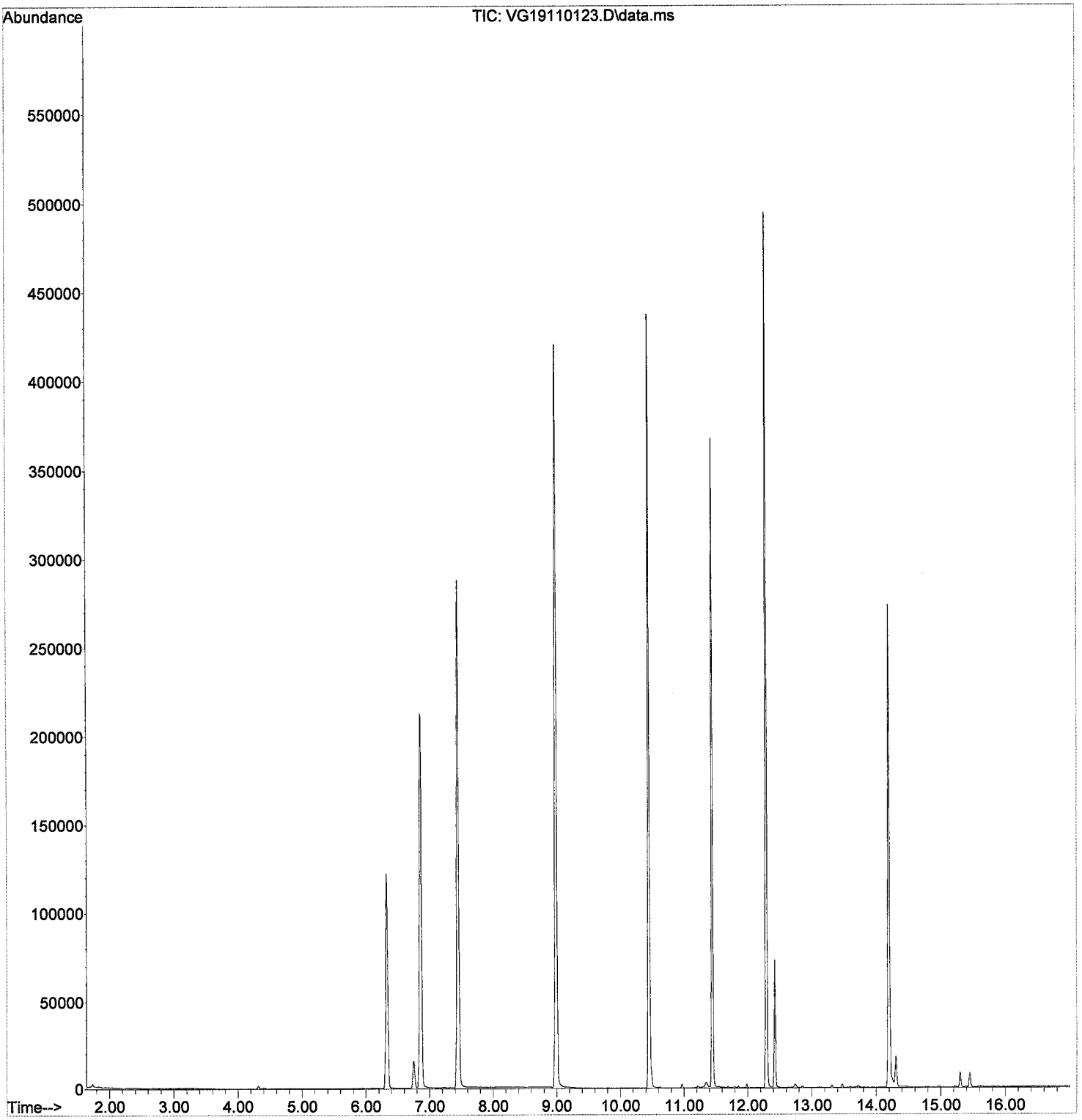
response 233499

Ion	Exp%	Act%
128.10	100.00	100.00
102.00	7.90	7.33
64.00	6.30	5.04
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110123.D
Acq On : 1 Nov 2019 10:52 pm
Operator : tb
Sample : A9J1114-06@100
Misc : 100X 500uL/50mL 8260
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:13 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

11/4/19

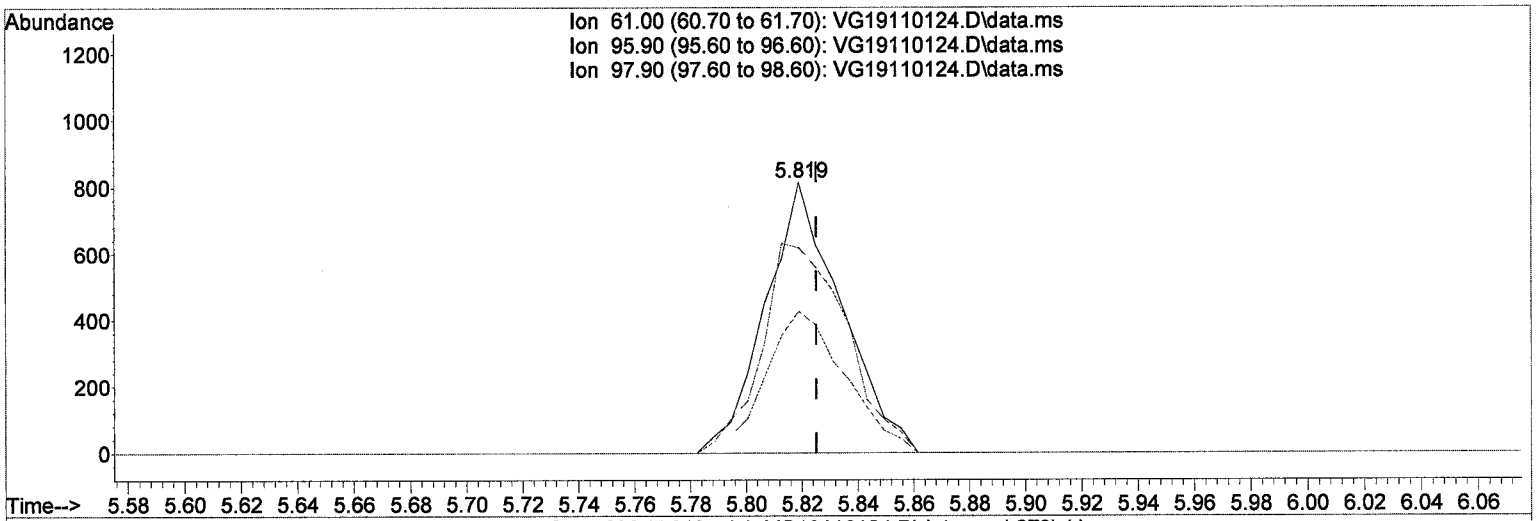
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)	
Internal Standards								
1) Pentafluorobenzene (I)	6.855	99	94118	50.00	ug/L		0.00	
45) Chlorobenzene-d5 (I)	10.446	117	277979	50.00	ug/L		0.00	
66) 1,4-Dichlorobenzene-d4...	12.287	152	145141	50.00	ug/L		0.00	
System Monitoring Compounds								
32) Dibromofluoromethane (S)	6.325	111	93818	47.35	ug/L		0.00	
39) 1,4-Difluorobenzene (S)	7.447	114	318224	49.22	ug/L		0.00	
48) Toluene-d8 (S)	8.989	98	356073	49.13	ug/L		0.00	
67) 4-Bromofluorobenzene (S)	11.440	174	123626	50.44	ug/L		0.00	
Target Compounds							Qvalue	
3) Chloromethane	1.984	50	455	0.21	ug/L		89	<MDL
6) Chloroethane	2.740	64	75	Below Cal		#	47	
8) Ethanol	3.624	45	23	0.47	ug/L	#	40	
14) Methylene Chloride	4.325	84	377	Below Cal		#	64	
15) Acetone	4.392	43	4259	4.34	ug/L		94	
19) tert-Butanol (TBA)	4.825	59	380	1.02	ug/L	#	60	
25) c-1,2-Dichloroethene	5.819	61	1533	0.66	ug/L		97	
35) Benzene	6.752	78	137882	18.93	ug/L		98	
38) iso-Butyl Alcohol	7.062	43	46	0.30	ug/L	#	22	<MDL
40) Trichloroethene (TCE)	7.410	130	291	0.14	ug/L		80	
46) 2-Chloroethyl Vinyl Ether	8.629	63	42	0.45	ug/L	#	1	
49) Toluene	9.038	91	3218	0.39	ug/L		91	
57) 2-Hexanone	10.214	43	178	0.10	ug/L	#	1	
59) Ethylbenzene	10.483	91	42380	5.33	ug/L		98	
61) m,p-Xylenes (2)	10.611	91	13122	2.40	ug/L		98	
62) o-Xylene	10.964	91	16959	3.27	ug/L		97	
63) Styrene	11.031	104	10	0.10	ug/L	#	40	<MDL
65) Isopropylbenzene	11.214	105	118695	17.85	ug/L		99	
69) n-Propylbenzene	11.537	91	22277	2.79	ug/L		98	
71) 2-Chlorotoluene	11.604	126	321	0.18	ug/L	#	1	<MDL
72) 1,3,5-Trimethylbenzene	11.684	105	13569	2.41	ug/L		92	
73) 1,2,3-Trichloropropane	11.781	110	84	0.09	ug/L	#	1	<MDL
76) tert-Butylbenzene	11.927	91	3723	1.32	ug/L		96	
77) 1,2,4-Trimethylbenzene	11.982	105	45861	7.87	ug/L		100	
78) sec-Butylbenzene	12.062	105	46025	7.16	ug/L		98	
79) 4-Isopropyltoluene	~~12.135~~	~~119~~	~~6059~~	~~1.12 ug/L~~			~~97~~	MI <MDL
82) n-Butylbenzene	12.482	91	1844	0.43	ug/L		98	<MDL
87) Naphthalene	14.195	128	1270504	168.04	ug/L		97	

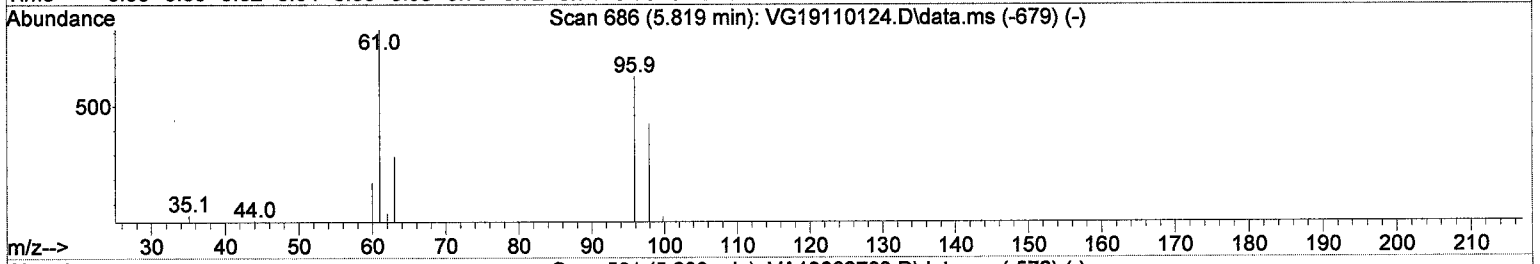
(#) = qualifier out of range (m) = manual integration (+) = signals summed

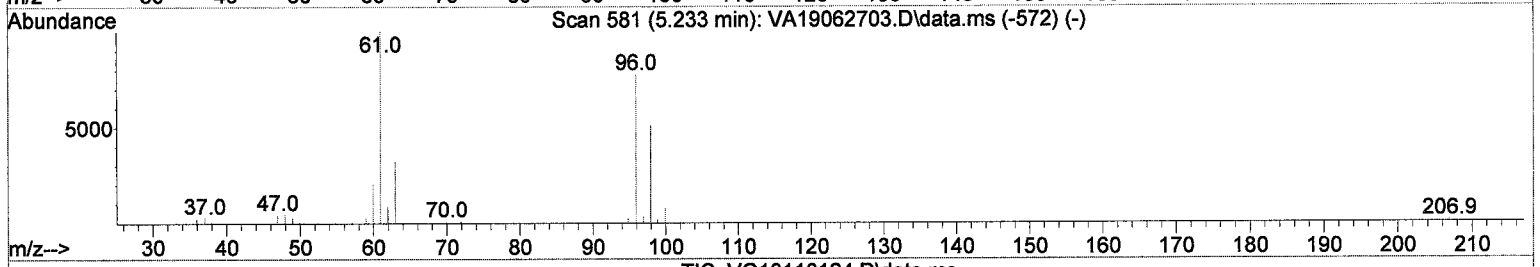
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(25) c-1,2-Dichloroethene

5.819min (-0.006) 0.66 ug/L

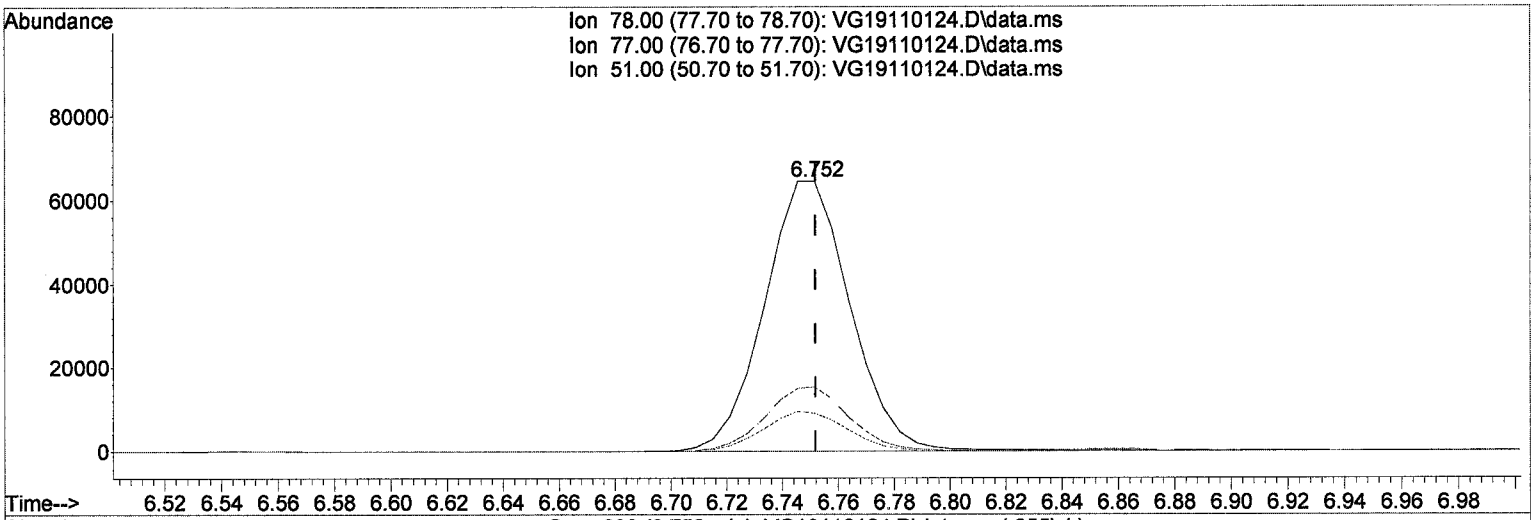
response 1533

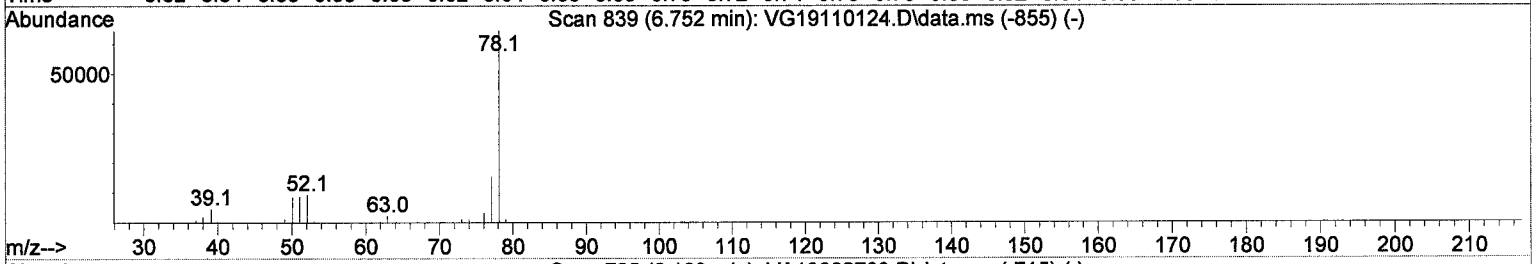
Ion	Exp%	Act%
61.00	100.00	100.00
95.90	75.90	76.04
97.90	47.60	52.33
0.00	0.00	0.00

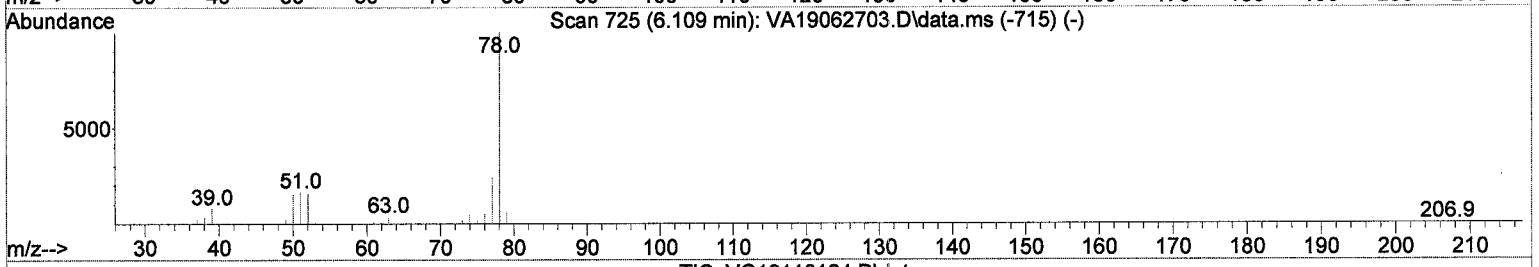
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(35) Benzene

6.752min (-0.000) 18.93 ug/L

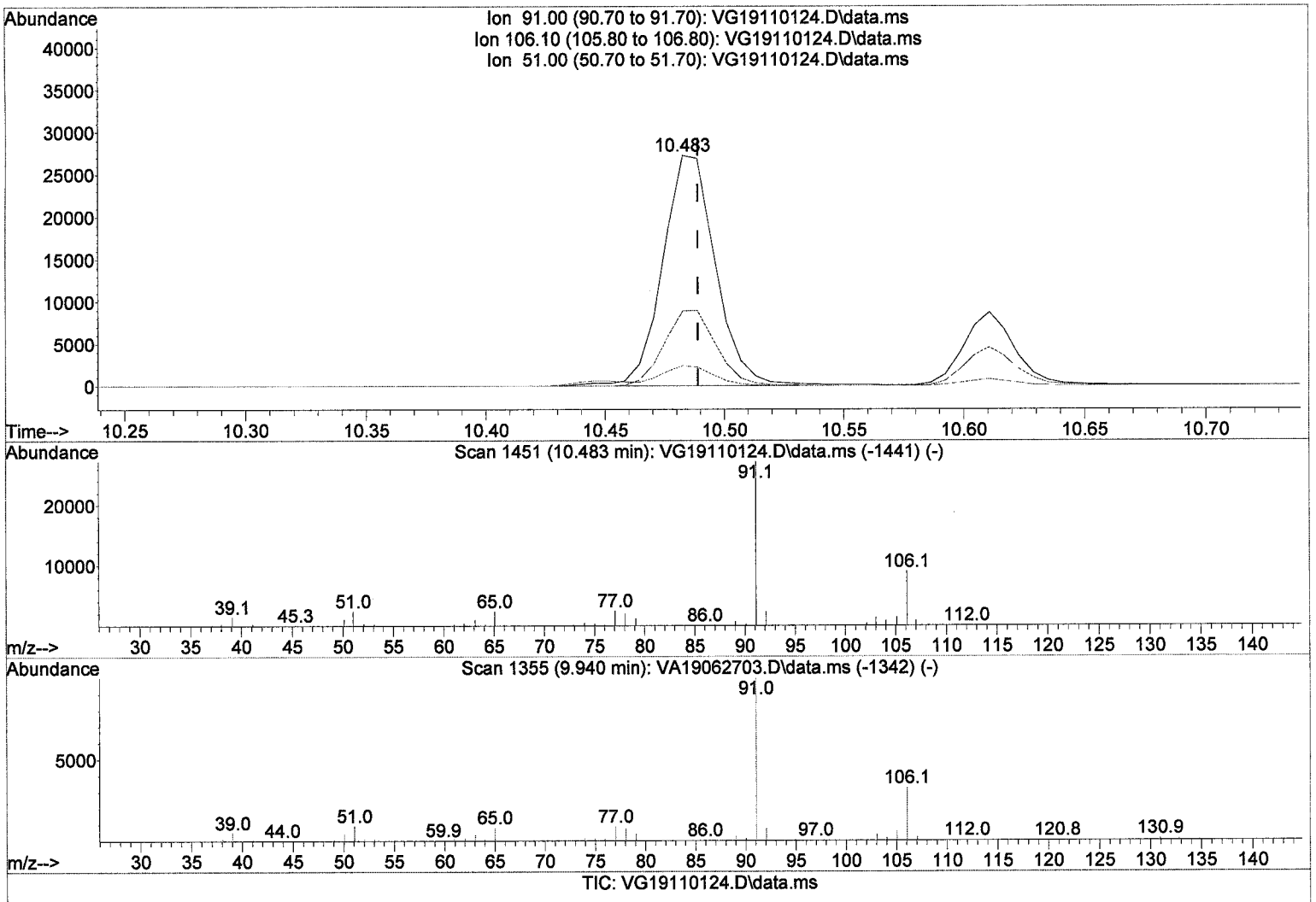
response 137882

Ion	Exp%	Act%
78.00	100.00	100.00
77.00	23.60	23.74
51.00	16.20	13.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110124.D\data.ms

(59) Ethylbenzene (C)

10.483min (-0.006) 5.33 ug/L

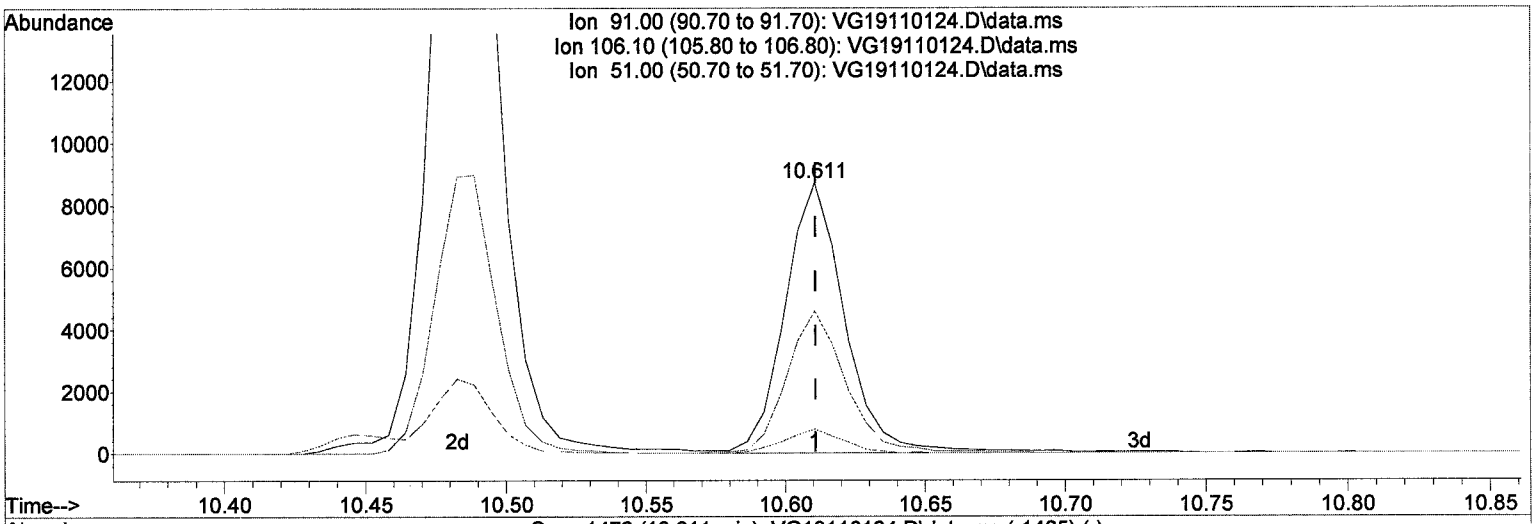
response 42380

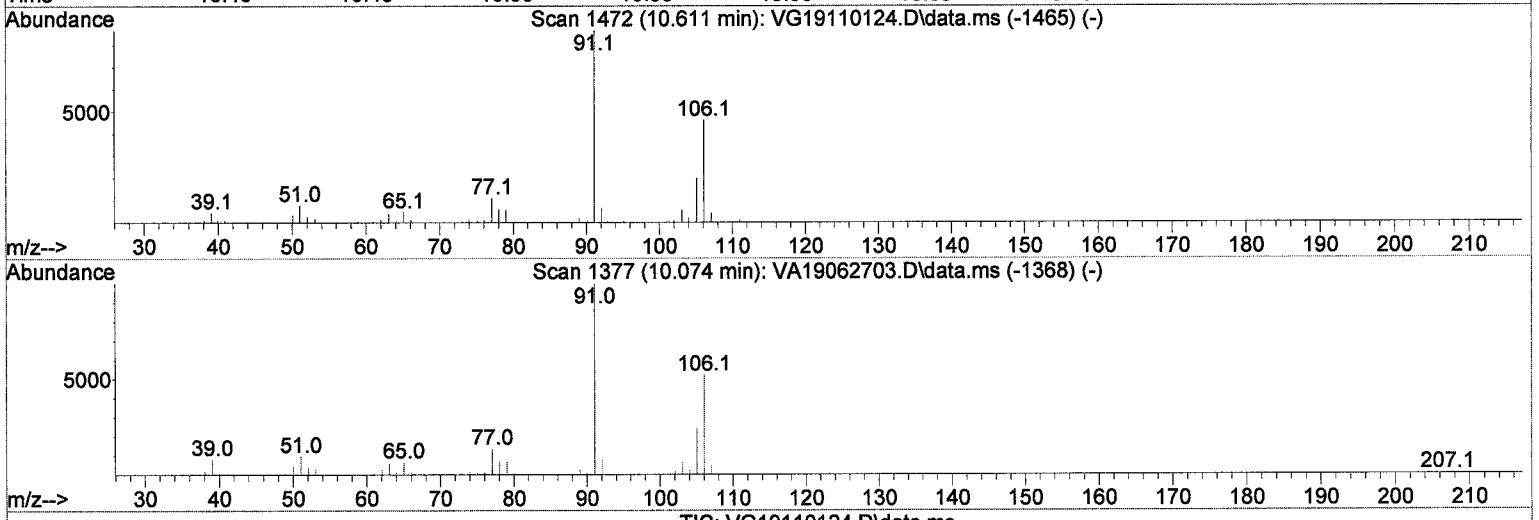
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	32.78
51.00	9.80	8.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration





TIC: VG19110124.D\data.ms

(61) m,p-Xylenes (2)

10.611min (-0.000) 2.40 ug/L

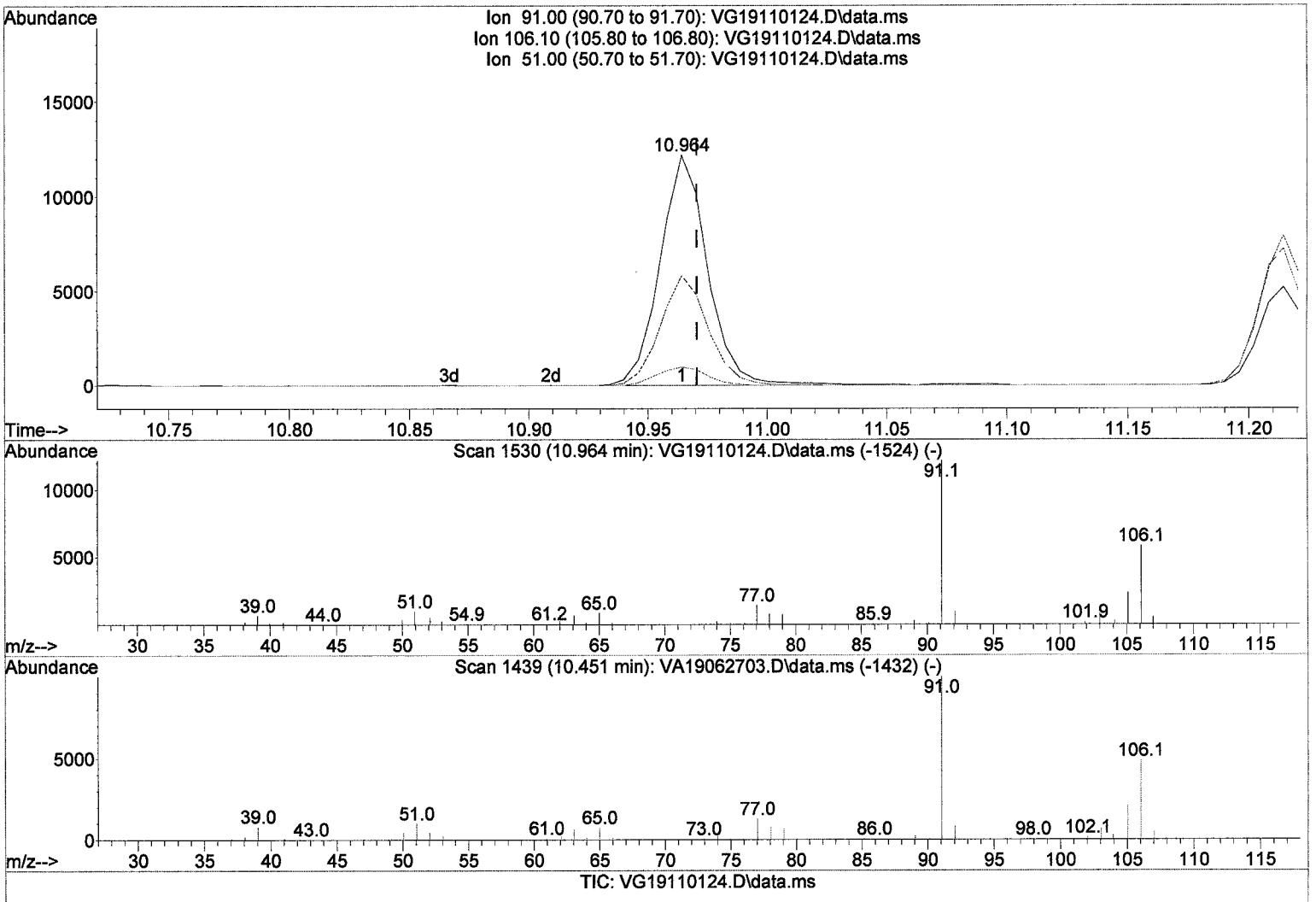
response 13122

Ion	Exp%	Act%
91.00	100.00	100.00
106.10	51.80	52.87
51.00	9.80	8.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



TIC: VG19110124.D\data.ms

(62) o-Xylene

10.964min (-0.006) 3.27 ug/L

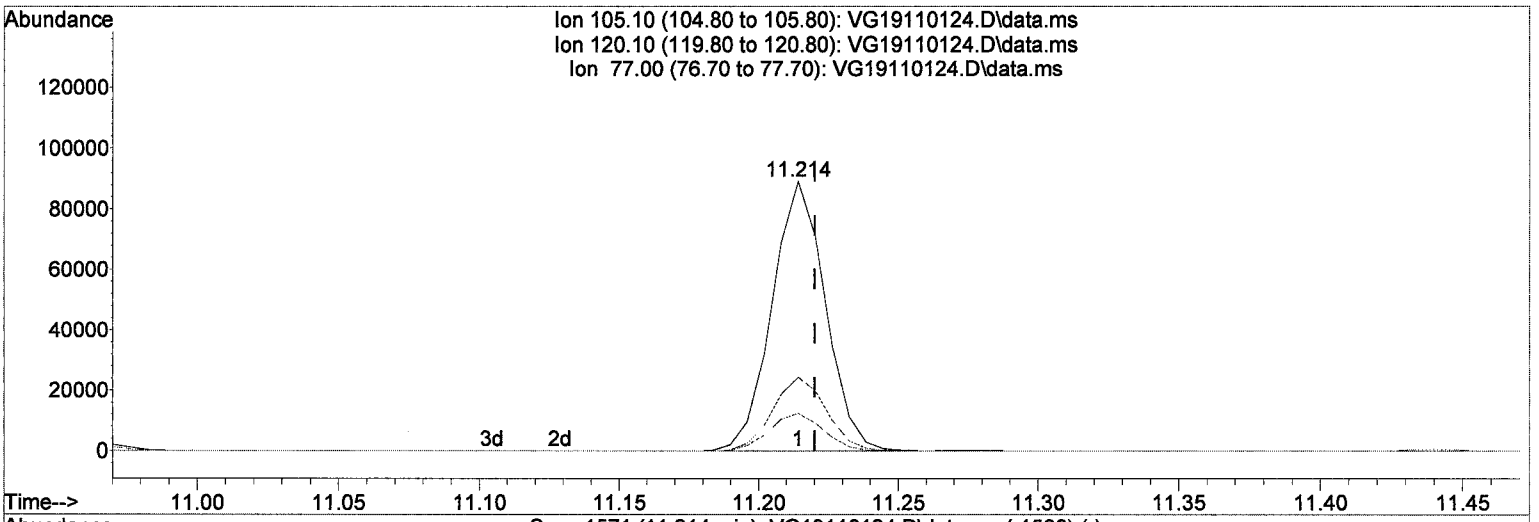
response 16959

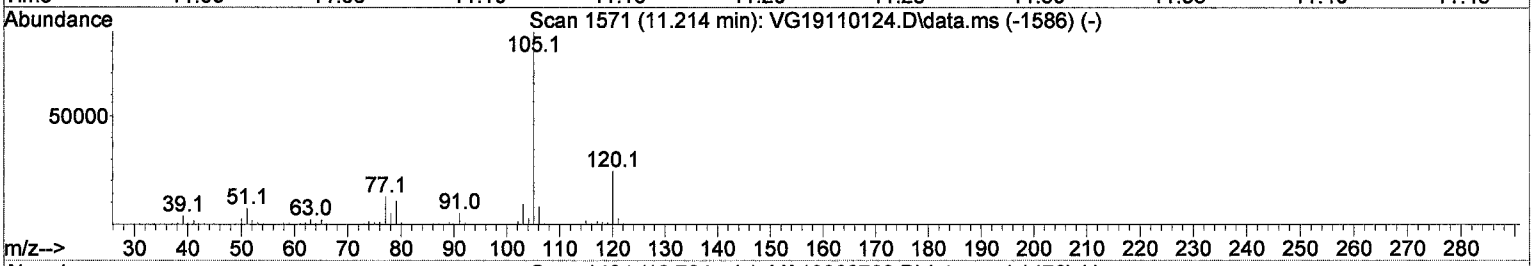
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	49.80	47.92
51.00	9.70	8.01
0.00	0.00	0.00

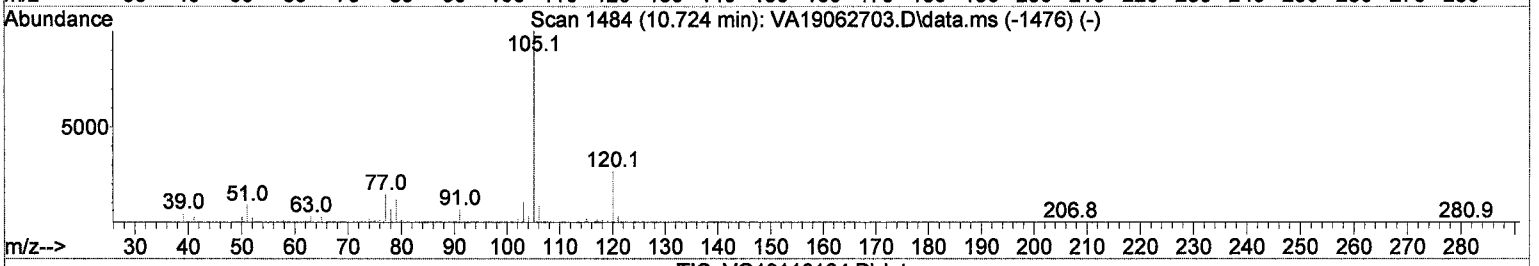
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(65) Isopropylbenzene

11.214min (-0.006) 17.85 ug/L

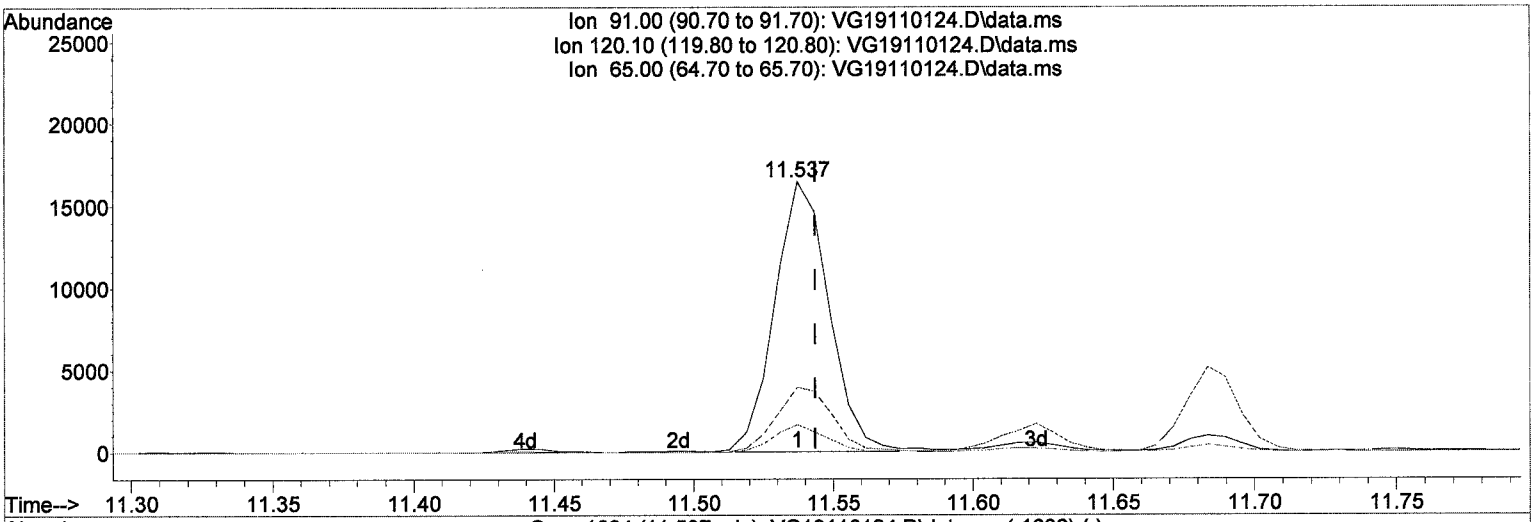
response 118695

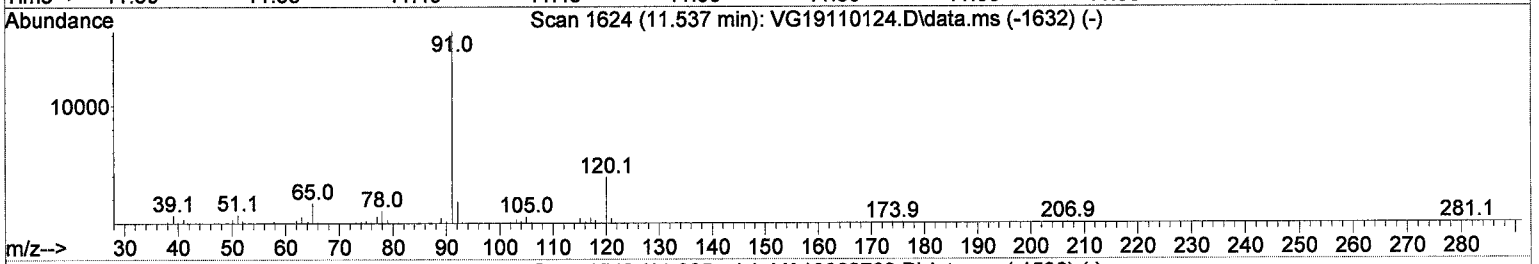
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	27.80	27.48
77.00	14.50	14.03
0.00	0.00	0.00

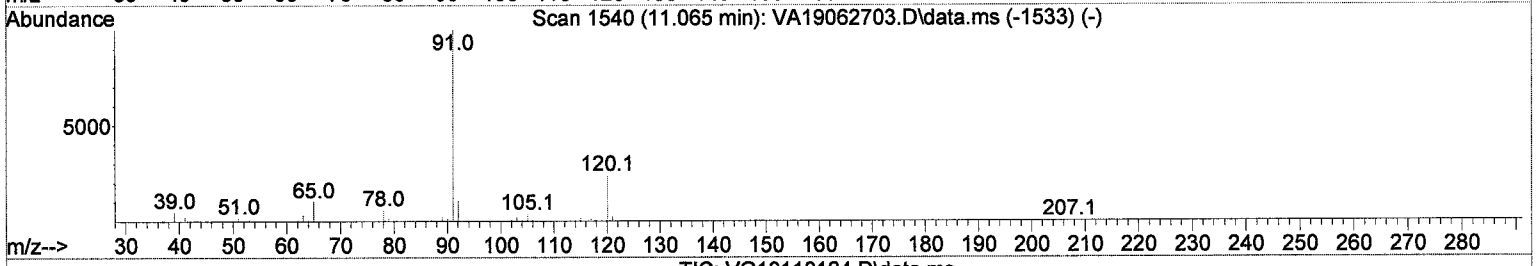
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(69) n-Propylbenzene

11.537min (-0.006) 2.79 ug/L

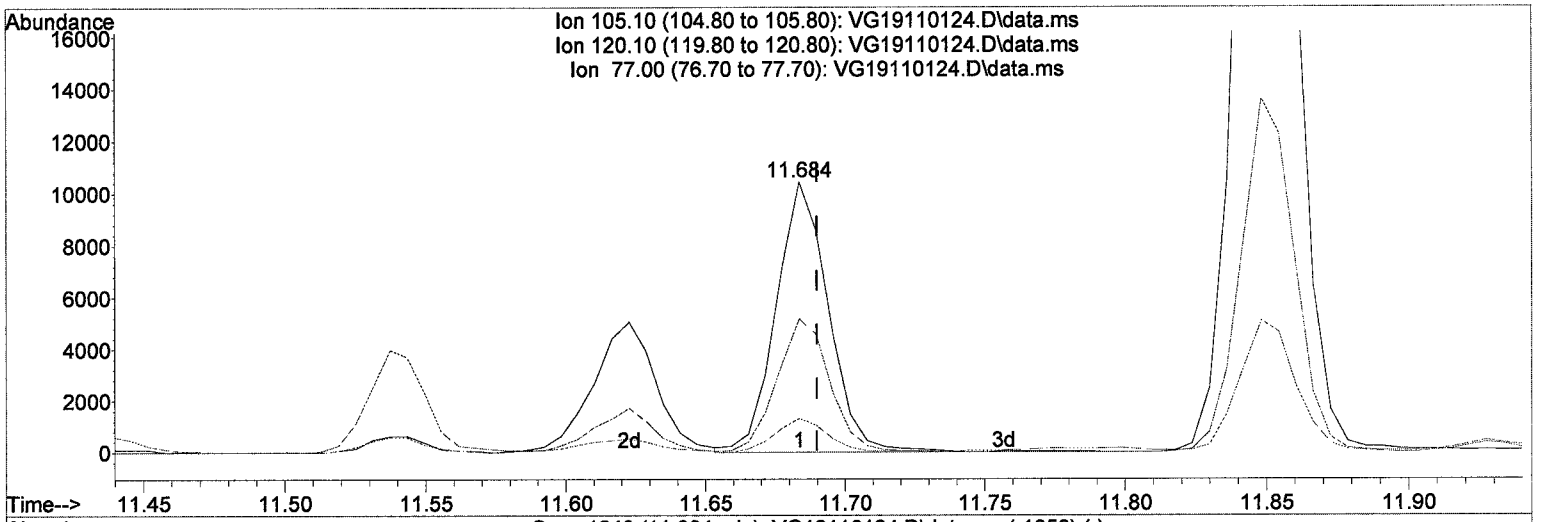
response 22277

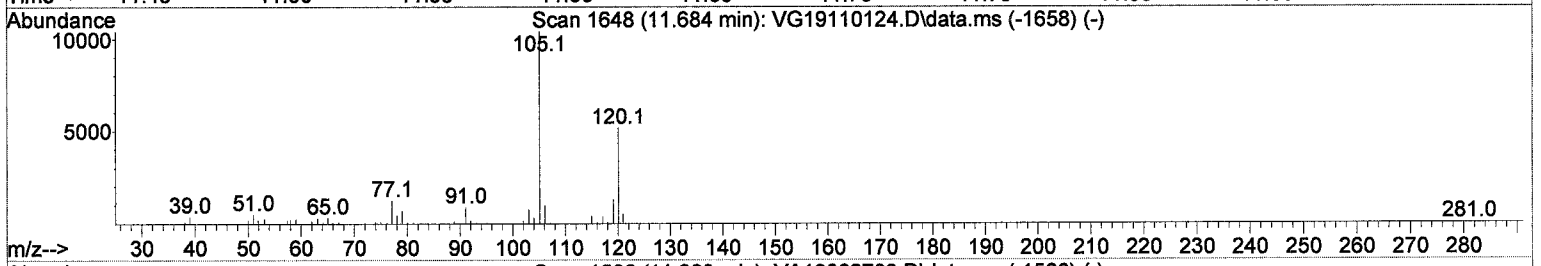
Ion	Exp%	Act%
91.00	100.00	100.00
120.10	25.20	24.15
65.00	10.10	10.15
0.00	0.00	0.00

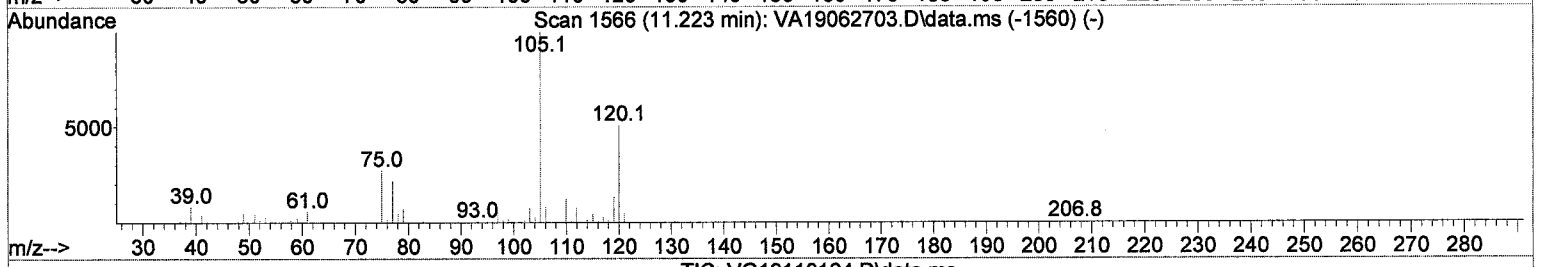
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(72) 1,3,5-Trimethylbenzene

11.684min (-0.006) 2.41 ug/L

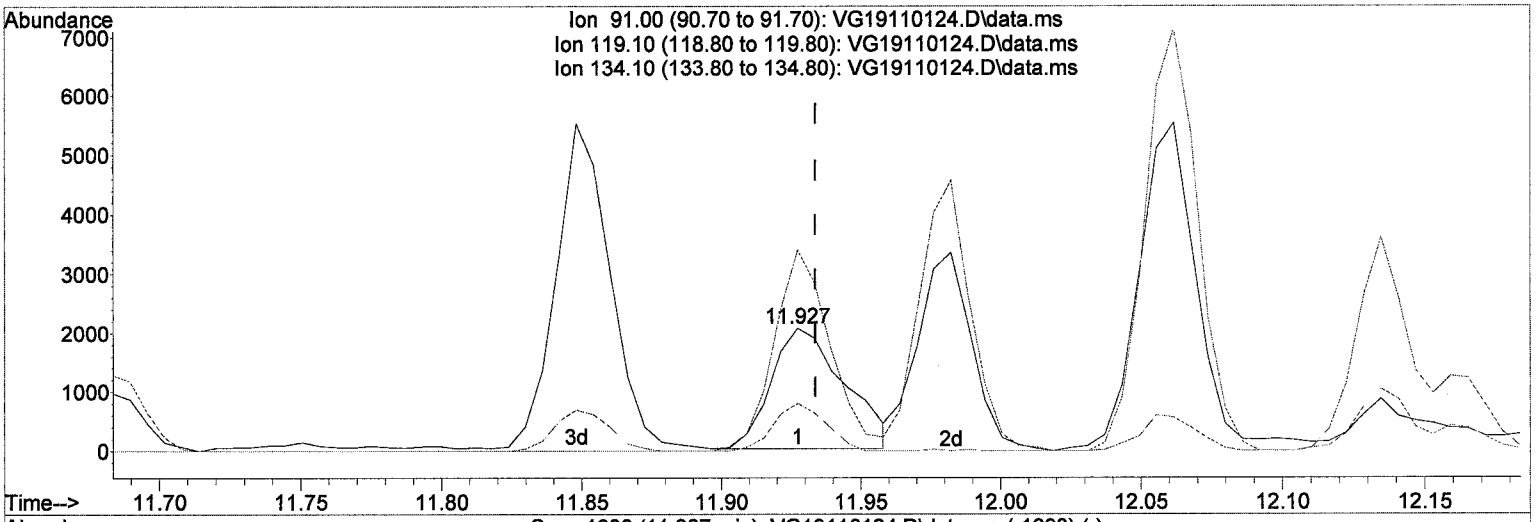
response 13569

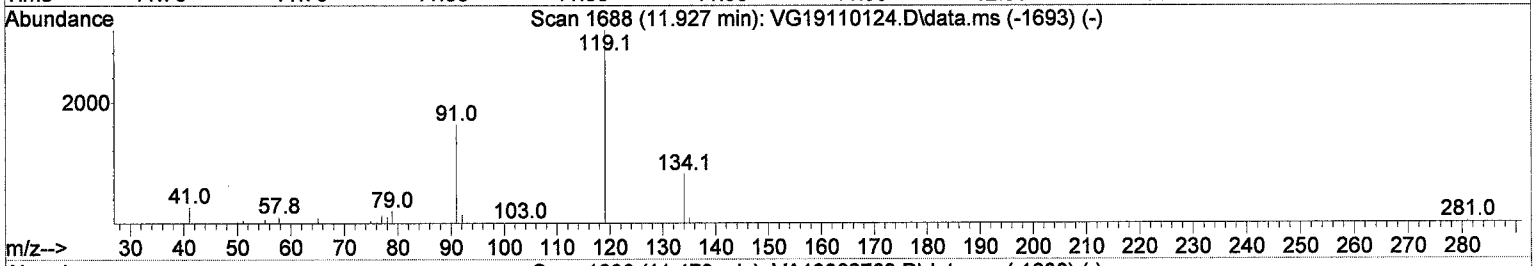
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	52.80	49.42
77.00	19.20	12.11
0.00	0.00	0.00

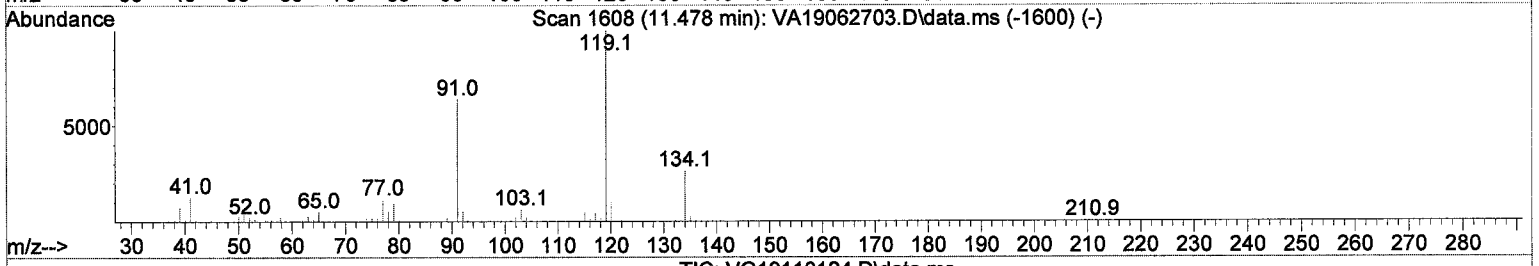
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(76) tert-Butylbenzene

11.927min (-0.006) 1.32 ug/L

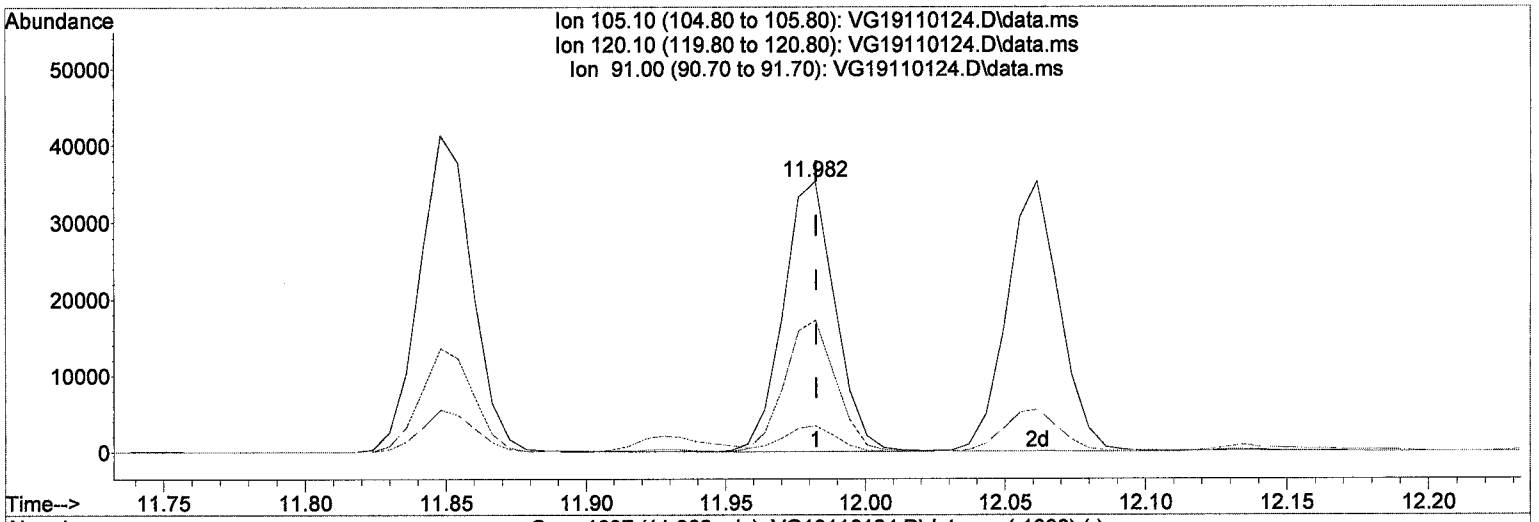
response 3723

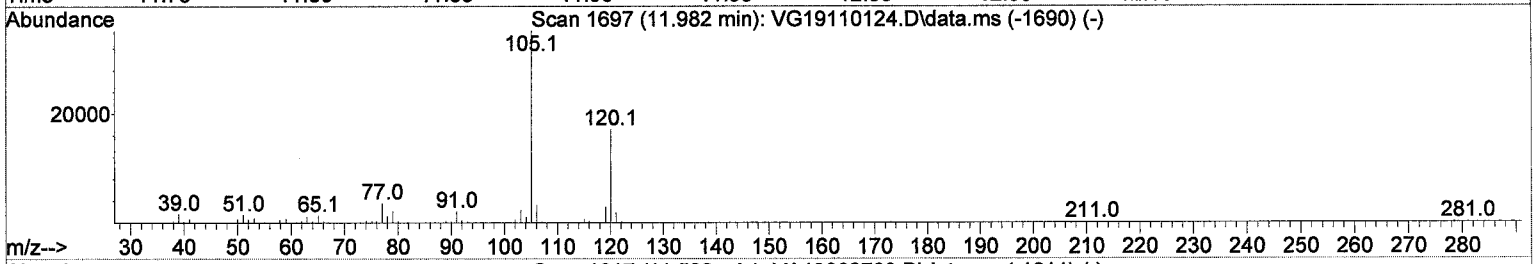
Ion	Exp%	Act%
91.00	100.00	100.00
119.10	159.70	166.00
134.10	41.40	39.32
0.00	0.00	0.00

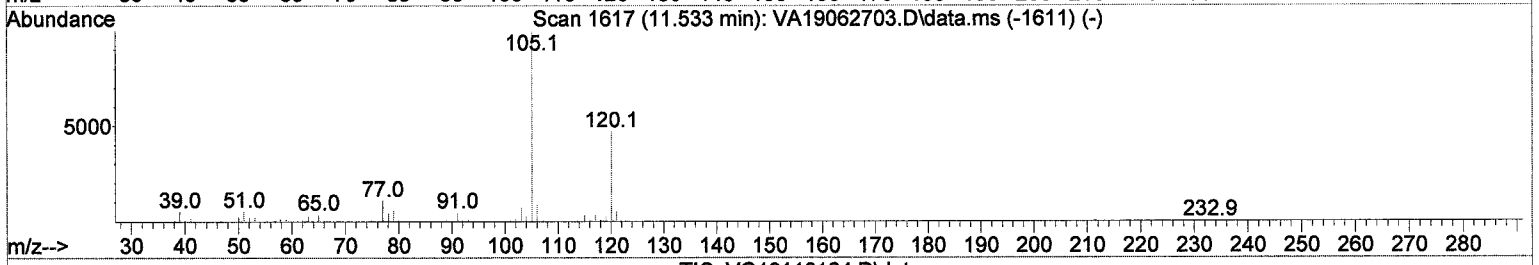
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(77) 1,2,4-Trimethylbenzene

11.982min (-0.000) 7.87 ug/L

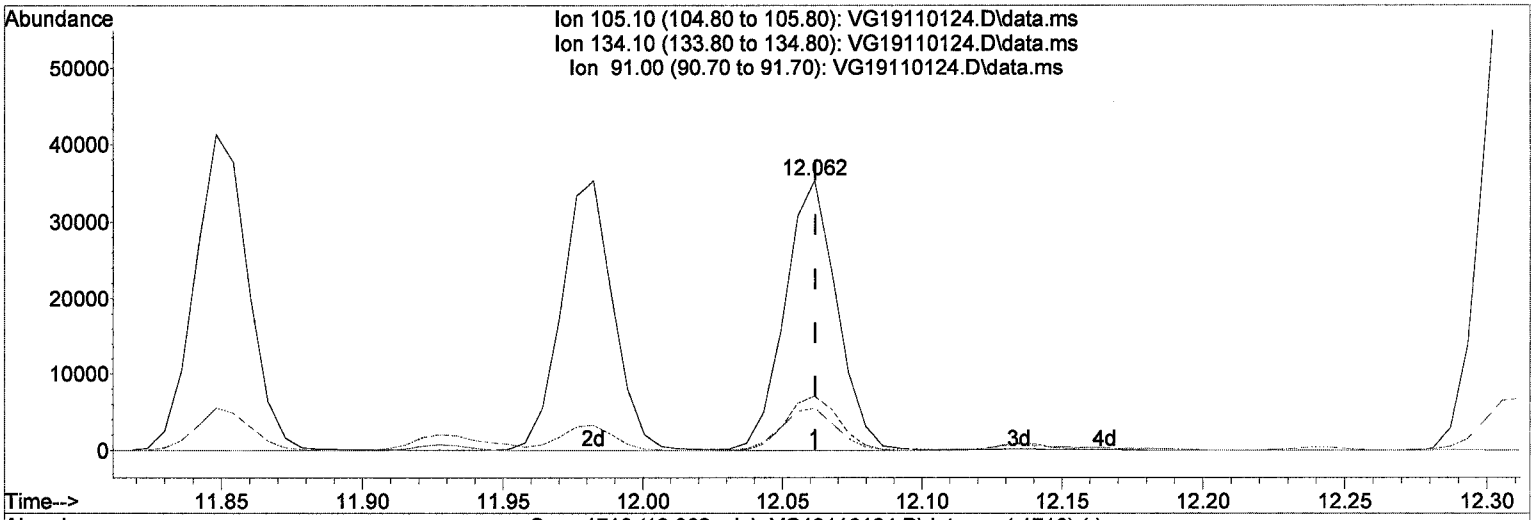
response 45861

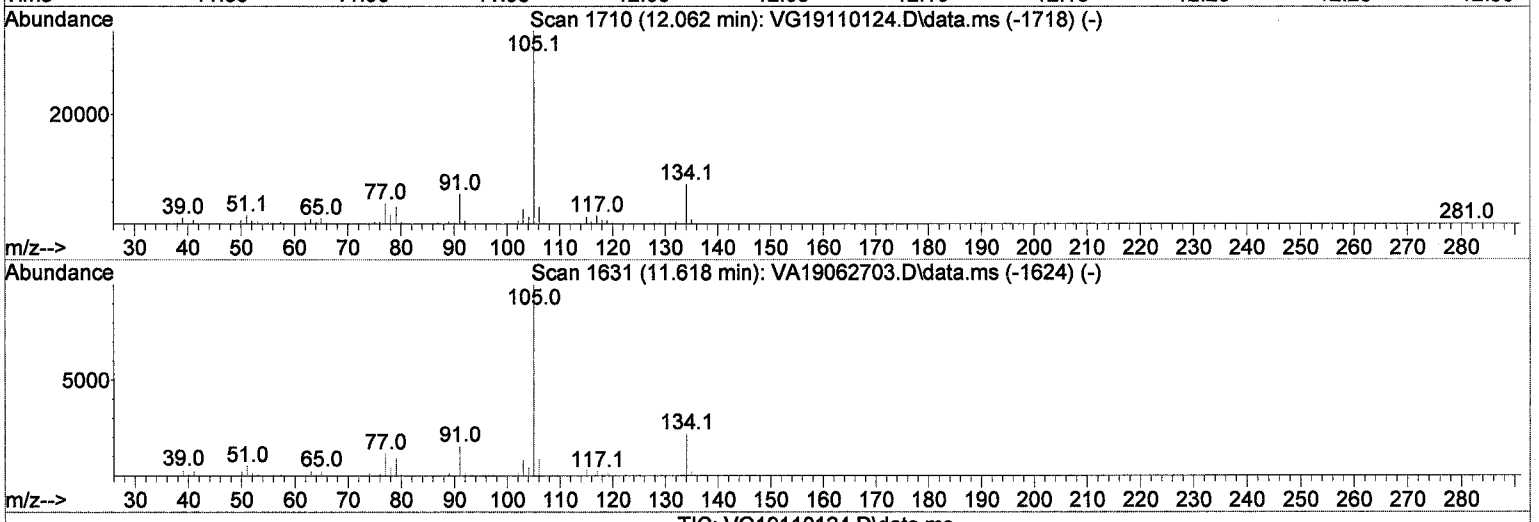
Ion	Exp%	Act%
105.10	100.00	100.00
120.10	48.60	48.79
91.00	9.80	9.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration





TIC: VG19110124.D\data.ms

(78) sec-Butylbenzene

12.062min (-0.000) 7.16 ug/L

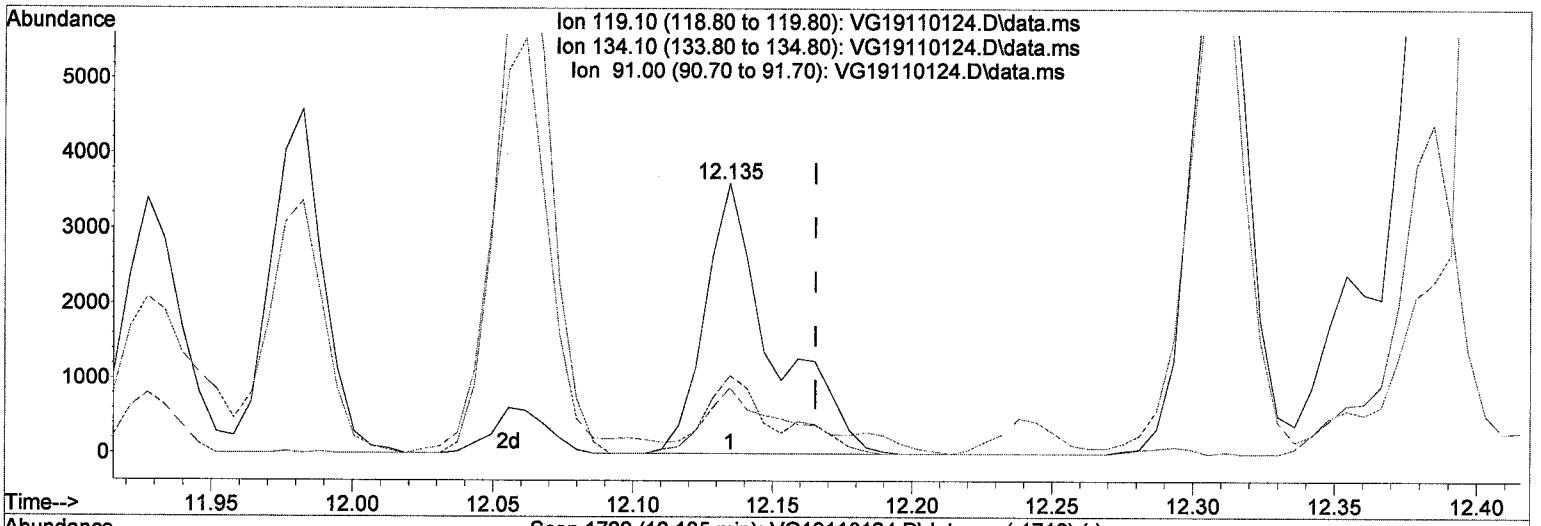
response 46025

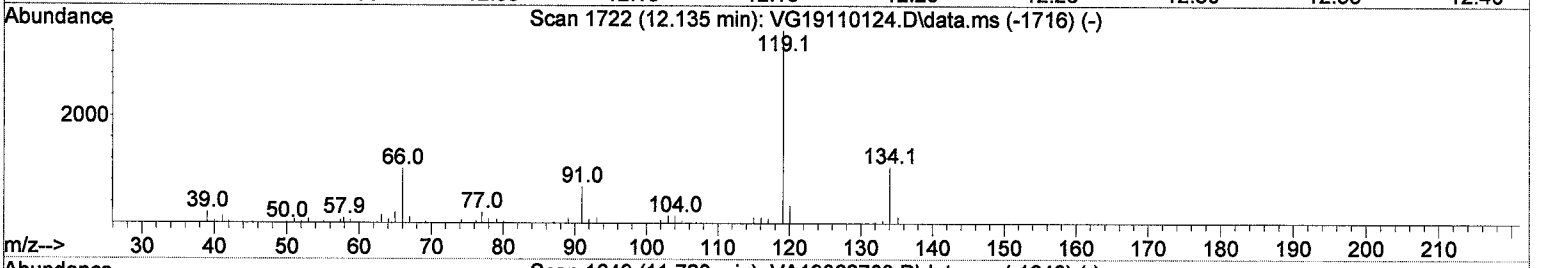
Ion	Exp%	Act%
105.10	100.00	100.00
134.10	21.70	20.25
91.00	14.90	15.54
0.00	0.00	0.00

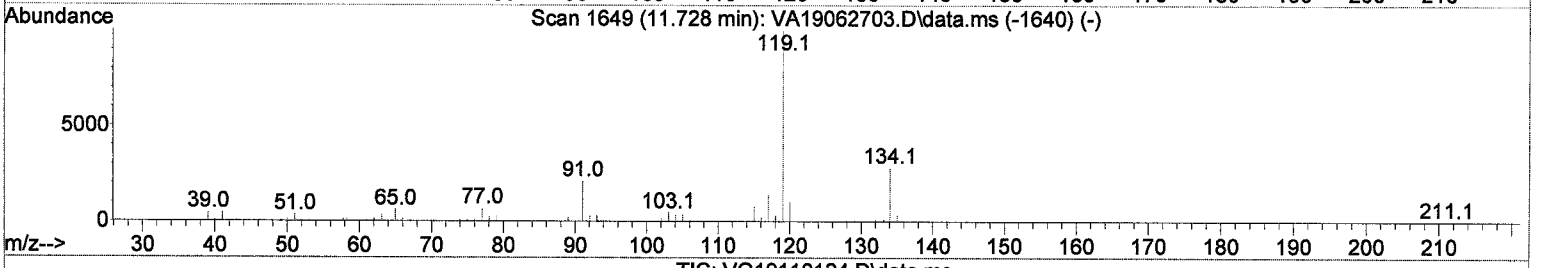
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(79) 4-Isopropyltoluene

12.135min (-0.031) 1.12 ug/L

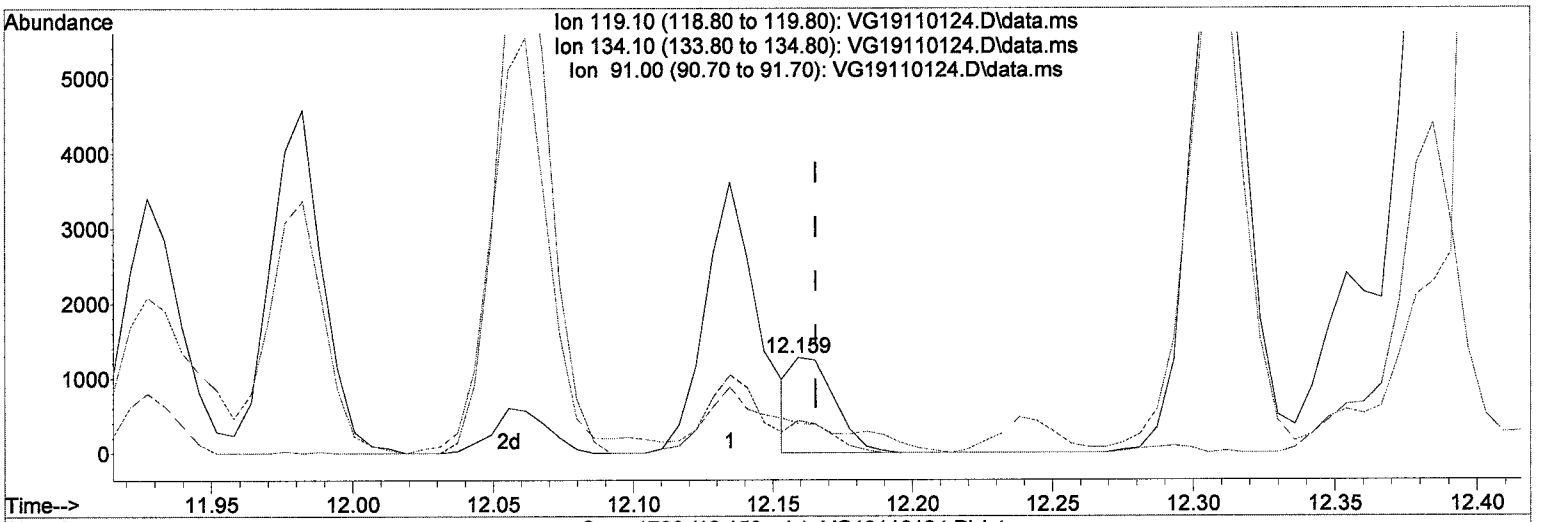
response 6059

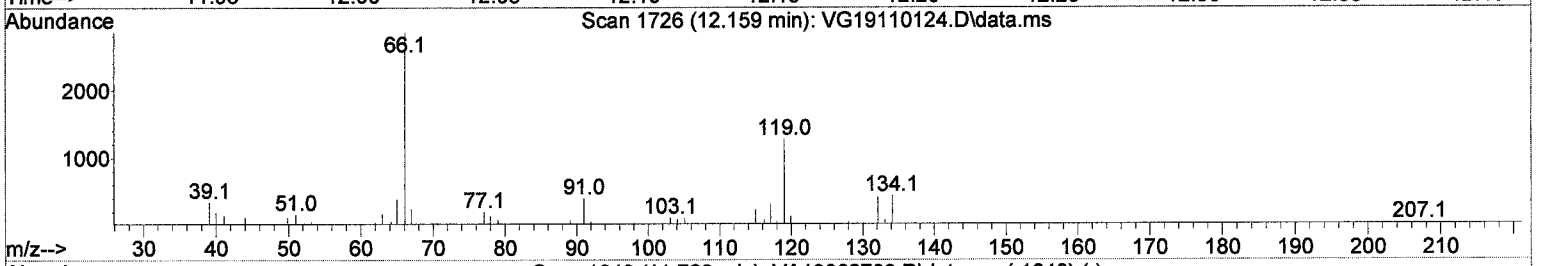
Ion	Exp%	Act%
119.10	100.00	100.00
134.10	26.60	28.95
91.00	21.70	22.66
0.00	0.00	0.00

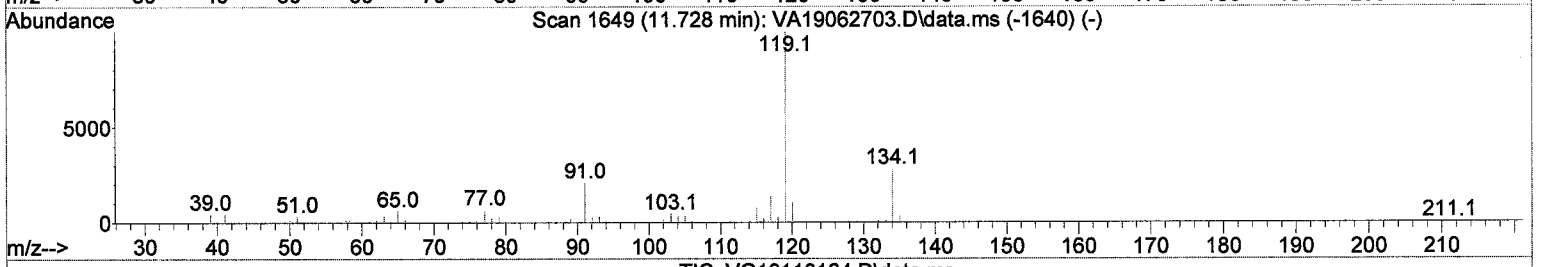
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(79) 4-Isopropyltoluene

12.159min (-0.006) 0.25 ug/L m

response 1369

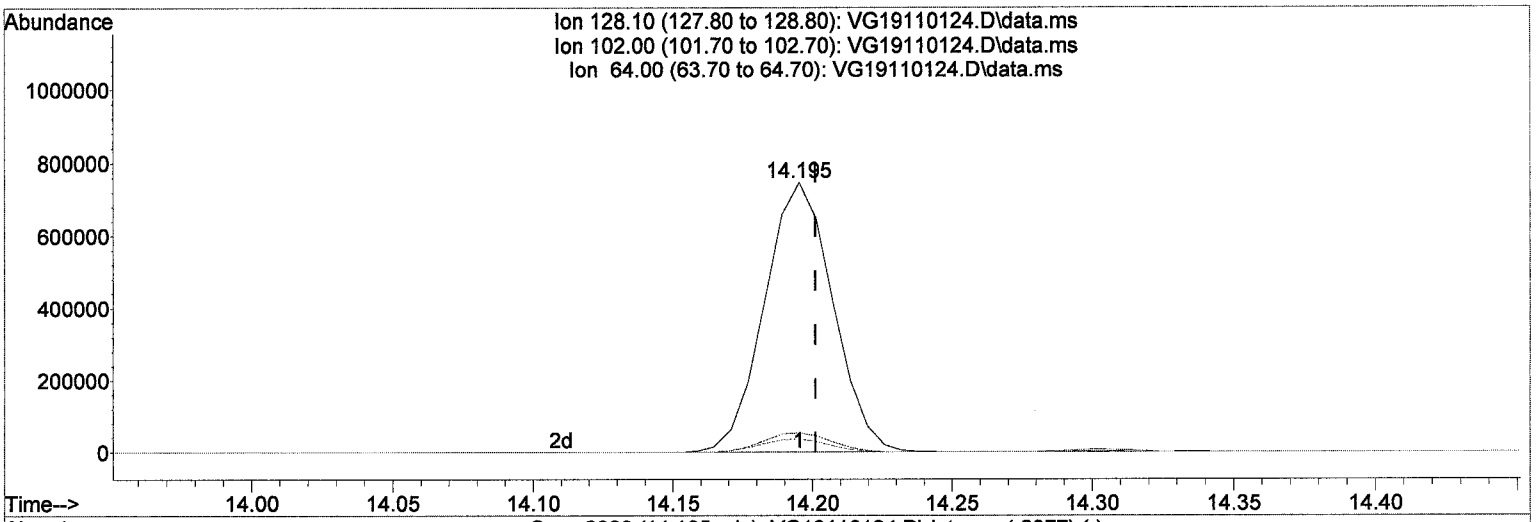
Ion	Exp%	Act%
119.10	100.00	100.00
134.10	26.60	34.01
91.00	21.70	31.11
0.00	0.00	0.00

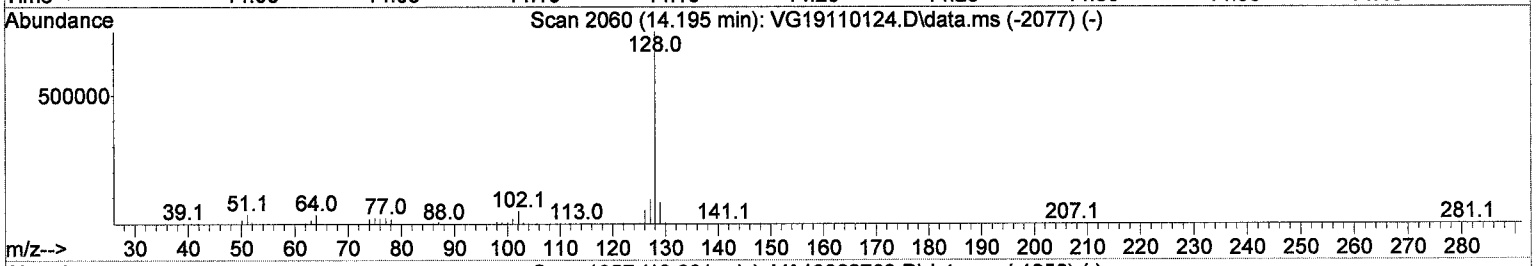
11/4/19

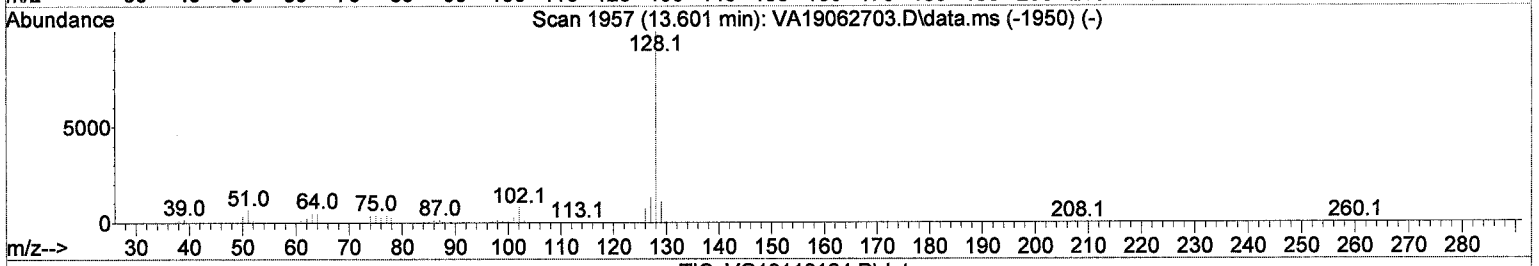
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19110124.D\data.ms

(87) Naphthalene

14.195min (-0.006) 168.04 ug/L

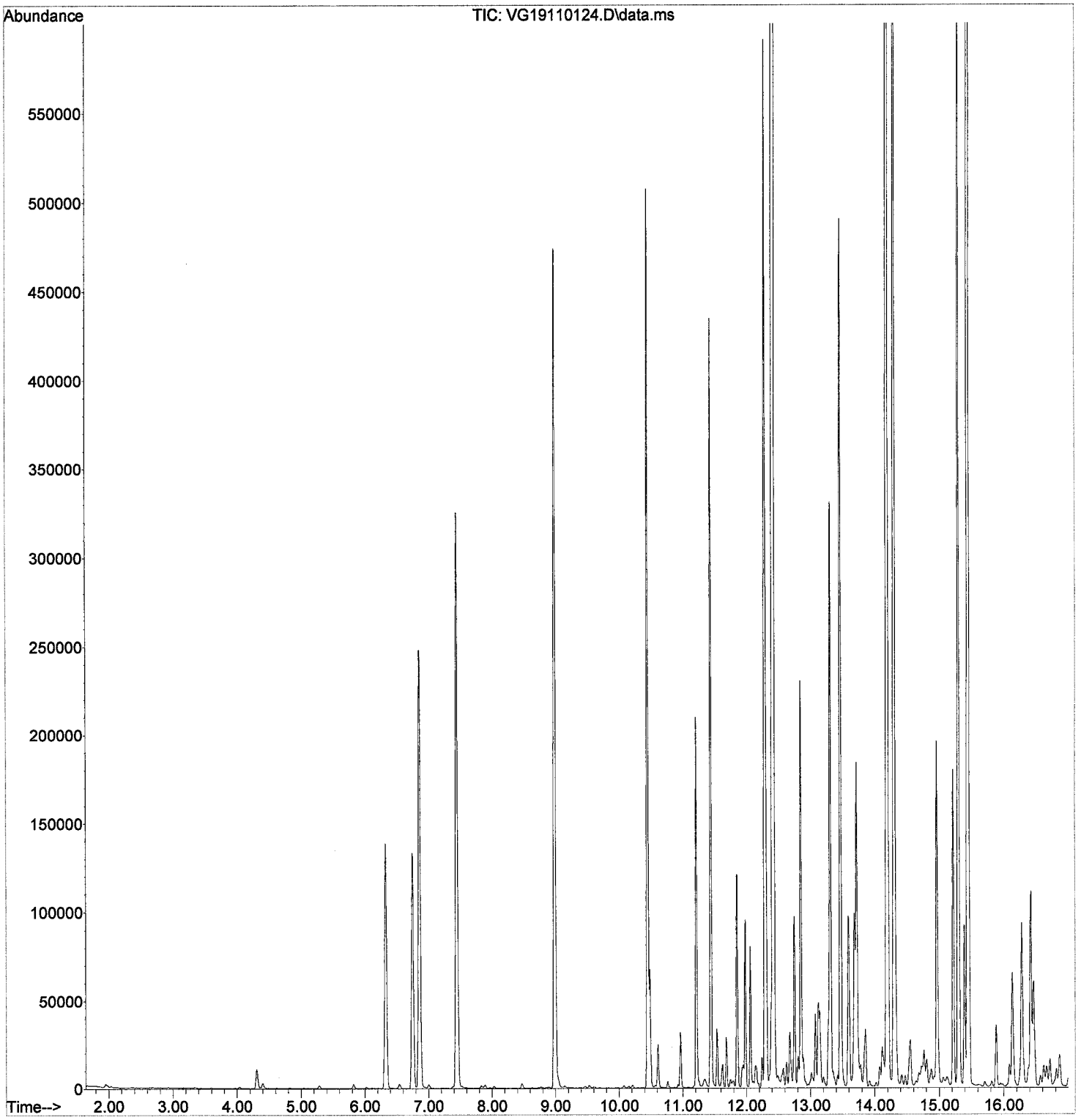
response 1270504

Ion	Exp%	Act%
128.10	100.00	100.00
102.00	7.90	7.35
64.00	6.30	4.98
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K01040\
Data File : VG19110124.D
Acq On : 1 Nov 2019 11:19 pm
Operator : tb
Sample : A9J1114-07
Misc : 1X 5mL 8260
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Nov 04 09:26:16 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 5035A/8260C
Benchsheet & Analysis Sequence Data

Batch 9110413
Sequence 9K04028 (A9J1114-03RE1)

PREPARATION BENCH SHEET

BATCH #: 9110413 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9110413-BLK1		QC	11/04/19 09:00	5	5							
9110413-BS1		QC	11/04/19 09:00	5	5	A19K007		5				
9110413-BS2		QC	11/04/19 09:00	5	5	A19J354		5				
A9J1110-10RE1	B	8260C Full List	11/04/19 11:08	5	5					GW-DUP-4-1019	10X RR-02 Cis12DCE	<2
A9J1114-03RE1	B	8260C Full List	11/04/19 11:08	5	5					PDI-037PW-04-06-191028	1000X RR-02 Cis12DCE	<2
A9K0039-01	A	8260C Full List	11/04/19 11:08	5	5					PDI-TB-1911010000	SIM if VC ND - Determine List	<2
A9K0039-02	A	8260C Full List	11/04/19 11:08	5	5					PDI-062PW-08-10-191101	SIM if VC ND - Determine List	<2
A9K0039-02RE1	A	8260C Full List	11/04/19 11:08	5	5					PDI-062PW-08-10-191101	10X RR-01 SIM IF VC ND	<2
A9K0039-03	A	8260C Full List	11/04/19 11:08	5	5					PDI-064PW-10-12-191101	SIM if VC ND - Determine List	<2
A9K0039-04	A	8260C Full List	11/04/19 11:08	5	5					PDI-067PW-06-08-191031	SIM if VC ND - Determine List	<2
A9K0039-05	A	8260C Full List	11/04/19 11:08	5	5					PDI-069PW-07-09-191031	~~HS in B & C . SIM if VC ND -~~ Det	<2
A9K0039-06	A	8260C Full List	11/04/19 11:08	5	5					PDI-1069PW-07-09-191031	~~HS in B & C . SIM if VC ND -~~ Det	<2
9110413-DUP1		QC	11/04/19 11:08	5	5		A9K0039-06					<2
A9K0039-07	A	8260C Full List	11/04/19 11:08	5	5					PDI-071PW-08-10-191031	HS in C . SIM if VC ND - Determi	<2
9110413-MS1		QC	11/04/19 11:08	5	5	A19K007	A9K0039-07	500			@100X	<2

*pH <2 verified 11/5/19 tnl

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description

Analyte Spike(s)

Std ID	Exp. Date	Description
A19J354	04/21/20	Prim NWTPH-Gx Spike (500 ug/mL)
A19K007	11/09/19	8260 Cal. Std. B VOCR+OXY Spike (20-40ug/r

Surrogate(s)

Std ID	Exp. Date	Description

GCMS9

11/5/19 tnl
Prepared By: Date

11/5/19
Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9K04028	Instrument:	VOA-GCMS9
Date:	11/04/19 08:18	Calibration:	A9J2503

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9K04028-IBL1	Water	QC	QC			A19I040	
2	9K04028-IBL2	Water	QC	QC			A19I040	
3	9K04028-IBL3	Water	QC	QC			A19I040	
4	9K04028-TUN1	Water	QC	QC			A19I040	
5	9K04028-CCV1	Water	QC	QC			A19I040	
6	9110413-BS1	Water	QC	QC		9110413	A19I040	
7	9K04028-CCV2	Water	QC	QC			A19I040	
8	9110413-BS2	Water	QC	QC		9110413	A19I040	
9	9110413-BLK1	Water	QC	QC		9110413	A19I040	
10	A9K0039-01	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
11	A9K0039-03	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
12	9K04028-IBL4	Water	QC	QC			A19I040	
13	A9J1110-10RE1	Water	8260C Full List		11/13/19	9110413	A19I040	
14	A9J1114-03RE1	Water	8260C Full List	Anchor QEA, LLC	11/13/19	9110413	A19I040	
15	A9K0039-02	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
16	A9K0039-04	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
17	A9K0039-05	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
18	A9K0039-06	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
19	9110413-DUP1	Water	QC	QC		9110413	A19I040	
20	A9K0039-07	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
21	9110413-MS1	Water	QC	QC		9110413	A19I040	
22	9K04028-IBL5	Water	QC	QC			A19I040	
23	9K04028-IBL6	Water	QC	QC			A19I040	
24	A9K0039-02RE1	Water	8260C Full List	Anchor QEA, LLC	11/15/19	9110413	A19I040	
25	9K04028-IBL7	Water	QC	QC			A19I040	
26	9K04028-IBL8	Water	QC	QC			A19I040	
27	9K04028-IBL9	Water	QC	QC			A19I040	

Comments: DCM → MDL↑ MRL↑ to 2.5ppb/5ppb

Data Entered By: 11/5/19 tml

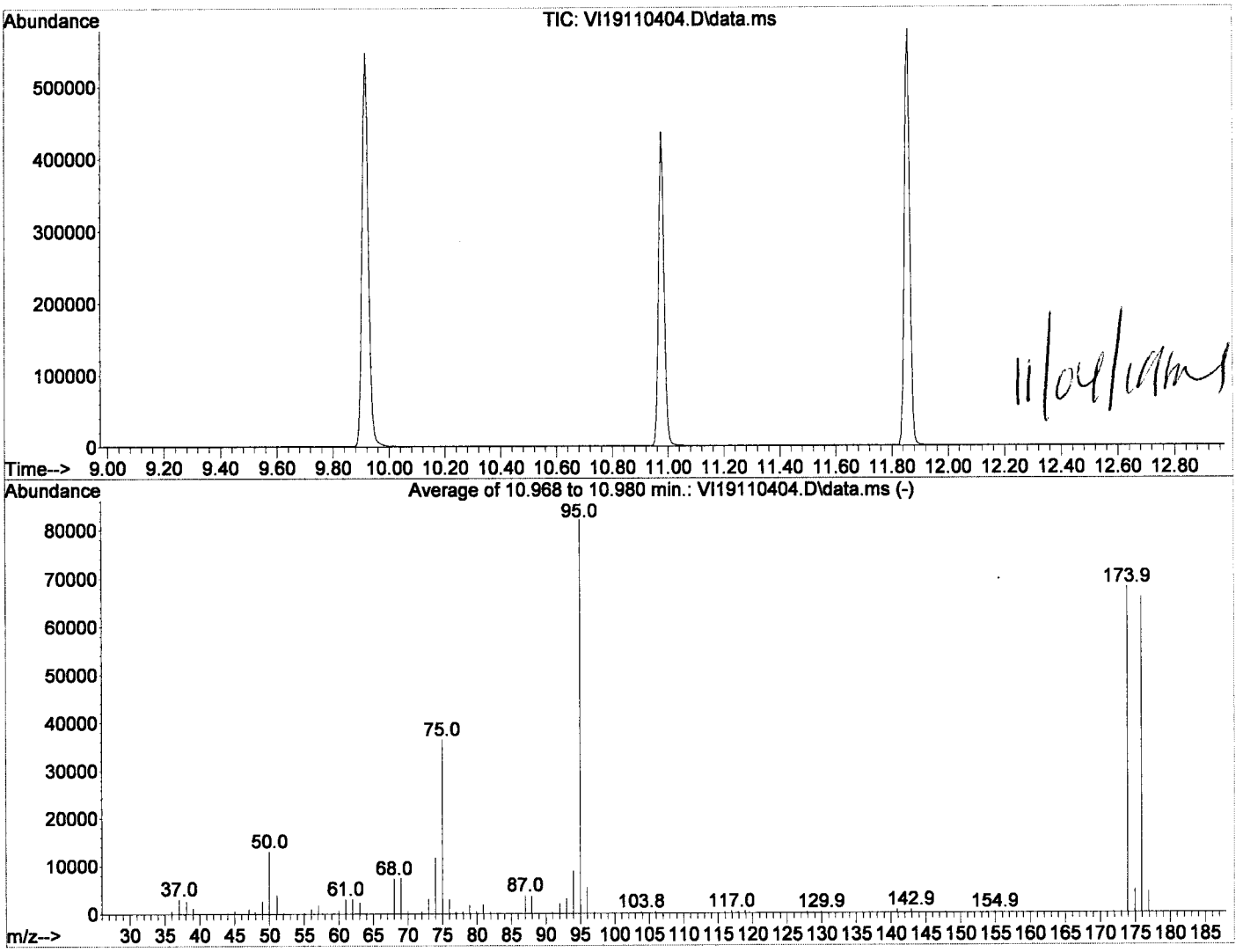
Data Reviewed By: 11/5/19

BFB

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110404.D
Acq On : 4 Nov 2019 10:01 am
Operator : tb
Sample : 9K04028-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 4 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	120.7	82117	PASS
96	95	5	9	6.7	5486	PASS
173	174	0.00	2	0.2	156	PASS
174	95	50	200	82.8	68016	PASS
175	174	5	9	7.1	4847	PASS
176	174	95	105	96.9	65877	PASS
177	176	5	10	6.7	4428	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110404.D
Acq On : 4 Nov 2019 10:01 am
Operator : tb
Sample : 9K04028-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:07 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.223	99	111602	50.00	ug/L	# 0.01
45) Chlorobenzene-d5 (I)	9.916	117	308623	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	137765	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	113972	51.97	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.789	114	368803	52.31	ug/L	0.01
48) Toluene-d8 (S)	8.304	98	412454	50.92	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112723	50.64	ug/L	0.00
Target Compounds						Qvalue
6) Chloroethane	2.494	64	301	0.27	ug/L #	36
14) Methylene Chloride	3.881	84	2209	0.22	ug/L	85
15) Acetone	3.954	43	2384	2.44	ug/L	89

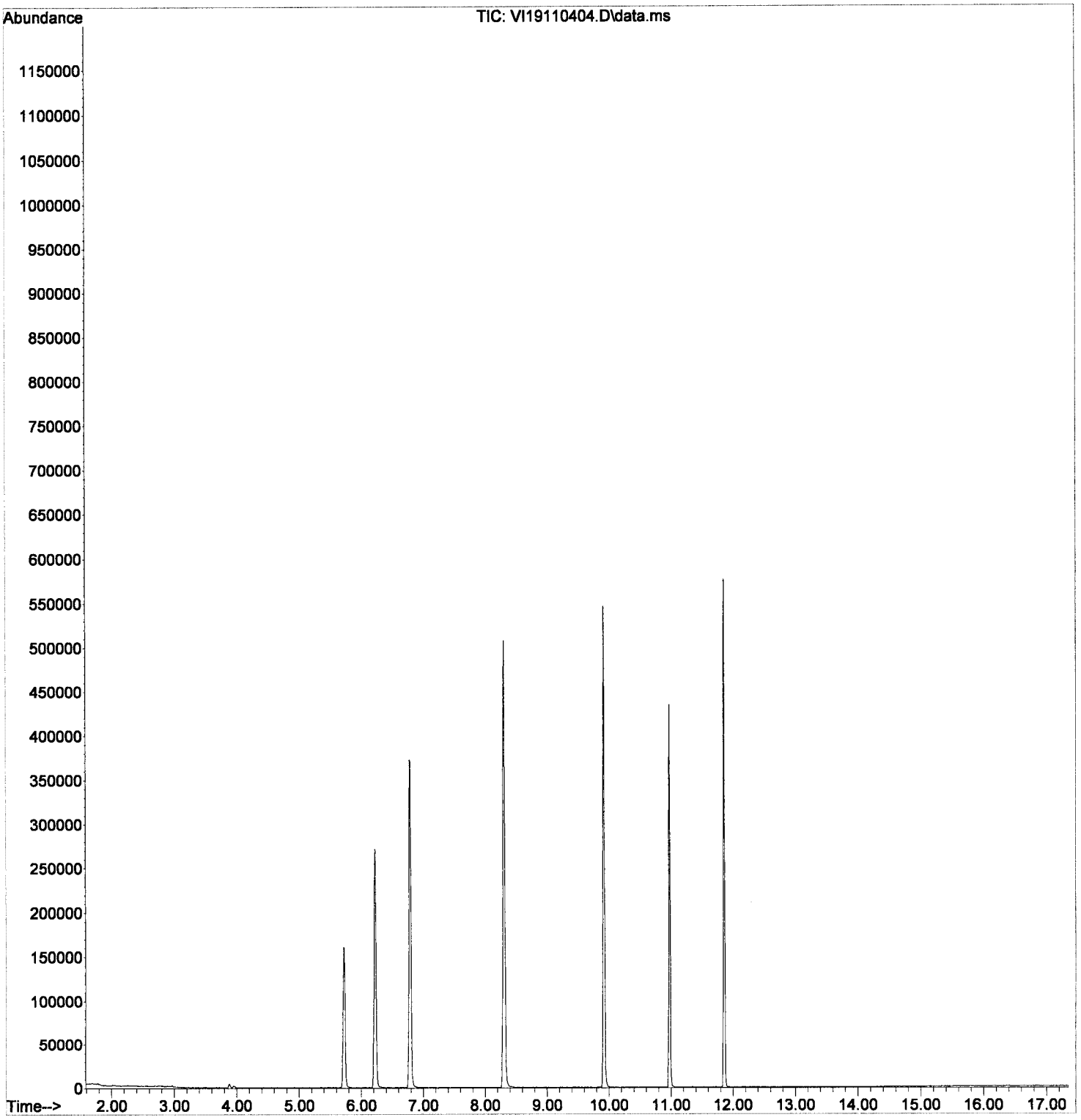
(#) = qualifier out of range (m) = manual integration (+) = signals summed

11/04/19 RL

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110404.D
Acq On : 4 Nov 2019 10:01 am
Operator : tb
Sample : 9K04028-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:07 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110405.D
Acq On : 4 Nov 2019 10:28 am
Operator : tb
Sample : 9110413-BS1
Misc : 1X 5mL 20/40PPB VOCR A19K007
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/4/19 KM

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.		%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000		0.0	104	0.00
2		Dichlorodifluoromethane	20.000	18.605		7.0	99	0.01
3	P	Chloromethane	20.000	17.338		13.3	97	0.00
4	C	Vinyl Chloride	20.000	19.550		2.2	99	0.00
5		Bromomethane	20.000	22.859		-14.3	124	0.01
6		Chloroethane	20.000	16.085		19.6	94	0.01
7		Trichlorofluoromethane	20.000	19.170		4.1	95	0.01
8		Ethanol	1250.000	1086.855		13.1	87	0.00
9	C	1,1-Dichloroethene	20.000	18.564		7.2	95	0.00
10		Carbon Disulfide	20.000	18.449		7.8	95	0.01
11		Freon 113	20.000	19.524		2.4	98	0.01
12		Iodomethane	20.000	10.995	NR	45.0#	55	0.01
13		Acrolein	20.000	18.724		6.4	95	0.01
14		Methylene Chloride	20.000	18.813		5.9	96	0.00
15		Acetone	40.000	36.056		9.9	94	0.00
16		t-1,2-Dichloroethene	20.000	19.553		2.2	94	0.01
17		n-Hexane	20.000	19.878		0.6	99	0.01
18		Methyl-tert-butyl-ether	20.000	17.894		10.5	91	0.00
19		tert-Butanol (TBA)	1250.000	1067.495		14.6	78	0.00
20		Diisopropyl ether (DIPE)	5.000	4.126		17.5	80	0.00
21	P	1,1-Dichloroethane	20.000	18.957		5.2	95	0.01
22		Acrylonitrile	20.000	21.388		-6.9	105	0.00
23		Ethyl-tert-butyl ether (ET	5.000	3.932	NR	21.4#	76	0.00
24		Vinyl Acetate	20.000	18.861		5.7	95	0.00
25		c-1,2-Dichloroethene	20.000	19.202		4.0	95	0.01
26		2,2-Dichloropropane	20.000	18.119		9.4	92	0.00
27		Bromochloromethane	20.000	21.856		-9.3	101	0.00
28	C	Chloroform	20.000	19.532		2.3	94	0.00
29		Carbon Tetrachloride	20.000	19.546		2.3	99	0.00
30		Tetrahydrofuran	20.000	19.417		2.9	98	0.00
31		1,1,1-Trichloroethane	20.000	18.207		9.0	91	0.00
32	S	Dibromofluoromethane (S)	50.000	50.968		-1.9	107	0.00
33		1,1-Dichloropropene	20.000	18.634		6.8	94	0.00
34		2-Butanone (MEK)	40.000	39.520		1.2	99	0.00
35		Benzene	20.000	19.366		3.2	98	0.00
36		tert-Amyl methyl ether (TA	5.000	3.951	NR	21.0#	79	0.00
37		1,2-Dichloroethane (EDC)	20.000	18.702		6.5	93	0.00
38		iso-Butyl Alcohol	500.000	484.401		3.1	94	0.00
39	S	1,4-Difluorobenzene (S)	50.000	51.676		-3.4	107	0.00
40		Trichloroethene (TCE)	20.000	19.854		0.7	96	0.00
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	3.875	NR	22.5#	75	0.00
42		Dibromomethane	20.000	20.801		-4.0	101	0.00
43	C	1,2-Dichloropropane	20.000	19.813		0.9	99	0.00
44		Bromodichloromethane	20.000	20.488		-2.4	102	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000		0.0	106	0.00
46		2-Chloroethyl Vinyl Ether	20.000	17.639		11.8	89	0.00
47		c-1,3-Dichloropropene	20.000	19.295		3.5	96	0.00
48	S	Toluene-d8 (S)	50.000	50.076		-0.2	107	0.00
49	C	Toluene	20.000	18.406		8.0	96	0.00
50		Tetrachloroethene (PCE)	20.000	19.468		2.7	95	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110405.D
Acq On : 4 Nov 2019 10:28 am
Operator : tb
Sample : 9110413-BS1
Misc : 1X 5mL 20/40PPB VOCR A19K007
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	39.758	0.6	96	0.00
52		t-1,3-Dichloropropene	20.000	18.709	6.5	94	0.00
53		1,1,2-Trichloroethane	20.000	20.062	-0.3	99	0.00
54		Dibromochloromethane	20.000	24.300	-21.5#	113	0.00
55		1,3-Dichloropropane	20.000	19.731	1.3	98	0.00
56		1,2-Dibromoethane (EDB)	20.000	19.509	2.5	96	0.00
57		2-Hexanone	40.000	37.799	5.5	92	0.00
58	P	Chlorobenzene	20.000	19.176	4.1	97	0.00
59	C	Ethylbenzene	20.000	18.395	8.0	95	0.00
60		1,1,1,2-Tetrachloroethane	20.000	20.780	-3.9	102	0.00
61		m,p-Xylenes (2)	40.000	37.163	7.1	93	0.00
62		o-Xylene	20.000	18.451	7.7	91	0.00
63		Styrene	20.000	19.065	4.7	93	0.00
64	P	Bromoform	20.000	23.796	-19.0	127	0.00
65		Isopropylbenzene	20.000	18.693	6.5	92	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	103	0.00
67	S	4-Bromofluorobenzene (S)	50.000	48.271	3.5	101	0.00
68		Bromobenzene	20.000	19.546	2.3	94	0.00
69		n-Propylbenzene	20.000	19.024	4.9	94	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	20.708	-3.5	101	0.00
71		2-Chlorotoluene	20.000	18.581	7.1	91	0.00
72		1,3,5-Trimethylbenzene	20.000	19.269	3.7	92	0.00
73		1,2,3-Trichloropropane	20.000	19.963	0.2	98	0.00
74		t-1,4-Dichloro-2-butene	20.000	20.736	-3.7	101	0.00
75		4-Chlorotoluene	20.000	18.904	5.5	93	0.00
76		tert-Butylbenzene	20.000	18.216	8.9	88	0.00
77		1,2,4-Trimethylbenzene	20.000	19.630	1.9	93	0.00
78		sec-Butylbenzene	20.000	19.085	4.6	92	0.00
79		4-Isopropyltoluene	20.000	19.428	2.9	89	0.00
80		1,3-Dichlorobenzene	20.000	19.366	3.2	95	0.00
81		1,4-Dichlorobenzene	20.000	19.079	4.6	93	0.00
82		n-Butylbenzene	20.000	20.237	-1.2	91	0.00
83		1,2-Dichlorobenzene	20.000	18.962	5.2	92	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	20.203	-1.0	102	0.00
85		Hexachlorobutadiene	20.000	18.392	8.0	87	0.00
86		1,2,4-Trichlorobenzene	20.000	18.730	6.3	87	0.00
87		Naphthalene	20.000	18.147	9.3	84	0.00
88		1,2,3-Trichlorobenzene	20.000	18.925	5.4	88	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110405.D
Acq On : 4 Nov 2019 10:28 am
Operator : tb
Sample : 9110413-BS1
Misc : 1X 5mL 20/40PPB VOCR A19K007
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

11/04/19 MJ

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	116594	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.916	117	325714	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	155936	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	116763	50.97	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	380651	51.68	ug/L		0.00
48) Toluene-d8 (S)	8.303	98	428102	50.08	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	121621	48.27	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	35460	18.61	ug/L		98
3) Chloromethane	1.897	50	43819	17.34	ug/L		97
4) Vinyl Chloride	2.001	62	49501	19.55	ug/L		95
5) Bromomethane	2.366	96	34123	22.86	ug/L		97
6) Chloroethane	2.500	64	18719	16.08	ug/L		84
7) Trichlorofluoromethane	2.670	101	54965	19.17	ug/L		97
8) Ethanol	3.236	45	60897	1086.85	ug/L		87
9) 1,1-Dichloroethene	3.236	61	51310	18.56	ug/L		95
10) Carbon Disulfide	3.254	76	94095	18.45	ug/L		99
11) Freon 113	3.291	101	38801	19.52	ug/L		96
12) Iodomethane	3.394	142	6336	11.00	ug/L		95
13) Acrolein	3.625	56	9919	18.72	ug/L		79
14) Methylene Chloride	3.875	84	41826	18.81	ug/L		90
15) Acetone	3.942	43	36839	36.06	ug/L		90
16) t-1,2-Dichloroethene	4.045	61	52893	19.55	ug/L		91
17) n-Hexane	4.130	86	8187	19.88	ug/L	#	98
18) Methyl-tert-butyl-ether	4.173	73	112517	17.89	ug/L		93
19) tert-Butanol (TBA)	4.294	59	481874	1067.50	ug/L		96
20) Diisopropyl ether (DIPE)	4.568	45	27915	4.13	ug/L		94
21) 1,1-Dichloroethane	4.690	63	71225	18.96	ug/L		97
22) Acrylonitrile	4.751	53	24188	21.39	ug/L		99
23) Ethyl-tert-butyl ether...	4.939	59	25565	3.93	ug/L		98
24) Vinyl Acetate	4.958	43	85589	18.86	ug/L		97
25) c-1,2-Dichloroethene	5.250	61	55693	19.20	ug/L		90
26) 2,2-Dichloropropane	5.353	77	44425	18.12	ug/L		94
27) Bromochloromethane	5.450	130	31105	21.86	ug/L		97
28) Chloroform	5.529	83	71745	19.53	ug/L		96
29) Carbon Tetrachloride	5.663	117	43668	19.55	ug/L		93
30) Tetrahydrofuran	5.706	42	20876	19.42	ug/L		87
31) 1,1,1-Trichloroethane	5.736	97	56455	18.21	ug/L		98
33) 1,1-Dichloropropene	5.864	75	55484	18.63	ug/L		94
34) 2-Butanone (MEK)	5.858	43	64015	39.52	ug/L		97
35) Benzene	6.126	78	172536	19.37	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	23881	3.95	ug/L		87
37) 1,2-Dichloroethane (EDC)	6.345	62	54581	18.70	ug/L		93
38) iso-Butyl Alcohol	6.375	43	78608	484.40	ug/L		95
40) Trichloroethene (TCE)	6.746	130	45579	19.85	ug/L		94
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	16913	3.88	ug/L		87
42) Dibromomethane	7.202	93	29743	20.80	ug/L		94
43) 1,2-Dichloropropane	7.312	63	44029	19.81	ug/L		89
44) Bromodichloromethane	7.385	83	52496	20.49	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.024	63	29491	17.64	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	62136	19.30	ug/L		85

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110405.D
Acq On : 4 Nov 2019 10:28 am
Operator : tb
Sample : 9110413-BS1
Misc : 1X 5mL 20/40PPB VOCR A19K007
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

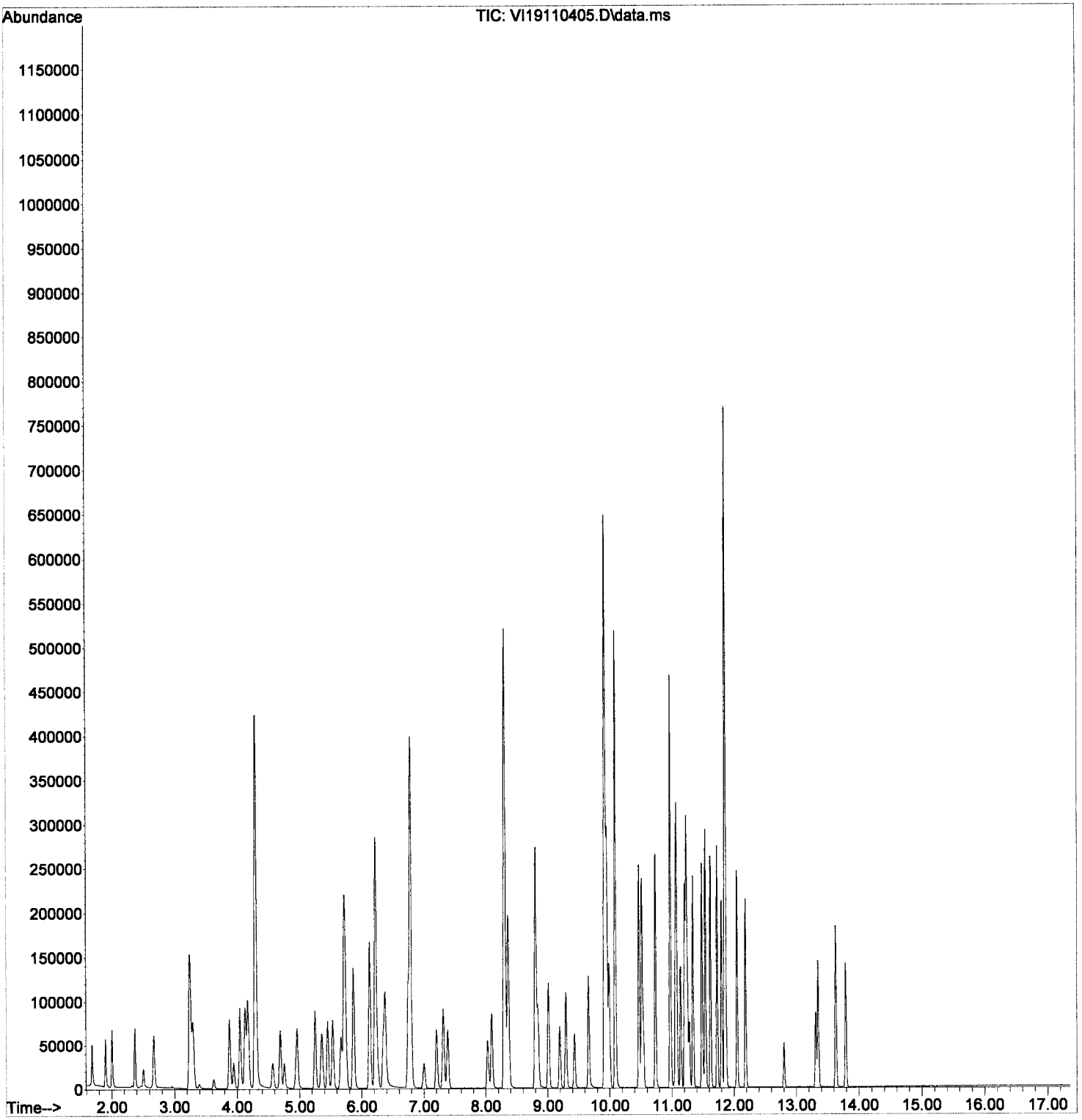
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Toluene	8.358	91	176297	18.41 ug/L	100
50) Tetrachloroethene (PCE)	8.802	166	43403	19.47 ug/L	96
51) 4-Methyl-2-Pentanone (...	8.802	43	115606	39.76 ug/L	94
52) t-1,3-Dichloropropene	8.839	75	53439	18.71 ug/L	98
53) 1,1,2-Trichloroethane	9.009	97	42598	20.06 ug/L	96
54) Dibromochloromethane	9.192	129	41712	24.30 ug/L	99
55) 1,3-Dichloropropane	9.289	76	72268	19.73 ug/L	90
56) 1,2-Dibromoethane (EDB)	9.429	107	45100	19.51 ug/L	96
57) 2-Hexanone	9.654	43	80537	37.80 ug/L	91
58) Chlorobenzene	9.928	112	117239	19.18 ug/L	97
59) Ethylbenzene	9.952	91	184767	18.39 ug/L	98
60) 1,1,1,2-Tetrachloroethane	9.989	131	37051	20.78 ug/L	95
61) m,p-Xylenes (2)	10.086	91	274884	37.16 ug/L	99
62) o-Xylene	10.469	91	135306	18.45 ug/L	99
63) Styrene	10.518	104	112373	19.07 ug/L	99
64) Bromoform	10.542	173	30321	23.80 ug/L	97
65) Isopropylbenzene	10.737	105	167239	18.69 ug/L	97
68) Bromobenzene	11.059	156	47240	19.55 ug/L	87
69) n-Propylbenzene	11.078	91	197153	19.02 ug/L	99
70) 1,1,2,2-Tetrachloroethane	11.145	85	42251	20.71 ug/L	93
71) 2-Chlorotoluene	11.205	126	41494	18.58 ug/L	99
72) 1,3,5-Trimethylbenzene	11.230	105	136461	19.27 ug/L	97
73) 1,2,3-Trichloropropane	11.248	110	19808	19.96 ug/L	96
74) t-1,4-Dichloro-2-butene	11.284	53	14723	20.74 ug/L #	74
75) 4-Chlorotoluene	11.339	91	120583	18.90 ug/L	97
76) tert-Butylbenzene	11.485	91	72033	18.22 ug/L	99
77) 1,2,4-Trimethylbenzene	11.540	105	139848	19.63 ug/L	98
78) sec-Butylbenzene	11.619	105	166532	19.08 ug/L	98
79) 4-Isopropyltoluene	11.729	119	134128	19.43 ug/L	97
80) 1,3-Dichlorobenzene	11.802	146	81541	19.37 ug/L	98
81) 1,4-Dichlorobenzene	11.868	146	83767	19.08 ug/L	97
82) n-Butylbenzene	12.045	91	118730	20.24 ug/L	96
83) 1,2-Dichlorobenzene	12.185	146	77534	18.96 ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	13968	20.20 ug/L	91
85) Hexachlorobutadiene	13.310	223	10508	18.39 ug/L	91
86) 1,2,4-Trichlorobenzene	13.347	180	44138	18.73 ug/L	98
87) Naphthalene	13.627	128	135963	18.15 ug/L	98
88) 1,2,3-Trichlorobenzene	13.791	180	42342	18.93 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110405.D
Acq On : 4 Nov 2019 10:28 am
Operator : tb
Sample : 9110413-BS1
Misc : 1X 5mL 20/40PPB VOCR A19K007
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110406.D
Acq On : 4 Nov 2019 10:55 am
Operator : tb
Sample : 9110413-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:25:09 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	106	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	51.296	-2.6	109	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	48.556	2.9	104	0.00
4	H	NWTPH-Gx (TPH)	500.000	460.454	7.9	98	0.00
5	H	TPHg (C5-C9)	500.000	473.102	5.4	101	0.00
6	H	TPHg (C6-C10)	500.000	474.017	5.2	101	0.00
7	H	CA-LUFT (C5-C12)	500.000	464.165	7.2	100	0.00
8		Benzene (NR)	-1.000	0.000	0.0	106	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	107	0.00
10		Toluene (NR)	-1.000	0.000	0.0	102	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	106	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	105	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	100	0.00

11/4/19 hc

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110406.D
Acq On : 4 Nov 2019 10:55 am
Operator : tb
Sample : 9110413-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:25:09 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	226896	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	378442	51.30	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	119594	48.56	ug/L	0.00
9) Toluene-d8 (NR)	8.303	98	423932	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	318854	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	235420	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	2927673m	460.45	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4188904m	473.10	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3558322m	474.02	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	4872701m	464.17	ug/L	

11/04/19 bg

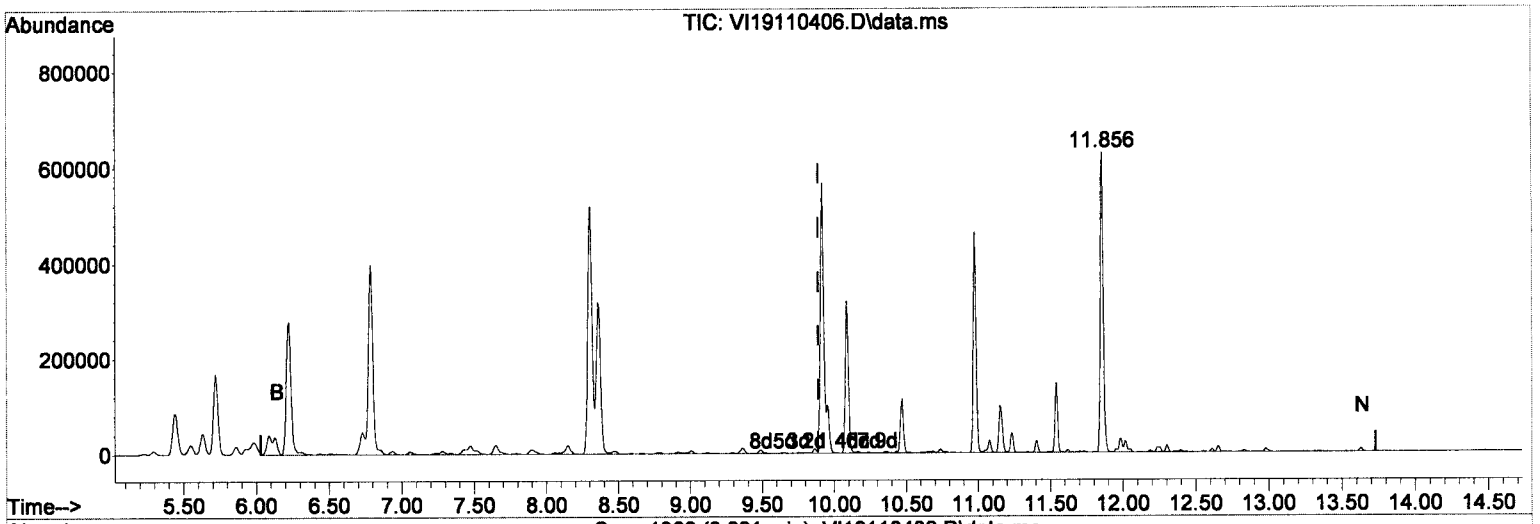
NR

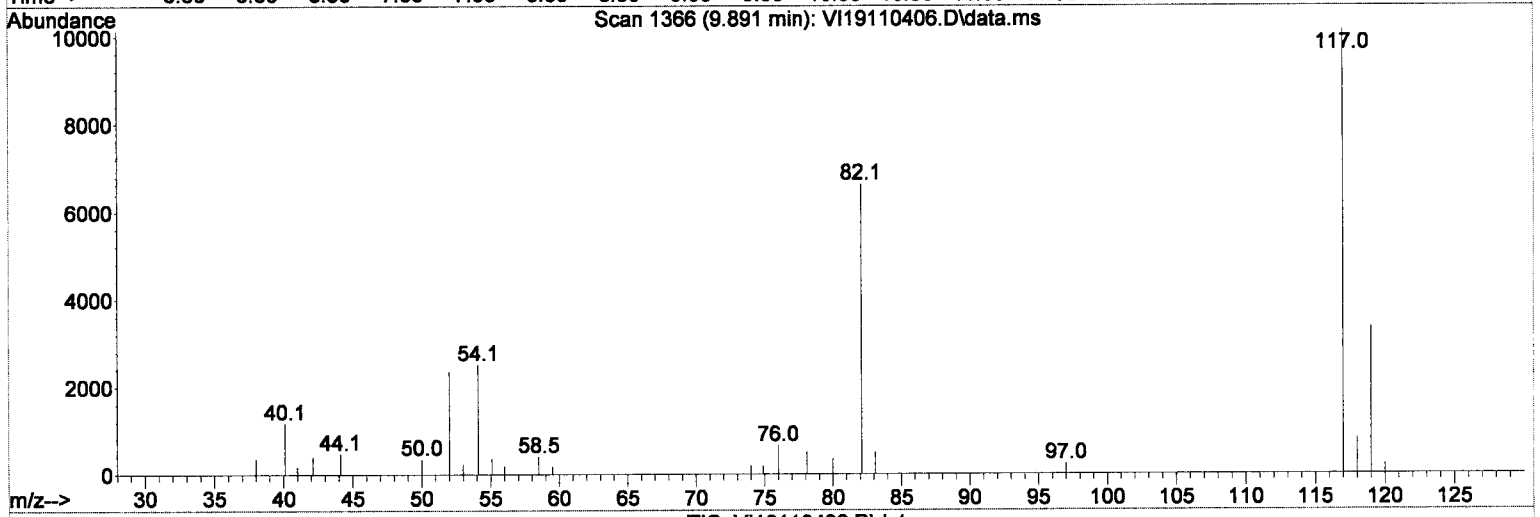
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110406.D
Acq On : 4 Nov 2019 10:55 am
Operator : tb
Sample : 9110413-BS2
Misc : 1X 5mL 500PPB GX A19J354
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:25:09 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19110406.D\data.ms

(4) NWTPH-Gx (TPH) (H)

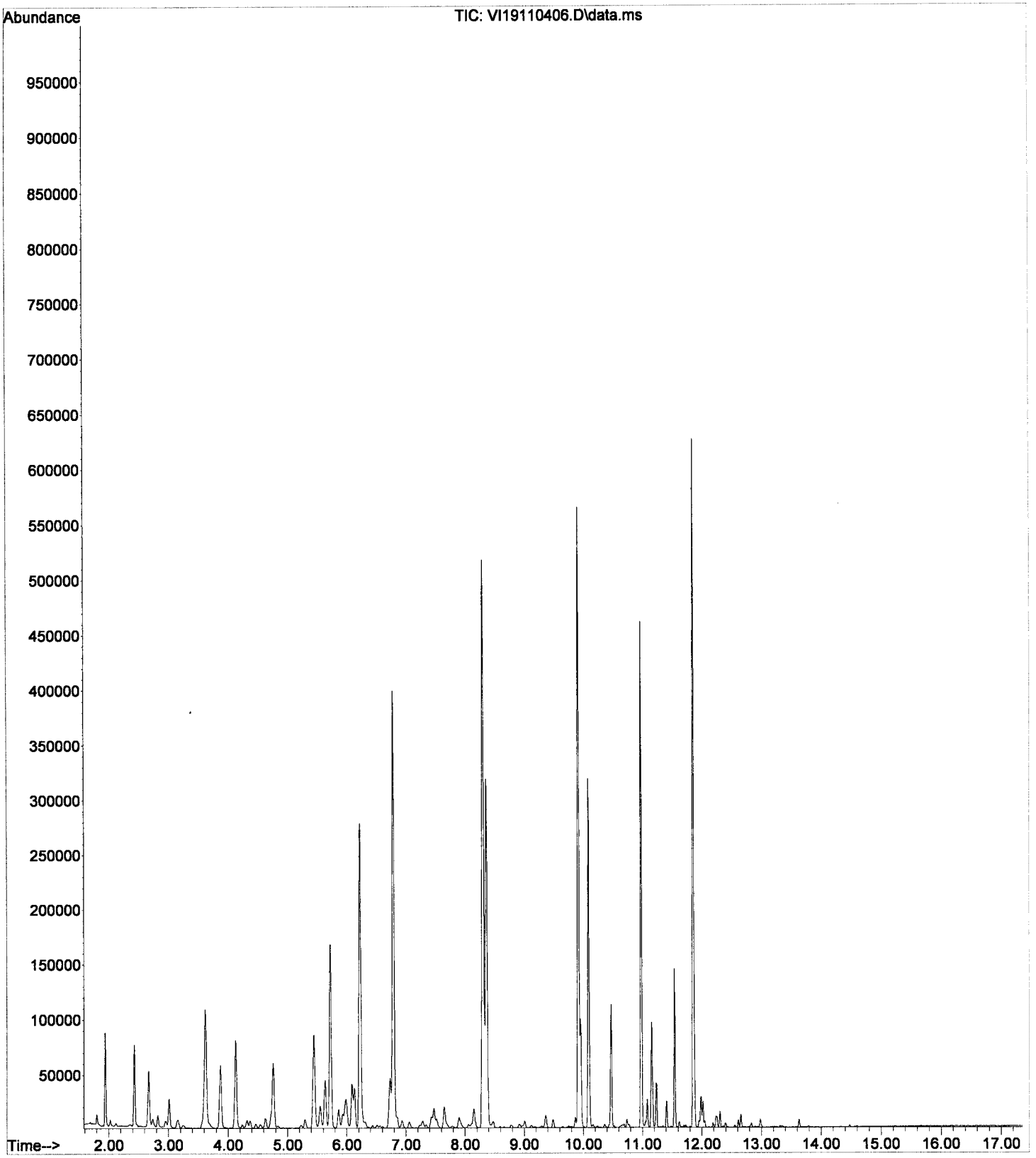
9.890min (0.000) 460.45 ug/L m

response 2927673

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

11/04/19 bh

File :C:\msdchem\1\data\2019-11\9K04028\VI19110406.D
Operator : tb
Acquired : 4 Nov 2019 10:55 am using AcqMethod VI1611RUN.M
Instrument : VOA-GCMS9
Sample Name: 9110413-BS2
Misc Info : 1X 5mL 500PPB GX A19J354
Vial Number: 6



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110407.D
Acq On : 4 Nov 2019 11:22 am
Operator : tb
Sample : 9110413-BLK1
Misc : 1X 5mL DI
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:25:12 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.223	168	223746	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	374547	51.48	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	113491	46.73	ug/L	0.00
9) Toluene-d8 (NR)	8.304	98	419294	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	311790	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.856	150	220200	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-9001m	23.27	ug/L	
5) TPHg (C5-C9)	9.890	TIC	366156m	16.55	ug/L	
6) TPHg (C6-C10)	9.890	TIC	346632m	19.33	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	364691m	19.90	ug/L	

11/4/19

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110407.D
Acq On : 4 Nov 2019 11:22 am
Operator : tb
Sample : 9110413-BLK1
Misc : 1X 5mL DI
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:13 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	113410	50.00	ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.916	117	311790	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	140834	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	114467	51.37	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	374203	52.23	ug/L	0.00
48) Toluene-d8 (S)	8.304	98	419294	51.24	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	113491	49.87	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.898	50	244	0.10	ug/L	# 47
6) Chloroethane	2.476	64	519	0.46	ug/L	# 36
14) Methylene Chloride	3.875	84	799	Below Cal		89
15) Acetone	3.948	43	716	0.72	ug/L	# 44

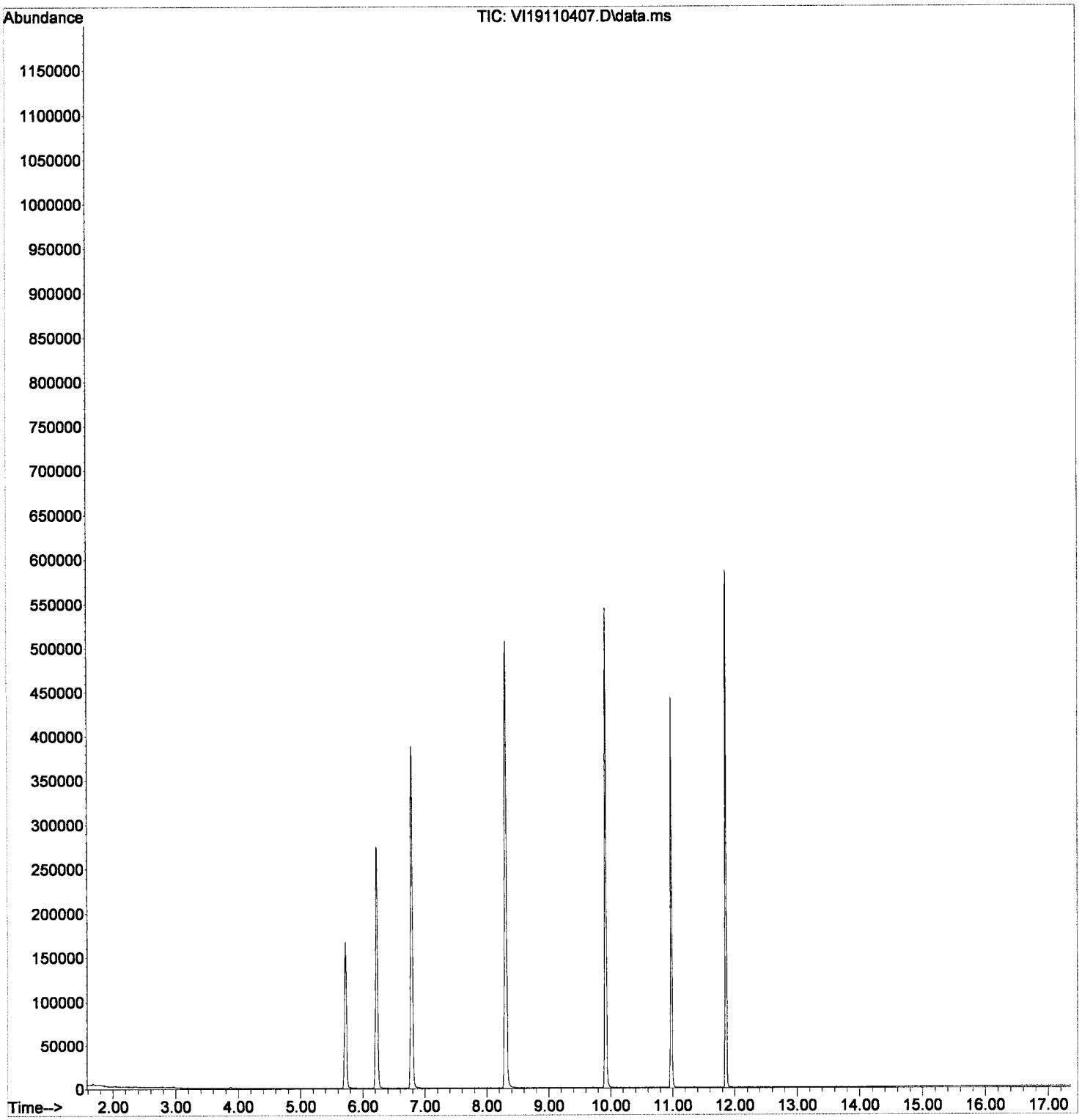
(#) = qualifier out of range (m) = manual integration (+) = signals summed

11/4/19 KW

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110407.D
Acq On : 4 Nov 2019 11:22 am
Operator : tb
Sample : 9110413-BLK1
Misc : 1X 5mL DI
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 12:21:13 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110412.D
Acq On : 4 Nov 2019 1:36 pm
Operator : tb
Sample : A9J1114-03RE1@1000
Misc : 1000X 50uL/50mL RR-02 Cis12DCE
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 14:45:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	102850	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	278955	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.856	152	125978	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	102790	50.86	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	337304	51.91	ug/L		0.00
48) Toluene-d8 (S)	8.304	98	375665	51.31	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	100988	49.61	ug/L		0.00
Target Compounds							Qvalue
4) Vinyl Chloride	2.001	62	12993	5.82	ug/L	NK	97
6) Chloroethane	2.482	64	749	0.73	ug/L	#	36
14) Methylene Chloride	3.869	84	1048	Below Cal			96
15) Acetone	3.948	43	446	0.49	ug/L	#	44
25) c-1,2-Dichloroethene	5.244	61	82603	32.29	ug/L		94
35) Benzene	6.126	78	2371	0.30	ug/L		89
40) Trichloroethene (TCE)	6.746	130	7894	3.90	ug/L	NK	96
49) Toluene	8.358	91	957	0.12	ug/L		90
59) Ethylbenzene	9.958	91	1744	0.20	ug/L		97
61) m,p-Xylenes (2)	10.086	91	595	0.09	ug/L		95
82) n-Butylbenzene	11.984	91	429	0.09	ug/L	#	31
87) Naphthalene	13.627	128	39155	6.47	ug/L		97

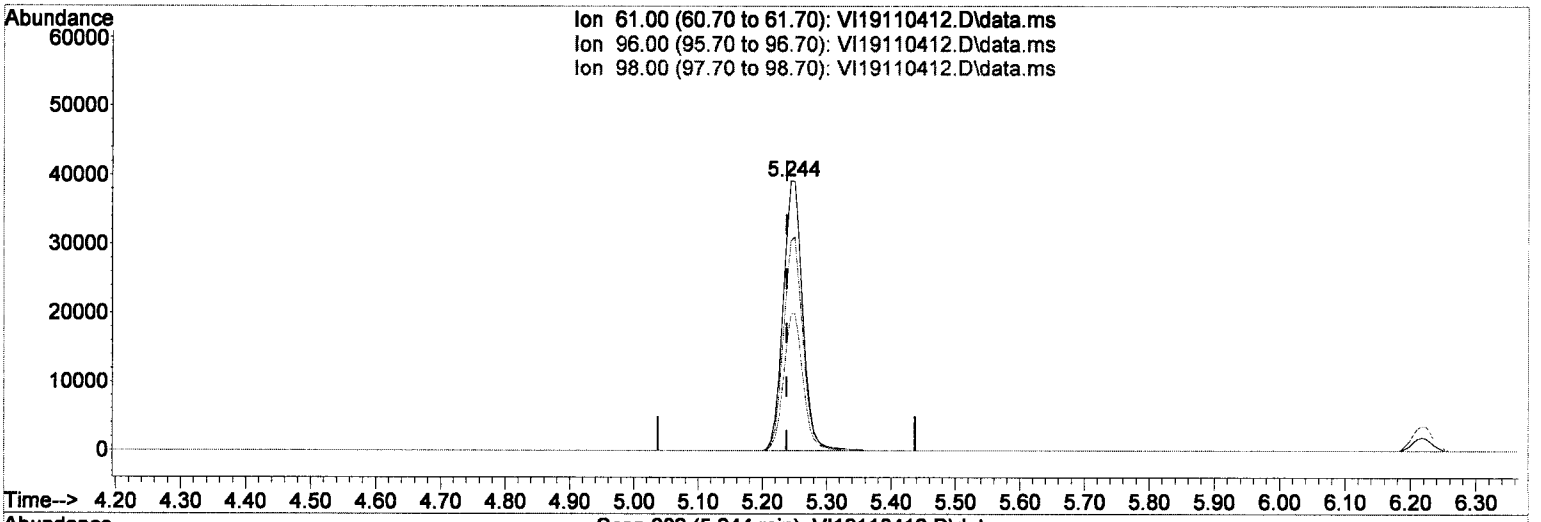
(#) = qualifier out of range (m) = manual integration (+) = signals summed

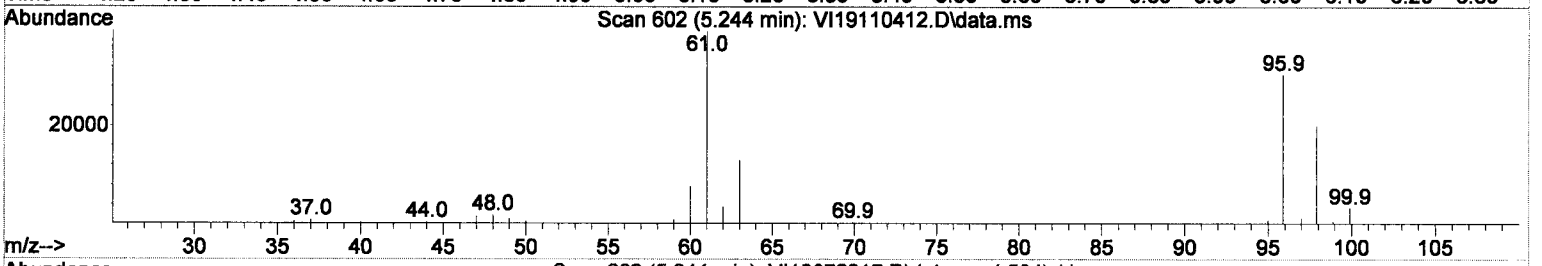
11/04/19 RM

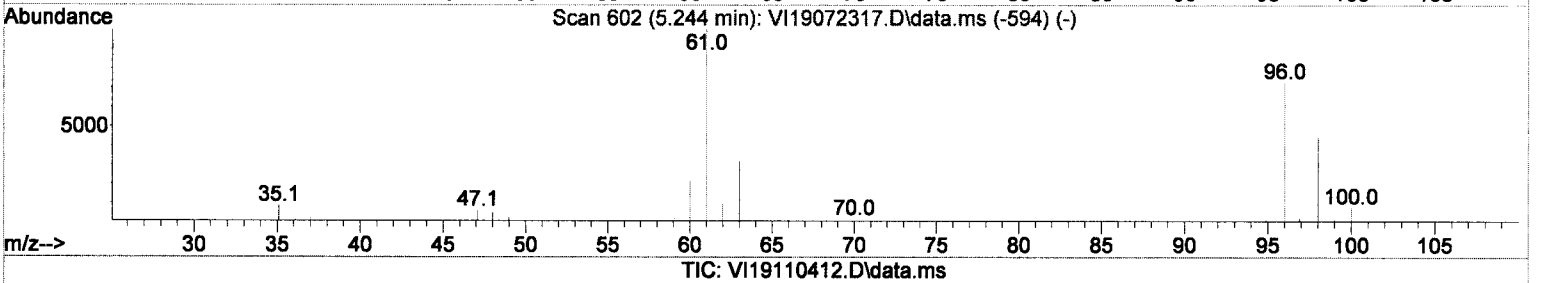
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110412.D
Acq On : 4 Nov 2019 1:36 pm
Operator : tb
Sample : A9J1114-03RE1@1000
Misc : 1000X 50uL/50mL RR-02 Cis12DCE
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 14:45:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19110412.D\data.ms

(25) c-1,2-Dichloroethene

5.244min (+ 0.006) 32.29 ug/L

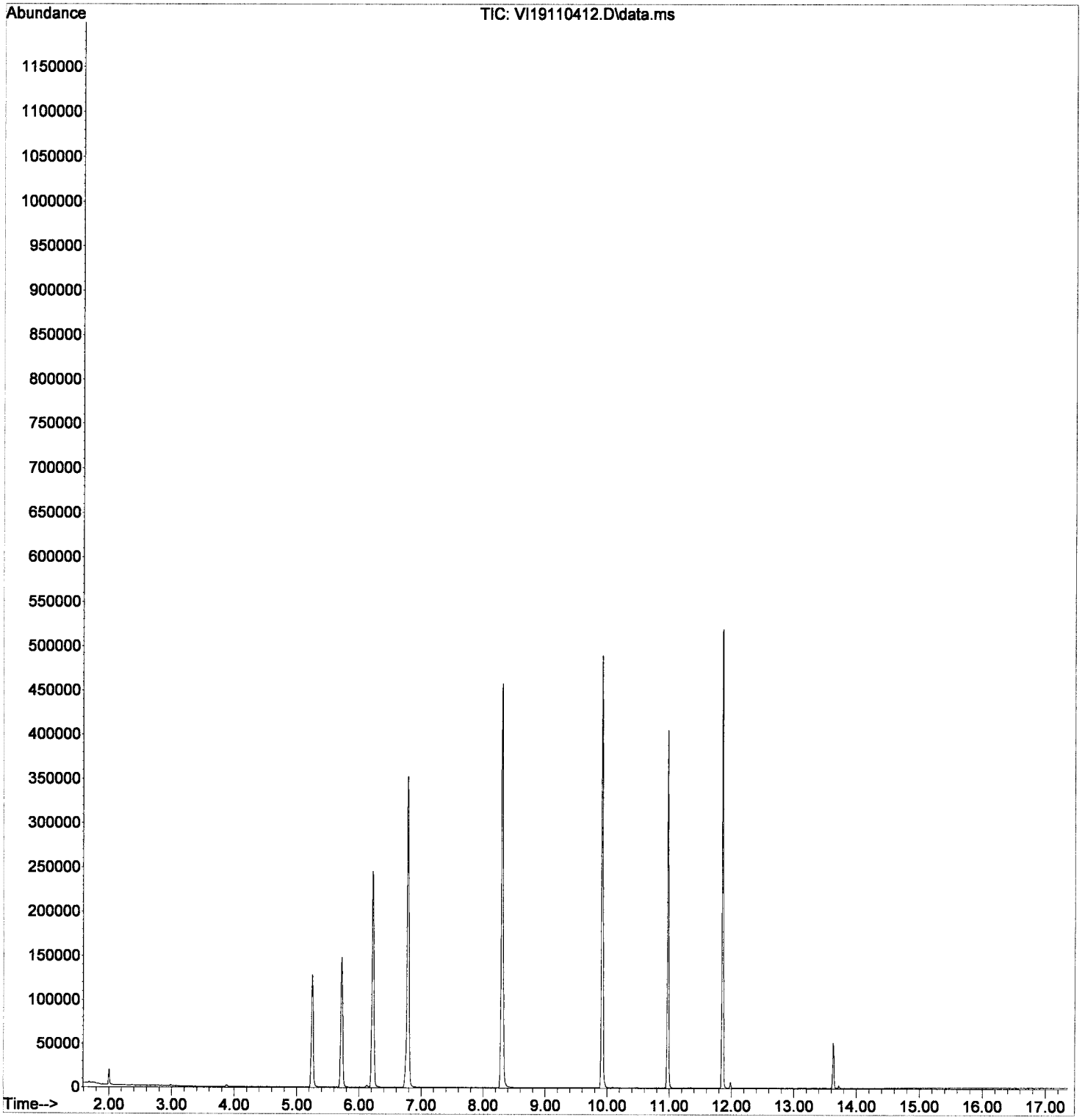
response 82603

Ion	Exp%	Act%
61.00	100.00	100.00
96.00	71.40	77.64
98.00	48.00	50.94
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-11\9K04028\
Data File : VI19110412.D
Acq On : 4 Nov 2019 1:36 pm
Operator : tb
Sample : A9J1114-03RE1@1000
Misc : 1000X 50uL/50mL RR-02 Cis12DCE
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Nov 04 14:45:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 5035A/8260C
Calibration Data

Sequence 9J24043 (Cal ID A9J2503) VOA-GCMS9

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9J24043	Instrument:	VOA-GCMS9
Date:	10/24/19 14:12	Calibration:	A9J2503

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9J24043-IBL1	Water	QC	QC			A19I040	
2	9J24043-TUN1	Water	QC	QC			A19I040	
3	9J24043-ICB1	Water	QC	QC			A19I040	
4	9J24043-CAL1	Water	QC	QC			A19I040	A19J377
5	9J24043-CAL2	Water	QC	QC			A19I040	A19J378
6	9J24043-CAL3	Water	QC	QC			A19I040	A19J379
7	9J24043-CAL4	Water	QC	QC			A19I040	A19J380
8	9J24043-CAL5	Water	QC	QC			A19I040	A19J381
9	9J24043-CAL6	Water	QC	QC			A19I040	A19J382
10	9J24043-CAL7	Water	QC	QC			A19I040	A19J383
11	9J24043-CAL8	Water	QC	QC			A19I040	A19J384
12	9J24043-CAL9	Water	QC	QC			A19I040	A19J385
13	9J24043-IBL2	Water	QC	QC			A19I040	
14	9J24043-CALA	Water	QC	QC			A19I040	A19J386
15	9J24043-IBL3	Water	QC	QC			A19I040	
16	9J24043-CALB	Water	QC	QC			A19I040	A19J387
17	9J24043-IBL4	Water	QC	QC			A19I040	
18	9J24043-IBL5	Water	QC	QC			A19I040	
19	9J24043-ICV1	Water	QC	QC			A19I040	A19J131
20	9J24043-ICV2	Water	QC	QC			A19I040	A19E195
21	9J24043-IBL6	Water	QC	QC			A19I040	
22	9J24043-TUN2	Water	QC	QC			A19I040	
23	9J24043-IBL7	Water	QC	QC			A19I040	
24	9J24043-ICB2	Water	QC	QC			A19I040	
25	9J24043-CALC	Water	QC	QC			A19I040	A19J388
26	9J24043-CALD	Water	QC	QC			A19I040	A19J389
27	9J24043-CALE	Water	QC	QC			A19I040	A19J390
28	9J24043-CALF	Water	QC	QC			A19I040	A19J391
29	9J24043-CALH	Water	QC	QC			A19I040	A19J393
30	9J24043-CALI	Water	QC	QC			A19I040	A19J394
31	9J24043-CALJ	Water	QC	QC			A19I040	A19J395
32	9J24043-IBL8	Water	QC	QC			A19I040	
33	9J24043-IBL9	Water	QC	QC			A19I040	
34	9J24043-IBLA	Water	QC	QC			A19I040	
35	9J24043-IBLB	Water	QC	QC			A19I040	
36	9J24043-CALG	Water	QC	QC			A19I040	A19J392
37	9J24043-ICV3	Water	QC	QC			A19I040	A19G350

Data Entered By: 10/25/19

Data Reviewed By: 10/28/19

Comments:

Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	0.1	-1	50	C:\msdchem\1\data\2019-10\9J24043\VI19102417.D
2	0.2	0	50	C:\msdchem\1\data\2019-10\9J24043\VI19102418.D
3	0.5	0	50	C:\msdchem\1\data\2019-10\9J24043\VI19102419.D
4	1	1	50	C:\msdchem\1\data\2019-10\9J24043\VI19102420.D
5	2	2	50	C:\msdchem\1\data\2019-10\9J24043\VI19102421.D
6	5	5	50	C:\msdchem\1\data\2019-10\9J24043\VI19102422.D
7	10	10	50	C:\msdchem\1\data\2019-10\9J24043\VI19102423.D
8	20	20	50	C:\msdchem\1\data\2019-10\9J24043\VI19102424.D
9	50	50	50	C:\msdchem\1\data\2019-10\9J24043\VI19102425.D
10	100	100	50	C:\msdchem\1\data\2019-10\9J24043\VI19102427.D
11	200	200	50	C:\msdchem\1\data\2019-10\9J24043\VI19102429.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.1	Oct 25 08:32 2019	Oct 25 08:17 2019	24 Oct 2019 3:55 pm
2	0.2	Oct 25 08:32 2019	Oct 25 08:19 2019	24 Oct 2019 4:21 pm
3	0.5	Oct 25 08:32 2019	Oct 25 08:21 2019	24 Oct 2019 4:48 pm
4	1	Oct 25 08:32 2019	Oct 25 08:23 2019	24 Oct 2019 5:15 pm
5	2	Oct 25 08:32 2019	Oct 25 08:24 2019	24 Oct 2019 5:42 pm
6	5	Oct 25 08:32 2019	Oct 25 08:25 2019	24 Oct 2019 6:09 pm
7	10	Oct 25 08:32 2019	Oct 25 08:10 2019	24 Oct 2019 6:36 pm
8	20	Oct 25 08:32 2019	Oct 25 08:10 2019	24 Oct 2019 7:03 pm
9	50	Oct 25 08:32 2019	Oct 25 08:10 2019	24 Oct 2019 7:30 pm
10	100	Oct 25 08:32 2019	Oct 25 08:10 2019	24 Oct 2019 8:24 pm
11	200	Oct 25 08:32 2019	Oct 25 08:30 2019	24 Oct 2019 9:17 pm

VI191025W.M Fri Oct 25 09:01:36 2019

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J24043

Analysis Included

8260C Full List
8260C Additional Cpds
8260C Iodomethane Add On
8260C Oxygenates

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9J24043-TUN1	MS Tune	Water		A19I040	10/24/2019 3:01:00PM
9J24043-ICB1	Initial Cal Blank	Water		A19I040	10/24/2019 3:28:00PM
9J24043-CAL1	Cal Standard	Water	A19J377	"	10/24/2019 3:55:00PM
9J24043-CAL2	Cal Standard	Water	A19J378	"	10/24/2019 4:21:00PM
9J24043-CAL3	Cal Standard	Water	A19J379	"	10/24/2019 4:48:00PM
9J24043-CAL4	Cal Standard	Water	A19J380	"	10/24/2019 5:15:00PM
9J24043-CAL5	Cal Standard	Water	A19J381	"	10/24/2019 5:42:00PM
9J24043-CAL6	Cal Standard	Water	A19J382	"	10/24/2019 6:09:00PM
9J24043-CAL7	Cal Standard	Water	A19J383	"	10/24/2019 6:36:00PM
9J24043-CAL8	Cal Standard	Water	A19J384	"	10/24/2019 7:03:00PM
9J24043-CAL9	Cal Standard	Water	A19J385	"	10/24/2019 7:30:00PM
9J24043-CALA	Cal Standard	Water	A19J386	"	10/24/2019 8:24:00PM
9J24043-CALB	Cal Standard	Water	A19J387	"	10/24/2019 9:17:00PM
9J24043-ICV1	Initial Cal Check	Water	A19J131	"	10/24/2019 10:38:00PM
9J24043-ICV2	Initial Cal Check	Water	A19E195	"	10/24/2019 11:05:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: A9J2503 Instrument: VOA-GCMS9

8260C Full List Sequence: 9J24043 Matrix: Water

9J24043-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J24043-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J24043

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9J2503** Instrument: **VOA-GCMS9**

8260C Full List Sequence: **9J24043** Matrix: **Water**

9J24043-ICV1	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**
9J24043-ICV2	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

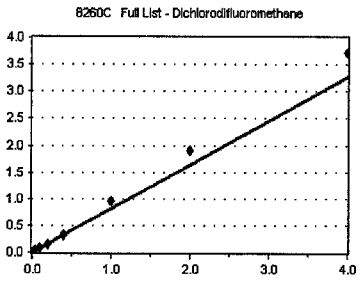
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

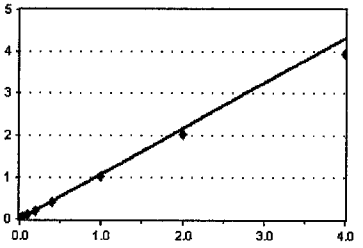


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	562	0.627	1.67
9J24043-CAL4	1	1583	0.682	1.68
9J24043-CAL5	2	3731	0.842	1.69
9J24043-CAL6	5	9010	0.812	1.68
9J24043-CAL7	10	18118	0.770	1.68
9J24043-CAL8	20	35982	0.800	1.67
9J24043-CAL9	50	109425	0.946	1.68
9J24043-CALA	100	212153	0.947	1.68
9J24043-CALB	200	431143	0.929	1.69

AVE RF **0.817** RF RSD **13.92** AVE RT **1.68**

Chloromethane

Curve Fit: **AVERAGE RF**

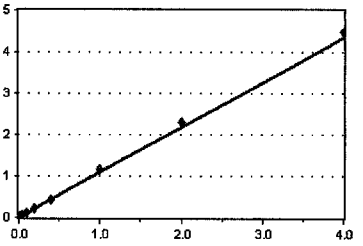


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~479~~	~~2.063~~	~~1.90~~
9J24043-CAL2	0.2	669	1.457	1.90
9J24043-CAL3	0.4	1136	1.268	1.89
9J24043-CAL4	1	2407	1.037	1.89
9J24043-CAL5	2	4743	1.070	1.90
9J24043-CAL6	5	11370	1.024	1.89
9J24043-CAL7	10	22449	0.954	1.90
9J24043-CAL8	20	45062	1.002	1.89
9J24043-CAL9	50	118956	1.029	1.89
9J24043-CALA	100	226754	1.012	1.90
9J24043-CALB	200	456703	0.984	1.90

AVE RF **1.084** RF RSD **14.45** AVE RT **1.90**

Vinyl chloride

Curve Fit: **AVERAGE RF**

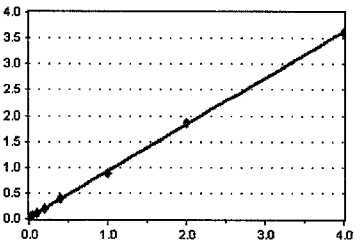


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	406	0.884	2.01
9J24043-CAL3	0.4	967	1.079	2.00
9J24043-CAL4	1	2351	1.013	2.00
9J24043-CAL5	2	5030	1.135	2.01
9J24043-CAL6	5	12653	1.140	2.00
9J24043-CAL7	10	25149	1.069	2.00
9J24043-CAL8	20	49916	1.110	2.00
9J24043-CAL9	50	133008	1.150	2.00
9J24043-CALA	100	258510	1.154	2.00
9J24043-CALB	200	521368	1.123	2.00

AVE RF **1.086** RF RSD **7.67** AVE RT **2.00**

Methylene chloride

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	2024	8.716	0.00
9J24043-CAL2	0.2	2201	4.794	0.00
9J24043-CAL3	0.4	2646	2.954	0.00
9J24043-CAL4	1	3939	1.697	0.00
9J24043-CAL5	2	6151	1.388	0.00
9J24043-CAL6	5	12549	1.130	3.87
9J24043-CAL7	10	22701	0.965	3.87
9J24043-CAL8	20	43598	0.970	3.87
9J24043-CAL9	50	102541	0.887	3.87
9J24043-CALA	100	209114	0.934	3.88
9J24043-CALB	200	419637	0.904	3.88

AVE RF **2.304** RF RSD **106.11** AVE RT **2.11**

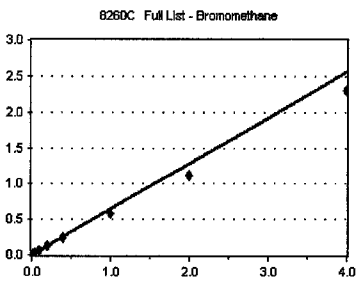
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Bromomethane

Curve Fit: **AVERAGE RF**

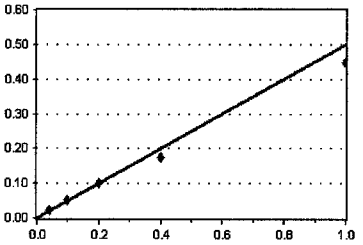


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~839~~	~~0.937~~	~~2.36~~
9J24043-CAL4	1	1763	0.760	2.36
9J24043-CAL5	2	3140	0.709	2.37
9J24043-CAL6	5	7782	0.701	2.36
9J24043-CAL7	10	14678	0.624	2.36
9J24043-CAL8	20	27599	0.614	2.35
9J24043-CAL9	50	66917	0.579	2.36
9J24043-CALA	100	125242	0.559	2.37
9J24043-CALB	200	267468	0.576	2.37

AVE RF **0.640** RF RSD **11.51** AVE RT **2.36**

Chloroethane

Curve Fit: **AVERAGE RF**

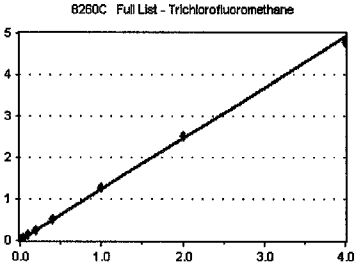


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL5	2	2540	0.573	2.52
9J24043-CAL6	5	5899	0.531	2.51
9J24043-CAL7	10	11813	0.502	2.50
9J24043-CAL8	20	19851	0.442	2.49
9J24043-CAL9	50	51695	0.447	2.49
~~9J24043-CALA~~	~~100~~	~~53786~~	~~0.240~~	~~2.51~~
~~9J24043-CALB~~	~~200~~	~~53331~~	~~0.115~~	~~2.49~~

AVE RF **0.499** RF RSD **11.23** AVE RT **2.50**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

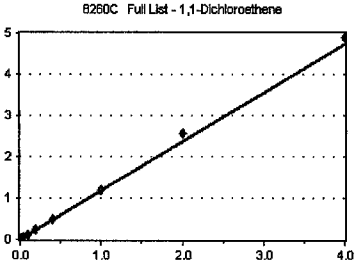


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	958	1.069	2.66
9J24043-CAL4	1	2784	1.200	2.66
9J24043-CAL5	2	5667	1.279	2.68
9J24043-CAL6	5	14236	1.282	2.66
9J24043-CAL7	10	29038	1.235	2.66
9J24043-CAL8	20	58162	1.294	2.66
9J24043-CAL9	50	145579	1.259	2.66
9J24043-CALA	100	279991	1.250	2.66
9J24043-CALB	200	556445	1.199	2.66

AVE RF **1.230** RF RSD **5.62** AVE RT **2.66**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1038	1.159	3.23
9J24043-CAL4	1	2476	1.067	3.23
9J24043-CAL5	2	5263	1.188	3.24
9J24043-CAL6	5	13321	1.200	3.23
9J24043-CAL7	10	27243	1.158	3.23
9J24043-CAL8	20	54074	1.203	3.23
9J24043-CAL9	50	137847	1.192	3.23
9J24043-CALA	100	286478	1.279	3.24
9J24043-CALB	200	567371	1.222	3.23

AVE RF **1.185** RF RSD **4.83** AVE RT **3.23**

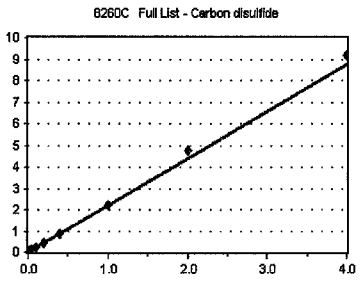
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Carbon disulfide

Curve Fit: **AVERAGE RF**

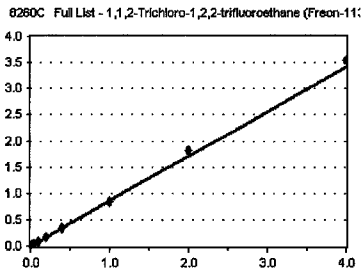


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	4573	1.970	3.25
9J24043-CAL5	2	9757	2.202	3.26
9J24043-CAL6	5	24060	2.167	3.25
9J24043-CAL7	10	49011	2.084	3.25
9J24043-CAL8	20	98898	2.200	3.24
9J24043-CAL9	50	254448	2.200	3.25
9J24043-CALA	100	531736	2.374	3.25
9J24043-CALB	200	1067583	2.300	3.25

AVE RF **2.187** RF RSD **5.64** AVE RT **3.25**

1,1,2-Trichloro-1,2,2-trifluoroethane

Curve Fit: **AVERAGE RF**

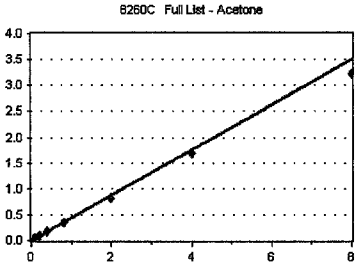


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	1717	0.740	3.29
9J24043-CAL5	2	3803	0.858	3.30
9J24043-CAL6	5	9544	0.860	3.29
9J24043-CAL7	10	19612	0.834	3.28
9J24043-CAL8	20	39711	0.883	3.28
9J24043-CAL9	50	97812	0.846	3.29
9J24043-CALA	100	204168	0.912	3.29
9J24043-CALB	200	411156	0.886	3.29

AVE RF **0.852** RF RSD **6.07** AVE RT **3.29**

Acetone

Curve Fit: **AVERAGE RF**

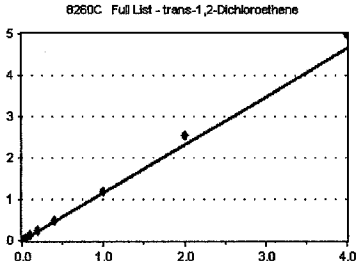


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.4~~	~~1168~~	~~1.272~~	~~3.95~~
~~9J24043-CAL3~~	~~0.8~~	~~1616~~	~~0.902~~	~~3.95~~
~~9J24043-CAL4~~	~~2~~	~~2940~~	~~0.633~~	~~3.95~~
9J24043-CAL5	4	4523	0.510	3.95
9J24043-CAL6	10	10355	0.466	3.94
9J24043-CAL7	20	19796	0.421	3.94
9J24043-CAL8	40	39380	0.438	3.94
9J24043-CAL9	100	93945	0.406	3.94
9J24043-CALA	200	188786	0.421	3.94
9J24043-CALB	400	375022	0.404	3.94

AVE RF **0.438** RF RSD **8.73** AVE RT **3.94**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	360	0.784	4.05
9J24043-CAL3	0.4	963	1.075	4.04
9J24043-CAL4	1	2657	1.145	4.04
9J24043-CAL5	2	5503	1.242	4.05
9J24043-CAL6	5	13685	1.233	4.04
9J24043-CAL7	10	27372	1.164	4.04
9J24043-CAL8	20	56066	1.247	4.03
9J24043-CAL9	50	137318	1.188	4.04
9J24043-CALA	100	285846	1.276	4.04
9J24043-CALB	200	579277	1.248	4.04

AVE RF **1.160** RF RSD **12.54** AVE RT **4.04**

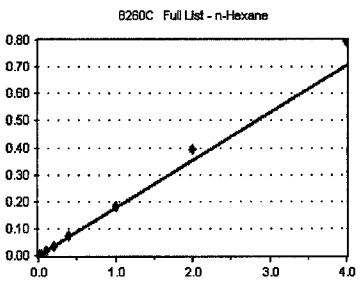
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

n-Hexane

Curve Fit: **AVERAGE RF**

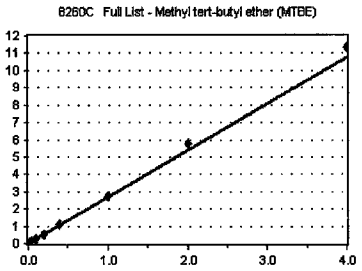


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	357	0.154	4.12
9J24043-CAL5	2	709	0.160	4.13
9J24043-CAL6	5	1836	0.165	4.12
9J24043-CAL7	10	4034	0.172	4.12
9J24043-CAL8	20	8308	0.185	4.12
9J24043-CAL9	50	21163	0.183	4.12
9J24043-CALA	100	43920	0.196	4.12
9J24043-CALB	200	92077	0.198	4.12

AVE RF **0.177** RF RSD **9.35** AVE RT **4.12**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

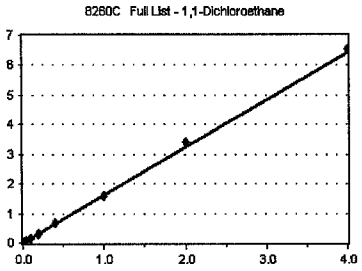


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	2309	2.577	4.17
9J24043-CAL4	1	5789	2.494	4.17
9J24043-CAL5	2	11957	2.698	4.17
9J24043-CAL6	5	29908	2.694	4.17
9J24043-CAL7	10	61557	2.617	4.17
9J24043-CAL8	20	123669	2.750	4.17
9J24043-CAL9	50	313020	2.707	4.17
9J24043-CALA	100	646936	2.888	4.17
9J24043-CALB	200	1318751	2.841	4.17

AVE RF **2.696** RF RSD **4.58** AVE RT **4.17**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

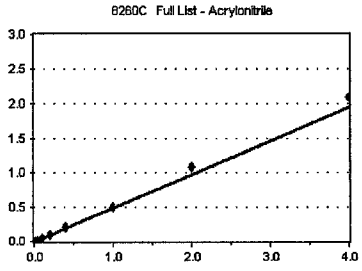


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1323	1.477	4.68
9J24043-CAL4	1	3672	1.582	4.68
9J24043-CAL5	2	7227	1.631	4.69
9J24043-CAL6	5	18307	1.649	4.68
9J24043-CAL7	10	36999	1.573	4.68
9J24043-CAL8	20	75120	1.671	4.68
9J24043-CAL9	50	182910	1.582	4.68
9J24043-CALA	100	379907	1.696	4.68
9J24043-CALB	200	761535	1.641	4.68

AVE RF **1.611** RF RSD **4.09** AVE RT **4.68**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	876	0.377	4.75
9J24043-CAL5	2	1949	0.440	4.76
9J24043-CAL6	5	5426	0.489	4.75
9J24043-CAL7	10	11383	0.484	4.74
9J24043-CAL8	20	22973	0.511	4.75
9J24043-CAL9	50	58667	0.507	4.75
9J24043-CALA	100	122564	0.547	4.75
9J24043-CALB	200	243406	0.524	4.75

AVE RF **0.485** RF RSD **11.08** AVE RT **4.75**

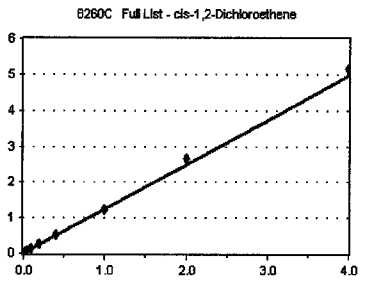
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

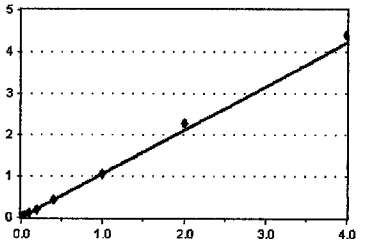


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1008	1.125	5.24
9J24043-CAL4	1	2744	1.182	5.24
9J24043-CAL5	2	5568	1.256	5.25
9J24043-CAL6	5	13959	1.257	5.24
9J24043-CAL7	10	28723	1.221	5.24
9J24043-CAL8	20	58359	1.298	5.24
9J24043-CAL9	50	143124	1.238	5.24
9J24043-CALA	100	297452	1.328	5.24
9J24043-CALB	200	597836	1.288	5.24

AVE RF **1.244** RF RSD **4.98** AVE RT **5.24**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

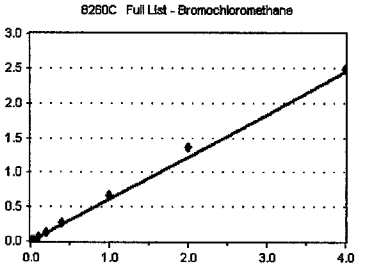


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	853	0.952	5.35
9J24043-CAL4	1	2316	0.998	5.35
9J24043-CAL5	2	4776	1.078	5.35
9J24043-CAL6	5	11793	1.062	5.35
9J24043-CAL7	10	23663	1.006	5.35
9J24043-CAL8	20	48254	1.073	5.35
9J24043-CAL9	50	122658	1.061	5.35
9J24043-CALA	100	252830	1.129	5.35
9J24043-CALB	200	512393	1.104	5.35

AVE RF **1.051** RF RSD **5.31** AVE RT **5.35**

Bromochloromethane

Curve Fit: **AVERAGE RF**

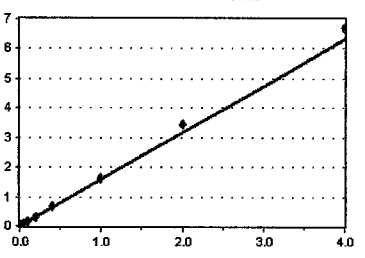


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	391	0.436	5.44
9J24043-CAL4	1	1188	0.512	5.45
9J24043-CAL5	2	2679	0.605	5.46
9J24043-CAL6	5	7172	0.646	5.44
9J24043-CAL7	10	14961	0.636	5.45
9J24043-CAL8	20	30935	0.688	5.44
9J24043-CAL9	50	77572	0.671	5.44
9J24043-CALA	100	151653	0.677	5.45
9J24043-CALB	200	288672	0.622	5.45

AVE RF **0.610** RF RSD **13.73** AVE RT **5.45**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	587	1.278	5.53
9J24043-CAL3	0.4	1292	1.442	5.53
9J24043-CAL4	1	3341	1.440	5.53
9J24043-CAL5	2	7277	1.642	5.54
9J24043-CAL6	5	18186	1.638	5.53
9J24043-CAL7	10	37799	1.607	5.53
9J24043-CAL8	20	76239	1.696	5.52
9J24043-CAL9	50	186984	1.617	5.52
9J24043-CALA	100	385051	1.719	5.53
9J24043-CALB	200	776466	1.673	5.53

AVE RF **1.575** RF RSD **8.98** AVE RT **5.53**

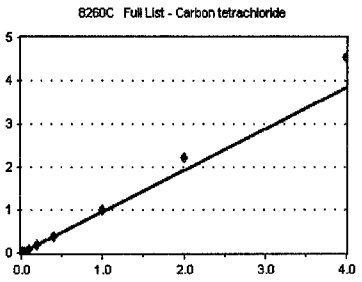
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

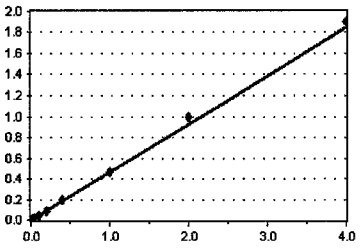


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~618~~	~~0.690~~	~~5.65~~
9J24043-CAL4	1	1791	0.772	5.66
9J24043-CAL5	2	4001	0.903	5.66
9J24043-CAL6	5	9957	0.897	5.66
9J24043-CAL7	10	20840	0.886	5.66
9J24043-CAL8	20	43938	0.977	5.66
9J24043-CAL9	50	114614	0.991	5.66
9J24043-CALA	100	247648	1.106	5.66
9J24043-CALB	200	525973	1.133	5.66

AVE RF **0.958** RF RSD **12.52** AVE RT **5.66**

Tetrahydrofuran

Curve Fit: **AVERAGE RF**

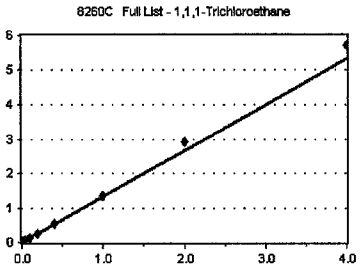


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	945	0.407	5.71
9J24043-CAL5	2	2045	0.461	5.71
9J24043-CAL6	5	5112	0.460	5.71
9J24043-CAL7	10	10375	0.441	5.70
9J24043-CAL8	20	21330	0.474	5.70
9J24043-CAL9	50	54072	0.468	5.69
9J24043-CALA	100	111881	0.500	5.70
9J24043-CALB	200	221252	0.477	5.69

AVE RF **0.461** RF RSD **5.94** AVE RT **5.70**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

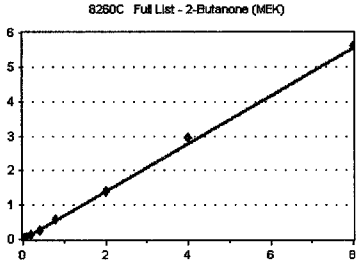


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1012	1.130	5.73
9J24043-CAL4	1	2903	1.251	5.73
9J24043-CAL5	2	5937	1.340	5.74
9J24043-CAL6	5	14957	1.347	5.73
9J24043-CAL7	10	30210	1.284	5.74
9J24043-CAL8	20	62000	1.379	5.73
9J24043-CAL9	50	156566	1.354	5.73
9J24043-CALA	100	325398	1.453	5.74
9J24043-CALB	200	663507	1.430	5.74

AVE RF **1.330** RF RSD **7.37** AVE RT **5.73**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	2	2900	0.625	5.86
9J24043-CAL5	4	6243	0.704	5.87
9J24043-CAL6	10	15638	0.704	5.86
9J24043-CAL7	20	31158	0.662	5.86
9J24043-CAL8	40	64474	0.717	5.85
9J24043-CAL9	100	162223	0.701	5.85
9J24043-CALA	200	331914	0.741	5.85
9J24043-CALB	400	651518	0.702	5.85

AVE RF **0.695** RF RSD **5.12** AVE RT **5.86**

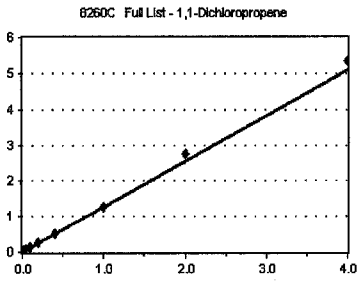
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

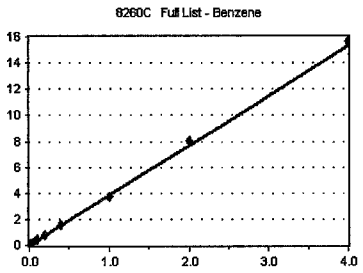


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1049	1.171	5.87
9J24043-CAL4	1	2749	1.184	5.86
9J24043-CAL5	2	5724	1.292	5.87
9J24043-CAL6	5	14423	1.299	5.86
9J24043-CAL7	10	29295	1.245	5.86
9J24043-CAL8	20	59019	1.313	5.86
9J24043-CAL9	50	146998	1.271	5.86
9J24043-CALA	100	308104	1.376	5.86
9J24043-CALB	200	622283	1.341	5.86

AVE RF **1.277** RF RSD **5.30** AVE RT **5.86**

Benzene

Curve Fit: **AVERAGE RF**

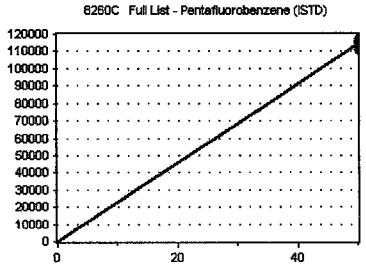


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	917	3.949	6.13
9J24043-CAL2	0.2	1584	3.450	6.13
9J24043-CAL3	0.4	3381	3.774	6.12
9J24043-CAL4	1	8314	3.582	6.13
9J24043-CAL5	2	17935	4.047	6.13
9J24043-CAL6	5	43404	3.910	6.12
9J24043-CAL7	10	87359	3.714	6.12
9J24043-CAL8	20	175817	3.910	6.12
9J24043-CAL9	50	434612	3.758	6.12
9J24043-CALA	100	900809	4.022	6.12
9J24043-CALB	200	1815119	3.911	6.12

AVE RF **3.821** RF RSD **4.86** AVE RT **6.12**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

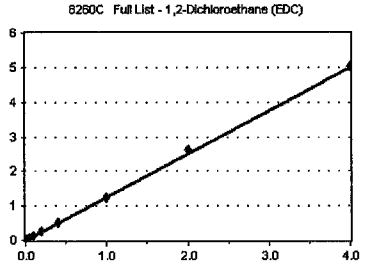


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116102	2322.040	6.22
9J24043-CAL2	50	114788	2295.760	6.22
9J24043-CAL3	50	111985	2239.700	6.21
9J24043-CAL4	50	116043	2320.860	6.21
9J24043-CAL5	50	110790	2215.800	6.22
9J24043-CAL6	50	111010	2220.200	6.21
9J24043-CAL7	50	117608	2352.160	6.22
9J24043-CAL8	50	112406	2248.120	6.21
9J24043-CAL9	50	115635	2312.700	6.21
9J24043-CALA	50	111989	2239.780	6.22
9J24043-CALB	50	116034	2320.680	6.22

AVE RF **2280.709** RF RSD **2.13** AVE RT **6.21**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1073	1.198	6.33
9J24043-CAL4	1	2623	1.130	6.34
9J24043-CAL5	2	5726	1.292	6.35
9J24043-CAL6	5	14359	1.293	6.34
9J24043-CAL7	10	28935	1.230	6.34
9J24043-CAL8	20	58731	1.306	6.34
9J24043-CAL9	50	143950	1.245	6.34
9J24043-CALA	100	294149	1.313	6.34
9J24043-CALB	200	583025	1.256	6.34

AVE RF **1.252** RF RSD **4.76** AVE RT **6.34**

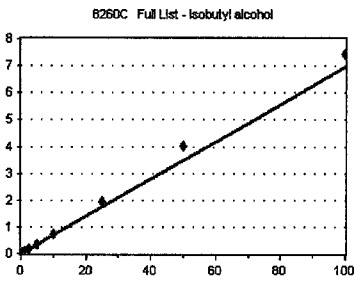
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Isobutyl alcohol

Curve Fit: **AVERAGE RF**

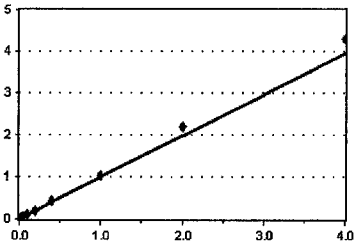


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~2.5~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~5~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	10	1172	5.233	6.39
9J24043-CAL4	25	3120	5.377	6.38
9J24043-CAL5	50	7968	7.192	6.38
9J24043-CAL6	125	20710	7.462	6.38
9J24043-CAL7	250	39286	6.681	6.38
9J24043-CAL8	500	83527	7.431	6.37
9J24043-CAL9	1250	224878	0.078	6.37
9J24043-CALA	2500	450055	8.037	6.38
9J24043-CALB	5000	863259	7.440	6.38

AVE RF **6.959** RF RSD **14.51** AVE RT **6.38**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**

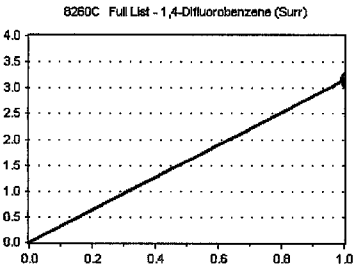


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	372	0.810	6.75
9J24043-CAL3	0.4	718	0.801	6.75
9J24043-CAL4	1	2166	0.933	6.74
9J24043-CAL5	2	4576	1.033	6.75
9J24043-CAL6	5	11340	1.022	6.74
9J24043-CAL7	10	23449	0.997	6.74
9J24043-CAL8	20	47359	1.053	6.74
9J24043-CAL9	50	118626	1.026	6.74
9J24043-CALA	100	245311	1.095	6.75
9J24043-CALB	200	498651	1.074	6.74

AVE RF **0.984** RF RSD **10.55** AVE RT **6.74**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

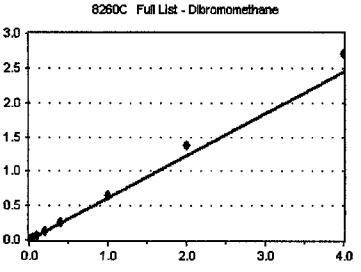


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	364447	3.139	6.78
9J24043-CAL2	50	359462	3.132	6.78
9J24043-CAL3	50	352302	3.146	6.78
9J24043-CAL4	50	366642	3.160	6.78
9J24043-CAL5	50	347212	3.134	6.78
9J24043-CAL6	50	353918	3.188	6.78
9J24043-CAL7	50	367409	3.124	6.78
9J24043-CAL8	50	354922	3.158	6.78
9J24043-CAL9	50	370144	3.201	6.78
9J24043-CALA	50	356857	3.187	6.78
9J24043-CALB	50	369003	3.180	6.78

AVE RF **3.159** RF RSD **0.84** AVE RT **6.78**

Dibromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	378	0.422	7.20
9J24043-CAL4	1	1285	0.554	7.20
9J24043-CAL5	2	2755	0.622	7.20
9J24043-CAL6	5	7023	0.633	7.20
9J24043-CAL7	10	14594	0.620	7.20
9J24043-CAL8	20	29514	0.656	7.20
9J24043-CAL9	50	74270	0.642	7.20
9J24043-CALA	100	155032	0.692	7.20
9J24043-CALB	200	314382	0.677	7.20

AVE RF **0.613** RF RSD **13.36** AVE RT **7.20**

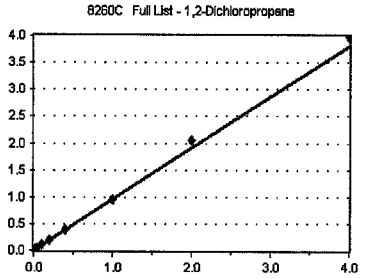
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

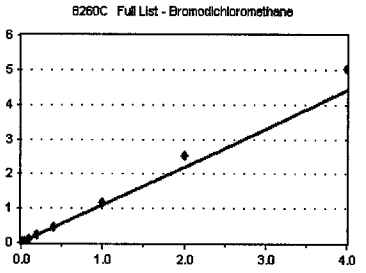


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	797	0.890	7.31
9J24043-CAL4	1	1944	0.838	7.31
9J24043-CAL5	2	4373	0.987	7.31
9J24043-CAL6	5	10897	0.982	7.31
9J24043-CAL7	10	21915	0.932	7.31
9J24043-CAL8	20	44422	0.988	7.31
9J24043-CAL9	50	109124	0.944	7.31
9J24043-CALA	100	229327	1.024	7.31
9J24043-CALB	200	461364	0.994	7.31

AVE RF **0.953** RF RSD **6.18** AVE RT **7.31**

Bromodichloromethane

Curve Fit: **AVERAGE RF**

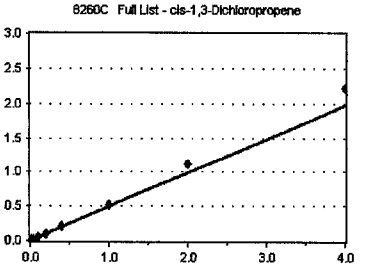


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	800	0.893	7.38
9J24043-CAL4	1	2259	0.973	7.38
9J24043-CAL5	2	4681	1.056	7.39
9J24043-CAL6	5	12021	1.083	7.38
9J24043-CAL7	10	25055	1.065	7.38
9J24043-CAL8	20	51693	1.150	7.38
9J24043-CAL9	50	133532	1.155	7.38
9J24043-CALA	100	282119	1.260	7.38
9J24043-CALB	200	582259	1.255	7.38

AVE RF **1.099** RF RSD **11.01** AVE RT **7.38**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

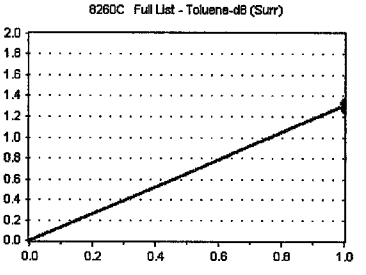


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	1014	0.431	8.09
9J24043-CAL4	1	2667	0.429	8.09
9J24043-CAL5	2	5578	0.468	8.09
9J24043-CAL6	5	14229	0.474	8.09
9J24043-CAL7	10	30482	0.487	8.09
9J24043-CAL8	20	64475	0.525	8.09
9J24043-CAL9	50	166893	0.520	8.09
9J24043-CALA	100	356393	0.559	8.09
9J24043-CALB	200	736312	0.556	8.09

AVE RF **0.494** RF RSD **9.88** AVE RT **8.09**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	406288	1.321	8.30
9J24043-CAL2	50	403793	1.333	8.30
9J24043-CAL3	50	396027	1.345	8.30
9J24043-CAL4	50	410518	1.321	8.30
9J24043-CAL5	50	395017	1.327	8.30
9J24043-CAL6	50	397005	1.322	8.30
9J24043-CAL7	50	415174	1.327	8.30
9J24043-CAL8	50	399810	1.302	8.30
9J24043-CAL9	50	415062	1.292	8.30
9J24043-CALA	50	405945	1.274	8.30
9J24043-CALB	50	420947	1.272	8.30

AVE RF **1.312** RF RSD **1.83** AVE RT **8.30**

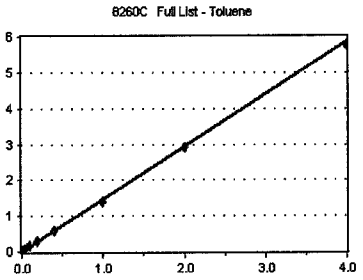
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Toluene

Curve Fit: **AVERAGE RF**

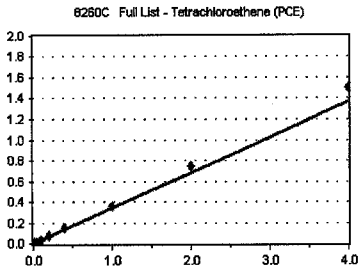


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	978	1.590	8.36
9J24043-CAL2	0.2	1744	1.439	8.35
9J24043-CAL3	0.4	3505	1.488	8.36
9J24043-CAL4	1	9040	1.454	8.35
9J24043-CAL5	2	17851	1.499	8.36
9J24043-CAL6	5	44272	1.474	8.36
9J24043-CAL7	10	90400	1.445	8.36
9J24043-CAL8	20	183309	1.492	8.36
9J24043-CAL9	50	446611	1.391	8.36
9J24043-CALA	100	931584	1.462	8.36
9J24043-CALB	200	1905088	1.439	8.36

AVE RF **1.470** RF RSD **3.41** AVE RT **8.36**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**

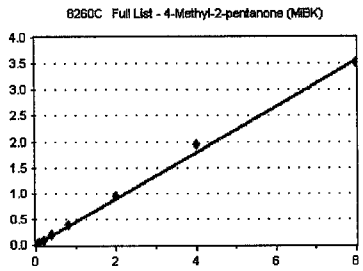


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	267	0.220	8.81
9J24043-CAL3	0.4	787	0.334	8.80
9J24043-CAL4	1	1994	0.321	8.80
9J24043-CAL5	2	4333	0.364	8.80
9J24043-CAL6	5	10847	0.361	8.80
9J24043-CAL7	10	22099	0.353	8.80
9J24043-CAL8	20	45467	0.370	8.80
9J24043-CAL9	50	113079	0.352	8.80
9J24043-CALA	100	236880	0.372	8.80
9J24043-CALB	200	496433	0.375	8.80

AVE RF **0.342** RF RSD **13.48** AVE RT **8.80**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

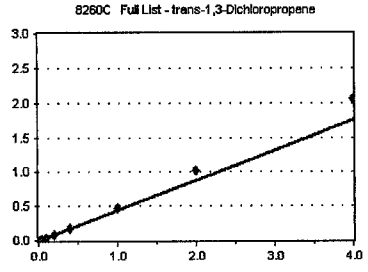


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.4	890	0.367	8.80
9J24043-CAL3	0.8	1912	0.406	8.81
9J24043-CAL4	2	5042	0.406	8.80
9J24043-CAL5	4	11029	0.463	8.81
9J24043-CAL6	10	28183	0.469	8.80
9J24043-CAL7	20	58009	0.464	8.80
9J24043-CAL8	40	120524	0.491	8.80
9J24043-CAL9	100	304356	0.474	8.80
9J24043-CALA	200	616767	0.484	8.80
9J24043-CALB	400	1166981	0.441	8.80

AVE RF **0.446** RF RSD **9.09** AVE RT **8.80**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~610~~	~~0.259~~	~~8.84~~
9J24043-CAL4	1	2122	0.341	8.84
9J24043-CAL5	2	4500	0.378	8.84
9J24043-CAL6	5	12130	0.404	8.84
9J24043-CAL7	10	26302	0.420	8.84
9J24043-CAL8	20	57085	0.465	8.83
9J24043-CAL9	50	151987	0.473	8.83
9J24043-CALA	100	327146	0.513	8.84
9J24043-CALB	200	678927	0.513	8.84

AVE RF **0.438** RF RSD **14.34** AVE RT **8.84**

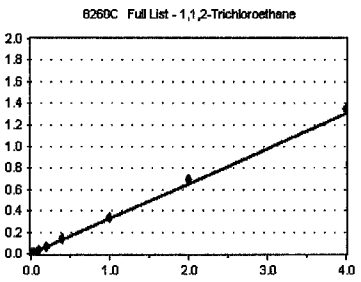
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

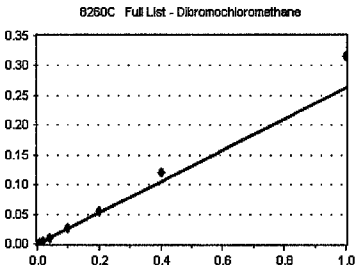


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	288	0.238	9.01
9J24043-CAL3	0.4	717	0.304	9.00
9J24043-CAL4	1	1944	0.313	9.00
9J24043-CAL5	2	4134	0.347	9.00
9J24043-CAL6	5	10336	0.344	9.00
9J24043-CAL7	10	21402	0.342	9.01
9J24043-CAL8	20	43171	0.351	9.00
9J24043-CAL9	50	107594	0.335	9.00
9J24043-CALA	100	221018	0.347	9.01
9J24043-CALB	200	447395	0.338	9.01

AVE RF **0.326** RF RSD **10.62** AVE RT **9.01**

Dibromochloromethane

Curve Fit: **AVERAGE RF**

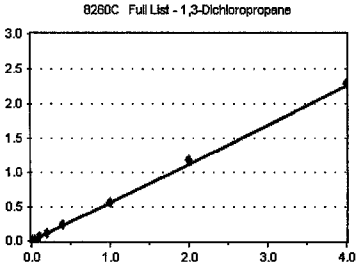


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	505	0.214	9.19
9J24043-CAL4	1	1349	0.217	9.19
9J24043-CAL5	2	3038	0.255	9.19
9J24043-CAL6	5	8016	0.267	9.19
9J24043-CAL7	10	17208	0.275	9.19
9J24043-CAL8	20	36932	0.301	9.19
9J24043-CAL9	50	101291	0.315	9.19
~~9J24043-CALA~~	~~100~~	~~222919~~	~~0.360~~	~~9.19~~
~~9J24043-CALB~~	~~200~~	~~473598~~	~~0.358~~	~~9.19~~

AVE RF **0.264** RF RSD **14.58** AVE RT **9.19**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

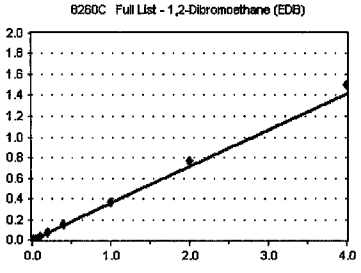


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	568	0.469	9.29
9J24043-CAL3	0.4	1253	0.532	9.29
9J24043-CAL4	1	3361	0.541	9.29
9J24043-CAL5	2	6889	0.578	9.29
9J24043-CAL6	5	17551	0.584	9.29
9J24043-CAL7	10	36354	0.581	9.29
9J24043-CAL8	20	73700	0.600	9.29
9J24043-CAL9	50	183541	0.571	9.29
9J24043-CALA	100	379039	0.595	9.29
9J24043-CALB	200	755862	0.571	9.29

AVE RF **0.562** RF RSD **6.98** AVE RT **9.29**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~279~~	~~0.230~~	~~9.42~~
9J24043-CAL3	0.4	615	0.261	9.42
9J24043-CAL4	1	1928	0.310	9.42
9J24043-CAL5	2	4499	0.378	9.43
9J24043-CAL6	5	11270	0.375	9.42
9J24043-CAL7	10	22884	0.366	9.42
9J24043-CAL8	20	46797	0.381	9.42
9J24043-CAL9	50	117418	0.366	9.42
9J24043-CALA	100	243688	0.382	9.42
9J24043-CALB	200	496207	0.375	9.42

AVE RF **0.355** RF RSD **11.70** AVE RT **9.42**

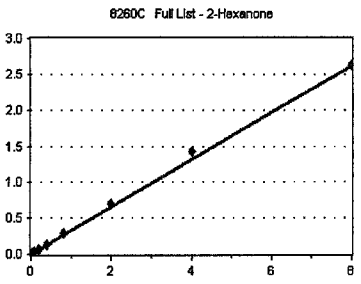
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

2-Hexanone

Curve Fit: **AVERAGE RF**

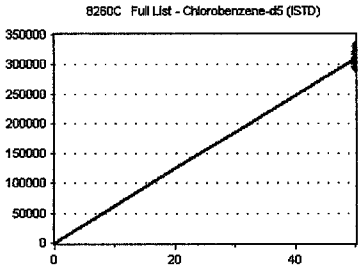


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.8	1346	0.286	9.66
9J24043-CAL4	2	3526	0.284	9.66
9J24043-CAL5	4	7610	0.319	9.66
9J24043-CAL6	10	19724	0.328	9.65
9J24043-CAL7	20	41881	0.335	9.65
9J24043-CAL8	40	87528	0.356	9.65
9J24043-CAL9	100	224495	0.350	9.65
9J24043-CALA	200	456833	0.358	9.65
9J24043-CALB	400	866990	0.327	9.65

AVE RF **0.327** RF RSD **8.41** AVE RT **9.66**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

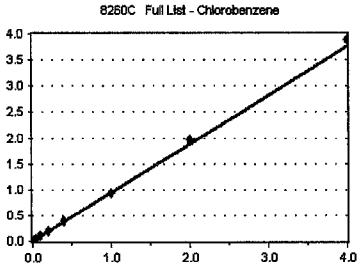


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	307577	6151.540	9.91
9J24043-CAL2	50	302974	6059.480	9.92
9J24043-CAL3	50	294372	5887.440	9.91
9J24043-CAL4	50	310797	6215.940	9.91
9J24043-CAL5	50	297754	5955.080	9.92
9J24043-CAL6	50	300317	6006.340	9.91
9J24043-CAL7	50	312833	6256.660	9.91
9J24043-CAL8	50	307093	6141.860	9.91
9J24043-CAL9	50	321159	6423.180	9.91
9J24043-CALA	50	318635	6372.700	9.91
9J24043-CALB	50	330915	6618.300	9.92

AVE RF **6189.865** RF RSD **3.53** AVE RT **9.91**

Chlorobenzene

Curve Fit: **AVERAGE RF**

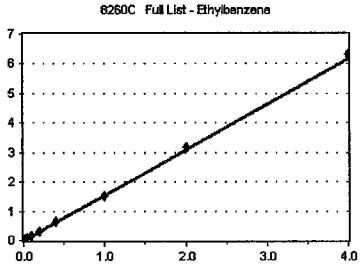


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	480	0.780	9.93
9J24043-CAL2	0.2	1045	0.862	9.93
9J24043-CAL3	0.4	2226	0.945	9.93
9J24043-CAL4	1	5770	0.928	9.93
9J24043-CAL5	2	11701	0.982	9.93
9J24043-CAL6	5	29555	0.984	9.93
9J24043-CAL7	10	60359	0.965	9.93
9J24043-CAL8	20	120984	0.985	9.93
9J24043-CAL9	50	301806	0.940	9.93
9J24043-CALA	100	624905	0.981	9.93
9J24043-CALB	200	1285529	0.971	9.93

AVE RF **0.939** RF RSD **6.80** AVE RT **9.93**

Ethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	942	1.531	9.95
9J24043-CAL2	0.2	1835	1.514	9.95
9J24043-CAL3	0.4	3584	1.522	9.95
9J24043-CAL4	1	8761	1.409	9.95
9J24043-CAL5	2	19157	1.608	9.95
9J24043-CAL6	5	46860	1.560	9.95
9J24043-CAL7	10	96018	1.535	9.95
9J24043-CAL8	20	195460	1.591	9.95
9J24043-CAL9	50	486890	1.516	9.95
9J24043-CALA	100	1015747	1.594	9.95
9J24043-CALB	200	2091382	1.580	9.95

AVE RF **1.542** RF RSD **3.61** AVE RT **9.95**

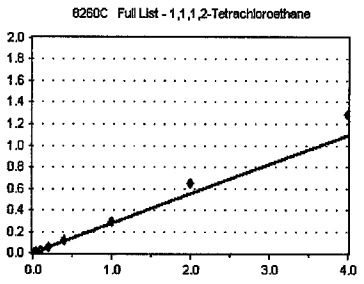
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

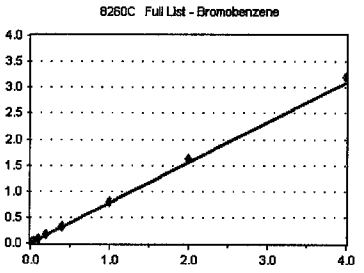


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~129~~	~~0.106~~	~~0.00~~
9J24043-CAL3	0.4	470	0.200	9.99
9J24043-CAL4	1	1476	0.237	9.99
9J24043-CAL5	2	2985	0.251	9.99
9J24043-CAL6	5	7981	0.266	9.99
9J24043-CAL7	10	16995	0.272	9.99
9J24043-CAL8	20	36336	0.296	9.99
9J24043-CAL9	50	95075	0.296	9.99
9J24043-CALA	100	206263	0.324	9.99
9J24043-CALB	200	427244	0.323	9.99

AVE RF **0.274** RF RSD **14.90** AVE RT **9.99**

Bromobenzene

Curve Fit: **AVERAGE RF**

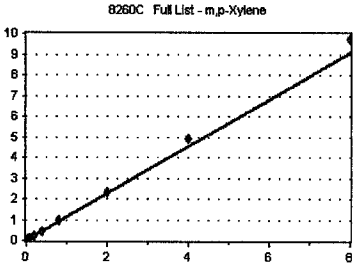


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	124	0.444	0.00
9J24043-CAL2	0.2	432	0.800	11.06
9J24043-CAL3	0.4	875	0.813	11.06
9J24043-CAL4	1	2220	0.771	11.06
9J24043-CAL5	2	4634	0.830	11.06
9J24043-CAL6	5	11623	0.819	11.06
9J24043-CAL7	10	24222	0.812	11.06
9J24043-CAL8	20	50013	0.825	11.06
9J24043-CAL9	50	126180	0.798	11.06
9J24043-CALA	100	265287	0.813	11.06
9J24043-CALB	200	542011	0.800	11.06

AVE RF **0.775** RF RSD **14.32** AVE RT **10.05**

m,p-Xylene

Curve Fit: **AVERAGE RF**

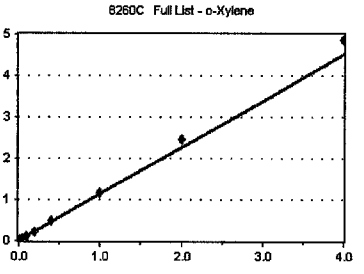


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.2	1368	1.112	10.09
9J24043-CAL2	0.4	2470	1.019	10.09
9J24043-CAL3	0.8	5197	1.103	10.09
9J24043-CAL4	2	12789	1.029	10.09
9J24043-CAL5	4	27092	1.137	10.09
9J24043-CAL6	10	68847	1.146	10.09
9J24043-CAL7	20	142004	1.135	10.09
9J24043-CAL8	40	297066	1.209	10.09
9J24043-CAL9	100	738497	1.150	10.09
9J24043-CALA	200	1568164	1.230	10.09
9J24043-CALB	400	3227914	1.219	10.09

AVE RF **1.135** RF RSD **6.12** AVE RT **10.09**

o-Xylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	585	0.951	10.47
9J24043-CAL2	0.2	1221	1.008	10.47
9J24043-CAL3	0.4	2605	1.106	10.47
9J24043-CAL4	1	6630	1.067	10.46
9J24043-CAL5	2	13605	1.142	10.47
9J24043-CAL6	5	34456	1.147	10.46
9J24043-CAL7	10	71417	1.141	10.46
9J24043-CAL8	20	149422	1.216	10.46
9J24043-CAL9	50	371768	1.158	10.46
9J24043-CALA	100	785588	1.233	10.46
9J24043-CALB	200	1606355	1.214	10.46

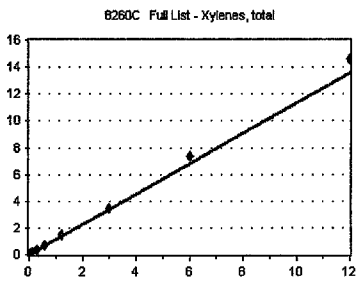
AVE RF **1.126** RF RSD **7.83** AVE RT **10.47**

Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Xylenes, total

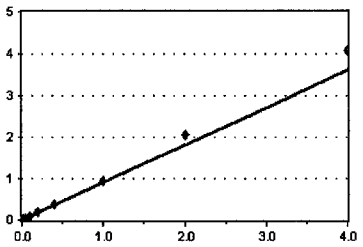


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.3	1953	1.058	10.47
9J24043-CAL2	0.6	3691	1.015	10.47
9J24043-CAL3	1.2	7802	1.104	10.47
9J24043-CAL4	3	19419	1.041	10.46
9J24043-CAL5	6	40697	1.139	10.47
9J24043-CAL6	15	103303	1.147	10.46
9J24043-CAL7	30	213421	1.137	10.46
9J24043-CAL8	60	446488	1.212	10.46
9J24043-CAL9	150	1110265	1.152	10.46
9J24043-CALA	300	2353752	1.231	10.46
9J24043-CALB	600	4834269	1.217	10.46

AVE RF **1.132** RF RSD **6.38** AVE RT **10.47**

Styrene

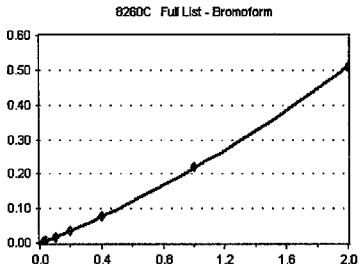


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~754~~	~~0.622~~	~~10.52~~
9J24043-CAL3	0.4	1656	0.703	10.52
9J24043-CAL4	1	4878	0.785	10.52
9J24043-CAL5	2	10363	0.870	10.52
9J24043-CAL6	5	26739	0.890	10.51
9J24043-CAL7	10	57022	0.911	10.51
9J24043-CAL8	20	120205	0.979	10.51
9J24043-CAL9	50	307044	0.956	10.51
9J24043-CALA	100	653902	1.026	10.51
9J24043-CALB	200	1353743	1.023	10.51

AVE RF **0.905** RF RSD **11.93** AVE RT **10.51**

Bromoform

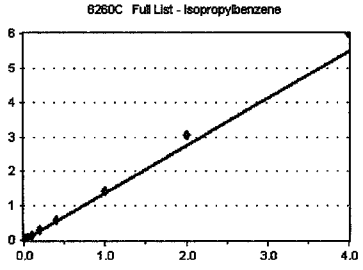


Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	795	0.128	10.54
9J24043-CAL5	2	1771	0.149	10.54
9J24043-CAL6	5	4690	0.156	10.54
9J24043-CAL7	10	10701	0.171	10.54
9J24043-CAL8	20	23844	0.194	10.54
9J24043-CAL9	50	71080	0.221	10.54
9J24043-CALA	100	162527	0.255	10.54
~~9J24043-CALB~~	~~200~~	~~351162~~	~~0.265~~	~~10.54~~

AVE RF **0.182** RF RSD **24.41** AVE RT **10.54**

Isopropylbenzene



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	1347	1.111	10.74
9J24043-CAL3	0.4	3067	1.302	10.73
9J24043-CAL4	1	7662	1.233	10.73
9J24043-CAL5	2	16325	1.371	10.73
9J24043-CAL6	5	41801	1.392	10.73
9J24043-CAL7	10	86673	1.385	10.73
9J24043-CAL8	20	182751	1.488	10.73
9J24043-CAL9	50	458349	1.427	10.73
9J24043-CALA	100	973691	1.528	10.73
9J24043-CALB	200	1980670	1.496	10.73

AVE RF **1.373** RF RSD **9.37** AVE RT **10.73**

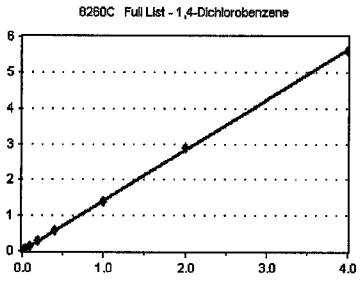
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

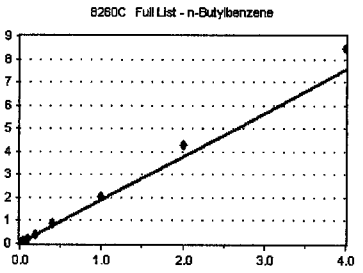


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	311	1.113	0.00
9J24043-CAL2	0.2	725	1.342	11.86
9J24043-CAL3	0.4	1564	1.454	11.86
9J24043-CAL4	1	4177	1.451	11.86
9J24043-CAL5	2	8550	1.531	11.86
9J24043-CAL6	5	20421	1.440	11.86
9J24043-CAL7	10	42771	1.433	11.86
9J24043-CAL8	20	89594	1.478	11.86
9J24043-CAL9	50	222386	1.406	11.86
9J24043-CALA	100	468883	1.436	11.86
9J24043-CALB	200	949679	1.402	11.86

AVE RF **1.408** RF RSD **7.70** AVE RT **10.78**

n-Butylbenzene

Curve Fit: **AVERAGE RF**

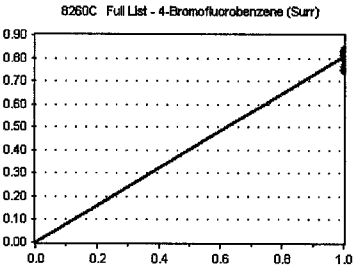


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	379	1.357	0.00
9J24043-CAL2	0.2	805	1.491	12.05
9J24043-CAL3	0.4	1867	1.735	12.05
9J24043-CAL4	1	4997	1.735	12.05
9J24043-CAL5	2	10626	1.903	12.05
9J24043-CAL6	5	28526	2.011	12.05
9J24043-CAL7	10	59515	1.994	12.05
9J24043-CAL8	20	130970	2.160	12.05
9J24043-CAL9	50	325681	2.060	12.05
9J24043-CALA	100	694929	2.129	12.05
9J24043-CALB	200	1435776	2.119	12.05

AVE RF **1.881** RF RSD **14.34** AVE RT **10.95**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

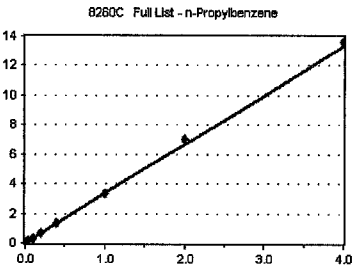


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116090	0.831	10.97
9J24043-CAL2	50	113180	0.838	10.97
9J24043-CAL3	50	112304	0.835	10.97
9J24043-CAL4	50	118563	0.823	10.97
9J24043-CAL5	50	115163	0.825	10.97
9J24043-CAL6	50	115652	0.815	10.97
9J24043-CAL7	50	121121	0.812	10.97
9J24043-CAL8	50	120976	0.798	10.97
9J24043-CAL9	50	125801	0.796	10.97
9J24043-CALA	50	124392	0.762	10.97
9J24043-CALB	50	127221	0.751	10.97

AVE RF **0.808** RF RSD **3.58** AVE RT **10.97**

n-Propylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	873	3.125	11.08
9J24043-CAL2	0.2	1649	3.053	11.08
9J24043-CAL3	0.4	3544	3.294	11.08
9J24043-CAL4	1	9160	3.181	11.08
9J24043-CAL5	2	19292	3.455	11.08
9J24043-CAL6	5	48000	3.384	11.07
9J24043-CAL7	10	99009	3.318	11.07
9J24043-CAL8	20	210703	3.475	11.07
9J24043-CAL9	50	530991	3.358	11.07
9J24043-CALA	100	1142995	3.501	11.07
9J24043-CALB	200	2308779	3.408	11.07

AVE RF **3.323** RF RSD **4.44** AVE RT **11.07**

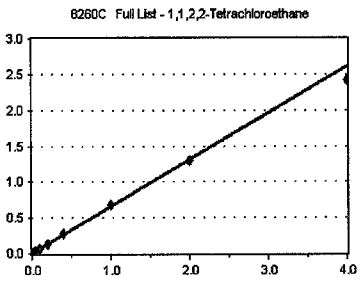
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

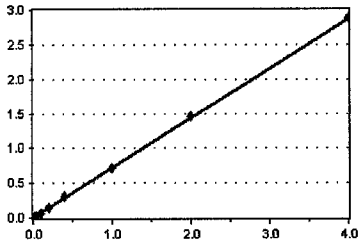


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	305	0.565	11.14
9J24043-CAL3	0.4	671	0.624	11.14
9J24043-CAL4	1	1876	0.651	11.14
9J24043-CAL5	2	4008	0.718	11.14
9J24043-CAL6	5	9843	0.694	11.14
9J24043-CAL7	10	20098	0.673	11.14
9J24043-CAL8	20	41819	0.690	11.14
9J24043-CAL9	50	106506	0.674	11.14
9J24043-CALA	100	212550	0.651	11.14
9J24043-CALB	200	408430	0.603	11.14

AVE RF **0.654** RF RSD **7.07** AVE RT **11.14**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**

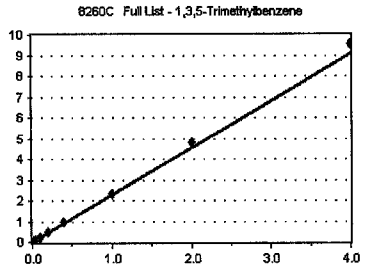


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	719	0.668	11.21
9J24043-CAL4	1	1910	0.663	11.21
9J24043-CAL5	2	4172	0.747	11.21
9J24043-CAL6	5	10150	0.716	11.21
9J24043-CAL7	10	21625	0.725	11.21
9J24043-CAL8	20	45664	0.753	11.21
9J24043-CAL9	50	113724	0.719	11.21
9J24043-CALA	100	238214	0.730	11.21
9J24043-CALB	200	490093	0.723	11.21

AVE RF **0.716** RF RSD **4.34** AVE RT **11.21**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

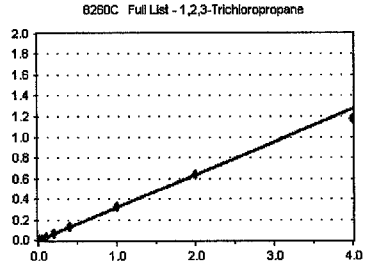


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	556	1.990	11.23
9J24043-CAL2	0.2	1127	2.087	11.23
9J24043-CAL3	0.4	2289	2.127	11.23
9J24043-CAL4	1	6197	2.152	11.23
9J24043-CAL5	2	13089	2.344	11.23
9J24043-CAL6	5	33314	2.349	11.23
9J24043-CAL7	10	69892	2.342	11.23
9J24043-CAL8	20	148694	2.452	11.23
9J24043-CAL9	50	370702	2.344	11.23
9J24043-CALA	100	783721	2.400	11.23
9J24043-CALB	200	1618836	2.390	11.23

AVE RF **2.271** RF RSD **6.72** AVE RT **11.23**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.4	271	0.252	11.25
9J24043-CAL4	1	887	0.308	11.25
9J24043-CAL5	2	1935	0.347	11.25
9J24043-CAL6	5	4862	0.343	11.25
9J24043-CAL7	10	10162	0.341	11.25
9J24043-CAL8	20	20199	0.333	11.25
9J24043-CAL9	50	51746	0.327	11.25
9J24043-CALA	100	103994	0.319	11.25
9J24043-CALB	200	199656	0.295	11.25

AVE RF **0.318** RF RSD **9.47** AVE RT **11.25**

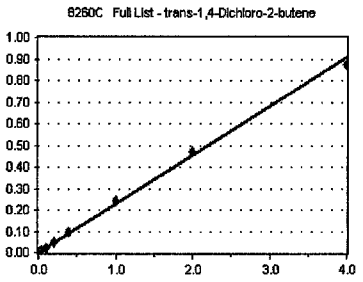
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

trans-1,4-Dichloro-2-butene

Curve Fit: **AVERAGE RF**

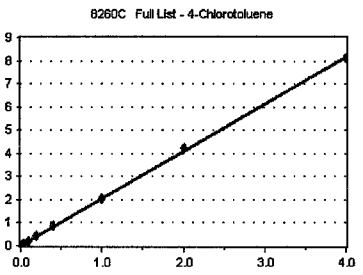


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	531	0.184	11.29
9J24043-CAL5	2	1313	0.235	11.28
9J24043-CAL6	5	3293	0.232	11.28
9J24043-CAL7	10	6985	0.234	11.28
9J24043-CAL8	20	14515	0.239	11.28
9J24043-CAL9	50	38431	0.243	11.28
9J24043-CALA	100	76466	0.234	11.28
9J24043-CALB	200	148266	0.219	11.28

AVE RF **0.228** RF RSD **8.27** AVE RT **11.28**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**

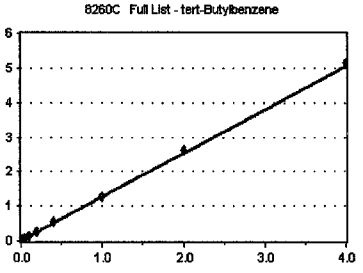


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	1020	1.889	11.34
9J24043-CAL3	0.4	2178	2.024	11.34
9J24043-CAL4	1	5461	1.896	11.34
9J24043-CAL5	2	11718	2.099	11.34
9J24043-CAL6	5	30239	2.132	11.34
9J24043-CAL7	10	61742	2.069	11.34
9J24043-CAL8	20	129933	2.143	11.34
9J24043-CAL9	50	325043	2.056	11.33
9J24043-CALA	100	688819	2.110	11.34
9J24043-CALB	200	1379272	2.036	11.34

AVE RF **2.045** RF RSD **4.37** AVE RT **11.34**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

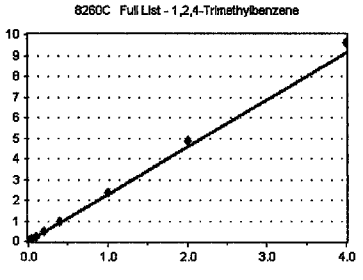


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	602	1.115	11.49
9J24043-CAL3	0.4	1248	1.160	11.49
9J24043-CAL4	1	3551	1.233	11.49
9J24043-CAL5	2	7395	1.324	11.49
9J24043-CAL6	5	18808	1.326	11.48
9J24043-CAL7	10	38411	1.287	11.48
9J24043-CAL8	20	81742	1.348	11.48
9J24043-CAL9	50	202040	1.278	11.48
9J24043-CALA	100	431117	1.320	11.48
9J24043-CALB	200	872573	1.288	11.48

AVE RF **1.268** RF RSD **6.05** AVE RT **11.48**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	536	1.919	11.54
9J24043-CAL2	0.2	1066	1.974	11.54
9J24043-CAL3	0.4	2387	2.218	11.54
9J24043-CAL4	1	6319	2.194	11.53
9J24043-CAL5	2	12974	2.324	11.53
9J24043-CAL6	5	34216	2.412	11.54
9J24043-CAL7	10	70882	2.375	11.53
9J24043-CAL8	20	151018	2.491	11.53
9J24043-CAL9	50	374779	2.370	11.53
9J24043-CALA	100	798406	2.445	11.53
9J24043-CALB	200	1629601	2.405	11.53

AVE RF **2.284** RF RSD **8.30** AVE RT **11.54**

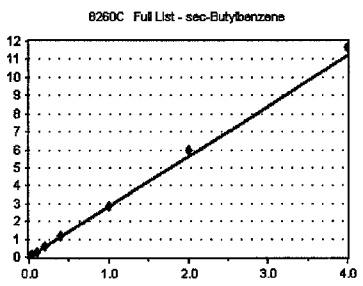
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

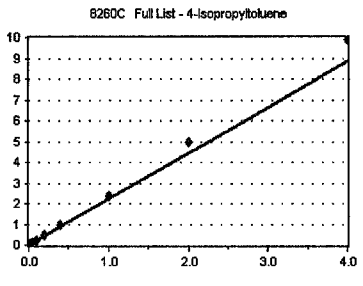


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	1301	2.409	11.62
9J24043-CAL3	0.4	2990	2.779	11.62
9J24043-CAL4	1	7450	2.587	11.62
9J24043-CAL5	2	15756	2.822	11.62
9J24043-CAL6	5	40240	2.837	11.62
9J24043-CAL7	10	83977	2.814	11.62
9J24043-CAL8	20	180894	2.983	11.62
9J24043-CAL9	50	451933	2.858	11.62
9J24043-CALA	100	969880	2.971	11.62
9J24043-CALB	200	1977513	2.919	11.62

AVE RF **2.798** RF RSD **6.31** AVE RT **11.62**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**

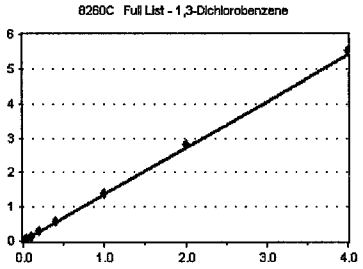


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	0.1	481	1.722	11.73
9J24043-CAL2	0.2	919	1.702	11.72
9J24043-CAL3	0.4	2236	2.078	11.73
9J24043-CAL4	1	6086	2.114	11.73
9J24043-CAL5	2	12523	2.243	11.73
9J24043-CAL6	5	33176	2.339	11.73
9J24043-CAL7	10	68628	2.300	11.73
9J24043-CAL8	20	151382	2.497	11.73
9J24043-CAL9	50	378247	2.392	11.73
9J24043-CALA	100	812481	2.489	11.73
9J24043-CALB	200	1677679	2.476	11.73

AVE RF **2.214** RF RSD **12.88** AVE RT **11.73**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

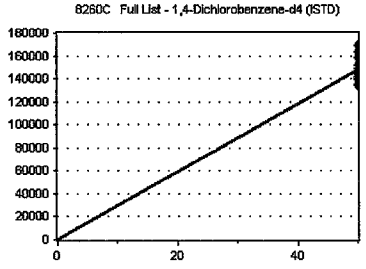


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	629	1.165	11.80
9J24043-CAL3	0.4	1412	1.312	11.80
9J24043-CAL4	1	3650	1.268	11.80
9J24043-CAL5	2	7718	1.382	11.80
9J24043-CAL6	5	19712	1.390	11.80
9J24043-CAL7	10	41299	1.384	11.80
9J24043-CAL8	20	86247	1.422	11.80
9J24043-CAL9	50	218694	1.383	11.80
9J24043-CALA	100	461068	1.412	11.80
9J24043-CALB	200	936572	1.382	11.80

AVE RF **1.350** RF RSD **5.93** AVE RT **11.80**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	139681	2793.620	11.85
9J24043-CAL2	50	135021	2700.420	11.85
9J24043-CAL3	50	134501	2690.020	11.85
9J24043-CAL4	50	143979	2879.580	11.85
9J24043-CAL5	50	139582	2791.640	11.85
9J24043-CAL6	50	141843	2836.860	11.85
9J24043-CAL7	50	149215	2984.300	11.85
9J24043-CAL8	50	151591	3031.820	11.85
9J24043-CAL9	50	158122	3162.440	11.85
9J24043-CALA	50	163243	3264.860	11.85
9J24043-CALB	50	169365	3387.300	11.85

AVE RF **2956.624** RF RSD **7.86** AVE RT **11.85**

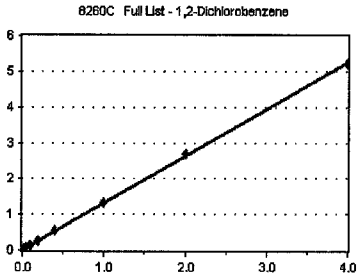
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

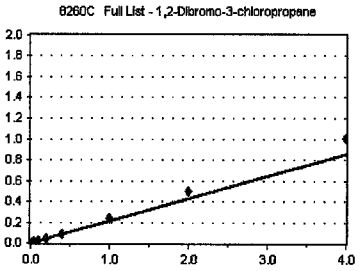


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	624	1.155	12.19
9J24043-CAL3	0.4	1284	1.193	12.19
9J24043-CAL4	1	3650	1.268	12.19
9J24043-CAL5	2	7854	1.407	12.19
9J24043-CAL6	5	19460	1.372	12.19
9J24043-CAL7	10	40125	1.345	12.18
9J24043-CAL8	20	83871	1.383	12.19
9J24043-CAL9	50	211431	1.337	12.18
9J24043-CALA	100	439251	1.345	12.19
9J24043-CALB	200	884385	1.305	12.19

AVE RF **1.311** RF RSD **6.28** AVE RT **12.18**

1,2-Dibromo-3-chloropropane

Curve Fit: **AVERAGE RF**

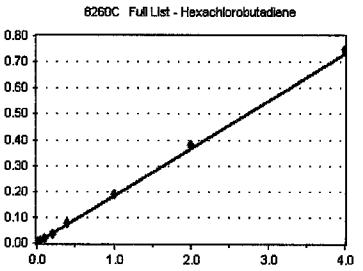


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL4~~	1	447	0.155	12.80
9J24043-CAL5	2	1006	0.180	12.80
9J24043-CAL6	5	2728	0.192	12.80
9J24043-CAL7	10	6234	0.209	12.80
9J24043-CAL8	20	13740	0.227	12.80
9J24043-CAL9	50	38435	0.243	12.80
9J24043-CALA	100	81625	0.250	12.80
9J24043-CALB	200	169849	0.251	12.80

AVE RF **0.213** RF RSD **16.56** 12.84 AVE RT **12.80**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

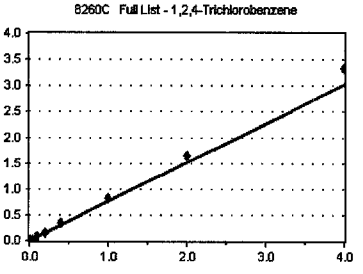


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	443	0.154	13.31
9J24043-CAL5	2	963	0.172	13.30
9J24043-CAL6	5	2715	0.191	13.30
9J24043-CAL7	10	5468	0.183	13.30
9J24043-CAL8	20	12054	0.199	13.30
9J24043-CAL9	50	29829	0.189	13.30
9J24043-CALA	100	62008	0.190	13.30
9J24043-CALB	200	126838	0.187	13.30

AVE RF **0.183** RF RSD **7.66** AVE RT **13.30**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~244~~	~~0.452~~	~~13.35~~
9J24043-CAL3	0.4	615	0.572	13.35
9J24043-CAL4	1	1833	0.637	13.35
9J24043-CAL5	2	4043	0.724	13.34
9J24043-CAL6	5	11114	0.784	13.35
9J24043-CAL7	10	23133	0.775	13.35
9J24043-CAL8	20	50962	0.840	13.35
9J24043-CAL9	50	128379	0.812	13.34
9J24043-CALA	100	268764	0.823	13.35
9J24043-CALB	200	564943	0.834	13.35

AVE RF **0.756** RF RSD **12.49** AVE RT **13.35**

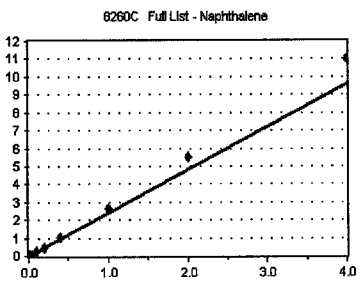
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VI191025W.M VI191025G.M**

Naphthalene

Curve Fit: **AVERAGE RF**

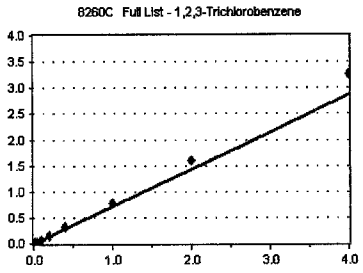


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~924~~	~~1.711~~	~~13.63~~
9J24043-CAL3	0.4	2009	1.867	13.63
9J24043-CAL4	1	5345	1.856	13.63
9J24043-CAL5	2	12724	2.279	13.63
9J24043-CAL6	5	32892	2.319	13.63
9J24043-CAL7	10	72324	2.423	13.63
9J24043-CAL8	20	161860	2.669	13.63
9J24043-CAL9	50	425207	2.689	13.63
9J24043-CALA	100	899370	2.755	13.63
9J24043-CALB	200	1872418	2.764	13.63

AVE RF **2.402** RF RSD **14.83** AVE RT **13.63**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL2	0.2	261	0.483	13.79
9J24043-CAL3	0.4	687	0.638	13.78
9J24043-CAL4	1	1879	0.653	13.79
9J24043-CAL5	2	4073	0.729	13.79
9J24043-CAL6	5	10402	0.733	13.79
9J24043-CAL7	10	22293	0.747	13.79
9J24043-CAL8	20	48345	0.797	13.79
9J24043-CAL9	50	123175	0.779	13.79
9J24043-CALA	100	260549	0.798	13.79
9J24043-CALB	200	552458	0.815	13.79

AVE RF **0.717** RF RSD **14.16** AVE RT **13.79**

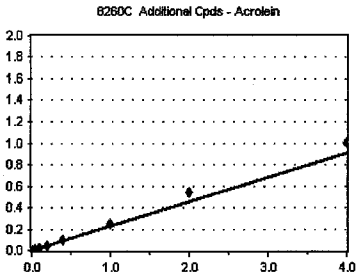
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VI191025W.M VI191025G.M**

Acrolein

Curve Fit: **AVERAGE RF**

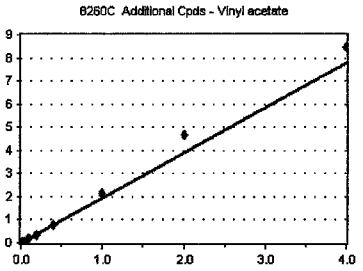


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	420	0.181	3.63
9J24043-CAL5	2	927	0.209	3.63
9J24043-CAL6	5	2465	0.222	3.62
9J24043-CAL7	10	4855	0.206	3.62
9J24043-CAL8	20	10458	0.233	3.61
9J24043-CAL9	50	28604	0.247	3.61
9J24043-CALA	100	60054	0.268	3.63
9J24043-CALB	200	116360	0.251	3.62

AVE RF **0.227** RF RSD **12.43** AVE RT **3.62**

Vinyl acetate

Curve Fit: **AVERAGE RF**

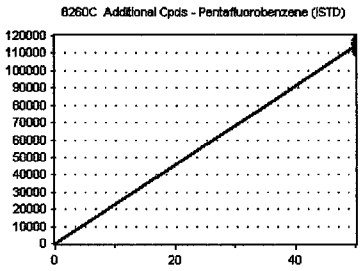


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	1	3620	1.560	4.96
9J24043-CAL5	2	7854	1.772	4.96
9J24043-CAL6	5	20467	1.844	4.96
9J24043-CAL7	10	42656	1.813	4.96
9J24043-CAL8	20	90141	2.005	4.95
9J24043-CAL9	50	246127	2.128	4.95
9J24043-CALA	100	522592	2.333	4.96
9J24043-CALB	200	980632	2.113	4.96

AVE RF **1.946** RF RSD **12.62** AVE RT **4.96**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

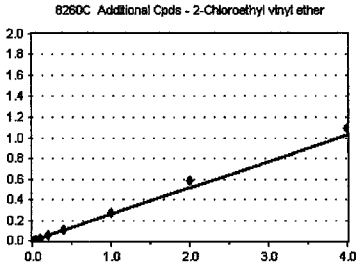


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116102	2322.040	6.22
9J24043-CAL2	50	114788	2295.760	6.22
9J24043-CAL3	50	111985	2239.700	6.21
9J24043-CAL4	50	116043	2320.860	6.21
9J24043-CAL5	50	110790	2215.800	6.22
9J24043-CAL6	50	111010	2220.200	6.21
9J24043-CAL7	50	117608	2352.160	6.22
9J24043-CAL8	50	112406	2248.120	6.21
9J24043-CAL9	50	115635	2312.700	6.21
9J24043-CALA	50	111989	2239.780	6.22
9J24043-CALB	50	116034	2320.680	6.22

AVE RF **2280.709** RF RSD **2.13** AVE RT **6.21**

2-Chloroethyl vinyl ether

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~369~~	~~0.152~~	~~8.04~~
9J24043-CAL4	1	1378	0.222	8.03
9J24043-CAL5	2	2589	0.217	8.03
9J24043-CAL6	5	7592	0.253	8.02
9J24043-CAL7	10	15685	0.251	8.02
9J24043-CAL8	20	33274	0.271	8.02
9J24043-CAL9	50	88331	0.275	8.02
9J24043-CALA	100	185987	0.292	8.02
9J24043-CALB	200	361318	0.273	8.02

AVE RF **0.257** RF RSD **10.27** AVE RT **8.02**

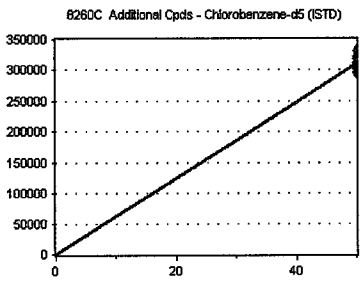
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VI191025W.M VI191025G.M**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	307577	6151.540	9.91
9J24043-CAL2	50	302974	6059.480	9.92
9J24043-CAL3	50	294372	5887.440	9.91
9J24043-CAL4	50	310797	6215.940	9.91
9J24043-CAL5	50	297754	5955.080	9.92
9J24043-CAL6	50	300317	6006.340	9.91
9J24043-CAL7	50	312833	6256.660	9.91
9J24043-CAL8	50	307093	6141.860	9.91
9J24043-CAL9	50	321159	6423.180	9.91
9J24043-CALA	50	318635	6372.700	9.91
9J24043-CALB	50	330915	6618.300	9.92

AVE RF **6189.865** RF RSD **3.53** AVE RT **9.91**

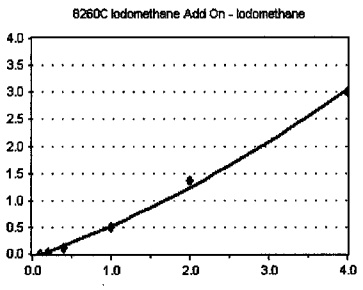
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Iodomethane Add On** Instrument Cal ID: **VI191025W.M VI191025G.M**

Iodomethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

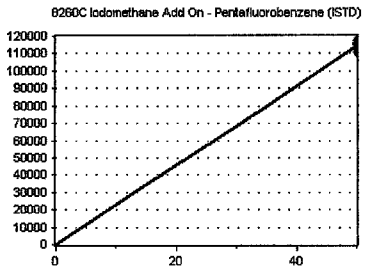


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL5~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL6	5	916	8.252	3.38
9J24043-CAL7	10	3125	0.133	3.39
9J24043-CAL8	20	11472	0.255	3.38
9J24043-CAL9	50	57651	0.499	3.38
9J24043-CALA	100	153366	0.685	3.39
9J24043-CALB	200	348091	0.750	3.39

AVE RF **0.401** RF RSD **71.16** AVE RT **3.39**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116102	2322.040	6.22
9J24043-CAL2	50	114788	2295.760	6.22
9J24043-CAL3	50	111985	2239.700	6.21
9J24043-CAL4	50	116043	2320.860	6.21
9J24043-CAL5	50	110790	2215.800	6.22
9J24043-CAL6	50	111010	2220.200	6.21
9J24043-CAL7	50	117608	2352.160	6.22
9J24043-CAL8	50	112406	2248.120	6.21
9J24043-CAL9	50	115635	2312.700	6.21
9J24043-CALA	50	111989	2239.780	6.22
9J24043-CALB	50	116034	2320.680	6.22

AVE RF **2280.709** RF RSD **2.13** AVE RT **6.21**

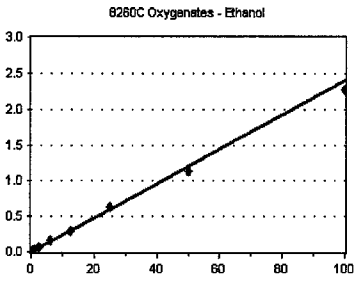
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI191025W.M VI191025G.M**

Ethanol

Curve Fit: **AVERAGE RF**

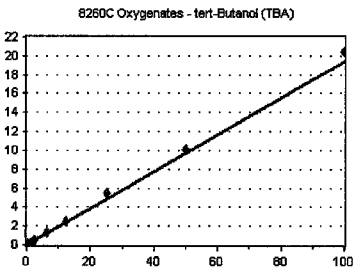


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~6.25~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~12.5~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	25	1315	2.349	3.23
9J24043-CAL4	62.5	3446	2.376	3.24
9J24043-CAL5	125	7229	2.610	3.24
9J24043-CAL6	312	17243	2.489	3.23
9J24043-CAL7	625	34617	2.355	3.24
9J24043-CAL8	1250	70360	2.504	3.23
9J24043-CAL9	2500	131053	2.267	3.23
9J24043-CALA	5000	254643	2.274	3.24

AVE RF **2.403** RF RSD **5.02** AVE RT **3.23**

tert-Butanol (TBA)

Curve Fit: **AVERAGE RF**

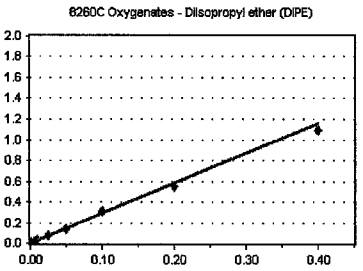


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	6.25	2472	0.170	4.30
9J24043-CAL2	12.5	4690	0.163	4.30
9J24043-CAL3	25	10086	0.180	4.29
9J24043-CAL4	62.5	25977	0.179	4.30
9J24043-CAL5	125	58093	0.210	4.30
9J24043-CAL6	312	143817	0.208	4.29
9J24043-CAL7	625	292252	0.199	4.29
9J24043-CAL8	1250	614954	0.219	4.29
9J24043-CAL9	2500	1172838	0.203	4.29
9J24043-CALA	5000	2295578	0.205	4.29

AVE RF **0.194** RF RSD **9.71** AVE RT **4.29**

Diisopropyl ether (DIPE)

Curve Fit: **AVERAGE RF**

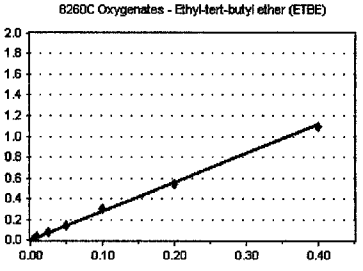


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.1	638	2.849	4.56
9J24043-CAL4	0.25	1604	2.764	4.56
9J24043-CAL5	0.5	3305	2.983	4.57
9J24043-CAL6	1.25	8576	3.090	4.57
9J24043-CAL7	2.5	17135	2.914	4.57
9J24043-CAL8	5	34871	3.102	4.56
9J24043-CAL9	10	63994	2.767	4.56
9J24043-CALA	20	122827	2.742	4.57

AVE RF **2.901** RF RSD **5.01** AVE RT **4.57**

Ethyl-tert-butyl ether (ETBE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	0.25	1449	2.497	4.94
9J24043-CAL5	0.5	3145	2.839	4.94
9J24043-CAL6	1.25	8071	2.908	4.94
9J24043-CAL7	2.5	16756	2.849	4.94
9J24043-CAL8	5	33471	2.978	4.94
9J24043-CAL9	10	63126	2.730	4.94
9J24043-CALA	20	121788	2.719	4.94

AVE RF **2.789** RF RSD **5.66** AVE RT **4.94**

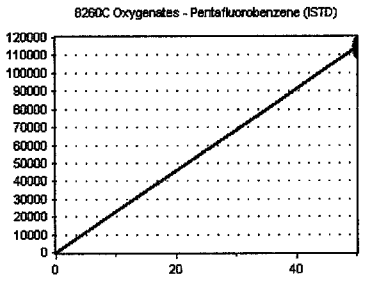
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI191025W.M VI191025G.M**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

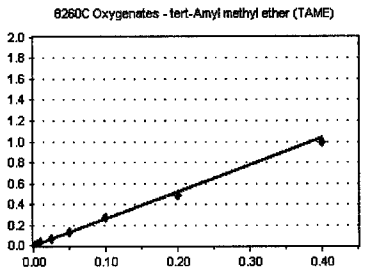


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116102	2322.040	6.22
9J24043-CAL2	50	114788	2295.760	6.22
9J24043-CAL3	50	111985	2239.700	6.21
9J24043-CAL4	50	116043	2320.860	6.21
9J24043-CAL5	50	110790	2215.800	6.22
9J24043-CAL6	50	111010	2220.200	6.21
9J24043-CAL7	50	117608	2352.160	6.22
9J24043-CAL8	50	112406	2248.120	6.21
9J24043-CAL9	50	115635	2312.700	6.21
9J24043-CALA	50	111989	2239.780	6.22
9J24043-CALB	50	116034	2320.680	6.22

AVE RF **2280.709** RF RSD **2.13** AVE RT **6.21**

tert-Amyl methyl ether (TAME)

Curve Fit: **AVERAGE RF**

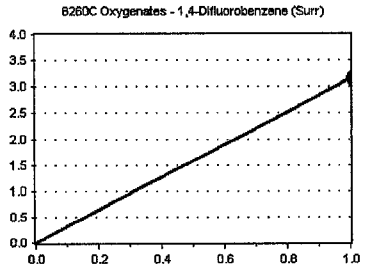


Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL3	0.1	580	2.590	6.25
9J24043-CAL4	0.25	1462	2.520	6.25
9J24043-CAL5	0.5	2996	2.704	6.25
9J24043-CAL6	1.25	7445	2.683	6.25
9J24043-CAL7	2.5	15349	2.610	6.25
9J24043-CAL8	5	30296	2.695	6.25
9J24043-CAL9	10	56793	2.456	6.24
9J24043-CALA	20	111127	2.481	6.25

AVE RF **2.592** RF RSD **3.80** AVE RT **6.25**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

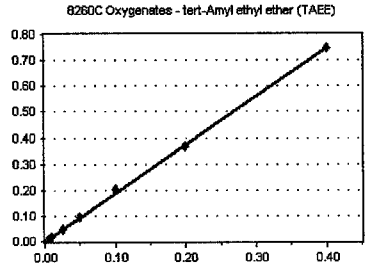


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	364447	3.139	6.78
9J24043-CAL2	50	359462	3.132	6.78
9J24043-CAL3	50	352302	3.146	6.78
9J24043-CAL4	50	366642	3.160	6.78
9J24043-CAL5	50	347212	3.134	6.78
9J24043-CAL6	50	353918	3.188	6.78
9J24043-CAL7	50	367409	3.124	6.78
9J24043-CAL8	50	354922	3.158	6.78
9J24043-CAL9	50	370144	3.201	6.78
9J24043-CALA	50	356857	3.187	6.78
9J24043-CALB	50	369003	3.180	6.78

AVE RF **3.159** RF RSD **0.84** AVE RT **6.78**

tert-Amyl ethyl ether (TAEE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J24043-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9J24043-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J24043-CAL4	0.25	950	1.637	7.00
9J24043-CAL5	0.5	2147	1.938	7.00
9J24043-CAL6	1.25	5331	1.921	7.00
9J24043-CAL7	2.5	11032	1.876	7.00
9J24043-CAL8	5	22696	2.019	7.00
9J24043-CAL9	10	42660	1.845	7.00
9J24043-CALA	20	83591	1.866	7.00

AVE RF **1.872** RF RSD **6.33** AVE RT **7.00**

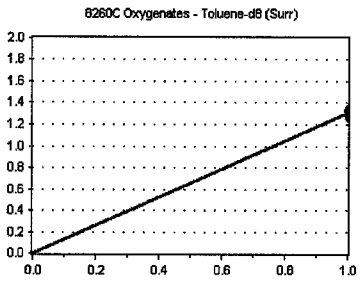
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VI191025W.M VI191025G.M**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

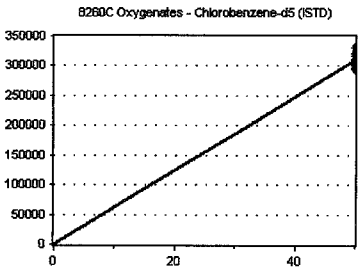


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	406288	1.321	8.30
9J24043-CAL2	50	403793	1.333	8.30
9J24043-CAL3	50	396027	1.345	8.30
9J24043-CAL4	50	410518	1.321	8.30
9J24043-CAL5	50	395017	1.327	8.30
9J24043-CAL6	50	397005	1.322	8.30
9J24043-CAL7	50	415174	1.327	8.30
9J24043-CAL8	50	399810	1.302	8.30
9J24043-CAL9	50	415062	1.292	8.30
9J24043-CALA	50	405945	1.274	8.30
9J24043-CALB	50	420947	1.272	8.30

AVE RF **1.312** RF RSD **1.83** AVE RT **8.30**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

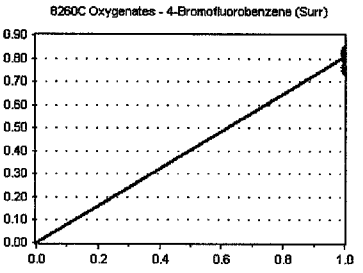


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	307577	6151.540	9.91
9J24043-CAL2	50	302974	6059.480	9.92
9J24043-CAL3	50	294372	5887.440	9.91
9J24043-CAL4	50	310797	6215.940	9.91
9J24043-CAL5	50	297754	5955.080	9.92
9J24043-CAL6	50	300317	6006.340	9.91
9J24043-CAL7	50	312833	6256.660	9.91
9J24043-CAL8	50	307093	6141.860	9.91
9J24043-CAL9	50	321159	6423.180	9.91
9J24043-CALA	50	318635	6372.700	9.91
9J24043-CALB	50	330915	6618.300	9.92

AVE RF **6189.865** RF RSD **3.53** AVE RT **9.91**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

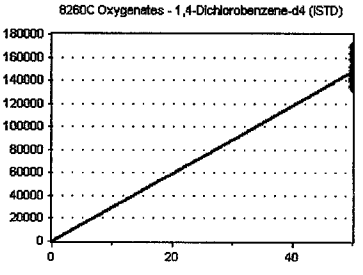


Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	116090	0.831	10.97
9J24043-CAL2	50	113180	0.838	10.97
9J24043-CAL3	50	112304	0.835	10.97
9J24043-CAL4	50	118563	0.823	10.97
9J24043-CAL5	50	115163	0.825	10.97
9J24043-CAL6	50	115652	0.815	10.97
9J24043-CAL7	50	121121	0.812	10.97
9J24043-CAL8	50	120976	0.798	10.97
9J24043-CAL9	50	125801	0.796	10.97
9J24043-CALA	50	124392	0.762	10.97
9J24043-CALB	50	127221	0.751	10.97

AVE RF **0.808** RF RSD **3.58** AVE RT **10.97**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CAL1	50	139681	2793.620	11.85
9J24043-CAL2	50	135021	2700.420	11.85
9J24043-CAL3	50	134501	2690.020	11.85
9J24043-CAL4	50	143979	2879.580	11.85
9J24043-CAL5	50	139582	2791.640	11.85
9J24043-CAL6	50	141843	2836.860	11.85
9J24043-CAL7	50	149215	2984.300	11.85
9J24043-CAL8	50	151591	3031.820	11.85
9J24043-CAL9	50	158122	3162.440	11.85
9J24043-CALA	50	163243	3264.860	11.85
9J24043-CALB	50	169365	3387.300	11.85

AVE RF **2956.624** RF RSD **7.86** AVE RT **11.85**

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019
Response Via : Initial Calibration

Calibration Files
0.1 =VI19102417.D 0.2 =VI19102418.D 0.5 =VI19102419.D 1 =VI19102420.D 2 =VI19102421.D 5 =VI19102422.D
10 =VI19102423.D 20 =VI19102424.D 50 =VI19102425.D 100 =VI19102427.D 200 =VI19102429.D

		Compound	0.1	0.2	0.5	1	2	5	10	20	50	100	200	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD												
2)		Dichlorodifluo...			0.627	0.682	0.842	0.812	0.770	0.800	0.946	0.947	0.929	0.817	13.92
3)	P	Chloromethane		1.457	1.268	1.037	1.070	1.024	0.954	1.002	1.029	1.012	0.984	1.084	14.45
4)	C	Vinyl Chloride		0.884	1.079	1.013	1.135	1.140	1.069	1.110	1.150	1.154	1.123	1.086	7.67
5)		Bromomethane				0.760	0.709	0.701	0.624	0.614	0.579	0.559	0.576	0.640	11.51
6)		Chloroethane					0.573	0.531	0.502	0.442	0.447			0.499	11.23
7)		Trichlorofluor...			1.069	1.200	1.279	1.282	1.235	1.294	1.259	1.250	1.199	1.230	5.62
8)		Ethanol			0.023	0.024	0.026	0.025	0.024	0.025	0.023	0.023		0.024	5.02
9)	C	1,1-Dichloroet...			1.159	1.067	1.188	1.200	1.158	1.203	1.192	1.279	1.222	1.185	4.83
10)		Carbon Disulfide				1.970	2.202	2.167	2.084	2.200	2.200	2.374	2.300	2.187	5.64
11)		Freon 113				0.740	0.858	0.860	0.834	0.883	0.846	0.912	0.886	0.852	6.07
12)		Iodomethane						0.083	0.133	0.255	0.499	0.685	0.750	0.401	71.16
13)		Acrolein				0.181	0.209	0.222	0.206	0.233	0.247	0.268	0.251	0.227	12.43
14)		Methylene Chlo...	8.716	4.794	2.954	1.697	1.388	1.130	0.965	0.970	0.887	0.934	0.904	2.304	106.11
15)		Acetone					0.510	0.466	0.421	0.438	0.406	0.421	0.404	0.438	8.73
16)		t-1,2-Dichloro...		0.784	1.075	1.145	1.242	1.233	1.164	1.247	1.188	1.276	1.248	1.160	12.54
17)		n-Hexane				0.154	0.160	0.165	0.172	0.185	0.183	0.196	0.198	0.177	9.35
18)		Methyl-tert-bu...			2.577	2.494	2.698	2.694	2.617	2.750	2.707	2.888	2.841	2.696	4.58
19)		tert-Butanol ...	0.170	0.163	0.180	0.179	0.210	0.208	0.199	0.219	0.203	0.205		0.194	9.71
20)		Diisopropyl et...			2.849	2.764	2.983	3.090	2.914	3.102	2.767	2.742		2.901	5.01
21)	P	1,1-Dichloroet...			1.477	1.582	1.631	1.649	1.573	1.671	1.582	1.696	1.641	1.611	4.09
22)		Acrylonitrile				0.377	0.440	0.489	0.484	0.511	0.507	0.547	0.524	0.485	11.08
23)		Ethyl-tert-but...				2.497	2.839	2.908	2.849	2.978	2.730	2.719		2.789	5.66
24)		Vinyl Acetate				1.560	1.772	1.844	1.813	2.005	2.128	2.333	2.113	1.946	12.62
25)		c-1,2-Dichloro...			1.125	1.182	1.256	1.257	1.221	1.298	1.238	1.328	1.288	1.244	4.98
26)		2,2-Dichloropr...			0.952	0.998	1.078	1.062	1.006	1.073	1.061	1.129	1.104	1.051	5.31
27)		Bromochloromet...			0.436	0.512	0.605	0.646	0.636	0.688	0.671	0.677	0.622	0.610	13.73
28)	C	Chloroform		1.278	1.442	1.440	1.642	1.638	1.607	1.696	1.617	1.719	1.673	1.575	8.98
29)		Carbon Tetrach...				0.772	0.903	0.897	0.886	0.977	0.991	1.106	1.133	0.958	12.52
30)		Tetrahydrofuran				0.407	0.461	0.460	0.441	0.474	0.468	0.500	0.477	0.461	5.94
31)		1,1,1-Trichlor...			1.130	1.251	1.340	1.347	1.284	1.379	1.354	1.453	1.430	1.330	7.37
32)	S	Dibromofluorom...	0.960	0.964	0.965	0.962	0.982	0.984	0.967	0.975	1.010	1.016	1.023	0.982	2.38
33)		1,1-Dichloropr...			1.171	1.184	1.292	1.299	1.245	1.313	1.271	1.376	1.341	1.277	5.30
34)		2-Butanone (MEK)				0.625	0.704	0.704	0.662	0.717	0.701	0.741	0.702	0.695	5.12
35)		Benzene	3.949	3.450	3.774	3.582	4.047	3.910	3.714	3.910	3.758	4.022	3.911	3.821	4.86
36)		tert-Amyl meth...			2.590	2.520	2.704	2.683	2.610	2.695	2.456	2.481		2.592	3.80
37)		1,2-Dichloroet...			1.198	1.130	1.292	1.293	1.230	1.306	1.245	1.313	1.256	1.252	4.76
38)		iso-Butyl Alcohol			0.052	0.054	0.072	0.075	0.067	0.074	0.078	0.080	0.074	0.070	14.51
39)	S	1,4-Difluorobe...	3.139	3.132	3.146	3.160	3.134	3.188	3.124	3.158	3.201	3.187	3.180	3.159	0.84
40)		Trichloroethen...		0.810	0.801	0.933	1.033	1.022	0.997	1.053	1.026	1.095	1.074	0.984	10.55
41)		Tert-Amyl-Ethy...				1.637	1.938	1.921	1.876	2.019	1.845	1.866		1.872	6.33

Method Path : C:\msdchem\1\methods\
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42)		Dibromomethane			0.422	0.554	0.622	0.633	0.620	0.656	0.642	0.692	0.677	0.613	13.36
43)	C	1,2-Dichloropr...			0.890	0.838	0.987	0.982	0.932	0.988	0.944	1.024	0.994	0.953	6.18
44)		Bromodichlorom...			0.893	0.973	1.056	1.083	1.065	1.150	1.155	1.260	1.255	1.099	11.01
45)		Chlorobenzene-d5 (I)	----------ISTD----------												
46)		2-Chloroethyl ...				0.222	0.217	0.253	0.251	0.271	0.275	0.292	0.273	0.257	10.27
47)		c-1,3-Dichloro...			0.431	0.429	0.468	0.474	0.487	0.525	0.520	0.559	0.556	0.494	9.88
48)	S	Toluene-d8 (S)	1.321	1.333	1.345	1.321	1.327	1.322	1.327	1.302	1.292	1.274	1.272	1.312	1.83
49)	C	Toluene	1.590	1.439	1.488	1.454	1.499	1.474	1.445	1.492	1.391	1.462	1.439	1.470	3.41
50)		Tetrachloroeth...		0.220	0.334	0.321	0.364	0.361	0.353	0.370	0.352	0.372	0.375	0.342	13.48
51)		4-Methyl-2-Pen...		0.367	0.406	0.406	0.463	0.469	0.464	0.491	0.474	0.484	0.441	0.446	9.09
52)		t-1,3-Dichloro...				0.341	0.378	0.404	0.420	0.465	0.473	0.513	0.513	0.438	14.34
53)		1,1,2-Trichlor...		0.238	0.304	0.313	0.347	0.344	0.342	0.351	0.335	0.347	0.338	0.326	10.62
54)		Dibromochlorom...			0.214	0.217	0.255	0.267	0.275	0.301	0.315			0.264	14.58
55)		1,3-Dichloropr...		0.469	0.532	0.541	0.578	0.584	0.581	0.600	0.571	0.595	0.571	0.562	6.98
56)		1,2-Dibromoeth...			0.261	0.310	0.378	0.375	0.366	0.381	0.366	0.382	0.375	0.355	11.70
57)		2-Hexanone			0.286	0.284	0.319	0.328	0.335	0.356	0.350	0.358	0.327	0.327	8.41
58)	P	Chlorobenzene	0.780	0.862	0.945	0.928	0.982	0.984	0.965	0.985	0.940	0.981	0.971	0.939	6.80
59)	C	Ethylbenzene	1.531	1.514	1.522	1.409	1.608	1.560	1.535	1.591	1.516	1.594	1.580	1.542	3.61
60)		1,1,1,2-Tetrac...			0.200	0.237	0.251	0.266	0.272	0.296	0.296	0.324	0.323	0.274	14.90
61)		m,p-Xylenes (2)	1.112	1.019	1.103	1.029	1.137	1.146	1.135	1.209	1.150	1.230	1.219	1.135	6.12
62)		o-Xylene	0.951	1.008	1.106	1.067	1.142	1.147	1.141	1.216	1.158	1.233	1.214	1.126	7.83
63)		Styrene			0.703	0.785	0.870	0.890	0.911	0.979	0.956	1.026	1.023	0.905	11.93
64)	P	Bromoform				0.128	0.149	0.156	0.171	0.194	0.221	0.255		0.182	24.41
65)		Isopropylbenzene		1.111	1.302	1.233	1.371	1.392	1.385	1.488	1.427	1.528	1.496	1.373	9.37
66)	I	1,4-Dichlorobenzen...	----------ISTD----------												
67)	S	4-Bromofluorob...	0.831	0.838	0.835	0.823	0.825	0.815	0.812	0.798	0.796	0.762	0.751	0.808	3.58
68)		Bromobenzene	0.444	0.800	0.813	0.771	0.830	0.819	0.812	0.825	0.798	0.813	0.800	0.775	14.32
69)		n-Propylbenzene	3.125	3.053	3.294	3.181	3.455	3.384	3.318	3.475	3.358	3.501	3.408	3.323	4.44
70)	P	1,1,2,2-Tetrac...		0.565	0.624	0.651	0.718	0.694	0.673	0.690	0.674	0.651	0.603	0.654	7.07
71)		2-Chlorotoluene			0.668	0.663	0.747	0.716	0.725	0.753	0.719	0.730	0.723	0.716	4.34
72)		1,3,5-Trimethy...	1.990	2.087	2.127	2.152	2.344	2.349	2.342	2.452	2.344	2.400	2.390	2.271	6.72
73)		1,2,3-Trichlor...			0.252	0.308	0.347	0.343	0.341	0.333	0.327	0.319	0.295	0.318	9.47
74)		t-1,4-Dichloro...				0.184	0.235	0.232	0.234	0.239	0.243	0.234	0.219	0.228	8.27
75)		4-Chlorotoluene		1.889	2.024	1.896	2.099	2.132	2.069	2.143	2.056	2.110	2.036	2.045	4.37
76)		tert-Butylbenzene		1.115	1.160	1.233	1.324	1.326	1.287	1.348	1.278	1.320	1.288	1.268	6.05
77)		1,2,4-Trimethy...	1.919	1.974	2.218	2.194	2.324	2.412	2.375	2.491	2.370	2.445	2.405	2.284	8.30
78)		sec-Butylbenzene		2.409	2.779	2.587	2.822	2.837	2.814	2.983	2.858	2.971	2.919	2.798	6.32
79)		4-Isopropyltol...	1.722	1.702	2.078	2.114	2.243	2.339	2.300	2.497	2.392	2.489	2.476	2.214	12.88
80)		1,3-Dichlorobe...		1.165	1.312	1.268	1.382	1.390	1.384	1.422	1.383	1.412	1.382	1.350	5.93
81)		1,4-Dichlorobe...	1.113	1.342	1.454	1.451	1.531	1.440	1.433	1.478	1.406	1.436	1.402	1.408	7.70
82)		n-Butylbenzene	1.357	1.491	1.735	1.735	1.903	2.011	1.994	2.160	2.060	2.129	2.119	1.881	14.34
83)		1,2-Dichlorobe...		1.155	1.193	1.268	1.407	1.372	1.345	1.383	1.337	1.345	1.305	1.311	6.28
84)		1,2-Dibromo-3-...					0.180	0.192	0.209	0.227	0.243	0.250	0.251	0.222	12.86
85)		Hexachlorobuta...				0.154	0.172	0.191	0.183	0.199	0.189	0.190	0.187	0.183	7.66
86)		1,2,4-Trichlor...			0.572	0.637	0.724	0.784	0.775	0.840	0.812	0.823	0.834	0.756	12.49
87)		Naphthalene			1.867	1.856	2.279	2.319	2.423	2.669	2.689	2.755	2.764	2.402	14.83
88)		1,2,3-Trichlor...		0.483	0.638	0.653	0.729	0.733	0.747	0.797	0.779	0.798	0.815	0.717	14.16

(#) = Out of Range

Compound List Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019
Response Via : Initial Calibration

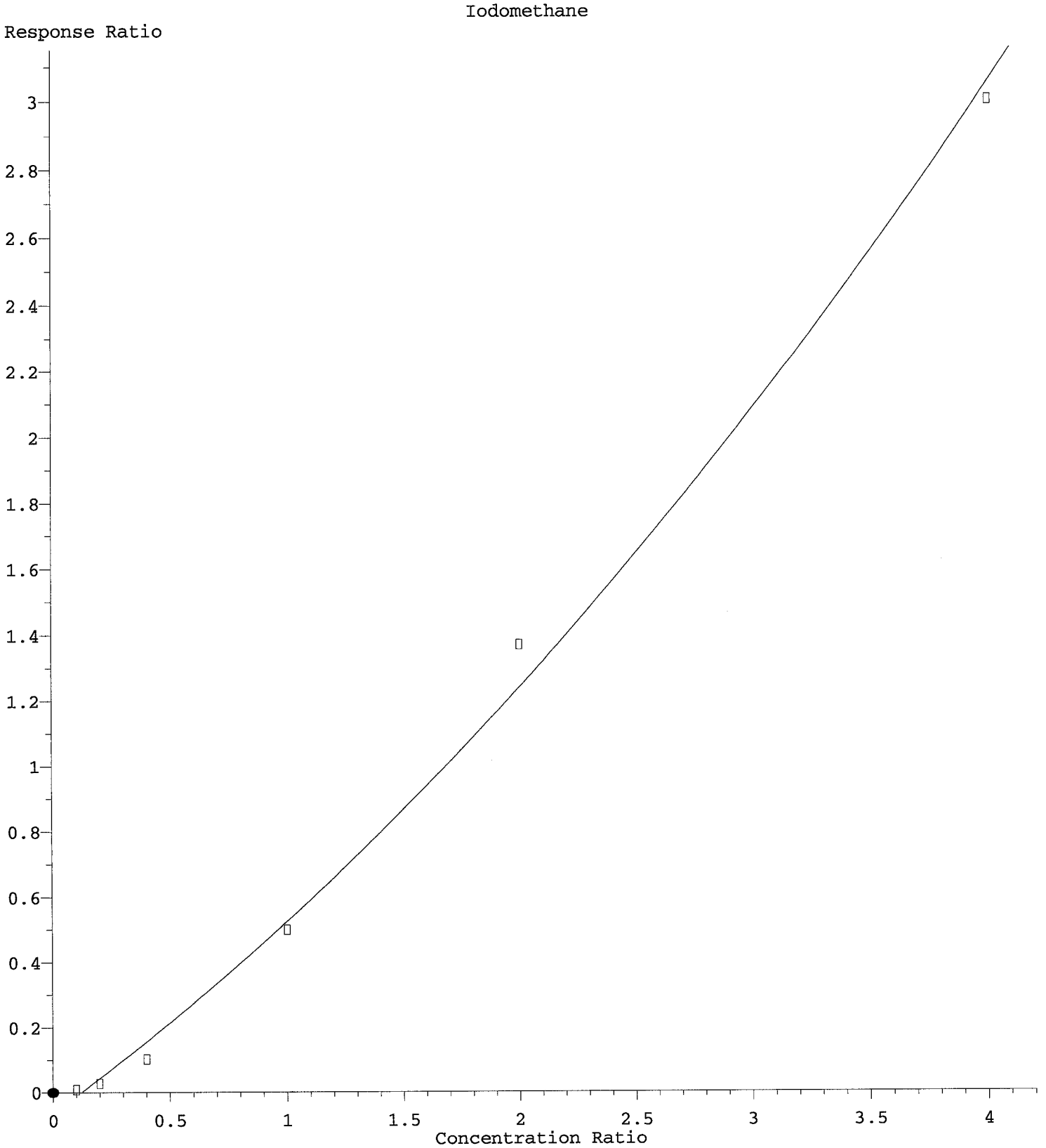
Total Cpnds : 88

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	99	6.211	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.673	0.269	A	2	A	R
3	P	Chloromethane	50	1.891	0.304	A	2	A	R
4	C	Vinyl Chloride	62	1.995	0.321	A	2	A	R
5		Bromomethane	96	2.353	0.379	A	2	A	R
6		Chloroethane	64	2.487	0.400	A	2	A	R
7		Trichlorofluoromethane	101	2.658	0.428	A	2	A	R
8		Ethanol	45	3.230	0.520	A	1	A	R
9	C	1,1-Dichloroethene	61	3.230	0.520	A	2	A	R
10		Carbon Disulfide	76	3.242	0.522	A	2	A	R
11		Freon 113	101	3.279	0.528	A	2	A	R
12		Iodomethane	142	3.382	0.545	QV	2	A	R
13		Acrolein	56	3.613	0.582	A	2	A	R
14		Methylene Chloride	84	3.868	0.623	QV	2	A	R
15		Acetone	43	3.935	0.634	A	1	A	R
16		t-1,2-Dichloroethene	61	4.033	0.649	A	2	A	R
17		n-Hexane	86	4.118	0.663	A	3	A	R
18		Methyl-tert-butyl-ether	73	4.167	0.671	A	3	A	R
19		tert-Butanol (TBA)	59	4.288	0.690	A	1	A	R
20		Diisopropyl ether (DIPE)	45	4.562	0.735	A	2	A	R
21	P	1,1-Dichloroethane	63	4.678	0.753	A	2	A	R
22		Acrylonitrile	53	4.745	0.764	A	2	A	R
23		Ethyl-tert-butyl ether (ETBE)	59	4.939	0.795	A	2	A	R
24		Vinyl Acetate	43	4.951	0.797	A	2	A	R
25		c-1,2-Dichloroethene	61	5.238	0.843	A	2	A	R
26		2,2-Dichloropropane	77	5.347	0.861	A	2	A	R
27		Bromochloromethane	130	5.444	0.877	A	2	A	R
28	C	Chloroform	83	5.523	0.889	A	2	A	R
29		Carbon Tetrachloride	117	5.657	0.911	A	2	A	R
30		Tetrahydrofuran	42	5.700	0.918	A	2	A	R
31		1,1,1-Trichloroethane	97	5.730	0.923	A	2	A	R
32	S	Dibromofluoromethane (S)	111	5.712	0.920	A	2	A	R
33		1,1-Dichloropropene	75	5.858	0.943	A	2	A	R
34		2-Butanone (MEK)	43	5.852	0.942	A	2	A	R
35		Benzene	78	6.120	0.985	A	2	A	R
36		tert-Amyl methyl ether (TAME)	73	6.247	1.006	A	2	A	R
37		1,2-Dichloroethane (EDC)	62	6.339	1.021	A	2	A	R
38		iso-Butyl Alcohol	43	6.369	1.025	A	2	A	R
39	S	1,4-Difluorobenzene (S)	114	6.777	1.091	A	2	A	R
40		Trichloroethene (TCE)	130	6.740	1.085	A	2	A	R
41		Tert-Amyl-Ethyl-Ether (TAEE)	59	6.996	1.126	A	2	A	R
42		Dibromomethane	93	7.196	1.159	A	2	A	R
43	C	1,2-Dichloropropane	63	7.306	1.176	A	2	A	R
44		Bromodichloromethane	83	7.379	1.188	A	2	A	R
45	I	Chlorobenzene-d5 (I)	117	9.910	1.000	A	2	A	R
46		2-Chloroethyl Vinyl Ether	63	8.017	0.809	A	2	A	R
47		c-1,3-Dichloropropene	75	8.091	0.816	A	2	A	R
48	S	Toluene-d8 (S)	98	8.298	0.837	A	2	A	R
49	C	Toluene	91	8.358	0.843	A	2	A	R
50		Tetrachloroethene (PCE)	166	8.796	0.888	A	2	A	R
51		4-Methyl-2-Pentanone (MIBK)	43	8.796	0.888	A	2	A	R
52		t-1,3-Dichloropropene	75	8.832	0.891	A	2	A	R
53		1,1,2-Trichloroethane	97	9.003	0.909	A	2	A	R
54		Dibromochloromethane	129	9.185	0.927	A	2	A	R
55		1,3-Dichloropropane	76	9.289	0.937	A	2	A	R

56		1,2-Dibromoethane (EDB)	107	9.423	0.951	A	2	A	R
57		2-Hexanone	43	9.654	0.974	A	2	A	R
58	P	Chlorobenzene	112	9.928	1.002	A	2	A	R
59	C	Ethylbenzene	91	9.952	1.004	A	2	A	R
60		1,1,1,2-Tetrachloroethane	131	9.988	1.008	A	2	A	R
61		m,p-Xylenes (2)	91	10.086	1.018	A	2	A	R
62		o-Xylene	91	10.463	1.056	A	2	A	R
63		Styrene	104	10.512	1.061	A	2	A	R
64	P	Bromoform	173	10.536	1.063	Q	2	A	R
65		Isopropylbenzene	105	10.731	1.083	A	2	A	R
66	I	1,4-Dichlorobenzene-d4 (I)	152	11.850	1.000	A	2	A	R
67	S	4-Bromofluorobenzene (S)	174	10.974	0.926	A	2	A	R
68		Bromobenzene	156	11.060	0.933	A	2	A	R
69		n-Propylbenzene	91	11.072	0.934	A	2	A	R
70	P	1,1,2,2-Tetrachloroethane	85	11.139	0.940	A	2	A	R
71		2-Chlorotoluene	126	11.206	0.946	A	2	A	R
72		1,3,5-Trimethylbenzene	105	11.229	0.948	A	2	A	R
73		1,2,3-Trichloropropane	110	11.248	0.949	A	2	A	R
74		t-1,4-Dichloro-2-butene	53	11.279	0.952	A	3	A	R
75		4-Chlorotoluene	91	11.339	0.957	A	2	A	R
76		tert-Butylbenzene	91	11.479	0.969	A	2	A	R
77		1,2,4-Trimethylbenzene	105	11.534	0.973	A	2	A	R
78		sec-Butylbenzene	105	11.619	0.980	A	2	A	R
79		4-Isopropyltoluene	119	11.728	0.990	A	2	A	R
80		1,3-Dichlorobenzene	146	11.796	0.995	A	2	A	R
81		1,4-Dichlorobenzene	146	11.863	1.001	A	2	A	R
82		n-Butylbenzene	91	12.045	1.016	A	2	A	R
83		1,2-Dichlorobenzene	146	12.185	1.028	A	2	A	R
84		1,2-Dibromo-3-Chloropropane	157	12.799	1.080	A	2	A	R
85		Hexachlorobutadiene	223	13.304	1.123	A	3	A	R
86		1,2,4-Trichlorobenzene	180	13.346	1.126	A	2	A	R
87		Naphthalene	128	13.626	1.150	A	2	A	R
88		1,2,3-Trichlorobenzene	180	13.784	1.163	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI191025W.M Fri Oct 25 09:01:32 2019

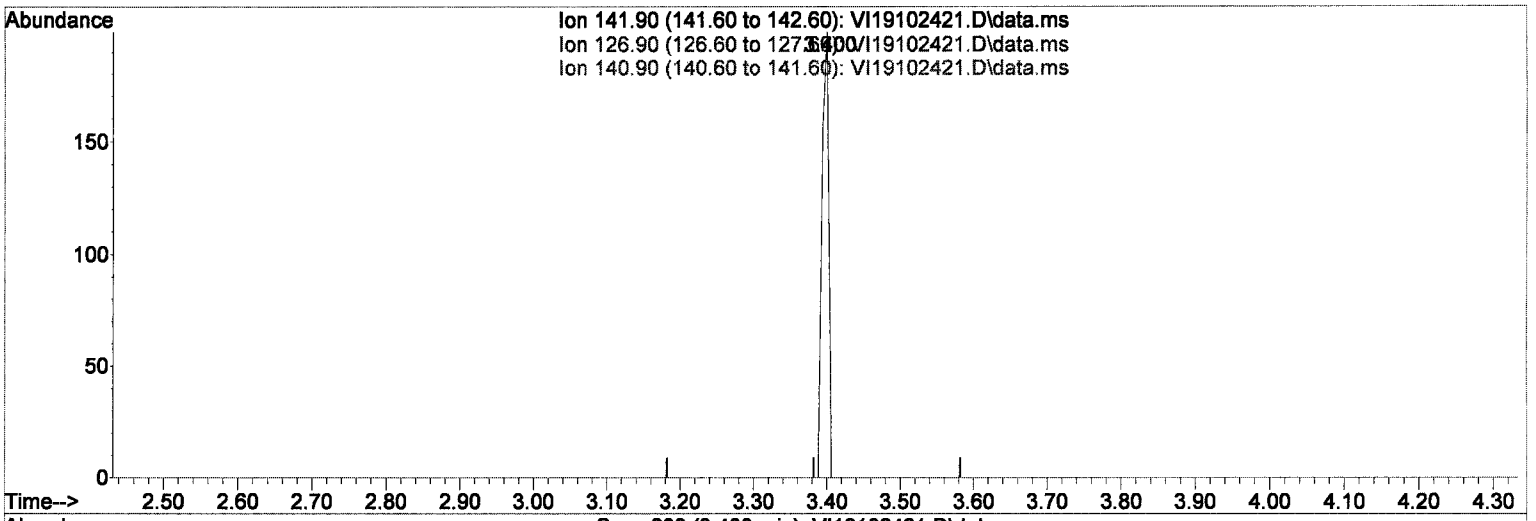


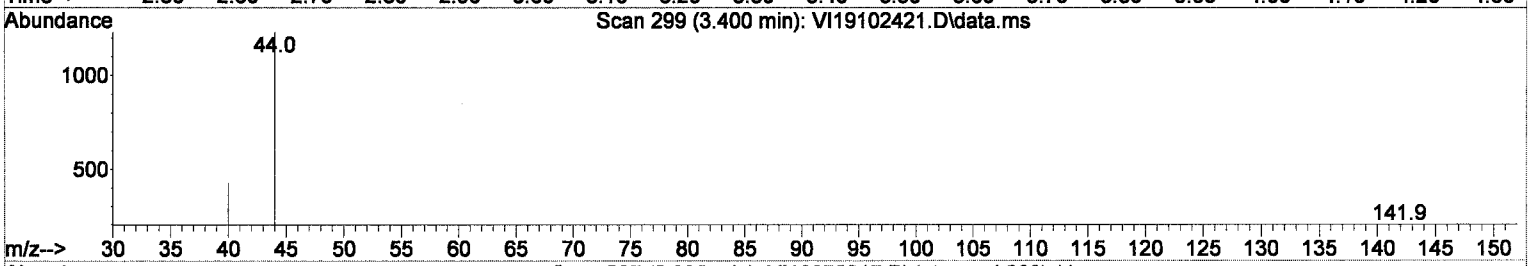
R = 6.36e-002 A*A + 5.25e-001 A - 6.41e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025W.M
Calibration Table Last Updated: Fri Oct 25 08:33:22 2019

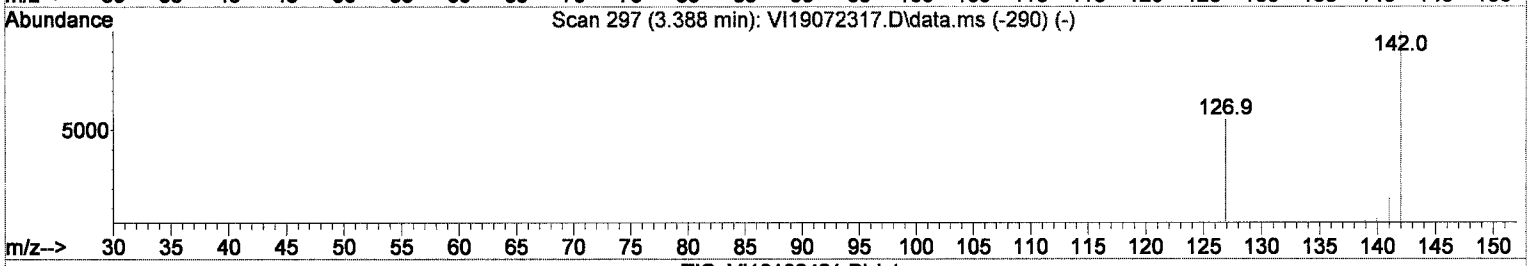
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:42:43 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







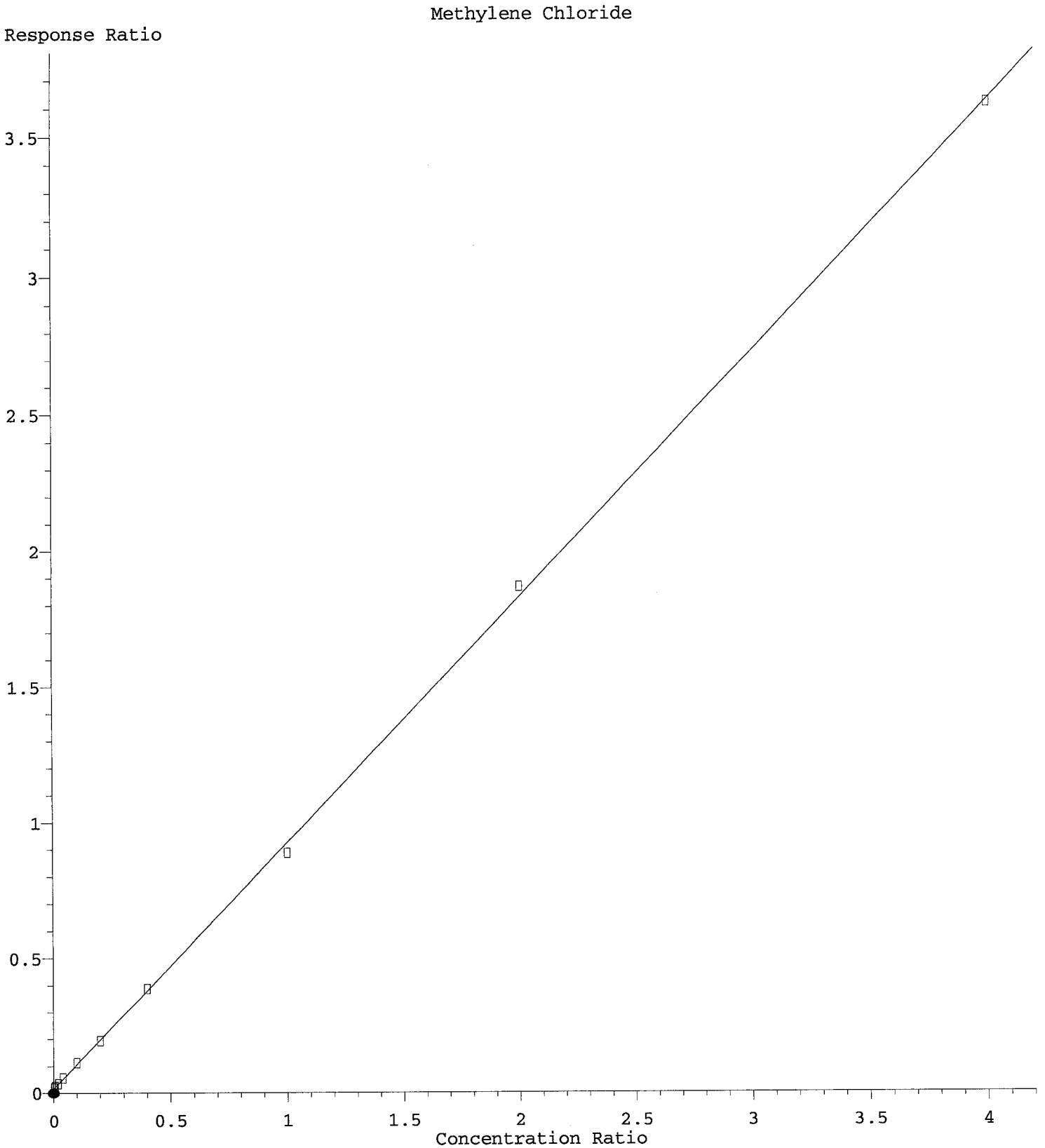
TIC: VI19102421.D\data.ms

(12) Iodomethane

3.400min (+ 0.018) 6.13 ug/L m

response 130

Ion	Exp%	Act%
141.90	100.00	100.00
126.90	34.80	0.00#
140.90	15.30	0.00#
0.00	0.00	0.00

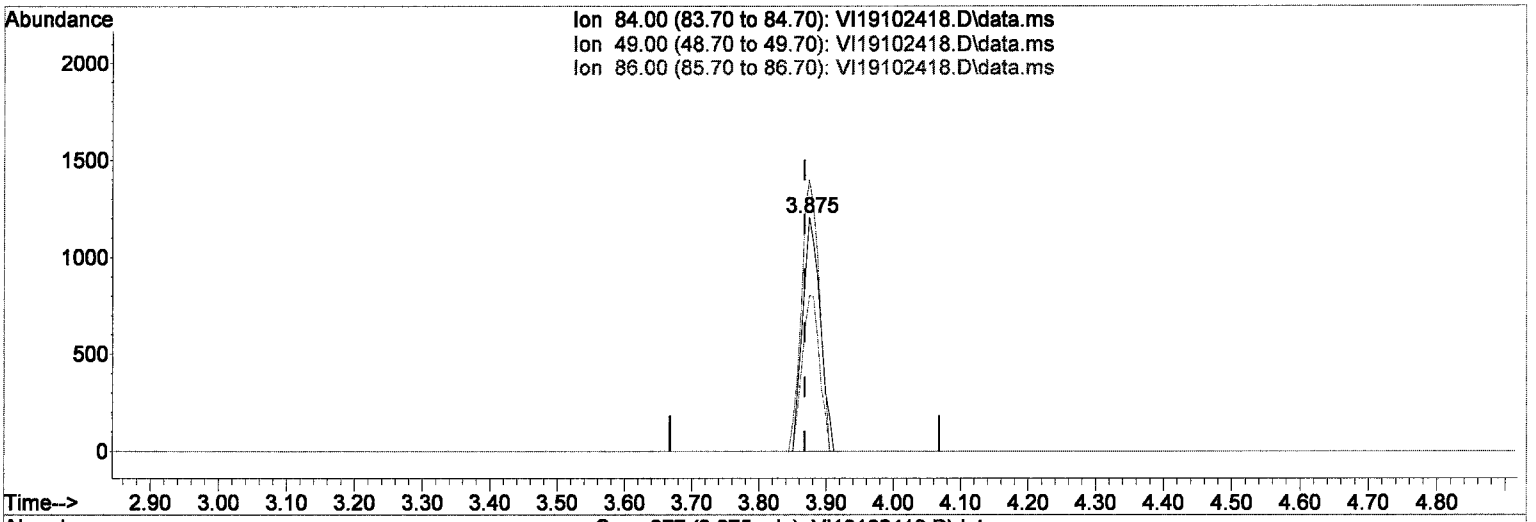


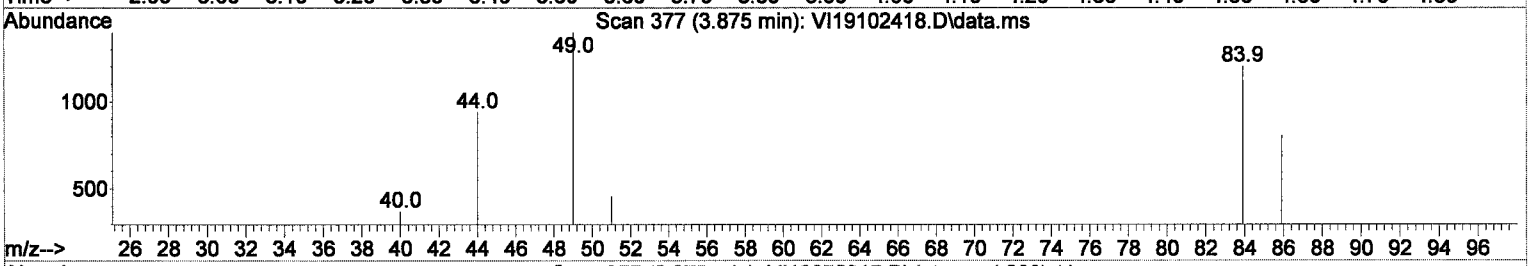
R = -2.46e-003 A*A + 9.12e-001 A + 1.58e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025W.M
Calibration Table Last Updated: Fri Oct 25 08:34:03 2019

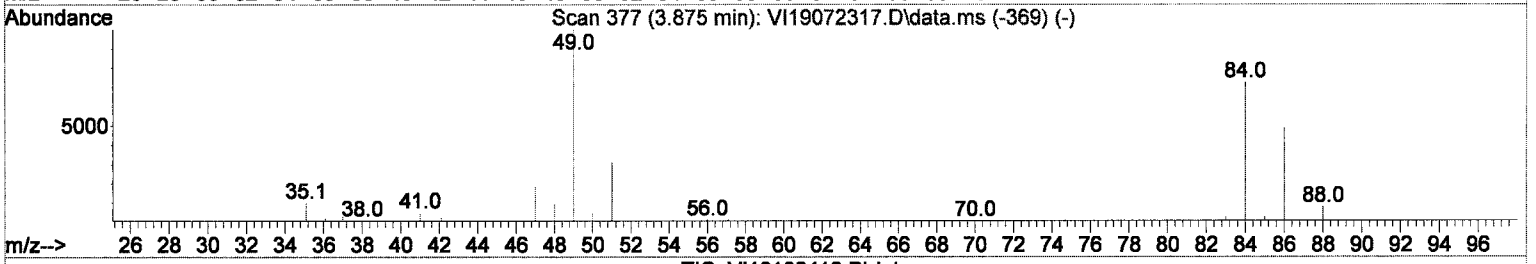
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:42:34 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







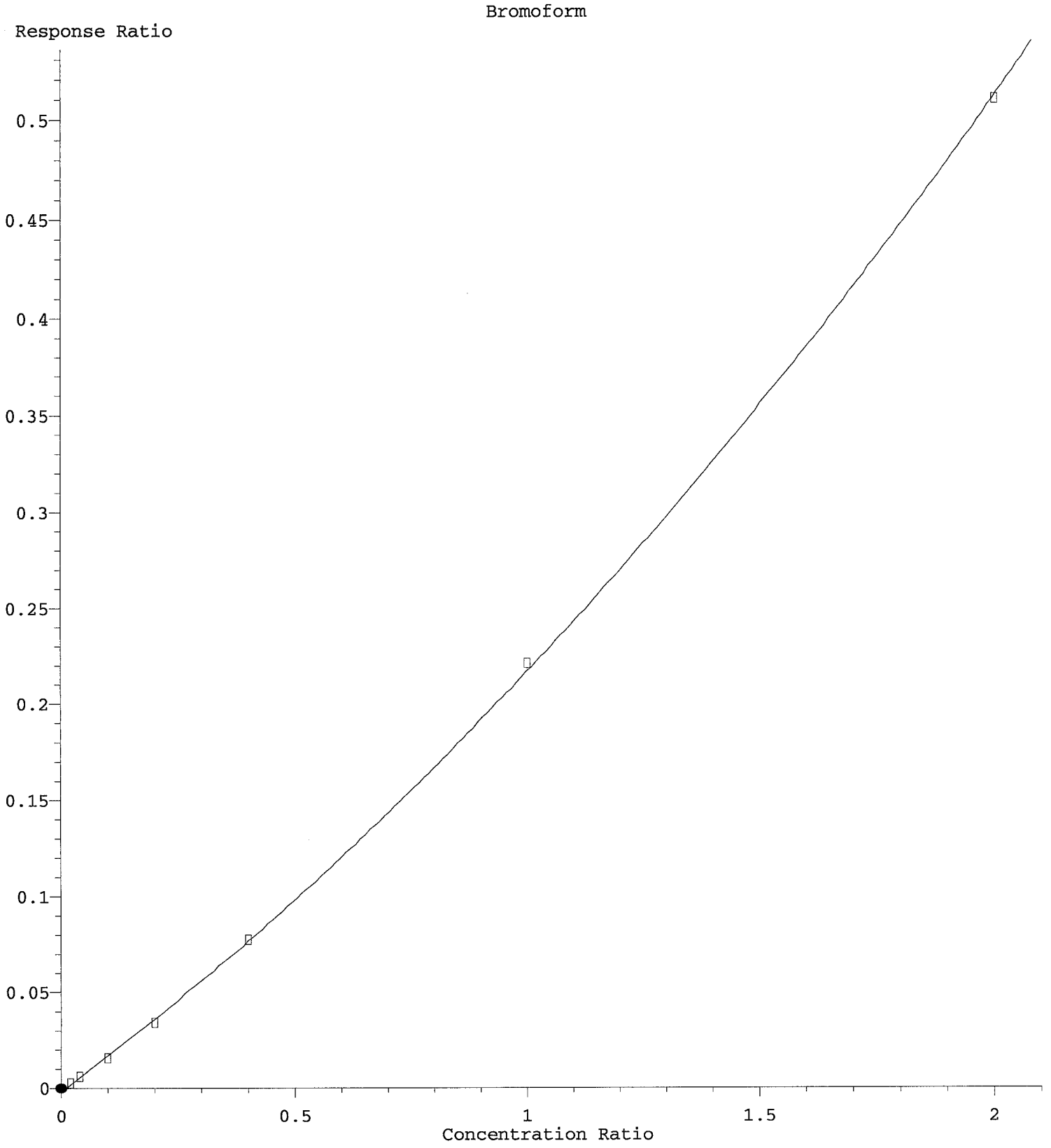
TIC: VI19102418.D\data.ms

(14) Methylene Chloride

3.875min (+ 0.007) 0.18 ug/L

response 2201

Ion	Exp%	Act%
84.00	100.00	100.00
49.00	134.70	116.13
86.00	61.50	66.92
0.00	0.00	0.00

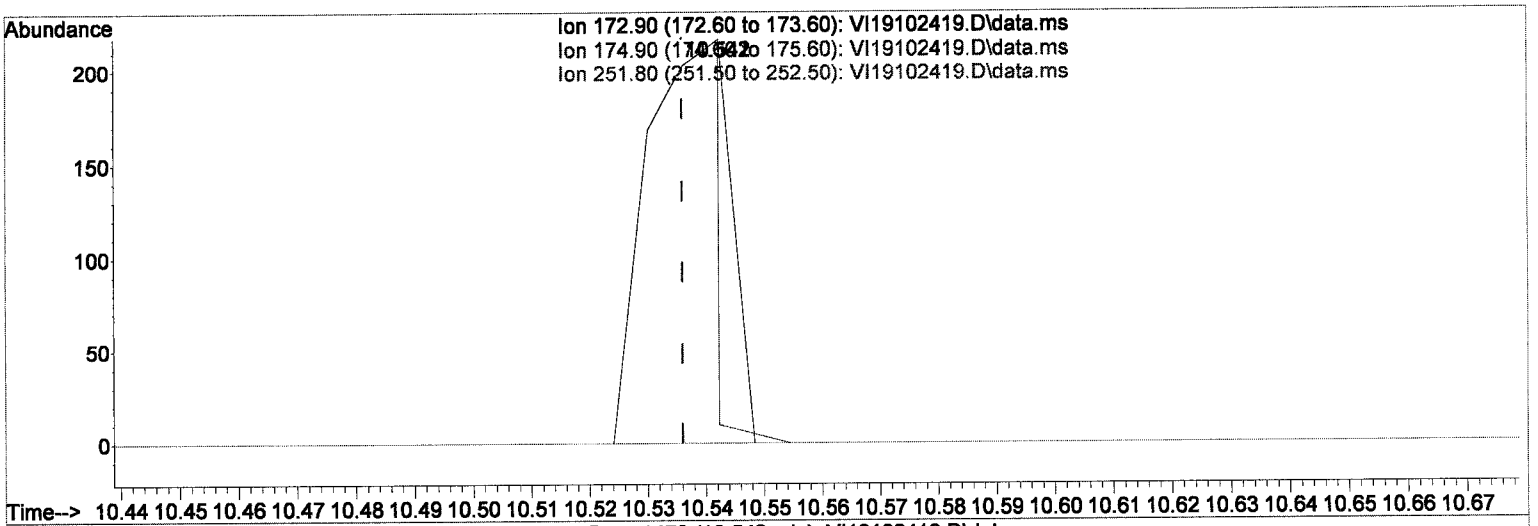


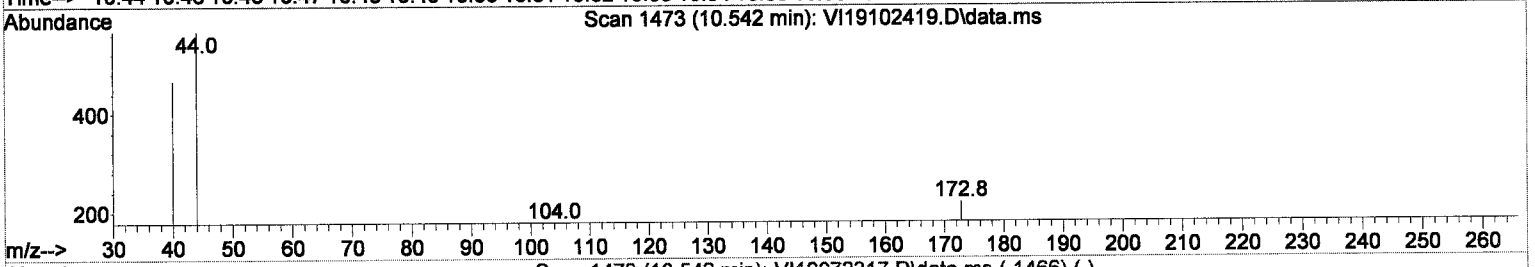
R = 3.82e-002 A*A + 1.80e-001 A - 1.40e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025W.M
Calibration Table Last Updated: Fri Oct 25 08:48:07 2019

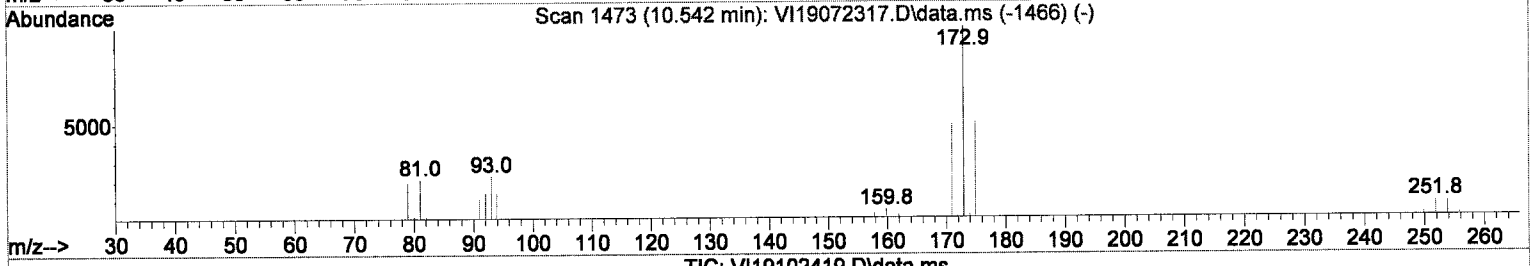
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:48:10 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration







TIC: VI19102419.D\data.ms

(64) Bromoform (P)

10.542min (+ 0.006) 0.38 ug/L m

response -4

Ion	Exp%	Act%
172.90	100.00	100.00
174.90	49.20	0.00#
251.80	13.30	0.00
0.00	0.00	-0.00

10/25

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102432.D
Acq On : 24 Oct 2019 10:38 pm
Operator : MM
Sample : 9J24043-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

MM 10/25/19

Quant Time: Oct 25 08:52:53 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	103	0.00
2		Dichlorodifluoromethane	20.000	25.235	-26.2#	133	0.00
3	P	Chloromethane	20.000	20.727	-3.6	115	0.00
4	C	Vinyl Chloride	20.000	22.118	-10.6	111	0.00
5		Bromomethane	20.000	22.648	-13.2	122	0.00
6		Chloroethane	20.000	17.519	12.4	102	0.00
7		Trichlorofluoromethane	20.000	20.686	-3.4	101	0.00
8		~~Ethanol~~	~~1250.000~~	~~37.145~~	~~97.0#~~	~~3~~	~~0.00~~
9	C	1,1-Dichloroethene	20.000	19.721	1.4	100	0.00
10		Carbon Disulfide	20.000	18.350	8.2	94	0.00
11		Freon 113	20.000	19.089	4.6	95	0.00
12		Iodomethane	20.000	16.515	17.4	117	0.00
13		Acrolein	20.000	20.473	-2.4	103	0.00
14		Methylene Chloride	20.000	19.959	0.2	101	0.00
15		Acetone	40.000	37.600	6.0	97	0.00
16		t-1,2-Dichloroethene	20.000	20.982	-4.9	100	0.00
17		n-Hexane	20.000	19.272	3.6	95	0.00
18		Methyl-tert-butyl-ether	20.000	19.588	2.1	99	0.00
19		~~tert-Butanol (TBA)~~	~~1250.000~~	~~28.139~~	~~97.7#~~	~~2~~	~~0.00~~
20		~~Diisopropyl ether (DIPE)~~	~~5.000~~	~~0.181~~	~~96.4#~~	~~3~~	~~0.00~~
21	P	1,1-Dichloroethane	20.000	20.526	-2.6	102	0.00
22		Acrylonitrile	20.000	19.587	2.1	96	0.00
23		~~Ethyl-tert-butyl ether (ET~~	~~5.000~~	~~0.158~~	~~96.8#~~	~~3~~	~~0.00~~
24		Vinyl Acetate	20.000	19.888	0.6	99	0.00
25		c-1,2-Dichloroethene	20.000	20.039	-0.2	99	0.00
26		2,2-Dichloropropane	20.000	17.720	11.4	89	0.00
27		Bromochloromethane	20.000	22.053	-10.3	101	0.00
28	C	Chloroform	20.000	20.857	-4.3	100	0.00
29		Carbon Tetrachloride	20.000	20.695	-3.5	104	0.00
30		Tetrahydrofuran	20.000	19.026	4.9	95	0.00
31		1,1,1-Trichloroethane	20.000	19.935	0.3	99	0.00
32	S	Dibromofluoromethane (S)	50.000	50.291	-0.6	104	0.00
33		1,1-Dichloropropene	20.000	19.605	2.0	98	0.00
34		2-Butanone (MEK)	40.000	37.882	5.3	94	0.00
35		Benzene	20.000	19.670	1.6	99	0.00
36		~~tert-Amyl methyl ether (TA~~	~~5.000~~	~~0.175~~	~~96.5#~~	~~3~~	~~0.01~~
37		1,2-Dichloroethane (EDC)	20.000	20.160	-0.8	99	0.00
38		iso-Butyl Alcohol	500.000	519.105	-3.8	100	0.00
39	S	1,4-Difluorobenzene (S)	50.000	50.364	-0.7	104	0.00
40		Trichloroethene (TCE)	20.000	21.245	-6.2	102	0.00
41		~~Tert-Amyl-Ethyl-Ether (TAEE~~	~~5.000~~	~~0.144~~	~~97.1#~~	~~3~~	~~0.00~~
42		Dibromomethane	20.000	21.130	-5.6	102	0.00
43	C	1,2-Dichloropropane	20.000	20.286	-1.4	101	0.00
44		Bromodichloromethane	20.000	20.751	-3.8	102	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	104	0.00
46		2-Chloroethyl Vinyl Ether	20.000	20.093	-0.5	99	0.00
47		c-1,3-Dichloropropene	20.000	19.890	0.5	98	0.00
48	S	Toluene-d8 (S)	50.000	49.306	1.4	104	0.00
49	C	Toluene	20.000	19.385	3.1	99	0.00
50		Tetrachloroethene (PCE)	20.000	20.889	-4.4	101	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102432.D
Acq On : 24 Oct 2019 10:38 pm
Operator : MM
Sample : 9J24043-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:53 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	41.038	-2.6	97	0.00
52		t-1,3-Dichloropropene	20.000	20.701	-3.5	102	0.00
53		1,1,2-Trichloroethane	20.000	21.234	-6.2	103	0.00
54		Dibromochloromethane	20.000	23.749	-18.7	108	0.00
55		1,3-Dichloropropane	20.000	20.475	-2.4	100	0.00
56		1,2-Dibromoethane (EDB)	20.000	20.657	-3.3	100	0.00
57		2-Hexanone	40.000	40.560	-1.4	97	0.00
58	P	Chlorobenzene	20.000	20.598	-3.0	102	0.00
59	C	Ethylbenzene	20.000	20.146	-0.7	102	0.00
60		1,1,1,2-Tetrachloroethane	20.000	21.774	-8.9	105	0.00
61		m,p-Xylenes (2)	40.000	40.933	-2.3	100	0.00
62		o-Xylene	20.000	20.989	-4.9	101	0.00
63		Styrene	20.000	20.857	-4.3	100	0.00
64	P	Bromoform	20.000	21.372	-6.9	111	0.00
65		Isopropylbenzene	20.000	20.931	-4.7	101	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	104	0.00
67	S	4-Bromofluorobenzene (S)	50.000	49.582	0.8	105	0.00
68		Bromobenzene	20.000	20.988	-4.9	103	0.00
69		n-Propylbenzene	20.000	20.099	-0.5	100	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	20.344	-1.7	100	0.00
71		2-Chlorotoluene	20.000	19.935	0.3	99	0.00
72		1,3,5-Trimethylbenzene	20.000	20.663	-3.3	100	0.00
73		1,2,3-Trichloropropane	20.000	20.663	-3.3	103	0.00
74		t-1,4-Dichloro-2-butene	20.000	17.538	12.3	87	0.00
75		4-Chlorotoluene	20.000	20.563	-2.8	102	0.00
76		tert-Butylbenzene	20.000	20.366	-1.8	100	0.00
77		1,2,4-Trimethylbenzene	20.000	20.724	-3.6	99	0.00
78		sec-Butylbenzene	20.000	20.458	-2.3	100	0.00
79		4-Isopropyltoluene	20.000	21.662	-8.3	100	0.00
80		1,3-Dichlorobenzene	20.000	20.840	-4.2	103	0.00
81		1,4-Dichlorobenzene	20.000	20.477	-2.4	102	0.00
82		n-Butylbenzene	20.000	22.267	-11.3	101	0.00
83		1,2-Dichlorobenzene	20.000	20.819	-4.1	103	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	20.036	-0.2	102	0.00
85		Hexachlorobutadiene	20.000	21.851	-9.3	105	0.00
86		1,2,4-Trichlorobenzene	20.000	22.259	-11.3	104	0.00
87		Naphthalene	20.000	21.916	-9.6	103	0.00
88		1,2,3-Trichlorobenzene	20.000	22.607	-13.0	106	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102433.D
Acq On : 24 Oct 2019 11:05 pm
Operator : MM
Sample : 9J24043-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

M
10/25/19

Quant Time: Oct 25 08:52:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	99	0.00
2		Dichlorodifluoromethane	20.000	0.142	99.3#	1	0.00
3	P	Chloromethane	20.000	0.423	97.9#	2	0.00
4	C	Vinyl Chloride	20.000	0.200	99.0#	1	0.00
5		Bromomethane	20.000	0.740	96.3#	4	0.00
6		Chloroethane	20.000	0.736	96.3#	4	0.03
7		Trichlorofluoromethane	20.000	0.052	99.7#	0	0.01
8		Ethanol	1250.000	1059.187	15.3	80	0.00
9	C	1,1-Dichloroethene	20.000	0.161	99.2#	1	0.00
10		Carbon Disulfide	20.000	0.494	97.5#	2	0.01
11		Freon 113	20.000	0.000	100.0#	0	-3.28#
12		Iodomethane	20.000	6.269	68.7#	3	0.00
13		Acrolein	20.000	0.000	100.0#	0	-3.61#
14		Methylene Chloride	20.000	0.401	98.0#	6	0.00
15		Acetone	40.000	1.018	97.5#	3	0.01
16		t-1,2-Dichloroethene	20.000	0.302	98.5#	1	0.00
17		n-Hexane	20.000	0.000	100.0#	0	-4.12#
18		Methyl-tert-butyl-ether	20.000	0.085	99.6#	0	0.00
19		tert-Butanol (TBA)	1250.000	1179.792	5.6	83	0.00
20		Diisopropyl ether (DIPE)	5.000	4.407	11.9	82	0.00
21	P	1,1-Dichloroethane	20.000	0.254	98.7#	1	0.00
22		Acrylonitrile	20.000	0.000	100.0#	0	-4.74#
23		Ethyl-tert-butyl ether (ET	5.000	4.402	12.0	82	0.00
24		Vinyl Acetate	20.000	0.689	96.6#	3	-0.02
25		c-1,2-Dichloroethene	20.000	0.236	98.8#	1	0.00
26		2,2-Dichloropropane	20.000	0.080	99.6#	0	0.01
27		Bromochloromethane	20.000	0.000	100.0#	0	-5.44#
28	C	Chloroform	20.000	0.223	98.9#	1	0.00
29		Carbon Tetrachloride	20.000	0.000	100.0#	0	-5.66#
30		Tetrahydrofuran	20.000	0.000	100.0#	0	-5.70#
31		1,1,1-Trichloroethane	20.000	0.094	99.5#	0	0.00
32	S	Dibromofluoromethane (S)	50.000	49.641	0.7	99	0.00
33		1,1-Dichloropropene	20.000	0.226	98.9#	1	0.00
34		2-Butanone (MEK)	40.000	0.000	100.0#	0	-5.85#
35		Benzene	20.000	0.266	98.7#	1	0.00
36		tert-Amyl methyl ether (TA	5.000	4.185	16.3	80	0.00
37		1,2-Dichloroethane (EDC)	20.000	0.071	99.6#	0	0.01
38		iso-Butyl Alcohol	500.000	0.000	100.0#	0	-6.37#
39	S	1,4-Difluorobenzene (S)	50.000	50.455	-0.9	100	0.00
40		Trichloroethene (TCE)	20.000	0.257	98.7#	1	0.01
41		Tert-Amyl-Ethyl-Ether (TAEE	5.000	4.278	14.4	78	0.00
42		Dibromomethane	20.000	0.000	100.0#	0	-7.20#
43	C	1,2-Dichloropropane	20.000	0.177	99.1#	1	0.00
44		Bromodichloromethane	20.000	0.108	99.5#	1	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	97	0.00
46		2-Chloroethyl Vinyl Ether	20.000	0.000	100.0#	0	-8.02#
47		c-1,3-Dichloropropene	20.000	0.143	99.3#	1	0.00
48	S	Toluene-d8 (S)	50.000	50.620	-1.2	99	0.00
49	C	Toluene	20.000	0.283	98.6#	1	0.00
50		Tetrachloroethene (PCE)	20.000	0.334	98.3#	1	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102433.D
Acq On : 24 Oct 2019 11:05 pm
Operator : MM
Sample : 9J24043-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	0.000	100.0#	0	-8.80#
52		t-1,3-Dichloropropene	20.000	0.080	99.6#	0	0.02
53		1,1,2-Trichloroethane	20.000	0.000	100.0#	0	-9.00#
54		Dibromochloromethane	20.000	0.000	100.0#	0	-9.19#
55		1,3-Dichloropropane	20.000	0.089	99.6#	0	0.00
56		1,2-Dibromoethane (EDB)	20.000	0.000	100.0#	0	-9.42#
57		2-Hexanone	40.000	0.000	100.0#	0	-9.65#
58	P	Chlorobenzene	20.000	0.297	98.5#	1	0.00
59	C	Ethylbenzene	20.000	0.274	98.6#	1	0.00
60		1,1,1,2-Tetrachloroethane	20.000	0.153	99.2#	1	0.00
61		m,p-Xylenes (2)	40.000	0.530	98.7#	1	0.00
62		o-Xylene	20.000	0.258	98.7#	1	0.00
63		Styrene	20.000	0.234	98.8#	1	0.00
64	P	Bromoform	20.000	0.000	100.0#	0	-10.54#
65		Isopropylbenzene	20.000	0.224	98.9#	1	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	92	0.00
67	S	4-Bromofluorobenzene (S)	50.000	50.894	-1.8	94	0.00
68		Bromobenzene	20.000	0.267	98.7#	1	0.00
69		n-Propylbenzene	20.000	0.308	98.5#	1	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	0.000	100.0#	0	-11.14#
71		2-Chlorotoluene	20.000	0.261	98.7#	1	0.00
72		1,3,5-Trimethylbenzene	20.000	0.279	98.6#	1	0.00
73		1,2,3-Trichloropropane	20.000	0.000	100.0#	0	-11.25#
74		t-1,4-Dichloro-2-butene	20.000	0.000	100.0#	0	-11.28#
75		4-Chlorotoluene	20.000	0.357	98.2#	2	0.00
76		tert-Butylbenzene	20.000	0.243	98.8#	1	0.00
77		1,2,4-Trimethylbenzene	20.000	0.300	98.5#	1	0.00
78		sec-Butylbenzene	20.000	0.275	98.6#	1	0.00
79		4-Isopropyltoluene	20.000	0.295	98.5#	1	0.00
80		1,3-Dichlorobenzene	20.000	0.371	98.1#	2	0.00
81		1,4-Dichlorobenzene	20.000	0.404	98.0#	2	0.00
82		n-Butylbenzene	20.000	0.398	98.0#	2	0.00
83		1,2-Dichlorobenzene	20.000	0.272	98.6#	1	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	0.000	100.0#	0	-12.80#
85		Hexachlorobutadiene	20.000	0.497	97.5#	2	0.00
86		1,2,4-Trichlorobenzene	20.000	0.570	97.2#	2	0.00
87		Naphthalene	20.000	0.356	98.2#	1	0.00
88		1,2,3-Trichlorobenzene	20.000	0.570	97.2#	2	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Calibration Status Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Oct 25 10:31:05 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50	50	C:\msdchem\1\data\2019-10\9J24043\VI19102439.D
2	100	100	50	C:\msdchem\1\data\2019-10\9J24043\VI19102440.D
3	250	250	50	C:\msdchem\1\data\2019-10\9J24043\VI19102441.D
4	500	500	50	C:\msdchem\1\data\2019-10\9J24043\VI19102442.D
5	1000	1000	50	C:\msdchem\1\data\2019-10\9J24043\VI19102452.D
6	2500	2500	50	C:\msdchem\1\data\2019-10\9J24043\VI19102444.D
7	5000	5000	50	C:\msdchem\1\data\2019-10\9J24043\VI19102445.D
8	10K	10000	50	C:\msdchem\1\data\2019-10\9J24043\VI19102446.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 1:46 am
2	100	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 2:13 am
3	250	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 2:40 am
4	500	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 3:07 am
5	1000	Oct 25 10:31 2019	Oct 25 10:30 2019	25 Oct 2019 10:13 am
6	2500	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 4:00 am
7	5000	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 4:27 am
8	10K	Oct 25 09:04 2019	Oct 25 08:55 2019	25 Oct 2019 4:54 am

VI191025G.M Fri Oct 25 10:41:17 2019

Response Factor Report VOA-GCMS9

Method Path : C:\msdchem\1\methods\
Method File : VI191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Oct 25 10:31:05 2019
Response Via : Initial Calibration

Calibration Files
50 =VI19102439.D 100 =VI19102440.D 250 =VI19102441.D 500 =VI19102442.D 1000=VI19102452.D 2500=VI19102444.D
5000=VI19102445.D 10K =VI19102446.D

		Compound	50	100	250	500	1000	2500	5000	10K	Avg	%RSD
1)	I	Pentafluorobenzene...	----------ISTD----------									
2)	S	1,4-Difluorobe...	1.634	1.635	1.620	1.616	1.606	1.628	1.624	1.644	1.626	0.73
3)	S	4-Bromofluorob...	0.521	0.525	0.529	0.536	0.539	0.555	0.563	0.574	0.543	3.54
4)	H	NWTPH-Gx (TPH)	0.926	1.028	1.244	1.386	1.437	1.550	1.569	1.699	1.355	19.99
5)	H	TPHg (C5-C9)	3.091	2.191	1.950	1.925	1.927	1.943	1.882	1.984	2.112	19.26
6)	H	TPHg (C6-C10)	2.666	1.908	1.665	1.633	1.632	1.643	1.597	1.694	1.805	20.00
7)	H	CA-LUFT (C5-C12)	3.259	2.422	2.257	2.271	2.291	2.353	2.307	2.441	2.450	13.62
8)		Benzene (NR)									0.000	-1.00
9)	S	Toluene-d8 (NR)									0.000	-1.00
10)		Toluene (NR)									0.000	-1.00
11)	S	Chlorobenzene-...									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS9

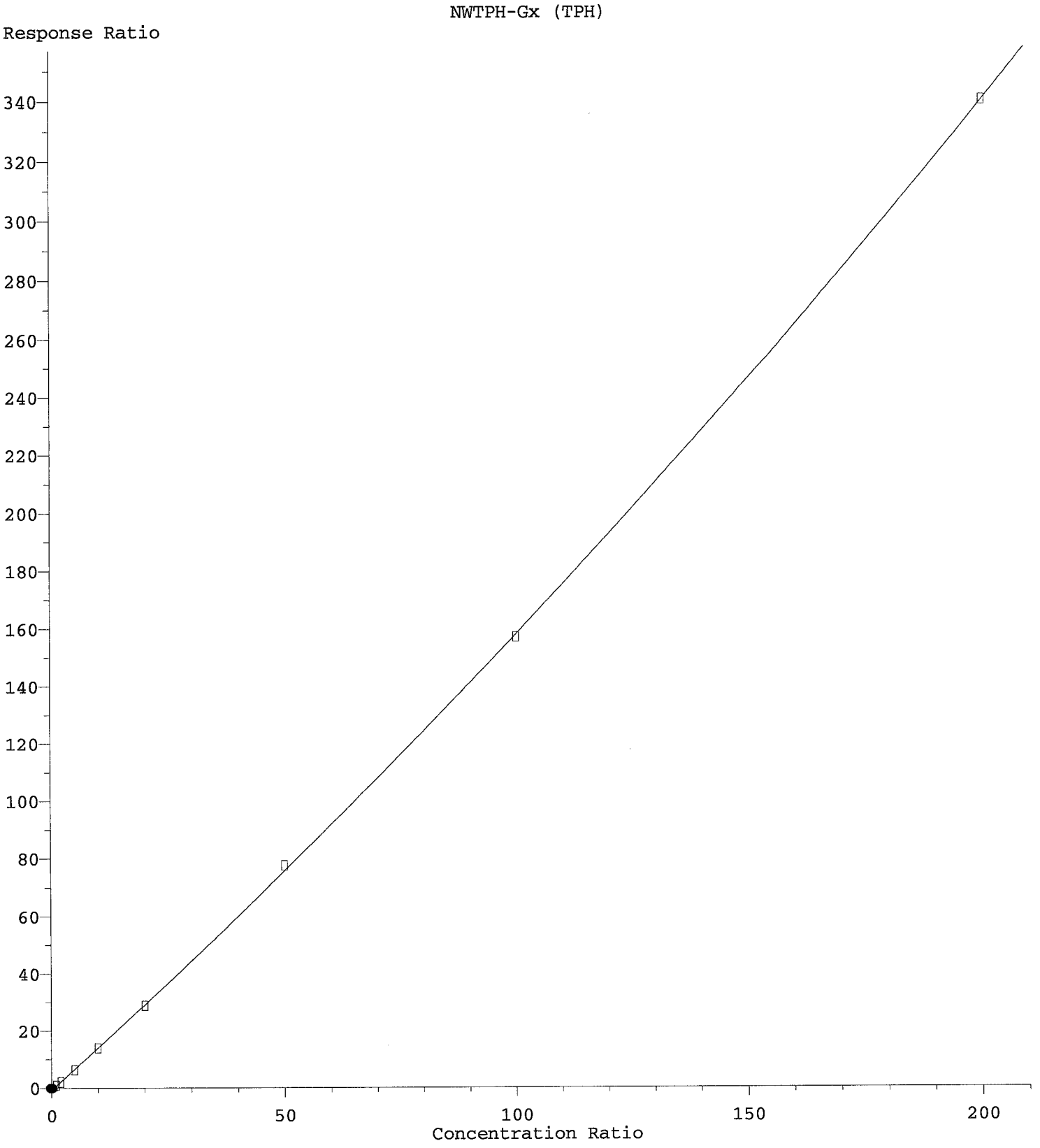
Method Path : C:\msdchem\1\methods\
Method File : VI191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Oct 25 10:31:05 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.217	1.000	A	2	A	B
2	S	1,4-Difluorobenzene (Sur)	114	6.783	1.091	A	2	A	B
3	S	4-Bromofluorobenzene (Sur)	174	10.974	1.765	A	2	A	B
4	H	NWTPH-Gx (TPH)	TIC	9.890	1.591	Q	0	A	B
5	H	TPHg (C5-C9)	TIC	9.890	1.591	Q	0	A	B
6	H	TPHg (C6-C10)	TIC	9.890	1.591	Q	0	A	B
7	H	CA-LUFT (C5-C12)	TIC	9.890	1.591	Q	0	A	B
8		Benzene (NR)	78	6.120	0.984	A	2	A	B
9	S	Toluene-d8 (NR)	98	8.298	1.335	A	2	A	B
10		Toluene (NR)	91	8.358	1.344	A	2	A	B
11	S	Chlorobenzene-d5 (NR)	117	9.916	1.595	A	2	A	B
12	S	1,4-Dichlorobenzene-d4 (NR)	150	11.850	1.906	A	2	A	B
13		Naphthalene (NR)	128	13.627	2.192	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VI191025G.M Fri Oct 25 10:41:12 2019

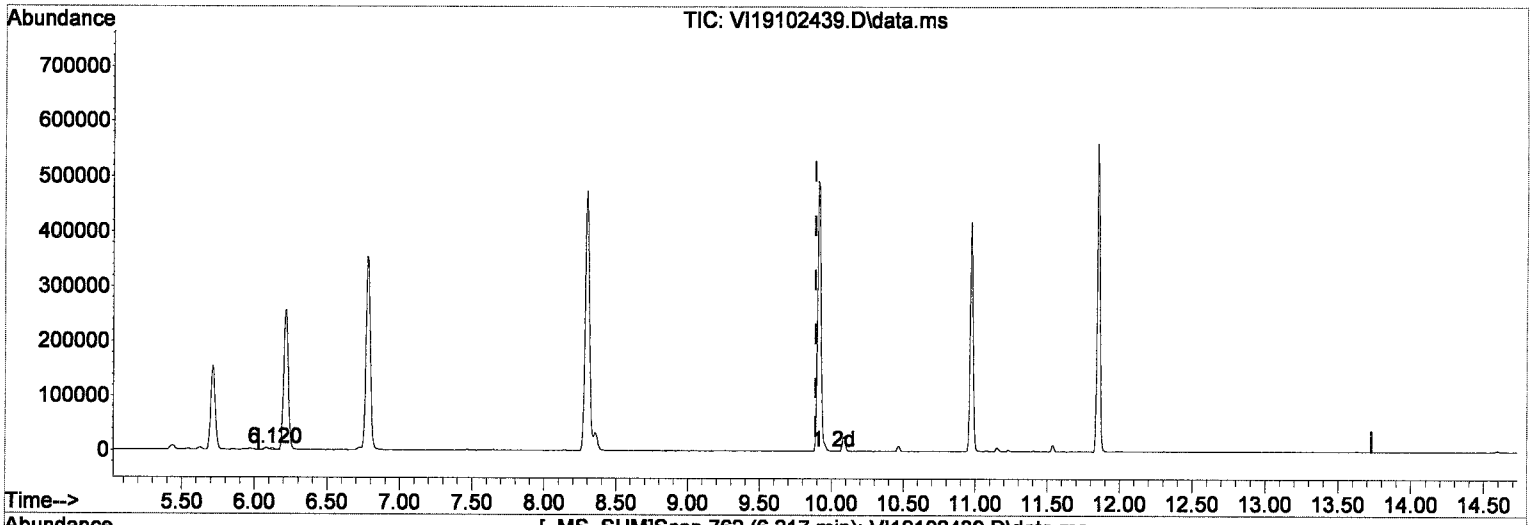


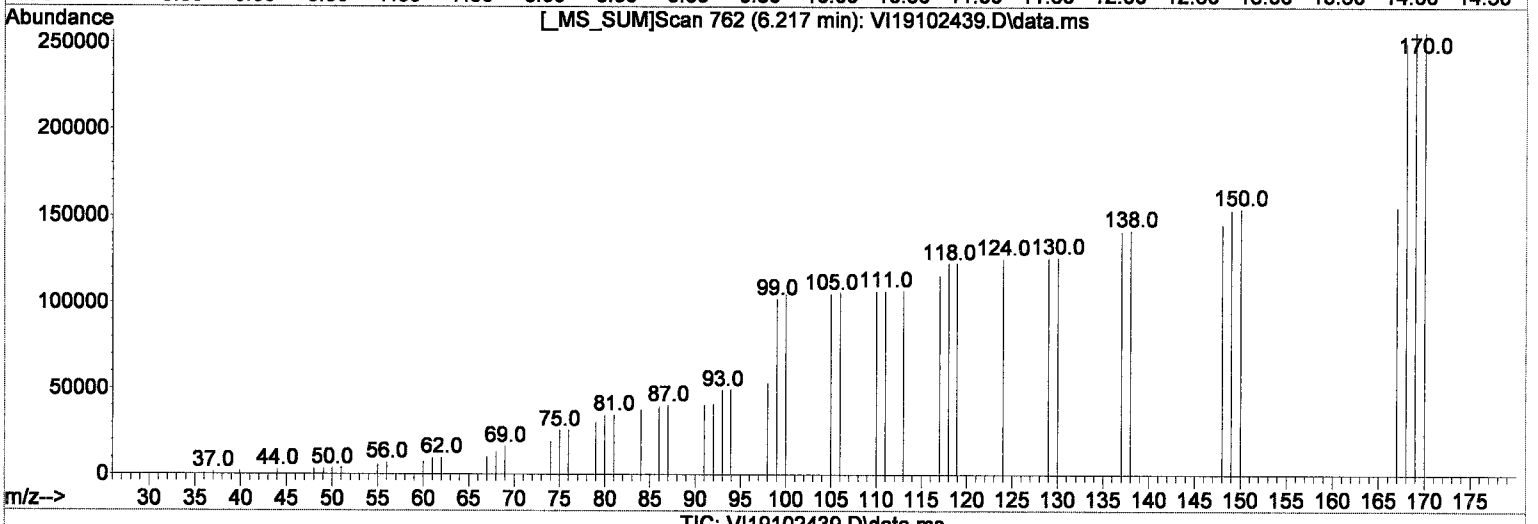
R = 1.17e-003 A*A + 1.47e+000 A - 7.24e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025G.M
Calibration Table Last Updated: Fri Oct 25 10:31:34 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:32:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





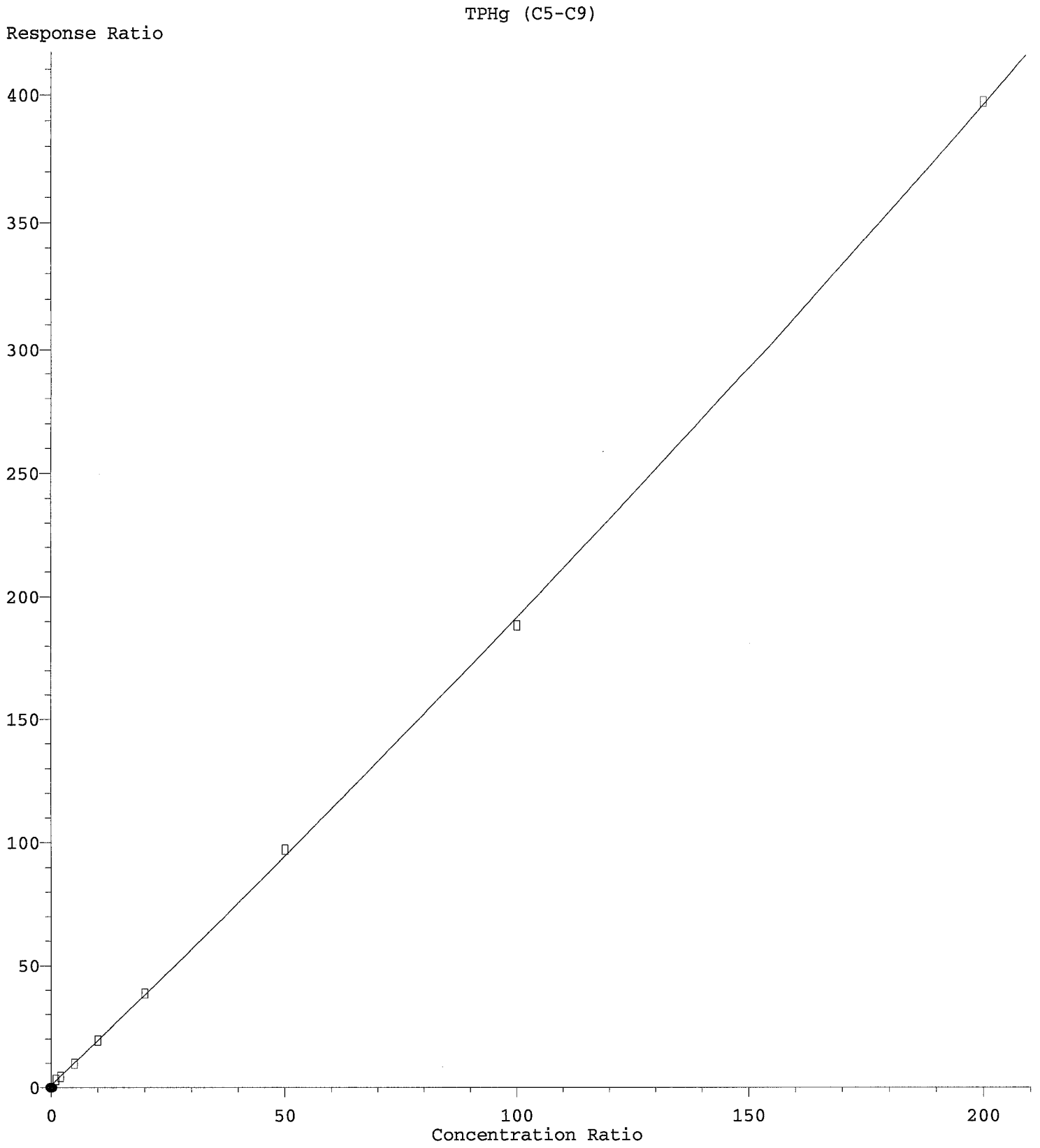
TIC: VI19102439.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 25.47 ug/L m

response 5099

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

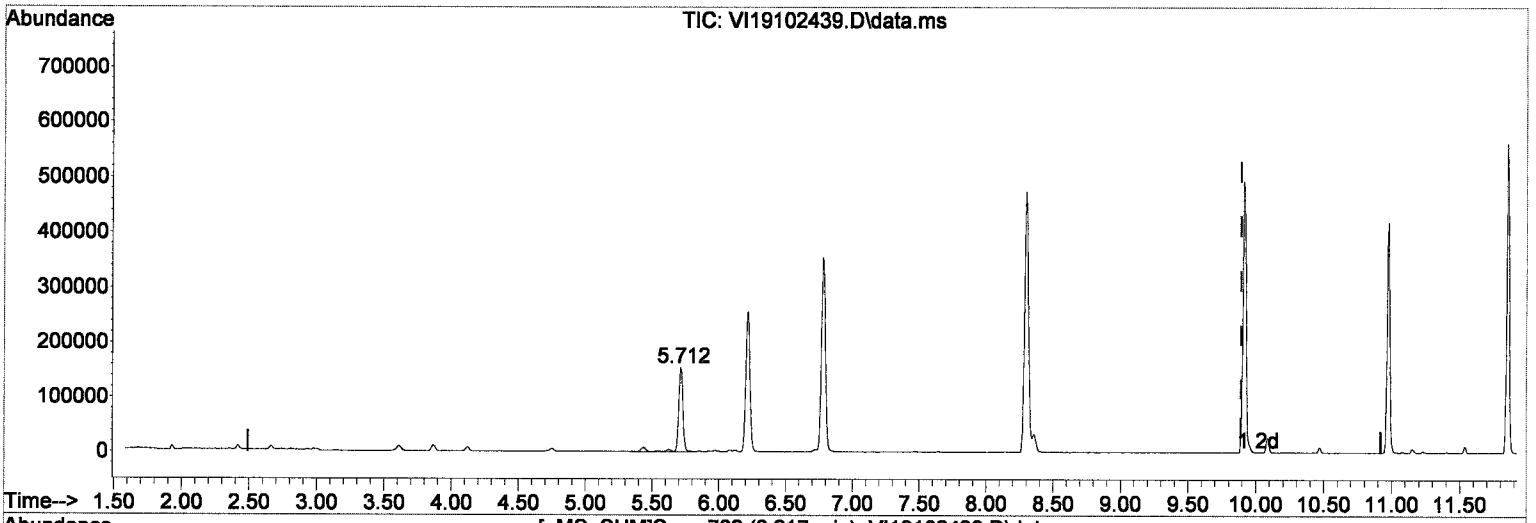


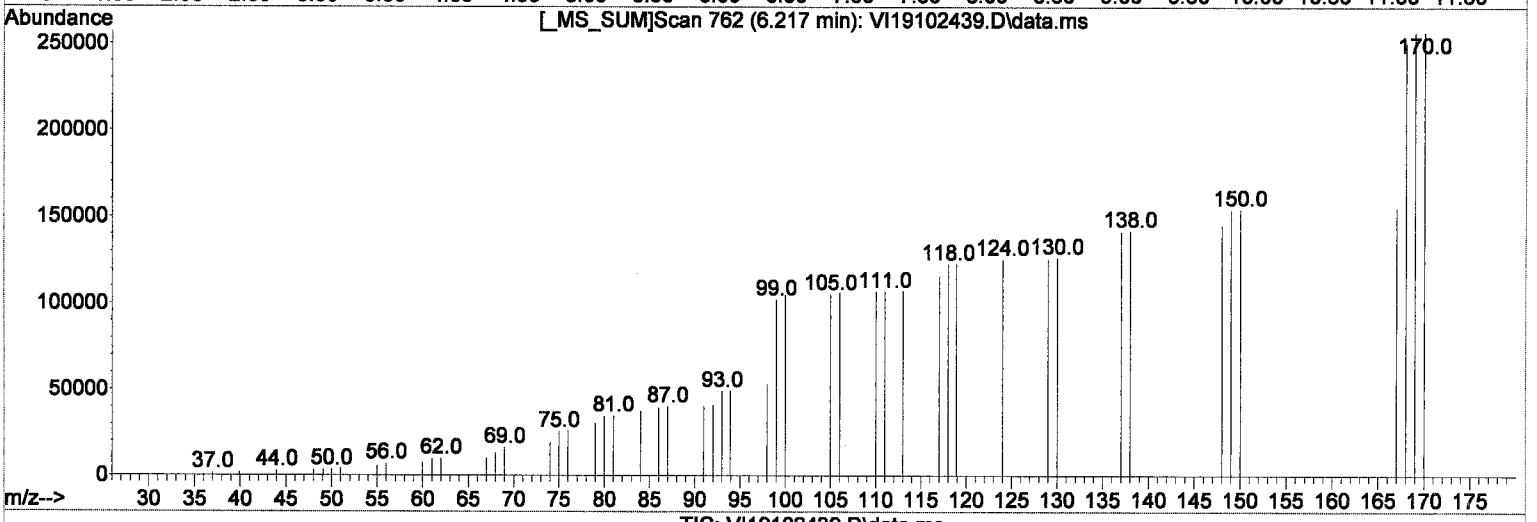
R = 6.91e-004 A*A + 1.84e+000 A + 1.03e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025G.M
Calibration Table Last Updated: Fri Oct 25 10:31:34 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:32:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





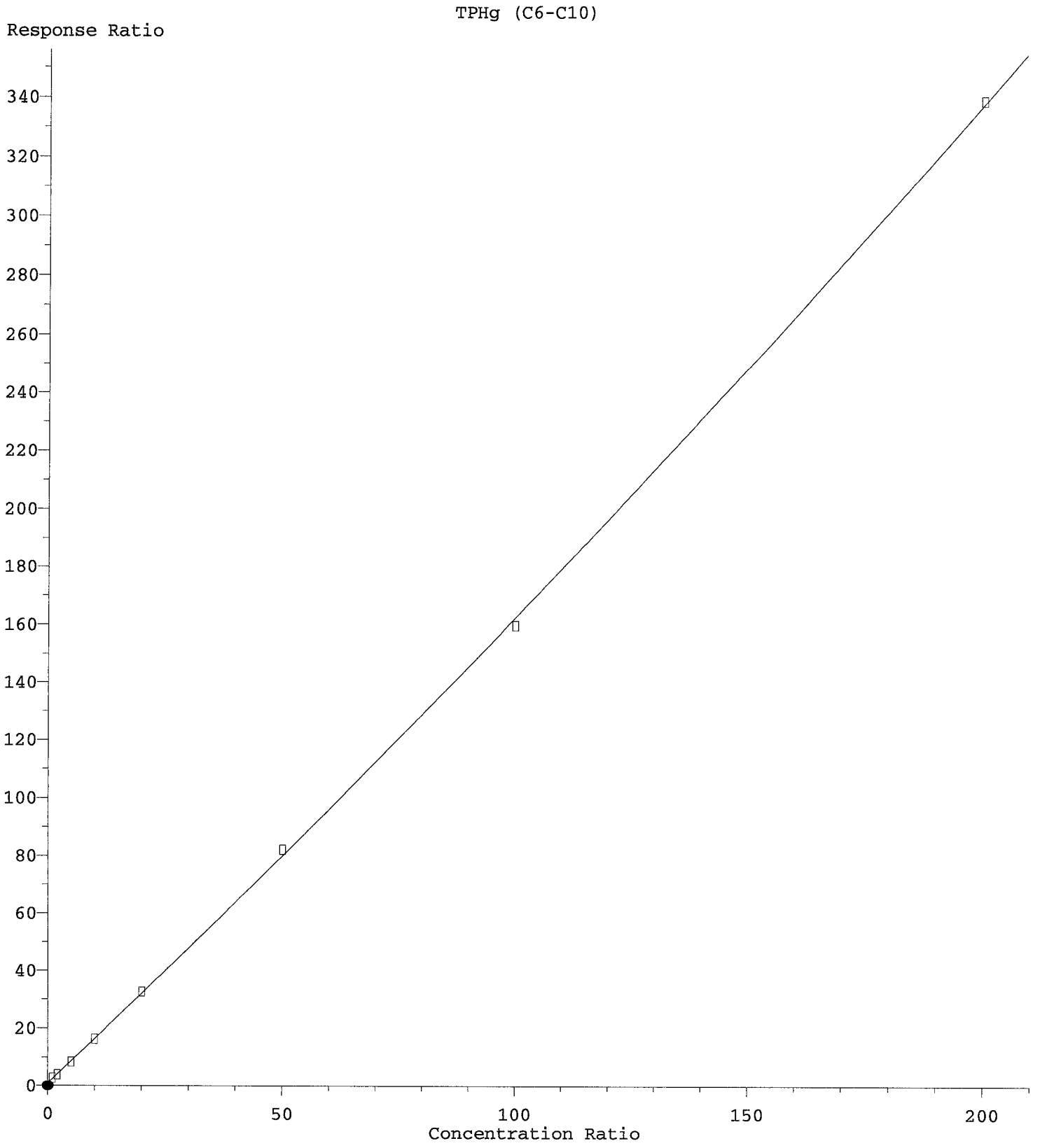
TIC: VI19102439.D\data.ms

(5) TPHg (C5-C9) (H)

9.890min (0.000) 19.12 ug/L m

response 362226

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

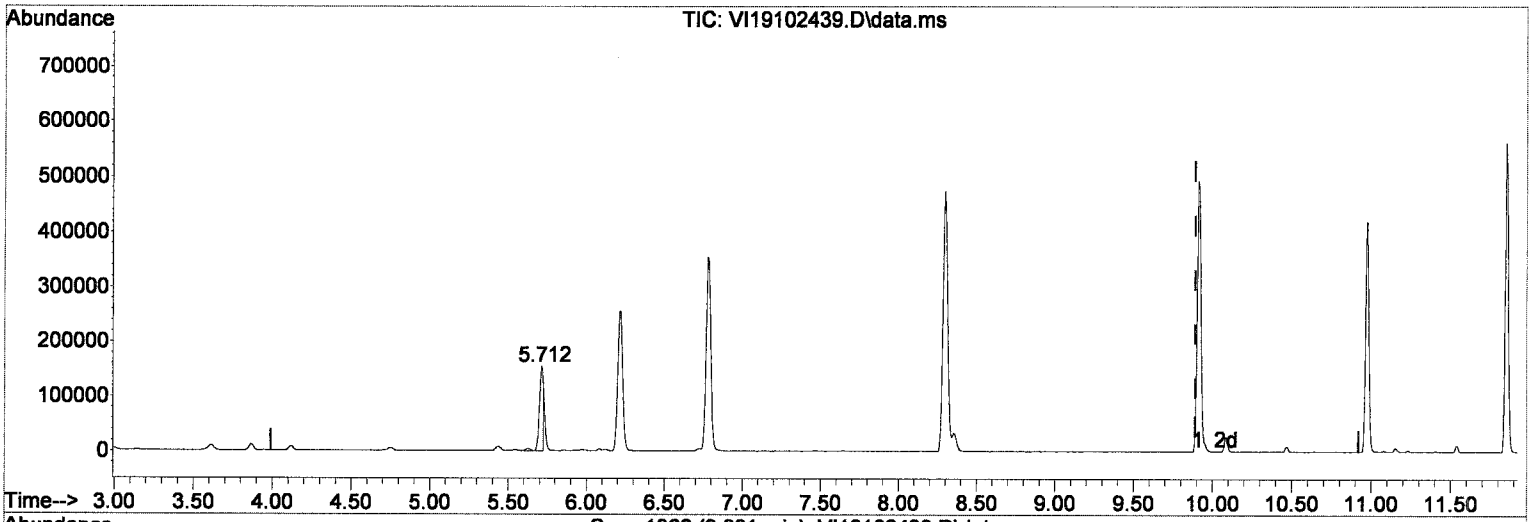


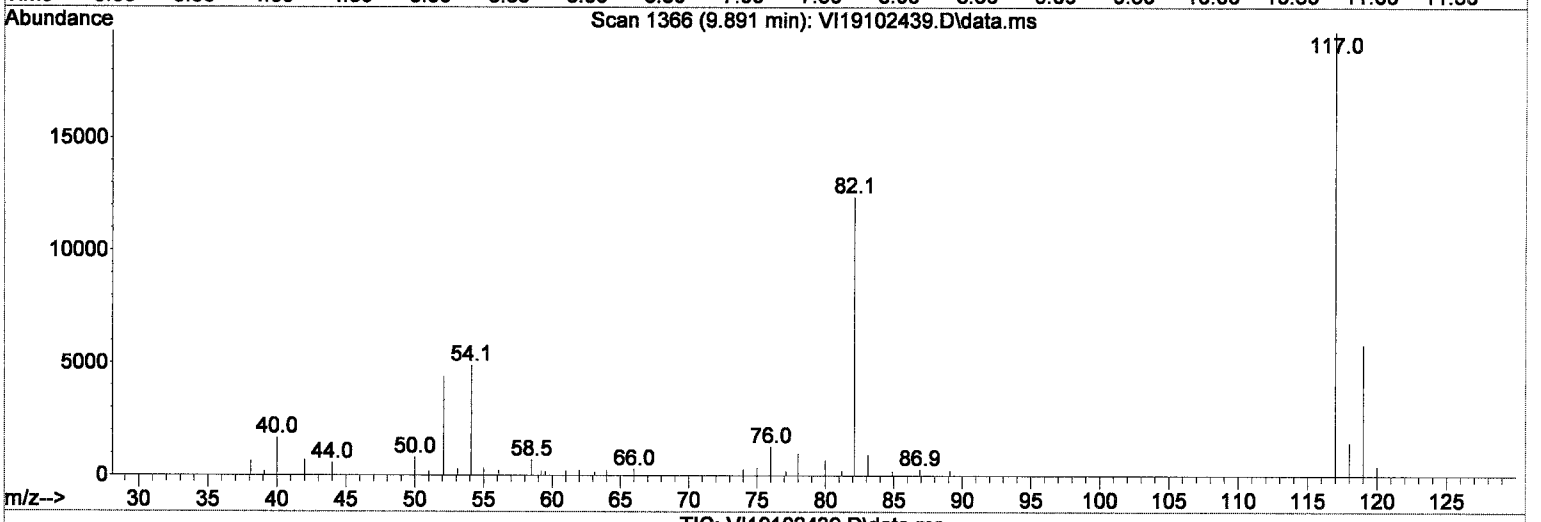
R = 6.87e-004 A*A + 1.55e+000 A + 9.51e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025G.M
Calibration Table Last Updated: Fri Oct 25 10:31:34 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:32:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





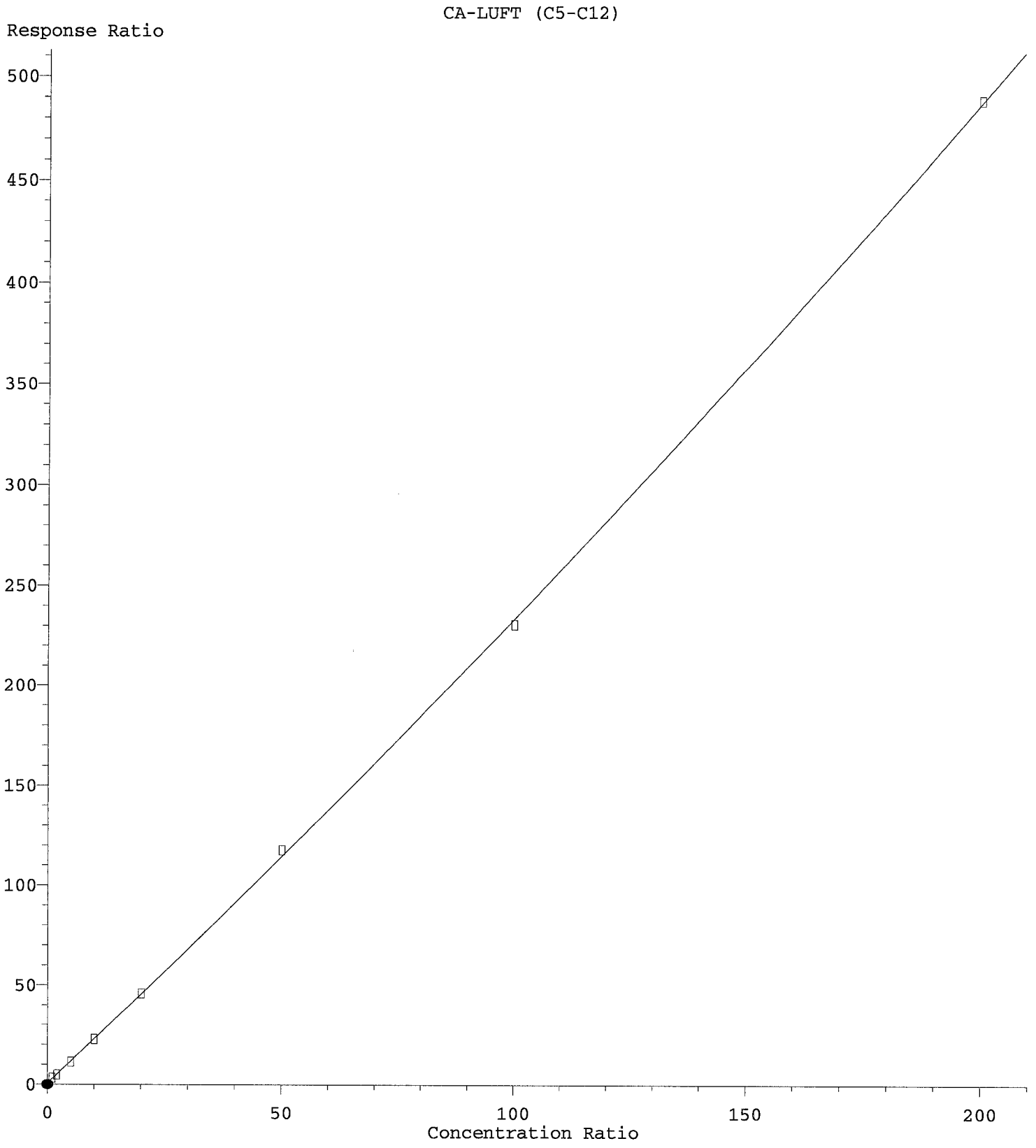
TIC: VI19102439.D\data.ms

(6) TPHg (C6-C10) (H)

9.890min (0.000) 12.28 ug/L m

response 278598

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

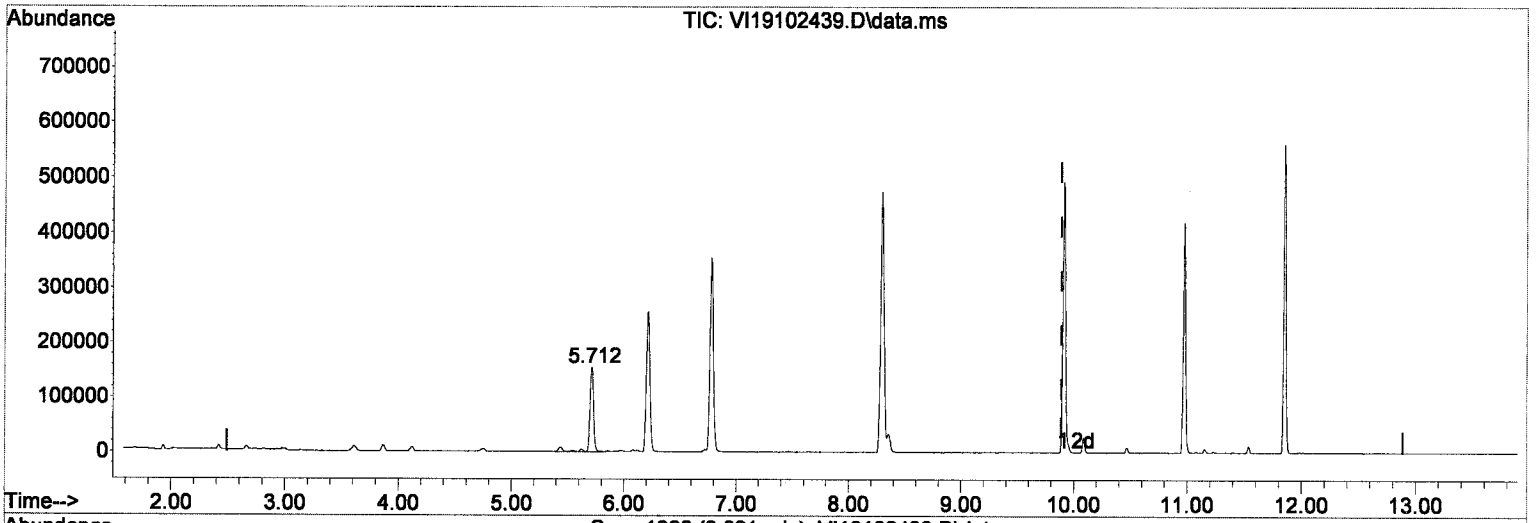


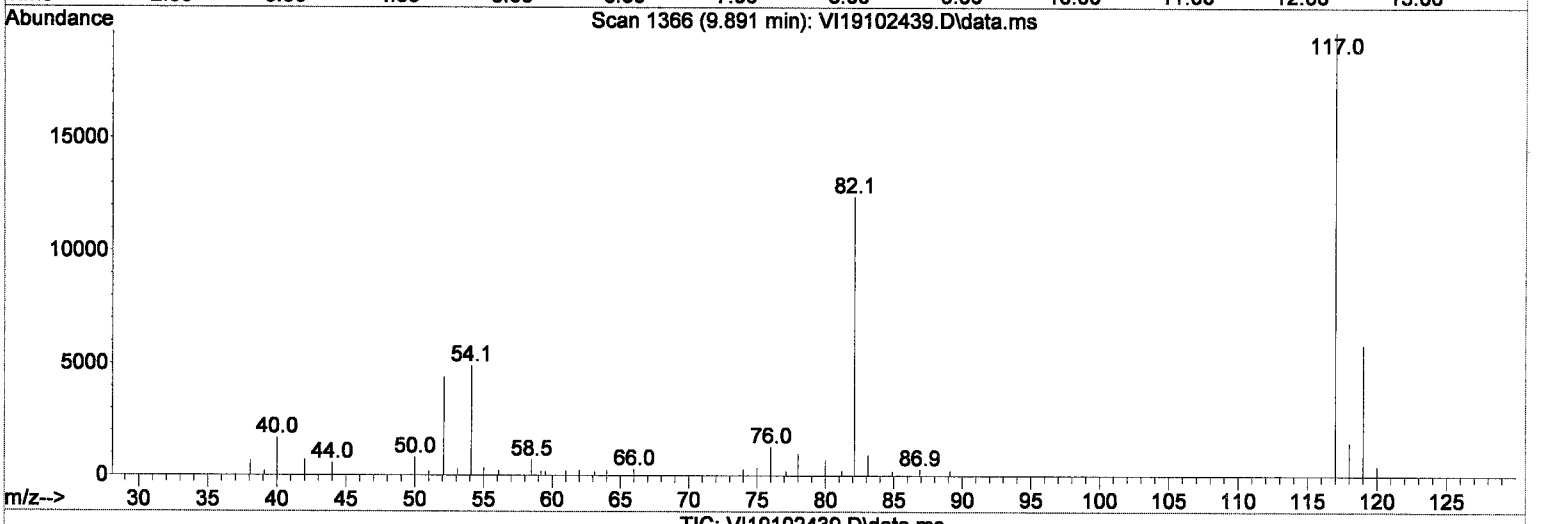
R = 1.05e-003 A*A + 2.22e+000 A + 7.45e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VI191025G.M
Calibration Table Last Updated: Fri Oct 25 10:31:34 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\REQUANT\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:32:52 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19102439.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.890min (0.000) 22.21 ug/L m

response 362637

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102453.D
Acq On : 25 Oct 2019 10:40 am
Operator : MM
Sample : 9J24043-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:55:48 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	103	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.705	0.6	103	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	48.785	2.4	102	0.00
4	H	NWTPH-Gx (TPH)	500.000	512.008	-2.4	108	0.00
5	H	TPHg (C5-C9)	500.000	489.707	2.1	102	0.00
6	H	TPHg (C6-C10)	500.000	503.040	-0.6	105	0.00
7	H	CA-LUFT (C5-C12)	500.000	493.527	1.3	104	0.00
8		Benzene (NR)	-1.000	0.000	0.0	100	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	102	0.00
10		Toluene (NR)	-1.000	0.000	0.0	103	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	103	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	100	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	114	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J24043

Analysis Included

8015D-Mod Gasoline (C6-C10) by GC/MS
CA LUFT GRO
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed
9J24043-TUN2	MS Tune	Water		A19I040	10/24/2019 11:59:00PM
9J24043-ICB2	Initial Cal Blank	Water		A19I040	10/25/2019 1:19:00AM
9J24043-CALC	Cal Standard	Water	A19J388	"	10/25/2019 1:46:00AM
9J24043-CALD	Cal Standard	Water	A19J389	"	10/25/2019 2:13:00AM
9J24043-CALE	Cal Standard	Water	A19J390	"	10/25/2019 2:40:00AM
9J24043-CALF	Cal Standard	Water	A19J391	"	10/25/2019 3:07:00AM
9J24043-CALH	Cal Standard	Water	A19J393	"	10/25/2019 4:00:00AM
9J24043-CALI	Cal Standard	Water	A19J394	"	10/25/2019 4:27:00AM
9J24043-CALJ	Cal Standard	Water	A19J395	"	10/25/2019 4:54:00AM
9J24043-CALG	Cal Standard	Water	A19J392	"	10/25/2019 10:13:00AM
9J24043-ICV3	Initial Cal Check	Water	A19G350	"	10/25/2019 10:40:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9J2503** Instrument: **VOA-GCMS9**

8015D-Mod Gasoline (C6-C10 Sequence: **9J24043** Matrix: **Water**

9J24043-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J24043-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J24043

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9J2503** Instrument: **VOA-GCMS9**

NWTPH-Gx Sequence: **9J24043** Matrix: **Water**

9J24043-ICV3	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

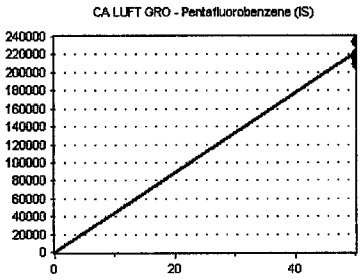
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VI191025W.M VI191025G.M**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

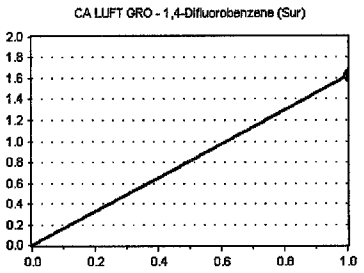


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	209290	4185.800	6.22
9J24043-CALD	50	209478	4189.560	6.22
9J24043-CALE	50	220921	4418.420	6.22
9J24043-CALF	50	214780	4295.600	6.22
9J24043-CALG	50	234293	4685.860	6.22
9J24043-CALH	50	216435	4328.700	6.22
9J24043-CALI	50	233849	4676.980	6.22
9J24043-CALJ	50	234183	4683.660	6.22

AVE RF **4433.073** RF RSD **4.95** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

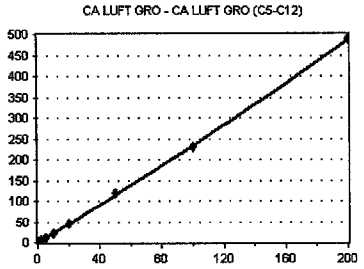


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	341977	1.634	6.78
9J24043-CALD	50	342473	1.635	6.78
9J24043-CALE	50	357958	1.620	6.78
9J24043-CALF	50	347086	1.616	6.78
9J24043-CALG	50	376297	1.606	6.78
9J24043-CALH	50	352248	1.628	6.78
9J24043-CALI	50	379658	1.624	6.78
9J24043-CALJ	50	384961	1.644	6.78

AVE RF **1.626** RF RSD **0.73** AVE RT **6.78**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

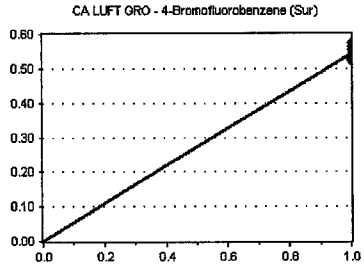


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	681991	3.259	9.89
9J24043-CALD	100	1014687	2.422	9.89
9J24043-CALE	250	2493143	2.257	9.89
9J24043-CALF	500	4877141	2.271	9.89
9J24043-CALG	1000	1.073362E+07	2.291	9.89
9J24043-CALH	2500	2.54612E+07	2.353	9.89
9J24043-CALI	5000	5.393736E+07	2.307	9.89
9J24043-CALJ	10000	1.143412E+08	2.441	9.89

AVE RF **2.450** RF RSD **13.62** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	109139	0.521	10.97
9J24043-CALD	50	110020	0.525	10.97
9J24043-CALE	50	116770	0.529	10.97
9J24043-CALF	50	115043	0.536	10.97
9J24043-CALG	50	126230	0.539	10.97
9J24043-CALH	50	120135	0.555	10.97
9J24043-CALI	50	131653	0.563	10.97
9J24043-CALJ	50	134509	0.574	10.97

AVE RF **0.543** RF RSD **3.54** AVE RT **10.97**

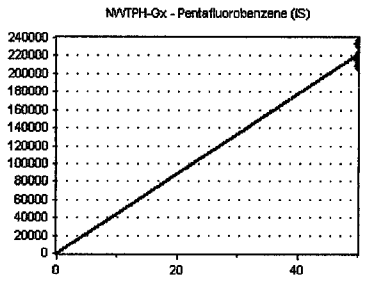
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VI191025W.M VI191025G.M**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

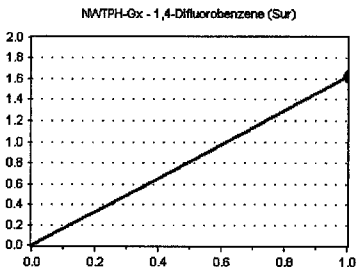


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	209290	4185.800	6.22
9J24043-CALD	50	209478	4189.560	6.22
9J24043-CALE	50	220921	4418.420	6.22
9J24043-CALF	50	214780	4295.600	6.22
9J24043-CALG	50	234293	4685.860	6.22
9J24043-CALH	50	216435	4328.700	6.22
9J24043-CALI	50	233849	4676.980	6.22
9J24043-CALJ	50	234183	4683.660	6.22

AVE RF **4433.073** RF RSD **4.95** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

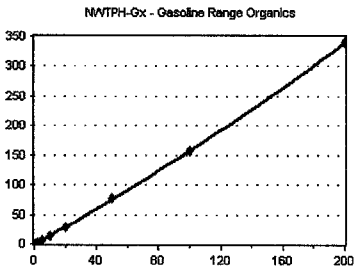


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	341977	1.634	6.78
9J24043-CALD	50	342473	1.635	6.78
9J24043-CALE	50	357958	1.620	6.78
9J24043-CALF	50	347086	1.616	6.78
9J24043-CALG	50	376297	1.606	6.78
9J24043-CALH	50	352248	1.628	6.78
9J24043-CALI	50	379658	1.624	6.78
9J24043-CALJ	50	384961	1.644	6.78

AVE RF **1.626** RF RSD **0.73** AVE RT **6.78**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

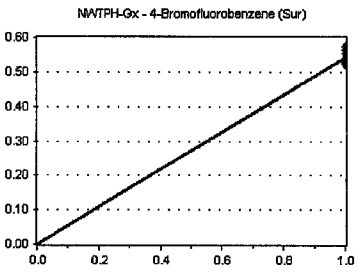


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	193702	0.926	9.89
9J24043-CALD	100	430822	1.028	9.89
9J24043-CALE	250	1374008	1.244	9.89
9J24043-CALF	500	2976997	1.386	9.89
9J24043-CALG	1000	6735895	1.437	9.89
9J24043-CALH	2500	1.67752E+07	1.550	9.89
9J24043-CALI	5000	3.669824E+07	1.569	9.89
9J24043-CALJ	10000	7.956248E+07	1.699	9.89

AVE RF **1.355** RF RSD **19.99** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	109139	0.521	10.97
9J24043-CALD	50	110020	0.525	10.97
9J24043-CALE	50	116770	0.529	10.97
9J24043-CALF	50	115043	0.536	10.97
9J24043-CALG	50	126230	0.539	10.97
9J24043-CALH	50	120135	0.555	10.97
9J24043-CALI	50	131653	0.563	10.97
9J24043-CALJ	50	134509	0.574	10.97

AVE RF **0.543** RF RSD **3.54** AVE RT **10.97**

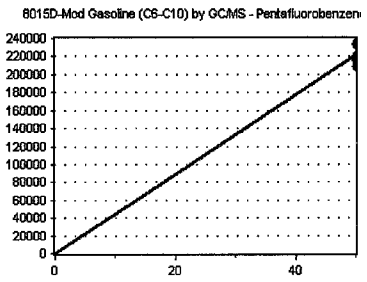
Element Calibration Review Sheet

Calibration ID: **A9J2503** Instrument: **VOA-GCMS9** Calibration Date: **10/25/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **VI191025W.M VI191025G.M**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

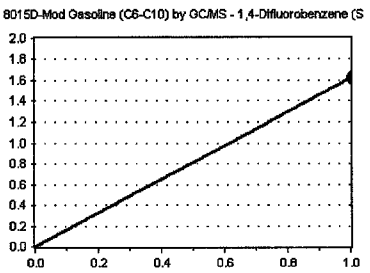


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	209290	4185.800	6.22
9J24043-CALD	50	209478	4189.560	6.22
9J24043-CALE	50	220921	4418.420	6.22
9J24043-CALF	50	214780	4295.600	6.22
9J24043-CALG	50	234293	4685.860	6.22
9J24043-CALH	50	216435	4328.700	6.22
9J24043-CALI	50	233849	4676.980	6.22
9J24043-CALJ	50	234183	4683.660	6.22

AVE RF **4433.073** RF RSD **4.95** AVE RT **6.22**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

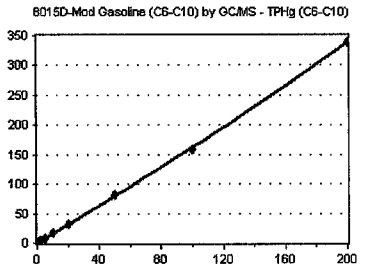


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	341977	1.634	6.78
9J24043-CALD	50	342473	1.635	6.78
9J24043-CALE	50	357958	1.620	6.78
9J24043-CALF	50	347086	1.616	6.78
9J24043-CALG	50	376297	1.606	6.78
9J24043-CALH	50	352248	1.628	6.78
9J24043-CALI	50	379658	1.624	6.78
9J24043-CALJ	50	384961	1.644	6.78

AVE RF **1.626** RF RSD **0.73** AVE RT **6.78**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

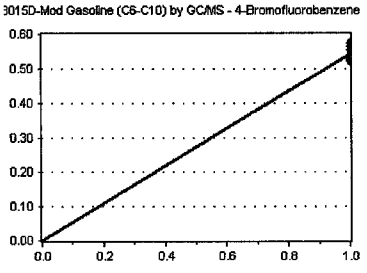


Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	557886	2.666	9.89
9J24043-CALD	100	799328	1.908	9.89
9J24043-CALE	250	1839524	1.665	9.89
9J24043-CALF	500	3507779	1.633	9.89
9J24043-CALG	1000	7648071	1.632	9.89
9J24043-CALH	2500	1.778026E+07	1.643	9.89
9J24043-CALI	5000	3.735262E+07	1.597	9.89
9J24043-CALJ	10000	7.933946E+07	1.694	9.89

AVE RF **1.805** RF RSD **20.00** AVE RT **9.89**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J24043-CALC	50	109139	0.521	10.97
9J24043-CALD	50	110020	0.525	10.97
9J24043-CALE	50	116770	0.529	10.97
9J24043-CALF	50	115043	0.536	10.97
9J24043-CALG	50	126230	0.539	10.97
9J24043-CALH	50	120135	0.555	10.97
9J24043-CALI	50	131653	0.563	10.97
9J24043-CALJ	50	134509	0.574	10.97

AVE RF **0.543** RF RSD **3.54** AVE RT **10.97**

Injection Log

Directory: v:\data\2019-10\9J24043

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	Vi19102414.d	1.	9J24043-IBL1	1X 5mL DI	24 Oct 2019 14:34
2	2	Vi19102415.d	1.	9J24043-TUN1	A19I040 BFB (IS/...	24 Oct 2019 15:01
3	3	Vi19102416.d	1.	9J24043-ICB1	1X 5mL DI	24 Oct 2019 15:28
4	4	Vi19102417.d	1.	9J24043-CAL1	1X 5mL 0.1/0.2...	24 Oct 2019 15:55
5	5	Vi19102418.d	1.	9J24043-CAL2	1X 5mL 0.2/0.4...	24 Oct 2019 16:21
6	6	Vi19102419.d	1.	9J24043-CAL3	1X 5mL 0.4/0.8...	24 Oct 2019 16:48
7	7	Vi19102420.d	1.	9J24043-CAL4	1X 5mL 1/2PPB ...	24 Oct 2019 17:15
8	8	Vi19102421.d	1.	9J24043-CAL5	1X 5mL 2/4PPB ...	24 Oct 2019 17:42
9	9	Vi19102422.d	1.	9J24043-CAL6	1X 5mL 5/10PPB...	24 Oct 2019 18:09
10	10	Vi19102423.d	1.	9J24043-CAL7	1X 5mL 10/20PP...	24 Oct 2019 18:36
11	11	Vi19102424.d	1.	9J24043-CAL8	1X 5mL 20/40PP...	24 Oct 2019 19:03
12	12	Vi19102425.d	1.	9J24043-CAL9	1X 5mL 50/100P...	24 Oct 2019 19:30
13	13	Vi19102426.d	1.	9J24043-IBL2	1X 5mL DI	24 Oct 2019 19:57
14	14	Vi19102427.d	1.	9J24043-CALA	1X 5mL 100/200...	24 Oct 2019 20:24
15	15	Vi19102428.d	1.	9J24043-IBL3	1X 5mL DI	24 Oct 2019 20:51
16	16	Vi19102429.d	1.	9J24043-CALB	1X 5mL 200/400...	24 Oct 2019 21:17
17	17	Vi19102430.d	1.	9J24043-IBL4	1X 5mL DI	24 Oct 2019 21:44
18	18	Vi19102431.d	1.	9J24043-IBL5	1X 5mL DI	24 Oct 2019 22:11
19	19	Vi19102432.d	1.	9J24043-ICV1	1X 5mL 20/40PP...	24 Oct 2019 22:38
20	20	Vi19102433.d	1.	9J24043-ICV2	1X 5mL 5/1250P...	24 Oct 2019 23:05
21	21	Vi19102434.d	1.	9J24043-IBL6	1X 5mL DI	24 Oct 2019 23:32
22	22	Vi19102435.d	1.	9J24043-TUN2	A19I040 BFB (IS/...	24 Oct 2019 23:59
23	23	Vi19102436.d	1.	9J24043-RT1	A18A167 VPH RT STD	25 Oct 2019 00:26
24	24	Vi19102437.d	1.	9J24043-IBL7	1X 5mL DI	25 Oct 2019 00:52
25	25	Vi19102438.d	1.	9J24043-ICB2	1X 5mL DI	25 Oct 2019 01:19
26	26	Vi19102439.d	1.	9J24043-CALC	1X 5mL 50PPB GX	25 Oct 2019 01:46
27	27	Vi19102440.d	1.	9J24043-CALD	1X 5mL 100PPB GX	25 Oct 2019 02:13
28	28	Vi19102441.d	1.	9J24043-CALE	1X 5mL 250PPB GX	25 Oct 2019 02:40
29	29	Vi19102442.d	1.	9J24043-CALF	1X 5mL 500PPB GX	25 Oct 2019 03:07
30	30	Vi19102443.d	1.	9J24043-CALG	1X 5mL 1000PPB GX	25 Oct 2019 03:34
31	31	Vi19102444.d	1.	9J24043-CALH	1X 5mL 2500PPB GX	25 Oct 2019 04:00
32	32	Vi19102445.d	1.	9J24043-CALI	1X 5mL 5000PPB GX	25 Oct 2019 04:27
33	33	Vi19102446.d	1.	9J24043-CALJ	1X 5mL 10000PP...	25 Oct 2019 04:54
34	34	Vi19102447.d	1.	9J24043-IBL8	1X 5mL DI	25 Oct 2019 05:21
35	35	Vi19102448.d	1.	9J24043-IBL9	1X 5mL DI	25 Oct 2019 05:48
36	36	Vi19102449.d	1.	9J24043-ICV3	1X 5mL 500PPB GX	25 Oct 2019 06:15
37	37	Vi19102450.d	1.	9J24043-IBLA	1X 5mL DI	25 Oct 2019 06:42

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102414.D
Acq On : 24 Oct 2019 2:34 pm
Operator : MM
Sample : 9J24043-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

NR

Quant Time: Oct 25 08:52:04 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

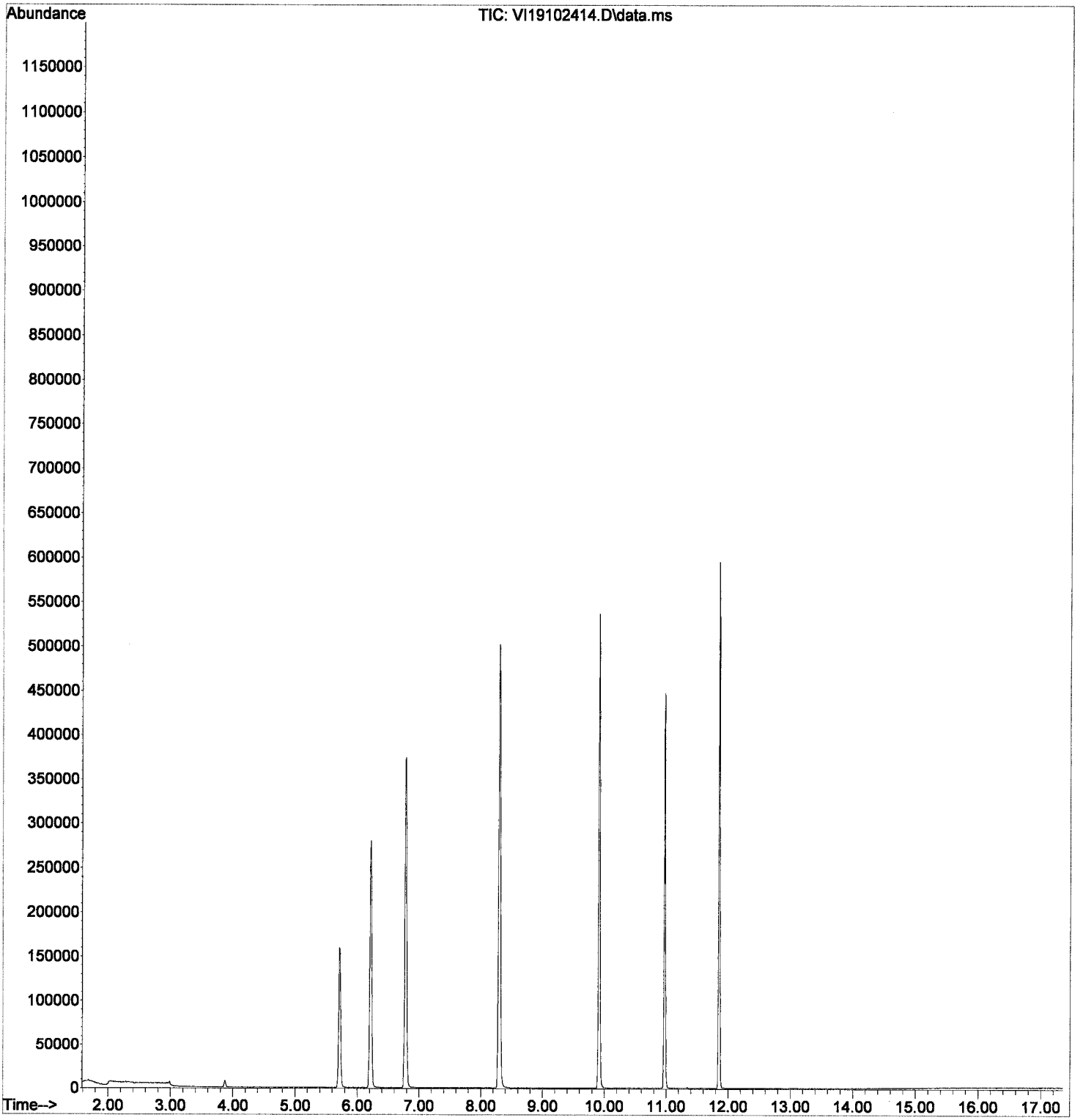
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	116268	50.00	ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.909	117	306026	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	138672	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.712	111	110907	48.55	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	362815	49.39	ug/L	0.00
48) Toluene-d8 (S)	8.297	98	408743	50.89	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	116096	51.81	ug/L	0.00
Target Compounds						Qvalue
6) Chloroethane	2.451	64	166	0.14	ug/L	# 58
14) Methylene Chloride	3.868	84	3943	0.99	ug/L	87
15) Acetone	3.948	43	891	0.87	ug/L	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102414.D
Acq On : 24 Oct 2019 2:34 pm
Operator : MM
Sample : 9J24043-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:04 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

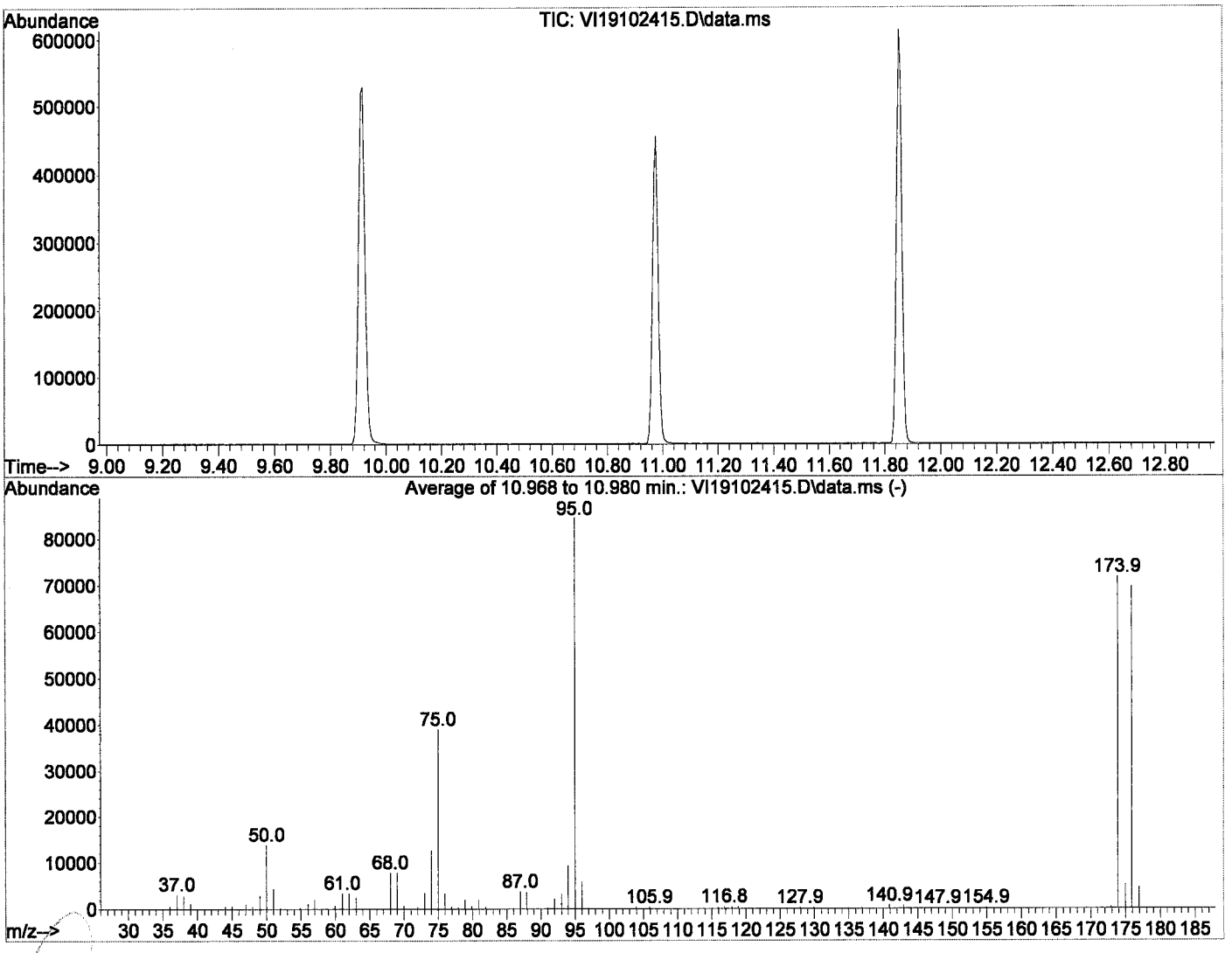


BFB

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102415.D
Acq On : 24 Oct 2019 3:01 pm
Operator : MM
Sample : 9J24043-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VI191025W.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Fri Oct 25 08:32:21 2019



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	117.9	84595	PASS
96	95	5	9	6.8	5736	PASS
173	174	0.00	2	0.4	280	PASS
174	95	50	200	84.8	71757	PASS
175	174	5	9	7.2	5145	PASS
176	174	95	105	97.0	69587	PASS
177	176	5	10	6.5	4525	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102415.D
Acq On : 24 Oct 2019 3:01 pm
Operator : MM
Sample : 9J24043-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:12 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

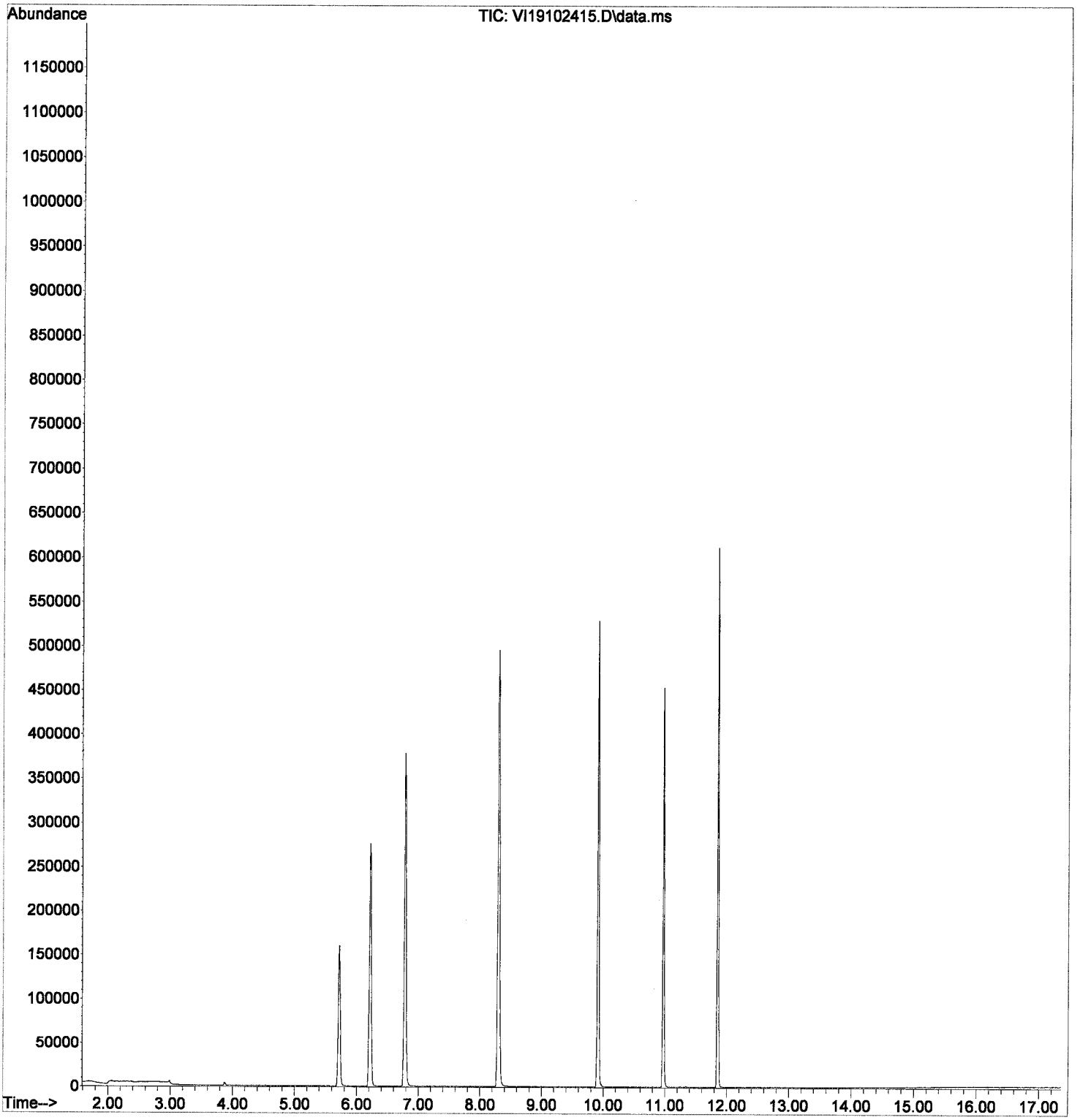
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	115135	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	306446	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	141323	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	110753	48.96	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	360182	49.52	ug/L	0.00
48) Toluene-d8 (S)	8.297	98	404469	50.29	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	115450	50.56	ug/L	0.00
Target Compounds						Qvalue
3) Chloromethane	1.904	50	226	0.09	ug/L #	47
6) Chloroethane	2.463	64	432	0.38	ug/L #	36
14) Methylene Chloride	3.875	84	1793	Below Cal	#	76
15) Acetone	3.948	43	857	0.85	ug/L #	44
19) tert-Butanol (TBA)	4.307	59	115	0.26	ug/L	46

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102415.D
Acq On : 24 Oct 2019 3:01 pm
Operator : MM
Sample : 9J24043-TUN1
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:12 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102416.D
Acq On : 24 Oct 2019 3:28 pm
Operator : MM
Sample : 9J24043-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

10/25/19

Quant Time: Oct 25 08:52:24 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

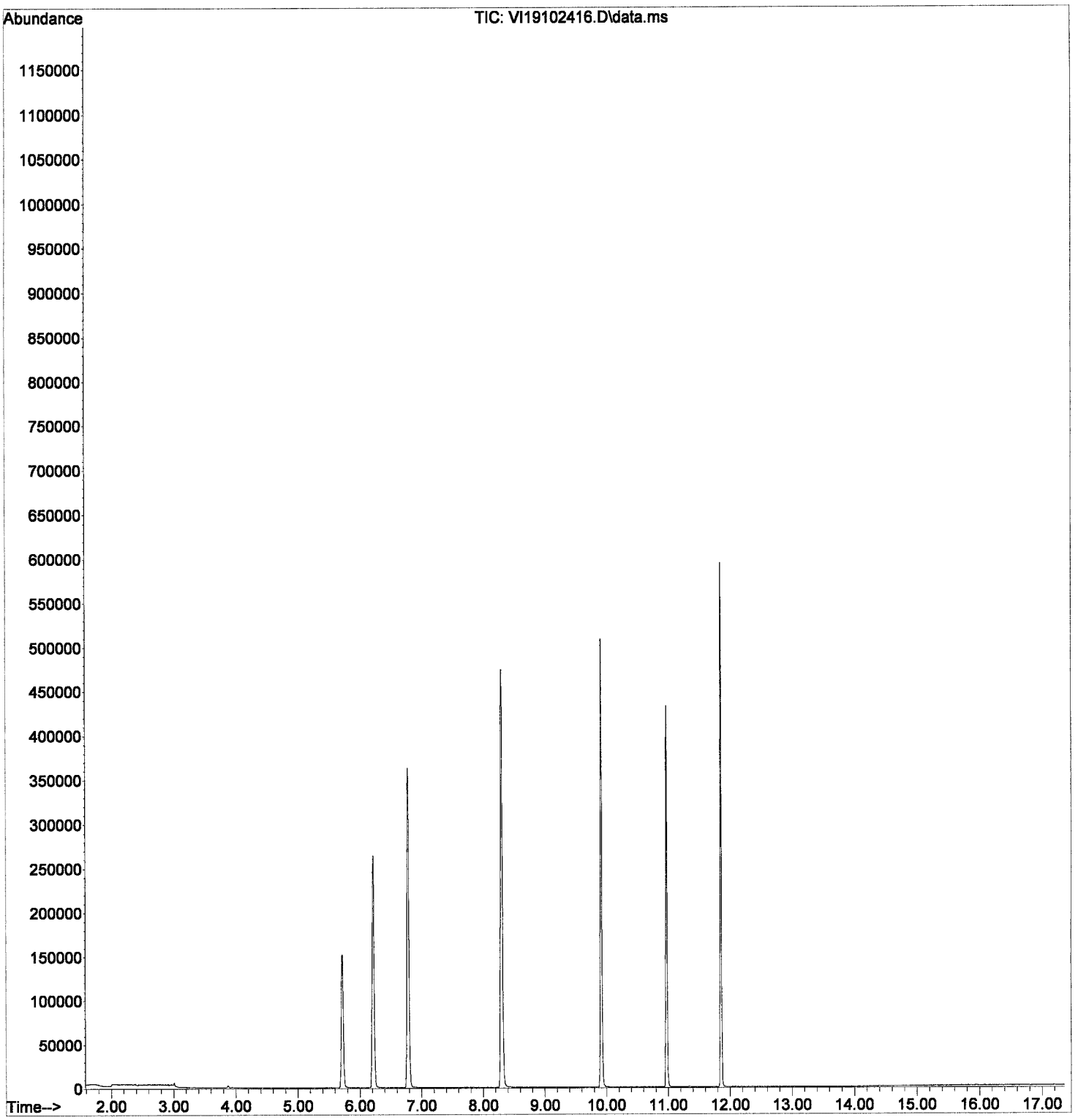
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.217	99	109157	50.00 ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.916	117	292802	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	134268	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.712	111	106415	49.62 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.782	114	343590	49.82 ug/L	0.00
48) Toluene-d8 (S)	8.297	98	387024	50.36 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	109949	50.68 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.897	50	228	0.10 ug/L #	47
6) Chloroethane	2.530	64	212	0.19 ug/L #	36
14) Methylene Chloride	3.868	84	1359	Below Cal	85
15) Acetone	3.948	43	763	0.80 ug/L #	44

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102416.D
Acq On : 24 Oct 2019 3:28 pm
Operator : MM
Sample : 9J24043-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:24 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102417.D
Acq On : 24 Oct 2019 3:55 pm
Operator : MM
Sample : 9J24043-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:17:09 2019
Quant Method : C:\msdchem\1\methods\~~VI191025W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	116102	50.00	ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.909	117	307577	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	139681	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.712	111	111441	46.79	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	364447	54.80	ug/L	0.00
48) Toluene-d8 (S)	8.297	98	406288	51.17	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	116090	51.67	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	1.897	50	479	0.18	ug/L	91
4) Vinyl Chloride	0.000		0	N.D.	d	
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	0.000		0	N.D.	d	
8) Ethanol	0.000		0	N.D.	d	
9) 1,1-Dichloroethene	0.000		0	N.D.	d	
10) Carbon Disulfide	0.000		0	N.D.	d	
11) Freon 113	0.000		0	N.D.		
12) Iodomethane	0.000		0	N.D.		
13) Acrolein	0.000		0	N.D.		
14) Methylene Chloride	3.875	84	2024	Below Cal		84
15) Acetone	0.000		0	N.D.	d	
16) t-1,2-Dichloroethene	0.000		0	N.D.		
17) n-Hexane	0.000		0	N.D.		
18) Methyl-tert-butyl-ether	0.000		0	N.D.	d	
19) tert-Butanol (TBA)	4.300	59	2472	6.89	ug/L	83
20) Diisopropyl ether (DIPE)	0.000		0	N.D.		
21) 1,1-Dichloroethane	0.000		0	N.D.	d	
22) Acrylonitrile	0.000		0	N.D.		
23) Ethyl-tert-butyl ether...	0.000		0	N.D.		
24) Vinyl Acetate	0.000		0	N.D.		
25) c-1,2-Dichloroethene	0.000		0	N.D.		
26) 2,2-Dichloropropane	0.000		0	N.D.		
27) Bromochloromethane	0.000		0	N.D.		
28) Chloroform	0.000		0	N.D.		
29) Carbon Tetrachloride	0.000		0	N.D.		
30) Tetrahydrofuran	0.000		0	N.D.		
31) 1,1,1-Trichloroethane	0.000		0	N.D.		
33) 1,1-Dichloropropene	0.000		0	N.D.		
34) 2-Butanone (MEK)	0.000		0	N.D.	d	
35) Benzene	6.132	78	917	0.12	ug/L	55
36) tert-Amyl methyl ether...	0.000		0	N.D.		
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d	
38) iso-Butyl Alcohol	0.000		0	N.D.		
40) Trichloroethene (TCE)	0.000		0	N.D.		
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.		
42) Dibromomethane	0.000		0	N.D.		
43) 1,2-Dichloropropane	0.000		0	N.D.		
44) Bromodichloromethane	0.000		0	N.D.		
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
47) c-1,3-Dichloropropene	0.000		0	N.D.		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102417.D
Acq On : 24 Oct 2019 3:55 pm
Operator : MM
Sample : 9J24043-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:17:09 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.358	91	978	0.11	ug/L	85
50) Tetrachloroethene (PCE)	0.000		0	N.D.		
51) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d	
52) t-1,3-Dichloropropene	0.000		0	N.D.		
53) 1,1,2-Trichloroethane	0.000		0	N.D.		
54) Dibromochloromethane	0.000		0	N.D.		
55) 1,3-Dichloropropane	0.000		0	N.D.	d	
56) 1,2-Dibromoethane (EDB)	0.000		0	N.D.		
57) 2-Hexanone	0.000		0	N.D.		
58) Chlorobenzene	9.934	112	480	0.09	ug/L #	35
59) Ethylbenzene	9.952	91	942	0.10	ug/L	91
60) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.		
61) m,p-Xylenes (2)	10.086	91	1368	0.27	ug/L	84
62) o-Xylene	10.469	91	585	0.15	ug/L	89
63) Styrene	0.000		0	N.D.	d	
64) Bromoform	0.000		0	N.D.		
65) Isopropylbenzene	0.000		0	N.D.	d	
68) Bromobenzene	11.059	156	124	0.06	ug/L #	82
69) n-Propylbenzene	11.078	91	873	0.10	ug/L	58
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.		
71) 2-Chlorotoluene	0.000		0	N.D.		
72) 1,3,5-Trimethylbenzene	11.230	105	556	0.10	ug/L	92
73) 1,2,3-Trichloropropane	0.000		0	N.D.		
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.		
75) 4-Chlorotoluene	0.000		0	N.D.	d	
76) tert-Butylbenzene	0.000		0	N.D.	d	
77) 1,2,4-Trimethylbenzene	11.540	105	536	0.17	ug/L	80
78) sec-Butylbenzene	0.000		0	N.D.	d	
79) 4-Isopropyltoluene	11.728	119	481	0.20	ug/L	68
80) 1,3-Dichlorobenzene	0.000		0	N.D.	d	
81) 1,4-Dichlorobenzene	11.868	146	311	0.08	ug/L #	41
82) n-Butylbenzene	12.045	91	379	0.08	ug/L	81
83) 1,2-Dichlorobenzene	0.000		0	N.D.	d	
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.		
85) Hexachlorobutadiene	0.000		0	N.D.		
86) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
87) Naphthalene	0.000		0	N.D.	d	
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102417.D
Acq On : 24 Oct 2019 3:55 pm
Operator : MM
Sample : 9J24043-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:12 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	116102	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.909	117	307577	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	139681	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	111441	46.79	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	364447	54.80	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	406288	51.17	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	116090	51.67	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.			
3) Chloromethane	1.897	50	479	0.18	ug/L		91
4) Vinyl Chloride	2.001	62	158	0.07	ug/L	#	50
5) Bromomethane	2.372	96	279	0.15	ug/L	#	64
6) Chloroethane	2.506	64	114	0.09	ug/L	#	61
7) Trichlorofluoromethane	2.676	101	188	0.05	ug/L	#	27
8) Ethanol	3.236	45	213	4.59	ug/L	#	29
9) 1,1-Dichloroethene	3.236	61	133	0.05	ug/L	#	28
10) Carbon Disulfide	3.254	76	531	0.11	ug/L		78
11) Freon 113	0.000		0	N.D.			
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	3.875	84	2024	Below Cal			84
15) Acetone	3.948	43	877	0.88	ug/L	#	44
16) t-1,2-Dichloroethene	0.000		0	N.D.			
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.167	73	444	0.08	ug/L		63
19) tert-Butanol (TBA)	4.300	59	2472	6.89	ug/L		83
20) Diisopropyl ether (DIPE)	0.000		0	N.D.			
21) 1,1-Dichloroethane	4.690	63	147	0.04	ug/L	#	48
22) Acrylonitrile	0.000		0	N.D.			
23) Ethyl-tert-butyl ether...	0.000		0	N.D.			
24) Vinyl Acetate	0.000		0	N.D.			
25) c-1,2-Dichloroethene	0.000		0	N.D.			
26) 2,2-Dichloropropane	0.000		0	N.D.			
27) Bromochloromethane	0.000		0	N.D.			
28) Chloroform	0.000		0	N.D.			
29) Carbon Tetrachloride	0.000		0	N.D.			
30) Tetrahydrofuran	0.000		0	N.D.			
31) 1,1,1-Trichloroethane	0.000		0	N.D.			
33) 1,1-Dichloropropene	0.000		0	N.D.			
34) 2-Butanone (MEK)	5.882	43	122	0.08	ug/L		52
35) Benzene	6.132	78	917	0.12	ug/L		55
36) tert-Amyl methyl ether...	0.000		0	N.D.			
37) 1,2-Dichloroethane (EDC)	6.345	62	176	0.05	ug/L		54
38) iso-Butyl Alcohol	0.000		0	N.D.			
40) Trichloroethene (TCE)	0.000		0	N.D.			
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	0.000		0	N.D.			
43) 1,2-Dichloropropane	0.000		0	N.D.			
44) Bromodichloromethane	0.000		0	N.D.			
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
47) c-1,3-Dichloropropene	0.000		0	N.D.			

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102417.D
Acq On : 24 Oct 2019 3:55 pm
Operator : MM
Sample : 9J24043-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:12 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

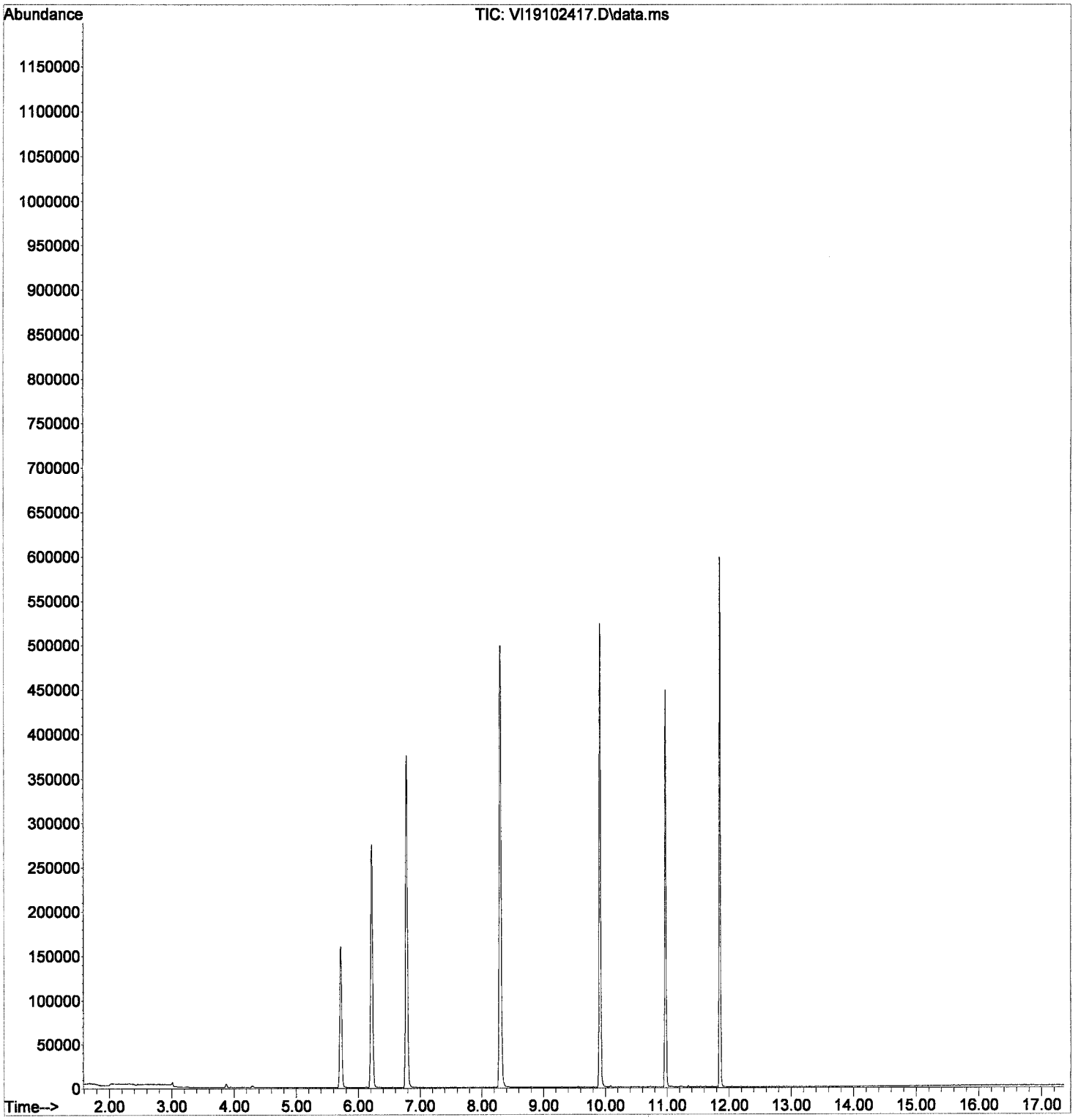
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	978	0.11	ug/L		85
50) Tetrachloroethene (PCE)	0.000		0	N.D.			
51) 4-Methyl-2-Pentanone (...	8.808	43	433	0.16	ug/L	#	43
52) t-1,3-Dichloropropene	0.000		0	N.D.			
53) 1,1,2-Trichloroethane	0.000		0	N.D.			
54) Dibromochloromethane	0.000		0	N.D.			
55) 1,3-Dichloropropane	9.289	76	204	0.06	ug/L	#	27
56) 1,2-Dibromoethane (EDB)	0.000		0	N.D.			
57) 2-Hexanone	0.000		0	N.D.			
58) Chlorobenzene	9.934	112	480	0.09	ug/L	#	35
59) Ethylbenzene	9.952	91	942	0.10	ug/L		91
60) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
61) m,p-Xylenes (2)	10.086	91	1368	0.27	ug/L		84
62) o-Xylene	10.469	91	585	0.15	ug/L		89
63) Styrene	10.524	104	329	0.22	ug/L	#	42
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.731	105	805	0.22	ug/L		54
68) Bromobenzene	11.059	156	124	0.06	ug/L	#	82
69) n-Propylbenzene	11.078	91	873	0.10	ug/L		58
70) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.			
71) 2-Chlorotoluene	0.000		0	N.D.			
72) 1,3,5-Trimethylbenzene	11.230	105	556	0.10	ug/L		92
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	458	0.09	ug/L	#	45
76) tert-Butylbenzene	11.485	91	177	0.06	ug/L	#	74
77) 1,2,4-Trimethylbenzene	11.540	105	536	0.17	ug/L		80
78) sec-Butylbenzene	11.619	105	687	0.10	ug/L		59
79) 4-Isopropyltoluene	11.728	119	481	0.20	ug/L		68
80) 1,3-Dichlorobenzene	11.801	146	273	0.08	ug/L	#	76
81) 1,4-Dichlorobenzene	11.868	146	311	0.08	ug/L	#	41
82) n-Butylbenzene	12.045	91	379	0.08	ug/L		81
83) 1,2-Dichlorobenzene	12.185	146	241	0.07	ug/L	#	25
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	0.000		0	N.D.			
87) Naphthalene	13.633	128	452	0.48	ug/L		81
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.			

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102417.D
Acq On : 24 Oct 2019 3:55 pm
Operator : MM
Sample : 9J24043-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:12 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:19:21 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	114788	50.00	ug/L	0.00
45) Chlorobenzene-d5 (I)	9.916	117	302974	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	135021	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.718	111	110610	46.98	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	359462	54.66	ug/L	0.00
48) Toluene-d8 (S)	8.297	98	403793	51.63	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	113180	52.11	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d	
3) Chloromethane	1.904	50	669	0.25	ug/L	89
4) Vinyl Chloride	2.007	62	406	0.17	ug/L	91
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	0.000		0	N.D.	d	
8) Ethanol	0.000		0	N.D.	d	
9) 1,1-Dichloroethene	0.000		0	N.D.	d	
10) Carbon Disulfide	0.000		0	N.D.	d	
11) Freon 113	0.000		0	N.D.	d	
12) Iodomethane	0.000		0	N.D.		
13) Acrolein	0.000		0	N.D.		
14) Methylene Chloride	3.875	84	2201	Below Cal		87
15) Acetone	3.954	43	1168	1.18	ug/L	93
16) t-1,2-Dichloroethene	4.045	61	360	0.14	ug/L	74
17) n-Hexane	0.000		0	N.D.	d	
18) Methyl-tert-butyl-ether	0.000		0	N.D.	d	
19) tert-Butanol (TBA)	4.300	59	4690	13.22	ug/L	91
20) Diisopropyl ether (DIPE)	0.000		0	N.D.		
21) 1,1-Dichloroethane	0.000		0	N.D.	d	
22) Acrylonitrile	0.000		0	N.D.		
23) Ethyl-tert-butyl ether...	0.000		0	N.D.		
24) Vinyl Acetate	0.000		0	N.D.	d	
25) c-1,2-Dichloroethene	0.000		0	N.D.	d	
26) 2,2-Dichloropropane	0.000		0	N.D.	d	
27) Bromochloromethane	0.000		0	N.D.		
28) Chloroform	5.529	83	587	0.15	ug/L	74
29) Carbon Tetrachloride	0.000		0	N.D.	d	
30) Tetrahydrofuran	0.000		0	N.D.		
31) 1,1,1-Trichloroethane	0.000		0	N.D.	d	
33) 1,1-Dichloropropene	0.000		0	N.D.	d	
34) 2-Butanone (MEK)	0.000		0	N.D.	d	
35) Benzene	6.126	78	1584	0.20	ug/L	77
36) tert-Amyl methyl ether...	0.000		0	N.D.		
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d	
38) iso-Butyl Alcohol	0.000		0	N.D.	d	
40) Trichloroethene (TCE)	6.752	130	372	0.19	ug/L #	75
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.		
42) Dibromomethane	0.000		0	N.D.	d	
43) 1,2-Dichloropropane	0.000		0	N.D.	d	
44) Bromodichloromethane	0.000		0	N.D.	d	
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.		
47) c-1,3-Dichloropropene	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:19:21 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.352	91	1744	0.21	ug/L		93
50) Tetrachloroethene (PCE)	8.808	166	267	0.14	ug/L	#	25
51) 4-Methyl-2-Pentanone (...	8.796	43	890	0.33	ug/L		85
52) t-1,3-Dichloropropene	0.000		0	N.D.	d		
53) 1,1,2-Trichloroethane	9.009	97	288	0.14	ug/L	#	10
54) Dibromochloromethane	0.000		0	N.D.			
55) 1,3-Dichloropropane	9.289	76	568	0.17	ug/L		84
56) 1,2-Dibromoethane (EDB)	9.423	107	279	0.13	ug/L		84
57) 2-Hexanone	0.000		0	N.D.	d		
58) Chlorobenzene	9.928	112	1045	0.19	ug/L	#	25
59) Ethylbenzene	9.952	91	1835	0.21	ug/L		93
60) 1,1,1,2-Tetrachloroethane	9.989	131	129	0.07	ug/L	#	74
61) m,p-Xylenes (2)	10.086	91	2470	0.45	ug/L		93
62) o-Xylene	10.469	91	1221	0.26	ug/L		90
63) Styrene	10.518	104	754	0.31	ug/L		82
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.737	105	1347	0.29	ug/L		86
68) Bromobenzene	11.059	156	432	0.22	ug/L		89
69) n-Propylbenzene	11.078	91	1649	0.19	ug/L		94
70) 1,1,2,2-Tetrachloroethane	11.138	85	305	0.17	ug/L	#	75
71) 2-Chlorotoluene	0.000		0	N.D.	d		
72) 1,3,5-Trimethylbenzene	11.230	105	1127	0.20	ug/L		79
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	1020	0.20	ug/L		80
76) tert-Butylbenzene	11.485	91	602	0.19	ug/L	#	77
77) 1,2,4-Trimethylbenzene	11.540	105	1066	0.27	ug/L		83
78) sec-Butylbenzene	11.619	105	1301	0.19	ug/L		81
79) 4-Isopropyltoluene	11.722	119	919	0.29	ug/L		98
80) 1,3-Dichlorobenzene	11.802	146	629	0.18	ug/L		91
81) 1,4-Dichlorobenzene	11.862	146	725	0.19	ug/L	#	31
82) n-Butylbenzene	12.045	91	805	0.17	ug/L		79
83) 1,2-Dichlorobenzene	12.185	146	624	0.19	ug/L		90
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.347	180	244	0.16	ug/L		66
87) Naphthalene	13.627	128	924	0.58	ug/L		81
88) 1,2,3-Trichlorobenzene	13.791	180	261	0.17	ug/L		76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:16 2019
Quant Method : C:\msdchem\1\methods\VI~~191025W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	114788	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	302974	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	135021	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	110610	46.98	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	359462	54.66	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	403793	51.63	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	113180	52.11	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	202	0.09	ug/L	#	49
3) Chloromethane	1.904	50	669	0.25	ug/L		89
4) Vinyl Chloride	2.007	62	406	0.17	ug/L		91
5) Bromomethane	2.366	96	403	0.22	ug/L	#	8
6) Chloroethane	2.512	64	534	0.44	ug/L	#	62
7) Trichlorofluoromethane	2.670	101	442	0.12	ug/L	#	76
8) Ethanol	3.242	45	573	12.50	ug/L	#	29
9) 1,1-Dichloroethene	3.236	61	354	0.12	ug/L	#	62
10) Carbon Disulfide	3.260	76	912	0.19	ug/L		78
11) Freon 113	3.297	101	119	0.06	ug/L	#	19
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	3.875	84	2201	Below Cal			87
15) Acetone	3.954	43	1168	1.18	ug/L		93
16) t-1,2-Dichloroethene	4.045	61	360	0.14	ug/L		74
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.167	73	1035	0.18	ug/L		63
19) tert-Butanol (TBA)	4.300	59	4690	13.22	ug/L		91
20) Diisopropyl ether (DIPE)	0.000		0	N.D.			
21) 1,1-Dichloroethane	4.690	63	650	0.18	ug/L	#	48
22) Acrylonitrile	0.000		0	N.D.			
23) Ethyl-tert-butyl ether...	0.000		0	N.D.			
24) Vinyl Acetate	4.982	43	476	0.11	ug/L		74
25) c-1,2-Dichloroethene	5.243	61	345	0.12	ug/L	#	70
26) 2,2-Dichloropropane	5.359	77	299	0.12	ug/L	#	30
27) Bromochloromethane	0.000		0	N.D.			
28) Chloroform	5.529	83	587	0.15	ug/L		74
29) Carbon Tetrachloride	5.675	117	123	0.05	ug/L	#	14
30) Tetrahydrofuran	0.000		0	N.D.			
31) 1,1,1-Trichloroethane	5.730	97	415	0.13	ug/L	#	25
33) 1,1-Dichloropropene	5.864	75	388	0.15	ug/L	#	43
34) 2-Butanone (MEK)	5.876	43	395	0.26	ug/L		52
35) Benzene	6.126	78	1584	0.20	ug/L		77
36) tert-Amyl methyl ether...	0.000		0	N.D.			
37) 1,2-Dichloroethane (EDC)	6.351	62	371	0.12	ug/L		54
38) iso-Butyl Alcohol	6.387	43	468	3.43	ug/L		89
40) Trichloroethene (TCE)	6.752	130	372	0.19	ug/L	#	75
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	7.196	93	115	0.08	ug/L	#	2
43) 1,2-Dichloropropane	7.312	63	259	0.12	ug/L	#	35
44) Bromodichloromethane	7.379	83	222	0.08	ug/L	#	27
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.			
47) c-1,3-Dichloropropene	8.097	75	326	0.11	ug/L	#	31

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:16 2019
Quant Method : C:\msdchem\1\methods\~~VI191025W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

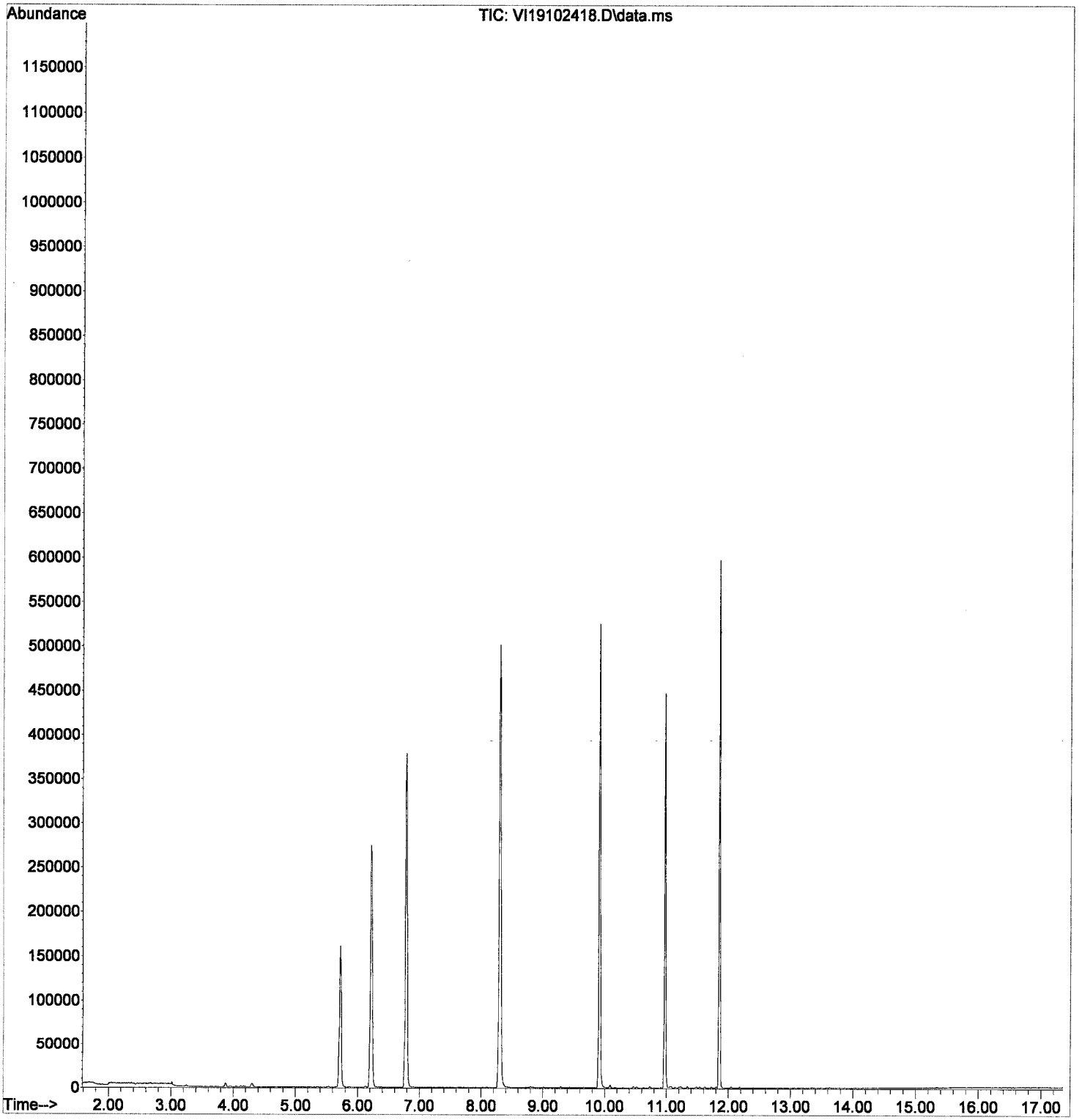
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.352	91	1744	0.21	ug/L		93
50) Tetrachloroethene (PCE)	8.808	166	267	0.14	ug/L	#	25
51) 4-Methyl-2-Pentanone (...	8.796	43	890	0.33	ug/L		85
52) t-1,3-Dichloropropene	8.839	75	300	0.11	ug/L	#	45
53) 1,1,2-Trichloroethane	9.009	97	288	0.14	ug/L	#	10
54) Dibromochloromethane	0.000		0	N.D.			
55) 1,3-Dichloropropane	9.289	76	568	0.17	ug/L		84
56) 1,2-Dibromoethane (EDB)	9.423	107	279	0.13	ug/L		84
57) 2-Hexanone	9.666	43	516	0.27	ug/L	#	35
58) Chlorobenzene	9.928	112	1045	0.19	ug/L	#	25
59) Ethylbenzene	9.952	91	1835	0.21	ug/L		93
60) 1,1,1,2-Tetrachloroethane	9.989	131	129	0.07	ug/L	#	74
61) m,p-Xylenes (2)	10.086	91	2470	0.45	ug/L		93
62) o-Xylene	10.469	91	1221	0.26	ug/L		90
63) Styrene	10.518	104	754	0.31	ug/L		82
64) Bromoform	0.000		0	N.D.			
65) Isopropylbenzene	10.737	105	1347	0.29	ug/L		86
68) Bromobenzene	11.059	156	432	0.22	ug/L		89
69) n-Propylbenzene	11.078	91	1649	0.19	ug/L		94
70) 1,1,2,2-Tetrachloroethane	11.138	85	305	0.17	ug/L	#	75
71) 2-Chlorotoluene	11.211	126	229	0.14	ug/L	#	88
72) 1,3,5-Trimethylbenzene	11.230	105	1127	0.20	ug/L		79
73) 1,2,3-Trichloropropane	0.000		0	N.D.			
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	1020	0.20	ug/L		80
76) tert-Butylbenzene	11.485	91	602	0.19	ug/L	#	77
77) 1,2,4-Trimethylbenzene	11.540	105	1066	0.27	ug/L		83
78) sec-Butylbenzene	11.619	105	1301	0.19	ug/L		81
79) 4-Isopropyltoluene	11.722	119	919	0.29	ug/L		98
80) 1,3-Dichlorobenzene	11.802	146	629	0.18	ug/L		91
81) 1,4-Dichlorobenzene	11.862	146	725	0.19	ug/L	#	31
82) n-Butylbenzene	12.045	91	805	0.17	ug/L		79
83) 1,2-Dichlorobenzene	12.185	146	624	0.19	ug/L		90
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.347	180	244	0.16	ug/L		66
87) Naphthalene	13.627	128	924	0.58	ug/L		81
88) 1,2,3-Trichlorobenzene	13.791	180	261	0.17	ug/L		76

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102418.D
Acq On : 24 Oct 2019 4:21 pm
Operator : MM
Sample : 9J24043-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:16 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:21:58 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	111985	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	294372	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	134501	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	108083	47.05	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	352302	54.92	ug/L		-0.01
48) Toluene-d8 (S)	8.297	98	396027	52.12	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112304	51.91	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.672	85	562	0.26	ug/L		90
3) Chloromethane	1.891	50	1136	0.44	ug/L		91
4) Vinyl Chloride	1.995	62	967	0.42	ug/L		83
5) Bromomethane	2.360	96	839	0.47	ug/L		69
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.664	101	958	0.26	ug/L		86
8) Ethanol	3.230	45	1315	29.40	ug/L		96
9) 1,1-Dichloroethene	3.230	61	1038	0.37	ug/L		87
10) Carbon Disulfide	0.000		0	N.D.	d		
11) Freon 113	0.000		0	N.D.	d		
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	3.869	84	2646	Below Cal			89
15) Acetone	3.948	43	1616	1.67	ug/L		96
16) t-1,2-Dichloroethene	4.039	61	963	0.38	ug/L		98
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.167	73	2309	0.41	ug/L		94
19) tert-Butanol (TBA)	4.294	59	10086	29.13	ug/L		91
20) Diisopropyl ether (DIPE)	4.562	45	638	0.11	ug/L		76
21) 1,1-Dichloroethane	4.684	63	1323	0.37	ug/L		87
22) Acrylonitrile	0.000		0	N.D.	d		
23) Ethyl-tert-butyl ether...	0.000		0	N.D.	d		
24) Vinyl Acetate	0.000		0	N.D.	d		
25) c-1,2-Dichloroethene	5.244	61	1008	0.36	ug/L		91
26) 2,2-Dichloropropane	5.347	77	853	0.34	ug/L		76
27) Bromochloromethane	5.444	130	391	0.28	ug/L		94
28) Chloroform	5.529	83	1292	0.34	ug/L		95
29) Carbon Tetrachloride	5.651	117	618	0.24	ug/L		90
30) Tetrahydrofuran	0.000		0	N.D.	d		
31) 1,1,1-Trichloroethane	5.730	97	1012	0.32	ug/L		93
33) 1,1-Dichloropropene	5.870	75	1049	0.41	ug/L	#	43
34) 2-Butanone (MEK)	0.000		0	N.D.	d		
35) Benzene	6.120	78	3381	0.44	ug/L		99
36) tert-Amyl methyl ether...	6.247	73	580	0.11	ug/L	#	21
37) 1,2-Dichloroethane (EDC)	6.332	62	1073	0.34	ug/L		54
38) iso-Butyl Alcohol	6.387	43	1172	8.80	ug/L		84
40) Trichloroethene (TCE)	6.746	130	718	0.37	ug/L		74
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	7.202	93	378	0.27	ug/L		86
43) 1,2-Dichloropropane	7.312	63	797	0.38	ug/L		95
44) Bromodichloromethane	7.379	83	800	0.29	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.036	63	359	1.00	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	1014	0.36	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:21:58 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	3505	0.43	ug/L		93
50) Tetrachloroethene (PCE)	8.796	166	787	0.42	ug/L		94
51) 4-Methyl-2-Pentanone (...	8.808	43	1912	0.73	ug/L		91
52) t-1,3-Dichloropropene	8.839	75	610	0.22	ug/L	#	45
53) 1,1,2-Trichloroethane	9.003	97	717	0.36	ug/L		82
54) Dibromochloromethane	9.186	129	505	0.24	ug/L		86
55) 1,3-Dichloropropane	9.289	76	1253	0.38	ug/L		95
56) 1,2-Dibromoethane (EDB)	9.423	107	615	0.30	ug/L		96
57) 2-Hexanone	9.660	43	1346	0.71	ug/L		91
58) Chlorobenzene	9.928	112	2226	0.43	ug/L	#	64
59) Ethylbenzene	9.952	91	3584	0.42	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.989	131	470	0.26	ug/L	#	66
61) m,p-Xylenes (2)	10.086	91	5197	0.91	ug/L		96
62) o-Xylene	10.469	91	2605	0.49	ug/L		93
63) Styrene	10.518	104	1656	0.51	ug/L		93
64) Bromoform	0.000		0	N.D.	d		
65) Isopropylbenzene	10.731	105	3067	0.54	ug/L		92
68) Bromobenzene	11.059	156	875	0.45	ug/L		92
69) n-Propylbenzene	11.078	91	3544	0.42	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.139	85	671	0.38	ug/L		87
71) 2-Chlorotoluene	11.205	126	719	0.43	ug/L		98
72) 1,3,5-Trimethylbenzene	11.230	105	2289	0.41	ug/L		92
73) 1,2,3-Trichloropropane	11.248	110	271	0.32	ug/L		91
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	2178	0.44	ug/L		99
76) tert-Butylbenzene	11.485	91	1248	0.40	ug/L		99
77) 1,2,4-Trimethylbenzene	11.540	105	2387	0.51	ug/L		98
78) sec-Butylbenzene	11.619	105	2990	0.44	ug/L		97
79) 4-Isopropyltoluene	11.729	119	2236	0.56	ug/L		92
80) 1,3-Dichlorobenzene	11.802	146	1412	0.41	ug/L		95
81) 1,4-Dichlorobenzene	11.862	146	1564	0.42	ug/L	#	54
82) n-Butylbenzene	12.045	91	1867	0.40	ug/L		85
83) 1,2-Dichlorobenzene	12.185	146	1284	0.39	ug/L		95
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.347	180	615	0.40	ug/L		89
87) Naphthalene	13.633	128	2009	0.81	ug/L		81
88) 1,2,3-Trichlorobenzene	13.779	180	687	0.45	ug/L		72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:19 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	111985	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	294372	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	134501	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	108083	47.05	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	352302	54.92	ug/L		-0.01
48) Toluene-d8 (S)	8.297	98	396027	52.12	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112304	51.91	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.672	85	562	0.26	ug/L		90
3) Chloromethane	1.891	50	1136	0.44	ug/L		91
4) Vinyl Chloride	1.995	62	967	0.42	ug/L		83
5) Bromomethane	2.360	96	839	0.47	ug/L		69
6) Chloroethane	2.512	64	672	0.57	ug/L	#	66
7) Trichlorofluoromethane	2.664	101	958	0.26	ug/L		86
8) Ethanol	3.230	45	1315	29.40	ug/L		96
9) 1,1-Dichloroethene	3.230	61	1038	0.37	ug/L		87
10) Carbon Disulfide	3.242	76	1798	0.39	ug/L		78
11) Freon 113	3.285	101	569	0.31	ug/L	#	63
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	3.869	84	2646	Below Cal			89
15) Acetone	3.948	43	1616	1.67	ug/L		96
16) t-1,2-Dichloroethene	4.039	61	963	0.38	ug/L		98
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.167	73	2309	0.41	ug/L		94
19) tert-Butanol (TBA)	4.294	59	10086	29.13	ug/L		91
20) Diisopropyl ether (DIPE)	4.562	45	638	0.11	ug/L		76
21) 1,1-Dichloroethane	4.684	63	1323	0.37	ug/L		87
22) Acrylonitrile	4.751	53	129	0.12	ug/L	#	15
23) Ethyl-tert-butyl ether...	4.945	59	438	0.09	ug/L	#	38
24) Vinyl Acetate	4.964	43	1231	0.29	ug/L		74
25) c-1,2-Dichloroethene	5.244	61	1008	0.36	ug/L		91
26) 2,2-Dichloropropane	5.347	77	853	0.34	ug/L		76
27) Bromochloromethane	5.444	130	391	0.28	ug/L		94
28) Chloroform	5.529	83	1292	0.34	ug/L		95
29) Carbon Tetrachloride	5.651	117	618	0.24	ug/L		90
30) Tetrahydrofuran	5.712	42	281	0.30	ug/L	#	62
31) 1,1,1-Trichloroethane	5.730	97	1012	0.32	ug/L		93
33) 1,1-Dichloropropene	5.870	75	1049	0.41	ug/L	#	43
34) 2-Butanone (MEK)	5.864	43	1016	0.69	ug/L		52
35) Benzene	6.120	78	3381	0.44	ug/L		99
36) tert-Amyl methyl ether...	6.247	73	580	0.11	ug/L	#	21
37) 1,2-Dichloroethane (EDC)	6.332	62	1073	0.34	ug/L		54
38) iso-Butyl Alcohol	6.387	43	1172	8.80	ug/L		84
40) Trichloroethene (TCE)	6.746	130	718	0.37	ug/L		74
41) Tert-Amyl-Ethyl-Ether ...	0.000		0	N.D.			
42) Dibromomethane	7.202	93	378	0.27	ug/L		86
43) 1,2-Dichloropropane	7.312	63	797	0.38	ug/L		95
44) Bromodichloromethane	7.379	83	800	0.29	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.036	63	359	1.00	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	1014	0.36	ug/L		89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:19 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

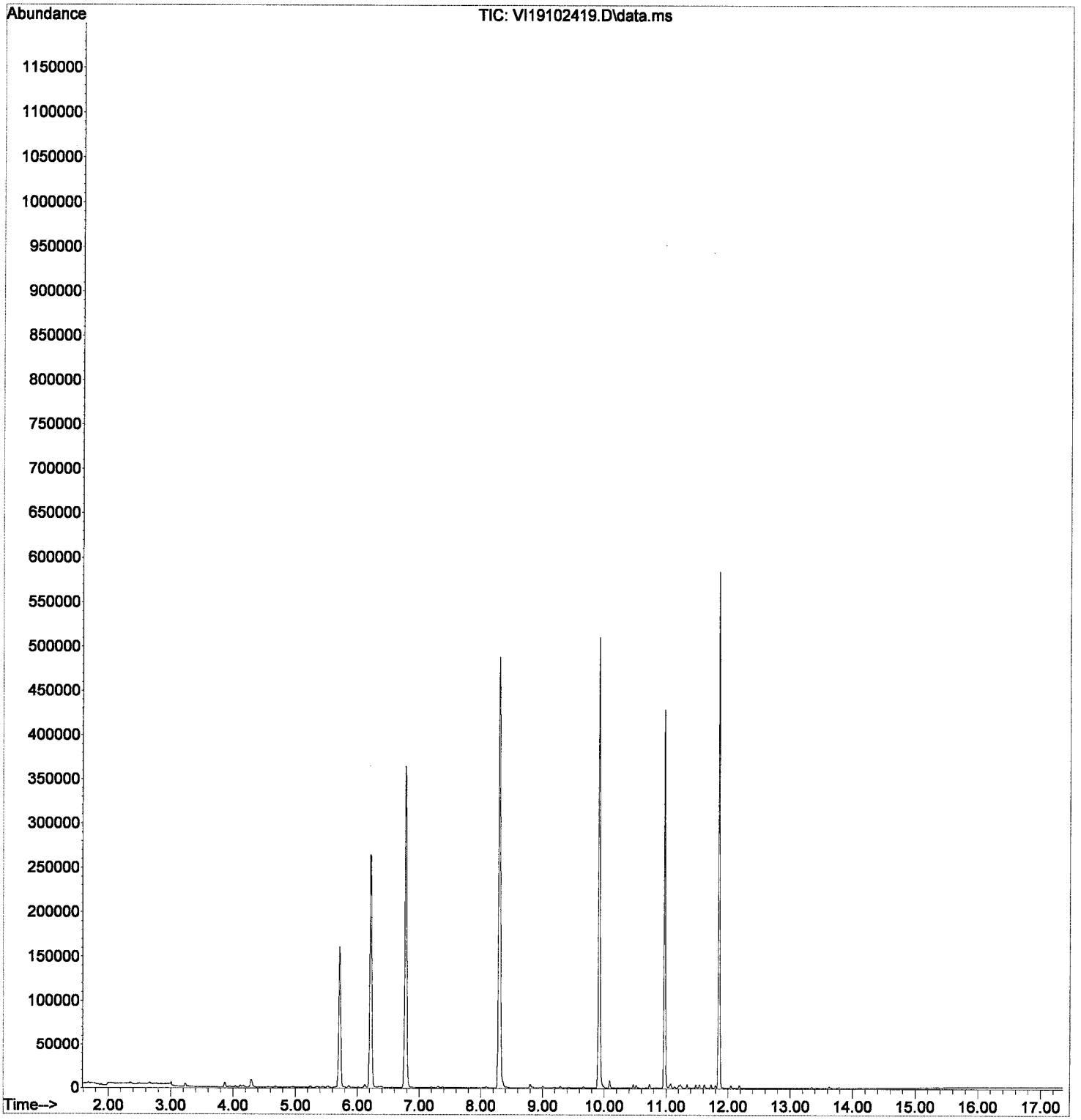
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	3505	0.43	ug/L		93
50) Tetrachloroethene (PCE)	8.796	166	787	0.42	ug/L		94
51) 4-Methyl-2-Pentanone (...	8.808	43	1912	0.73	ug/L		91
52) t-1,3-Dichloropropene	8.839	75	610	0.22	ug/L	#	45
53) 1,1,2-Trichloroethane	9.003	97	717	0.36	ug/L		82
54) Dibromochloromethane	9.186	129	505	0.24	ug/L		86
55) 1,3-Dichloropropane	9.289	76	1253	0.38	ug/L		95
56) 1,2-Dibromoethane (EDB)	9.423	107	615	0.30	ug/L		96
57) 2-Hexanone	9.660	43	1346	0.71	ug/L		91
58) Chlorobenzene	9.928	112	2226	0.43	ug/L	#	64
59) Ethylbenzene	9.952	91	3584	0.42	ug/L		99
60) 1,1,1,2-Tetrachloroethane	9.989	131	470	0.26	ug/L	#	66
61) m,p-Xylenes (2)	10.086	91	5197	0.91	ug/L		96
62) o-Xylene	10.469	91	2605	0.49	ug/L		93
63) Styrene	10.518	104	1656	0.51	ug/L		93
64) Bromoform	10.542	173	215	0.15	ug/L	#	36
65) Isopropylbenzene	10.731	105	3067	0.54	ug/L		92
68) Bromobenzene	11.059	156	875	0.45	ug/L		92
69) n-Propylbenzene	11.078	91	3544	0.42	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.139	85	671	0.38	ug/L		87
71) 2-Chlorotoluene	11.205	126	719	0.43	ug/L		98
72) 1,3,5-Trimethylbenzene	11.230	105	2289	0.41	ug/L		92
73) 1,2,3-Trichloropropane	11.248	110	271	0.32	ug/L		91
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.339	91	2178	0.44	ug/L		99
76) tert-Butylbenzene	11.485	91	1248	0.40	ug/L		99
77) 1,2,4-Trimethylbenzene	11.540	105	2387	0.51	ug/L		98
78) sec-Butylbenzene	11.619	105	2990	0.44	ug/L		97
79) 4-Isopropyltoluene	11.729	119	2236	0.56	ug/L		92
80) 1,3-Dichlorobenzene	11.802	146	1412	0.41	ug/L		95
81) 1,4-Dichlorobenzene	11.862	146	1564	0.42	ug/L	#	54
82) n-Butylbenzene	12.045	91	1867	0.40	ug/L		85
83) 1,2-Dichlorobenzene	12.185	146	1284	0.39	ug/L		95
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.347	180	615	0.40	ug/L		89
87) Naphthalene	13.633	128	2009	0.81	ug/L		81
88) 1,2,3-Trichlorobenzene	13.779	180	687	0.45	ug/L		72

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102419.D
Acq On : 24 Oct 2019 4:48 pm
Operator : MM
Sample : 9J24043-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:19 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102420.D
Acq On : 24 Oct 2019 5:15 pm
Operator : MM
Sample : 9J24043-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:23 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	116043	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	310797	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	143979	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	111608	46.89	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	366642	55.15	ug/L		0.00
48) Toluene-d8 (S)	8.298	98	410518	51.17	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	118563	51.20	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	1583	0.69	ug/L		98
3) Chloromethane	1.892	50	2407	0.90	ug/L		90
4) Vinyl Chloride	1.995	62	2351	0.98	ug/L		95
5) Bromomethane	2.360	96	1763	0.95	ug/L	#	71
6) Chloroethane	2.500	64	2425	1.99	ug/L		75
7) Trichlorofluoromethane	2.664	101	2784	0.73	ug/L		90
8) Ethanol	3.236	45	3446	74.35	ug/L		88
9) 1,1-Dichloroethene	3.230	61	2476	0.85	ug/L		86
10) Carbon Disulfide	3.248	76	4573	0.95	ug/L		96
11) Freon 113	3.285	101	1717	0.90	ug/L		98
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	3.625	56	420	1.01	ug/L		60
14) Methylene Chloride	3.869	84	3939	Below Cal			91
15) Acetone	3.948	43	2940	2.94	ug/L		92
16) t-1,2-Dichloroethene	4.039	61	2657	1.01	ug/L		94
17) n-Hexane	4.124	86	357	1.11	ug/L	#	60
18) Methyl-tert-butyl-ether	4.167	73	5789	1.00	ug/L		81
19) tert-Butanol (TBA)	4.295	59	25977	72.41	ug/L		88
20) Diisopropyl ether (DIPE)	4.562	45	1604	0.27	ug/L		98
21) 1,1-Dichloroethane	4.684	63	3672	0.99	ug/L		94
22) Acrylonitrile	4.751	53	876	0.80	ug/L		79
23) Ethyl-tert-butyl ether...	4.939	59	1449	0.28	ug/L		83
24) Vinyl Acetate	4.964	43	3620	0.82	ug/L		88
25) c-1,2-Dichloroethene	5.244	61	2744	0.95	ug/L		83
26) 2,2-Dichloropropane	5.353	77	2316	0.90	ug/L		92
27) Bromochloromethane	5.450	130	1188	0.83	ug/L		88
28) Chloroform	5.530	83	3341	0.84	ug/L		98
29) Carbon Tetrachloride	5.663	117	1791	0.66	ug/L		91
30) Tetrahydrofuran	5.706	42	945	0.99	ug/L		87
31) 1,1,1-Trichloroethane	5.730	97	2903	0.89	ug/L		93
33) 1,1-Dichloropropene	5.864	75	2749	1.05	ug/L		93
34) 2-Butanone (MEK)	5.858	43	2900	1.90	ug/L		90
35) Benzene	6.126	78	8314	1.05	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	1462	0.28	ug/L		60
37) 1,2-Dichloroethane (EDC)	6.339	62	2623	0.81	ug/L		91
38) iso-Butyl Alcohol	6.375	43	3120	22.60	ug/L		86
40) Trichloroethene (TCE)	6.740	130	2166	1.08	ug/L		94
41) Tert-Amyl-Ethyl-Ether ...	6.996	59	950	0.29	ug/L		74
42) Dibromomethane	7.196	93	1285	0.90	ug/L		96
43) 1,2-Dichloropropane	7.306	63	1944	0.91	ug/L		93
44) Bromodichloromethane	7.379	83	2259	0.78	ug/L		96
46) 2-Chloroethyl Vinyl Ether	8.030	63	1378	1.78	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	2667	0.91	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102420.D
Acq On : 24 Oct 2019 5:15 pm
Operator : MM
Sample : 9J24043-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:23 2019
Quant Method : C:\msdchem\1\methods\VI~~191025W~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

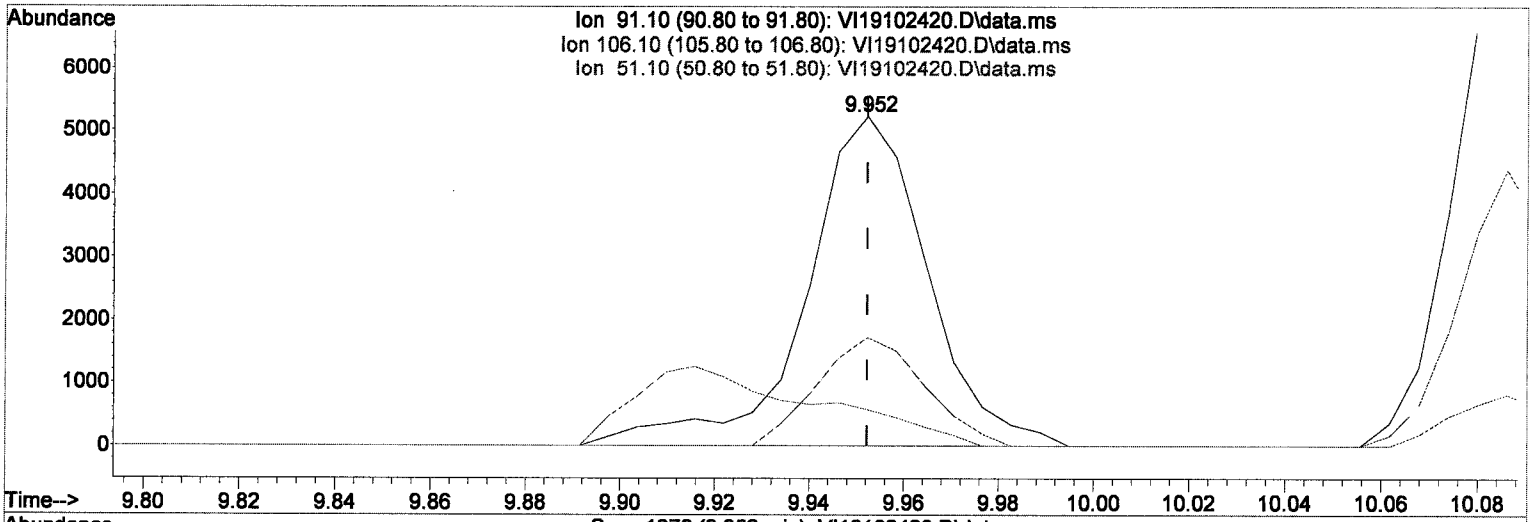
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.352	91	9040	1.04	ug/L		99
50) Tetrachloroethene (PCE)	8.796	166	1994	1.00	ug/L		91
51) 4-Methyl-2-Pentanone (...	8.802	43	5042	1.83	ug/L		93
52) t-1,3-Dichloropropene	8.839	75	2122	0.72	ug/L		95
53) 1,1,2-Trichloroethane	9.003	97	1944	0.93	ug/L		92
54) Dibromochloromethane	9.186	129	1349	0.61	ug/L		88
55) 1,3-Dichloropropane	9.289	76	3361	0.96	ug/L		93
56) 1,2-Dibromoethane (EDB)	9.423	107	1928	0.90	ug/L		93
57) 2-Hexanone	9.660	43	3526	1.77	ug/L		99
58) Chlorobenzene	9.928	112	5770	1.05	ug/L		93
59) Ethylbenzene	9.952	91	~~9335~~ 8761	1.03	ug/L		97
60) 1,1,1,2-Tetrachloroethane	9.989	131	1476	0.77	ug/L		91
61) m,p-Xylenes (2)	10.086	91	12789	2.05	ug/L		99
62) o-Xylene	10.463	91	6630	1.11	ug/L		97
63) Styrene	10.518	104	4878	1.15	ug/L		95
64) Bromoform	10.536	173	795	0.51	ug/L		91
65) Isopropylbenzene	10.731	105	7662	1.14	ug/L		98
68) Bromobenzene	11.059	156	2220	1.07	ug/L		88
69) n-Propylbenzene	11.078	91	9160	1.02	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.139	85	1876	1.00	ug/L		85
71) 2-Chlorotoluene	11.205	126	1910	1.07	ug/L		98
72) 1,3,5-Trimethylbenzene	11.230	105	6197	1.03	ug/L		90
73) 1,2,3-Trichloropropane	11.248	110	887	0.97	ug/L		97
74) t-1,4-Dichloro-2-butene	11.285	53	531	0.74	ug/L	#	41
75) 4-Chlorotoluene	11.339	91	5461	1.02	ug/L		98
76) tert-Butylbenzene	11.485	91	3551	1.07	ug/L		94
77) 1,2,4-Trimethylbenzene	11.534	105	6319	1.16	ug/L		93
78) sec-Butylbenzene	11.619	105	7450	1.03	ug/L		98
79) 4-Isopropyltoluene	11.729	119	6086	1.25	ug/L		98
80) 1,3-Dichlorobenzene	11.796	146	3650	1.00	ug/L		96
81) 1,4-Dichlorobenzene	11.863	146	4177	1.04	ug/L		86
82) n-Butylbenzene	12.045	91	4997	1.00	ug/L		93
83) 1,2-Dichlorobenzene	12.185	146	3650	1.04	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	12.799	157	447	0.82	ug/L	#	69
85) Hexachlorobutadiene	13.310	223	443	0.91	ug/L		96
86) 1,2,4-Trichlorobenzene	13.347	180	1833	1.10	ug/L		94
87) Naphthalene	13.627	128	5345	1.42	ug/L		98
88) 1,2,3-Trichlorobenzene	13.785	180	1879	1.15	ug/L		89

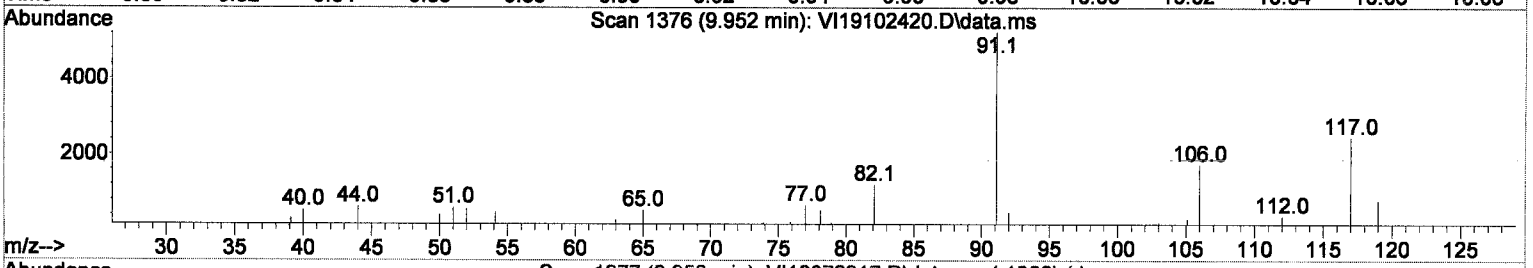
(#) = qualifier out of range (m) = manual integration (+) = signals summed

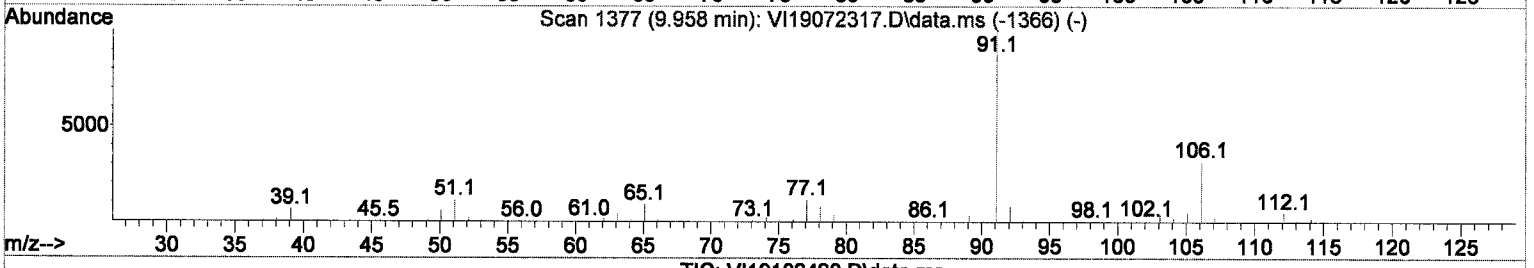
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102420.D
Acq On : 24 Oct 2019 5:15 pm
Operator : MM
Sample : 9J24043-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:23 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration







TIC: VI19102420.D\data.ms

(59) Ethylbenzene (C)

9.952min (+ 0.000) 1.03 ug/L

response 9335

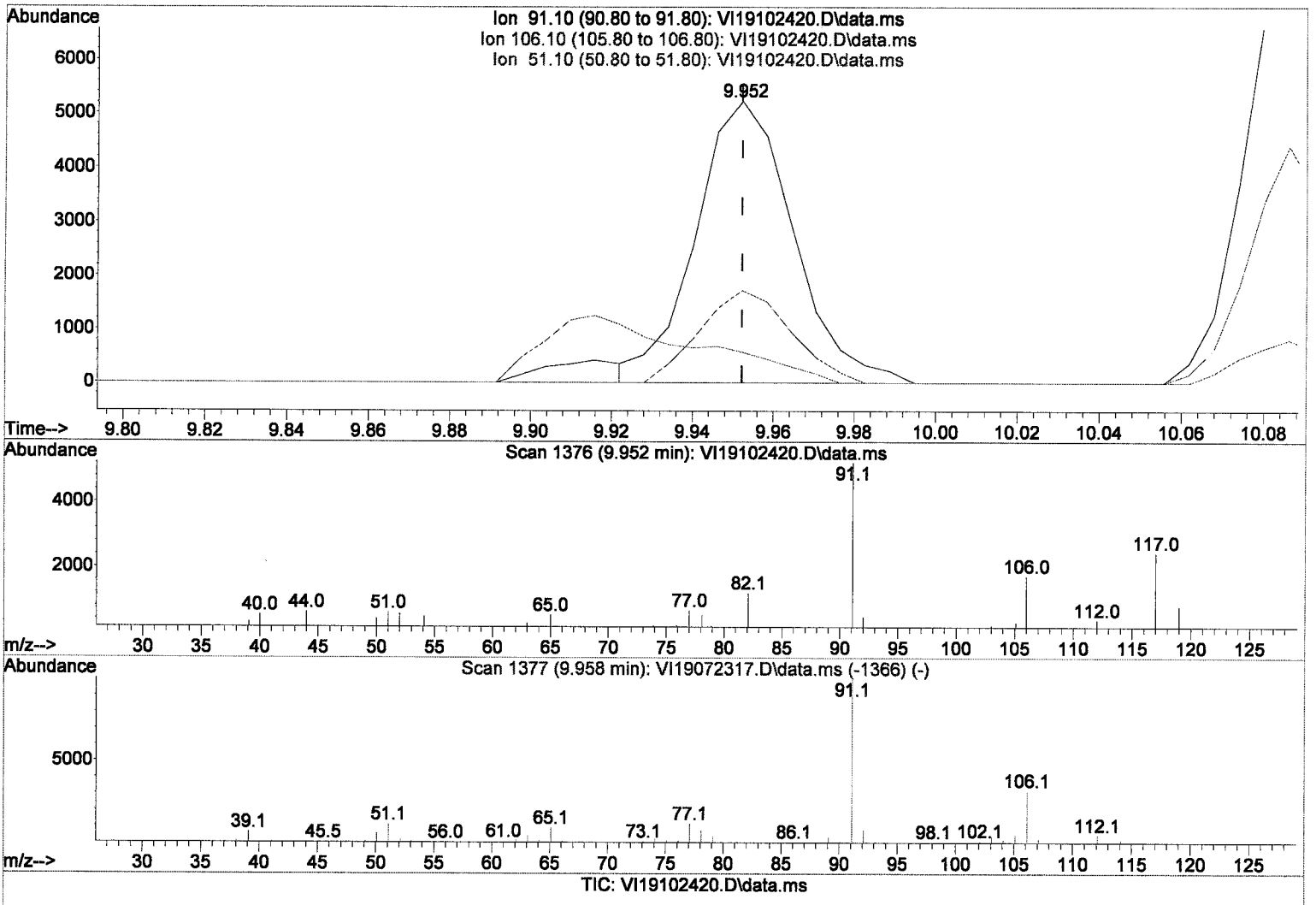
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	32.98
51.10	10.40	11.11
0.00	0.00	0.00

M.2

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102420.D
Acq On : 24 Oct 2019 5:15 pm
Operator : MM
Sample : 9J24043-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:23 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



TIC: VI19102420.D\data.ms

(59) Ethylbenzene (C)

9.952min (+ 0.000) 0.96 ug/L m

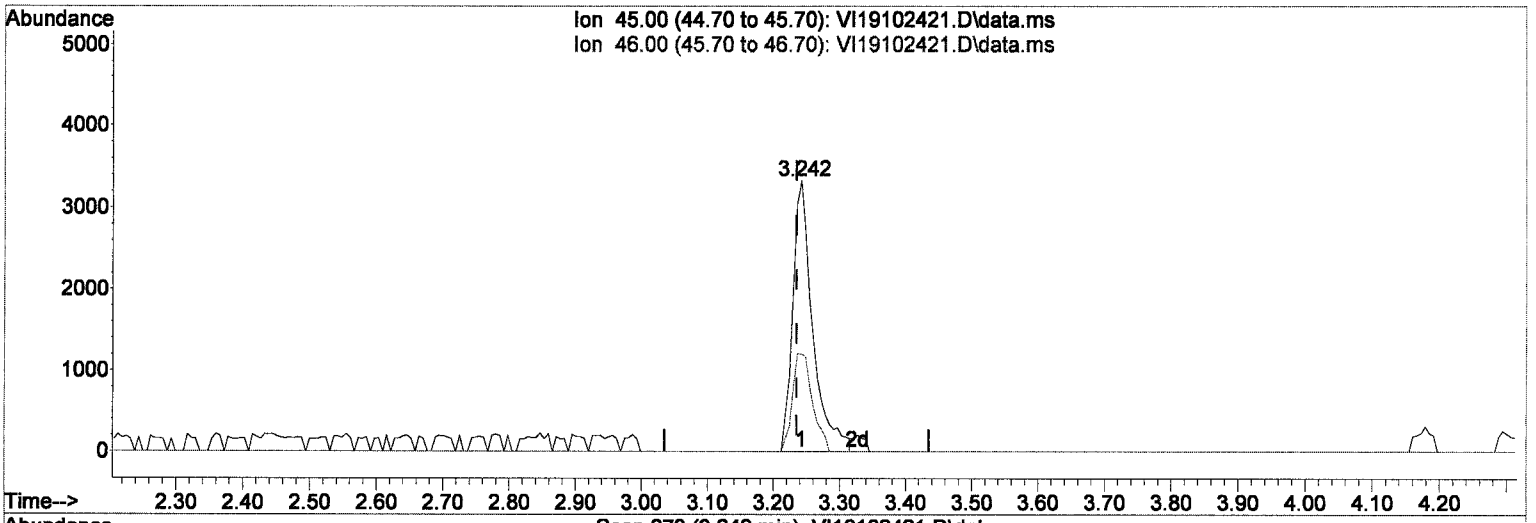
response 8761

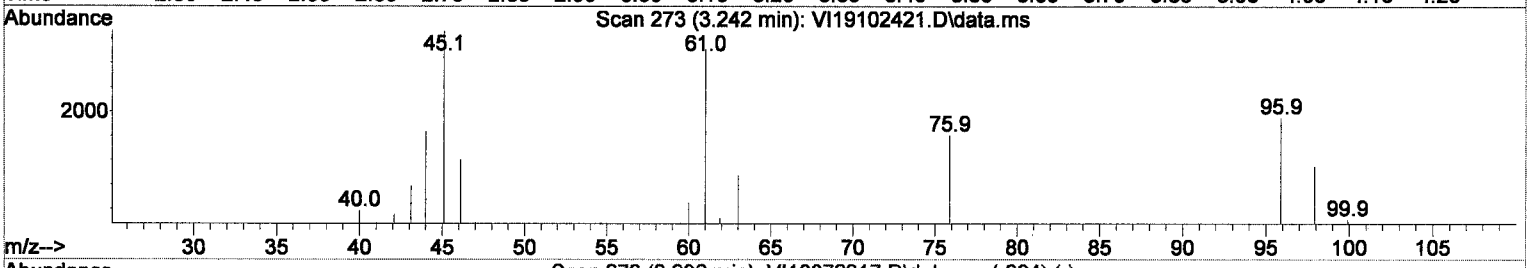
Ion	Exp%	Act%
91.10	100.00	100.00
106.10	30.80	32.98
51.10	10.40	11.11
0.00	0.00	0.00

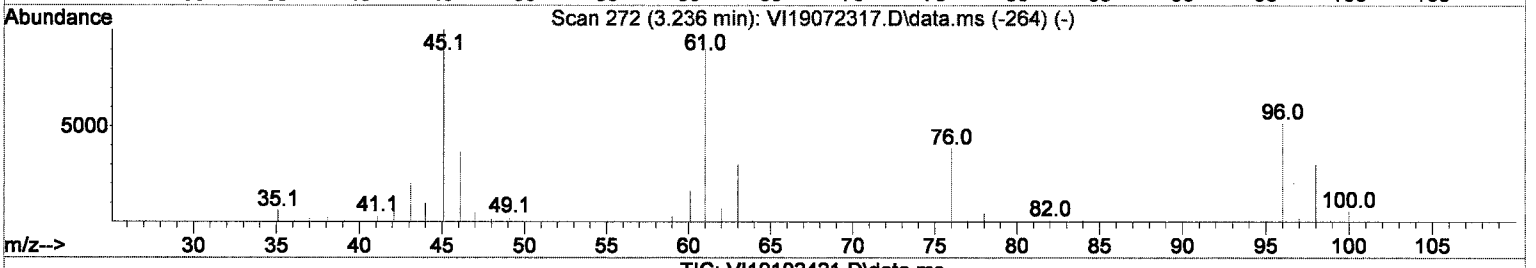
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:26 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration







TIC: VI19102421.D\data.ms

(8) Ethanol

3.242min (+ 0.007) 157.83 ug/L

response 6984

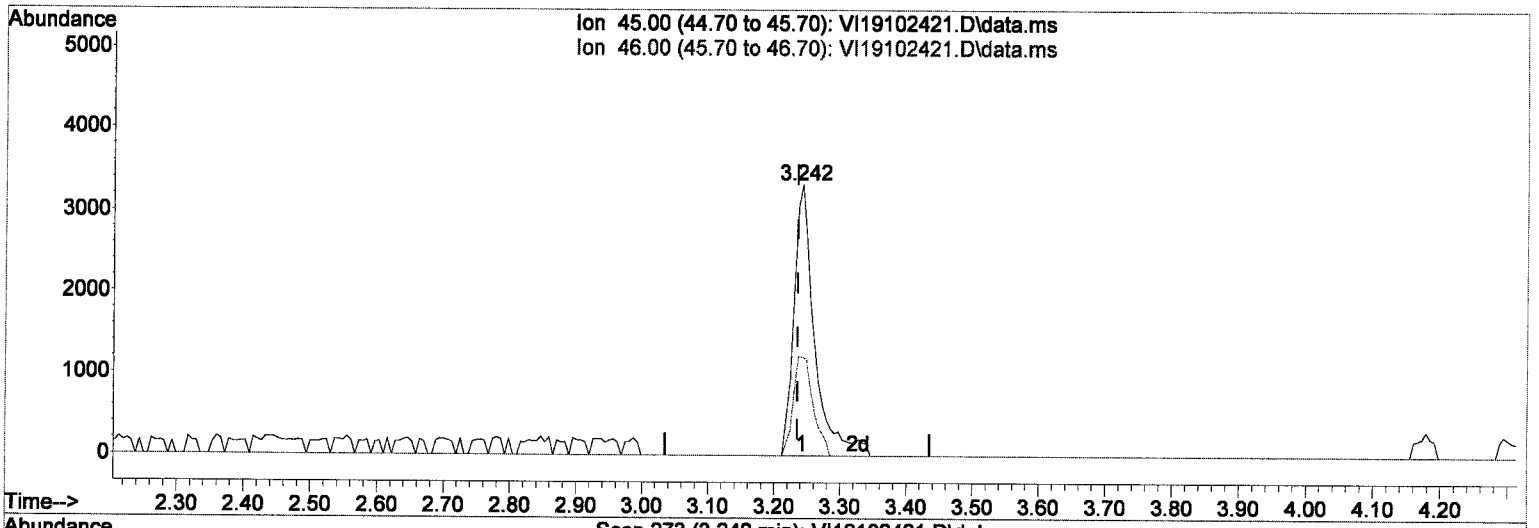
Ion	Exp%	Act%
45.00	100.00	100.00
46.00	47.50	36.12
0.00	0.00	0.00
0.00	0.00	0.00

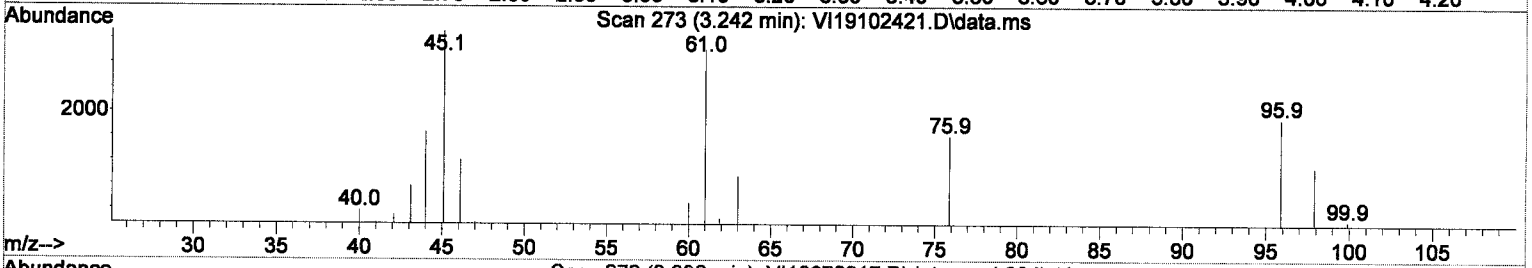
M.2.

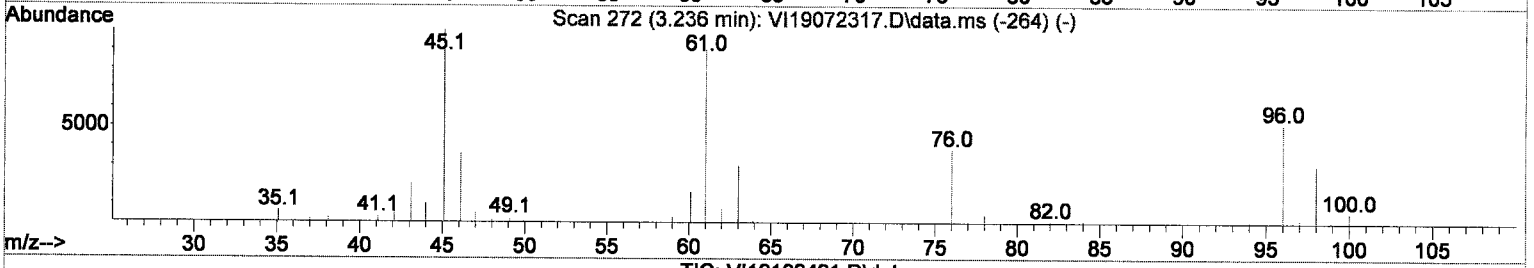
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:26 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration







TIC: VI19102421.D\data.ms

(8) Ethanol

3.242min (+ 0.007) 163.37 ug/L m

response 7229

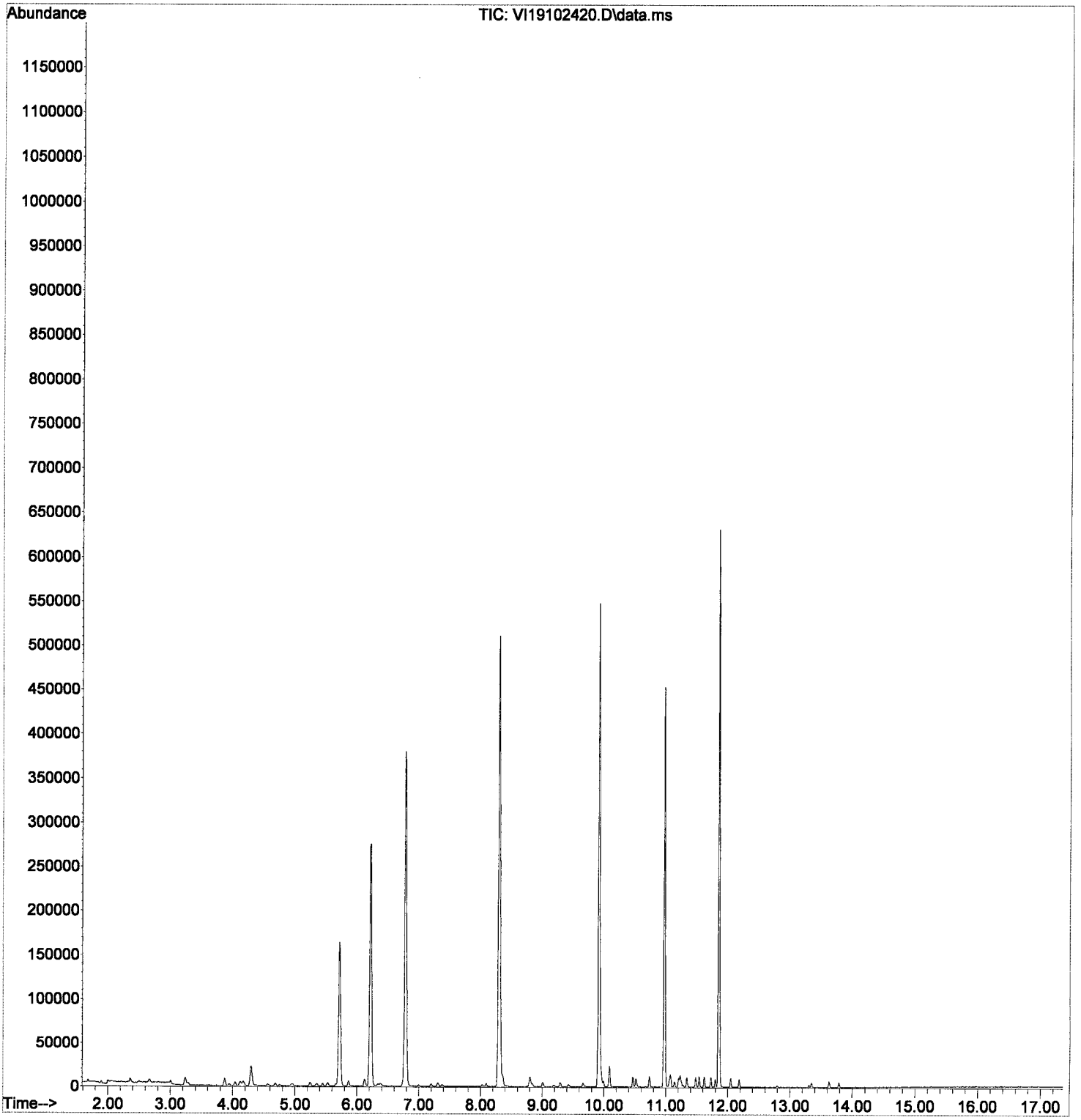
Ion	Exp%	Act%
45.00	100.00	100.00
46.00	47.50	36.12
0.00	0.00	0.00
0.00	0.00	0.00

M 10/25/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102420.D
Acq On : 24 Oct 2019 5:15 pm
Operator : MM
Sample : 9J24043-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:23 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

MM 10/25/19

Quant Time: Oct 25 08:10:26 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	110790	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	297754	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	139582	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	108776	47.86	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	347212	54.71	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	395017	51.39	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	115163	51.29	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.691	85	3731	1.71	ug/L		97
3) Chloromethane	1.904	50	4743	1.85	ug/L		90
4) Vinyl Chloride	2.007	62	5030	2.20	ug/L		95
5) Bromomethane	2.372	96	3140	1.78	ug/L		93
6) Chloroethane	2.524	64	2540	2.19	ug/L		82
7) Trichlorofluoromethane	2.682	101	5667	1.55	ug/L		97
8) Ethanol	3.242	45	~~6984~~ 7129	157.83	ug/L		83
9) 1,1-Dichloroethene	3.242	61	5263	1.88	ug/L		96
10) Carbon Disulfide	3.260	76	9757	2.13	ug/L		99
11) Freon 113	3.297	101	3803	2.08	ug/L		95
12) Iodomethane	~~3.400~~	~~142~~	~~130~~	5.22	ug/L	#	47 Qdel
13) Acrolein	3.625	56	927	2.34	ug/L		71
14) Methylene Chloride	3.881	84	6151	Below Cal			89
15) Acetone	3.948	43	4523	4.74	ug/L		93
16) t-1,2-Dichloroethene	4.051	61	5503	2.20	ug/L		91
17) n-Hexane	4.130	86	709	2.31	ug/L	#	84
18) Methyl-tert-butyl-ether	4.173	73	11957	2.16	ug/L		93
19) tert-Butanol (TBA)	4.301	59	58093	169.62	ug/L		94
20) Diisopropyl ether (DIPE)	4.568	45	3305	0.59	ug/L		95
21) 1,1-Dichloroethane	4.690	63	7227	2.05	ug/L		100
22) Acrylonitrile	4.763	53	1949	1.87	ug/L		96
23) Ethyl-tert-butyl ether...	4.939	59	3145	0.63	ug/L		96
24) Vinyl Acetate	4.964	43	7854	1.87	ug/L		99
25) c-1,2-Dichloroethene	5.250	61	5568	2.02	ug/L		93
26) 2,2-Dichloropropane	5.353	77	4776	1.94	ug/L		95
27) Bromochloromethane	5.456	130	2679	1.97	ug/L		99
28) Chloroform	5.536	83	7277	1.92	ug/L		99
29) Carbon Tetrachloride	5.663	117	4001	1.54	ug/L		98
30) Tetrahydrofuran	5.706	42	2045	2.23	ug/L		88
31) 1,1,1-Trichloroethane	5.736	97	5937	1.90	ug/L		97
33) 1,1-Dichloropropene	5.870	75	5724	2.28	ug/L		95
34) 2-Butanone (MEK)	5.870	43	6243	4.29	ug/L		98
35) Benzene	6.126	78	17935	2.38	ug/L		94
36) tert-Amyl methyl ether...	6.247	73	2996	0.60	ug/L		72
37) 1,2-Dichloroethane (EDC)	6.345	62	5726	1.86	ug/L		98
38) iso-Butyl Alcohol	6.381	43	7968	60.45	ug/L		93
40) Trichloroethene (TCE)	6.746	130	4576	2.38	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	7.002	59	2147	0.68	ug/L		90
42) Dibromomethane	7.202	93	2755	2.01	ug/L		88
43) 1,2-Dichloropropane	7.312	63	4373	2.13	ug/L		93
44) Bromodichloromethane	7.385	83	4681	1.70	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.030	63	2589	2.82	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	5578	1.98	ug/L		90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:26 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

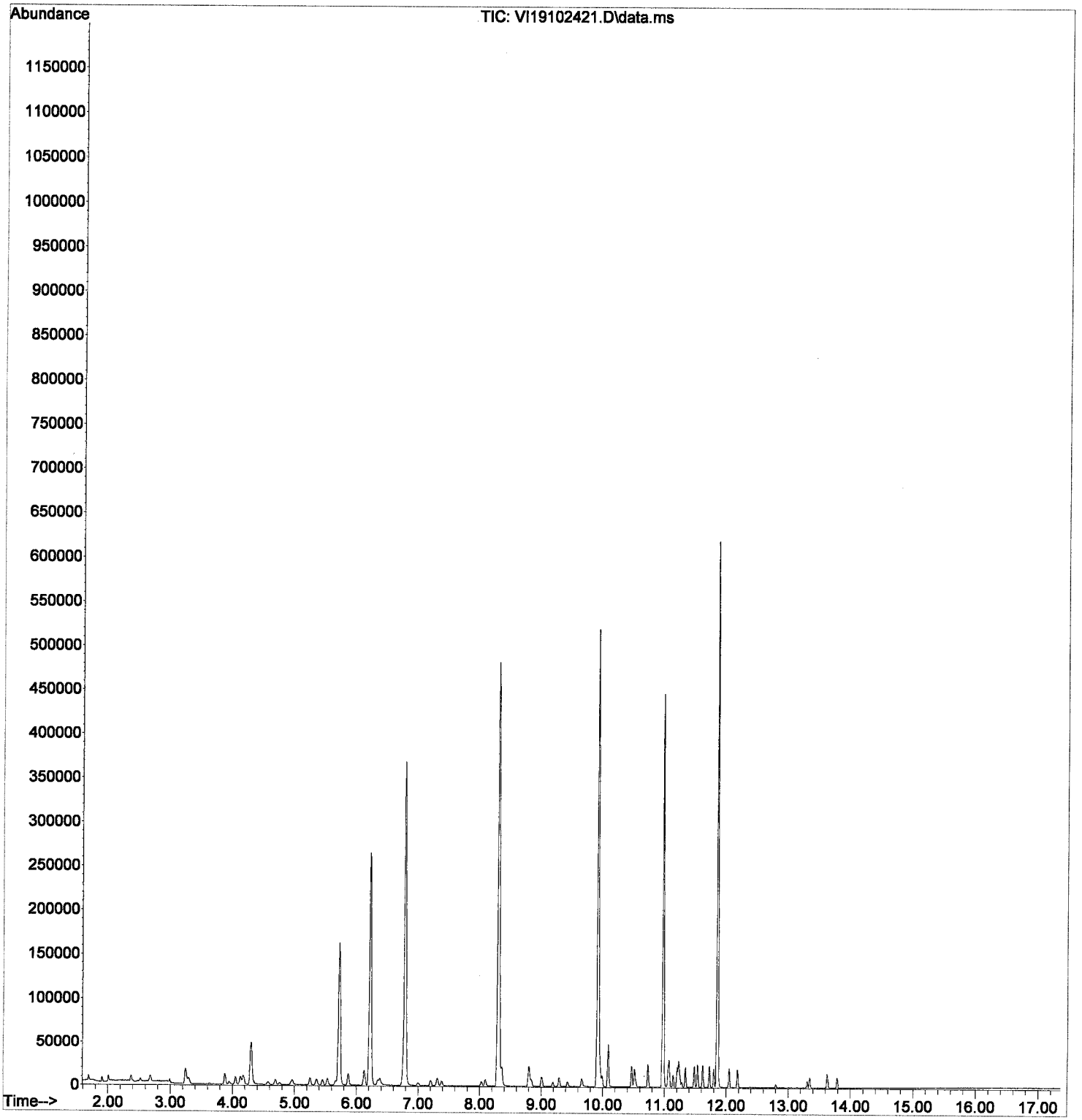
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	17851	2.14	ug/L		99
50) Tetrachloroethene (PCE)	8.796	166	4333	2.28	ug/L		92
51) 4-Methyl-2-Pentanone (...	8.809	43	11029	4.18	ug/L		98
52) t-1,3-Dichloropropene	8.839	75	4500	1.60	ug/L		95
53) 1,1,2-Trichloroethane	9.003	97	4134	2.06	ug/L		93
54) Dibromochloromethane	9.192	129	3038	1.44	ug/L		91
55) 1,3-Dichloropropane	9.289	76	6889	2.05	ug/L		90
56) 1,2-Dibromoethane (EDB)	9.429	107	4499	2.18	ug/L		100
57) 2-Hexanone	9.660	43	7610	3.99	ug/L		92
58) Chlorobenzene	9.928	112	11701	2.22	ug/L		98
59) Ethylbenzene	9.952	91	19157	2.20	ug/L		95
60) 1,1,1,2-Tetrachloroethane	9.989	131	2985	1.63	ug/L		94
61) m,p-Xylenes (2)	10.086	91	27092	4.47	ug/L		98
62) o-Xylene	10.469	91	13605	2.31	ug/L		96
63) Styrene	10.518	104	10363	2.35	ug/L		98
64) Bromoform	10.536	173	1771	1.19	ug/L		90
65) Isopropylbenzene	10.731	105	16325	2.39	ug/L		97
68) Bromobenzene	11.059	156	4634	2.30	ug/L		83
69) n-Propylbenzene	11.078	91	19292	2.21	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.139	85	4008	2.20	ug/L		91
71) 2-Chlorotoluene	11.205	126	4172	2.40	ug/L		98
72) 1,3,5-Trimethylbenzene	11.230	105	13089	2.24	ug/L		97
73) 1,2,3-Trichloropropane	11.248	110	1935	2.17	ug/L		93
74) t-1,4-Dichloro-2-butene	11.278	53	1313	1.90	ug/L	#	50
75) 4-Chlorotoluene	11.339	91	11718	2.26	ug/L		99
76) tert-Butylbenzene	11.485	91	7395	2.30	ug/L		98
77) 1,2,4-Trimethylbenzene	11.534	105	12974	2.38	ug/L		98
78) sec-Butylbenzene	11.619	105	15756	2.25	ug/L		99
79) 4-Isopropyltoluene	11.729	119	12523	2.53	ug/L		97
80) 1,3-Dichlorobenzene	11.802	146	7718	2.18	ug/L		97
81) 1,4-Dichlorobenzene	11.862	146	8550	2.20	ug/L		91
82) n-Butylbenzene	12.045	91	10626	2.18	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	7854	2.32	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	12.799	157	1006	1.90	ug/L		77
85) Hexachlorobutadiene	13.304	223	963	2.05	ug/L		87
86) 1,2,4-Trichlorobenzene	13.341	180	4043	2.51	ug/L		89
87) Naphthalene	13.627	128	12724	2.92	ug/L		97
88) 1,2,3-Trichlorobenzene	13.785	180	4073	2.58	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102421.D
Acq On : 24 Oct 2019 5:42 pm
Operator : MM
Sample : 9J24043-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:26 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102422.D
Acq On : 24 Oct 2019 6:09 pm
Operator : MM
Sample : 9J24043-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

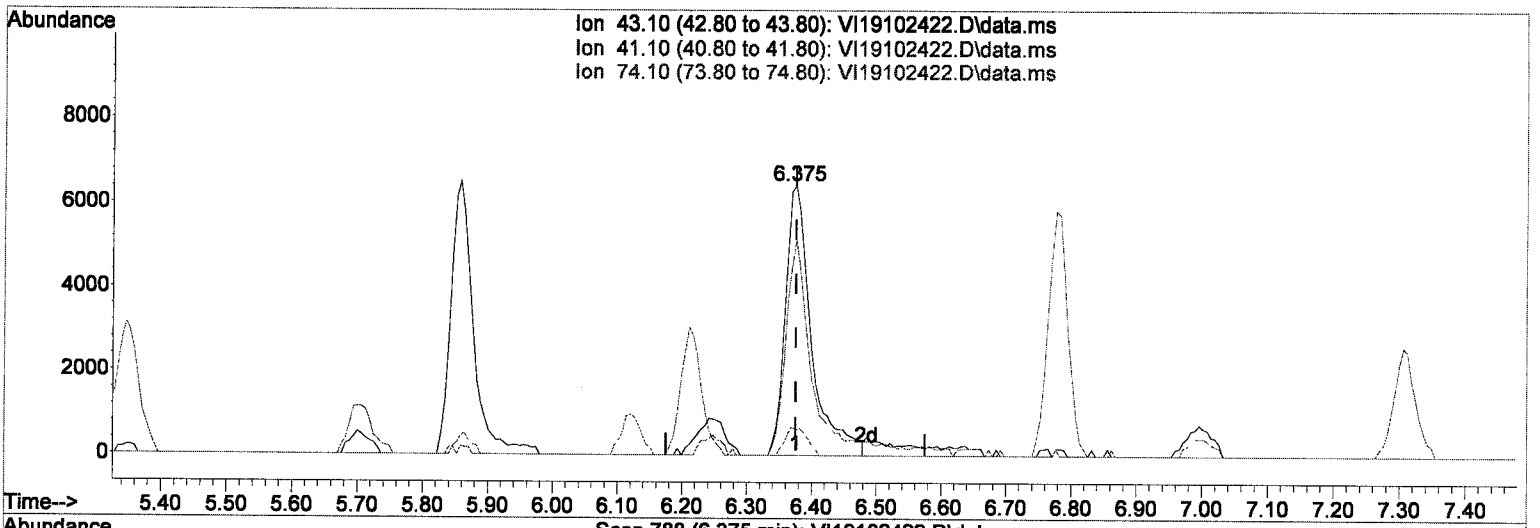
Quant Time: Oct 25 08:10:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

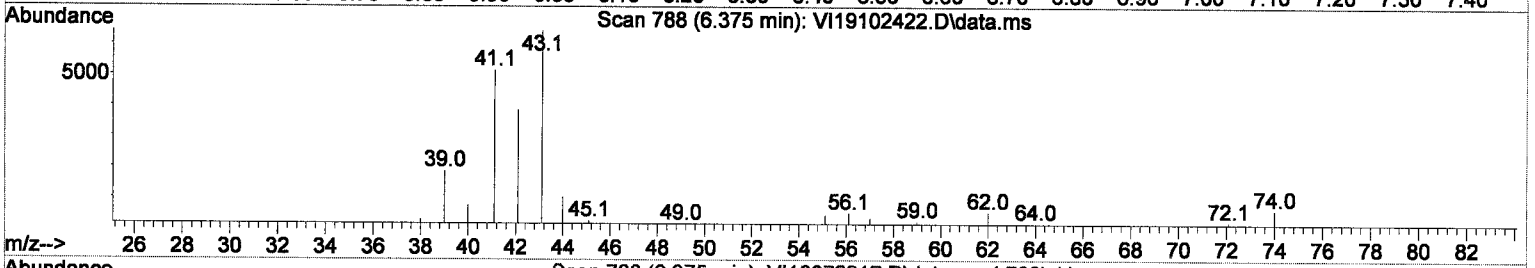
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	111010	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	300317	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	141843	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	109232	47.97	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	353918	55.65	ug/L		-0.01
48) Toluene-d8 (S)	8.297	98	397005	51.21	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	115652	50.69	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	9010	4.13	ug/L		98
3) Chloromethane	1.891	50	11370	4.42	ug/L		96
4) Vinyl Chloride	1.995	62	12653	5.52	ug/L		96
5) Bromomethane	2.360	96	7782	4.40	ug/L		97
6) Chloroethane	2.506	64	5899	5.07	ug/L		79
7) Trichlorofluoromethane	2.664	101	14236	3.89	ug/L		96
8) Ethanol	3.230	45	17243	388.90	ug/L		85
9) 1,1-Dichloroethene	3.230	61	13321	4.75	ug/L		93
10) Carbon Disulfide	3.248	76	24060	5.23	ug/L		98
11) Freon 113	3.291	101	9544	5.22	ug/L		91
12) Iodomethane	3.382	142	916	6.05	ug/L	#	79
13) Acrolein	3.619	56	2465	6.22	ug/L		88
14) Methylene Chloride	3.869	84	12549	2.62	ug/L		87
15) Acetone	3.942	43	10355	10.83	ug/L		98
16) t-1,2-Dichloroethene	4.039	61	13685	5.45	ug/L		96
17) n-Hexane	4.118	86	1836	5.97	ug/L		92
18) Methyl-tert-butyl-ether	4.167	73	29908	5.40	ug/L		93
19) tert-Butanol (TBA)	4.288	59	143817	419.08	ug/L		97
20) Diisopropyl ether (DIPE)	4.568	45	8576	1.52	ug/L		93
21) 1,1-Dichloroethane	4.684	63	18307	5.17	ug/L		95
22) Acrylonitrile	4.751	53	5426	5.19	ug/L		98
23) Ethyl-tert-butyl ether...	4.939	59	8071	1.61	ug/L		98
24) Vinyl Acetate	4.958	43	20467	4.86	ug/L		97
25) c-1,2-Dichloroethene	5.244	61	13959	5.05	ug/L		90
26) 2,2-Dichloropropane	5.353	77	11793	4.78	ug/L		98
27) Bromochloromethane	5.444	130	7172	5.26	ug/L		96
28) Chloroform	5.529	83	18186	4.79	ug/L		96
29) Carbon Tetrachloride	5.657	117	9957	3.83	ug/L		96
30) Tetrahydrofuran	5.706	42	5112	5.57	ug/L		83
31) 1,1,1-Trichloroethane	5.730	97	14957	4.77	ug/L		94
33) 1,1-Dichloropropene	5.864	75	14423	5.74	ug/L		94
34) 2-Butanone (MEK)	5.858	43	15638	10.72	ug/L		94
35) Benzene	6.120	78	43404	5.74	ug/L		97
36) tert-Amyl methyl ether...	6.247	73	7445	1.48	ug/L		89
37) 1,2-Dichloroethane (EDC)	6.339	62	14359	4.65	ug/L		90
38) iso-Butyl Alcohol	6.375	43	~~18074~~ 20710	136.86	ug/L		98
40) Trichloroethene (TCE)	6.740	130	11340	5.89	ug/L		97
41) Tert-Amyl-Ethyl-Ether ...	6.996	59	5331	1.68	ug/L		83
42) Dibromomethane	7.196	93	7023	5.12	ug/L		97
43) 1,2-Dichloropropane	7.306	63	10897	5.31	ug/L		88
44) Bromodichloromethane	7.379	83	12021	4.36	ug/L		95
46) 2-Chloroethyl Vinyl Ether	8.024	63	7592	6.83	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	14229	5.00	ug/L		87

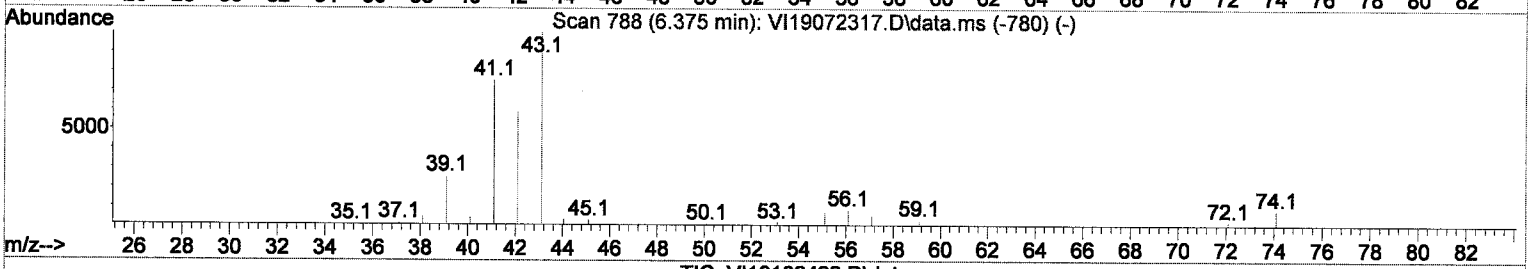
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102422.D
Acq On : 24 Oct 2019 6:09 pm
Operator : MM
Sample : 9J24043-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration







TIC: VI19102422.D\data.ms

(38) iso-Butyl Alcohol

6.375min (+ 0.000) 136.86 ug/L

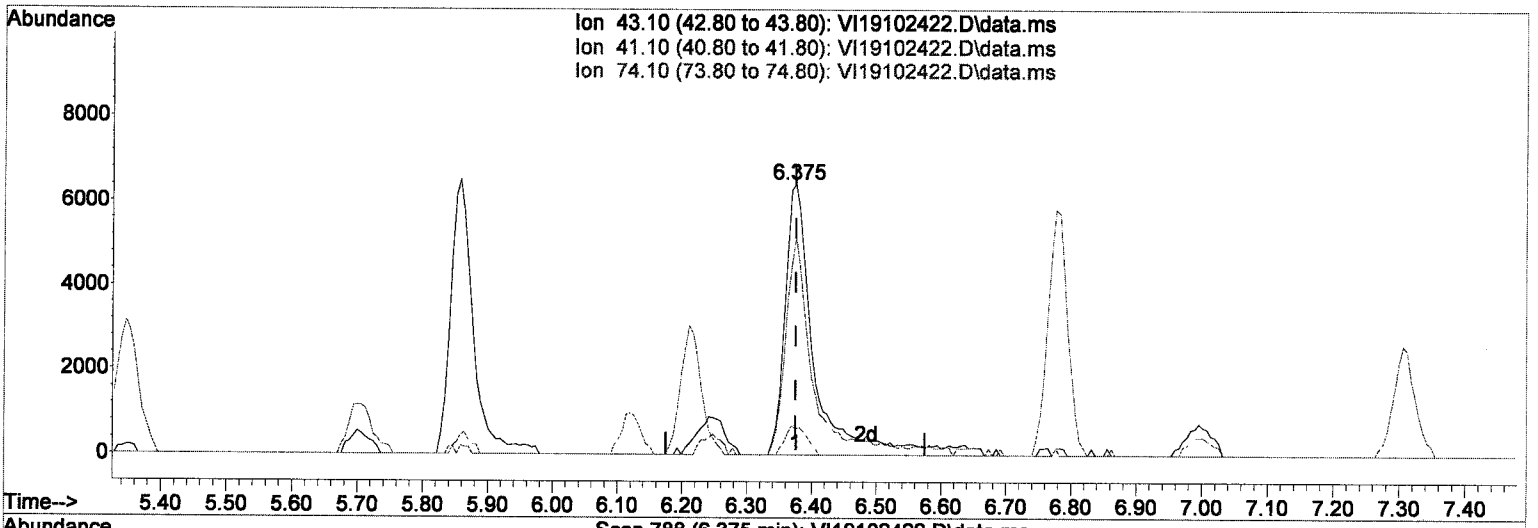
response 18074

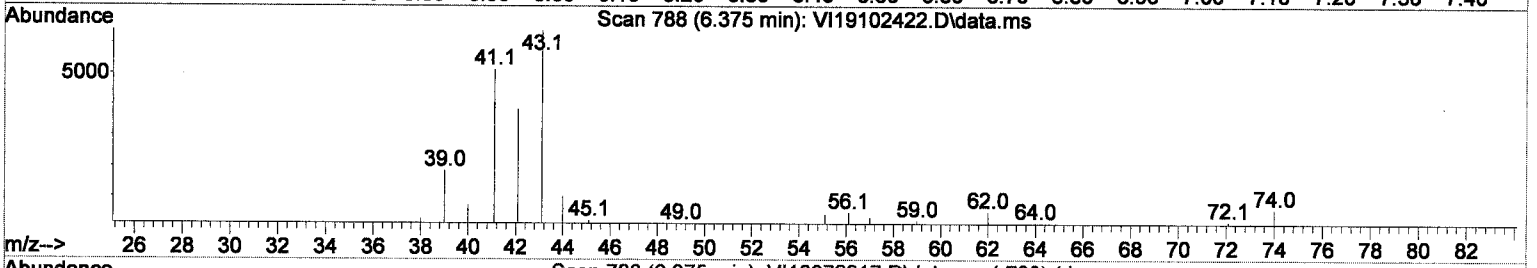
Ion	Exp%	Act%
43.10	100.00	100.00
41.10	78.60	80.03
74.10	11.20	9.63
0.00	0.00	0.00

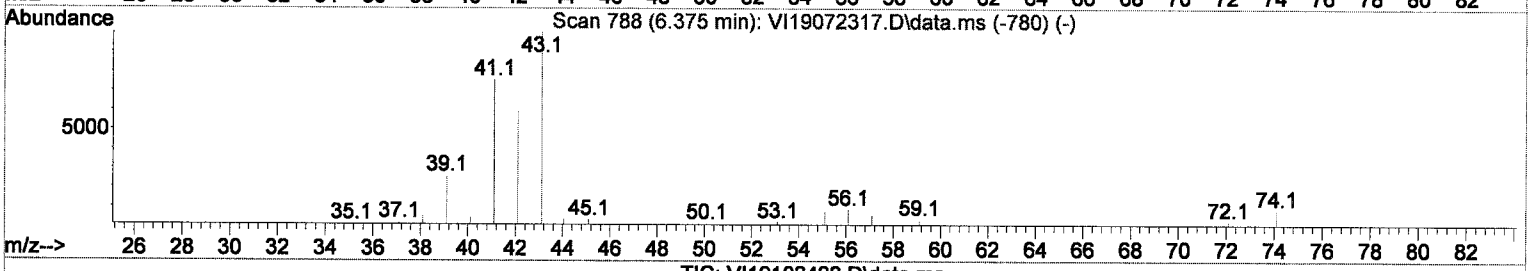
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102422.D
Acq On : 24 Oct 2019 6:09 pm
Operator : MM
Sample : 9J24043-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration







TIC: VI19102422.D\data.ms

(38) iso-Butyl Alcohol

6.375min (+ 0.000) 156.81 ug/L m

response 20710

Ion	Exp%	Act%
43.10	100.00	100.00
41.10	78.60	80.03
74.10	11.20	9.63
0.00	0.00	0.00

M 10/25/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102422.D
Acq On : 24 Oct 2019 6:09 pm
Operator : MM
Sample : 9J24043-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

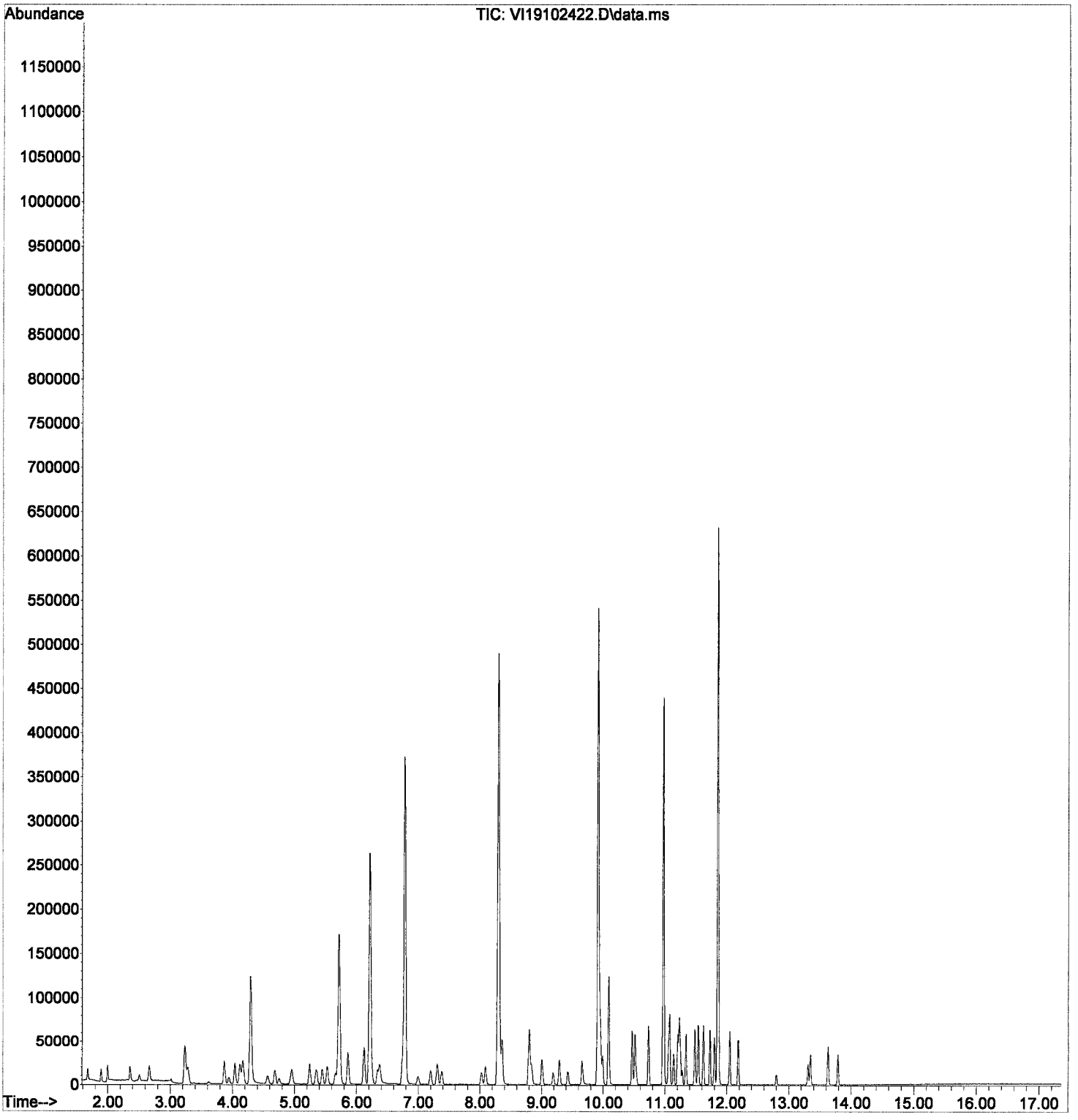
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	44272	5.27	ug/L		100
50) Tetrachloroethene (PCE)	8.796	166	10847	5.65	ug/L		90
51) 4-Methyl-2-Pentanone (...	8.796	43	28183	10.59	ug/L		97
52) t-1,3-Dichloropropene	8.839	75	12130	4.29	ug/L		98
53) 1,1,2-Trichloroethane	9.003	97	10336	5.11	ug/L		93
54) Dibromochloromethane	9.186	129	8016	3.77	ug/L		99
55) 1,3-Dichloropropane	9.289	76	17551	5.18	ug/L		88
56) 1,2-Dibromoethane (EDB)	9.423	107	11270	5.42	ug/L		98
57) 2-Hexanone	9.654	43	19724	10.24	ug/L		92
58) Chlorobenzene	9.928	112	29555	5.55	ug/L		97
59) Ethylbenzene	9.952	91	46860	5.34	ug/L		98
60) 1,1,1,2-Tetrachloroethane	9.989	131	7981	4.33	ug/L		94
61) m,p-Xylenes (2)	10.086	91	68847	11.15	ug/L		99
62) o-Xylene	10.463	91	34456	5.68	ug/L		99
63) Styrene	10.512	104	26739	5.76	ug/L		98
64) Bromoform	10.536	173	4690	3.11	ug/L		97
65) Isopropylbenzene	10.731	105	41801	5.88	ug/L		99
68) Bromobenzene	11.059	156	11623	5.69	ug/L		87
69) n-Propylbenzene	11.072	91	48000	5.40	ug/L		98
70) 1,1,2,2-Tetrachloroethane	11.139	85	9843	5.31	ug/L		96
71) 2-Chlorotoluene	11.205	126	10150	5.76	ug/L		90
72) 1,3,5-Trimethylbenzene	11.230	105	33314	5.62	ug/L		97
73) 1,2,3-Trichloropropane	11.248	110	4862	5.37	ug/L		96
74) t-1,4-Dichloro-2-butene	11.278	53	3293	4.68	ug/L	#	57
75) 4-Chlorotoluene	11.339	91	30239	5.73	ug/L		95
76) tert-Butylbenzene	11.479	91	18808	5.76	ug/L		94
77) 1,2,4-Trimethylbenzene	11.540	105	34216	6.04	ug/L		97
78) sec-Butylbenzene	11.619	105	40240	5.67	ug/L		98
79) 4-Isopropyltoluene	11.729	119	33176	6.39	ug/L		99
80) 1,3-Dichlorobenzene	11.796	146	19712	5.49	ug/L		98
81) 1,4-Dichlorobenzene	11.862	146	20421	5.17	ug/L		94
82) n-Butylbenzene	12.045	91	28526	5.77	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	19460	5.65	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	2728	5.06	ug/L		90
85) Hexachlorobutadiene	13.304	223	2715	5.67	ug/L		94
86) 1,2,4-Trichlorobenzene	13.347	180	11114	6.78	ug/L		93
87) Naphthalene	13.627	128	32892	6.76	ug/L		97
88) 1,2,3-Trichlorobenzene	13.785	180	10402	6.49	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102422.D
Acq On : 24 Oct 2019 6:09 pm
Operator : MM
Sample : 9J24043-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:29 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102423.D
Acq On : 24 Oct 2019 6:36 pm
Operator : MM
Sample : 9J24043-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:32 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.217	99	117608	50.00	ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.909	117	312833	50.00	ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	149215	50.00	ug/L	0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	5.712	111	113697	47.13	ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.782	114	367409	54.53	ug/L	0.00
48) Toluene-d8 (S)	8.297	98	415174	51.41	ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	121121	50.47	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.678	85	18118	7.84	ug/L	99
3) Chloromethane	1.897	50	22449	8.25	ug/L	98
4) Vinyl Chloride	2.001	62	25149	10.35	ug/L	96
5) Bromomethane	2.360	96	14678	7.84	ug/L	99
6) Chloroethane	2.500	64	11813	9.58	ug/L	80
7) Trichlorofluoromethane	2.664	101	29038	7.49	ug/L	94
8) Ethanol	3.236	45	34617	736.96	ug/L	86
9) 1,1-Dichloroethene	3.230	61	27243	9.18	ug/L	93
10) Carbon Disulfide	3.248	76	49011	10.06	ug/L	98
11) Freon 113	3.284	101	19612	10.13	ug/L	99
12) Iodomethane	3.388	142	3125	8.20	ug/L	93
13) Acrolein	3.619	56	4855	11.57	ug/L	76
14) Methylene Chloride	3.868	84	22701	7.47	ug/L	90
15) Acetone	3.941	43	19796	19.53	ug/L	95
16) t-1,2-Dichloroethene	4.039	61	27372	10.29	ug/L	93
17) n-Hexane	4.124	86	4034	12.37	ug/L	92
18) Methyl-tert-butyl-ether	4.167	73	61557	10.49	ug/L	95
19) tert-Butanol (TBA)	4.294	59	292252	803.84	ug/L	99
20) Diisopropyl ether (DIPE)	4.568	45	17135	2.87	ug/L	96
21) 1,1-Dichloroethane	4.684	63	36999	9.87	ug/L	97
22) Acrylonitrile	4.744	53	11383	10.28	ug/L	91
23) Ethyl-tert-butyl ether...	4.939	59	16756	3.15	ug/L	98
24) Vinyl Acetate	4.957	43	42656	9.56	ug/L	97
25) c-1,2-Dichloroethene	5.243	61	28723	9.81	ug/L	90
26) 2,2-Dichloropropane	5.353	77	23663	9.05	ug/L	99
27) Bromochloromethane	5.450	130	14961	10.35	ug/L	91
28) Chloroform	5.529	83	37799	9.40	ug/L	97
29) Carbon Tetrachloride	5.657	117	20840	7.56	ug/L	94
30) Tetrahydrofuran	5.700	42	10375	10.67	ug/L	83
31) 1,1,1-Trichloroethane	5.736	97	30210	9.09	ug/L	97
33) 1,1-Dichloropropene	5.864	75	29295	11.00	ug/L	95
34) 2-Butanone (MEK)	5.858	43	31158	20.17	ug/L	96
35) Benzene	6.119	78	87359	10.91	ug/L	96
36) tert-Amyl methyl ether...	6.247	73	15349	2.88	ug/L	94
37) 1,2-Dichloroethane (EDC)	6.338	62	28935	8.85	ug/L	92
38) iso-Butyl Alcohol	6.375	43	39286	280.78	ug/L	94
40) Trichloroethene (TCE)	6.740	130	23449	11.49	ug/L	96
41) Tert-Amyl-Ethyl-Ether ...	7.001	59	11032	3.28	ug/L	85
42) Dibromomethane	7.196	93	14594	10.04	ug/L	95
43) 1,2-Dichloropropane	7.312	63	21915	10.08	ug/L	94
44) Bromodichloromethane	7.379	83	25055	8.58	ug/L	99
46) 2-Chloroethyl Vinyl Ether	8.023	63	15685	12.76	ug/L #	100
47) c-1,3-Dichloropropene	8.090	75	30482	10.29	ug/L	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102423.D
Acq On : 24 Oct 2019 6:36 pm
Operator : MM
Sample : 9J24043-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:32 2019
Quant Method : C:\msdchem\1\methods\~~VI191025W.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

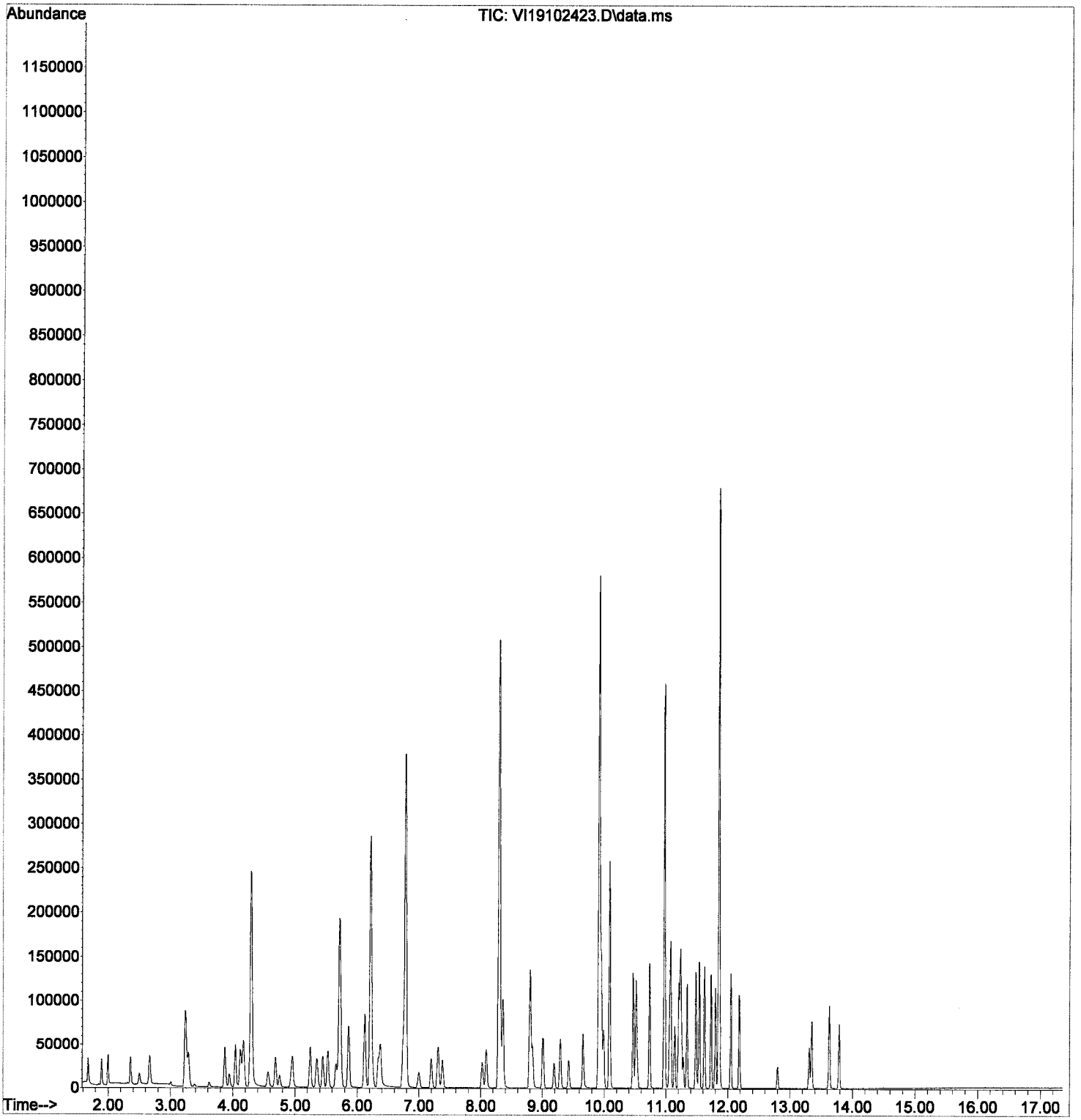
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	90400	10.33	ug/L		100
50) Tetrachloroethene (PCE)	8.796	166	22099	11.06	ug/L		92
51) 4-Methyl-2-Pentanone (...	8.802	43	58009	20.92	ug/L		92
52) t-1,3-Dichloropropene	8.839	75	26302	8.92	ug/L		96
53) 1,1,2-Trichloroethane	9.009	97	21402	10.15	ug/L		91
54) Dibromochloromethane	9.192	129	17208	7.78	ug/L		98
55) 1,3-Dichloropropane	9.289	76	36354	10.31	ug/L		92
56) 1,2-Dibromoethane (EDB)	9.423	107	22884	10.57	ug/L		92
57) 2-Hexanone	9.654	43	41881	20.88	ug/L		91
58) Chlorobenzene	9.928	112	60359	10.89	ug/L		98
59) Ethylbenzene	9.952	91	96018	10.49	ug/L		97
60) 1,1,1,2-Tetrachloroethane	9.988	131	16995	8.86	ug/L		94
61) m,p-Xylenes (2)	10.086	91	142004	21.90	ug/L		100
62) o-Xylene	10.463	91	71417	11.16	ug/L		99
63) Styrene	10.512	104	57022	11.55	ug/L		96
64) Bromoform	10.536	173	10701	6.82	ug/L		97
65) Isopropylbenzene	10.731	105	86673	11.50	ug/L		99
68) Bromobenzene	11.059	156	24222	11.27	ug/L		89
69) n-Propylbenzene	11.071	91	99009	10.59	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.138	85	20098	10.31	ug/L		97
71) 2-Chlorotoluene	11.205	126	21625	11.66	ug/L		93
72) 1,3,5-Trimethylbenzene	11.230	105	69892	11.21	ug/L		98
73) 1,2,3-Trichloropropane	11.248	110	10162	10.68	ug/L		92
74) t-1,4-Dichloro-2-butene	11.278	53	6985	9.43	ug/L	#	66
75) 4-Chlorotoluene	11.339	91	61742	11.13	ug/L		98
76) tert-Butylbenzene	11.479	91	38411	11.19	ug/L		96
77) 1,2,4-Trimethylbenzene	11.534	105	70882	11.77	ug/L		98
78) sec-Butylbenzene	11.619	105	83977	11.24	ug/L		99
79) 4-Isopropyltoluene	11.728	119	68628	12.35	ug/L		98
80) 1,3-Dichlorobenzene	11.795	146	41299	10.93	ug/L		98
81) 1,4-Dichlorobenzene	11.862	146	42771	10.30	ug/L		96
82) n-Butylbenzene	12.045	91	59515	11.45	ug/L		98
83) 1,2-Dichlorobenzene	12.179	146	40125	11.07	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	12.799	157	6234	10.99	ug/L		83
85) Hexachlorobutadiene	13.304	223	5468	10.86	ug/L		93
86) 1,2,4-Trichlorobenzene	13.347	180	23133	13.41	ug/L		99
87) Naphthalene	13.626	128	72324	13.49	ug/L		97
88) 1,2,3-Trichlorobenzene	13.785	180	22293	13.22	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102423.D
Acq On : 24 Oct 2019 6:36 pm
Operator : MM
Sample : 9J24043-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:32 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102424.D
Acq On : 24 Oct 2019 7:03 pm
Operator : MM
Sample : 9J24043-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:35 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

MM 10/25/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	112406	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	307093	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	151591	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	109549	47.51	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	354922	55.12	ug/L		-0.01
48) Toluene-d8 (S)	8.298	98	399810	50.43	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	120976	49.61	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.673	85	35982	16.29	ug/L		98
3) Chloromethane	1.892	50	45062	17.32	ug/L		97
4) Vinyl Chloride	1.995	62	49916	21.50	ug/L		96
5) Bromomethane	2.354	96	27599	15.42	ug/L		98
6) Chloroethane	2.488	64	19851	16.84	ug/L		80
7) Trichlorofluoromethane	2.658	101	58162	15.70	ug/L		96
8) Ethanol	3.230	45	70360	1567.21	ug/L		87
9) 1,1-Dichloroethene	3.230	61	54074	19.06	ug/L		94
10) Carbon Disulfide	3.242	76	98898	21.25	ug/L		98
11) Freon 113	3.279	101	39711	21.45	ug/L		97
12) Iodomethane	3.382	142	11472	16.74	ug/L		96
13) Acrolein	3.613	56	10458	26.07	ug/L		77
14) Methylene Chloride	3.869	84	43598	19.20	ug/L		88
15) Acetone	3.936	43	39380	40.66	ug/L		94
16) t-1,2-Dichloroethene	4.033	61	56066	22.05	ug/L		94
17) n-Hexane	4.118	86	8308	26.66	ug/L		95
18) Methyl-tert-butyl-ether	4.167	73	123669	22.05	ug/L		95
19) tert-Butanol (TBA)	4.289	59	614954	1769.71	ug/L		97
20) Diisopropyl ether (DIPE)	4.562	45	34871	6.10	ug/L		94
21) 1,1-Dichloroethane	4.678	63	75120	20.96	ug/L		96
22) Acrylonitrile	4.745	53	22973	21.71	ug/L		97
23) Ethyl-tert-butyl ether...	4.939	59	33471	6.59	ug/L		98
24) Vinyl Acetate	4.952	43	90141	21.14	ug/L		97
25) c-1,2-Dichloroethene	5.238	61	58359	20.86	ug/L		92
26) 2,2-Dichloropropane	5.347	77	48254	19.30	ug/L		97
27) Bromochloromethane	5.444	130	30935	22.39	ug/L		93
28) Chloroform	5.523	83	76239	19.85	ug/L		97
29) Carbon Tetrachloride	5.657	117	43938	16.68	ug/L		92
30) Tetrahydrofuran	5.700	42	21330	22.95	ug/L		89
31) 1,1,1-Trichloroethane	5.730	97	62000	19.52	ug/L		96
33) 1,1-Dichloropropene	5.858	75	59019	23.19	ug/L		96
34) 2-Butanone (MEK)	5.852	43	64474	43.67	ug/L		98
35) Benzene	6.120	78	175817	22.96	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	30296	5.94	ug/L		96
37) 1,2-Dichloroethane (EDC)	6.339	62	58731	18.79	ug/L		91
38) iso-Butyl Alcohol	6.369	43	83527	624.61	ug/L		94
40) Trichloroethene (TCE)	6.740	130	47359	24.28	ug/L		92
41) Tert-Amyl-Ethyl-Ether ...	6.996	59	22696	7.05	ug/L		83
42) Dibromomethane	7.196	93	29514	21.24	ug/L		94
43) 1,2-Dichloropropane	7.306	63	44422	21.38	ug/L		92
44) Bromodichloromethane	7.379	83	51693	18.52	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.018	63	33274	26.29	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	64475	22.18	ug/L		87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102424.D
Acq On : 24 Oct 2019 7:03 pm
Operator : MM
Sample : 9J24043-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:35 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

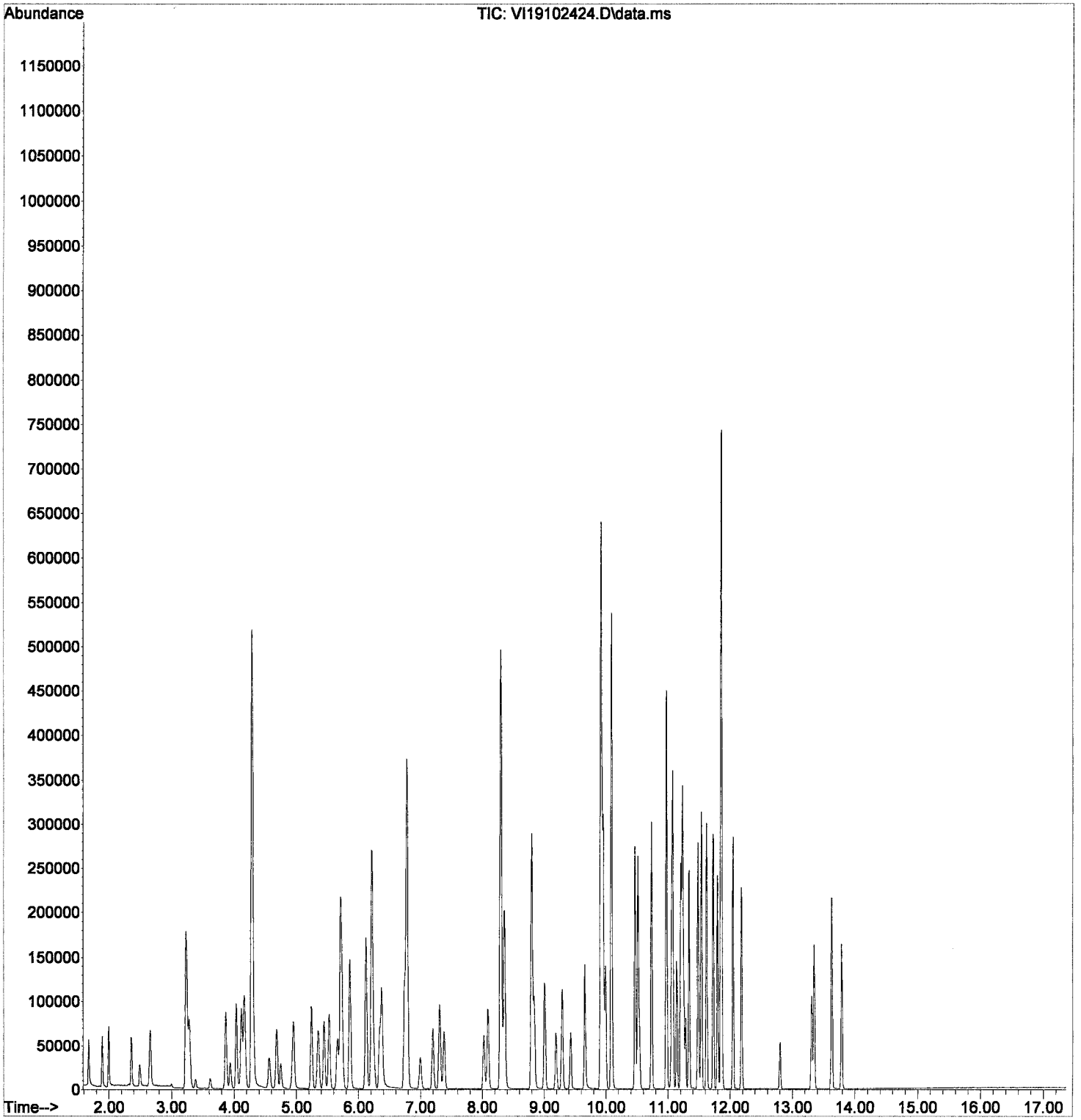
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	183309	21.33	ug/L		100
50) Tetrachloroethene (PCE)	8.796	166	45467	23.17	ug/L		91
51) 4-Methyl-2-Pentanone (...	8.796	43	120524	44.27	ug/L		94
52) t-1,3-Dichloropropene	8.833	75	57085	19.72	ug/L		96
53) 1,1,2-Trichloroethane	9.003	97	43171	20.86	ug/L		95
54) Dibromochloromethane	9.186	129	36932	17.00	ug/L		99
55) 1,3-Dichloropropane	9.289	76	73700	21.29	ug/L		92
56) 1,2-Dibromoethane (EDB)	9.423	107	46797	22.02	ug/L		95
57) 2-Hexanone	9.654	43	87528	44.45	ug/L		92
58) Chlorobenzene	9.928	112	120984	22.23	ug/L		99
59) Ethylbenzene	9.952	91	195460	21.76	ug/L		96
60) 1,1,1,2-Tetrachloroethane	9.989	131	36336	19.29	ug/L		96
61) m,p-Xylenes (2)	10.086	91	297066	46.05	ug/L		100
62) o-Xylene	10.463	91	149422	23.36	ug/L		99
63) Styrene	10.512	104	120205	24.26	ug/L		98
64) Bromoform	10.536	173	23844	15.48	ug/L		97
65) Isopropylbenzene	10.731	105	182751	24.16	ug/L		100
68) Bromobenzene	11.060	156	50013	22.90	ug/L		89
69) n-Propylbenzene	11.072	91	210703	22.19	ug/L		100
70) 1,1,2,2-Tetrachloroethane	11.139	85	41819	21.12	ug/L		95
71) 2-Chlorotoluene	11.206	126	45664	24.23	ug/L		95
72) 1,3,5-Trimethylbenzene	11.230	105	148694	23.48	ug/L		98
73) 1,2,3-Trichloropropane	11.248	110	20199	20.89	ug/L		96
74) t-1,4-Dichloro-2-butene	11.279	53	14515	19.29	ug/L	#	73
75) 4-Chlorotoluene	11.339	91	129933	23.05	ug/L		99
76) tert-Butylbenzene	11.479	91	81742	23.44	ug/L		95
77) 1,2,4-Trimethylbenzene	11.534	105	151018	24.30	ug/L		97
78) sec-Butylbenzene	11.619	105	180894	23.84	ug/L		99
79) 4-Isopropyltoluene	11.729	119	151382	26.15	ug/L		97
80) 1,3-Dichlorobenzene	11.796	146	86247	22.48	ug/L		98
81) 1,4-Dichlorobenzene	11.863	146	89594	21.23	ug/L		97
82) n-Butylbenzene	12.045	91	130970	24.80	ug/L		97
83) 1,2-Dichlorobenzene	12.185	146	83871	22.77	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	12.799	157	13740	23.83	ug/L		96
85) Hexachlorobutadiene	13.304	223	12054	23.57	ug/L		92
86) 1,2,4-Trichlorobenzene	13.347	180	50962	29.09	ug/L		98
87) Naphthalene	13.627	128	161860	28.24	ug/L		98
88) 1,2,3-Trichlorobenzene	13.785	180	48345	28.22	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102424.D
Acq On : 24 Oct 2019 7:03 pm
Operator : MM
Sample : 9J24043-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:35 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102425.D
Acq On : 24 Oct 2019 7:30 pm
Operator : MM
Sample : 9J24043-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:38 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	115635	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	321159	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	158122	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	116809	49.24	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	370144	55.88	ug/L		-0.01
48) Toluene-d8 (S)	8.298	98	415062	50.06	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	125801	49.46	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	109425	48.15	ug/L		99
3) Chloromethane	1.892	50	118956	44.44	ug/L		96
4) Vinyl Chloride	1.995	62	133008	55.69	ug/L		97
5) Bromomethane	2.360	96	66917	36.34	ug/L		96
6) Chloroethane	2.494	64	51695	42.64	ug/L		82
7) Trichlorofluoromethane	2.664	101	145579	38.20	ug/L		95
8) Ethanol	3.230	45	131053	2837.58	ug/L		88
9) 1,1-Dichloroethene	3.230	61	137847	47.23	ug/L		91
10) Carbon Disulfide	3.248	76	254448	53.14	ug/L		98
11) Freon 113	3.285	101	97812	51.37	ug/L		94
12) Iodomethane	3.382	142	57651	55.87	ug/L		92
13) Acrolein	3.613	56	28604	69.32	ug/L		78
14) Methylene Chloride	3.869	84	102541	48.75	ug/L		89
15) Acetone	3.936	43	93945	94.28	ug/L		97
16) t-1,2-Dichloroethene	4.039	61	137318	52.49	ug/L		92
17) n-Hexane	4.118	86	21163	66.01	ug/L	#	91
18) Methyl-tert-butyl-ether	4.167	73	313020	54.26	ug/L		94
19) tert-Butanol (TBA)	4.288	59	1172838	3280.93	ug/L		94
20) Diisopropyl ether (DIPE)	4.562	45	63994	10.88	ug/L		93
21) 1,1-Dichloroethane	4.684	63	182910	49.62	ug/L		96
22) Acrylonitrile	4.745	53	58667	53.90	ug/L		96
23) Ethyl-tert-butyl ether...	4.939	59	63126	12.08	ug/L		96
24) Vinyl Acetate	4.952	43	246127	56.12	ug/L		96
25) c-1,2-Dichloroethene	5.238	61	143124	49.74	ug/L		92
26) 2,2-Dichloropropane	5.347	77	122658	47.70	ug/L		96
27) Bromochloromethane	5.444	130	77572	54.59	ug/L		95
28) Chloroform	5.523	83	186984	47.32	ug/L		97
29) Carbon Tetrachloride	5.657	117	114614	42.30	ug/L		94
30) Tetrahydrofuran	5.694	42	54072	56.56	ug/L		88
31) 1,1,1-Trichloroethane	5.730	97	156566	47.91	ug/L		96
33) 1,1-Dichloropropene	5.858	75	146998	56.14	ug/L		96
34) 2-Butanone (MEK)	5.852	43	162223	106.80	ug/L		96
35) Benzene	6.120	78	434612	55.18	ug/L		96
36) tert-Amyl methyl ether...	6.241	73	56793	10.83	ug/L		98
37) 1,2-Dichloroethane (EDC)	6.339	62	143950	44.78	ug/L		92
38) iso-Butyl Alcohol	6.369	43	224878	1634.66	ug/L		92
40) Trichloroethene (TCE)	6.740	130	118626	59.12	ug/L		95
41) Tert-Amyl-Ethyl-Ether ...	6.996	59	42660	12.88	ug/L		84
42) Dibromomethane	7.196	93	74270	51.96	ug/L		96
43) 1,2-Dichloropropane	7.306	63	109124	51.04	ug/L		92
44) Bromodichloromethane	7.379	83	133532	46.50	ug/L		95
46) 2-Chloroethyl Vinyl Ether	8.018	63	88331	62.62	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	166893	54.89	ug/L		87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102425.D
Acq On : 24 Oct 2019 7:30 pm
Operator : MM
Sample : 9J24043-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:38 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

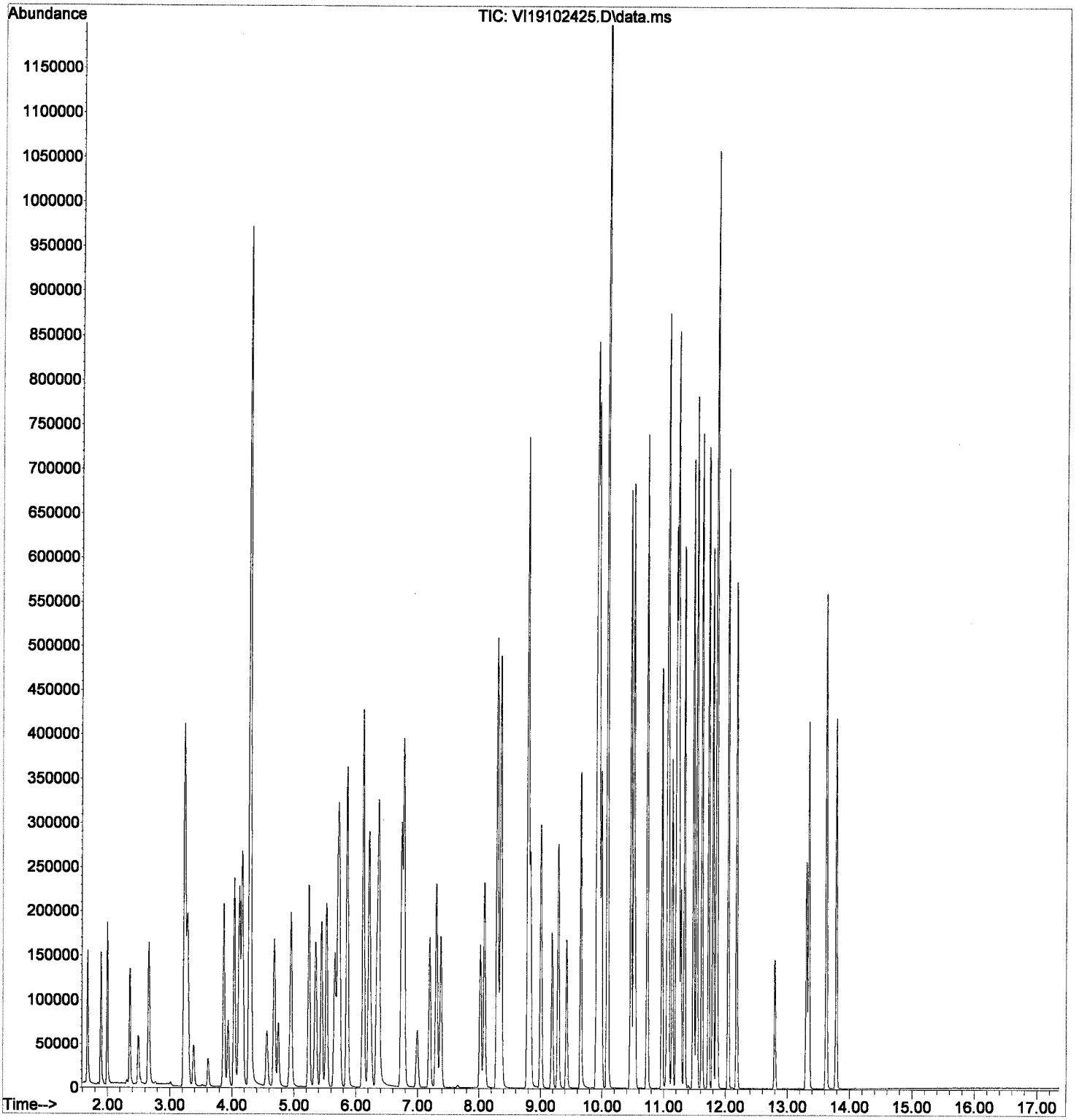
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.358	91	446611	49.69	ug/L	99
50) Tetrachloroethene (PCE)	8.796	166	113079	55.11	ug/L	92
51) 4-Methyl-2-Pentanone (...	8.796	43	304356	106.90	ug/L	94
52) t-1,3-Dichloropropene	8.833	75	151987	50.21	ug/L	97
53) 1,1,2-Trichloroethane	9.003	97	107594	49.71	ug/L	94
54) Dibromochloromethane	9.186	129	101291	44.59	ug/L	96
55) 1,3-Dichloropropane	9.289	76	183541	50.70	ug/L	91
56) 1,2-Dibromoethane (EDB)	9.423	107	117418	52.83	ug/L	95
57) 2-Hexanone	9.648	43	224495	109.02	ug/L	91
58) Chlorobenzene	9.928	112	301806	53.03	ug/L	98
59) Ethylbenzene	9.952	91	486890	51.84	ug/L	97
60) 1,1,1,2-Tetrachloroethane	9.989	131	95075	48.26	ug/L	97
61) m,p-Xylenes (2)	10.086	91	738497	106.14	ug/L	99
62) o-Xylene	10.463	91	371768	53.47	ug/L	99
63) Styrene	10.512	104	307044	56.78	ug/L	98
64) Bromoform	10.536	173	71080	44.14	ug/L	96
65) Isopropylbenzene	10.731	105	458349	55.46	ug/L	98
68) Bromobenzene	11.060	156	126180	55.39	ug/L	90
69) n-Propylbenzene	11.072	91	530991	53.60	ug/L	100
70) 1,1,2,2-Tetrachloroethane	11.139	85	106506	51.56	ug/L	94
71) 2-Chlorotoluene	11.206	126	113724	57.85	ug/L	93
72) 1,3,5-Trimethylbenzene	11.230	105	370702	56.11	ug/L	97
73) 1,2,3-Trichloropropane	11.248	110	51746	51.81	ug/L	92
74) t-1,4-Dichloro-2-butene	11.279	53	38431	48.98	ug/L	84
75) 4-Chlorotoluene	11.333	91	325043	55.29	ug/L	95
76) tert-Butylbenzene	11.479	91	202040	55.54	ug/L	97
77) 1,2,4-Trimethylbenzene	11.534	105	374779	56.03	ug/L	96
78) sec-Butylbenzene	11.619	105	451933	57.09	ug/L	98
79) 4-Isopropyltoluene	11.729	119	378247	59.61	ug/L	97
80) 1,3-Dichlorobenzene	11.796	146	218694	54.64	ug/L	99
81) 1,4-Dichlorobenzene	11.863	146	222386	50.52	ug/L	98
82) n-Butylbenzene	12.045	91	325681	59.11	ug/L	99
83) 1,2-Dichlorobenzene	12.179	146	211431	55.02	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	38435	63.92	ug/L	93
85) Hexachlorobutadiene	13.304	223	29829	55.92	ug/L	96
86) 1,2,4-Trichlorobenzene	13.341	180	128379	70.24	ug/L	96
87) Naphthalene	13.627	128	425207	64.94	ug/L	98
88) 1,2,3-Trichlorobenzene	13.785	180	123175	68.94	ug/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102425.D
Acq On : 24 Oct 2019 7:30 pm
Operator : MM
Sample : 9J24043-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:38 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102426.D
Acq On : 24 Oct 2019 7:57 pm
Operator : MM
Sample : 9J24043-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:40 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

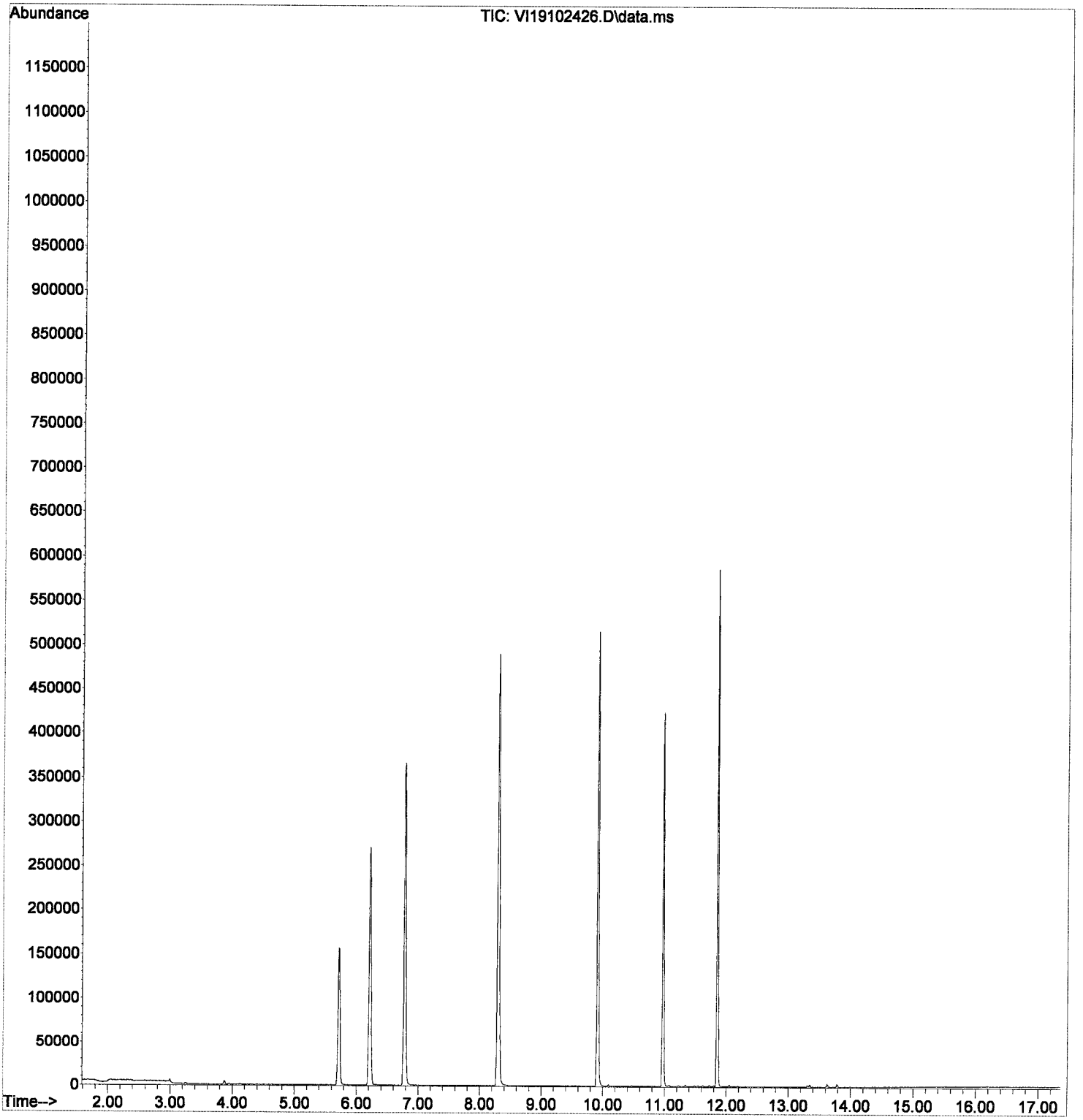
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	112457	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.910	117	299558	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	136435	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	110045	49.80	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	354886	49.95	ug/L		0.00
48) Toluene-d8 (S)	8.298	98	401381	51.05	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112112	50.86	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	219	0.12	ug/L	#	49
3) Chloromethane	1.898	50	309	0.13	ug/L	#	47
5) Bromomethane	2.366	96	254	0.18	ug/L	#	43
6) Chloroethane	2.518	64	211	0.19	ug/L	#	36
10) Carbon Disulfide	3.248	76	1601	0.33	ug/L		78
15) Acetone	3.948	43	1040	1.06	ug/L		95
50) Tetrachloroethene (PCE)	8.803	166	260	0.13	ug/L	#	25
61) m,p-Xylenes (2)	10.092	91	1118	0.16	ug/L		95
69) n-Propylbenzene	11.072	91	1265	0.14	ug/L		91
72) 1,3,5-Trimethylbenzene	11.230	105	651	0.11	ug/L		81
75) 4-Chlorotoluene	11.339	91	738	0.13	ug/L		86
76) tert-Butylbenzene	11.485	91	323	0.09	ug/L	#	83
77) 1,2,4-Trimethylbenzene	11.540	105	743	0.12	ug/L		92
78) sec-Butylbenzene	11.625	105	1155	0.15	ug/L		94
79) 4-Isopropyltoluene	11.729	119	1010	0.17	ug/L		89
80) 1,3-Dichlorobenzene	11.802	146	590	0.16	ug/L		93
81) 1,4-Dichlorobenzene	11.863	146	797	0.21	ug/L	#	7
82) n-Butylbenzene	12.051	91	1166	0.23	ug/L		98
83) 1,2-Dichlorobenzene	12.185	146	421	0.12	ug/L	#	70
85) Hexachlorobutadiene	13.304	223	332	0.66	ug/L	#	72
86) 1,2,4-Trichlorobenzene	13.341	180	1230	0.60	ug/L		94
87) Naphthalene	13.627	128	3549	0.54	ug/L		93
88) 1,2,3-Trichlorobenzene	13.785	180	1510	0.77	ug/L		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102426.D
Acq On : 24 Oct 2019 7:57 pm
Operator : MM
Sample : 9J24043-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:40 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102427.D
Acq On : 24 Oct 2019 8:24 pm
Operator : MM
Sample : 9J24043-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:41 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	111989	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.909	117	318635	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	163243	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	113819	49.55	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	356857	55.62	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	405945	49.35	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	124392	47.37	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.684	85	212153	96.39	ug/L		98
3) Chloromethane	1.897	50	226754	87.47	ug/L		96
4) Vinyl Chloride	2.001	62	258510	111.76	ug/L		98
5) Bromomethane	2.366	96	125242	70.23	ug/L		98
6) Chloroethane	2.506	64	53786	45.81	ug/L		81
7) Trichlorofluoromethane	2.664	101	279991	75.86	ug/L		97
8) Ethanol	3.242	45	254643	5693.08	ug/L		88
9) 1,1-Dichloroethene	3.236	61	286478	101.36	ug/L		92
10) Carbon Disulfide	3.254	76	531736	114.66	ug/L		98
11) Freon 113	3.291	101	204168	110.71	ug/L		97
12) Iodomethane	3.388	142	153366	122.76	ug/L		92
13) Acrolein	3.625	56	60054	150.27	ug/L		72
14) Methylene Chloride	3.875	84	209114	104.97	ug/L		88
15) Acetone	3.942	43	188786	195.63	ug/L		96
16) t-1,2-Dichloroethene	4.039	61	285846	112.82	ug/L		95
17) n-Hexane	4.124	86	43920	141.46	ug/L		93
18) Methyl-tert-butyl-ether	4.167	73	646936	115.78	ug/L		92
19) tert-Butanol (TBA)	4.294	59	2295578	6630.79	ug/L		91
20) Diisopropyl ether (DIPE)	4.568	45	122827	21.57	ug/L		93
21) 1,1-Dichloroethane	4.684	63	379907	106.41	ug/L		96
22) Acrylonitrile	4.751	53	122564	116.27	ug/L		98
23) Ethyl-tert-butyl ether...	4.939	59	121788	24.06	ug/L		98
24) Vinyl Acetate	4.957	43	522592	123.03	ug/L		95
25) c-1,2-Dichloroethene	5.243	61	297452	106.74	ug/L		91
26) 2,2-Dichloropropane	5.353	77	252830	101.52	ug/L		95
27) Bromochloromethane	5.450	130	151653	110.19	ug/L		94
28) Chloroform	5.529	83	385051	100.61	ug/L		97
29) Carbon Tetrachloride	5.663	117	247648	94.37	ug/L		94
30) Tetrahydrofuran	5.700	42	111881	120.85	ug/L		86
31) 1,1,1-Trichloroethane	5.736	97	325398	102.81	ug/L		96
33) 1,1-Dichloropropene	5.864	75	308104	121.49	ug/L		95
34) 2-Butanone (MEK)	5.852	43	331914	225.64	ug/L		97
35) Benzene	6.119	78	900809	118.09	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	111127	21.87	ug/L		99
37) 1,2-Dichloroethane (EDC)	6.338	62	294149	94.48	ug/L		92
38) iso-Butyl Alcohol	6.375	43	450055	3378.00	ug/L		92
40) Trichloroethene (TCE)	6.746	130	245311	126.23	ug/L		94
41) Tert-Amyl-Ethyl-Ether ...	6.995	59	83591	26.07	ug/L		86
42) Dibromomethane	7.196	93	155032	111.99	ug/L		94
43) 1,2-Dichloropropane	7.312	63	229327	110.76	ug/L		90
44) Bromodichloromethane	7.379	83	282119	101.45	ug/L		92
46) 2-Chloroethyl Vinyl Ether	8.024	63	185987	122.70	ug/L	#	100
47) c-1,3-Dichloropropene	8.090	75	356393	118.14	ug/L		86

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102427.D
Acq On : 24 Oct 2019 8:24 pm
Operator : MM
Sample : 9J24043-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:41 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

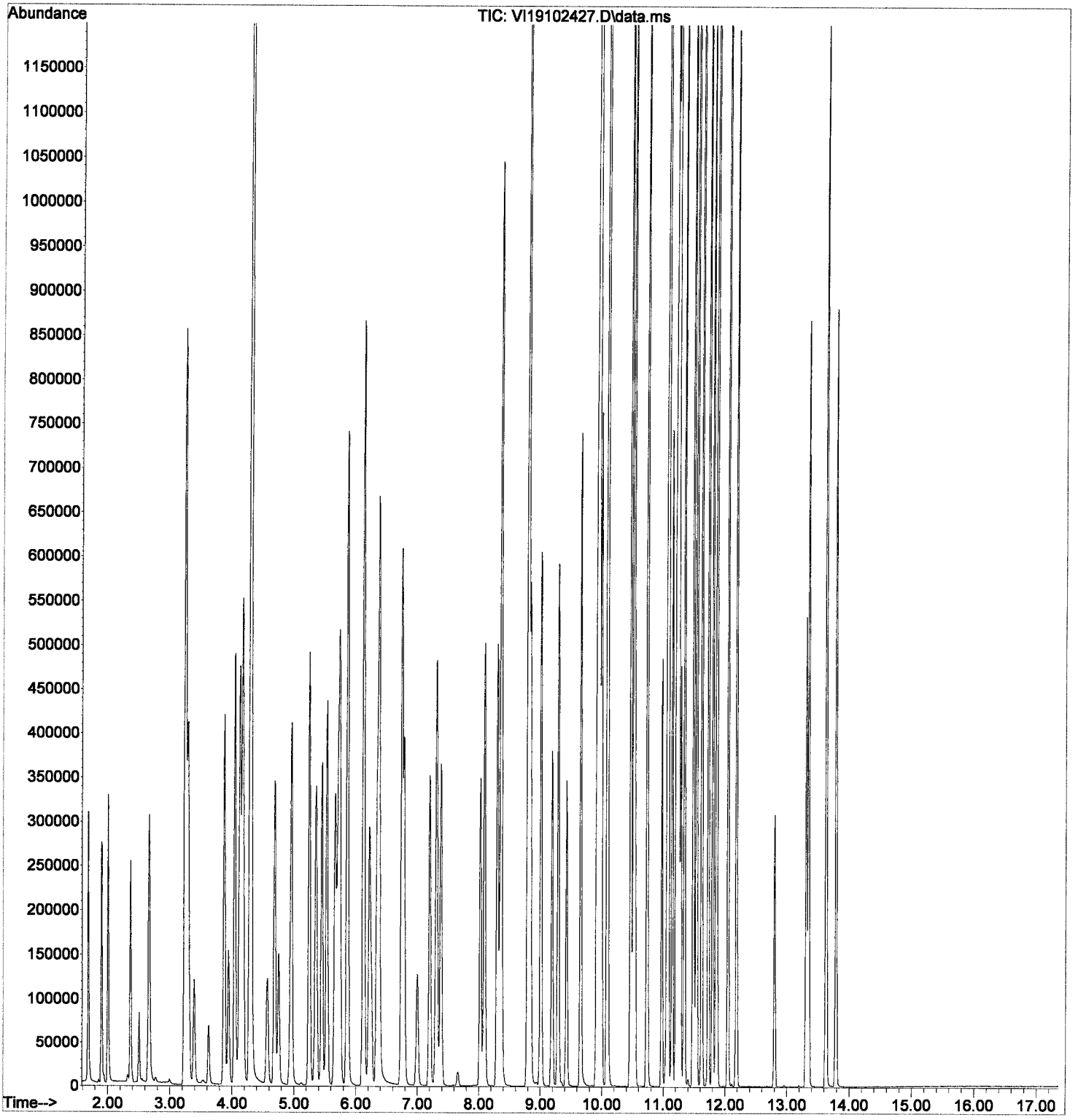
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.358	91	931584	104.48	ug/L	99
50) Tetrachloroethene (PCE)	8.796	166	236880	116.36	ug/L	92
51) 4-Methyl-2-Pentanone (...	8.796	43	616767	218.34	ug/L	92
52) t-1,3-Dichloropropene	8.839	75	327146	108.93	ug/L	98
53) 1,1,2-Trichloroethane	9.009	97	221018	102.93	ug/L	92
54) Dibromochloromethane	9.186	129	222919	98.91	ug/L	98
55) 1,3-Dichloropropane	9.289	76	379039	105.53	ug/L	90
56) 1,2-Dibromoethane (EDB)	9.423	107	243688	110.52	ug/L	94
57) 2-Hexanone	9.654	43	456833	223.60	ug/L	90
58) Chlorobenzene	9.928	112	624905	110.67	ug/L	98
59) Ethylbenzene	9.952	91	1015747	109.00	ug/L	97
60) 1,1,1,2-Tetrachloroethane	9.989	131	206263	105.52	ug/L	96
61) m,p-Xylenes (2)	10.086	91	1568164	215.46	ug/L	98
62) o-Xylene	10.463	91	785588	106.87	ug/L	100
63) Styrene	10.512	104	653902	114.07	ug/L	98
64) Bromoform	10.536	173	162527	101.72	ug/L	98
65) Isopropylbenzene	10.731	105	973691	110.72	ug/L	98
68) Bromobenzene	11.059	156	265287	112.81	ug/L	91
69) n-Propylbenzene	11.071	91	1142995	111.76	ug/L	100
70) 1,1,2,2-Tetrachloroethane	11.138	85	212550	99.67	ug/L	94
71) 2-Chlorotoluene	11.205	126	238214	117.38	ug/L	96
72) 1,3,5-Trimethylbenzene	11.230	105	783721	114.91	ug/L	97
73) 1,2,3-Trichloropropane	11.248	110	103994	99.89	ug/L	91
74) t-1,4-Dichloro-2-butene	11.278	53	76466	94.39	ug/L	93
75) 4-Chlorotoluene	11.339	91	688819	113.48	ug/L	98
76) tert-Butylbenzene	11.479	91	431117	114.79	ug/L	98
77) 1,2,4-Trimethylbenzene	11.534	105	798406	110.07	ug/L	97
78) sec-Butylbenzene	11.619	105	969880	118.68	ug/L	98
79) 4-Isopropyltoluene	11.728	119	812481	115.11	ug/L	97
80) 1,3-Dichlorobenzene	11.795	146	461068	111.58	ug/L	98
81) 1,4-Dichlorobenzene	11.862	146	468883	103.17	ug/L	97
82) n-Butylbenzene	12.045	91	694929	122.18	ug/L	99
83) 1,2-Dichlorobenzene	12.185	146	439251	110.73	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	81625	131.48	ug/L	92
85) Hexachlorobutadiene	13.304	223	62008	112.60	ug/L	96
86) 1,2,4-Trichlorobenzene	13.347	180	268764	142.44	ug/L	98
87) Naphthalene	13.627	128	899370	118.81	ug/L	98
88) 1,2,3-Trichlorobenzene	13.785	180	260549	141.24	ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102427.D
Acq On : 24 Oct 2019 8:24 pm
Operator : MM
Sample : 9J24043-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:41 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102428.D
Acq On : 24 Oct 2019 8:51 pm
Operator : MM
Sample : 9J24043-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:44 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	111004	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.916	117	296306	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	134814	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	109567	50.24	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	354190	50.51	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	395820	50.89	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	112213	51.51	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	460	0.25	ug/L	#	49
3) Chloromethane	1.904	50	377	0.16	ug/L	#	47
4) Vinyl Chloride	2.007	62	243	0.10	ug/L	#	50
5) Bromomethane	2.378	96	380	0.27	ug/L	#	63
6) Chloroethane	2.475	64	250	0.23	ug/L	#	36
7) Trichlorofluoromethane	2.676	101	332	0.12	ug/L	#	27
9) 1,1-Dichloroethene	3.242	61	244	0.09	ug/L	#	66
10) Carbon Disulfide	3.260	76	3074	0.63	ug/L		91
11) Freon 113	3.303	101	464	0.25	ug/L	#	64
12) Iodomethane	3.394	142	124	6.13	ug/L	#	47
14) Methylene Chloride	3.881	84	3969	1.09	ug/L	#	77
15) Acetone	3.948	43	1229	1.26	ug/L		100
16) t-1,2-Dichloroethene	4.045	61	638	0.25	ug/L		95
19) tert-Butanol (TBA)	4.307	59	387	0.90	ug/L		46
33) 1,1-Dichloropropene	5.870	75	460	0.16	ug/L	#	43
40) Trichloroethene (TCE)	6.752	130	288	0.13	ug/L	#	77
49) Toluene	8.352	91	913	0.10	ug/L		85
50) Tetrachloroethene (PCE)	8.796	166	577	0.28	ug/L	#	68
58) Chlorobenzene	9.928	112	773	0.14	ug/L	#	1
59) Ethylbenzene	9.958	91	1209	0.13	ug/L		91
61) m,p-Xylenes (2)	10.092	91	2162	0.32	ug/L		89
62) o-Xylene	10.469	91	668	0.10	ug/L		82
63) Styrene	10.524	104	495	0.09	ug/L	#	42
65) Isopropylbenzene	10.731	105	1275	0.16	ug/L		97
68) Bromobenzene	11.059	156	288	0.14	ug/L		83
69) n-Propylbenzene	11.078	91	2421	0.27	ug/L		95
71) 2-Chlorotoluene	11.211	126	168	0.09	ug/L	#	78
72) 1,3,5-Trimethylbenzene	11.230	105	1309	0.21	ug/L		93
75) 4-Chlorotoluene	11.345	91	1369	0.25	ug/L		91
76) tert-Butylbenzene	11.485	91	751	0.22	ug/L		89
77) 1,2,4-Trimethylbenzene	11.540	105	1395	0.23	ug/L		94
78) sec-Butylbenzene	11.619	105	2367	0.31	ug/L		93
79) 4-Isopropyltoluene	11.729	119	2004	0.34	ug/L		95
80) 1,3-Dichlorobenzene	11.795	146	1269	0.35	ug/L		90
81) 1,4-Dichlorobenzene	11.862	146	1515	0.40	ug/L	#	64
82) n-Butylbenzene	12.045	91	2454	0.48	ug/L		99
83) 1,2-Dichlorobenzene	12.185	146	829	0.23	ug/L		91
85) Hexachlorobutadiene	13.304	223	765	1.55	ug/L		89
86) 1,2,4-Trichlorobenzene	13.341	180	2446	1.20	ug/L		96
87) Naphthalene	13.627	128	6843	1.06	ug/L		97
88) 1,2,3-Trichlorobenzene	13.785	180	2978	1.54	ug/L		95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102428.D
Acq On : 24 Oct 2019 8:51 pm
Operator : MM
Sample : 9J24043-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:44 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

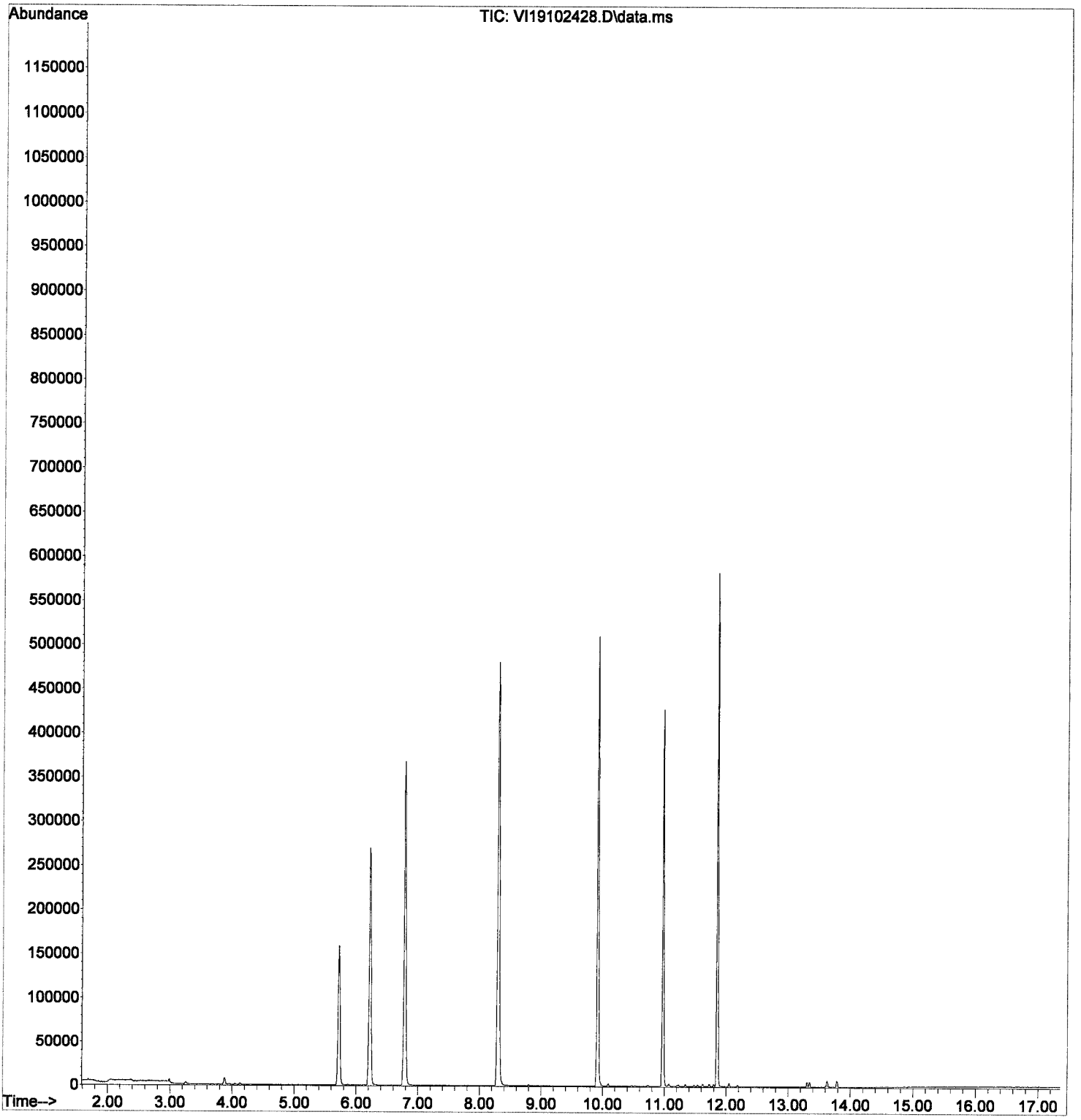
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102428.D
Acq On : 24 Oct 2019 8:51 pm
Operator : MM
Sample : 9J24043-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:44 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102429.D
Acq On : 24 Oct 2019 9:17 pm
Operator : MM
Sample : 9J24043-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:44 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	116034	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.916	117	330915	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	169365	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	118677	49.86	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	369003	55.51	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	420947	49.28	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	127221	46.70	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	431143	189.06	ug/L		99
3) Chloromethane	1.897	50	456703	170.02	ug/L		96
4) Vinyl Chloride	2.001	62	521368	217.54	ug/L		97
5) Bromomethane	2.366	96	267468	144.76	ug/L		99
6) Chloroethane	2.494	64	53331	43.84	ug/L		86
7) Trichlorofluoromethane	2.658	101	556445	145.51	ug/L		96
8) ~~Ethanol~~	~~3.248~~	~~45~~	~~3815~~	~~82.32~~	~~ug/L~~	~~#~~	~~1~~
9) 1,1-Dichloroethene	3.230	61	567371	193.74	ug/L		92
10) Carbon Disulfide	3.248	76	1067583	222.18	ug/L		98
11) Freon 113	3.285	101	411156	215.18	ug/L		96
12) Iodomethane	3.388	142	348091	216.50	ug/L		94
13) Acrolein	3.619	56	116360	281.01	ug/L		72
14) Methylene Chloride	3.875	84	419637	199.87	ug/L		87
15) Acetone	3.942	43	375022	375.07	ug/L		94
16) t-1,2-Dichloroethene	4.039	61	579277	220.67	ug/L		91
17) n-Hexane	4.124	86	92077	286.23	ug/L		96
18) Methyl-tert-butyl-ether	4.167	73	1318751	227.79	ug/L		93
19) ~~tert-Butanol (TBA)~~	~~4.294~~	~~59~~	~~1885~~	~~5.26~~	~~ug/L~~	~~#~~	~~34~~
20) ~~Diisopropyl ether (DIPE)~~	~~4.568~~	~~45~~	~~1263~~	~~0.21~~	~~ug/L~~		~~96~~
21) 1,1-Dichloroethane	4.684	63	761535	205.86	ug/L		97
22) Acrylonitrile	4.751	53	243406	222.86	ug/L		99
23) ~~Ethyl-tert-butyl ether...~~	~~4.939~~	~~59~~	~~984~~	~~0.19~~	~~ug/L~~	~~#~~	~~1~~
24) Vinyl Acetate	4.957	43	980632	222.81	ug/L		94
25) c-1,2-Dichloroethene	5.243	61	597836	207.05	ug/L		89
26) 2,2-Dichloropropane	5.353	77	512393	198.56	ug/L		92
27) Bromochloromethane	5.450	130	288672	202.44	ug/L		91
28) Chloroform	5.529	83	776466	195.81	ug/L		96
29) Carbon Tetrachloride	5.663	117	525973	193.45	ug/L		95
30) Tetrahydrofuran	5.694	42	221252	230.66	ug/L		85
31) 1,1,1-Trichloroethane	5.736	97	663507	202.33	ug/L		95
33) 1,1-Dichloropropene	5.864	75	622283	236.82	ug/L		94
34) 2-Butanone (MEK)	5.852	43	651518	427.47	ug/L		95
35) Benzene	6.119	78	1815119	229.66	ug/L		96
36) ~~tert-Amyl methyl ether...~~	~~6.253~~	~~73~~	~~804~~	~~0.15~~	~~ug/L~~	~~#~~	~~44~~
37) 1,2-Dichloroethane (EDC)	6.338	62	583025	180.73	ug/L		92
38) iso-Butyl Alcohol	6.375	43	863259	6253.53	ug/L		90
40) Trichloroethene (TCE)	6.740	130	498651	247.64	ug/L		95
41) ~~Tert-Amyl-Ethyl-Ether ...~~	~~7.002~~	~~59~~	~~794~~	~~0.24~~	~~ug/L~~		~~83~~
42) Dibromomethane	7.196	93	314382	219.17	ug/L		96
43) 1,2-Dichloropropane	7.312	63	461364	215.06	ug/L		91
44) Bromodichloromethane	7.379	83	582259	202.08	ug/L		93
46) 2-Chloroethyl Vinyl Ether	8.024	63	361318	207.89	ug/L	#	100
47) c-1,3-Dichloropropene	8.091	75	736312	235.01	ug/L		86

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102429.D
Acq On : 24 Oct 2019 9:17 pm
Operator : MM
Sample : 9J24043-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:44 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration

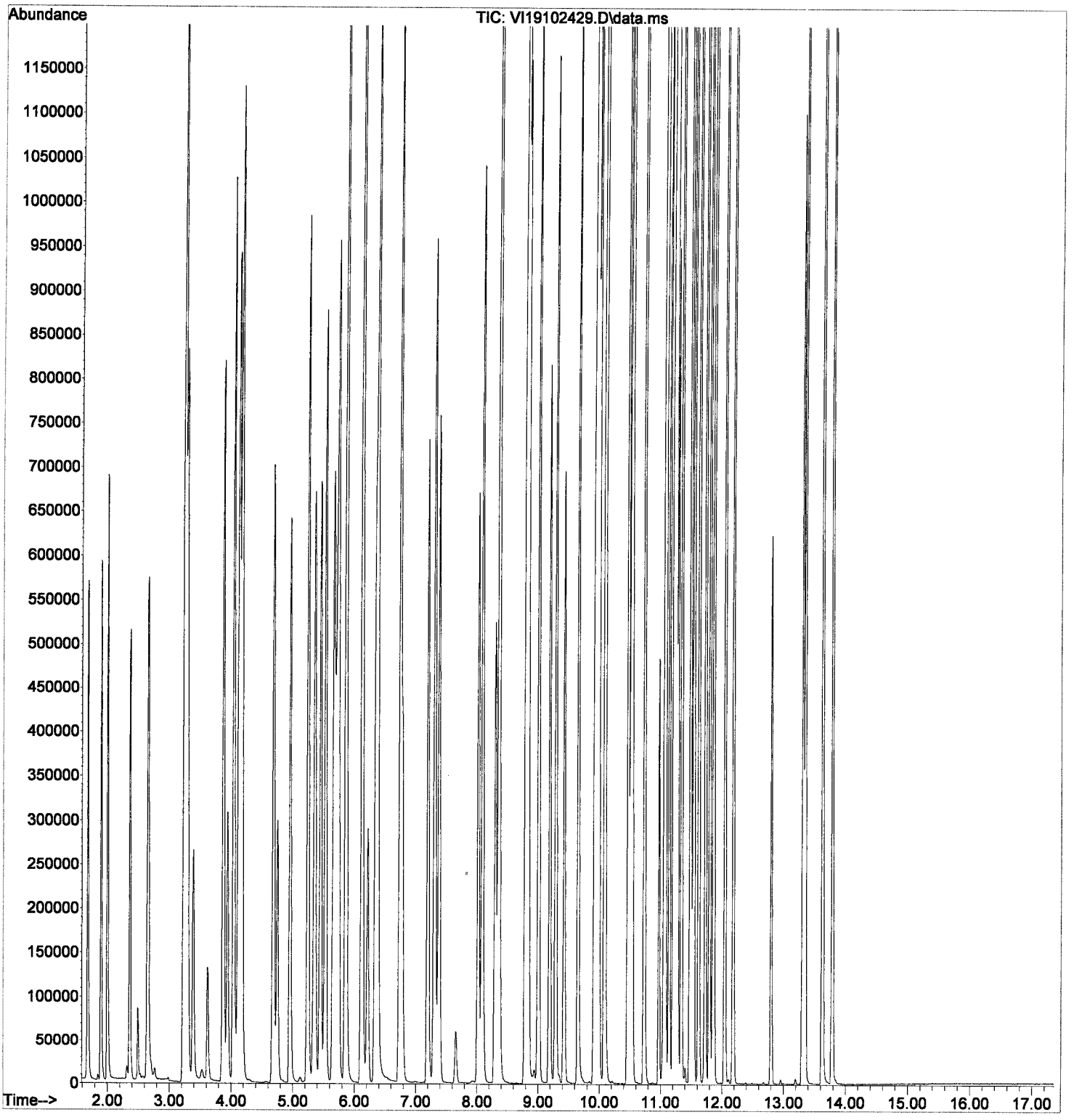
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	8.358	91	1905088	205.73	ug/L	100
50) Tetrachloroethene (PCE)	8.796	166	496433	234.81	ug/L	93
51) 4-Methyl-2-Pentanone (...	8.796	43	1166981	397.79	ug/L	90
52) t-1,3-Dichloropropene	8.839	75	678927	217.67	ug/L	98
53) 1,1,2-Trichloroethane	9.009	97	447395	200.62	ug/L	91
54) Dibromochloromethane	9.186	129	473598	202.33	ug/L	98
55) 1,3-Dichloropropane	9.289	76	755862	202.63	ug/L	88
56) 1,2-Dibromoethane (EDB)	9.423	107	496207	216.69	ug/L	95
57) 2-Hexanone	9.654	43	866990	408.61	ug/L	89
58) Chlorobenzene	9.928	112	1285529	219.22	ug/L	98
59) Ethylbenzene	9.952	91	2091382	216.09	ug/L	96
60) 1,1,1,2-Tetrachloroethane	9.989	131	427244	210.45	ug/L	97
61) m,p-Xylenes (2)	10.086	91	3227914	393.99	ug/L	97
62) o-Xylene	10.463	91	1606355	191.75	ug/L	99
63) Styrene	10.512	104	1353743	206.36	ug/L	98
64) Bromoform	10.536	173	351162	211.63	ug/L	97
65) Isopropylbenzene	10.731	105	1980670	196.46	ug/L	98
68) Bromobenzene	11.059	156	542011	222.15	ug/L	92
69) n-Propylbenzene	11.071	91	2308779	217.60	ug/L	99
70) 1,1,2,2-Tetrachloroethane	11.138	85	408430	184.60	ug/L	94
71) 2-Chlorotoluene	11.205	126	490093	232.77	ug/L	92
72) 1,3,5-Trimethylbenzene	11.230	105	1618836	228.77	ug/L	97
73) 1,2,3-Trichloropropane	11.248	110	199656	184.85	ug/L	91
74) t-1,4-Dichloro-2-butene	11.278	53	148266	176.41	ug/L	93
75) 4-Chlorotoluene	11.339	91	1379272	219.02	ug/L	99
76) tert-Butylbenzene	11.479	91	872573	223.94	ug/L	99
77) 1,2,4-Trimethylbenzene	11.534	105	1629601	200.54	ug/L	97
78) sec-Butylbenzene	11.619	105	1977513	233.24	ug/L	98
79) 4-Isopropyltoluene	11.729	119	1677679	205.31	ug/L	96
80) 1,3-Dichlorobenzene	11.795	146	936572	218.47	ug/L	99
81) 1,4-Dichlorobenzene	11.862	146	949679	201.41	ug/L	97
82) n-Butylbenzene	12.045	91	1435776	243.31	ug/L	100
83) 1,2-Dichlorobenzene	12.185	146	884385	214.88	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	169849	263.70	ug/L	91
85) Hexachlorobutadiene	13.304	223	126838	221.99	ug/L	96
86) 1,2,4-Trichlorobenzene	13.347	180	564943	288.60	ug/L	97
87) Naphthalene	13.627	128	1872418	204.22	ug/L	98
88) 1,2,3-Trichlorobenzene	13.785	180	552458	288.66	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102429.D
Acq On : 24 Oct 2019 9:17 pm
Operator : MM
Sample : 9J24043-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:10:44 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Aug 06 08:58:13 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102430.D
Acq On : 24 Oct 2019 9:44 pm
Operator : MM
Sample : 9J24043-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:47 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	114565	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.916	117	310520	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	145083	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.718	111	112455	49.96	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	365140	50.45	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	412521	50.61	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	119053	50.79	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.685	85	901	0.48	ug/L		86
3) Chloromethane	1.904	50	702	0.28	ug/L		91
4) Vinyl Chloride	2.007	62	555	0.22	ug/L		76
5) Bromomethane	2.366	96	620	0.42	ug/L	#	66
6) Chloroethane	2.475	64	119	0.10	ug/L	#	36
7) Trichlorofluoromethane	2.682	101	785	0.28	ug/L		75
9) 1,1-Dichloroethene	3.242	61	667	0.25	ug/L	#	68
10) Carbon Disulfide	3.254	76	6515	1.30	ug/L		94
11) Freon 113	3.291	101	931	0.48	ug/L		95
12) Iodomethane	3.394	142	137	6.13	ug/L	#	47
14) Methylene Chloride	3.875	84	7612	2.78	ug/L		89
15) Acetone	3.954	43	1615	1.61	ug/L		99
16) t-1,2-Dichloroethene	4.045	61	1218	0.46	ug/L		78
17) n-Hexane	4.136	86	112	0.28	ug/L	#	32
25) c-1,2-Dichloroethene	5.250	61	460	0.16	ug/L		83
33) 1,1-Dichloropropene	5.870	75	1080	0.37	ug/L		91
35) Benzene	6.132	78	1050	0.12	ug/L		55
40) Trichloroethene (TCE)	6.746	130	726	0.32	ug/L		83
49) Toluene	8.364	91	1892	0.21	ug/L		82
50) Tetrachloroethene (PCE)	8.802	166	1170	0.55	ug/L		97
52) t-1,3-Dichloropropene	8.851	75	248	0.09	ug/L	#	45
58) Chlorobenzene	9.928	112	1487	0.26	ug/L	#	41
59) Ethylbenzene	9.952	91	2481	0.26	ug/L		98
61) m,p-Xylenes (2)	10.086	91	3988	0.57	ug/L		87
62) o-Xylene	10.469	91	1347	0.19	ug/L		91
63) Styrene	10.518	104	1067	0.19	ug/L		84
65) Isopropylbenzene	10.731	105	2410	0.28	ug/L		98
68) Bromobenzene	11.059	156	607	0.27	ug/L	#	77
69) n-Propylbenzene	11.078	91	4614	0.48	ug/L		96
71) 2-Chlorotoluene	11.205	126	614	0.30	ug/L		91
72) 1,3,5-Trimethylbenzene	11.230	105	2535	0.38	ug/L		94
75) 4-Chlorotoluene	11.339	91	2932	0.49	ug/L		94
76) tert-Butylbenzene	11.479	91	1522	0.41	ug/L	#	74
77) 1,2,4-Trimethylbenzene	11.540	105	2816	0.42	ug/L		95
78) sec-Butylbenzene	11.619	105	4551	0.56	ug/L		94
79) 4-Isopropyltoluene	11.729	119	3934	0.61	ug/L		99
80) 1,3-Dichlorobenzene	11.802	146	2380	0.61	ug/L		96
81) 1,4-Dichlorobenzene	11.862	146	2728	0.67	ug/L	#	77
82) n-Butylbenzene	12.045	91	4783	0.88	ug/L		94
83) 1,2-Dichlorobenzene	12.185	146	1646	0.43	ug/L		95
85) Hexachlorobutadiene	13.304	223	1948	3.66	ug/L		90
86) 1,2,4-Trichlorobenzene	13.347	180	4827	2.20	ug/L		92
87) Naphthalene	13.627	128	13602	1.95	ug/L		98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102430.D
Acq On : 24 Oct 2019 9:44 pm
Operator : MM
Sample : 9J24043-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:47 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

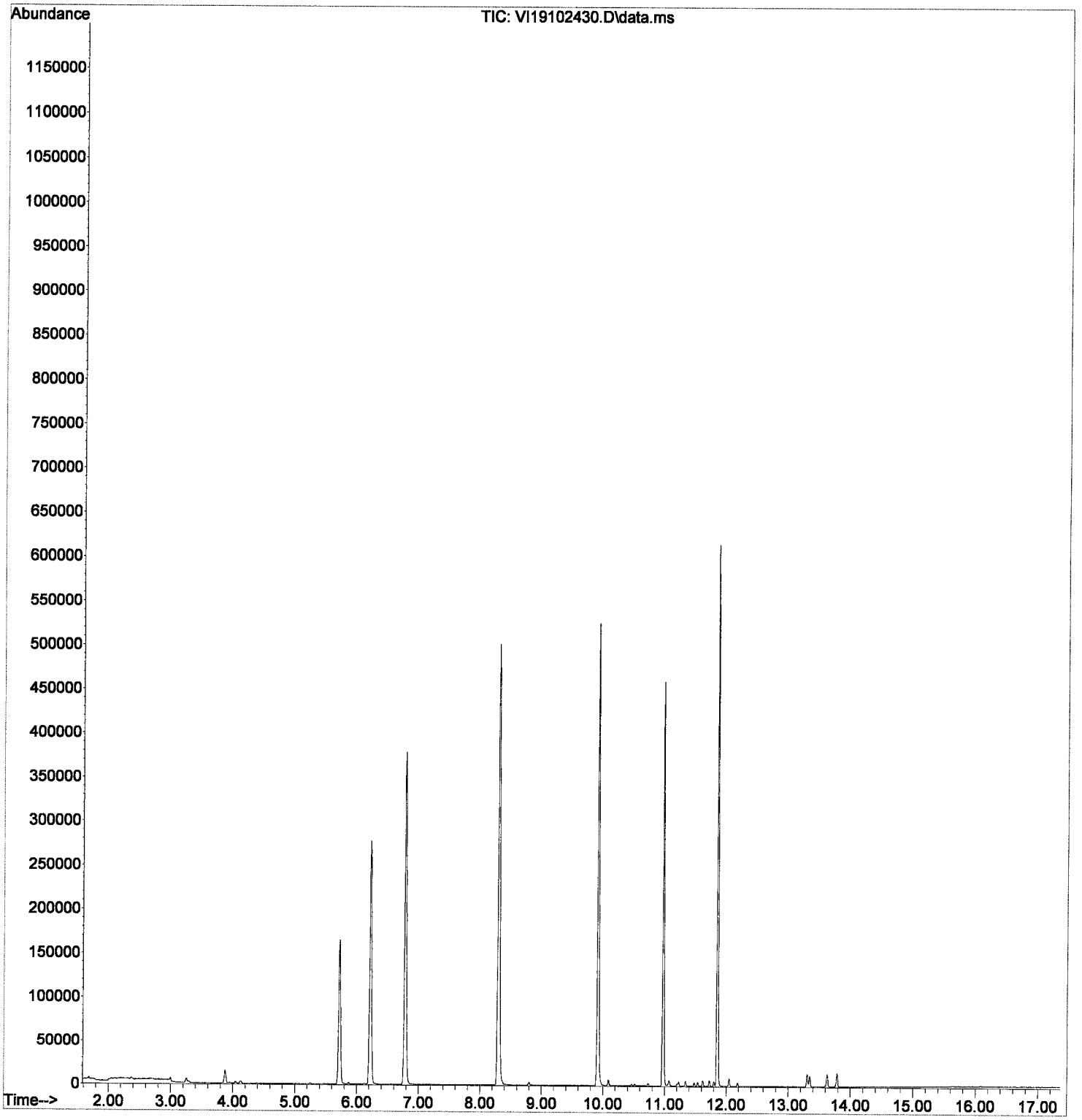
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
88) 1,2,3-Trichlorobenzene	13.785	180	5992	2.88	ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102430.D
Acq On : 24 Oct 2019 9:44 pm
Operator : MM
Sample : 9J24043-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:47 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102431.D
Acq On : 24 Oct 2019 10:11 pm
Operator : MM
Sample : 9J24043-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:50 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

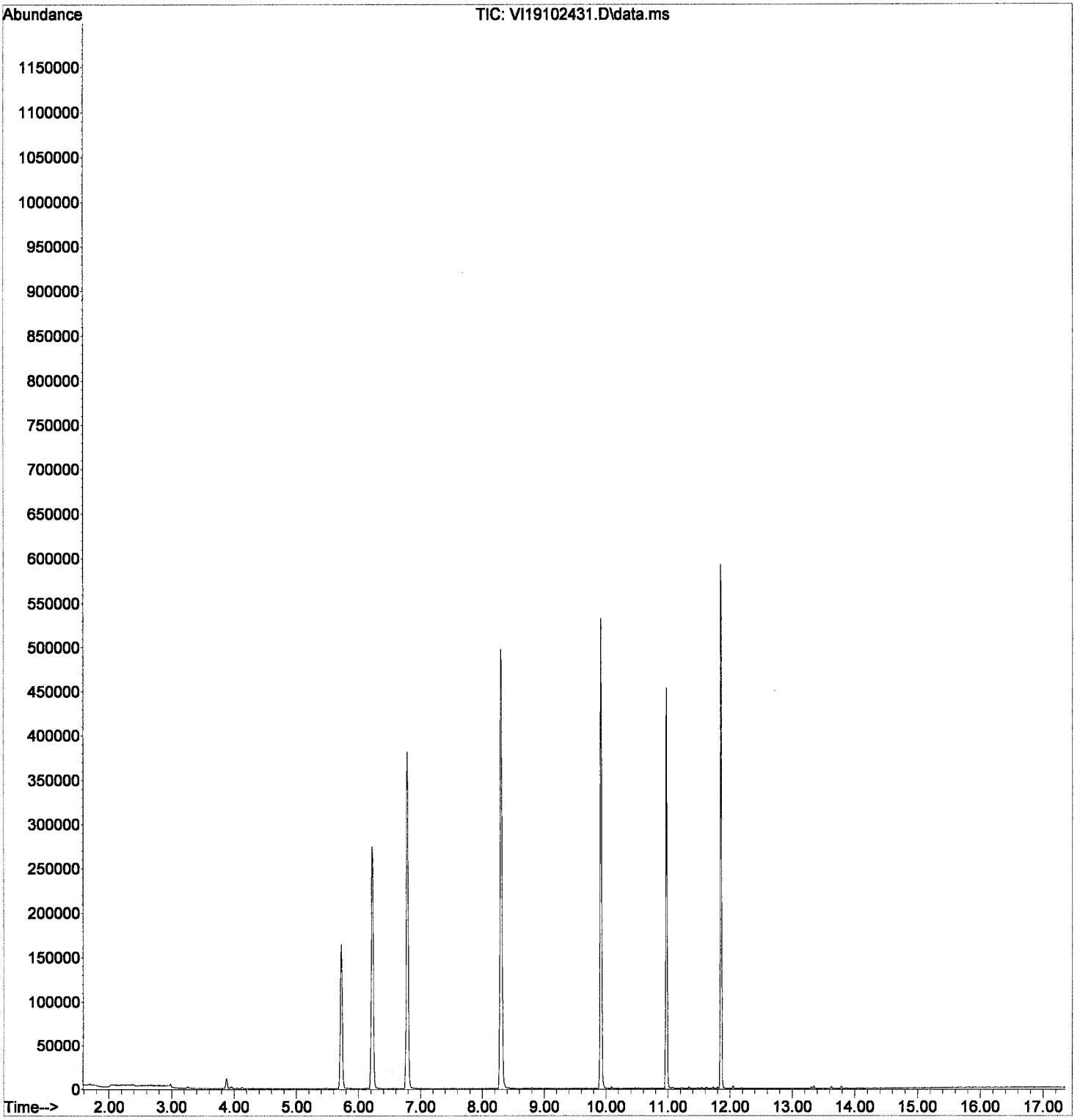
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.217	99	114296	50.00 ug/L	# 0.00
45) Chlorobenzene-d5 (I)	9.916	117	308297	50.00 ug/L	0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	139384	50.00 ug/L	0.00
System Monitoring Compounds					
32) Dibromofluoromethane (S)	5.718	111	112321	50.01 ug/L	0.00
39) 1,4-Difluorobenzene (S)	6.783	114	364393	50.46 ug/L	0.00
48) Toluene-d8 (S)	8.297	98	406006	50.17 ug/L	0.00
67) 4-Bromofluorobenzene (S)	10.974	174	117384	52.12 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.691	85	321	0.17 ug/L #	49
3) Chloromethane	1.904	50	302	0.12 ug/L #	47
5) Bromomethane	2.378	96	484	0.33 ug/L #	56
6) Chloroethane	2.500	64	259	0.23 ug/L #	36
10) Carbon Disulfide	3.260	76	2655	0.53 ug/L	89
11) Freon 113	3.291	101	416	0.21 ug/L #	74
14) Methylene Chloride	3.881	84	5891	1.96 ug/L	86
15) Acetone	3.954	43	3138	3.13 ug/L	97
16) t-1,2-Dichloroethene	4.039	61	402	0.15 ug/L #	70
33) 1,1-Dichloropropene	5.870	75	357	0.12 ug/L #	43
49) Toluene	8.358	91	884	0.10 ug/L	92
50) Tetrachloroethene (PCE)	8.802	166	422	0.20 ug/L #	70
58) Chlorobenzene	9.928	112	577	0.10 ug/L #	5
59) Ethylbenzene	9.952	91	980	0.10 ug/L	83
61) m,p-Xylenes (2)	10.086	91	1705	0.24 ug/L	86
65) Isopropylbenzene	10.737	105	735	0.09 ug/L	54
69) n-Propylbenzene	11.072	91	1706	0.18 ug/L	90
72) 1,3,5-Trimethylbenzene	11.230	105	901	0.14 ug/L	86
75) 4-Chlorotoluene	11.339	91	1026	0.18 ug/L	91
76) tert-Butylbenzene	11.479	91	379	0.11 ug/L #	75
77) 1,2,4-Trimethylbenzene	11.540	105	984	0.15 ug/L	90
78) sec-Butylbenzene	11.625	105	1431	0.18 ug/L	80
79) 4-Isopropyltoluene	11.729	119	1483	0.24 ug/L	96
80) 1,3-Dichlorobenzene	11.802	146	846	0.22 ug/L	96
81) 1,4-Dichlorobenzene	11.862	146	1023	0.26 ug/L #	40
82) n-Butylbenzene	12.051	91	1702	0.32 ug/L	91
83) 1,2-Dichlorobenzene	12.191	146	544	0.15 ug/L #	66
85) Hexachlorobutadiene	13.304	223	353	0.69 ug/L	94
86) 1,2,4-Trichlorobenzene	13.347	180	1099	0.52 ug/L	84
87) Naphthalene	13.627	128	2260	0.34 ug/L	81
88) 1,2,3-Trichlorobenzene	13.785	180	993	0.50 ug/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102431.D
Acq On : 24 Oct 2019 10:11 pm
Operator : MM
Sample : 9J24043-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:50 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102432.D
Acq On : 24 Oct 2019 10:38 pm
Operator : MM
Sample : 9J24043-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

JV 10/25/19

Quant Time: Oct 25 08:52:53 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	115739	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.909	117	319865	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	157880	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	114369	50.29	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.782	114	368262	50.36	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	413951	49.31	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	126483	49.58	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.678	85	47743	25.24	ug/L		99
3) Chloromethane	1.891	50	52000	20.73	ug/L		96
4) Vinyl Chloride	1.995	62	55595	22.12	ug/L		97
5) Bromomethane	2.360	96	33560	22.65	ug/L		98
6) Chloroethane	2.494	64	20238	17.52	ug/L		79
7) Trichlorofluoromethane	2.658	101	58875	20.69	ug/L		97
8) Ethanol	3.236	45	2066	37.15	ug/L		95
9) 1,1-Dichloroethene	3.230	61	54108	19.72	ug/L		91
10) Carbon Disulfide	3.248	76	92901	18.35	ug/L		98
11) Freon 113	3.278	101	37659	19.09	ug/L		97
12) Iodomethane	3.382	142	13440	16.51	ug/L		90
13) Acrolein	3.619	56	10766	20.47	ug/L		64
14) Methylene Chloride	3.868	84	43934	19.96	ug/L		87
15) Acetone	3.935	43	38135	37.60	ug/L		96
16) t-1,2-Dichloroethene	4.039	61	56343	20.98	ug/L		89
17) n-Hexane	4.124	86	7879	19.27	ug/L	#	88
18) Methyl-tert-butyl-ether	4.167	73	122260	19.59	ug/L		93
19) tert-Butanol (TBA)	4.294	59	12609	28.14	ug/L		83
20) Diisopropyl ether (DIPE)	4.562	45	1214	0.18	ug/L		74
21) 1,1-Dichloroethane	4.684	63	76555	20.53	ug/L		97
22) Acrylonitrile	4.744	53	21989	19.59	ug/L		99
23) Ethyl-tert-butyl ether...	4.945	59	1021	0.16	ug/L		69
24) Vinyl Acetate	4.957	43	89589	19.89	ug/L		95
25) c-1,2-Dichloroethene	5.243	61	57695	20.04	ug/L		92
26) 2,2-Dichloropropane	5.347	77	43127	17.72	ug/L		97
27) Bromochloromethane	5.444	130	31156	22.05	ug/L		93
28) Chloroform	5.523	83	76051	20.86	ug/L		96
29) Carbon Tetrachloride	5.657	117	45898	20.70	ug/L		97
30) Tetrahydrofuran	5.700	42	20305	19.03	ug/L		86
31) 1,1,1-Trichloroethane	5.730	97	61359	19.94	ug/L		97
33) 1,1-Dichloropropene	5.858	75	57945	19.60	ug/L		96
34) 2-Butanone (MEK)	5.852	43	60911	37.88	ug/L		97
35) Benzene	6.119	78	173963	19.67	ug/L		97
36) tert-Amyl methyl ether...	6.259	73	1053	0.18	ug/L		74
37) 1,2-Dichloroethane (EDC)	6.338	62	58405	20.16	ug/L		94
38) iso-Butyl Alcohol	6.375	43	83622	519.10	ug/L		92
40) Trichloroethene (TCE)	6.740	130	48413	21.24	ug/L		94
41) Tert-Amyl-Ethyl-Ether ...	6.995	59	625	0.14	ug/L	#	64
42) Dibromomethane	7.196	93	29991	21.13	ug/L		96
43) 1,2-Dichloropropane	7.306	63	44751	20.29	ug/L		93
44) Bromodichloromethane	7.379	83	52780	20.75	ug/L		94
46) 2-Chloroethyl Vinyl Ether	8.023	63	32992	20.09	ug/L	#	100
47) c-1,3-Dichloropropene	8.090	75	62899	19.89	ug/L		88

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102432.D
Acq On : 24 Oct 2019 10:38 pm
Operator : MM
Sample : 9J24043-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:53 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

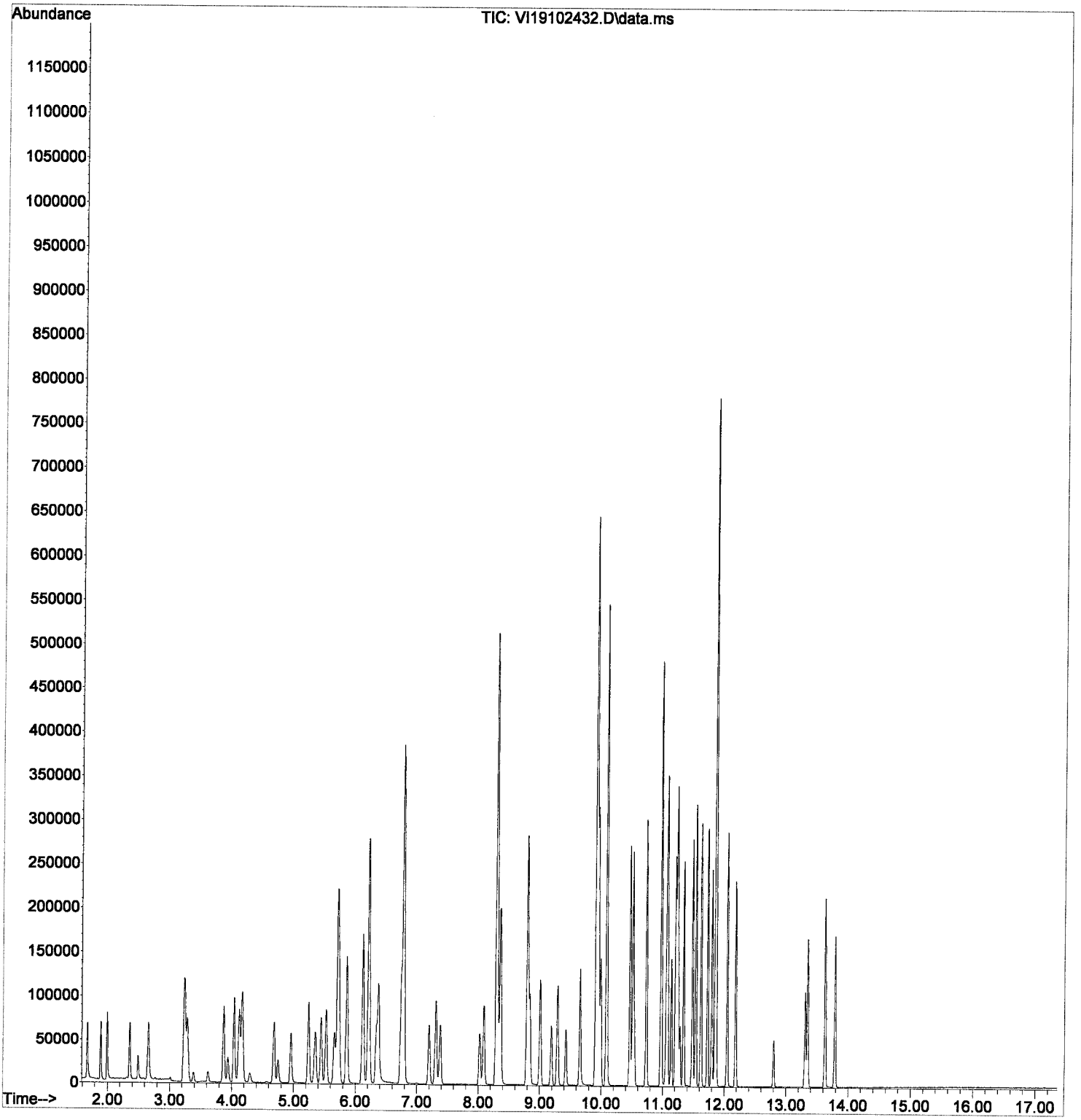
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	8.358	91	182339	19.39	ug/L		100
50) Tetrachloroethene (PCE)	8.796	166	45736	20.89	ug/L		91
51) 4-Methyl-2-Pentanone (...	8.796	43	117185	41.04	ug/L		94
52) t-1,3-Dichloropropene	8.839	75	58067	20.70	ug/L		99
53) 1,1,2-Trichloroethane	9.003	97	44277	21.23	ug/L		94
54) Dibromochloromethane	9.185	129	40034	23.75	ug/L		97
55) 1,3-Dichloropropane	9.289	76	73648	20.48	ug/L		92
56) 1,2-Dibromoethane (EDB)	9.423	107	46898	20.66	ug/L		94
57) 2-Hexanone	9.654	43	84867	40.56	ug/L		91
58) Chlorobenzene	9.928	112	123672	20.60	ug/L		98
59) Ethylbenzene	9.952	91	198723	20.15	ug/L		97
60) 1,1,1,2-Tetrachloroethane	9.988	131	38126	21.77	ug/L		95
61) m,p-Xylenes (2)	10.086	91	297332	40.93	ug/L		99
62) o-Xylene	10.463	91	151148	20.99	ug/L		99
63) Styrene	10.512	104	120728	20.86	ug/L		97
64) Bromoform	10.536	173	26445	21.37	ug/L		97
65) Isopropylbenzene	10.731	105	183894	20.93	ug/L		99
68) Bromobenzene	11.059	156	51357	20.99	ug/L		88
69) n-Propylbenzene	11.071	91	210884	20.10	ug/L		100
70) 1,1,2,2-Tetrachloroethane	11.138	85	42026	20.34	ug/L		94
71) 2-Chlorotoluene	11.205	126	45073	19.94	ug/L		95
72) 1,3,5-Trimethylbenzene	11.230	105	148155	20.66	ug/L		98
73) 1,2,3-Trichloropropane	11.248	110	20758	20.66	ug/L		90
74) t-1,4-Dichloro-2-butene	11.278	53	12607	17.54	ug/L	#	74
75) 4-Chlorotoluene	11.339	91	132799	20.56	ug/L		98
76) tert-Butylbenzene	11.479	91	81539	20.37	ug/L		95
77) 1,2,4-Trimethylbenzene	11.534	105	149487	20.72	ug/L		97
78) sec-Butylbenzene	11.619	105	180737	20.46	ug/L		99
79) 4-Isopropyltoluene	11.728	119	151416	21.66	ug/L		97
80) 1,3-Dichlorobenzene	11.795	146	88840	20.84	ug/L		98
81) 1,4-Dichlorobenzene	11.862	146	91025	20.48	ug/L		97
82) n-Butylbenzene	12.045	91	132273	22.27	ug/L		99
83) 1,2-Dichlorobenzene	12.179	146	86186	20.82	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	12.799	157	14025	20.04	ug/L		92
85) Hexachlorobutadiene	13.304	223	12640	21.85	ug/L		95
86) 1,2,4-Trichlorobenzene	13.347	180	53108	22.26	ug/L		97
87) Naphthalene	13.626	128	166250	21.92	ug/L		98
88) 1,2,3-Trichlorobenzene	13.785	180	51210	22.61	ug/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102432.D
Acq On : 24 Oct 2019 10:38 pm
Operator : MM
Sample : 9J24043-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:53 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102433.D
Acq On : 24 Oct 2019 11:05 pm
Operator : MM
Sample : 9J24043-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.217	99	111178	50.00	ug/L	#	0.00
45) Chlorobenzene-d5 (I)	9.910	117	298625	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	138840	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	108440	49.64	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.783	114	354392	50.46	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	396767	50.62	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	114172	50.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.679	85	258	0.14	ug/L	#	49
3) Chloromethane	1.898	50	1019	0.42	ug/L		80
4) Vinyl Chloride	2.001	62	483	0.20	ug/L		73
5) Bromomethane	2.360	96	1054	0.74	ug/L		79
6) Chloroethane	2.512	64	817	0.74	ug/L	#	63
8) Ethanol	3.230	45	56590	1059.19	ug/L		85
9) 1,1-Dichloroethene	3.230	61	425	0.16	ug/L	#	74
10) Carbon Disulfide	3.254	76	2404	0.49	ug/L		78
12) Iodomethane	3.388	142	297	6.27	ug/L	#	47
14) Methylene Chloride	3.875	84	2571	0.40	ug/L		89
15) Acetone	3.948	43	992	1.02	ug/L		93
16) t-1,2-Dichloroethene	4.039	61	778	0.30	ug/L		95
18) Methyl-tert-butyl-ether	4.173	73	509	0.08	ug/L		63
19) tert-Butanol (TBA)	4.288	59	507827	1179.79	ug/L		99
20) Diisopropyl ether (DIPE)	4.562	45	28434	4.41	ug/L		96
21) 1,1-Dichloroethane	4.684	63	910	0.25	ug/L		91
23) Ethyl-tert-butyl ether...	4.939	59	27297	4.40	ug/L		98
24) Vinyl Acetate	4.933	43	2981	0.69	ug/L		63
25) c-1,2-Dichloroethene	5.244	61	653	0.24	ug/L		94
28) Chloroform	5.529	83	782	0.22	ug/L		86
31) 1,1,1-Trichloroethane	5.730	97	279	0.09	ug/L	#	25
33) 1,1-Dichloropropene	5.858	75	642	0.23	ug/L	#	43
35) Benzene	6.120	78	2264	0.27	ug/L		96
36) tert-Amyl methyl ether...	6.247	73	24122	4.18	ug/L		94
40) Trichloroethene (TCE)	6.752	130	563	0.26	ug/L		81
41) Tert-Amyl-Ethyl-Ether ...	6.996	59	17806	4.28	ug/L		82
43) 1,2-Dichloropropane	7.312	63	375	0.18	ug/L	#	35
44) Bromodichloromethane	7.379	83	264	0.11	ug/L		89
47) c-1,3-Dichloropropene	8.097	75	423	0.14	ug/L	#	31
49) Toluene	8.358	91	2481	0.28	ug/L		90
50) Tetrachloroethene (PCE)	8.796	166	682	0.33	ug/L		77
55) 1,3-Dichloropropane	9.289	76	299	0.09	ug/L	#	62
58) Chlorobenzene	9.928	112	1665	0.30	ug/L	#	53
59) Ethylbenzene	9.952	91	2525	0.27	ug/L		93
60) 1,1,1,2-Tetrachloroethane	9.989	131	250	0.15	ug/L	#	56
61) m,p-Xylenes (2)	10.086	91	3597	0.53	ug/L		99
62) o-Xylene	10.469	91	1736	0.26	ug/L		95
63) Styrene	10.518	104	1266	0.23	ug/L		98
65) Isopropylbenzene	10.731	105	1839	0.22	ug/L		96
68) Bromobenzene	11.066	156	575	0.27	ug/L	#	73
69) n-Propylbenzene	11.078	91	2840	0.31	ug/L		98
71) 2-Chlorotoluene	11.212	126	519	0.26	ug/L	#	70
72) 1,3,5-Trimethylbenzene	11.230	105	1758	0.28	ug/L		93

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102433.D
Acq On : 24 Oct 2019 11:05 pm
Operator : MM
Sample : 9J24043-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

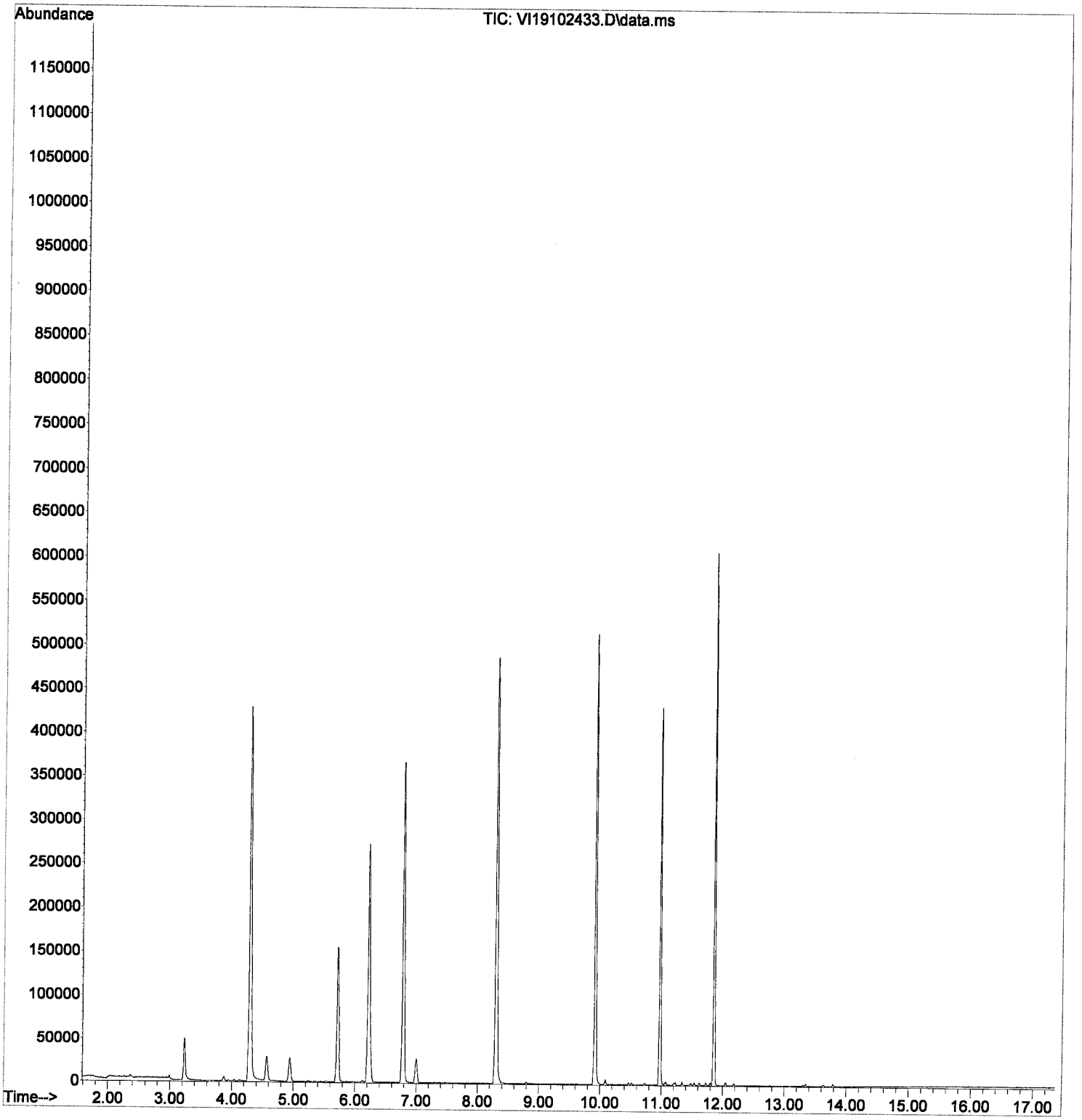
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
75) 4-Chlorotoluene	11.339	91	2029	0.36	ug/L		92
76) tert-Butylbenzene	11.479	91	857	0.24	ug/L		90
77) 1,2,4-Trimethylbenzene	11.540	105	1902	0.30	ug/L		99
78) sec-Butylbenzene	11.619	105	2140	0.28	ug/L		96
79) 4-Isopropyltoluene	11.729	119	1814	0.30	ug/L		89
80) 1,3-Dichlorobenzene	11.802	146	1391	0.37	ug/L		91
81) 1,4-Dichlorobenzene	11.862	146	1580	0.40	ug/L	#	77
82) n-Butylbenzene	12.051	91	2081	0.40	ug/L		97
83) 1,2-Dichlorobenzene	12.179	146	992	0.27	ug/L		94
85) Hexachlorobutadiene	13.304	223	253	0.50	ug/L		90
86) 1,2,4-Trichlorobenzene	13.347	180	1195	0.57	ug/L		98
87) Naphthalene	13.627	128	2373	0.36	ug/L		81
88) 1,2,3-Trichlorobenzene	13.785	180	1136	0.57	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102433.D
Acq On : 24 Oct 2019 11:05 pm
Operator : MM
Sample : 9J24043-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:56 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102434.D
Acq On : 24 Oct 2019 11:32 pm
Operator : MM
Sample : 9J24043-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:59 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

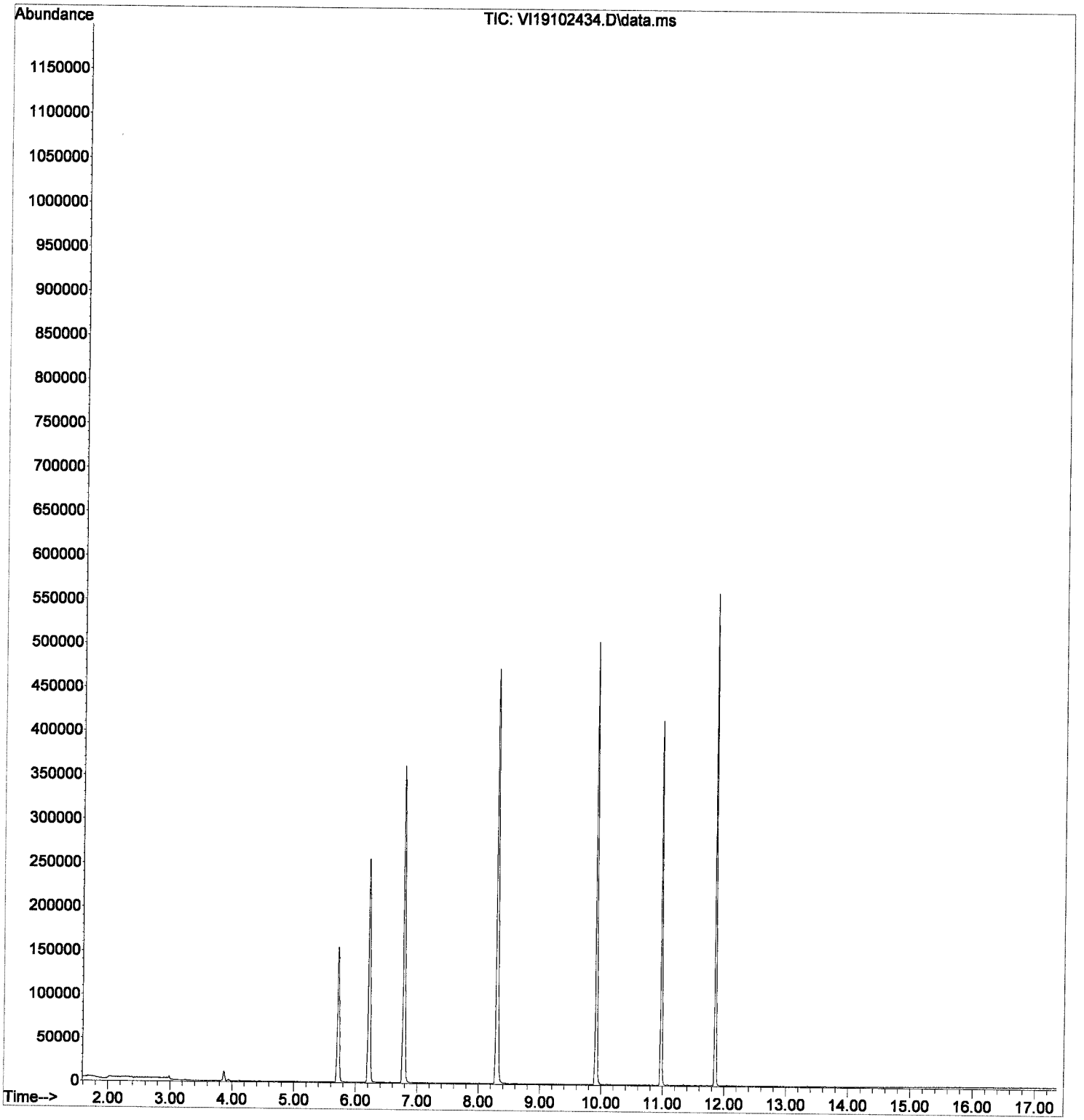
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.211	99	109647	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	9.910	117	290801	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	11.850	152	129266	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	5.712	111	106868	49.60	ug/L		0.00
39) 1,4-Difluorobenzene (S)	6.777	114	348077	50.25	ug/L		0.00
48) Toluene-d8 (S)	8.297	98	390388	51.15	ug/L		0.00
67) 4-Bromofluorobenzene (S)	10.974	174	109398	52.38	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.891	50	233	0.10	ug/L	#	47
5) Bromomethane	2.360	96	288	0.21	ug/L	#	32
6) Chloroethane	2.500	64	219	0.20	ug/L	#	62
10) Carbon Disulfide	3.242	76	797	0.17	ug/L		78
14) Methylene Chloride	3.869	84	5477	1.87	ug/L		91
15) Acetone	3.942	43	1939	2.02	ug/L		95
19) tert-Butanol (TBA)	4.301	59	193	0.45	ug/L		46
61) m,p-Xylenes (2)	10.086	91	722	0.11	ug/L		86
79) 4-Isopropyltoluene	11.723	119	462	0.08	ug/L		51
81) 1,4-Dichlorobenzene	11.862	146	377	0.10	ug/L	#	1
82) n-Butylbenzene	12.045	91	599	0.12	ug/L		81
86) 1,2,4-Trichlorobenzene	13.341	180	337	0.17	ug/L		69
87) Naphthalene	13.633	128	630	0.10	ug/L		81
88) 1,2,3-Trichlorobenzene	13.785	180	159	0.09	ug/L		87

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102434.D
Acq On : 24 Oct 2019 11:32 pm
Operator : MM
Sample : 9J24043-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:52:59 2019
Quant Method : C:\msdchem\1\methods\VI191025W.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Oct 25 08:32:21 2019
Response via : Initial Calibration

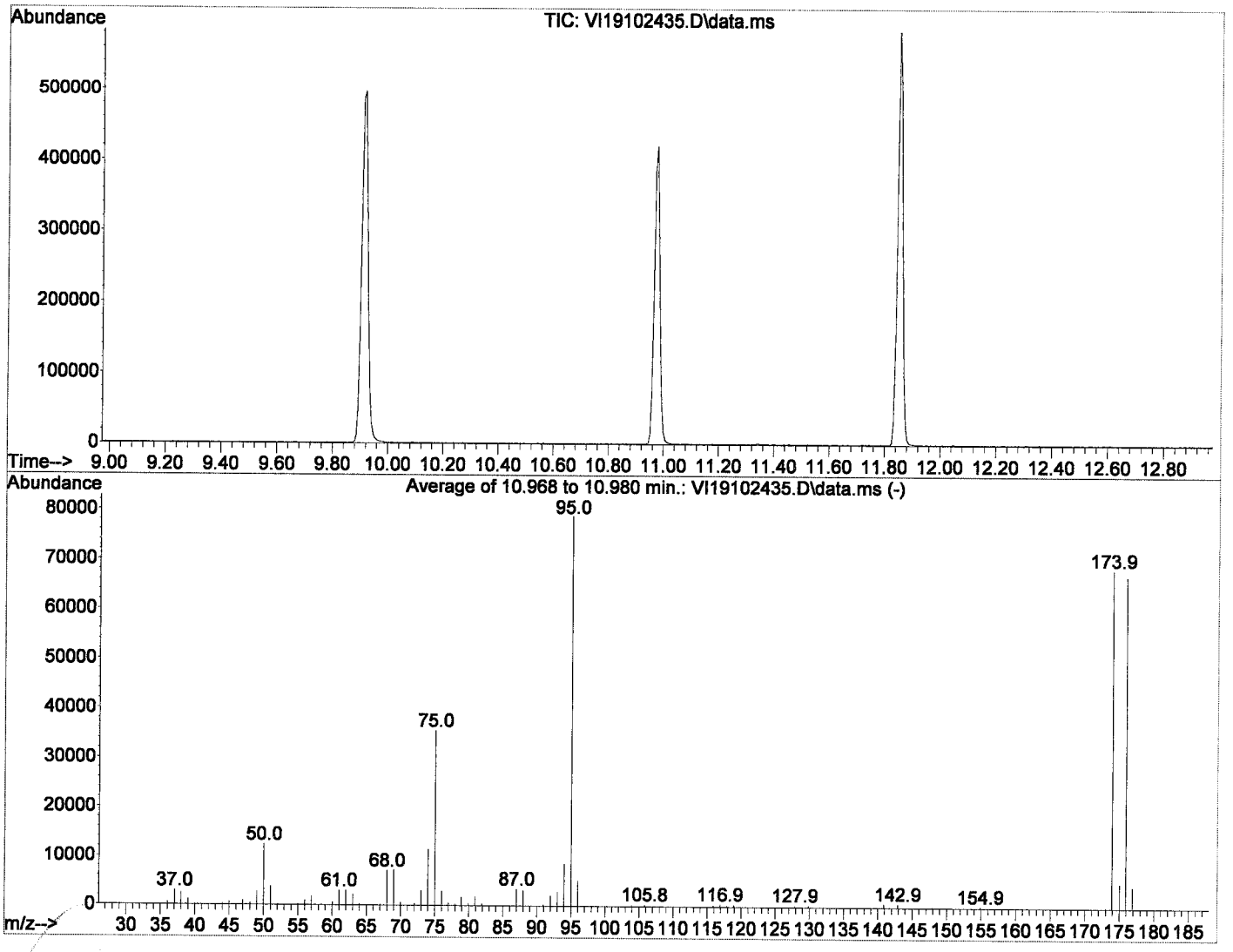


BFB

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102435.D
Acq On : 24 Oct 2019 11:59 pm
Operator : MM
Sample : 9J24043-TUN2
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1

Integration File: APEXG.P

Method : C:\msdchem\1\methods\VI191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Fri Oct 25 10:31:05 2019



AutoFind: Scans 1543, 1544, 1545; Background Corrected with Scan 1536

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	115.5	78893	PASS
96	95	5	9	6.6	5193	PASS
173	174	0.00	2	0.2	146	PASS
174	95	50	200	86.6	68315	PASS
175	174	5	9	7.2	4950	PASS
176	174	95	105	98.1	67045	PASS
177	176	5	10	6.4	4322	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102435.D
Acq On : 24 Oct 2019 11:59 pm
Operator : MM
Sample : 9J24043-TUN2
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:47 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

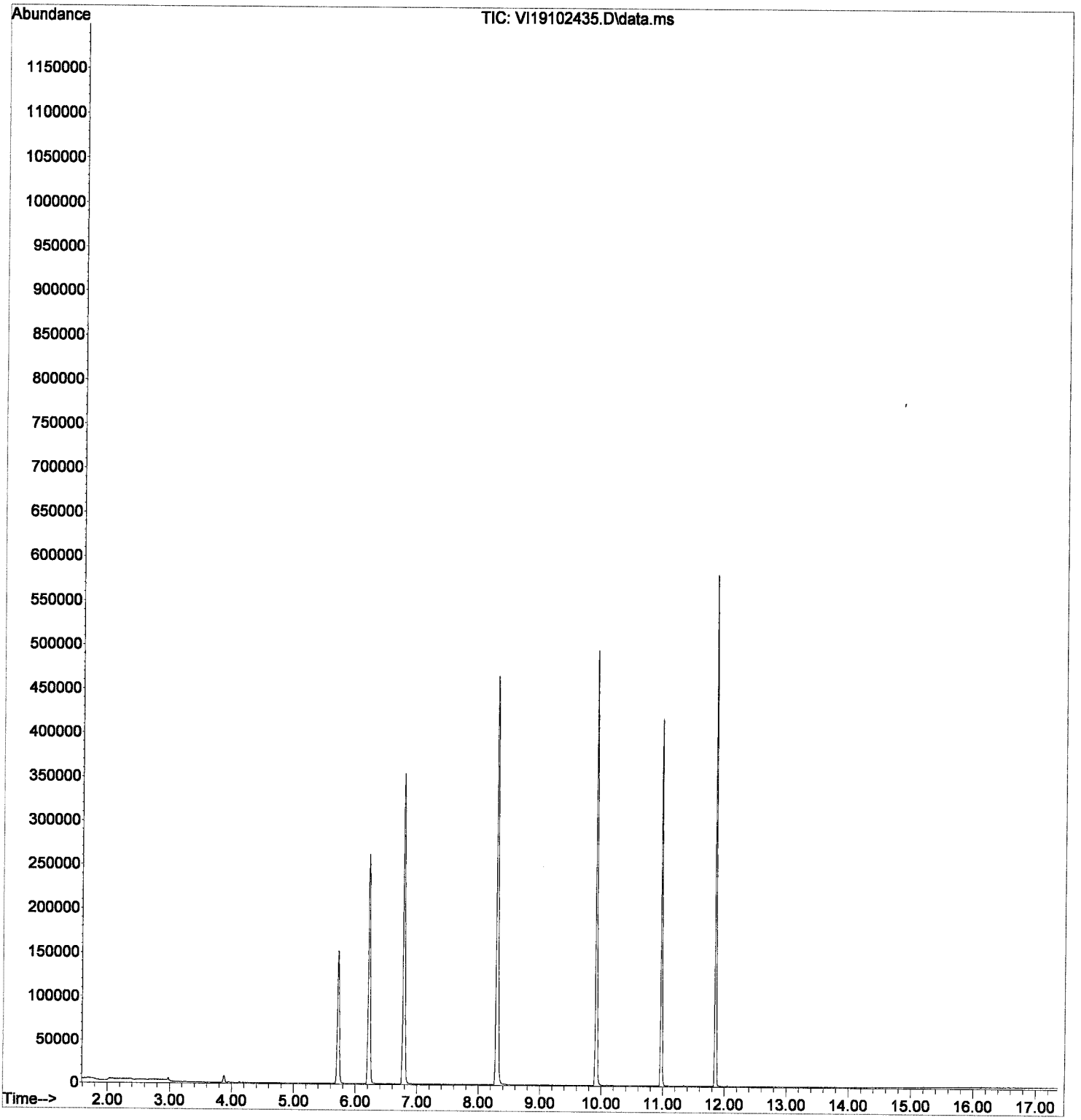
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	210406	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	342441	50.05	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	110054	48.18	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	383585	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	289628	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	210356	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	-629m	24.54	ug/L	
5) TPHg (C5-C9)	9.890	TIC	350597m	17.37	ug/L	
6) TPHg (C6-C10)	9.890	TIC	318995m	18.26	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	354669m	21.15	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102435.D
Acq On : 24 Oct 2019 11:59 pm
Operator : MM
Sample : 9J24043-TUN2
Misc : A19I040 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

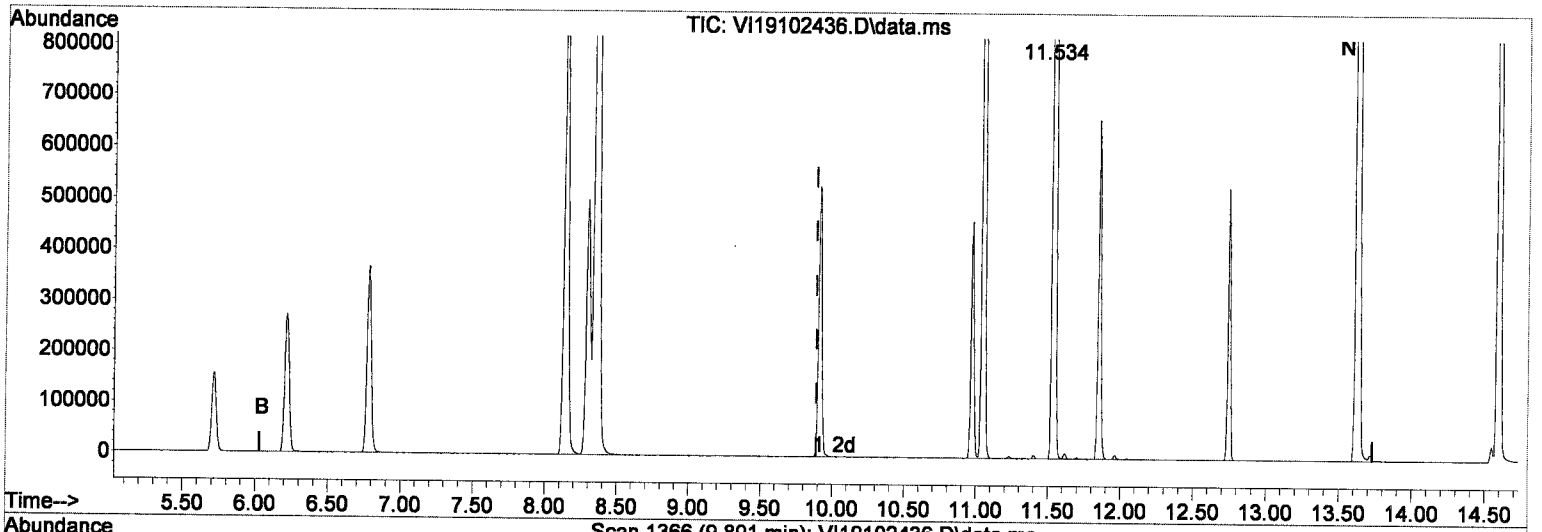
Quant Time: Oct 25 10:34:47 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

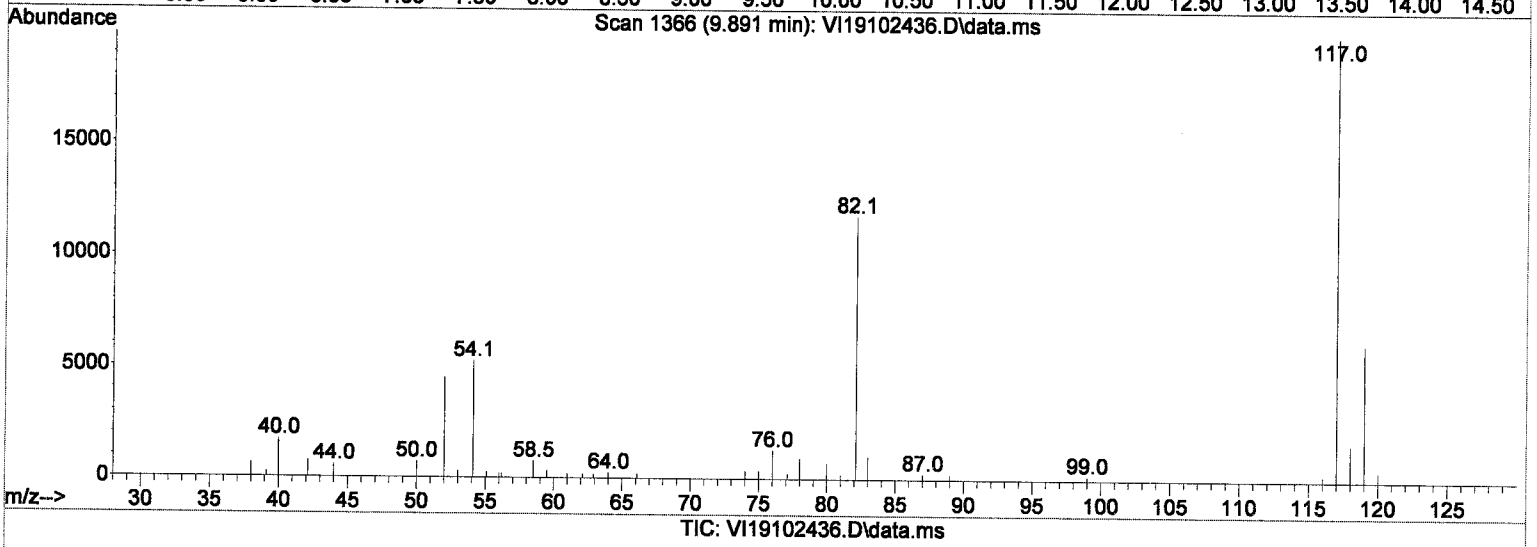


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19102436.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 2930.43 ug/L m

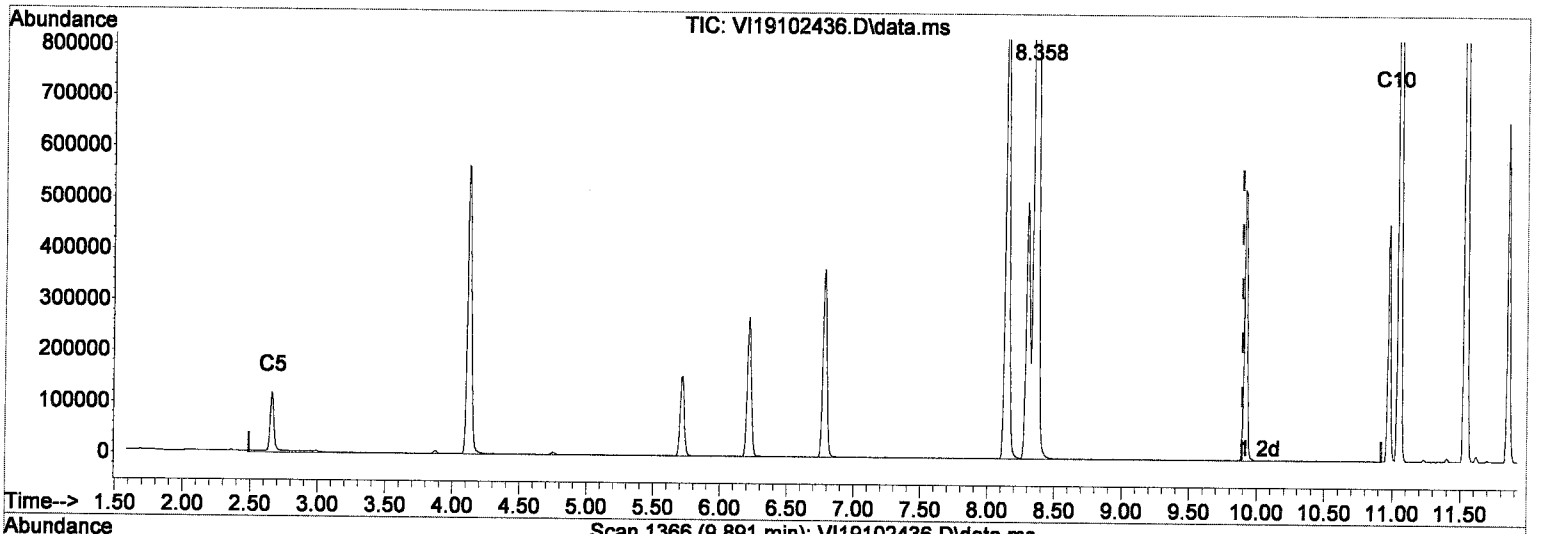
response 19501721

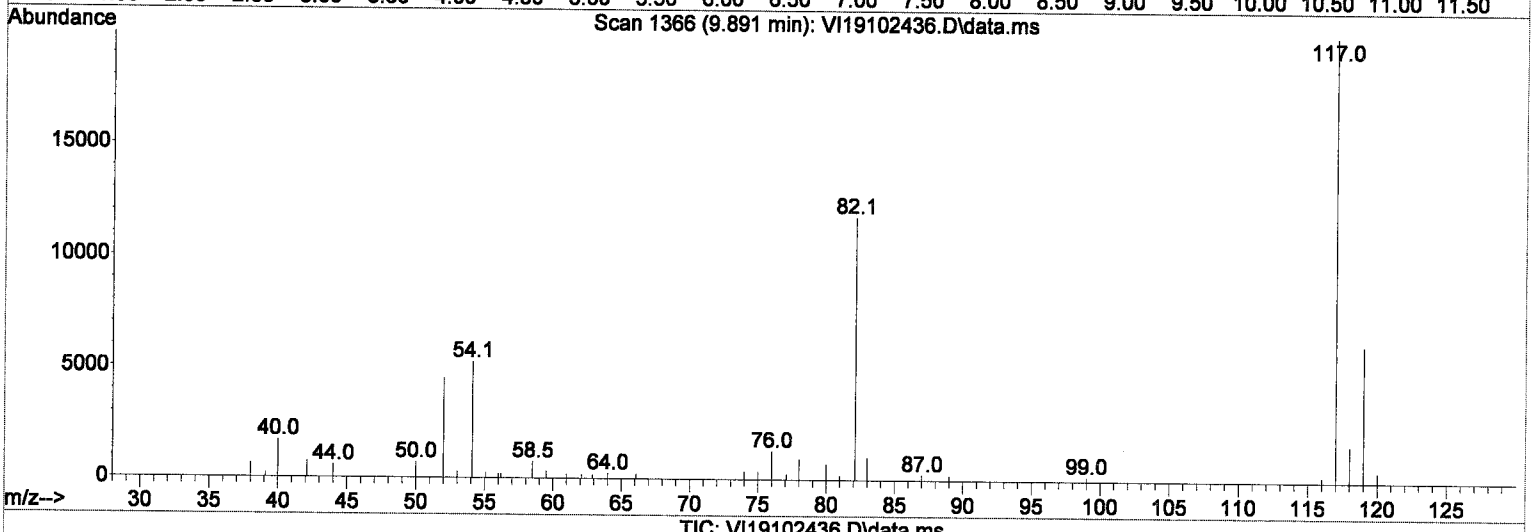
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.04#
0.00	0.00	0.76#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19102436.D\data.ms

(5) TPHg (C5-C9) (H)

9.890min (0.000) 973.75 ug/L m

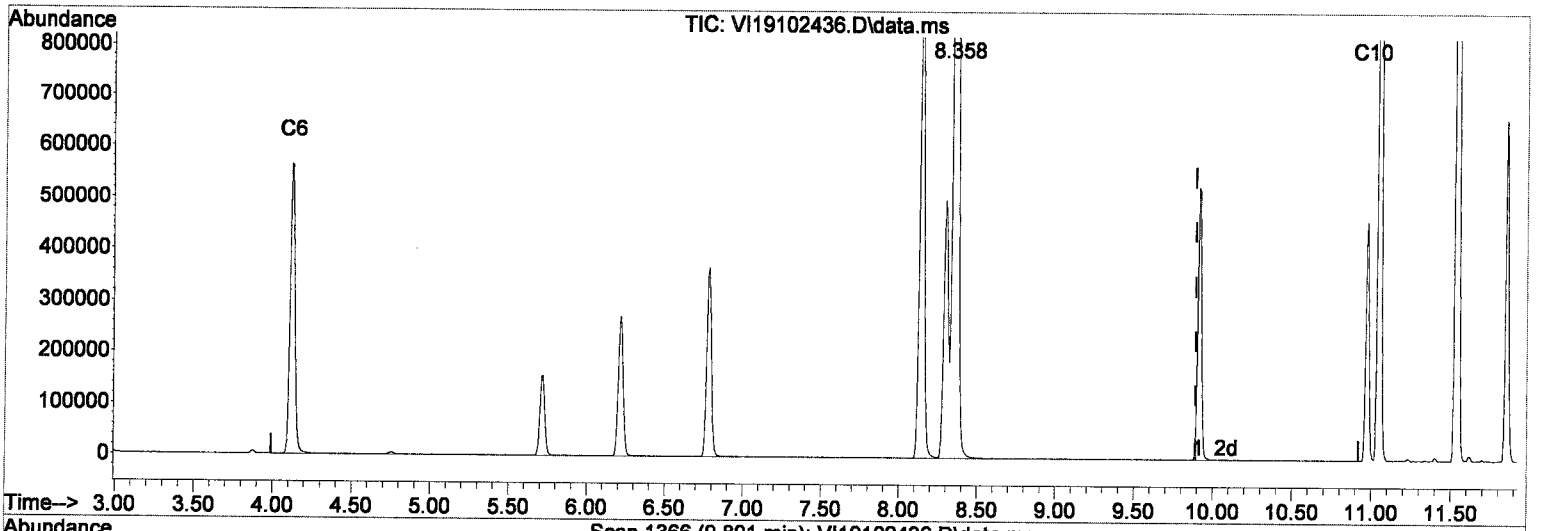
response 8083029

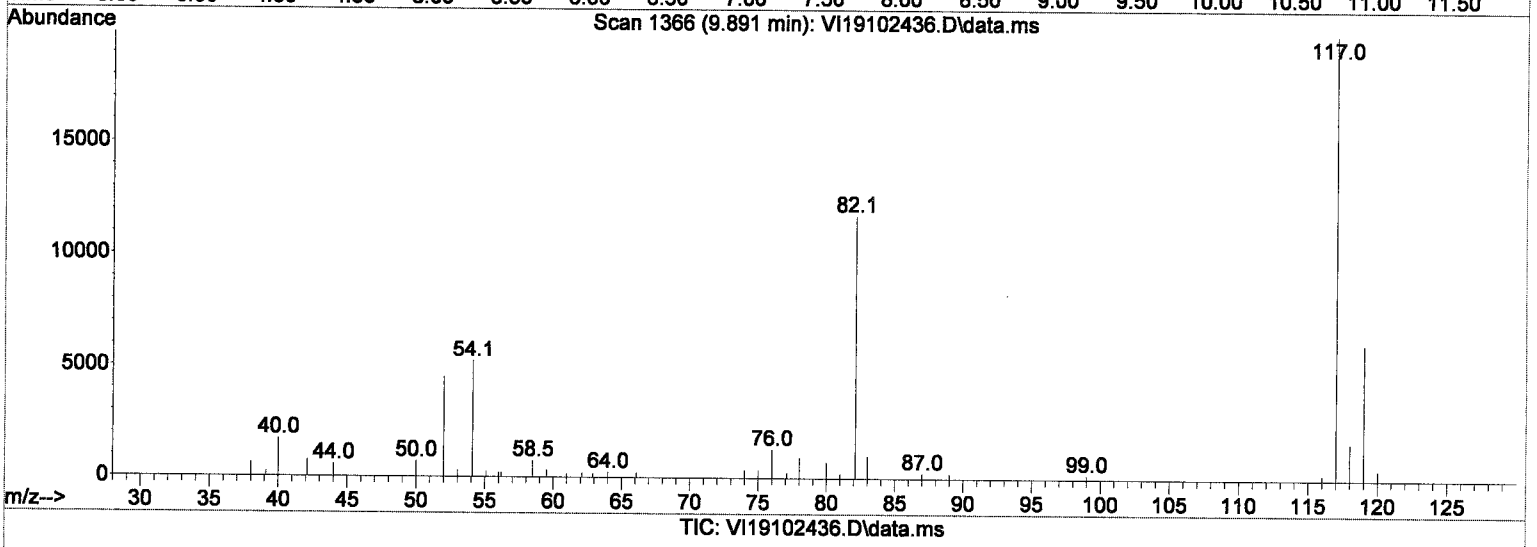
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.52#
0.00	0.00	1.83#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19102436.D\data.ms

(6) TPHg (C6-C10) (H)

9.890min (0.000) 1119.88 ug/L m

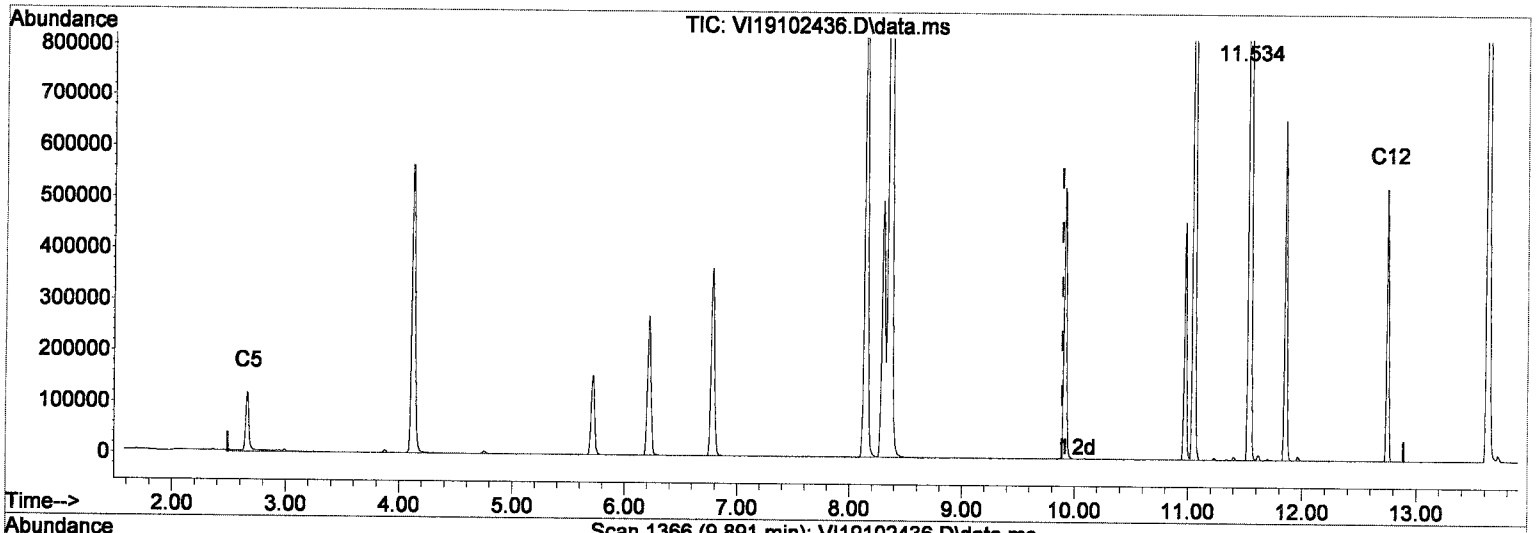
response 7845020

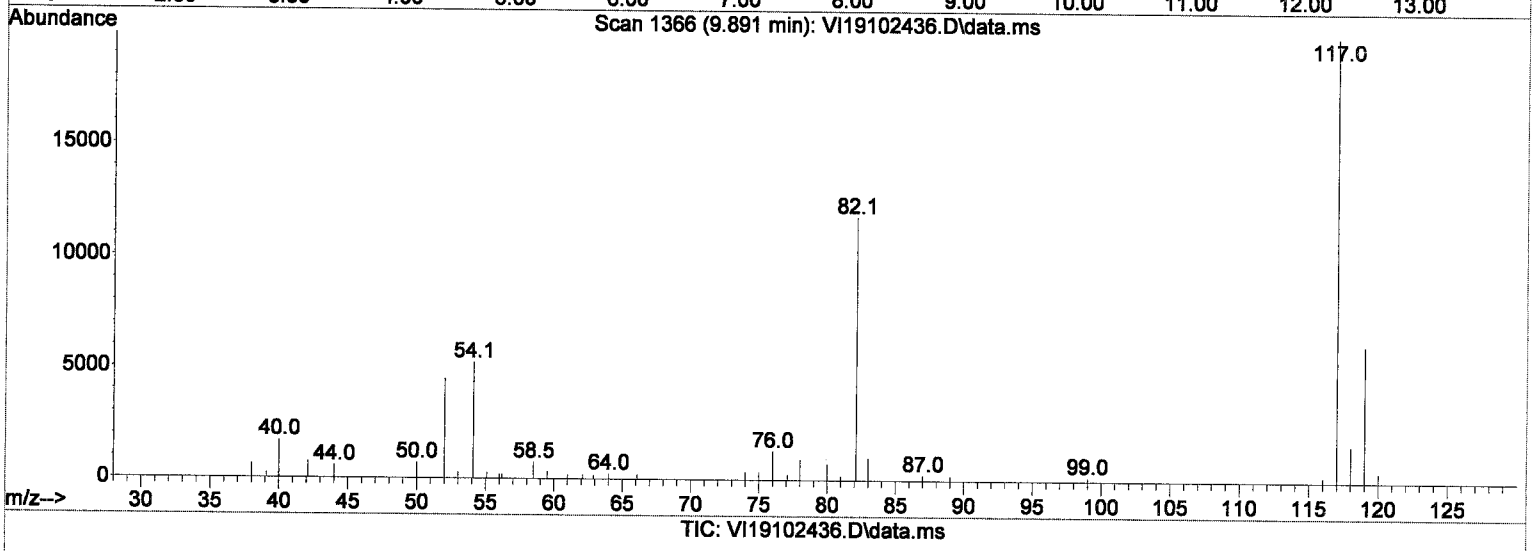
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.60#
0.00	0.00	1.88#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





TIC: VI19102436.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.890min (0.000) 1651.42 ug/L m

response 16435844

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.24#
0.00	0.00	0.90#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

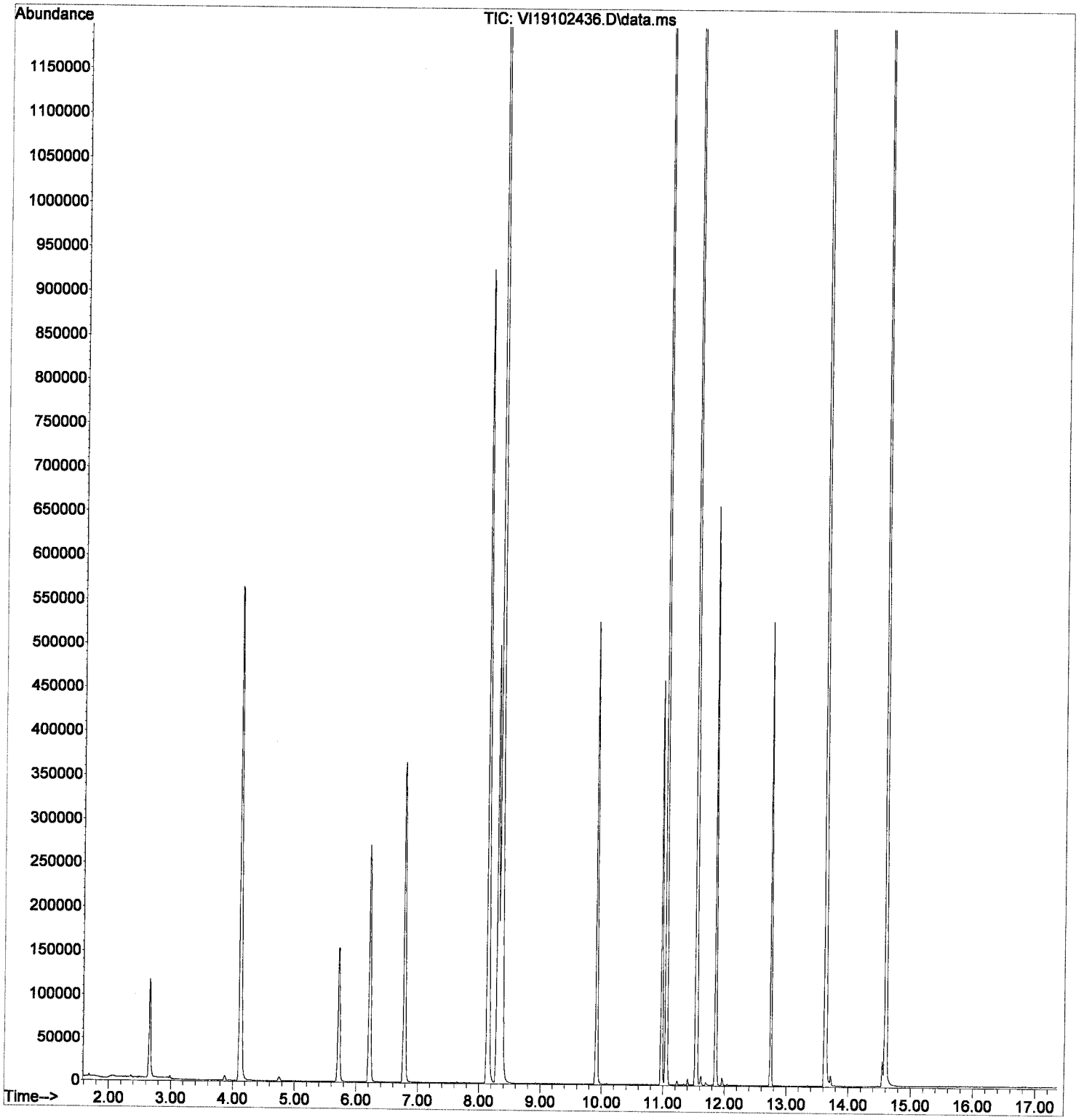
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	218196	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	354554	49.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	120603	50.92	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	405063	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	307990	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	238057	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	19501721m	2930.43	ug/L	
5) TPHg (C5-C9)	9.890	TIC	8083029m	973.75	ug/L	
6) TPHg (C6-C10)	9.890	TIC	7845020m	1119.88	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	16435844m	1651.42	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102436.D
Acq On : 25 Oct 2019 12:26 am
Operator : MM
Sample : 9J24043-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:34:58 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102437.D
Acq On : 25 Oct 2019 12:52 am
Operator : MM
Sample : 9J24043-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:35:59 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

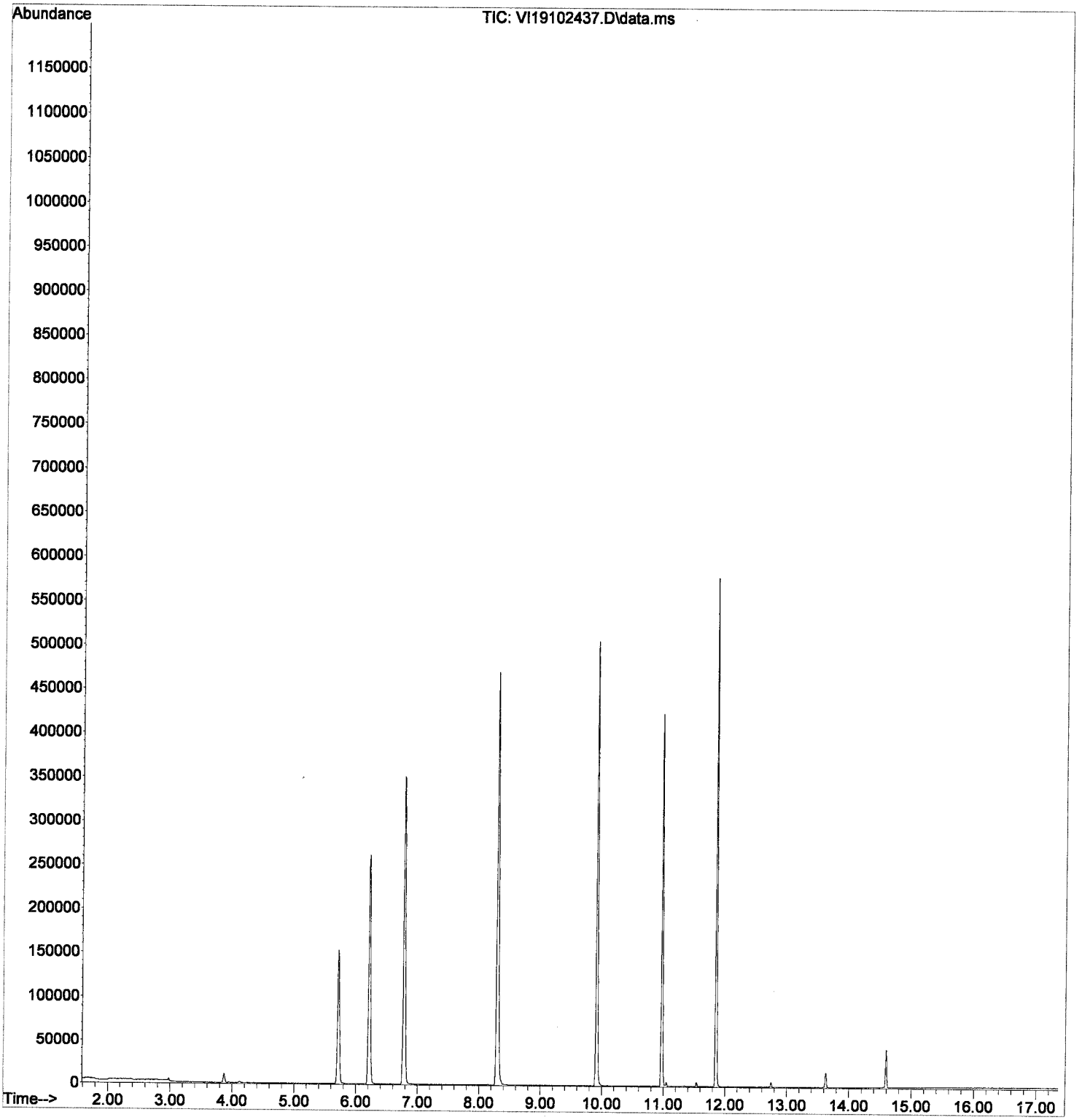
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	210247	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	345936	50.60	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	111405	48.81	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	383628	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.910	117	292283	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	209732	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	24413m	28.59	ug/L	
5) TPHg (C5-C9)	9.890	TIC	344892m	16.66	ug/L	
6) TPHg (C6-C10)	9.890	TIC	312692m	17.33	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	358119m	21.55	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102437.D
Acq On : 25 Oct 2019 12:52 am
Operator : MM
Sample : 9J24043-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:35:59 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102438.D
Acq On : 25 Oct 2019 1:19 am
Operator : MM
Sample : 9J24043-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

M 10/25/19

Quant Time: Oct 25 10:36:04 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

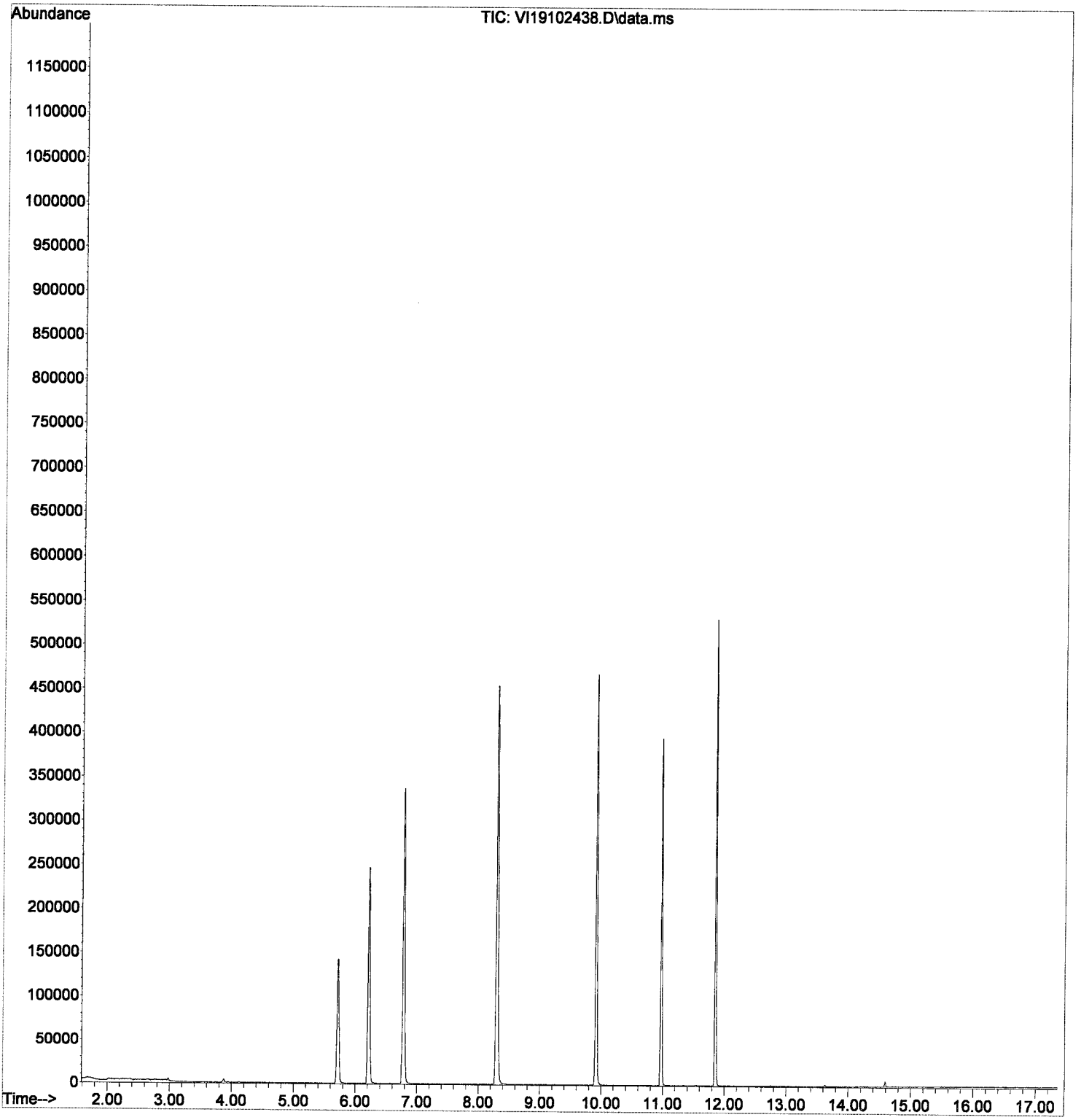
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	197519	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	324404	50.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	100113	46.69	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	365451	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	272946	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	191005	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3183m	25.18	ug/L	
5) TPHg (C5-C9)	9.890	TIC	344149m	19.44	ug/L	
6) TPHg (C6-C10)	9.890	TIC	310754m	20.11	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	344897m	22.51	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102438.D
Acq On : 25 Oct 2019 1:19 am
Operator : MM
Sample : 9J24043-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:04 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

M 10/25/19

Quant Time: Oct 25 08:55:14 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

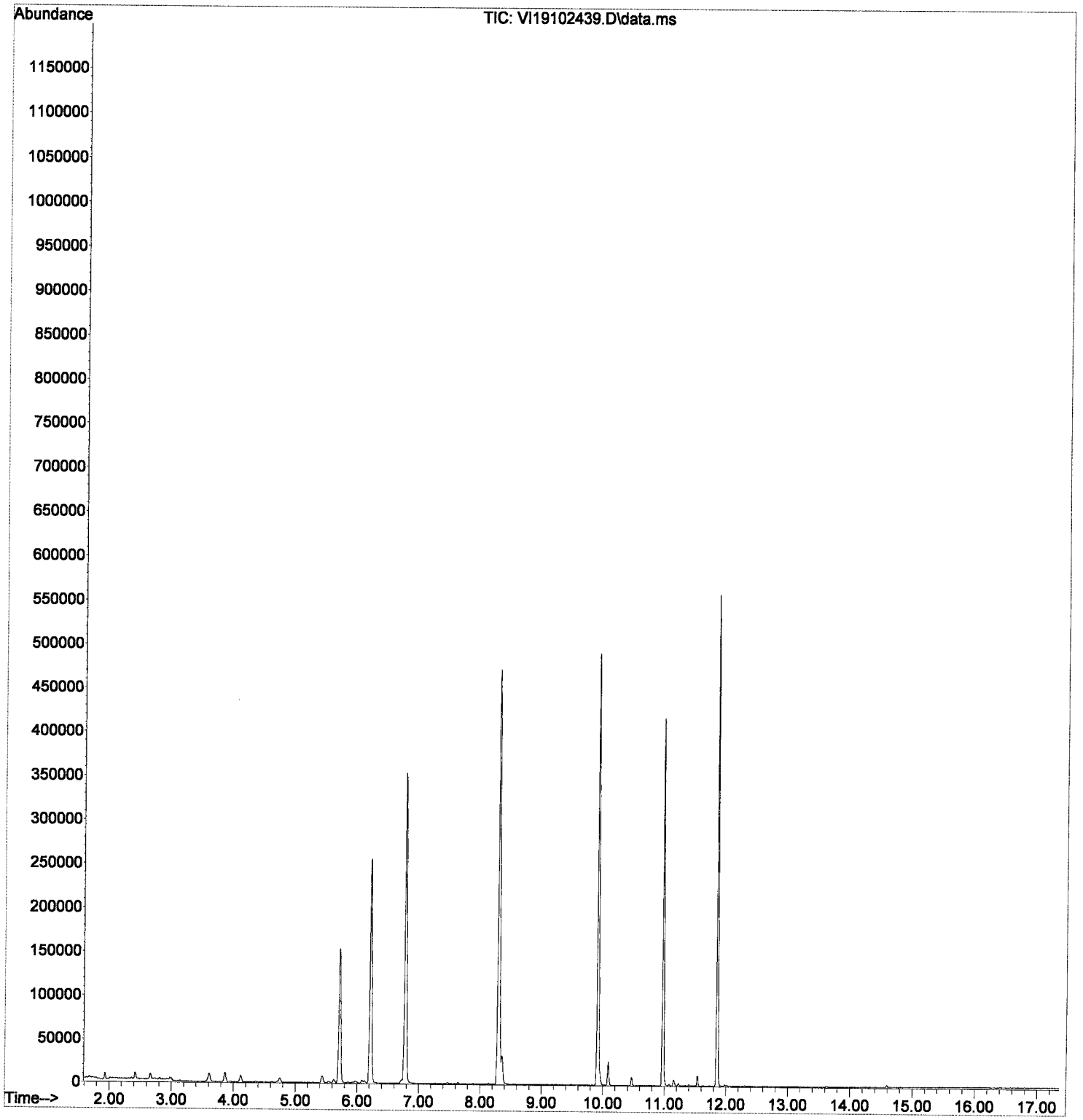
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	209290	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.777	114	341977	48.13	ug/L	-0.01
3) 4-Bromofluorobenzene (...	10.974	174	109139	43.97	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	385632	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	289080	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	203847	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	193702m	55.98	ug/L	
5) TPHg (C5-C9)	9.890	TIC	646954m	48.30	ug/L	
6) TPHg (C6-C10)	9.890	TIC	557886m	49.25	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	681991m	46.79	ug/L	
8) Benzene (NR)	6.120	78	3046	No Calib		
10) Toluene (NR)	8.358	91	26962	No Calib		
13) Naphthalene (NR)	13.633	128	1492	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102439.D
Acq On : 25 Oct 2019 1:46 am
Operator : MM
Sample : 9J24043-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:14 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102440.D
Acq On : 25 Oct 2019 2:13 am
Operator : MM
Sample : 9J24043-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:16 2019
Quant Method : C:\msdchem\1\methods\VI~~191025G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

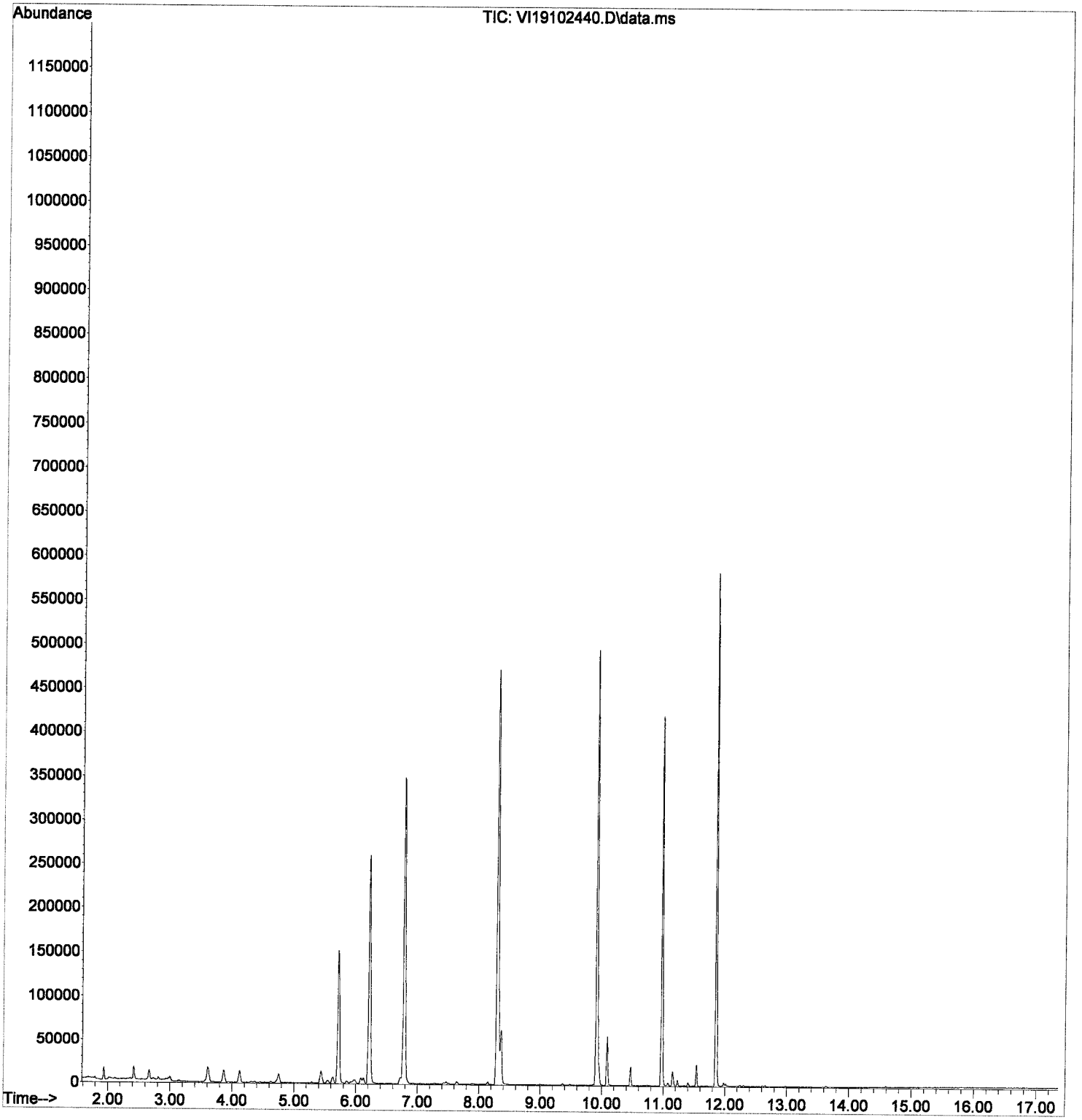
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	209478	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	342473	48.16	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	110020	44.29	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	383736	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	289519	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	212572	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	430822m	90.27	ug/L	
5) TPHg (C5-C9)	9.890	TIC	918071m	78.43	ug/L	
6) TPHg (C6-C10)	9.890	TIC	799328m	81.58	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	1014687m	77.57	ug/L	
8) Benzene (NR)	6.126	78	5908	No Calib		
10) Toluene (NR)	8.358	91	53262	No Calib		
13) Naphthalene (NR)	13.627	128	1678	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102440.D
Acq On : 25 Oct 2019 2:13 am
Operator : MM
Sample : 9J24043-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:16 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102441.D
Acq On : 25 Oct 2019 2:40 am
Operator : MM
Sample : 9J24043-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:19 2019
Quant Method : C:\msdchem\1\methods\VI~~191025G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

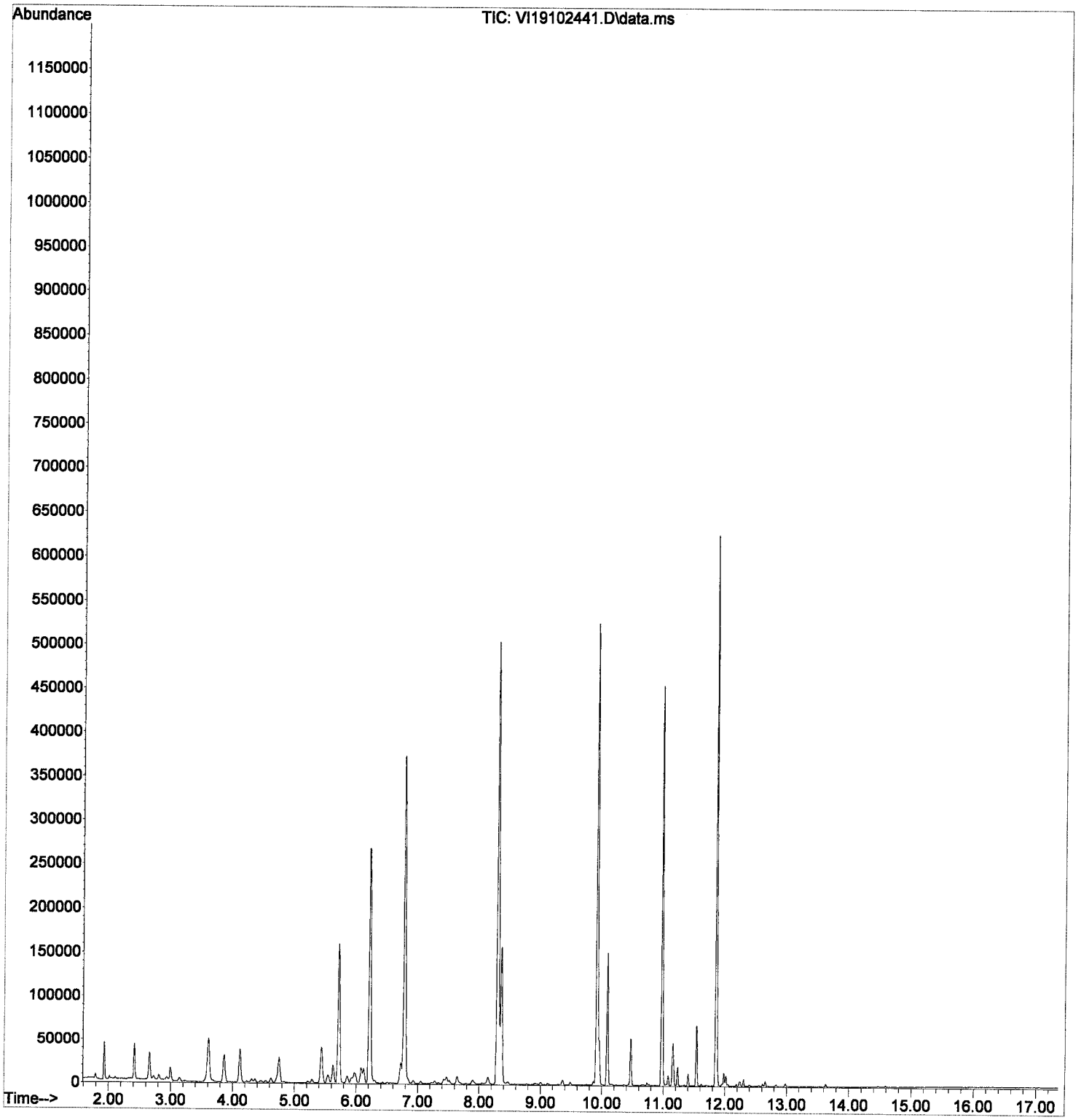
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	220921	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.777	114	357958	47.73	ug/L	-0.01
3) 4-Bromofluorobenzene (...	10.974	174	116770	44.57	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	404018	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	307058	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	223658	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	1374008m	216.41	ug/L	
5) TPHg (C5-C9)	9.890	TIC	2153713m	203.72	ug/L	
6) TPHg (C6-C10)	9.890	TIC	1839524m	208.44	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	2493143m	202.69	ug/L	
8) Benzene (NR)	6.120	78	15473	No Calib		
10) Toluene (NR)	8.358	91	140638	No Calib		
13) Naphthalene (NR)	13.627	128	3143	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102441.D
Acq On : 25 Oct 2019 2:40 am
Operator : MM
Sample : 9J24043-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:19 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102442.D
Acq On : 25 Oct 2019 3:07 am
Operator : MM
Sample : 9J24043-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:22 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

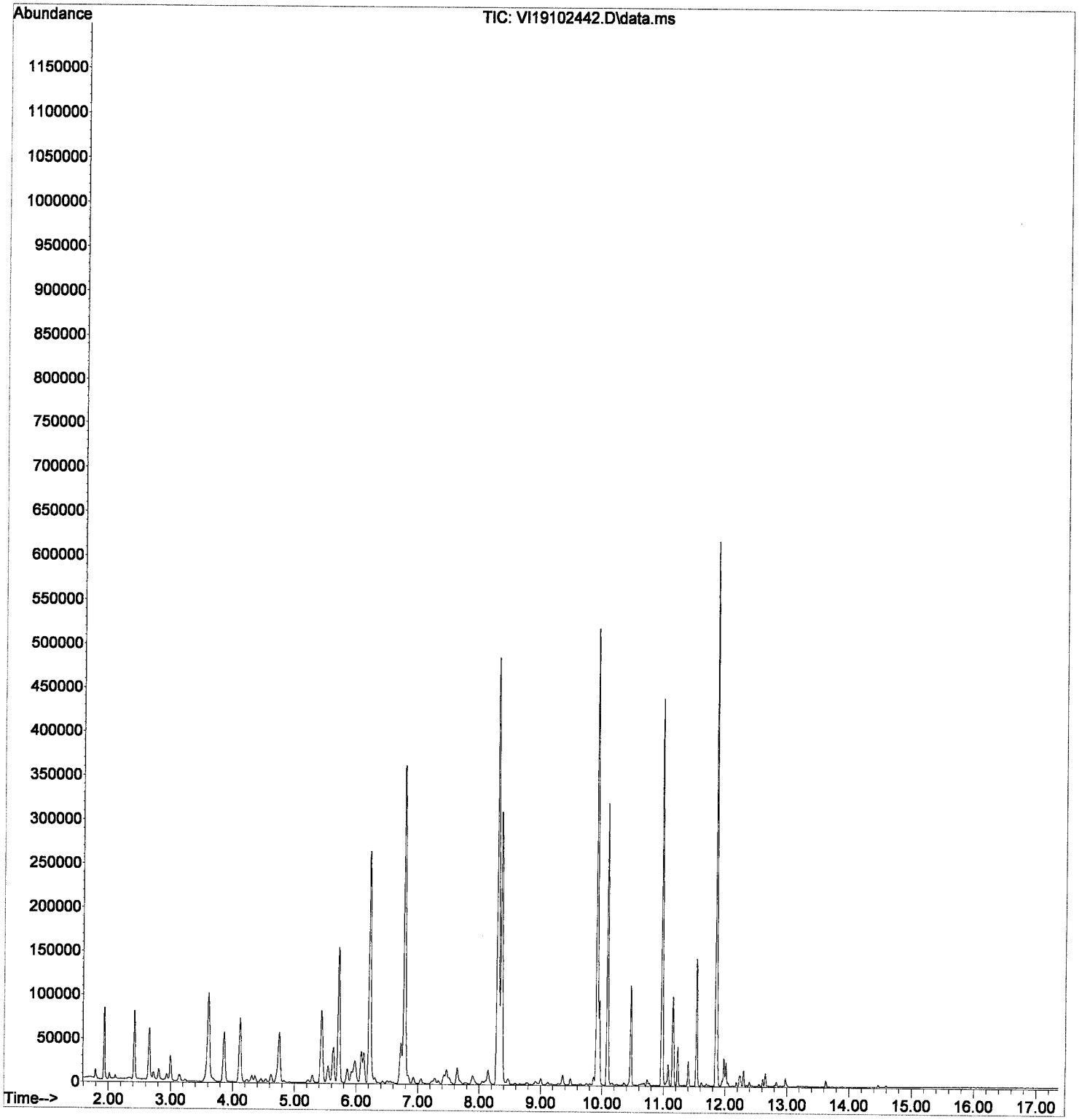
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	214780	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	347086	47.60	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	115043	45.16	ug/L	0.00
9) Toluene-d8 (NR)	8.298	98	395742	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	299444	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	223960	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	2976997m	447.66	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4135130m	425.95	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3507779m	433.73	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	4877141m	424.71	ug/L	
8) Benzene (NR)	6.120	78	31187	No Calib		
10) Toluene (NR)	8.358	91	281045	No Calib		
13) Naphthalene (NR)	13.627	128	6060	No Calib	#	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102442.D
Acq On : 25 Oct 2019 3:07 am
Operator : MM
Sample : 9J24043-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:22 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102443.D
Acq On : 25 Oct 2019 3:34 am
Operator : MM
Sample : 9J24043-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:25 2019
Quant Method : C:\msdchem\1\methods\~~VI191025G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

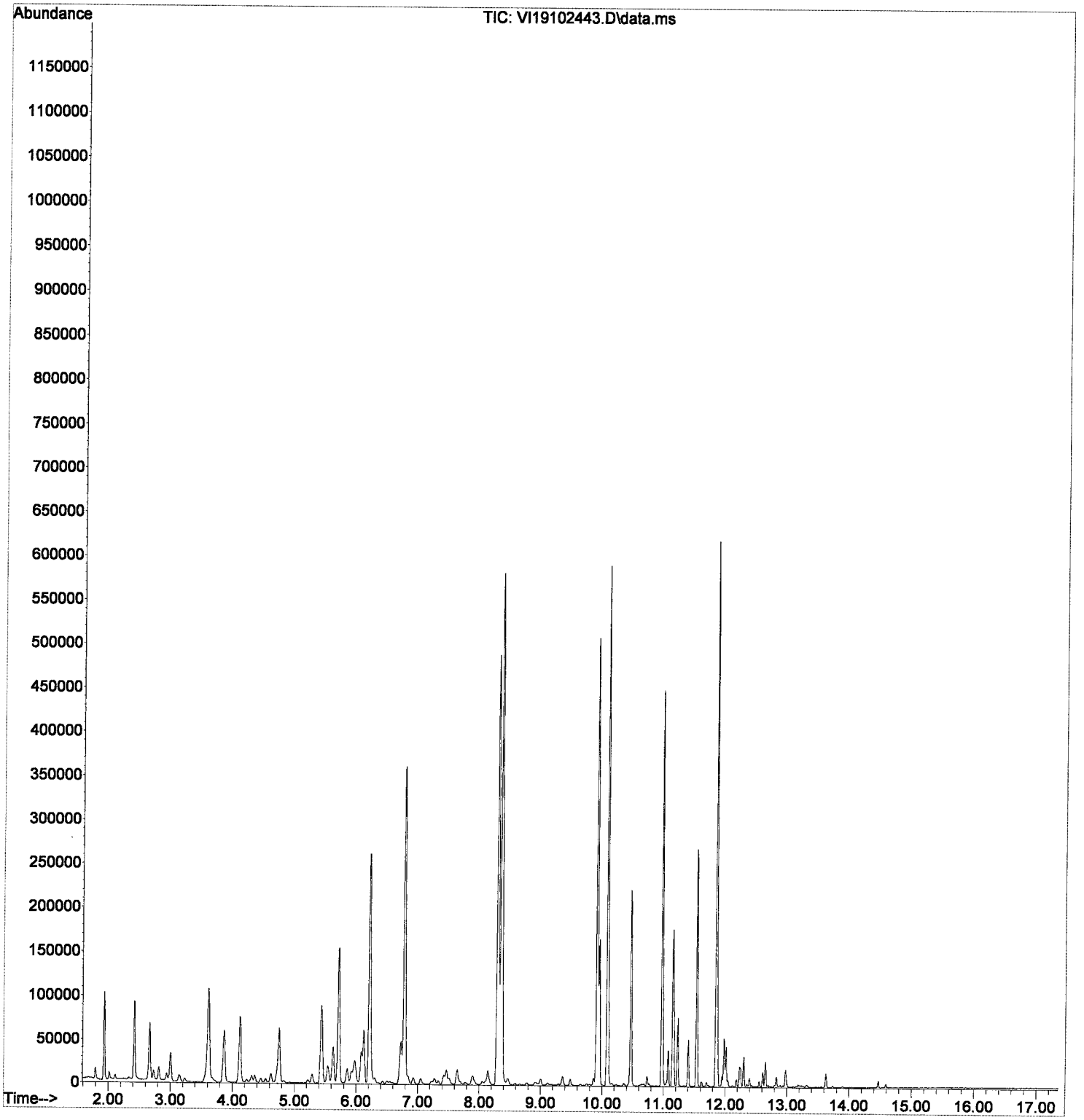
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	211453	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	348407	48.54	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	115114	45.90	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	392439	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	298529	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	222551	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	4888792m	727.40	ug/L	
5) TPHg (C5-C9)	9.890	TIC	5510904m	585.41	ug/L	
6) TPHg (C6-C10)	9.890	TIC	4867313m	622.06	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	6835714m	611.85	ug/L	
8) Benzene (NR)	6.119	78	58175	No Calib		
10) Toluene (NR)	8.358	91	520899	No Calib		
13) Naphthalene (NR)	13.627	128	12132	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102443.D
Acq On : 25 Oct 2019 3:34 am
Operator : MM
Sample : 9J24043-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:25 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102444.D
Acq On : 25 Oct 2019 4:00 am
Operator : MM
Sample : 9J24043-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:28 2019
Quant Method : C:\msdchem\1\methods\~~VI191025~~G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

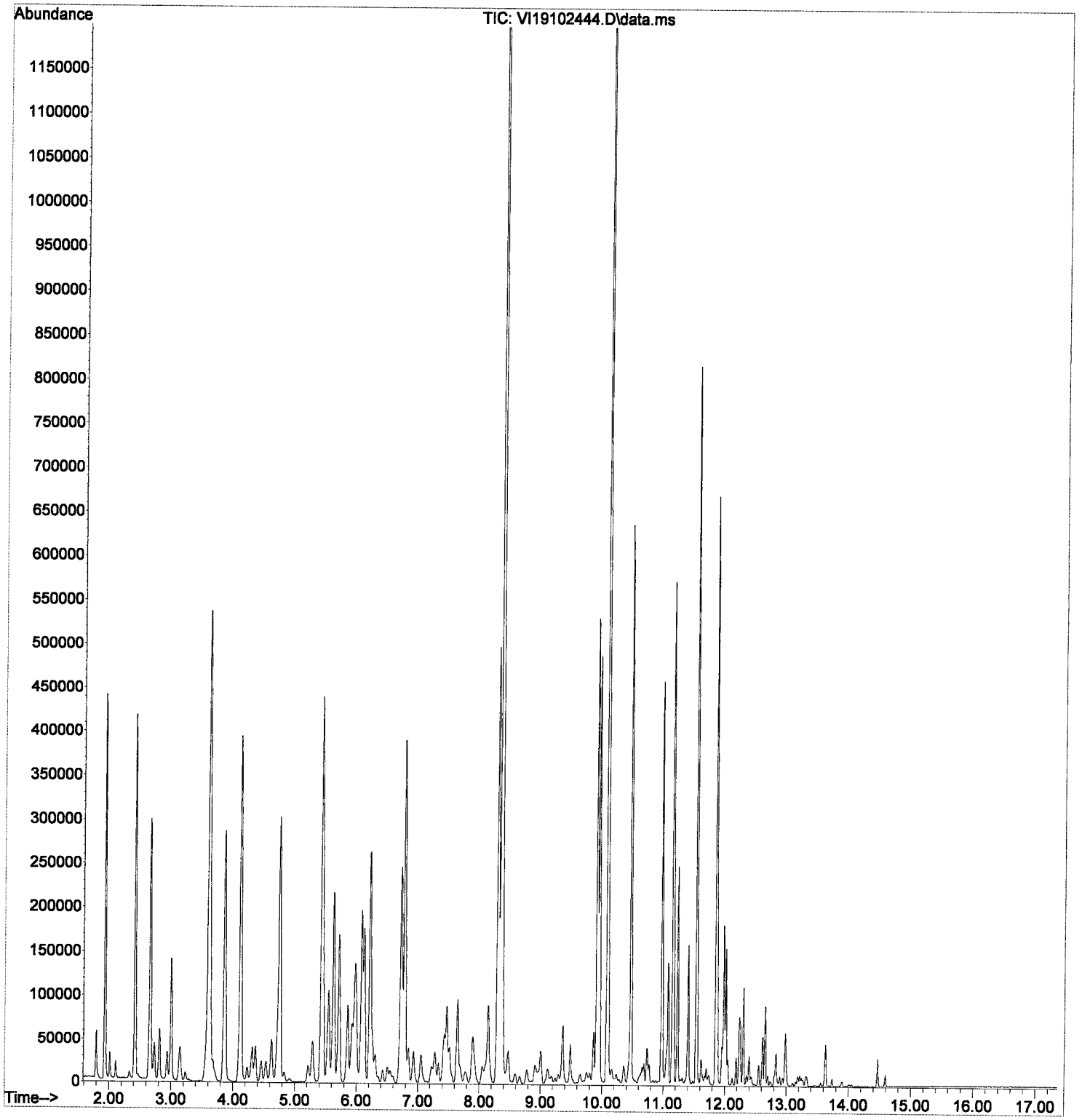
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	216435	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	352248	47.94	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	120135	46.80	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	398721	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	303642	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	237458	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	16775203m	2359.89	ug/L	
5) TPHg (C5-C9)	9.890	TIC	21028250m	2263.03	ug/L	
6) TPHg (C6-C10)	9.890	TIC	17780255m	2293.78	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	25461195m	2277.93	ug/L	
8) Benzene (NR)	6.119	78	158403	No Calib		
10) Toluene (NR)	8.358	91	1477009	No Calib		
13) Naphthalene (NR)	13.627	128	35052	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102444.D
Acq On : 25 Oct 2019 4:00 am
Operator : MM
Sample : 9J24043-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:28 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102445.D
Acq On : 25 Oct 2019 4:27 am
Operator : MM
Sample : 9J24043-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:31 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

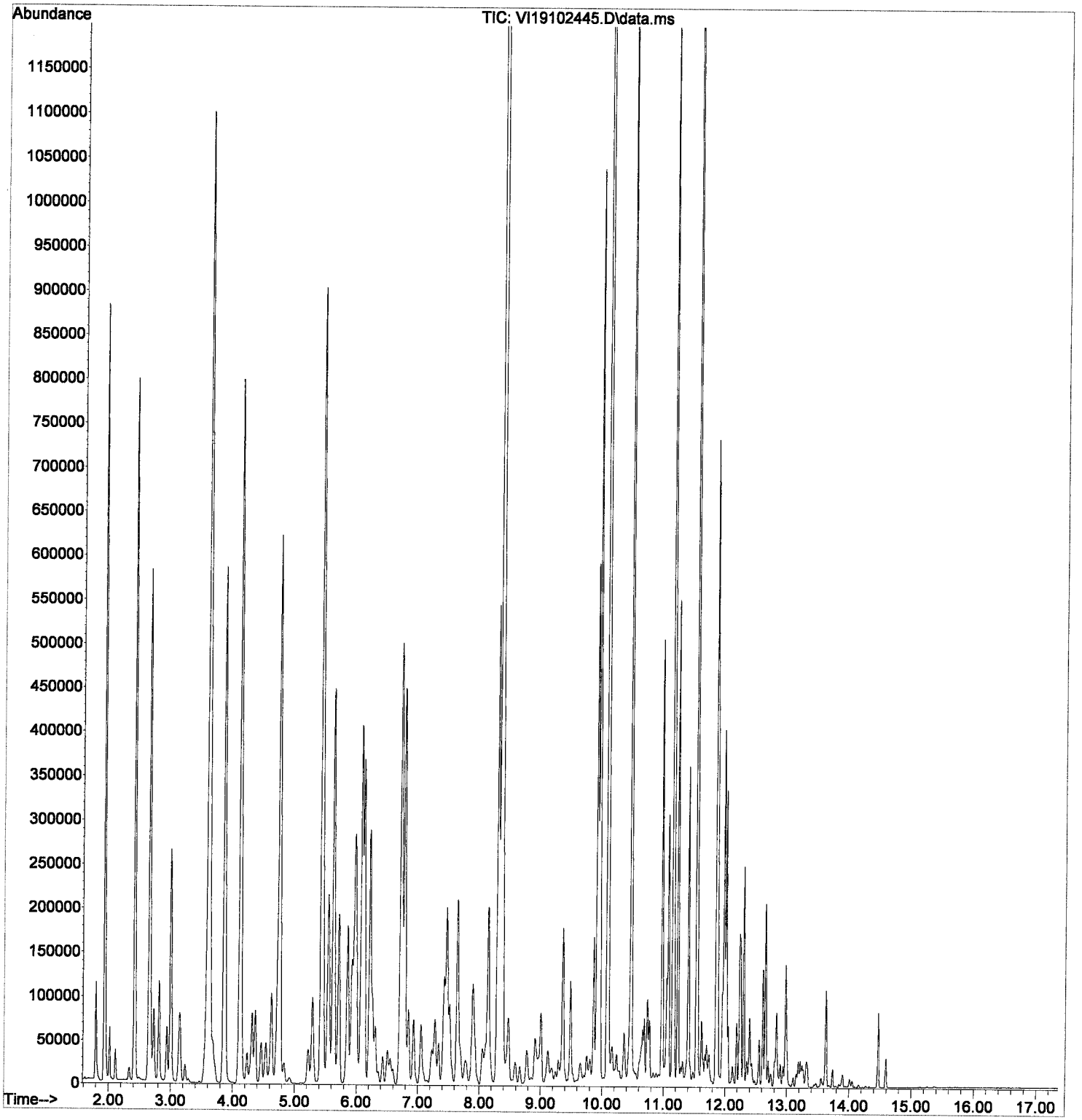
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	233849	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	379658	47.83	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	131653	47.47	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	428988	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	328511	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	265485	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	36698243m	4712.25	ug/L	
5) TPHg (C5-C9)	9.890	TIC	44004926m	4445.71	ug/L	
6) TPHg (C6-C10)	9.890	TIC	37352617m	4504.22	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	53937364m	4503.02	ug/L	
8) Benzene (NR)	6.119	78	331579	No Calib		
10) Toluene (NR)	8.358	91	3164737	No Calib		
13) Naphthalene (NR)	13.627	128	80787	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102445.D
Acq On : 25 Oct 2019 4:27 am
Operator : MM
Sample : 9J24043-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:31 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102446.D
Acq On : 25 Oct 2019 4:54 am
Operator : MM
Sample : 9J24043-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:34 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration

W 10/28/19

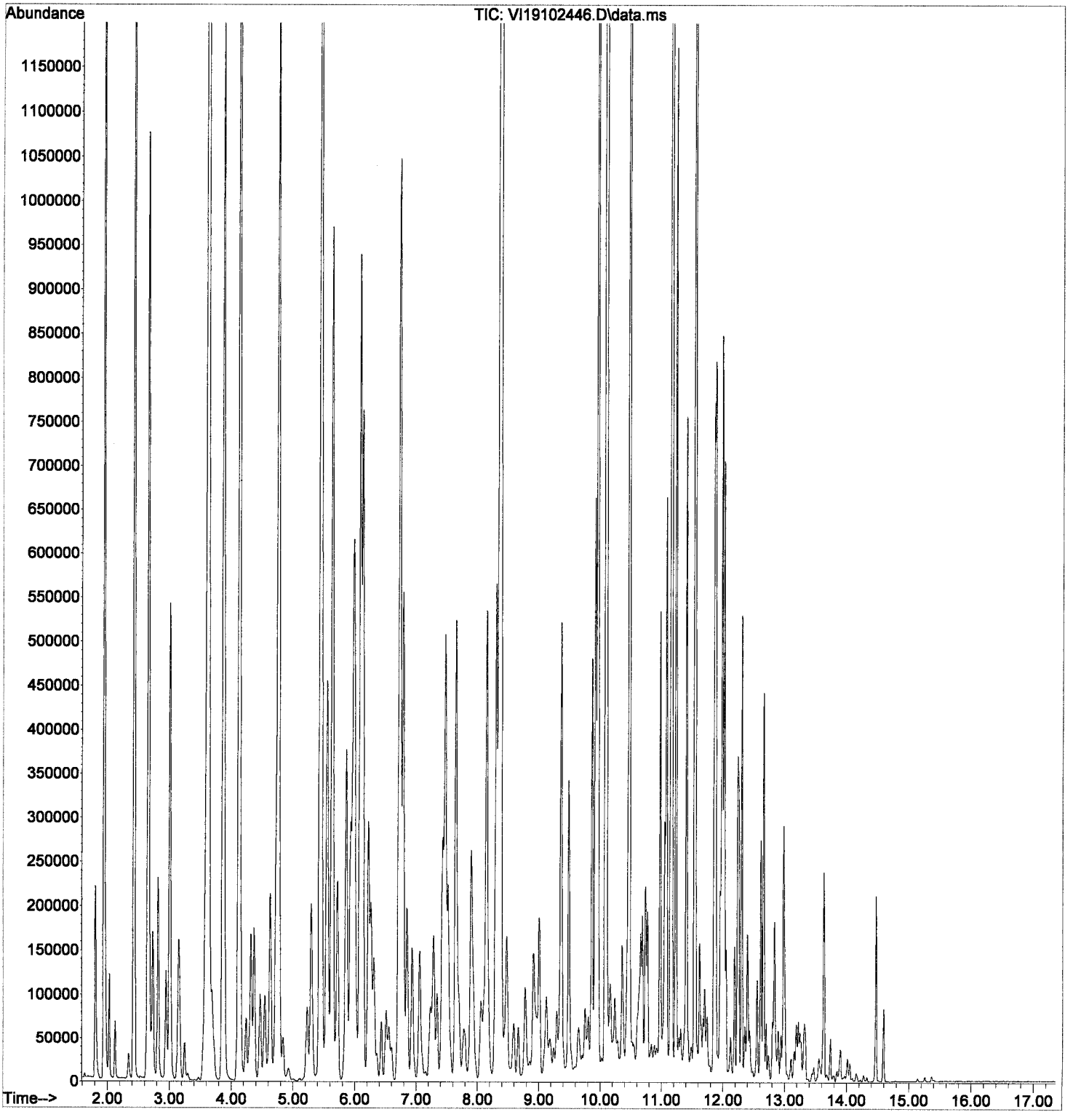
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	234183	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	384961	48.42	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	134509	48.43	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	441445	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	336849	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	271148	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	79562476m	9992.42	ug/L	
5) TPHg (C5-C9)	9.890	TIC	92937489m	9609.74	ug/L	
6) TPHg (C6-C10)	9.890	TIC	79339461m	9683.51	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	114341182m	9654.93	ug/L	
8) Benzene (NR)	6.126	78	681943	No Calib		
10) Toluene (NR)	8.358	91	6524048	No Calib		
13) Naphthalene (NR)	13.627	128	171453	No Calib		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102446.D
Acq On : 25 Oct 2019 4:54 am
Operator : MM
Sample : 9J24043-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 08:55:34 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Aug 06 09:35:12 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102447.D
Acq On : 25 Oct 2019 5:21 am
Operator : MM
Sample : 9J24043-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:23 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

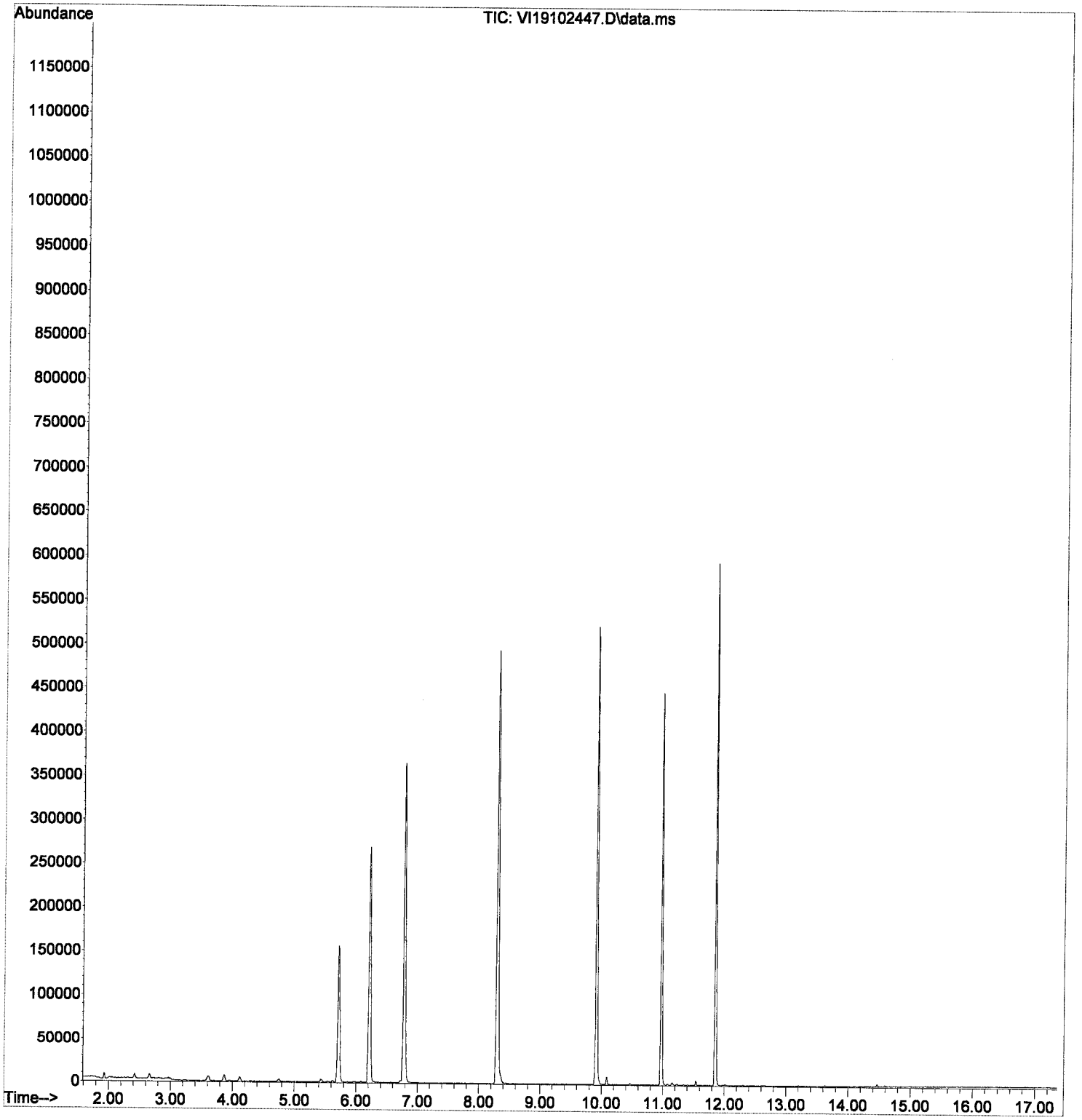
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	220300	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	358131	50.00	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	115759	48.41	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	401614	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	304304	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	217857	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	67010m	34.98	ug/L	
5) TPHg (C5-C9)	9.890	TIC	462754m	29.19	ug/L	
6) TPHg (C6-C10)	9.890	TIC	415778m	30.25	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	479273m	32.16	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102447.D
Acq On : 25 Oct 2019 5:21 am
Operator : MM
Sample : 9J24043-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:23 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102448.D
Acq On : 25 Oct 2019 5:48 am
Operator : MM
Sample : 9J24043-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:26 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

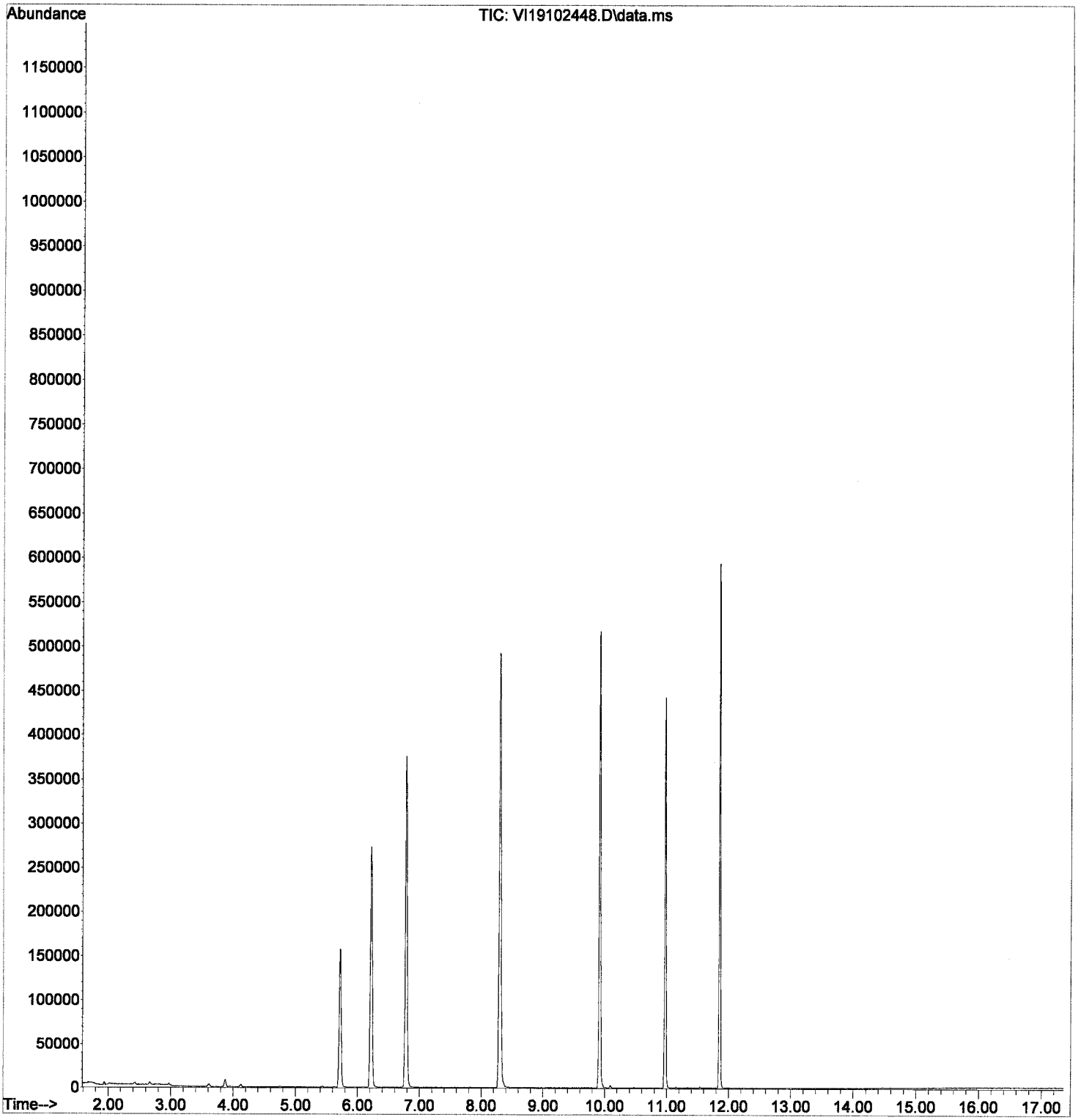
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	224165	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	364141	49.96	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	116148	47.73	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	404017	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	307716	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	221768	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	6246m	25.58	ug/L	
5) TPHg (C5-C9)	9.890	TIC	423048m	23.38	ug/L	
6) TPHg (C6-C10)	9.890	TIC	367482m	22.24	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	414999m	24.87	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102448.D
Acq On : 25 Oct 2019 5:48 am
Operator : MM
Sample : 9J24043-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:26 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102449.D
Acq On : 25 Oct 2019 6:15 am
Operator : MM
Sample : NOT USED-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:29 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

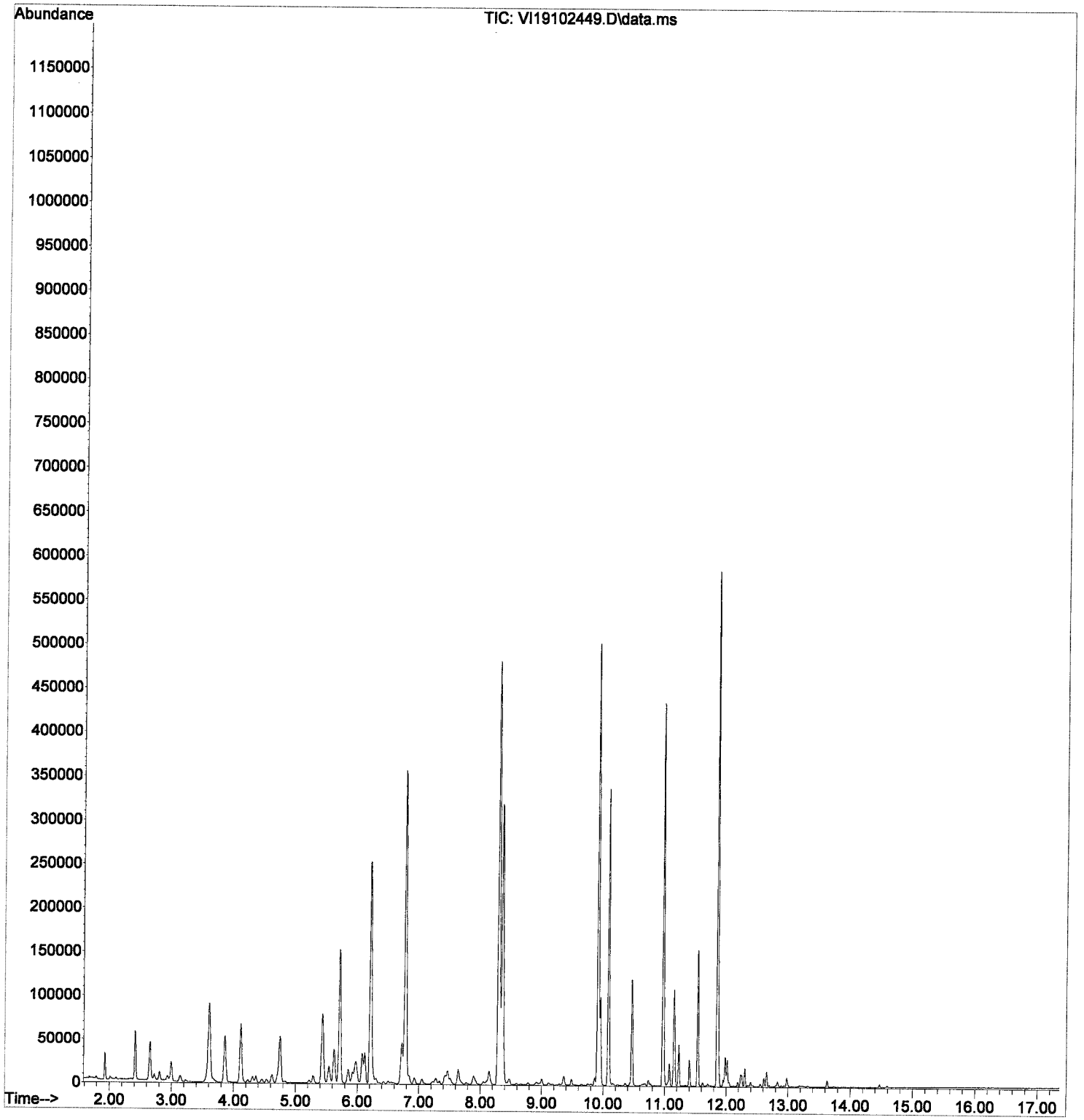
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	210169	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	342543	50.13	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	111447	48.85	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	389625	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	294881	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	215811	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3057398m	515.56	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4012577m	490.15	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3490261m	503.63	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	4796224m	494.15	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102449.D
Acq On : 25 Oct 2019 6:15 am
Operator : MM
Sample : NOT USED-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:29 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102450.D
Acq On : 25 Oct 2019 6:42 am
Operator : MM
Sample : 9J24043-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:32 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

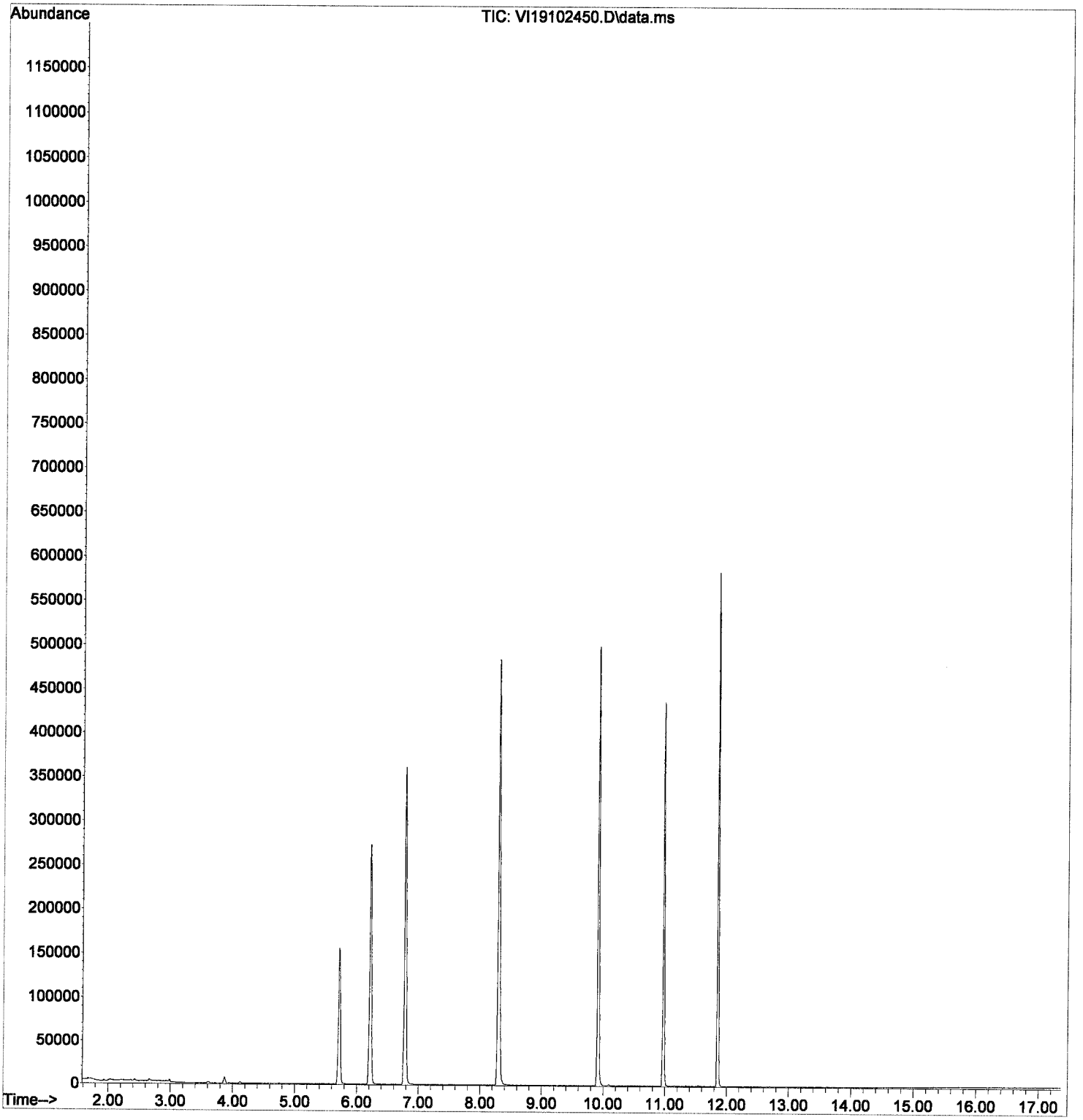
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	220005	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	355641	49.72	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	113694	47.61	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	395183	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	297812	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	216661	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	1338m	24.84	ug/L	
5) TPHg (C5-C9)	9.890	TIC	395852m	20.99	ug/L	
6) TPHg (C6-C10)	9.890	TIC	356830m	21.68	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	380718m	22.16	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102450.D
Acq On : 25 Oct 2019 6:42 am
Operator : MM
Sample : 9J24043-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:32 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102451.D
Acq On : 25 Oct 2019 9:37 am
Operator : MM
Sample : 9J24043-IBLB
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:35 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

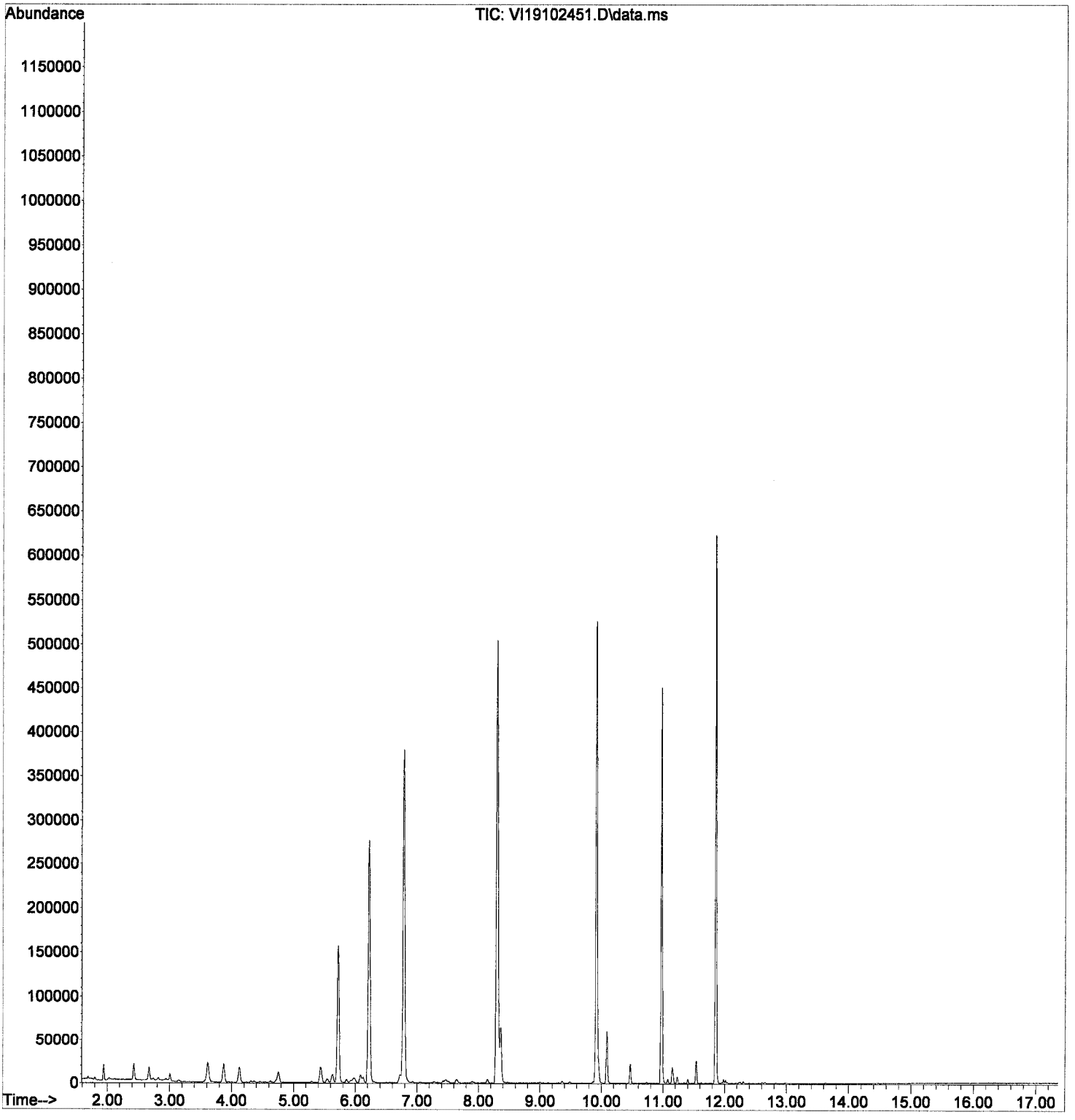
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	220874	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	362775	50.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	117808	49.14	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	408461	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	309494	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	224643	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	516538m	104.07	ug/L	
5) TPHg (C5-C9)	9.890	TIC	1099818m	107.51	ug/L	
6) TPHg (C6-C10)	9.890	TIC	929473m	105.15	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	1204383m	105.77	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102451.D
Acq On : 25 Oct 2019 9:37 am
Operator : MM
Sample : 9J24043-IBLB
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:36:35 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102452.D
Acq On : 25 Oct 2019 10:13 am
Operator : MM
Sample : 9J24043-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:30:48 2019
Quant Method : C:\msdchem\1\methods\~~VI191025G~~.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 09:04:24 2019
Response via : Initial Calibration

MM 10/25/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	234293	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	376297	49.24	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	126230	49.57	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	425778	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.916	117	321320	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	240304	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	6735895m	1025.45	ug/L	
5) TPHg (C5-C9)	9.890	TIC	9031832m	1085.81	ug/L	
6) TPHg (C6-C10)	9.890	TIC	7648071m	1079.95	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	10733621m	1066.65	ug/L	
8) Benzene (NR)	6.126	78	64412	No Calib		
10) Toluene (NR)	8.358	91	587525	No Calib		
13) Naphthalene (NR)	13.627	128	13369	No Calib		

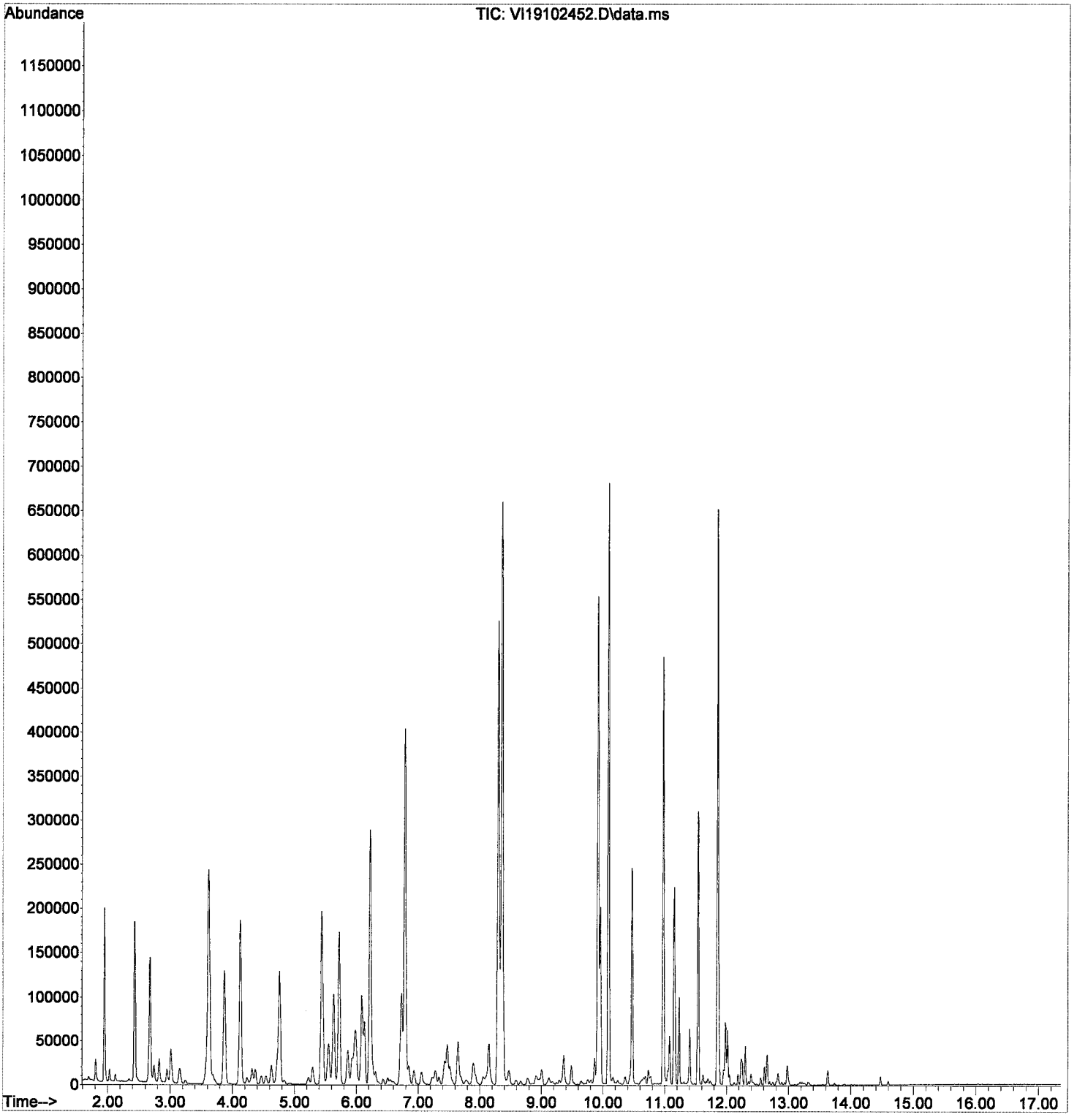
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Re-prepped @ 10/25/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102452.D
Acq On : 25 Oct 2019 10:13 am
Operator : MM
Sample : 9J24043-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:30:48 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 09:04:24 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102453.D
Acq On : 25 Oct 2019 10:40 am
Operator : MM
Sample : 9J24043-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:55:48 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration

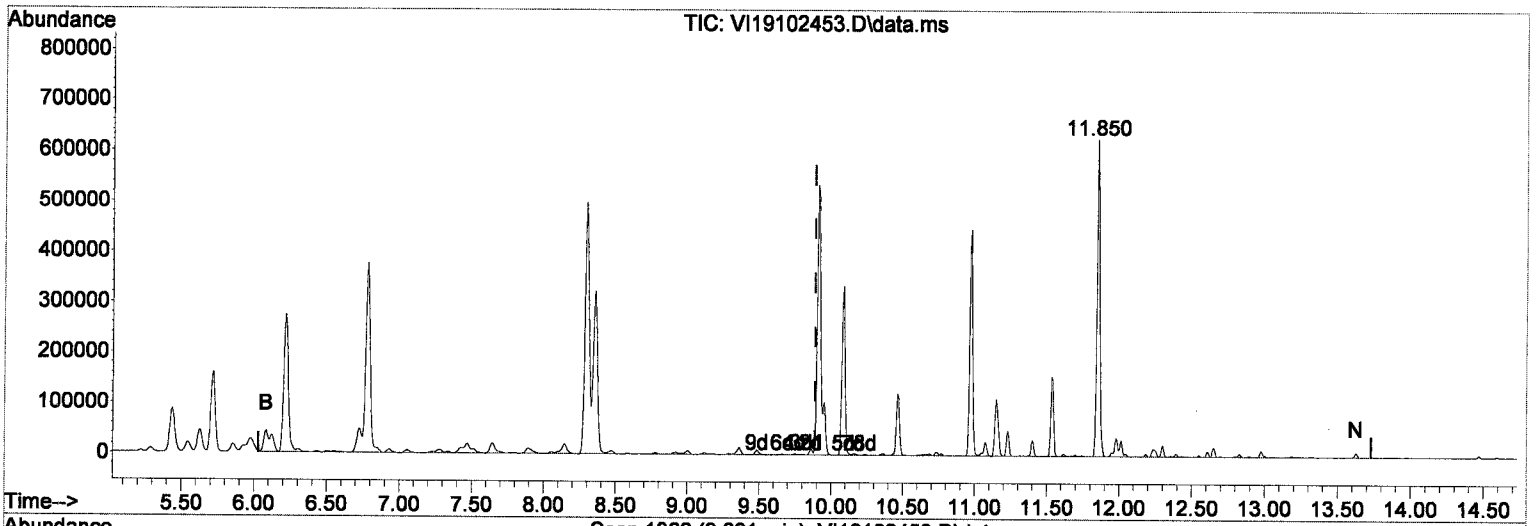
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.217	168	221958	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.783	114	358721	49.70	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.974	174	117543	48.79	ug/L	0.00
9) Toluene-d8 (NR)	8.297	98	403727	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	9.910	117	307598	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.850	150	224832	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.890	TIC	3205343m	512.01	ug/L	
5) TPHg (C5-C9)	9.890	TIC	4234043m	489.71	ug/L	
6) TPHg (C6-C10)	9.890	TIC	3681976m	503.04	ug/L	
7) CA-LUFT (C5-C12)	9.890	TIC	5059070m	493.53	ug/L	

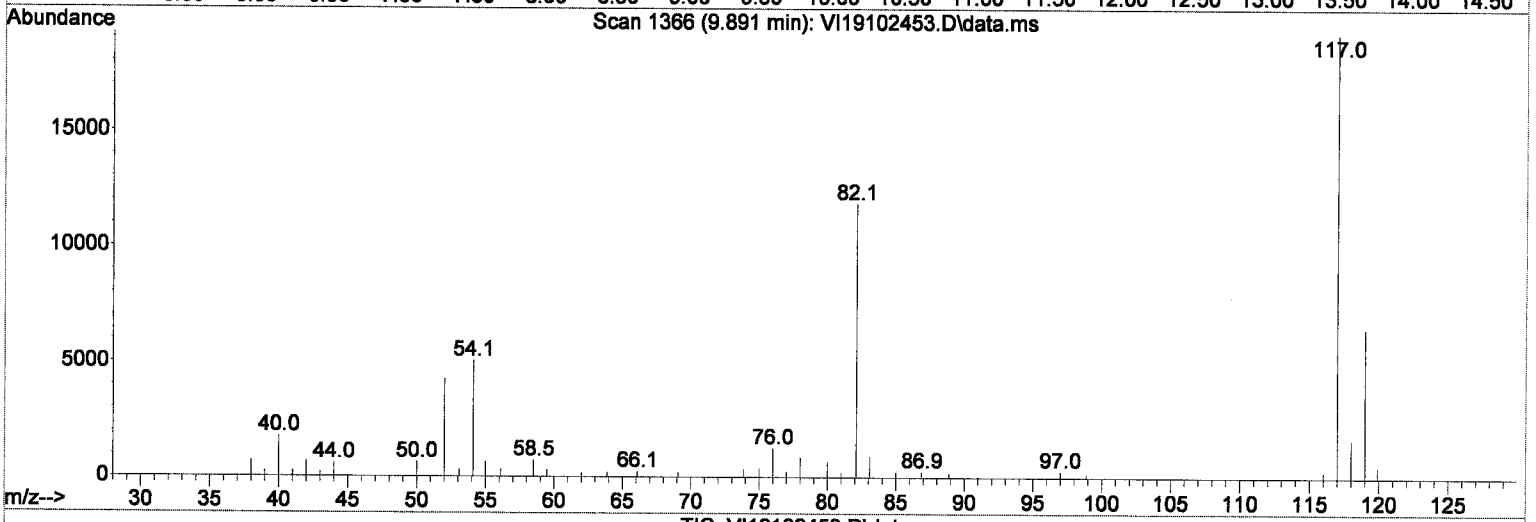
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102453.D
Acq On : 25 Oct 2019 10:40 am
Operator : MM
Sample : 9J24043-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:55:48 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration





(4) NWTPH-Gx (TPH) (H)

9.890min (0.000) 512.01 ug/L m

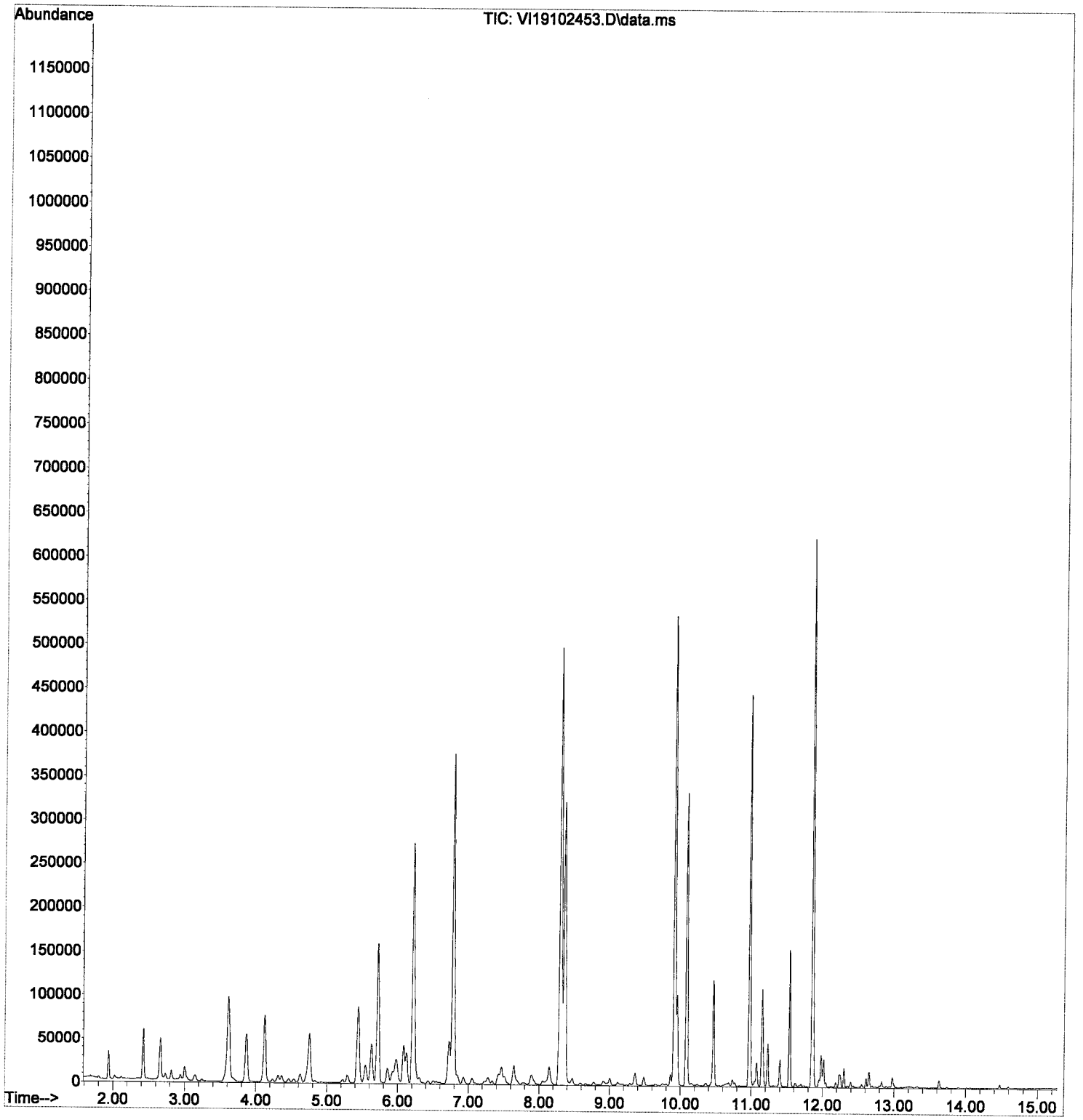
response 3205343

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.02#
0.00	0.00	0.01#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J24043\
Data File : VI19102453.D
Acq On : 25 Oct 2019 10:40 am
Operator : MM
Sample : 9J24043-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VI1611RUN.M

Quant Time: Oct 25 10:55:48 2019
Quant Method : C:\msdchem\1\methods\VI191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Fri Oct 25 10:31:05 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Volatile Organic Compounds by EPA 5035A/8260C
Calibration Data

Sequence 9J25051 (Cal ID A9J2806) VOA-GCMS7

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9J25051	Instrument:	VOA-GCMS7
Date:	10/25/19 15:22	Calibration:	A9J2806

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9J25051-IBL1	Water	QC	QC			A19F381	
2	9J25051-TUN1	Water	QC	QC			A19F381	
3	9J25051-ICB1	Water	QC	QC			A19F381	
4	9J25051-CAL1	Water	QC	QC			A19F381	A19J377
5	9J25051-CAL2	Water	QC	QC			A19F381	A19J378
6	9J25051-CAL3	Water	QC	QC			A19F381	A19J379
7	9J25051-CAL4	Water	QC	QC			A19F381	A19J380
8	9J25051-CAL5	Water	QC	QC			A19F381	A19J381
9	9J25051-CAL6	Water	QC	QC			A19F381	A19J382
10	9J25051-CAL7	Water	QC	QC			A19F381	A19J383
11	9J25051-CAL8	Water	QC	QC			A19F381	A19J384
12	9J25051-CAL9	Water	QC	QC			A19F381	A19J385
13	9J25051-IBL2	Water	QC	QC			A19F381	
14	9J25051-CALA	Water	QC	QC			A19F381	A19J386
15	9J25051-IBL3	Water	QC	QC			A19F381	
16	9J25051-CALB	Water	QC	QC			A19F381	A19J387
17	9J25051-IBL4	Water	QC	QC			A19F381	
18	9J25051-IBL5	Water	QC	QC			A19F381	
19	9J25051-ICV1	Water	QC	QC			A19F381	A19J131
20	9J25051-ICV2	Water	QC	QC			A19F381	A19E195
21	9J25051-IBL6	Water	QC	QC			A19F381	
22	9J25051-TUN2	Water	QC	QC			A19F381	
23	9J25051-IBL7	Water	QC	QC			A19F381	
24	9J25051-ICB2	Water	QC	QC			A19F381	
25	9J25051-CALC	Water	QC	QC			A19F381	A19J388
26	9J25051-CALD	Water	QC	QC			A19F381	A19J389
27	9J25051-CALE	Water	QC	QC			A19F381	A19J390
28	9J25051-CALF	Water	QC	QC			A19F381	A19J391
29	9J25051-CALG	Water	QC	QC			A19F381	A19J392
30	9J25051-CALH	Water	QC	QC			A19F381	A19J393
31	9J25051-CALI	Water	QC	QC			A19F381	A19J394
32	9J25051-CALJ	Water	QC	QC			A19F381	A19J395
33	9J25051-IBL8	Water	QC	QC			A19F381	
34	9J25051-IBL9	Water	QC	QC			A19F381	
35	9J25051-ICV3	Water	QC	QC			A19F381	A19G350
36	9J25051-IBLA	Water	QC	QC			A19F381	

Data Entered By: 10/28/19

Data Reviewed By: N/A 10/30/19

Comments:

Calibration Status Report VOA-GCMS7

Method Path : C:\msdchem\1\methods\
Method File : VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Mon Oct 28 11:12:23 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	-1	50	C:\msdchem\1\data\2019-10\9J25051\VG19102514.D
2	2	0	50	C:\msdchem\1\data\2019-10\9J25051\VG19102515.D
3	3	0	50	C:\msdchem\1\data\2019-10\9J25051\VG19102516.D
4	4	1	50	C:\msdchem\1\data\2019-10\9J25051\VG19102517.D
5	5	2	50	C:\msdchem\1\data\2019-10\9J25051\VG19102518.D
6	6	5	50	C:\msdchem\1\data\2019-10\9J25051\VG19102519.D
7	7	10	50	C:\msdchem\1\data\2019-10\9J25051\VG19102520.D
8	8	20	50	C:\msdchem\1\data\2019-10\9J25051\VG19102521.D
9	9	50	50	C:\msdchem\1\data\2019-10\9J25051\VG19102522.D
10	10	100	50	C:\msdchem\1\data\2019-10\9J25051\VG19102524.D
11	1a	200	50	C:\msdchem\1\data\2019-10\9J25051\VG19102526.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Oct 28 11:11 2019	Oct 28 10:37 2019	25 Oct 2019 4:53 pm
2	2	Oct 28 11:11 2019	Oct 28 10:40 2019	25 Oct 2019 5:20 pm
3	3	Oct 28 11:11 2019	Oct 28 10:43 2019	25 Oct 2019 5:47 pm
4	4	Oct 28 11:11 2019	Oct 28 10:44 2019	25 Oct 2019 6:14 pm
5	5	Oct 28 11:11 2019	Oct 28 10:25 2019	25 Oct 2019 6:41 pm
6	6	Oct 28 11:11 2019	Oct 28 10:25 2019	25 Oct 2019 7:08 pm
7	7	Oct 28 11:11 2019	Oct 28 10:25 2019	25 Oct 2019 7:35 pm
8	8	Oct 28 11:12 2019	Oct 28 10:25 2019	25 Oct 2019 8:02 pm
9	9	Oct 28 11:11 2019	Oct 28 10:25 2019	25 Oct 2019 8:29 pm
10	10	Oct 28 11:11 2019	Oct 28 10:25 2019	25 Oct 2019 9:22 pm
11	1a	Oct 28 11:11 2019	Oct 28 10:53 2019	25 Oct 2019 10:16 pm

VG191025W.M Mon Oct 28 12:57:18 2019

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J25051

Analysis Included

8260C Full List
8260C Additional Cpds
8260C Iodomethane Add On
8260C Oxygenates

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed	
9J25051-TUN1	MS Tune	Water		A19F381	10/25/2019	3:58:00PM
9J25051-ICB1	Initial Cal Blank	Water		A19F381	10/25/2019	4:25:00PM
9J25051-CAL1	Cal Standard	Water	A19J377	"	10/25/2019	4:53:00PM
9J25051-CAL2	Cal Standard	Water	A19J378	"	10/25/2019	5:20:00PM
9J25051-CAL3	Cal Standard	Water	A19J379	"	10/25/2019	5:47:00PM
9J25051-CAL4	Cal Standard	Water	A19J380	"	10/25/2019	6:14:00PM
9J25051-CAL5	Cal Standard	Water	A19J381	"	10/25/2019	6:41:00PM
9J25051-CAL6	Cal Standard	Water	A19J382	"	10/25/2019	7:08:00PM
9J25051-CAL7	Cal Standard	Water	A19J383	"	10/25/2019	7:35:00PM
9J25051-CAL8	Cal Standard	Water	A19J384	"	10/25/2019	8:02:00PM
9J25051-CAL9	Cal Standard	Water	A19J385	"	10/25/2019	8:29:00PM
9J25051-CALA	Cal Standard	Water	A19J386	"	10/25/2019	9:22:00PM
9J25051-CALB	Cal Standard	Water	A19J387	"	10/25/2019	10:16:00PM
9J25051-ICV1	Initial Cal Check	Water	A19J131	"	10/25/2019	11:37:00PM
9J25051-ICV2	Initial Cal Check	Water	A19E195	"	10/26/2019	12:04:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: A9J2806 Instrument: VOA-GCMS7

8260C Full List Sequence: 9J25051 Matrix: Water

9J25051-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9J25051-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J25051

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9J2806** Instrument: **VOA-GCMS7**

8260C Full List Sequence: **9J25051** Matrix: **Water**

9J25051-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual
9J25051-ICV2	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102529.D
Acq On : 25 Oct 2019 11:37 pm
Operator : MM
Sample : 9J25051-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:58 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

10/28/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	105	0.00
2		Dichlorodifluoromethane	20.000	24.475	-22.4	137	0.00
3	P	Chloromethane	20.000	21.781	-8.9	122	0.00
4	C	Vinyl Chloride	20.000	22.344	-11.7	117	0.00
5		Bromomethane	20.000	18.619	6.9	105	0.00
6		Chloroethane	20.000	18.870	5.6	102	0.00
7		Trichlorofluoromethane	20.000	20.028	-0.1	103	0.00
8		~~Ethanol~~	~~1250.000~~	~~32.970~~	~~97.4#~~	~~3~~	~~0.00~~
9	C	1,1-Dichloroethene	20.000	20.190	-1.0	106	0.00
10		Carbon Disulfide	20.000	18.937	5.3	102	0.00
11		Freon 113	20.000	18.382	8.1	96	0.00
12		Iodomethane	20.000	23.068	-15.3	144	0.00
13		Acrolein	20.000	23.137	-15.7	123	0.00
14		Methylene Chloride	20.000	20.883	-4.4	105	0.00
15		Acetone	40.000	38.535	3.7	103	0.00
16		t-1,2-Dichloroethene	20.000	20.695	-3.5	105	0.00
17		n-Hexane	20.000	18.853	5.7	99	0.00
18		Methyl-tert-butyl-ether	20.000	21.443	-7.2	103	0.00
19		~~tert-Butanol (TBA)~~	~~1250.000~~	~~29.198~~	~~97.7#~~	~~2~~	~~0.00~~
20		~~Diisopropyl ether (DIPE)~~	~~5.000~~	~~0.167~~	~~96.7#~~	~~3~~	~~0.00~~
21	P	1,1-Dichloroethane	20.000	20.134	-0.7	105	0.00
22		Acrylonitrile	20.000	20.433	-2.2	99	0.00
23		Vinyl Acetate	20.000	21.254	-6.3	113	0.00
24		~~Ethyl-tert-butyl ether (ETB~~	~~5.000~~	~~0.196~~	~~96.1#~~	~~4~~	~~0.01~~
25		c-1,2-Dichloroethene	20.000	20.722	-3.6	103	0.00
26		2,2-Dichloropropane	20.000	18.657	6.7	95	0.00
27		Bromochloromethane	20.000	20.679	-3.4	105	0.00
28	C	Chloroform	20.000	20.087	-0.4	102	0.00
29		Carbon Tetrachloride	20.000	21.734	-8.7	102	0.00
30		Tetrahydrofuran	20.000	21.248	-6.2	103	0.00
31		1,1,1-Trichloroethane	20.000	20.183	-0.9	102	0.00
32	S	Dibromofluoromethane (S)	50.000	49.158	1.7	105	0.00
33		1,1-Dichloropropene	20.000	22.212	-11.1	102	0.00
34		2-Butanone (MEK)	40.000	42.443	-6.1	101	0.00
35		Benzene	20.000	20.402	-2.0	102	0.00
36		~~tert-Amyl methyl ether (TAM~~	~~5.000~~	~~0.212~~	~~95.8#~~	~~4~~	~~0.00~~
37		1,2-Dichloroethane (EDC)	20.000	20.013	-0.1	103	0.00
38		iso-Butyl Alcohol	500.000	529.784	-6.0	107	0.00
39	S	1,4-Difluorobenzene (S)	50.000	48.823	2.4	105	0.00
40		Trichloroethene (TCE)	20.000	19.828	0.9	107	0.00
41		~~tert-Amyl ethyl ether (TAEE~~	~~5.000~~	~~0.182~~	~~96.4#~~	~~4~~	~~0.00~~
42		Dibromomethane	20.000	20.428	-2.1	101	0.00
43	C	1,2-Dichloropropane	20.000	20.305	-1.5	103	0.00
44		Bromodichloromethane	20.000	20.687	-3.4	103	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	105	0.00
46		2-Chloroethyl Vinyl Ether	20.000	21.360	-6.8	116	0.00
47		c-1,3-Dichloropropene	20.000	20.290	-1.4	102	0.00
48	S	Toluene-d8 (S)	50.000	49.725	0.5	105	0.00
49	C	Toluene	20.000	19.384	3.1	104	0.00
50		Tetrachloroethene (PCE)	20.000	20.033	-0.2	105	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102529.D
Acq On : 25 Oct 2019 11:37 pm
Operator : MM
Sample : 9J25051-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:58 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	43.897	-9.7	103	0.00
52		t-1,3-Dichloropropene	20.000	22.830	-14.1	108	0.00
53		1,1,2-Trichloroethane	20.000	21.039	-5.2	105	0.00
54		Dibromochloromethane	20.000	20.745	-3.7	106	0.00
55		1,3-Dichloropropane	20.000	21.061	-5.3	104	0.00
56		1,2-Dibromoethane (EDB)	20.000	21.476	-7.4	104	0.00
57		2-Hexanone	40.000	44.774	-11.9	105	0.00
58	P	Chlorobenzene	20.000	19.855	0.7	104	0.00
59	C	Ethylbenzene	20.000	20.650	-3.2	105	0.00
60		1,1,1,2-Tetrachloroethane	20.000	20.976	-4.9	104	0.00
61		m,p-Xylenes (2)	40.000	44.147	-10.4	105	0.00
62		o-Xylene	20.000	22.920	-14.6	106	0.00
63		Styrene	20.000	21.134	-5.7	107	0.00
64	P	Bromoform	20.000	19.469	2.7	104	0.00
65		Isopropylbenzene	20.000	21.747	-8.7	105	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	107	0.00
67	S	4-Bromofluorobenzene (S)	50.000	49.148	1.7	106	0.00
68		Bromobenzene	20.000	20.236	-1.2	105	0.00
69		n-Propylbenzene	20.000	20.543	-2.7	104	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	19.960	0.2	102	0.00
71		2-Chlorotoluene	20.000	21.462	-7.3	106	0.00
72		1,3,5-Trimethylbenzene	20.000	22.121	-10.6	105	0.00
73		1,2,3-Trichloropropane	20.000	19.915	0.4	105	0.00
74		t-1,4-Dichloro-2-butene	20.000	16.698	16.5	86	0.00
75		4-Chlorotoluene	20.000	21.910	-9.6	107	0.00
76		tert-Butylbenzene	20.000	21.688	-8.4	106	0.00
77		1,2,4-Trimethylbenzene	20.000	21.702	-8.5	104	0.00
78		sec-Butylbenzene	20.000	21.287	-6.4	104	0.00
79		4-Isopropyltoluene	20.000	21.641	-8.2	106	0.00
80		1,3-Dichlorobenzene	20.000	21.290	-6.4	108	0.00
81		1,4-Dichlorobenzene	20.000	19.194	4.0	108	0.00
82		n-Butylbenzene	20.000	22.979	-14.9	106	0.00
83		1,2-Dichlorobenzene	20.000	21.226	-6.1	107	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	19.861	0.7	106	0.00
85		Hexachlorobutadiene	20.000	21.482	-7.4	105	0.00
86		1,2,4-Trichlorobenzene	20.000	22.669	-13.3	108	0.00
87		Naphthalene	20.000	20.737	-3.7	107	0.00
88		1,2,3-Trichlorobenzene	20.000	23.057	-15.3	107	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102530.D
Acq On : 26 Oct 2019 12:04 am
Operator : MM
Sample : 9J25051-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:01 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

10/25/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	50.000	50.000	0.0	98	0.00
2		Dichlorodifluoromethane	20.000	0.154	99.2#	1	0.00
3	P	Chloromethane	20.000	0.503	97.5#	3	0.00
4	C	Vinyl Chloride	20.000	0.234	98.8#	1	0.00
5		Bromomethane	20.000	0.479	97.6#	3	0.00
6		Chloroethane	20.000	-1.000	105.0#	1	0.00
7		Trichlorofluoromethane	20.000	0.128	99.4#	1	0.00
8		Ethanol	1250.000	1240.676	0.7	92	-0.01
9	C	1,1-Dichloroethene	20.000	0.214	98.9#	1	0.00
10		Carbon Disulfide	20.000	0.491	97.5#	2	0.00
11		Freon 113	20.000	0.163	99.2#	1	0.00
12		Iodomethane	20.000	2.402	88.0#	2	0.00
13		Acrolein	20.000	0.000	100.0#	0	-4.03#
14		Methylene Chloride	20.000	0.356	98.2#	7	0.00
15		Acetone	40.000	1.225	96.9#	3	0.00
16		t-1,2-Dichloroethene	20.000	0.345	98.3#	2	0.00
17		n-Hexane	20.000	0.043	99.8#	0	0.00
18		Methyl-tert-butyl-ether	20.000	0.103	99.5#	0	0.00
19		tert-Butanol (TBA)	1250.000	1370.603	-9.6	94	0.00
20		Diisopropyl ether (DIPE)	5.000	5.379	-7.6	95	0.00
21	P	1,1-Dichloroethane	20.000	0.269	98.7#	1	0.00
22		Acrylonitrile	20.000	0.020	99.9#	0	0.01
23		Vinyl Acetate	20.000	0.795	96.0#	4	0.00
24		Ethyl-tert-butyl ether (ETB	5.000	5.357	-7.1	91	0.00
25		c-1,2-Dichloroethene	20.000	0.306	98.5#	1	0.00
26		2,2-Dichloropropane	20.000	0.163	99.2#	1	0.00
27		Bromochloromethane	20.000	0.228	98.9#	1	0.00
28	C	Chloroform	20.000	0.256	98.7#	1	0.00
29		Carbon Tetrachloride	20.000	0.087	99.6#	0	0.00
30		Tetrahydrofuran	20.000	0.013	99.9#	0	0.00
31		1,1,1-Trichloroethane	20.000	0.167	99.2#	1	0.00
32	S	Dibromofluoromethane (S)	50.000	48.359	3.3	96	0.00
33		1,1-Dichloropropene	20.000	0.236	98.8#	1	0.01
34		2-Butanone (MEK)	40.000	0.000	100.0#	0	-6.48#
35		Benzene	20.000	0.271	98.6#	1	0.00
36		tert-Amyl methyl ether (TAM	5.000	4.709	5.8	90	0.00
37		1,2-Dichloroethane (EDC)	20.000	0.174	99.1#	1	0.00
38		iso-Butyl Alcohol	500.000	0.135	100.0#	0	0.02
39	S	1,4-Difluorobenzene (S)	50.000	49.944	0.1	100	0.00
40		Trichloroethene (TCE)	20.000	0.304	98.5#	2	0.00
41		tert-Amyl ethyl ether (TAEE	5.000	4.937	1.3	90	0.00
42		Dibromomethane	20.000	0.126	99.4#	1	0.00
43	C	1,2-Dichloropropane	20.000	0.246	98.8#	1	0.00
44		Bromodichloromethane	20.000	0.203	99.0#	1	0.00
45		Chlorobenzene-d5 (I)	50.000	50.000	0.0	99	0.00
46		2-Chloroethyl Vinyl Ether	20.000	0.000	100.0#	0	-8.74#
47		c-1,3-Dichloropropene	20.000	0.258	98.7#	1	0.00
48	S	Toluene-d8 (S)	50.000	49.687	0.6	98	0.00
49	C	Toluene	20.000	0.289	98.6#	1	0.00
50		Tetrachloroethene (PCE)	20.000	0.313	98.4#	2	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102530.D
Acq On : 26 Oct 2019 12:04 am
Operator : MM
Sample : 9J25051-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:01 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
51		4-Methyl-2-Pentanone (MIBK)	40.000	0.070	99.8#	0	0.00
52		t-1,3-Dichloropropene	20.000	0.227	98.9#	1	0.02
53		1,1,2-Trichloroethane	20.000	0.134	99.3#	1	0.00
54		Dibromochloromethane	20.000	0.239	98.8#	1	0.00
55		1,3-Dichloropropane	20.000	0.134	99.3#	1	0.00
56		1,2-Dibromoethane (EDB)	20.000	0.110	99.5#	1	0.01
57		2-Hexanone	40.000	0.047	99.9#	0	0.01
58	P	Chlorobenzene	20.000	0.322	98.4#	2	0.00
59	C	Ethylbenzene	20.000	0.262	98.7#	1	0.00
60		1,1,1,2-Tetrachloroethane	20.000	0.167	99.2#	1	0.00
61		m,p-Xylenes (2)	40.000	0.528	98.7#	1	0.00
62		o-Xylene	20.000	0.235	98.8#	1	0.00
63		Styrene	20.000	0.316	98.4#	1	0.00
64	P	Bromoform	20.000	0.186	99.1#	0	0.00
65		Isopropylbenzene	20.000	0.202	99.0#	1	0.00
66	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	98	0.00
67	S	4-Bromofluorobenzene (S)	50.000	49.237	1.5	98	0.00
68		Bromobenzene	20.000	0.280	98.6#	1	0.00
69		n-Propylbenzene	20.000	0.291	98.5#	1	0.00
70	P	1,1,2,2-Tetrachloroethane	20.000	0.070	99.6#	0	0.00
71		2-Chlorotoluene	20.000	0.298	98.5#	1	0.00
72		1,3,5-Trimethylbenzene	20.000	0.249	98.8#	1	0.00
73		1,2,3-Trichloropropane	20.000	0.012	99.9#	0	0.00
74		t-1,4-Dichloro-2-butene	20.000	0.000	100.0#	0	-11.74#
75		4-Chlorotoluene	20.000	0.349	98.3#	2	0.00
76		tert-Butylbenzene	20.000	0.220	98.9#	1	0.00
77		1,2,4-Trimethylbenzene	20.000	0.225	98.9#	1	0.00
78		sec-Butylbenzene	20.000	0.215	98.9#	1	0.00
79		4-Isopropyltoluene	20.000	0.250	98.8#	1	0.00
80		1,3-Dichlorobenzene	20.000	0.378	98.1#	2	0.00
81		1,4-Dichlorobenzene	20.000	0.417	97.9#	2	0.00
82		n-Butylbenzene	20.000	0.358	98.2#	2	0.00
83		1,2-Dichlorobenzene	20.000	0.298	98.5#	1	0.00
84		1,2-Dibromo-3-Chloropropane	20.000	0.000	100.0#	0	-13.28#
85		Hexachlorobutadiene	20.000	0.512	97.4#	2	0.00
86		1,2,4-Trichlorobenzene	20.000	0.361	98.2#	2	0.00
87		Naphthalene	20.000	0.392	98.0#	1	0.00
88		1,2,3-Trichlorobenzene	20.000	0.292	98.5#	1	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 6

Compound List Report VOA-GCMS7

Method Path : C:\msdchem\1\methods\
Method File : VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Mon Oct 28 11:12:23 2019
Response Via : Initial Calibration

Total Cpnds : 88

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	99	6.861	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.728	0.252	A	2	A	R
3	P	Chloromethane	50	1.990	0.290	A	2	A	R
4	C	Vinyl Chloride	62	2.112	0.308	A	2	A	R
5		Bromomethane	96	2.551	0.372	A	2	A	R
6		Chloroethane	64	2.722	0.397	Q1/a	2	A	R
7		Trichlorofluoromethane	101	2.917	0.425	A	2	A	R
8		Ethanol	45	3.636	0.530	A	1	A	R
9	C	1,1-Dichloroethene	61	3.588	0.523	A	2	A	R
10		Carbon Disulfide	76	3.588	0.523	A	2	A	R
11		Freon 113	101	3.661	0.534	A	2	A	R
12		Iodomethane	142	3.746	0.546	Q1/a	2	A	R
13		Acrolein	56	4.032	0.588	A	2	A	R
14		Methylene Chloride	84	4.319	0.630	Q1/a	2	A	R
15		Acetone	43	4.398	0.641	A	1	A	R
16		t-1,2-Dichloroethene	61	4.508	0.657	A	2	A	R
17		n-Hexane	86	4.606	0.671	A	3	A	R
18		Methyl-tert-butyl-ether	73	4.661	0.679	A	3	A	R
19		tert-Butanol (TBA)	59	4.819	0.702	A	1	A	R
20		Diisopropyl ether (DIPE)	45	5.112	0.745	A	2	A	R
21	P	1,1-Dichloroethane	63	5.215	0.760	A	2	A	R
22		Acrylonitrile	53	5.289	0.771	A	2	A	R
23		Vinyl Acetate	43	5.526	0.805	A	2	A	R
24		Ethyl-tert-butyl ether (ETBE)	59	5.514	0.804	A	2	A	R
25		c-1,2-Dichloroethene	61	5.825	0.849	A	2	A	R
26		2,2-Dichloropropane	77	5.935	0.865	A	2	A	R
27		Bromochloromethane	49	6.038	0.880	A	2	A	R
28	C	Chloroform	83	6.136	0.894	A	2	A	R
29		Carbon Tetrachloride	117	6.264	0.913	A	2	A	R
30		Tetrahydrofuran	42	6.307	0.919	A	2	A	R
31		1,1,1-Trichloroethane	97	6.343	0.925	A	2	A	R
32	S	Dibromofluoromethane (S)	111	6.331	0.923	A	2	A	R
33		1,1-Dichloropropene	75	6.477	0.944	A	2	A	R
34		2-Butanone (MEK)	43	6.477	0.944	A	2	A	R
35		Benzene	78	6.752	0.984	A	2	A	R
36		tert-Amyl methyl ether (TAME)	73	6.898	1.005	A	2	A	R
37		1,2-Dichloroethane (EDC)	62	6.983	1.018	A	2	A	R
38		iso-Butyl Alcohol	43	7.038	1.026	A	2	A	R
39	S	1,4-Difluorobenzene (S)	114	7.453	1.086	A	2	A	R
40		Trichloroethene (TCE)	130	7.410	1.080	A	2	A	R
41		tert-Amyl ethyl ether (TAEE)	59	7.691	1.121	A	2	A	R
42		Dibromomethane	93	7.886	1.149	A	2	A	R
43	C	1,2-Dichloropropane	63	7.995	1.165	A	2	A	R
44		Bromodichloromethane	83	8.075	1.177	A	2	A	R
45	I	Chlorobenzene-d5 (I)	117	10.452	1.000	A	2	A	R
46		2-Chloroethyl Vinyl Ether	63	8.739	0.836	Q1/a	2	A	R
47		c-1,3-Dichloropropene	75	8.800	0.842	Q1/a	2	A	R
48	S	Toluene-d8 (S)	98	8.989	0.860	A	2	A	R
49	C	Toluene	91	9.044	0.865	A	2	A	R
50		Tetrachloroethene (PCE)	166	9.434	0.903	A	2	A	R
51		4-Methyl-2-Pentanone (MIBK)	43	9.434	0.903	A	2	A	R
52		t-1,3-Dichloropropene	75	9.470	0.906	Q1/a2	2	A	R
53		1,1,2-Trichloroethane	97	9.623	0.921	A	2	A	R
54		Dibromochloromethane	129	9.787	0.936	Q1/a	2	A	R
55		1,3-Dichloropropane	76	9.879	0.945	A	2	A	R

56		1,2-Dibromoethane (EDB)	107	10.001	0.957	A	2	A	R
57		2-Hexanone	43	10.208	0.977	A	2	A	R
58	P	Chlorobenzene	112	10.471	1.002	A	2	A	R
59	C	Ethylbenzene	91	10.489	1.004	A	2	A	R
60		1,1,1,2-Tetrachloroethane	131	10.525	1.007	A	2	A	R
61		m,p-Xylenes (2)	91	10.611	1.015	A	2	A	R
62		o-Xylene	91	10.970	1.050	A	2	A	R
63		Styrene	104	11.013	1.054	Q l/a	2	A	R
64	P	Bromoform	173	11.037	1.056	Q l/a	2	A	R
65		Isopropylbenzene	105	11.220	1.073	A	2	A	R
66	I	1,4-Dichlorobenzene-d4 (I)	152	12.293	1.000	A	2	A	R
67	S	4-Bromofluorobenzene (S)	174	11.446	0.931	A	2	A	R
68		Bromobenzene	156	11.531	0.938	A	2	A	R
69		n-Propylbenzene	91	11.544	0.939	A	2	A	R
70	P	1,1,2,2-Tetrachloroethane	83	11.598	0.943	A	2	A	R
71		2-Chlorotoluene	126	11.665	0.949	A	2	A	R
72		1,3,5-Trimethylbenzene	105	11.690	0.951	A	2	A	R
73		1,2,3-Trichloropropane	110	11.708	0.952	A	2	A	R
74		t-1,4-Dichloro-2-butene	88	11.738	0.955	Q l/a	3	A	R
75		4-Chlorotoluene	91	11.793	0.959	A	2	A	R
76		tert-Butylbenzene	91	11.934	0.971	A	2	A	R
77		1,2,4-Trimethylbenzene	105	11.982	0.975	A	2	A	R
78		sec-Butylbenzene	105	12.062	0.981	A	2	A	R
79		4-Isopropyltoluene	119	12.165	0.990	A	2	A	R
80		1,3-Dichlorobenzene	146	12.238	0.996	A	2	A	R
81		1,4-Dichlorobenzene	146	12.306	1.001	A	2	A	R
82		n-Butylbenzene	91	12.488	1.016	A	2	A	R
83		1,2-Dichlorobenzene	146	12.629	1.027	A	2	A	R
84		1,2-Dibromo-3-Chloropropane	157	13.281	1.080	A	2	A	R
85		Hexachlorobutadiene	223	13.830	1.125	A	3	A	R
86		1,2,4-Trichlorobenzene	180	13.872	1.128	A	2	A	R
87		Naphthalene	128	14.201	1.155	Q l/a	2	A	R
88		1,2,3-Trichlorobenzene	180	14.396	1.171	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VG191025W.M Mon Oct 28 12:23:07 2019

Response Factor Report VOA-GCMS7

Method Path : C:\msdchem\1\methods\
Method File : VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Mon Oct 28 11:12:23 2019
Response Via : Initial Calibration

Calibration Files
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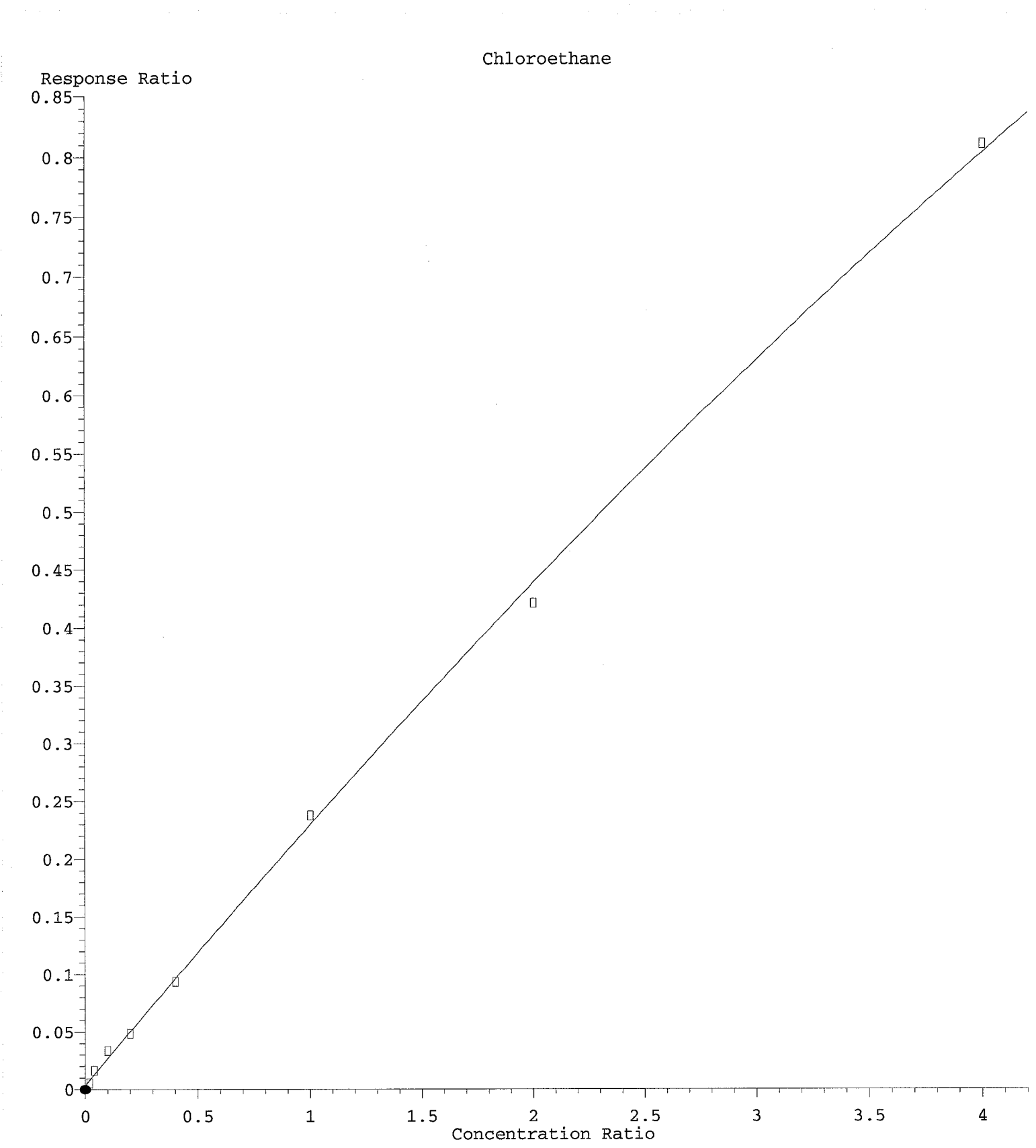
7 =VG19102520.D 8 =VG19102521.D 9 =VG19102522.D 10 =VG19102524.D 1a =VG19102526.D

		Compound	1	2	3	4	5	6	7	8	9	10	1a	Avg	%RSD
1)	I	Pentafluorobenzene...					ISTD								
2)		Dichlorodifluo...		0.807	0.646	0.756	0.913	0.879	0.821	0.784	0.966	0.899	0.914	0.839	11.32
3)	P	Chloromethane			1.457	1.154	1.209	1.149	1.069	1.064	1.072	1.025	1.049	1.139	11.72
4)	C	Vinyl Chloride	0.837	0.960	0.870	0.957	1.025	1.021	0.980	0.976	1.049	0.995	1.023	0.972	6.77
5)		Bromomethane				0.587	0.643	0.585	0.497	0.483	0.441	0.439	0.463	0.517	14.94
6)		Chloroethane				0.269	0.405	0.333	0.242	0.234	0.238	0.210	0.202	0.267	25.91
7)		Trichlorofluor...	0.959	1.037	1.036	1.078	1.178	1.134	1.104	1.068	1.070	0.971	0.904	1.049	7.63
8)		Ethanol			0.026	0.026	0.029	0.028	0.027	0.028	0.025	0.021		0.026	8.82
9)	C	1,1-Dichloroet...	1.208	1.083	1.148	1.139	1.196	1.182	1.139	1.168	1.125	1.184	1.235	1.164	3.69
10)		Carbon Disulfide	1.999	1.788	1.527	1.489	1.635	1.610	1.620	1.727	1.845	2.018	2.177	1.767	12.55
11)		Freon 113		0.979	0.921	0.908	1.036	1.024	0.981	0.954	0.892	0.897	0.951	0.954	5.33
12)		Iodomethane					0.146	0.189	0.241	0.338	0.465	0.603	0.741	0.389	57.35
13)		Acrolein				0.207	0.260	0.242	0.249	0.254	0.280	0.276	0.290	0.257	10.23
14)		Methylene Chlo...	1.057	0.596	0.326	0.198	0.156	0.122	0.107	0.099	0.089	0.088	0.090	0.266	E1 114.13
15)		Acetone					0.647	0.553	0.516	0.512	0.464	0.463	0.494	0.521	12.24
16)		t-1,2-Dichloro...	1.255	1.071	1.149	1.152	1.272	1.224	1.212	1.248	1.167	1.220	1.295	1.206	5.44
17)		n-Hexane					0.112	0.120	0.135	0.137	0.144	0.150	0.158	0.137	11.92
18)		Methyl-tert-bu...	2.068	1.979	1.982	2.041	2.191	2.305	2.409	2.482	2.371	2.511	2.678	2.274	10.48
19)		tert-Butanol (...	0.195	0.180	0.176	0.176	0.208	0.209	0.215	0.226	0.205	0.183		0.197	9.01
20)		Diisopropyl et...			2.181	2.343	2.644	2.606	2.587	2.782	2.442	2.374		2.495	7.80
21)	P	1,1-Dichloroet...	1.749	1.558	1.562	1.702	1.767	1.719	1.642	1.650	1.508	1.572	1.653	1.644	5.19
22)		Acrylonitrile			0.466	0.473	0.567	0.588	0.581	0.606	0.559	0.574	0.604	0.557	9.39
23)		Vinyl Acetate						1.393	1.557	1.766	1.930	1.988	2.075	1.785	14.87
24)		Ethyl-tert-but...			1.766	1.819	2.135	2.243	2.356	2.469	2.237	2.156		2.148	11.37
25)		c-1,2-Dichloro...	1.150	1.129	1.181	1.160	1.274	1.274	1.265	1.288	1.188	1.249	1.330	1.226	5.42
26)		2,2-Dichloropr...		0.669	0.576	0.727	0.761	0.748	0.744	0.766	0.751	0.818	0.905	0.746	11.51
27)		Bromochloromet...	0.657	0.733	0.843	0.845	0.867	0.860	0.827	0.801	0.705	0.693	0.700	0.776	10.12
28)	C	Chloroform	1.545	1.687	1.569	1.660	1.783	1.738	1.683	1.702	1.546	1.593	1.681	1.653	4.81
29)		Carbon Tetrach...		0.736	0.713	0.790	0.906	0.956	0.983	1.013	1.006	1.082		0.909	14.58
30)		Tetrahydrofuran			0.394	0.414	0.458	0.476	0.486	0.523	0.505	0.524	0.570	0.483	11.49
31)		1,1,1-Trichlor...	1.185	1.068	1.169	1.153	1.295	1.296	1.286	1.288	1.230	1.309	1.401	1.243	7.48
32)	S	Dibromofluorom...	1.074	1.076	1.069	1.064	1.065	1.045	1.051	1.036	1.032	1.040	1.026	1.053	1.68
33)		1,1-Dichloropr...	0.767	0.942	0.990	1.060	1.101	1.180	1.224	1.274	1.199	1.247	1.307	1.117	14.78
34)		2-Butanone (MEK)			0.543	0.661	0.747	0.777	0.782	0.810	0.754	0.762	0.803	0.738	11.51
35)		Benzene	3.649	3.789	3.689	3.704	4.043	4.102	4.047	4.040	3.703	3.820	3.971	3.869	4.48
36)		tert-Amyl meth...				2.439	2.274	2.241	2.234	2.277	2.056	1.981		2.215	6.86
37)		1,2-Dichloroet...		1.252	1.282	1.322	1.474	1.400	1.342	1.341	1.213	1.254	1.326	1.320	5.83
38)		iso-Butyl Alcohol					0.084	0.082	0.082	0.086	0.085	0.081	0.079	0.083	3.12
39)	S	1,4-Difluorobe...	3.555	3.532	3.514	3.524	3.453	3.390	3.391	3.361	3.354	3.373	3.337	3.435	2.40
40)		Trichloroethen...	1.179	1.175	1.178	1.116	1.151	1.135	1.135	1.095	1.038	1.093	1.133	1.130	3.80
41)		tert-Amyl ethy...				1.330	1.484	1.403	1.462	1.536	1.388	1.362		1.423	5.12

Method Path : C:\msdchem\1\methods\
Method File : VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds

42)		Dibromomethane		0.506	0.580	0.660	0.681	0.694	0.699	0.690	0.643	0.670	0.705	0.653	9.69
43)	C	1,2-Dichloropr...	0.918	1.003	0.933	0.951	1.055	1.018	1.001	1.013	0.926	0.963	1.019	0.982	4.65
44)		Bromodichlorom...		0.862	0.894	1.010	1.069	1.083	1.084	1.124	1.090	1.180	1.286	1.068	11.68
45)		Chlorobenzene-d5 (I)	----------	ISTD	----------										
46)		2-Chloroethyl ...			0.078	0.122	0.141	0.152	0.166	0.201	0.225	0.240	0.262	0.176	34.20
47)		c-1,3-Dichloro...	0.228	0.239	0.270	0.284	0.336	0.358	0.400	0.442	0.442	0.486	0.553	0.367	29.10
48)	S	Toluene-d8 (S)	1.297	1.291	1.307	1.306	1.295	1.291	1.295	1.302	1.294	1.310	1.352	1.304	1.32
49)	C	Toluene	1.884	1.545	1.435	1.451	1.508	1.486	1.463	1.467	1.343	1.392	1.491	1.497	9.34
50)		Tetrachloroeth...	0.409	0.431	0.382	0.380	0.411	0.409	0.403	0.398	0.371	0.379	0.395	0.397	4.49
51)		4-Methyl-2-Pen...			0.353	0.370	0.424	0.434	0.449	0.484	0.460	0.461	0.467	0.434	10.32
52)		t-1,3-Dichloro...		0.213	0.211	0.243	0.279	0.316	0.345	0.374	0.387	0.431	0.493	0.329	28.73
53)		1,1,2-Trichlor...	0.310	0.314	0.321	0.330	0.381	0.371	0.366	0.363	0.332	0.341	0.366	0.345	7.30
54)		Dibromochlorom...		0.182	0.224	0.243	0.281	0.299	0.314	0.334	0.336	0.371	0.416	0.300	23.35
55)		1,3-Dichloropr...	0.504	0.467	0.465	0.518	0.565	0.566	0.565	0.565	0.520	0.544	0.588	0.533	7.84
56)		1,2-Dibromoeth...		0.288	0.295	0.309	0.344	0.366	0.364	0.377	0.355	0.372	0.406	0.348	11.05
57)		2-Hexanone				0.233	0.273	0.299	0.316	0.354	0.349	0.349	0.358	0.316	14.29
58)	P	Chlorobenzene	1.051	0.984	0.954	0.999	1.027	1.008	0.980	0.977	0.892	0.910	0.946	0.975	4.88
59)	C	Ethylbenzene	1.437	1.394	1.308	1.356	1.486	1.494	1.468	1.482	1.388	1.426	1.502	1.431	4.42
60)		1,1,1,2-Tetrac...		0.230	0.257	0.271	0.282	0.296	0.308	0.312	0.304	0.321	0.348	0.293	11.68
61)		m,p-Xylenes (2)			0.820	0.848	0.964	1.027	1.052	1.090	1.020	1.054		0.984	10.15
62)		o-Xylene			0.732	0.777	0.853	0.930	0.970	1.057	1.040	1.098		0.932	14.42
63)		Styrene	0.426	0.477	0.475	0.547	0.659	0.772	0.825	0.873	0.847	0.884	0.926	0.701	27.01
64)	P	Bromoform		0.135	0.167	0.175	0.206	0.221	0.234	0.260	0.274	0.301	0.316	0.229	26.09
65)		Isopropylbenzene				0.889	1.018	1.154	1.225	1.301	1.263	1.326	1.392	1.196	14.11
66)	I	1,4-Dichlorobenzen...	----------	ISTD	----------										
67)	S	4-Bromofluorob...	0.854	0.843	0.833	0.832	0.822	0.837	0.842	0.837	0.846	0.859	0.882	0.844	1.92
68)		Bromobenzene	0.823	0.792	0.783	0.824	0.844	0.860	0.846	0.851	0.781	0.798	0.840	0.822	3.52
69)		n-Propylbenzene	2.728	2.581	2.417	2.595	2.852	2.843	2.831	2.894	2.661	2.780	3.027	2.746	6.26
70)	P	1,1,2,2-Tetrac...	0.974	0.993	1.034	1.046	1.209	1.114	1.119	1.096	0.992	0.957	0.973	1.046	7.59
71)		2-Chlorotoluene		0.495	0.514	0.615	0.633	0.653	0.665	0.675	0.632	0.663	0.706	0.625	10.97
72)		1,3,5-Trimethy...			1.484	1.538	1.821	2.002	2.137	2.184	2.009	2.072	2.195	1.938	13.82
73)		1,2,3-Trichlor...		0.313	0.310	0.330	0.355	0.338	0.328	0.323	0.295	0.292	0.291	0.317	6.67
74)		t-1,4-Dichloro...				0.056	0.069	0.073	0.079	0.093	0.096	0.107	0.121	0.087	24.88
75)		4-Chlorotoluene	1.475	1.443	1.350	1.545	1.700	1.808	1.799	1.838	1.721	1.806	1.984	1.679	11.77
76)		tert-Butylbenzene		0.810	0.778	0.853	0.954	0.999	1.016	1.066	1.011	1.070	1.184	0.974	13.06
77)		1,2,4-Trimethy...				1.475	1.721	2.035	2.190	2.238	2.050	2.117	2.240	2.008	13.58
78)		sec-Butylbenzene			1.661	1.884	2.113	2.325	2.359	2.422	2.246	2.376	2.554	2.216	12.81
79)		4-Isopropyltol...				1.398	1.615	1.842	1.959	2.041	1.911	2.019	2.145	1.866	13.21
80)		1,3-Dichlorobe...	1.199	1.266	1.146	1.211	1.364	1.401	1.381	1.369	1.271	1.321	1.374	1.300	6.68
81)		1,4-Dichlorobe...	1.746	1.645	1.490	1.449	1.518	1.496	1.421	1.396	1.289	1.315	1.371	1.467	9.27
82)		n-Butylbenzene		1.168	1.172	1.283	1.410	1.546	1.657	1.719	1.573	1.642	1.728	1.490	14.58
83)		1,2-Dichlorobe...	1.199	1.189	1.125	1.258	1.357	1.350	1.357	1.356	1.264	1.274	1.312	1.276	6.22
84)		1,2-Dibromo-3-...					0.194	0.200	0.220	0.232	0.246	0.251	0.276	0.231	12.69
85)		Hexachlorobuta...			0.172	0.185	0.202	0.208	0.218	0.218	0.195	0.197	0.196	0.199	7.49
86)		1,2,4-Trichlor...				0.594	0.635	0.680	0.788	0.843	0.811	0.797	0.833	0.747	12.92
87)		Naphthalene		0.922	0.978	1.054	1.309	1.514	1.979	2.399	2.496	2.501	2.651	1.780	39.33
88)		1,2,3-Trichlor...				0.537	0.626	0.700	0.807	0.845	0.784	0.759	0.795	0.732	14.26

(#) = Out of Range



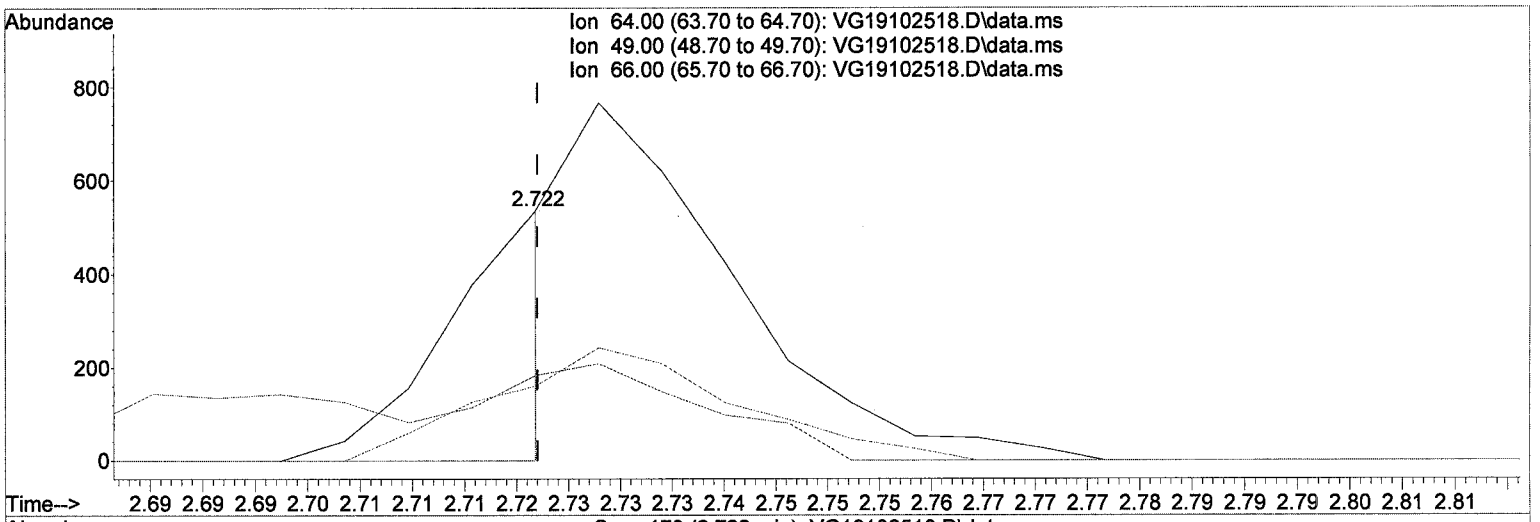
Int = (-)

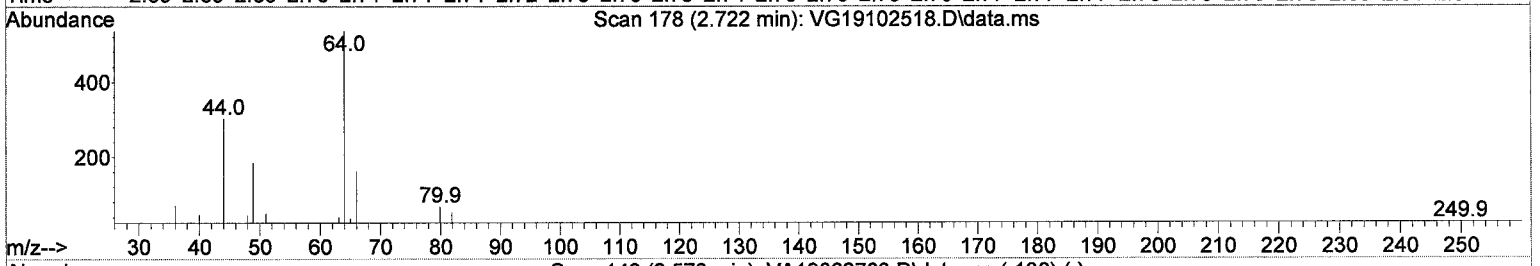
R = -8.88e-003 A*A + 2.35e-001 A + 3.40e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VGI91025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

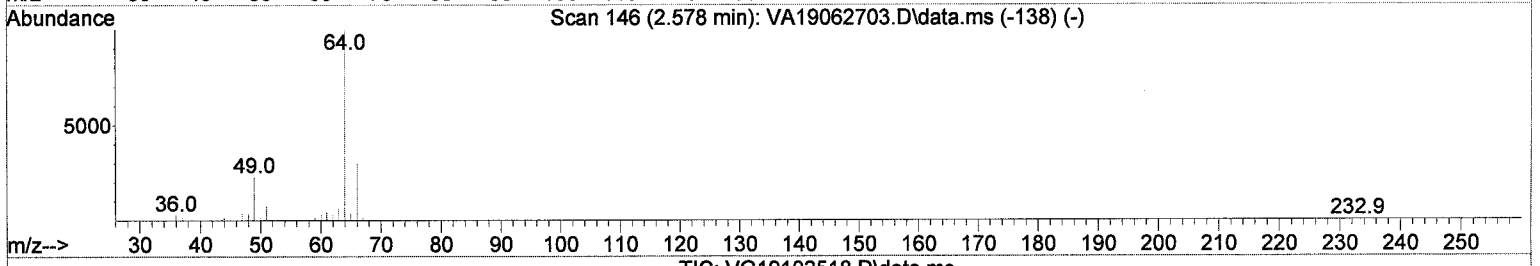
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







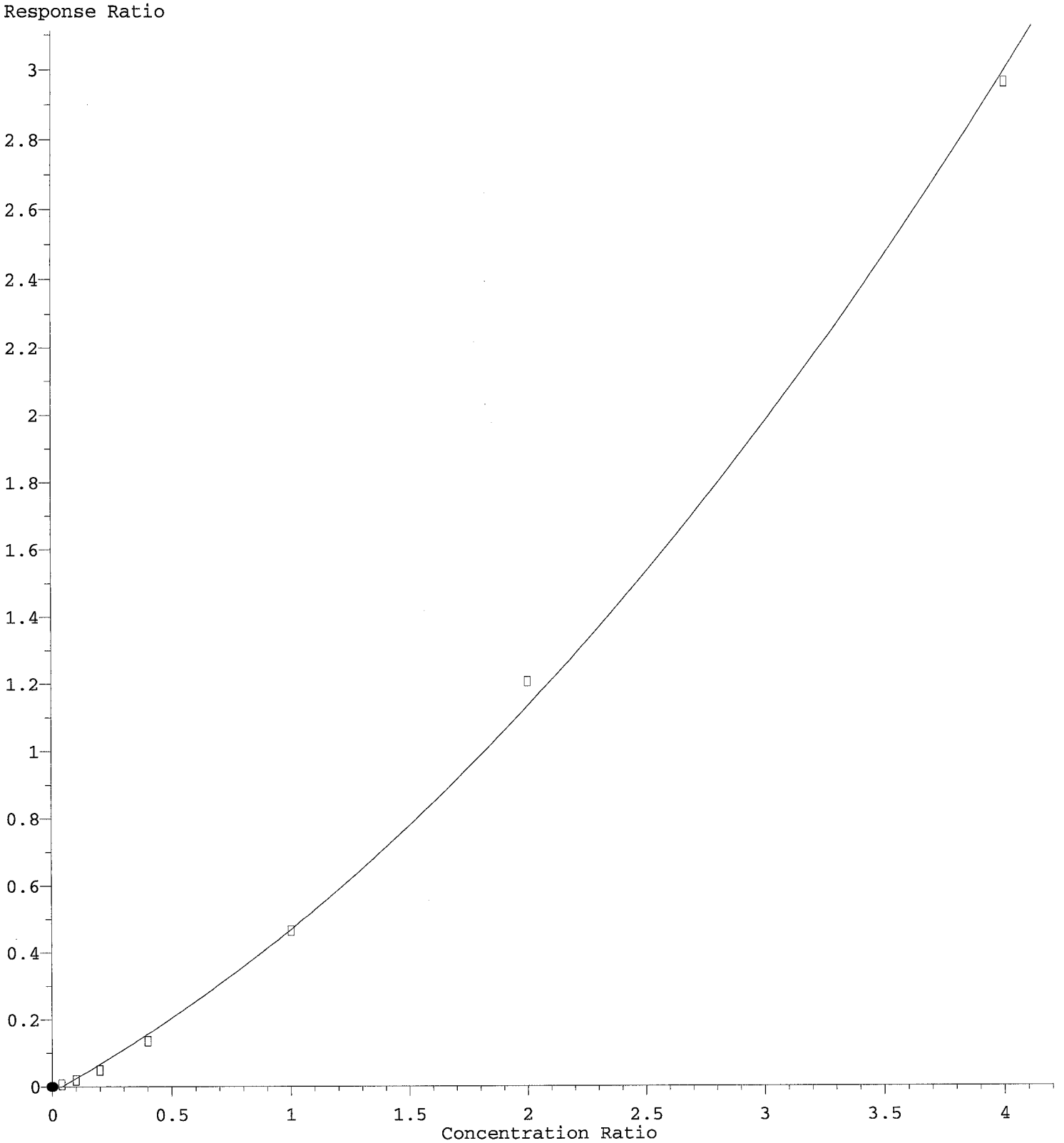
TIC: VG19102518.D\data.ms

(6) Chloroethane

2.722min (-0.000) 0.41 ug/L m

response 407

Ion	Exp%	Act%
64.00	100.00	100.00
49.00	24.30	34.33
66.00	31.30	30.04
0.00	0.00	0.00



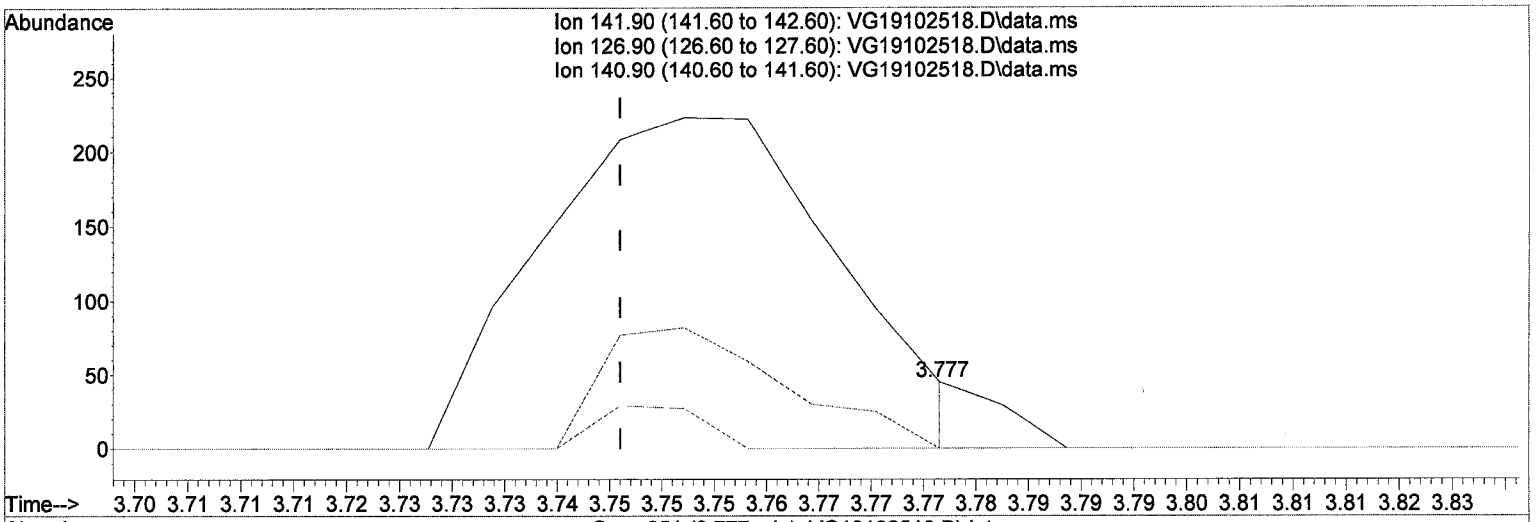
Int = 2.11

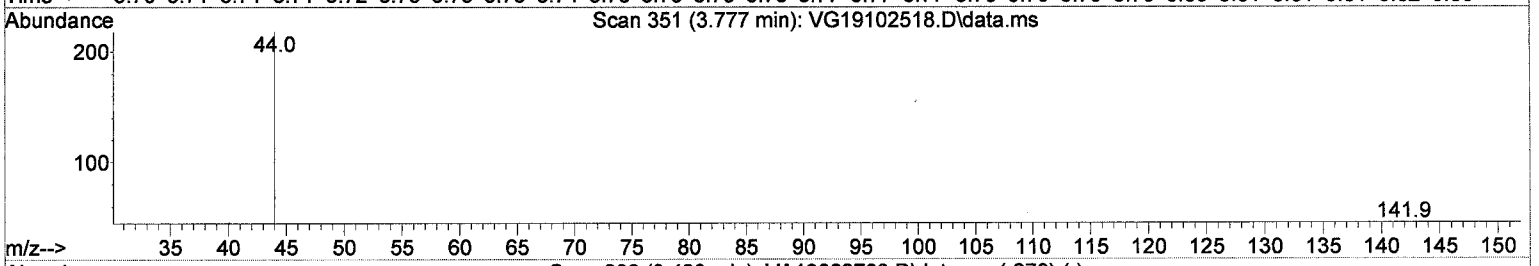
R = 8.93e-002 A*A + 3.96e-001 A - 1.67e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

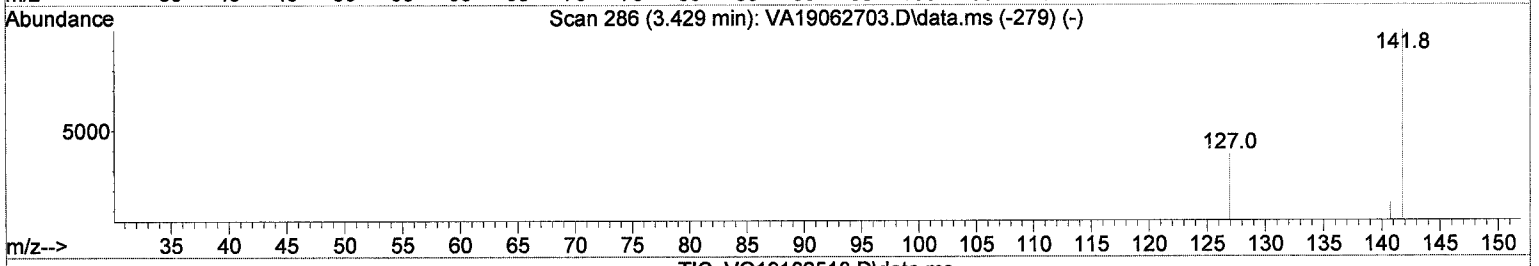
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







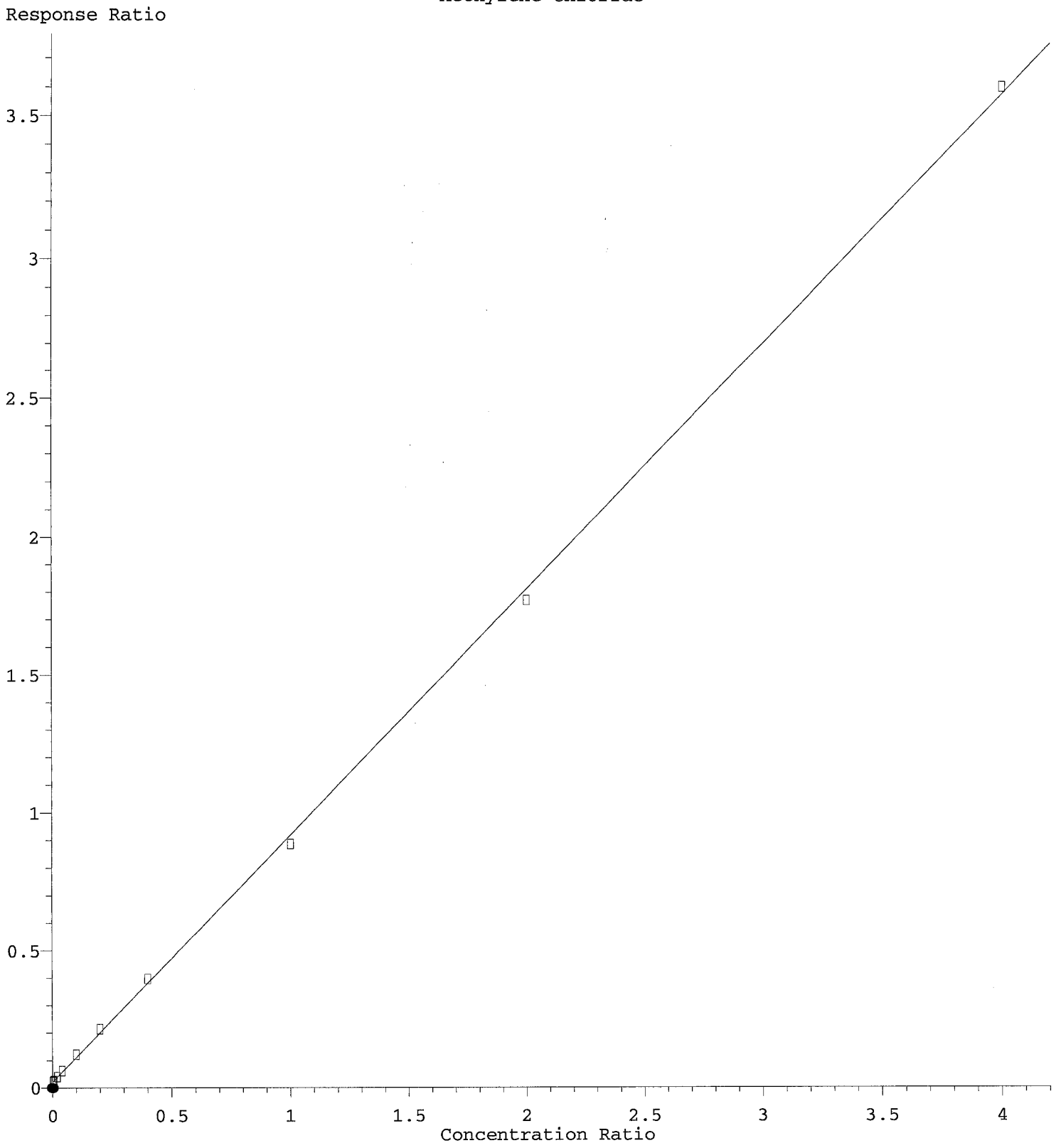
TIC: VG19102518.D\data.ms

(12) Iodomethane

3.777min (+ 0.030) 2.11 ug/L m

response 11

Ion	Exp%	Act%
141.90	100.00	100.00
126.90	34.80	0.00#
140.90	15.30	0.00
0.00	0.00	0.00



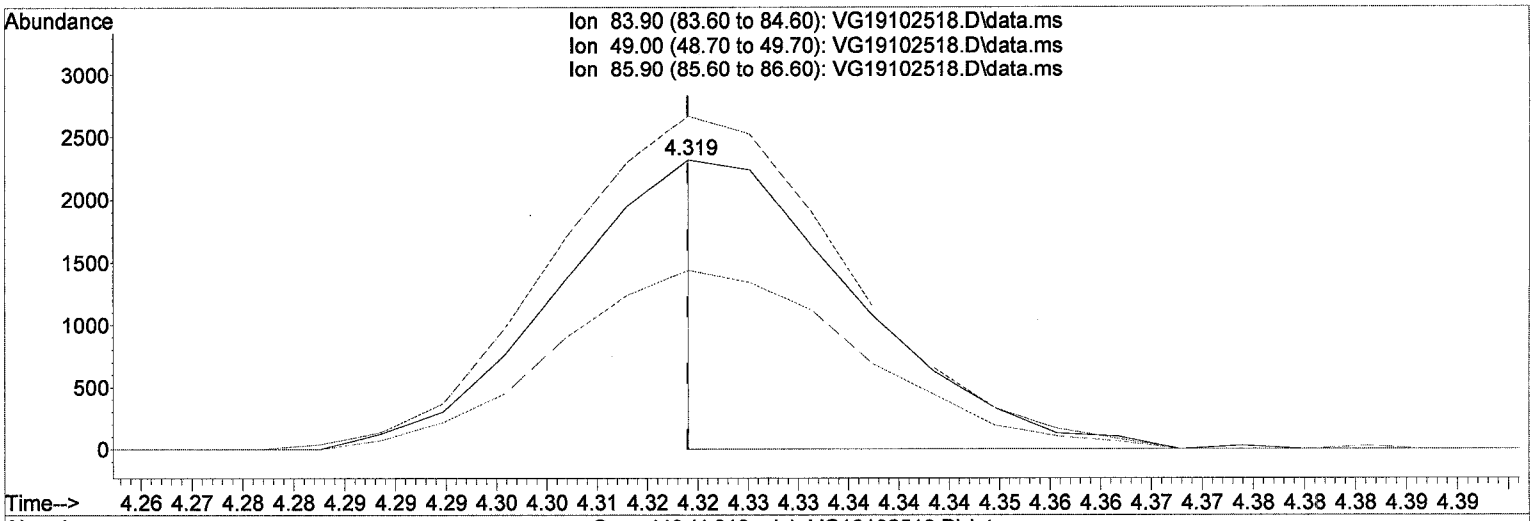
Int = (—) 0.52

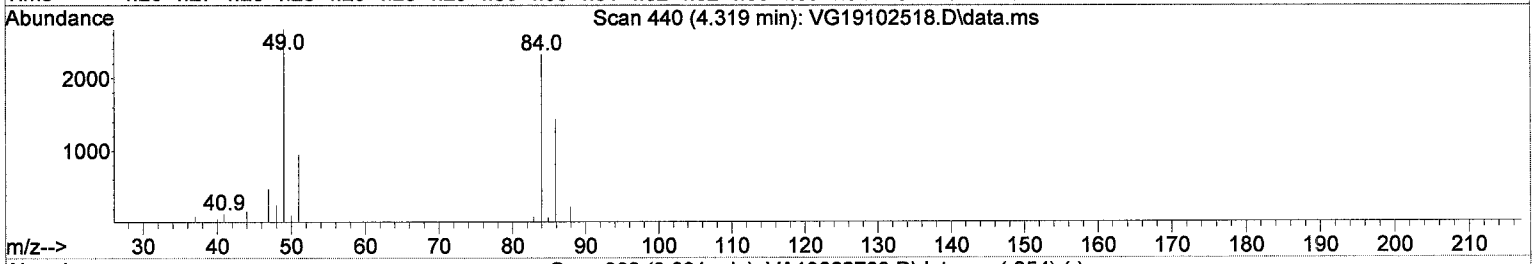
R = -3.40e-003 A*A + 9.03e-001 A + 2.00e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

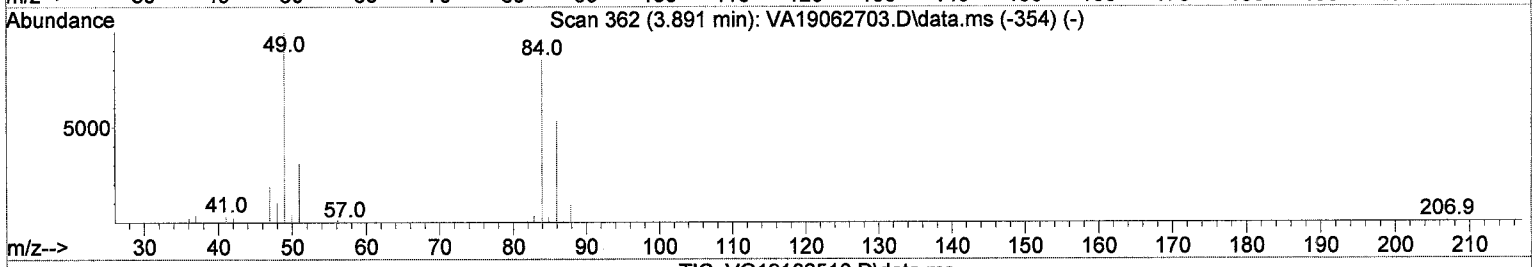
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







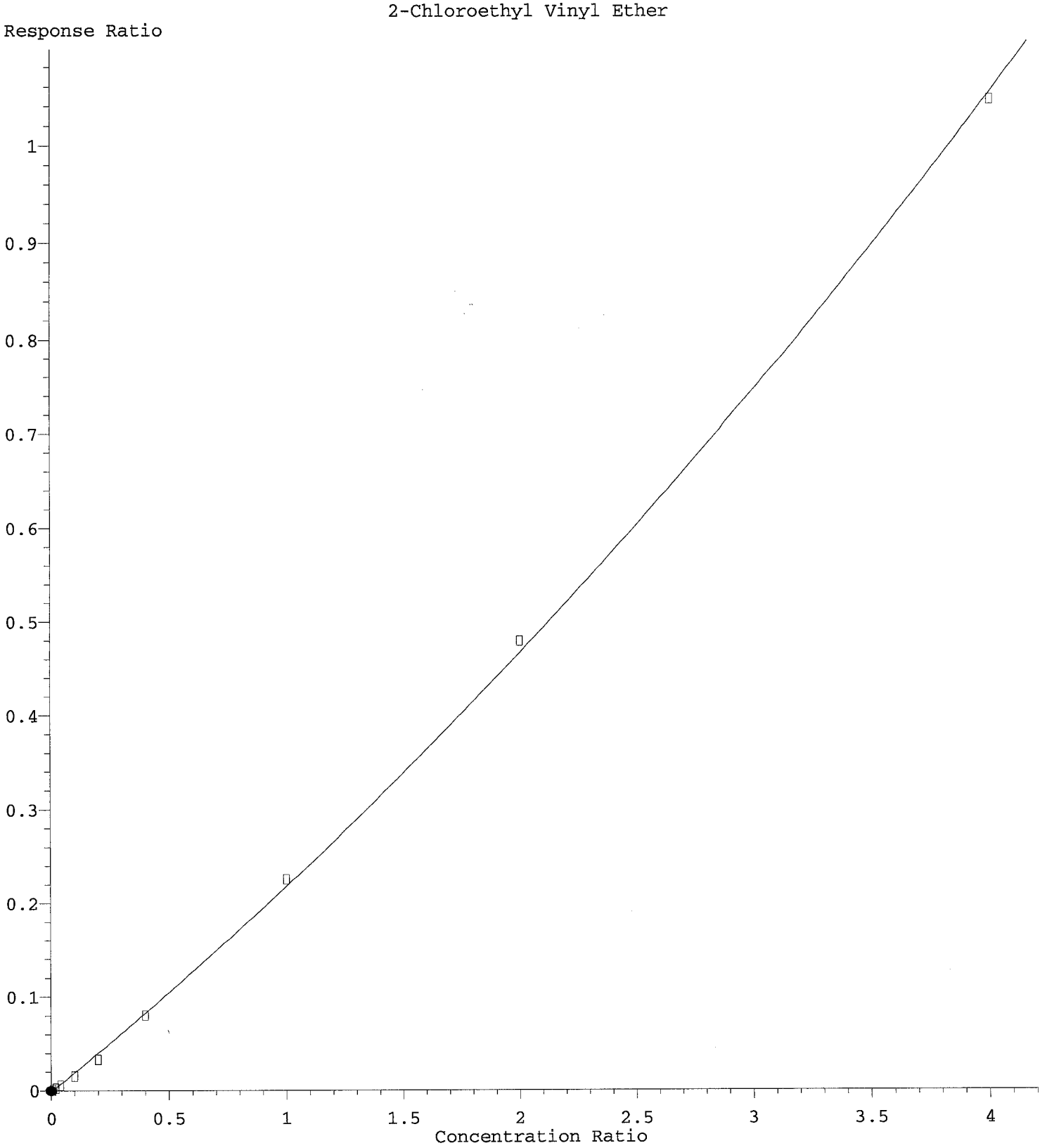
TIC: VG19102518.D\data.ms

(14) Methylene Chloride

4.319min (+ 0.000) 0.52 ug/L m

response 2253

Ion	Exp%	Act%
83.90	100.00	100.00
49.00	123.30	114.94
85.90	63.90	62.10
0.00	0.00	0.00



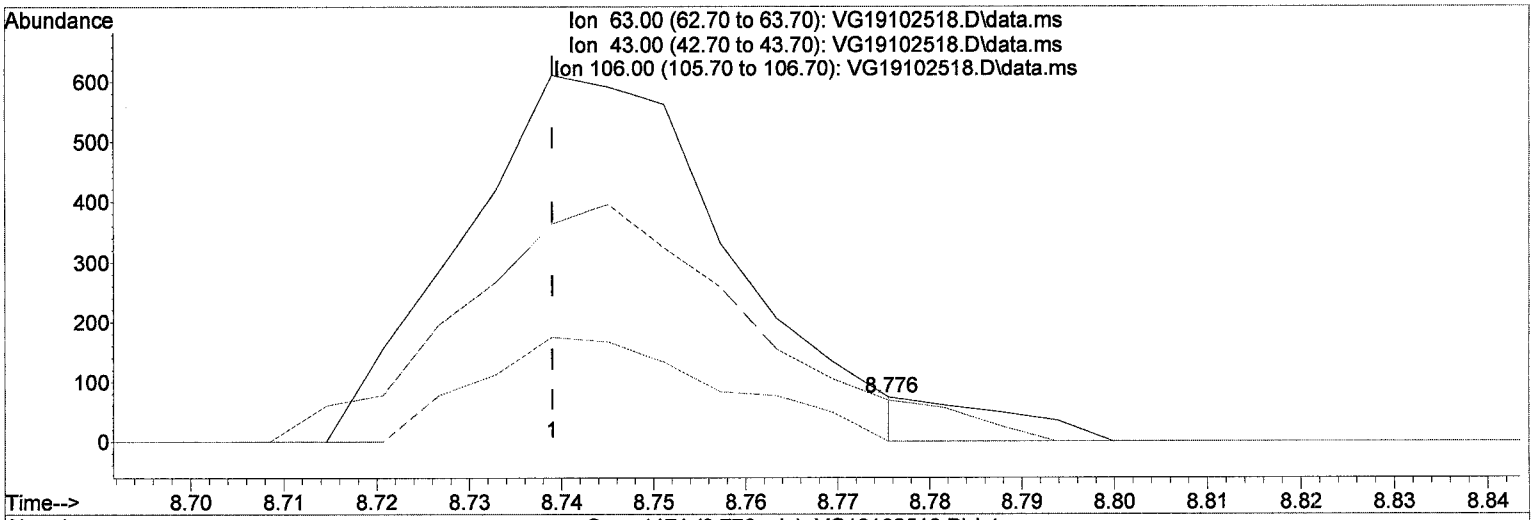
Int = 0.47

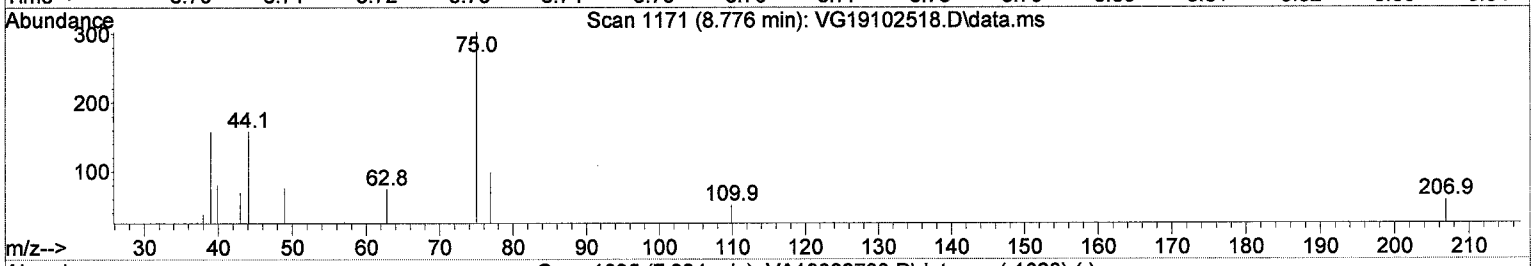
R = 1.48e-002 A*A + 2.05e-001 A - 1.70e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w/(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M

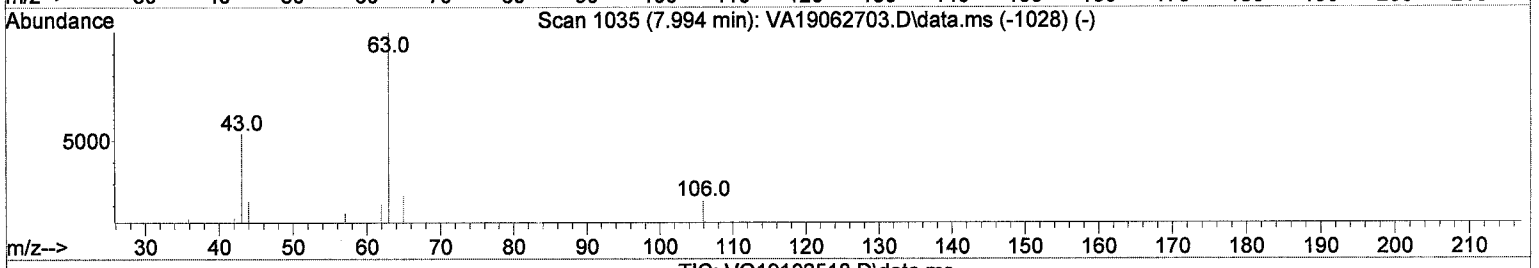
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







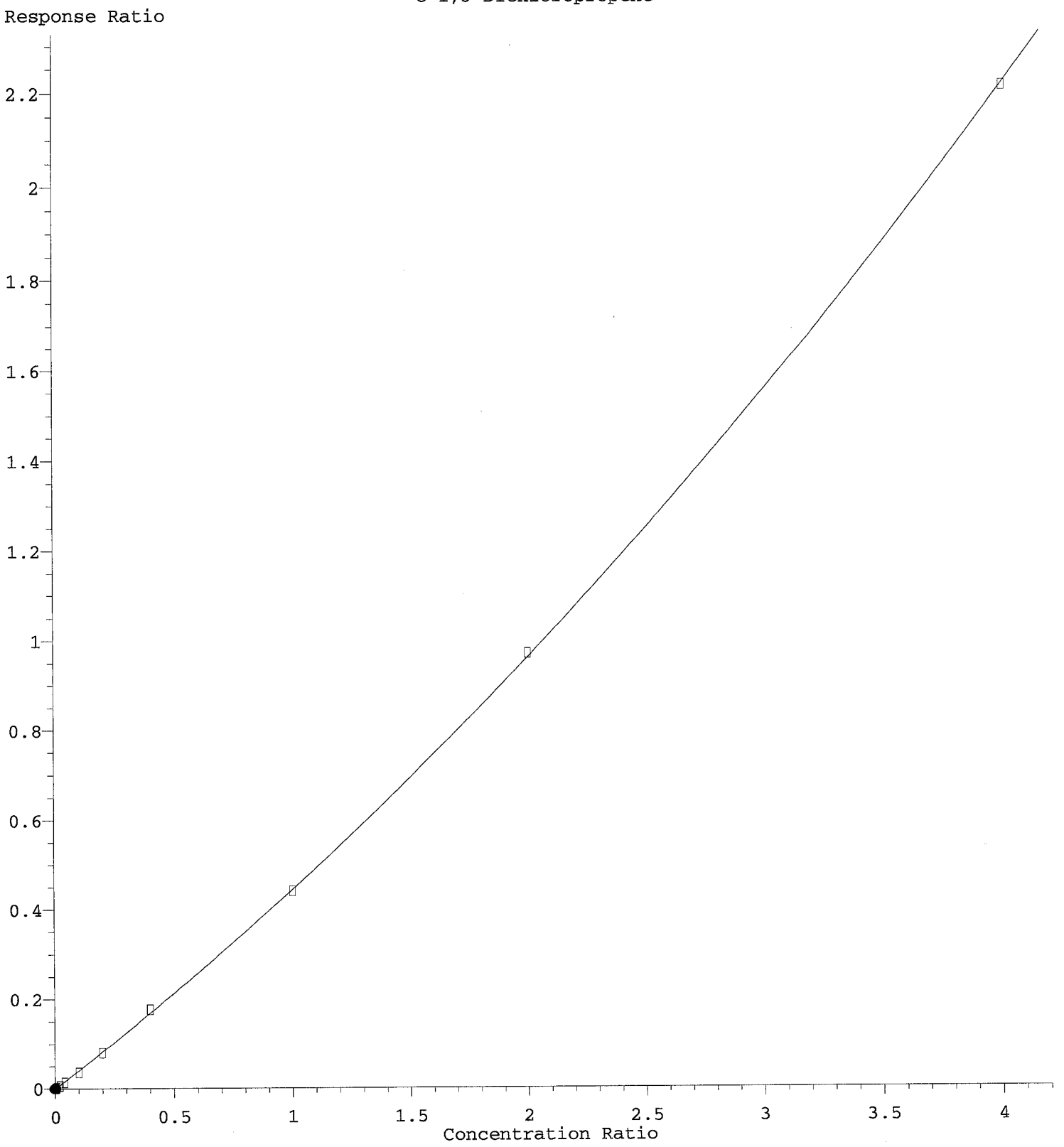
TIC: VG19102518.D\data.ms

(46) 2-Chloroethyl Vinyl Ether

8.776min (+ 0.037) 0.47 ug/L m

response 53

Ion	Exp%	Act%
63.00	100.00	100.00
43.00	282.80	93.24#
106.00	0.00	0.00
0.00	0.00	0.00



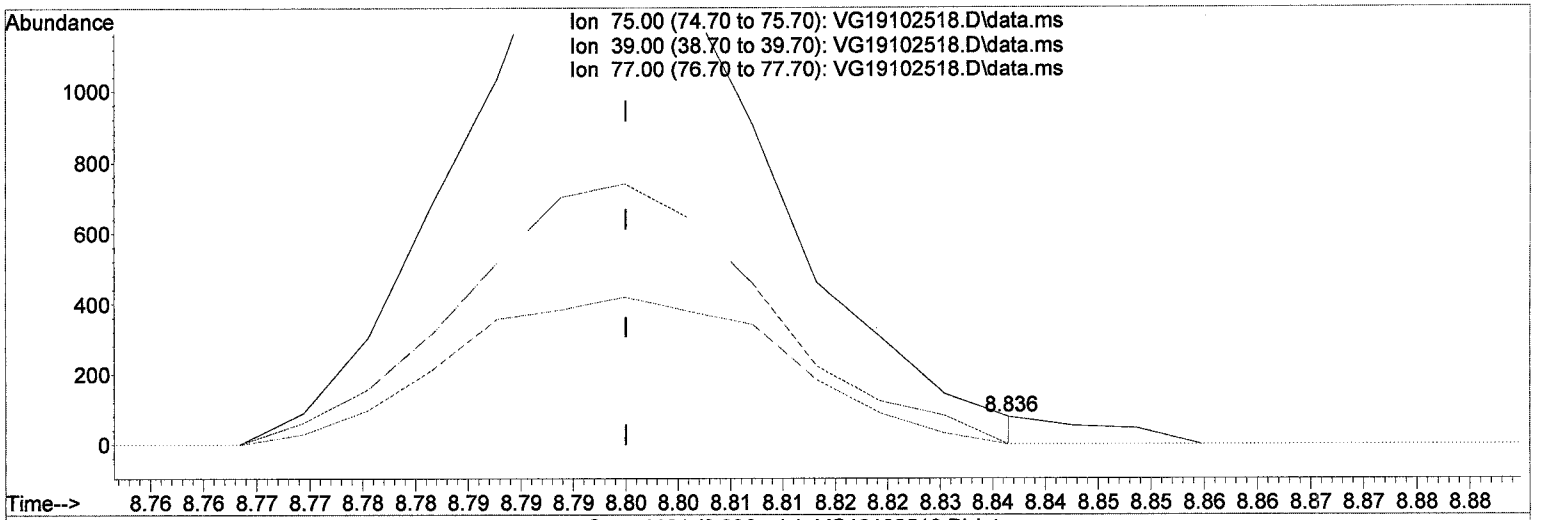
Int = 0.11

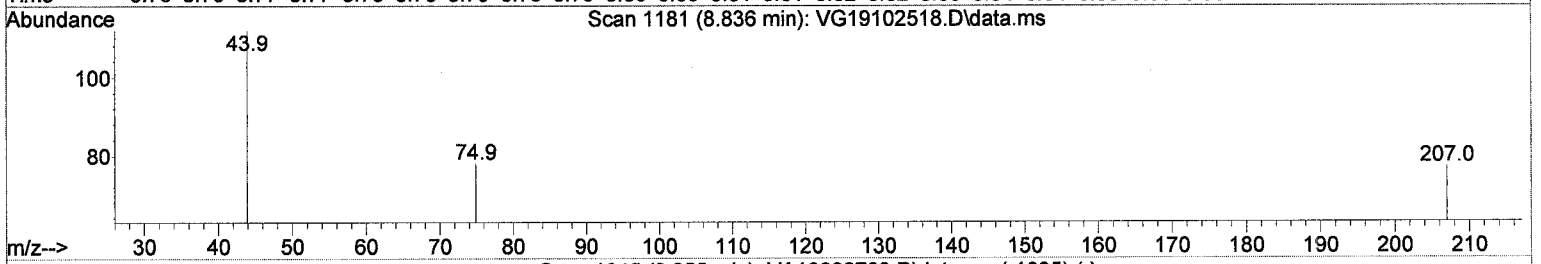
R = 3.67e-002 A*A + 4.08e-001 A - 7.59e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

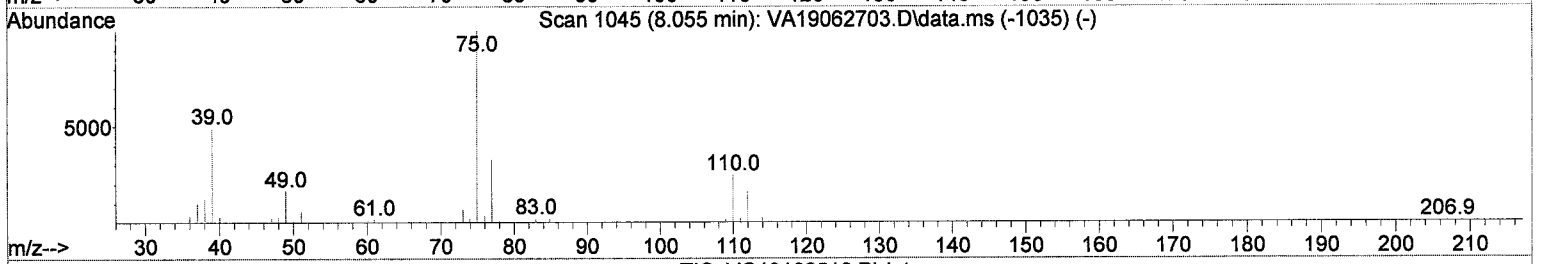
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







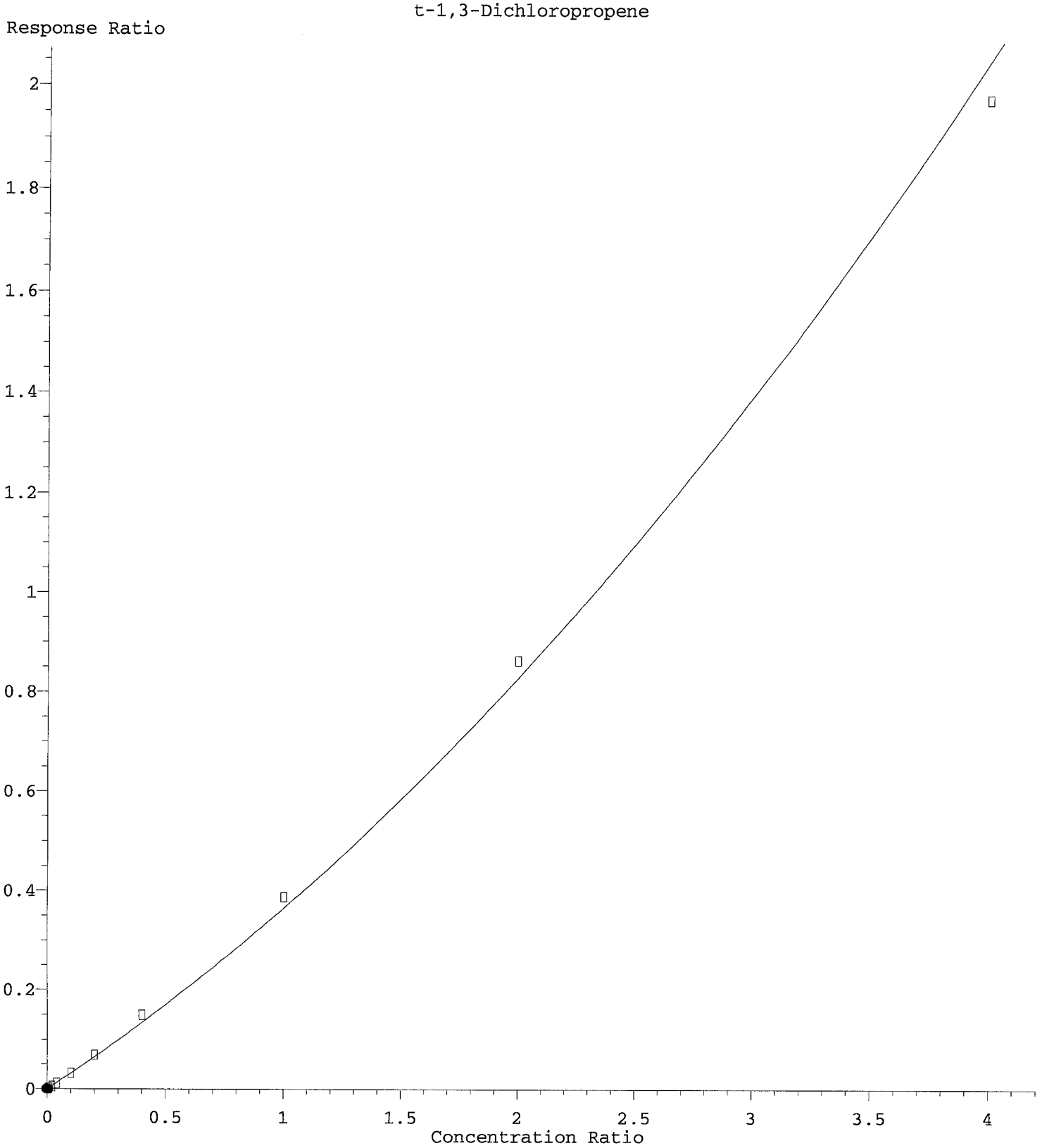
TIC: VG19102518.D\data.ms

(47) c-1,3-Dichloropropene

8.836min (+ 0.036) 0.11 ug/L m

response 36

Ion	Exp%	Act%
75.00	100.00	100.00
39.00	50.30	0.00#
77.00	31.90	0.00#
0.00	0.00	0.00



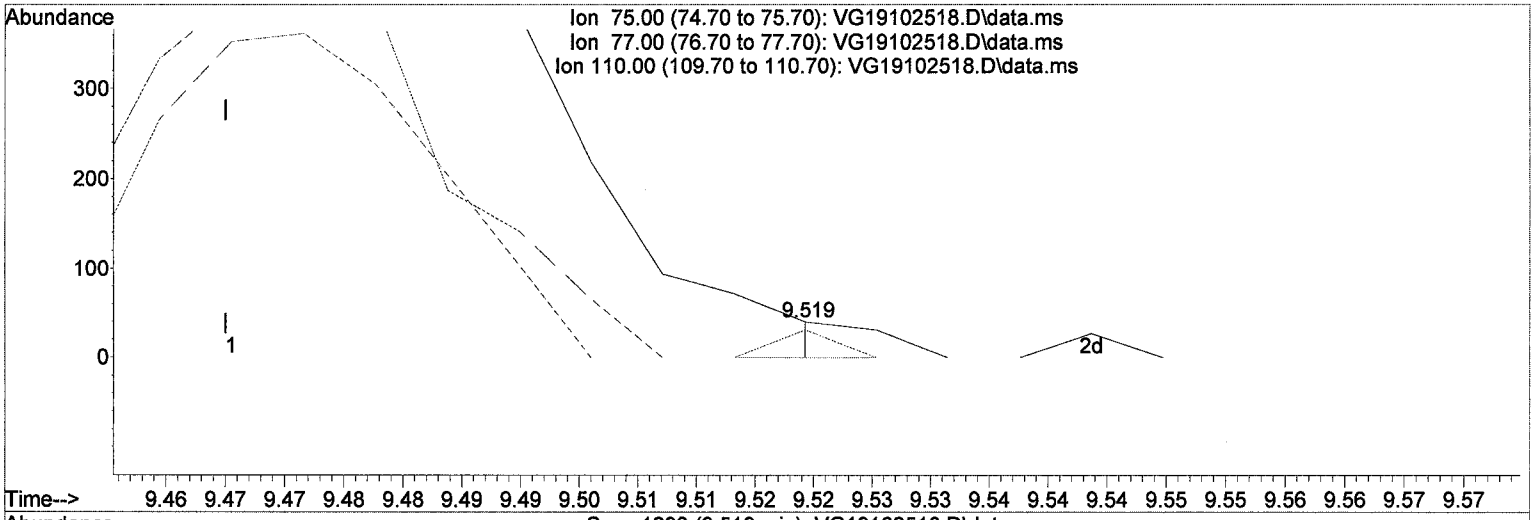
Int= 0.09

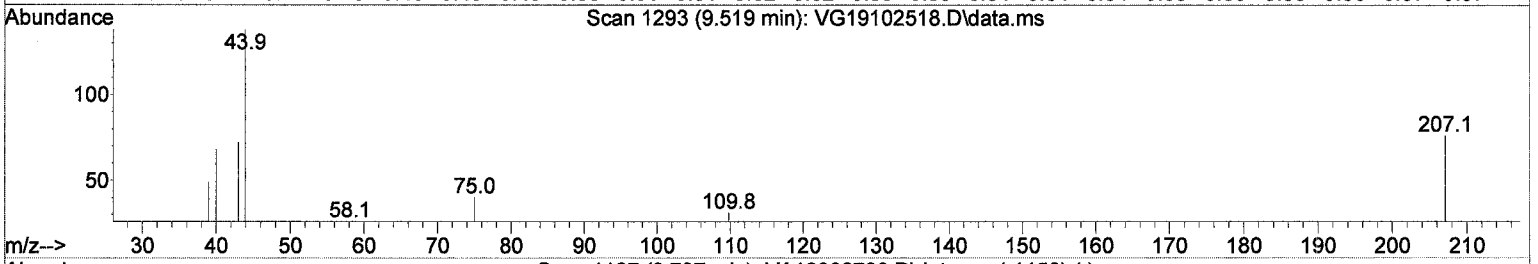
R = 4.88e-002 A*A + 3.17e-001 A - 5.38e-004
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

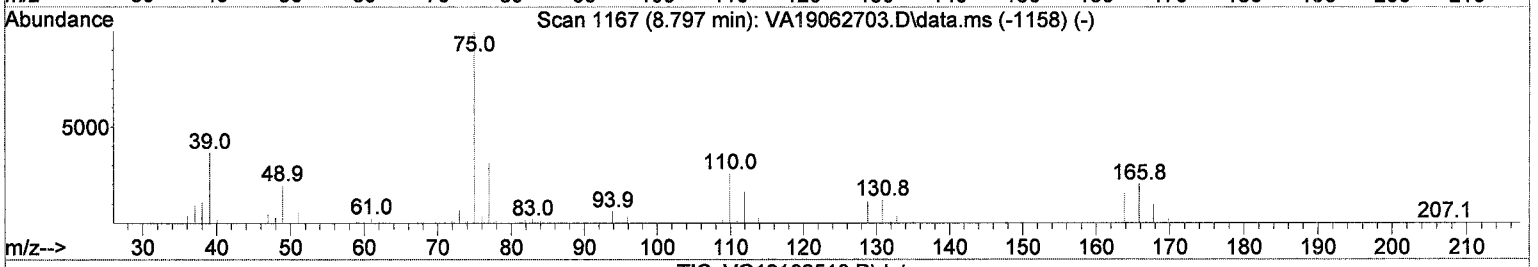
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







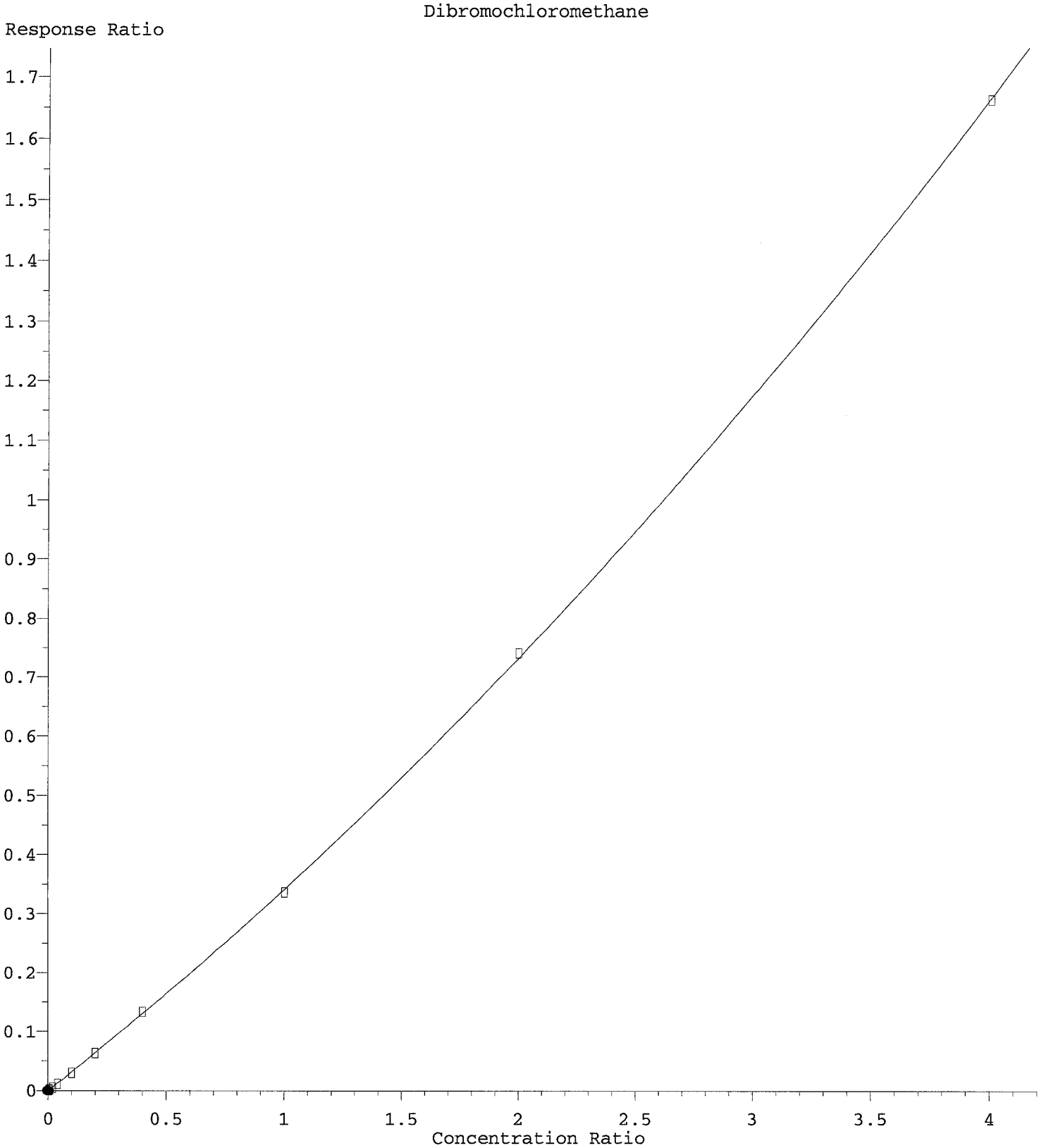
TIC: VG19102518.D\data.ms

(52) t-1,3-Dichloropropene

9.519min (+ 0.049) 0.09 ug/L m

response 11

Ion	Exp%	Act%
75.00	100.00	100.00
77.00	33.20	0.00#
110.00	25.60	77.50#
0.00	0.00	0.00



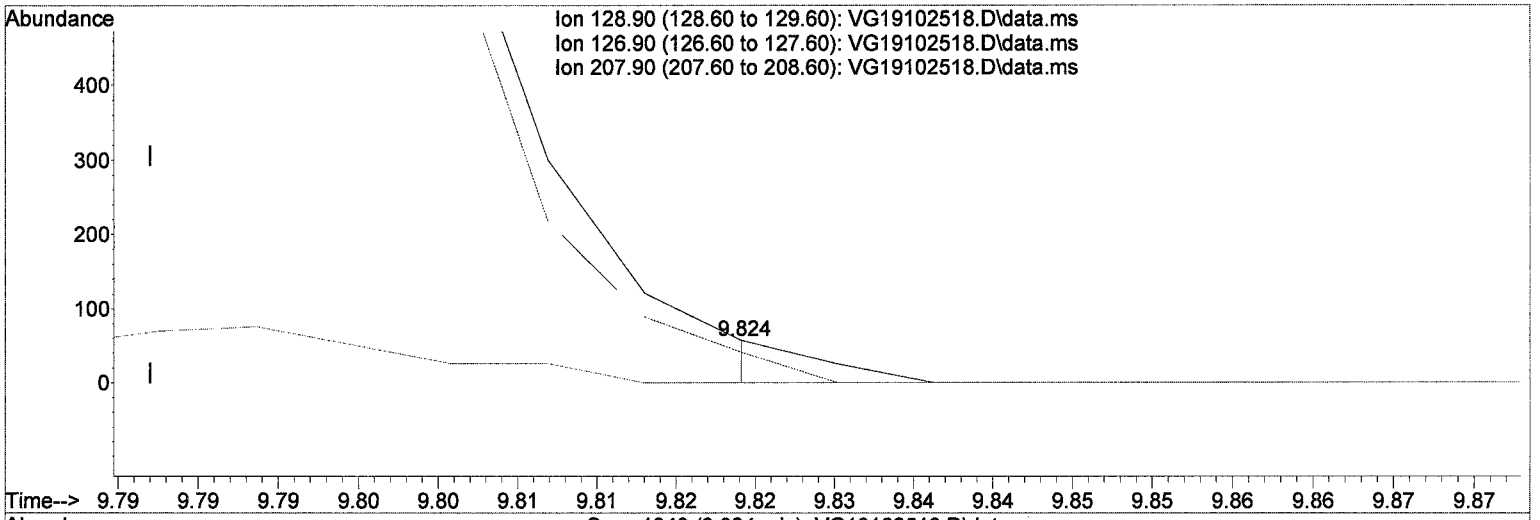
Int = 0,13

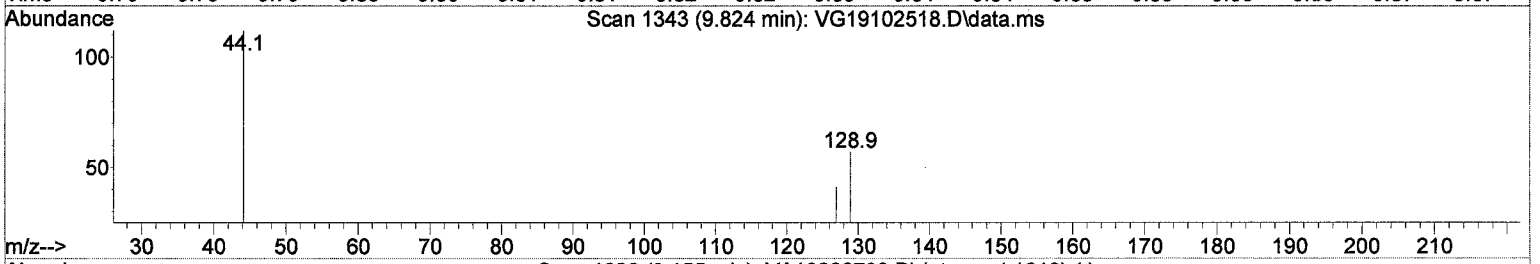
R = 2.49e-002 A*A + 3.17e-001 A - 7.80e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

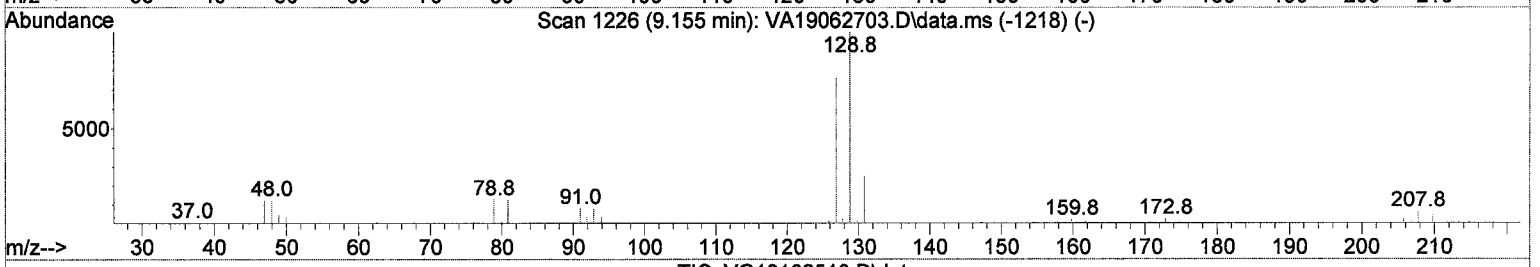
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







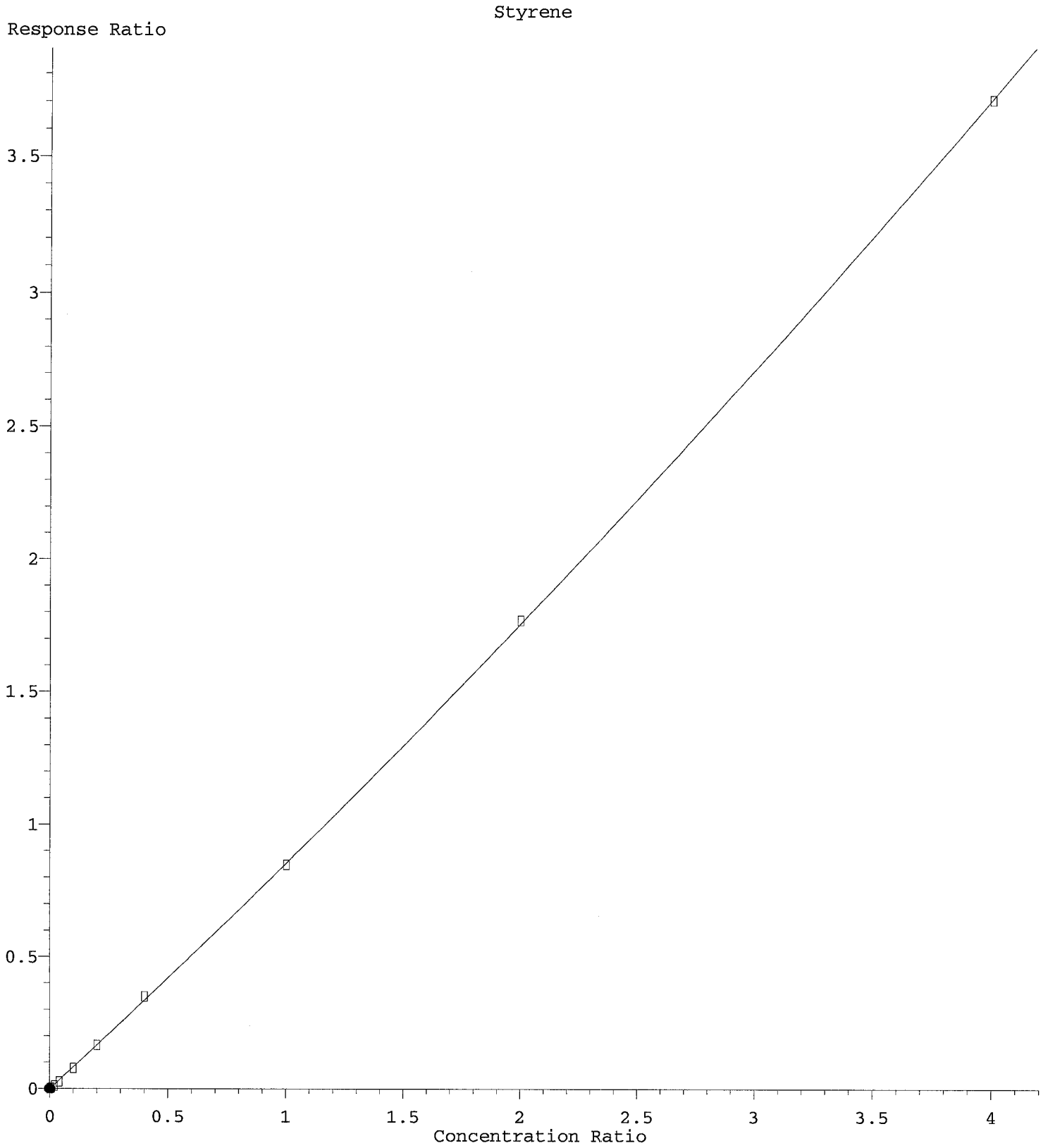
TIC: VG19102518.D\data.ms

(54) Dibromochloromethane

9.824min (+ 0.037) 0.13 ug/L m

response 9

Ion	Exp%	Act%
128.90	100.00	100.00
126.90	77.40	71.93
207.90	7.30	0.00
0.00	0.00	0.00



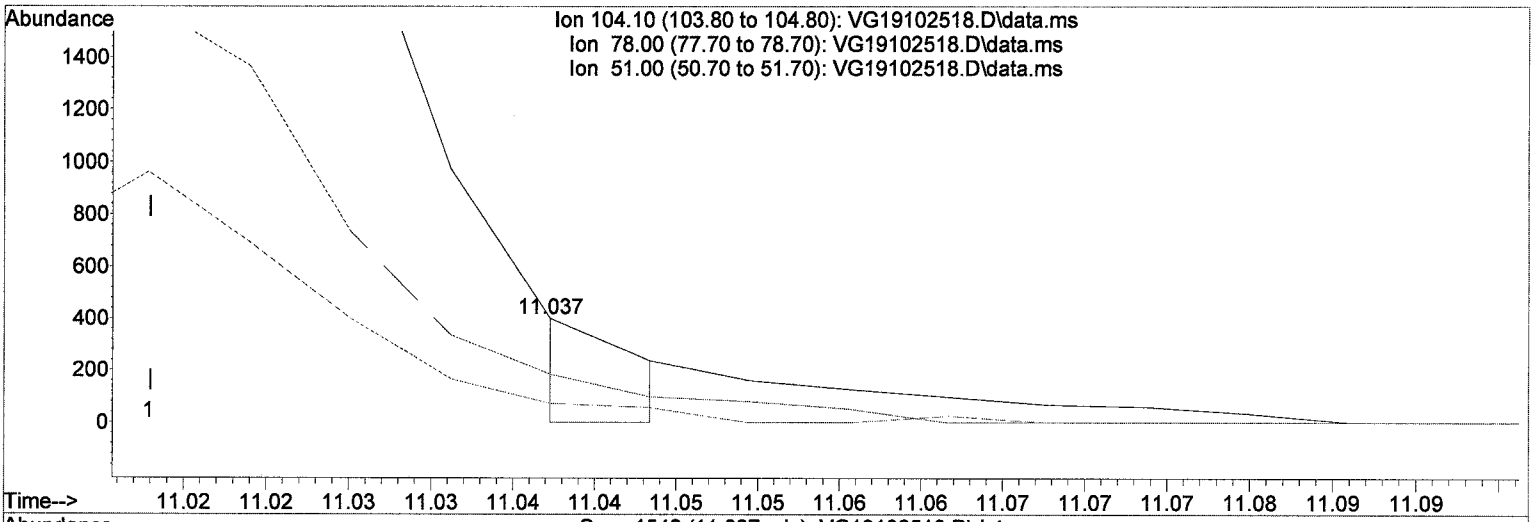
Int = 0.12

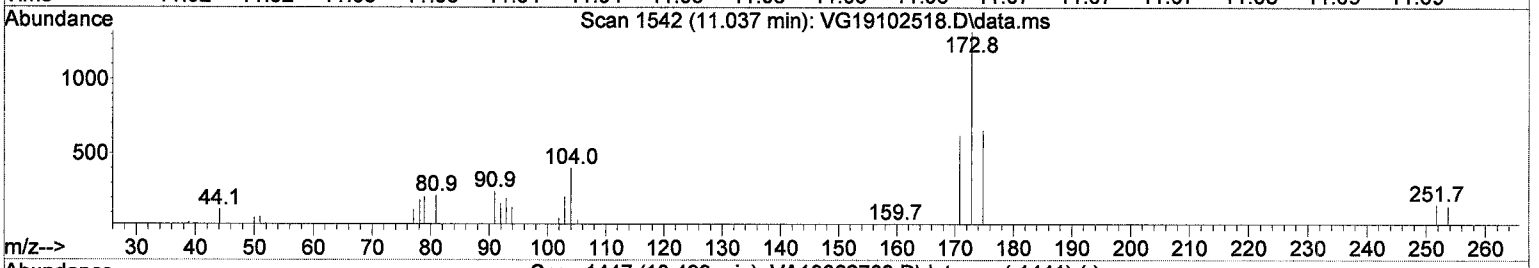
R = 2.43e-002 A*A + 8.31e-001 A - 1.67e-003
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

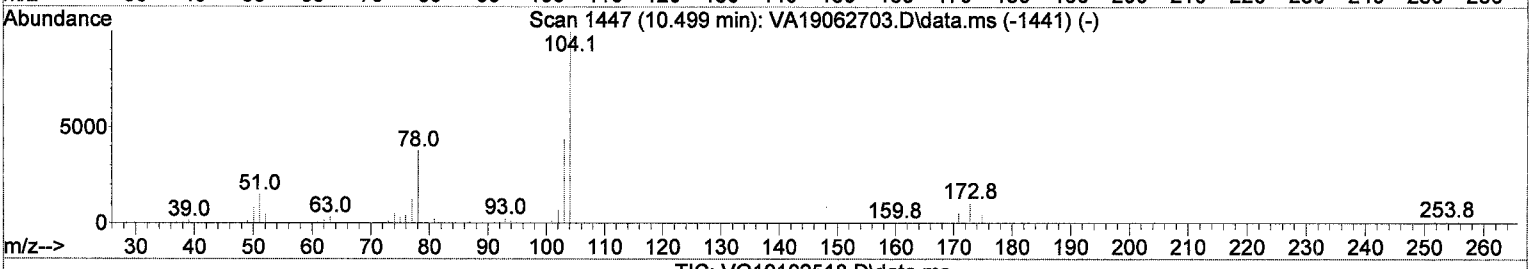
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







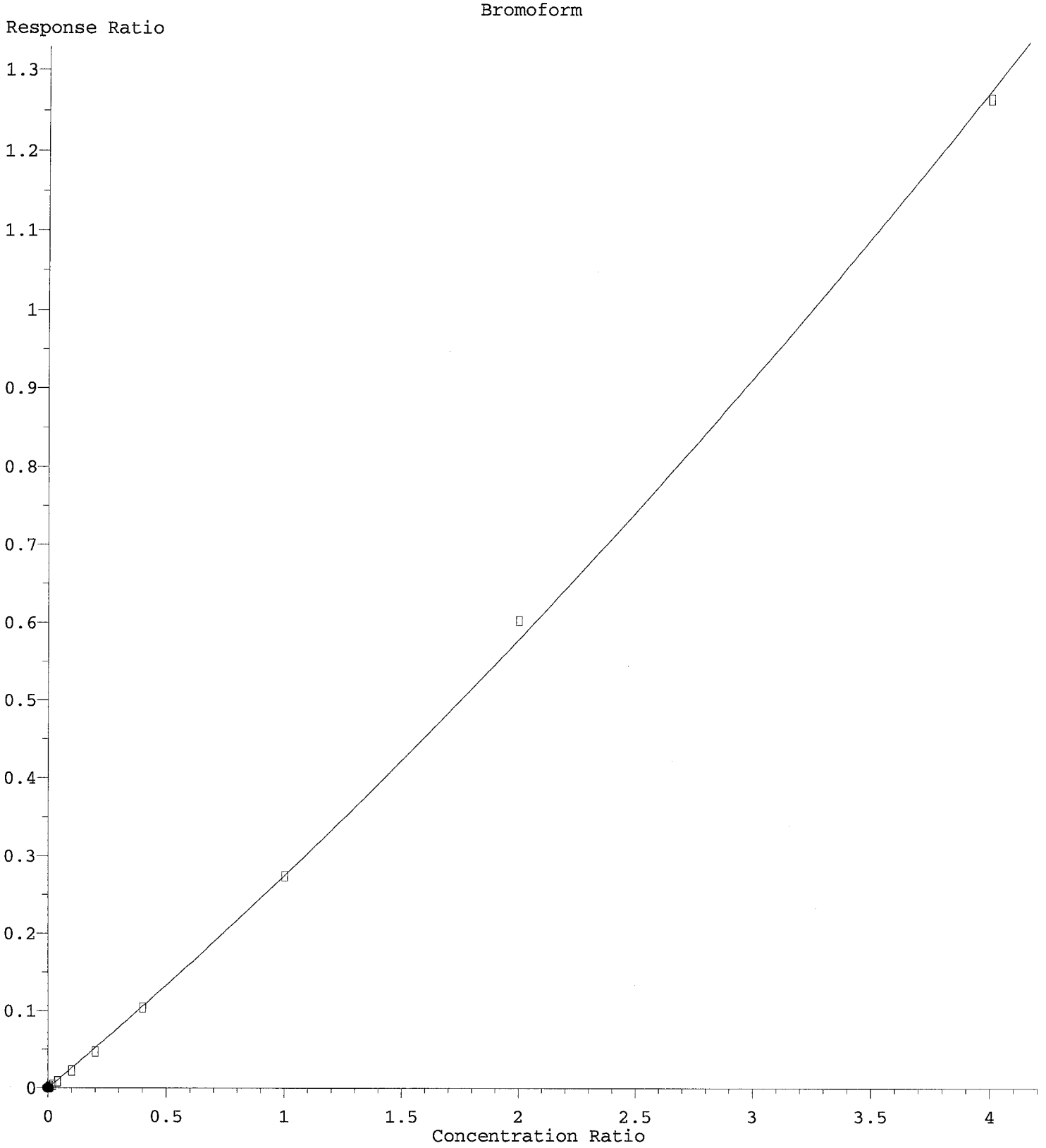
TIC: VG19102518.D\data.ms

(63) Styrene

11.037min (+ 0.024) 0.12 ug/L m

response 86

Ion	Exp%	Act%
104.10	100.00	100.00
78.00	42.20	46.00
51.00	24.70	18.25
0.00	0.00	0.00



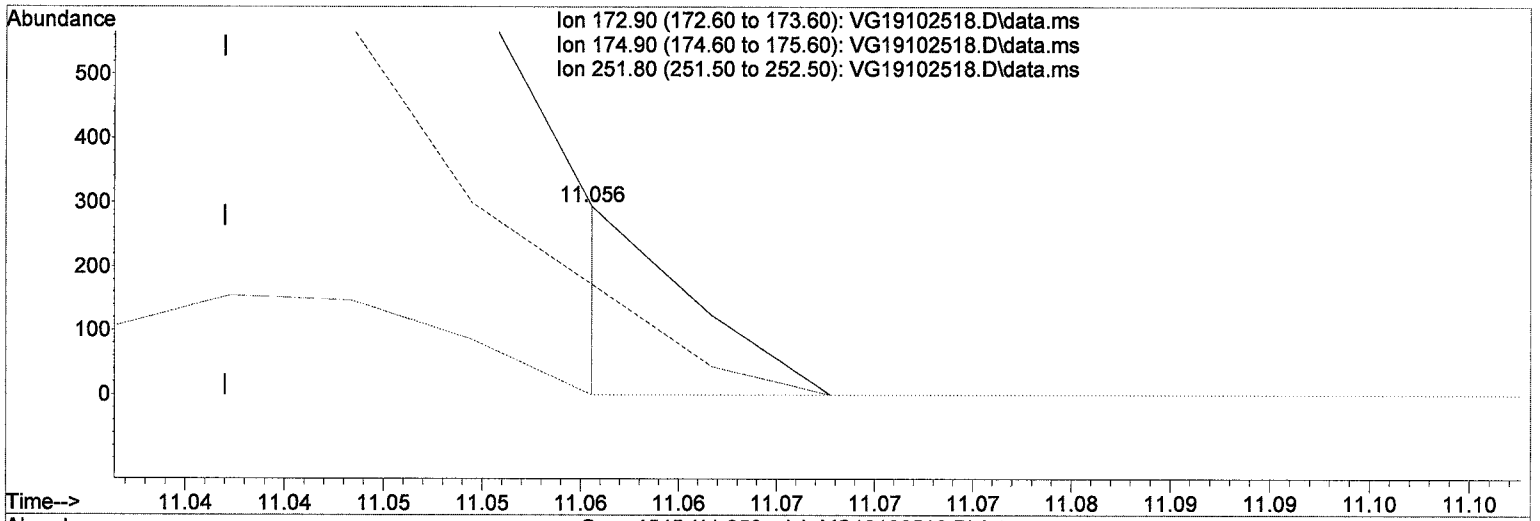
INT = 0,21

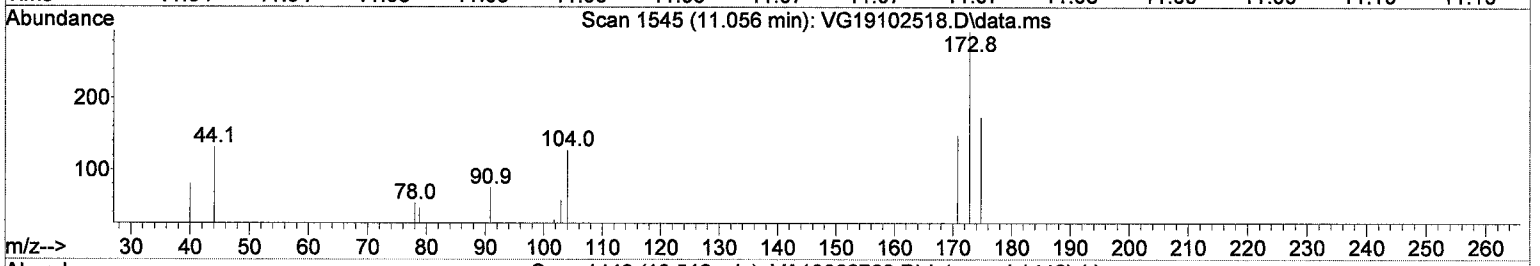
R = 1.46e-002 A*A + 2.61e-001 A - 9.25e-004
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

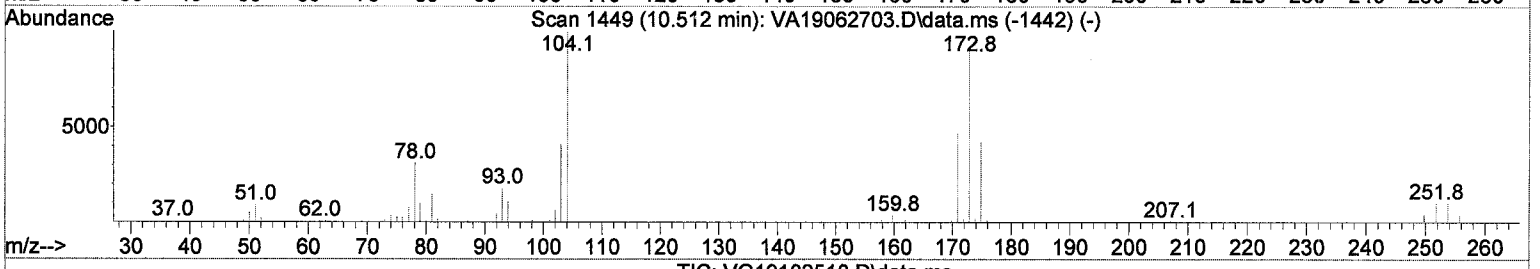
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







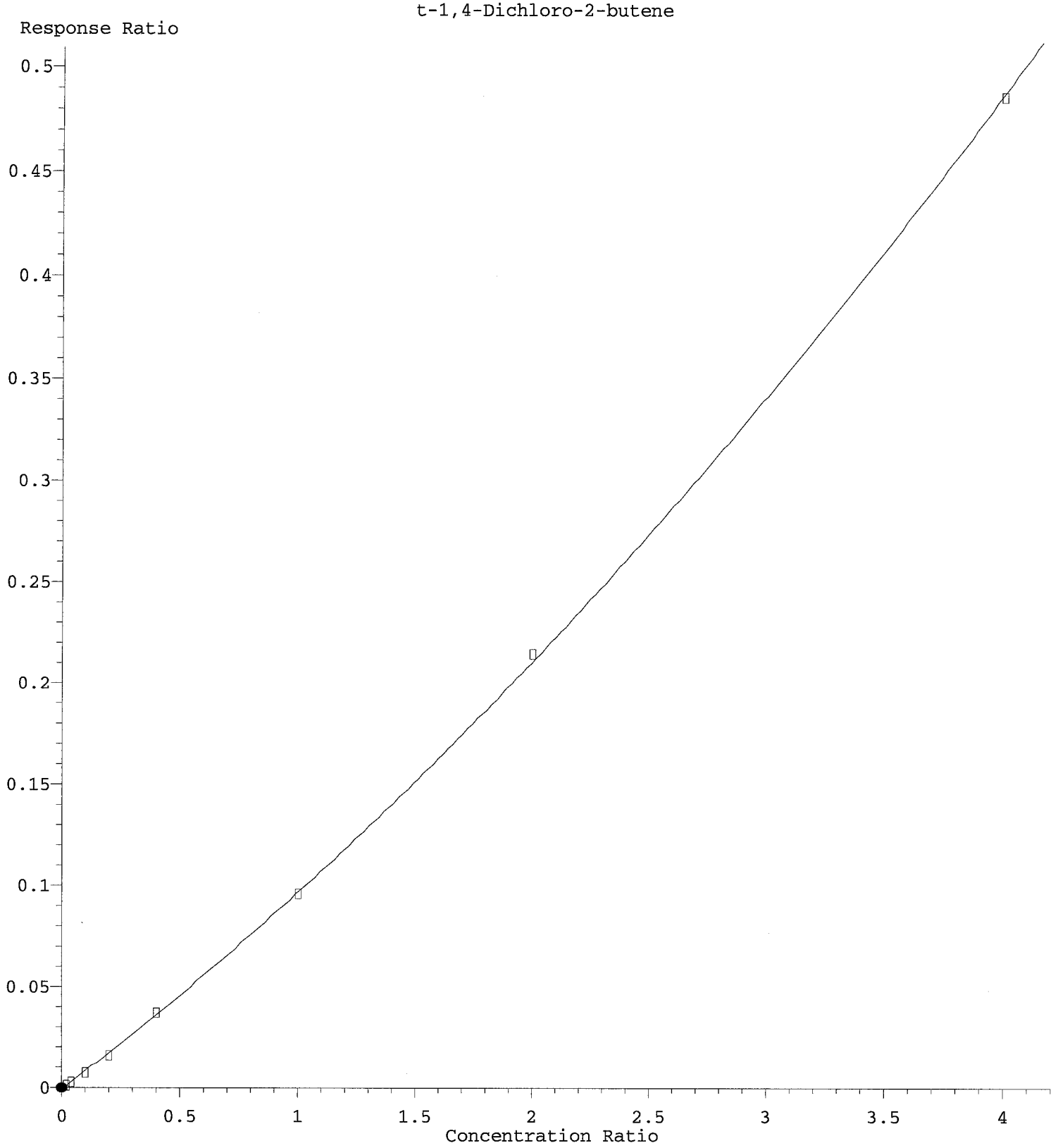
TIC: VG19102518.D\data.ms

(64) Bromoform (P)

11.056min (+ 0.019) 0.21 ug/L m

response 45

Ion	Exp%	Act%
172.90	100.00	100.00
174.90	48.50	58.84
251.80	13.90	0.00
0.00	0.00	0.00



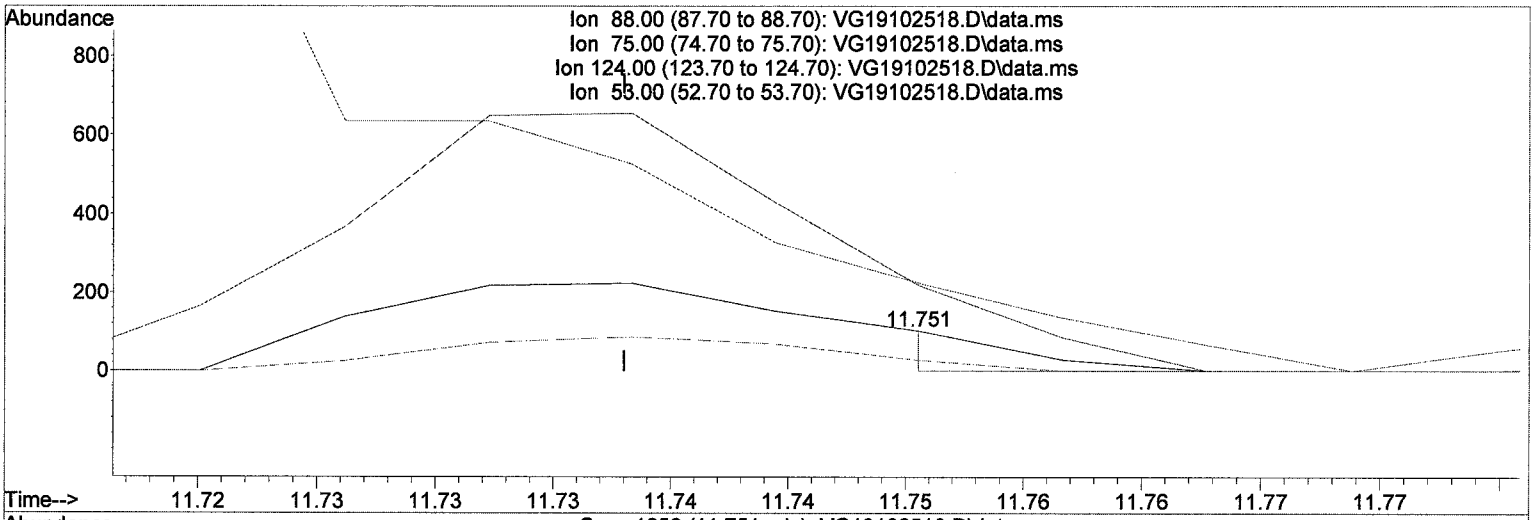
Fut = 0.56

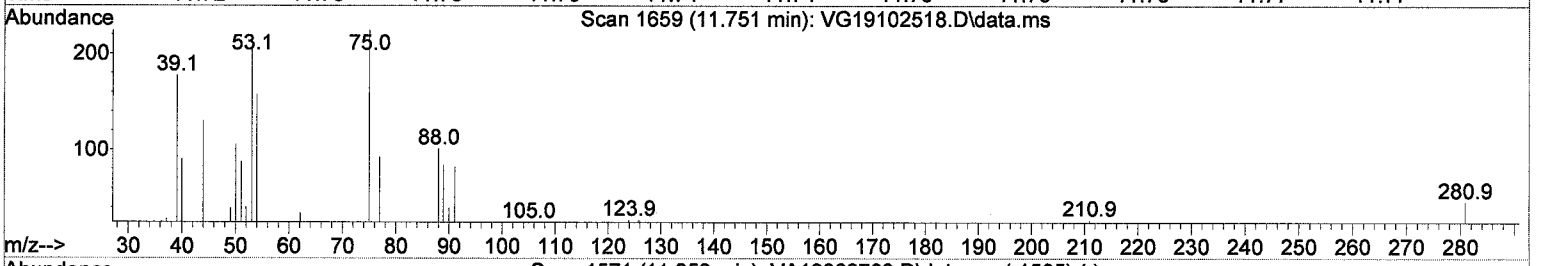
R = 8.09e-003 A*A + 8.97e-002 A - 9.14e-004
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

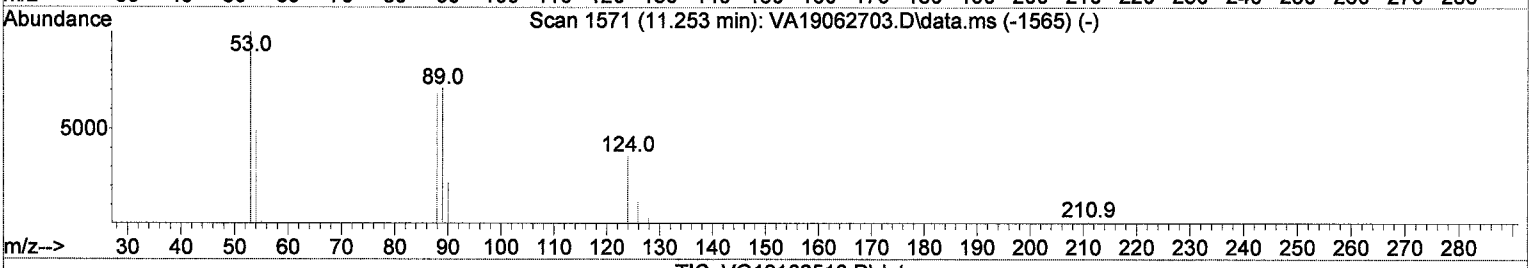
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







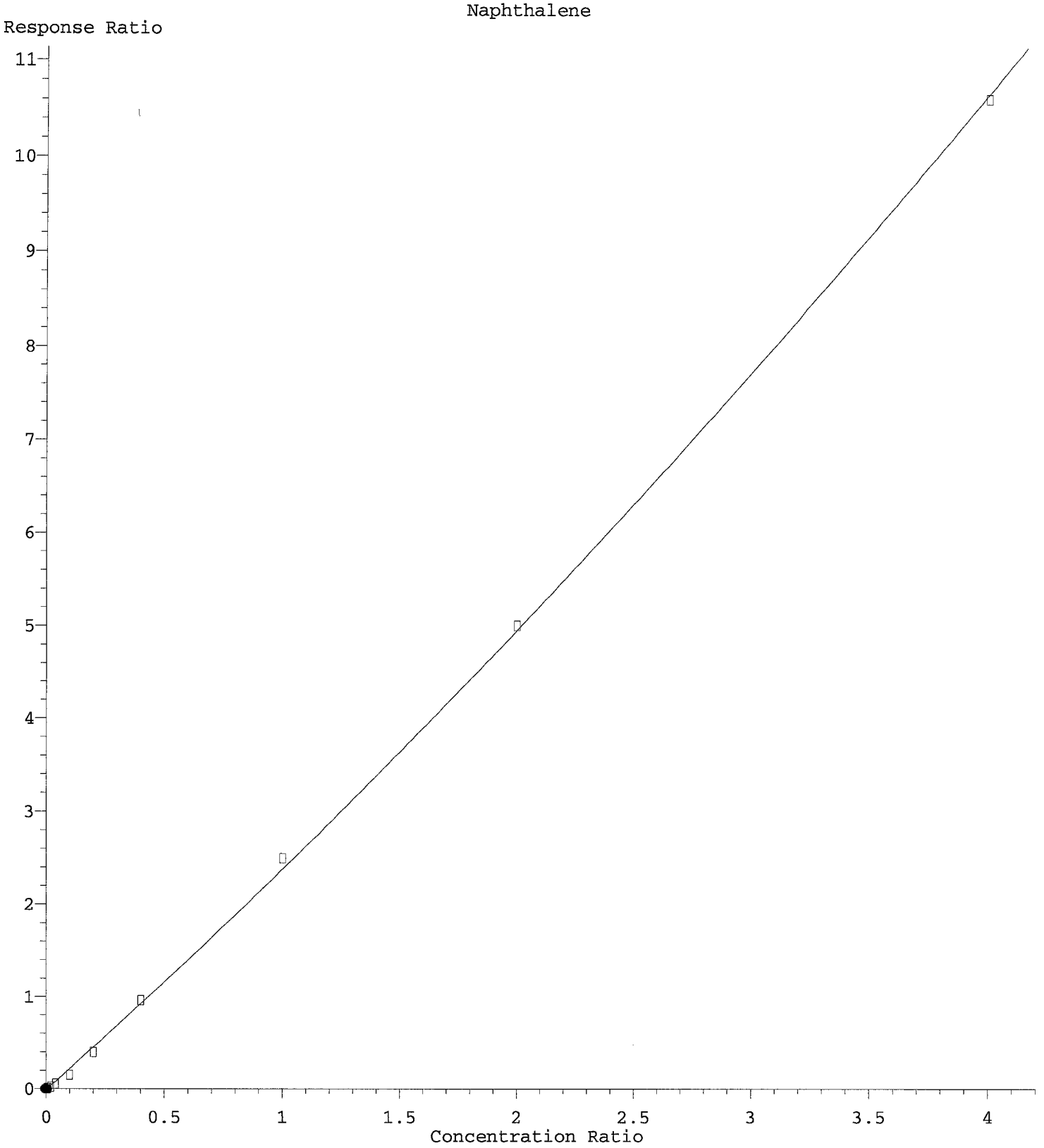
TIC: VG19102518.D\data.ms

(74) t-1,4-Dichloro-2-butene

11.751min (+ 0.013) 0.56 ug/L m

response 10

Ion	Exp%	Act%
88.00	100.00	100.00
75.00	263.20	221.78#
124.00	63.30	26.73#
53.00	196.80	215.84



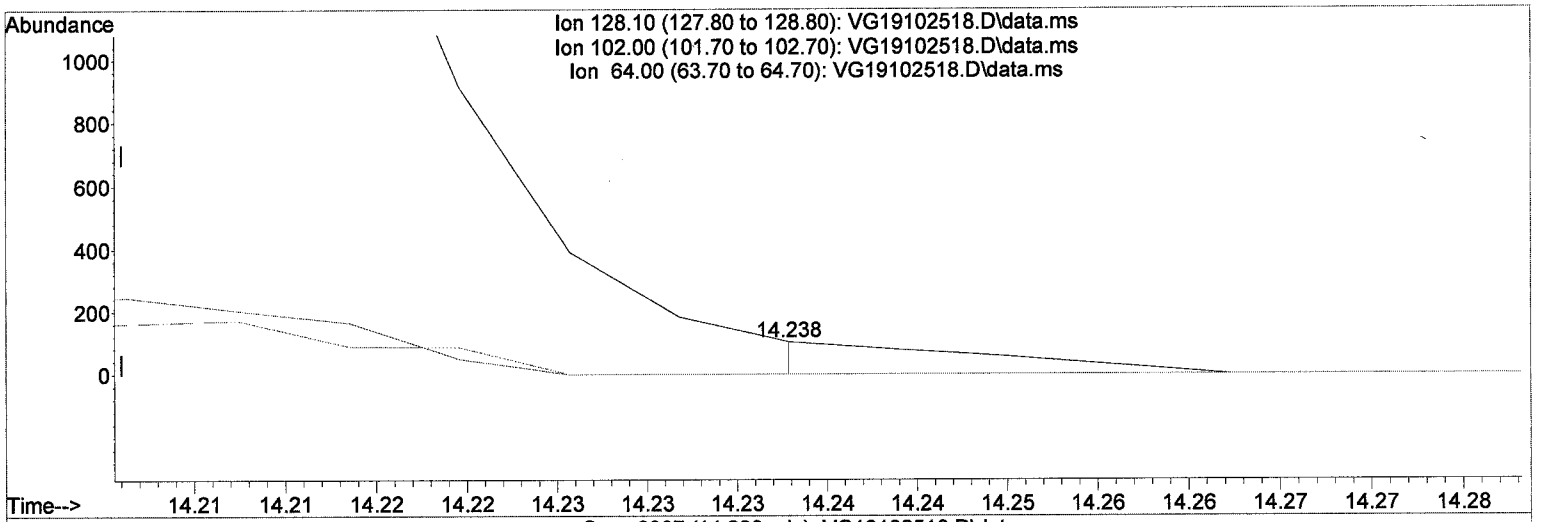
Int = 0.28

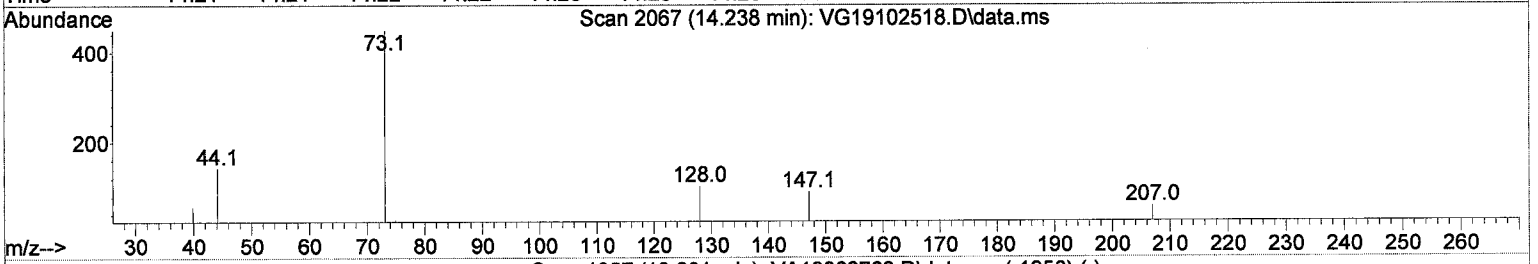
R = 9.23e-002 A*A + 2.30e+000 A - 1.26e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VGI911025W.M
Calibration Table Last Updated: Mon Oct 28 12:05:29 2019

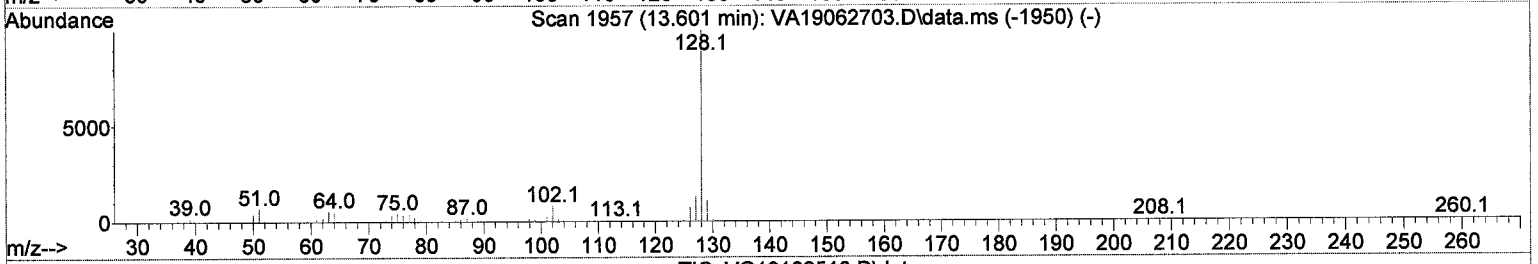
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\REQUANT\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:05:59 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration







TIC: VG19102518.D\data.ms

(87) Naphthalene

14.238min (+ 0.037) 0.28 ug/L m

response 58

Ion	Exp%	Act%
128.10	100.00	100.00
102.00	7.90	0.00
64.00	6.30	0.00
0.00	0.00	0.00

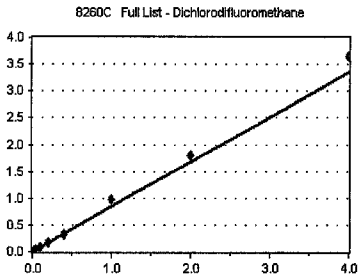
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

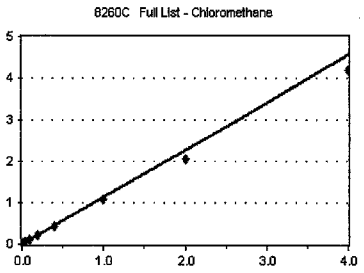


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	263	0.807	1.73
9J25051-CAL3	0.4	405	0.646	1.73
9J25051-CAL4	1	1328	0.756	1.73
9J25051-CAL5	2	2795	0.913	1.73
9J25051-CAL6	5	7404	0.879	1.73
9J25051-CAL7	10	15599	0.821	1.73
9J25051-CAL8	20	27201	0.784	1.73
9J25051-CAL9	50	91711	0.966	1.73
9J25051-CALA	100	173843	0.899	1.73
9J25051-CALB	200	310233	0.914	1.73

AVE RF **0.839** RF RSD **11.32** AVE RT **1.73**

Chloromethane

Curve Fit: **AVERAGE RF**

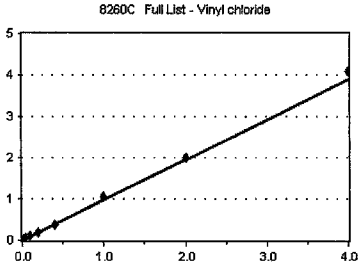


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~449~~	~~2.609~~	~~1.98~~
~~9J25051-CAL2~~	~~0.2~~	~~619~~	~~1.899~~	~~1.98~~
9J25051-CAL3	0.4	914	1.457	1.98
9J25051-CAL4	1	2027	1.154	1.98
9J25051-CAL5	2	3700	1.209	1.98
9J25051-CAL6	5	9675	1.149	1.98
9J25051-CAL7	10	20315	1.069	1.98
9J25051-CAL8	20	36903	1.064	1.99
9J25051-CAL9	50	101831	1.072	1.98
9J25051-CALA	100	198132	1.025	1.98
9J25051-CALB	200	356174	1.049	1.98

AVE RF **1.139** RF RSD **11.72** AVE RT **1.98**

Vinyl chloride

Curve Fit: **AVERAGE RF**

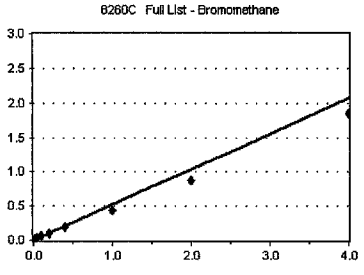


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	144	0.837	2.11
9J25051-CAL2	0.2	313	0.960	2.11
9J25051-CAL3	0.4	546	0.870	2.11
9J25051-CAL4	1	1682	0.957	2.11
9J25051-CAL5	2	3136	1.025	2.11
9J25051-CAL6	5	8598	1.021	2.11
9J25051-CAL7	10	18609	0.980	2.11
9J25051-CAL8	20	33851	0.976	2.11
9J25051-CAL9	50	99666	1.049	2.11
9J25051-CALA	100	192412	0.995	2.11
9J25051-CALB	200	347189	1.023	2.11

AVE RF **0.972** RF RSD **6.77** AVE RT **2.11**

Bromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~151~~	~~0.877~~	~~2.55~~
~~9J25051-CAL2~~	~~0.2~~	~~229~~	~~0.703~~	~~2.55~~
~~9J25051-CAL3~~	~~0.4~~	~~415~~	~~0.662~~	~~2.55~~
9J25051-CAL4	1	1031	0.587	2.55
9J25051-CAL5	2	1968	0.643	2.55
9J25051-CAL6	5	4925	0.585	2.55
9J25051-CAL7	10	9433	0.497	2.55
9J25051-CAL8	20	16751	0.483	2.55
9J25051-CAL9	50	41867	0.441	2.55
9J25051-CALA	100	84791	0.439	2.55
9J25051-CALB	200	157346	0.463	2.55

AVE RF **0.517** RF RSD **14.94** AVE RT **2.55**

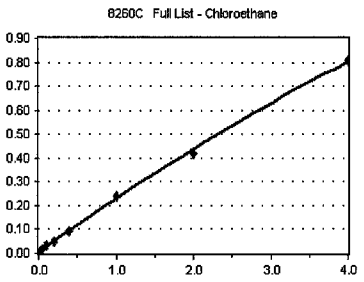
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Chloroethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

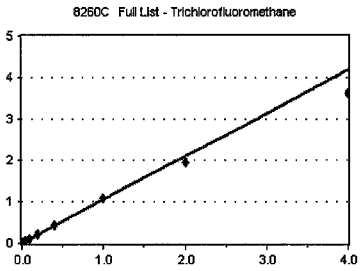


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~183~~	~~0.292~~	~~2.72~~
9J25051-CAL4	1	473	0.269	2.72
9J25051-CAL5	2	1240	0.405	2.73
9J25051-CAL6	5	2805	0.333	2.73
9J25051-CAL7	10	4599	0.242	2.72
9J25051-CAL8	20	8110	0.234	2.72
9J25051-CAL9	50	22569	0.238	2.72
9J25051-CALA	100	40673	0.210	2.72
9J25051-CALB	200	68728	0.202	2.72

AVE RF **0.267** RF RSD **25.91** AVE RT **2.72**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

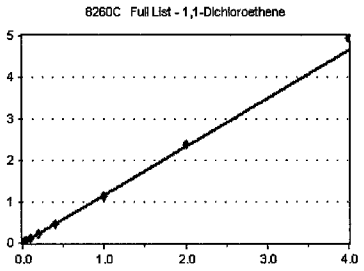


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	165	0.959	2.92
9J25051-CAL2	0.2	338	1.037	2.92
9J25051-CAL3	0.4	650	1.036	2.92
9J25051-CAL4	1	1893	1.078	2.92
9J25051-CAL5	2	3605	1.178	2.92
9J25051-CAL6	5	9548	1.134	2.92
9J25051-CAL7	10	20980	1.104	2.92
9J25051-CAL8	20	37053	1.068	2.92
9J25051-CAL9	50	101591	1.070	2.92
9J25051-CALA	100	187789	0.971	2.92
9J25051-CALB	200	306829	0.904	2.91

AVE RF **1.049** RF RSD **7.63** AVE RT **2.92**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**

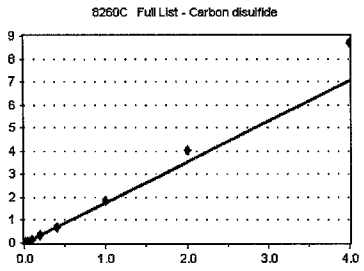


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	208	1.208	3.59
9J25051-CAL2	0.2	353	1.083	3.58
9J25051-CAL3	0.4	720	1.148	3.59
9J25051-CAL4	1	2001	1.139	3.58
9J25051-CAL5	2	3661	1.196	3.59
9J25051-CAL6	5	9956	1.182	3.59
9J25051-CAL7	10	21638	1.139	3.59
9J25051-CAL8	20	40497	1.168	3.59
9J25051-CAL9	50	106825	1.125	3.59
9J25051-CALA	100	228850	1.184	3.59
9J25051-CALB	200	419375	1.235	3.58

AVE RF **1.164** RF RSD **3.69** AVE RT **3.59**

Carbon disulfide

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	344	1.999	3.59
9J25051-CAL2	0.2	583	1.788	3.59
9J25051-CAL3	0.4	958	1.527	3.59
9J25051-CAL4	1	2616	1.489	3.59
9J25051-CAL5	2	5003	1.635	3.59
9J25051-CAL6	5	13555	1.610	3.59
9J25051-CAL7	10	30767	1.620	3.59
9J25051-CAL8	20	59881	1.727	3.59
9J25051-CAL9	50	175211	1.845	3.59
9J25051-CALA	100	390234	2.018	3.59
9J25051-CALB	200	739088	2.177	3.58

AVE RF **1.767** RF RSD **12.55** AVE RT **3.59**

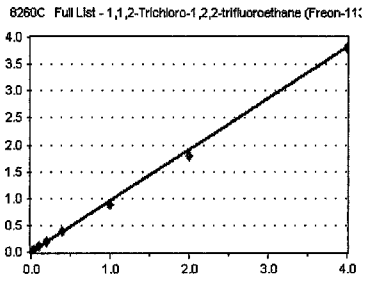
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,1,2-Trichloro-1,2,2-trifluoroetha

Curve Fit: **AVERAGE RF**

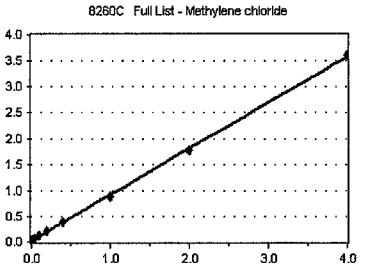


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	319	0.979	3.67
9J25051-CAL3	0.4	578	0.921	3.66
9J25051-CAL4	1	1595	0.908	3.66
9J25051-CAL5	2	3171	1.036	3.66
9J25051-CAL6	5	8623	1.024	3.66
9J25051-CAL7	10	18630	0.981	3.66
9J25051-CAL8	20	33091	0.954	3.66
9J25051-CAL9	50	84735	0.892	3.66
9J25051-CALA	100	173399	0.897	3.66
9J25051-CALB	200	322757	0.951	3.66

AVE RF **0.954** RF RSD **5.33** AVE RT **3.66**

Methylene chloride

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

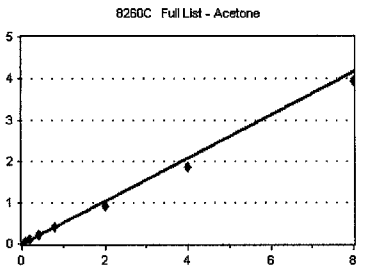


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	1819	10.568	4.32
9J25051-CAL2	0.2	1942	5.958	4.32
9J25051-CAL3	0.4	2043	3.257	4.32
9J25051-CAL4	1	3475	1.978	4.32
9J25051-CAL5	2	4760	1.556	4.32
9J25051-CAL6	5	10277	1.220	4.32
9J25051-CAL7	10	20314	1.069	4.32
9J25051-CAL8	20	34415	0.992	4.32
9J25051-CAL9	50	84220	0.887	4.32
9J25051-CALA	100	171077	0.885	4.32
9J25051-CALB	200	305732	0.901	4.32

AVE RF **2.661** RF RSD **114.13** AVE RT **4.32**

Acetone

Curve Fit: **AVERAGE RF**

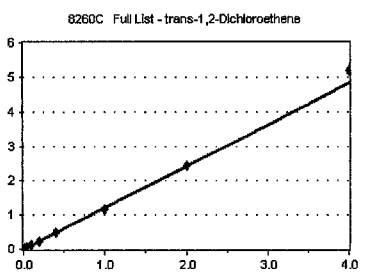


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.2~~	~~1032~~	~~2.998~~	~~4.41~~
~~9J25051-CAL2~~	~~0.4~~	~~1117~~	~~1.713~~	~~4.40~~
~~9J25051-CAL3~~	~~0.8~~	~~1426~~	~~1.137~~	~~4.40~~
~~9J25051-CAL4~~	~~2~~	~~2696~~	~~0.767~~	~~4.40~~
9J25051-CAL5	4	3962	0.647	4.40
9J25051-CAL6	10	9305	0.553	4.40
9J25051-CAL7	20	19598	0.516	4.40
9J25051-CAL8	40	35535	0.512	4.40
9J25051-CAL9	100	88109	0.464	4.40
9J25051-CALA	200	178985	0.463	4.40
9J25051-CALB	400	335353	0.494	4.40

AVE RF **0.521** RF RSD **12.24** AVE RT **4.40**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	216	1.255	4.51
9J25051-CAL2	0.2	349	1.071	4.51
9J25051-CAL3	0.4	721	1.149	4.51
9J25051-CAL4	1	2024	1.152	4.51
9J25051-CAL5	2	3893	1.272	4.51
9J25051-CAL6	5	10306	1.224	4.51
9J25051-CAL7	10	23032	1.212	4.51
9J25051-CAL8	20	43270	1.248	4.51
9J25051-CAL9	50	110813	1.167	4.51
9J25051-CALA	100	235876	1.220	4.51
9J25051-CALB	200	439733	1.295	4.51

AVE RF **1.206** RF RSD **5.44** AVE RT **4.51**

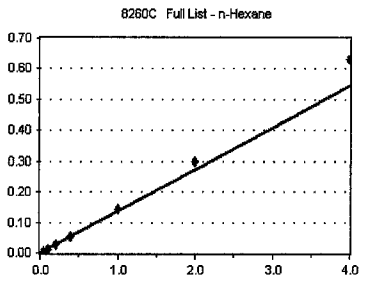
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

n-Hexane

Curve Fit: **AVERAGE RF**

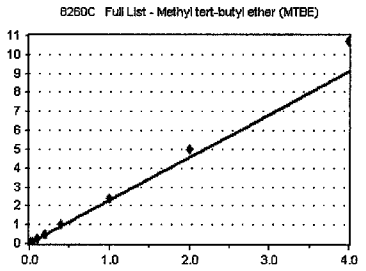


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~10~~	~~1.594~~	~~0.00~~
~~9J25051-CAL4~~	~~1~~	~~168~~	~~9.563~~	~~4.61~~
9J25051-CAL5	2	342	0.112	4.61
9J25051-CAL6	5	1014	0.120	4.61
9J25051-CAL7	10	2568	0.135	4.61
9J25051-CAL8	20	4737	0.137	4.61
9J25051-CAL9	50	13670	0.144	4.61
9J25051-CALA	100	29007	0.150	4.61
9J25051-CALB	200	53781	0.158	4.61

AVE RF **0.137** RF RSD **11.92** AVE RT **4.61**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

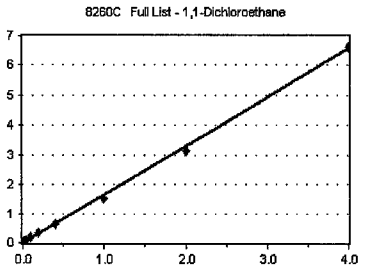


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	356	2.068	4.67
9J25051-CAL2	0.2	645	1.979	4.67
9J25051-CAL3	0.4	1243	1.982	4.67
9J25051-CAL4	1	3585	2.041	4.67
9J25051-CAL5	2	6706	2.191	4.67
9J25051-CAL6	5	19407	2.305	4.66
9J25051-CAL7	10	45758	2.409	4.66
9J25051-CAL8	20	86097	2.482	4.66
9J25051-CAL9	50	225213	2.371	4.66
9J25051-CALA	100	485505	2.511	4.66
9J25051-CALB	200	909069	2.678	4.66

AVE RF **2.274** RF RSD **10.48** AVE RT **4.66**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

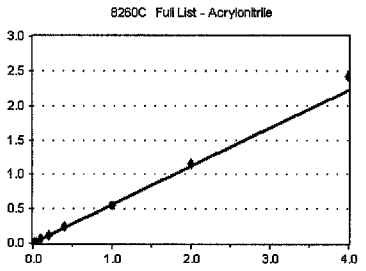


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	301	1.749	5.22
9J25051-CAL2	0.2	508	1.558	5.22
9J25051-CAL3	0.4	980	1.562	5.22
9J25051-CAL4	1	2990	1.702	5.22
9J25051-CAL5	2	5406	1.767	5.22
9J25051-CAL6	5	14473	1.719	5.22
9J25051-CAL7	10	31196	1.642	5.22
9J25051-CAL8	20	57239	1.650	5.22
9J25051-CAL9	50	143204	1.508	5.22
9J25051-CALA	100	303825	1.572	5.22
9J25051-CALB	200	561273	1.653	5.22

AVE RF **1.644** RF RSD **5.19** AVE RT **5.22**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.4	292	0.466	5.30
9J25051-CAL4	1	831	0.473	5.30
9J25051-CAL5	2	1734	0.567	5.30
9J25051-CAL6	5	4948	0.588	5.29
9J25051-CAL7	10	11034	0.581	5.29
9J25051-CAL8	20	21017	0.606	5.29
9J25051-CAL9	50	53096	0.559	5.28
9J25051-CALA	100	110954	0.574	5.29
9J25051-CALB	200	205093	0.604	5.29

AVE RF **0.557** RF RSD **9.39** AVE RT **5.29**

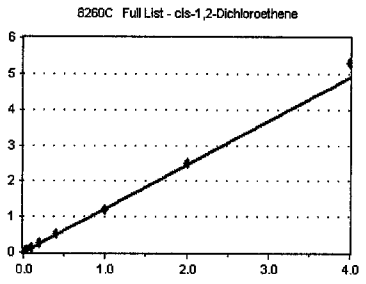
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

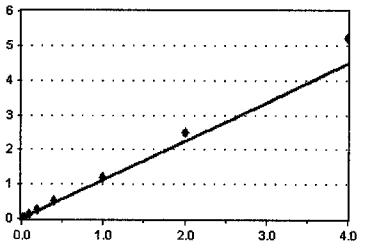


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	198	1.150	5.83
9J25051-CAL2	0.2	368	1.129	5.83
9J25051-CAL3	0.4	741	1.181	5.83
9J25051-CAL4	1	2038	1.160	5.82
9J25051-CAL5	2	3898	1.274	5.83
9J25051-CAL6	5	10725	1.274	5.83
9J25051-CAL7	10	24037	1.265	5.82
9J25051-CAL8	20	44663	1.288	5.83
9J25051-CAL9	50	112782	1.188	5.82
9J25051-CALA	100	241396	1.249	5.83
9J25051-CALB	200	451383	1.330	5.82

AVE RF **1.226** RF RSD **5.42** AVE RT **5.82**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

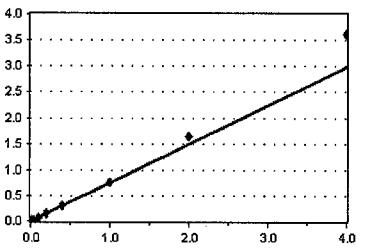


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	132	0.767	0.00
9J25051-CAL2	0.2	307	0.942	6.48
9J25051-CAL3	0.4	621	0.990	6.48
9J25051-CAL4	1	1862	1.060	6.48
9J25051-CAL5	2	3368	1.101	6.48
9J25051-CAL6	5	9935	1.180	6.48
9J25051-CAL7	10	23256	1.224	6.48
9J25051-CAL8	20	44179	1.274	6.48
9J25051-CAL9	50	113867	1.199	6.48
9J25051-CALA	100	241070	1.247	6.48
9J25051-CALB	200	443732	1.307	6.48

AVE RF **1.117** RF RSD **14.78** AVE RT **5.89**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

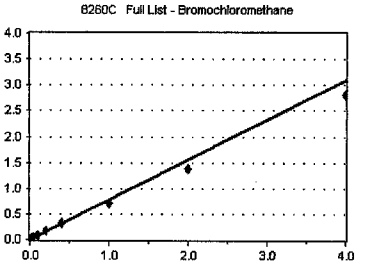


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	218	0.669	5.94
9J25051-CAL3	0.4	361	0.576	5.94
9J25051-CAL4	1	1277	0.727	5.94
9J25051-CAL5	2	2329	0.761	5.94
9J25051-CAL6	5	6301	0.748	5.94
9J25051-CAL7	10	14137	0.744	5.94
9J25051-CAL8	20	26576	0.766	5.94
9J25051-CAL9	50	71310	0.751	5.94
9J25051-CALA	100	158158	0.818	5.94
9J25051-CALB	200	307183	0.905	5.94

AVE RF **0.746** RF RSD **11.51** AVE RT **5.94**

Bromochloromethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	113	0.657	6.04
9J25051-CAL2	0.2	239	0.733	6.04
9J25051-CAL3	0.4	529	0.843	6.04
9J25051-CAL4	1	1485	0.845	6.04
9J25051-CAL5	2	2654	0.867	6.04
9J25051-CAL6	5	7242	0.860	6.04
9J25051-CAL7	10	15717	0.827	6.04
9J25051-CAL8	20	27767	0.801	6.04
9J25051-CAL9	50	66951	0.705	6.04
9J25051-CALA	100	134039	0.693	6.04
9J25051-CALB	200	237805	0.700	6.04

AVE RF **0.776** RF RSD **10.12** AVE RT **6.04**

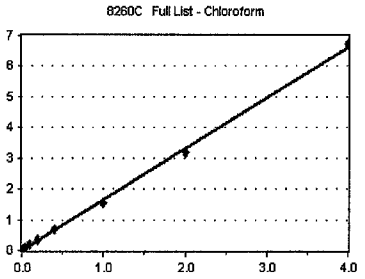
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Chloroform

Curve Fit: **AVERAGE RF**

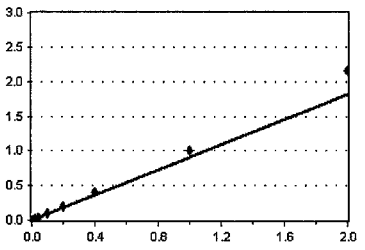


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	266	1.545	6.13
9J25051-CAL2	0.2	550	1.687	6.14
9J25051-CAL3	0.4	984	1.569	6.14
9J25051-CAL4	1	2916	1.660	6.14
9J25051-CAL5	2	5455	1.783	6.14
9J25051-CAL6	5	14639	1.738	6.14
9J25051-CAL7	10	31968	1.683	6.14
9J25051-CAL8	20	59036	1.702	6.14
9J25051-CAL9	50	146798	1.546	6.14
9J25051-CALA	100	307965	1.593	6.14
9J25051-CALB	200	570590	1.681	6.14

AVE RF **1.653** RF RSD **4.81** AVE RT **6.14**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

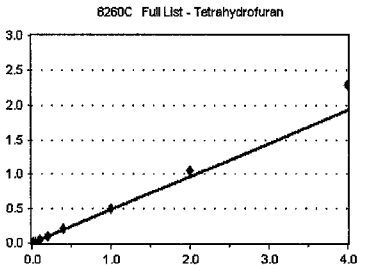


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	240	0.736	6.26
9J25051-CAL3	0.4	447	0.713	6.26
9J25051-CAL4	1	1387	0.790	6.26
9J25051-CAL5	2	2771	0.906	6.26
9J25051-CAL6	5	8051	0.956	6.26
9J25051-CAL7	10	18676	0.983	6.26
9J25051-CAL8	20	35140	1.013	6.26
9J25051-CAL9	50	95588	1.006	6.26
9J25051-CALA	100	209216	1.082	6.26
~~9J25051-CALB~~	~~200~~	~~401239~~	~~1.182~~	~~6.26~~

AVE RF **0.909** RF RSD **14.58** AVE RT **6.26**

Tetrahydrofuran

Curve Fit: **AVERAGE RF**

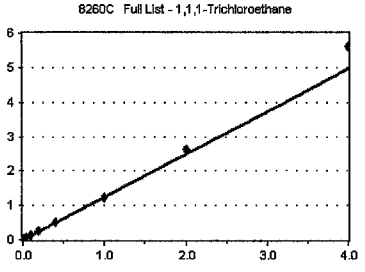


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.4	247	0.394	6.31
9J25051-CAL4	1	728	0.414	6.32
9J25051-CAL5	2	1403	0.458	6.31
9J25051-CAL6	5	4008	0.476	6.31
9J25051-CAL7	10	9225	0.486	6.31
9J25051-CAL8	20	18146	0.523	6.31
9J25051-CAL9	50	48009	0.505	6.30
9J25051-CALA	100	101260	0.524	6.30
9J25051-CALB	200	193536	0.570	6.30

AVE RF **0.483** RF RSD **11.49** AVE RT **6.31**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	204	1.185	6.34
9J25051-CAL2	0.2	348	1.068	6.34
9J25051-CAL3	0.4	733	1.169	6.34
9J25051-CAL4	1	2025	1.153	6.34
9J25051-CAL5	2	3963	1.295	6.34
9J25051-CAL6	5	10911	1.296	6.34
9J25051-CAL7	10	24426	1.286	6.34
9J25051-CAL8	20	44656	1.288	6.34
9J25051-CAL9	50	116783	1.230	6.34
9J25051-CALA	100	253138	1.309	6.34
9J25051-CALB	200	475459	1.401	6.34

AVE RF **1.243** RF RSD **7.48** AVE RT **6.34**

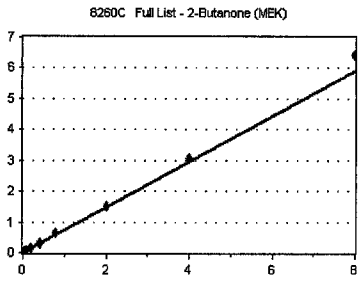
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**

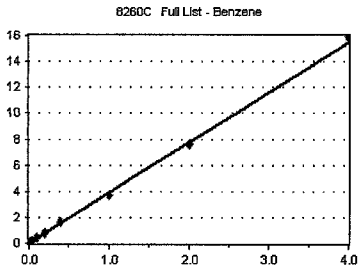


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.8	681	0.543	6.48
9J25051-CAL4	2	2324	0.661	6.48
9J25051-CAL5	4	4574	0.747	6.48
9J25051-CAL6	10	13080	0.777	6.48
9J25051-CAL7	20	29709	0.782	6.48
9J25051-CAL8	40	56191	0.810	6.48
9J25051-CAL9	100	143270	0.754	6.47
9J25051-CALA	200	294469	0.762	6.47
9J25051-CALB	400	545000	0.803	6.47

AVE RF **0.738** RF RSD **11.51** AVE RT **6.48**

Benzene

Curve Fit: **AVERAGE RF**

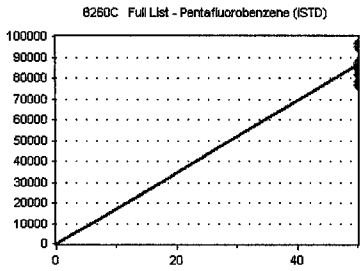


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	628	3.649	6.76
9J25051-CAL2	0.2	1235	3.789	6.75
9J25051-CAL3	0.4	2314	3.689	6.75
9J25051-CAL4	1	6507	3.704	6.75
9J25051-CAL5	2	12371	4.043	6.76
9J25051-CAL6	5	34545	4.102	6.76
9J25051-CAL7	10	76881	4.047	6.75
9J25051-CAL8	20	140134	4.040	6.75
9J25051-CAL9	50	351675	3.703	6.75
9J25051-CALA	100	738577	3.820	6.75
9J25051-CALB	200	1348023	3.971	6.75

AVE RF **3.869** RF RSD **4.48** AVE RT **6.75**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

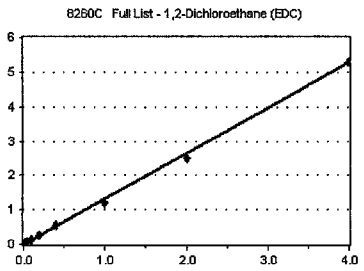


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	86062	1721.240	6.86
9J25051-CAL2	50	81493	1629.860	6.86
9J25051-CAL3	50	78410	1568.200	6.86
9J25051-CAL4	50	87837	1756.740	6.86
9J25051-CAL5	50	76501	1530.020	6.86
9J25051-CAL6	50	84206	1684.120	6.86
9J25051-CAL7	50	94987	1899.740	6.86
9J25051-CAL8	50	86706	1734.120	6.86
9J25051-CAL9	50	94974	1899.480	6.86
9J25051-CALA	50	96665	1933.300	6.86
9J25051-CALB	50	84871	1697.420	6.86

AVE RF **1732.204** RF RSD **7.72** AVE RT **6.86**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	408	1.252	6.99
9J25051-CAL3	0.4	804	1.282	6.98
9J25051-CAL4	1	2322	1.322	6.98
9J25051-CAL5	2	4512	1.474	6.98
9J25051-CAL6	5	11793	1.400	6.98
9J25051-CAL7	10	25491	1.342	6.98
9J25051-CAL8	20	46494	1.341	6.98
9J25051-CAL9	50	115183	1.213	6.98
9J25051-CALA	100	242443	1.254	6.98
9J25051-CALB	200	450038	1.326	6.98

AVE RF **1.320** RF RSD **5.83** AVE RT **6.98**

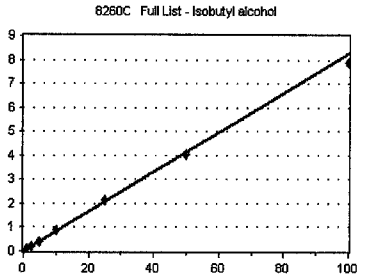
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Isobutyl alcohol

Curve Fit: **AVERAGE RF**

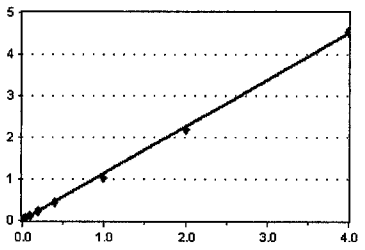


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~2.5~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~5~~	~~506~~	~~6.209~~	~~7.05~~
~~9J25051-CAL3~~	~~10~~	~~1036~~	~~0.066~~	~~7.05~~
~~9J25051-CAL4~~	~~25~~	~~3182~~	~~7.245~~	~~7.04~~
9J25051-CAL5	50	6444	8.423	7.04
9J25051-CAL6	125	17343	8.238	7.04
9J25051-CAL7	250	38810	8.172	7.04
9J25051-CAL8	500	74881	8.636	7.04
9J25051-CAL9	1250	202120	8.513	7.04
9J25051-CALA	2500	391326	0.081	7.04
9J25051-CALB	5000	669707	7.891	7.04

AVE RF **8.281** RF RSD **3.12** AVE RT **7.04**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**

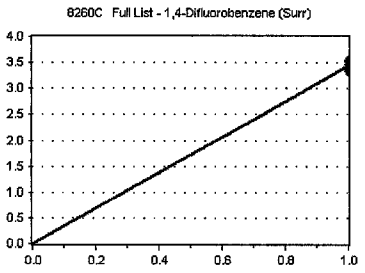


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	203	1.179	7.40
9J25051-CAL2	0.2	383	1.175	7.40
9J25051-CAL3	0.4	739	1.178	7.40
9J25051-CAL4	1	1961	1.116	7.41
9J25051-CAL5	2	3521	1.151	7.41
9J25051-CAL6	5	9556	1.135	7.40
9J25051-CAL7	10	21560	1.135	7.41
9J25051-CAL8	20	37986	1.095	7.41
9J25051-CAL9	50	98591	1.038	7.40
9J25051-CALA	100	211347	1.093	7.41
9J25051-CALB	200	384777	1.133	7.41

AVE RF **1.130** RF RSD **3.80** AVE RT **7.41**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

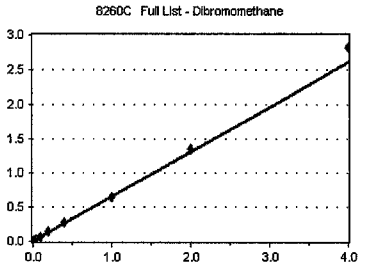


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	305946	3.555	7.45
9J25051-CAL2	50	287858	3.532	7.45
9J25051-CAL3	50	275500	3.514	7.45
9J25051-CAL4	50	309533	3.524	7.45
9J25051-CAL5	50	264143	3.453	7.45
9J25051-CAL6	50	285436	3.390	7.45
9J25051-CAL7	50	322104	3.391	7.45
9J25051-CAL8	50	291439	3.361	7.45
9J25051-CAL9	50	318518	3.354	7.45
9J25051-CALA	50	326047	3.373	7.45
9J25051-CALB	50	283209	3.337	7.45

AVE RF **3.435** RF RSD **2.40** AVE RT **7.45**

Dibromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~64~~	~~0.372~~	~~0.00~~
9J25051-CAL2	0.2	165	0.506	7.89
9J25051-CAL3	0.4	364	0.580	7.89
9J25051-CAL4	1	1159	0.660	7.88
9J25051-CAL5	2	2084	0.681	7.89
9J25051-CAL6	5	5847	0.694	7.88
9J25051-CAL7	10	13281	0.699	7.88
9J25051-CAL8	20	23918	0.690	7.89
9J25051-CAL9	50	61052	0.643	7.88
9J25051-CALA	100	129476	0.670	7.88
9J25051-CALB	200	239485	0.705	7.88

AVE RF **0.653** RF RSD **9.69** AVE RT **7.88**

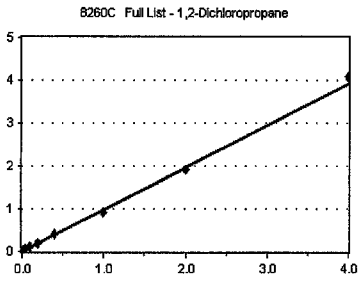
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

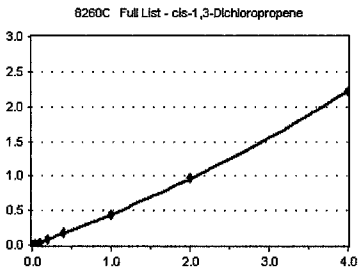


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	158	0.918	8.00
9J25051-CAL2	0.2	327	1.003	8.00
9J25051-CAL3	0.4	585	0.933	7.99
9J25051-CAL4	1	1670	0.951	8.00
9J25051-CAL5	2	3229	1.055	8.00
9J25051-CAL6	5	8575	1.018	8.00
9J25051-CAL7	10	19019	1.001	8.00
9J25051-CAL8	20	35146	1.013	8.00
9J25051-CAL9	50	87924	0.926	8.00
9J25051-CALA	100	186244	0.963	8.00
9J25051-CALB	200	345874	1.019	8.00

AVE RF **0.982** RF RSD **4.65** AVE RT **8.00**

cis-1,3-Dichloropropene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

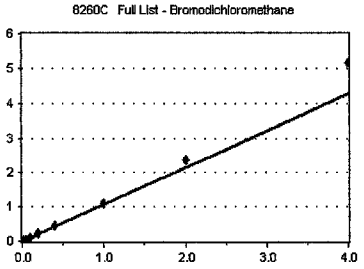


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	120	0.228	0.00
9J25051-CAL2	0.2	237	0.239	8.80
9J25051-CAL3	0.4	512	0.270	8.81
9J25051-CAL4	1	1512	0.284	8.80
9J25051-CAL5	2	3075	0.336	8.80
9J25051-CAL6	5	8925	0.358	8.80
9J25051-CAL7	10	22428	0.400	8.80
9J25051-CAL8	20	44754	0.442	8.80
9J25051-CAL9	50	122277	0.442	8.79
9J25051-CALA	100	272691	0.486	8.79
9J25051-CALB	200	524872	0.553	8.80

AVE RF **0.367** RF RSD **29.10** AVE RT **8.00**

Bromodichloromethane

Curve Fit: **AVERAGE RF**

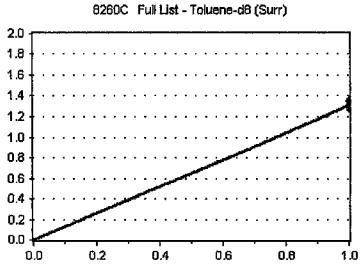


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	281	0.862	8.07
9J25051-CAL3	0.4	561	0.894	8.08
9J25051-CAL4	1	1774	1.010	8.08
9J25051-CAL5	2	3272	1.069	8.07
9J25051-CAL6	5	9117	1.083	8.08
9J25051-CAL7	10	20600	1.084	8.08
9J25051-CAL8	20	38970	1.124	8.08
9J25051-CAL9	50	103483	1.090	8.08
9J25051-CALA	100	228141	1.180	8.08
9J25051-CALB	200	436572	1.286	8.08

AVE RF **1.068** RF RSD **11.68** AVE RT **8.08**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	340973	1.297	8.99
9J25051-CAL2	50	320375	1.291	8.99
9J25051-CAL3	50	309475	1.307	8.99
9J25051-CAL4	50	348152	1.306	8.99
9J25051-CAL5	50	296218	1.295	8.99
9J25051-CAL6	50	321703	1.291	8.99
9J25051-CAL7	50	362985	1.295	8.99
9J25051-CAL8	50	329731	1.302	8.99
9J25051-CAL9	50	358348	1.294	8.99
9J25051-CALA	50	367797	1.310	8.99
9J25051-CALB	50	320536	1.352	9.00

AVE RF **1.304** RF RSD **1.32** AVE RT **8.99**

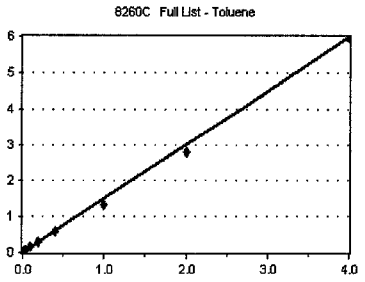
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Toluene

Curve Fit: **AVERAGE RF**

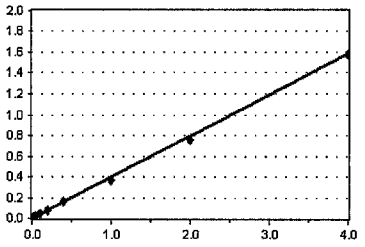


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	991	1.884	9.05
9J25051-CAL2	0.2	1534	1.545	9.05
9J25051-CAL3	0.4	2717	1.435	9.05
9J25051-CAL4	1	7737	1.451	9.04
9J25051-CAL5	2	13799	1.508	9.04
9J25051-CAL6	5	37021	1.486	9.04
9J25051-CAL7	10	81964	1.463	9.04
9J25051-CAL8	20	148631	1.467	9.04
9J25051-CAL9	50	371837	1.343	9.04
9J25051-CALA	100	781810	1.392	9.04
9J25051-CALB	200	1414184	1.491	9.04

AVE RF **1.497** RF RSD **9.34** AVE RT **9.05**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**

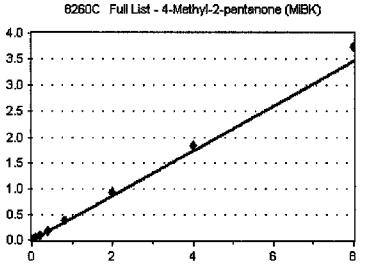


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	215	0.409	9.44
9J25051-CAL2	0.2	428	0.431	9.43
9J25051-CAL3	0.4	724	0.382	9.44
9J25051-CAL4	1	2028	0.380	9.44
9J25051-CAL5	2	3761	0.411	9.43
9J25051-CAL6	5	10200	0.409	9.43
9J25051-CAL7	10	22594	0.403	9.43
9J25051-CAL8	20	40323	0.398	9.43
9J25051-CAL9	50	102842	0.371	9.43
9J25051-CALA	100	212731	0.379	9.43
9J25051-CALB	200	374693	0.395	9.43

AVE RF **0.397** RF RSD **4.49** AVE RT **9.44**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

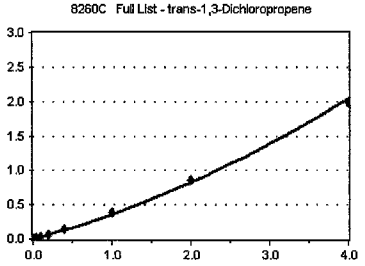


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.2~~	~~316~~	~~0.300~~	~~9.45~~
~~9J25051-CAL2~~	~~0.4~~	~~661~~	~~0.333~~	~~9.44~~
9J25051-CAL3	0.8	1338	0.353	9.45
9J25051-CAL4	2	3944	0.370	9.44
9J25051-CAL5	4	7750	0.424	9.44
9J25051-CAL6	10	21651	0.434	9.44
9J25051-CAL7	20	50335	0.449	9.44
9J25051-CAL8	40	98178	0.484	9.43
9J25051-CAL9	100	254574	0.460	9.43
9J25051-CALA	200	518207	0.461	9.43
9J25051-CALB	400	885884	0.467	9.43

AVE RF **0.434** RF RSD **10.32** AVE RT **9.44**

trans-1,3-Dichloropropene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	211	0.213	9.48
9J25051-CAL3	0.4	400	0.211	9.48
9J25051-CAL4	1	1296	0.243	9.47
9J25051-CAL5	2	2554	0.279	9.47
9J25051-CAL6	5	7875	0.316	9.47
9J25051-CAL7	10	19307	0.345	9.47
9J25051-CAL8	20	37931	0.374	9.47
9J25051-CAL9	50	107286	0.387	9.47
9J25051-CALA	100	242090	0.431	9.47
9J25051-CALB	200	467620	0.493	9.47

AVE RF **0.329** RF RSD **28.73** AVE RT **9.47**

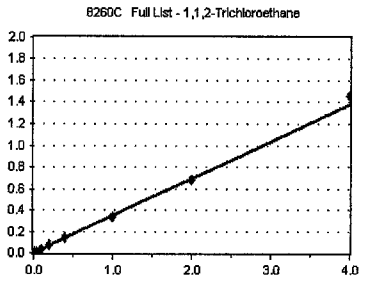
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

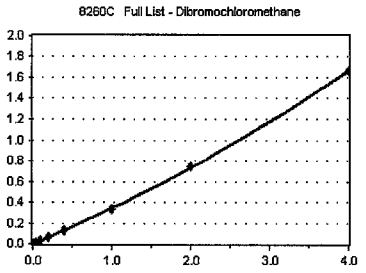


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	163	0.310	9.63
9J25051-CAL2	0.2	312	0.314	9.64
9J25051-CAL3	0.4	608	0.321	9.62
9J25051-CAL4	1	1761	0.330	9.62
9J25051-CAL5	2	3489	0.381	9.63
9J25051-CAL6	5	9239	0.371	9.62
9J25051-CAL7	10	20512	0.366	9.62
9J25051-CAL8	20	36821	0.363	9.62
9J25051-CAL9	50	91931	0.332	9.62
9J25051-CALA	100	191781	0.341	9.62
9J25051-CALB	200	346944	0.366	9.62

AVE RF **0.345** RF RSD **7.30** AVE RT **9.63**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

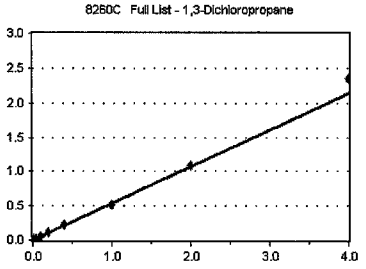


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~42~~	~~7.985~~	~~0.00~~
9J25051-CAL2	0.2	181	0.182	9.79
9J25051-CAL3	0.4	425	0.224	9.79
9J25051-CAL4	1	1298	0.243	9.79
9J25051-CAL5	2	2572	0.281	9.79
9J25051-CAL6	5	7461	0.299	9.79
9J25051-CAL7	10	17581	0.314	9.79
9J25051-CAL8	20	33811	0.334	9.79
9J25051-CAL9	50	93162	0.336	9.79
9J25051-CALA	100	208257	0.371	9.79
9J25051-CALB	200	394459	0.416	9.79

AVE RF **0.300** RF RSD **23.35** AVE RT **9.79**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

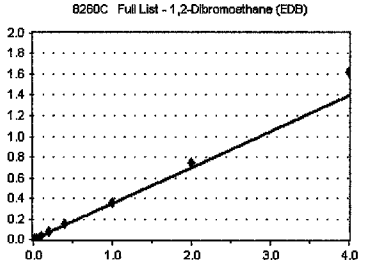


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	265	0.504	9.88
9J25051-CAL2	0.2	464	0.467	9.88
9J25051-CAL3	0.4	881	0.465	9.88
9J25051-CAL4	1	2761	0.518	9.88
9J25051-CAL5	2	5172	0.565	9.88
9J25051-CAL6	5	14110	0.566	9.88
9J25051-CAL7	10	31655	0.565	9.88
9J25051-CAL8	20	57259	0.565	9.88
9J25051-CAL9	50	144038	0.520	9.88
9J25051-CALA	100	305571	0.544	9.88
9J25051-CALB	200	557771	0.588	9.88

AVE RF **0.533** RF RSD **7.84** AVE RT **9.88**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	286	0.288	10.01
9J25051-CAL3	0.4	559	0.295	10.01
9J25051-CAL4	1	1647	0.309	10.01
9J25051-CAL5	2	3150	0.344	10.01
9J25051-CAL6	5	9131	0.366	10.01
9J25051-CAL7	10	20378	0.364	10.01
9J25051-CAL8	20	38181	0.377	10.00
9J25051-CAL9	50	98185	0.355	10.00
9J25051-CALA	100	208836	0.372	10.00
9J25051-CALB	200	384667	0.406	10.01

AVE RF **0.348** RF RSD **11.05** AVE RT **10.01**

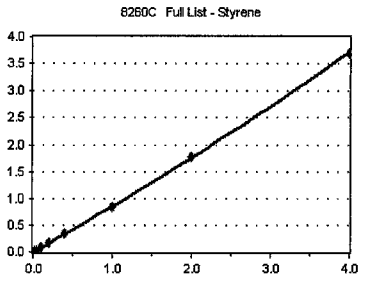
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Styrene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

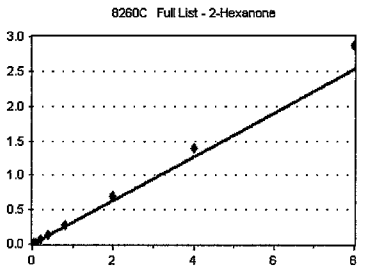


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	224	0.426	0.00
9J25051-CAL2	0.2	473	0.477	11.02
9J25051-CAL3	0.4	899	0.475	11.02
9J25051-CAL4	1	2917	0.547	11.01
9J25051-CAL5	2	6029	0.659	11.01
9J25051-CAL6	5	19241	0.772	11.01
9J25051-CAL7	10	46210	0.825	11.01
9J25051-CAL8	20	88408	0.873	11.01
9J25051-CAL9	50	234659	0.847	11.01
9J25051-CALA	100	496713	0.884	11.01
9J25051-CALB	200	878618	0.926	11.01

AVE RF **0.701** RF RSD **27.01** AVE RT **10.01**

2-Hexanone

Curve Fit: **AVERAGE RF**

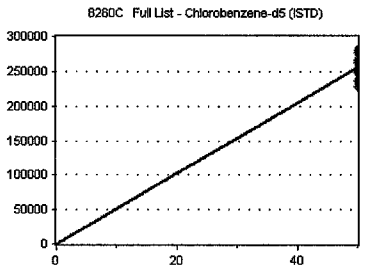


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.4~~	~~303~~	~~0.153~~	~~10.22~~
~~9J25051-CAL3~~	~~0.8~~	~~717~~	~~0.189~~	~~10.21~~
9J25051-CAL4	2	2488	0.233	10.21
9J25051-CAL5	4	5003	0.273	10.21
9J25051-CAL6	10	14919	0.299	10.21
9J25051-CAL7	20	35393	0.316	10.21
9J25051-CAL8	40	71710	0.354	10.21
9J25051-CAL9	100	193352	0.349	10.21
9J25051-CALA	200	392003	0.349	10.21
9J25051-CALB	400	679397	0.358	10.21

AVE RF **0.316** RF RSD **14.29** AVE RT **10.21**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

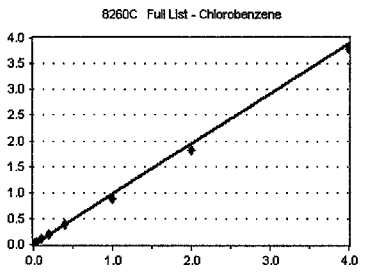


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	262978	5259.560	10.45
9J25051-CAL2	50	248140	4962.800	10.45
9J25051-CAL3	50	236751	4735.020	10.45
9J25051-CAL4	50	266623	5332.460	10.45
9J25051-CAL5	50	228711	4574.220	10.45
9J25051-CAL6	50	249179	4983.580	10.45
9J25051-CAL7	50	280212	5604.240	10.45
9J25051-CAL8	50	253314	5066.280	10.45
9J25051-CAL9	50	276912	5538.240	10.45
9J25051-CALA	50	280815	5616.300	10.45
9J25051-CALB	50	237104	4742.080	10.45

AVE RF **5128.616** RF RSD **7.18** AVE RT **10.45**

Chlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	553	1.051	10.47
9J25051-CAL2	0.2	977	0.984	10.46
9J25051-CAL3	0.4	1806	0.954	10.47
9J25051-CAL4	1	5325	0.999	10.47
9J25051-CAL5	2	9394	1.027	10.46
9J25051-CAL6	5	25125	1.008	10.47
9J25051-CAL7	10	54921	0.980	10.47
9J25051-CAL8	20	98998	0.977	10.47
9J25051-CAL9	50	247035	0.892	10.47
9J25051-CALA	100	511165	0.910	10.47
9J25051-CALB	200	897555	0.946	10.47

AVE RF **0.975** RF RSD **4.88** AVE RT **10.47**

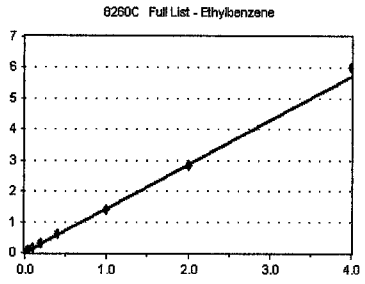
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Ethylbenzene

Curve Fit: **AVERAGE RF**

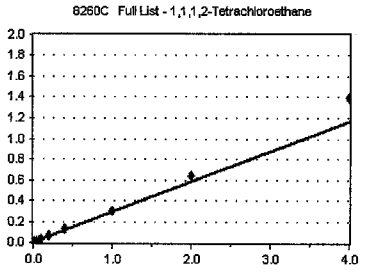


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	756	1.437	10.49
9J25051-CAL2	0.2	1384	1.394	10.49
9J25051-CAL3	0.4	2478	1.308	10.49
9J25051-CAL4	1	7230	1.356	10.49
9J25051-CAL5	2	13598	1.486	10.49
9J25051-CAL6	5	37238	1.494	10.49
9J25051-CAL7	10	82267	1.468	10.49
9J25051-CAL8	20	150206	1.482	10.49
9J25051-CAL9	50	384473	1.388	10.49
9J25051-CALA	100	801122	1.426	10.49
9J25051-CALB	200	1424477	1.502	10.49

AVE RF **1.431** RF RSD **4.42** AVE RT **10.49**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

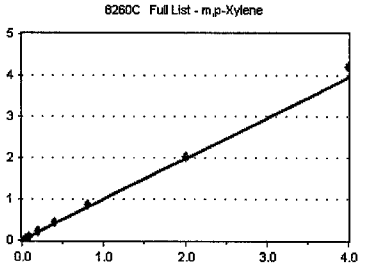


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	228	0.230	10.53
9J25051-CAL3	0.4	486	0.257	10.53
9J25051-CAL4	1	1443	0.271	10.52
9J25051-CAL5	2	2578	0.282	10.53
9J25051-CAL6	5	7365	0.296	10.53
9J25051-CAL7	10	17260	0.308	10.53
9J25051-CAL8	20	31571	0.312	10.53
9J25051-CAL9	50	84064	0.304	10.53
9J25051-CALA	100	180354	0.321	10.53
9J25051-CALB	200	330493	0.348	10.53

AVE RF **0.293** RF RSD **11.68** AVE RT **10.52**

m,p-Xylene

Curve Fit: **AVERAGE RF**

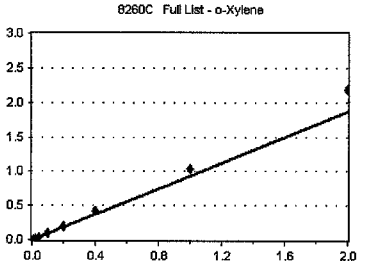


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.2~~	~~920~~	~~0.875~~	~~10.62~~
~~9J25051-CAL2~~	~~0.4~~	~~1670~~	~~0.841~~	~~10.62~~
9J25051-CAL3	0.8	3107	0.820	10.62
9J25051-CAL4	2	9040	0.848	10.61
9J25051-CAL5	4	17637	0.964	10.62
9J25051-CAL6	10	51157	1.027	10.61
9J25051-CAL7	20	117957	1.052	10.61
9J25051-CAL8	40	220983	1.090	10.61
9J25051-CAL9	100	564636	1.020	10.61
9J25051-CALA	200	1184446	1.054	10.61
~~9J25051-CALB~~	~~400~~	~~2061112~~	~~1.087~~	~~10.61~~

AVE RF **0.984** RF RSD **10.15** AVE RT **10.61**

o-Xylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~378~~	~~0.719~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~748~~	~~0.754~~	~~10.97~~
9J25051-CAL3	0.4	1387	0.732	10.97
9J25051-CAL4	1	4144	0.777	10.97
9J25051-CAL5	2	7805	0.853	10.97
9J25051-CAL6	5	23185	0.930	10.97
9J25051-CAL7	10	54341	0.970	10.97
9J25051-CAL8	20	107127	1.057	10.97
9J25051-CAL9	50	288059	1.040	10.97
9J25051-CALA	100	616887	1.098	10.97
~~9J25051-CALB~~	~~200~~	~~1108926~~	~~1.169~~	~~10.97~~

AVE RF **0.932** RF RSD **14.42** AVE RT **10.97**

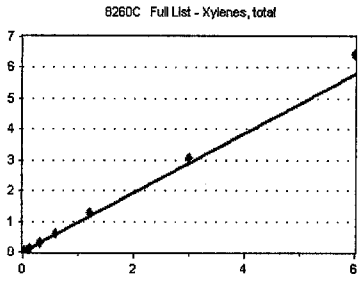
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Xylenes, total

Curve Fit: **AVERAGE RF**

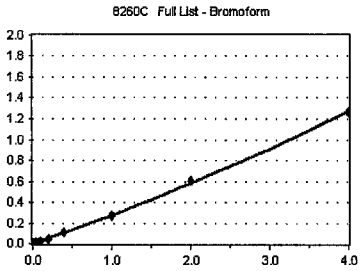


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.3~~	~~1298~~	~~0.823~~	~~10.62~~
~~9J25051-CAL2~~	~~0.6~~	~~2418~~	~~0.812~~	~~10.97~~
9J25051-CAL3	1.2	4494	0.791	10.97
9J25051-CAL4	3	13184	0.824	10.97
9J25051-CAL5	6	25442	0.927	10.97
9J25051-CAL6	15	74342	0.994	10.97
9J25051-CAL7	30	172298	1.025	10.97
9J25051-CAL8	60	328110	1.079	10.97
9J25051-CAL9	150	852695	1.026	10.97
9J25051-CALA	300	1801333	1.069	10.97
~~9J25051-CALB~~	~~600~~	~~3170038~~	~~1.114~~	~~10.97~~

AVE RF **0.967** RF RSD **11.31** AVE RT **10.97**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

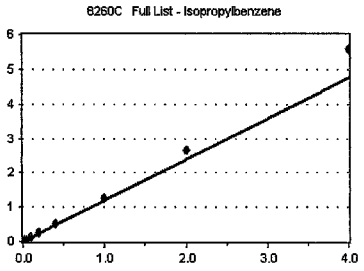


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	134	0.135	11.04
9J25051-CAL3	0.4	316	0.167	11.04
9J25051-CAL4	1	931	0.175	11.04
9J25051-CAL5	2	1883	0.206	11.04
9J25051-CAL6	5	5513	0.221	11.04
9J25051-CAL7	10	13109	0.234	11.04
9J25051-CAL8	20	26373	0.260	11.04
9J25051-CAL9	50	75820	0.274	11.04
9J25051-CALA	100	169206	0.301	11.04
9J25051-CALB	200	299993	0.316	11.04

AVE RF **0.229** RF RSD **26.09** AVE RT **11.04**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

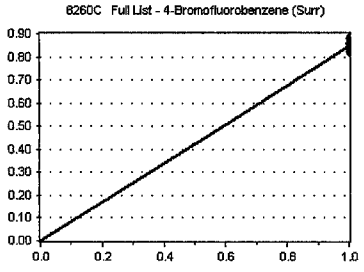


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~392~~	~~0.745~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~829~~	~~0.835~~	~~11.22~~
~~9J25051-CAL3~~	~~0.4~~	~~1525~~	~~0.805~~	~~11.22~~
9J25051-CAL4	1	4739	0.889	11.22
9J25051-CAL5	2	9314	1.018	11.22
9J25051-CAL6	5	28750	1.154	11.22
9J25051-CAL7	10	68642	1.225	11.22
9J25051-CAL8	20	131792	1.301	11.22
9J25051-CAL9	50	349766	1.263	11.22
9J25051-CALA	100	744896	1.326	11.22
9J25051-CALB	200	1319857	1.392	11.22

AVE RF **1.196** RF RSD **14.11** AVE RT **11.22**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	110058	0.854	11.45
9J25051-CAL2	50	103556	0.843	11.45
9J25051-CAL3	50	97363	0.833	11.45
9J25051-CAL4	50	112252	0.832	11.45
9J25051-CAL5	50	93974	0.822	11.45
9J25051-CAL6	50	105208	0.837	11.45
9J25051-CAL7	50	119477	0.842	11.45
9J25051-CAL8	50	107703	0.837	11.45
9J25051-CAL9	50	121264	0.846	11.45
9J25051-CALA	50	124225	0.859	11.45
9J25051-CALB	50	102899	0.882	11.45

AVE RF **0.844** RF RSD **1.92** AVE RT **11.45**

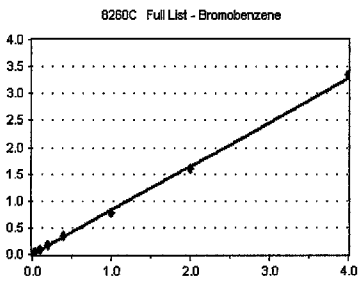
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

Bromobenzene

Curve Fit: **AVERAGE RF**

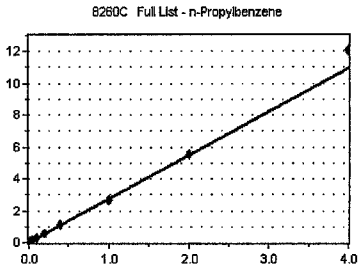


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	212	0.823	11.53
9J25051-CAL2	0.2	389	0.792	11.53
9J25051-CAL3	0.4	732	0.783	11.53
9J25051-CAL4	1	2221	0.824	11.53
9J25051-CAL5	2	3862	0.844	11.53
9J25051-CAL6	5	10809	0.860	11.53
9J25051-CAL7	10	23997	0.846	11.53
9J25051-CAL8	20	43790	0.851	11.53
9J25051-CAL9	50	111875	0.781	11.53
9J25051-CALA	100	230853	0.798	11.53
9J25051-CALB	200	391986	0.840	11.53

AVE RF **0.822** RF RSD **3.52** AVE RT **11.53**

n-Propylbenzene

Curve Fit: **AVERAGE RF**

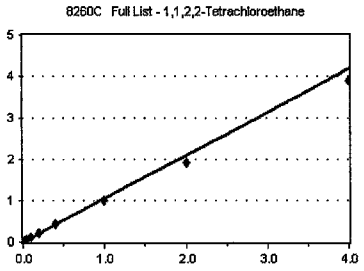


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	703	2.728	11.54
9J25051-CAL2	0.2	1268	2.581	11.54
9J25051-CAL3	0.4	2261	2.417	11.54
9J25051-CAL4	1	6998	2.595	11.54
9J25051-CAL5	2	13043	2.852	11.54
9J25051-CAL6	5	35745	2.843	11.54
9J25051-CAL7	10	80330	2.831	11.54
9J25051-CAL8	20	148949	2.894	11.54
9J25051-CAL9	50	381465	2.661	11.54
9J25051-CALA	100	803869	2.780	11.54
9J25051-CALB	200	1412751	3.027	11.54

AVE RF **2.746** RF RSD **6.26** AVE RT **11.54**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

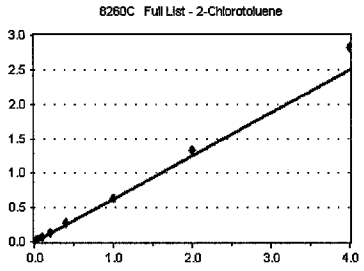


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	251	0.974	11.60
9J25051-CAL2	0.2	488	0.993	11.60
9J25051-CAL3	0.4	967	1.034	11.60
9J25051-CAL4	1	2820	1.046	11.60
9J25051-CAL5	2	5527	1.209	11.60
9J25051-CAL6	5	14004	1.114	11.60
9J25051-CAL7	10	31762	1.119	11.60
9J25051-CAL8	20	56394	1.096	11.60
9J25051-CAL9	50	142222	0.992	11.60
9J25051-CALA	100	276789	0.957	11.60
9J25051-CALB	200	454028	0.973	11.60

AVE RF **1.046** RF RSD **7.59** AVE RT **11.60**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~96~~	~~0.373~~	~~0.00~~
9J25051-CAL2	0.2	243	0.495	11.67
9J25051-CAL3	0.4	481	0.514	11.67
9J25051-CAL4	1	1659	0.615	11.67
9J25051-CAL5	2	2896	0.633	11.67
9J25051-CAL6	5	8212	0.653	11.67
9J25051-CAL7	10	18857	0.665	11.67
9J25051-CAL8	20	34740	0.675	11.67
9J25051-CAL9	50	90597	0.632	11.67
9J25051-CALA	100	191643	0.663	11.67
9J25051-CALB	200	329426	0.706	11.67

AVE RF **0.625** RF RSD **10.97** AVE RT **11.67**

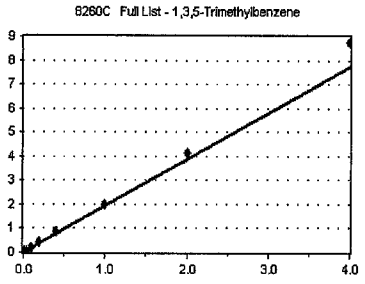
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

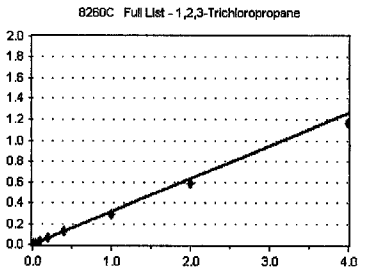


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~347~~	~~1.347~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~719~~	~~1.464~~	~~11.69~~
9J25051-CAL3	0.4	1388	1.484	11.69
9J25051-CAL4	1	4147	1.538	11.69
9J25051-CAL5	2	8326	1.821	11.69
9J25051-CAL6	5	25171	2.002	11.69
9J25051-CAL7	10	60626	2.137	11.69
9J25051-CAL8	20	112417	2.184	11.69
9J25051-CAL9	50	287885	2.009	11.69
9J25051-CALA	100	599123	2.072	11.69
9J25051-CALB	200	1024588	2.195	11.69

AVE RF **1.938** RF RSD **13.82** AVE RT **11.69**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**

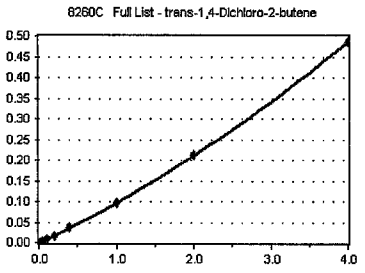


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	154	0.313	11.71
9J25051-CAL3	0.4	290	0.310	11.70
9J25051-CAL4	1	889	0.330	11.71
9J25051-CAL5	2	1624	0.355	11.71
9J25051-CAL6	5	4250	0.338	11.71
9J25051-CAL7	10	9293	0.328	11.71
9J25051-CAL8	20	16623	0.323	11.71
9J25051-CAL9	50	42315	0.295	11.71
9J25051-CALA	100	84503	0.292	11.71
9J25051-CALB	200	135722	0.291	11.71

AVE RF **0.317** RF RSD **6.67** AVE RT **11.71**

trans-1,4-Dichloro-2-butene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

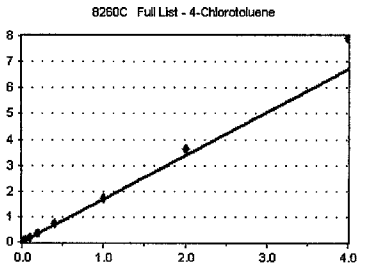


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL4	1	151	5.599	11.73
9J25051-CAL5	2	314	6.866	11.74
9J25051-CAL6	5	920	0.073	11.74
9J25051-CAL7	10	2243	7.905	11.74
9J25051-CAL8	20	4774	9.275	11.74
9J25051-CAL9	50	13756	9.597	11.73
9J25051-CALA	100	31040	0.107	11.73
9J25051-CALB	200	56671	0.121	11.73

AVE RF **8.679** RF RSD **24.88** AVE RT **11.74**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	380	1.475	11.80
9J25051-CAL2	0.2	709	1.443	11.80
9J25051-CAL3	0.4	1263	1.350	11.80
9J25051-CAL4	1	4167	1.545	11.79
9J25051-CAL5	2	7775	1.700	11.79
9J25051-CAL6	5	22730	1.808	11.79
9J25051-CAL7	10	51031	1.799	11.79
9J25051-CAL8	20	94606	1.838	11.79
9J25051-CAL9	50	246655	1.721	11.79
9J25051-CALA	100	522158	1.806	11.79
9J25051-CALB	200	925899	1.984	11.79

AVE RF **1.679** RF RSD **11.77** AVE RT **11.79**

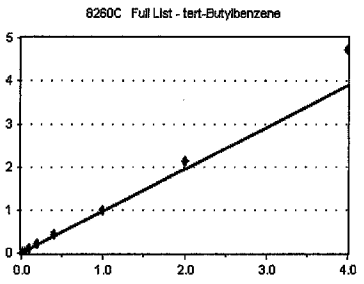
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

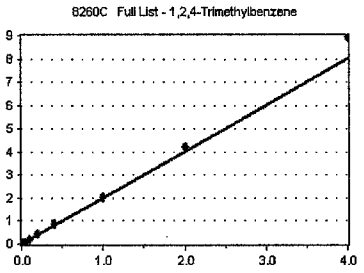


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~160~~	~~0.621~~	~~0.00~~
9J25051-CAL2	0.2	398	0.810	11.93
9J25051-CAL3	0.4	728	0.778	11.93
9J25051-CAL4	1	2301	0.853	11.93
9J25051-CAL5	2	4363	0.954	11.93
9J25051-CAL6	5	12557	0.999	11.93
9J25051-CAL7	10	28831	1.016	11.93
9J25051-CAL8	20	54853	1.066	11.93
9J25051-CAL9	50	144949	1.011	11.93
9J25051-CALA	100	309424	1.070	11.93
9J25051-CALB	200	552713	1.184	11.93

AVE RF **0.974** RF RSD **13.06** AVE RT **11.93**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**

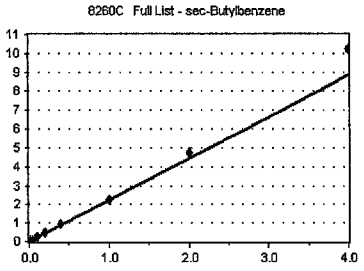


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~385~~	~~1.494~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~700~~	~~1.425~~	~~11.98~~
~~9J25051-CAL3~~	~~0.4~~	~~1235~~	~~1.320~~	~~11.98~~
9J25051-CAL4	1	3979	1.475	11.98
9J25051-CAL5	2	7870	1.721	11.98
9J25051-CAL6	5	25589	2.035	11.98
9J25051-CAL7	10	62151	2.190	11.98
9J25051-CAL8	20	115215	2.238	11.98
9J25051-CAL9	50	293788	2.050	11.98
9J25051-CALA	100	612078	2.117	11.98
9J25051-CALB	200	1045289	2.240	11.98

AVE RF **2.008** RF RSD **13.58** AVE RT **11.98**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

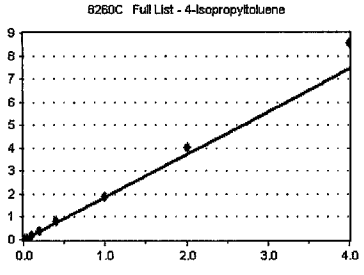


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~435~~	~~1.688~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~773~~	~~1.574~~	~~12.07~~
9J25051-CAL3	0.4	1554	1.661	12.06
9J25051-CAL4	1	5081	1.884	12.06
9J25051-CAL5	2	9664	2.113	12.06
9J25051-CAL6	5	29229	2.325	12.06
9J25051-CAL7	10	66926	2.359	12.06
9J25051-CAL8	20	124647	2.422	12.06
9J25051-CAL9	50	321962	2.246	12.06
9J25051-CALA	100	687152	2.376	12.06
9J25051-CALB	200	1192215	2.554	12.06

AVE RF **2.216** RF RSD **12.81** AVE RT **12.06**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~323~~	~~1.253~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~591~~	~~1.203~~	~~12.17~~
~~9J25051-CAL3~~	~~0.4~~	~~1094~~	~~1.170~~	~~12.17~~
9J25051-CAL4	1	3769	1.398	12.17
9J25051-CAL5	2	7387	1.615	12.17
9J25051-CAL6	5	23158	1.842	12.17
9J25051-CAL7	10	55590	1.959	12.17
9J25051-CAL8	20	105070	2.041	12.17
9J25051-CAL9	50	273920	1.911	12.17
9J25051-CALA	100	583941	2.019	12.17
9J25051-CALB	200	1001166	2.145	12.17

AVE RF **1.866** RF RSD **13.21** AVE RT **12.17**

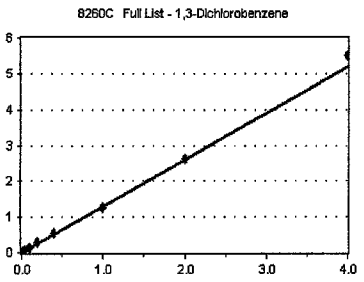
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

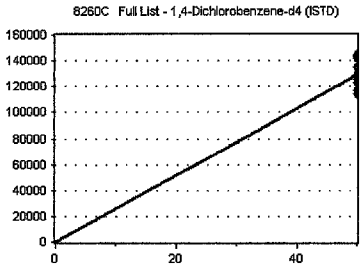


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	309	1.199	12.24
9J25051-CAL2	0.2	622	1.266	12.24
9J25051-CAL3	0.4	1072	1.146	12.24
9J25051-CAL4	1	3266	1.211	12.24
9J25051-CAL5	2	6240	1.364	12.24
9J25051-CAL6	5	17620	1.401	12.24
9J25051-CAL7	10	39173	1.381	12.24
9J25051-CAL8	20	70439	1.369	12.24
9J25051-CAL9	50	182204	1.271	12.24
9J25051-CALA	100	382076	1.321	12.24
9J25051-CALB	200	641529	1.374	12.24

AVE RF **1.300** RF RSD **6.68** AVE RT **12.24**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

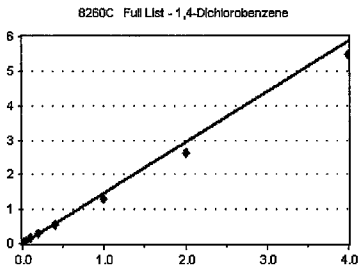


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	128844	2576.880	12.29
9J25051-CAL2	50	122815	2456.300	12.29
9J25051-CAL3	50	116929	2338.580	12.29
9J25051-CAL4	50	134840	2696.800	12.29
9J25051-CAL5	50	114333	2286.660	12.29
9J25051-CAL6	50	125726	2514.520	12.29
9J25051-CAL7	50	141868	2837.360	12.29
9J25051-CAL8	50	128679	2573.580	12.29
9J25051-CAL9	50	143329	2866.580	12.29
9J25051-CALA	50	144590	2891.800	12.29
9J25051-CALB	50	116686	2333.720	12.29

AVE RF **2579.344** RF RSD **8.53** AVE RT **12.29**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

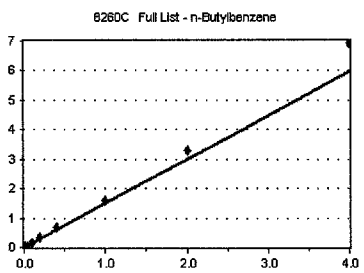


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	450	1.746	12.31
9J25051-CAL2	0.2	808	1.645	12.30
9J25051-CAL3	0.4	1394	1.490	12.31
9J25051-CAL4	1	3909	1.449	12.31
9J25051-CAL5	2	6942	1.518	12.31
9J25051-CAL6	5	18805	1.496	12.31
9J25051-CAL7	10	40327	1.421	12.31
9J25051-CAL8	20	71878	1.396	12.31
9J25051-CAL9	50	184746	1.289	12.31
9J25051-CALA	100	380389	1.315	12.31
9J25051-CALB	200	639760	1.371	12.31

AVE RF **1.467** RF RSD **9.27** AVE RT **12.30**

n-Butylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~309~~	~~1.199~~	~~0.00~~
9J25051-CAL2	0.2	574	1.168	12.49
9J25051-CAL3	0.4	1096	1.172	12.49
9J25051-CAL4	1	3461	1.283	12.49
9J25051-CAL5	2	6447	1.410	12.49
9J25051-CAL6	5	19439	1.546	12.49
9J25051-CAL7	10	47013	1.657	12.49
9J25051-CAL8	20	88503	1.719	12.49
9J25051-CAL9	50	225454	1.573	12.48
9J25051-CALA	100	474858	1.642	12.49
9J25051-CALB	200	806750	1.728	12.49

AVE RF **1.490** RF RSD **14.58** AVE RT **12.49**

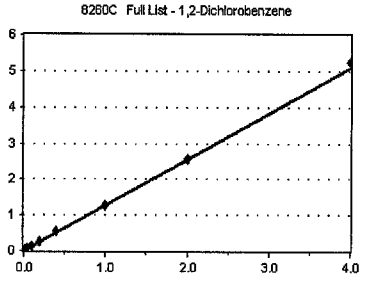
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

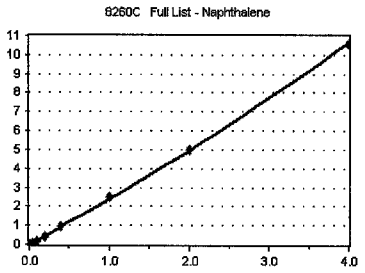


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	0.1	309	1.199	12.64
9J25051-CAL2	0.2	584	1.189	12.64
9J25051-CAL3	0.4	1052	1.125	12.63
9J25051-CAL4	1	3393	1.258	12.64
9J25051-CAL5	2	6204	1.357	12.64
9J25051-CAL6	5	16971	1.350	12.64
9J25051-CAL7	10	38505	1.357	12.64
9J25051-CAL8	20	69775	1.356	12.63
9J25051-CAL9	50	181138	1.264	12.63
9J25051-CALA	100	368271	1.274	12.63
9J25051-CALB	200	612148	1.312	12.63

AVE RF **1.276** RF RSD **6.22** AVE RT **12.63**

Naphthalene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

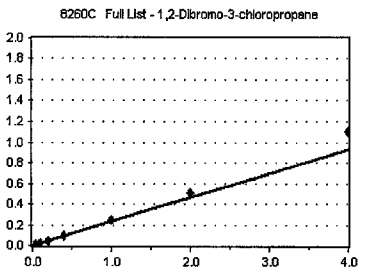


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL2	0.2	453	0.922	0.00
9J25051-CAL3	0.4	915	0.978	14.20
9J25051-CAL4	1	2843	1.054	14.20
9J25051-CAL5	2	5987	1.309	14.20
9J25051-CAL6	5	19030	1.514	14.20
9J25051-CAL7	10	56149	1.979	14.20
9J25051-CAL8	20	123502	2.399	14.20
9J25051-CAL9	50	357738	2.496	14.20
9J25051-CALA	100	723210	2.501	14.20
9J25051-CALB	200	1237338	2.651	14.20

AVE RF **1.780** RF RSD **39.33** AVE RT **12.78**

1,2-Dibromo-3-chloropropane

Curve Fit: **AVERAGE RF**

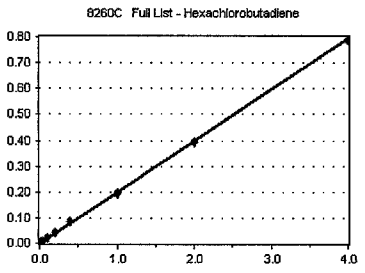


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~121~~	~~0.129~~	~~13.29~~
~~9J25051-CAL4~~	~~1~~	~~450~~	~~0.167~~	~~13.28~~
9J25051-CAL5	2	887	0.194	13.28
9J25051-CAL6	5	2511	0.200	13.28
9J25051-CAL7	10	6229	0.220	13.28
9J25051-CAL8	20	11935	0.232	13.28
9J25051-CAL9	50	35194	0.246	13.28
9J25051-CALA	100	72710	0.251	13.28
9J25051-CALB	200	128958	0.276	13.28

AVE RF **0.231** RF RSD **12.69** AVE RT **13.28**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.4	161	0.172	13.83
9J25051-CAL4	1	499	0.185	13.83
9J25051-CAL5	2	925	0.202	13.83
9J25051-CAL6	5	2612	0.208	13.83
9J25051-CAL7	10	6191	0.218	13.83
9J25051-CAL8	20	11238	0.218	13.83
9J25051-CAL9	50	27912	0.195	13.83
9J25051-CALA	100	56850	0.197	13.83
9J25051-CALB	200	91693	0.196	13.83

AVE RF **0.199** RF RSD **7.49** AVE RT **13.83**

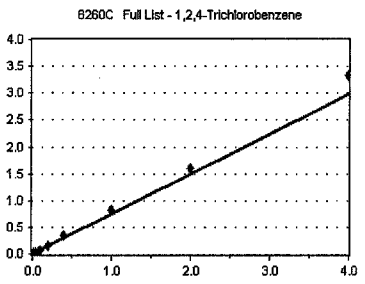
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VG191025W VG191025G**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**

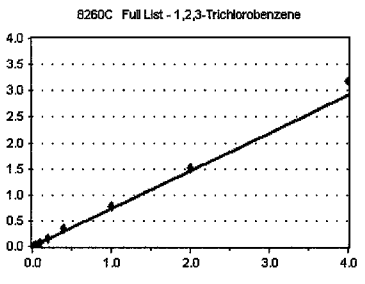


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~123~~	~~0.477~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~228~~	~~0.464~~	~~13.88~~
~~9J25051-CAL3~~	~~0.4~~	~~459~~	~~0.491~~	~~13.87~~
9J25051-CAL4	1	1602	0.594	13.87
9J25051-CAL5	2	2902	0.635	13.87
9J25051-CAL6	5	8550	0.680	13.87
9J25051-CAL7	10	22360	0.788	13.87
9J25051-CAL8	20	43365	0.843	13.87
9J25051-CAL9	50	116235	0.811	13.87
9J25051-CALA	100	230455	0.797	13.87
9J25051-CALB	200	388731	0.833	13.87

AVE RF **0.747** RF RSD **12.92** AVE RT **13.87**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~188~~	~~0.383~~	~~14.40~~
~~9J25051-CAL3~~	~~0.4~~	~~435~~	~~0.465~~	~~14.40~~
9J25051-CAL4	1	1447	0.537	14.40
9J25051-CAL5	2	2863	0.626	14.40
9J25051-CAL6	5	8797	0.700	14.40
9J25051-CAL7	10	22886	0.807	14.40
9J25051-CAL8	20	43488	0.845	14.40
9J25051-CAL9	50	112370	0.784	14.40
9J25051-CALA	100	219631	0.759	14.40
9J25051-CALB	200	370994	0.795	14.40

AVE RF **0.732** RF RSD **14.26** AVE RT **14.40**

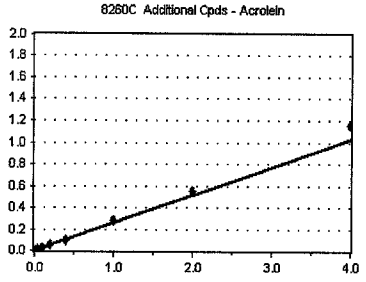
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VG191025W VG191025G**

Acrolein

Curve Fit: **AVERAGE RF**

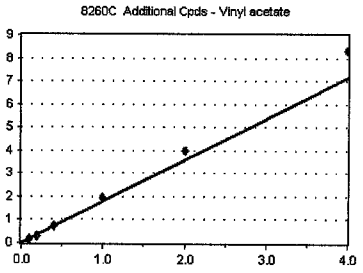


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL4	1	363	0.207	4.03
9J25051-CAL5	2	797	0.260	4.03
9J25051-CAL6	5	2034	0.242	4.04
9J25051-CAL7	10	4726	0.249	4.03
9J25051-CAL8	20	8799	0.254	4.03
9J25051-CAL9	50	26568	0.280	4.03
9J25051-CALA	100	53447	0.276	4.03
9J25051-CALB	200	98401	0.290	4.03

AVE RF **0.257** RF RSD **10.23** AVE RT **4.03**

Vinyl acetate

Curve Fit: **AVERAGE RF**

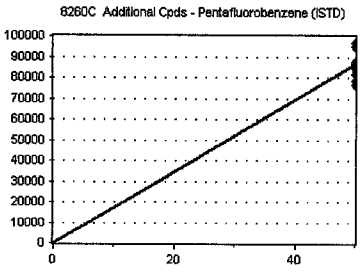


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL4~~	~~1~~	~~1655~~	~~0.942~~	~~5.53~~
~~9J25051-CAL5~~	~~2~~	~~3721~~	~~1.216~~	~~5.53~~
9J25051-CAL6	5	11730	1.393	5.53
9J25051-CAL7	10	29582	1.557	5.53
9J25051-CAL8	20	61236	1.766	5.53
9J25051-CAL9	50	183258	1.930	5.53
9J25051-CALA	100	384431	1.988	5.53
9J25051-CALB	200	704281	2.075	5.53

AVE RF **1.785** RF RSD **14.87** AVE RT **5.53**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

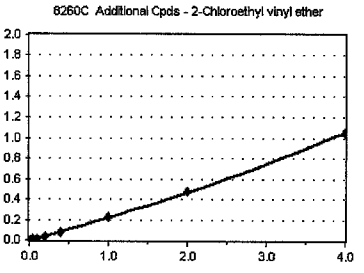


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	86062	1721.240	6.86
9J25051-CAL2	50	81493	1629.860	6.86
9J25051-CAL3	50	78410	1568.200	6.86
9J25051-CAL4	50	87837	1756.740	6.86
9J25051-CAL5	50	76501	1530.020	6.86
9J25051-CAL6	50	84206	1684.120	6.86
9J25051-CAL7	50	94987	1899.740	6.86
9J25051-CAL8	50	86706	1734.120	6.86
9J25051-CAL9	50	94974	1899.480	6.86
9J25051-CALA	50	96665	1933.300	6.86
9J25051-CALB	50	84871	1697.420	6.86

AVE RF **1732.204** RF RSD **7.72** AVE RT **6.86**

2-Chloroethyl vinyl ether

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.4	147	7.761	8.75
9J25051-CAL4	1	648	0.122	8.74
9J25051-CAL5	2	1287	0.141	8.74
9J25051-CAL6	5	3782	0.152	8.74
9J25051-CAL7	10	9286	0.166	8.74
9J25051-CAL8	20	20353	0.201	8.74
9J25051-CAL9	50	62426	0.225	8.74
9J25051-CALA	100	134625	0.240	8.74
9J25051-CALB	200	248016	0.262	8.74

AVE RF **0.176** RF RSD **34.20** AVE RT **8.74**

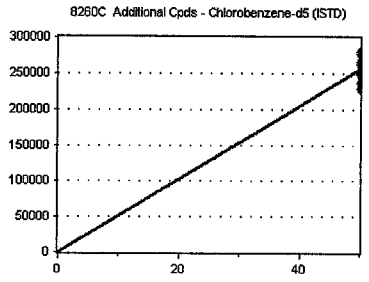
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Additional Cpds** Instrument Cal ID: **VG191025W VG191025G**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	262978	5259.560	10.45
9J25051-CAL2	50	248140	4962.800	10.45
9J25051-CAL3	50	236751	4735.020	10.45
9J25051-CAL4	50	266623	5332.460	10.45
9J25051-CAL5	50	228711	4574.220	10.45
9J25051-CAL6	50	249179	4983.580	10.45
9J25051-CAL7	50	280212	5604.240	10.45
9J25051-CAL8	50	253314	5066.280	10.45
9J25051-CAL9	50	276912	5538.240	10.45
9J25051-CALA	50	280815	5616.300	10.45
9J25051-CALB	50	237104	4742.080	10.45

AVE RF **5128.616** RF RSD **7.18** AVE RT **10.45**

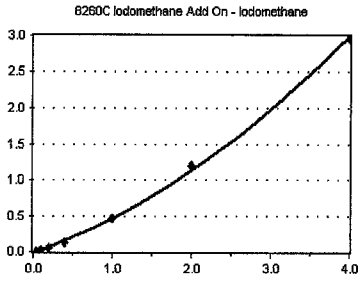
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Iodomethane Add On** Instrument Cal ID: **VG191025W VG191025G**

Iodomethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

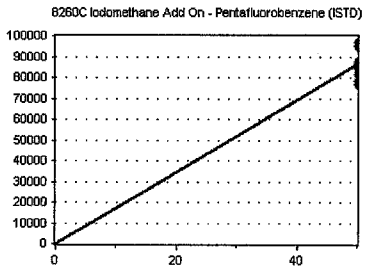


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL5	2	448	0.146	3.75
9J25051-CAL6	5	1592	0.189	3.75
9J25051-CAL7	10	4581	0.241	3.75
9J25051-CAL8	20	11720	0.338	3.75
9J25051-CAL9	50	44167	0.465	3.75
9J25051-CALA	100	116589	0.603	3.75
9J25051-CALB	200	251532	0.741	3.75

AVE RF **0.389** RF RSD **57.35** AVE RT **3.75**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	86062	1721.240	6.86
9J25051-CAL2	50	81493	1629.860	6.86
9J25051-CAL3	50	78410	1568.200	6.86
9J25051-CAL4	50	87837	1756.740	6.86
9J25051-CAL5	50	76501	1530.020	6.86
9J25051-CAL6	50	84206	1684.120	6.86
9J25051-CAL7	50	94987	1899.740	6.86
9J25051-CAL8	50	86706	1734.120	6.86
9J25051-CAL9	50	94974	1899.480	6.86
9J25051-CALA	50	96665	1933.300	6.86
9J25051-CALB	50	84871	1697.420	6.86

AVE RF **1732.204** RF RSD **7.72** AVE RT **6.86**

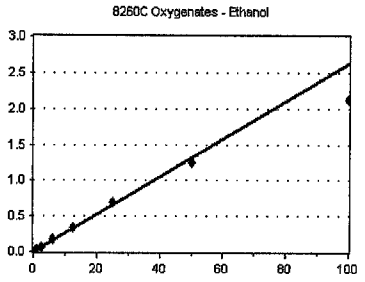
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VG191025W VG191025G**

Ethanol

Curve Fit: **AVERAGE RF**

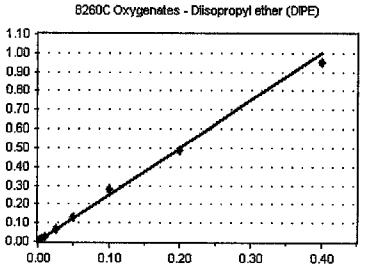


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~6.25~~	~~266~~	~~2.473~~	~~3.63~~
~~9J25051-CAL2~~	~~12.5~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	25	1029	2.625	3.63
9J25051-CAL4	62.5	2873	2.617	3.64
9J25051-CAL5	125	5504	2.878	3.63
9J25051-CAL6	312	14603	2.779	3.63
9J25051-CAL7	625	31930	0.027	3.63
9J25051-CAL8	1250	59872	0.028	3.64
9J25051-CAL9	2500	118949	2.505	3.63
9J25051-CALA	5000	205433	2.125	3.64

AVE RF **2.622** RF RSD **8.82** AVE RT **3.63**

Diisopropyl ether (DIPE)

Curve Fit: **AVERAGE RF**

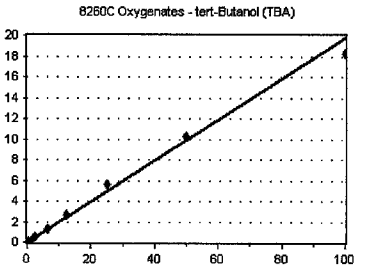


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.1	342	2.181	0.00
9J25051-CAL4	0.25	1029	2.343	5.11
9J25051-CAL5	0.5	2023	2.644	5.11
9J25051-CAL6	1.25	5485	2.606	5.11
9J25051-CAL7	2.5	12288	2.587	5.11
9J25051-CAL8	5	24122	2.782	5.11
9J25051-CAL9	10	46377	2.442	5.11
9J25051-CALA	20	91793	2.374	5.11

AVE RF **2.495** RF RSD **7.80** AVE RT **4.47**

tert-Butanol (TBA)

Curve Fit: **AVERAGE RF**

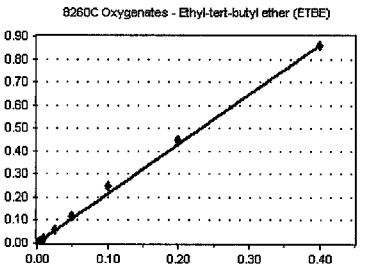


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	6.25	2096	0.195	4.83
9J25051-CAL2	12.5	3672	0.180	4.83
9J25051-CAL3	25	6902	0.176	4.83
9J25051-CAL4	62.5	19370	0.176	4.83
9J25051-CAL5	125	39779	0.208	4.82
9J25051-CAL6	312	110044	0.209	4.82
9J25051-CAL7	625	255470	0.215	4.82
9J25051-CAL8	1250	489113	0.226	4.82
9J25051-CAL9	2500	974201	0.205	4.82
9J25051-CALA	5000	1764644	0.183	4.83

AVE RF **0.197** RF RSD **9.01** AVE RT **4.82**

Ethyl-tert-butyl ether (ETBE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL3	0.1	277	1.766	0.00
9J25051-CAL4	0.25	799	1.819	5.51
9J25051-CAL5	0.5	1633	2.135	5.52
9J25051-CAL6	1.25	4721	2.243	5.51
9J25051-CAL7	2.5	11188	2.356	5.52
9J25051-CAL8	5	21409	2.469	5.51
9J25051-CAL9	10	42497	2.237	5.51
9J25051-CALA	20	83379	2.156	5.51

AVE RF **2.148** RF RSD **11.37** AVE RT **4.83**

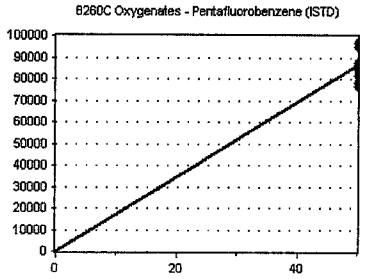
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VG191025W VG191025G**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

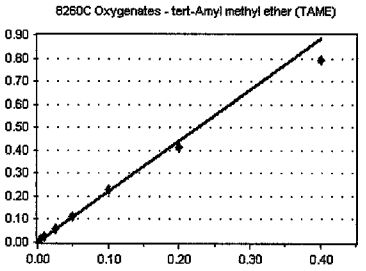


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	86062	1721.240	6.86
9J25051-CAL2	50	81493	1629.860	6.86
9J25051-CAL3	50	78410	1568.200	6.86
9J25051-CAL4	50	87837	1756.740	6.86
9J25051-CAL5	50	76501	1530.020	6.86
9J25051-CAL6	50	84206	1684.120	6.86
9J25051-CAL7	50	94987	1899.740	6.86
9J25051-CAL8	50	86706	1734.120	6.86
9J25051-CAL9	50	94974	1899.480	6.86
9J25051-CALA	50	96665	1933.300	6.86
9J25051-CALB	50	84871	1697.420	6.86

AVE RF **1732.204** RF RSD **7.72** AVE RT **6.86**

tert-Amyl methyl ether (TAME)

Curve Fit: **AVERAGE RF**

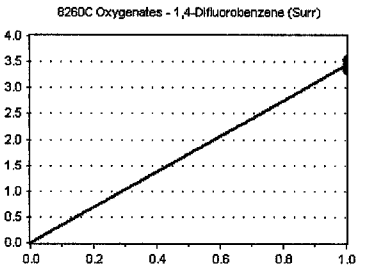


Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9J25051-CAL4	0.25	1071	2.439	6.90
9J25051-CAL5	0.5	1740	2.274	6.90
9J25051-CAL6	1.25	4717	2.241	6.90
9J25051-CAL7	2.5	10610	2.234	6.90
9J25051-CAL8	5	19745	2.277	6.90
9J25051-CAL9	10	39047	2.056	6.90
9J25051-CALA	20	76599	1.981	6.90

AVE RF **2.215** RF RSD **6.86** AVE RT **6.90**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

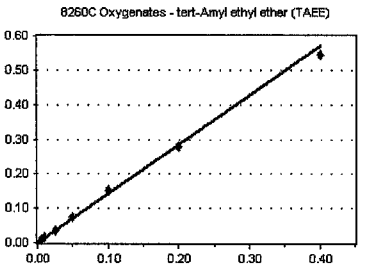


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	305946	3.555	7.45
9J25051-CAL2	50	287858	3.532	7.45
9J25051-CAL3	50	275500	3.514	7.45
9J25051-CAL4	50	309533	3.524	7.45
9J25051-CAL5	50	264143	3.453	7.45
9J25051-CAL6	50	285436	3.390	7.45
9J25051-CAL7	50	322104	3.391	7.45
9J25051-CAL8	50	291439	3.361	7.45
9J25051-CAL9	50	318518	3.354	7.45
9J25051-CALA	50	326047	3.373	7.45
9J25051-CALB	50	283209	3.337	7.45

AVE RF **3.435** RF RSD **2.40** AVE RT **7.45**

tert-Amyl ethyl ether (TAEE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9J25051-CAL1~~	~~0.025~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL2~~	~~0.05~~	~~0~~	~~0.000~~	~~0.00~~
~~9J25051-CAL3~~	~~0.1~~	~~195~~	~~1.243~~	~~7.68~~
9J25051-CAL4	0.25	584	1.330	7.68
9J25051-CAL5	0.5	1135	1.484	7.68
9J25051-CAL6	1.25	2954	1.403	7.68
9J25051-CAL7	2.5	6943	1.462	7.69
9J25051-CAL8	5	13314	1.536	7.69
9J25051-CAL9	10	26359	1.388	7.68
9J25051-CALA	20	52681	1.362	7.69

AVE RF **1.423** RF RSD **5.12** AVE RT **7.69**

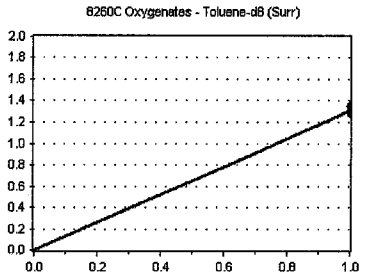
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8260C Oxygenates** Instrument Cal ID: **VG191025W VG191025G**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

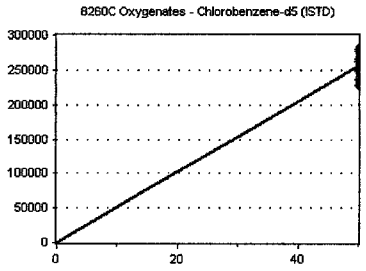


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	340973	1.297	8.99
9J25051-CAL2	50	320375	1.291	8.99
9J25051-CAL3	50	309475	1.307	8.99
9J25051-CAL4	50	348152	1.306	8.99
9J25051-CAL5	50	296218	1.295	8.99
9J25051-CAL6	50	321703	1.291	8.99
9J25051-CAL7	50	362985	1.295	8.99
9J25051-CAL8	50	329731	1.302	8.99
9J25051-CAL9	50	358348	1.294	8.99
9J25051-CALA	50	367797	1.310	8.99
9J25051-CALB	50	320536	1.352	9.00

AVE RF **1.304** RF RSD **1.32** AVE RT **8.99**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

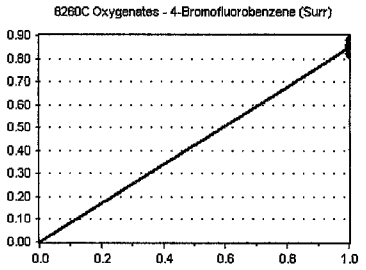


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	262978	5259.560	10.45
9J25051-CAL2	50	248140	4962.800	10.45
9J25051-CAL3	50	236751	4735.020	10.45
9J25051-CAL4	50	266623	5332.460	10.45
9J25051-CAL5	50	228711	4574.220	10.45
9J25051-CAL6	50	249179	4983.580	10.45
9J25051-CAL7	50	280212	5604.240	10.45
9J25051-CAL8	50	253314	5066.280	10.45
9J25051-CAL9	50	276912	5538.240	10.45
9J25051-CALA	50	280815	5616.300	10.45
9J25051-CALB	50	237104	4742.080	10.45

AVE RF **5128.616** RF RSD **7.18** AVE RT **10.45**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

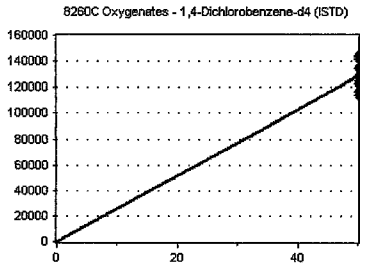


Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	110058	0.854	11.45
9J25051-CAL2	50	103556	0.843	11.45
9J25051-CAL3	50	97363	0.833	11.45
9J25051-CAL4	50	112252	0.832	11.45
9J25051-CAL5	50	93974	0.822	11.45
9J25051-CAL6	50	105208	0.837	11.45
9J25051-CAL7	50	119477	0.842	11.45
9J25051-CAL8	50	107703	0.837	11.45
9J25051-CAL9	50	121264	0.846	11.45
9J25051-CALA	50	124225	0.859	11.45
9J25051-CALB	50	102899	0.882	11.45

AVE RF **0.844** RF RSD **1.92** AVE RT **11.45**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CAL1	50	128844	2576.880	12.29
9J25051-CAL2	50	122815	2456.300	12.29
9J25051-CAL3	50	116929	2338.580	12.29
9J25051-CAL4	50	134840	2696.800	12.29
9J25051-CAL5	50	114333	2286.660	12.29
9J25051-CAL6	50	125726	2514.520	12.29
9J25051-CAL7	50	141868	2837.360	12.29
9J25051-CAL8	50	128679	2573.580	12.29
9J25051-CAL9	50	143329	2866.580	12.29
9J25051-CALA	50	144590	2891.800	12.29
9J25051-CALB	50	116686	2333.720	12.29

AVE RF **2579.344** RF RSD **8.53** AVE RT **12.29**

Calibration Status Report VOA-GCMS7

Method Path : C:\msdchem\1\methods\
Method File : VG191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Mon Oct 28 12:17:57 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	50	50	50	C:\msdchem\1\data\2019-10\9J25051\VG19102536.D
2	100	100	50	C:\msdchem\1\data\2019-10\9J25051\VG19102537.D
3	250	250	50	C:\msdchem\1\data\2019-10\9J25051\VG19102538.D
4	500	500	50	C:\msdchem\1\data\2019-10\9J25051\VG19102539.D
5	1000	1000	50	C:\msdchem\1\data\2019-10\9J25051\VG19102540.D
6	2500	2500	50	C:\msdchem\1\data\2019-10\9J25051\VG19102541.D
7	5000	5000	50	C:\msdchem\1\data\2019-10\9J25051\VG19102542.D
8	10K	10000	50	C:\msdchem\1\data\2019-10\9J25051\VG19102543.D

#	ID	Update Time	Quant Time	Acquisition Time
1	50	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 2:45 am
2	100	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 3:12 am
3	250	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 3:38 am
4	500	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 4:05 am
5	1000	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 4:32 am
6	2500	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 4:59 am
7	5000	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 5:26 am
8	10K	Oct 28 12:17 2019	Oct 28 12:12 2019	26 Oct 2019 5:52 am

VG191025G.M Mon Oct 28 13:01:23 2019

Response Factor Report VOA-GCMS7

Method Path : C:\msdchem\1\methods\
Method File : VG191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Mon Oct 28 12:17:57 2019
Response Via : Initial Calibration

Calibration Files
50 =VG19102536.D 100 =VG19102537.D 250 =VG19102538.D 500 =VG19102539.D 1000=VG19102540.D 2500=VG19102541.D
5000=VG19102542.D 10K =VG19102543.D

		Compound	50	100	250	500	1000	2500	5000	10K	Avg	%RSD
1)	I	Pentafluorobenzene...	----------	----------	ISTD	----------	----------	----------	----------	----------		
2)	S	1,4-Difluorobe...	1.524	1.508	1.481	1.497	1.503	1.466	1.494	1.485	1.495	1.20
3)	S	4-Bromofluorob...	0.543	0.543	0.544	0.538	0.536	0.541	0.557	0.553	0.545	1.31
4)	H	NWTPH-Gx (TPH)	1.077	1.006	1.136	1.222	1.285	1.296	1.372	1.394	1.224	11.42
5)	H	TPHg (C5-C9)	2.792	1.935	1.689	1.647	1.666	1.555	1.606	1.595	1.811	22.82
6)	H	TPHg (C6-C10)	2.469	1.683	1.432	1.380	1.387	1.295	1.334	1.328	1.539	25.67
7)	H	CA-LUFT (C5-C12)	3.061	2.205	1.975	1.979	2.037	1.955	2.033	2.039	2.160	17.22
8)		Benzene (NR)									0.000	-1.00
9)	S	Toluene-d8 (NR)									0.000	-1.00
10)		Toluene (NR)									0.000	-1.00
11)	S	Chlorobenzene-...									0.000	-1.00
12)	S	1,4-Dichlorobe...									0.000	-1.00
13)		Naphthalene (NR)									0.000	-1.00

(#) = Out of Range

Compound List Report VOA-GCMS7

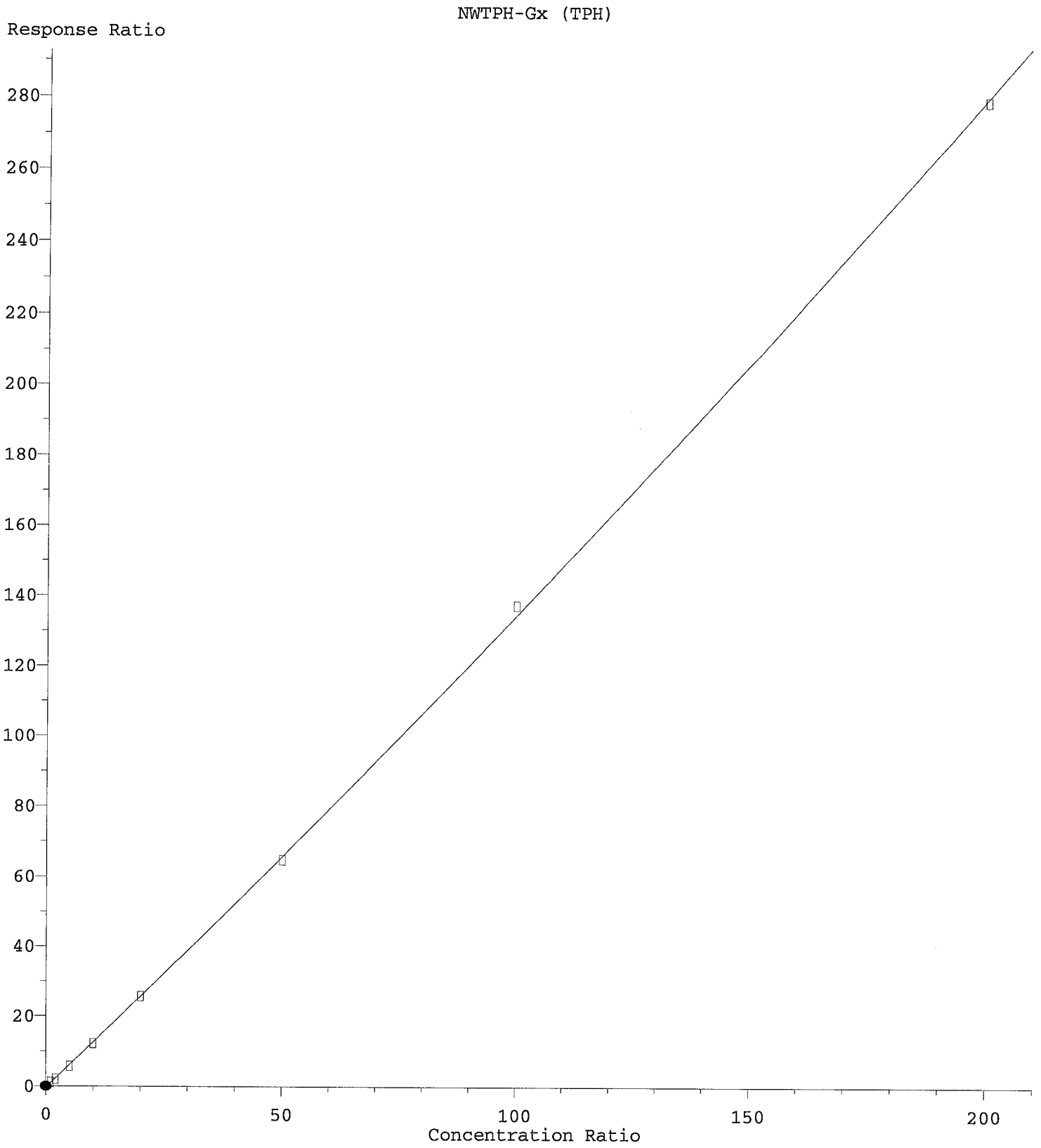
Method Path : C:\msdchem\1\methods\
Method File : VG191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Mon Oct 28 12:17:57 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.874	1.000	A	2	A	B
2	S	1,4-Difluorobenzene (Sur)	114	7.459	1.085	A	2	A	B
3	S	4-Bromofluorobenzene (Sur)	174	11.452	1.666	A	2	A	B
4	H	NWTPH-Gx (TPH)	TIC	9.440	1.373	Q	0	A	B
5	H	TPHg (C5-C9)	TIC	9.940	1.446	Q	0	A	B
6	H	TPHg (C6-C10)	TIC	9.940	1.446	Q	0	A	B
7	H	CA-LUFT (C5-C12)	TIC	9.940	1.446	Q	0	A	B
8		Benzene (NR)	78	6.758	0.983	A	2	A	B
9	S	Toluene-d8 (NR)	98	9.001	1.310	A	2	A	B
10		Toluene (NR)	91	9.050	1.317	A	2	A	B
11	S	Chlorobenzene-d5 (NR)	117	10.458	1.522	A	2	A	B
12	S	1,4-Dichlorobenzene-d4 (NR)	150	12.293	1.788	A	2	A	B
13		Naphthalene (NR)	128	14.207	2.067	A	2	A	B

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VG191025G.M Mon Oct 28 13:01:42 2019



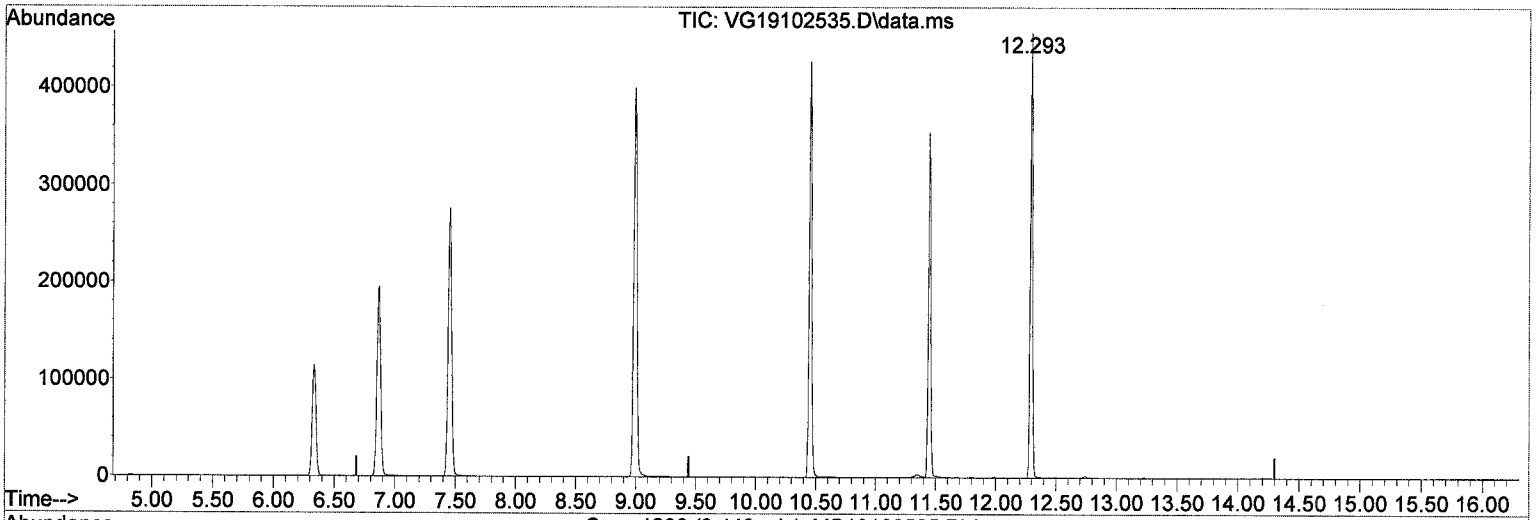
Int = 23.29 ✓

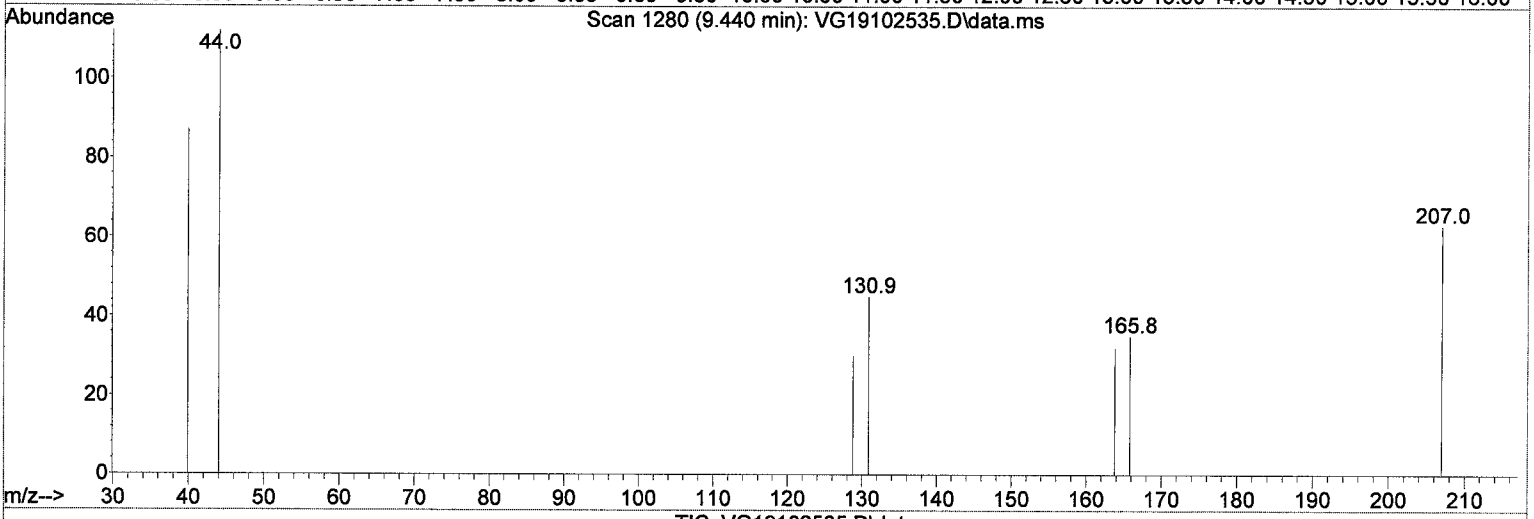
R = 5.30e-004 A*A + 1.30e+000 A - 4.15e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025G.M
Calibration Table Last Updated: Mon Oct 28 12:17:57 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration





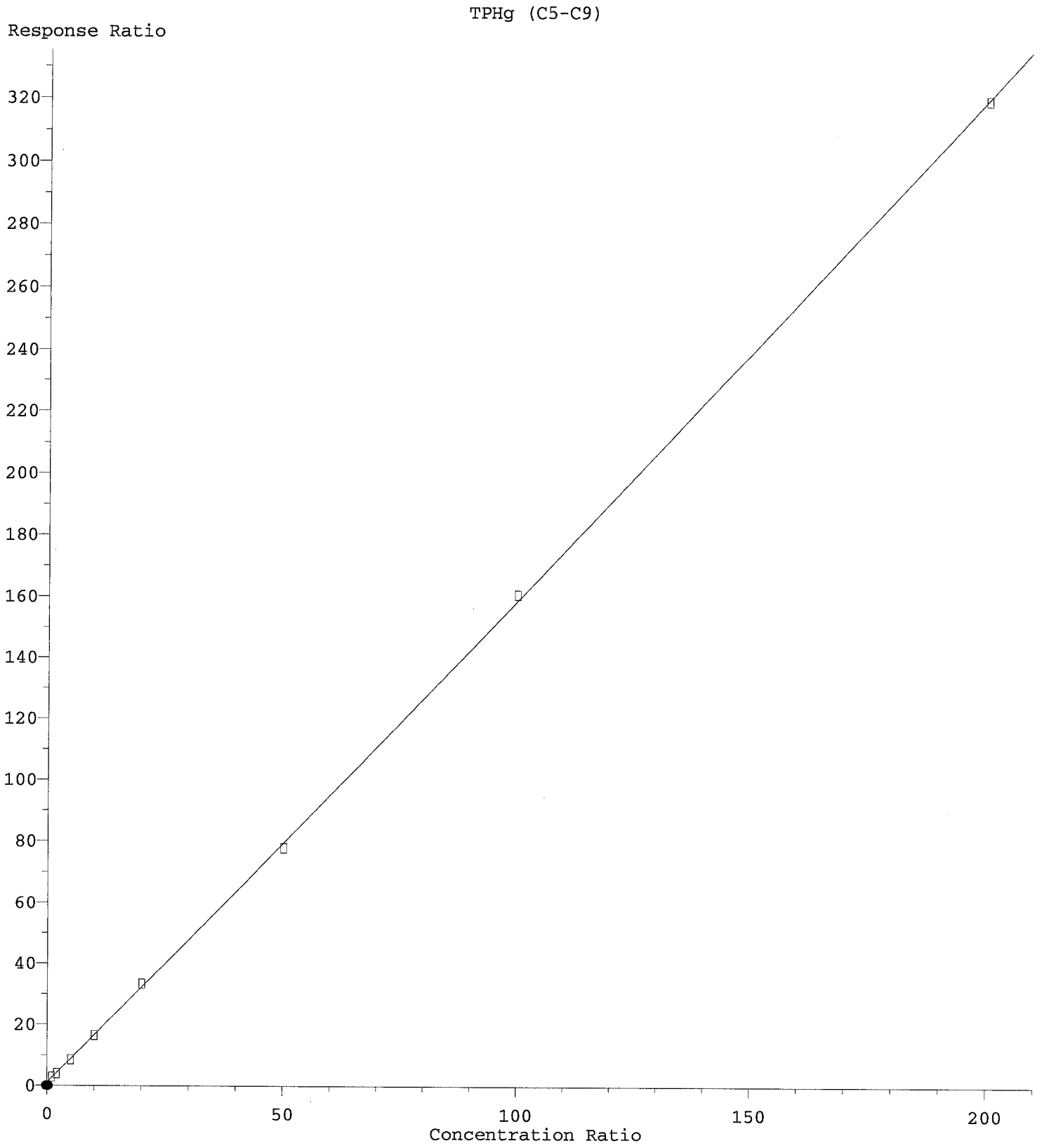
TIC: VG19102535.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.440min (0.000) 23.29 ug/L m

response 31416

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



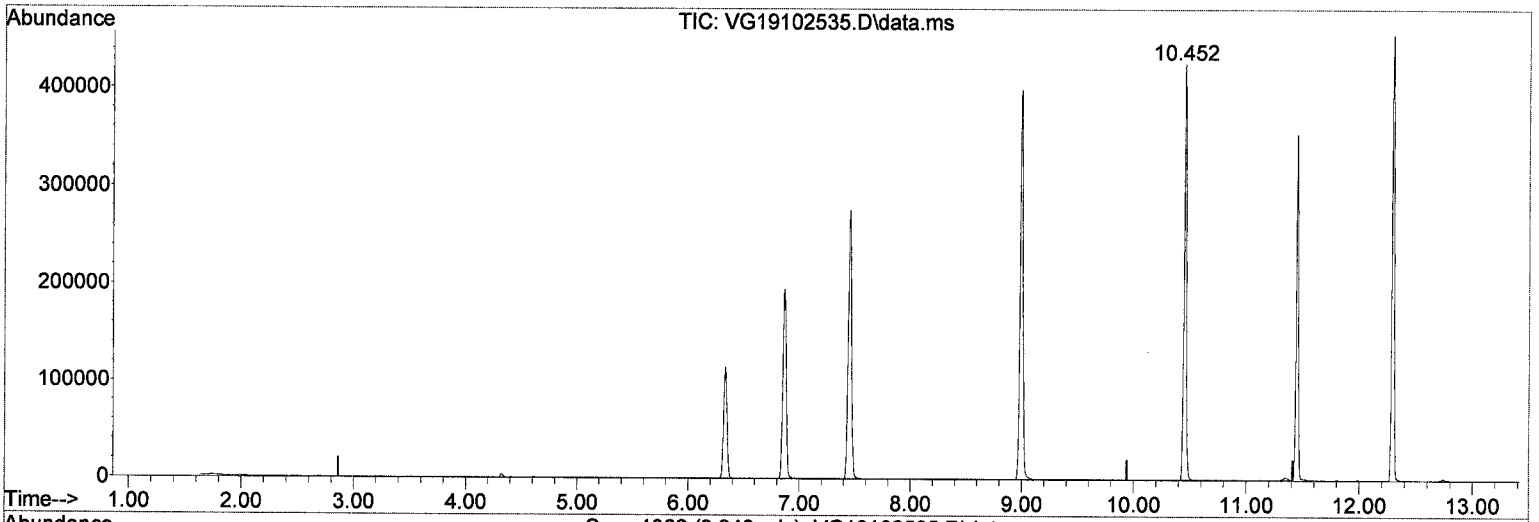
Int = 18.73

R = 1.66e-004 A*A + 1.56e+000 A + 1.03e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025G.M
Calibration Table Last Updated: Mon Oct 28 12:17:57 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



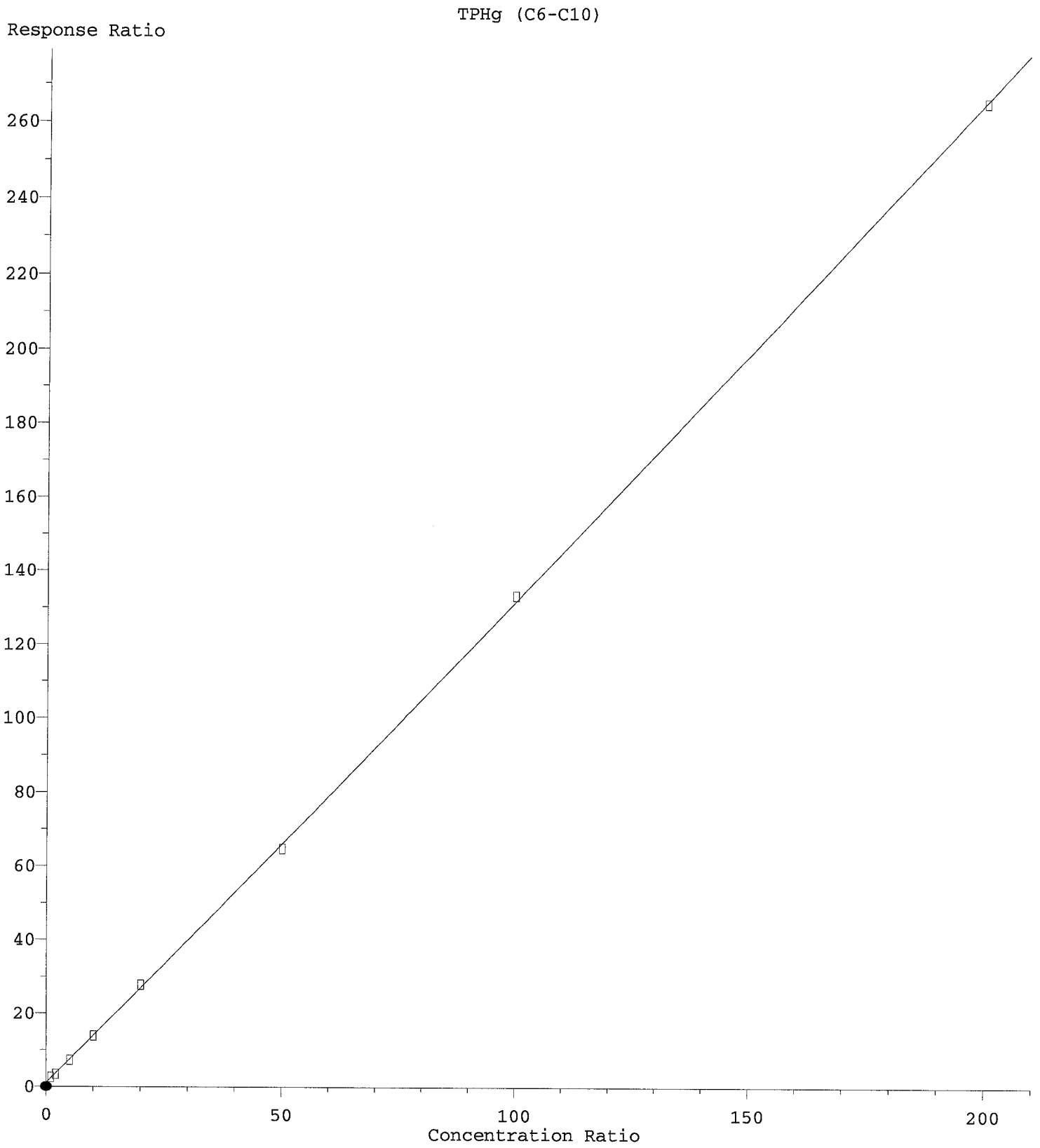
TIC: VG19102535.D\data.ms

(5) TPHg (C5-C9) (H)

9.940min (0.000) 18.73 ug/L m

response 269339

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



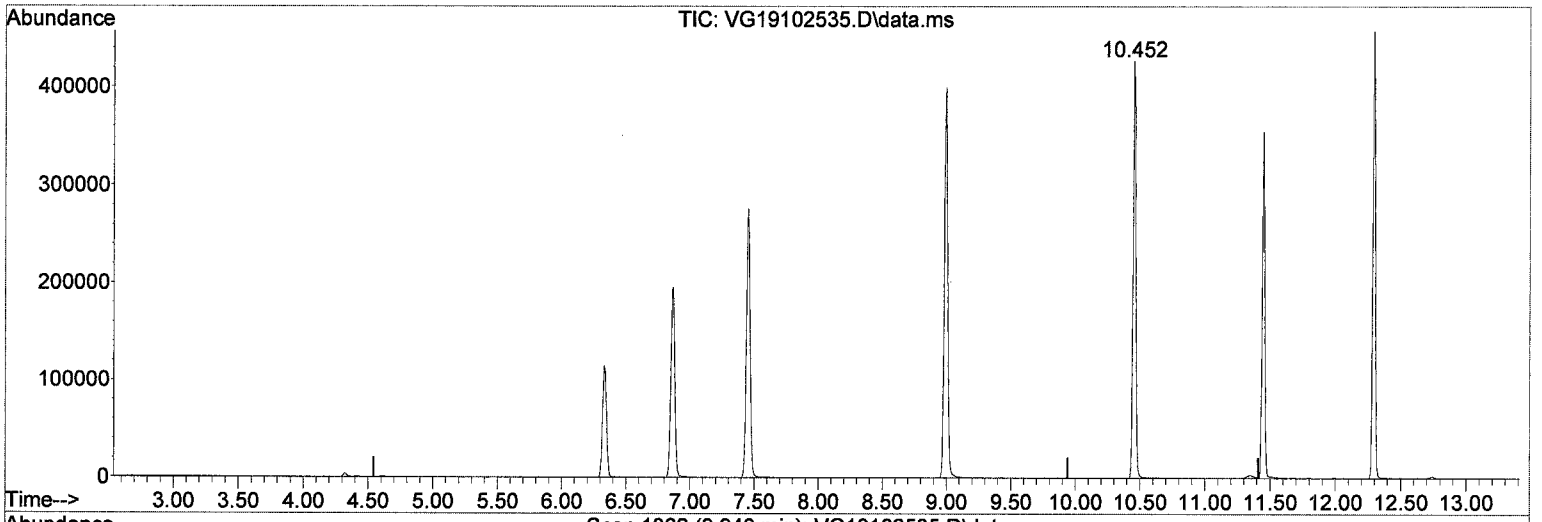
fwt = 21.67

R = 1.62e-004 A*A + 1.29e+000 A + 1.01e+000
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025G.M
Calibration Table Last Updated: Mon Oct 28 12:17:57 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



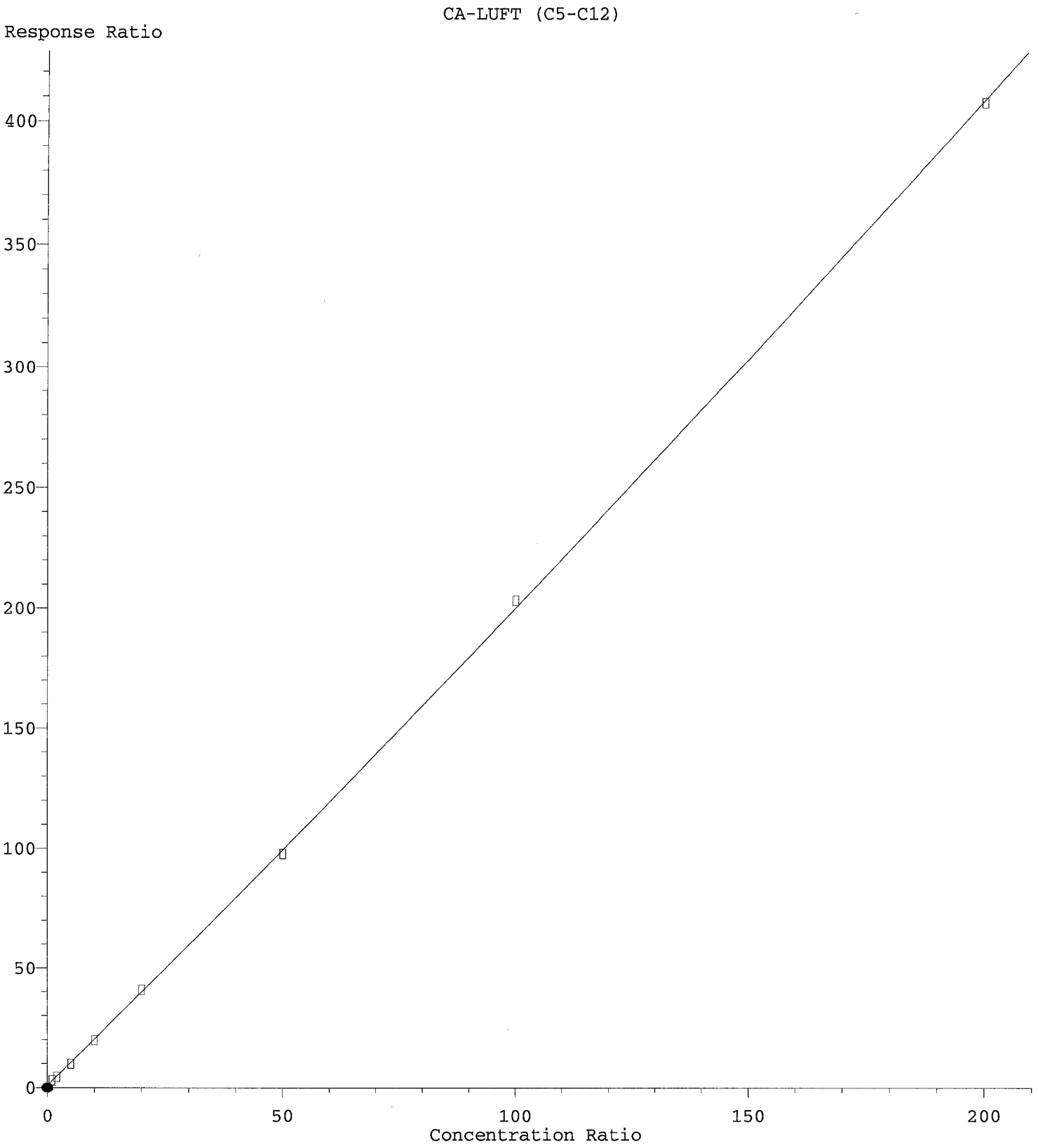
TIC: VG19102535.D\data.ms

(6) TPHg (C6-C10) (H)

9.940min (0.000) 21.67 ug/L m

response 261869

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00



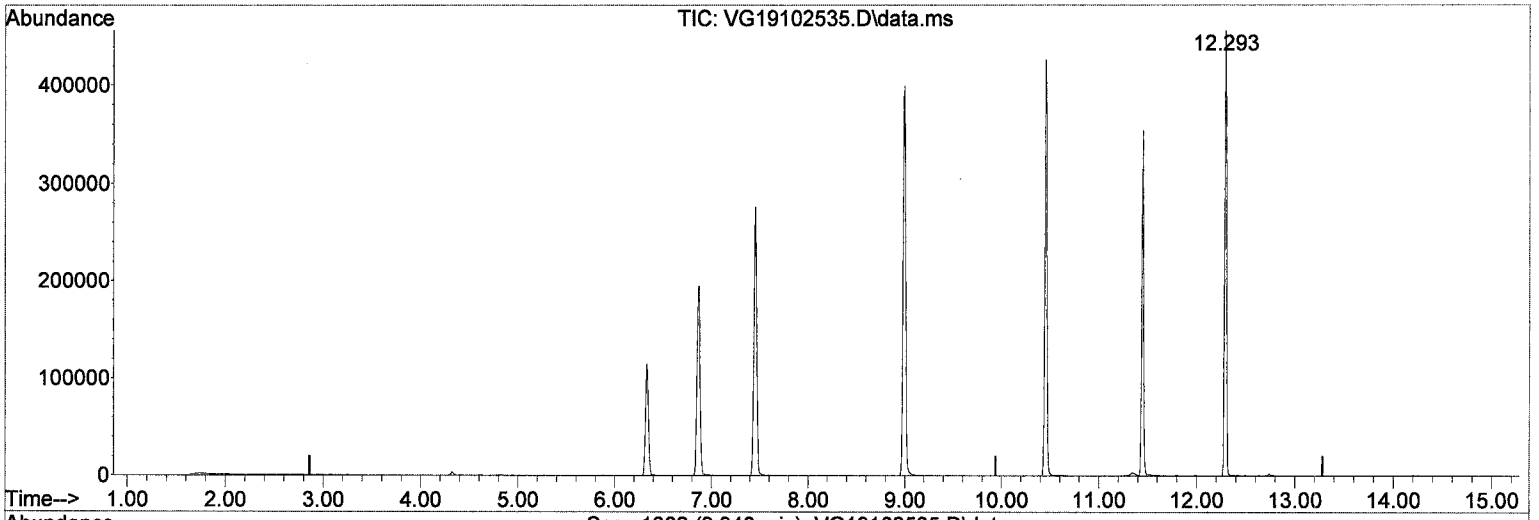
$I_{UT} = 22.78$

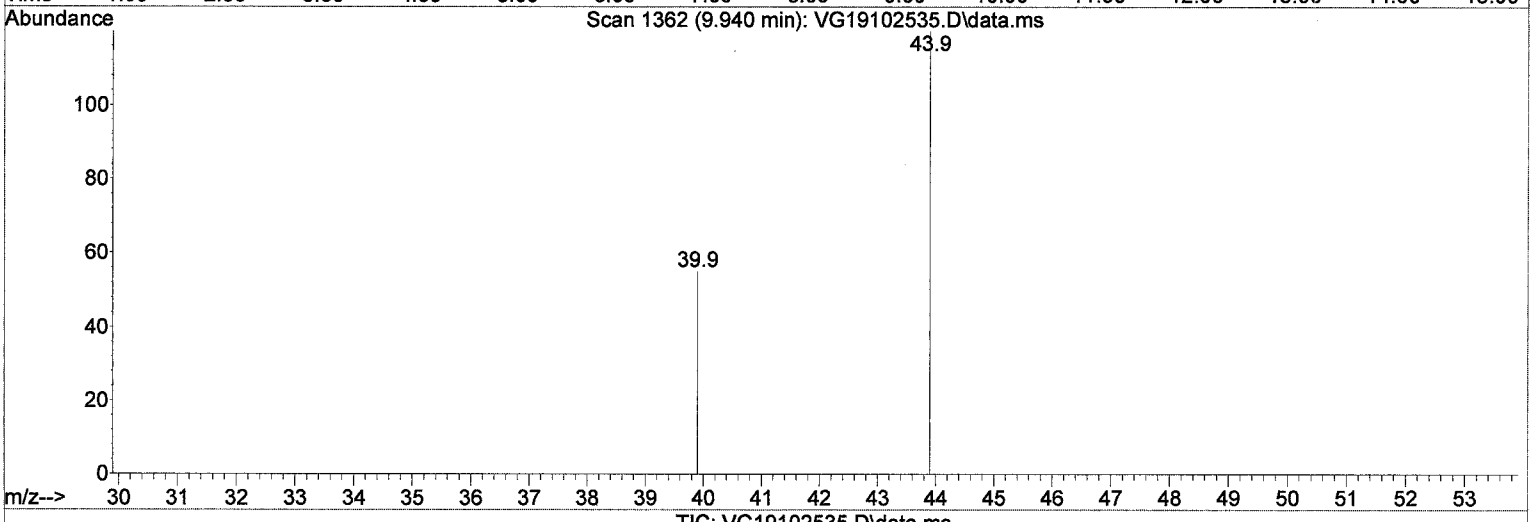
R = 4.75e-004 A*A + 1.95e+000 A + 8.13e-001
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\VG191025G.M
Calibration Table Last Updated: Mon Oct 28 12:17:57 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration





TIC: VG19102535.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.940min (0.000) 22.78 ug/L m

response 283617

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J25051

Analysis Included
8015D-Mod Gasoline (C6-C10) by GC/MS
CA LUFT GRO
NWTPH-Gx

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9J25051-TUN2	MS Tune	Water		A19F381	10/26/2019 12:57:00AM
9J25051-ICB2	Initial Cal Blank	Water		A19F381	10/26/2019 2:18:00AM
9J25051-CALC	Cal Standard	Water	A19J388	"	10/26/2019 2:45:00AM
9J25051-CALD	Cal Standard	Water	A19J389	"	10/26/2019 3:12:00AM
9J25051-CALE	Cal Standard	Water	A19J390	"	10/26/2019 3:38:00AM
9J25051-CALF	Cal Standard	Water	A19J391	"	10/26/2019 4:05:00AM
9J25051-CALG	Cal Standard	Water	A19J392	"	10/26/2019 4:32:00AM
9J25051-CALH	Cal Standard	Water	A19J393	"	10/26/2019 4:59:00AM
9J25051-CALI	Cal Standard	Water	A19J394	"	10/26/2019 5:26:00AM
9J25051-CALJ	Cal Standard	Water	A19J395	"	10/26/2019 5:52:00AM
9J25051-ICV3	Initial Cal Check	Water	A19G350	"	10/26/2019 7:13:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9J2806** Instrument: **VOA-GCMS7**

8015D-Mod Gasoline (C6-C10 Sequence: **9J25051** Matrix: **Water**

9J25051-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9J25051-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9J25051

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9J2806** Instrument: **VOA-GCMS7**

NWTPH-Gx Sequence: **9J25051** Matrix: **Water**

9J25051-ICV3	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102546.D
Acq On : 26 Oct 2019 7:13 am
Operator : MM
Sample : 9J25051-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:46 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

10/28/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (IS)	50.000	50.000	0.0	108	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	49.620	0.8	107	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	49.762	0.5	109	0.00
4	H	NWTPH-Gx (TPH)	500.000	536.396	-7.3	120	0.00
5	H	TPHg (C5-C9)	500.000	518.140	-3.6	113	0.00
6	H	TPHg (C6-C10)	500.000	530.811	-6.2	116	0.00
7	H	CA-LUFT (C5-C12)	500.000	518.197	-3.6	115	0.00
8		Benzene (NR)	-1.000	0.000	0.0	108	0.00
9	S	Toluene-d8 (NR)	-1.000	0.000	0.0	107	0.00
10		Toluene (NR)	-1.000	0.000	0.0	111	0.00
11	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	107	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	106	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	126	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

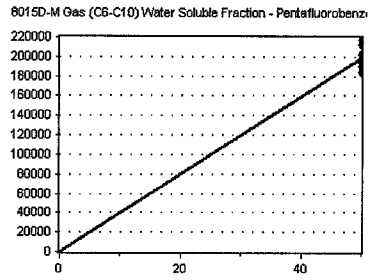
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8015D-M Gas (C6-C10) Wate** Instrument Cal ID: **VG191025W VG191025G**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

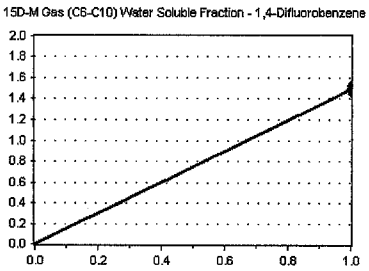


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	193559	3871.180	6.87
9J25051-CALD	50	202223	4044.460	6.87
9J25051-CALE	50	212459	4249.180	6.87
9J25051-CALF	50	184039	3680.780	6.86
9J25051-CALG	50	190639	3812.780	6.87
9J25051-CALH	50	218107	4362.140	6.87
9J25051-CALI	50	195244	3904.880	6.86
9J25051-CALJ	50	197171	3943.420	6.86

AVE RF **3983.603** RF RSD **5.68** AVE RT **6.87**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

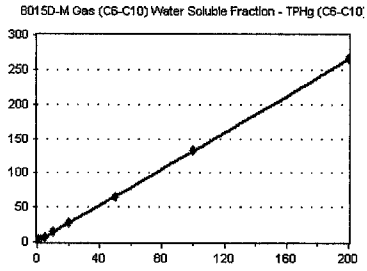


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	295012	1.524	7.45
9J25051-CALD	50	304919	1.508	7.45
9J25051-CALE	50	314600	1.481	7.45
9J25051-CALF	50	275552	1.497	7.45
9J25051-CALG	50	286580	1.503	7.45
9J25051-CALH	50	319682	1.466	7.45
9J25051-CALI	50	291674	1.494	7.45
9J25051-CALJ	50	292717	1.485	7.45

AVE RF **1.495** RF RSD **1.20** AVE RT **7.45**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

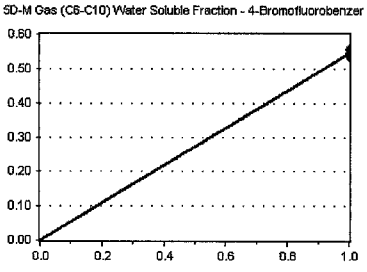


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	477926	2.469	9.94
9J25051-CALD	100	680725	1.683	9.94
9J25051-CALE	250	1521053	1.432	9.94
9J25051-CALF	500	2539707	1.380	9.94
9J25051-CALG	1000	5288509	1.387	9.94
9J25051-CALH	2500	1.41248E+07	1.295	9.94
9J25051-CALI	5000	2.605397E+07	1.334	9.94
9J25051-CALJ	10000	5.235829E+07	1.328	9.94

AVE RF **1.539** RF RSD **25.67** AVE RT **9.94**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	105074	0.543	11.45
9J25051-CALD	50	109800	0.543	11.45
9J25051-CALE	50	115645	0.544	11.45
9J25051-CALF	50	99104	0.538	11.45
9J25051-CALG	50	102218	0.536	11.45
9J25051-CALH	50	117998	0.541	11.45
9J25051-CALI	50	108752	0.557	11.45
9J25051-CALJ	50	109113	0.553	11.45

AVE RF **0.545** RF RSD **1.31** AVE RT **11.45**

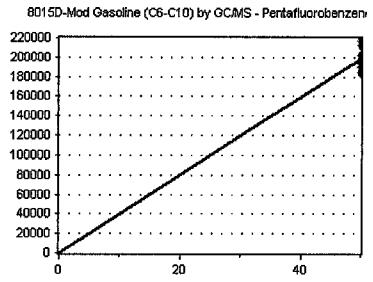
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **VG191025W VG191025G**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

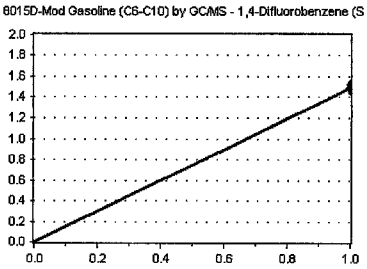


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	193559	3871.180	6.87
9J25051-CALD	50	202223	4044.460	6.87
9J25051-CALE	50	212459	4249.180	6.87
9J25051-CALF	50	184039	3680.780	6.86
9J25051-CALG	50	190639	3812.780	6.87
9J25051-CALH	50	218107	4362.140	6.87
9J25051-CALI	50	195244	3904.880	6.86
9J25051-CALJ	50	197171	3943.420	6.86

AVE RF **3983.603** RF RSD **5.68** AVE RT **6.87**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

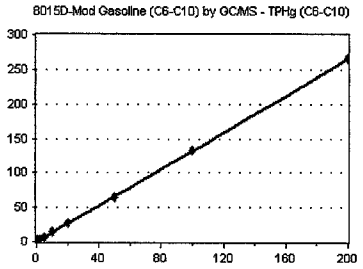


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	295012	1.524	7.45
9J25051-CALD	50	304919	1.508	7.45
9J25051-CALE	50	314600	1.481	7.45
9J25051-CALF	50	275552	1.497	7.45
9J25051-CALG	50	286580	1.503	7.45
9J25051-CALH	50	319682	1.466	7.45
9J25051-CALI	50	291674	1.494	7.45
9J25051-CALJ	50	292717	1.485	7.45

AVE RF **1.495** RF RSD **1.20** AVE RT **7.45**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

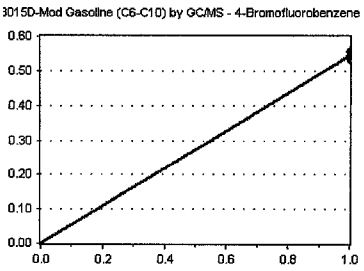


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	477926	2.469	9.94
9J25051-CALD	100	680725	1.683	9.94
9J25051-CALE	250	1521053	1.432	9.94
9J25051-CALF	500	2539707	1.380	9.94
9J25051-CALG	1000	5288509	1.387	9.94
9J25051-CALH	2500	1.41248E+07	1.295	9.94
9J25051-CALI	5000	2.605397E+07	1.334	9.94
9J25051-CALJ	10000	5.235829E+07	1.328	9.94

AVE RF **1.539** RF RSD **25.67** AVE RT **9.94**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	105074	0.543	11.45
9J25051-CALD	50	109800	0.543	11.45
9J25051-CALE	50	115645	0.544	11.45
9J25051-CALF	50	99104	0.538	11.45
9J25051-CALG	50	102218	0.536	11.45
9J25051-CALH	50	117998	0.541	11.45
9J25051-CALI	50	108752	0.557	11.45
9J25051-CALJ	50	109113	0.553	11.45

AVE RF **0.545** RF RSD **1.31** AVE RT **11.45**

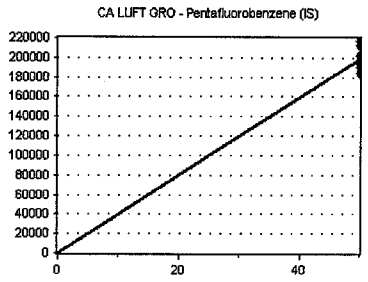
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VG191025W VG191025G**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

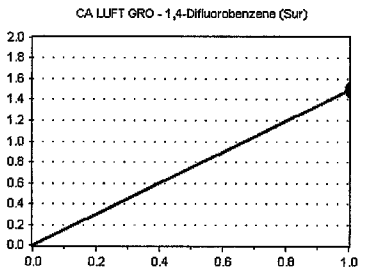


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	193559	3871.180	6.87
9J25051-CALD	50	202223	4044.460	6.87
9J25051-CALE	50	212459	4249.180	6.87
9J25051-CALF	50	184039	3680.780	6.86
9J25051-CALG	50	190639	3812.780	6.87
9J25051-CALH	50	218107	4362.140	6.87
9J25051-CALI	50	195244	3904.880	6.86
9J25051-CALJ	50	197171	3943.420	6.86

AVE RF **3983.603** RF RSD **5.68** AVE RT **6.87**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

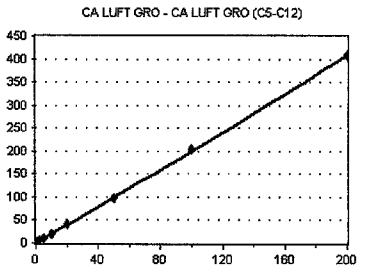


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	295012	1.524	7.45
9J25051-CALD	50	304919	1.508	7.45
9J25051-CALE	50	314600	1.481	7.45
9J25051-CALF	50	275552	1.497	7.45
9J25051-CALG	50	286580	1.503	7.45
9J25051-CALH	50	319682	1.466	7.45
9J25051-CALI	50	291674	1.494	7.45
9J25051-CALJ	50	292717	1.485	7.45

AVE RF **1.495** RF RSD **1.20** AVE RT **7.45**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

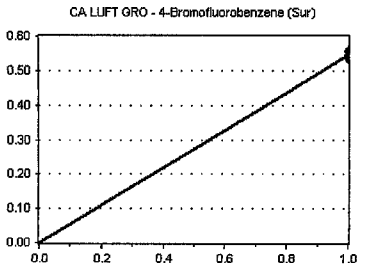


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	592441	3.061	9.94
9J25051-CALD	100	891666	2.205	9.94
9J25051-CALE	250	2098250	1.975	9.94
9J25051-CALF	500	3642980	1.979	9.94
9J25051-CALG	1000	7765125	2.037	9.94
9J25051-CALH	2500	2.13198E+07	1.955	9.94
9J25051-CALI	5000	3.968852E+07	2.033	9.94
9J25051-CALJ	10000	8.03942E+07	2.039	9.94

AVE RF **2.160** RF RSD **17.22** AVE RT **9.94**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	105074	0.543	11.45
9J25051-CALD	50	109800	0.543	11.45
9J25051-CALE	50	115645	0.544	11.45
9J25051-CALF	50	99104	0.538	11.45
9J25051-CALG	50	102218	0.536	11.45
9J25051-CALH	50	117998	0.541	11.45
9J25051-CALI	50	108752	0.557	11.45
9J25051-CALJ	50	109113	0.553	11.45

AVE RF **0.545** RF RSD **1.31** AVE RT **11.45**

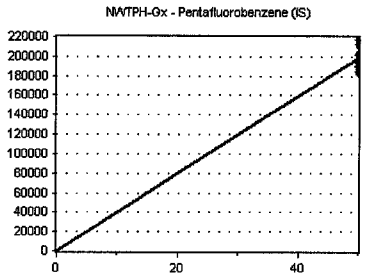
Element Calibration Review Sheet

Calibration ID: **A9J2806** Instrument: **VOA-GCMS7** Calibration Date: **10/28/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VG191025W VG191025G**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

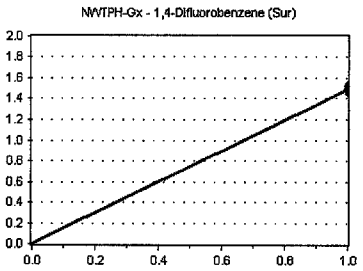


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	193559	3871.180	6.87
9J25051-CALD	50	202223	4044.460	6.87
9J25051-CALE	50	212459	4249.180	6.87
9J25051-CALF	50	184039	3680.780	6.86
9J25051-CALG	50	190639	3812.780	6.87
9J25051-CALH	50	218107	4362.140	6.87
9J25051-CALI	50	195244	3904.880	6.86
9J25051-CALJ	50	197171	3943.420	6.86

AVE RF **3983.603** RF RSD **5.68** AVE RT **6.87**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

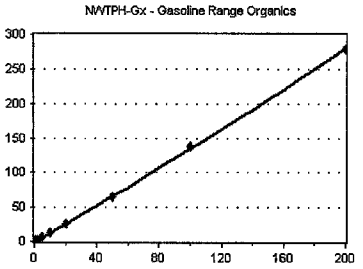


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	295012	1.524	7.45
9J25051-CALD	50	304919	1.508	7.45
9J25051-CALE	50	314600	1.481	7.45
9J25051-CALF	50	275552	1.497	7.45
9J25051-CALG	50	286580	1.503	7.45
9J25051-CALH	50	319682	1.466	7.45
9J25051-CALI	50	291674	1.494	7.45
9J25051-CALJ	50	292717	1.485	7.45

AVE RF **1.495** RF RSD **1.20** AVE RT **7.45**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

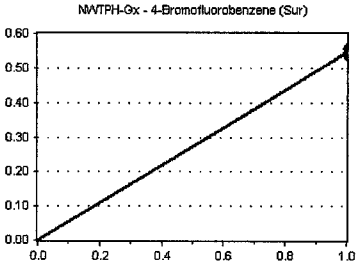


Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	208521	1.077	9.44
9J25051-CALD	100	406857	1.006	9.44
9J25051-CALE	250	1206913	1.136	9.44
9J25051-CALF	500	2248368	1.222	9.44
9J25051-CALG	1000	4898415	1.285	9.44
9J25051-CALH	2500	1.413597E+07	1.296	9.44
9J25051-CALI	5000	2.67945E+07	1.372	9.44
9J25051-CALJ	10000	5.496649E+07	1.394	9.44

AVE RF **1.224** RF RSD **11.42** AVE RT **9.44**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9J25051-CALC	50	105074	0.543	11.45
9J25051-CALD	50	109800	0.543	11.45
9J25051-CALE	50	115645	0.544	11.45
9J25051-CALF	50	99104	0.538	11.45
9J25051-CALG	50	102218	0.536	11.45
9J25051-CALH	50	117998	0.541	11.45
9J25051-CALI	50	108752	0.557	11.45
9J25051-CALJ	50	109113	0.553	11.45

AVE RF **0.545** RF RSD **1.31** AVE RT **11.45**

Injection Log

Directory: z:\data\2019-10\9J25051

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	Vg19102511.d	1.	9J25051-IBL1	1X 5mL DI	25 Oct 2019 15:31
2	2	Vg19102512.d	1.	9J25051-TUN1	A19F381 BFB (IS/...	25 Oct 2019 15:58
3	3	Vg19102513.d	1.	9J25051-ICB1	1X 5mL DI	25 Oct 2019 16:25
4	4	Vg19102514.d	1.	9J25051-CAL1	1X 5mL 0.1/0.2...	25 Oct 2019 16:53
5	5	Vg19102515.d	1.	9J25051-CAL2	1X 5mL 0.2/0.4...	25 Oct 2019 17:20
6	6	Vg19102516.d	1.	9J25051-CAL3	1X 5mL 0.4/0.8...	25 Oct 2019 17:47
7	7	Vg19102517.d	1.	9J25051-CAL4	1X 5mL 1/2PPB ...	25 Oct 2019 18:14
8	8	Vg19102518.d	1.	9J25051-CAL5	1X 5mL 2/4PPB ...	25 Oct 2019 18:41
9	9	Vg19102519.d	1.	9J25051-CAL6	1X 5mL 5/10PPB...	25 Oct 2019 19:08
10	10	Vg19102520.d	1.	9J25051-CAL7	1X 5mL 10/20PP...	25 Oct 2019 19:35
11	11	Vg19102521.d	1.	9J25051-CAL8	1X 5mL 20/40PP...	25 Oct 2019 20:02
12	12	Vg19102522.d	1.	9J25051-CAL9	1X 5mL 50/100P...	25 Oct 2019 20:29
13	13	Vg19102523.d	1.	9J25051-IBL2	1X 5mL DI	25 Oct 2019 20:55
14	14	Vg19102524.d	1.	9J25051-CALA	1X 5mL 100/200...	25 Oct 2019 21:22
15	15	Vg19102525.d	1.	9J25051-IBL3	1X 5mL DI	25 Oct 2019 21:49
16	16	Vg19102526.d	1.	9J25051-CALB	1X 5mL 200/400...	25 Oct 2019 22:16
17	17	Vg19102527.d	1.	9J25051-IBL4	1X 5mL DI	25 Oct 2019 22:43
18	18	Vg19102528.d	1.	9J25051-IBL5	1X 5mL DI	25 Oct 2019 23:10
19	19	Vg19102529.d	1.	9J25051-ICV1	1X 5mL 20/40PP...	25 Oct 2019 23:37
20	20	Vg19102530.d	1.	9J25051-ICV2	1X 5mL 5/1250P...	26 Oct 2019 00:04
21	21	Vg19102531.d	1.	9J25051-IBL6	1X 5mL DI	26 Oct 2019 00:31
22	22	Vg19102532.d	1.	9J25051-TUN2	A19F381 BFB (IS/...	26 Oct 2019 00:57
23	23	Vg19102533.d	1.	9J25051-RT1	A18A167 VPH RT STD	26 Oct 2019 01:24
24	24	Vg19102534.d	1.	9J25051-IBL7	1X 5mL DI	26 Oct 2019 01:51
25	25	Vg19102535.d	1.	9J25051-ICB2	1X 5mL DI	26 Oct 2019 02:18
26	26	Vg19102536.d	1.	9J25051-CALC	1X 5mL 50PPB GX	26 Oct 2019 02:45
27	27	Vg19102537.d	1.	9J25051-CALD	1X 5mL 100PPB GX	26 Oct 2019 03:12
28	28	Vg19102538.d	1.	9J25051-CALE	1X 5mL 250PPB GX	26 Oct 2019 03:38
29	29	Vg19102539.d	1.	9J25051-CALF	1X 5mL 500PPB GX	26 Oct 2019 04:05
30	30	Vg19102540.d	1.	9J25051-CALG	1X 5mL 1000PPB GX	26 Oct 2019 04:32
31	31	Vg19102541.d	1.	9J25051-CALH	1X 5mL 2500PPB GX	26 Oct 2019 04:59
32	32	Vg19102542.d	1.	9J25051-CALI	1X 5mL 5000PPB GX	26 Oct 2019 05:26
33	33	Vg19102543.d	1.	9J25051-CALJ	1X 5mL 10000PP...	26 Oct 2019 05:52
34	34	Vg19102544.d	1.	9J25051-IBL8	1X 5mL DI	26 Oct 2019 06:19
35	35	Vg19102545.d	1.	9J25051-IBL9	1X 5mL DI	26 Oct 2019 06:46
36	36	Vg19102546.d	1.	9J25051-ICV3	1X 5mL 500PPB GX	26 Oct 2019 07:13
37	37	Vg19102547.d	1.	9J25051-IBLA	1X 5mL DI	26 Oct 2019 07:40

10/28/19 mL

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102511.D
Acq On : 25 Oct 2019 3:31 pm
Operator : MM
Sample : 9J25051-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:37 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

NR

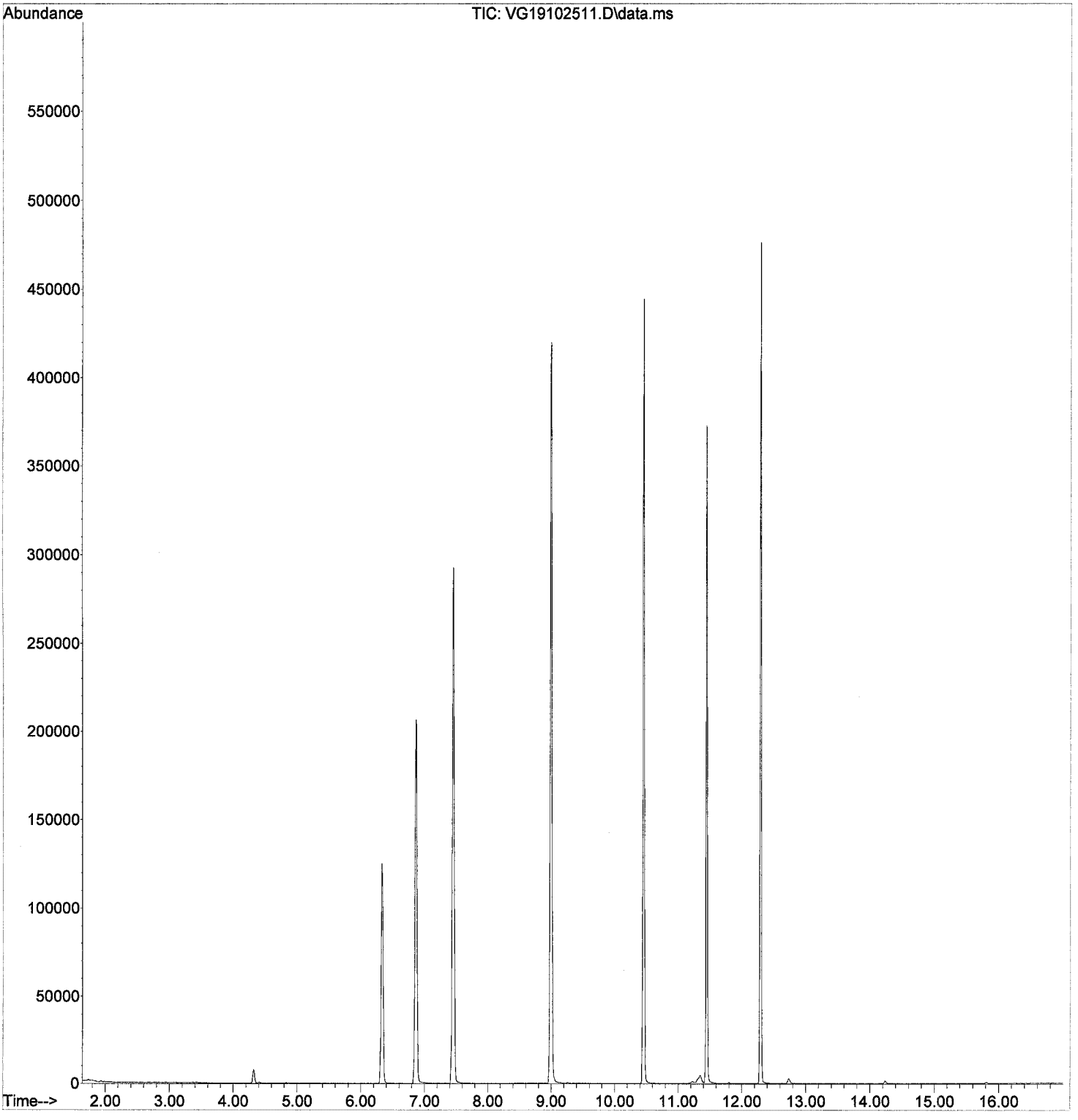
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	79679	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	238424	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	114211	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	84431	50.34	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	279431	51.05	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	311513	50.11	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	97930	50.78	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.984	50	207	0.11	ug/L		77
6) Chloroethane	2.832	64	11	Below Cal		#	47
14) Methylene Chloride	4.319	84	4164	1.79	ug/L		96
15) Acetone	4.405	43	787	0.95	ug/L		95
19) tert-Butanol (TBA)	4.831	59	256	0.81	ug/L	#	46

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102511.D
Acq On : 25 Oct 2019 3:31 pm
Operator : MM
Sample : 9J25051-IBL1
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:37 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



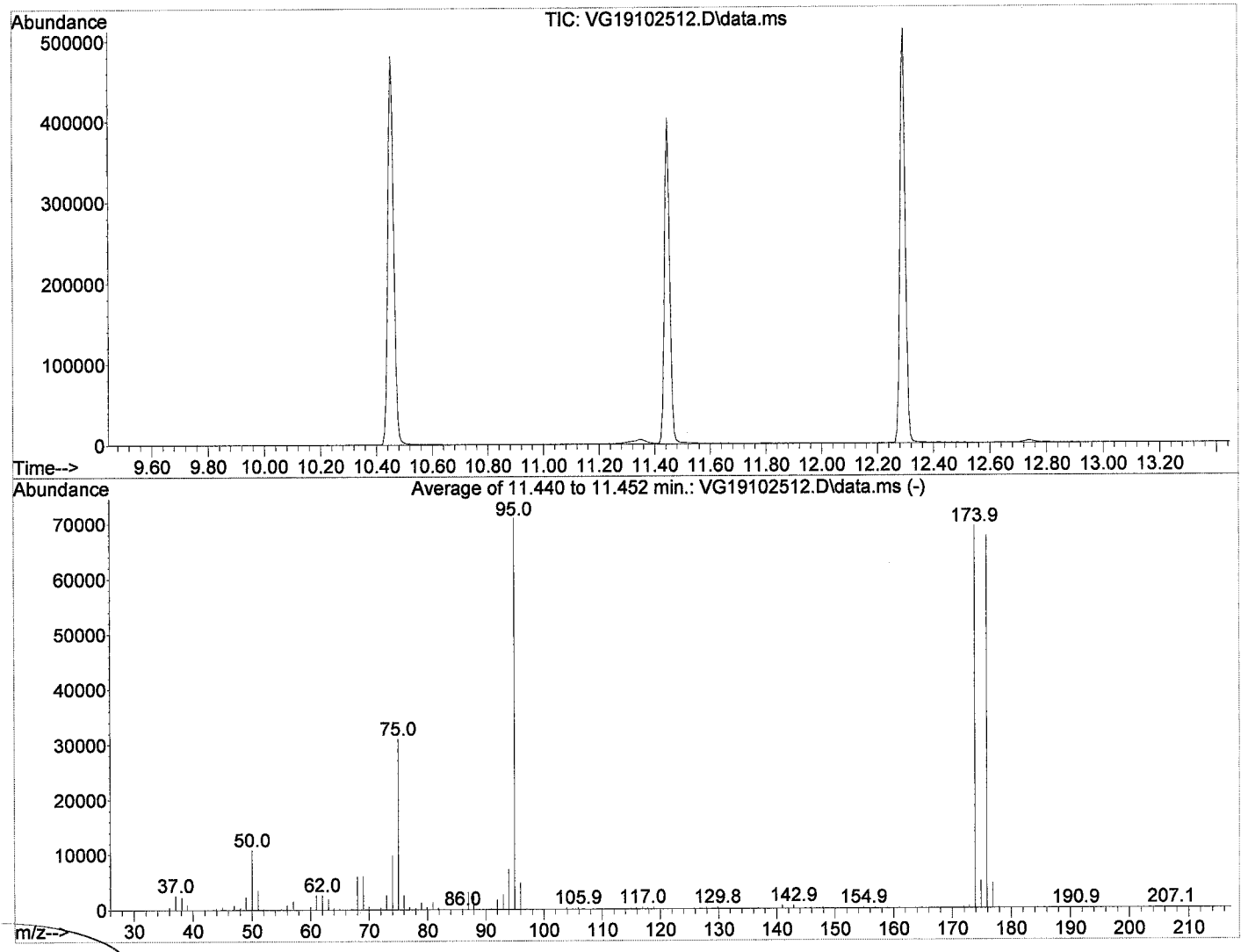
BFB

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102512.D
Acq On : 25 Oct 2019 3:58 pm
Operator : MM
Sample : 9J25051-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\methods\VG191025W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Mon Oct 28 11:12:23 2019

10/25/19



AutoFind: Scans 1608, 1609, 1610; Background Corrected with Scan 1601

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	102.5	71019	PASS
96	95	5	9	6.7	4776	PASS
173	174	0.00	2	0.6	397	PASS
174	95	50	200	97.5	69277	PASS
175	174	5	9	7.0	4863	PASS
176	174	95	105	97.4	67507	PASS
177	176	5	10	6.6	4457	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102512.D
Acq On : 25 Oct 2019 3:58 pm
Operator : MM
Sample : 9J25051-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:40 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

10/25/19

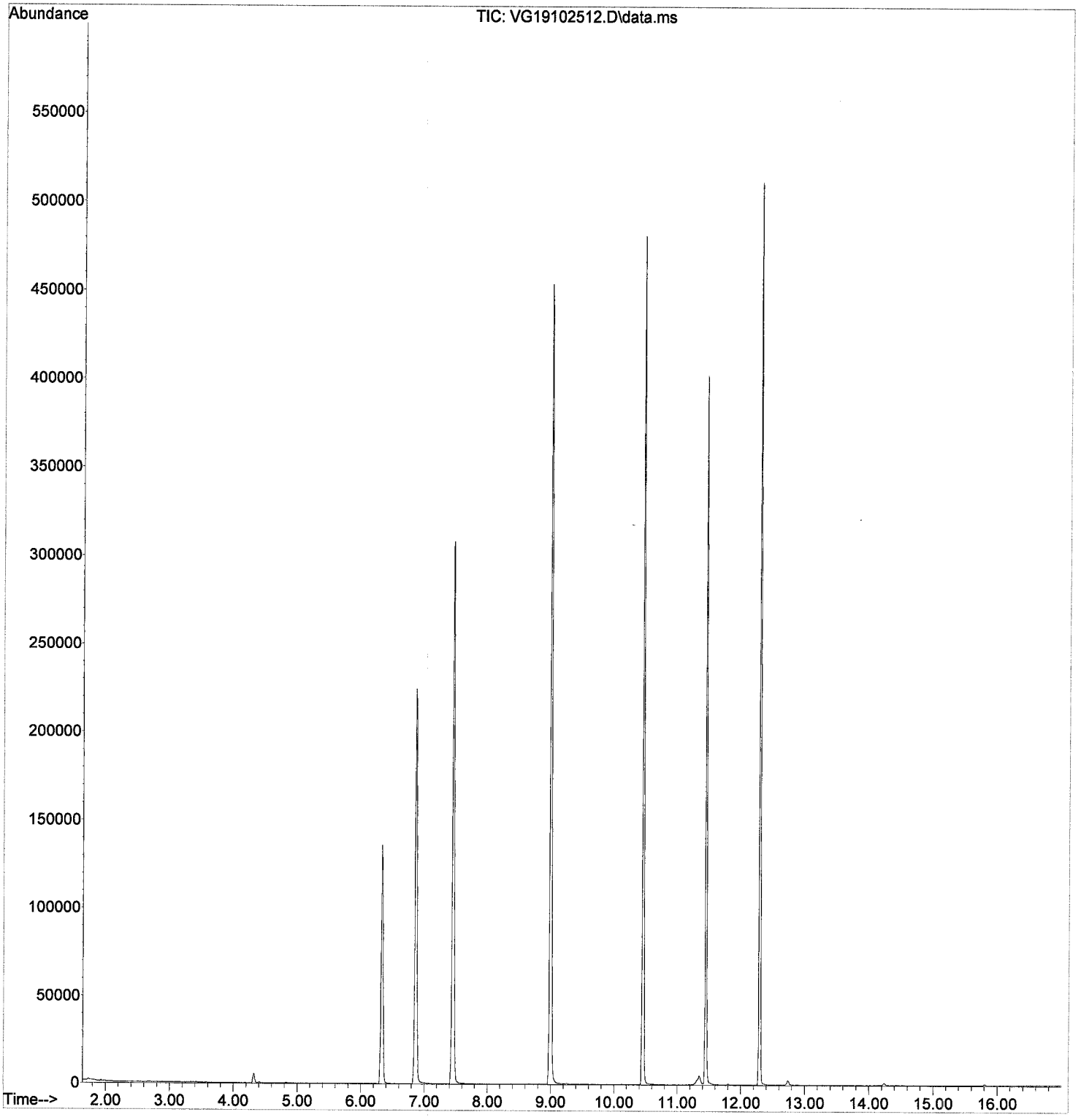
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.862	99	84248	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	258488	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	125829	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	91848	51.79	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	301964	52.17	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	335293	49.75	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	107678	50.68	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.984	50	243	0.13	ug/L		78
6) Chloroethane	2.807	64	20	Below Cal		#	47
14) Methylene Chloride	4.319	84	2895	0.80	ug/L		96
15) Acetone	4.405	43	747	0.85	ug/L		95
19) tert-Butanol (TBA)	4.831	59	341	1.03	ug/L	#	82
87) Naphthalene	14.214	128	19	0.28	ug/L		79

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102512.D
Acq On : 25 Oct 2019 3:58 pm
Operator : MM
Sample : 9J25051-TUN1
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:40 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102513.D
Acq On : 25 Oct 2019 4:25 pm
Operator : MM
Sample : 9J25051-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:43 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

10/25/19

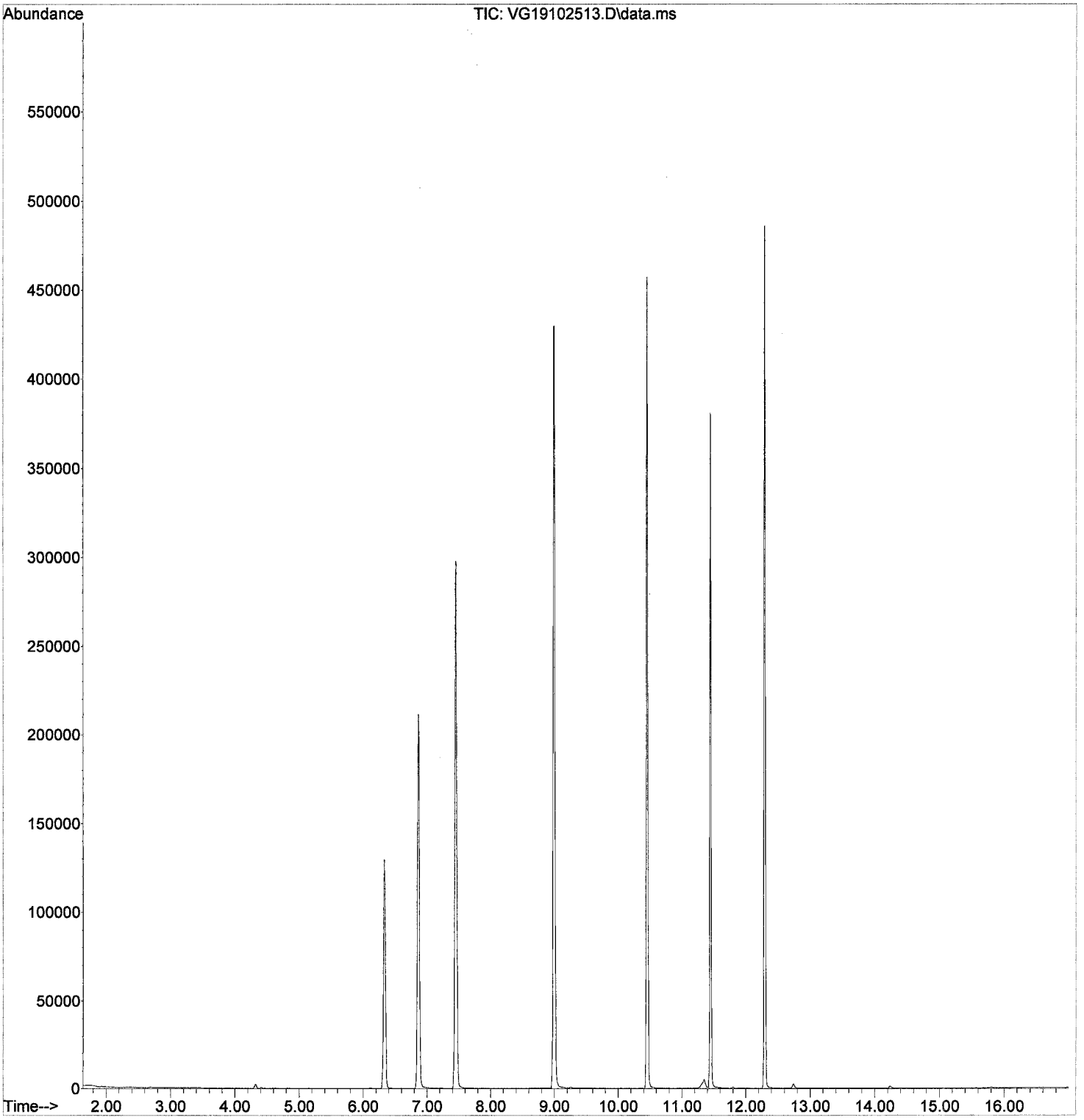
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	79992	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	244512	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	118749	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87451	51.93	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	286935	52.22	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	318243	49.92	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	100945	50.34	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.990	50	219	0.12	ug/L		77
6) Chloroethane	2.771	64	10	Below Cal		#	47
14) Methylene Chloride	4.325	84	1333	Below Cal			92
15) Acetone	4.405	43	628	0.75	ug/L		89
19) tert-Butanol (TBA)	4.831	59	197	0.62	ug/L	#	60
47) c-1,3-Dichloropropene	8.751	75	10	0.10	ug/L	#	33

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102513.D
Acq On : 25 Oct 2019 4:25 pm
Operator : MM
Sample : 9J25051-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:43 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102514.D
Acq On : 25 Oct 2019 4:53 pm
Operator : MM
Sample : 9J25051-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:37:03 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	86062	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	262978	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	128844	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	92408	51.80	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	305946	52.88	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	340973	49.80	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	110058	51.03	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d		
3) Chloromethane	1.984	50	449	0.25	ug/L		89
4) Vinyl Chloride	2.112	62	144	0.09	ug/L		77
5) Bromomethane	2.551	96	151	0.18	ug/L		82
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.923	101	165	0.09	ug/L		81
8) Ethanol	3.630	45	266	5.60	ug/L		78
9) 1,1-Dichloroethene	3.588	61	208	0.10	ug/L		91
10) Carbon Disulfide	3.588	76	344	0.12	ug/L		78
11) Freon 113	0.000		0	N.D.	d		
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	4.319	84	1819	1.07	ug/L		99
15) Acetone	4.411	43	1032	1.17	ug/L		91
16) t-1,2-Dichloroethene	4.514	61	216	0.10	ug/L		81
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.673	73	356	0.08	ug/L		57
19) tert-Butanol (TBA)	4.825	59	2096	5.40	ug/L	#	71
20) Diisopropyl ether (DIPE)	0.000		0	N.D.	d		
21) 1,1-Dichloroethane	5.215	63	301	0.11	ug/L		84
22) Acrylonitrile	0.000		0	N.D.	d		
23) Vinyl Acetate	0.000		0	N.D.			
24) Ethyl-tert-butyl ether...	0.000		0	N.D.	d		
25) c-1,2-Dichloroethene	5.825	61	198	0.09	ug/L		82
26) 2,2-Dichloropropane	0.000		0	N.D.	d		
27) Bromochloromethane	6.038	49	113	0.08	ug/L		90
28) Chloroform	6.130	83	266	0.09	ug/L		66
29) Carbon Tetrachloride	0.000		0	N.D.	d		
30) Tetrahydrofuran	0.000		0	N.D.	d		
31) 1,1,1-Trichloroethane	6.343	97	204	0.09	ug/L		74
33) 1,1-Dichloropropene	6.477	75	132	0.06	ug/L	#	65
34) 2-Butanone (MEK)	0.000		0	N.D.	d		
35) Benzene	6.758	78	628	0.09	ug/L		75
36) tert-Amyl methyl ether...	0.000		0	N.D.	d		
37) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d		
38) iso-Butyl Alcohol	0.000		0	N.D.	d		
40) Trichloroethene (TCE)	7.404	130	203	0.11	ug/L		87
41) tert-Amyl ethyl ether ...	0.000		0	N.D.			
42) Dibromomethane	7.892	93	64	0.05	ug/L	#	32
43) 1,2-Dichloropropane	7.995	63	158	0.09	ug/L		83
44) Bromodichloromethane	0.000		0	N.D.	d		
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	d		
47) c-1,3-Dichloropropene	8.812	75	120	0.05	ug/L	#	60

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102514.D
Acq On : 25 Oct 2019 4:53 pm
Operator : MM
Sample : 9J25051-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:37:03 2019
Quant Method : C:\msdchem\1\methods\~~VG191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	991	0.13	ug/L		90
50) Tetrachloroethene (PCE)	9.440	166	215	0.10	ug/L		74
51) 4-Methyl-2-Pentanone (...	9.446	43	316	0.12	ug/L		86
52) t-1,3-Dichloropropene	0.000		0	N.D.	d		
53) 1,1,2-Trichloroethane	9.629	97	163	0.09	ug/L	#	63
54) Dibromochloromethane	9.794	129	42	0.02	ug/L	#	58
55) 1,3-Dichloropropane	9.879	76	265	0.09	ug/L		80
56) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	d		
57) 2-Hexanone	0.000		0	N.D.	d		
58) Chlorobenzene	10.470	112	553	0.11	ug/L	#	55
59) Ethylbenzene	10.489	91	756	0.10	ug/L		89
60) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.	d		
61) m,p-Xylenes (2)	10.617	91	920	0.16	ug/L		98
62) o-Xylene	10.970	91	378	0.07	ug/L		95
63) Styrene	11.019	104	224	0.05	ug/L		97
64) Bromoform	0.000		0	N.D.	d		
65) Isopropylbenzene	11.220	105	392	0.06	ug/L		92
68) Bromobenzene	11.531	156	212	0.10	ug/L		88
69) n-Propylbenzene	11.543	91	703	0.09	ug/L		95
70) 1,1,2,2-Tetrachloroethane	11.604	83	251	0.09	ug/L		89
71) 2-Chlorotoluene	11.671	126	96	0.06	ug/L	#	67
72) 1,3,5-Trimethylbenzene	11.690	105	347	0.06	ug/L		74
73) 1,2,3-Trichloropropane	0.000		0	N.D.	d		
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.799	91	380	0.08	ug/L		80
76) tert-Butylbenzene	11.927	91	160	0.06	ug/L		91
77) 1,2,4-Trimethylbenzene	11.988	105	385	0.07	ug/L		81
78) sec-Butylbenzene	12.068	105	435	0.07	ug/L		97
79) 4-Isopropyltoluene	12.165	119	323	0.06	ug/L		84
80) 1,3-Dichlorobenzene	12.238	146	309	0.09	ug/L		99
81) 1,4-Dichlorobenzene	12.305	146	450	0.13	ug/L	#	56
82) n-Butylbenzene	12.488	91	309	0.07	ug/L		94
83) 1,2-Dichlorobenzene	12.635	146	309	0.09	ug/L		74
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	0.000		0	N.D.	d		
86) 1,2,4-Trichlorobenzene	13.884	180	123	0.06	ug/L		83
87) Naphthalene	0.000		0	N.D.	d		
88) 1,2,3-Trichlorobenzene	0.000		0	N.D.	d		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102514.D
Acq On : 25 Oct 2019 4:53 pm
Operator : MM
Sample : 9J25051-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:27 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	86062	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	262978	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	128844	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	92408	51.80	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	305946	52.88	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	340973	49.80	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	110058	51.08	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	129	0.10	ug/L	#	51
3) Chloromethane	1.984	50	449	0.25	ug/L		89
4) Vinyl Chloride	2.112	62	144	0.09	ug/L		77
5) Bromomethane	2.551	96	151	0.18	ug/L		82
6) Chloroethane	2.722	64	59	0.15	ug/L	#	47
7) Trichlorofluoromethane	2.923	101	165	0.09	ug/L		81
8) Ethanol	3.630	45	266	5.60	ug/L		78
9) 1,1-Dichloroethene	3.588	61	208	0.10	ug/L		91
10) Carbon Disulfide	3.588	76	344	0.12	ug/L		78
11) Freon 113	3.655	101	163	0.10	ug/L	#	77
12) Iodomethane	0.000		0	N.D.			
13) Acrolein	0.000		0	N.D.			
14) Methylene Chloride	4.319	84	1819	1.07	ug/L		99
15) Acetone	4.411	43	1032	1.17	ug/L		91
16) t-1,2-Dichloroethene	4.514	61	216	0.10	ug/L		81
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.673	73	356	0.08	ug/L		57
19) tert-Butanol (TBA)	4.825	59	2096	5.40	ug/L	#	71
20) Diisopropyl ether (DIPE)	5.112	45	35	0.01	ug/L		60
21) 1,1-Dichloroethane	5.215	63	301	0.11	ug/L		84
22) Acrylonitrile	5.343	53	10	0.01	ug/L	#	14
23) Vinyl Acetate	0.000		0	N.D.			
24) Ethyl-tert-butyl ether...	5.508	59	19	0.00	ug/L	#	38
25) c-1,2-Dichloroethene	5.825	61	198	0.09	ug/L		82
26) 2,2-Dichloropropane	5.947	77	59	0.04	ug/L	#	32
27) Bromochloromethane	6.038	49	113	0.08	ug/L		90
28) Chloroform	6.130	83	266	0.09	ug/L		66
29) Carbon Tetrachloride	6.252	117	10	0.01	ug/L	#	20
30) Tetrahydrofuran	6.301	42	11	0.01	ug/L	#	30
31) 1,1,1-Trichloroethane	6.343	97	204	0.09	ug/L		74
33) 1,1-Dichloropropene	6.477	75	132	0.06	ug/L	#	65
34) 2-Butanone (MEK)	6.489	43	25	0.02	ug/L		52
35) Benzene	6.758	78	628	0.09	ug/L		75
36) tert-Amyl methyl ether...	6.916	73	11	0.00	ug/L	#	8
37) 1,2-Dichloroethane (EDC)	6.983	62	195	0.08	ug/L		81
38) iso-Butyl Alcohol	7.056	43	168	1.13	ug/L		67
40) Trichloroethene (TCE)	7.404	130	203	0.11	ug/L		87
41) tert-Amyl ethyl ether ...	0.000		0	N.D.			
42) Dibromomethane	7.892	93	64	0.05	ug/L	#	32
43) 1,2-Dichloropropane	7.995	63	158	0.09	ug/L		83
44) Bromodichloromethane	8.075	83	165	0.09	ug/L	#	26
46) 2-Chloroethyl Vinyl Ether	8.757	63	10	0.01	ug/L	#	1
47) c-1,3-Dichloropropene	8.812	75	120	0.05	ug/L	#	60

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102514.D
Acq On : 25 Oct 2019 4:53 pm
Operator : MM
Sample : 9J25051-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:27 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

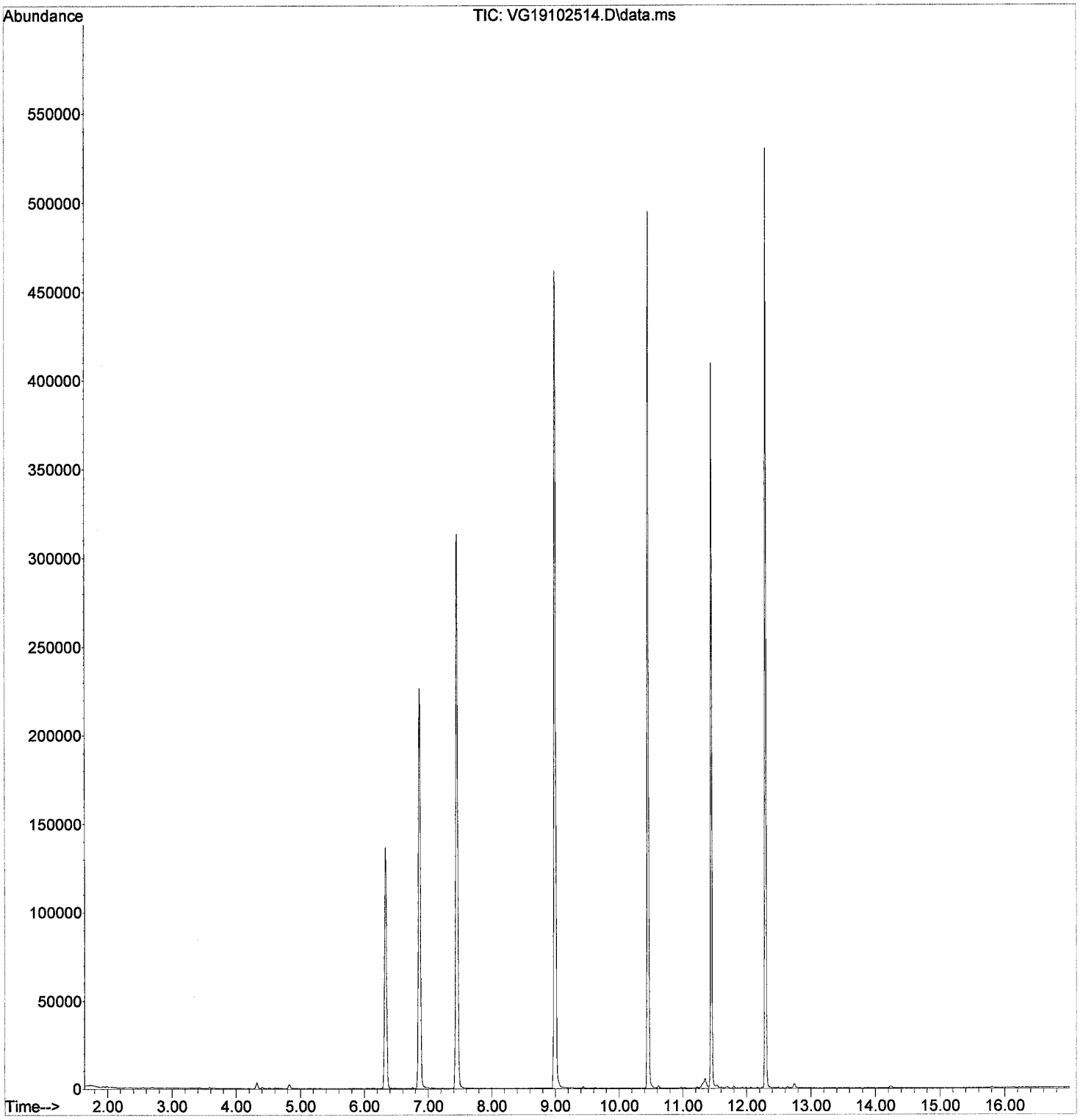
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	991	0.13	ug/L		90
50) Tetrachloroethene (PCE)	9.440	166	215	0.10	ug/L		74
51) 4-Methyl-2-Pentanone (...	9.446	43	316	0.12	ug/L		86
52) t-1,3-Dichloropropene	9.483	75	81	0.04	ug/L	#	45
53) 1,1,2-Trichloroethane	9.629	97	163	0.09	ug/L	#	63
54) Dibromochloromethane	9.794	129	42	0.02	ug/L	#	58
55) 1,3-Dichloropropane	9.879	76	265	0.09	ug/L		80
56) 1,2-Dibromoethane (EDB)	10.007	107	117	0.06	ug/L		85
57) 2-Hexanone	10.227	43	143	0.08	ug/L		71
58) Chlorobenzene	10.470	112	553	0.11	ug/L	#	55
59) Ethylbenzene	10.489	91	756	0.10	ug/L		89
60) 1,1,1,2-Tetrachloroethane	10.525	131	113	0.07	ug/L	#	61
61) m,p-Xylenes (2)	10.617	91	920	0.16	ug/L		98
62) o-Xylene	10.970	91	378	0.07	ug/L		95
63) Styrene	11.019	104	224	0.05	ug/L		97
64) Bromoform	11.037	173	29	0.02	ug/L	#	37
65) Isopropylbenzene	11.220	105	392	0.06	ug/L		92
68) Bromobenzene	11.531	156	212	0.10	ug/L		88
69) n-Propylbenzene	11.543	91	703	0.09	ug/L		95
70) 1,1,2,2-Tetrachloroethane	11.604	83	251	0.09	ug/L		89
71) 2-Chlorotoluene	11.671	126	96	0.06	ug/L	#	67
72) 1,3,5-Trimethylbenzene	11.690	105	347	0.06	ug/L		74
73) 1,2,3-Trichloropropane	11.702	110	63	0.08	ug/L	#	60
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.799	91	380	0.08	ug/L		80
76) tert-Butylbenzene	11.927	91	160	0.06	ug/L		91
77) 1,2,4-Trimethylbenzene	11.988	105	385	0.07	ug/L		81
78) sec-Butylbenzene	12.068	105	435	0.07	ug/L		97
79) 4-Isopropyltoluene	12.165	119	323	0.06	ug/L		84
80) 1,3-Dichlorobenzene	12.238	146	309	0.09	ug/L		99
81) 1,4-Dichlorobenzene	12.305	146	450	0.13	ug/L	#	56
82) n-Butylbenzene	12.488	91	309	0.07	ug/L		94
83) 1,2-Dichlorobenzene	12.635	146	309	0.09	ug/L		74
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
85) Hexachlorobutadiene	13.830	223	19	0.03	ug/L	#	1
86) 1,2,4-Trichlorobenzene	13.884	180	123	0.06	ug/L		83
87) Naphthalene	14.201	128	230	0.04	ug/L		79
88) 1,2,3-Trichlorobenzene	14.403	180	75	0.03	ug/L	#	12

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102514.D
Acq On : 25 Oct 2019 4:53 pm
Operator : MM
Sample : 9J25051-CAL1
Misc : 1X 5mL 0.1/0.2PPB VOCR
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:27 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:40:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	81493	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	248140	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	122815	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87694	51.91	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	287858	52.54	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	320375	49.59	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	103556	50.37	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	263	0.21	ug/L		72
3) Chloromethane	1.984	50	619	0.36	ug/L		99
4) Vinyl Chloride	2.112	62	313	0.20	ug/L		94
5) Bromomethane	2.551	96	229	0.29	ug/L		80
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.923	101	338	0.19	ug/L		78
8) Ethanol	0.000		0	N.D.	d		
9) 1,1-Dichloroethene	3.581	61	353	0.19	ug/L		98
10) Carbon Disulfide	3.588	76	583	0.21	ug/L		77
11) Freon 113	3.667	101	319	0.21	ug/L		77
12) Iodomethane	0.000		0	N.D.	d		
13) Acrolein	0.000		0	N.D.	d		
14) Methylene Chloride	4.319	84	1942	1.20	ug/L		91
15) Acetone	4.404	43	1117	1.34	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	349	0.17	ug/L		93
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.667	73	645	0.16	ug/L		96
19) tert-Butanol (TBA)	4.825	59	3672	9.98	ug/L	#	66
20) Diisopropyl ether (DIPE)	0.000		0	N.D.	d		
21) 1,1-Dichloroethane	5.215	63	508	0.19	ug/L		95
22) Acrylonitrile	0.000		0	N.D.	d		
23) Vinyl Acetate	0.000		0	N.D.	d		
24) Ethyl-tert-butyl ether...	0.000		0	N.D.	d		
25) c-1,2-Dichloroethene	5.825	61	368	0.18	ug/L		93
26) 2,2-Dichloropropane	5.935	77	218	0.17	ug/L		59
27) Bromochloromethane	6.044	49	239	0.18	ug/L		83
28) Chloroform	6.136	83	550	0.20	ug/L		81
29) Carbon Tetrachloride	6.264	117	240	0.15	ug/L	#	63
30) Tetrahydrofuran	0.000		0	N.D.	d		
31) 1,1,1-Trichloroethane	6.337	97	348	0.17	ug/L		91
33) 1,1-Dichloropropene	6.483	75	307	0.15	ug/L		87
34) 2-Butanone (MEK)	0.000		0	N.D.	d		
35) Benzene	6.752	78	1235	0.19	ug/L		93
36) tert-Amyl methyl ether...	0.000		0	N.D.	d		
37) 1,2-Dichloroethane (EDC)	6.989	62	408	0.19	ug/L		71
38) iso-Butyl Alcohol	7.050	43	506	3.59	ug/L		92
40) Trichloroethene (TCE)	7.404	130	383	0.21	ug/L		79
41) tert-Amyl ethyl ether ...	0.000		0	N.D.	d		
42) Dibromomethane	7.892	93	165m	0.15	ug/L		
43) 1,2-Dichloropropane	8.001	63	327	0.20	ug/L		98
44) Bromodichloromethane	8.074	83	281	0.15	ug/L		96
46) 2-Chloroethyl Vinyl Ether	0.000		0	N.D.	d		
47) c-1,3-Dichloropropene	8.800	75	237	0.11	ug/L	#	52

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:40:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

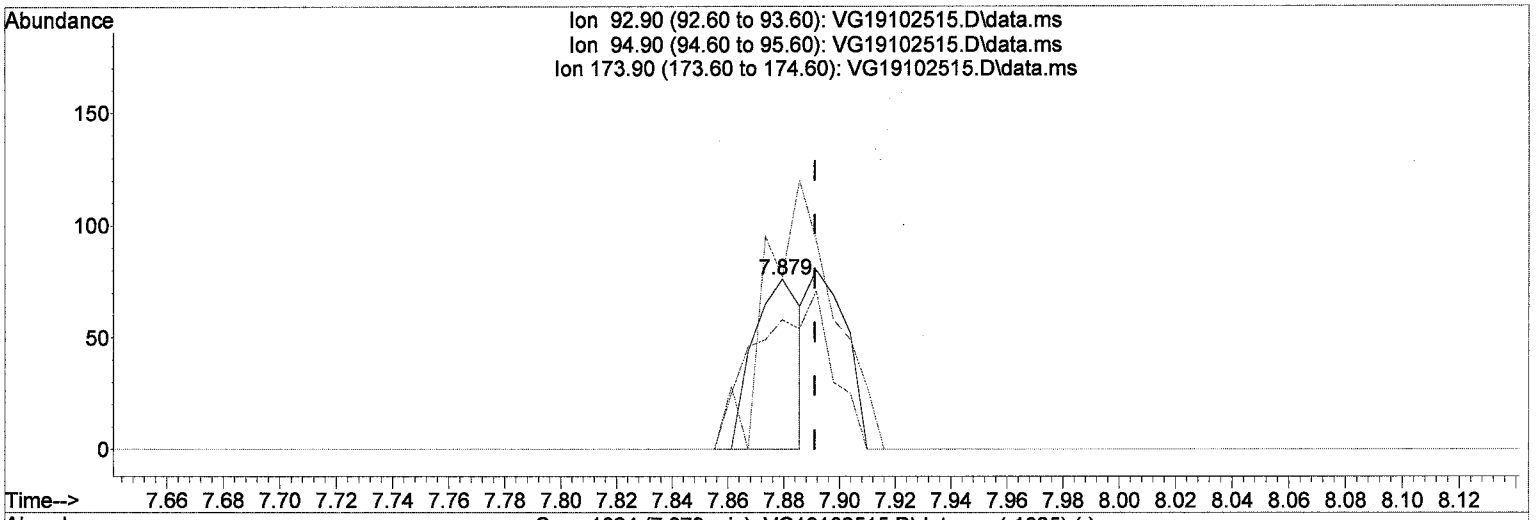
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	1534	0.21	ug/L		89
50) Tetrachloroethene (PCE)	9.434	166	428	0.22	ug/L		95
51) 4-Methyl-2-Pentanone (...	9.440	43	661	0.27	ug/L		78
52) t-1,3-Dichloropropene	9.483	75	211	0.11	ug/L		96
53) 1,1,2-Trichloroethane	9.635	97	312	0.17	ug/L		87
54) Dibromochloromethane	9.794	129	181	0.11	ug/L		87
55) 1,3-Dichloropropane	9.879	76	464	0.17	ug/L		83
56) 1,2-Dibromoethane (EDB)	10.007	107	286	0.15	ug/L		81
57) 2-Hexanone	10.220	43	303	0.17	ug/L		86
58) Chlorobenzene	10.464	112	977	0.20	ug/L	#	36
59) Ethylbenzene	10.489	91	1384	0.19	ug/L		97
60) 1,1,1,2-Tetrachloroethane	10.525	131	228	0.15	ug/L		84
61) m,p-Xylenes (2)	10.617	91	1670	0.31	ug/L		97
62) o-Xylene	10.970	91	748	0.14	ug/L		91
63) Styrene	11.019	104	473	0.11	ug/L		82
64) Bromoform	11.043	173	134	0.10	ug/L		81
65) Isopropylbenzene	11.220	105	829	0.13	ug/L		98
68) Bromobenzene	11.531	156	389	0.19	ug/L		97
69) n-Propylbenzene	11.543	91	1268	0.18	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	488	0.18	ug/L		90
71) 2-Chlorotoluene	11.671	126	243	0.15	ug/L	#	74
72) 1,3,5-Trimethylbenzene	11.690	105	719	0.13	ug/L		94
73) 1,2,3-Trichloropropane	11.708	110	154	0.19	ug/L	#	76
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.799	91	709	0.16	ug/L		87
76) tert-Butylbenzene	11.927	91	398	0.15	ug/L	#	70
77) 1,2,4-Trimethylbenzene	11.982	105	700	0.13	ug/L		88
78) sec-Butylbenzene	12.068	105	773	0.13	ug/L		98
79) 4-Isopropyltoluene	12.165	119	591	0.12	ug/L		92
80) 1,3-Dichlorobenzene	12.238	146	622	0.19	ug/L		86
81) 1,4-Dichlorobenzene	12.299	146	808	0.24	ug/L	#	26
82) n-Butylbenzene	12.488	91	574	0.14	ug/L		85
83) 1,2-Dichlorobenzene	12.635	146	584	0.18	ug/L		94
84) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	d		
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.884	180	228	0.11	ug/L		83
87) Naphthalene	14.207	128	453	0.08	ug/L		79
88) 1,2,3-Trichlorobenzene	14.396	180	188	0.09	ug/L		82

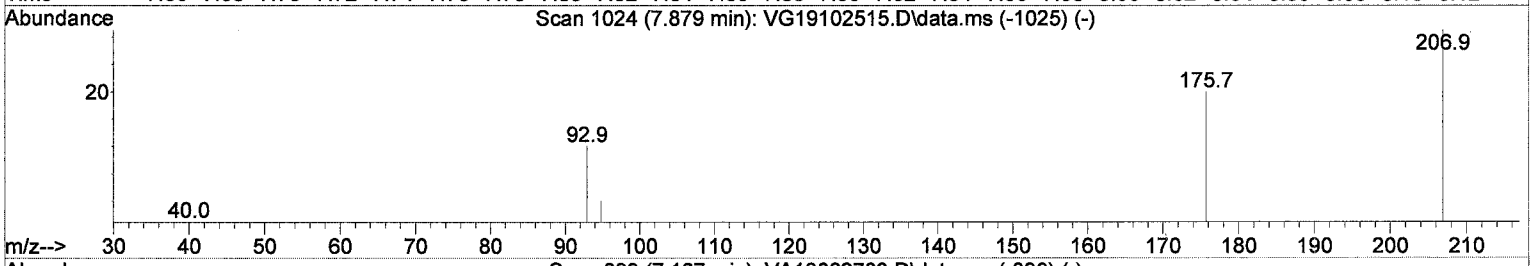
(#) = qualifier out of range (m) = manual integration (+) = signals summed

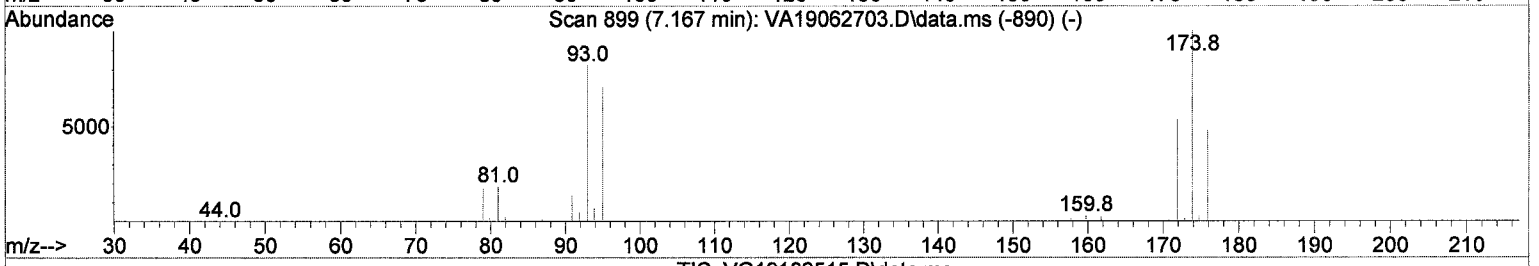
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:30 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration







TIC: VG19102515.D\data.ms

(42) Dibromomethane

7.879min (-0.012) 0.08 ug/L

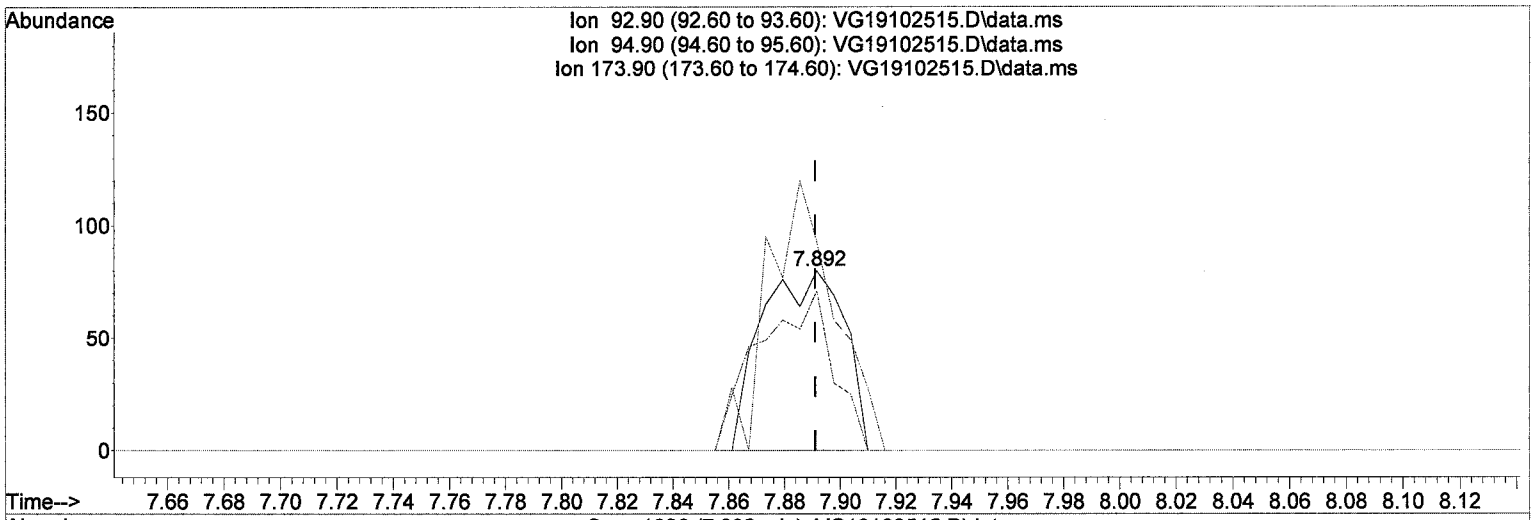
response 91

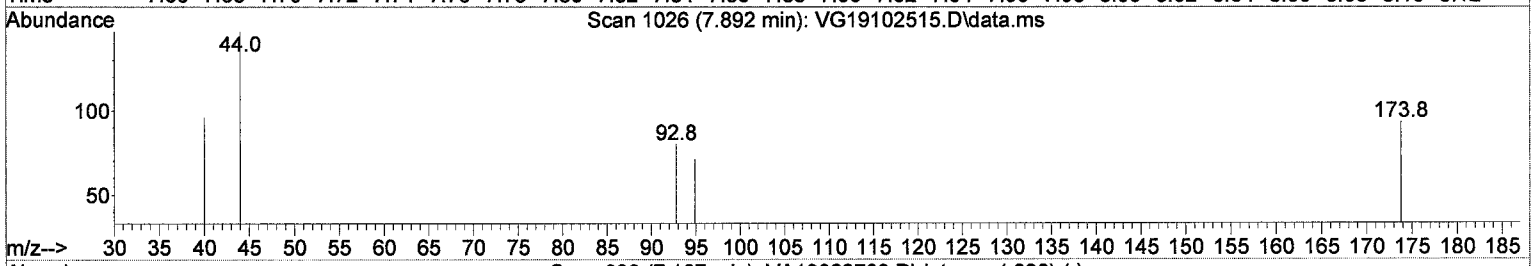
Ion	Exp%	Act%
92.90	100.00	100.00
94.90	83.10	76.32
173.90	115.70	101.32
0.00	0.00	0.00

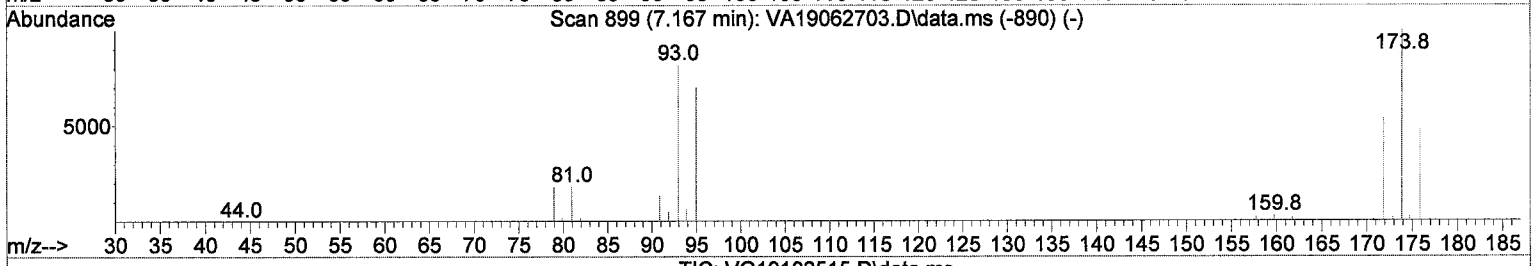
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:30 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration







TIC: VG19102515.D\data.ms

(42) Dibromomethane

7.892min (+ 0.001) 0.15 ug/L m

10/28/19

response 165

Ion	Exp%	Act%
92.90	100.00	100.00
94.90	83.10	88.75
173.90	115.70	116.25
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:30 2019
Quant Method : C:\msdchem\1\methods\~~VG191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	81493	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	248140	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	122815	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87694	51.91	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	287858	52.54	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	320375	49.59	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	103556	50.37	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	263	0.21	ug/L		72
3) Chloromethane	1.984	50	619	0.36	ug/L		99
4) Vinyl Chloride	2.112	62	313	0.20	ug/L		94
5) Bromomethane	2.551	96	229	0.29	ug/L		80
6) Chloroethane	2.728	64	137	0.36	ug/L	#	47
7) Trichlorofluoromethane	2.923	101	338	0.19	ug/L		78
8) Ethanol	3.630	45	529	11.75	ug/L		89
9) 1,1-Dichloroethene	3.581	61	353	0.19	ug/L		98
10) Carbon Disulfide	3.588	76	583	0.21	ug/L		77
11) Freon 113	3.667	101	319	0.21	ug/L		77
12) Iodomethane	3.746	142	22	0.04	ug/L	#	47
13) Acrolein	4.039	56	35	0.08	ug/L	#	23
14) Methylene Chloride	4.319	84	1942	1.20	ug/L		91
15) Acetone	4.404	43	1117	1.34	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	349	0.17	ug/L		93
17) n-Hexane	0.000		0	N.D.			
18) Methyl-tert-butyl-ether	4.667	73	645	0.16	ug/L		96
19) tert-Butanol (TBA)	4.825	59	3672	9.98	ug/L	#	66
20) Diisopropyl ether (DIPE)	5.124	45	144	0.03	ug/L	#	33
21) 1,1-Dichloroethane	5.215	63	508	0.19	ug/L		95
22) Acrylonitrile	5.295	53	109	0.11	ug/L	#	14
23) Vinyl Acetate	5.551	43	104	0.04	ug/L		74
24) Ethyl-tert-butyl ether...	5.520	59	80	0.02	ug/L	#	72
25) c-1,2-Dichloroethene	5.825	61	368	0.18	ug/L		93
26) 2,2-Dichloropropane	5.935	77	218	0.17	ug/L		59
27) Bromochloromethane	6.044	49	239	0.18	ug/L		83
28) Chloroform	6.136	83	550	0.20	ug/L		81
29) Carbon Tetrachloride	6.264	117	240	0.15	ug/L	#	63
30) Tetrahydrofuran	6.313	42	50	0.06	ug/L	#	30
31) 1,1,1-Trichloroethane	6.337	97	348	0.17	ug/L		91
33) 1,1-Dichloropropene	6.483	75	307	0.15	ug/L		87
34) 2-Butanone (MEK)	6.496	43	192	0.15	ug/L		52
35) Benzene	6.752	78	1235	0.19	ug/L		93
36) tert-Amyl methyl ether...	6.898	73	143	0.04	ug/L	#	1
37) 1,2-Dichloroethane (EDC)	6.989	62	408	0.19	ug/L		71
38) iso-Butyl Alcohol	7.050	43	506	3.59	ug/L		92
40) Trichloroethene (TCE)	7.404	130	383	0.21	ug/L		79
41) tert-Amyl ethyl ether ...	7.678	59	21	0.01	ug/L	#	42
42) Dibromomethane	~~7.879~~	~~93~~	~~91~~	~~0.08~~	~~ug/L~~		~~89~~ MI 165
43) 1,2-Dichloropropane	8.001	63	327	0.20	ug/L		98
44) Bromodichloromethane	8.074	83	281	0.15	ug/L		96
46) 2-Chloroethyl Vinyl Ether	8.745	63	19	0.02	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	237	0.11	ug/L	#	52

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:30 2019
Quant Method : C:\msdchem\1\methods\VG~~191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

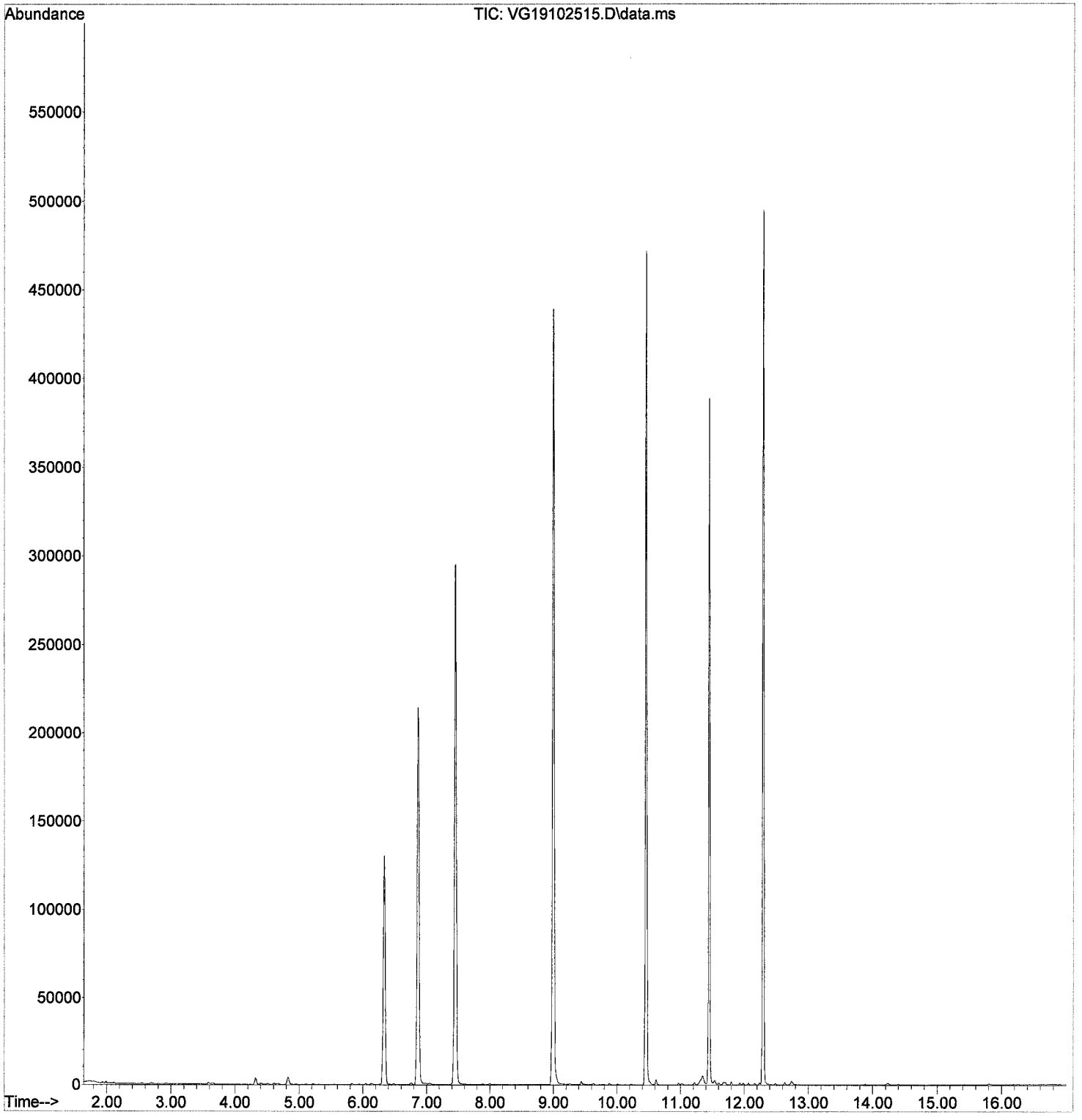
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	1534	0.21	ug/L		89
50) Tetrachloroethene (PCE)	9.434	166	428	0.22	ug/L		95
51) 4-Methyl-2-Pentanone (...	9.440	43	661	0.27	ug/L		78
52) t-1,3-Dichloropropene	9.483	75	211	0.11	ug/L		96
53) 1,1,2-Trichloroethane	9.635	97	312	0.17	ug/L		87
54) Dibromochloromethane	9.794	129	181	0.11	ug/L		87
55) 1,3-Dichloropropane	9.879	76	464	0.17	ug/L		83
56) 1,2-Dibromoethane (EDB)	10.007	107	286	0.15	ug/L		81
57) 2-Hexanone	10.220	43	303	0.17	ug/L		86
58) Chlorobenzene	10.464	112	977	0.20	ug/L	#	36
59) Ethylbenzene	10.489	91	1384	0.19	ug/L		97
60) 1,1,1,2-Tetrachloroethane	10.525	131	228	0.15	ug/L		84
61) m,p-Xylenes (2)	10.617	91	1670	0.31	ug/L		97
62) o-Xylene	10.970	91	748	0.14	ug/L		91
63) Styrene	11.019	104	473	0.11	ug/L		82
64) Bromoform	11.043	173	134	0.10	ug/L		81
65) Isopropylbenzene	11.220	105	829	0.13	ug/L		98
68) Bromobenzene	11.531	156	389	0.19	ug/L		97
69) n-Propylbenzene	11.543	91	1268	0.18	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	488	0.18	ug/L		90
71) 2-Chlorotoluene	11.671	126	243	0.15	ug/L	#	74
72) 1,3,5-Trimethylbenzene	11.690	105	719	0.13	ug/L		94
73) 1,2,3-Trichloropropane	11.708	110	154	0.19	ug/L	#	76
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
75) 4-Chlorotoluene	11.799	91	709	0.16	ug/L		87
76) tert-Butylbenzene	11.927	91	398	0.15	ug/L	#	70
77) 1,2,4-Trimethylbenzene	11.982	105	700	0.13	ug/L		88
78) sec-Butylbenzene	12.068	105	773	0.13	ug/L		98
79) 4-Isopropyltoluene	12.165	119	591	0.12	ug/L		92
80) 1,3-Dichlorobenzene	12.238	146	622	0.19	ug/L		86
81) 1,4-Dichlorobenzene	12.299	146	808	0.24	ug/L	#	26
82) n-Butylbenzene	12.488	91	574	0.14	ug/L		85
83) 1,2-Dichlorobenzene	12.635	146	584	0.18	ug/L		94
84) 1,2-Dibromo-3-Chloropr...	13.287	157	31	0.05	ug/L	#	18
85) Hexachlorobutadiene	0.000		0	N.D.			
86) 1,2,4-Trichlorobenzene	13.884	180	228	0.11	ug/L		83
87) Naphthalene	14.207	128	453	0.08	ug/L		79
88) 1,2,3-Trichlorobenzene	14.396	180	188	0.09	ug/L		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102515.D
Acq On : 25 Oct 2019 5:20 pm
Operator : MM
Sample : 9J25051-CAL2
Misc : 1X 5mL 0.2/0.4PPB VOCR
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:30 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102516.D
Acq On : 25 Oct 2019 5:47 pm
Operator : MM
Sample : 9J25051-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:43:31 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	78410	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	236751	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	116929	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	83807	51.56	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	275500	52.27	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	309475	50.21	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	97363	49.74	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	405	0.33	ug/L		90
3) Chloromethane	1.984	50	914	0.55	ug/L		90
4) Vinyl Chloride	2.112	62	546	0.36	ug/L		83
5) Bromomethane	2.545	96	415	0.55	ug/L		77
6) Chloroethane	2.722	64	183	0.50	ug/L	#	65
7) Trichlorofluoromethane	2.923	101	650	0.39	ug/L		89
8) Ethanol	3.630	45	1029	23.76	ug/L		76
9) 1,1-Dichloroethene	3.588	61	720	0.39	ug/L		98
10) Carbon Disulfide	3.588	76	958	0.35	ug/L		93
11) Freon 113	3.655	101	578	0.39	ug/L		88
12) Iodomethane	0.000		0	N.D.	d		
13) Acrolein	0.000		0	N.D.	d		
14) Methylene Chloride	4.319	84	2043	1.31	ug/L		94
15) Acetone	4.404	43	1426	1.78	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	721	0.37	ug/L		83
17) n-Hexane	4.624	86	10	0.05	ug/L	#	22
18) Methyl-tert-butyl-ether	4.667	73	1243	0.32	ug/L		95
19) tert-Butanol (TBA)	4.825	59	6902	19.51	ug/L	#	52
20) Diisopropyl ether (DIPE)	5.106	45	342	0.08	ug/L		78
21) 1,1-Dichloroethane	5.215	63	980	0.38	ug/L		98
22) Acrylonitrile	5.295	53	292	0.31	ug/L		83
23) Vinyl Acetate	0.000		0	N.D.	d		
24) Ethyl-tert-butyl ether...	5.520	59	277	0.07	ug/L	#	76
25) c-1,2-Dichloroethene	5.831	61	741	0.37	ug/L		88
26) 2,2-Dichloropropane	5.935	77	361	0.30	ug/L	#	53
27) Bromochloromethane	6.038	49	529	0.42	ug/L		93
28) Chloroform	6.136	83	984	0.37	ug/L		96
29) Carbon Tetrachloride	6.264	117	447	0.28	ug/L		92
30) Tetrahydrofuran	6.313	42	247	0.30	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	733	0.36	ug/L		96
33) 1,1-Dichloropropene	6.483	75	621	0.31	ug/L		94
34) 2-Butanone (MEK)	6.483	43	681	0.54	ug/L		86
35) Benzene	6.752	78	2314	0.37	ug/L		91
36) tert-Amyl methyl ether...	0.000		0	N.D.	d		
37) 1,2-Dichloroethane (EDC)	6.983	62	804	0.38	ug/L		91
38) iso-Butyl Alcohol	7.050	43	1036	7.65	ug/L		68
40) Trichloroethene (TCE)	7.404	130	739	0.43	ug/L		94
41) tert-Amyl ethyl ether ...	7.684	59	195	0.08	ug/L	#	58
42) Dibromomethane	7.892	93	364	0.34	ug/L		97
43) 1,2-Dichloropropane	7.989	63	585	0.37	ug/L		79
44) Bromodichloromethane	8.081	83	561	0.32	ug/L		85
46) 2-Chloroethyl Vinyl Ether	8.751	63	147	0.15	ug/L	#	1
47) c-1,3-Dichloropropene	8.806	75	512	0.24	ug/L		100

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102516.D
Acq On : 25 Oct 2019 5:47 pm
Operator : MM
Sample : 9J25051-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:43:31 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	9.050	91	2717	0.39	ug/L	97
50) Tetrachloroethene (PCE)	9.440	166	724	0.38	ug/L	88
51) 4-Methyl-2-Pentanone (...	9.446	43	1338	0.58	ug/L	98
52) t-1,3-Dichloropropene	9.477	75	400	0.23	ug/L	97
53) 1,1,2-Trichloroethane	9.623	97	608	0.35	ug/L	95
54) Dibromochloromethane	9.794	129	425	0.27	ug/L	88
55) 1,3-Dichloropropane	9.879	76	881	0.33	ug/L	77
56) 1,2-Dibromoethane (EDB)	10.007	107	559	0.31	ug/L	91
57) 2-Hexanone	10.214	43	717	0.43	ug/L	97
58) Chlorobenzene	10.470	112	1806	0.39	ug/L	87
59) Ethylbenzene	10.489	91	2478	0.35	ug/L	96
60) 1,1,1,2-Tetrachloroethane	10.525	131	486	0.33	ug/L	96
61) m,p-Xylenes (2)	10.617	91	3107	0.60	ug/L	98
62) o-Xylene	10.970	91	1387	0.28	ug/L	97
63) Styrene	11.019	104	899	0.22	ug/L	98
64) Bromoform	11.043	173	316	0.26	ug/L	75
65) Isopropylbenzene	11.220	105	1525	0.25	ug/L	95
68) Bromobenzene	11.531	156	732	0.37	ug/L	97
69) n-Propylbenzene	11.543	91	2261	0.33	ug/L	96
70) 1,1,2,2-Tetrachloroethane	11.604	83	967	0.38	ug/L	95
71) 2-Chlorotoluene	11.671	126	481	0.30	ug/L	96
72) 1,3,5-Trimethylbenzene	11.690	105	1388	0.27	ug/L	98
73) 1,2,3-Trichloropropane	11.702	110	290	0.38	ug/L #	72
74) t-1,4-Dichloro-2-butene	0.000		0	N.D.	d	
75) 4-Chlorotoluene	11.799	91	1263	0.29	ug/L	92
76) tert-Butylbenzene	11.927	91	728	0.29	ug/L	87
77) 1,2,4-Trimethylbenzene	11.982	105	1235	0.24	ug/L	94
78) sec-Butylbenzene	12.062	105	1554	0.27	ug/L	97
79) 4-Isopropyltoluene	12.165	119	1094	0.23	ug/L	97
80) 1,3-Dichlorobenzene	12.238	146	1072	0.33	ug/L	100
81) 1,4-Dichlorobenzene	12.305	146	1394	0.43	ug/L	84
82) n-Butylbenzene	12.488	91	1096	0.27	ug/L	92
83) 1,2-Dichlorobenzene	12.628	146	1052	0.33	ug/L	95
84) 1,2-Dibromo-3-Chloropr...	13.287	157	121	0.22	ug/L	84
85) Hexachlorobutadiene	13.829	223	161	0.32	ug/L	93
86) 1,2,4-Trichlorobenzene	13.872	180	459	0.23	ug/L	93
87) Naphthalene	14.201	128	915	0.16	ug/L	89
88) 1,2,3-Trichlorobenzene	14.396	180	435	0.22	ug/L	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102516.D
Acq On : 25 Oct 2019 5:47 pm
Operator : MM
Sample : 9J25051-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:33 2019
Quant Method : C:\msdchem\1\methods\~~VG191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	78410	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	236751	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	116929	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	83807	51.56	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	275500	52.27	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	309475	50.21	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	97363	49.74	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	405	0.33	ug/L		90
3) Chloromethane	1.984	50	914	0.55	ug/L		90
4) Vinyl Chloride	2.112	62	546	0.36	ug/L		83
5) Bromomethane	2.545	96	415	0.55	ug/L		77
6) Chloroethane	2.722	64	183	0.50	ug/L	#	65
7) Trichlorofluoromethane	2.923	101	650	0.39	ug/L		89
8) Ethanol	3.630	45	1029	23.76	ug/L		76
9) 1,1-Dichloroethene	3.588	61	720	0.39	ug/L		98
10) Carbon Disulfide	3.588	76	958	0.35	ug/L		93
11) Freon 113	3.655	101	578	0.39	ug/L		88
12) Iodomethane	3.740	142	27	0.05	ug/L	#	47
13) Acrolein	4.039	56	89	0.22	ug/L		96
14) Methylene Chloride	4.319	84	2043	1.31	ug/L		94
15) Acetone	4.404	43	1426	1.78	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	721	0.37	ug/L		83
17) n-Hexane	4.624	86	10	0.05	ug/L	#	22
18) Methyl-tert-butyl-ether	4.667	73	1243	0.32	ug/L		95
19) tert-Butanol (TBA)	4.825	59	6902	19.51	ug/L	#	52
20) Diisopropyl ether (DIPE)	5.106	45	342	0.08	ug/L		78
21) 1,1-Dichloroethane	5.215	63	980	0.38	ug/L		98
22) Acrylonitrile	5.295	53	292	0.31	ug/L		83
23) Vinyl Acetate	5.544	43	406	0.15	ug/L		74
24) Ethyl-tert-butyl ether...	5.520	59	277	0.07	ug/L	#	76
25) c-1,2-Dichloroethene	5.831	61	741	0.37	ug/L		88
26) 2,2-Dichloropropane	5.935	77	361	0.30	ug/L	#	53
27) Bromochloromethane	6.038	49	529	0.42	ug/L		93
28) Chloroform	6.136	83	984	0.37	ug/L		96
29) Carbon Tetrachloride	6.264	117	447	0.28	ug/L		92
30) Tetrahydrofuran	6.313	42	247	0.30	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	733	0.36	ug/L		96
33) 1,1-Dichloropropene	6.483	75	621	0.31	ug/L		94
34) 2-Butanone (MEK)	6.483	43	681	0.54	ug/L		86
35) Benzene	6.752	78	2314	0.37	ug/L		91
36) tert-Amyl methyl ether...	6.892	73	326	0.09	ug/L	#	1
37) 1,2-Dichloroethane (EDC)	6.983	62	804	0.38	ug/L		91
38) iso-Butyl Alcohol	7.050	43	1036	7.65	ug/L		68
40) Trichloroethene (TCE)	7.404	130	739	0.43	ug/L		94
41) tert-Amyl ethyl ether ...	7.684	59	195	0.08	ug/L	#	58
42) Dibromomethane	7.892	93	364	0.34	ug/L		97
43) 1,2-Dichloropropane	7.989	63	585	0.37	ug/L		79
44) Bromodichloromethane	8.081	83	561	0.32	ug/L		85
46) 2-Chloroethyl Vinyl Ether	8.751	63	147	0.15	ug/L	#	1
47) c-1,3-Dichloropropene	8.806	75	512	0.24	ug/L		100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102516.D
Acq On : 25 Oct 2019 5:47 pm
Operator : MM
Sample : 9J25051-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:33 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

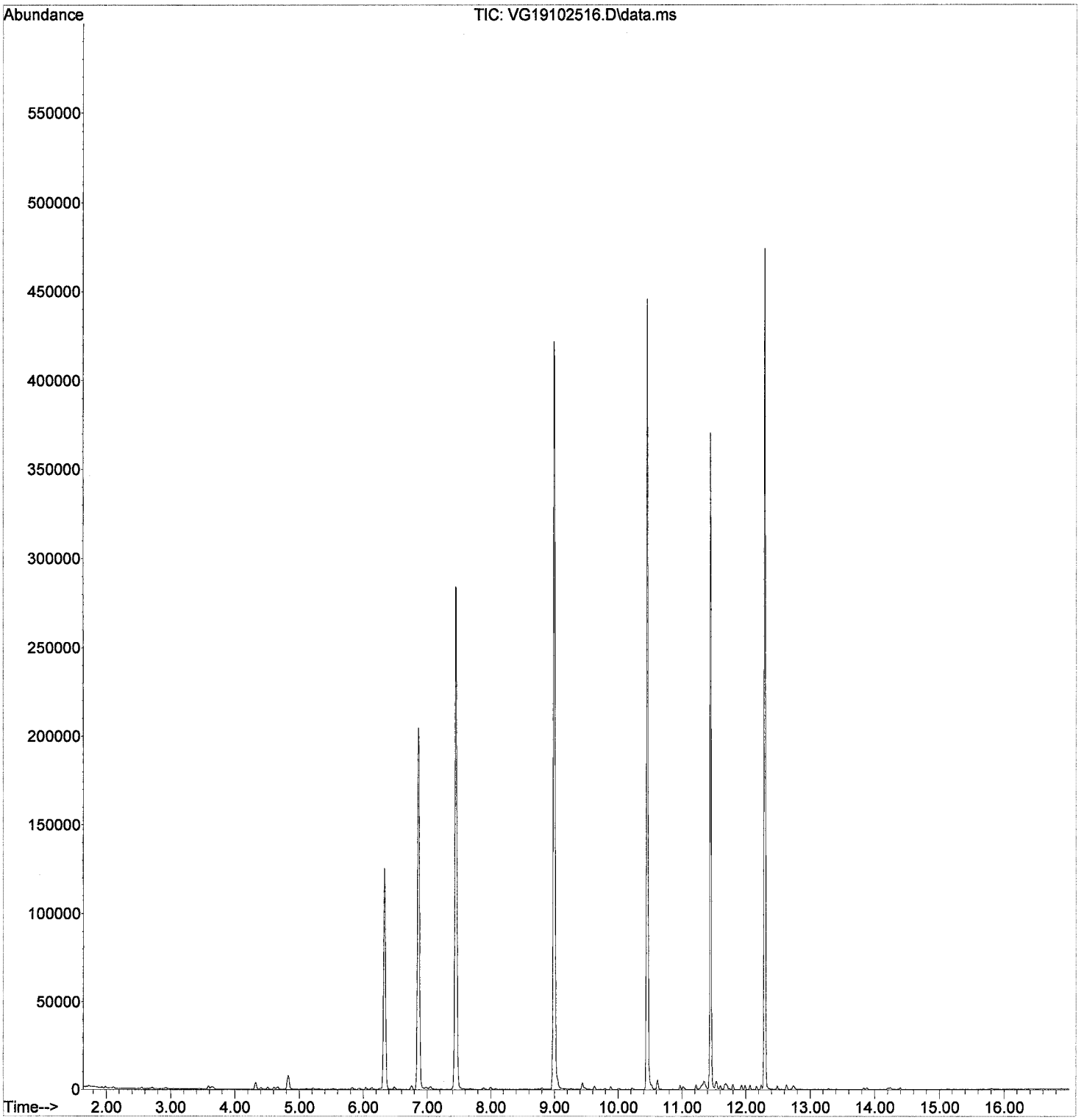
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	2717	0.39	ug/L		97
50) Tetrachloroethene (PCE)	9.440	166	724	0.38	ug/L		88
51) 4-Methyl-2-Pentanone (...	9.446	43	1338	0.58	ug/L		98
52) t-1,3-Dichloropropene	9.477	75	400	0.23	ug/L		97
53) 1,1,2-Trichloroethane	9.623	97	608	0.35	ug/L		95
54) Dibromochloromethane	9.794	129	425	0.27	ug/L		88
55) 1,3-Dichloropropane	9.879	76	881	0.33	ug/L		77
56) 1,2-Dibromoethane (EDB)	10.007	107	559	0.31	ug/L		91
57) 2-Hexanone	10.214	43	717	0.43	ug/L		97
58) Chlorobenzene	10.470	112	1806	0.39	ug/L		87
59) Ethylbenzene	10.489	91	2478	0.35	ug/L		96
60) 1,1,1,2-Tetrachloroethane	10.525	131	486	0.33	ug/L		96
61) m,p-Xylenes (2)	10.617	91	3107	0.60	ug/L		98
62) o-Xylene	10.970	91	1387	0.28	ug/L		97
63) Styrene	11.019	104	899	0.22	ug/L		98
64) Bromoform	11.043	173	316	0.26	ug/L		75
65) Isopropylbenzene	11.220	105	1525	0.25	ug/L		95
68) Bromobenzene	11.531	156	732	0.37	ug/L		97
69) n-Propylbenzene	11.543	91	2261	0.33	ug/L		96
70) 1,1,2,2-Tetrachloroethane	11.604	83	967	0.38	ug/L		95
71) 2-Chlorotoluene	11.671	126	481	0.30	ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	1388	0.27	ug/L		98
73) 1,2,3-Trichloropropane	11.702	110	290	0.38	ug/L	#	72
74) t-1,4-Dichloro-2-butene	11.744	88	10	0.05	ug/L	#	28
75) 4-Chlorotoluene	11.799	91	1263	0.29	ug/L		92
76) tert-Butylbenzene	11.927	91	728	0.29	ug/L		87
77) 1,2,4-Trimethylbenzene	11.982	105	1235	0.24	ug/L		94
78) sec-Butylbenzene	12.062	105	1554	0.27	ug/L		97
79) 4-Isopropyltoluene	12.165	119	1094	0.23	ug/L		97
80) 1,3-Dichlorobenzene	12.238	146	1072	0.33	ug/L		100
81) 1,4-Dichlorobenzene	12.305	146	1394	0.43	ug/L		84
82) n-Butylbenzene	12.488	91	1096	0.27	ug/L		92
83) 1,2-Dichlorobenzene	12.628	146	1052	0.33	ug/L		95
84) 1,2-Dibromo-3-Chloropr...	13.287	157	121	0.22	ug/L		84
85) Hexachlorobutadiene	13.829	223	161	0.32	ug/L		93
86) 1,2,4-Trichlorobenzene	13.872	180	459	0.23	ug/L		93
87) Naphthalene	14.201	128	915	0.16	ug/L		89
88) 1,2,3-Trichlorobenzene	14.396	180	435	0.22	ug/L		92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102516.D
Acq On : 25 Oct 2019 5:47 pm
Operator : MM
Sample : 9J25051-CAL3
Misc : 1X 5mL 0.4/0.8PPB VOCR
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:33 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:44:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	87837	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	266623	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	134840	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	93451	51.32	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	309533	52.42	ug/L		-0.01
48) Toluene-d8 (S)	8.989	98	348152	50.16	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	112252	49.73	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	1328	0.96	ug/L		98
3) Chloromethane	1.984	50	2027	1.08	ug/L		88
4) Vinyl Chloride	2.112	62	1682	0.98	ug/L		99
5) Bromomethane	2.545	96	1031	1.22	ug/L		99
6) Chloroethane	2.722	64	473	1.15	ug/L	#	34
7) Trichlorofluoromethane	2.917	101	1893	1.01	ug/L		99
8) Ethanol	3.636	45	2873	59.21	ug/L		93
9) 1,1-Dichloroethene	3.581	61	2001	0.98	ug/L		92
10) Carbon Disulfide	3.588	76	2616	0.86	ug/L		95
11) Freon 113	3.661	101	1595	0.95	ug/L		83
12) Iodomethane	0.000		0	N.D.	d		
13) Acrolein	4.027	56	363	0.81	ug/L		85
14) Methylene Chloride	4.319	84	3475	1.99	ug/L		89
15) Acetone	4.404	43	2696	3.00	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	2024	0.92	ug/L		94
17) n-Hexane	4.606	86	168	0.70	ug/L	#	60
18) Methyl-tert-butyl-ether	4.667	73	3585	0.82	ug/L		92
19) tert-Butanol (TBA)	4.825	59	19370	48.87	ug/L	#	57
20) Diisopropyl ether (DIPE)	5.112	45	1029	0.21	ug/L		96
21) 1,1-Dichloroethane	5.215	63	2990	1.03	ug/L		97
22) Acrylonitrile	5.295	53	831	0.78	ug/L		98
23) Vinyl Acetate	5.532	43	1655	0.53	ug/L		87
24) Ethyl-tert-butyl ether...	5.514	59	799	0.18	ug/L		92
25) c-1,2-Dichloroethene	5.819	61	2038	0.90	ug/L		95
26) 2,2-Dichloropropane	5.935	77	1277	0.95	ug/L	#	51
27) Bromochloromethane	6.038	49	1485	1.06	ug/L		95
28) Chloroform	6.136	83	2916	0.98	ug/L		97
29) Carbon Tetrachloride	6.264	117	1387	0.78	ug/L		95
30) Tetrahydrofuran	6.319	42	728	0.79	ug/L		80
31) 1,1,1-Trichloroethane	6.337	97	2025	0.90	ug/L		95
33) 1,1-Dichloropropene	6.477	75	1862	0.83	ug/L		97
34) 2-Butanone (MEK)	6.483	43	2324	1.63	ug/L		90
35) Benzene	6.752	78	6507	0.92	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	1071	0.27	ug/L	#	58
37) 1,2-Dichloroethane (EDC)	6.983	62	2322	0.99	ug/L		99
38) iso-Butyl Alcohol	7.044	43	3182	20.97	ug/L		89
40) Trichloroethene (TCE)	7.410	130	1961	1.02	ug/L		88
41) tert-Amyl ethyl ether ...	7.684	59	584	0.22	ug/L		80
42) Dibromomethane	7.879	93	1159	0.96	ug/L		96
43) 1,2-Dichloropropane	7.995	63	1670	0.94	ug/L		93
44) Bromodichloromethane	8.075	83	1774	0.90	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	648	0.60	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	1512	0.64	ug/L		89

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:44:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

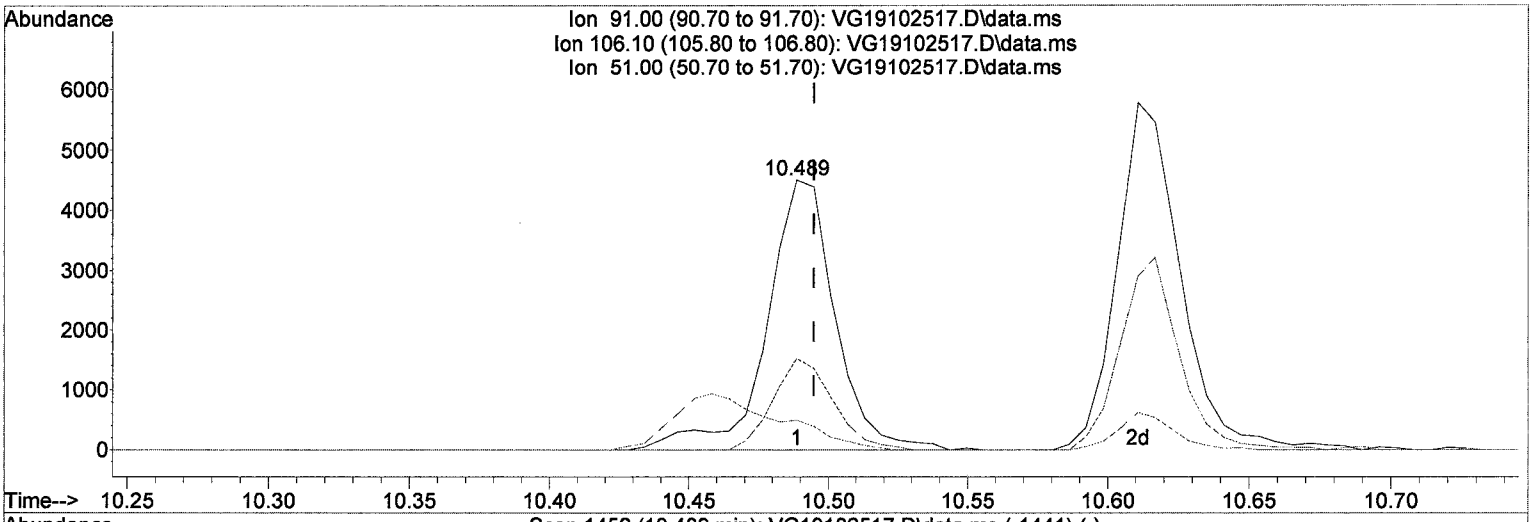
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	7737	0.99	ug/L		95
50) Tetrachloroethene (PCE)	9.440	166	2028	0.96	ug/L		86
51) 4-Methyl-2-Pentanone (...	9.440	43	3944	1.53	ug/L		93
52) t-1,3-Dichloropropene	9.471	75	1296	0.65	ug/L		86
53) 1,1,2-Trichloroethane	9.623	97	1761	0.91	ug/L		96
54) Dibromochloromethane	9.788	129	1298	0.73	ug/L		92
55) 1,3-Dichloropropane	9.879	76	2761	0.92	ug/L		94
56) 1,2-Dibromoethane (EDB)	10.007	107	1647	0.82	ug/L		99
57) 2-Hexanone	10.214	43	2488	1.32	ug/L		96
58) Chlorobenzene	10.470	112	5325	1.02	ug/L		98
59) Ethylbenzene	10.489	91	7230m	0.91	ug/L		
60) 1,1,1,2-Tetrachloroethane	10.519	131	1443	0.87	ug/L		97
61) m,p-Xylenes (2)	10.611	91	9040	1.55	ug/L		98
62) o-Xylene	10.970	91	4144	0.74	ug/L		95
63) Styrene	11.013	104	2917	0.63	ug/L		95
64) Bromoform	11.037	173	931	0.67	ug/L		95
65) Isopropylbenzene	11.220	105	4739	0.68	ug/L		96
68) Bromobenzene	11.531	156	2221	0.97	ug/L		96
69) n-Propylbenzene	11.543	91	6998	0.90	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	2820	0.95	ug/L		100
71) 2-Chlorotoluene	11.665	126	1659	0.91	ug/L	#	71
72) 1,3,5-Trimethylbenzene	11.690	105	4147	0.70	ug/L		98
73) 1,2,3-Trichloropropane	11.708	110	889	1.02	ug/L	#	81
74) t-1,4-Dichloro-2-butene	11.732	88	151	0.60	ug/L	#	65
75) 4-Chlorotoluene	11.793	91	4167	0.84	ug/L		99
76) tert-Butylbenzene	11.927	91	2301	0.80	ug/L		88
77) 1,2,4-Trimethylbenzene	11.982	105	3979	0.66	ug/L		99
78) sec-Butylbenzene	12.062	105	5081	0.78	ug/L		98
79) 4-Isopropyltoluene	12.165	119	3769	0.68	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	3266	0.88	ug/L		96
81) 1,4-Dichlorobenzene	12.305	146	3909	1.04	ug/L		94
82) n-Butylbenzene	12.488	91	3461	0.75	ug/L		97
83) 1,2-Dichlorobenzene	12.635	146	3393	0.93	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	13.281	157	450	0.72	ug/L		73
85) Hexachlorobutadiene	13.829	223	499	0.85	ug/L		86
86) 1,2,4-Trichlorobenzene	13.872	180	1602	0.71	ug/L		85
87) Naphthalene	14.201	128	2843	0.44	ug/L		99
88) 1,2,3-Trichlorobenzene	14.396	180	1447	0.64	ug/L		89

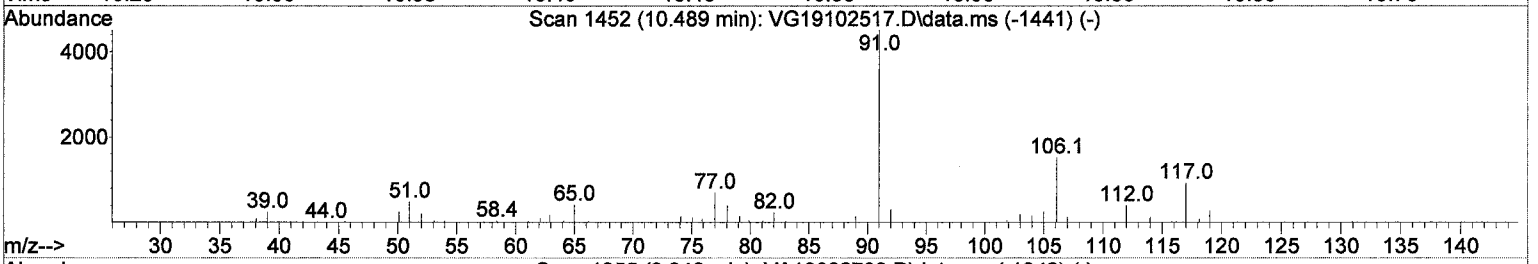
(#) = qualifier out of range (m) = manual integration (+) = signals summed

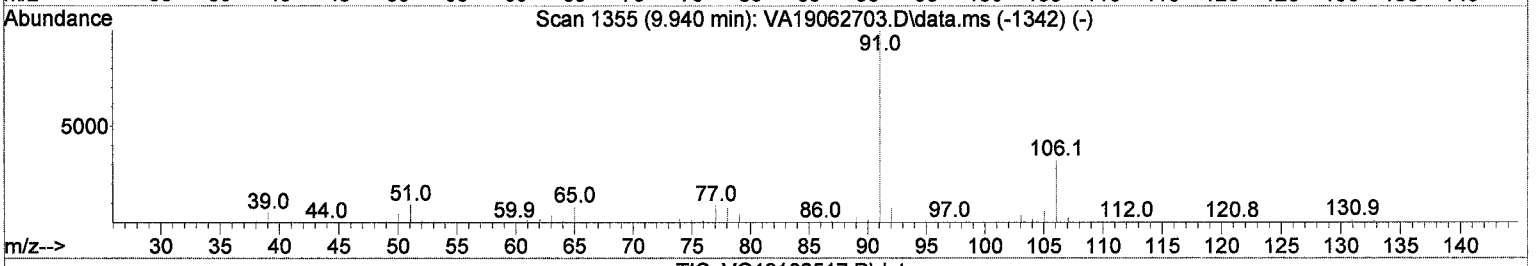
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:36 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration







TIC: VG19102517.D\data.ms

(59) Ethylbenzene (C)

10.489min (-0.006) 0.97 ug/L

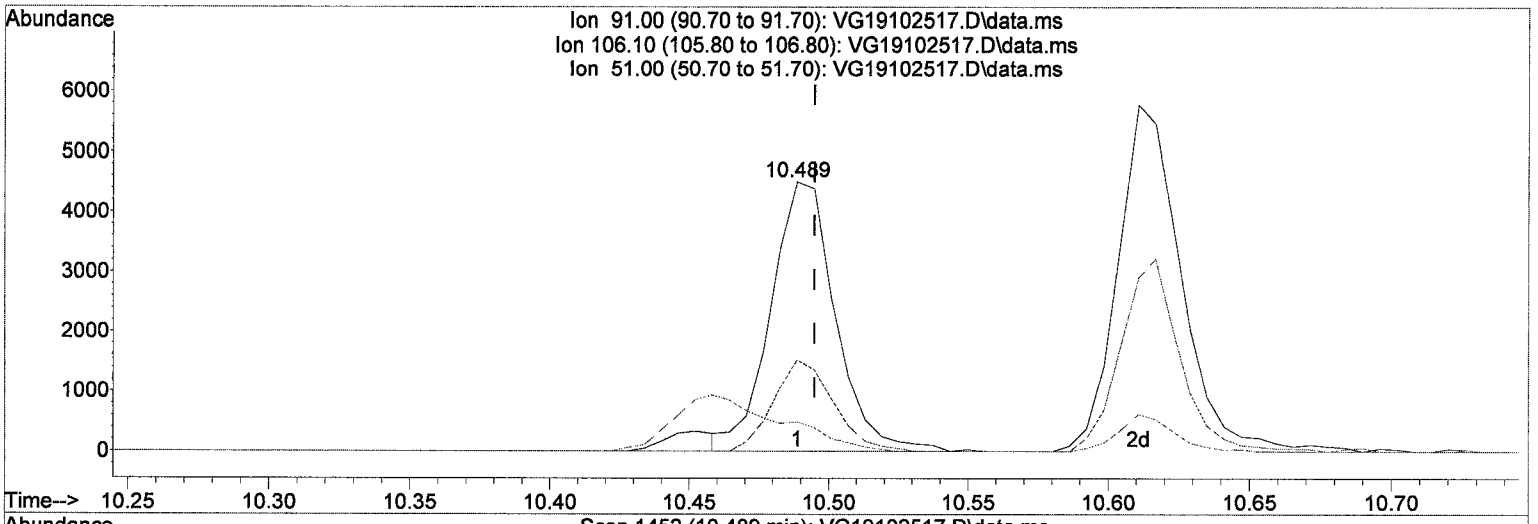
response 7653

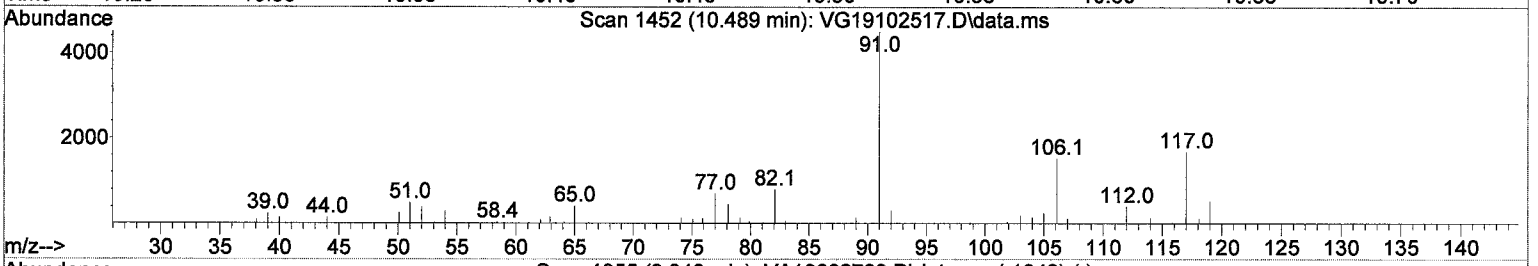
Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	33.82
51.00	9.80	10.88
0.00	0.00	0.00

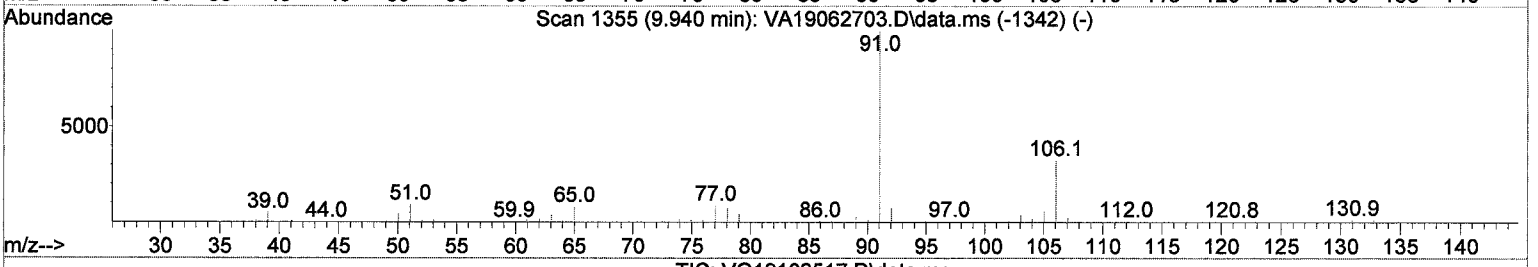
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:36 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration







TIC: VG19102517.D\data.ms

(59) Ethylbenzene (C)

10.489min (-0.006) 0.91 ug/L m

response 7230

Ion	Exp%	Act%
91.00	100.00	100.00
106.10	31.80	33.82
51.00	9.80	10.88
0.00	0.00	0.00

10/28/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:36 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	87837	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	266623	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	134840	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	93451	51.32	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.447	114	309533	52.42	ug/L		-0.01
48) Toluene-d8 (S)	8.989	98	348152	50.16	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	112252	49.73	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	1328	0.96	ug/L		98
3) Chloromethane	1.984	50	2027	1.08	ug/L		88
4) Vinyl Chloride	2.112	62	1682	0.98	ug/L		99
5) Bromomethane	2.545	96	1031	1.22	ug/L		99
6) Chloroethane	2.722	64	473	1.15	ug/L	#	34
7) Trichlorofluoromethane	2.917	101	1893	1.01	ug/L		99
8) Ethanol	3.636	45	2873	59.21	ug/L		93
9) 1,1-Dichloroethene	3.581	61	2001	0.98	ug/L		92
10) Carbon Disulfide	3.588	76	2616	0.86	ug/L		95
11) Freon 113	3.661	101	1595	0.95	ug/L		83
12) Iodomethane	3.746	142	185	0.81	ug/L	#	54
13) Acrolein	4.027	56	363	0.81	ug/L		85
14) Methylene Chloride	4.319	84	3475	1.99	ug/L		89
15) Acetone	4.404	43	2696	3.00	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	2024	0.92	ug/L		94
17) n-Hexane	4.606	86	168	0.70	ug/L	#	60
18) Methyl-tert-butyl-ether	4.667	73	3585	0.82	ug/L		92
19) tert-Butanol (TBA)	4.825	59	19370	48.87	ug/L	#	57
20) Diisopropyl ether (DIPE)	5.112	45	1029	0.21	ug/L		96
21) 1,1-Dichloroethane	5.215	63	2990	1.03	ug/L		97
22) Acrylonitrile	5.295	53	831	0.78	ug/L		98
23) Vinyl Acetate	5.532	43	1655	0.53	ug/L		87
24) Ethyl-tert-butyl ether...	5.514	59	799	0.18	ug/L		92
25) c-1,2-Dichloroethene	5.819	61	2038	0.90	ug/L		95
26) 2,2-Dichloropropane	5.935	77	1277	0.95	ug/L	#	51
27) Bromochloromethane	6.038	49	1485	1.06	ug/L		95
28) Chloroform	6.136	83	2916	0.98	ug/L		97
29) Carbon Tetrachloride	6.264	117	1387	0.78	ug/L		95
30) Tetrahydrofuran	6.319	42	728	0.79	ug/L		80
31) 1,1,1-Trichloroethane	6.337	97	2025	0.90	ug/L		95
33) 1,1-Dichloropropene	6.477	75	1862	0.83	ug/L		97
34) 2-Butanone (MEK)	6.483	43	2324	1.63	ug/L		90
35) Benzene	6.752	78	6507	0.92	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	1071	0.27	ug/L	#	58
37) 1,2-Dichloroethane (EDC)	6.983	62	2322	0.99	ug/L		99
38) iso-Butyl Alcohol	7.044	43	3182	20.97	ug/L		89
40) Trichloroethene (TCE)	7.410	130	1961	1.02	ug/L		88
41) tert-Amyl ethyl ether ...	7.684	59	584	0.22	ug/L		80
42) Dibromomethane	7.879	93	1159	0.96	ug/L		96
43) 1,2-Dichloropropane	7.995	63	1670	0.94	ug/L		93
44) Bromodichloromethane	8.075	83	1774	0.90	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	648	0.60	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	1512	0.64	ug/L		89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:36 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

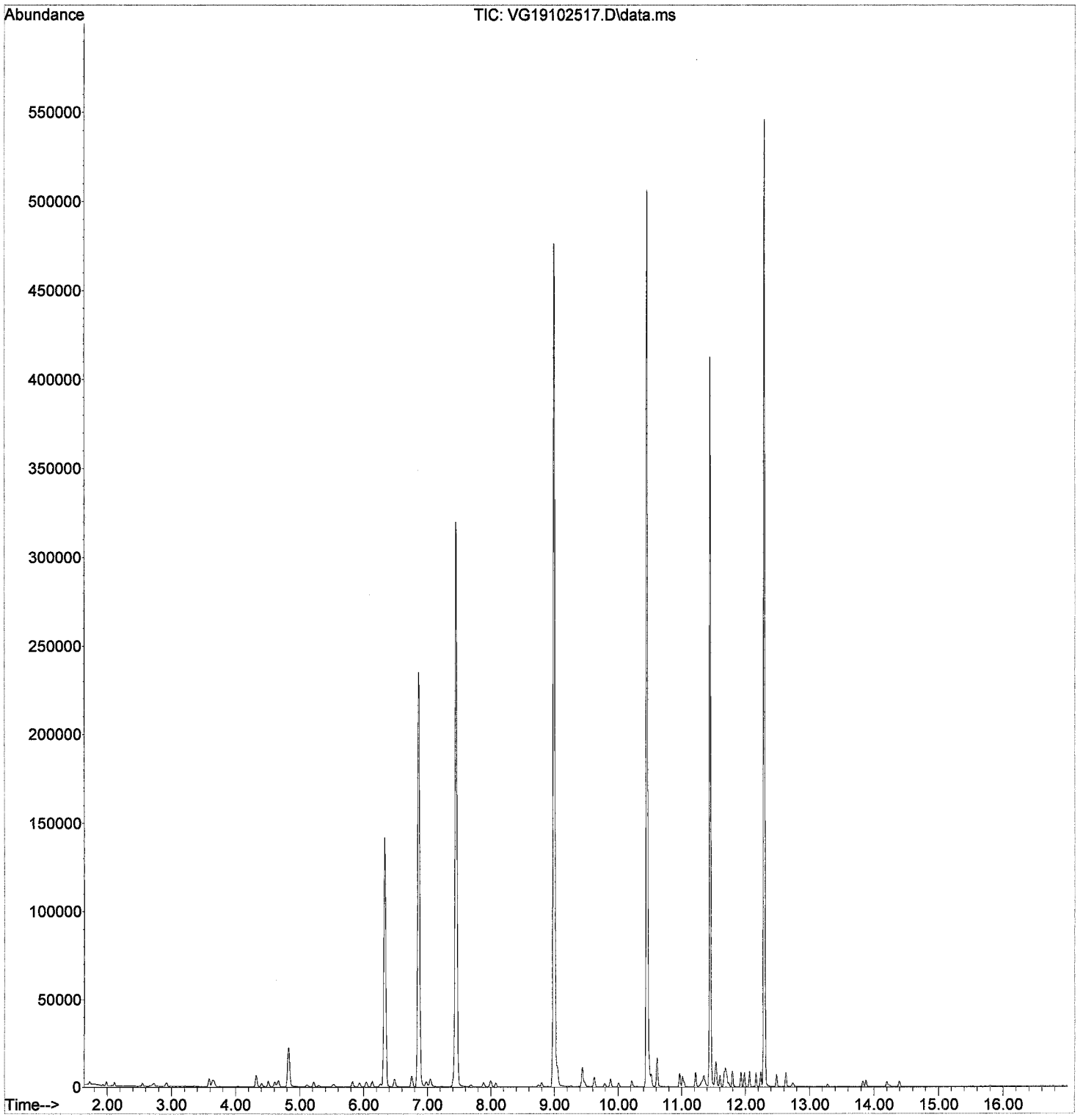
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	7737	0.99	ug/L		95
50) Tetrachloroethene (PCE)	9.440	166	2028	0.96	ug/L		86
51) 4-Methyl-2-Pentanone (...	9.440	43	3944	1.53	ug/L		93
52) t-1,3-Dichloropropene	9.471	75	1296	0.65	ug/L		86
53) 1,1,2-Trichloroethane	9.623	97	1761	0.91	ug/L		96
54) Dibromochloromethane	9.788	129	1298	0.73	ug/L		92
55) 1,3-Dichloropropane	9.879	76	2761	0.92	ug/L		94
56) 1,2-Dibromoethane (EDB)	10.007	107	1647	0.82	ug/L		99
57) 2-Hexanone	10.214	43	2488	1.32	ug/L		96
58) Chlorobenzene	10.470	112	5325	1.02	ug/L		98
59) Ethylbenzene	10.489	91	~~7653~~	~~0.97~~	~~ug/L~~		~~97~~ MI 7230
60) 1,1,1,2-Tetrachloroethane	10.519	131	1443	0.87	ug/L		97
61) m,p-Xylenes (2)	10.611	91	9040	1.55	ug/L		98
62) o-Xylene	10.970	91	4144	0.74	ug/L		95
63) Styrene	11.013	104	2917	0.63	ug/L		95
64) Bromoform	11.037	173	931	0.67	ug/L		95
65) Isopropylbenzene	11.220	105	4739	0.68	ug/L		96
68) Bromobenzene	11.531	156	2221	0.97	ug/L		96
69) n-Propylbenzene	11.543	91	6998	0.90	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	2820	0.95	ug/L		100
71) 2-Chlorotoluene	11.665	126	1659	0.91	ug/L	#	71
72) 1,3,5-Trimethylbenzene	11.690	105	4147	0.70	ug/L		98
73) 1,2,3-Trichloropropane	11.708	110	889	1.02	ug/L	#	81
74) t-1,4-Dichloro-2-butene	11.732	88	151	0.60	ug/L	#	65
75) 4-Chlorotoluene	11.793	91	4167	0.84	ug/L		99
76) tert-Butylbenzene	11.927	91	2301	0.80	ug/L		88
77) 1,2,4-Trimethylbenzene	11.982	105	3979	0.66	ug/L		99
78) sec-Butylbenzene	12.062	105	5081	0.78	ug/L		98
79) 4-Isopropyltoluene	12.165	119	3769	0.68	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	3266	0.88	ug/L		96
81) 1,4-Dichlorobenzene	12.305	146	3909	1.04	ug/L		94
82) n-Butylbenzene	12.488	91	3461	0.75	ug/L		97
83) 1,2-Dichlorobenzene	12.635	146	3393	0.93	ug/L		99
84) 1,2-Dibromo-3-Chloropr...	13.281	157	450	0.72	ug/L		73
85) Hexachlorobutadiene	13.829	223	499	0.85	ug/L		86
86) 1,2,4-Trichlorobenzene	13.872	180	1602	0.71	ug/L		85
87) Naphthalene	14.201	128	2843	0.44	ug/L		99
88) 1,2,3-Trichlorobenzene	14.396	180	1447	0.64	ug/L		89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102517.D
Acq On : 25 Oct 2019 6:14 pm
Operator : MM
Sample : 9J25051-CAL4
Misc : 1X 5mL 1/2PPB VOCR
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:36 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:39 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	76501	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	228711	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	114333	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	81480	51.38	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	264143	51.36	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	296218	49.75	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	93974	49.10	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	2795	2.33	ug/L		96
3) Chloromethane	1.984	50	3700	2.27	ug/L		94
4) Vinyl Chloride	2.112	62	3136	2.10	ug/L		95
5) Bromomethane	2.551	96	1968	2.66	ug/L		92
6) Chloroethane	2.728	64	1240	3.47	ug/L		97
7) Trichlorofluoromethane	2.923	101	3605	2.21	ug/L		91
8) Ethanol	3.630	45	5504	130.24	ug/L		82
9) 1,1-Dichloroethene	3.587	61	3661	2.05	ug/L		90
10) Carbon Disulfide	3.587	76	5003	1.89	ug/L		99
11) Freon 113	3.661	101	3171	2.17	ug/L		96
12) Iodomethane	3.752	142	448	0.87	ug/L		95
13) Acrolein	4.033	56	797	2.05	ug/L		92
14) Methylene Chloride	4.319	84	4760	3.14	ug/L		94
15) Acetone	4.404	43	3962	5.05	ug/L		99
16) t-1,2-Dichloroethene	4.508	61	3893	2.04	ug/L		93
17) n-Hexane	4.606	86	342	1.64	ug/L	#	72
18) Methyl-tert-butyl-ether	4.667	73	6706	1.77	ug/L		97
19) tert-Butanol (TBA)	4.819	59	39779	115.22	ug/L	#	59
20) Diisopropyl ether (DIPE)	5.106	45	2023	0.48	ug/L		96
21) 1,1-Dichloroethane	5.215	63	5406	2.14	ug/L		95
22) Acrylonitrile	5.301	53	1734	1.87	ug/L		94
23) Vinyl Acetate	5.532	43	3721	1.38	ug/L		95
24) Ethyl-tert-butyl ether...	5.520	59	1633	0.43	ug/L		97
25) c-1,2-Dichloroethene	5.825	61	3898	1.98	ug/L		91
26) 2,2-Dichloropropane	5.935	77	2329	1.99	ug/L	#	61
27) Bromochloromethane	6.044	49	2654	2.17	ug/L		87
28) Chloroform	6.136	83	5455	2.09	ug/L		98
29) Carbon Tetrachloride	6.258	117	2771	1.79	ug/L		94
30) Tetrahydrofuran	6.313	42	1403	1.75	ug/L		90
31) 1,1,1-Trichloroethane	6.343	97	3963	2.01	ug/L		93
33) 1,1-Dichloropropene	6.483	75	3368	1.73	ug/L		96
34) 2-Butanone (MEK)	6.483	43	4574	3.69	ug/L		98
35) Benzene	6.758	78	12371	2.00	ug/L		97
36) tert-Amyl methyl ether...	6.904	73	1740	0.50	ug/L		65
37) 1,2-Dichloroethane (EDC)	6.983	62	4512	2.20	ug/L		96
38) iso-Butyl Alcohol	7.044	43	6444	48.77	ug/L		80
40) Trichloroethene (TCE)	7.410	130	3521	2.10	ug/L		96
41) tert-Amyl ethyl ether ...	7.684	59	1135	0.48	ug/L		91
42) Dibromomethane	7.885	93	2084	1.98	ug/L		92
43) 1,2-Dichloropropane	7.995	63	3229	2.08	ug/L		91
44) Bromodichloromethane	8.074	83	3272	1.90	ug/L		91
46) 2-Chloroethyl Vinyl Ether	8.739	63	1287	1.40	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	3075	1.52	ug/L		95

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:39 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	13799	2.06	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	3761	2.07	ug/L		97
51) 4-Methyl-2-Pentanone (...	9.440	43	7750	3.50	ug/L		98
52) t-1,3-Dichloropropene	9.470	75	2554	1.49	ug/L		96
53) 1,1,2-Trichloroethane	9.629	97	3489	2.10	ug/L		94
54) Dibromochloromethane	9.794	129	2572	1.69	ug/L		93
55) 1,3-Dichloropropane	9.879	76	5172	2.00	ug/L		99
56) 1,2-Dibromoethane (EDB)	10.007	107	3150	1.83	ug/L		95
57) 2-Hexanone	10.214	43	5003	3.09	ug/L		100
58) Chlorobenzene	10.464	112	9394	2.10	ug/L		97
59) Ethylbenzene	10.489	91	13598	2.01	ug/L		97
60) 1,1,1,2-Tetrachloroethane	10.525	131	2578	1.81	ug/L		94
61) m,p-Xylenes (2)	10.617	91	17637	3.54	ug/L		98
62) o-Xylene	10.970	91	7805	1.61	ug/L		95
63) Styrene	11.013	104	6029	1.51	ug/L		98
64) Bromoform	11.037	173	1883	1.58	ug/L		98
65) Isopropylbenzene	11.220	105	9314	1.57	ug/L		99
68) Bromobenzene	11.531	156	3862	1.99	ug/L		96
69) n-Propylbenzene	11.543	91	13043	1.97	ug/L		97
70) 1,1,2,2-Tetrachloroethane	11.604	83	5527	2.21	ug/L		99
71) 2-Chlorotoluene	11.665	126	2896	1.88	ug/L		92
72) 1,3,5-Trimethylbenzene	11.690	105	8326	1.67	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	1624	2.20	ug/L	#	83
74) t-1,4-Dichloro-2-butene	11.738	88	314	1.48	ug/L	#	64
75) 4-Chlorotoluene	11.793	91	7775	1.85	ug/L		98
76) tert-Butylbenzene	11.933	91	4363	1.79	ug/L		91
77) 1,2,4-Trimethylbenzene	11.982	105	7870	1.54	ug/L		98
78) sec-Butylbenzene	12.061	105	9664	1.75	ug/L		96
79) 4-Isopropyltoluene	12.165	119	7387	1.58	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	6240	1.99	ug/L		96
81) 1,4-Dichlorobenzene	12.305	146	6942	2.17	ug/L		95
82) n-Butylbenzene	12.488	91	6447	1.64	ug/L		96
83) 1,2-Dichlorobenzene	12.635	146	6204	2.00	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	887	1.67	ug/L		96
85) Hexachlorobutadiene	13.829	223	925	1.85	ug/L		90
86) 1,2,4-Trichlorobenzene	13.872	180	2902	1.51	ug/L		93
87) Naphthalene	14.201	128	5987	1.09	ug/L		97
88) 1,2,3-Trichlorobenzene	14.396	180	2863	1.48	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:39 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	76501	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	228711	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	114333	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	81480	51.38	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	264143	51.36	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	296218	49.75	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	93974	49.10	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	2795	2.33	ug/L		96
3) Chloromethane	1.984	50	3700	2.27	ug/L		94
4) Vinyl Chloride	2.112	62	3136	2.10	ug/L		95
5) Bromomethane	2.551	96	1968	2.66	ug/L		92
6) Chloroethane	2.728	64	1240	3.47	ug/L		97
7) Trichlorofluoromethane	2.923	101	3605	2.21	ug/L		91
8) Ethanol	3.630	45	5504	130.24	ug/L		82
9) 1,1-Dichloroethene	3.587	61	3661	2.05	ug/L		90
10) Carbon Disulfide	3.587	76	5003	1.89	ug/L		99
11) Freon 113	3.661	101	3171	2.17	ug/L		96
12) Iodomethane	3.752	142	448	0.87	ug/L		95
13) Acrolein	4.033	56	797	2.05	ug/L		92
14) Methylene Chloride	4.319	84	4760	3.14	ug/L		94
15) Acetone	4.404	43	3962	5.05	ug/L		99
16) t-1,2-Dichloroethene	4.508	61	3893	2.04	ug/L		93
17) n-Hexane	4.606	86	342	1.64	ug/L	#	72
18) Methyl-tert-butyl-ether	4.667	73	6706	1.77	ug/L		97
19) tert-Butanol (TBA)	4.819	59	39779	115.22	ug/L	#	59
20) Diisopropyl ether (DIPE)	5.106	45	2023	0.48	ug/L		96
21) 1,1-Dichloroethane	5.215	63	5406	2.14	ug/L		95
22) Acrylonitrile	5.301	53	1734	1.87	ug/L		94
23) Vinyl Acetate	5.532	43	3721	1.38	ug/L		95
24) Ethyl-tert-butyl ether...	5.520	59	1633	0.43	ug/L		97
25) c-1,2-Dichloroethene	5.825	61	3898	1.98	ug/L		91
26) 2,2-Dichloropropane	5.935	77	2329	1.99	ug/L	#	61
27) Bromochloromethane	6.044	49	2654	2.17	ug/L		87
28) Chloroform	6.136	83	5455	2.09	ug/L		98
29) Carbon Tetrachloride	6.258	117	2771	1.79	ug/L		94
30) Tetrahydrofuran	6.313	42	1403	1.75	ug/L		90
31) 1,1,1-Trichloroethane	6.343	97	3963	2.01	ug/L		93
33) 1,1-Dichloropropene	6.483	75	3368	1.73	ug/L		96
34) 2-Butanone (MEK)	6.483	43	4574	3.69	ug/L		98
35) Benzene	6.758	78	12371	2.00	ug/L		97
36) tert-Amyl methyl ether...	6.904	73	1740	0.50	ug/L		65
37) 1,2-Dichloroethane (EDC)	6.983	62	4512	2.20	ug/L		96
38) iso-Butyl Alcohol	7.044	43	6444	48.77	ug/L		80
40) Trichloroethene (TCE)	7.410	130	3521	2.10	ug/L		96
41) tert-Amyl ethyl ether ...	7.684	59	1135	0.48	ug/L		91
42) Dibromomethane	7.885	93	2084	1.98	ug/L		92
43) 1,2-Dichloropropane	7.995	63	3229	2.08	ug/L		91
44) Bromodichloromethane	8.074	83	3272	1.90	ug/L		91
46) 2-Chloroethyl Vinyl Ether	8.739	63	1287	1.40	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	3075	1.52	ug/L		95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:39 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

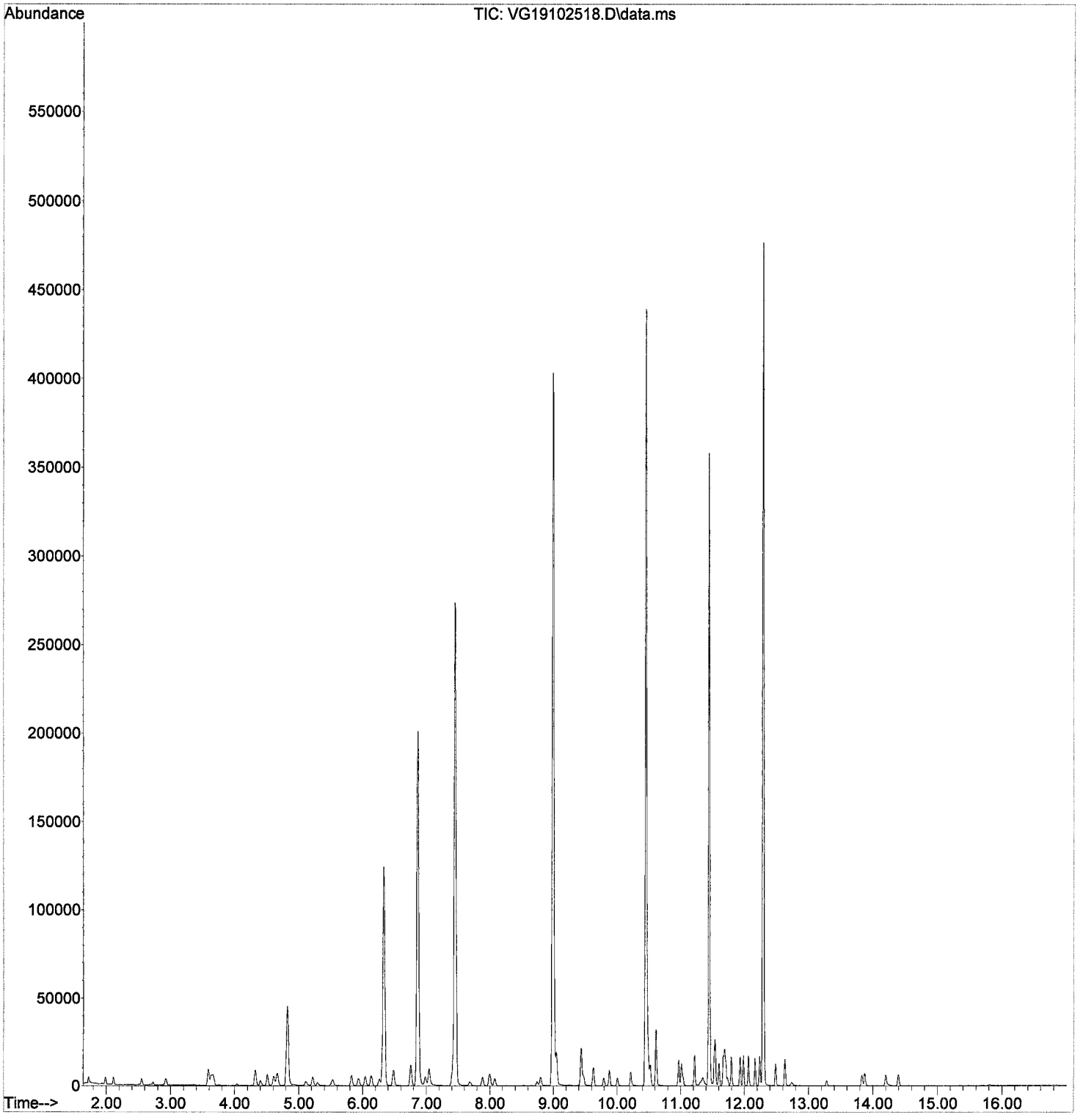
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	13799	2.06	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	3761	2.07	ug/L		97
51) 4-Methyl-2-Pentanone (...	9.440	43	7750	3.50	ug/L		98
52) t-1,3-Dichloropropene	9.470	75	2554	1.49	ug/L		96
53) 1,1,2-Trichloroethane	9.629	97	3489	2.10	ug/L		94
54) Dibromochloromethane	9.794	129	2572	1.69	ug/L		93
55) 1,3-Dichloropropane	9.879	76	5172	2.00	ug/L		99
56) 1,2-Dibromoethane (EDB)	10.007	107	3150	1.83	ug/L		95
57) 2-Hexanone	10.214	43	5003	3.09	ug/L		100
58) Chlorobenzene	10.464	112	9394	2.10	ug/L		97
59) Ethylbenzene	10.489	91	13598	2.01	ug/L		97
60) 1,1,1,2-Tetrachloroethane	10.525	131	2578	1.81	ug/L		94
61) m,p-Xylenes (2)	10.617	91	17637	3.54	ug/L		98
62) o-Xylene	10.970	91	7805	1.61	ug/L		95
63) Styrene	11.013	104	6029	1.51	ug/L		98
64) Bromoform	11.037	173	1883	1.58	ug/L		98
65) Isopropylbenzene	11.220	105	9314	1.57	ug/L		99
68) Bromobenzene	11.531	156	3862	1.99	ug/L		96
69) n-Propylbenzene	11.543	91	13043	1.97	ug/L		97
70) 1,1,2,2-Tetrachloroethane	11.604	83	5527	2.21	ug/L		99
71) 2-Chlorotoluene	11.665	126	2896	1.88	ug/L		92
72) 1,3,5-Trimethylbenzene	11.690	105	8326	1.67	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	1624	2.20	ug/L	#	83
74) t-1,4-Dichloro-2-butene	11.738	88	314	1.48	ug/L	#	64
75) 4-Chlorotoluene	11.793	91	7775	1.85	ug/L		98
76) tert-Butylbenzene	11.933	91	4363	1.79	ug/L		91
77) 1,2,4-Trimethylbenzene	11.982	105	7870	1.54	ug/L		98
78) sec-Butylbenzene	12.061	105	9664	1.75	ug/L		96
79) 4-Isopropyltoluene	12.165	119	7387	1.58	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	6240	1.99	ug/L		96
81) 1,4-Dichlorobenzene	12.305	146	6942	2.17	ug/L		95
82) n-Butylbenzene	12.488	91	6447	1.64	ug/L		96
83) 1,2-Dichlorobenzene	12.635	146	6204	2.00	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	887	1.67	ug/L		96
85) Hexachlorobutadiene	13.829	223	925	1.85	ug/L		90
86) 1,2,4-Trichlorobenzene	13.872	180	2902	1.51	ug/L		93
87) Naphthalene	14.201	128	5987	1.09	ug/L		97
88) 1,2,3-Trichlorobenzene	14.396	180	2863	1.48	ug/L		94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102518.D
Acq On : 25 Oct 2019 6:41 pm
Operator : MM
Sample : 9J25051-CAL5
Misc : 1X 5mL 2/4PPB VOCR
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:39 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102519.D
Acq On : 25 Oct 2019 7:08 pm
Operator : MM
Sample : 9J25051-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:42 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	84206	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	249179	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	125726	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87988	50.41	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	285436	50.42	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	321703	49.59	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	105208	49.99	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	7404	5.61	ug/L		97
3) Chloromethane	1.984	50	9675	5.40	ug/L		98
4) Vinyl Chloride	2.112	62	8598	5.23	ug/L		97
5) Bromomethane	2.551	96	4925	6.05	ug/L		94
6) Chloroethane	2.728	64	2805	7.12	ug/L		91
7) Trichlorofluoromethane	2.923	101	9548	5.31	ug/L		97
8) Ethanol	3.630	45	14603	313.93	ug/L		84
9) 1,1-Dichloroethene	3.588	61	9956	5.06	ug/L		99
10) Carbon Disulfide	3.588	76	13555	4.66	ug/L		99
11) Freon 113	3.661	101	8623	5.37	ug/L		95
12) Iodomethane	3.752	142	1592	2.80	ug/L		98
13) Acrolein	4.039	56	2034	4.76	ug/L		91
14) Methylene Chloride	4.319	84	10277	6.15	ug/L		96
15) Acetone	4.399	43	9305	10.79	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	10306	4.91	ug/L		93
17) n-Hexane	4.612	86	1014	4.41	ug/L	#	46
18) Methyl-tert-butyl-ether	4.661	73	19407	4.64	ug/L		94
19) tert-Butanol (TBA)	4.819	59	110044	289.58	ug/L	#	65
20) Diisopropyl ether (DIPE)	5.106	45	5485	1.17	ug/L		95
21) 1,1-Dichloroethane	5.215	63	14473	5.21	ug/L		96
22) Acrylonitrile	5.289	53	4948	4.85	ug/L		96
23) Vinyl Acetate	5.532	43	11730	3.94	ug/L		98
24) Ethyl-tert-butyl ether...	5.514	59	4721	1.14	ug/L		91
25) c-1,2-Dichloroethene	5.825	61	10725	4.95	ug/L		96
26) 2,2-Dichloropropane	5.935	77	6301	4.88	ug/L	#	65
27) Bromochloromethane	6.038	49	7242	5.37	ug/L		86
28) Chloroform	6.136	83	14639	5.11	ug/L		97
29) Carbon Tetrachloride	6.264	117	8051	4.72	ug/L		97
30) Tetrahydrofuran	6.313	42	4008	4.55	ug/L		96
31) 1,1,1-Trichloroethane	6.343	97	10911	5.03	ug/L		92
33) 1,1-Dichloropropene	6.483	75	9935	4.63	ug/L		97
34) 2-Butanone (MEK)	6.483	43	13080	9.59	ug/L		99
35) Benzene	6.758	78	34545	5.08	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	4717	1.23	ug/L		71
37) 1,2-Dichloroethane (EDC)	6.983	62	11793	5.22	ug/L		95
38) iso-Butyl Alcohol	7.044	43	17343	119.24	ug/L		86
40) Trichloroethene (TCE)	7.404	130	9556	5.18	ug/L		99
41) tert-Amyl ethyl ether ...	7.684	59	2954	1.14	ug/L		91
42) Dibromomethane	7.880	93	5847	5.03	ug/L		95
43) 1,2-Dichloropropane	7.995	63	8575	5.02	ug/L		100
44) Bromodichloromethane	8.075	83	9117	4.82	ug/L		98
46) 2-Chloroethyl Vinyl Ether	8.739	63	3782	3.78	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	8925	4.05	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102519.D
Acq On : 25 Oct 2019 7:08 pm
Operator : MM
Sample : 9J25051-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:42 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	37021	5.06	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	10200	5.14	ug/L		96
51) 4-Methyl-2-Pentanone (...	9.440	43	21651	8.97	ug/L		96
52) t-1,3-Dichloropropene	9.471	75	7875	4.22	ug/L		96
53) 1,1,2-Trichloroethane	9.623	97	9239	5.10	ug/L		100
54) Dibromochloromethane	9.794	129	7461	4.49	ug/L		97
55) 1,3-Dichloropropane	9.879	76	14110	5.01	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.007	107	9131	4.86	ug/L		99
57) 2-Hexanone	10.214	43	14919	8.46	ug/L		99
58) Chlorobenzene	10.470	112	25125	5.16	ug/L		98
59) Ethylbenzene	10.489	91	37238	5.04	ug/L		98
60) 1,1,1,2-Tetrachloroethane	10.525	131	7365	4.74	ug/L		94
61) m,p-Xylenes (2)	10.611	91	51157	9.41	ug/L		98
62) o-Xylene	10.970	91	23185	4.40	ug/L		98
63) Styrene	11.013	104	19241	4.43	ug/L		94
64) Bromoform	11.037	173	5513	4.25	ug/L		96
65) Isopropylbenzene	11.220	105	28750	4.44	ug/L		100
68) Bromobenzene	11.531	156	10809	5.05	ug/L		95
69) n-Propylbenzene	11.543	91	35745	4.91	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.604	83	14004	5.08	ug/L		96
71) 2-Chlorotoluene	11.665	126	8212	4.84	ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	25171	4.58	ug/L		94
73) 1,2,3-Trichloropropane	11.708	110	4250	5.23	ug/L		94
74) t-1,4-Dichloro-2-butene	11.739	88	920	3.94	ug/L	#	67
75) 4-Chlorotoluene	11.793	91	22730	4.92	ug/L		99
76) tert-Butylbenzene	11.934	91	12557	4.69	ug/L		95
77) 1,2,4-Trimethylbenzene	11.982	105	25589	4.55	ug/L		99
78) sec-Butylbenzene	12.062	105	29229	4.80	ug/L		96
79) 4-Isopropyltoluene	12.165	119	23158	4.51	ug/L		98
80) 1,3-Dichlorobenzene	12.238	146	17620	5.12	ug/L		97
81) 1,4-Dichlorobenzene	12.306	146	18805	5.36	ug/L		96
82) n-Butylbenzene	12.488	91	19439	4.50	ug/L		97
83) 1,2-Dichlorobenzene	12.635	146	16971	4.98	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	13.281	157	2511	4.31	ug/L		89
85) Hexachlorobutadiene	13.830	223	2612	4.76	ug/L		96
86) 1,2,4-Trichlorobenzene	13.872	180	8550	4.04	ug/L		95
87) Naphthalene	14.201	128	19030	3.15	ug/L		99
88) 1,2,3-Trichlorobenzene	14.397	180	8797	4.14	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102519.D
Acq On : 25 Oct 2019 7:08 pm
Operator : MM
Sample : 9J25051-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:42 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	84206	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	249179	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	125726	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87988	50.41	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	285436	50.42	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	321703	49.59	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	105208	49.99	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	7404	5.61	ug/L		97
3) Chloromethane	1.984	50	9675	5.40	ug/L		98
4) Vinyl Chloride	2.112	62	8598	5.23	ug/L		97
5) Bromomethane	2.551	96	4925	6.05	ug/L		94
6) Chloroethane	2.728	64	2805	7.12	ug/L		91
7) Trichlorofluoromethane	2.923	101	9548	5.31	ug/L		97
8) Ethanol	3.630	45	14603	313.93	ug/L		84
9) 1,1-Dichloroethene	3.588	61	9956	5.06	ug/L		99
10) Carbon Disulfide	3.588	76	13555	4.66	ug/L		99
11) Freon 113	3.661	101	8623	5.37	ug/L		95
12) Iodomethane	3.752	142	1592	2.80	ug/L		98
13) Acrolein	4.039	56	2034	4.76	ug/L		91
14) Methylene Chloride	4.319	84	10277	6.15	ug/L		96
15) Acetone	4.399	43	9305	10.79	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	10306	4.91	ug/L		93
17) n-Hexane	4.612	86	1014	4.41	ug/L	#	46
18) Methyl-tert-butyl-ether	4.661	73	19407	4.64	ug/L		94
19) tert-Butanol (TBA)	4.819	59	110044	289.58	ug/L	#	65
20) Diisopropyl ether (DIPE)	5.106	45	5485	1.17	ug/L		95
21) 1,1-Dichloroethane	5.215	63	14473	5.21	ug/L		96
22) Acrylonitrile	5.289	53	4948	4.85	ug/L		96
23) Vinyl Acetate	5.532	43	11730	3.94	ug/L		98
24) Ethyl-tert-butyl ether...	5.514	59	4721	1.14	ug/L		91
25) c-1,2-Dichloroethene	5.825	61	10725	4.95	ug/L		96
26) 2,2-Dichloropropane	5.935	77	6301	4.88	ug/L	#	65
27) Bromochloromethane	6.038	49	7242	5.37	ug/L		86
28) Chloroform	6.136	83	14639	5.11	ug/L		97
29) Carbon Tetrachloride	6.264	117	8051	4.72	ug/L		97
30) Tetrahydrofuran	6.313	42	4008	4.55	ug/L		96
31) 1,1,1-Trichloroethane	6.343	97	10911	5.03	ug/L		92
33) 1,1-Dichloropropene	6.483	75	9935	4.63	ug/L		97
34) 2-Butanone (MEK)	6.483	43	13080	9.59	ug/L		99
35) Benzene	6.758	78	34545	5.08	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	4717	1.23	ug/L		71
37) 1,2-Dichloroethane (EDC)	6.983	62	11793	5.22	ug/L		95
38) iso-Butyl Alcohol	7.044	43	17343	119.24	ug/L		86
40) Trichloroethene (TCE)	7.404	130	9556	5.18	ug/L		99
41) tert-Amyl ethyl ether ...	7.684	59	2954	1.14	ug/L		91
42) Dibromomethane	7.880	93	5847	5.03	ug/L		95
43) 1,2-Dichloropropane	7.995	63	8575	5.02	ug/L		100
44) Bromodichloromethane	8.075	83	9117	4.82	ug/L		98
46) 2-Chloroethyl Vinyl Ether	8.739	63	3782	3.78	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	8925	4.05	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102519.D
Acq On : 25 Oct 2019 7:08 pm
Operator : MM
Sample : 9J25051-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:42 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

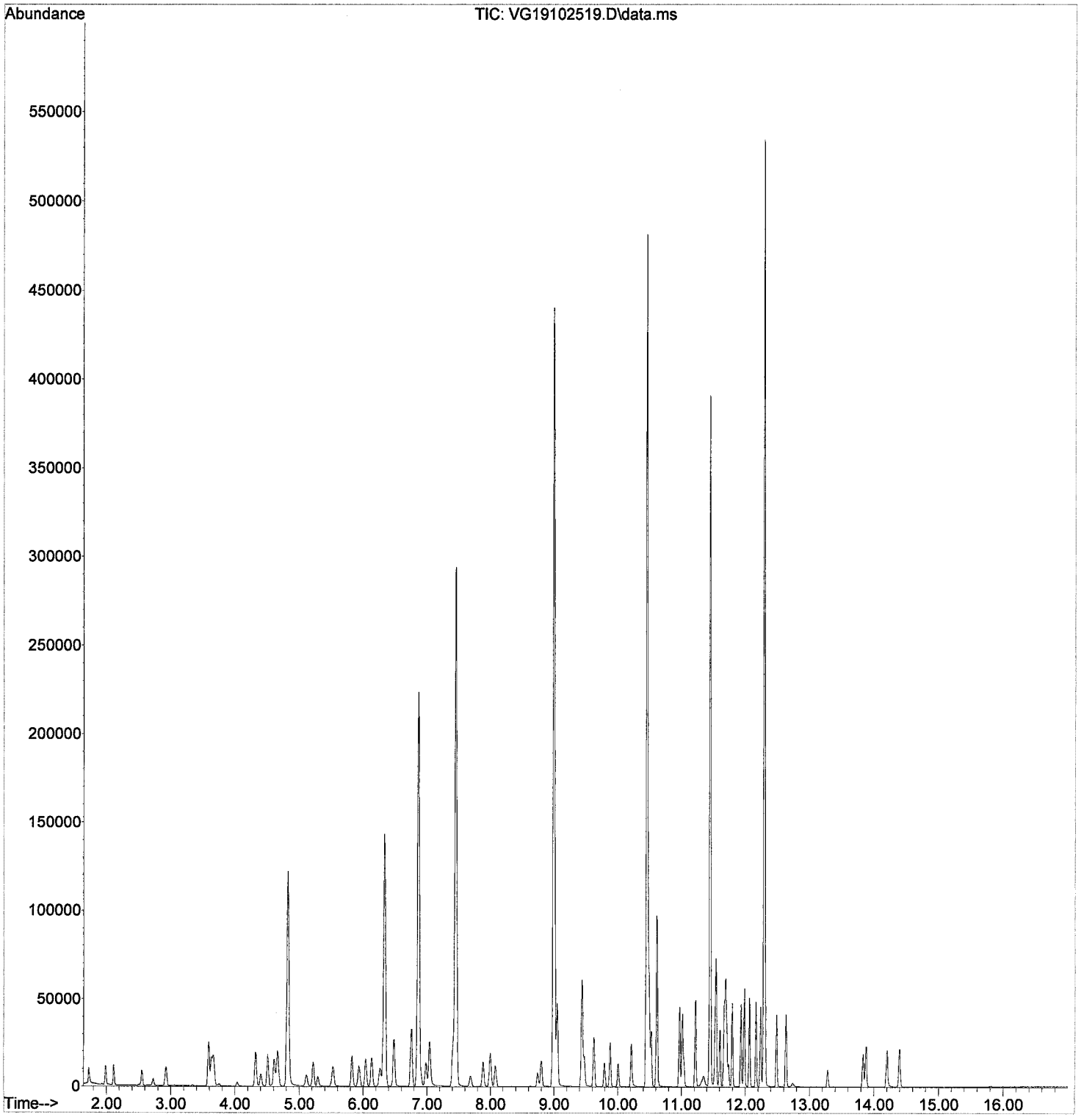
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	37021	5.06	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	10200	5.14	ug/L		96
51) 4-Methyl-2-Pentanone (...	9.440	43	21651	8.97	ug/L		96
52) t-1,3-Dichloropropene	9.471	75	7875	4.22	ug/L		96
53) 1,1,2-Trichloroethane	9.623	97	9239	5.10	ug/L		100
54) Dibromochloromethane	9.794	129	7461	4.49	ug/L		97
55) 1,3-Dichloropropane	9.879	76	14110	5.01	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.007	107	9131	4.86	ug/L		99
57) 2-Hexanone	10.214	43	14919	8.46	ug/L		99
58) Chlorobenzene	10.470	112	25125	5.16	ug/L		98
59) Ethylbenzene	10.489	91	37238	5.04	ug/L		98
60) 1,1,1,2-Tetrachloroethane	10.525	131	7365	4.74	ug/L		94
61) m,p-Xylenes (2)	10.611	91	51157	9.41	ug/L		98
62) o-Xylene	10.970	91	23185	4.40	ug/L		98
63) Styrene	11.013	104	19241	4.43	ug/L		94
64) Bromoform	11.037	173	5513	4.25	ug/L		96
65) Isopropylbenzene	11.220	105	28750	4.44	ug/L		100
68) Bromobenzene	11.531	156	10809	5.05	ug/L		95
69) n-Propylbenzene	11.543	91	35745	4.91	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.604	83	14004	5.08	ug/L		96
71) 2-Chlorotoluene	11.665	126	8212	4.84	ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	25171	4.58	ug/L		94
73) 1,2,3-Trichloropropane	11.708	110	4250	5.23	ug/L		94
74) t-1,4-Dichloro-2-butene	11.739	88	920	3.94	ug/L	#	67
75) 4-Chlorotoluene	11.793	91	22730	4.92	ug/L		99
76) tert-Butylbenzene	11.934	91	12557	4.69	ug/L		95
77) 1,2,4-Trimethylbenzene	11.982	105	25589	4.55	ug/L		99
78) sec-Butylbenzene	12.062	105	29229	4.80	ug/L		96
79) 4-Isopropyltoluene	12.165	119	23158	4.51	ug/L		98
80) 1,3-Dichlorobenzene	12.238	146	17620	5.12	ug/L		97
81) 1,4-Dichlorobenzene	12.306	146	18805	5.36	ug/L		96
82) n-Butylbenzene	12.488	91	19439	4.50	ug/L		97
83) 1,2-Dichlorobenzene	12.635	146	16971	4.98	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	13.281	157	2511	4.31	ug/L		89
85) Hexachlorobutadiene	13.830	223	2612	4.76	ug/L		96
86) 1,2,4-Trichlorobenzene	13.872	180	8550	4.04	ug/L		95
87) Naphthalene	14.201	128	19030	3.15	ug/L		99
88) 1,2,3-Trichlorobenzene	14.397	180	8797	4.14	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102519.D
Acq On : 25 Oct 2019 7:08 pm
Operator : MM
Sample : 9J25051-CAL6
Misc : 1X 5mL 5/10PPB VOCR
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:42 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102520.D
Acq On : 25 Oct 2019 7:35 pm
Operator : MM
Sample : 9J25051-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:45 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	94987	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	280212	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	141868	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	99801	50.68	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	322104	50.44	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	362985	49.76	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	119477	50.31	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	15599	10.47	ug/L		99
3) Chloromethane	1.984	50	20315	10.05	ug/L		99
4) Vinyl Chloride	2.112	62	18609	10.04	ug/L		96
5) Bromomethane	2.551	96	9433	10.28	ug/L		99
6) Chloroethane	2.722	64	4599	10.35	ug/L		86
7) Trichlorofluoromethane	2.923	101	20980	10.34	ug/L		97
8) Ethanol	3.630	45	31930	608.51	ug/L		85
9) 1,1-Dichloroethene	3.588	61	21638	9.75	ug/L		95
10) Carbon Disulfide	3.588	76	30767	9.38	ug/L		98
11) Freon 113	3.661	101	18630	10.28	ug/L		99
12) Iodomethane	3.752	142	4581	7.14	ug/L		97
13) Acrolein	4.033	56	4726	9.81	ug/L		97
14) Methylene Chloride	4.319	84	20314	10.78	ug/L		94
15) Acetone	4.399	43	19598	20.14	ug/L		93
16) t-1,2-Dichloroethene	4.508	61	23032	9.72	ug/L		94
17) n-Hexane	4.612	86	2568	9.90	ug/L	#	66
18) Methyl-tert-butyl-ether	4.661	73	45758	9.70	ug/L		97
19) tert-Butanol (TBA)	4.819	59	255470	595.97	ug/L	#	77
20) Diisopropyl ether (DIPE)	5.112	45	12288	2.32	ug/L		96
21) 1,1-Dichloroethane	5.215	63	31196	9.95	ug/L		98
22) Acrylonitrile	5.289	53	11034	9.58	ug/L		99
23) Vinyl Acetate	5.532	43	29582	8.82	ug/L		98
24) Ethyl-tert-butyl ether...	5.520	59	11188	2.39	ug/L		95
25) c-1,2-Dichloroethene	5.819	61	24037	9.83	ug/L		93
26) 2,2-Dichloropropane	5.935	77	14137	9.71	ug/L		68
27) Bromochloromethane	6.038	49	15717	10.33	ug/L		86
28) Chloroform	6.136	83	31968	9.89	ug/L		98
29) Carbon Tetrachloride	6.264	117	18676	9.70	ug/L		99
30) Tetrahydrofuran	6.307	42	9225	9.28	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	24426	9.99	ug/L		97
33) 1,1-Dichloropropene	6.477	75	23256	9.61	ug/L		99
34) 2-Butanone (MEK)	6.477	43	29709	19.30	ug/L		96
35) Benzene	6.752	78	76881	10.02	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	10610	2.45	ug/L		76
37) 1,2-Dichloroethane (EDC)	6.983	62	25491	10.01	ug/L		98
38) iso-Butyl Alcohol	7.044	43	38810	236.55	ug/L		89
40) Trichloroethene (TCE)	7.410	130	21560	10.36	ug/L		97
41) tert-Amyl ethyl ether ...	7.691	59	6943	2.38	ug/L		95
42) Dibromomethane	7.880	93	13281	10.14	ug/L		99
43) 1,2-Dichloropropane	7.995	63	19019	9.88	ug/L		99
44) Bromodichloromethane	8.075	83	20600	9.65	ug/L		98
46) 2-Chloroethyl Vinyl Ether	8.739	63	9286	8.25	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	22428	9.06	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102520.D
Acq On : 25 Oct 2019 7:35 pm
Operator : MM
Sample : 9J25051-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:45 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	81964	9.97	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	22594	10.13	ug/L		98
51) 4-Methyl-2-Pentanone (...	9.440	43	50335	18.54	ug/L		94
52) t-1,3-Dichloropropene	9.471	75	19307	9.20	ug/L		97
53) 1,1,2-Trichloroethane	9.623	97	20512	10.07	ug/L		97
54) Dibromochloromethane	9.788	129	17581	9.40	ug/L		99
55) 1,3-Dichloropropane	9.879	76	31655	10.00	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.007	107	20378	9.65	ug/L		97
57) 2-Hexanone	10.208	43	35393	17.85	ug/L		99
58) Chlorobenzene	10.470	112	54921	10.03	ug/L		96
59) Ethylbenzene	10.489	91	82267	9.90	ug/L		99
60) 1,1,1,2-Tetrachloroethane	10.525	131	17260	9.88	ug/L		97
61) m,p-Xylenes (2)	10.611	91	117957	19.30	ug/L		99
62) o-Xylene	10.970	91	54341	9.17	ug/L		99
63) Styrene	11.013	104	46210	9.45	ug/L		93
64) Bromoform	11.037	173	13109	8.99	ug/L		98
65) Isopropylbenzene	11.220	105	68642	9.42	ug/L		100
68) Bromobenzene	11.531	156	23997	9.94	ug/L		97
69) n-Propylbenzene	11.543	91	80330	9.78	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	31762	10.22	ug/L		96
71) 2-Chlorotoluene	11.665	126	18857	9.85	ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	60626	9.78	ug/L		97
73) 1,2,3-Trichloropropane	11.708	110	9293	10.14	ug/L		98
74) t-1,4-Dichloro-2-butene	11.739	88	2243	8.52	ug/L	#	73
75) 4-Chlorotoluene	11.793	91	51031	9.79	ug/L		99
76) tert-Butylbenzene	11.934	91	28831	9.53	ug/L		95
77) 1,2,4-Trimethylbenzene	11.982	105	62151	9.79	ug/L		98
78) sec-Butylbenzene	12.062	105	66926	9.74	ug/L		98
79) 4-Isopropyltoluene	12.165	119	55590	9.60	ug/L		100
80) 1,3-Dichlorobenzene	12.238	146	39173	10.09	ug/L		99
81) 1,4-Dichlorobenzene	12.306	146	40327	10.18	ug/L		98
82) n-Butylbenzene	12.488	91	47013	9.64	ug/L		98
83) 1,2-Dichlorobenzene	12.635	146	38505	10.01	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	13.281	157	6229	9.47	ug/L		98
85) Hexachlorobutadiene	13.830	223	6191	9.99	ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	22360	9.35	ug/L		98
87) Naphthalene	14.201	128	56149	8.25	ug/L		98
88) 1,2,3-Trichlorobenzene	14.397	180	22886	9.55	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102520.D
Acq On : 25 Oct 2019 7:35 pm
Operator : MM
Sample : 9J25051-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:45 2019
Quant Method : C:\msdchem\1\methods\~~VG191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	94987	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	280212	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	141868	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	99801	50.68	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	322104	50.44	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	362985	49.76	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	119477	50.31	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	15599	10.47	ug/L		99
3) Chloromethane	1.984	50	20315	10.05	ug/L		99
4) Vinyl Chloride	2.112	62	18609	10.04	ug/L		96
5) Bromomethane	2.551	96	9433	10.28	ug/L		99
6) Chloroethane	2.722	64	4599	10.35	ug/L		86
7) Trichlorofluoromethane	2.923	101	20980	10.34	ug/L		97
8) Ethanol	3.630	45	31930	608.51	ug/L		85
9) 1,1-Dichloroethene	3.588	61	21638	9.75	ug/L		95
10) Carbon Disulfide	3.588	76	30767	9.38	ug/L		98
11) Freon 113	3.661	101	18630	10.28	ug/L		99
12) Iodomethane	3.752	142	4581	7.14	ug/L		97
13) Acrolein	4.033	56	4726	9.81	ug/L		97
14) Methylene Chloride	4.319	84	20314	10.78	ug/L		94
15) Acetone	4.399	43	19598	20.14	ug/L		93
16) t-1,2-Dichloroethene	4.508	61	23032	9.72	ug/L		94
17) n-Hexane	4.612	86	2568	9.90	ug/L	#	66
18) Methyl-tert-butyl-ether	4.661	73	45758	9.70	ug/L		97
19) tert-Butanol (TBA)	4.819	59	255470	595.97	ug/L	#	77
20) Diisopropyl ether (DIPE)	5.112	45	12288	2.32	ug/L		96
21) 1,1-Dichloroethane	5.215	63	31196	9.95	ug/L		98
22) Acrylonitrile	5.289	53	11034	9.58	ug/L		99
23) Vinyl Acetate	5.532	43	29582	8.82	ug/L		98
24) Ethyl-tert-butyl ether...	5.520	59	11188	2.39	ug/L		95
25) c-1,2-Dichloroethene	5.819	61	24037	9.83	ug/L		93
26) 2,2-Dichloropropane	5.935	77	14137	9.71	ug/L		68
27) Bromochloromethane	6.038	49	15717	10.33	ug/L		86
28) Chloroform	6.136	83	31968	9.89	ug/L		98
29) Carbon Tetrachloride	6.264	117	18676	9.70	ug/L		99
30) Tetrahydrofuran	6.307	42	9225	9.28	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	24426	9.99	ug/L		97
33) 1,1-Dichloropropene	6.477	75	23256	9.61	ug/L		99
34) 2-Butanone (MEK)	6.477	43	29709	19.30	ug/L		96
35) Benzene	6.752	78	76881	10.02	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	10610	2.45	ug/L		76
37) 1,2-Dichloroethane (EDC)	6.983	62	25491	10.01	ug/L		98
38) iso-Butyl Alcohol	7.044	43	38810	236.55	ug/L		89
40) Trichloroethene (TCE)	7.410	130	21560	10.36	ug/L		97
41) tert-Amyl ethyl ether ...	7.691	59	6943	2.38	ug/L		95
42) Dibromomethane	7.880	93	13281	10.14	ug/L		99
43) 1,2-Dichloropropane	7.995	63	19019	9.88	ug/L		99
44) Bromodichloromethane	8.075	83	20600	9.65	ug/L		98
46) 2-Chloroethyl Vinyl Ether	8.739	63	9286	8.25	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	22428	9.06	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102520.D
Acq On : 25 Oct 2019 7:35 pm
Operator : MM
Sample : 9J25051-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:45 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

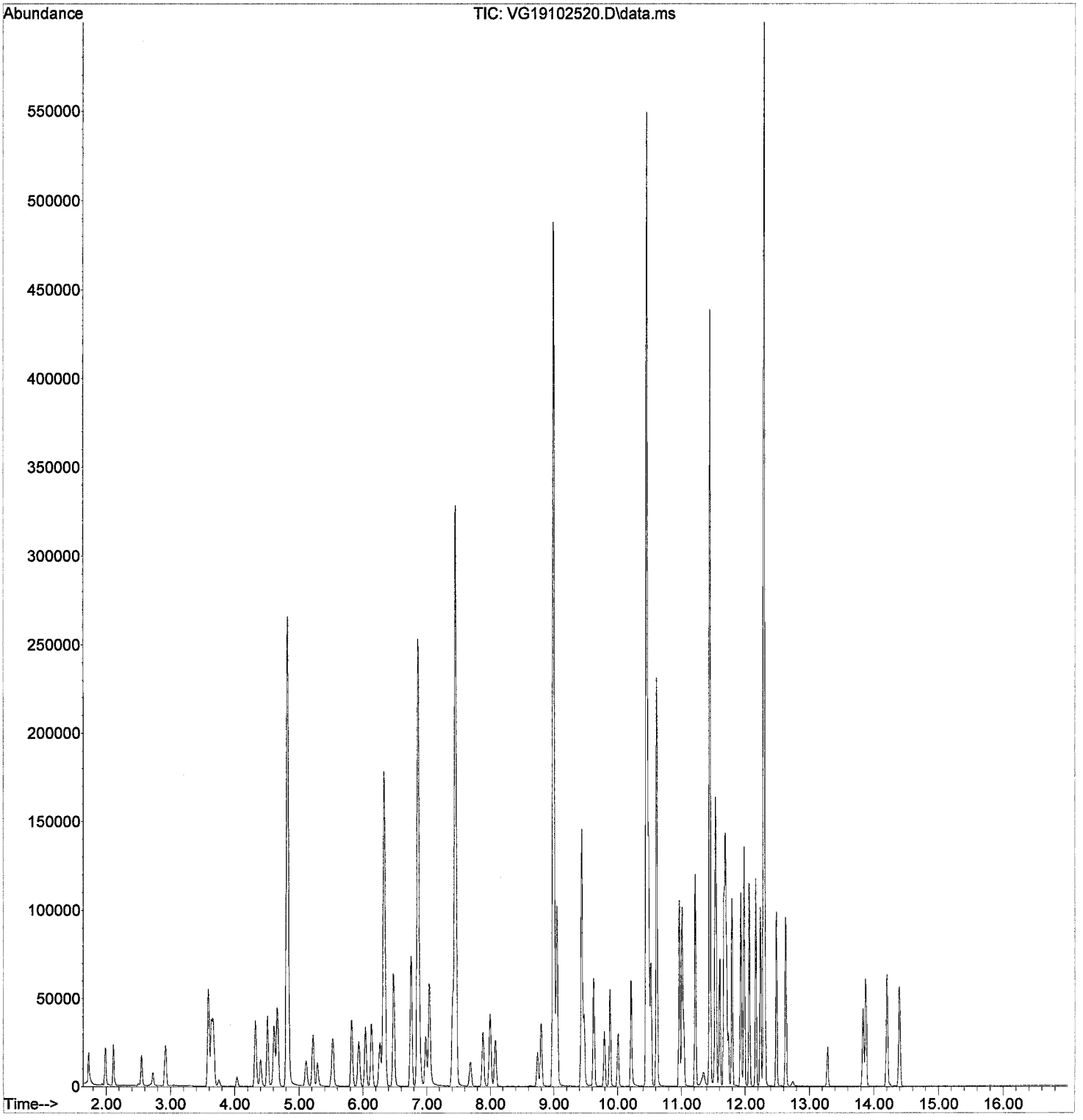
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	81964	9.97	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	22594	10.13	ug/L		98
51) 4-Methyl-2-Pentanone (...	9.440	43	50335	18.54	ug/L		94
52) t-1,3-Dichloropropene	9.471	75	19307	9.20	ug/L		97
53) 1,1,2-Trichloroethane	9.623	97	20512	10.07	ug/L		97
54) Dibromochloromethane	9.788	129	17581	9.40	ug/L		99
55) 1,3-Dichloropropane	9.879	76	31655	10.00	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.007	107	20378	9.65	ug/L		97
57) 2-Hexanone	10.208	43	35393	17.85	ug/L		99
58) Chlorobenzene	10.470	112	54921	10.03	ug/L		96
59) Ethylbenzene	10.489	91	82267	9.90	ug/L		99
60) 1,1,1,2-Tetrachloroethane	10.525	131	17260	9.88	ug/L		97
61) m,p-Xylenes (2)	10.611	91	117957	19.30	ug/L		99
62) o-Xylene	10.970	91	54341	9.17	ug/L		99
63) Styrene	11.013	104	46210	9.45	ug/L		93
64) Bromoform	11.037	173	13109	8.99	ug/L		98
65) Isopropylbenzene	11.220	105	68642	9.42	ug/L		100
68) Bromobenzene	11.531	156	23997	9.94	ug/L		97
69) n-Propylbenzene	11.543	91	80330	9.78	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	31762	10.22	ug/L		96
71) 2-Chlorotoluene	11.665	126	18857	9.85	ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	60626	9.78	ug/L		97
73) 1,2,3-Trichloropropane	11.708	110	9293	10.14	ug/L		98
74) t-1,4-Dichloro-2-butene	11.739	88	2243	8.52	ug/L	#	73
75) 4-Chlorotoluene	11.793	91	51031	9.79	ug/L		99
76) tert-Butylbenzene	11.934	91	28831	9.53	ug/L		95
77) 1,2,4-Trimethylbenzene	11.982	105	62151	9.79	ug/L		98
78) sec-Butylbenzene	12.062	105	66926	9.74	ug/L		98
79) 4-Isopropyltoluene	12.165	119	55590	9.60	ug/L		100
80) 1,3-Dichlorobenzene	12.238	146	39173	10.09	ug/L		99
81) 1,4-Dichlorobenzene	12.306	146	40327	10.18	ug/L		98
82) n-Butylbenzene	12.488	91	47013	9.64	ug/L		98
83) 1,2-Dichlorobenzene	12.635	146	38505	10.01	ug/L		97
84) 1,2-Dibromo-3-Chloropr...	13.281	157	6229	9.47	ug/L		98
85) Hexachlorobutadiene	13.830	223	6191	9.99	ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	22360	9.35	ug/L		98
87) Naphthalene	14.201	128	56149	8.25	ug/L		98
88) 1,2,3-Trichlorobenzene	14.397	180	22886	9.55	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102520.D
Acq On : 25 Oct 2019 7:35 pm
Operator : MM
Sample : 9J25051-CAL7
Misc : 1X 5mL 10/20PPB VOCR
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:45 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102521.D
Acq On : 25 Oct 2019 8:02 pm
Operator : MM
Sample : 9J25051-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	86706	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	253314	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	128679	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	89870	50.00	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	291439	50.00	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	329731	50.00	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	107703	50.00	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	27201	20.00	ug/L		97
3) Chloromethane	1.990	50	36903	20.00	ug/L		99
4) Vinyl Chloride	2.112	62	33851	20.00	ug/L		95
5) Bromomethane	2.551	96	16751	20.00	ug/L		99
6) Chloroethane	2.722	64	8110	20.00	ug/L		91
7) Trichlorofluoromethane	2.917	101	37053	20.00	ug/L		99
8) Ethanol	3.636	45	59872	1250.00	ug/L		86
9) 1,1-Dichloroethene	3.588	61	40497	20.00	ug/L		95
10) Carbon Disulfide	3.588	76	59881	20.00	ug/L		99
11) Freon 113	3.661	101	33091	20.00	ug/L		94
12) Iodomethane	3.746	142	11720	20.00	ug/L		98
13) Acrolein	4.033	56	8799	20.00	ug/L		98
14) Methylene Chloride	4.319	84	34415	20.00	ug/L		93
15) Acetone	4.399	43	35535	40.00	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	43270	20.00	ug/L		93
17) n-Hexane	4.606	86	4737	20.00	ug/L	#	57
18) Methyl-tert-butyl-ether	4.661	73	86097	20.00	ug/L		96
19) tert-Butanol (TBA)	4.819	59	489113	1250.00	ug/L	#	81
20) Diisopropyl ether (DIPE)	5.112	45	24122	5.00	ug/L		98
21) 1,1-Dichloroethane	5.215	63	57239	20.00	ug/L		99
22) Acrylonitrile	5.289	53	21017	20.00	ug/L		96
23) Vinyl Acetate	5.526	43	61236	20.00	ug/L		98
24) Ethyl-tert-butyl ether...	5.514	59	21409	5.00	ug/L		97
25) c-1,2-Dichloroethene	5.825	61	44663	20.00	ug/L		93
26) 2,2-Dichloropropane	5.935	77	26576	20.00	ug/L		74
27) Bromochloromethane	6.038	49	27767	20.00	ug/L		84
28) Chloroform	6.136	83	59036	20.00	ug/L		96
29) Carbon Tetrachloride	6.264	117	35140	20.00	ug/L		97
30) Tetrahydrofuran	6.307	42	18146	20.00	ug/L		91
31) 1,1,1-Trichloroethane	6.343	97	44656	20.00	ug/L		95
33) 1,1-Dichloropropene	6.477	75	44179	20.00	ug/L		98
34) 2-Butanone (MEK)	6.477	43	56191	40.00	ug/L		97
35) Benzene	6.752	78	140134	20.00	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	19745	5.00	ug/L		80
37) 1,2-Dichloroethane (EDC)	6.983	62	46494	20.00	ug/L		99
38) iso-Butyl Alcohol	7.038	43	74881	500.00	ug/L		91
40) Trichloroethene (TCE)	7.410	130	37986	20.00	ug/L		98
41) tert-Amyl ethyl ether ...	7.691	59	13314	5.00	ug/L		93
42) Dibromomethane	7.886	93	23918	20.00	ug/L		95
43) 1,2-Dichloropropane	7.995	63	35146	20.00	ug/L		98
44) Bromodichloromethane	8.075	83	38970	20.00	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	20353	20.00	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	44754	20.00	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102521.D
Acq On : 25 Oct 2019 8:02 pm
Operator : MM
Sample : 9J25051-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	148631	20.00	ug/L		100
50) Tetrachloroethene (PCE)	9.434	166	40323	20.00	ug/L		97
51) 4-Methyl-2-Pentanone (...	9.434	43	98178	40.00	ug/L		97
52) t-1,3-Dichloropropene	9.471	75	37931	20.00	ug/L		99
53) 1,1,2-Trichloroethane	9.623	97	36821	20.00	ug/L		94
54) Dibromochloromethane	9.788	129	33811	20.00	ug/L		99
55) 1,3-Dichloropropane	9.879	76	57259	20.00	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.001	107	38181	20.00	ug/L		99
57) 2-Hexanone	10.208	43	71710	40.00	ug/L		98
58) Chlorobenzene	10.471	112	98998	20.00	ug/L		97
59) Ethylbenzene	10.489	91	150206	20.00	ug/L		98
60) 1,1,1,2-Tetrachloroethane	10.525	131	31571	20.00	ug/L		96
61) m,p-Xylenes (2)	10.611	91	220983	40.00	ug/L		98
62) o-Xylene	10.970	91	107127	20.00	ug/L		98
63) Styrene	11.013	104	88408	20.00	ug/L		94
64) Bromoform	11.038	173	26373	20.00	ug/L		97
65) Isopropylbenzene	11.220	105	131792	20.00	ug/L		99
68) Bromobenzene	11.531	156	43790	20.00	ug/L		94
69) n-Propylbenzene	11.544	91	148949	20.00	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	56394	20.00	ug/L		98
71) 2-Chlorotoluene	11.665	126	34740	20.00	ug/L		94
72) 1,3,5-Trimethylbenzene	11.690	105	112417	20.00	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	16623	20.00	ug/L		96
74) t-1,4-Dichloro-2-butene	11.739	88	4774	20.00	ug/L	#	80
75) 4-Chlorotoluene	11.793	91	94606	20.00	ug/L		97
76) tert-Butylbenzene	11.934	91	54853	20.00	ug/L		96
77) 1,2,4-Trimethylbenzene	11.982	105	115215	20.00	ug/L		99
78) sec-Butylbenzene	12.062	105	124647	20.00	ug/L		98
79) 4-Isopropyltoluene	12.165	119	105070	20.00	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	70439	20.00	ug/L		99
81) 1,4-Dichlorobenzene	12.306	146	71878	20.00	ug/L		99
82) n-Butylbenzene	12.488	91	88503	20.00	ug/L		99
83) 1,2-Dichlorobenzene	12.629	146	69775	20.00	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	11935	20.00	ug/L		97
85) Hexachlorobutadiene	13.830	223	11238	20.00	ug/L		97
86) 1,2,4-Trichlorobenzene	13.872	180	43365	20.00	ug/L		95
87) Naphthalene	14.202	128	123502	20.00	ug/L		98
88) 1,2,3-Trichlorobenzene	14.397	180	43488	20.00	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102521.D
Acq On : 25 Oct 2019 8:02 pm
Operator : MM
Sample : 9J25051-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	86706	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	253314	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	128679	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	89870	50.00	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	291439	50.00	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	329731	50.00	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	107703	50.00	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	27201	20.00	ug/L		97
3) Chloromethane	1.990	50	36903	20.00	ug/L		99
4) Vinyl Chloride	2.112	62	33851	20.00	ug/L		95
5) Bromomethane	2.551	96	16751	20.00	ug/L		99
6) Chloroethane	2.722	64	8110	20.00	ug/L		91
7) Trichlorofluoromethane	2.917	101	37053	20.00	ug/L		99
8) Ethanol	3.636	45	59872	1250.00	ug/L		86
9) 1,1-Dichloroethene	3.588	61	40497	20.00	ug/L		95
10) Carbon Disulfide	3.588	76	59881	20.00	ug/L		99
11) Freon 113	3.661	101	33091	20.00	ug/L		94
12) Iodomethane	3.746	142	11720	20.00	ug/L		98
13) Acrolein	4.033	56	8799	20.00	ug/L		98
14) Methylene Chloride	4.319	84	34415	20.00	ug/L		93
15) Acetone	4.399	43	35535	40.00	ug/L		96
16) t-1,2-Dichloroethene	4.508	61	43270	20.00	ug/L		93
17) n-Hexane	4.606	86	4737	20.00	ug/L	#	57
18) Methyl-tert-butyl-ether	4.661	73	86097	20.00	ug/L		96
19) tert-Butanol (TBA)	4.819	59	489113	1250.00	ug/L	#	81
20) Diisopropyl ether (DIPE)	5.112	45	24122	5.00	ug/L		98
21) 1,1-Dichloroethane	5.215	63	57239	20.00	ug/L		99
22) Acrylonitrile	5.289	53	21017	20.00	ug/L		96
23) Vinyl Acetate	5.526	43	61236	20.00	ug/L		98
24) Ethyl-tert-butyl ether...	5.514	59	21409	5.00	ug/L		97
25) c-1,2-Dichloroethene	5.825	61	44663	20.00	ug/L		93
26) 2,2-Dichloropropane	5.935	77	26576	20.00	ug/L		74
27) Bromochloromethane	6.038	49	27767	20.00	ug/L		84
28) Chloroform	6.136	83	59036	20.00	ug/L		96
29) Carbon Tetrachloride	6.264	117	35140	20.00	ug/L		97
30) Tetrahydrofuran	6.307	42	18146	20.00	ug/L		91
31) 1,1,1-Trichloroethane	6.343	97	44656	20.00	ug/L		95
33) 1,1-Dichloropropene	6.477	75	44179	20.00	ug/L		98
34) 2-Butanone (MEK)	6.477	43	56191	40.00	ug/L		97
35) Benzene	6.752	78	140134	20.00	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	19745	5.00	ug/L		80
37) 1,2-Dichloroethane (EDC)	6.983	62	46494	20.00	ug/L		99
38) iso-Butyl Alcohol	7.038	43	74881	500.00	ug/L		91
40) Trichloroethene (TCE)	7.410	130	37986	20.00	ug/L		98
41) tert-Amyl ethyl ether ...	7.691	59	13314	5.00	ug/L		93
42) Dibromomethane	7.886	93	23918	20.00	ug/L		95
43) 1,2-Dichloropropane	7.995	63	35146	20.00	ug/L		98
44) Bromodichloromethane	8.075	83	38970	20.00	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	20353	20.00	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	44754	20.00	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102521.D
Acq On : 25 Oct 2019 8:02 pm
Operator : MM
Sample : 9J25051-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

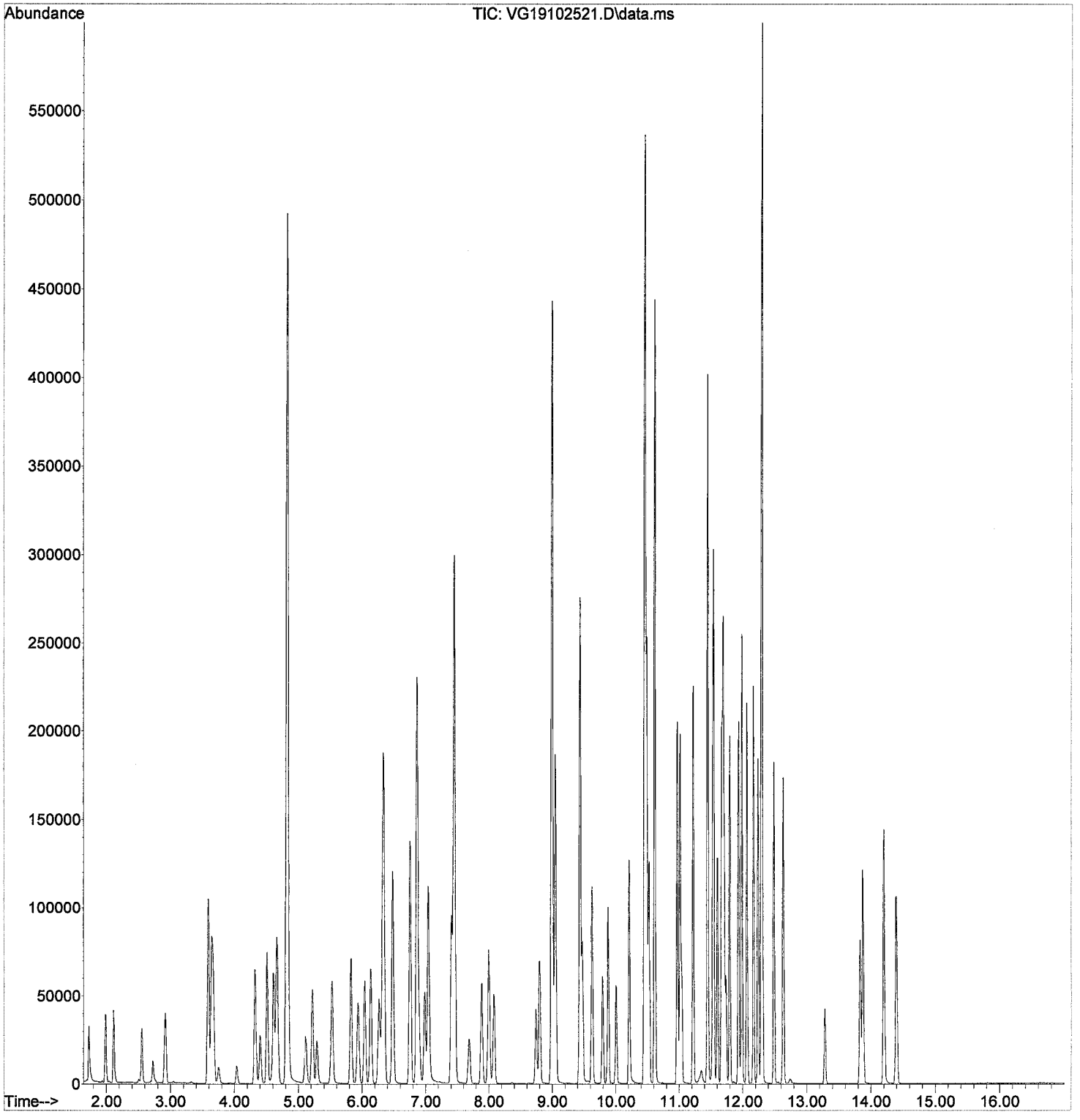
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	148631	20.00	ug/L		100
50) Tetrachloroethene (PCE)	9.434	166	40323	20.00	ug/L		97
51) 4-Methyl-2-Pentanone (...	9.434	43	98178	40.00	ug/L		97
52) t-1,3-Dichloropropene	9.471	75	37931	20.00	ug/L		99
53) 1,1,2-Trichloroethane	9.623	97	36821	20.00	ug/L		94
54) Dibromochloromethane	9.788	129	33811	20.00	ug/L		99
55) 1,3-Dichloropropane	9.879	76	57259	20.00	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.001	107	38181	20.00	ug/L		99
57) 2-Hexanone	10.208	43	71710	40.00	ug/L		98
58) Chlorobenzene	10.471	112	98998	20.00	ug/L		97
59) Ethylbenzene	10.489	91	150206	20.00	ug/L		98
60) 1,1,1,2-Tetrachloroethane	10.525	131	31571	20.00	ug/L		96
61) m,p-Xylenes (2)	10.611	91	220983	40.00	ug/L		98
62) o-Xylene	10.970	91	107127	20.00	ug/L		98
63) Styrene	11.013	104	88408	20.00	ug/L		94
64) Bromoform	11.038	173	26373	20.00	ug/L		97
65) Isopropylbenzene	11.220	105	131792	20.00	ug/L		99
68) Bromobenzene	11.531	156	43790	20.00	ug/L		94
69) n-Propylbenzene	11.544	91	148949	20.00	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.598	83	56394	20.00	ug/L		98
71) 2-Chlorotoluene	11.665	126	34740	20.00	ug/L		94
72) 1,3,5-Trimethylbenzene	11.690	105	112417	20.00	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	16623	20.00	ug/L		96
74) t-1,4-Dichloro-2-butene	11.739	88	4774	20.00	ug/L	#	80
75) 4-Chlorotoluene	11.793	91	94606	20.00	ug/L		97
76) tert-Butylbenzene	11.934	91	54853	20.00	ug/L		96
77) 1,2,4-Trimethylbenzene	11.982	105	115215	20.00	ug/L		99
78) sec-Butylbenzene	12.062	105	124647	20.00	ug/L		98
79) 4-Isopropyltoluene	12.165	119	105070	20.00	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	70439	20.00	ug/L		99
81) 1,4-Dichlorobenzene	12.306	146	71878	20.00	ug/L		99
82) n-Butylbenzene	12.488	91	88503	20.00	ug/L		99
83) 1,2-Dichlorobenzene	12.629	146	69775	20.00	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	11935	20.00	ug/L		97
85) Hexachlorobutadiene	13.830	223	11238	20.00	ug/L		97
86) 1,2,4-Trichlorobenzene	13.872	180	43365	20.00	ug/L		95
87) Naphthalene	14.202	128	123502	20.00	ug/L		98
88) 1,2,3-Trichlorobenzene	14.397	180	43488	20.00	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102521.D
Acq On : 25 Oct 2019 8:02 pm
Operator : MM
Sample : 9J25051-CAL8
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:48 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102522.D
Acq On : 25 Oct 2019 8:29 pm
Operator : MM
Sample : 9J25051-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:51 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	94974	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	276912	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	143329	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	98035	49.79	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	318518	49.89	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	358348	49.71	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	121264	50.54	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	91711	61.56	ug/L		98
3) Chloromethane	1.984	50	101831	50.38	ug/L		99
4) Vinyl Chloride	2.112	62	99666	53.76	ug/L		95
5) Bromomethane	2.551	96	41867	45.64	ug/L		100
6) Chloroethane	2.722	64	22569	50.81	ug/L		92
7) Trichlorofluoromethane	2.917	101	101591	50.06	ug/L		97
8) Ethanol	3.630	45	118949	2267.21	ug/L		84
9) 1,1-Dichloroethene	3.588	61	106825	48.16	ug/L		96
10) Carbon Disulfide	3.588	76	175211	53.43	ug/L		99
11) Freon 113	3.661	101	84735	46.75	ug/L		97
12) Iodomethane	3.752	142	44167	68.81	ug/L		99
13) Acrolein	4.033	56	26568	55.13	ug/L		96
14) Methylene Chloride	4.319	84	84220	44.68	ug/L		94
15) Acetone	4.398	43	88109	90.55	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	110813	46.76	ug/L		94
17) n-Hexane	4.612	86	13670	52.69	ug/L	#	70
18) Methyl-tert-butyl-ether	4.661	73	225213	47.76	ug/L		74
19) tert-Butanol (TBA)	4.819	59	974201	2272.97	ug/L	#	90
20) Diisopropyl ether (DIPE)	5.112	45	46377	8.78	ug/L		97
21) 1,1-Dichloroethane	5.215	63	143204	45.68	ug/L		99
22) Acrylonitrile	5.282	53	53096	46.13	ug/L		97
23) Vinyl Acetate	5.526	43	183258	54.64	ug/L		99
24) Ethyl-tert-butyl ether...	5.514	59	42497	9.06	ug/L		97
25) c-1,2-Dichloroethene	5.819	61	112782	46.11	ug/L		95
26) 2,2-Dichloropropane	5.935	77	71310	48.99	ug/L		78
27) Bromochloromethane	6.038	49	66951	44.03	ug/L		84
28) Chloroform	6.136	83	146798	45.40	ug/L		95
29) Carbon Tetrachloride	6.264	117	95588	49.67	ug/L		97
30) Tetrahydrofuran	6.301	42	48009	48.31	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	116783	47.75	ug/L		97
33) 1,1-Dichloropropene	6.483	75	113867	47.06	ug/L		98
34) 2-Butanone (MEK)	6.471	43	143270	93.11	ug/L		98
35) Benzene	6.752	78	351675	45.82	ug/L		97
36) tert-Amyl methyl ether...	6.898	73	39047	9.03	ug/L		83
37) 1,2-Dichloroethane (EDC)	6.983	62	115183	45.23	ug/L		99
38) iso-Butyl Alcohol	7.038	43	202120	1232.12	ug/L		95
40) Trichloroethene (TCE)	7.404	130	98591	47.39	ug/L		98
41) tert-Amyl ethyl ether ...	7.684	59	26359	9.04	ug/L		91
42) Dibromomethane	7.879	93	61052	46.61	ug/L		98
43) 1,2-Dichloropropane	7.995	63	87924	45.68	ug/L		97
44) Bromodichloromethane	8.075	83	103483	48.49	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	62426	56.12	ug/L	#	1
47) c-1,3-Dichloropropene	8.794	75	122277	49.99	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102522.D
Acq On : 25 Oct 2019 8:29 pm
Operator : MM
Sample : 9J25051-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:51 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	371837	45.77	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	102842	46.66	ug/L		98
51) 4-Methyl-2-Pentanone (...	9.434	43	254574	94.88	ug/L		93
52) t-1,3-Dichloropropene	9.471	75	107286	51.75	ug/L		99
53) 1,1,2-Trichloroethane	9.623	97	91931	45.68	ug/L		95
54) Dibromochloromethane	9.788	129	93162	50.41	ug/L		99
55) 1,3-Dichloropropane	9.879	76	144038	46.02	ug/L		95
56) 1,2-Dibromoethane (EDB)	10.001	107	98185	47.05	ug/L		99
57) 2-Hexanone	10.208	43	193352	98.66	ug/L		96
58) Chlorobenzene	10.470	112	247035	45.65	ug/L		96
59) Ethylbenzene	10.489	91	384473	46.83	ug/L		99
60) 1,1,1,2-Tetrachloroethane	10.525	131	84064	48.72	ug/L		98
61) m,p-Xylenes (2)	10.611	91	564636	93.49	ug/L		100
62) o-Xylene	10.970	91	288059	49.20	ug/L		99
63) Styrene	11.013	104	234659	48.56	ug/L		94
64) Bromoform	11.037	173	75820	52.60	ug/L		98
65) Isopropylbenzene	11.220	105	349766	48.56	ug/L		99
68) Bromobenzene	11.531	156	111875	45.87	ug/L		96
69) n-Propylbenzene	11.543	91	381465	45.99	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.604	83	142222	45.28	ug/L		98
71) 2-Chlorotoluene	11.665	126	90597	46.83	ug/L		92
72) 1,3,5-Trimethylbenzene	11.690	105	287885	45.98	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	42315	45.71	ug/L		96
74) t-1,4-Dichloro-2-butene	11.732	88	13756	51.74	ug/L	#	89
75) 4-Chlorotoluene	11.793	91	246655	46.81	ug/L		98
76) tert-Butylbenzene	11.934	91	144949	47.45	ug/L		97
77) 1,2,4-Trimethylbenzene	11.982	105	293788	45.79	ug/L		99
78) sec-Butylbenzene	12.062	105	321962	46.38	ug/L		98
79) 4-Isopropyltoluene	12.165	119	273920	46.81	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	182204	46.45	ug/L		99
81) 1,4-Dichlorobenzene	12.305	146	184746	46.15	ug/L		98
82) n-Butylbenzene	12.482	91	225454	45.74	ug/L		98
83) 1,2-Dichlorobenzene	12.629	146	181138	46.61	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	35194	52.95	ug/L		94
85) Hexachlorobutadiene	13.830	223	27912	44.60	ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	116235	48.13	ug/L		96
87) Naphthalene	14.201	128	357738	52.01	ug/L		98
88) 1,2,3-Trichlorobenzene	14.396	180	112370	46.40	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102522.D
Acq On : 25 Oct 2019 8:29 pm
Operator : MM
Sample : 9J25051-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:51 2019
Quant Method : C:\msdchem\1\methods\~~VG191025W.M~~
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	94974	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	276912	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	143329	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	98035	49.79	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	318518	49.89	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	358348	49.71	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	121264	50.54	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	91711	61.56	ug/L		98
3) Chloromethane	1.984	50	101831	50.38	ug/L		99
4) Vinyl Chloride	2.112	62	99666	53.76	ug/L		95
5) Bromomethane	2.551	96	41867	45.64	ug/L		100
6) Chloroethane	2.722	64	22569	50.81	ug/L		92
7) Trichlorofluoromethane	2.917	101	101591	50.06	ug/L		97
8) Ethanol	3.630	45	118949	2267.21	ug/L		84
9) 1,1-Dichloroethene	3.588	61	106825	48.16	ug/L		96
10) Carbon Disulfide	3.588	76	175211	53.43	ug/L		99
11) Freon 113	3.661	101	84735	46.75	ug/L		97
12) Iodomethane	3.752	142	44167	68.81	ug/L		99
13) Acrolein	4.033	56	26568	55.13	ug/L		96
14) Methylene Chloride	4.319	84	84220	44.68	ug/L		94
15) Acetone	4.398	43	88109	90.55	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	110813	46.76	ug/L		94
17) n-Hexane	4.612	86	13670	52.69	ug/L	#	70
18) Methyl-tert-butyl-ether	4.661	73	225213	47.76	ug/L		74
19) tert-Butanol (TBA)	4.819	59	974201	2272.97	ug/L	#	90
20) Diisopropyl ether (DIPE)	5.112	45	46377	8.78	ug/L		97
21) 1,1-Dichloroethane	5.215	63	143204	45.68	ug/L		99
22) Acrylonitrile	5.282	53	53096	46.13	ug/L		97
23) Vinyl Acetate	5.526	43	183258	54.64	ug/L		99
24) Ethyl-tert-butyl ether...	5.514	59	42497	9.06	ug/L		97
25) c-1,2-Dichloroethene	5.819	61	112782	46.11	ug/L		95
26) 2,2-Dichloropropane	5.935	77	71310	48.99	ug/L		78
27) Bromochloromethane	6.038	49	66951	44.03	ug/L		84
28) Chloroform	6.136	83	146798	45.40	ug/L		95
29) Carbon Tetrachloride	6.264	117	95588	49.67	ug/L		97
30) Tetrahydrofuran	6.301	42	48009	48.31	ug/L		89
31) 1,1,1-Trichloroethane	6.343	97	116783	47.75	ug/L		97
33) 1,1-Dichloropropene	6.483	75	113867	47.06	ug/L		98
34) 2-Butanone (MEK)	6.471	43	143270	93.11	ug/L		98
35) Benzene	6.752	78	351675	45.82	ug/L		97
36) tert-Amyl methyl ether...	6.898	73	39047	9.03	ug/L		83
37) 1,2-Dichloroethane (EDC)	6.983	62	115183	45.23	ug/L		99
38) iso-Butyl Alcohol	7.038	43	202120	1232.12	ug/L		95
40) Trichloroethene (TCE)	7.404	130	98591	47.39	ug/L		98
41) tert-Amyl ethyl ether ...	7.684	59	26359	9.04	ug/L		91
42) Dibromomethane	7.879	93	61052	46.61	ug/L		98
43) 1,2-Dichloropropane	7.995	63	87924	45.68	ug/L		97
44) Bromodichloromethane	8.075	83	103483	48.49	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	62426	56.12	ug/L	#	1
47) c-1,3-Dichloropropene	8.794	75	122277	49.99	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102522.D
Acq On : 25 Oct 2019 8:29 pm
Operator : MM
Sample : 9J25051-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:51 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

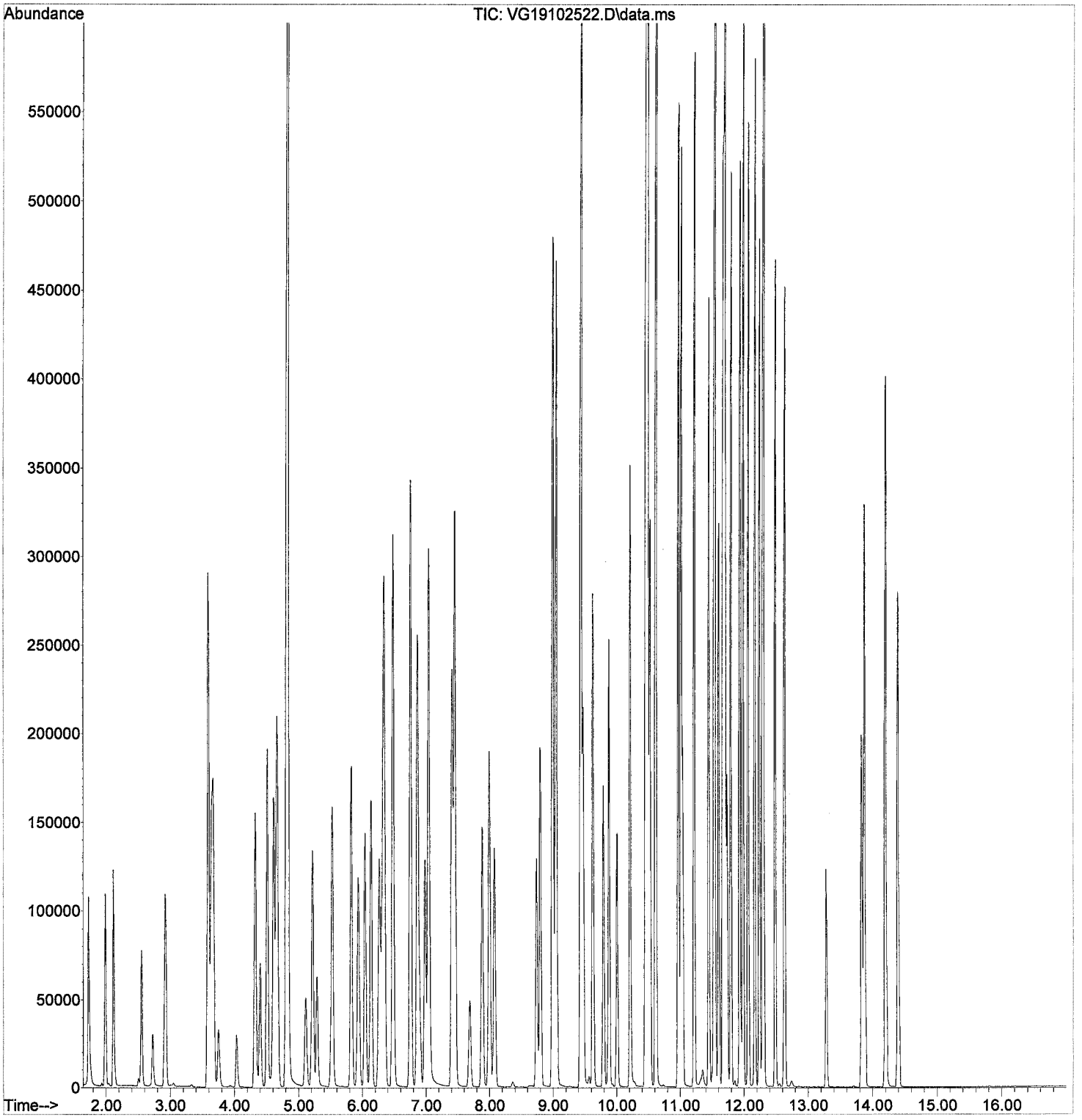
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.044	91	371837	45.77	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	102842	46.66	ug/L		98
51) 4-Methyl-2-Pentanone (...	9.434	43	254574	94.88	ug/L		93
52) t-1,3-Dichloropropene	9.471	75	107286	51.75	ug/L		99
53) 1,1,2-Trichloroethane	9.623	97	91931	45.68	ug/L		95
54) Dibromochloromethane	9.788	129	93162	50.41	ug/L		99
55) 1,3-Dichloropropane	9.879	76	144038	46.02	ug/L		95
56) 1,2-Dibromoethane (EDB)	10.001	107	98185	47.05	ug/L		99
57) 2-Hexanone	10.208	43	193352	98.66	ug/L		96
58) Chlorobenzene	10.470	112	247035	45.65	ug/L		96
59) Ethylbenzene	10.489	91	384473	46.83	ug/L		99
60) 1,1,1,2-Tetrachloroethane	10.525	131	84064	48.72	ug/L		98
61) m,p-Xylenes (2)	10.611	91	564636	93.49	ug/L		100
62) o-Xylene	10.970	91	288059	49.20	ug/L		99
63) Styrene	11.013	104	234659	48.56	ug/L		94
64) Bromoform	11.037	173	75820	52.60	ug/L		98
65) Isopropylbenzene	11.220	105	349766	48.56	ug/L		99
68) Bromobenzene	11.531	156	111875	45.87	ug/L		96
69) n-Propylbenzene	11.543	91	381465	45.99	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.604	83	142222	45.28	ug/L		98
71) 2-Chlorotoluene	11.665	126	90597	46.83	ug/L		92
72) 1,3,5-Trimethylbenzene	11.690	105	287885	45.98	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	42315	45.71	ug/L		96
74) t-1,4-Dichloro-2-butene	11.732	88	13756	51.74	ug/L	#	89
75) 4-Chlorotoluene	11.793	91	246655	46.81	ug/L		98
76) tert-Butylbenzene	11.934	91	144949	47.45	ug/L		97
77) 1,2,4-Trimethylbenzene	11.982	105	293788	45.79	ug/L		99
78) sec-Butylbenzene	12.062	105	321962	46.38	ug/L		98
79) 4-Isopropyltoluene	12.165	119	273920	46.81	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	182204	46.45	ug/L		99
81) 1,4-Dichlorobenzene	12.305	146	184746	46.15	ug/L		98
82) n-Butylbenzene	12.482	91	225454	45.74	ug/L		98
83) 1,2-Dichlorobenzene	12.629	146	181138	46.61	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	35194	52.95	ug/L		94
85) Hexachlorobutadiene	13.830	223	27912	44.60	ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	116235	48.13	ug/L		96
87) Naphthalene	14.201	128	357738	52.01	ug/L		98
88) 1,2,3-Trichlorobenzene	14.396	180	112370	46.40	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102522.D
Acq On : 25 Oct 2019 8:29 pm
Operator : MM
Sample : 9J25051-CAL9
Misc : 1X 5mL 50/100PPB VOCR
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:51 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102523.D
Acq On : 25 Oct 2019 8:55 pm
Operator : MM
Sample : 9J25051-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:46 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

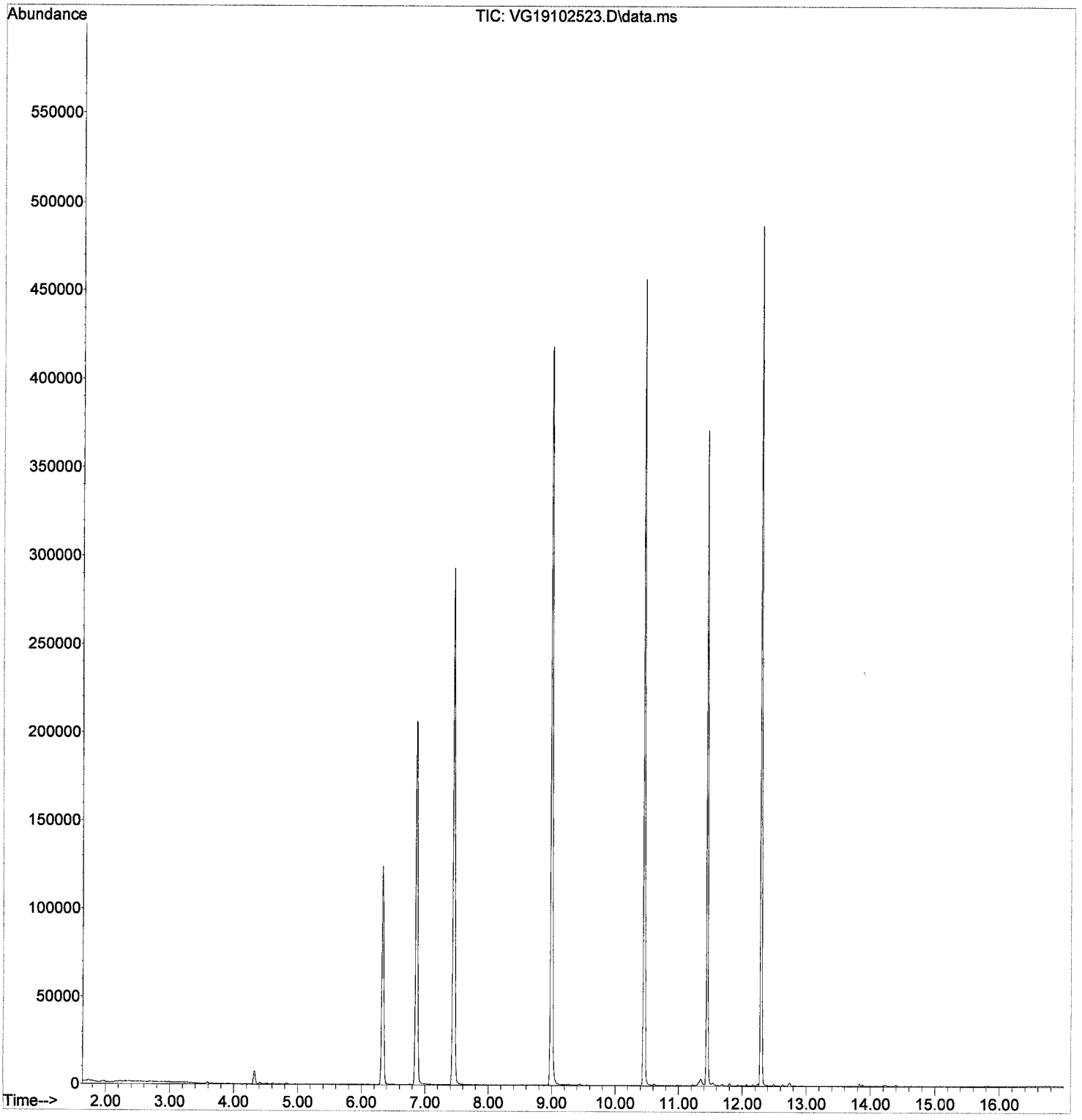
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.861	99	79919	50.00 ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	240589	50.00 ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	117739	50.00 ug/L		0.00
System Monitoring Compounds						
32) Dibromofluoromethane (S)	6.331	111	83899	49.87 ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	280390	51.07 ug/L		0.00
48) Toluene-d8 (S)	8.995	98	311902	49.72 ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	98502	49.54 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.728	85	204	0.15 ug/L	#	51
3) Chloromethane	1.990	50	313	0.17 ug/L		86
6) Chloroethane	2.661	64	10	Below Cal	#	53
8) Ethanol	3.636	45	53	1.26 ug/L	#	29
9) 1,1-Dichloroethene	3.582	61	167	0.09 ug/L	#	25
10) Carbon Disulfide	3.594	76	1010	0.36 ug/L		91
14) Methylene Chloride	4.325	84	3641	1.42 ug/L		88
15) Acetone	4.405	43	1207	1.45 ug/L		98
16) t-1,2-Dichloroethene	4.508	61	286	0.15 ug/L		84
19) tert-Butanol (TBA)	4.831	59	531	1.68 ug/L	#	84
33) 1,1-Dichloropropene	6.483	75	184	0.10 ug/L	#	59
38) iso-Butyl Alcohol	7.087	43	11	0.08 ug/L	#	22
40) Trichloroethene (TCE)	7.410	130	193	0.11 ug/L		77
47) c-1,3-Dichloropropene	8.818	75	11	0.10 ug/L	#	33
50) Tetrachloroethene (PCE)	9.440	166	275	0.14 ug/L		75
52) t-1,3-Dichloropropene	9.489	75	12	0.09 ug/L	#	45
58) Chlorobenzene	10.464	112	411	0.09 ug/L	#	1
61) m,p-Xylenes (2)	10.623	91	666	0.14 ug/L		86
63) Styrene	11.037	104	134	0.13 ug/L	#	40
68) Bromobenzene	11.531	156	175	0.09 ug/L		81
69) n-Propylbenzene	11.549	91	840	0.13 ug/L		96
72) 1,3,5-Trimethylbenzene	11.690	105	392	0.09 ug/L		93
75) 4-Chlorotoluene	11.799	91	519	0.13 ug/L		89
76) tert-Butylbenzene	11.934	91	202	0.09 ug/L	#	71
77) 1,2,4-Trimethylbenzene	11.988	105	420	0.09 ug/L		94
78) sec-Butylbenzene	12.068	105	601	0.12 ug/L		96
79) 4-Isopropyltoluene	12.165	119	488	0.11 ug/L		90
80) 1,3-Dichlorobenzene	12.244	146	511	0.17 ug/L		95
81) 1,4-Dichlorobenzene	12.305	146	726	0.21 ug/L	#	60
82) n-Butylbenzene	12.488	91	766	0.22 ug/L		85
83) 1,2-Dichlorobenzene	12.635	146	337	0.11 ug/L		98
85) Hexachlorobutadiene	13.823	223	208	0.44 ug/L		95
86) 1,2,4-Trichlorobenzene	13.878	180	409	0.23 ug/L		91
87) Naphthalene	14.208	128	669	0.40 ug/L		79
88) 1,2,3-Trichlorobenzene	14.396	180	327	0.19 ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102523.D
Acq On : 25 Oct 2019 8:55 pm
Operator : MM
Sample : 9J25051-IBL2
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:46 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102524.D
Acq On : 25 Oct 2019 9:22 pm
Operator : MM
Sample : 9J25051-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.862	99	96665	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	280815	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	144590	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	100532	50.17	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	326047	50.17	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	367797	50.31	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	124225	51.32	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	173843	114.65	ug/L		97
3) Chloromethane	1.984	50	198132	96.32	ug/L		98
4) Vinyl Chloride	2.112	62	192412	101.97	ug/L		95
5) Bromomethane	2.551	96	84791	90.81	ug/L		99
6) Chloroethane	2.722	64	40673	89.97	ug/L		94
7) Trichlorofluoromethane	2.917	101	187789	90.92	ug/L		97
8) Ethanol	3.643	45	205433	3847.13	ug/L		84
9) 1,1-Dichloroethene	3.588	61	228850	101.38	ug/L		96
10) Carbon Disulfide	3.588	76	390234	116.91	ug/L		98
11) Freon 113	3.661	101	173399	94.00	ug/L		95
12) Iodomethane	3.752	142	116589	178.46	ug/L		99
13) Acrolein	4.033	56	53447	108.97	ug/L		98
14) Methylene Chloride	4.319	84	171077	89.18	ug/L		94
15) Acetone	4.399	43	178985	180.72	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	235876	97.79	ug/L		94
17) n-Hexane	4.612	86	29007	109.85	ug/L	#	62
18) Methyl-tert-butyl-ether	4.661	73	485505	101.16	ug/L		92
19) tert-Butanol (TBA)	4.825	59	1764644	4045.18	ug/L	#	94
20) Diisopropyl ether (DIPE)	5.112	45	91793	17.07	ug/L		96
21) 1,1-Dichloroethane	5.215	63	303825	95.22	ug/L		99
22) Acrylonitrile	5.289	53	110954	94.71	ug/L		98
23) Vinyl Acetate	5.526	43	384431	112.62	ug/L		99
24) Ethyl-tert-butyl ether...	5.514	59	83379	17.47	ug/L		99
25) c-1,2-Dichloroethene	5.825	61	241396	96.96	ug/L		92
26) 2,2-Dichloropropane	5.935	77	158158	106.76	ug/L		83
27) Bromochloromethane	6.039	49	134039	86.60	ug/L		83
28) Chloroform	6.136	83	307965	93.58	ug/L		96
29) Carbon Tetrachloride	6.264	117	209216	106.81	ug/L		96
30) Tetrahydrofuran	6.301	42	101260	100.11	ug/L		91
31) 1,1,1-Trichloroethane	6.343	97	253138	101.69	ug/L		98
33) 1,1-Dichloropropene	6.477	75	241070	97.89	ug/L		97
34) 2-Butanone (MEK)	6.471	43	294469	188.02	ug/L		97
35) Benzene	6.752	78	738577	94.55	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	76599	17.40	ug/L		86
37) 1,2-Dichloroethane (EDC)	6.983	62	242443	93.55	ug/L		99
38) iso-Butyl Alcohol	7.044	43	391326	2343.78	ug/L		96
40) Trichloroethene (TCE)	7.410	130	211347	99.81	ug/L		97
41) tert-Amyl ethyl ether ...	7.685	59	52681	17.75	ug/L		93
42) Dibromomethane	7.880	93	129476	97.11	ug/L		97
43) 1,2-Dichloropropane	7.995	63	186244	95.06	ug/L		97
44) Bromodichloromethane	8.075	83	228141	105.02	ug/L		96
46) 2-Chloroethyl Vinyl Ether	8.739	63	134625	119.33	ug/L	#	1
47) c-1,3-Dichloropropene	8.794	75	272691	109.93	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102524.D
Acq On : 25 Oct 2019 9:22 pm
Operator : MM
Sample : 9J25051-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	9.044	91	781810	94.90	ug/L	99
50) Tetrachloroethene (PCE)	9.434	166	212731	95.18	ug/L	98
51) 4-Methyl-2-Pentanone (...	9.434	43	518207	190.45	ug/L	93
52) t-1,3-Dichloropropene	9.471	75	242090	115.15	ug/L	98
53) 1,1,2-Trichloroethane	9.623	97	191781	93.97	ug/L	96
54) Dibromochloromethane	9.788	129	208257	111.12	ug/L	99
55) 1,3-Dichloropropane	9.879	76	305571	96.28	ug/L	96
56) 1,2-Dibromoethane (EDB)	10.001	107	208836	98.68	ug/L	98
57) 2-Hexanone	10.208	43	392003	197.25	ug/L	96
58) Chlorobenzene	10.471	112	511165	93.15	ug/L	97
59) Ethylbenzene	10.489	91	801122	96.22	ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.525	131	180354	103.06	ug/L	96
61) m,p-Xylenes (2)	10.611	91	1184446	193.40	ug/L	98
62) o-Xylene	10.970	91	616887	103.89	ug/L	98
63) Styrene	11.013	104	496713	101.36	ug/L	94
64) Bromoform	11.038	173	169206	115.75	ug/L	98
65) Isopropylbenzene	11.220	105	744896	101.97	ug/L	99
68) Bromobenzene	11.531	156	230853	93.83	ug/L	95
69) n-Propylbenzene	11.544	91	803869	96.06	ug/L	99
70) 1,1,2,2-Tetrachloroethane	11.598	83	276789	87.36	ug/L	97
71) 2-Chlorotoluene	11.665	126	191643	98.19	ug/L	92
72) 1,3,5-Trimethylbenzene	11.690	105	599123	94.86	ug/L	94
73) 1,2,3-Trichloropropane	11.708	110	84503	90.48	ug/L	93
74) t-1,4-Dichloro-2-butene	11.733	88	31040	115.73	ug/L	90
75) 4-Chlorotoluene	11.793	91	522158	98.24	ug/L	99
76) tert-Butylbenzene	11.934	91	309424	100.40	ug/L	97
77) 1,2,4-Trimethylbenzene	11.982	105	612078	94.56	ug/L	99
78) sec-Butylbenzene	12.062	105	687152	98.12	ug/L	98
79) 4-Isopropyltoluene	12.165	119	583941	98.92	ug/L	99
80) 1,3-Dichlorobenzene	12.239	146	382076	96.55	ug/L	100
81) 1,4-Dichlorobenzene	12.306	146	380389	94.20	ug/L	98
82) n-Butylbenzene	12.488	91	474858	95.50	ug/L	99
83) 1,2-Dichlorobenzene	12.629	146	368271	93.94	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	72710	108.44	ug/L	91
85) Hexachlorobutadiene	13.830	223	56850	90.04	ug/L	98
86) 1,2,4-Trichlorobenzene	13.872	180	230455	94.59	ug/L	97
87) Naphthalene	14.202	128	723210	104.23	ug/L	97
88) 1,2,3-Trichlorobenzene	14.397	180	219631	89.89	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102524.D
Acq On : 25 Oct 2019 9:22 pm
Operator : MM
Sample : 9J25051-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.862	99	96665	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	280815	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	144590	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	100532	50.17	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	326047	50.17	ug/L		0.00
48) Toluene-d8 (S)	8.989	98	367797	50.31	ug/L		-0.01
67) 4-Bromofluorobenzene (S)	11.446	174	124225	51.32	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	173843	114.65	ug/L		97
3) Chloromethane	1.984	50	198132	96.32	ug/L		98
4) Vinyl Chloride	2.112	62	192412	101.97	ug/L		95
5) Bromomethane	2.551	96	84791	90.81	ug/L		99
6) Chloroethane	2.722	64	40673	89.97	ug/L		94
7) Trichlorofluoromethane	2.917	101	187789	90.92	ug/L		97
8) Ethanol	3.643	45	205433	3847.13	ug/L		84
9) 1,1-Dichloroethene	3.588	61	228850	101.38	ug/L		96
10) Carbon Disulfide	3.588	76	390234	116.91	ug/L		98
11) Freon 113	3.661	101	173399	94.00	ug/L		95
12) Iodomethane	3.752	142	116589	178.46	ug/L		99
13) Acrolein	4.033	56	53447	108.97	ug/L		98
14) Methylene Chloride	4.319	84	171077	89.18	ug/L		94
15) Acetone	4.399	43	178985	180.72	ug/L		97
16) t-1,2-Dichloroethene	4.508	61	235876	97.79	ug/L		94
17) n-Hexane	4.612	86	29007	109.85	ug/L	#	62
18) Methyl-tert-butyl-ether	4.661	73	485505	101.16	ug/L		92
19) tert-Butanol (TBA)	4.825	59	1764644	4045.18	ug/L	#	94
20) Diisopropyl ether (DIPE)	5.112	45	91793	17.07	ug/L		96
21) 1,1-Dichloroethane	5.215	63	303825	95.22	ug/L		99
22) Acrylonitrile	5.289	53	110954	94.71	ug/L		98
23) Vinyl Acetate	5.526	43	384431	112.62	ug/L		99
24) Ethyl-tert-butyl ether...	5.514	59	83379	17.47	ug/L		99
25) c-1,2-Dichloroethene	5.825	61	241396	96.96	ug/L		92
26) 2,2-Dichloropropane	5.935	77	158158	106.76	ug/L		83
27) Bromochloromethane	6.039	49	134039	86.60	ug/L		83
28) Chloroform	6.136	83	307965	93.58	ug/L		96
29) Carbon Tetrachloride	6.264	117	209216	106.81	ug/L		96
30) Tetrahydrofuran	6.301	42	101260	100.11	ug/L		91
31) 1,1,1-Trichloroethane	6.343	97	253138	101.69	ug/L		98
33) 1,1-Dichloropropene	6.477	75	241070	97.89	ug/L		97
34) 2-Butanone (MEK)	6.471	43	294469	188.02	ug/L		97
35) Benzene	6.752	78	738577	94.55	ug/L		98
36) tert-Amyl methyl ether...	6.898	73	76599	17.40	ug/L		86
37) 1,2-Dichloroethane (EDC)	6.983	62	242443	93.55	ug/L		99
38) iso-Butyl Alcohol	7.044	43	391326	2343.78	ug/L		96
40) Trichloroethene (TCE)	7.410	130	211347	99.81	ug/L		97
41) tert-Amyl ethyl ether ...	7.685	59	52681	17.75	ug/L		93
42) Dibromomethane	7.880	93	129476	97.11	ug/L		97
43) 1,2-Dichloropropane	7.995	63	186244	95.06	ug/L		97
44) Bromodichloromethane	8.075	83	228141	105.02	ug/L		96
46) 2-Chloroethyl Vinyl Ether	8.739	63	134625	119.33	ug/L	#	1
47) c-1,3-Dichloropropene	8.794	75	272691	109.93	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102524.D
Acq On : 25 Oct 2019 9:22 pm
Operator : MM
Sample : 9J25051-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

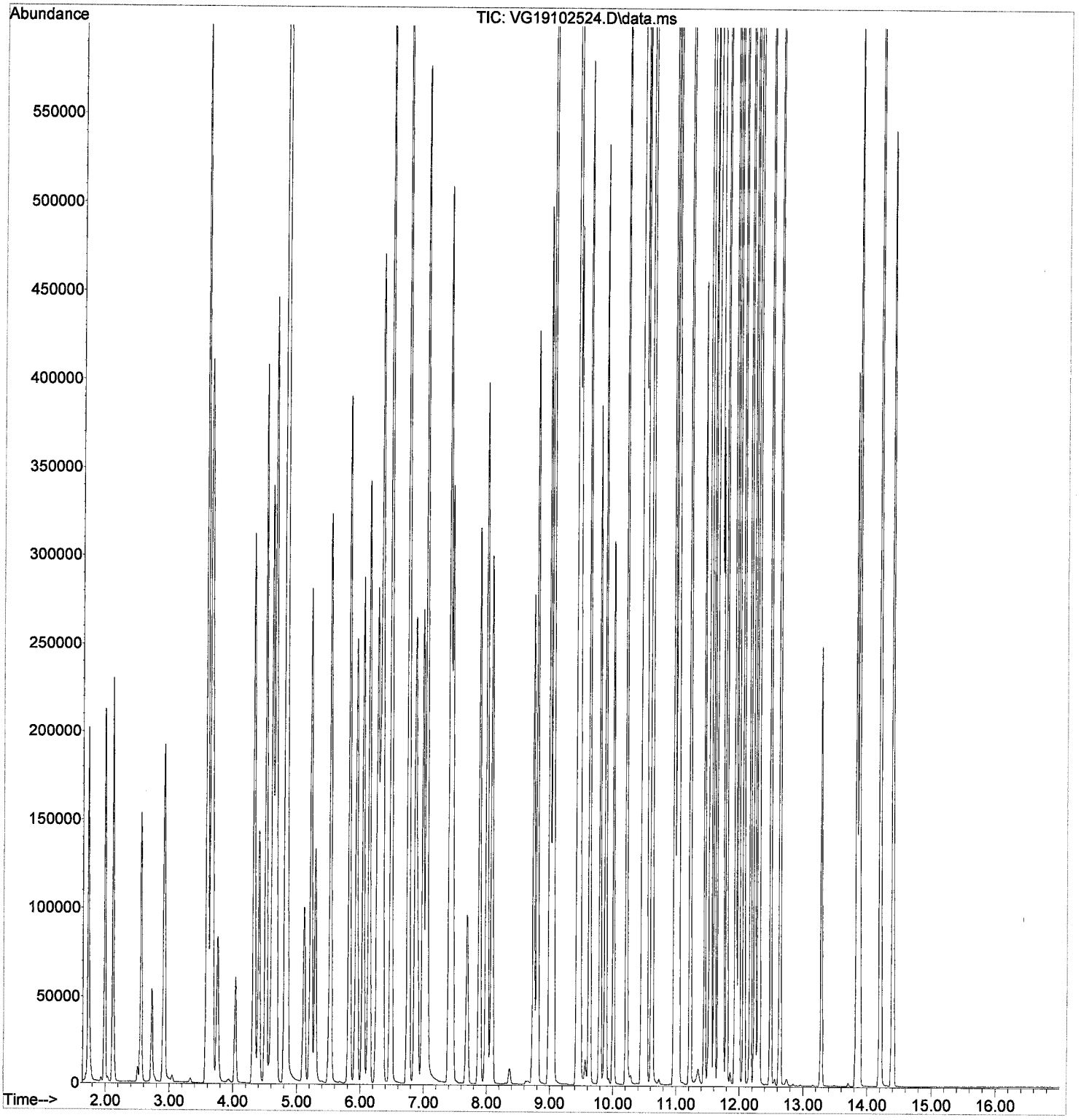
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	9.044	91	781810	94.90	ug/L	99
50) Tetrachloroethene (PCE)	9.434	166	212731	95.18	ug/L	98
51) 4-Methyl-2-Pentanone (...	9.434	43	518207	190.45	ug/L	93
52) t-1,3-Dichloropropene	9.471	75	242090	115.15	ug/L	98
53) 1,1,2-Trichloroethane	9.623	97	191781	93.97	ug/L	96
54) Dibromochloromethane	9.788	129	208257	111.12	ug/L	99
55) 1,3-Dichloropropane	9.879	76	305571	96.28	ug/L	96
56) 1,2-Dibromoethane (EDB)	10.001	107	208836	98.68	ug/L	98
57) 2-Hexanone	10.208	43	392003	197.25	ug/L	96
58) Chlorobenzene	10.471	112	511165	93.15	ug/L	97
59) Ethylbenzene	10.489	91	801122	96.22	ug/L	98
60) 1,1,1,2-Tetrachloroethane	10.525	131	180354	103.06	ug/L	96
61) m,p-Xylenes (2)	10.611	91	1184446	193.40	ug/L	98
62) o-Xylene	10.970	91	616887	103.89	ug/L	98
63) Styrene	11.013	104	496713	101.36	ug/L	94
64) Bromoform	11.038	173	169206	115.75	ug/L	98
65) Isopropylbenzene	11.220	105	744896	101.97	ug/L	99
68) Bromobenzene	11.531	156	230853	93.83	ug/L	95
69) n-Propylbenzene	11.544	91	803869	96.06	ug/L	99
70) 1,1,2,2-Tetrachloroethane	11.598	83	276789	87.36	ug/L	97
71) 2-Chlorotoluene	11.665	126	191643	98.19	ug/L	92
72) 1,3,5-Trimethylbenzene	11.690	105	599123	94.86	ug/L	94
73) 1,2,3-Trichloropropane	11.708	110	84503	90.48	ug/L	93
74) t-1,4-Dichloro-2-butene	11.733	88	31040	115.73	ug/L	90
75) 4-Chlorotoluene	11.793	91	522158	98.24	ug/L	99
76) tert-Butylbenzene	11.934	91	309424	100.40	ug/L	97
77) 1,2,4-Trimethylbenzene	11.982	105	612078	94.56	ug/L	99
78) sec-Butylbenzene	12.062	105	687152	98.12	ug/L	98
79) 4-Isopropyltoluene	12.165	119	583941	98.92	ug/L	99
80) 1,3-Dichlorobenzene	12.239	146	382076	96.55	ug/L	100
81) 1,4-Dichlorobenzene	12.306	146	380389	94.20	ug/L	98
82) n-Butylbenzene	12.488	91	474858	95.50	ug/L	99
83) 1,2-Dichlorobenzene	12.629	146	368271	93.94	ug/L	98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	72710	108.44	ug/L	91
85) Hexachlorobutadiene	13.830	223	56850	90.04	ug/L	98
86) 1,2,4-Trichlorobenzene	13.872	180	230455	94.59	ug/L	97
87) Naphthalene	14.202	128	723210	104.23	ug/L	97
88) 1,2,3-Trichlorobenzene	14.397	180	219631	89.89	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102524.D
Acq On : 25 Oct 2019 9:22 pm
Operator : MM
Sample : 9J25051-CALA
Misc : 1X 5mL 100/200PPB VOCR
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:54 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102525.D
Acq On : 25 Oct 2019 9:49 pm
Operator : MM
Sample : 9J25051-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:49 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	81875	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	238938	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	117374	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	85118	49.39	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	283924	50.48	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	312156	50.11	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	98559	49.73	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	388	0.28	ug/L		83
3) Chloromethane	1.990	50	362	0.19	ug/L		91
4) Vinyl Chloride	2.112	62	175	0.11	ug/L		63
5) Bromomethane	2.551	96	92	0.11	ug/L		86
6) Chloroethane	2.740	64	39	Below Cal		#	47
7) Trichlorofluoromethane	2.929	101	260	0.15	ug/L		94
8) Ethanol	3.630	45	101	2.35	ug/L	#	29
9) 1,1-Dichloroethene	3.588	61	321	0.17	ug/L		96
10) Carbon Disulfide	3.594	76	1909	0.66	ug/L		98
11) Freon 113	3.661	101	441	0.28	ug/L		76
12) Iodomethane	3.752	142	27	2.13	ug/L	#	47
14) Methylene Chloride	4.325	84	2626	0.67	ug/L		94
15) Acetone	4.411	43	1215	1.42	ug/L		99
16) t-1,2-Dichloroethene	4.514	61	544	0.28	ug/L		91
19) tert-Butanol (TBA)	4.825	59	566	1.75	ug/L	#	82
25) c-1,2-Dichloroethene	5.819	61	227	0.11	ug/L		90
33) 1,1-Dichloropropene	6.483	75	346	0.19	ug/L		84
38) iso-Butyl Alcohol	7.063	43	130	0.96	ug/L		71
40) Trichloroethene (TCE)	7.416	130	385	0.21	ug/L		95
47) c-1,3-Dichloropropene	8.812	75	85	0.14	ug/L	#	33
49) Toluene	9.044	91	825	0.12	ug/L		97
50) Tetrachloroethene (PCE)	9.440	166	526	0.28	ug/L		95
51) 4-Methyl-2-Pentanone (...	9.452	43	232	0.11	ug/L		70
52) t-1,3-Dichloropropene	9.483	75	60	0.12	ug/L	#	45
57) 2-Hexanone	10.227	43	155	0.10	ug/L		69
58) Chlorobenzene	10.464	112	661	0.14	ug/L	#	1
59) Ethylbenzene	10.489	91	952	0.14	ug/L		89
61) m,p-Xylenes (2)	10.617	91	1444	0.31	ug/L		98
62) o-Xylene	10.970	91	449	0.10	ug/L		85
63) Styrene	11.019	104	336	0.19	ug/L		71
65) Isopropylbenzene	11.214	105	667	0.12	ug/L		85
68) Bromobenzene	11.537	156	300	0.16	ug/L	#	79
69) n-Propylbenzene	11.543	91	1731	0.27	ug/L		96
71) 2-Chlorotoluene	11.671	126	275	0.19	ug/L	#	71
72) 1,3,5-Trimethylbenzene	11.690	105	790	0.17	ug/L		92
75) 4-Chlorotoluene	11.800	91	942	0.24	ug/L		98
76) tert-Butylbenzene	11.928	91	416	0.18	ug/L	#	77
77) 1,2,4-Trimethylbenzene	11.988	105	751	0.16	ug/L		90
78) sec-Butylbenzene	12.062	105	1219	0.23	ug/L		96
79) 4-Isopropyltoluene	12.165	119	952	0.22	ug/L		96
80) 1,3-Dichlorobenzene	12.238	146	960	0.31	ug/L		94
81) 1,4-Dichlorobenzene	12.299	146	1383	0.40	ug/L	#	62
82) n-Butylbenzene	12.488	91	1399	0.40	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102525.D
Acq On : 25 Oct 2019 9:49 pm
Operator : MM
Sample : 9J25051-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:49 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

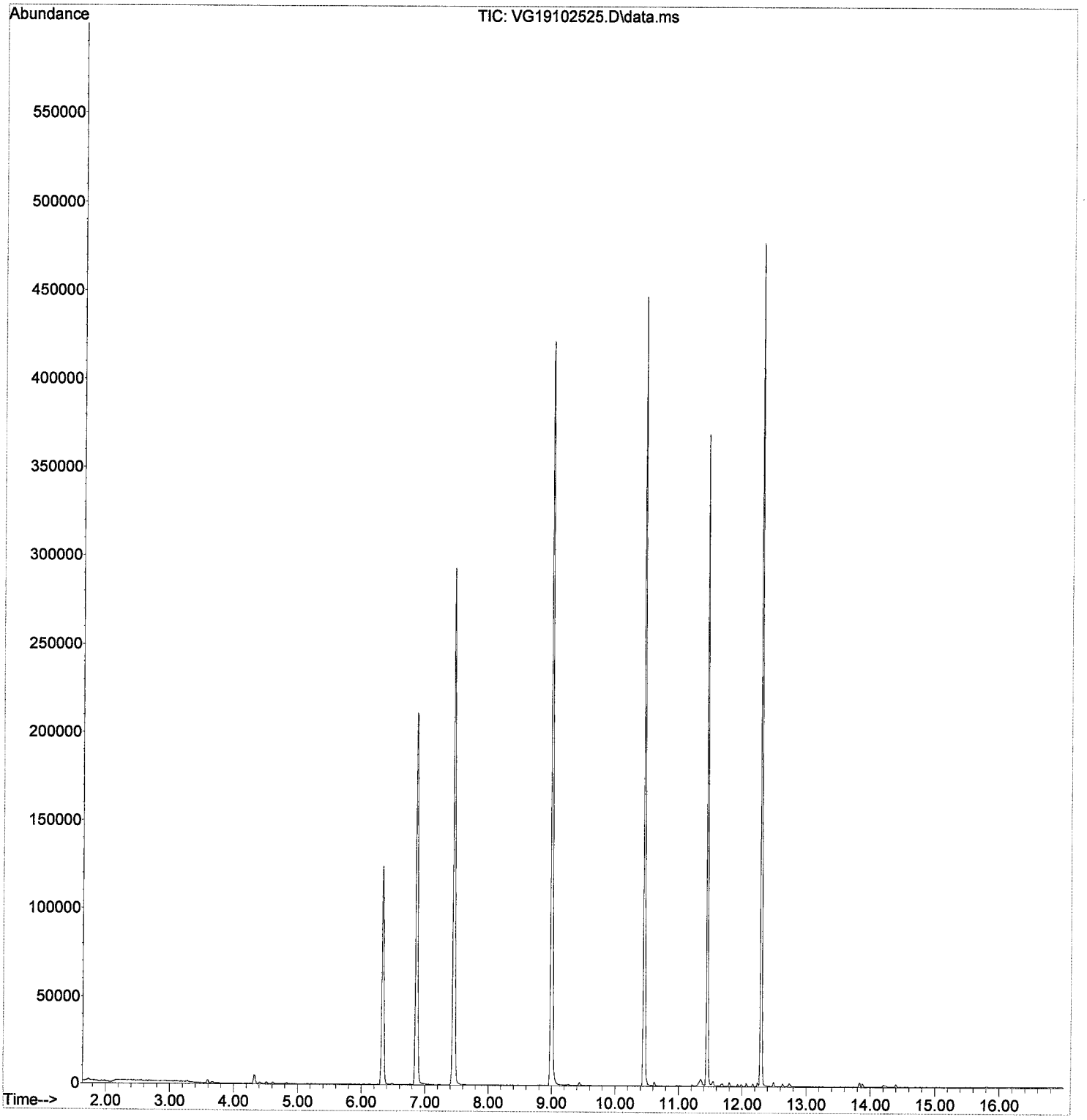
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
83) 1,2-Dichlorobenzene	12.635	146	683	0.23 ug/L	93
85) Hexachlorobutadiene	13.830	223	397	0.85 ug/L	94
86) 1,2,4-Trichlorobenzene	13.878	180	879	0.50 ug/L	89
87) Naphthalene	14.208	128	1414	0.54 ug/L	79
88) 1,2,3-Trichlorobenzene	14.397	180	774	0.45 ug/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102525.D
Acq On : 25 Oct 2019 9:49 pm
Operator : MM
Sample : 9J25051-IBL3
Misc : 1X 5mL DI
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:49 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102526.D
Acq On : 25 Oct 2019 10:16 pm
Operator : MM
Sample : 9J25051-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:53:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	84871	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	237104	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	116686	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87086	49.50	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	283209	49.64	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	320536	51.93	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	102899	52.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	310233	233.04	ug/L		98
3) Chloromethane	1.984	50	356174	197.21	ug/L		99
4) Vinyl Chloride	2.112	62	347189	209.56	ug/L		96
5) Bromomethane	2.551	96	157346	191.93	ug/L		99
6) Chloroethane	2.722	64	68728	173.15	ug/L		95
7) Trichlorofluoromethane	2.911	101	306829	169.20	ug/L		98
8) Ethanol	0.000		0	N.D.	d		
9) 1,1-Dichloroethene	3.582	61	419375	211.59	ug/L		98
10) Carbon Disulfide	3.582	76	739088	252.19	ug/L		98
11) Freon 113	3.655	101	322757	199.29	ug/L		99
12) Iodomethane	3.746	142	251532	438.52	ug/L		97
13) Acrolein	4.033	56	98401	228.50	ug/L		97
14) Methylene Chloride	4.319	84	305732	181.52	ug/L		95
15) Acetone	4.399	43	335353	385.65	ug/L		98
16) t-1,2-Dichloroethene	4.508	61	439733	207.65	ug/L		95
17) n-Hexane	4.606	86	53781	231.98	ug/L	#	61
18) Methyl-tert-butyl-ether	4.661	73	909069	215.74	ug/L		95
19) tert-Butanol (TBA)	0.000		0	N.D.	d		
20) Diisopropyl ether (DIPE)	0.000		0	N.D.	d		
21) 1,1-Dichloroethane	5.215	63	561273	200.36	ug/L		99
22) Acrylonitrile	5.289	53	205093	199.39	ug/L		96
23) Vinyl Acetate	5.526	43	704281	235.00	ug/L		99
24) Ethyl-tert-butyl ether...	0.000		0	N.D.	d		
25) c-1,2-Dichloroethene	5.819	61	451383	206.50	ug/L		94
26) 2,2-Dichloropropane	5.935	77	307183	236.17	ug/L		85
27) Bromochloromethane	6.038	49	237805	174.99	ug/L		85
28) Chloroform	6.136	83	570590	197.48	ug/L		96
29) Carbon Tetrachloride	6.264	117	401239	233.30	ug/L		96
30) Tetrahydrofuran	6.301	42	193536	217.92	ug/L		92
31) 1,1,1-Trichloroethane	6.343	97	475459	217.55	ug/L		98
33) 1,1-Dichloropropene	6.477	75	443732	205.22	ug/L		98
34) 2-Butanone (MEK)	6.471	43	545000	396.35	ug/L		97
35) Benzene	6.752	78	1348023	196.55	ug/L		99
36) tert-Amyl methyl ether...	0.000		0	N.D.	d		
37) 1,2-Dichloroethane (EDC)	6.983	62	450038	197.78	ug/L		99
38) iso-Butyl Alcohol	7.044	43	669707	4568.49	ug/L		96
40) Trichloroethene (TCE)	7.410	130	384777	206.97	ug/L		97
41) tert-Amyl ethyl ether ...	0.000		0	N.D.	d		
42) Dibromomethane	7.880	93	239485	204.58	ug/L		99
43) 1,2-Dichloropropane	7.995	63	345874	201.08	ug/L		97
44) Bromodichloromethane	8.075	83	436572	228.90	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	248016	260.38	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	524872	250.59	ug/L		94

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102526.D
Acq On : 25 Oct 2019 10:16 pm
Operator : MM
Sample : 9J25051-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:53:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Toluene	9.044	91	1414184	203.30 ug/L	100
50) Tetrachloroethene (PCE)	9.434	166	374693	198.55 ug/L	99
51) 4-Methyl-2-Pentanone (...	9.434	43	885884	385.61 ug/L	94
52) t-1,3-Dichloropropene	9.471	75	467620	263.42 ug/L	98
53) 1,1,2-Trichloroethane	9.623	97	346944	201.33 ug/L	96
54) Dibromochloromethane	9.794	129	394459	249.28 ug/L	99
55) 1,3-Dichloropropane	9.879	76	557771	208.14 ug/L	97
56) 1,2-Dibromoethane (EDB)	10.007	107	384667	215.27 ug/L	98
57) 2-Hexanone	10.208	43	679397	404.88 ug/L	97
58) Chlorobenzene	10.470	112	897555	193.72 ug/L	98
59) Ethylbenzene	10.489	91	1424477	202.64 ug/L	99
60) 1,1,1,2-Tetrachloroethane	10.525	131	330493	223.68 ug/L	97
61) m,p-Xylenes (2)	10.611	91	2061112	398.59 ug/L	97
62) o-Xylene	10.970	91	1108926	221.18 ug/L	98
63) Styrene	11.013	104	878618	212.35 ug/L	96
64) Bromoform	11.037	173	299993	243.05 ug/L	97
65) Isopropylbenzene	11.220	105	1319857	213.99 ug/L	100
68) Bromobenzene	11.531	156	391986	197.43 ug/L	97
69) n-Propylbenzene	11.543	91	1412751	209.19 ug/L	100
70) 1,1,2,2-Tetrachloroethane	11.604	83	454028	177.57 ug/L	97
71) 2-Chlorotoluene	11.665	126	329426	209.14 ug/L	97
72) 1,3,5-Trimethylbenzene	11.690	105	1024588	201.02 ug/L	94
73) 1,2,3-Trichloropropane	11.708	110	135722	180.08 ug/L	92
74) t-1,4-Dichloro-2-butene	11.732	88	56671	261.82 ug/L	93
75) 4-Chlorotoluene	11.793	91	925899	215.86 ug/L	99
76) tert-Butylbenzene	11.934	91	552713	222.24 ug/L	99
77) 1,2,4-Trimethylbenzene	11.982	105	1045289	200.10 ug/L	99
78) sec-Butylbenzene	12.062	105	1192215	210.96 ug/L	98
79) 4-Isopropyltoluene	12.165	119	1001166	210.16 ug/L	98
80) 1,3-Dichlorobenzene	12.238	146	641529	200.87 ug/L	99
81) 1,4-Dichlorobenzene	12.306	146	639760	196.31 ug/L	98
82) n-Butylbenzene	12.488	91	806750	201.05 ug/L	99
83) 1,2-Dichlorobenzene	12.629	146	612148	193.50 ug/L	99
84) 1,2-Dibromo-3-Chloropr...	13.281	157	128958	238.31 ug/L	93
85) Hexachlorobutadiene	13.830	223	91693	179.96 ug/L	98
86) 1,2,4-Trichlorobenzene	13.872	180	388731	197.71 ug/L	97
87) Naphthalene	14.201	128	1237338	220.97 ug/L	98
88) 1,2,3-Trichlorobenzene	14.397	180	370994	188.16 ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102526.D
Acq On : 25 Oct 2019 10:16 pm
Operator : MM
Sample : 9J25051-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:57 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

10/28/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	84871	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	237104	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	116686	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	87086	49.50	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	283209	49.64	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	320536	51.93	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	102899	52.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	310233	233.04	ug/L		98
3) Chloromethane	1.984	50	356174	197.21	ug/L		99
4) Vinyl Chloride	2.112	62	347189	209.56	ug/L		96
5) Bromomethane	2.551	96	157346	191.93	ug/L		99
6) Chloroethane	2.722	64	68728	173.15	ug/L		95
7) Trichlorofluoromethane	2.911	101	306829	169.20	ug/L		98
8) Ethanol	3.655	45	540	11.52	ug/L		87
9) 1,1-Dichloroethene	3.582	61	419375	211.59	ug/L		98
10) Carbon Disulfide	3.582	76	739088	252.19	ug/L		98
11) Freon 113	3.655	101	322757	199.29	ug/L		99
12) Iodomethane	3.746	142	251532	438.52	ug/L		97
13) Acrolein	4.033	56	98401	228.50	ug/L		97
14) Methylene Chloride	4.319	84	305732	181.52	ug/L		95
15) Acetone	4.399	43	335353	385.65	ug/L		98
16) t-1,2-Dichloroethene	4.508	61	439733	207.65	ug/L		95
17) n-Hexane	4.606	86	53781	231.98	ug/L	#	61
18) Methyl-tert-butyl-ether	4.661	73	909069	215.74	ug/L		95
19) tert-Butanol (TBA)	4.831	59	1729	4.51	ug/L	#	55
20) Diisopropyl ether (DIPE)	5.118	45	822	0.17	ug/L		85
21) 1,1-Dichloroethane	5.215	63	561273	200.36	ug/L		99
22) Acrylonitrile	5.289	53	205093	199.39	ug/L		96
23) Vinyl Acetate	5.526	43	704281	235.00	ug/L		99
24) Ethyl-tert-butyl ether...	5.520	59	721	0.17	ug/L	#	1
25) c-1,2-Dichloroethene	5.819	61	451383	206.50	ug/L		94
26) 2,2-Dichloropropane	5.935	77	307183	236.17	ug/L		85
27) Bromochloromethane	6.038	49	237805	174.99	ug/L		85
28) Chloroform	6.136	83	570590	197.48	ug/L		96
29) Carbon Tetrachloride	6.264	117	401239	233.30	ug/L		96
30) Tetrahydrofuran	6.301	42	193536	217.92	ug/L		92
31) 1,1,1-Trichloroethane	6.343	97	475459	217.55	ug/L		98
33) 1,1-Dichloropropene	6.477	75	443732	205.22	ug/L		98
34) 2-Butanone (MEK)	6.471	43	545000	396.35	ug/L		97
35) Benzene	6.752	78	1348023	196.55	ug/L		99
36) tert-Amyl methyl ether...	6.898	73	687	0.18	ug/L		55
37) 1,2-Dichloroethane (EDC)	6.983	62	450038	197.78	ug/L		99
38) iso-Butyl Alcohol	7.044	43	669707	4568.49	ug/L		96
40) Trichloroethene (TCE)	7.410	130	384777	206.97	ug/L		97
41) tert-Amyl ethyl ether ...	7.684	59	526	0.20	ug/L		81
42) Dibromomethane	7.880	93	239485	204.58	ug/L		99
43) 1,2-Dichloropropane	7.995	63	345874	201.08	ug/L		97
44) Bromodichloromethane	8.075	83	436572	228.90	ug/L		97
46) 2-Chloroethyl Vinyl Ether	8.739	63	248016	260.38	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	524872	250.59	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102526.D
Acq On : 25 Oct 2019 10:16 pm
Operator : MM
Sample : 9J25051-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:57 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration

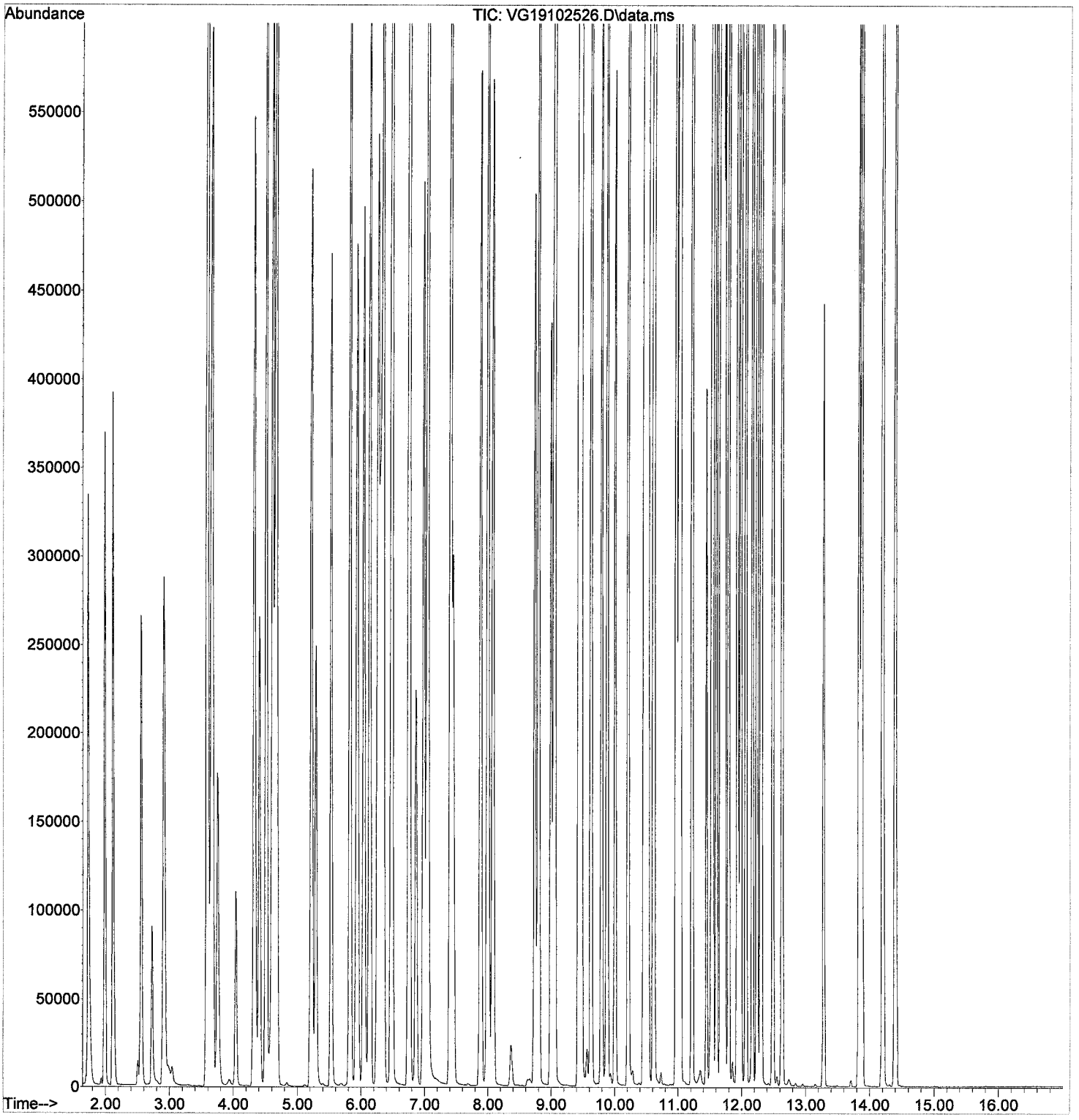
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Toluene	9.044	91	1414184	203.30	ug/L	100
50) Tetrachloroethene (PCE)	9.434	166	374693	198.55	ug/L	99
51) 4-Methyl-2-Pentanone (...	9.434	43	885884	385.61	ug/L	94
52) t-1,3-Dichloropropene	9.471	75	467620	263.42	ug/L	98
53) 1,1,2-Trichloroethane	9.623	97	346944	201.33	ug/L	96
54) Dibromochloromethane	9.794	129	394459	249.28	ug/L	99
55) 1,3-Dichloropropane	9.879	76	557771	208.14	ug/L	97
56) 1,2-Dibromoethane (EDB)	10.007	107	384667	215.27	ug/L	98
57) 2-Hexanone	10.208	43	679397	404.88	ug/L	97
58) Chlorobenzene	10.470	112	897555	193.72	ug/L	98
59) Ethylbenzene	10.489	91	1424477	202.64	ug/L	99
60) 1,1,1,2-Tetrachloroethane	10.525	131	330493	223.68	ug/L	97
61) m,p-Xylenes (2)	10.611	91	2061112	398.59	ug/L	97
62) o-Xylene	10.970	91	1108926	221.18	ug/L	98
63) Styrene	11.013	104	878618	212.35	ug/L	96
64) Bromoform	11.037	173	299993	243.05	ug/L	97
65) Isopropylbenzene	11.220	105	1319857	213.99	ug/L	100
68) Bromobenzene	11.531	156	391986	197.43	ug/L	97
69) n-Propylbenzene	11.543	91	1412751	209.19	ug/L	100
70) 1,1,2,2-Tetrachloroethane	11.604	83	454028	177.57	ug/L	97
71) 2-Chlorotoluene	11.665	126	329426	209.14	ug/L	97
72) 1,3,5-Trimethylbenzene	11.690	105	1024588	201.02	ug/L	94
73) 1,2,3-Trichloropropane	11.708	110	135722	180.08	ug/L	92
74) t-1,4-Dichloro-2-butene	11.732	88	56671	261.82	ug/L	93
75) 4-Chlorotoluene	11.793	91	925899	215.86	ug/L	99
76) tert-Butylbenzene	11.934	91	552713	222.24	ug/L	99
77) 1,2,4-Trimethylbenzene	11.982	105	1045289	200.10	ug/L	99
78) sec-Butylbenzene	12.062	105	1192215	210.96	ug/L	98
79) 4-Isopropyltoluene	12.165	119	1001166	210.16	ug/L	98
80) 1,3-Dichlorobenzene	12.238	146	641529	200.87	ug/L	99
81) 1,4-Dichlorobenzene	12.306	146	639760	196.31	ug/L	98
82) n-Butylbenzene	12.488	91	806750	201.05	ug/L	99
83) 1,2-Dichlorobenzene	12.629	146	612148	193.50	ug/L	99
84) 1,2-Dibromo-3-Chloropr...	13.281	157	128958	238.31	ug/L	93
85) Hexachlorobutadiene	13.830	223	91693	179.96	ug/L	98
86) 1,2,4-Trichlorobenzene	13.872	180	388731	197.71	ug/L	97
87) Naphthalene	14.201	128	1237338	220.97	ug/L	98
88) 1,2,3-Trichlorobenzene	14.397	180	370994	188.16	ug/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102526.D
Acq On : 25 Oct 2019 10:16 pm
Operator : MM
Sample : 9J25051-CALB
Misc : 1X 5mL 200/400PPB VOCR
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 10:25:57 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 10:24:51 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102527.D
Acq On : 25 Oct 2019 10:43 pm
Operator : MM
Sample : 9J25051-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:52 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	89938	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	264181	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	131026	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	91826	48.50	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	309186	50.04	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	342029	49.66	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	110596	49.99	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	880	0.58	ug/L		97
3) Chloromethane	1.990	50	589	0.29	ug/L		83
4) Vinyl Chloride	2.112	62	470	0.27	ug/L		95
5) Bromomethane	2.551	96	226	0.24	ug/L	#	63
6) Chloroethane	2.728	64	90	Below Cal		#	47
7) Trichlorofluoromethane	2.929	101	590	0.31	ug/L		94
8) Ethanol	3.648	45	10	0.21	ug/L	#	29
9) 1,1-Dichloroethene	3.594	61	579	0.28	ug/L		81
10) Carbon Disulfide	3.594	76	4168	1.31	ug/L		99
11) Freon 113	3.667	101	905	0.53	ug/L		94
12) Iodomethane	3.758	142	132	2.27	ug/L	#	47
14) Methylene Chloride	4.325	84	4270	1.52	ug/L		92
15) Acetone	4.404	43	1316	1.40	ug/L		95
16) t-1,2-Dichloroethene	4.514	61	1153	0.53	ug/L		92
17) n-Hexane	4.612	86	107	0.44	ug/L	#	87
19) tert-Butanol (TBA)	4.825	59	462	1.30	ug/L	#	47
22) Acrylonitrile	5.313	53	118	0.12	ug/L	#	49
25) c-1,2-Dichloroethene	5.825	61	522	0.24	ug/L		93
27) Bromochloromethane	6.038	49	262	0.19	ug/L		90
28) Chloroform	6.136	83	285	0.10	ug/L		74
29) Carbon Tetrachloride	6.264	117	134	0.08	ug/L	#	53
33) 1,1-Dichloropropene	6.483	75	863	0.43	ug/L		90
34) 2-Butanone (MEK)	6.502	43	266	0.20	ug/L		52
35) Benzene	6.758	78	966	0.14	ug/L		92
37) 1,2-Dichloroethane (EDC)	6.983	62	221	0.09	ug/L	#	49
38) iso-Butyl Alcohol	7.056	43	320	2.15	ug/L		70
40) Trichloroethene (TCE)	7.416	130	741	0.36	ug/L		91
42) Dibromomethane	7.892	93	161	0.14	ug/L		85
47) c-1,3-Dichloropropene	8.806	75	253	0.21	ug/L		92
49) Toluene	9.050	91	1637	0.21	ug/L		93
50) Tetrachloroethene (PCE)	9.434	166	1240	0.59	ug/L		93
51) 4-Methyl-2-Pentanone (...	9.446	43	521	0.23	ug/L		91
52) t-1,3-Dichloropropene	9.477	75	270	0.25	ug/L	#	45
54) Dibromochloromethane	9.800	129	82	0.17	ug/L	#	60
56) 1,2-Dibromoethane (EDB)	10.019	107	226	0.12	ug/L		82
57) 2-Hexanone	10.220	43	495	0.30	ug/L		82
58) Chlorobenzene	10.464	112	1497	0.29	ug/L	#	57
59) Ethylbenzene	10.495	91	2070	0.27	ug/L		98
61) m,p-Xylenes (2)	10.617	91	3152	0.61	ug/L		97
62) o-Xylene	10.976	91	946	0.19	ug/L		84
63) Styrene	11.019	104	791	0.28	ug/L		95
64) Bromoform	11.043	173	76	0.23	ug/L	#	37
65) Isopropylbenzene	11.220	105	1538	0.24	ug/L		98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102527.D
Acq On : 25 Oct 2019 10:43 pm
Operator : MM
Sample : 9J25051-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:52 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

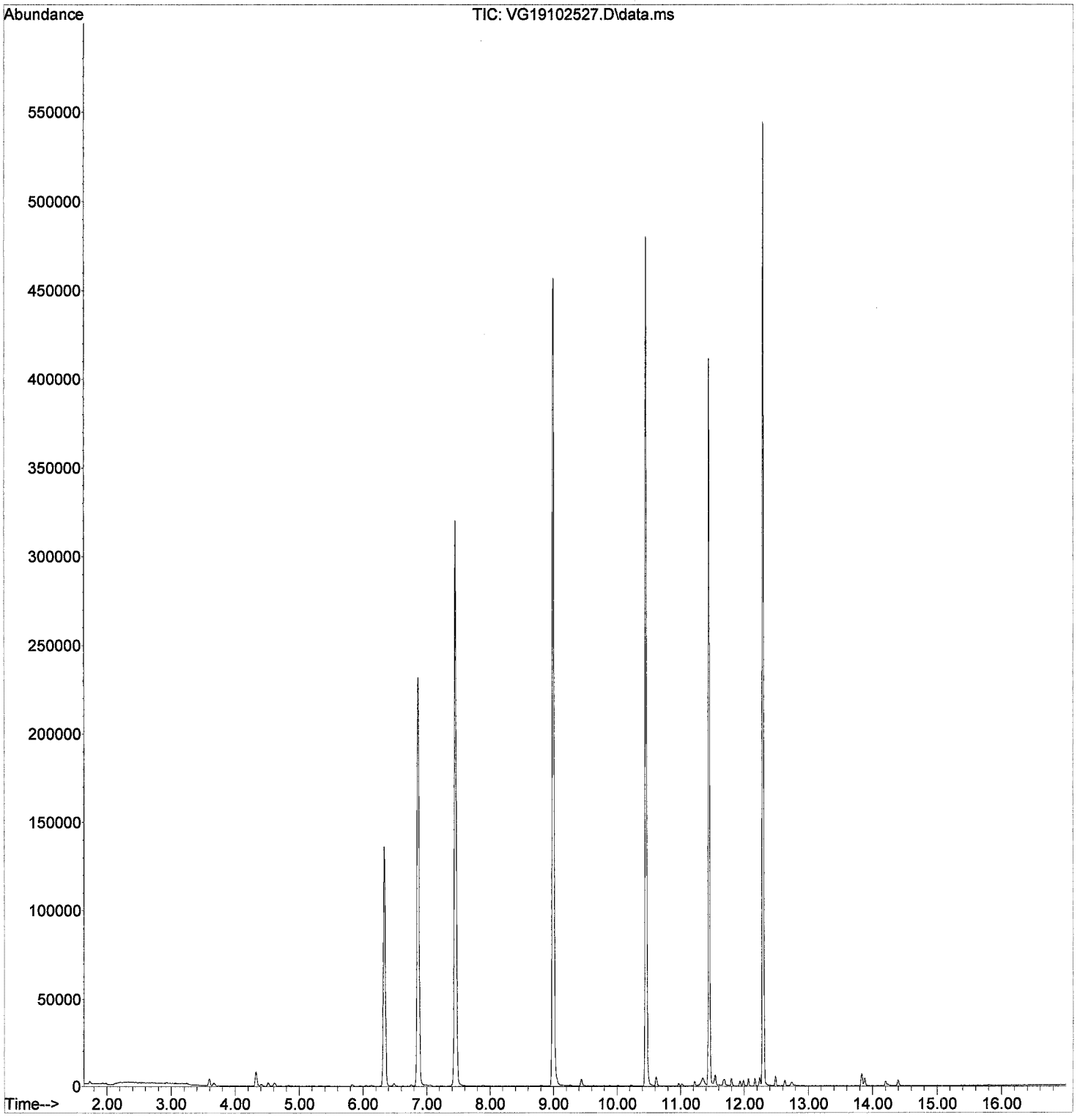
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
68) Bromobenzene	11.531	156	636	0.30	ug/L		85
69) n-Propylbenzene	11.543	91	3545	0.49	ug/L		95
71) 2-Chlorotoluene	11.671	126	545	0.33	ug/L	#	81
72) 1,3,5-Trimethylbenzene	11.690	105	1761	0.35	ug/L		88
75) 4-Chlorotoluene	11.799	91	2149	0.49	ug/L		98
76) tert-Butylbenzene	11.933	91	902	0.35	ug/L		92
77) 1,2,4-Trimethylbenzene	11.982	105	1790	0.34	ug/L		94
78) sec-Butylbenzene	12.061	105	2637	0.45	ug/L		94
79) 4-Isopropyltoluene	12.165	119	2255	0.46	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	2125	0.62	ug/L		97
81) 1,4-Dichlorobenzene	12.305	146	2707	0.70	ug/L		90
82) n-Butylbenzene	12.488	91	3145	0.81	ug/L		95
83) 1,2-Dichlorobenzene	12.635	146	1381	0.41	ug/L		93
84) 1,2-Dibromo-3-Chloropr...	13.287	157	60	0.10	ug/L	#	18
85) Hexachlorobutadiene	13.829	223	1094	2.10	ug/L		96
86) 1,2,4-Trichlorobenzene	13.878	180	1916	0.98	ug/L		95
87) Naphthalene	14.201	128	2725	0.73	ug/L		97
88) 1,2,3-Trichlorobenzene	14.396	180	1506	0.79	ug/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102527.D
Acq On : 25 Oct 2019 10:43 pm
Operator : MM
Sample : 9J25051-IBL4
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:52 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102528.D
Acq On : 25 Oct 2019 11:10 pm
Operator : MM
Sample : 9J25051-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:55 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.867	99	92100	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	276911	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	138080	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	96022	49.53	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	322415	50.96	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	358808	49.70	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	116196	49.83	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	353	0.23	ug/L		88
3) Chloromethane	1.990	50	363	0.17	ug/L		81
4) Vinyl Chloride	2.118	62	147	0.08	ug/L		88
5) Bromomethane	2.557	96	109	0.11	ug/L	#	56
6) Chloroethane	2.832	64	20	Below Cal		#	47
7) Trichlorofluoromethane	2.935	101	252	0.13	ug/L		75
8) Ethanol	3.630	45	11	0.23	ug/L	#	29
9) 1,1-Dichloroethene	3.588	61	226	0.11	ug/L		86
10) Carbon Disulfide	3.594	76	1842	0.57	ug/L		97
11) Freon 113	3.667	101	435	0.25	ug/L		92
12) Iodomethane	3.758	142	31	2.13	ug/L	#	47
14) Methylene Chloride	4.325	84	2342	0.30	ug/L		92
15) Acetone	4.411	43	891	0.93	ug/L		99
16) t-1,2-Dichloroethene	4.508	61	406	0.18	ug/L		88
17) n-Hexane	4.612	86	47	0.19	ug/L	#	44
19) tert-Butanol (TBA)	4.819	59	219	0.60	ug/L	#	89
25) c-1,2-Dichloroethene	5.825	61	186	0.08	ug/L	#	68
33) 1,1-Dichloropropene	6.483	75	371	0.18	ug/L	#	72
40) Trichloroethene (TCE)	7.416	130	290	0.14	ug/L		85
47) c-1,3-Dichloropropene	8.806	75	59	0.12	ug/L	#	33
49) Toluene	9.050	91	703	0.08	ug/L		85
50) Tetrachloroethene (PCE)	9.440	166	556	0.25	ug/L		92
52) t-1,3-Dichloropropene	9.489	75	100	0.14	ug/L	#	45
54) Dibromochloromethane	9.794	129	10	0.13	ug/L		86
58) Chlorobenzene	10.470	112	590	0.11	ug/L	#	64
59) Ethylbenzene	10.501	91	700	0.09	ug/L		92
61) m,p-Xylenes (2)	10.617	91	1215	0.22	ug/L		95
63) Styrene	11.019	104	269	0.16	ug/L		75
68) Bromobenzene	11.537	156	255	0.11	ug/L		77
69) n-Propylbenzene	11.549	91	1452	0.19	ug/L		96
71) 2-Chlorotoluene	11.677	126	201	0.12	ug/L		91
72) 1,3,5-Trimethylbenzene	11.690	105	600	0.11	ug/L		96
75) 4-Chlorotoluene	11.799	91	831	0.18	ug/L		98
76) tert-Butylbenzene	11.927	91	219	0.08	ug/L	#	77
77) 1,2,4-Trimethylbenzene	11.988	105	568	0.10	ug/L		91
78) sec-Butylbenzene	12.062	105	808	0.13	ug/L		95
79) 4-Isopropyltoluene	12.171	119	738	0.14	ug/L		99
80) 1,3-Dichlorobenzene	12.244	146	852	0.24	ug/L		94
81) 1,4-Dichlorobenzene	12.305	146	1131	0.28	ug/L	#	78
82) n-Butylbenzene	12.488	91	1221	0.30	ug/L		94
83) 1,2-Dichlorobenzene	12.635	146	524	0.15	ug/L		95
85) Hexachlorobutadiene	13.829	223	331	0.60	ug/L		86
86) 1,2,4-Trichlorobenzene	13.878	180	665	0.32	ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102528.D
Acq On : 25 Oct 2019 11:10 pm
Operator : MM
Sample : 9J25051-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:55 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

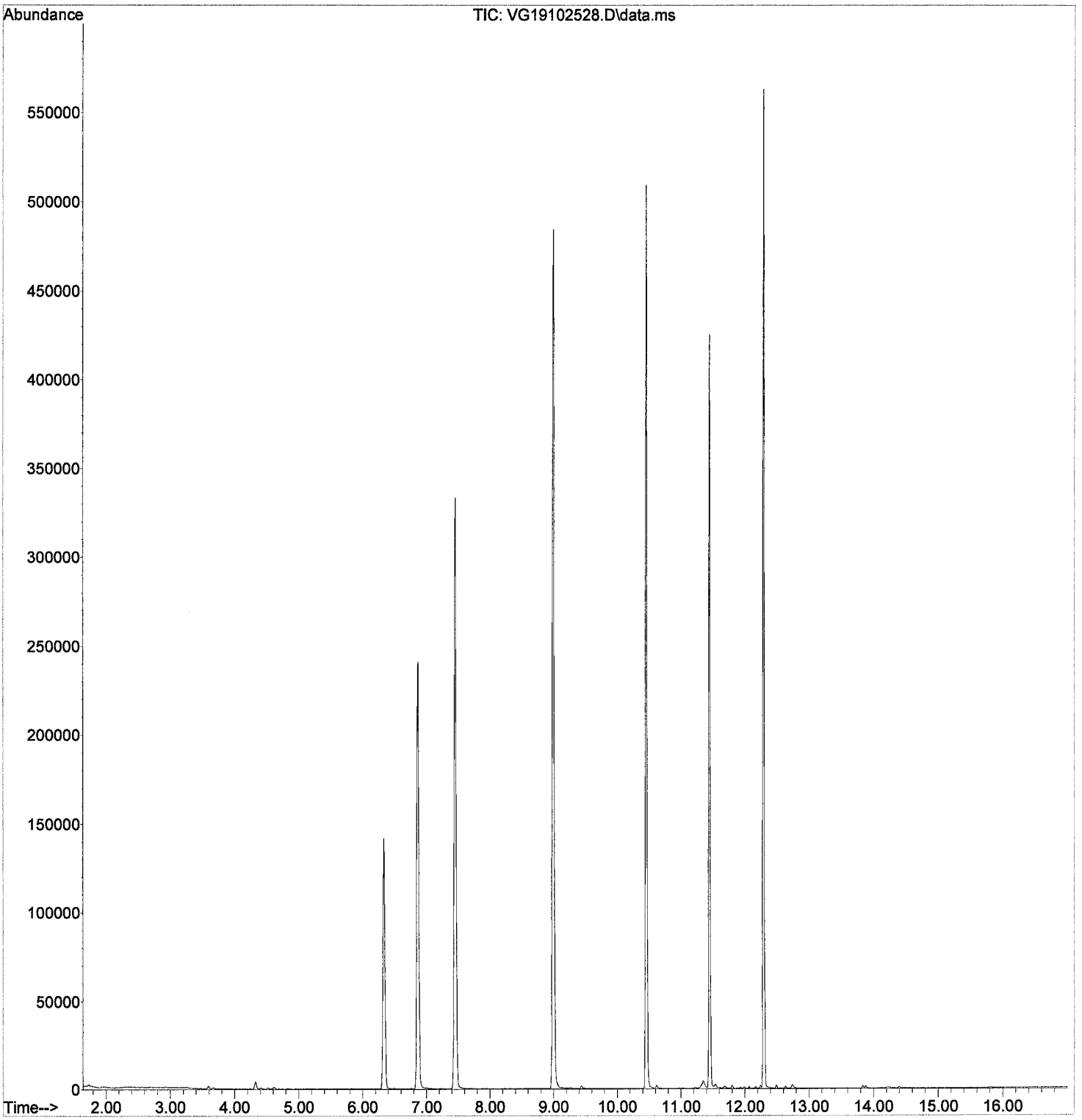
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
87) Naphthalene	14.207	128	735	0.39	ug/L	92
88) 1,2,3-Trichlorobenzene	14.396	180	489	0.24	ug/L	90

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102528.D
Acq On : 25 Oct 2019 11:10 pm
Operator : MM
Sample : 9J25051-IBL5
Misc : 1X 5mL DI
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:55 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102529.D
Acq On : 25 Oct 2019 11:37 pm
Operator : MM
Sample : 9J25051-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

10/28/19

Quant Time: Oct 28 12:44:58 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	90965	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	266164	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	137604	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	94133	49.16	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	305094	48.82	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	345063	49.72	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	114201	49.15	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	37337	24.48	ug/L		97
3) Chloromethane	1.990	50	45124	21.78	ug/L		100
4) Vinyl Chloride	2.112	62	39518	22.34	ug/L		95
5) Bromomethane	2.551	96	17518	18.62	ug/L		99
6) Chloroethane	2.722	64	8273	18.87	ug/L		88
7) Trichlorofluoromethane	2.917	101	38221	20.03	ug/L		97
8) Ethanol	3.642	45	1573	32.97	ug/L		76
9) 1,1-Dichloroethene	3.588	61	42768	20.19	ug/L		97
10) Carbon Disulfide	3.588	76	60869	18.94	ug/L		99
11) Freon 113	3.667	101	31913	18.38	ug/L		96
12) Iodomethane	3.752	142	16833	23.07	ug/L		97
13) Acrolein	4.033	56	10824	23.14	ug/L		98
14) Methylene Chloride	4.319	84	36056	20.88	ug/L		96
15) Acetone	4.398	43	36542	38.53	ug/L		95
16) t-1,2-Dichloroethene	4.508	61	45403	20.69	ug/L		91
17) n-Hexane	4.606	86	4686	18.85	ug/L	#	56
18) Methyl-tert-butyl-ether	4.661	73	88721	21.44	ug/L		96
19) tert-Butanol (TBA)	4.825	59	10483	29.20	ug/L	#	58
20) Diisopropyl ether (DIPE)	5.118	45	759	0.17	ug/L		92
21) 1,1-Dichloroethane	5.221	63	60213	20.13	ug/L		99
22) Acrylonitrile	5.289	53	20721	20.43	ug/L		93
23) Vinyl Acetate	5.532	43	69012	21.25	ug/L		99
24) Ethyl-tert-butyl ether...	5.526	59	764	0.20	ug/L	#	51
25) c-1,2-Dichloroethene	5.825	61	46222	20.72	ug/L		90
26) 2,2-Dichloropropane	5.935	77	25337	18.66	ug/L		70
27) Bromochloromethane	6.038	49	29181	20.68	ug/L		85
28) Chloroform	6.136	83	60420	20.09	ug/L		96
29) Carbon Tetrachloride	6.264	117	35960	21.73	ug/L		95
30) Tetrahydrofuran	6.307	42	18687	21.25	ug/L		91
31) 1,1,1-Trichloroethane	6.343	97	45657	20.18	ug/L		96
33) 1,1-Dichloropropene	6.483	75	45149	22.21	ug/L		97
34) 2-Butanone (MEK)	6.477	43	56959	42.44	ug/L		96
35) Benzene	6.758	78	143601	20.40	ug/L		98
36) tert-Amyl methyl ether...	6.904	73	854	0.21	ug/L		75
37) 1,2-Dichloroethane (EDC)	6.983	62	48080	20.01	ug/L		99
38) iso-Butyl Alcohol	7.038	43	79819	529.78	ug/L		91
40) Trichloroethene (TCE)	7.410	130	40760	19.83	ug/L		97
41) tert-Amyl ethyl ether ...	7.690	59	471	0.18	ug/L		79
42) Dibromomethane	7.886	93	24262	20.43	ug/L		96
43) 1,2-Dichloropropane	7.995	63	36271	20.31	ug/L		98
44) Bromodichloromethane	8.081	83	40202	20.69	ug/L		98
46) 2-Chloroethyl Vinyl Ether	8.739	63	23534	21.36	ug/L	#	1
47) c-1,3-Dichloropropene	8.800	75	45468	20.29	ug/L		92

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102529.D
Acq On : 25 Oct 2019 11:37 pm
Operator : MM
Sample : 9J25051-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:58 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

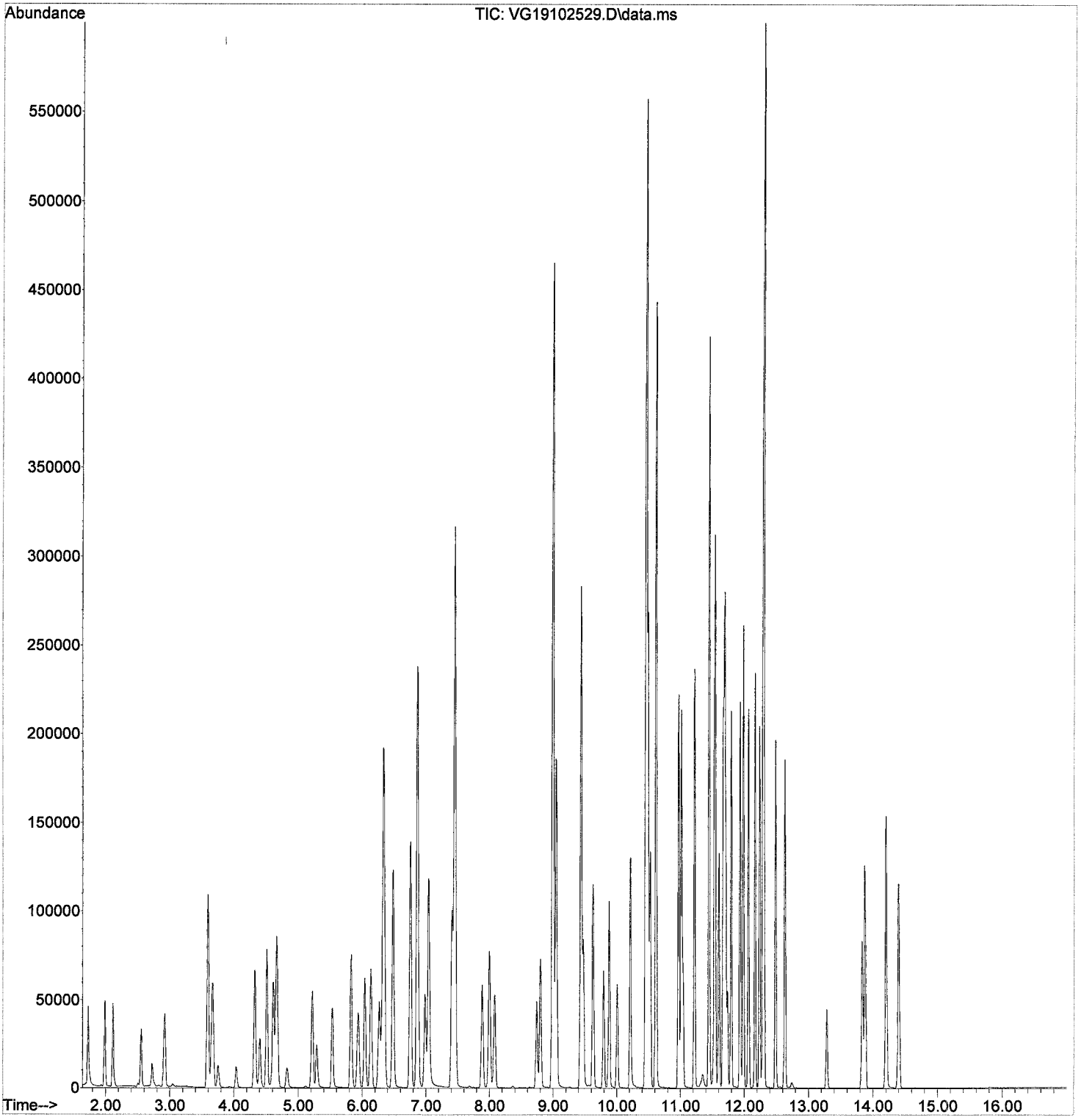
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Toluene	9.050	91	154447	19.38	ug/L		99
50) Tetrachloroethene (PCE)	9.434	166	42359	20.03	ug/L		98
51) 4-Methyl-2-Pentanone (...	9.434	43	101327	43.90	ug/L		96
52) t-1,3-Dichloropropene	9.471	75	41037	22.83	ug/L		98
53) 1,1,2-Trichloroethane	9.623	97	38653	21.04	ug/L		94
54) Dibromochloromethane	9.794	129	35982	20.75	ug/L		98
55) 1,3-Dichloropropane	9.879	76	59808	21.06	ug/L		97
56) 1,2-Dibromoethane (EDB)	10.007	107	39732	21.48	ug/L		100
57) 2-Hexanone	10.214	43	75436	44.77	ug/L		96
58) Chlorobenzene	10.470	112	103089	19.86	ug/L		97
59) Ethylbenzene	10.489	91	157330	20.65	ug/L		99
60) 1,1,1,2-Tetrachloroethane	10.525	131	32683	20.98	ug/L		96
61) m,p-Xylenes (2)	10.611	91	231340	44.15	ug/L		100
62) o-Xylene	10.970	91	113752	22.92	ug/L		99
63) Styrene	11.013	104	94185	21.13	ug/L		94
64) Bromoform	11.037	173	27392	19.47	ug/L		97
65) Isopropylbenzene	11.220	105	138446	21.75	ug/L		99
68) Bromobenzene	11.531	156	45767	20.24	ug/L		98
69) n-Propylbenzene	11.543	91	155267	20.54	ug/L		99
70) 1,1,2,2-Tetrachloroethane	11.604	83	57461	19.96	ug/L		99
71) 2-Chlorotoluene	11.665	126	36919	21.46	ug/L		93
72) 1,3,5-Trimethylbenzene	11.690	105	117971	22.12	ug/L		95
73) 1,2,3-Trichloropropane	11.708	110	17401	19.91	ug/L		99
74) t-1,4-Dichloro-2-butene	11.738	88	4121	16.70	ug/L	#	80
75) 4-Chlorotoluene	11.793	91	101234	21.91	ug/L		99
76) tert-Butylbenzene	11.934	91	58145	21.69	ug/L		98
77) 1,2,4-Trimethylbenzene	11.982	105	119947	21.70	ug/L		99
78) sec-Butylbenzene	12.062	105	129800	21.29	ug/L		98
79) 4-Isopropyltoluene	12.165	119	111157	21.64	ug/L		99
80) 1,3-Dichlorobenzene	12.238	146	76192	21.29	ug/L		99
81) 1,4-Dichlorobenzene	12.305	146	77493	19.19	ug/L		99
82) n-Butylbenzene	12.488	91	94224	22.98	ug/L		99
83) 1,2-Dichlorobenzene	12.635	146	74553	21.23	ug/L		98
84) 1,2-Dibromo-3-Chloropr...	13.281	157	12637	19.86	ug/L		95
85) Hexachlorobutadiene	13.830	223	11768	21.48	ug/L		99
86) 1,2,4-Trichlorobenzene	13.872	180	46633	22.67	ug/L		98
87) Naphthalene	14.201	128	131607	20.74	ug/L		98
88) 1,2,3-Trichlorobenzene	14.396	180	46418	23.06	ug/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102529.D
Acq On : 25 Oct 2019 11:37 pm
Operator : MM
Sample : 9J25051-ICV1
Misc : 1X 5mL 20/40PPB VOCR
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:44:58 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102530.D
Acq On : 26 Oct 2019 12:04 am
Operator : MM
Sample : 9J25051-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

10/28/19

Quant Time: Oct 28 12:45:01 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.868	99	84982	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	250385	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	126694	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	86513	48.36	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	291575	49.94	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	324360	49.69	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	105337	49.24	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	219	0.15	ug/L		73
3) Chloromethane	1.984	50	973	0.50	ug/L		85
4) Vinyl Chloride	2.112	62	387	0.23	ug/L		83
5) Bromomethane	2.551	96	421	0.48	ug/L		87
6) Chloroethane	2.728	64	105	Below Cal		#	49
7) Trichlorofluoromethane	2.923	101	228	0.13	ug/L		73
8) Ethanol	3.624	45	55300	1240.68	ug/L		83
9) 1,1-Dichloroethene	3.588	61	424	0.21	ug/L		87
10) Carbon Disulfide	3.594	76	1474	0.49	ug/L		97
11) Freon 113	3.667	101	265	0.16	ug/L		95
12) Iodomethane	3.746	142	212	2.40	ug/L	#	47
14) Methylene Chloride	4.325	84	2244	0.36	ug/L		86
15) Acetone	4.405	43	1085	1.22	ug/L		94
16) t-1,2-Dichloroethene	4.514	61	708	0.35	ug/L		83
18) Methyl-tert-butyl-ether	4.655	73	398	0.10	ug/L		81
19) tert-Butanol (TBA)	4.813	59	459726	1370.60	ug/L	#	83
20) Diisopropyl ether (DIPE)	5.106	45	22807	5.38	ug/L		96
21) 1,1-Dichloroethane	5.215	63	751	0.27	ug/L		82
23) Vinyl Acetate	5.520	43	2412	0.80	ug/L	#	46
24) Ethyl-tert-butyl ether...	5.514	59	19554	5.36	ug/L		97
25) c-1,2-Dichloroethene	5.825	61	638	0.31	ug/L		90
26) 2,2-Dichloropropane	5.929	77	207	0.16	ug/L		88
27) Bromochloromethane	6.032	49	300	0.23	ug/L		84
28) Chloroform	6.136	83	719	0.26	ug/L		88
29) Carbon Tetrachloride	6.264	117	135	0.09	ug/L		87
31) 1,1,1-Trichloroethane	6.337	97	352	0.17	ug/L		86
33) 1,1-Dichloropropene	6.490	75	449	0.24	ug/L		89
35) Benzene	6.758	78	1782	0.27	ug/L		93
36) tert-Amyl methyl ether...	6.898	73	17726	4.71	ug/L		79
37) 1,2-Dichloroethane (EDC)	6.989	62	391	0.17	ug/L		89
38) iso-Butyl Alcohol	7.063	43	19	0.13	ug/L	#	22
40) Trichloroethene (TCE)	7.410	130	584	0.30	ug/L		83
41) tert-Amyl ethyl ether ...	7.691	59	11945	4.94	ug/L		95
42) Dibromomethane	7.892	93	140	0.13	ug/L		96
43) 1,2-Dichloropropane	8.001	63	410	0.25	ug/L		86
44) Bromodichloromethane	8.081	83	368	0.20	ug/L		85
47) c-1,3-Dichloropropene	8.806	75	338	0.26	ug/L		85
49) Toluene	9.044	91	2163	0.29	ug/L		98
50) Tetrachloroethene (PCE)	9.434	166	622	0.31	ug/L		83
52) t-1,3-Dichloropropene	9.489	75	225	0.23	ug/L	#	45
53) 1,1,2-Trichloroethane	9.629	97	232	0.13	ug/L		76
54) Dibromochloromethane	9.794	129	184	0.24	ug/L		72
55) 1,3-Dichloropropane	9.885	76	358	0.13	ug/L		88

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102530.D
Acq On : 26 Oct 2019 12:04 am
Operator : MM
Sample : 9J25051-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:01 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

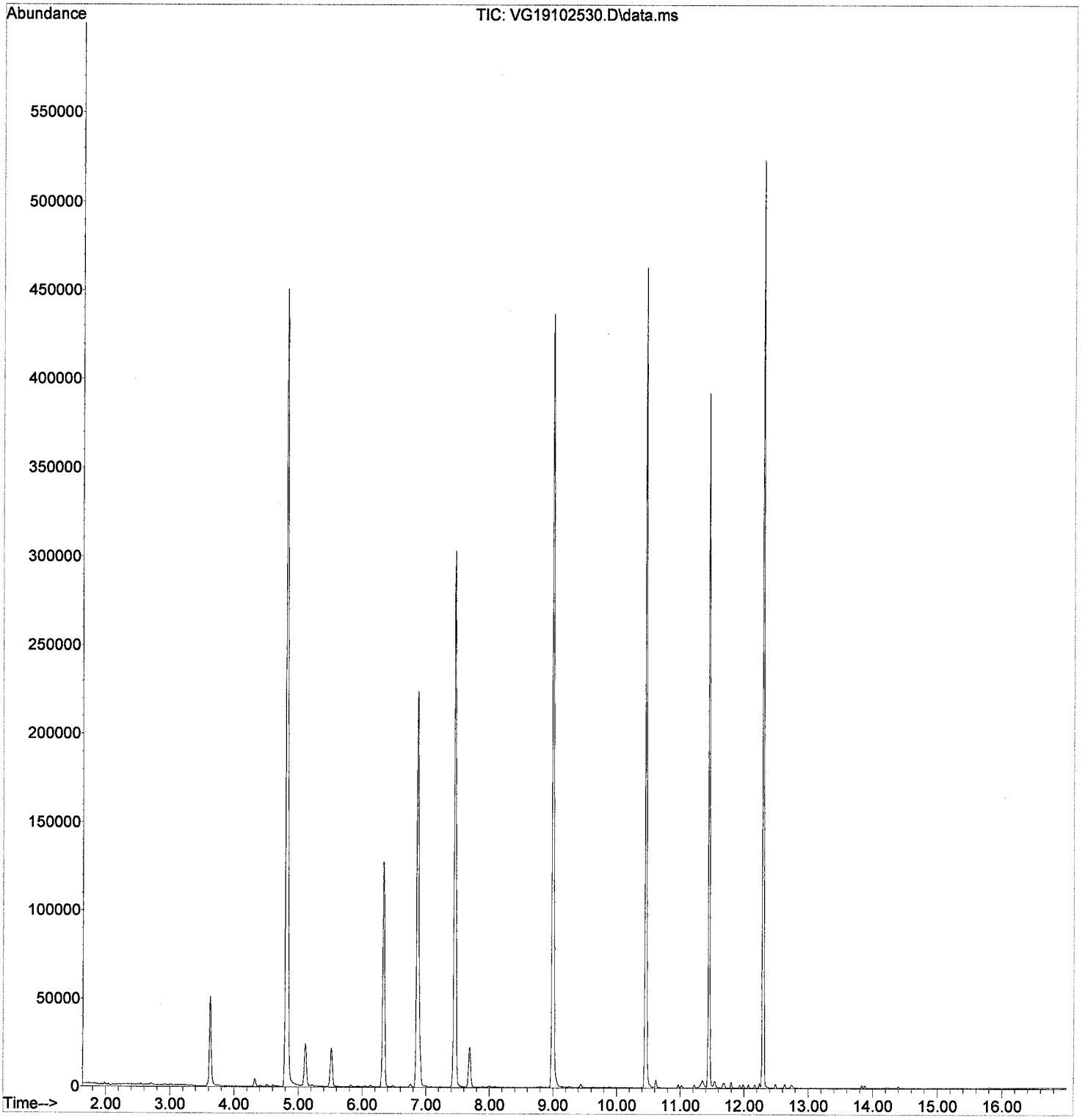
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
56) 1,2-Dibromoethane (EDB)	10.013	107	191	0.11 ug/L		83
58) Chlorobenzene	10.470	112	1573	0.32 ug/L		95
59) Ethylbenzene	10.495	91	1876	0.26 ug/L		93
60) 1,1,1,2-Tetrachloroethane	10.525	131	245	0.17 ug/L		74
61) m,p-Xylenes (2)	10.617	91	2604	0.53 ug/L		98
62) o-Xylene	10.970	91	1099	0.24 ug/L		99
63) Styrene	11.019	104	896	0.32 ug/L		92
64) Bromoform	11.031	173	11	0.19 ug/L	#	37
65) Isopropylbenzene	11.220	105	1212	0.20 ug/L		100
68) Bromobenzene	11.525	156	584	0.28 ug/L		90
69) n-Propylbenzene	11.543	91	2022	0.29 ug/L		98
71) 2-Chlorotoluene	11.671	126	472	0.30 ug/L	#	84
72) 1,3,5-Trimethylbenzene	11.690	105	1221	0.25 ug/L		88
75) 4-Chlorotoluene	11.799	91	1485	0.35 ug/L		95
76) tert-Butylbenzene	11.934	91	544	0.22 ug/L		90
77) 1,2,4-Trimethylbenzene	11.988	105	1145	0.23 ug/L		93
78) sec-Butylbenzene	12.068	105	1206	0.21 ug/L		98
79) 4-Isopropyltoluene	12.165	119	1183	0.25 ug/L		93
80) 1,3-Dichlorobenzene	12.245	146	1245	0.38 ug/L		87
81) 1,4-Dichlorobenzene	12.305	146	1551	0.42 ug/L		86
82) n-Butylbenzene	12.488	91	1351	0.36 ug/L		94
83) 1,2-Dichlorobenzene	12.635	146	963	0.30 ug/L		91
85) Hexachlorobutadiene	13.836	223	258	0.51 ug/L		93
86) 1,2,4-Trichlorobenzene	13.878	180	684	0.36 ug/L		83
87) Naphthalene	14.201	128	691	0.39 ug/L		86
88) 1,2,3-Trichlorobenzene	14.397	180	541	0.29 ug/L		77

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102530.D
Acq On : 26 Oct 2019 12:04 am
Operator : MM
Sample : 9J25051-ICV2
Misc : 1X 5mL 5/1250PPB OXY
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:01 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102531.D
Acq On : 26 Oct 2019 12:31 am
Operator : MM
Sample : 9J25051-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration

NR

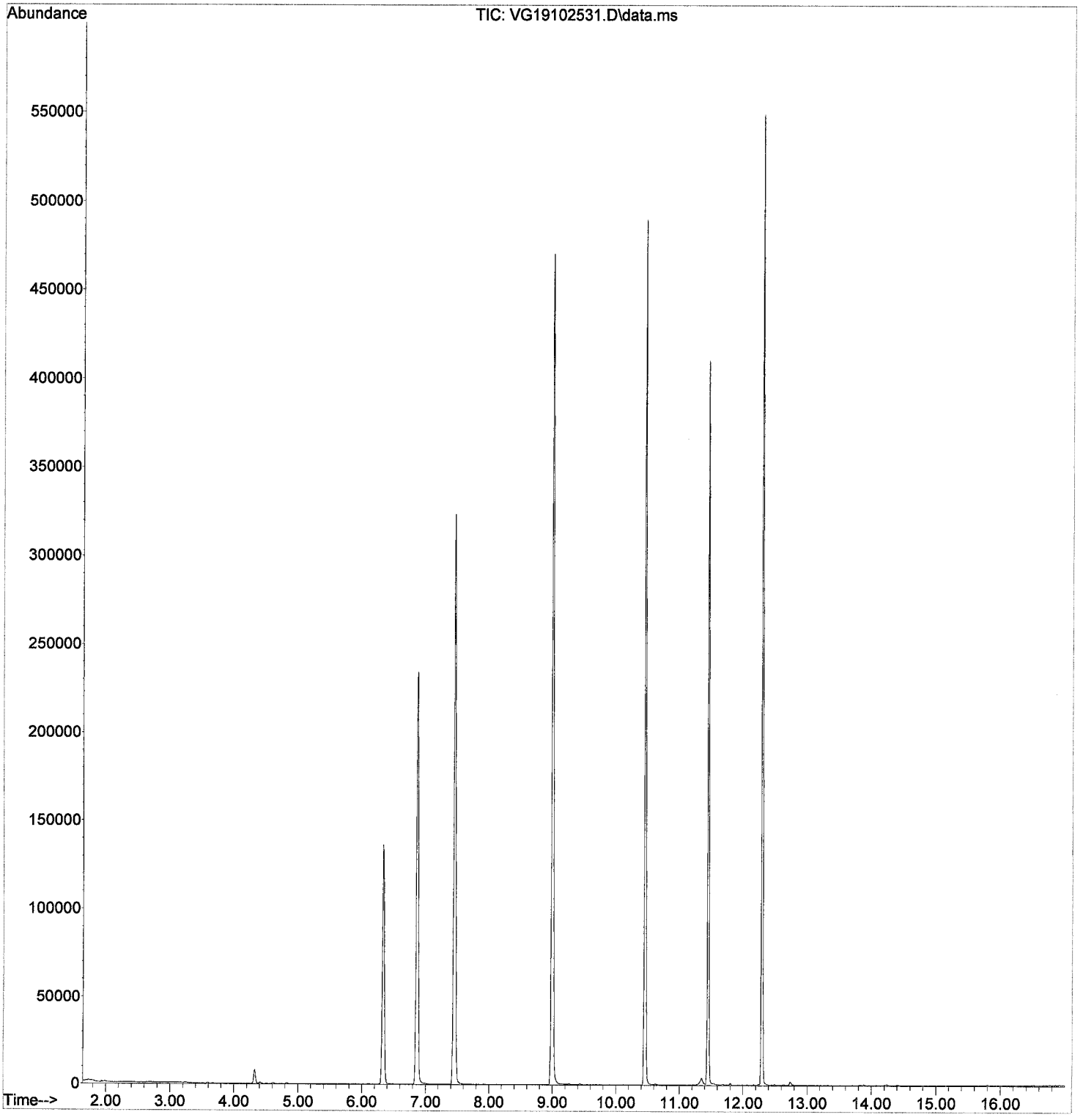
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.861	99	89250	50.00	ug/L		0.00
45) Chlorobenzene-d5 (I)	10.452	117	268337	50.00	ug/L		0.00
66) 1,4-Dichlorobenzene-d4...	12.293	152	133750	50.00	ug/L		0.00
System Monitoring Compounds							
32) Dibromofluoromethane (S)	6.331	111	92391	49.18	ug/L		0.00
39) 1,4-Difluorobenzene (S)	7.453	114	313231	51.09	ug/L		0.00
48) Toluene-d8 (S)	8.995	98	348030	49.75	ug/L		0.00
67) 4-Bromofluorobenzene (S)	11.446	174	111496	49.37	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.728	85	143	0.10	ug/L	#	51
3) Chloromethane	1.990	50	271	0.13	ug/L		91
6) Chloroethane	2.728	64	10	Below Cal		#	47
10) Carbon Disulfide	3.594	76	654	0.21	ug/L		96
11) Freon 113	3.661	101	149	0.09	ug/L		87
12) Iodomethane	3.764	142	10	2.11	ug/L	#	47
14) Methylene Chloride	4.325	84	3984	1.37	ug/L		91
15) Acetone	4.404	43	1226	1.32	ug/L		88
19) tert-Butanol (TBA)	4.825	59	425	1.21	ug/L	#	66
47) c-1,3-Dichloropropene	8.818	75	10	0.10	ug/L	#	37
50) Tetrachloroethene (PCE)	9.440	166	190	0.09	ug/L	#	64
61) m,p-Xylenes (2)	10.617	91	524	0.10	ug/L		78
63) Styrene	11.013	104	10	0.10	ug/L	#	40
80) 1,3-Dichlorobenzene	12.238	146	314	0.09	ug/L		95
81) 1,4-Dichlorobenzene	12.305	146	477	0.12	ug/L	#	5
82) n-Butylbenzene	12.494	91	416	0.10	ug/L		80
85) Hexachlorobutadiene	13.829	223	68	0.13	ug/L		89
86) 1,2,4-Trichlorobenzene	13.884	180	221	0.11	ug/L		80
87) Naphthalene	14.207	128	260	0.32	ug/L		79
88) 1,2,3-Trichlorobenzene	14.402	180	162	0.08	ug/L		82

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102531.D
Acq On : 26 Oct 2019 12:31 am
Operator : MM
Sample : 9J25051-IBL6
Misc : 1X 5mL DI
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:04 2019
Quant Method : C:\msdchem\1\methods\VG191025W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Mon Oct 28 11:12:23 2019
Response via : Initial Calibration



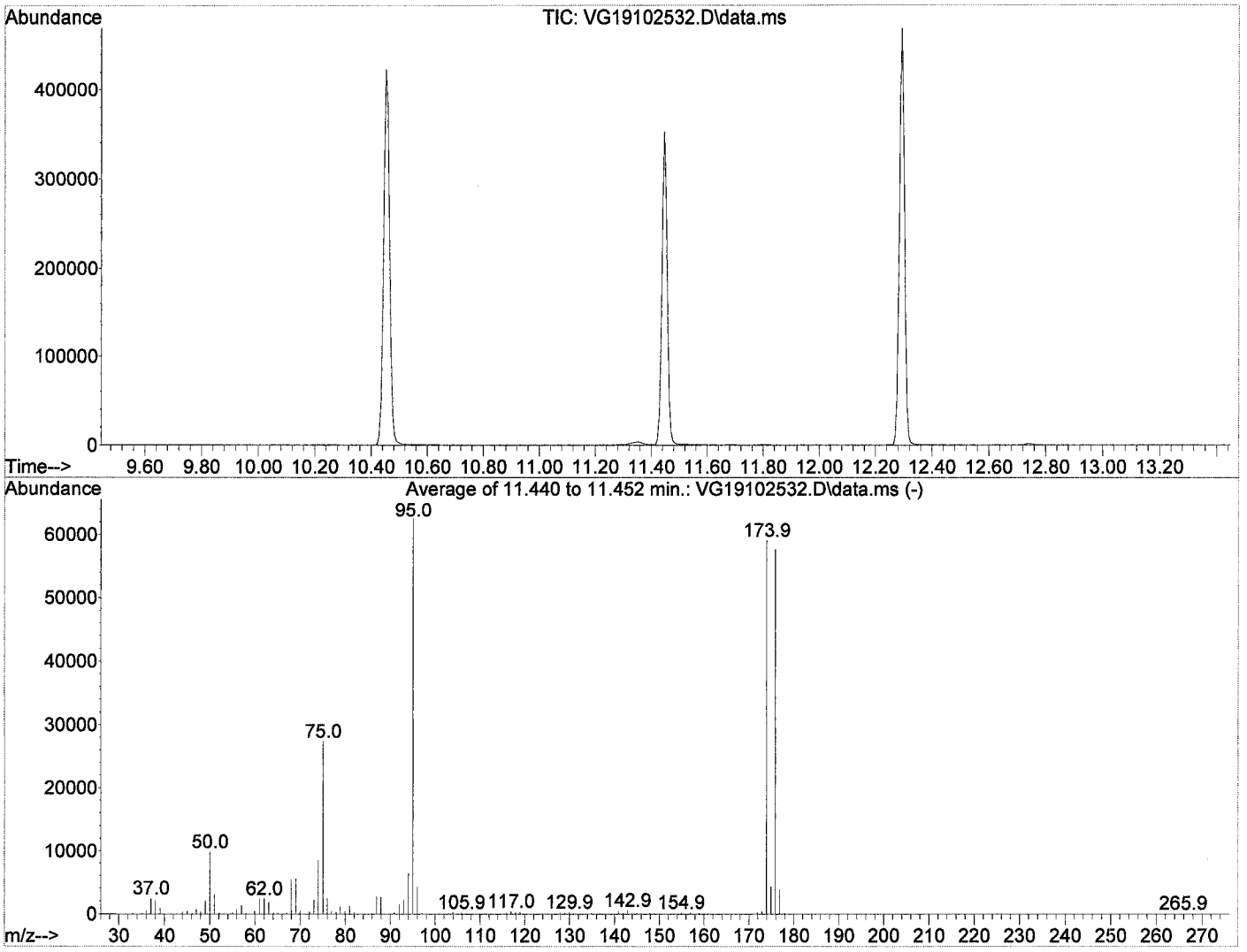
BFB

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102532.D
Acq On : 26 Oct 2019 12:57 am
Operator : MM
Sample : 9J25051-TUN2
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1

10/28/19

Integration File: APEXG.P

Method : C:\msdchem\1\methods\VG191025G.M
Title : NWTPH-Gx by GC/MS
Last Update : Mon Oct 28 12:17:57 2019



AutoFind: Scans 1608, 1609, 1610; Background Corrected with Scan 1601

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	105.7	62517	PASS
96	95	5	9	6.6	4121	PASS
173	174	0.00	2	0.5	319	PASS
174	95	50	200	94.6	59120	PASS
175	174	5	9	7.1	4209	PASS
176	174	95	105	97.6	57699	PASS
177	176	5	10	6.5	3773	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102532.D
Acq On : 26 Oct 2019 12:57 am
Operator : MM
Sample : 9J25051-TUN2
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:33 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

10/28/19

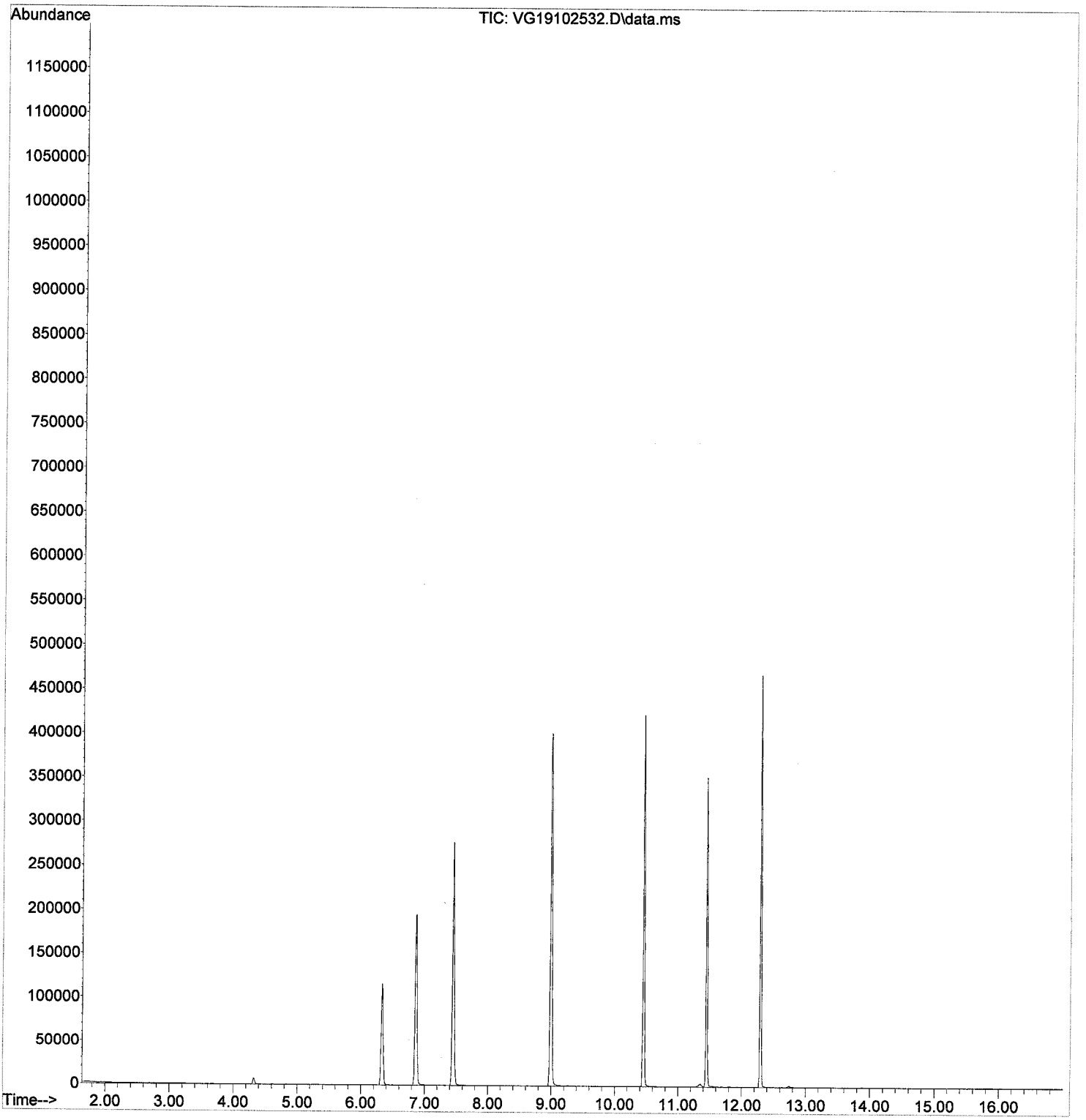
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	167672	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	264256	52.72	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	92938	50.90	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	295445	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	226737	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	175589	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	38078m	24.79	ug/L	
5) TPHg (C5-C9)	9.940	TIC	288403m	22.12	ug/L	
6) TPHg (C6-C10)	9.940	TIC	271428m	23.57	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	304009m	25.69	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102532.D
Acq On : 26 Oct 2019 12:57 am
Operator : MM
Sample : 9J25051-TUN2
Misc : A19F381 BFB (IS/SURR)
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:33 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102533.D
Acq On : 26 Oct 2019 1:24 am
Operator : MM
Sample : 9J25051-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:36 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

10/28/19

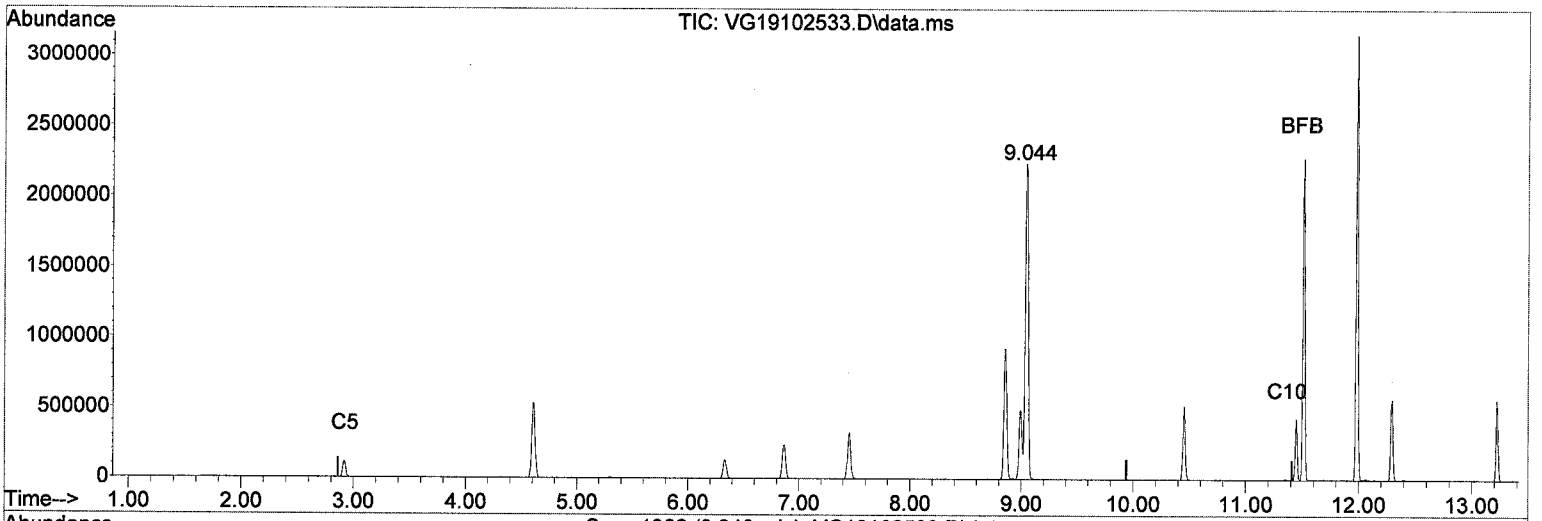
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	206554	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	314345	50.91	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	117175	52.09	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	370131	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	275270	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	223021	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	17801383m	3255.06	ug/L	
5) TPHg (C5-C9)	9.940	TIC	7577119m	1140.06	ug/L	
6) TPHg (C6-C10)	9.940	TIC	7354306m	1333.45	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	15242164m	1858.54	ug/L	

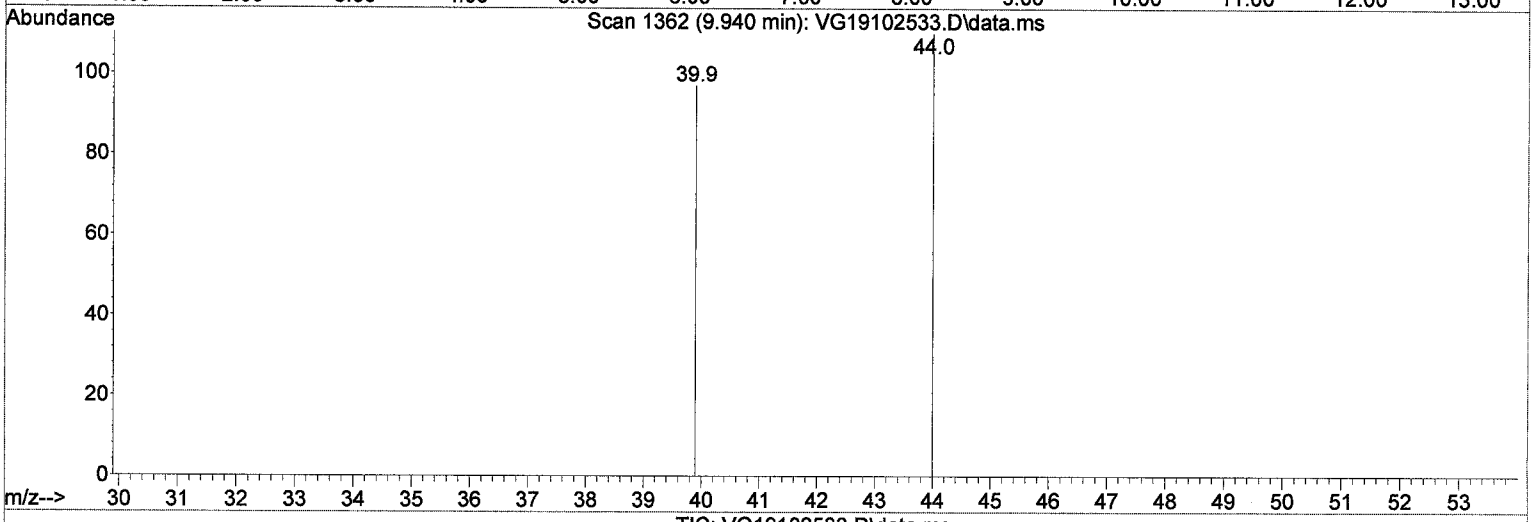
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102533.D
Acq On : 26 Oct 2019 1:24 am
Operator : MM
Sample : 9J25051-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:09:20 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Oct 08 10:06:28 2019
Response via : Initial Calibration





TIC: VG19102533.D\data.ms

(5) TPHg (C5-C9) (H)

9.940min (0.000) 997.65 ug/L m

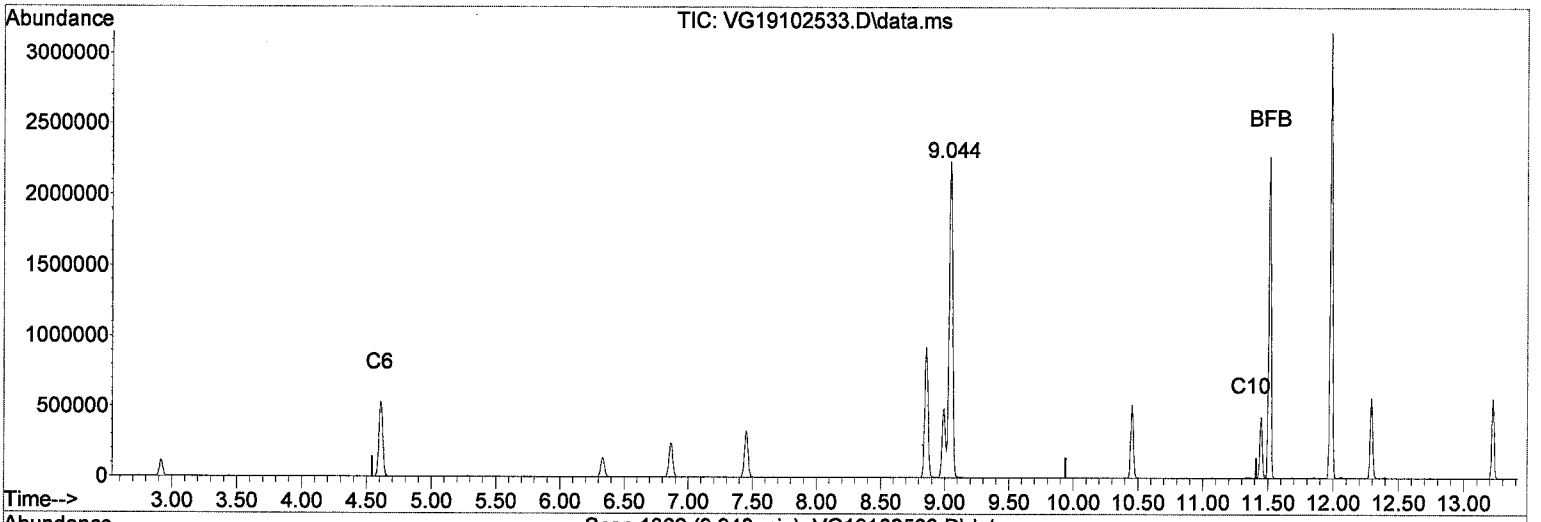
response 7577119

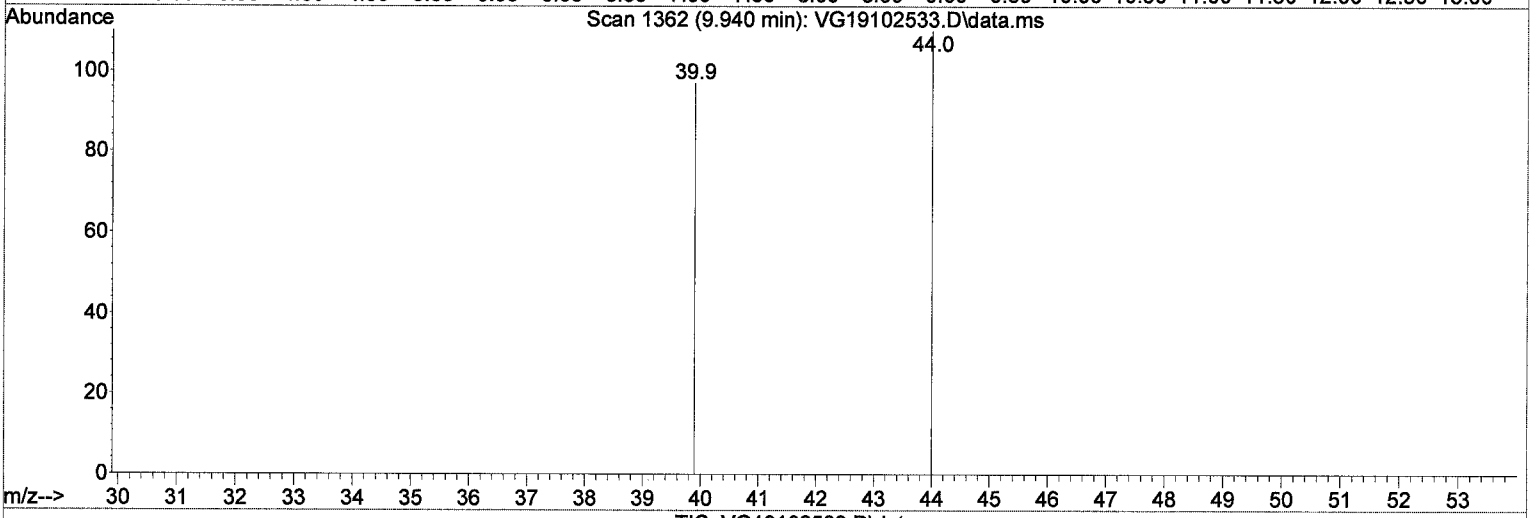
Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.23#
0.00	0.00	1.50#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102533.D
Acq On : 26 Oct 2019 1:24 am
Operator : MM
Sample : 9J25051-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:09:20 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Oct 08 10:06:28 2019
Response via : Initial Calibration





TIC: VG19102533.D\data.ms

(6) TPHg (C6-C10) (H)

9.940min (0.000) 1157.40 ug/L m

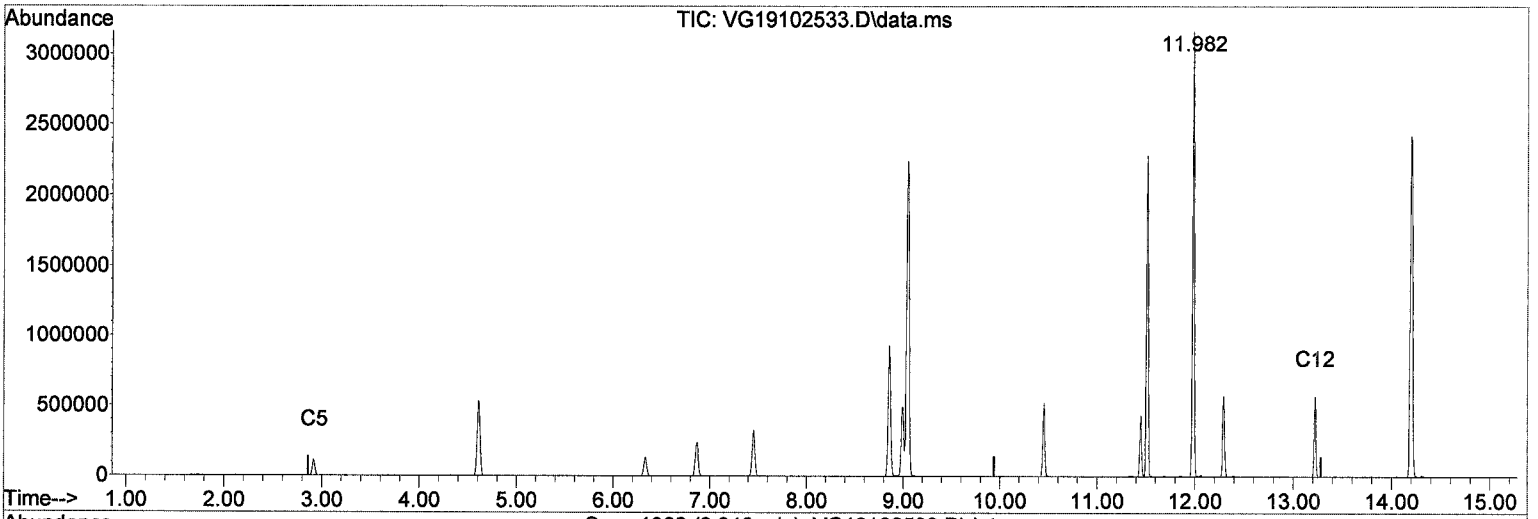
response 7354306

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	2.29#
0.00	0.00	1.55#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102533.D
Acq On : 26 Oct 2019 1:24 am
Operator : MM
Sample : 9J25051-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:09:20 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Oct 08 10:06:28 2019
Response via : Initial Calibration



TIC: VG19102533.D\data.ms

(7) CA-LUFT (C5-C12) (H)

9.940min (0.000) 1638.40 ug/L m

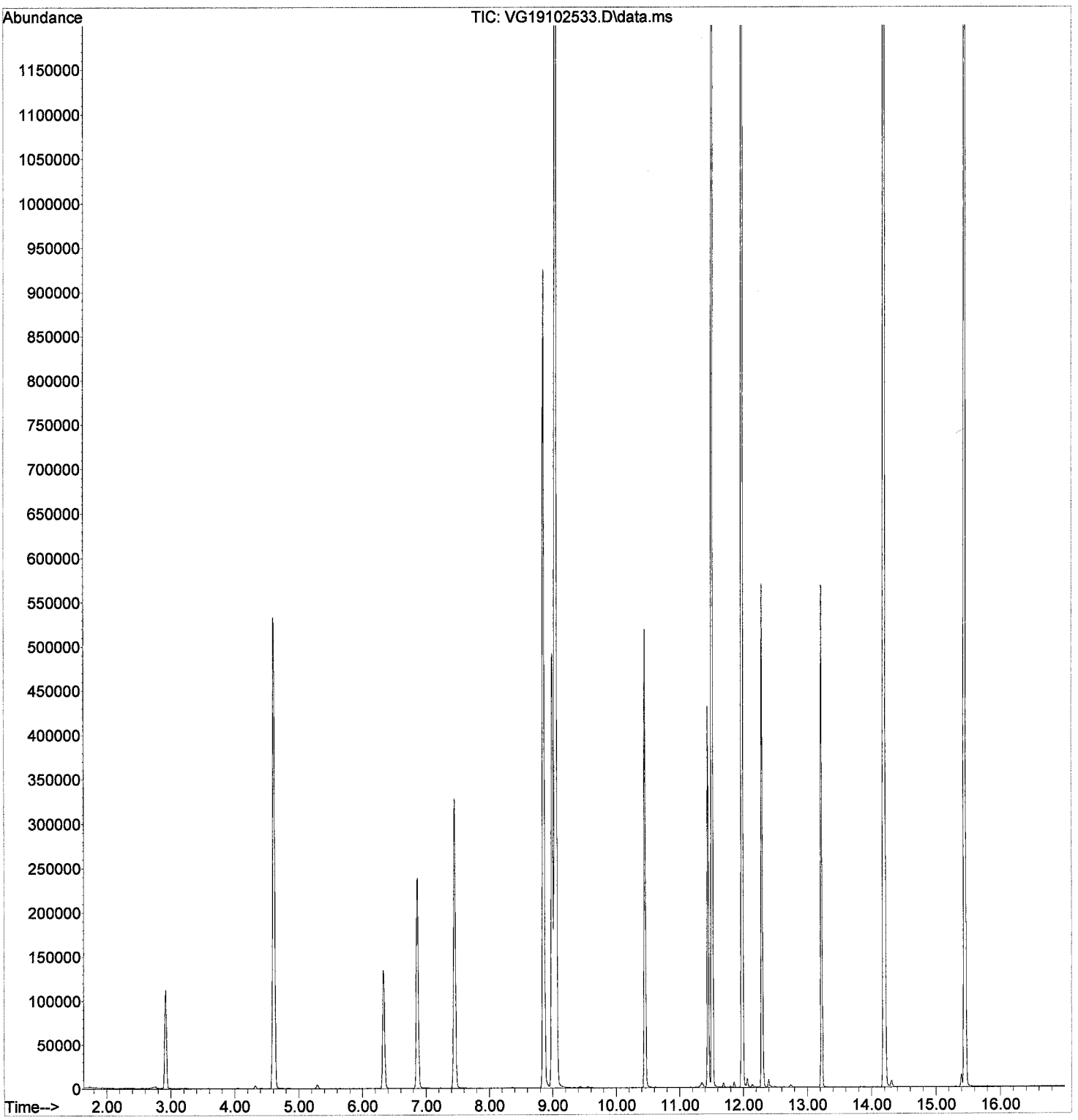
response 15242164

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	1.11#
0.00	0.00	0.75#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102533.D
Acq On : 26 Oct 2019 1:24 am
Operator : MM
Sample : 9J25051-RT1
Misc : A18A167 VPH RT STD
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:36 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102534.D
Acq On : 26 Oct 2019 1:51 am
Operator : MM
Sample : 9J25051-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:38 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

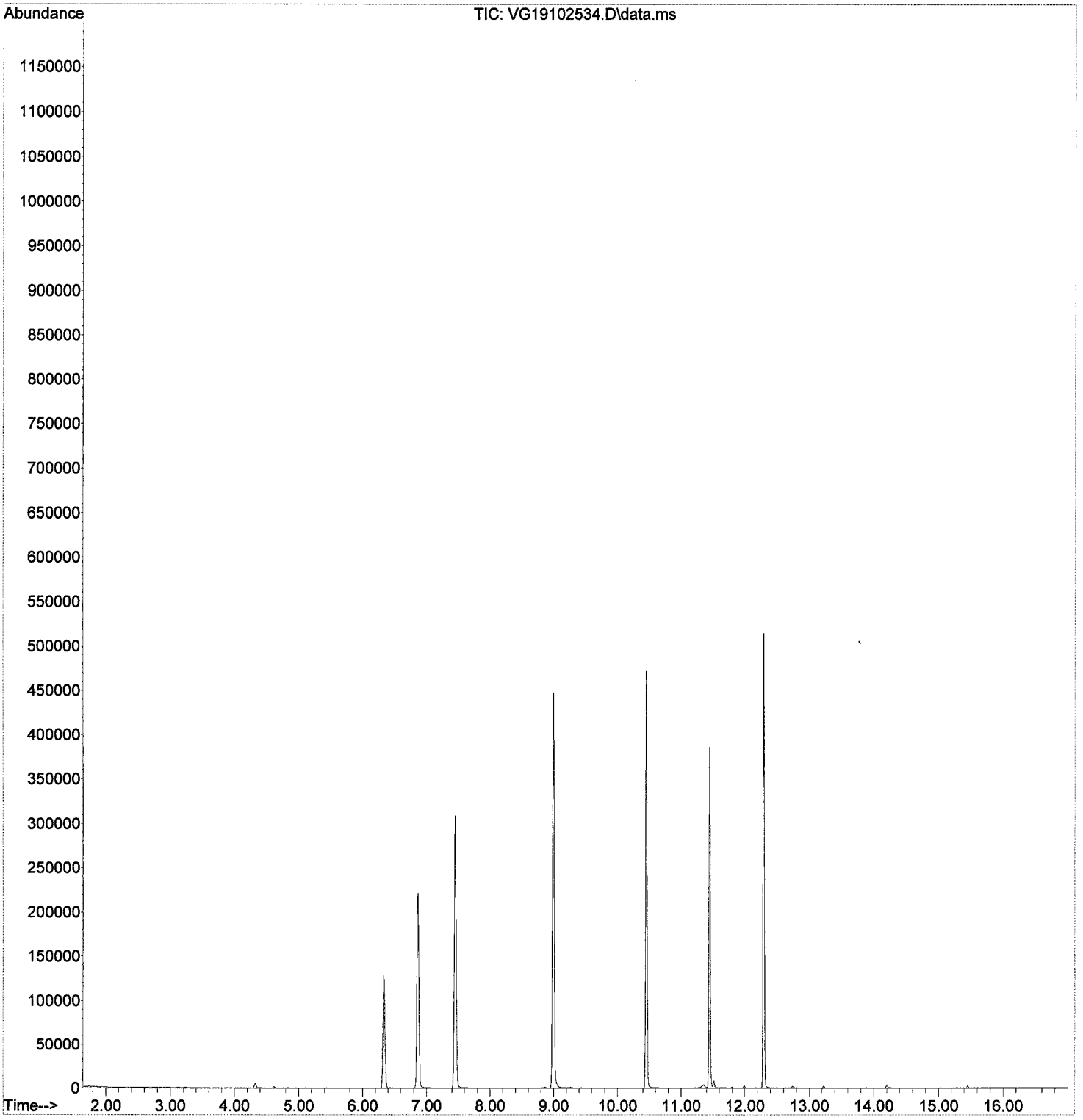
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	192420	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	297870	51.78	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	105012	50.11	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	331316	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	254503	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	199526	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	74370m	30.94	ug/L	
5) TPHg (C5-C9)	9.940	TIC	326747m	21.41	ug/L	
6) TPHg (C6-C10)	9.940	TIC	310417m	23.35	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	363718m	27.67	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102534.D
Acq On : 26 Oct 2019 1:51 am
Operator : MM
Sample : 9J25051-IBL7
Misc : 1X 5mL DI
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:38 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

10/28/19

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

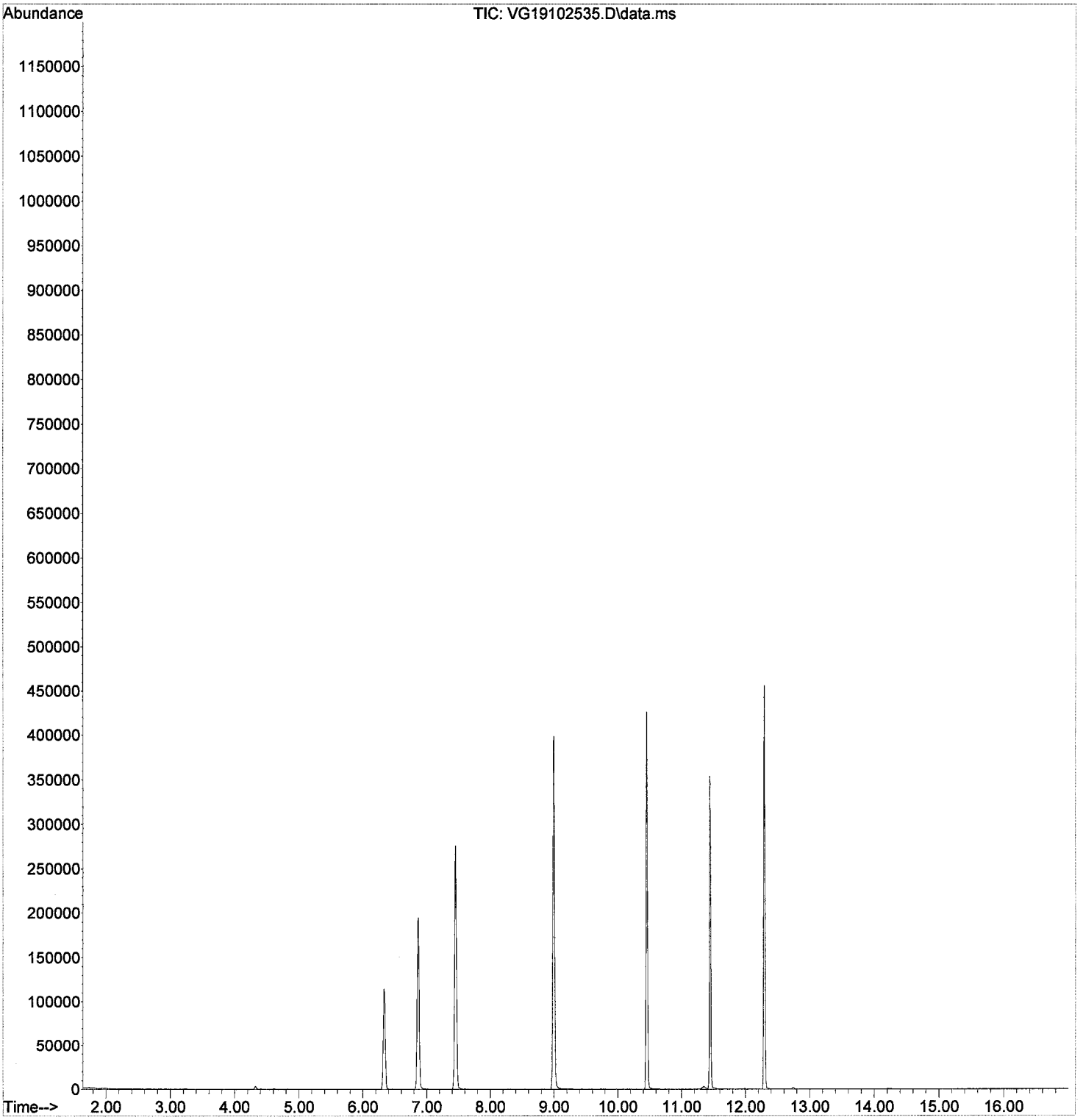
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	166825	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	262789	52.69	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	92634	50.99	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	295889	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	227022	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	174689	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	31416m	23.29	ug/L	MWL
5) TPHg (C5-C9)	9.940	TIC	269339m	18.73	ug/L	
6) TPHg (C6-C10)	9.940	TIC	261869m	21.67	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	283617m	22.78	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102535.D
Acq On : 26 Oct 2019 2:18 am
Operator : MM
Sample : 9J25051-ICB2
Misc : 1X 5mL DI
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102536.D
Acq On : 26 Oct 2019 2:45 am
Operator : MM
Sample : 9J25051-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:35 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

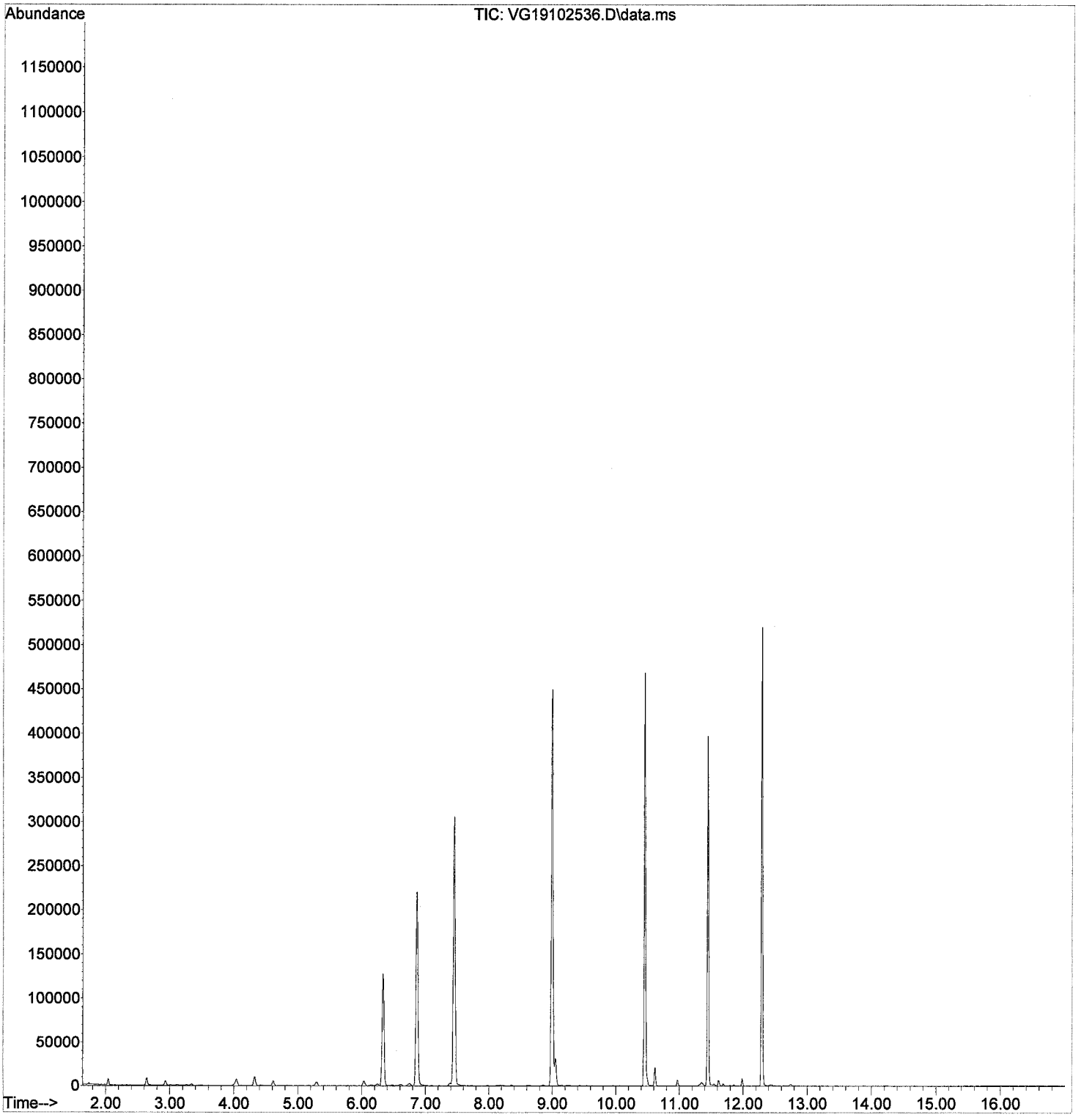
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	193559	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	295012	50.90	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	105074	50.40	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	328759	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	251777	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	199445	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	208521m	44.09	ug/L	
5) TPHg (C5-C9)	9.940	TIC	540435m	84.79	ug/L	
6) TPHg (C6-C10)	9.940	TIC	477926m	89.46	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	592441m	77.31	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102536.D
Acq On : 26 Oct 2019 2:45 am
Operator : MM
Sample : 9J25051-CALC
Misc : 1X 5mL 50PPB GX
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:35 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102537.D
Acq On : 26 Oct 2019 3:12 am
Operator : MM
Sample : 9J25051-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:38 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

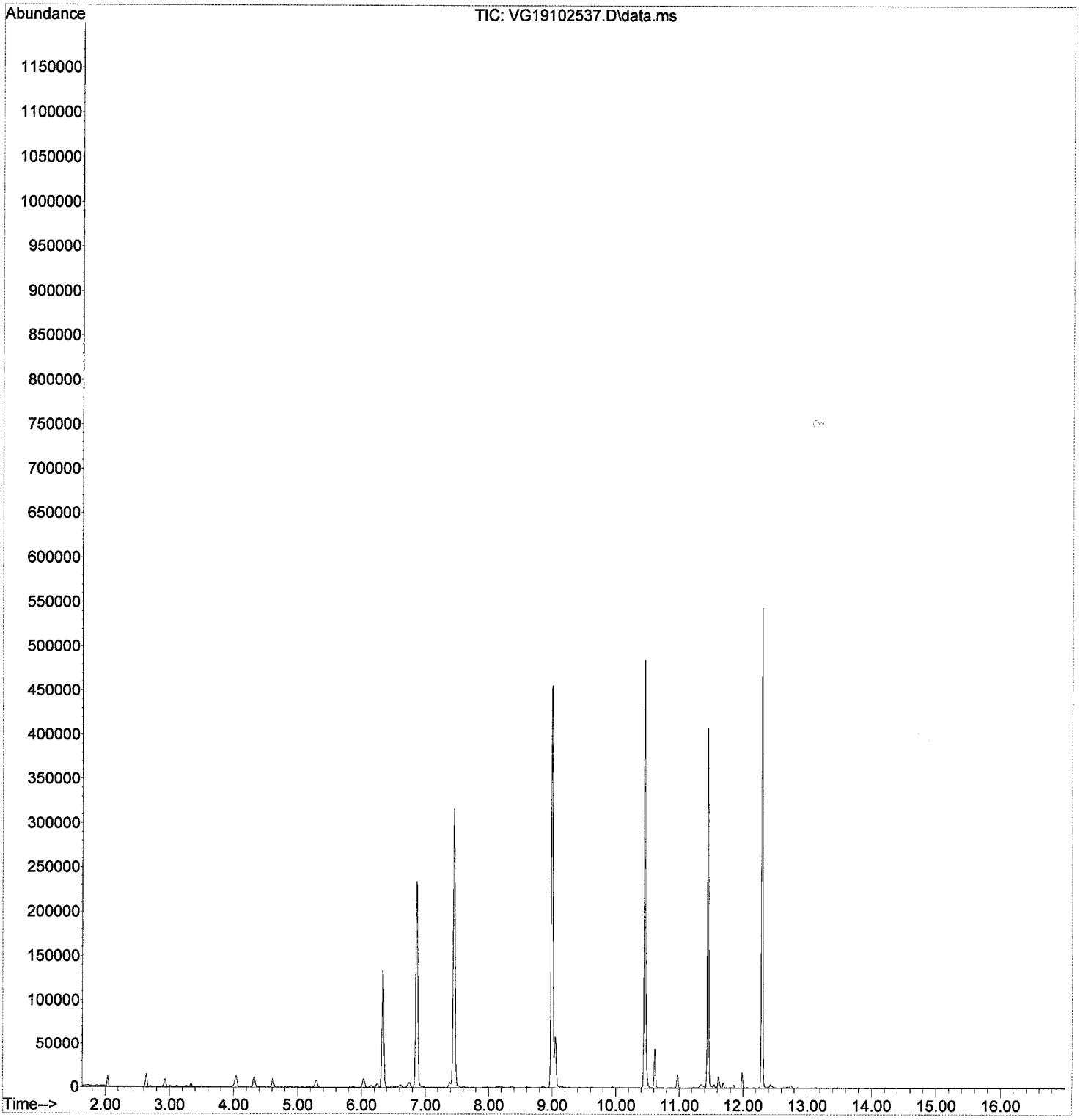
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.868	168	202223	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	304919	50.35	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	109800	50.42	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	341874	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	262610	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	208745	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	406857m	82.34	ug/L	
5) TPHg (C5-C9)	9.940	TIC	782617m	117.52	ug/L	
6) TPHg (C6-C10)	9.940	TIC	680725m	121.97	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	891666m	111.38	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102537.D
Acq On : 26 Oct 2019 3:12 am
Operator : MM
Sample : 9J25051-CALD
Misc : 1X 5mL 100PPB GX
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:38 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102538.D
Acq On : 26 Oct 2019 3:38 am
Operator : MM
Sample : 9J25051-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

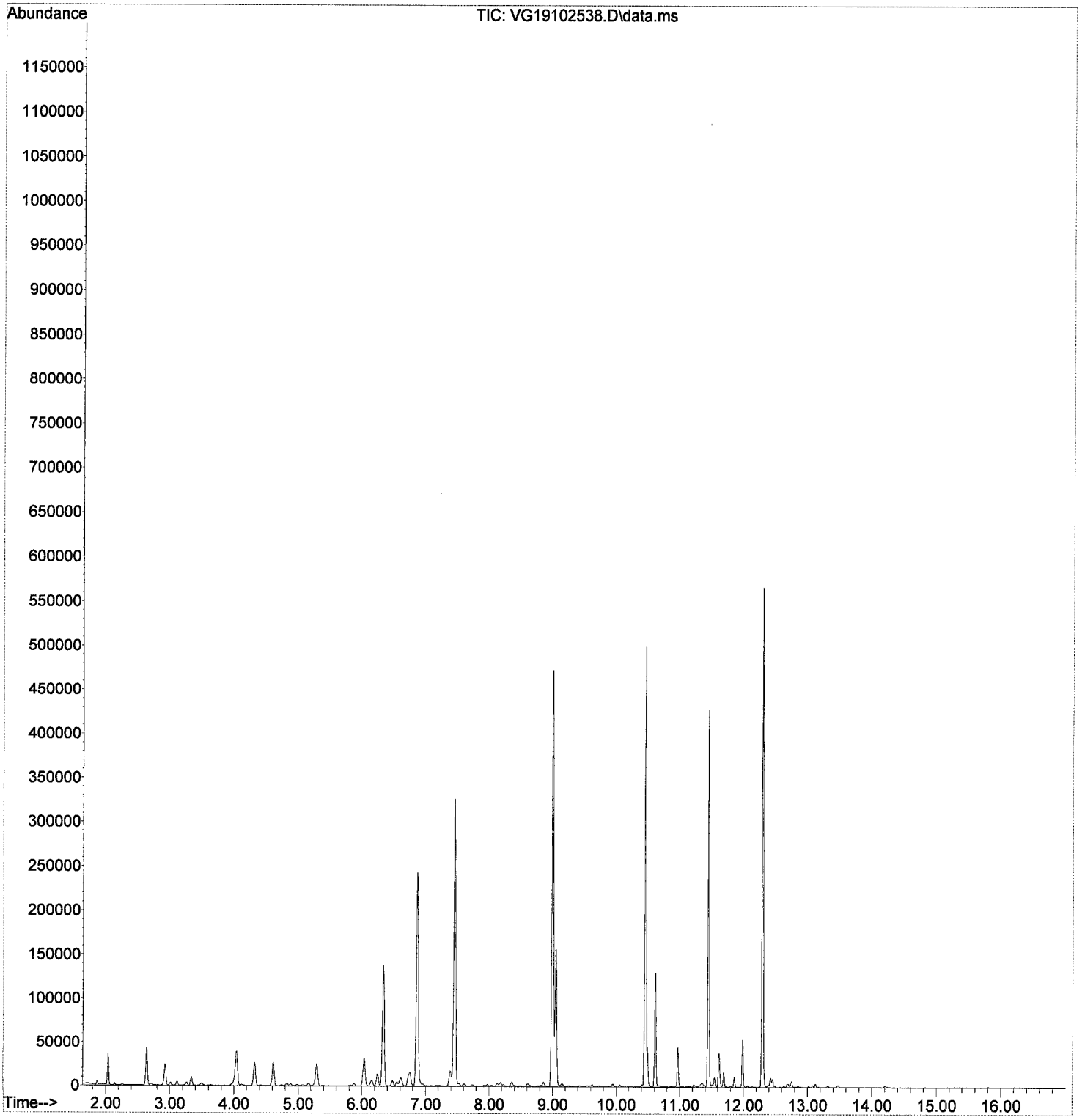
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	212459	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	314600	49.45	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	115645	50.54	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	352860	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	270819	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	218030	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	1206913m	232.49	ug/L	
5) TPHg (C5-C9)	9.940	TIC	1794254m	256.45	ug/L	
6) TPHg (C6-C10)	9.940	TIC	1521053m	259.40	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	2098250m	249.46	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102538.D
Acq On : 26 Oct 2019 3:38 am
Operator : MM
Sample : 9J25051-CALE
Misc : 1X 5mL 250PPB GX
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:40 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102539.D
Acq On : 26 Oct 2019 4:05 am
Operator : MM
Sample : 9J25051-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:42 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

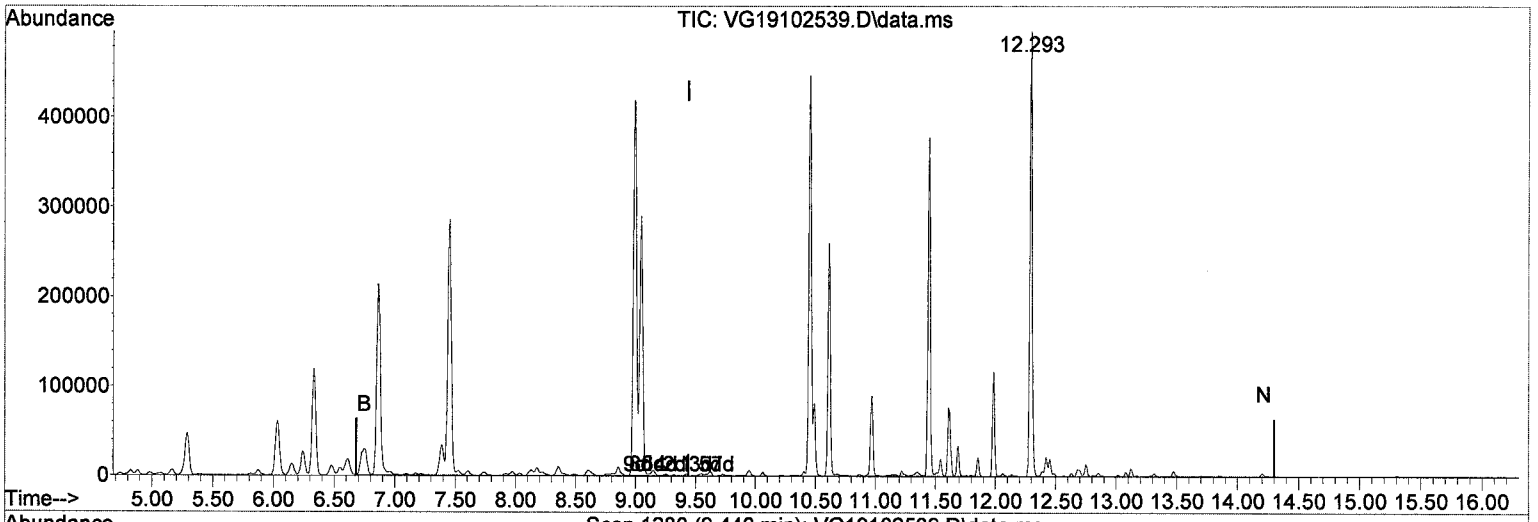
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.862	168	184039	50.00	ug/L	-0.01
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	275552	50.00	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	99104	50.00	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	311019	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	239613	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	188917	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	2248368m	500.00	ug/L	
5) TPHg (C5-C9)	9.940	TIC	3030299m	500.00	ug/L	
6) TPHg (C6-C10)	9.940	TIC	2539707m	500.00	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	3642980m	500.00	ug/L	

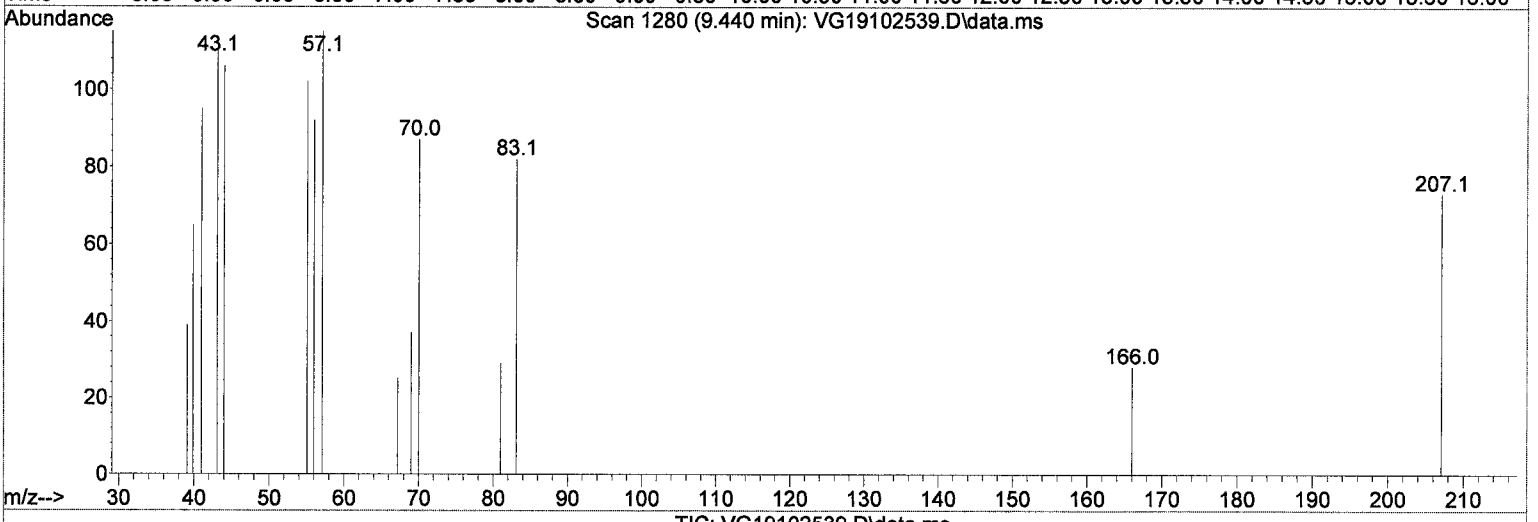
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102539.D
Acq On : 26 Oct 2019 4:05 am
Operator : MM
Sample : 9J25051-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:42 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration





TIC: VG19102539.D\data.ms

(4) NWTPH-Gx (TPH) (H)

9.440min (0.000) 500.00 ug/L m

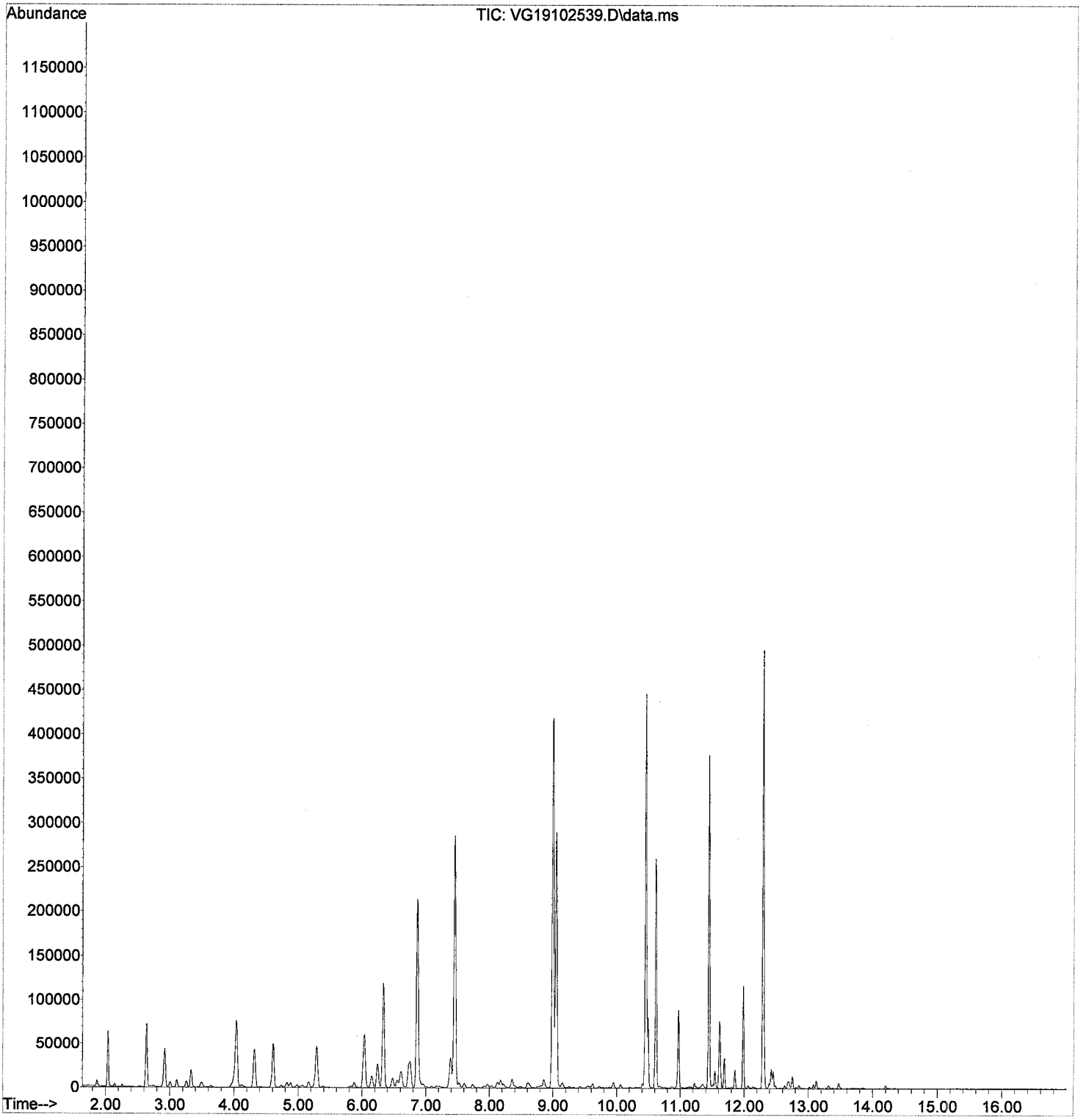
response 2248368

Signal	Exp%	Act%
TIC	100.00	100.00
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102539.D
Acq On : 26 Oct 2019 4:05 am
Operator : MM
Sample : 9J25051-CALF
Misc : 1X 5mL 500PPB GX
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:42 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102540.D
Acq On : 26 Oct 2019 4:32 am
Operator : MM
Sample : 9J25051-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:44 2019
Quant Method : C:\msdchem\1\methods\~~VG191025G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

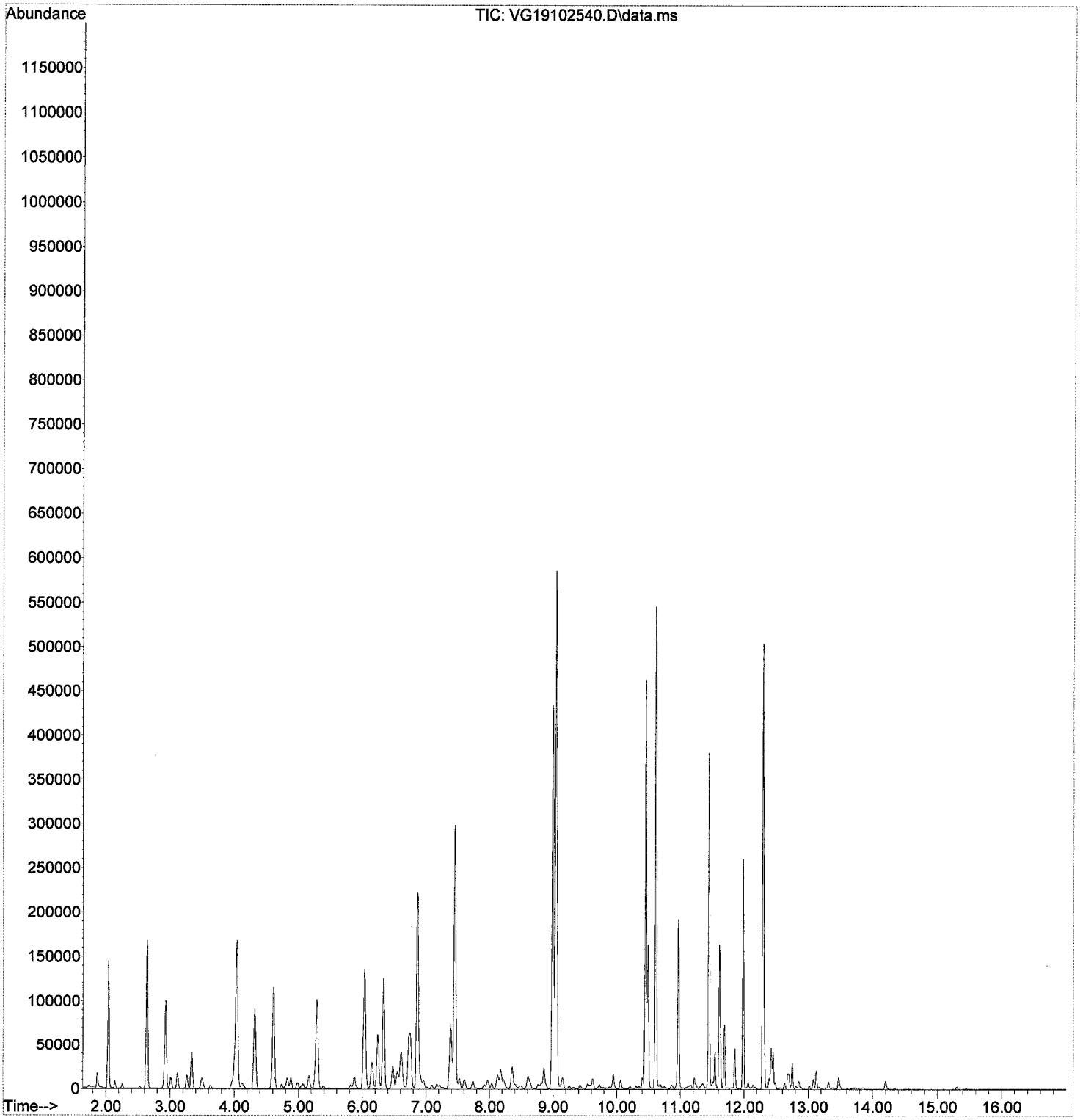
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	190639	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	286580	50.20	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	102218	49.79	ug/L	0.00
9) Toluene-d8 (NR)	8.989	98	321105	0.00	ug/L	-0.01
11) Chlorobenzene-d5 (NR)	10.452	117	246991	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	190835	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	4898415m	1051.61	ug/L	
5) TPHg (C5-C9)	9.940	TIC	6352259m	1011.84	ug/L	
6) TPHg (C6-C10)	9.940	TIC	5288509m	1005.12	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	7765125m	1028.87	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102540.D
Acq On : 26 Oct 2019 4:32 am
Operator : MM
Sample : 9J25051-CALG
Misc : 1X 5mL 1000PPB GX
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:44 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102541.D
Acq On : 26 Oct 2019 4:59 am
Operator : MM
Sample : 9J25051-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:47 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

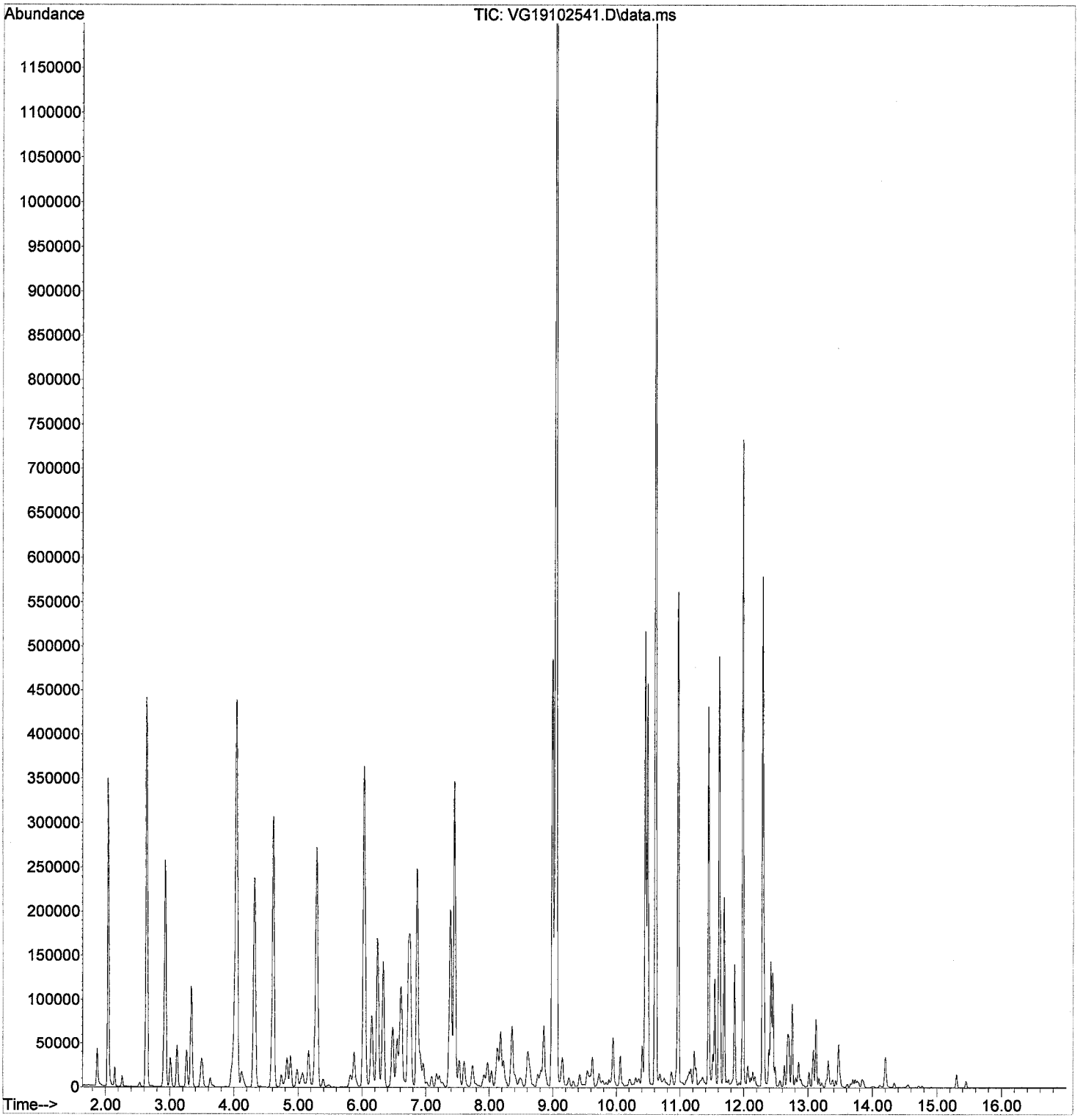
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	218107	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	319682	48.95	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	117998	50.23	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	359191	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	278863	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	220552	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	14135965m	2652.58	ug/L	
5) TPHg (C5-C9)	9.940	TIC	16960704m	2361.40	ug/L	
6) TPHg (C6-C10)	9.940	TIC	14124797m	2345.44	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	21319796m	2469.09	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102541.D
Acq On : 26 Oct 2019 4:59 am
Operator : MM
Sample : 9J25051-CALH
Misc : 1X 5mL 2500PPB GX
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:47 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102542.D
Acq On : 26 Oct 2019 5:26 am
Operator : MM
Sample : 9J25051-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:49 2019
Quant Method : C:\msdchem\1\methods\VG~~191025G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

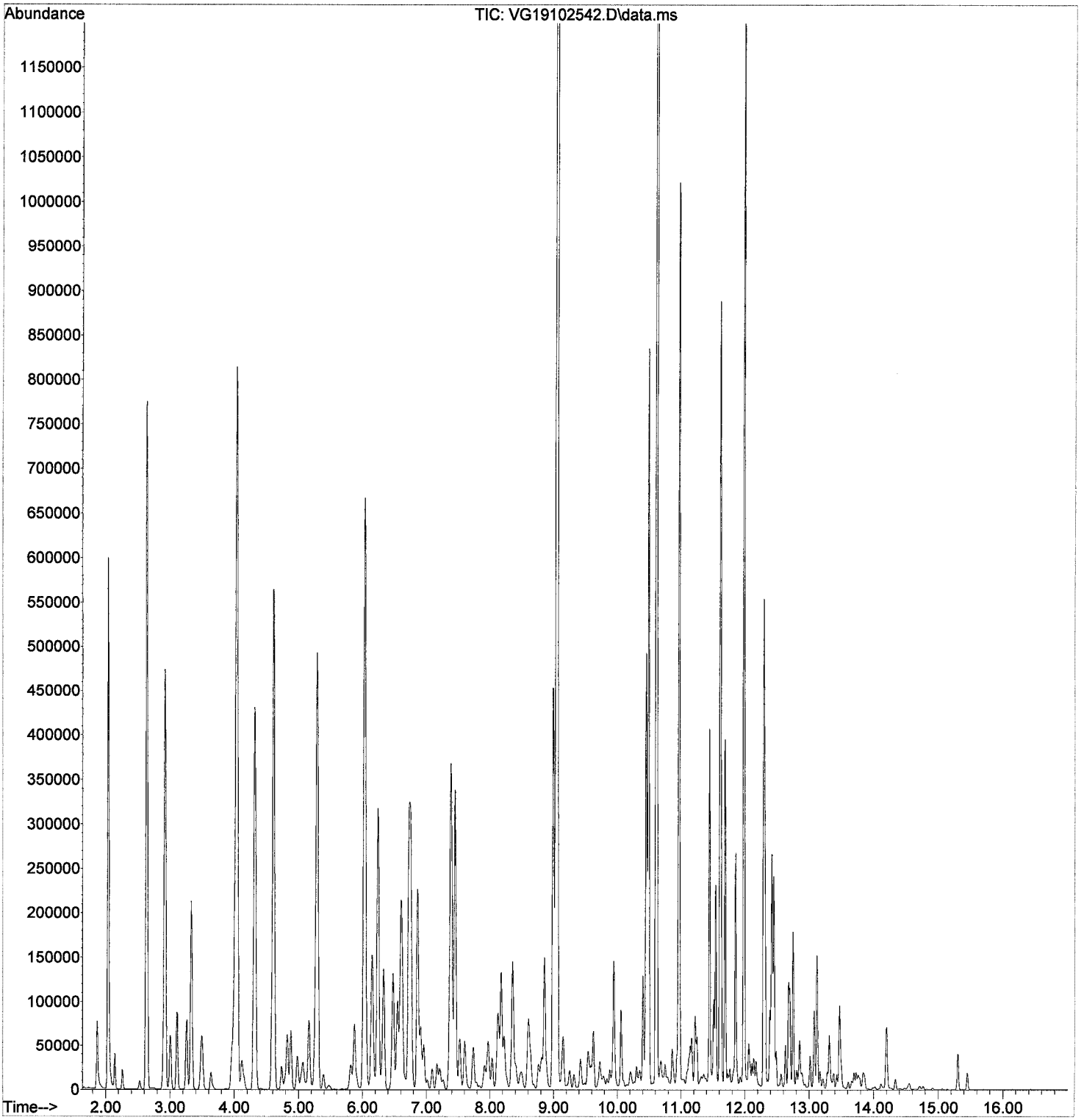
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.861	168	195244	50.00	ug/L	-0.01
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	291674	49.89	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	108752	51.72	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	328924	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	253387	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	202369	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	26794497m	5616.69	ug/L	
5) TPHg (C5-C9)	9.940	TIC	31355075m	4876.68	ug/L	
6) TPHg (C6-C10)	9.940	TIC	26053972m	4834.96	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	39688515m	5134.64	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102542.D
Acq On : 26 Oct 2019 5:26 am
Operator : MM
Sample : 9J25051-CALI
Misc : 1X 5mL 5000PPB GX
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:49 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102543.D
Acq On : 26 Oct 2019 5:52 am
Operator : MM
Sample : 9J25051-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:51 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration

10/28/19

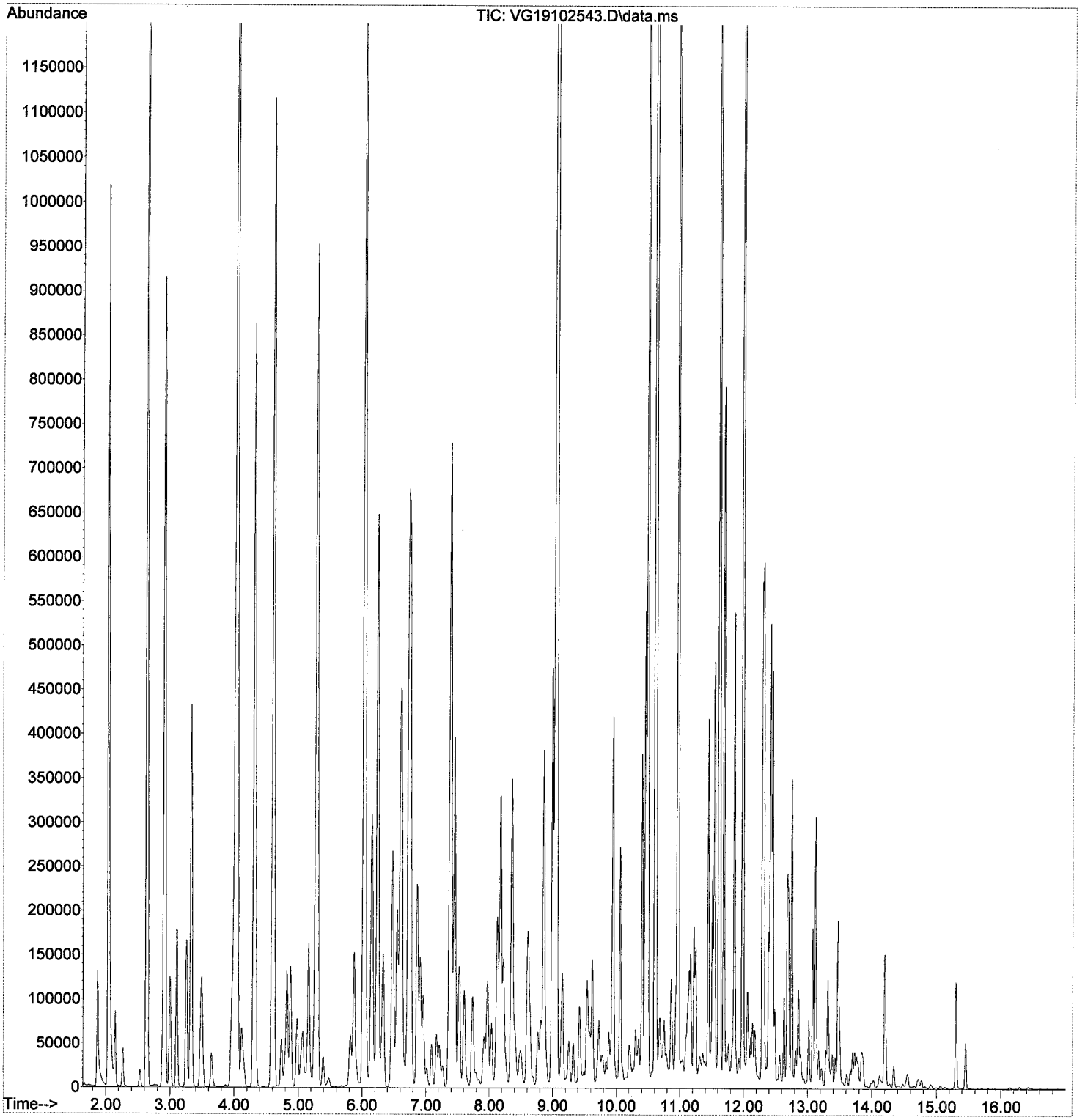
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.861	168	197171	50.00	ug/L	-0.01
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	292717	49.58	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	109113	51.38	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	331575	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	254631	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	199163	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	54966493m	11409.52	ug/L	
5) TPHg (C5-C9)	9.940	TIC	62901609m	9687.53	ug/L	
6) TPHg (C6-C10)	9.940	TIC	52358292m	9621.41	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	80394197m	10299.23	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102543.D
Acq On : 26 Oct 2019 5:52 am
Operator : MM
Sample : 9J25051-CALJ
Misc : 1X 5mL 10000PPB GX
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:12:51 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:11:52 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102544.D
Acq On : 26 Oct 2019 6:19 am
Operator : MM
Sample : 9J25051-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:42 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

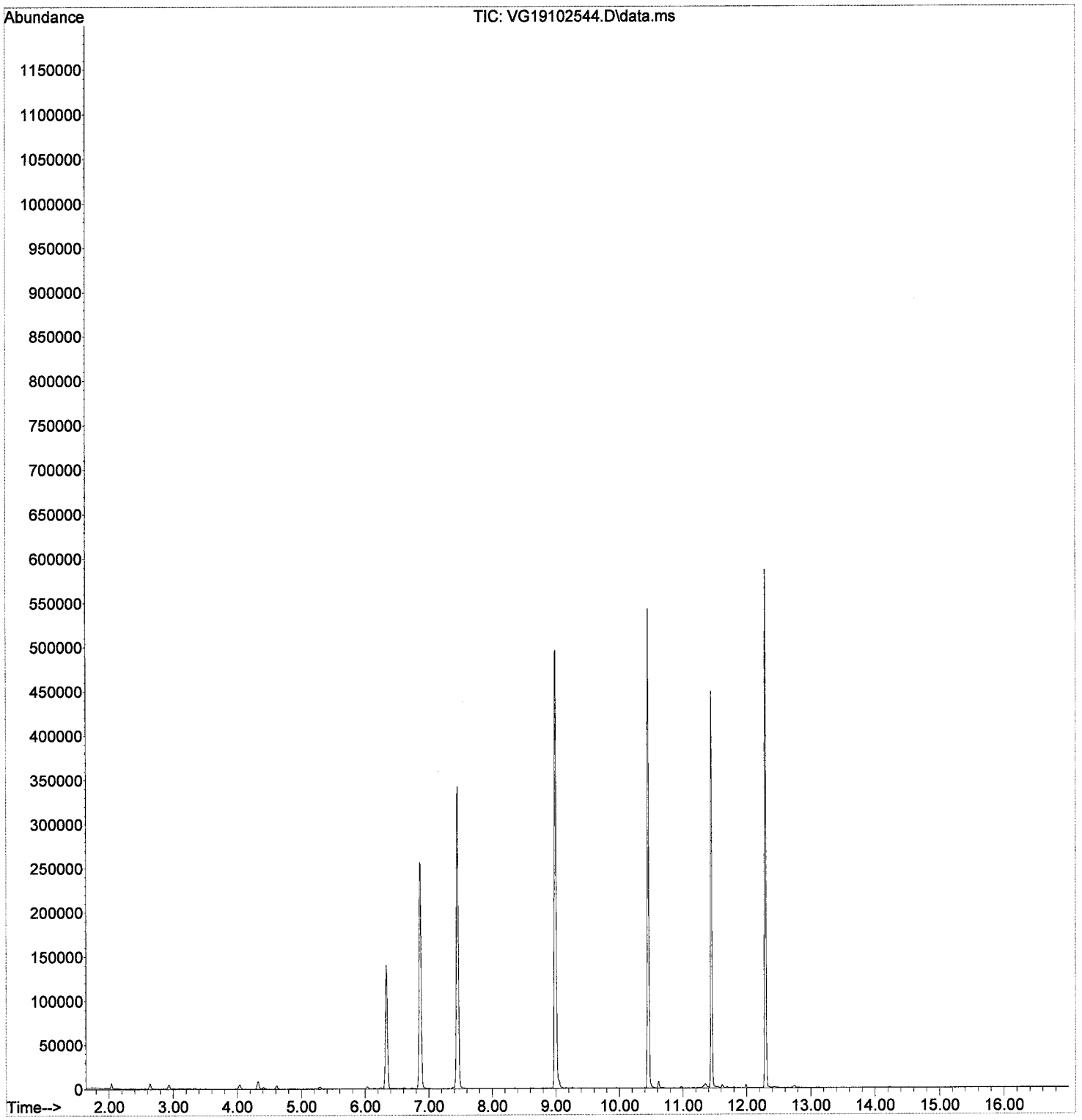
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	225495	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	337060	50.00	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	122114	49.73	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	377779	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	290665	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	226756	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	107579m	34.43	ug/L	
5) TPHg (C5-C9)	9.940	TIC	445850m	30.36	ug/L	
6) TPHg (C6-C10)	9.940	TIC	393291m	28.41	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	481896m	34.01	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102544.D
Acq On : 26 Oct 2019 6:19 am
Operator : MM
Sample : 9J25051-IBL8
Misc : 1X 5mL DI
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:42 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102545.D
Acq On : 26 Oct 2019 6:46 am
Operator : MM
Sample : 9J25051-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:44 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

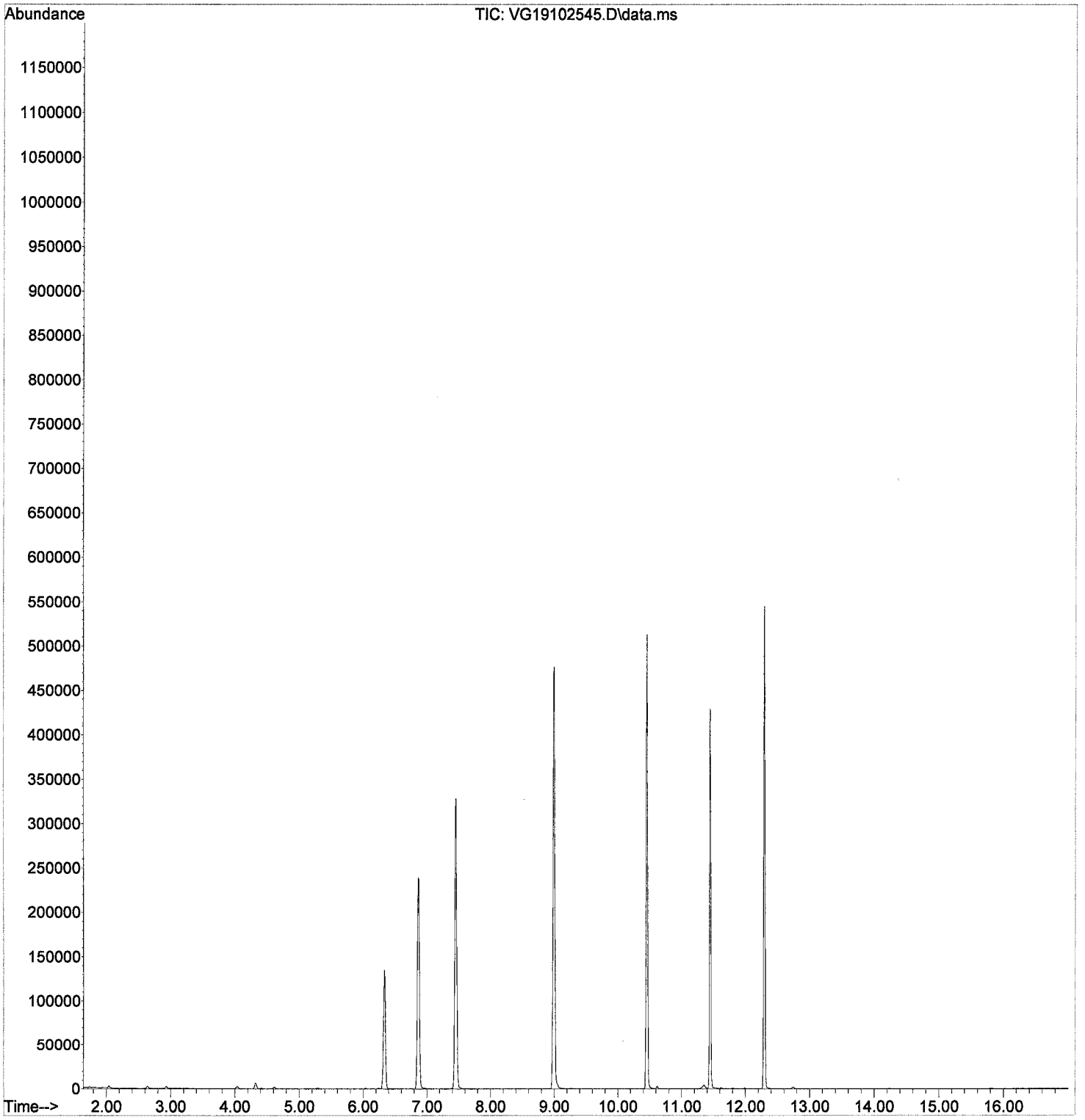
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	212130	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	321985	50.78	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	115469	49.98	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	359017	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	275943	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	214203	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	58592m	26.68	ug/L	
5) TPHg (C5-C9)	9.940	TIC	360796m	21.50	ug/L	
6) TPHg (C6-C10)	9.940	TIC	330453m	21.21	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	382639m	25.45	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102545.D
Acq On : 26 Oct 2019 6:46 am
Operator : MM
Sample : 9J25051-IBL9
Misc : 1X 5mL DI
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:44 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102546.D
Acq On : 26 Oct 2019 7:13 am
Operator : MM
Sample : 9J25051-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:46 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

10/28/19

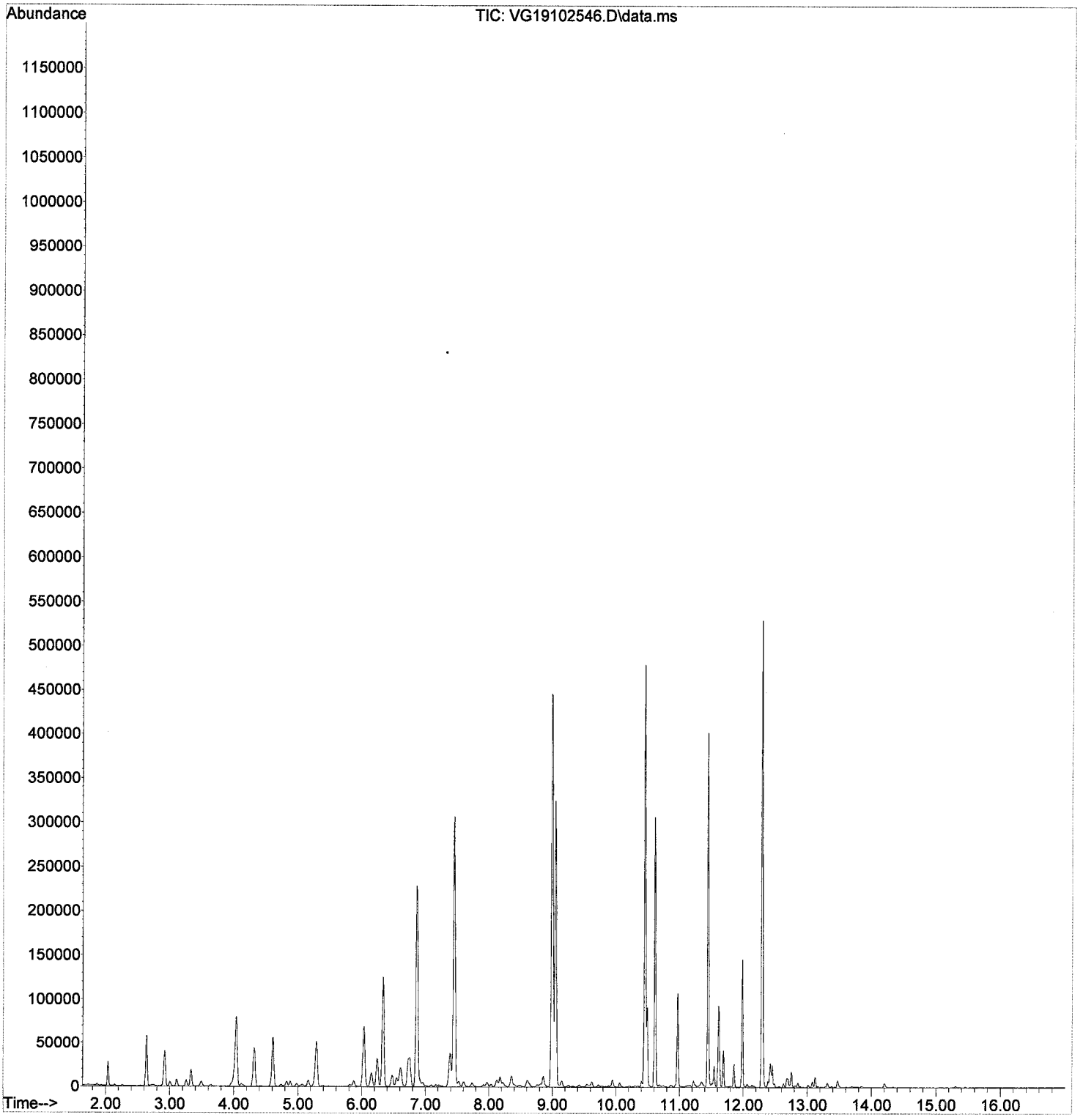
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	198918	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	295059	49.62	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	107800	49.76	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	333031	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	255524	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	200908	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	2694552m	536.40	ug/L	
5) TPHg (C5-C9)	9.940	TIC	3423889m	518.14	ug/L	
6) TPHg (C6-C10)	9.940	TIC	2934697m	530.81	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	4183115m	518.20	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102546.D
Acq On : 26 Oct 2019 7:13 am
Operator : MM
Sample : 9J25051-ICV3
Misc : 1X 5mL 500PPB GX
ALS Vial : 36 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:46 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102547.D
Acq On : 26 Oct 2019 7:40 am
Operator : MM
Sample : 9J25051-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:48 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration

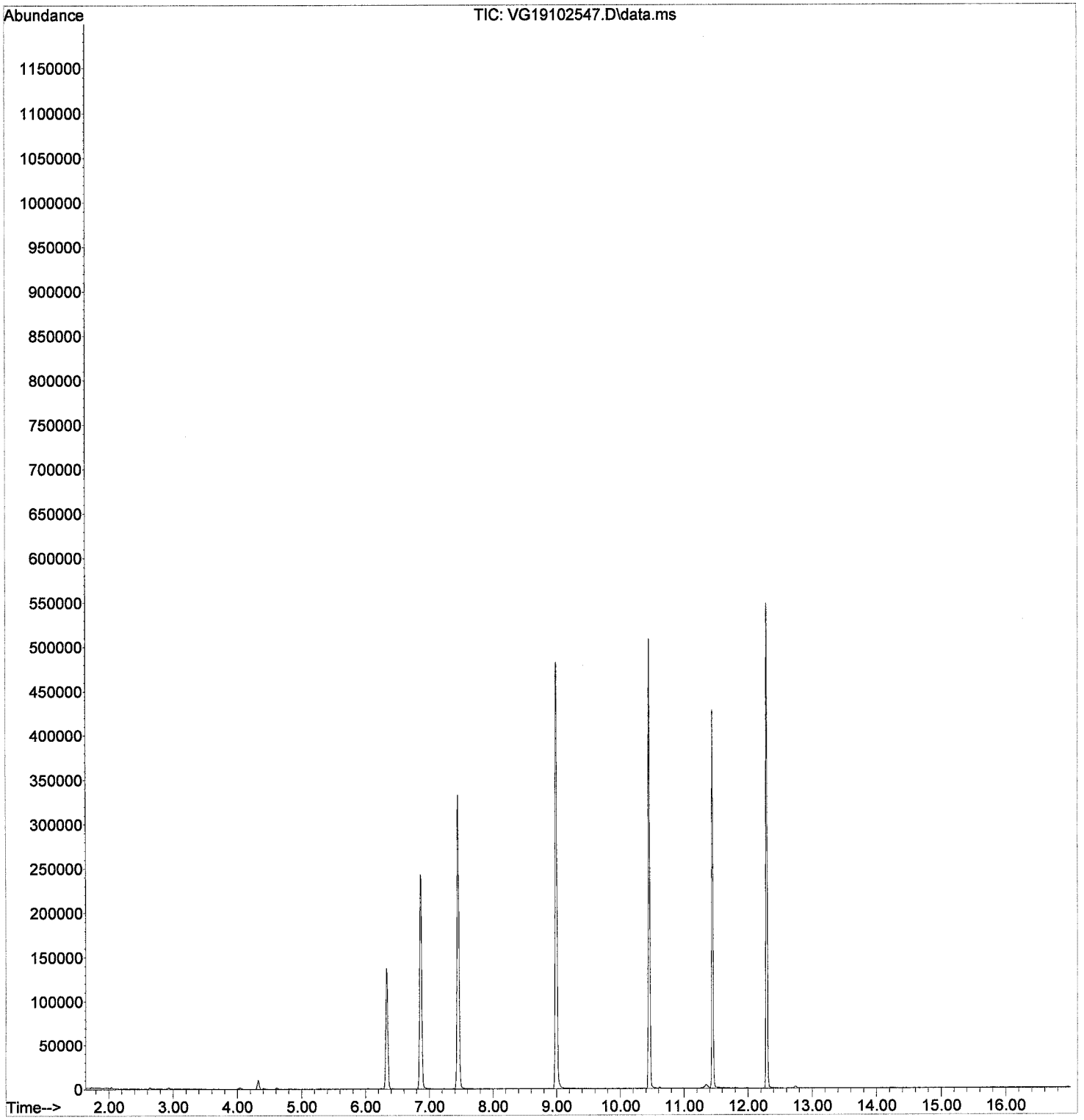
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.867	168	214380	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	7.453	114	325769	50.83	ug/L	0.00
3) 4-Bromofluorobenzene (...	11.446	174	115143	49.32	ug/L	0.00
9) Toluene-d8 (NR)	8.995	98	361095	0.00	ug/L	0.00
11) Chlorobenzene-d5 (NR)	10.452	117	276533	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	12.293	150	213955	0.00	ug/L	0.00
Target Compounds						Qvalue
4) NWTPH-Gx (TPH)	9.440	TIC	60146m	26.85	ug/L	
5) TPHg (C5-C9)	9.940	TIC	363449m	21.32	ug/L	
6) TPHg (C6-C10)	9.940	TIC	332311m	20.91	ug/L	
7) CA-LUFT (C5-C12)	9.940	TIC	383928m	25.12	ug/L	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-10\9J25051\
Data File : VG19102547.D
Acq On : 26 Oct 2019 7:40 am
Operator : MM
Sample : 9J25051-IBLA
Misc : 1X 5mL DI
ALS Vial : 37 Sample Multiplier: 1
DataAcq Meth:VG1808RUN.M

Quant Time: Oct 28 12:45:48 2019
Quant Method : C:\msdchem\1\methods\VG191025G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Mon Oct 28 12:17:57 2019
Response via : Initial Calibration



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Vinyl Chloride by EPA 8260C SIM
Benchsheet & Analysis Sequence Data

Batch 9110483
Sequence 9K05040 (A9J1114-01,02,04,05,07)

PREPARATION BENCH SHEET

BATCH #: 9110483 (Water)

Apex Laboratories

Prep Method: EPA 5030B

Lab Number	Cont.	Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9110483-BLK1		QC	11/05/19 12:14	5	5							
9110483-BS1		QC	11/05/19 12:14	5	5	A19K007		0.05				
A9J1114-01	A	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-TB-1910300000	Needs 0.022ug/L RL	<2
A9J1114-02	A	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-028PW-9-11-191030	Needs 0.022ug/L RL	<2
A9J1114-04	C	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-038PW-9-11-191030	Needs 0.022ug/L RL	<2
A9J1114-05	B	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-045PW-04-06-191029	Needs 0.022ug/L RL	<2
9110483-DUP1		QC	11/05/19 13:35	5	5		A9J1114-05					<2
A9J1114-07	C	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-059PW-10-12-191030	Needs 0.022ug/L RL	<2
A9K0039-01	A	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-TB-1911010000	Needs 0.022ug/L RL	<2
A9K0039-03	B	8260C SIM - VC Only	11/05/19 13:35	5	5					PDI-064PW-10-12-191101	Needs 0.022ug/L RL	<2
9110483-MS1		QC	11/05/19 13:35	5	5	A19K007	A9K0039-03	0.05				<2

*pH <2 verified 11/6/19

Standards/Reagents

Reagent(s)			Analyte Spike(s)			Surrogate(s)		
Std ID	Exp. Date	Description	Std ID	Exp. Date	Description	Std ID	Exp. Date	Description
			A19K007	11/09/19	8260 Cal. Std. B VOCR+OXY Spike (20-40ug/r			

GCMS8 SIMW

Prepared By: 11/6/19 Date

Reviewed By: 11/6/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9K05040**	Instrument:	**VOA-GCMS8**
Date:	**11/05/19 11:35**	Calibration:	**A9G1805**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9K05040-IBL1	Water	QC	QC			A19G296	
2	9K05040-TUN1	Water	QC	QC			A19G296	
3	9K05040-IBL2	Water	QC	QC			A19G296	
4	9K05040-CCV1	Water	QC	QC			A19G296	A19K089
5	9110483-BS1	Water	QC	QC		9110483	A19G296	
6	9110483-BLK1	Water	QC	QC		9110483	A19G296	
7	A9J1114-01	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/13/19	9110483	A19G296	
8	A9K0039-01	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/15/19	9110483	A19G296	
9	A9J1114-02	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/13/19	9110483	A19G296	
10	A9J1114-04	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/13/19	9110483	A19G296	
11	A9J1114-05	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/13/19	9110483	A19G296	
12	9110483-DUP1	Water	QC	QC		9110483	A19G296	
13	9K05040-IBL3	Water	QC	QC			A19G296	
14	A9J1114-07	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/13/19	9110483	A19G296	
15	A9K0039-03	Water	8260C SIM - VC Only	Anchor QEA, LLC	11/15/19	9110483	A19G296	
16	9110483-MS1	Water	QC	QC		9110483	A19G296	
17	9K05040-IBL4	Water	QC	QC			A19G296	
18	9110492-BLK1	Water	QC	QC		9110492	A19G296	
19	9110492-BS1	Water	QC	QC		9110492	A19G296	
20	9110492-BS2	Water	QC	QC		9110492	A19G296	
21	9110492-BS3	Water	QC	QC		9110492	A19G296	
22	9110492-BS4	Water	QC	QC		9110492	A19G296	
23	9K05040-IBL5	Water	QC	QC			A19G296	

> DOC

Scan to Archive DB

Comments: chloromethane EOS

Data Entered By: 11/6/19

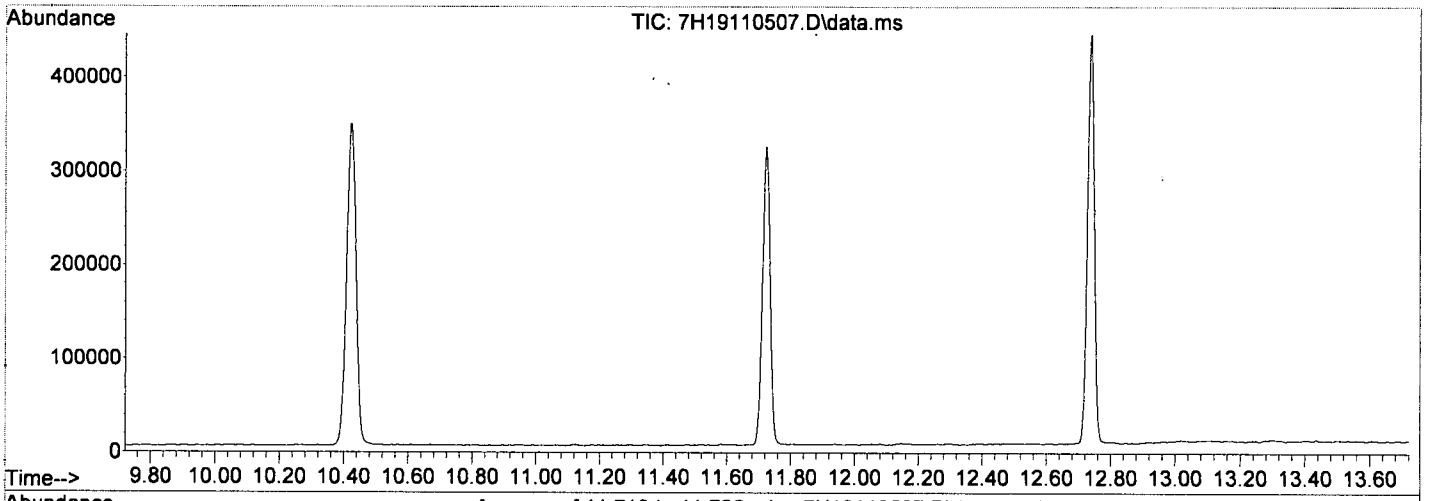
Data Reviewed By: 11/20/19

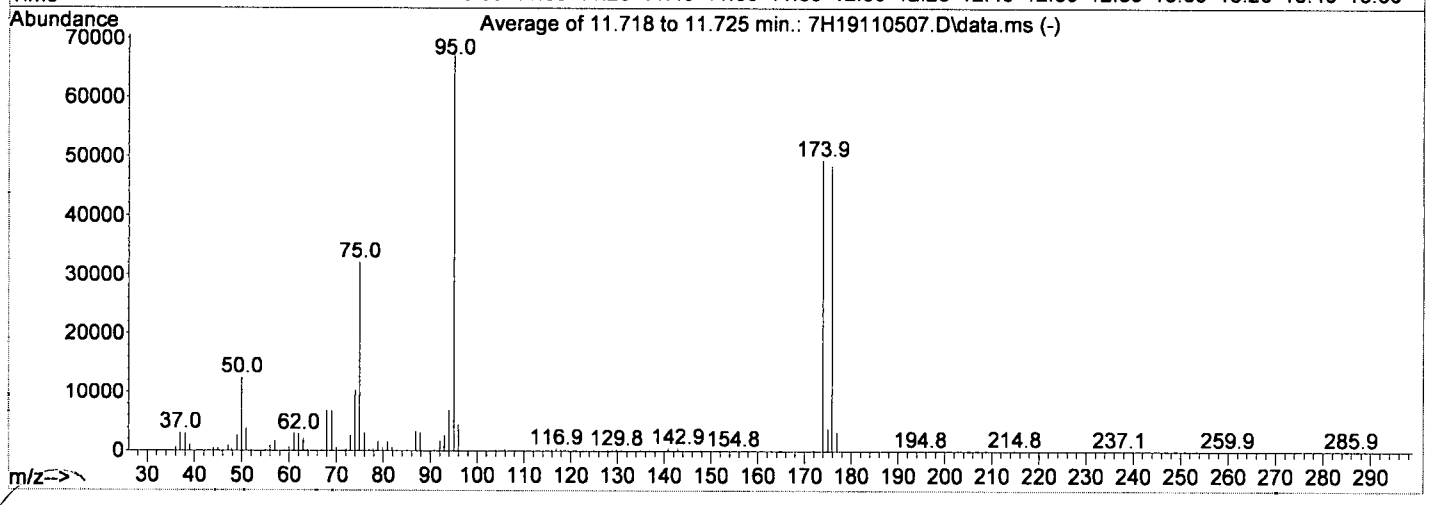
BFB

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110507.D
Acq On : 05 Nov 2019 12:14 pm
Operator : MM
Sample : 9K05040-TUN1
Misc : 1X 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\GCMS\1\methods\VH190718W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Wed Dec 21 11:05:59 2016





AutoFind: Scans 3150, 3151, 3152; Background Corrected with Scan 3134

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
95	174	50	200	136.1	67251	PASS
96	95	5	9	6.7	4537	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	73.5	49408	PASS
175	174	5	9	7.8	3864	PASS
176	174	95	105	98.2	48504	PASS
177	176	5	10	6.7	3226	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110507.D
Acq On : 05 Nov 2019 12:14 pm
Operator : MM
Sample : 9K05040-TUN1
Misc : 1X 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 05 16:37:27 2019
Quant Method : C:\GCMS\1\methods\VH190718W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Wed Dec 21 11:05:59 2016
Response via : Initial Calibration
DataAcq Meth:VH1907RUN.M

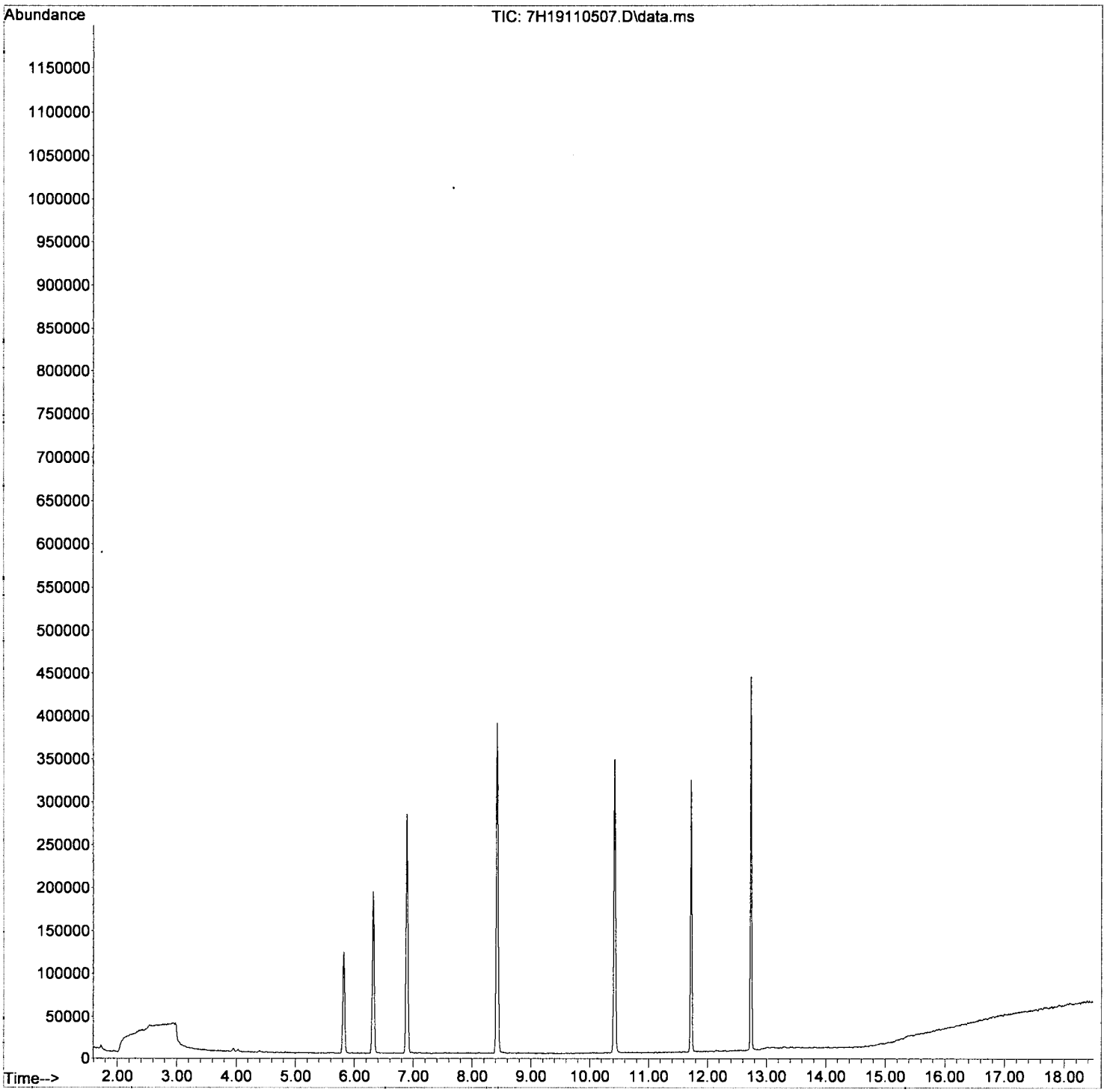
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.317	168	145471	50.00	ug/L		0.00
39) Chlorobenzene-d5 (I)	10.423	117	231779	50.00	ug/L		0.00
60) 1,4-Dichlorobenzene-d4...	12.738	152	104556	50.00	ug/L		0.00
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.815	111	85746	44.61	ug/L		0.00
34) 1,4-Difluorobenzene (S)	6.889	114	257812	53.05	ug/L		0.00
42) Toluene-d8 (S)	8.423	98	321213	55.69	ug/L		0.00
61) 4-Bromofluorobenzene (S)	11.722	174	85203	59.20	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.896	50	187	0.09	ug/L	#	50
5) Bromomethane	2.378	96	238	Below Cal		#	9
6) Chloroethane	2.539	64	28	Below Cal		#	1
11) Iodomethane	3.410	142	20	2.16	ug/L	#	1
12) Acrolein	3.690	56	53	0.22	ug/L	#	13
13) Methylene Chloride	3.957	84	1877	1.11	ug/L		90
14) Acetone	4.027	43	2877	4.81	ug/L		87
19) Acrylonitrile	4.828	53	150	0.26	ug/L	#	63
20) Vinyl Acetate	5.056	43	57	0.18	ug/L		82
26) Tetrahydrofuran	5.793	42	48	0.11	ug/L	#	46
30) 2-Butanone (MEK)	5.953	43	151	0.18	ug/L		52
33) iso-Butyl Alcohol	6.487	43	382	4.90	ug/L	#	22
46) t-1,3-Dichloropropene	9.008	75	129	0.49	ug/L		48
51) 2-Hexanone	10.088	43	195	0.51	ug/L	#	42
55) m,p-Xylenes (2)	10.484	91	60	0.16	ug/L	#	33
56) o-Xylene	10.654	91	293	0.13	ug/L		67
57) Styrene	11.172	104	81	0.36	ug/L	#	55
71) 1,2,4-Trimethylbenzene	12.407	105	35	0.20	ug/L	#	29
72) sec-Butylbenzene	12.448	105	10	0.15	ug/L	#	1
73) 4-Isopropyltoluene	12.609	119	99	0.21	ug/L		51
81) Naphthalene	14.661	128	652	0.32	ug/L		78

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110507.D
Acq On : 05 Nov 2019 12:14 pm
Operator : MM
Sample : 9K05040-TUN1
Misc : 1X 5mL BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Nov 05 16:37:27 2019
Quant Method : C:\GCMS\1\methods\VH190718W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Wed Dec 21 11:05:59 2016
Response via : Initial Calibration
DataAcq Meth:VH1907RUN.M



Evaluate Continuing Calibration Report

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110509.D
Acq On : 05 Nov 2019 01:08 pm
Operator : MM
Sample : 9110483-BS1
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 05 16:37:56 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	2330.000	2330.000	0.0	119	-0.01
2		Chloromethane	200.000	228.844	-14.4	122	0.00
3		Vinyl Chloride	200.000	199.269	0.4	106	-0.01
4		1,1-Dichloroethene	200.000	164.832	17.6	100	0.00
5		Carbon Disulfide	200.000	188.858	5.6	108	0.00
6		t-1,2-Dichloroethene	200.000	195.279	2.4	114	0.00
7		Methyl-tert-butyl-ether	200.000	194.324	2.8	111	-0.02
8		1,1-Dichloroethane	200.000	193.937	3.0	114	-0.01
9		c-1,2-Dichloroethene	200.000	190.197	4.9	111	-0.01
10		Chloroform	200.000	192.372	3.8	112	0.00
11	S	Dibromofluoromethane (S)	2330.000	2228.911	4.3	113	-0.01
12		Benzene	200.000	201.656	-0.8	117	-0.01
13		1,2-Dichloroethane (EDC)	200.000	202.063	-1.0	118	-0.01
14	S	1,4-Difluorobenzene (S)	2330.000	2326.723	0.1	119	-0.01
15		Trichloroethene (TCE)	200.000	194.253	2.9	113	-0.01
16		1,2-Dichloropropane	200.000	196.900	1.5	118	-0.01
17		Chlorobenzene-d5 (I)	2330.000	2330.000	0.0	123	-0.01
18		c-1,3-Dichloropropene	200.000	195.639	2.2	121	-0.01
19	S	Toluene-d8 (S)	2330.000	2257.190	3.1	121	-0.02
20		Toluene	200.000	192.993	3.5	126	-0.01
21		Tetrachloroethene (PCE)	200.000	195.756	2.1	121	0.00
22		t-1,3-Dichloropropene	200.000	197.033	1.5	121	0.00
23		1,1,2-Trichloroethane	200.000	191.730	4.1	119	-0.01
24		1,2-Dibromoethane (EDB)	200.000	183.245	8.4	114	-0.01
25		Ethylbenzene	200.000	195.359	2.3	126	-0.01
26		m,p-Xylenes (2)	400.000	398.807	0.3	127	-0.01
27		o-Xylene	200.000	182.882	8.6	121	-0.01
28	I	1,4-Dichlorobenzene-d4 (I)	2330.000	2330.000	0.0	134	-0.01
29	S	4-Bromofluorobenzene (S)	2330.000	2219.530	4.7	127	-0.01
30		1,1,2,2-Tetrachloroethane	200.000	178.542	10.7	106	-0.01
31		1,3.5-Trimethylbenzene	200.000	181.749	9.1	124	-0.02
32		1,2,3-Trichloropropane	200.000	173.991	13.0	107	-0.01
33		1,2,4-Trimethylbenzene	200.000	173.494	13.3	121	-0.01
34		1,2-Dibromo-3-chloropropane	200.000	161.257	19.4	90	-0.01
35		Naphthalene	200.000	190.584	4.7	114	-0.01

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110509.D
Acq On : 05 Nov 2019 01:08 pm
Operator : MM
Sample : 9110483-BS1
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 05 16:37:56 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

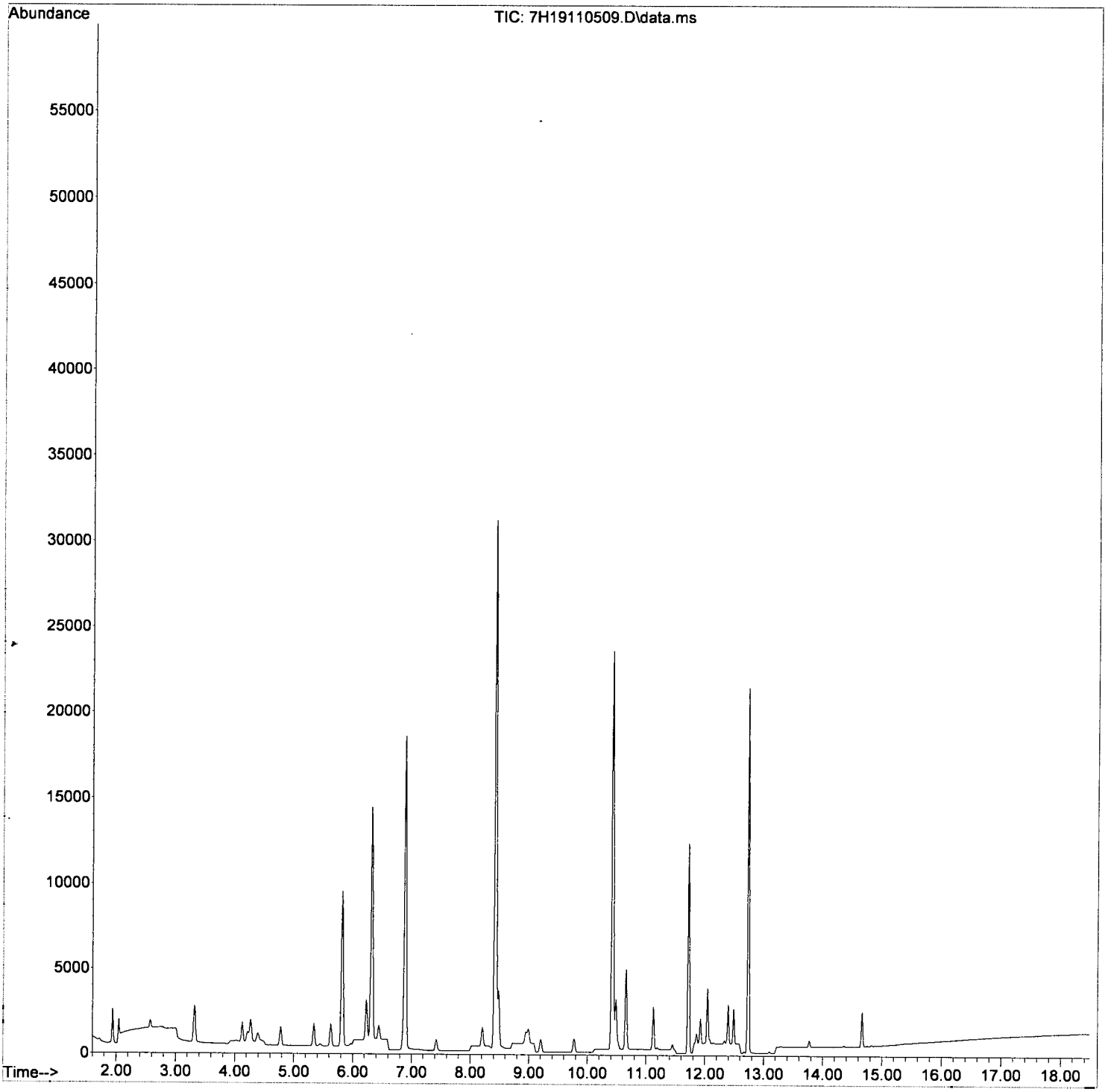
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.316	168	21016	2330.00	ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	32497	2330.00	ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	13984	2330.00	ng/L	-0.01
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.814	111	11135	2228.91	ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	36436	2326.72	ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	49837	2257.19	ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	11726	2219.53	ng/L	-0.01
Target Compounds						Qvalue
2) Chloromethane	1.936	50	2601	228.84	ng/L	98
3) Vinyl Chloride	2.039	62	1403	199.27	ng/L	99
4) 1,1-Dichloroethene	3.307	61	1396	164.83	ng/L	89
5) Carbon Disulfide	3.327	76	2819	188.86	ng/L	97
6) t-1,2-Dichloroethene	4.125	61	1478	195.28	ng/L	86
7) Methyl-tert-butyl-ether	4.266	73	3013	194.32	ng/L	75
8) 1,1-Dichloroethane	4.776	63	1882	193.94	ng/L	100
9) c-1,2-Dichloroethene	5.336	61	1483	190.20	ng/L	89
10) Chloroform	5.626	83	1874	192.37	ng/L	100
12) Benzene	6.230	78	4546	201.66	ng/L	97
13) 1,2-Dichloroethane (EDC)	6.441	62	1526	202.06	ng/L	99
15) Trichloroethene (TCE)	6.851	130	996	194.25	ng/L	98
16) 1,2-Dichloropropane	7.421	63	1196	196.90	ng/L	88
18) c-1,3-Dichloropropene	8.207	75	1799	195.64	ng/L	86
20) Toluene	8.481	91	4540	192.99	ng/L	96
21) Tetrachloroethene (PCE)	8.949	166	934	195.76	ng/L	84
22) t-1,3-Dichloropropene	8.992	75	1595	197.03	ng/L	98
23) 1,1,2-Trichloroethane	9.207	97	1043	191.73	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.774	107	1082	183.25	ng/L	94
25) Ethylbenzene	10.482	91	4484	195.36	ng/L	96
26) m,p-Xylenes (2)	10.654	91	6618	398.81	ng/L	88
27) o-Xylene	11.123	91	3383	182.88	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.923	83	1701	178.54	ug/L	96
31) 1,3.5-Trimethylbenzene	12.042	105	2733	181.75	ng/L	91
32) 1,2,3-Trichloropropane	12.047	110	443	173.99	ng/L	87
33) 1,2,4-Trimethylbenzene	12.394	105	2681	173.49	ng/L	90
34) 1,2-Dibromo-3-chloropr...	13.775	157	348	161.26	ng/L #	71
35) Naphthalene	14.664	128	3236	190.58	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110509.D
Acq On : 05 Nov 2019 01:08 pm
Operator : MM
Sample : 9110483-BS1
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Nov 05 16:37:56 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110510.D
Acq On : 05 Nov 2019 01:35 pm
Operator : MM
Sample : 9110483-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 05 16:38:21 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

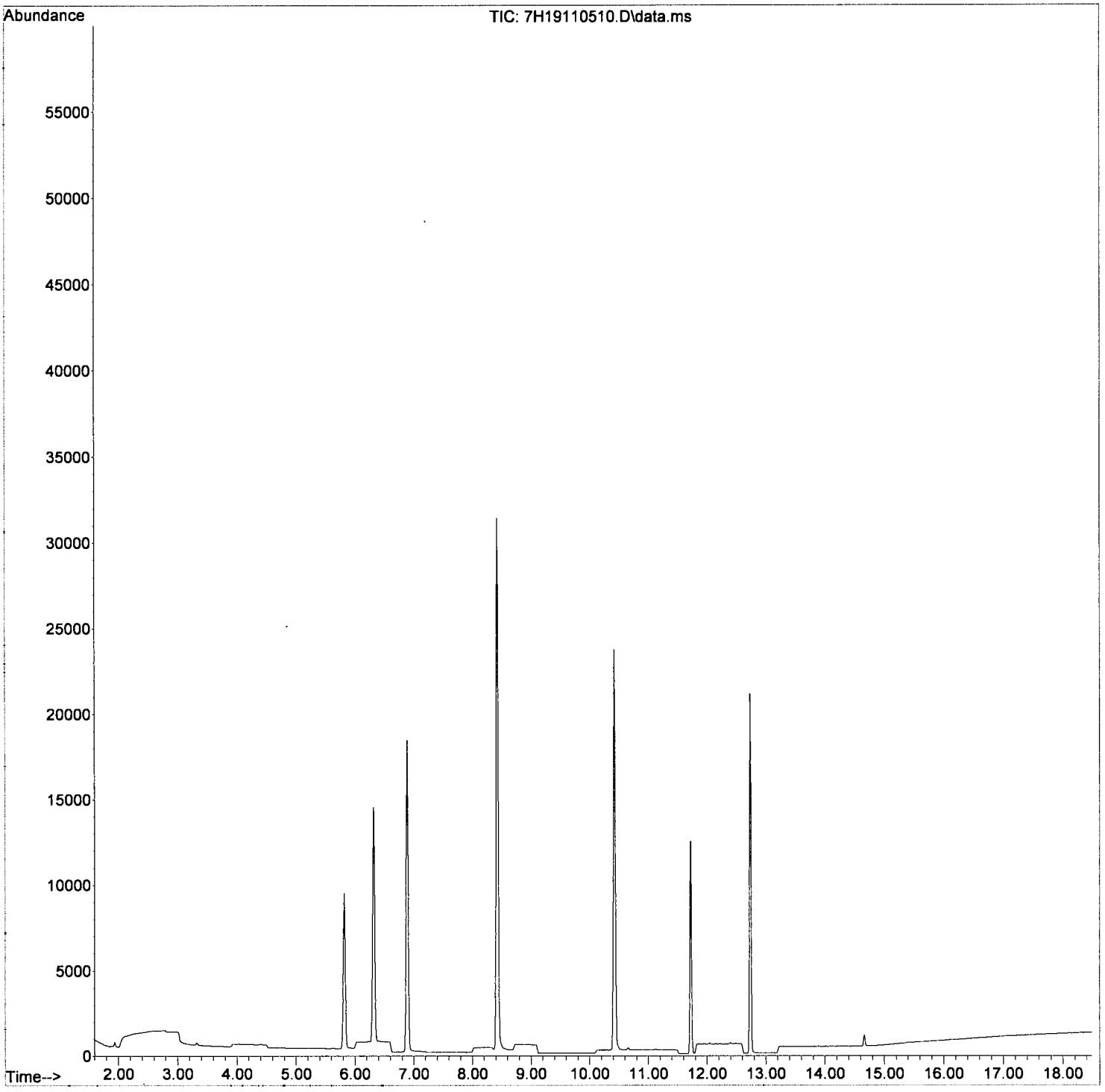
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.317	168	20981	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	32773	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	14034	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	11153	2236.24 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	36439	2330.80 ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	50153	2252.37 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.718	174	11827	2230.67 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.936	50	378	Below Cal	98
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.322	76	256	17.18 ng/L	79
6) t-1,2-Dichloroethene	0.000		0	N.D.	
7) Methyl-tert-butyl-ether	0.000		0	N.D.	
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	0.000		0	N.D.	
10) Chloroform	5.626	83	40	4.11 ng/L	91
12) Benzene	6.224	78	124	5.51 ng/L	85
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	0.000		0	N.D.	
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	242	10.20 ng/L	99
21) Tetrachloroethene (PCE)	8.949	166	31	6.44 ng/L	91
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.482	91	84	3.63 ng/L	91
26) m,p-Xylenes (2)	10.654	91	169	10.10 ng/L	89
27) o-Xylene	11.123	91	75	4.02 ng/L	100
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.042	105	65	4.31 ng/L	80
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.394	105	108	6.96 ng/L	93
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	1094	64.20 ng/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110510.D
Acq On : 05 Nov 2019 01:35 pm
Operator : MM
Sample : 9110483-BLK1
Misc : 1X 5mL DI
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Nov 05 16:38:21 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110511.D
Acq On : 05 Nov 2019 02:04 pm
Operator : MM
Sample : A9J1114-01
Misc : 1X 5mL SIM VC TB
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 05 16:38:30 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

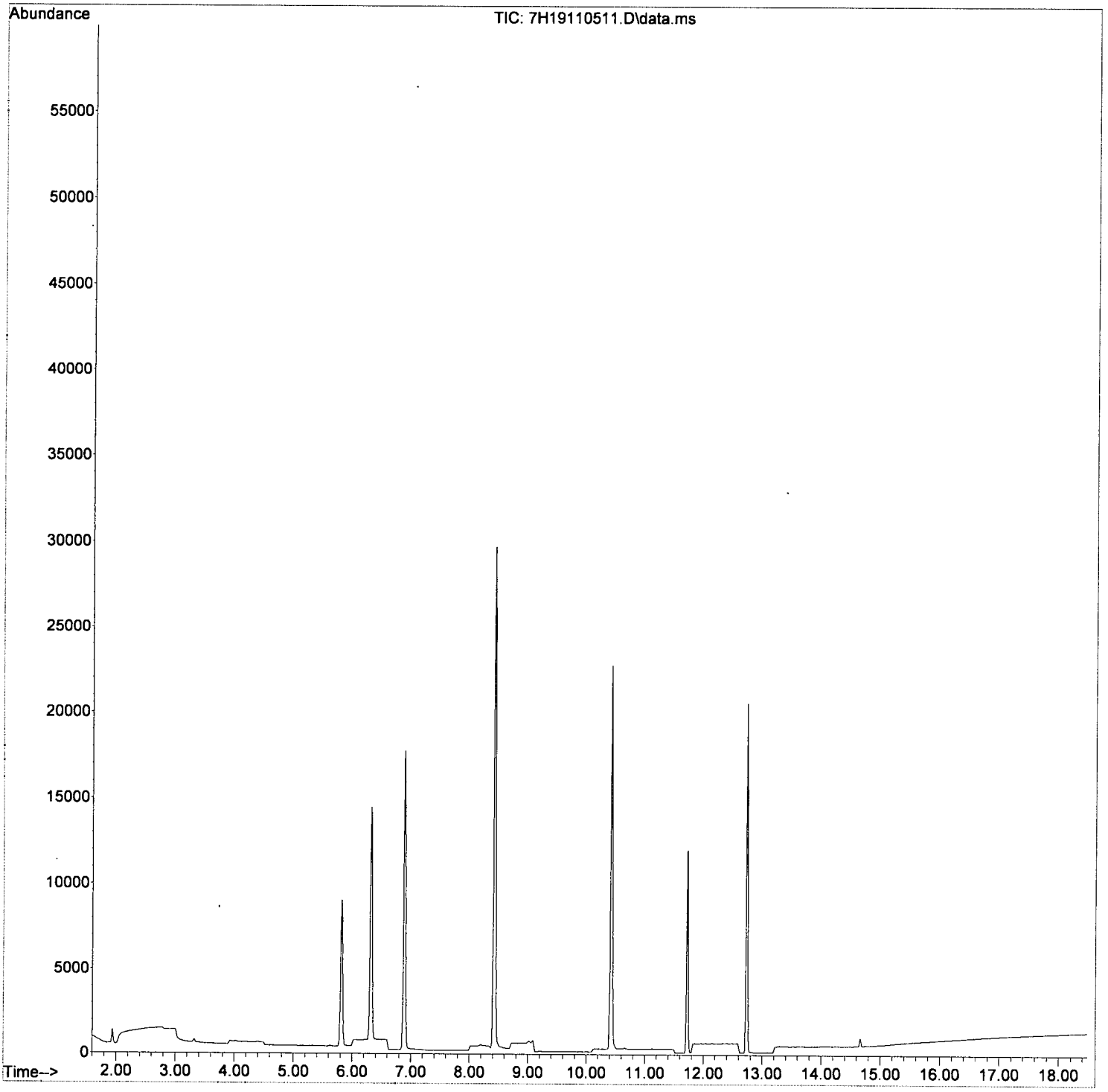
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.317	168	20798	2330.00	ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	31171	2330.00	ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	13551	2330.00	ng/L	-0.01
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.814	111	10609	2145.88	ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	34872	2250.19	ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	47556	2245.51	ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	11279	2203.14	ng/L	-0.01
Target Compounds						Qvalue
2) Chloromethane	1.937	50	1134	46.85	ng/L	98
3) Vinyl Chloride	0.000		0	N.D.		
4) 1,1-Dichloroethene	3.312	61	38	4.53	ng/L #	37
5) Carbon Disulfide	3.327	76	247	16.72	ng/L #	1
6) t-1,2-Dichloroethene	0.000		0	N.D.		
7) Methyl-tert-butyl-ether	0.000		0	N.D.		
8) 1,1-Dichloroethane	0.000		0	N.D.		
9) c-1,2-Dichloroethene	0.000		0	N.D.		
10) Chloroform	5.626	83	61	6.33	ng/L	99
12) Benzene	6.230	78	112	5.02	ng/L	98
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.		
15) Trichloroethene (TCE)	6.851	130	35	6.90	ng/L	93
16) 1,2-Dichloropropane	0.000		0	N.D.		
18) c-1,3-Dichloropropene	0.000		0	N.D.		
20) Toluene	8.481	91	148	6.56	ng/L	95
21) Tetrachloroethene (PCE)	0.000		0	N.D.		
22) t-1,3-Dichloropropene	0.000		0	N.D.		
23) 1,1,2-Trichloroethane	0.000		0	N.D.		
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.		
25) Ethylbenzene	10.482	91	46	2.09	ng/L	91
26) m,p-Xylenes (2)	10.654	91	108	6.79	ng/L	82
27) o-Xylene	11.123	91	45	2.54	ng/L	90
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.		
31) 1,3.5-Trimethylbenzene	0.000		0	N.D.		
32) 1,2,3-Trichloropropane	0.000		0	N.D.		
33) 1,2,4-Trimethylbenzene	12.394	105	52	3.47	ng/L	88
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
35) Naphthalene	14.664	128	764	46.43	ng/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110511.D
Acq On : 05 Nov 2019 02:04 pm
Operator : MM
Sample : A9J1114-01
Misc : 1X 5mL SIM VC TB
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Nov 05 16:38:30 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110513.D
Acq On : 05 Nov 2019 02:58 pm
Operator : MM
Sample : A9J1114-02
Misc : 1X 5mL SIM VC
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 05 16:38:38 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

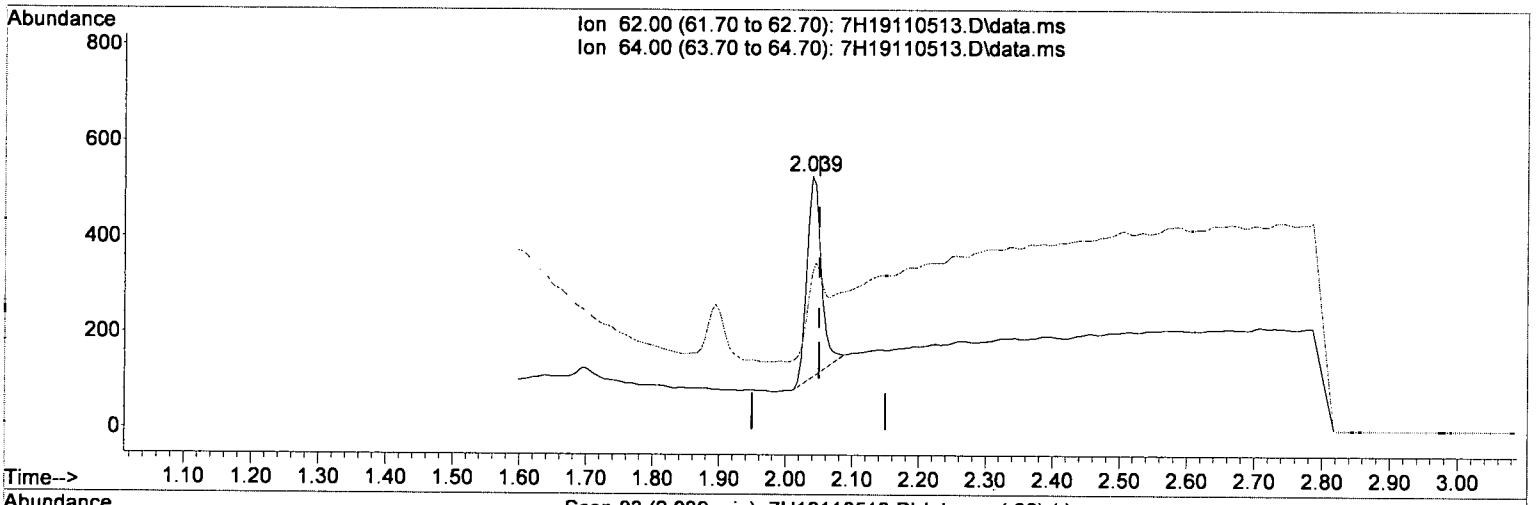
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.317	168	21155	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	33917	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.739	152	16492	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	11157	2218.64 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	36425	2310.74 ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	50578	2194.84 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	13012	2088.40 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.937	50	680	Below Cal	99
3) Vinyl Chloride	2.039	62	631	89.03 ng/L	91
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.328	76	985	65.56 ng/L	89
6) t-1,2-Dichloroethene	4.125	61	87	11.42 ng/L	91
7) Methyl-tert-butyl-ether	4.256	73	85	5.45 ng/L #	26
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	5.337	61	1015	129.32 ng/L	88
10) Chloroform	5.626	83	51	5.20 ng/L #	58
12) Benzene	6.230	78	5653	249.11 ng/L	96
13) 1,2-Dichloroethane (EDC)	6.441	62	39	5.13 ng/L	93
15) Trichloroethene (TCE)	6.851	130	208	40.30 ng/L	98
16) 1,2-Dichloropropane	7.458	63	28	4.58 ng/L	71
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	2445	99.58 ng/L	98
21) Tetrachloroethene (PCE)	0.000		0	N.D.	
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	9.164	97	73	12.86 ug/L #	1
24) 1,2-Dibromoethane (EDB)	9.790	107	30	4.87 ng/L #	1
25) Ethylbenzene	10.482	91	10803	450.96 ng/L	96
26) m,p-Xylenes (2)	10.655	91	16117	930.56 ng/L	88
27) o-Xylene	11.123	91	12680	656.77 ng/L	95
30) 1,1,2,2-Tetrachloroeth...	11.929	83	33	2.94 ug/L #	1
31) 1,3.5-Trimethylbenzene	12.042	105	38287	2158.95 ng/L	91
32) 1,2,3-Trichloropropane	12.096	110	46	15.32 ng/L #	1
33) 1,2,4-Trimethylbenzene	12.394	105	59158	3246.09 ng/L	91
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	948750	47379.10 ng/L	96

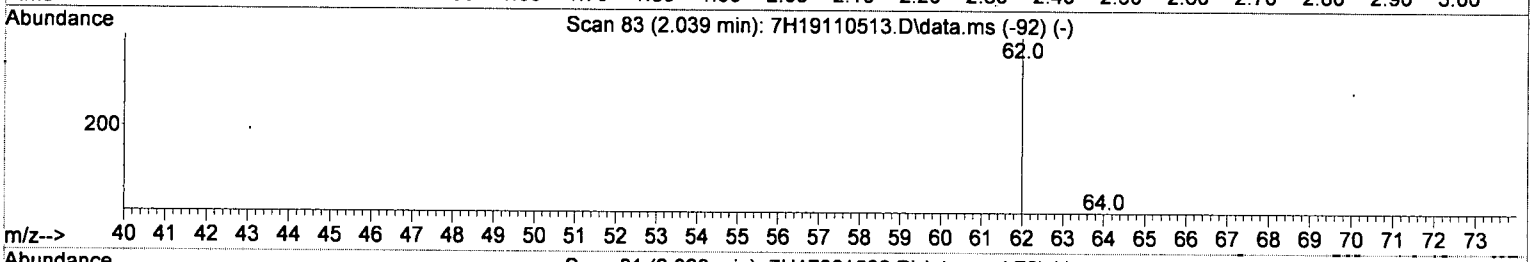
(#) = qualifier out of range (m) = manual integration (+) = signals summed

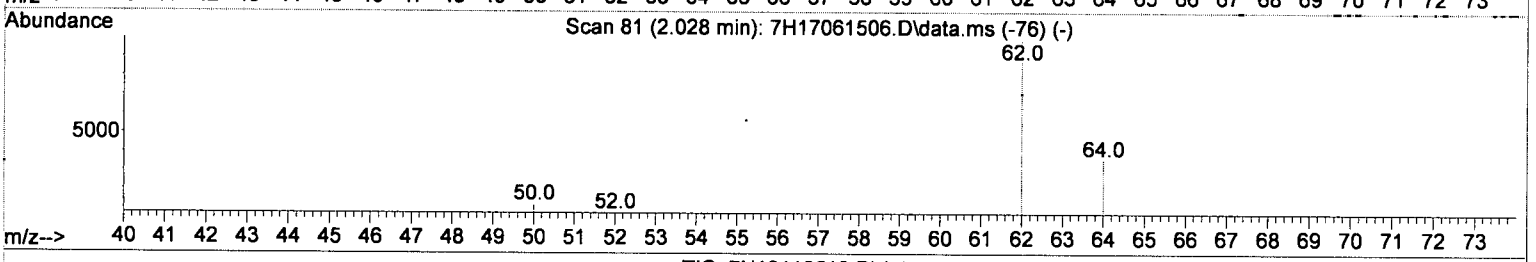
Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110513.D
Acq On : 05 Nov 2019 02:58 pm
Operator : MM
Sample : A9J1114-02
Misc : 1X 5mL SIM VC
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 05 16:38:38 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M







TIC: 7H19110513.D\data.ms

(3) Vinyl Chloride

2.039min (-0.011) 89.03 ng/L

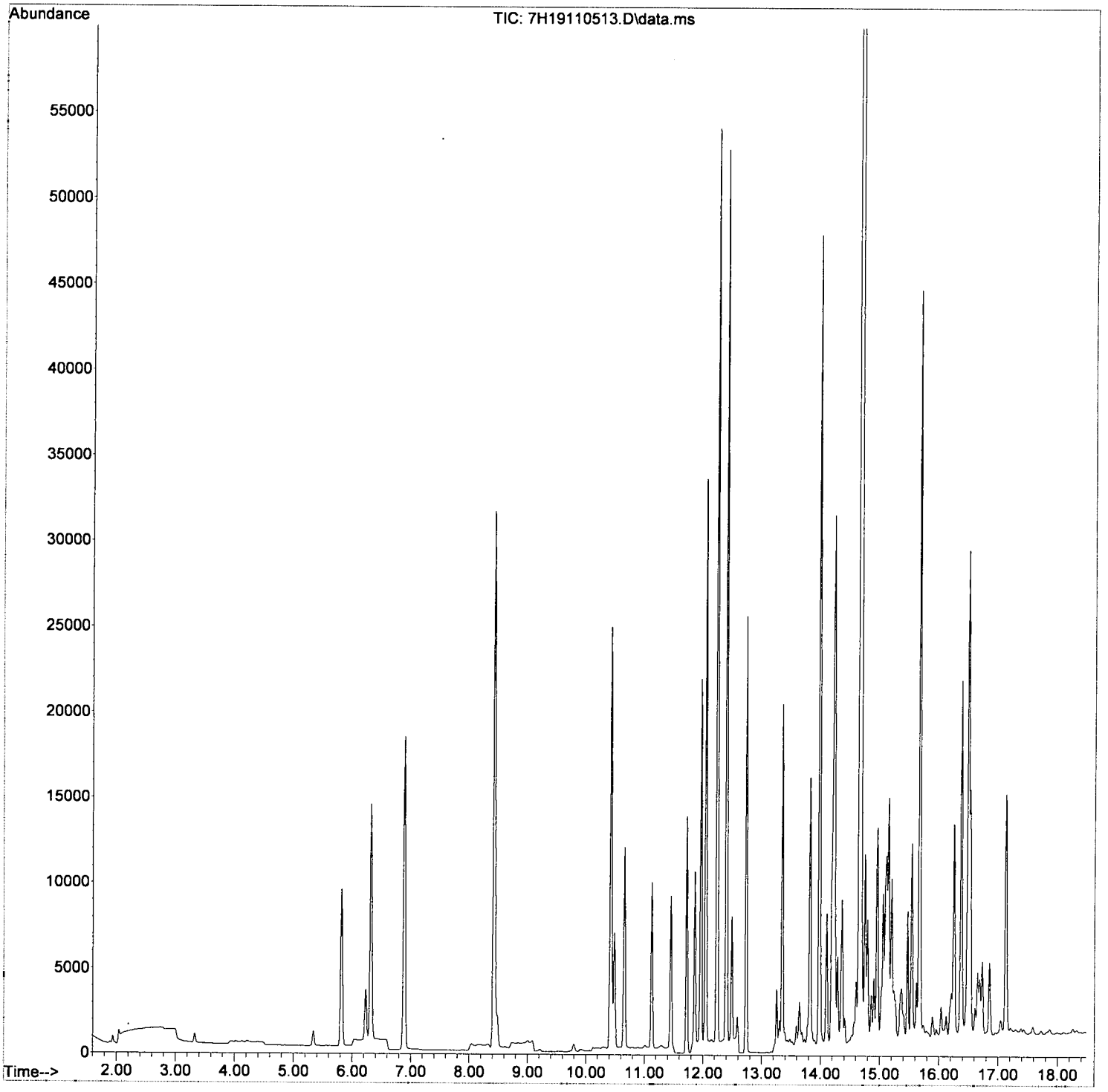
response 631

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	35.30	40.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110513.D
Acq On : 05 Nov 2019 02:58 pm
Operator : MM
Sample : A9J1114-02
Misc : 1X 5mL SIM VC
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Nov 05 16:38:38 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110514.D
Acq On : 05 Nov 2019 03:25 pm
Operator : MM
Sample : A9J1114-04
Misc : 1X 5mL SIM VC
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 05 16:38:42 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

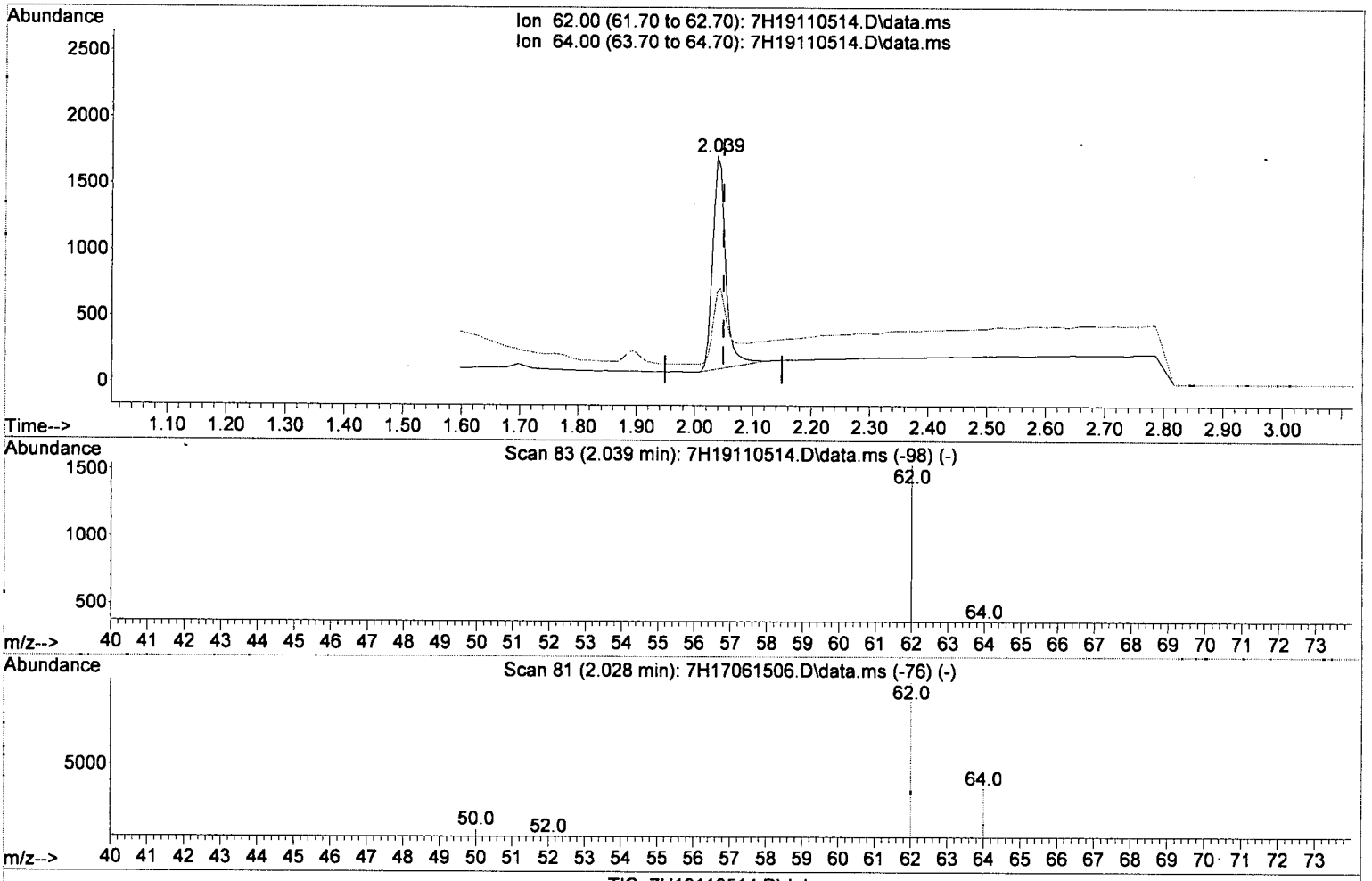
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.316	168	21911	2330.00	ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	34834	2330.00	ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	16568	2330.00	ng/L	-0.01
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.814	111	11518	2211.40	ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	37634	2305.06	ng/L	-0.01
19) Toluene-d8 (S)	8.421	98	52267	2208.43	ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.718	174	13154	2101.50	ng/L	-0.01
Target Compounds						Qvalue
2) Chloromethane	1.936	50	868	5.73	ng/L	97
3) Vinyl Chloride	2.039	62	2470	336.49	ng/L	97
4) 1,1-Dichloroethene	0.000		0	N.D.		
5) Carbon Disulfide	3.327	76	1046	67.21	ng/L	85
6) t-1,2-Dichloroethene	4.125	61	72	9.12	ng/L	93
7) Methyl-tert-butyl-ether	0.000		0	N.D.		
8) 1,1-Dichloroethane	0.000		0	N.D.		
9) c-1,2-Dichloroethene	5.336	61	455	55.97	ng/L	89
10) Chloroform	5.626	83	26	2.56	ng/L	88
12) Benzene	6.230	78	5776	245.75	ng/L	97
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.		
15) Trichloroethene (TCE)	6.851	130	192	35.92	ng/L	97
16) 1,2-Dichloropropane	0.000		0	N.D.		
18) c-1,3-Dichloropropene	0.000		0	N.D.		
20) Toluene	8.481	91	1274	50.52	ng/L	99
21) Tetrachloroethene (PCE)	0.000		0	N.D.		
22) t-1,3-Dichloropropene	0.000		0	N.D.		
23) 1,1,2-Trichloroethane	0.000		0	N.D.		
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.		
25) Ethylbenzene	10.482	91	1254	50.97	ng/L	95
26) m,p-Xylenes (2)	10.654	91	2478	139.31	ng/L	89
27) o-Xylene	11.122	91	3758	189.52	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.966	83	28	2.48	ug/L #	17
31) 1,3.5-Trimethylbenzene	12.042	105	10117	567.87	ng/L	91
32) 1,2,3-Trichloropropane	0.000		0	N.D.		
33) 1,2,4-Trimethylbenzene	12.393	105	6399	349.51	ng/L	91
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
35) Naphthalene	14.664	128	126364	6281.47	ng/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110514.D
Acq On : 05 Nov 2019 03:25 pm
Operator : MM
Sample : A9J1114-04
Misc : 1X 5mL SIM VC
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 05 16:38:42 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



TIC: 7H19110514.D\data.ms

(3) Vinyl Chloride

2.039min (-0.011) 336.49 ng/L

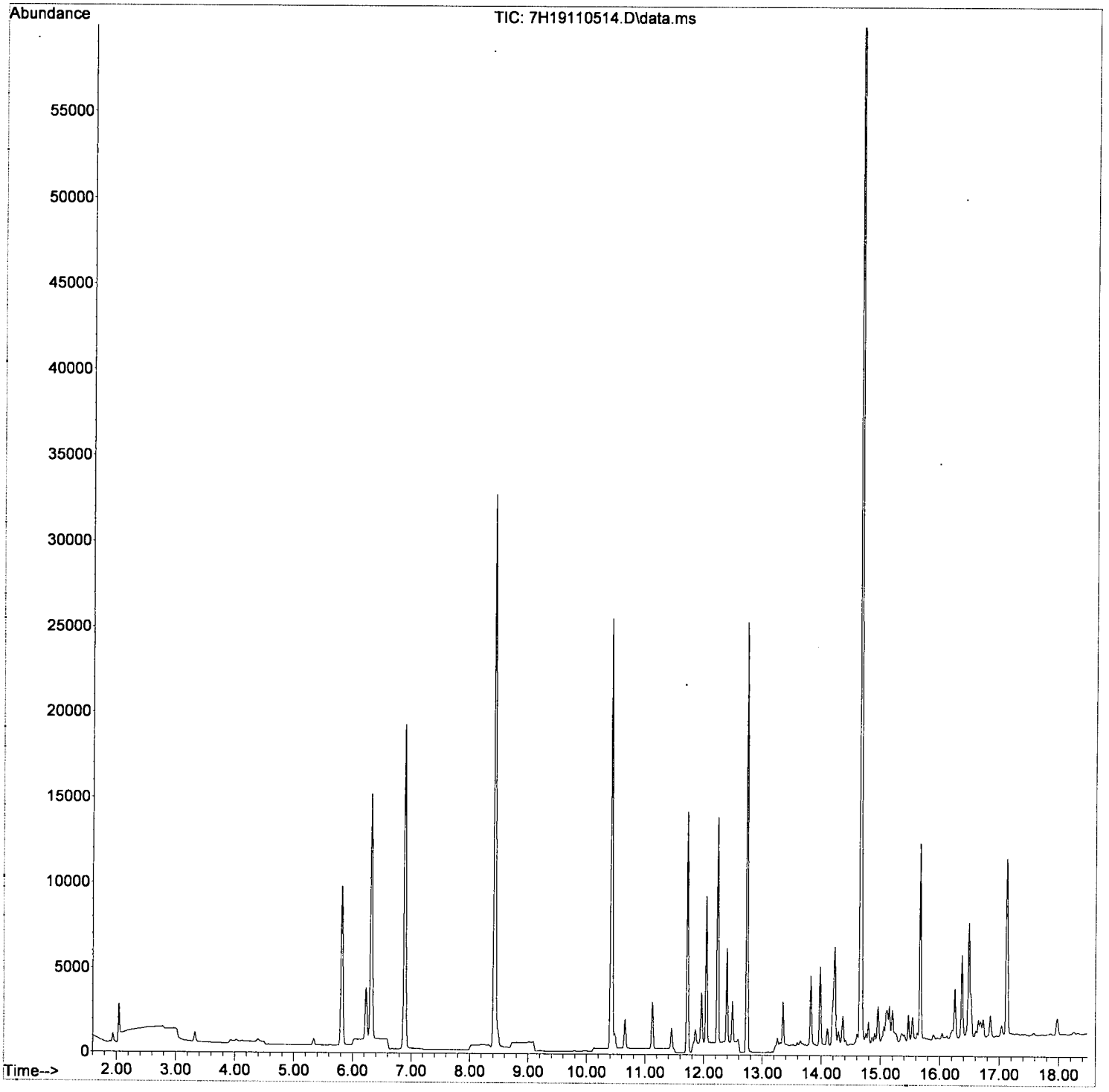
response 2470

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	35.30	33.35
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110514.D
Acq On : 05 Nov 2019 03:25 pm
Operator : MM
Sample : A9J1114-04
Misc : 1X 5mL SIM VC
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Nov 05 16:38:42 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110515.D
Acq On : 05 Nov 2019 03:51 pm
Operator : MM
Sample : A9J1114-05
Misc : 1X 5mL SIM VC
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 05 16:38:46 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

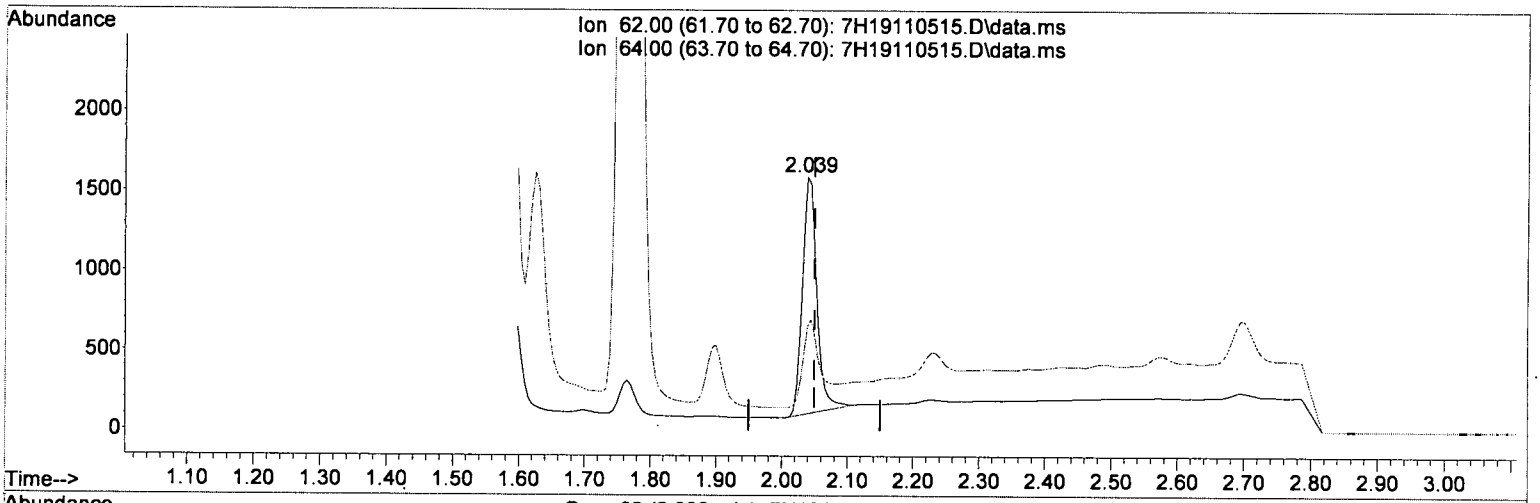
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.316	168	21713	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	34609	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	16723	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	11580	2243.58 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	37544	2320.52 ng/L	-0.01
19) Toluene-d8 (S)	8.421	98	51954	2209.48 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.718	174	13262	2099.12 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.936	50	1038	28.41 ng/L	99
3) Vinyl Chloride	2.039	62	2275	312.75 ng/L	98
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.327	76	349	22.63 ng/L #	31
6) t-1,2-Dichloroethene	4.125	61	471	60.23 ng/L	85
7) Methyl-tert-butyl-ether	4.271	73	47	2.93 ng/L	94
8) 1,1-Dichloroethane	4.776	63	490	48.87 ng/L	97
9) c-1,2-Dichloroethene	5.336	61	2558	317.54 ng/L	88
10) Chloroform	5.620	83	28	2.78 ng/L	93
12) Benzene	6.230	78	370220	15895.39 ng/L	97
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	6.851	130	493	93.06 ng/L	98
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	19258	768.69 ng/L	97
21) Tetrachloroethene (PCE)	8.949	166	26	5.12 ng/L	88
22) t-1,3-Dichloropropene	8.949	75	43	4.99 ng/L #	22
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.482	91	9722	397.72 ng/L	95
26) m,p-Xylenes (2)	10.654	91	14089	797.21 ng/L	88
27) o-Xylene	11.122	91	30130	1529.41 ng/L	95
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.042	105	8575	476.85 ng/L	91
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.393	105	21243	1149.53 ng/L	91
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	216933	10683.65 ng/L	96

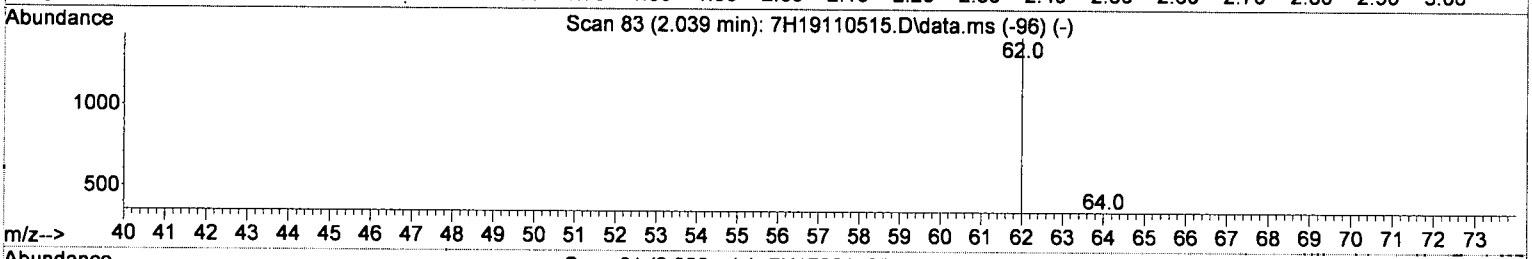
(#) = qualifier out of range (m) = manual integration (+) = signals summed

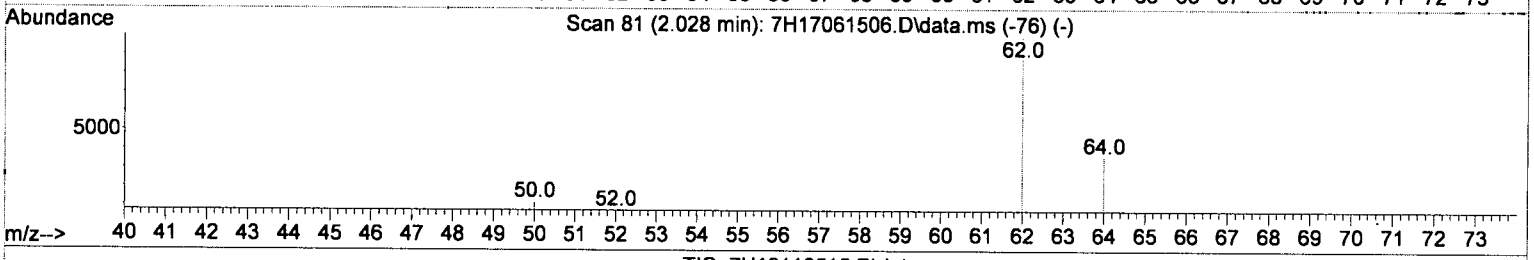
Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110515.D
Acq On : 05 Nov 2019 03:51 pm
Operator : MM
Sample : A9J1114-05
Misc : 1X 5mL SIM VC
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 05 16:38:46 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M







TIC: 7H19110515.D\data.ms

(3) Vinyl Chloride

2.039min (-0.011) 312.75 ng/L

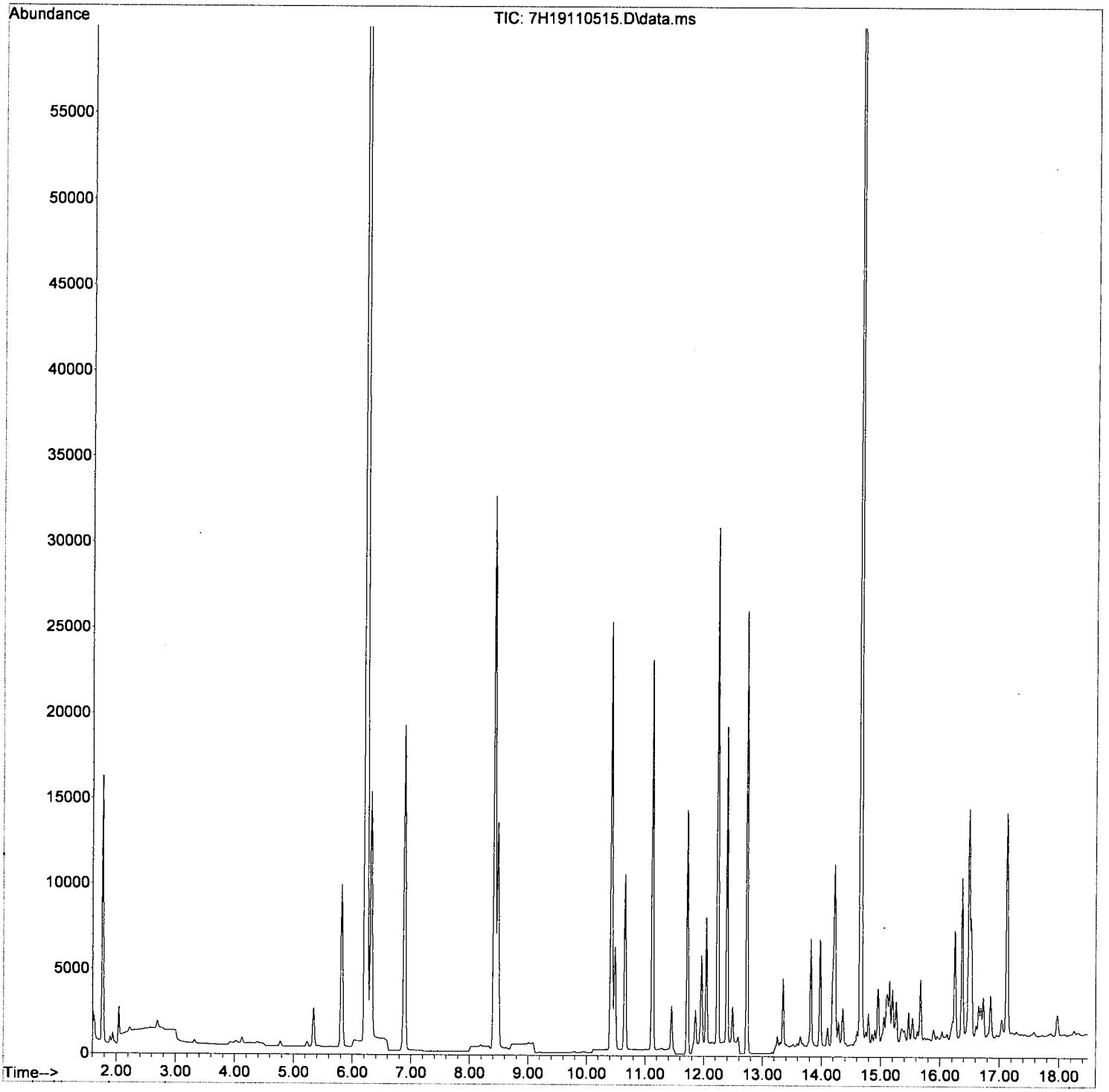
response 2275

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	35.30	34.06
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110515.D
Acq On : 05 Nov 2019 03:51 pm
Operator : MM
Sample : A9J1114-05
Misc : 1X 5mL SIM VC
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Nov 05 16:38:46 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110516.D
Acq On : 05 Nov 2019 04:18 pm
Operator : MM
Sample : 9110483-DUP1
Misc : 1X 5mL (J1114-05)
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 05 16:38:50 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

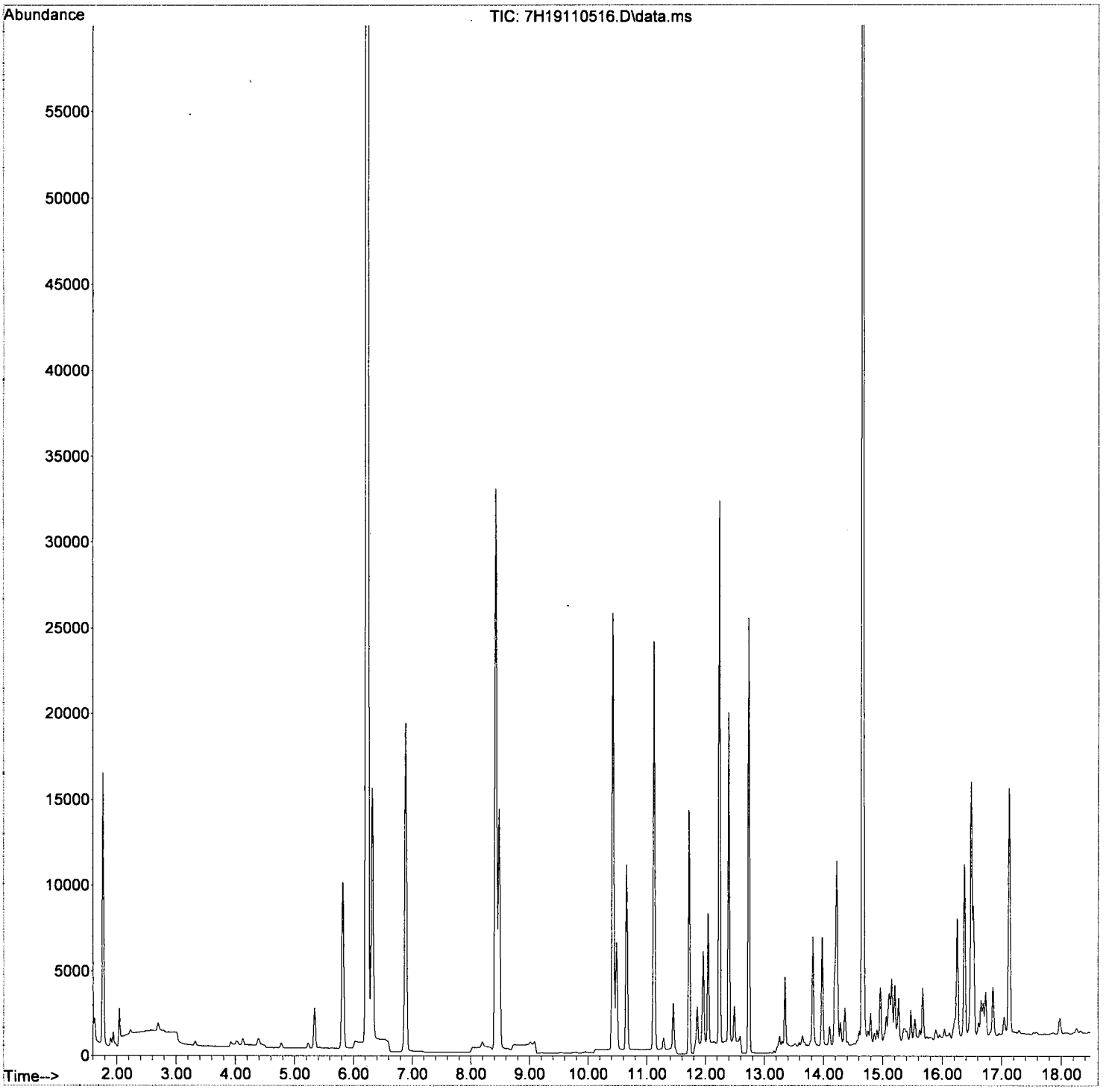
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.316	168	22102	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	35256	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	16733	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	11803	2246.54 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	38172	2317.81 ng/L	-0.01
19) Toluene-d8 (S)	8.421	98	52679	2199.20 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.718	174	13405	2120.49 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.936	50	1348	64.45 ng/L	99
3) Vinyl Chloride	2.039	62	2420	326.83 ng/L	96
4) 1,1-Dichloroethene	3.312	61	27	3.03 ng/L #	67
5) Carbon Disulfide	3.327	76	332	21.15 ng/L #	1
6) t-1,2-Dichloroethene	4.125	61	495	62.19 ng/L	86
7) Methyl-tert-butyl-ether	4.266	73	103	6.32 ng/L #	55
8) 1,1-Dichloroethane	4.776	63	498	48.80 ng/L	97
9) c-1,2-Dichloroethene	5.336	61	2641	322.07 ng/L	89
10) Chloroform	5.620	83	42	4.10 ng/L	86
12) Benzene	6.230	78	387528	16345.67 ng/L	97
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	6.851	130	516	95.69 ng/L	99
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	20136	788.98 ng/L	96
21) Tetrachloroethene (PCE)	8.949	166	25	4.83 ng/L	68
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.482	91	10088	405.12 ng/L	96
26) m,p-Xylenes (2)	10.654	91	14960	830.96 ng/L	88
27) o-Xylene	11.122	91	31834	1586.25 ng/L	95
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.042	105	8960	497.96 ng/L	91
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.393	105	22265	1204.12 ng/L	90
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	224093	11029.68 ng/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110516.D
Acq On : 05 Nov 2019 04:18 pm
Operator : MM
Sample : 9110483-DUP1
Misc : 1X 5mL (J1114-05)
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Nov 05 16:38:50 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110518.D
Acq On : 05 Nov 2019 05:12 pm
Operator : MM
Sample : A9J1114-07
Misc : 1X 5mL SIM VC
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 06 09:24:08 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

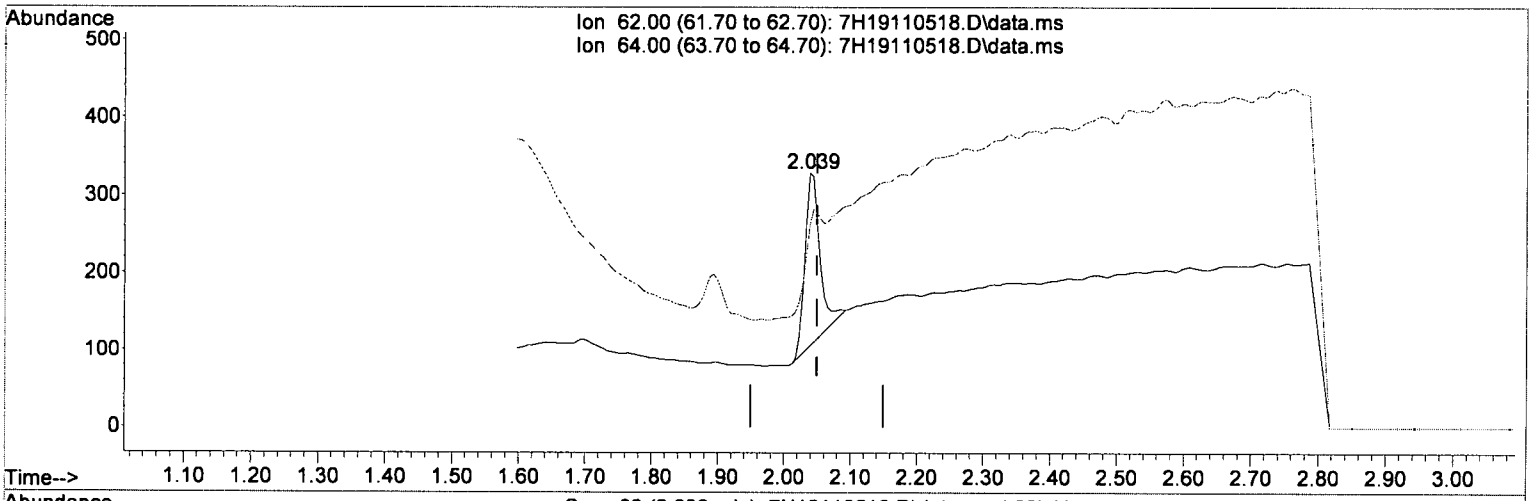
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.317	168	22152	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	35814	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	17499	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	12020	2282.67 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	38395	2326.09 ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	53349	2192.47 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.718	174	13758	2081.06 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.936	50	881	6.16 ng/L	96
3) Vinyl Chloride	2.039	62	355	47.84 ng/L	79
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.327	76	876	55.68 ng/L	91
6) t-1,2-Dichloroethene	4.125	61	30	3.76 ng/L	84
7) Methyl-tert-butyl-ether	4.256	73	38	2.33 ng/L #	1
8) 1,1-Dichloroethane	4.771	63	42	4.11 ng/L	94
9) c-1,2-Dichloroethene	5.336	61	5321	647.43 ng/L	88
10) Chloroform	5.626	83	49	4.77 ng/L	91
12) Benzene	6.230	78	412727	17369.25 ng/L	97
13) 1,2-Dichloroethane (EDC)	6.441	62	29	3.64 ng/L #	43
15) Trichloroethene (TCE)	6.851	130	607	112.31 ng/L	98
16) 1,2-Dichloropropane	7.458	63	47	7.34 ng/L #	46
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	8342	321.77 ng/L	97
21) Tetrachloroethene (PCE)	0.000		0	N.D.	
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	9.169	97	98	16.35 ug/L #	1
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.482	91	126022	4982.01 ng/L	95
26) m,p-Xylenes (2)	10.654	91	42216	2308.36 ng/L	88
27) o-Xylene	11.122	91	58409	2865.10 ng/L	95
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.042	105	43290	2300.59 ng/L	91
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.394	105	133038	6879.90 ng/L	91
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	3106894	146224.97 ng/L	97

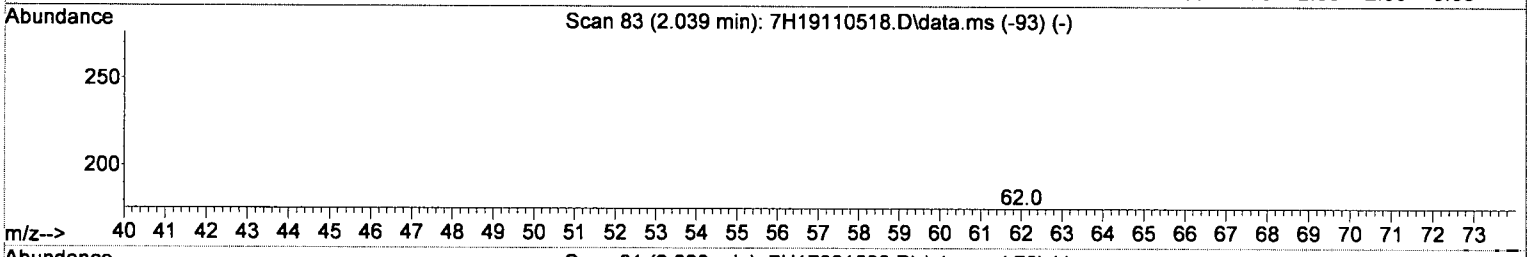
(#) = qualifier out of range (m) = manual integration (+) = signals summed

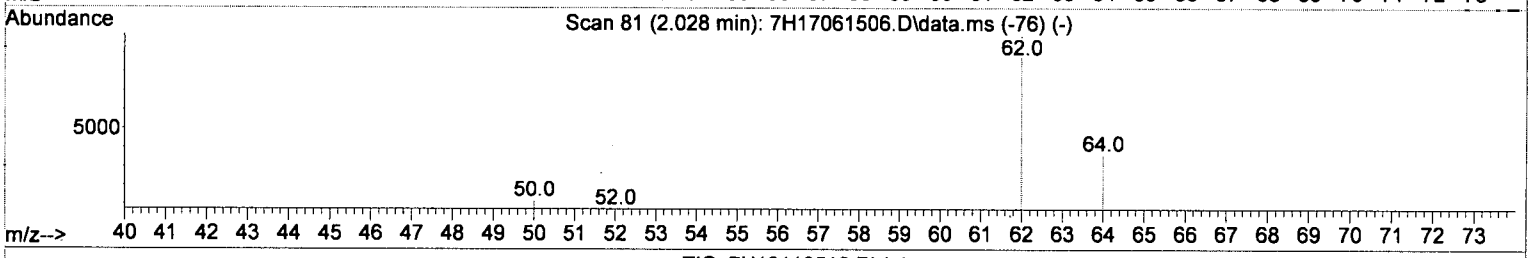
Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110518.D
Acq On : 05 Nov 2019 05:12 pm
Operator : MM
Sample : A9J1114-07
Misc : 1X 5mL SIM VC
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 06 09:24:08 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M







TIC: 7H19110518.D\data.ms

(3) Vinyl Chloride

2.039min (-0.011) 47.84 ng/L

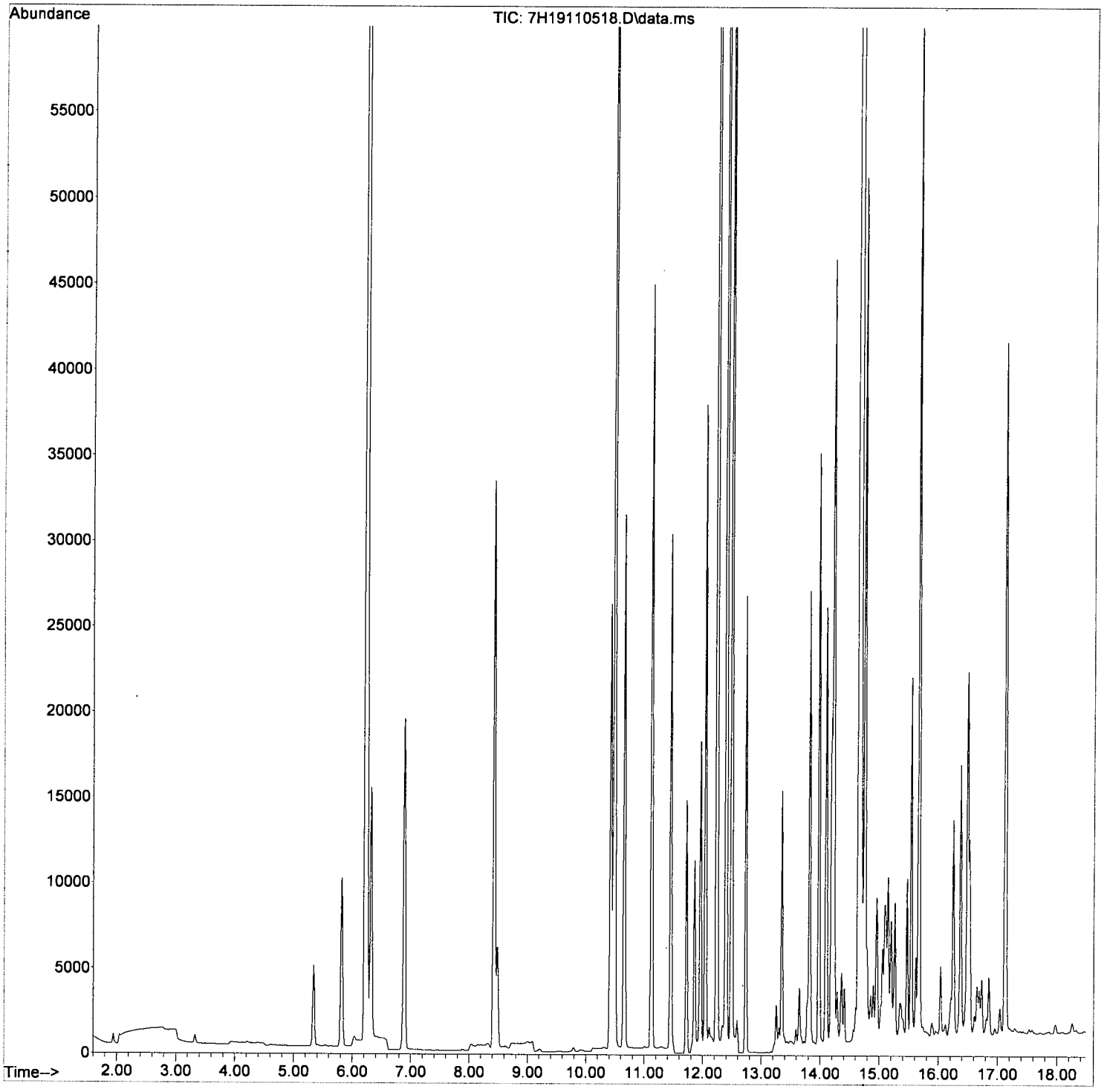
response 355

Ion	Exp%	Act%
62.00	100.00	100.00
64.00	35.30	47.56
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110518.D
Acq On : 05 Nov 2019 05:12 pm
Operator : MM
Sample : A9J1114-07
Misc : 1X 5mL SIM VC
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Nov 06 09:24:08 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110522.D
Acq On : 05 Nov 2019 07:00 pm
Operator : MM
Sample : 9110492-BLK1
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 06 09:24:25 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.317	168	21343	2330.00 ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	33476	2330.00 ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	14983	2330.00 ng/L	-0.01
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.814	111	11586	2283.66 ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	37193	2338.67 ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	50696	2228.95 ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	12265	2166.76 ng/L	-0.01
Target Compounds					Qvalue
2) Chloromethane	1.936	50	459	Below Cal	97
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.327	76	270	17.81 ng/L	99
6) t-1,2-Dichloroethene	0.000		0	N.D.	
7) Methyl-tert-butyl-ether	4.226	73	50	3.18 ng/L #	1
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	0.000		0	N.D.	
10) Chloroform	5.621	83	39	3.94 ng/L	87
12) Benzene	6.230	78	287	12.54 ng/L	90
13) 1,2-Dichloroethane (EDC)	6.436	62	26	3.39 ng/L	97
15) Trichloroethene (TCE)	0.000		0	N.D.	
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.481	91	239	9.86 ng/L	97
21) Tetrachloroethene (PCE)	0.000		0	N.D.	
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.482	91	131	5.54 ng/L	96
26) m,p-Xylenes (2)	10.654	91	182	10.65 ng/L	88
27) o-Xylene	11.123	91	112	5.88 ng/L	87
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.042	105	65	4.03 ng/L	83
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.394	105	166	10.03 ng/L	94
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.664	128	12700	698.09 ng/L	97

<LMDL

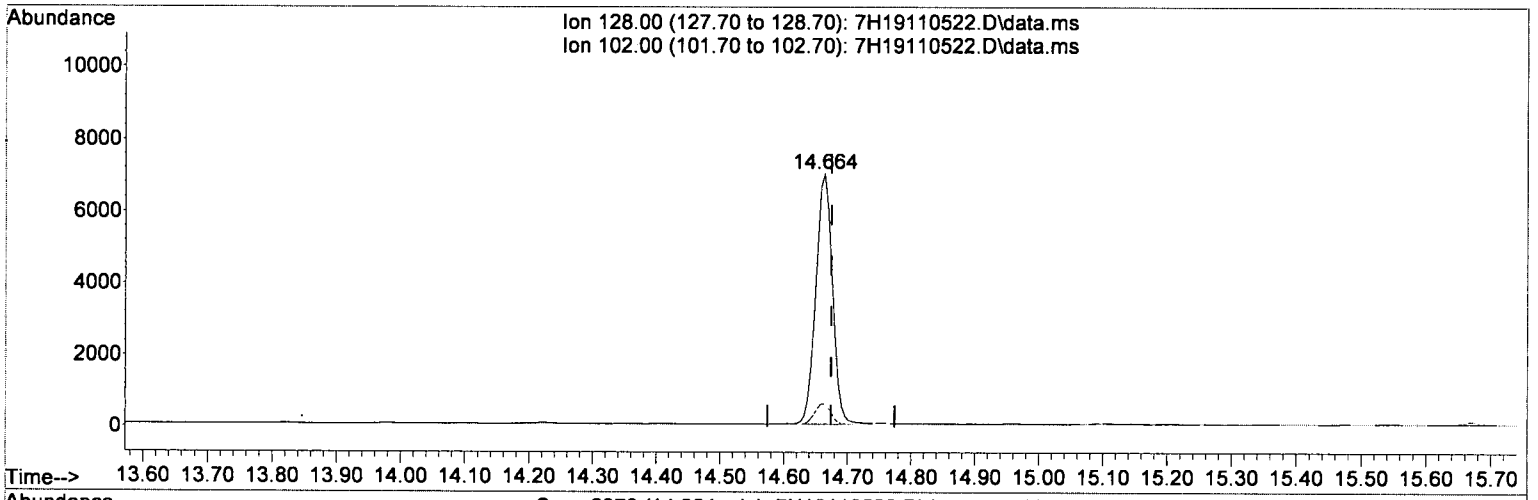
C.O.B

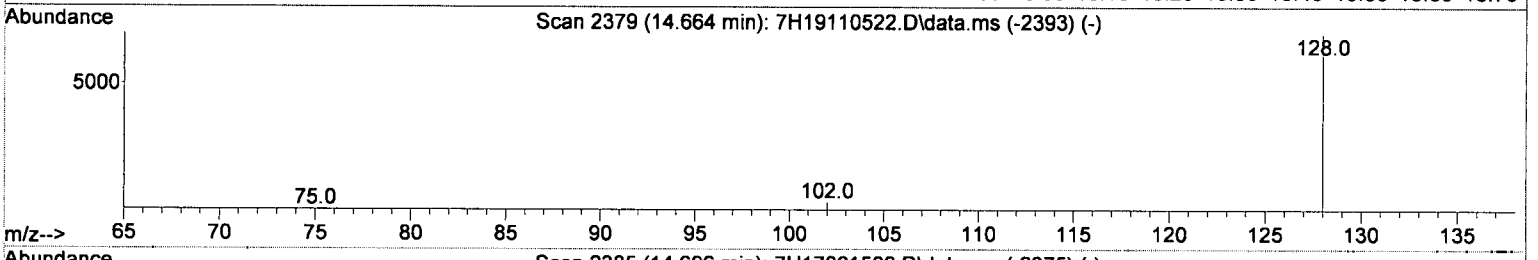
(#) = qualifier out of range (m) = manual integration (+) = signals summed

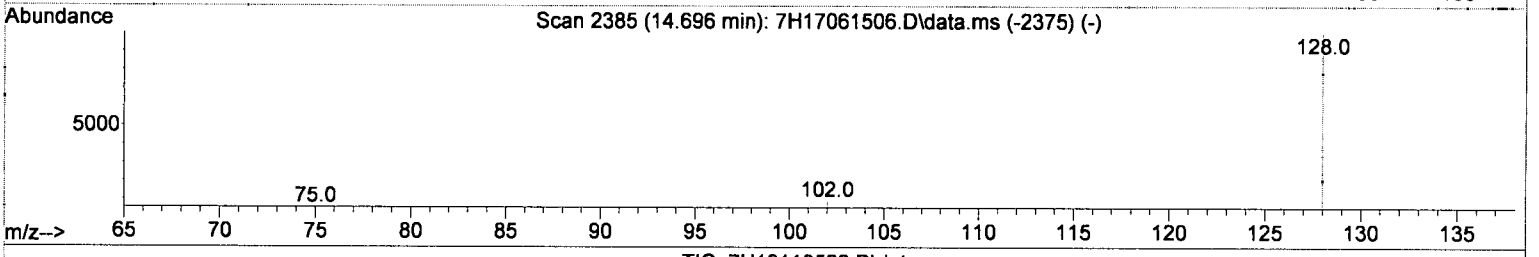
Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110522.D
Acq On : 05 Nov 2019 07:00 pm
Operator : MM
Sample : 9110492-BLK1
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 06 09:24:25 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M







TIC: 7H19110522.D\data.ms

(35) Naphthalene

14.664min (-0.010) 698.09 ng/L

response 12700

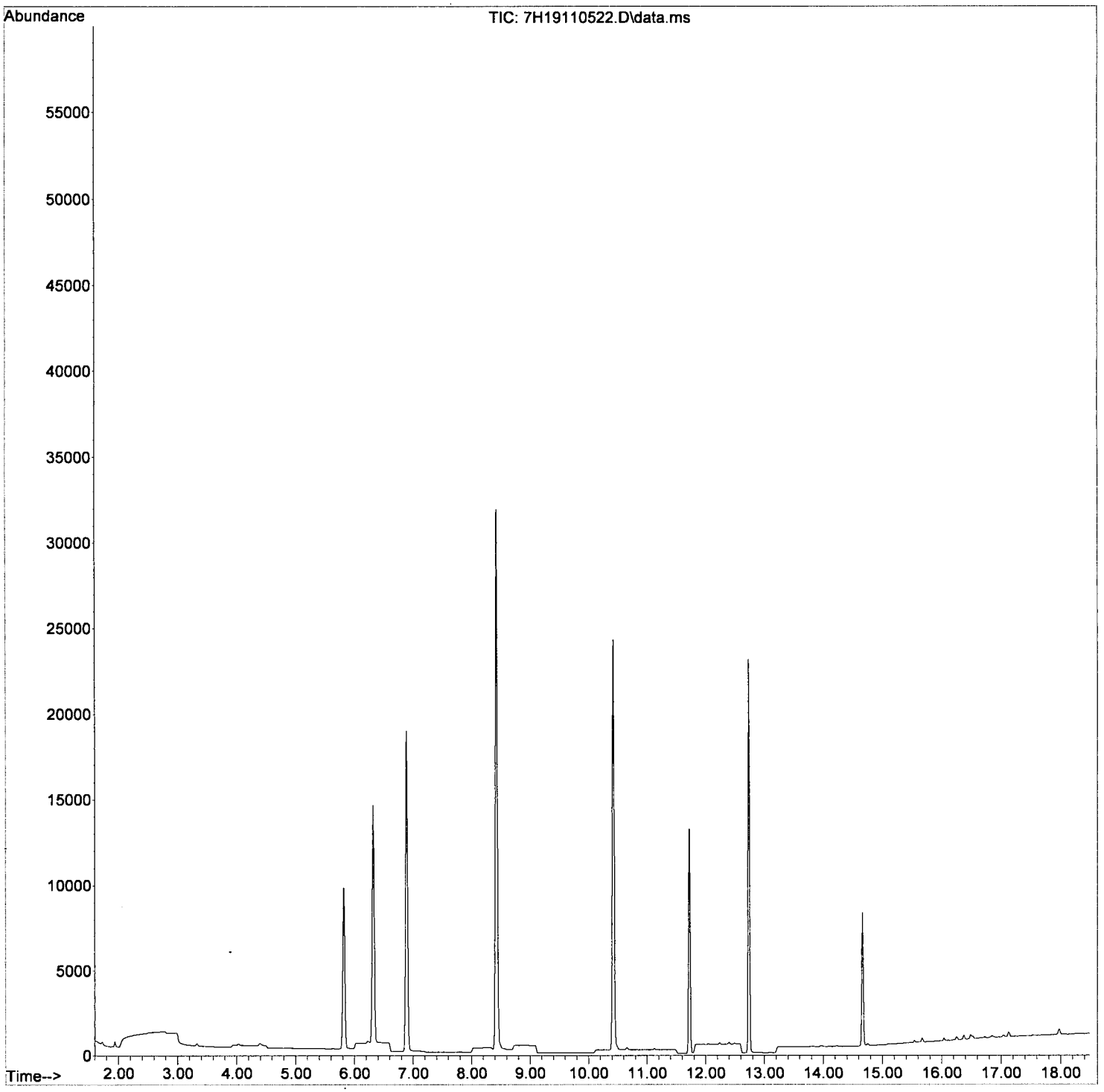
Ion	Exp%	Act%
128.00	100.00	100.00
102.00	9.40	8.30
0.00	0.00	0.00
0.00	0.00	0.00

B

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110522.D
Acq On : 05 Nov 2019 07:00 pm
Operator : MM
Sample : 9110492-BLK1
Misc : 1X 5mL DI
ALS Vial : 17 Sample Multiplier: 1

Quant Time: Nov 06 09:24:25 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110523.D
Acq On : 05 Nov 2019 07:26 pm
Operator : MM
Sample : 9110492-BS1
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 06 09:24:29 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

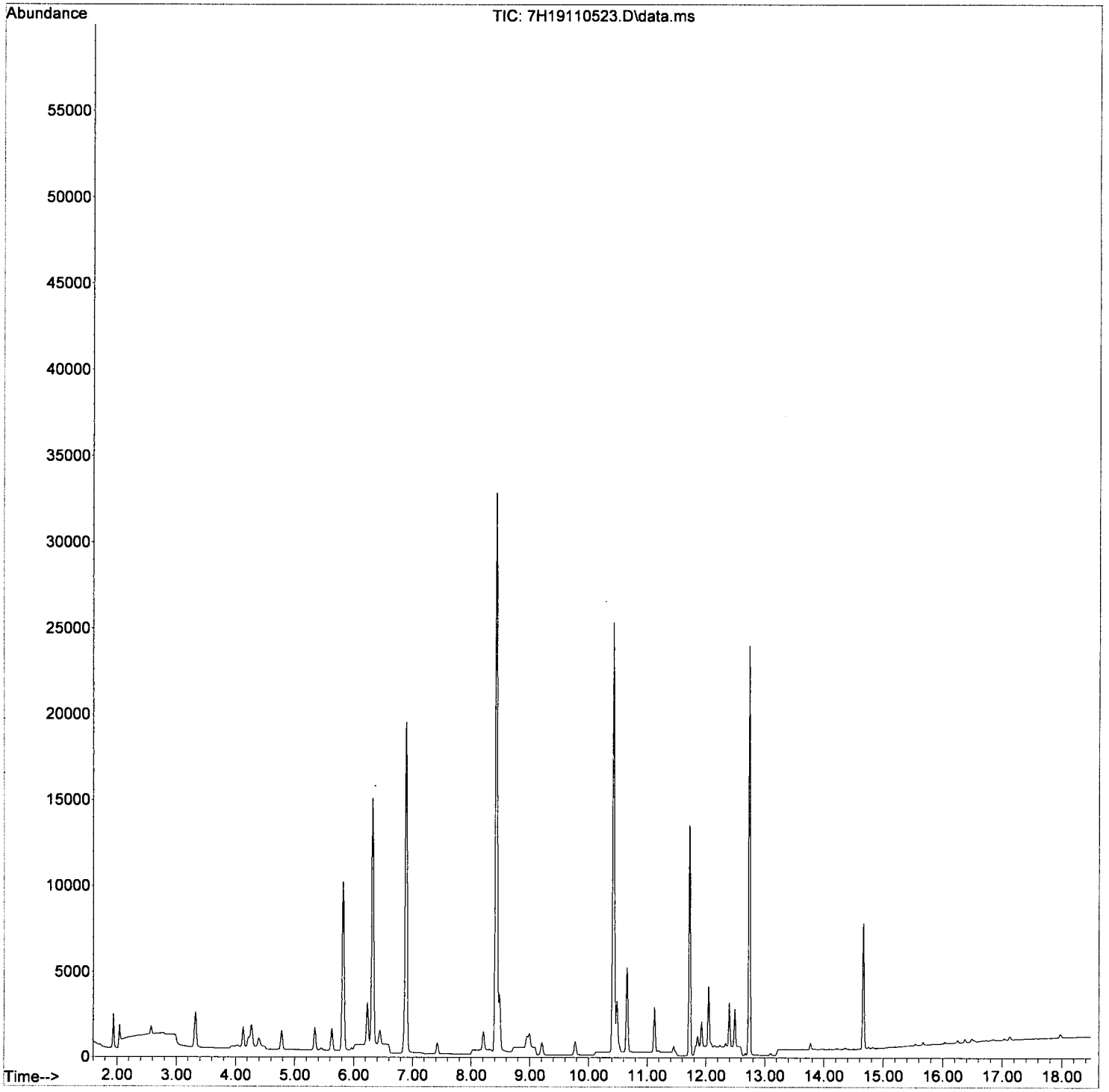
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.317	168	22046	2330.00	ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	34502	2330.00	ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.739	152	15519	2330.00	ng/L	-0.01
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.814	111	11985	2286.97	ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	38277	2330.09	ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	52195	2226.61	ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	12732	2171.58	ng/L	-0.01
Target Compounds						Qvalue
2) Chloromethane	1.937	50	2573	210.92	ng/L	99
3) Vinyl Chloride	2.039	62	1380	186.84	ng/L	100
4) 1,1-Dichloroethene	3.307	61	1397	157.24	ng/L	87
5) Carbon Disulfide	3.328	76	2648	169.11	ng/L	98
6) t-1,2-Dichloroethene	4.125	61	1497	188.55	ng/L	87
7) Methyl-tert-butyl-ether	4.267	73	2946	181.13	ng/L	57
8) 1,1-Dichloroethane	4.776	63	1923	188.90	ng/L	100
9) c-1,2-Dichloroethene	5.337	61	1528	186.81	ng/L	89
10) Chloroform	5.626	83	1879	183.87	ng/L	100
12) Benzene	6.230	78	4648	196.55	ng/L	97
13) 1,2-Dichloroethane (EDC)	6.441	62	1563	197.29	ng/L	100
15) Trichloroethene (TCE)	6.852	130	1002	186.29	ng/L	96
16) 1,2-Dichloropropane	7.421	63	1204	188.96	ng/L	89
18) c-1,3-Dichloropropene	8.207	75	1775	181.81	ng/L	88
20) Toluene	8.481	91	4571	183.02	ng/L	96
21) Tetrachloroethene (PCE)	8.949	166	925	182.60	ng/L	85
22) t-1,3-Dichloropropene	8.992	75	1558	181.28	ng/L	100
23) 1,1,2-Trichloroethane	9.207	97	1044	180.76	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.769	107	1098	175.15	ng/L	99
25) Ethylbenzene	10.482	91	4648	190.74	ng/L	95
26) m,p-Xylenes (2)	10.655	91	6879	390.45	ng/L	88
27) o-Xylene	11.123	91	3538	180.15	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.923	83	1677	158.61	ug/L	98
31) 1,3.5-Trimethylbenzene	12.042	105	3030	181.57	ng/L	90
32) 1,2,3-Trichloropropane	12.048	110	442	156.43	ng/L	84
33) 1,2,4-Trimethylbenzene	12.394	105	3066	178.78	ng/L	91
34) 1,2-Dibromo-3-chloropr...	13.775	157	357	149.06	ng/L	79
35) Naphthalene	14.664	128	11662	618.90	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110523.D
Acq On : 05 Nov 2019 07:26 pm
Operator : MM
Sample : 9110492-BS1
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 18 Sample Multiplier: 1

Quant Time: Nov 06 09:24:29 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110524.D
Acq On : 05 Nov 2019 07:53 pm
Operator : MM
Sample : 9110492-BS2
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 06 09:24:33 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

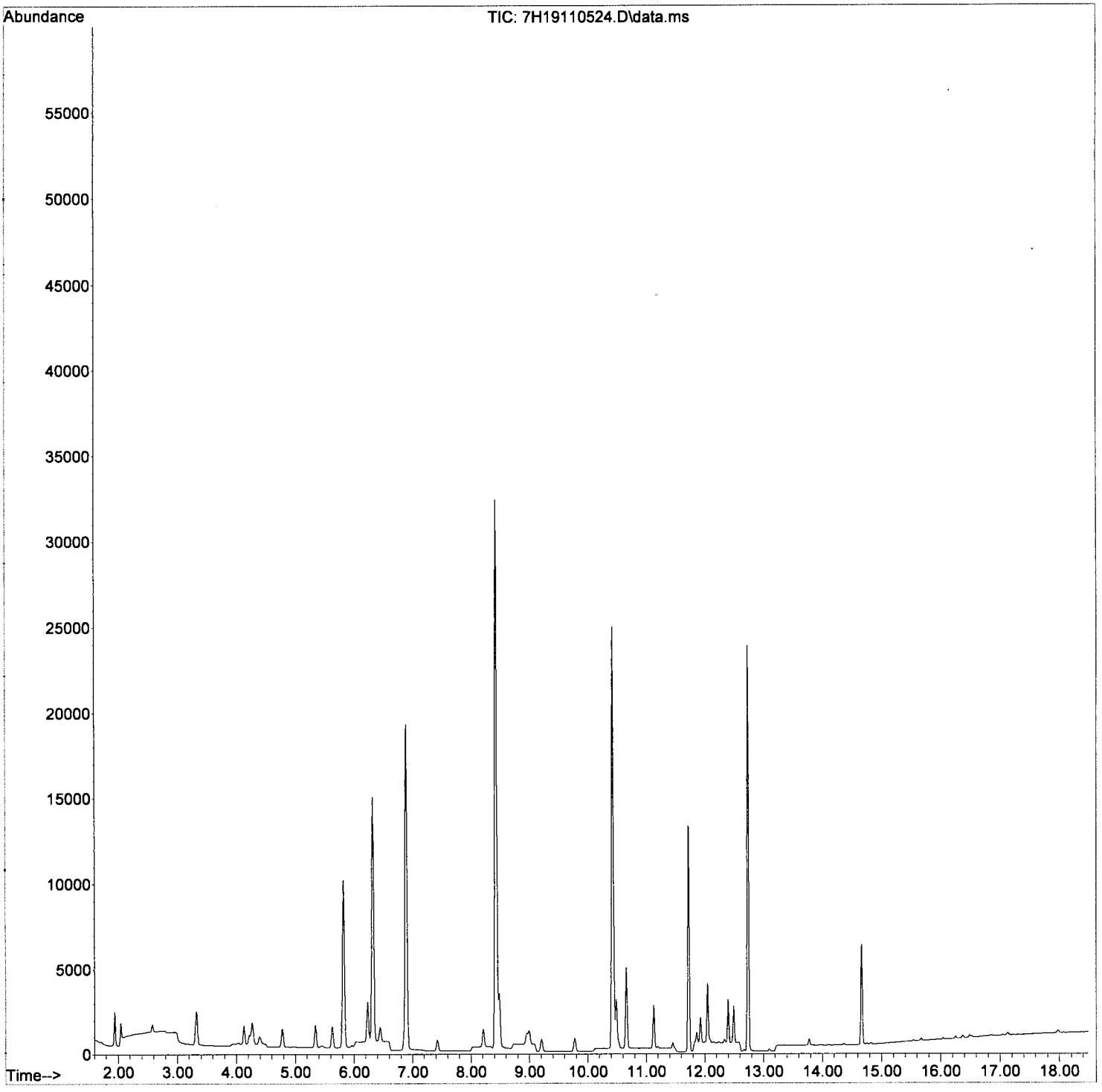
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.317	168	21871	2330.00	ng/L		-0.01
17) Chlorobenzene-d5 (I)	10.423	117	34352	2330.00	ng/L		-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	15292	2330.00	ng/L		-0.01
System Monitoring Compounds							
11) Dibromofluoromethane (S)	5.814	111	11917	2292.19	ng/L		-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	37912	2326.33	ng/L		-0.01
19) Toluene-d8 (S)	8.422	98	51974	2226.86	ng/L		-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	12604	2181.66	ng/L		-0.01
Target Compounds							Qvalue
2) Chloromethane	1.937	50	2480	202.45	ng/L		99
3) Vinyl Chloride	2.039	62	1299	177.29	ng/L		99
4) 1,1-Dichloroethene	3.307	61	1350	153.17	ng/L		86
5) Carbon Disulfide	3.328	76	2534	163.13	ng/L		98
6) t-1,2-Dichloroethene	4.125	61	1456	184.85	ng/L		87
7) Methyl-tert-butyl-ether	4.266	73	2903	179.91	ng/L	#	56
8) 1,1-Dichloroethane	4.776	63	1866	184.77	ng/L		98
9) c-1,2-Dichloroethene	5.336	61	1492	183.87	ng/L		88
10) Chloroform	5.626	83	1822	179.72	ng/L		100
12) Benzene	6.230	78	4524	192.83	ng/L		97
13) 1,2-Dichloroethane (EDC)	6.441	62	1531	194.80	ng/L		99
15) Trichloroethene (TCE)	6.851	130	978	183.29	ng/L		100
16) 1,2-Dichloropropane	7.421	63	1160	183.51	ng/L		89
18) c-1,3-Dichloropropene	8.207	75	1715	176.43	ng/L		87
20) Toluene	8.481	91	4426	177.99	ng/L		97
21) Tetrachloroethene (PCE)	8.949	166	912	180.82	ng/L		83
22) t-1,3-Dichloropropene	8.992	75	1534	179.26	ng/L		99
23) 1,1,2-Trichloroethane	9.207	97	1016	176.68	ug/L		99
24) 1,2-Dibromoethane (EDB)	9.774	107	1093	175.11	ng/L		94
25) Ethylbenzene	10.482	91	4481	184.69	ng/L		95
26) m,p-Xylenes (2)	10.655	91	6659	379.61	ng/L		88
27) o-Xylene	11.123	91	3422	175.00	ng/L		95
30) 1,1,2,2-Tetrachloroeth...	11.923	83	1709	164.04	ug/L		95
31) 1,3.5-Trimethylbenzene	12.042	105	2931	178.24	ng/L		92
32) 1,2,3-Trichloropropane	12.048	110	446	160.19	ng/L		88
33) 1,2,4-Trimethylbenzene	12.394	105	2955	174.87	ng/L		91
34) 1,2-Dibromo-3-chloropr...	13.775	157	342	144.92	ng/L		78
35) Naphthalene	14.664	128	9528	513.15	ng/L		96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110524.D
Acq On : 05 Nov 2019 07:53 pm
Operator : MM
Sample : 9110492-BS2
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 19 Sample Multiplier: 1

Quant Time: Nov 06 09:24:33 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110525.D
Acq On : 05 Nov 2019 08:20 pm
Operator : MM
Sample : 9110492-BS3
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 06 09:24:37 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

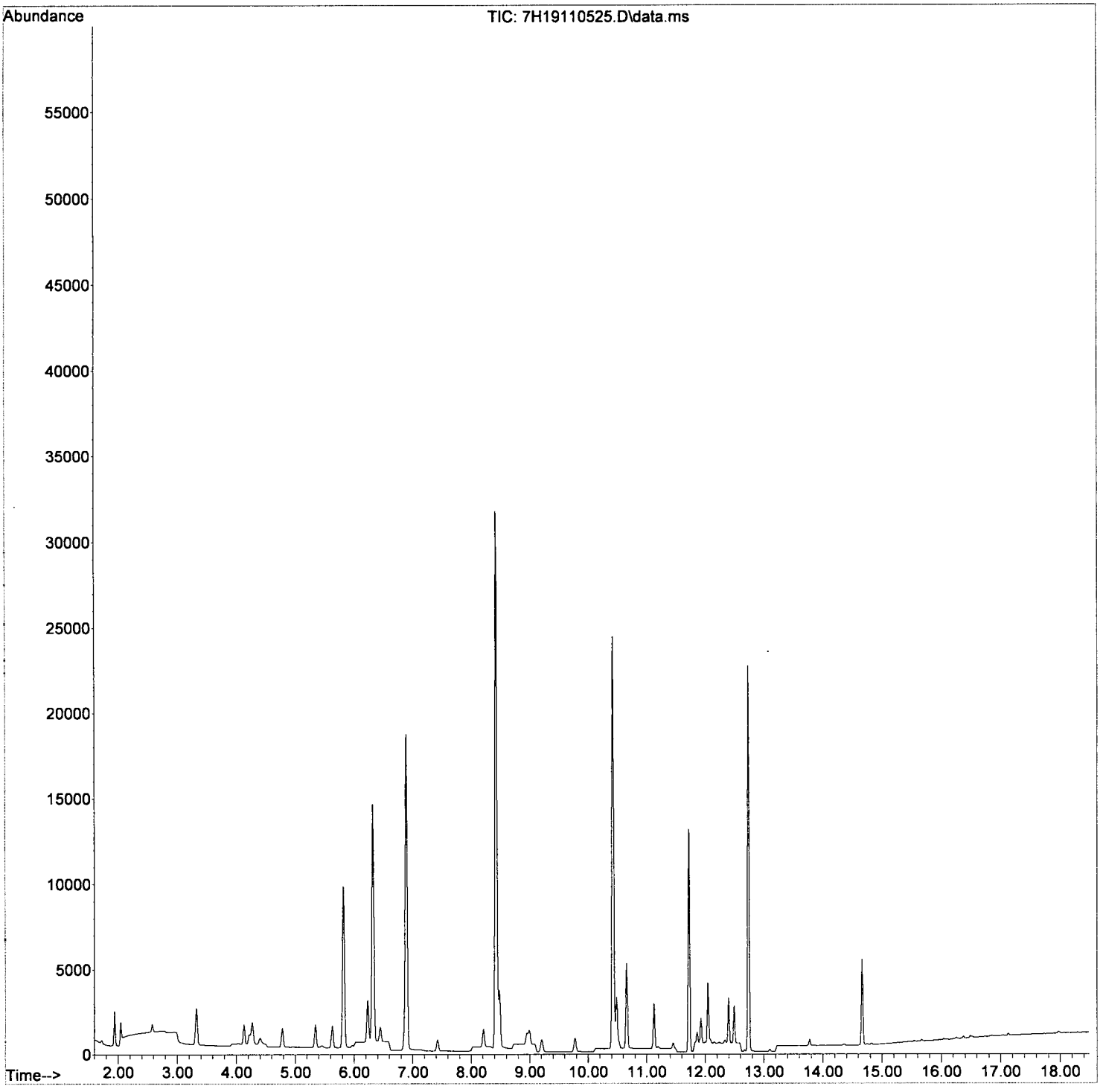
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.317	168	21345	2330.00	ng/L		-0.01
17) Chlorobenzene-d5 (I)	10.423	117	33302	2330.00	ng/L		-0.01
28) 1,4-Dichlorobenzene-d4...	12.738	152	14856	2330.00	ng/L		-0.01
System Monitoring Compounds							
11) Dibromofluoromethane (S)	5.814	111	11541	2274.57	ng/L		-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	36896	2319.78	ng/L		-0.01
19) Toluene-d8 (S)	8.422	98	50589	2235.86	ng/L		-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	12199	2173.53	ng/L		-0.01
Target Compounds							Qvalue
2) Chloromethane	1.936	50	2572	220.56	ng/L		98
3) Vinyl Chloride	2.039	62	1406	196.62	ng/L		99
4) 1,1-Dichloroethene	3.307	61	1435	166.82	ng/L		85
5) Carbon Disulfide	3.327	76	2839	187.27	ng/L		99
6) t-1,2-Dichloroethene	4.125	61	1526	198.51	ng/L		85
7) Methyl-tert-butyl-ether	4.266	73	2963	188.15	ng/L	#	55
8) 1,1-Dichloroethane	4.776	63	1952	198.05	ng/L		99
9) c-1,2-Dichloroethene	5.336	61	1557	196.61	ng/L		87
10) Chloroform	5.626	83	1930	195.07	ng/L		100
12) Benzene	6.230	78	4747	207.33	ng/L		97
13) 1,2-Dichloroethane (EDC)	6.441	62	1590	207.29	ng/L		97
15) Trichloroethene (TCE)	6.852	130	1024	196.64	ng/L		99
16) 1,2-Dichloropropane	7.421	63	1228	199.05	ng/L		88
18) c-1,3-Dichloropropene	8.207	75	1781	189.00	ng/L		86
20) Toluene	8.481	91	4788	198.62	ng/L		96
21) Tetrachloroethene (PCE)	8.949	166	945	193.27	ng/L		83
22) t-1,3-Dichloropropene	8.992	75	1609	193.96	ng/L		99
23) 1,1,2-Trichloroethane	9.207	97	1059	189.97	ug/L		98
24) 1,2-Dibromoethane (EDB)	9.769	107	1110	183.44	ng/L		99
25) Ethylbenzene	10.482	91	4673	198.67	ng/L		95
26) m,p-Xylenes (2)	10.655	91	6994	411.28	ng/L		89
27) o-Xylene	11.123	91	3575	188.59	ng/L		95
30) 1,1,2,2-Tetrachloroeth...	11.923	83	1701	168.06	ug/L		96
31) 1,3.5-Trimethylbenzene	12.042	105	3067	191.99	ng/L		91
32) 1,2,3-Trichloropropane	12.048	110	445	164.52	ng/L		87
33) 1,2,4-Trimethylbenzene	12.394	105	3083	187.80	ng/L		91
34) 1,2-Dibromo-3-chloropr...	13.775	157	345	150.48	ng/L	#	76
35) Naphthalene	14.664	128	8142	451.38	ng/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110525.D
Acq On : 05 Nov 2019 08:20 pm
Operator : MM
Sample : 9110492-BS3
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 20 Sample Multiplier: 1

Quant Time: Nov 06 09:24:37 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110526.D
Acq On : 05 Nov 2019 08:47 pm
Operator : MM
Sample : 9110492-BS4
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 06 09:24:41 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

11/6/19

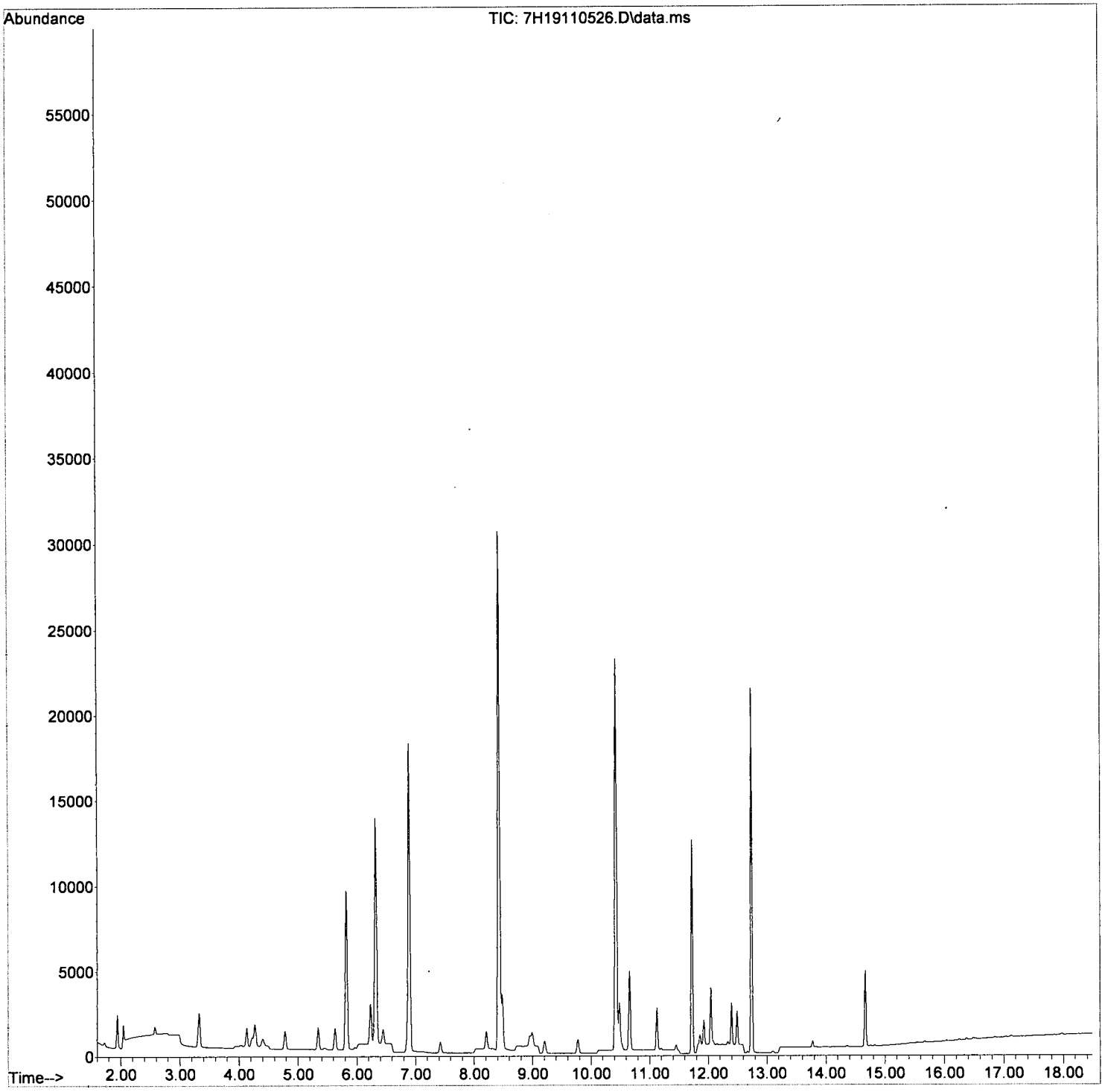
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.317	168	20183	2330.00	ng/L	-0.01
17) Chlorobenzene-d5 (I)	10.423	117	31907	2330.00	ng/L	-0.01
28) 1,4-Dichlorobenzene-d4...	12.739	152	13858	2330.00	ng/L	-0.01
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.814	111	11383	2372.59	ng/L	-0.01
14) 1,4-Difluorobenzene (S)	6.889	114	35853	2383.99	ng/L	-0.01
19) Toluene-d8 (S)	8.422	98	48656	2244.45	ng/L	-0.02
29) 4-Bromofluorobenzene (S)	11.719	174	11596	2214.88	ng/L	-0.01
Target Compounds						Qvalue
2) Chloromethane	1.936	50	2487	227.48	ng/L	99
3) Vinyl Chloride	2.039	62	1334	197.29	ng/L	100
4) 1,1-Dichloroethene	3.307	61	1316	161.80	ng/L	86
5) Carbon Disulfide	3.327	76	2631	183.54	ng/L	98
6) t-1,2-Dichloroethene	4.125	61	1433	197.15	ng/L	86
7) Methyl-tert-butyl-ether	4.266	73	2961	198.85	ng/L	57
8) 1,1-Dichloroethane	4.776	63	1885	202.26	ng/L	99
9) c-1,2-Dichloroethene	5.336	61	1510	201.65	ng/L	87
10) Chloroform	5.626	83	1869	199.78	ng/L	100
12) Benzene	6.230	78	4512	208.41	ng/L	97
13) 1,2-Dichloroethane (EDC)	6.441	62	1539	212.20	ng/L	100
15) Trichloroethene (TCE)	6.852	130	958	194.55	ng/L	98
16) 1,2-Dichloropropane	7.421	63	1188	203.66	ng/L	90
18) c-1,3-Dichloropropene	8.207	75	1725	191.06	ng/L	87
20) Toluene	8.481	91	4490	194.40	ng/L	96
21) Tetrachloroethene (PCE)	8.949	166	866	184.86	ng/L	86
22) t-1,3-Dichloropropene	8.992	75	1524	191.74	ng/L	100
23) 1,1,2-Trichloroethane	9.207	97	1053	197.15	ug/L	97
24) 1,2-Dibromoethane (EDB)	9.769	107	1082	186.63	ng/L	98
25) Ethylbenzene	10.483	91	4326	191.96	ng/L	95
26) m,p-Xylenes (2)	10.655	91	6453	396.05	ng/L	88
27) o-Xylene	11.123	91	3377	185.93	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.923	83	1677	177.62	ug/L	96
31) 1,3.5-Trimethylbenzene	12.042	105	2792	187.36	ng/L	92
32) 1,2,3-Trichloropropane	12.048	110	439	173.99	ng/L	86
33) 1,2,4-Trimethylbenzene	12.394	105	2797	182.65	ng/L	93
34) 1,2-Dibromo-3-chloropr...	13.775	157	342	159.92	ng/L	80
35) Naphthalene	14.664	128	7126	423.50	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-11\9K05040\
Data File : 7H19110526.D
Acq On : 05 Nov 2019 08:47 pm
Operator : MM
Sample : 9110492-BS4
Misc : 1X 5mL 200PPT VOC A19K007
ALS Vial : 21 Sample Multiplier: 1

Quant Time: Nov 06 09:24:41 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Vinyl Chloride by EPA 8260C SIM
Calibration Data

Sequence 9G12037 (Cal ID A9G1805) VOA-GCMS8

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9G12037**	Instrument:	**VOA-GCMS8**
Date:	**07/12/19 18:25**	Calibration:	**A9G1805**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G12037-IBL1	Water	QC	QC			A19A332	
2	9G12037-IBL2	Water	QC	QC			A19A332	
3	9G12037-TUN1	Water	QC	QC			A19A332	
4	9G12037-ICB1	Water	QC	QC			A19A332	
5	9G12037-CAL1	Water	QC	QC			A19A332	A19G219
6	9G12037-CAL2	Water	QC	QC			A19A332	A19G220
7	9G12037-CAL3	Water	QC	QC			A19A332	A19G221
8	9G12037-CAL4	Water	QC	QC			A19A332	A19G222
9	9G12037-CAL5	Water	QC	QC			A19A332	A19G223
10	9G12037-CAL6	Water	QC	QC			A19A332	A19G224
11	9G12037-CAL7	Water	QC	QC			A19A332	A19G225
12	9G12037-IBL4	Water	QC	QC			A19A332	
13	9G12037-CAL8	Water	QC	QC			A19A332	A19G226
14	9G12037-IBL5	Water	QC	QC			A19A332	
15	9G12037-IBL6	Water	QC	QC			A19A332	
16	9G12037-ICV1	Water	QC	QC			A19A332	A19G227

Chloromethane EOS

Data Entered By: MM 7/18/19

Data Reviewed By: MM 7/19/19

Comments:

Method Path : C:\GCMS\1\methods\
Method File : VH190716SIMw.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jul 16 11:10:39 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	10	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071225.D
2	2	20	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071226.D
3	3	50	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071227.D
4	4	100	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071228.D
5	5	200	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071229.D
6	6	500	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071230.D
7	7	1000	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071231.D
8	8	2000	2330	C:\GCMS\1\data\2019-07\9G12037\7H19071233.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jul 16 11:10 2019	Jul 16 11:06 2019	12 Jul 2019 10:41 pm
2	2	Jul 16 11:10 2019	Jul 16 11:07 2019	12 Jul 2019 11:08 pm
3	3	Jul 16 11:10 2019	Jul 16 11:01 2019	12 Jul 2019 11:35 pm
4	4	Jul 16 11:10 2019	Jul 16 11:01 2019	13 Jul 2019 12:02 am
5	5	Jul 16 11:10 2019	Jul 16 11:01 2019	13 Jul 2019 12:29 am
6	6	Jul 16 11:10 2019	Jul 16 11:01 2019	13 Jul 2019 12:55 am
7	7	Jul 16 11:10 2019	Jul 16 11:01 2019	13 Jul 2019 01:22 am
8	8	Jul 16 11:10 2019	Jul 16 11:01 2019	13 Jul 2019 02:16 am

VH190716SIMw.M Tue Jul 16 11:26:07 2019

Response Factor Report VOA-GCMS8

Method Path : C:\GCMS\1\methods\
Method File : VH190716SIMw.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jul 16 11:10:39 2019
Response Via : Initial Calibration

Calibration Files
1 =7H19071225.D 2 =7H19071226.D 3 =7H19071227.D 4 =7H19071228.D 5 =7H19071229.D 6 =7H19071230.D 7 =7H19071231.D
8 =7H19071233.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene...	----------ISTD----------									
2)		Chloromethane	4.901	4.332	1.769	2.117	1.407	1.393	0.992	1.262	2.271	65.74
3)		Vinyl Chloride	0.640	0.757	0.767	0.791	0.874	0.889	0.705	0.822	0.781	10.68
4)		1,1-Dichloroet...	1.239	0.965	0.943	0.883	0.920	0.899	0.799	0.863	0.939	14.00
5)		Carbon Disulfide			1.847	1.739	1.729	1.699	1.366	1.550	1.655	10.31
6)		t-1,2-Dichloro...	0.953	0.854	0.849	0.825	0.858	0.836	0.747	0.790	0.839	7.08
7)		Methyl-tert-bu...			1.610	1.814	1.667	1.788	1.757	1.666	1.731	1.719	4.29
8)		1,1-Dichloroet...	1.266	1.090	1.063	1.034	1.087	1.054	0.987	1.026	1.076	7.80
9)		c-1,2-Dichloro...	1.021	0.826	0.856	0.850	0.881	0.860	0.790	0.831	0.864	7.97
10)		Chloroform			1.201	1.152	1.050	1.101	1.061	0.963	1.032	1.080	7.31
11)	S	Dibromofluorom...	0.562	0.556	0.568	0.548	0.559	0.549	0.535	0.555	0.554	1.78
12)		Benzene			2.736	2.626	2.568	2.459	2.273	2.334	2.499	7.09
13)		1,2-Dichloroet...	0.980	0.805	0.833	0.822	0.854	0.836	0.752	0.817	0.837	7.78
14)	S	1,4-Difluorobe...	1.745	1.745	1.728	1.732	1.742	1.753	1.670	1.773	1.736	1.73
15)		Trichloroethen...	0.558	0.639	0.570	0.558	0.583	0.572	0.515	0.553	0.568	6.13
16)		1,2-Dichloropr...	0.776	0.694	0.664	0.649	0.670	0.675	0.616	0.643	0.673	7.06
17)		Chlorobenzene-d5 (I)	----------ISTD----------									
18)		c-1,3-Dichloro...	0.632	0.792	0.701	0.625	0.653	0.642	0.617	0.611	0.659	9.21
19)	S	Toluene-d8 (S)	1.612	1.592	1.598	1.589	1.563	1.584	1.547	1.580	1.583	1.29
20)		Toluene	2.120	1.833	1.730	1.608	1.588	1.575	1.545	1.493	1.687	12.22
21)		Tetrachloroeth...			0.392	0.378	0.331	0.342	0.323	0.329	0.300	0.342	9.40
22)		t-1,3-Dichloro...			0.539	0.634	0.586	0.582	0.585	0.573	0.564	0.580	4.99
23)		1,1,2-Trichlor...	0.428	0.424	0.395	0.373	0.387	0.386	0.360	0.368	0.390	6.34
24)		1,2-Dibromoeth...	0.549	0.401	0.419	0.406	0.417	0.415	0.381	0.399	0.423	12.31
25)		Ethylbenzene	1.943	1.732	1.615	1.562	1.569	1.596	1.653	1.496	1.646	8.44
26)		m,p-Xylenes (2)	1.292	1.221	1.187	1.141	1.150	1.176	1.234	1.117	1.190	4.81
27)		o-Xylene	1.757	1.446	1.246	1.210	1.229	1.250	1.278	1.194	1.326	14.40
28)	I	1,4-Dichlorobenzen...	----------ISTD----------									
29)	S	4-Bromofluorob...	0.894	0.899	0.891	0.901	0.885	0.873	0.830	0.868	0.880	2.65
30)		1,1,2,2-Tetrac...	1.821	1.691	1.541	1.631	1.802	1.574	1.301	1.339	1.587	12.12
31)		1,3.5-Trimethy...	2.743	2.687	2.597	2.428	2.468	2.390	2.560	2.171	2.505	7.29
32)		1,2,3-Trichlor...			0.492	0.436	0.463	0.428	0.350	0.376	0.424	12.54
33)		1,2,4-Trimethy...	3.074	2.896	2.601	2.430	2.474	2.411	2.562	2.151	2.575	11.28
34)		1,2-Dibromo-3-...			0.383	0.356	0.434	0.380	0.284	0.320	0.360	14.59

Method Path : C:\GCMS\1\methods\
Method File : VH190716SIMw.M
Title : EPA 8260: Volatile Organic Compounds

35)	Naphthalene	3.487	2.879	2.564	3.178	2.735	2.651	2.309	2.829	13.98

(#) = Out of Range

Compound List Report VOA-GCMS8

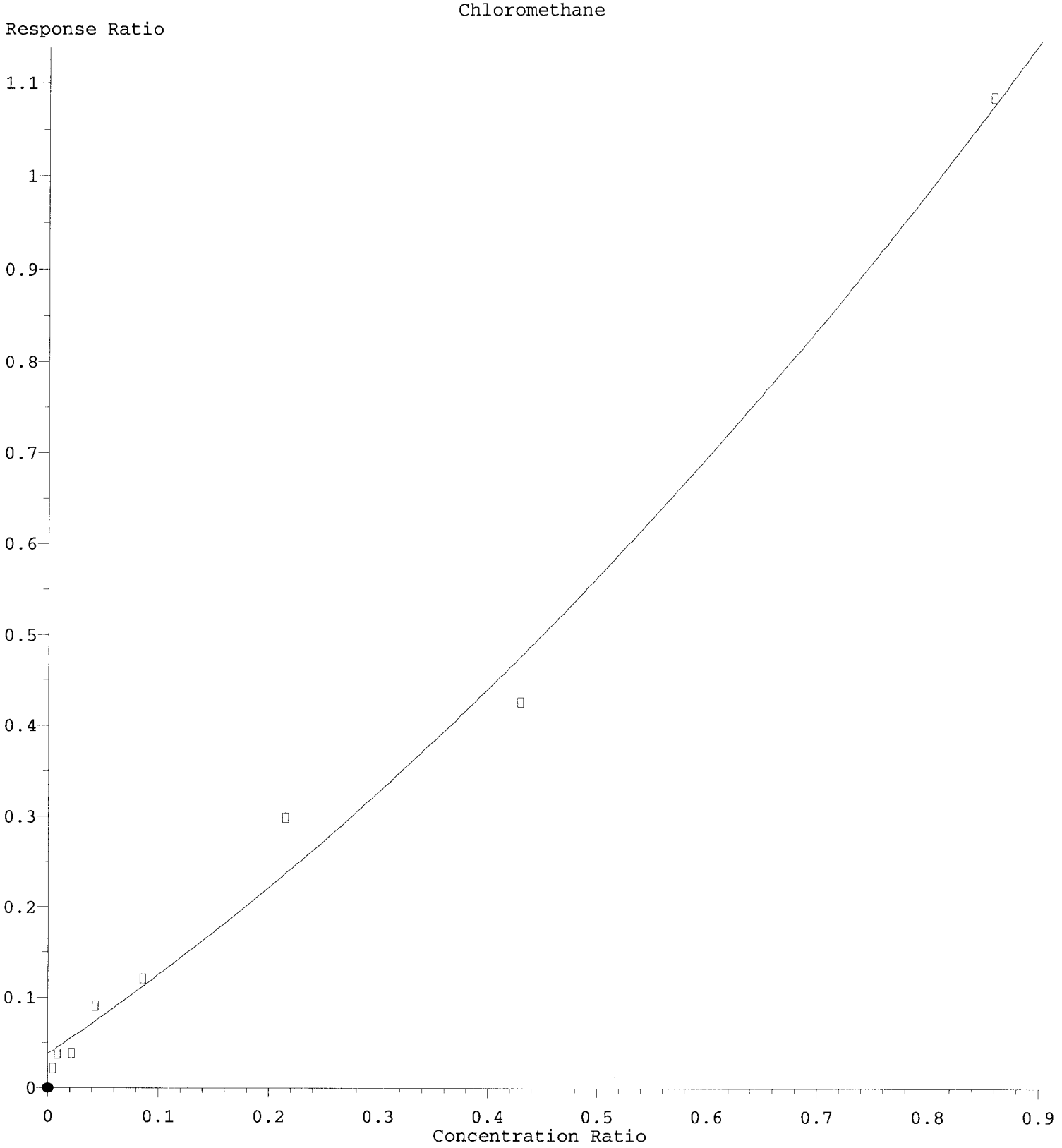
Method Path : C:\GCMS\1\methods\
Method File : VH190716SIMw.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jul 16 11:10:39 2019
Response Via : Initial Calibration

Total Cpnds : 35

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.327	1.000	A	1	A	L
2		Chloromethane	50	1.941	0.307	Q	1	A	R
3		Vinyl Chloride	62	2.049	0.324	A	1	A	R
4		1,1-Dichloroethene	61	3.312	0.523	A	1	A	R
5		Carbon Disulfide	76	3.332	0.527	A	1	A	R
6		t-1,2-Dichloroethene	61	4.130	0.653	A	1	A	R
7		Methyl-tert-butyl-ether	73	4.281	0.677	A	1	A	R
8		1,1-Dichloroethane	63	4.786	0.756	A	1	A	R
9		c-1,2-Dichloroethene	61	5.346	0.845	A	1	A	R
10		Chloroform	83	5.631	0.890	A	1	A	R
11	S	Dibromofluoromethane (S)	111	5.825	0.921	A	1	A	R
12		Benzene	78	6.241	0.986	A	1	A	R
13		1,2-Dichloroethane (EDC)	62	6.452	1.020	A	1	A	R
14	S	1,4-Difluorobenzene (S)	114	6.900	1.090	A	1	A	R
15		Trichloroethene (TCE)	130	6.862	1.085	A	1	A	R
16		1,2-Dichloropropane	63	7.431	1.174	A	1	A	R
17	I	Chlorobenzene-d5 (I)	117	10.434	1.000	A	1	A	L
18		c-1,3-Dichloropropene	75	8.218	0.788	A	1	A	R
19	S	Toluene-d8 (S)	98	8.438	0.809	A	1	A	R
20		Toluene	91	8.491	0.814	A	1	A	R
21		Tetrachloroethene (PCE)	166	8.959	0.859	A	1	A	R
22		t-1,3-Dichloropropene	75	9.002	0.863	A	1	A	R
23		1,1,2-Trichloroethane	97	9.218	0.883	A	1	A	B
24		1,2-Dibromoethane (EDB)	107	9.785	0.938	A	1	A	R
25		Ethylbenzene	91	10.493	1.006	A	1	A	R
26		m,p-Xylenes (2)	91	10.665	1.022	A	1	A	R
27		o-Xylene	91	11.133	1.067	A	1	A	R
28	I	1,4-Dichlorobenzene-d4 (I)	152	12.749	1.000	A	1	A	L
29	S	4-Bromofluorobenzene (S)	174	11.729	0.920	A	1	A	R
30		1,1,2,2-Tetrachloroethane	83	11.934	0.936	A	1	A	B
31		1,3.5-Trimethylbenzene	105	12.058	0.946	A	1	A	R
32		1,2,3-Trichloropropane	110	12.058	0.946	A	1	A	R
33		1,2,4-Trimethylbenzene	105	12.404	0.973	A	1	A	R
34		1,2-Dibromo-3-chloropropane	157	13.785	1.081	A	1	A	R
35		Naphthalene	128	14.674	1.151	A	1	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

VH190716SIMw.M Tue Jul 16 11:26:01 2019

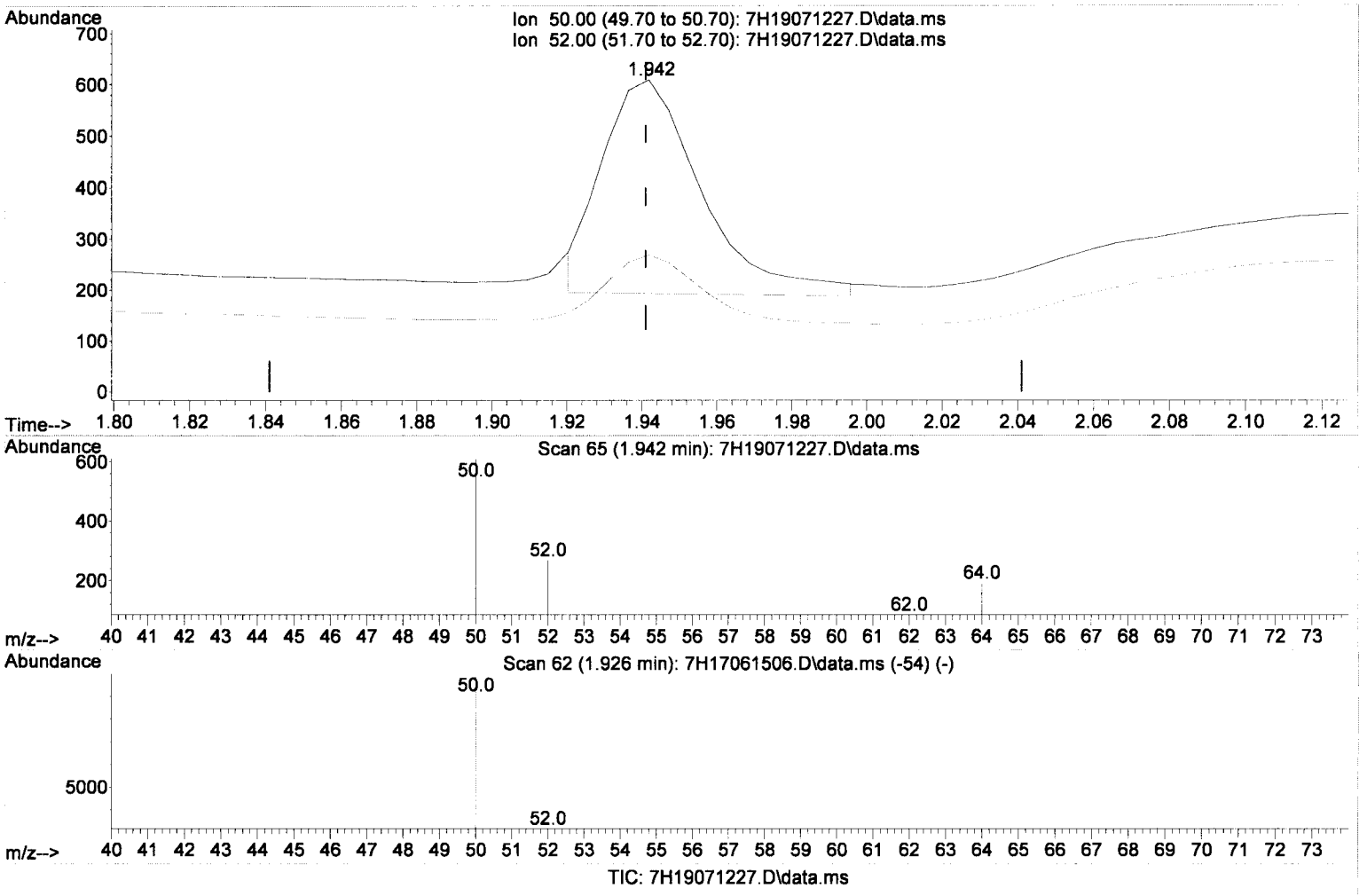


R = 4.34e-001 A*A + 8.35e-001 A + 3.76e-002
Coef of Det (r^2) = 0.991649 Curve Fit: Quadratic
Method Name: C:\GCMS\1\methods\VH190716S1MW.M
Calibration Table Last Updated: Tue Jul 16 11:10:39 2019

Quantitation Report (Qedit)

Data Path : C:\GCMS\1\data\2019-07\9G12037\REQUANT\
Data File : 7H19071227.D
Acq On : 12 Jul 2019 11:35 pm
Operator : MM
Sample : 9G12037-CAL3
Misc : 1X 5mL 50PPT VOC
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:16:32 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



TIC: 7H19071227.D\data.ms

(2) Chloromethane

1.942min (+ 0.001) 3.24 ng/L m

response 769

Ion	Exp%	Act%
50.00	100.00	100.00
52.00	32.80	44.17
0.00	0.00	0.00
0.00	0.00	0.00

CH3Cl

7/16/19

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9G12037

Analysis Included
8260C SIM LL Vols

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9G12037-TUN1	MS Tune	Water		A19A332	7/12/2019 9:48:00PM
9G12037-ICB1	Initial Cal Blank	Water		A19A332	7/12/2019 10:14:00PM
9G12037-CAL1	Cal Standard	Water	A19G219	"	7/12/2019 10:41:00PM
9G12037-CAL2	Cal Standard	Water	A19G220	"	7/12/2019 11:08:00PM
9G12037-CAL3	Cal Standard	Water	A19G221	"	7/12/2019 11:35:00PM
9G12037-CAL4	Cal Standard	Water	A19G222	"	7/13/2019 12:02:00AM
9G12037-CAL5	Cal Standard	Water	A19G223	"	7/13/2019 12:29:00AM
9G12037-CAL6	Cal Standard	Water	A19G224	"	7/13/2019 12:55:00AM
9G12037-CAL7	Cal Standard	Water	A19G225	"	7/13/2019 1:22:00AM
9G12037-CAL8	Cal Standard	Water	A19G226	"	7/13/2019 2:16:00AM
9G12037-ICV1	Initial Cal Check	Water	A19G227	"	7/13/2019 3:37:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9G1805** Instrument: **VOA-GCMS8**

8260C SIM LL Vols Sequence: **9G12037** Matrix: **Water**

9G12037-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G12037-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9G12037

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9G1805** Instrument: **VOA-GCMS8**

8260C SIM LL Vols Sequence: **9G12037** Matrix: **Water**

9G12037-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual
Chloromethane	1000	200	**302.89**	151	E-05

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Evaluate Continuing Calibration Report

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071236.D
Acq On : 13 Jul 2019 03:37 am
Operator : MM
Sample : 9G12037-ICV1
Misc : 1X 5mL 200PPT
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 11:19:51 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 200%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Pentafluorobenzene (I)	2330.000	2330.000	0.0	90	0.00
2		Chloromethane	200.000	302.890	-51.4#	115	0.00
3		Vinyl Chloride	200.000	237.077	-18.5	96	0.00
4		1,1-Dichloroethene	200.000	204.723	-2.4	94	0.00
5		Carbon Disulfide	200.000	246.639	-23.3#	107	0.00
6		t-1,2-Dichloroethene	200.000	216.356	-8.2	95	0.00
7		Methyl-tert-butyl-ether	200.000	209.778	-4.9	91	0.00
8		1,1-Dichloroethane	200.000	211.848	-5.9	95	0.00
9		c-1,2-Dichloroethene	200.000	204.769	-2.4	91	0.00
10		Chloroform	200.000	209.817	-4.9	93	0.00
11	S	Dibromofluoromethane (S)	2330.000	2320.386	0.4	89	0.00
12		Benzene	200.000	217.331	-8.7	95	0.00
13		1,2-Dichloroethane (EDC)	200.000	214.210	-7.1	95	0.00
14	S	1,4-Difluorobenzene (S)	2330.000	2365.478	-1.5	91	0.00
15		Trichloroethene (TCE)	200.000	209.740	-4.9	92	0.00
16		1,2-Dichloropropane	200.000	211.371	-5.7	96	0.00
17		Chlorobenzene-d5 (I)	2330.000	2330.000	0.0	95	0.00
18		c-1,3-Dichloropropene	200.000	197.873	1.1	95	0.00
19	S	Toluene-d8 (S)	2330.000	2278.803	2.2	94	0.00
20		Toluene	200.000	192.154	3.9	97	0.00
21		Tetrachloroethene (PCE)	200.000	198.577	0.7	94	0.00
22		t-1,3-Dichloropropene	200.000	206.789	-3.4	98	0.00
23		1,1,2-Trichloroethane	200.000	207.616	-3.8	99	0.00
24		1,2-Dibromoethane (EDB)	200.000	199.199	0.4	96	0.00
25		Ethylbenzene	200.000	202.488	-1.2	100	0.00
26		m,p-Xylenes (2)	400.000	403.972	-1.0	99	0.00
27		o-Xylene	200.000	193.002	3.5	99	0.00
28	I	1,4-Dichlorobenzene-d4 (I)	2330.000	2330.000	0.0	95	0.00
29	S	4-Bromofluorobenzene (S)	2330.000	2357.892	-1.2	95	0.00
30		1,1,2,2-Tetrachloroethane	200.000	245.773	-22.9#	103	0.00
31		1,3.5-Trimethylbenzene	200.000	206.490	-3.2	99	0.00
32		1,2,3-Trichloropropane	200.000	242.013	-21.0#	105	0.00
33		1,2,4-Trimethylbenzene	200.000	201.760	-0.9	100	0.00
34		1,2-Dibromo-3-chloropropane	200.000	252.712	-26.4#	99	0.00
35		Naphthalene	200.000	243.688	-21.8#	103	0.00

EOS/NR

(#) = Out of Range SPCC's out = 0 CCC's out = 0

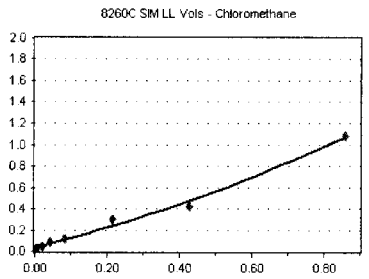
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

Chloromethane

Curve Fit: **QUADRATIC: Weighting: None, Origin: Ignore**

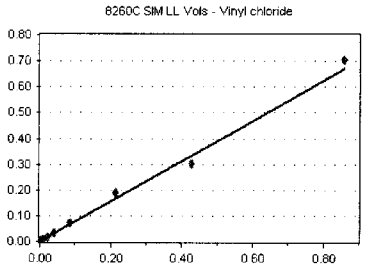


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	360	4.901	0.00
9G12037-CAL2	20	624	4.332	0.00
9G12037-CAL3	50	754	1.769	0.00
9G12037-CAL4	100	1558	2.117	1.94
9G12037-CAL5	200	2132	1.407	1.94
9G12037-CAL6	500	4906	1.393	1.94
9G12037-CAL7	1000	9213	0.992	1.94
9G12037-CAL8	2000	18748	1.262	1.94

AVE RF **2.271** RF RSD **65.74** AVE RT **1.21**

Vinyl chloride

Curve Fit: **AVERAGE RF**

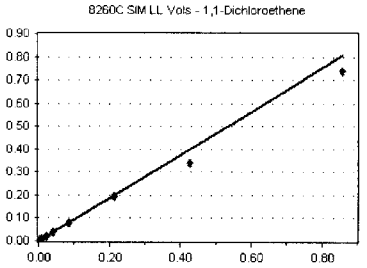


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	47	0.640	2.05
9G12037-CAL2	20	109	0.757	2.05
9G12037-CAL3	50	327	0.767	2.05
9G12037-CAL4	100	582	0.791	2.05
9G12037-CAL5	200	1324	0.874	2.05
9G12037-CAL6	500	3132	0.889	2.05
9G12037-CAL7	1000	6549	0.705	2.04
9G12037-CAL8	2000	12216	0.822	2.05

AVE RF **0.781** RF RSD **10.68** AVE RT **2.05**

1,1-Dichloroethene

Curve Fit: **AVERAGE RF**

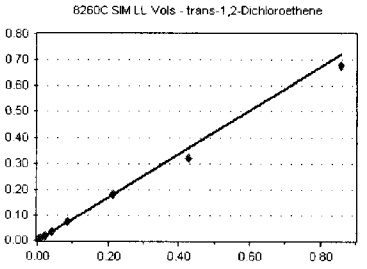


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	91	1.239	3.31
9G12037-CAL2	20	139	0.965	3.31
9G12037-CAL3	50	402	0.943	3.31
9G12037-CAL4	100	650	0.883	3.31
9G12037-CAL5	200	1394	0.920	3.31
9G12037-CAL6	500	3167	0.899	3.31
9G12037-CAL7	1000	7422	0.799	3.31
9G12037-CAL8	2000	12830	0.863	3.31

AVE RF **0.939** RF RSD **14.00** AVE RT **3.31**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	70	0.953	4.13
9G12037-CAL2	20	123	0.854	4.13
9G12037-CAL3	50	362	0.849	4.13
9G12037-CAL4	100	607	0.825	4.13
9G12037-CAL5	200	1300	0.858	4.13
9G12037-CAL6	500	2946	0.836	4.13
9G12037-CAL7	1000	6942	0.747	4.13
9G12037-CAL8	2000	11744	0.790	4.13

AVE RF **0.839** RF RSD **7.08** AVE RT **4.13**

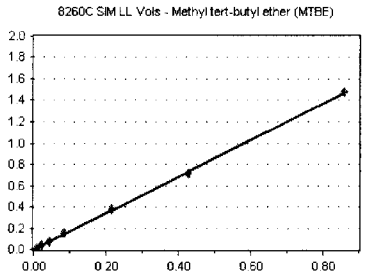
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

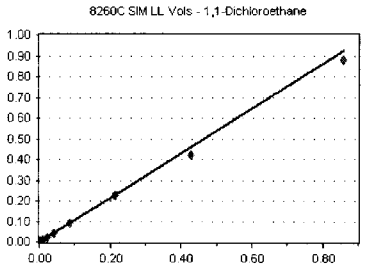


Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
9G12037-CAL2	20	232	1.610	4.28
9G12037-CAL3	50	773	1.814	4.28
9G12037-CAL4	100	1227	1.667	4.28
9G12037-CAL5	200	2708	1.788	4.28
9G12037-CAL6	500	6188	1.757	4.28
9G12037-CAL7	1000	15477	1.666	4.28
9G12037-CAL8	2000	25727	1.731	4.28

AVE RF **1.719** RF RSD **4.29** AVE RT **4.28**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

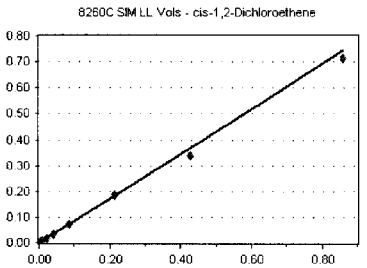


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	93	1.266	4.78
9G12037-CAL2	20	157	1.090	4.79
9G12037-CAL3	50	453	1.063	4.78
9G12037-CAL4	100	761	1.034	4.78
9G12037-CAL5	200	1647	1.087	4.79
9G12037-CAL6	500	3712	1.054	4.79
9G12037-CAL7	1000	9171	0.987	4.78
9G12037-CAL8	2000	15247	1.026	4.78

AVE RF **1.076** RF RSD **7.80** AVE RT **4.78**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

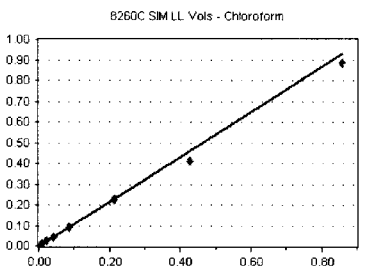


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	75	1.021	5.35
9G12037-CAL2	20	119	0.826	5.35
9G12037-CAL3	50	365	0.856	5.35
9G12037-CAL4	100	626	0.850	5.35
9G12037-CAL5	200	1335	0.881	5.35
9G12037-CAL6	500	3028	0.860	5.35
9G12037-CAL7	1000	7341	0.790	5.35
9G12037-CAL8	2000	12341	0.831	5.35

AVE RF **0.864** RF RSD **7.97** AVE RT **5.35**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~134~~	~~1.824~~	~~5.63~~
9G12037-CAL2	20	173	1.201	5.63
9G12037-CAL3	50	491	1.152	5.63
9G12037-CAL4	100	773	1.050	5.63
9G12037-CAL5	200	1668	1.101	5.63
9G12037-CAL6	500	3736	1.061	5.63
9G12037-CAL7	1000	8951	0.963	5.63
9G12037-CAL8	2000	15330	1.032	5.63

AVE RF **1.080** RF RSD **7.31** AVE RT **5.63**

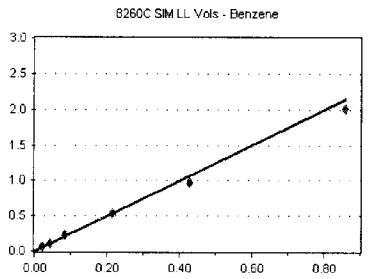
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

Benzene

Curve Fit: **AVERAGE RF**

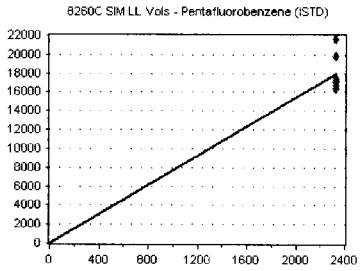


Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
~~9G12037-CAL2~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
9G12037-CAL3	50	1166	2.736	6.24
9G12037-CAL4	100	1933	2.626	6.24
9G12037-CAL5	200	3890	2.568	6.24
9G12037-CAL6	500	8661	2.459	6.24
9G12037-CAL7	1000	21117	2.273	6.24
9G12037-CAL8	2000	34681	2.334	6.24

AVE RF **2.499** RF RSD **7.09** AVE RT **6.24**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

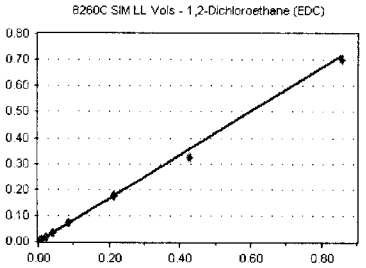


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	17116	7.346	6.33
9G12037-CAL2	2330	16783	7.203	6.33
9G12037-CAL3	2330	19860	8.524	6.33
9G12037-CAL4	2330	17151	7.361	6.33
9G12037-CAL5	2330	17647	7.574	6.33
9G12037-CAL6	2330	16412	7.044	6.33
9G12037-CAL7	2330	21648	9.291	6.33
9G12037-CAL8	2330	17311	7.430	6.33

AVE RF **7.721** RF RSD **10.05** AVE RT **6.33**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**

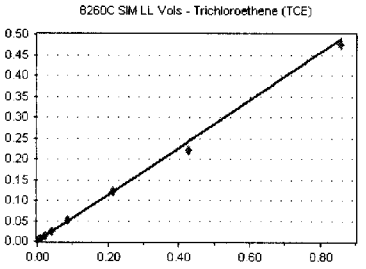


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	72	0.980	6.45
9G12037-CAL2	20	116	0.805	6.45
9G12037-CAL3	50	355	0.833	6.45
9G12037-CAL4	100	605	0.822	6.45
9G12037-CAL5	200	1293	0.854	6.45
9G12037-CAL6	500	2943	0.836	6.45
9G12037-CAL7	1000	6985	0.752	6.45
9G12037-CAL8	2000	12140	0.817	6.45

AVE RF **0.837** RF RSD **7.78** AVE RT **6.45**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	41	0.558	6.86
9G12037-CAL2	20	92	0.639	6.86
9G12037-CAL3	50	243	0.570	6.86
9G12037-CAL4	100	411	0.558	6.86
9G12037-CAL5	200	883	0.583	6.86
9G12037-CAL6	500	2015	0.572	6.86
9G12037-CAL7	1000	4781	0.515	6.86
9G12037-CAL8	2000	8213	0.553	6.86

AVE RF **0.568** RF RSD **6.13** AVE RT **6.86**

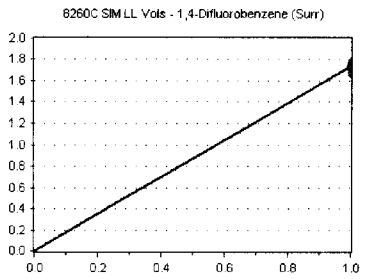
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

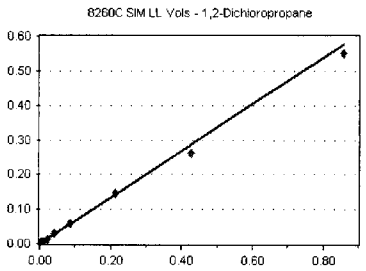


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	29875	1.745	6.90
9G12037-CAL2	2330	29288	1.745	6.90
9G12037-CAL3	2330	34319	1.728	6.89
9G12037-CAL4	2330	29698	1.732	6.90
9G12037-CAL5	2330	30742	1.742	6.90
9G12037-CAL6	2330	28778	1.753	6.90
9G12037-CAL7	2330	36161	1.670	6.90
9G12037-CAL8	2330	30697	1.773	6.90

AVE RF **1.736** RF RSD **1.73** AVE RT **6.90**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

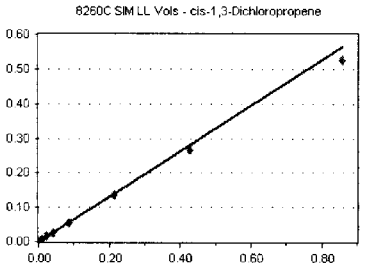


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	57	0.776	7.43
9G12037-CAL2	20	100	0.694	7.43
9G12037-CAL3	50	283	0.664	7.43
9G12037-CAL4	100	478	0.649	7.43
9G12037-CAL5	200	1015	0.670	7.43
9G12037-CAL6	500	2376	0.675	7.43
9G12037-CAL7	1000	5721	0.616	7.43
9G12037-CAL8	2000	9561	0.643	7.43

AVE RF **0.673** RF RSD **7.06** AVE RT **7.43**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

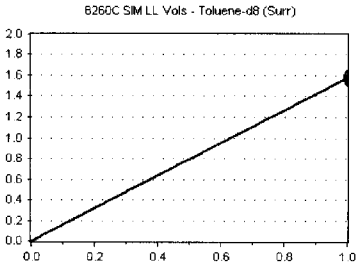


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	68	0.632	8.22
9G12037-CAL2	20	172	0.792	8.22
9G12037-CAL3	50	430	0.701	8.22
9G12037-CAL4	100	684	0.625	8.22
9G12037-CAL5	200	1481	0.653	8.22
9G12037-CAL6	500	3435	0.642	8.22
9G12037-CAL7	1000	8477	0.617	8.22
9G12037-CAL8	2000	13895	0.611	8.22

AVE RF **0.659** RF RSD **9.21** AVE RT **8.22**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	40402	1.612	8.44
9G12037-CAL2	2330	40271	1.592	8.44
9G12037-CAL3	2330	45650	1.598	8.43
9G12037-CAL4	2330	40494	1.589	8.43
9G12037-CAL5	2330	41301	1.563	8.44
9G12037-CAL6	2330	39473	1.584	8.44
9G12037-CAL7	2330	49504	1.547	8.43
9G12037-CAL8	2330	41860	1.580	8.43

AVE RF **1.583** RF RSD **1.29** AVE RT **8.44**

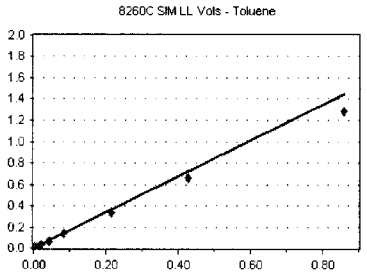
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

Toluene

Curve Fit: **AVERAGE RF**

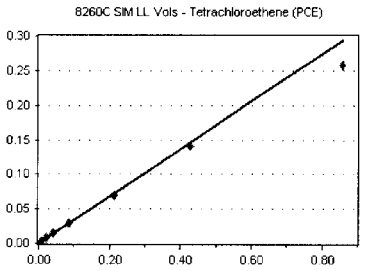


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	228	2.120	8.49
9G12037-CAL2	20	398	1.833	8.49
9G12037-CAL3	50	1061	1.730	8.49
9G12037-CAL4	100	1759	1.608	8.49
9G12037-CAL5	200	3602	1.588	8.49
9G12037-CAL6	500	8426	1.575	8.49
9G12037-CAL7	1000	21218	1.545	8.49
9G12037-CAL8	2000	33962	1.493	8.49

AVE RF **1.687** RF RSD **12.22** AVE RT **8.49**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**

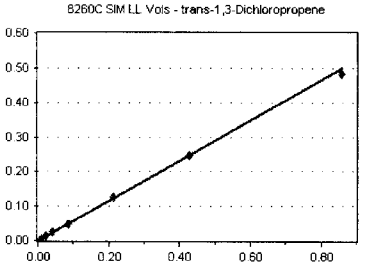


Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~65~~	~~0.604~~	~~8.96~~
9G12037-CAL2	20	85	0.392	8.96
9G12037-CAL3	50	232	0.378	8.96
9G12037-CAL4	100	362	0.331	8.96
9G12037-CAL5	200	775	0.342	8.96
9G12037-CAL6	500	1730	0.323	8.96
9G12037-CAL7	1000	4518	0.329	8.96
9G12037-CAL8	2000	6817	0.300	8.96

AVE RF **0.342** RF RSD **9.40** AVE RT **8.96**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

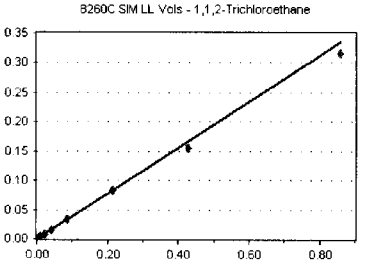


Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~92~~	~~0.855~~	~~9.00~~
9G12037-CAL2	20	117	0.539	9.00
9G12037-CAL3	50	389	0.634	9.00
9G12037-CAL4	100	641	0.586	9.00
9G12037-CAL5	200	1320	0.582	9.00
9G12037-CAL6	500	3131	0.585	9.00
9G12037-CAL7	1000	7862	0.573	9.00
9G12037-CAL8	2000	12822	0.564	9.00

AVE RF **0.580** RF RSD **4.99** AVE RT **9.00**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	46	0.428	9.22
9G12037-CAL2	20	92	0.424	9.22
9G12037-CAL3	50	242	0.395	9.22
9G12037-CAL4	100	408	0.373	9.22
9G12037-CAL5	200	878	0.387	9.22
9G12037-CAL6	500	2065	0.386	9.22
9G12037-CAL7	1000	4945	0.360	9.22
9G12037-CAL8	2000	8368	0.368	9.22

AVE RF **0.390** RF RSD **6.34** AVE RT **9.22**

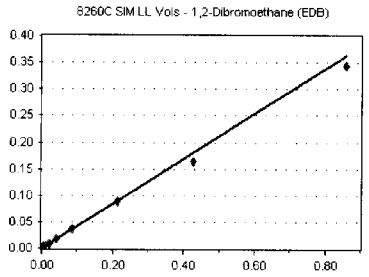
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**

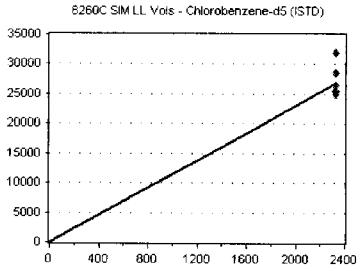


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	59	0.549	9.79
9G12037-CAL2	20	87	0.401	9.79
9G12037-CAL3	50	257	0.419	9.78
9G12037-CAL4	100	444	0.406	9.79
9G12037-CAL5	200	946	0.417	9.79
9G12037-CAL6	500	2222	0.415	9.79
9G12037-CAL7	1000	5227	0.381	9.78
9G12037-CAL8	2000	9084	0.399	9.79

AVE RF **0.423** RF RSD **12.31** AVE RT **9.78**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**

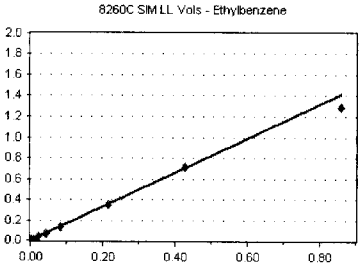


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	25058	10.755	10.43
9G12037-CAL2	2330	25290	10.854	10.43
9G12037-CAL3	2330	28572	12.263	10.43
9G12037-CAL4	2330	25484	10.937	10.43
9G12037-CAL5	2330	26428	11.342	10.43
9G12037-CAL6	2330	24926	10.698	10.43
9G12037-CAL7	2330	31997	13.733	10.43
9G12037-CAL8	2330	26502	11.374	10.43

AVE RF **11.494** RF RSD **9.03** AVE RT **10.43**

Ethylbenzene

Curve Fit: **AVERAGE RF**

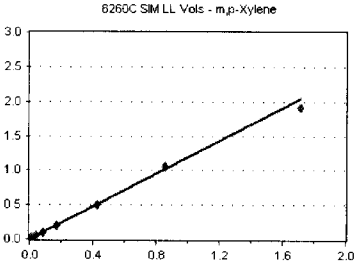


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	209	1.943	10.49
9G12037-CAL2	20	376	1.732	10.50
9G12037-CAL3	50	990	1.615	10.49
9G12037-CAL4	100	1708	1.562	10.49
9G12037-CAL5	200	3559	1.569	10.49
9G12037-CAL6	500	8538	1.596	10.49
9G12037-CAL7	1000	22694	1.653	10.49
9G12037-CAL8	2000	34033	1.496	10.49

AVE RF **1.646** RF RSD **8.44** AVE RT **10.49**

m,p-Xylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	20	278	1.292	10.67
9G12037-CAL2	40	530	1.221	10.67
9G12037-CAL3	100	1455	1.187	10.67
9G12037-CAL4	200	2495	1.141	10.67
9G12037-CAL5	400	5219	1.150	10.67
9G12037-CAL6	1000	12586	1.176	10.67
9G12037-CAL7	2000	33897	1.234	10.67
9G12037-CAL8	4000	50826	1.117	10.67

AVE RF **1.190** RF RSD **4.81** AVE RT **10.67**

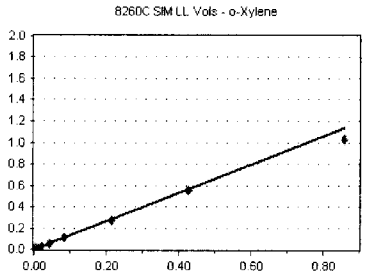
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

o-Xylene

Curve Fit: **AVERAGE RF**

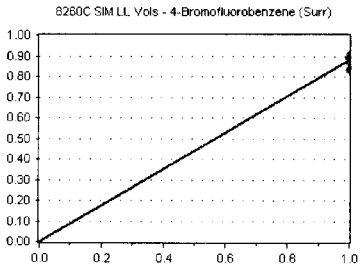


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	189	1.757	11.13
9G12037-CAL2	20	314	1.446	11.13
9G12037-CAL3	50	764	1.246	11.13
9G12037-CAL4	100	1323	1.210	11.13
9G12037-CAL5	200	2788	1.229	11.13
9G12037-CAL6	500	6686	1.250	11.13
9G12037-CAL7	1000	17546	1.278	11.13
9G12037-CAL8	2000	27167	1.194	11.13

AVE RF **1.326** RF RSD **14.40** AVE RT **11.13**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

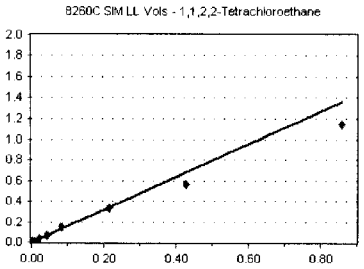


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	8813	0.894	11.73
9G12037-CAL2	2330	9046	0.899	11.73
9G12037-CAL3	2330	9861	0.891	11.73
9G12037-CAL4	2330	8907	0.901	11.73
9G12037-CAL5	2330	9218	0.885	11.73
9G12037-CAL6	2330	9000	0.873	11.73
9G12037-CAL7	2330	12009	0.830	11.73
9G12037-CAL8	2330	9673	0.868	11.73

AVE RF **0.880** RF RSD **2.65** AVE RT **11.73**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

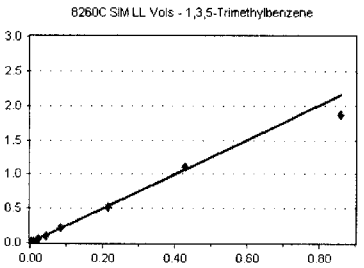


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	77	1.821	11.93
9G12037-CAL2	20	146	1.691	11.93
9G12037-CAL3	50	366	1.541	11.93
9G12037-CAL4	100	692	1.631	11.93
9G12037-CAL5	200	1611	1.802	11.93
9G12037-CAL6	500	3481	1.574	11.93
9G12037-CAL7	1000	8074	1.301	11.93
9G12037-CAL8	2000	12811	1.339	11.93

AVE RF **1.587** RF RSD **12.12** AVE RT **11.93**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	116	2.743	12.06
9G12037-CAL2	20	232	2.687	12.06
9G12037-CAL3	50	617	2.597	12.06
9G12037-CAL4	100	1030	2.428	12.06
9G12037-CAL5	200	2207	2.468	12.06
9G12037-CAL6	500	5286	2.390	12.06
9G12037-CAL7	1000	15889	2.560	12.05
9G12037-CAL8	2000	20762	2.171	12.05

AVE RF **2.505** RF RSD **7.29** AVE RT **12.06**

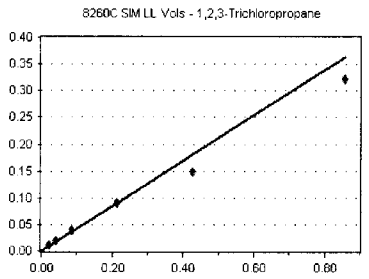
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**

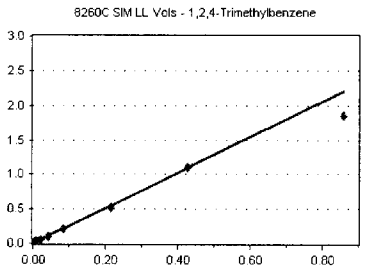


Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
~~9G12037-CAL2~~	~~20~~	~~48~~	~~0.556~~	~~12.06~~
9G12037-CAL3	50	117	0.492	12.06
9G12037-CAL4	100	185	0.436	12.06
9G12037-CAL5	200	414	0.463	12.06
9G12037-CAL6	500	946	0.428	12.06
9G12037-CAL7	1000	2171	0.350	12.05
9G12037-CAL8	2000	3600	0.376	12.06

AVE RF **0.424** RF RSD **12.54** AVE RT **12.06**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**

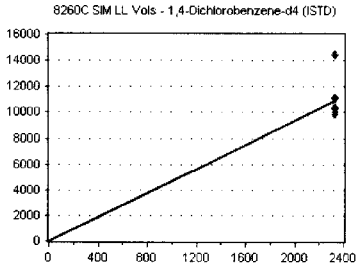


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	10	130	3.074	12.40
9G12037-CAL2	20	250	2.896	12.40
9G12037-CAL3	50	618	2.601	12.40
9G12037-CAL4	100	1031	2.430	12.41
9G12037-CAL5	200	2212	2.474	12.40
9G12037-CAL6	500	5332	2.411	12.40
9G12037-CAL7	1000	15898	2.562	12.41
9G12037-CAL8	2000	20573	2.151	12.41

AVE RF **2.575** RF RSD **11.28** AVE RT **12.40**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

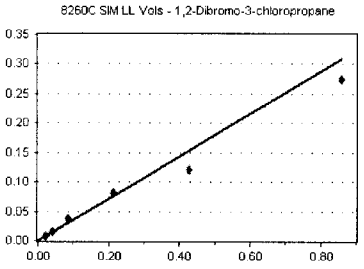


Standard	Concentration	Response	Response Factor	RT
9G12037-CAL1	2330	9854	4.229	12.75
9G12037-CAL2	2330	10057	4.316	12.75
9G12037-CAL3	2330	11071	4.752	12.75
9G12037-CAL4	2330	9886	4.243	12.75
9G12037-CAL5	2330	10417	4.471	12.75
9G12037-CAL6	2330	10307	4.424	12.75
9G12037-CAL7	2330	14461	6.206	12.74
9G12037-CAL8	2330	11143	4.782	12.75

AVE RF **4.678** RF RSD **13.95** AVE RT **12.75**

1,2-Dibromo-3-chloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~0~~	~~0.000~~	~~0.00~~
~~9G12037-CAL2~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
9G12037-CAL3	50	91	0.383	13.79
9G12037-CAL4	100	151	0.356	13.79
9G12037-CAL5	200	388	0.434	13.79
9G12037-CAL6	500	841	0.380	13.79
9G12037-CAL7	1000	1764	0.284	13.79
9G12037-CAL8	2000	3062	0.320	13.79

AVE RF **0.360** RF RSD **14.59** AVE RT **13.79**

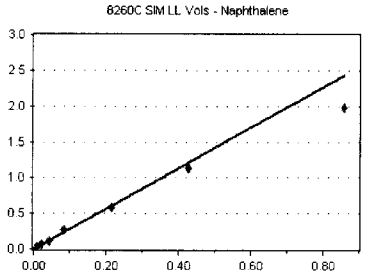
Element Calibration Review Sheet

Calibration ID: **A9G1805** Instrument: **VOA-GCMS8** Calibration Date: **07/18/2019**

Analysis: **8260C SIM LL Vols** Instrument Cal ID: **VH190716SIMw.M**

Naphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9G12037-CAL1~~	~~10~~	~~225~~	~~5.320~~	~~14.67~~
9G12037-CAL2	20	301	3.487	14.67
9G12037-CAL3	50	684	2.879	14.67
9G12037-CAL4	100	1088	2.564	14.68
9G12037-CAL5	200	2842	3.178	14.67
9G12037-CAL6	500	6049	2.735	14.67
9G12037-CAL7	1000	16455	2.651	14.68
9G12037-CAL8	2000	22085	2.309	14.68

AVE RF **2.829** RF RSD **13.98** AVE RT **14.67**

Injection Log

Directory: y:\data\2019-07\9G12037

Line	Vial	FileName	Multiplier	SampleName	Misc Info	Injected
1	1	7h19071217.d	1.	BLK	1X 5mL DI	12 Jul 2019 19:06
2	99	7h19071218.d	1.	BLK	1X 5mL DI	12 Jul 2019 19:33
3	99	7h19071219.d	1.	BLK	1X 5mL DI	12 Jul 2019 20:00
4	99	7h19071220.d	1.	BLK	1X 5mL DI	12 Jul 2019 20:27
5	99	7h19071221.d	1.	9G12037-IBL1	1X 5mL DI	12 Jul 2019 20:54
6	1	7h19071222.d	1.	9G12037-IBL2	1X 5mL DI	12 Jul 2019 21:21
7	2	7h19071223.d	1.	9G12037-TUN1	1X 5mL DI	12 Jul 2019 21:48
8	3	7h19071224.d	1.	9G12037-ICB1	1X 5mL DI	12 Jul 2019 22:14
9	4	7h19071225.d	1.	9G12037-CAL1	1X 5mL 10PPT VOC	12 Jul 2019 22:41
10	5	7h19071226.d	1.	9G12037-CAL2	1X 5mL 20PPT VOC	12 Jul 2019 23:08
11	6	7h19071227.d	1.	9G12037-CAL3	1X 5mL 50PPT VOC	12 Jul 2019 23:35
12	7	7h19071228.d	1.	9G12037-CAL4	1X 5mL 100PPT VOC	13 Jul 2019 00:02
13	8	7h19071229.d	1.	9G12037-CAL5	1X 5mL 200PPT VOC	13 Jul 2019 00:29
14	9	7h19071230.d	1.	9G12037-CAL6	1X 5mL 500PPT VOC	13 Jul 2019 00:55
15	10	7h19071231.d	1.	9G12037-CAL7	1X 5mL 1000PPT VOC	13 Jul 2019 01:22
16	11	7h19071232.d	1.	9G12037-IBL4	1X 5mL DI	13 Jul 2019 01:49
17	12	7h19071233.d	1.	9G12037-CAL8	1X 5mL 2000PPT VOC	13 Jul 2019 02:16
18	13	7h19071234.d	1.	9G12037-IBL5	1X 5mL DI	13 Jul 2019 02:43
19	14	7h19071235.d	1.	9G12037-IBL6	1X 5mL DI	13 Jul 2019 03:10
20	15	7h19071236.d	1.	9G12037-ICV1	1X 5mL 200PPT	13 Jul 2019 03:37
21	16	7h19071237.d	1.	~~9G12037-ICV1~~ BLK	1X 5mL 200PPT VOC	13 Jul 2019 04:03
22		7h19071238.d	1.	No MS or GC data present		

7/16/19

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071221.D
Acq On : 12 Jul 2019 08:54 pm
Operator : MM
Sample : 9G12037-IBL1
Misc : 1X 5mL DI
ALS Vial : 99 Sample Multiplier: 1

Quant Time: Jul 16 11:19:19 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

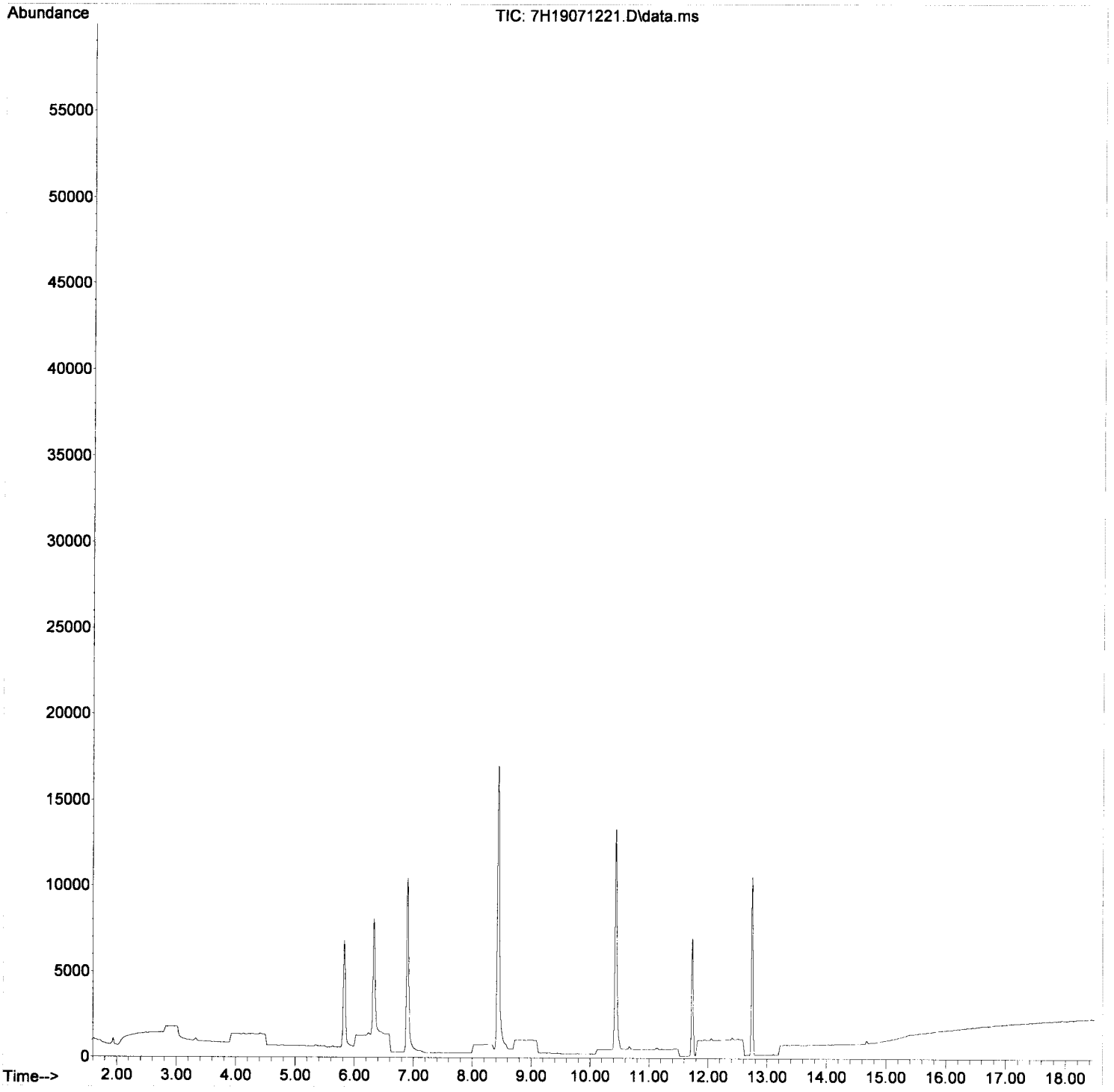
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.327	168	11897	2330.00	ng/L		0.00
17) Chlorobenzene-d5 (I)	10.434	117	19468	2330.00	ng/L		0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	6922	2330.00	ng/L		0.00
System Monitoring Compounds							
11) Dibromofluoromethane (S)	5.825	111	8298	2934.19	ng/L		0.00
14) 1,4-Difluorobenzene (S)	6.900	114	23224	2619.77	ng/L		0.00
19) Toluene-d8 (S)	8.438	98	31775	2402.28	ng/L		0.00
29) 4-Bromofluorobenzene (S)	11.729	174	6706	2564.33	ng/L		0.00
Target Compounds							Qvalue
2) Chloromethane	1.936	50	483	8.46	ng/L		98
3) Vinyl Chloride	2.049	62	35	8.78	ng/L		64
4) 1,1-Dichloroethene	3.312	61	51	10.64	ng/L		88
5) Carbon Disulfide	3.327	76	286	33.85	ng/L		75
6) t-1,2-Dichloroethene	4.130	61	58	13.54	ng/L		82
7) Methyl-tert-butyl-ether	4.286	73	144	16.41	ng/L	#	55
8) 1,1-Dichloroethane	4.781	63	73	13.29	ng/L		89
9) c-1,2-Dichloroethene	5.346	61	56	12.69	ng/L		98
10) Chloroform	5.637	83	87	15.78	ng/L		94
12) Benzene	6.241	78	396	31.03	ng/L		88
13) 1,2-Dichloroethane (EDC)	6.452	62	69	16.14	ng/L		91
15) Trichloroethene (TCE)	6.862	130	39	13.44	ng/L		86
16) 1,2-Dichloropropane	7.431	63	41	11.92	ng/L		94
18) c-1,3-Dichloropropene	8.218	75	90	16.34	ng/L		97
20) Toluene	8.491	91	237	16.82	ng/L		97
21) Tetrachloroethene (PCE)	8.954	166	54	18.89	ng/L		97
22) t-1,3-Dichloropropene	9.003	75	65	13.40	ng/L	#	57
23) 1,1,2-Trichloroethane	9.218	97	44	13.50	ug/L		83
24) 1,2-Dibromoethane (EDB)	9.779	107	41	11.59	ng/L		90
25) Ethylbenzene	10.493	91	159	11.56	ng/L		99
26) m,p-Xylenes (2)	10.665	91	248	24.95	ng/L		88
27) o-Xylene	11.133	91	132	11.91	ng/L		92
30) 1,1,2,2-Tetrachloroeth...	11.934	83	83	17.60	ug/L		84
31) 1,3.5-Trimethylbenzene	12.053	105	108	14.51	ng/L		78
32) 1,2,3-Trichloropropane	0.000		0	N.D.			
33) 1,2,4-Trimethylbenzene	12.404	105	157	20.53	ng/L		97
34) 1,2-Dibromo-3-chloropr...	13.780	157	44	41.19	ng/L		91
35) Naphthalene	14.674	128	276	32.84	ng/L		99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071221.D
Acq On : 12 Jul 2019 08:54 pm
Operator : MM
Sample : 9G12037-IBL1
Misc : 1X 5mL DI
ALS Vial : 99 Sample Multiplier: 1

Quant Time: Jul 16 11:19:19 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071222.D
Acq On : 12 Jul 2019 09:21 pm
Operator : MM
Sample : 9G12037-IBL2
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1

Quant Time: Jul 16 11:19:31 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

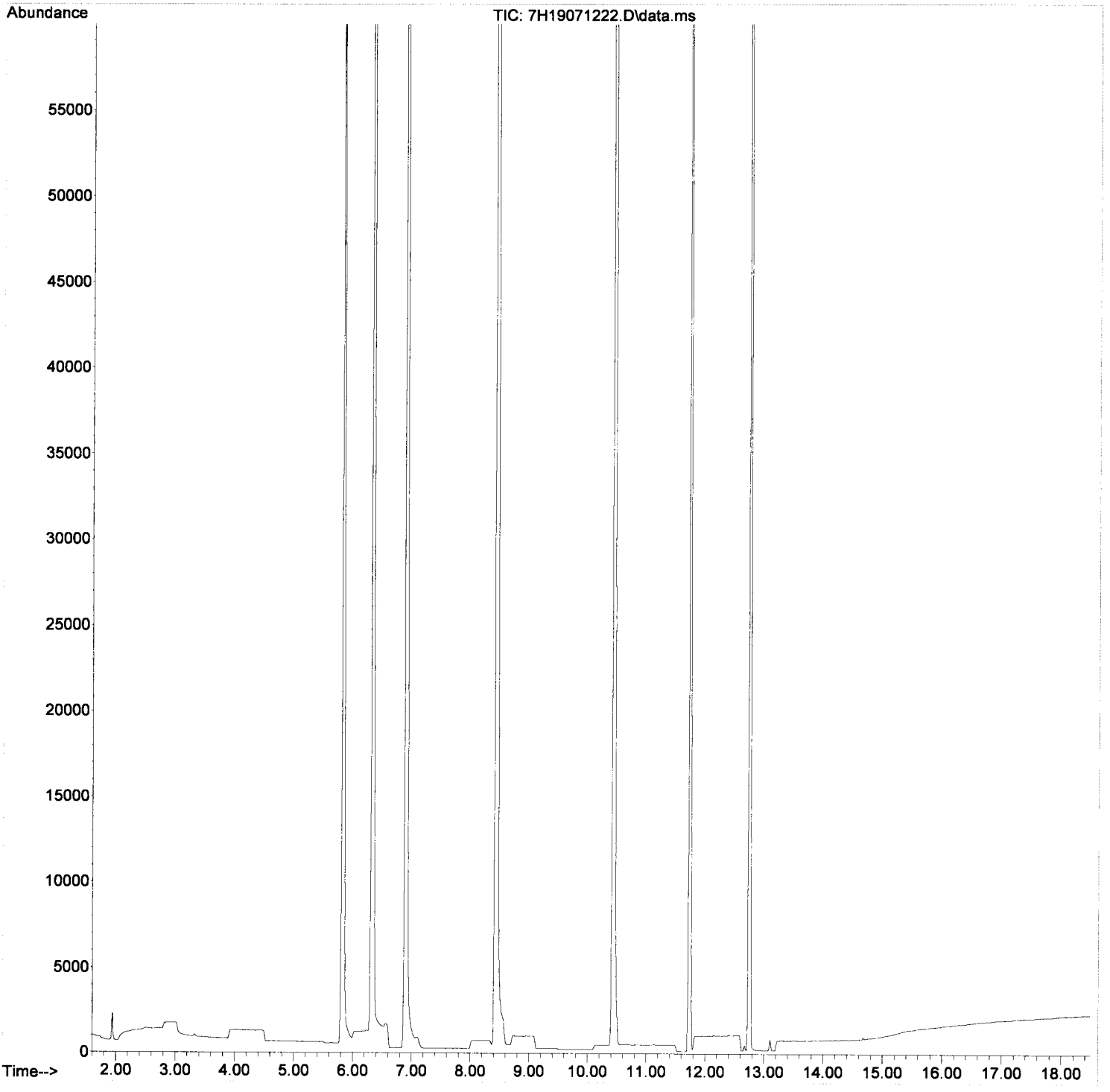
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.327	168	153379	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	224568	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	89507	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	83195	2281.83	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.894	114	258591	2262.62	ng/L	0.00
19) Toluene-d8 (S)	8.432	98	340117	2229.15	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	80481	2380.01	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.937	50	1970	Below Cal		98
3) Vinyl Chloride	0.000		0	N.D.		
4) 1,1-Dichloroethene	0.000		0	N.D.		
5) Carbon Disulfide	3.327	76	253	2.32	ng/L	47
6) t-1,2-Dichloroethene	0.000		0	N.D.		
7) Methyl-tert-butyl-ether	4.282	73	32	0.28	ng/L	84
8) 1,1-Dichloroethane	0.000		0	N.D.		
9) c-1,2-Dichloroethene	0.000		0	N.D.		
10) Chloroform	5.637	83	36	0.51	ng/L	82
12) Benzene	6.235	78	213	1.29	ng/L	95
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.		
15) Trichloroethene (TCE)	0.000		0	N.D.		
16) 1,2-Dichloropropane	0.000		0	N.D.		
18) c-1,3-Dichloropropene	0.000		0	N.D.		
20) Toluene	8.492	91	103	0.63	ng/L	94
21) Tetrachloroethene (PCE)	8.955	166	38	1.15	ng/L	76
22) t-1,3-Dichloropropene	0.000		0	N.D.		
23) 1,1,2-Trichloroethane	0.000		0	N.D.		
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.		
25) Ethylbenzene	0.000		0	N.D.		
26) m,p-Xylenes (2)	10.665	91	67	0.58	ng/L	92
27) o-Xylene	11.133	91	50	0.39	ng/L	99
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.		
31) 1,3.5-Trimethylbenzene	12.058	105	31	0.32	ng/L	83
32) 1,2,3-Trichloropropane	0.000		0	N.D.		
33) 1,2,4-Trimethylbenzene	12.405	105	56	0.57	ng/L	92
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.		
35) Naphthalene	14.675	128	169	1.56	ng/L	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071222.D
Acq On : 12 Jul 2019 09:21 pm
Operator : MM
Sample : 9G12037-IBL2
Misc : 1X 5mL DI
ALS Vial : 1 Sample Multiplier: 1

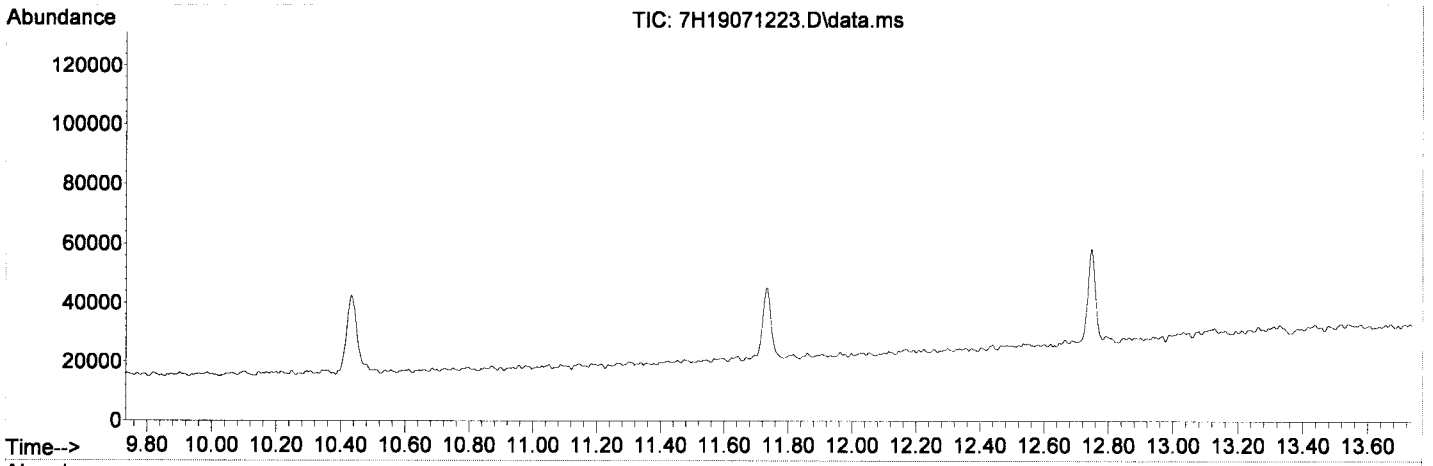
Quant Time: Jul 16 11:19:31 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

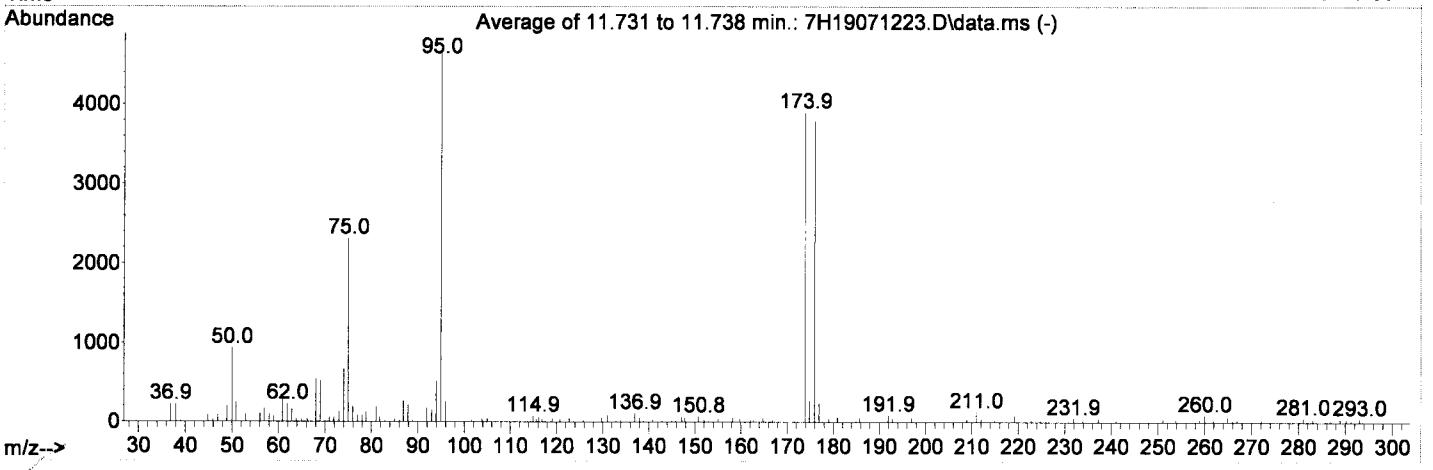


Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071223.D
Acq On : 12 Jul 2019 09:48 pm
Operator : MM
Sample : 9G12037-TUN1
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\GCMS\1\methods\VH161228W.M
Title : EPA 8260C: Volatile Organic Compounds
Last Update : Wed Dec 21 11:05:59 2016





AutoFind: Scans 3154, 3155, 3156; Background Corrected with Scan 3136

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	20.1	935	PASS
75	95	30	60	49.6	2310	PASS
95	95	100	100	100.0	4657	PASS
96	95	5	9	5.4	253	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	83.7	3899	PASS
175	174	5	9	6.7	262	PASS
176	174	95	101	97.2	3790	PASS
177	176	5	9	6.5	246	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071223.D
Acq On : 12 Jul 2019 09:48 pm
Operator : MM
Sample : 9G12037-TUN1
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 10:57:37 2019
Quant Method : C:\GCMS\1\methods\VH161228W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Wed Dec 21 11:05:59 2016
Response via : Initial Calibration
DataAcq Meth:VH1907RUN.M

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.326	168	11403	50.00	ug/L		-0.02
39) Chlorobenzene-d5 (I)	10.432	117	18697	50.00	ug/L		-0.02
60) 1,4-Dichlorobenzene-d4...	12.748	152	8099	50.00	ug/L		-0.02
System Monitoring Compounds							
28) Dibromofluoromethane (S)	5.825	111	6895	45.76	ug/L		-0.01
34) 1,4-Difluorobenzene (S)	6.902	114	20645	54.20	ug/L		-0.02
42) Toluene-d8 (S)	8.436	98	26364	56.66	ug/L		-0.02
61) 4-Bromofluorobenzene (S)	11.735	174	6921	62.08	ug/L		-0.02
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.683	85	108	0.52	ug/L		59
3) Chloromethane	1.941	50	380	2.21	ug/L		88
4) Vinyl Chloride	2.044	62	19	0.15	ug/L	#	19
5) Bromomethane	2.420	96	176	1.82	ug/L		75
6) Chloroethane	2.552	64	31	Below Cal		#	64
7) Trichlorofluoromethane	2.709	101	92	0.32	ug/L		75
8) 1,1-Dichloroethene	3.291	61	49	0.30	ug/L	#	70
9) Carbon Disulfide	3.323	76	173	0.61	ug/L		44
10) Freon 113	3.330	101	47	0.35	ug/L	#	16
11) Iodomethane	3.388	142	10	2.38	ug/L	#	47
12) Acrolein	3.709	56	91	4.91	ug/L		72
13) Methylene Chloride	3.960	84	7426	56.16	ug/L		97
14) Acetone	4.037	43	1199	25.57	ug/L		85
16) n-Hexane	4.182	86	20	3.00	ug/L	#	1
17) Methyl-tert-butyl-ether	4.272	73	91	0.39	ug/L		57
18) 1,1-Dichloroethane	4.777	63	55	0.27	ug/L	#	1
19) Acrylonitrile	4.854	53	31	0.69	ug/L	#	3
20) Vinyl Acetate	5.060	43	175	1.50	ug/L		74
21) c-1,2-Dichloroethene	5.346	61	38	0.29	ug/L	#	27
22) 2,2-Dichloropropane	5.471	77	20	0.13	ug/L	#	7
25) Carbon Tetrachloride	5.764	117	21	0.10	ug/L	#	61
26) Tetrahydrofuran	5.831	42	75	2.16	ug/L		91
27) 1,1,1-Trichloroethane	5.854	97	78	0.34	ug/L	#	39
29) 1,1-Dichloropropene	5.976	75	35	0.30	ug/L	#	1
30) 2-Butanone (MEK)	5.979	43	38	0.59	ug/L		90
31) Benzene	6.230	78	166	0.42	ug/L	#	17
33) iso-Butyl Alcohol	6.490	43	106	17.35	ug/L	#	63
35) Trichloroethene (TCE)	6.773	130	14	0.11	ug/L	#	14
36) Dibromomethane	7.317	93	39	0.41	ug/L	#	38
37) 1,2-Dichloropropane	7.439	63	35	0.34	ug/L	#	21
38) Bromodichloromethane	7.494	83	37	0.20	ug/L	#	1
41) c-1,3-Dichloropropene	8.214	75	32	0.24	ug/L	#	1
43) Toluene	8.487	91	110	0.20	ug/L	#	15
45) 4-Methyl-2-Pentanone (...	8.992	43	263	2.47	ug/L	#	48
46) t-1,3-Dichloropropene	8.986	75	82	0.87	ug/L	#	60
47) 1,1,2-Trichloroethane	9.204	97	168	1.24	ug/L	#	37
48) Dibromochloromethane	9.449	129	52	0.33	ug/L	#	8

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071223.D
Acq On : 12 Jul 2019 09:48 pm
Operator : MM
Sample : 9G12037-TUN1
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 10:57:37 2019
Quant Method : C:\GCMS\1\methods\VH161228W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Wed Dec 21 11:05:59 2016
Response via : Initial Calibration
DataAcq Meth:VH1907RUN.M

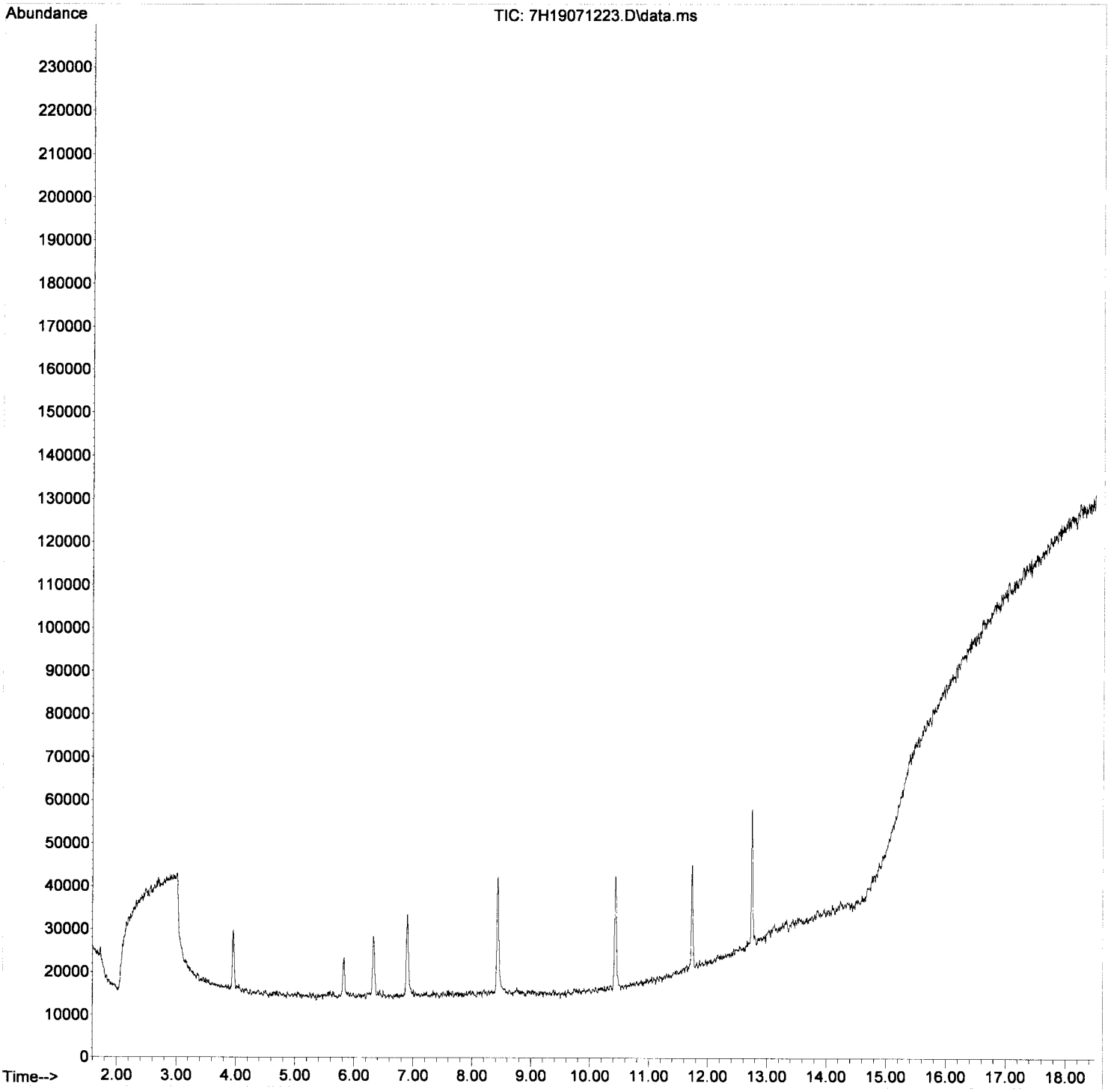
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) 1,3-Dichloropropane	9.609	76	80	0.41 ug/L #	1
50) 1,2-Dibromoethane (EDB)	9.783	107	31	0.24 ug/L #	60
51) 2-Hexanone	10.117	43	157	2.24 ug/L	89
53) Ethylbenzene	10.487	91	91	0.23 ug/L #	32
54) 1,1,1,2-Tetrachloroethane	10.545	131	20	0.13 ug/L #	37
55) m,p-Xylenes (2)	10.487	91	91	0.47 ug/L #	21
56) o-Xylene	10.654	91	81	0.20 ug/L #	22
57) Styrene	11.188	104	81	0.58 ug/L #	1
59) Isopropylbenzene	11.468	105	83	0.35 ug/L	53
63) n-Propylbenzene	11.886	91	147	0.37 ug/L	69
64) 1,1,2,2-Tetrachloroethane	11.934	83	31	0.17 ug/L #	49
65) 2-Chlorotoluene	12.027	126	77	1.04 ug/L #	1
66) 1,3,5-Trimethylbenzene	12.063	105	71	0.35 ug/L #	43
67) 1,2,3-Trichloropropane	12.050	110	57	1.01 ug/L #	27
69) 4-Chlorotoluene	12.156	91	114	0.51 ug/L	59
70) tert-Butylbenzene	12.339	91	70	0.56 ug/L #	1
71) 1,2,4-Trimethylbenzene	12.413	105	113	0.52 ug/L #	16
72) sec-Butylbenzene	12.516	105	115	0.44 ug/L	58
73) 4-Isopropyltoluene	12.629	119	87	0.47 ug/L	51
74) 1,3-Dichlorobenzene	12.683	146	44	0.21 ug/L #	25
75) 1,4-Dichlorobenzene	12.757	146	62	0.23 ug/L #	39
76) n-Butylbenzene	12.979	91	67	0.35 ug/L #	32
78) 1,2-Dibromo-3-Chloropr...	13.780	157	62	2.42 ug/L #	18
79) Hexachlorobutadiene	14.346	223	39	0.92 ug/L #	31
80) 1,2,4-Trichlorobenzene	14.837	180	26	0.25 ug/L #	11
81) Naphthalene	14.667	128	200	1.25 ug/L	46
82) 1,2,3-Trichlorobenzene	14.397	180	45	0.44 ug/L #	15

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071223.D
Acq On : 12 Jul 2019 09:48 pm
Operator : MM
Sample : 9G12037-TUN1
Misc : 1X 5mL DI
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 16 10:57:37 2019
Quant Method : C:\GCMS\1\methods\VH161228W.M
Quant Title : EPA 8260C: Volatile Organic Compounds
QLast Update : Wed Dec 21 11:05:59 2016
Response via : Initial Calibration
DataAcq Meth:VH1907RUN.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071224.D
Acq On : 12 Jul 2019 10:14 pm
Operator : MM
Sample : 9G12037-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:19:35 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

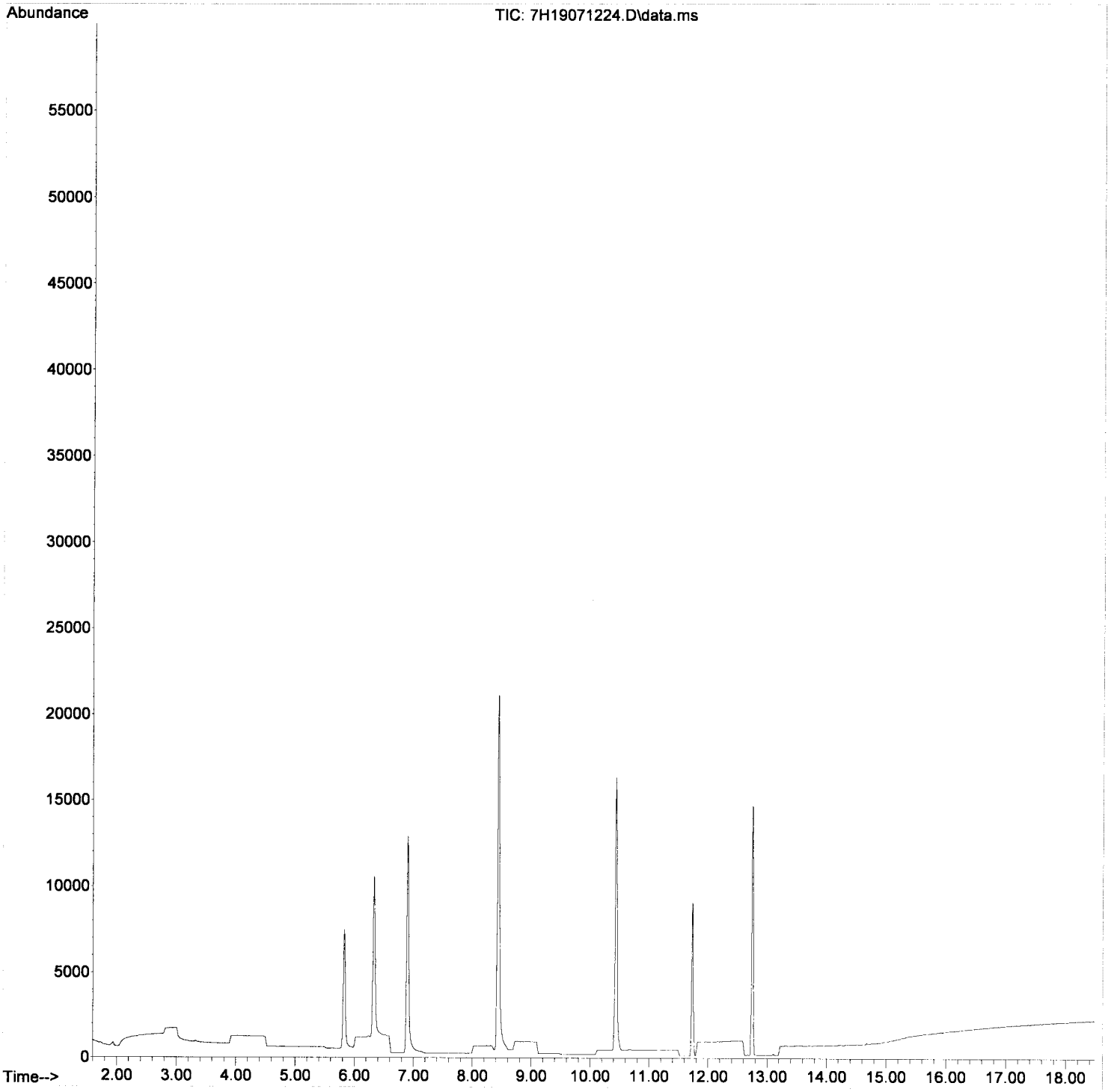
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.327	168	16371	2330.00 ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	24143	2330.00 ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9784	2330.00 ng/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.825	111	8975	2306.28 ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	28520	2337.97 ng/L	0.00
19) Toluene-d8 (S)	8.438	98	38746	2362.08 ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.734	174	8606	2328.24 ng/L	0.00
Target Compounds					Qvalue
2) Chloromethane	1.942	50	294	Below Cal	98
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.327	76	171	14.71 ng/L #	42
6) t-1,2-Dichloroethene	0.000		0	N.D.	
7) Methyl-tert-butyl-ether	4.241	73	65	5.38 ng/L	91
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	0.000		0	N.D.	
10) Chloroform	5.626	83	40	5.27 ng/L	69
12) Benzene	6.241	78	178	10.14 ng/L	81
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	0.000		0	N.D.	
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.491	91	71	4.06 ng/L	85
21) Tetrachloroethene (PCE)	8.965	166	26	7.33 ng/L	81
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.498	91	30	1.76 ng/L	72
26) m,p-Xylenes (2)	10.665	91	45	3.65 ng/L	84
27) o-Xylene	0.000		0	N.D.	
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.053	105	25	2.38 ng/L #	26
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.410	105	46	4.25 ng/L	95
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.674	128	141	11.87 ng/L	83

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071224.D
Acq On : 12 Jul 2019 10:14 pm
Operator : MM
Sample : 9G12037-ICB1
Misc : 1X 5mL DI
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 16 11:19:35 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071225.D
Acq On : 12 Jul 2019 10:41 pm
Operator : MM
Sample : 9G12037-CAL1
Misc : 1X 5mL 10PPT VOC
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:01:08 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

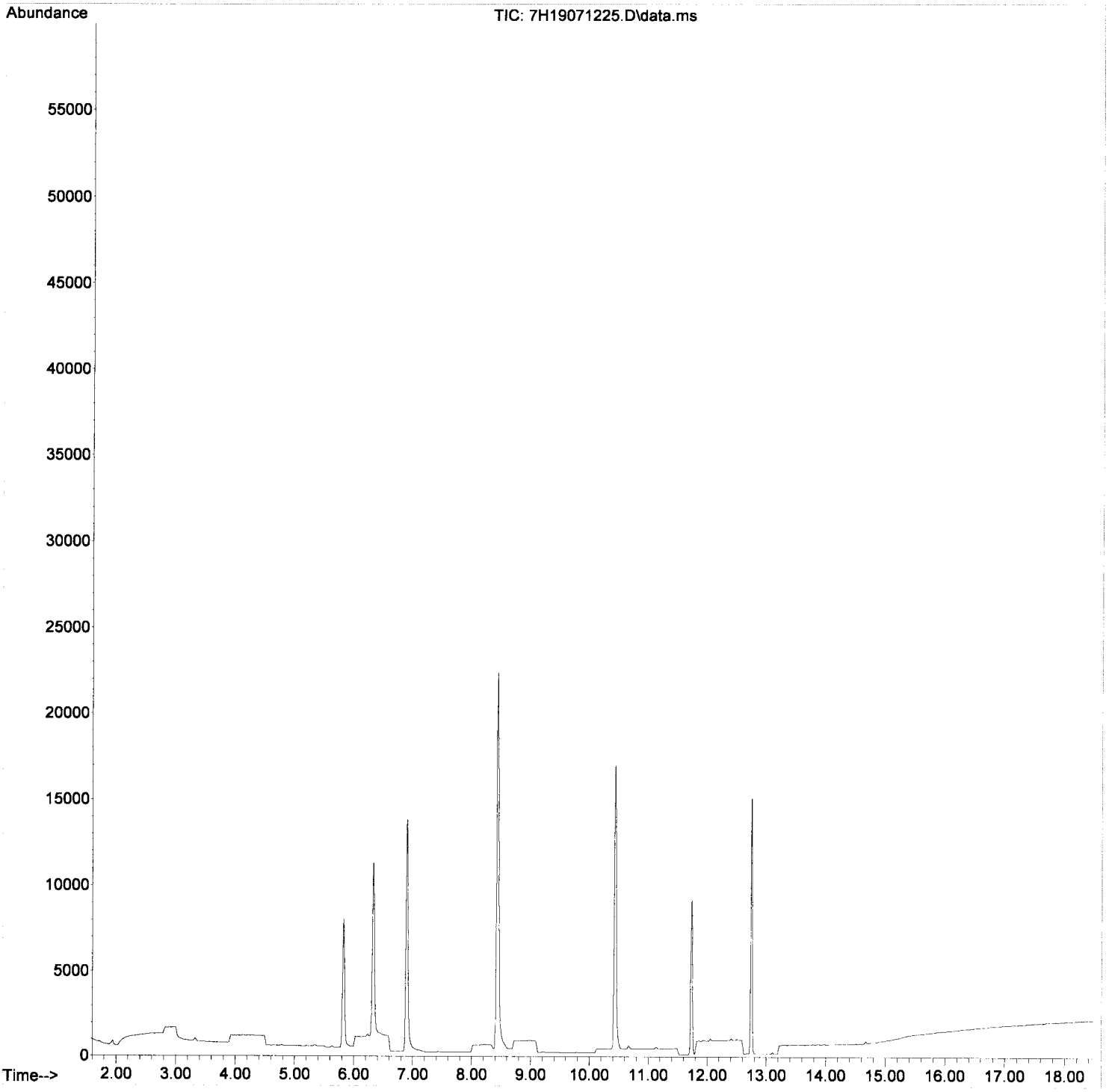
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.327	168	17116	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	25058	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9854	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9614	2235.91	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	29875	2309.27	ng/L	0.00
19) Toluene-d8 (S)	8.438	98	40402	2663.80	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	8813	2369.23	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	360	Below Cal		96
3) Vinyl Chloride	2.049	62	47	8.44	ng/L	71
4) 1,1-Dichloroethene	3.312	61	91	15.94	ng/L	76
5) Carbon Disulfide	3.332	76	279	23.56	ng/L	75
6) t-1,2-Dichloroethene	4.130	61	70	12.47	ng/L	88
7) Methyl-tert-butyl-ether	4.276	73	142	11.53	ng/L #	55
8) 1,1-Dichloroethane	4.781	63	93	12.05	ng/L	92
9) c-1,2-Dichloroethene	5.346	61	75	11.93	ng/L	90
10) Chloroform	5.631	83	134	16.56	ng/L	100
12) Benzene	6.241	78	414	22.38	ng/L	93
13) 1,2-Dichloroethane (EDC)	6.452	62	72	11.40	ng/L	95
15) Trichloroethene (TCE)	6.862	130	41	9.81	ng/L	99
16) 1,2-Dichloropropane	7.431	63	57	11.94	ng/L	92
18) c-1,3-Dichloropropene	8.218	75	68	9.84	ng/L	98
20) Toluene	8.491	91	228	12.89	ng/L	97
21) Tetrachloroethene (PCE)	8.960	166	65	17.23	ng/L	100
22) t-1,3-Dichloropropene	9.003	75	92	14.75	ng/L	86
23) 1,1,2-Trichloroethane	9.218	97	46	10.79	ug/L	90
24) 1,2-Dibromoethane (EDB)	9.785	107	59	14.49	ng/L	94
25) Ethylbenzene	10.493	91	209	12.86	ng/L	91
26) m,p-Xylenes (2)	10.665	91	278	22.01	ng/L	90
27) o-Xylene	11.133	91	189	14.01	ng/L	98
30) 1,1,2,2-Tetrachloroeth...	11.934	83	77	11.93	ug/L	86
31) 1,3.5-Trimethylbenzene	12.058	105	116	10.97	ng/L	99
32) 1,2,3-Trichloropropane	0.000		0	N.D.		
33) 1,2,4-Trimethylbenzene	12.404	105	130	12.26	ng/L	96
34) 1,2-Dibromo-3-chloropr...	13.785	157	28	21.31	ng/L #	1
35) Naphthalene	14.674	128	225	26.52	ng/L	99

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071225.D
Acq On : 12 Jul 2019 10:41 pm
Operator : MM
Sample : 9G12037-CAL1
Misc : 1X 5mL 10PPT VOC
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 16 11:01:08 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071226.D
Acq On : 12 Jul 2019 11:08 pm
Operator : MM
Sample : 9G12037-CAL2
Misc : 1X 5mL 20PPT VOC
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:01:12 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

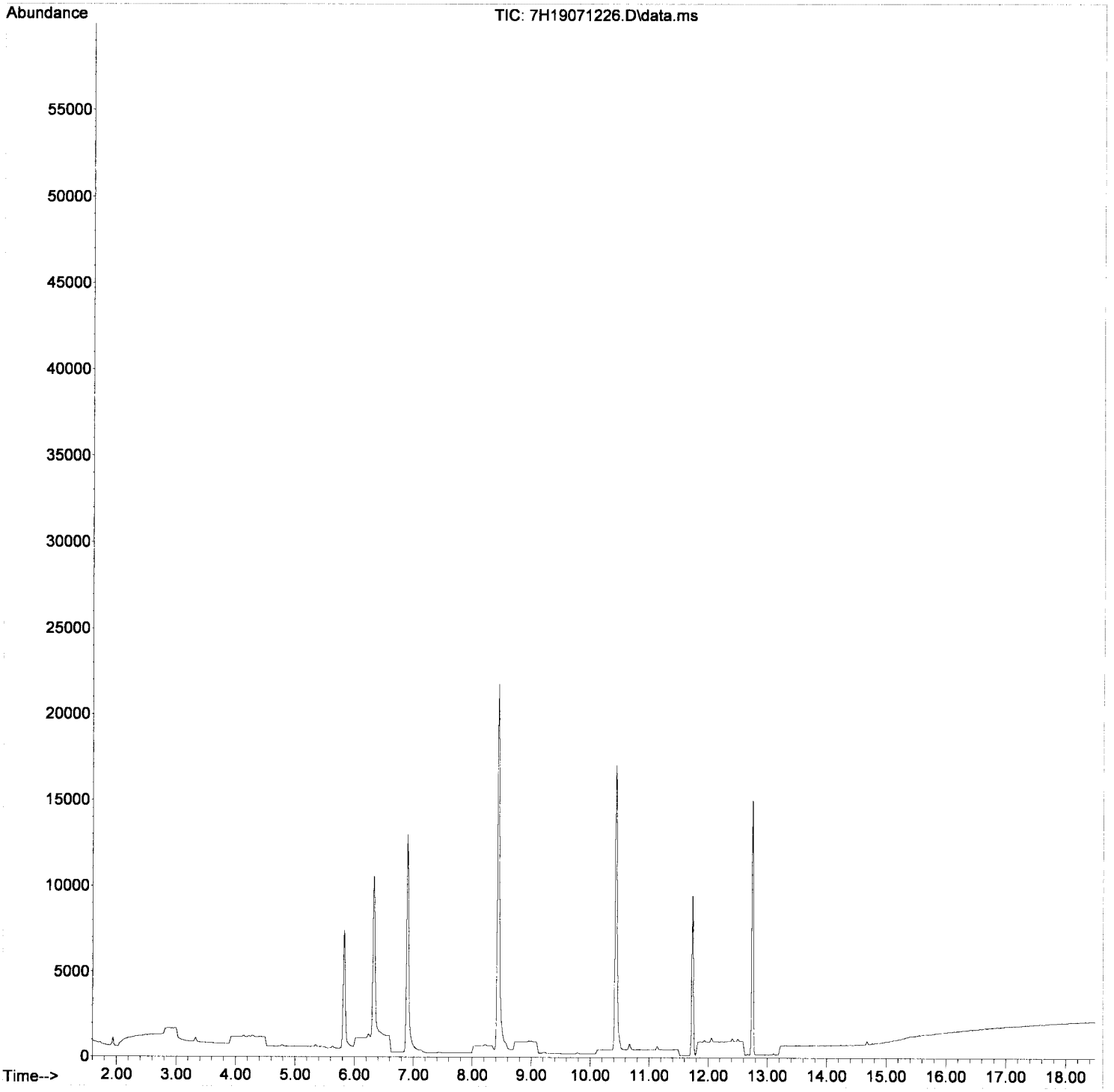
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.327	168	16783	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	25290	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	10057	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9327	2212.20	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	29288	2308.82	ng/L	0.00
19) Toluene-d8 (S)	8.438	98	40271	2630.81	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	9046	2382.78	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	624	Below Cal		96
3) Vinyl Chloride	2.049	62	109	19.95	ng/L	92
4) 1,1-Dichloroethene	3.312	61	139	24.84	ng/L	75
5) Carbon Disulfide	3.332	76	389	33.50	ng/L	80
6) t-1,2-Dichloroethene	4.130	61	123	22.34	ng/L #	76
7) Methyl-tert-butyl-ether	4.281	73	232	19.21	ng/L	87
8) 1,1-Dichloroethane	4.786	63	157	20.75	ng/L	89
9) c-1,2-Dichloroethene	5.346	61	119	19.30	ng/L	93
10) Chloroform	5.631	83	173	21.80	ng/L	94
12) Benzene	6.241	78	577	51.82	ng/L	88
13) 1,2-Dichloroethane (EDC)	6.452	62	116	18.73	ng/L	92
15) Trichloroethene (TCE)	6.862	130	92	22.44	ng/L	88
16) 1,2-Dichloropropane	7.431	63	100	21.36	ng/L	78
18) c-1,3-Dichloropropene	8.218	75	172	24.66	ng/L	87
20) Toluene	8.491	91	398	22.30	ng/L	94
21) Tetrachloroethene (PCE)	8.960	166	85	22.32	ng/L	85
22) t-1,3-Dichloropropene	9.003	75	117	18.59	ng/L	89
23) 1,1,2-Trichloroethane	9.218	97	92	21.39	ug/L	96
24) 1,2-Dibromoethane (EDB)	9.785	107	87	21.18	ng/L	89
25) Ethylbenzene	10.498	91	376	22.92	ng/L	92
26) m,p-Xylenes (2)	10.665	91	530	41.58	ng/L	89
27) o-Xylene	11.133	91	314	23.06	ng/L	95
30) 1,1,2,2-Tetrachloroeth...	11.934	83	146	22.17	ug/L #	69
31) 1,3.5-Trimethylbenzene	12.058	105	232	21.90	ng/L	96
32) 1,2,3-Trichloropropane	12.058	110	48	26.80	ng/L #	73
33) 1,2,4-Trimethylbenzene	12.404	105	250	23.10	ng/L	82
34) 1,2-Dibromo-3-chloropr...	13.786	157	35	26.10	ng/L	89
35) Naphthalene	14.674	128	301	34.77	ng/L	96

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071226.D
Acq On : 12 Jul 2019 11:08 pm
Operator : MM
Sample : 9G12037-CAL2
Misc : 1X 5mL 20PPT VOC
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 16 11:01:12 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071227.D
Acq On : 12 Jul 2019 11:35 pm
Operator : MM
Sample : 9G12037-CAL3
Misc : 1X 5mL 50PPT VOC
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:01:16 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

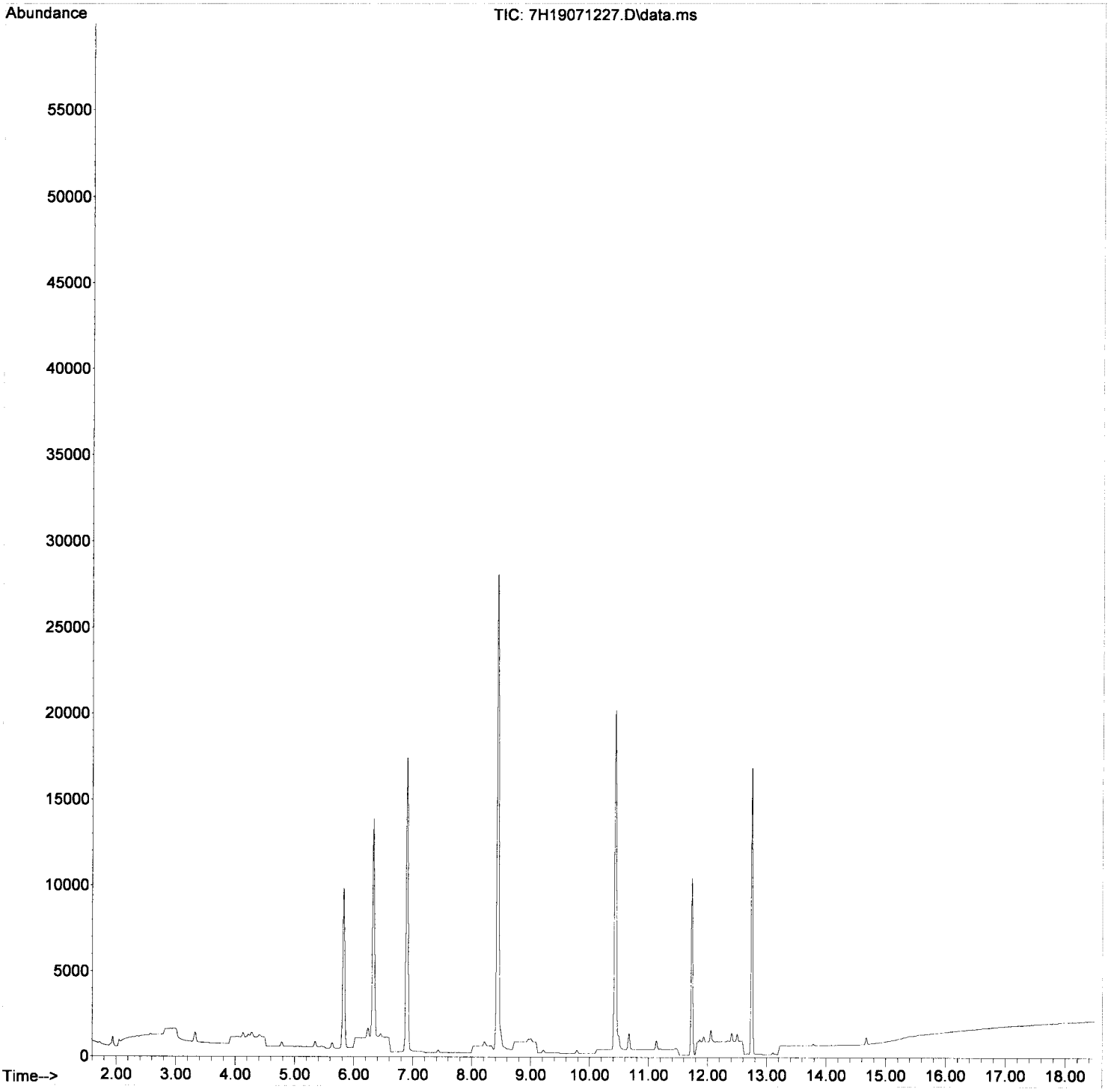
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.327	168	19860	2330.00	ng/L		0.00
17) Chlorobenzene-d5 (I)	10.434	117	28572	2330.00	ng/L		0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	11071	2330.00	ng/L		0.00
System Monitoring Compounds							
11) Dibromofluoromethane (S)	5.825	111	11274	2259.70	ng/L		0.00
14) 1,4-Difluorobenzene (S)	6.894	114	34319	2286.26	ng/L		0.00
19) Toluene-d8 (S)	8.432	98	45650	2639.65	ng/L		0.00
29) 4-Bromofluorobenzene (S)	11.729	174	9861	2359.56	ng/L		0.00
Target Compounds							Qvalue
2) Chloromethane	1.942	50	754	Below Cal			98
3) Vinyl Chloride	2.049	62	327	50.58	ng/L		91
4) 1,1-Dichloroethene	3.312	61	402	60.70	ng/L		89
5) Carbon Disulfide	3.327	76	787	57.27	ng/L		97
6) t-1,2-Dichloroethene	4.130	61	362	55.57	ng/L		85
7) Methyl-tert-butyl-ether	4.276	73	773	54.10	ng/L	#	55
8) 1,1-Dichloroethane	4.781	63	453	50.59	ng/L		99
9) c-1,2-Dichloroethene	5.346	61	365	50.02	ng/L		92
10) Chloroform	5.631	83	491	52.28	ng/L		97
12) Benzene	6.235	78	1166	54.33	ng/L		99
13) 1,2-Dichloroethane (EDC)	6.452	62	355	48.44	ng/L		97
15) Trichloroethene (TCE)	6.862	130	243	50.09	ng/L		97
16) 1,2-Dichloropropane	7.431	63	283	51.07	ng/L		92
18) c-1,3-Dichloropropene	8.218	75	430	54.57	ng/L		91
20) Toluene	8.491	91	1061	52.61	ng/L		96
21) Tetrachloroethene (PCE)	8.960	166	232	53.93	ng/L		79
22) t-1,3-Dichloropropene	9.003	75	389	54.70	ng/L		98
23) 1,1,2-Trichloroethane	9.218	97	242	49.79	ug/L		96
24) 1,2-Dibromoethane (EDB)	9.779	107	257	55.37	ng/L		99
25) Ethylbenzene	10.493	91	990	53.42	ng/L		97
26) m,p-Xylenes (2)	10.665	91	1455	101.03	ng/L		88
27) o-Xylene	11.133	91	764	49.65	ng/L		95
30) 1,1,2,2-Tetrachloroeth...	11.934	83	366	50.49	ug/L		98
31) 1,3.5-Trimethylbenzene	12.058	105	617	51.94	ng/L		98
32) 1,2,3-Trichloropropane	12.058	110	117	59.35	ng/L		84
33) 1,2,4-Trimethylbenzene	12.404	105	618	51.88	ng/L		91
34) 1,2-Dibromo-3-chloropr...	13.785	157	91	61.64	ng/L		79
35) Naphthalene	14.674	128	684	71.77	ng/L		98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071227.D
Acq On : 12 Jul 2019 11:35 pm
Operator : MM
Sample : 9G12037-CAL3
Misc : 1X 5mL 50PPT VOC
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 16 11:01:16 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071228.D
Acq On : 13 Jul 2019 12:02 am
Operator : MM
Sample : 9G12037-CAL4
Misc : 1X 5mL 100PPT VOC
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 11:01:20 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

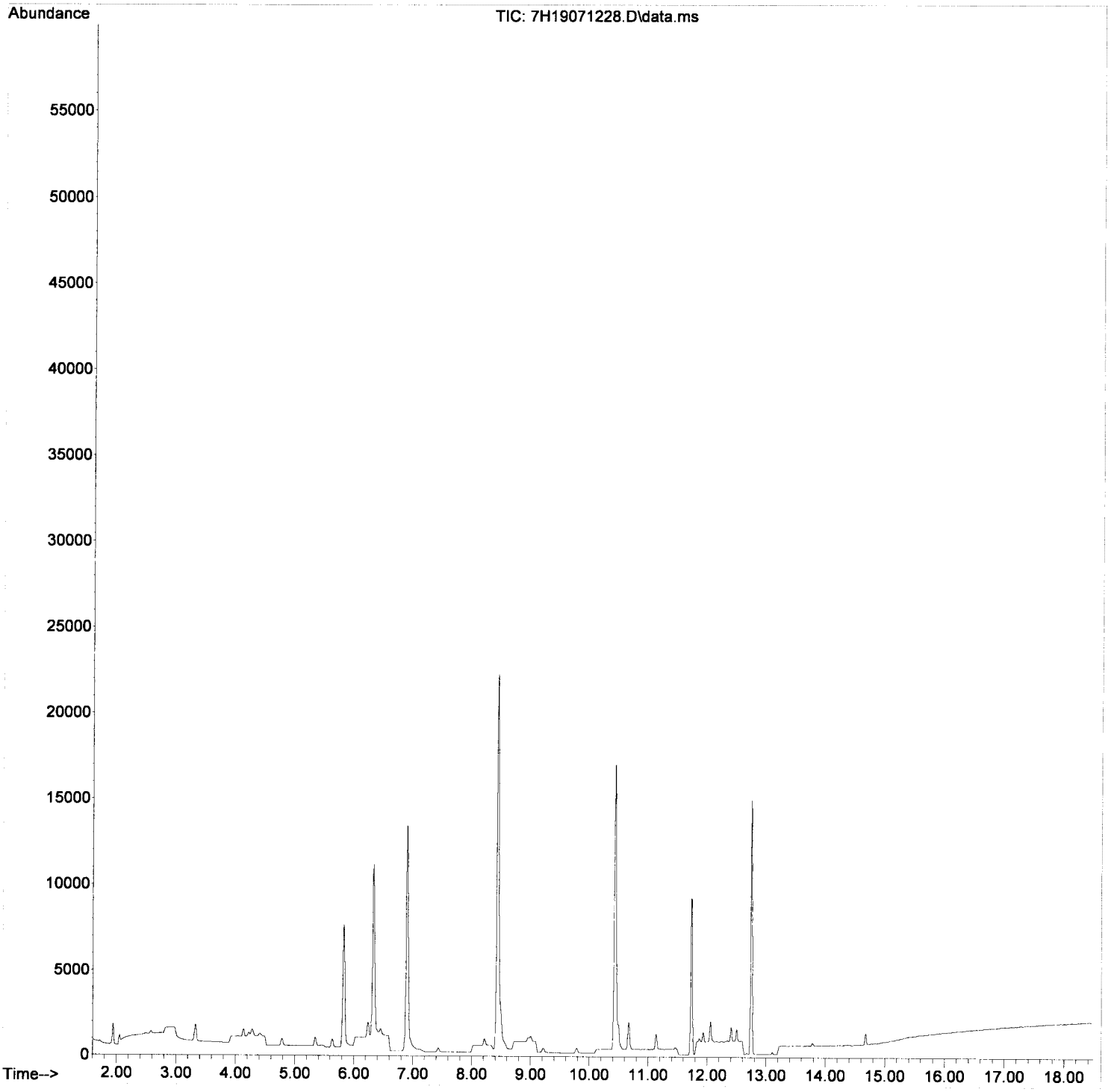
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.328	168	17151	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	25484	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9886	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9396	2180.75	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	29698	2290.91	ng/L	0.00
19) Toluene-d8 (S)	8.433	98	40494	2625.24	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	8907	2386.75	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	1558	87.38	ng/L	99
3) Vinyl Chloride	2.049	62	582	104.24	ng/L	99
4) 1,1-Dichloroethene	3.312	61	650	113.65	ng/L	89
5) Carbon Disulfide	3.332	76	1280	107.85	ng/L	97
6) t-1,2-Dichloroethene	4.130	61	607	107.90	ng/L	86
7) Methyl-tert-butyl-ether	4.281	73	1227	99.48	ng/L	77
8) 1,1-Dichloroethane	4.781	63	761	98.42	ng/L	97
9) c-1,2-Dichloroethene	5.346	61	626	99.35	ng/L	93
10) Chloroform	5.632	83	773	95.31	ng/L	99
12) Benzene	6.241	78	1933	104.30	ng/L	98
13) 1,2-Dichloroethane (EDC)	6.452	62	605	95.58	ng/L	98
15) Trichloroethene (TCE)	6.862	130	411	98.09	ng/L	99
16) 1,2-Dichloropropane	7.431	63	478	99.89	ng/L	88
18) c-1,3-Dichloropropene	8.218	75	684	97.32	ng/L	91
20) Toluene	8.492	91	1759	97.79	ng/L	99
21) Tetrachloroethene (PCE)	8.960	166	362	94.35	ng/L	86
22) t-1,3-Dichloropropene	9.003	75	641	101.06	ng/L	99
23) 1,1,2-Trichloroethane	9.218	97	408	94.12	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.785	107	444	107.25	ng/L	97
25) Ethylbenzene	10.493	91	1708	103.33	ng/L	94
26) m,p-Xylenes (2)	10.665	91	2495	194.24	ng/L	89
27) o-Xylene	11.134	91	1323	96.40	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.934	83	692	106.90	ug/L	92
31) 1,3.5-Trimethylbenzene	12.059	105	1030	97.11	ng/L	96
32) 1,2,3-Trichloropropane	12.059	110	185	105.10	ng/L	87
33) 1,2,4-Trimethylbenzene	12.405	105	1031	96.92	ng/L	90
34) 1,2-Dibromo-3-chloropr...	13.786	157	151	114.54	ng/L #	67
35) Naphthalene	14.675	128	1088	127.84	ng/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071228.D
Acq On : 13 Jul 2019 12:02 am
Operator : MM
Sample : 9G12037-CAL4
Misc : 1X 5mL 100PPT VOC
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 16 11:01:20 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071229.D
Acq On : 13 Jul 2019 12:29 am
Operator : MM
Sample : 9G12037-CAL5
Misc : 1X 5mL 200PPT VOC
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:01:24 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

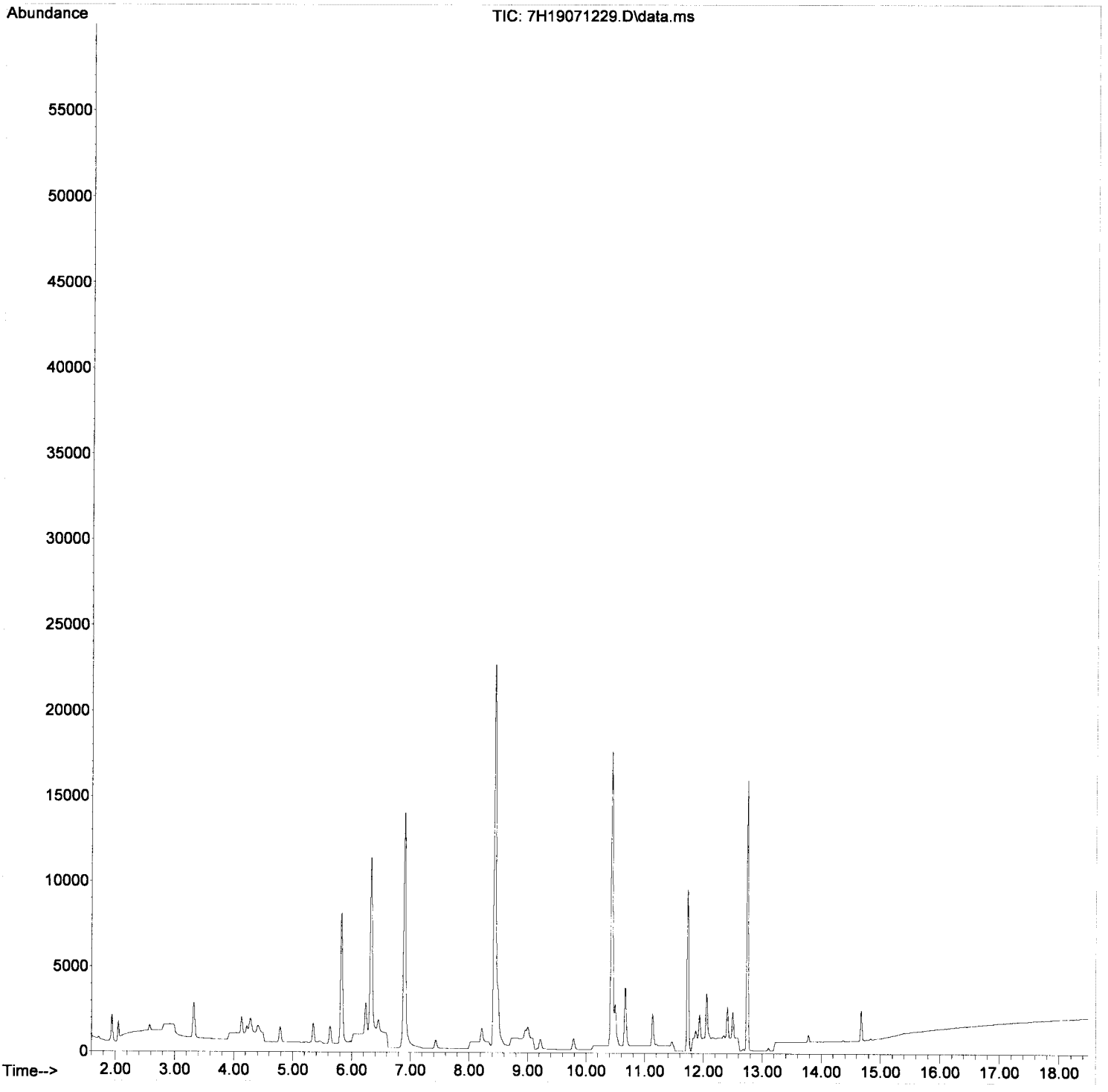
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.327	168	17647	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	26428	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	10417	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9863	2224.80	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	30742	2304.79	ng/L	0.00
19) Toluene-d8 (S)	8.438	98	41301	2581.92	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	9218	2344.18	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	2132	142.91	ng/L	100
3) Vinyl Chloride	2.049	62	1324	230.47	ng/L	96
4) 1,1-Dichloroethene	3.312	61	1394	236.88	ng/L	88
5) Carbon Disulfide	3.332	76	2619	214.48	ng/L	98
6) t-1,2-Dichloroethene	4.130	61	1300	224.60	ng/L	87
7) Methyl-tert-butyl-ether	4.281	73	2708	213.29	ng/L	90
8) 1,1-Dichloroethane	4.786	63	1647	207.02	ng/L	100
9) c-1,2-Dichloroethene	5.346	61	1335	205.91	ng/L	92
10) Chloroform	5.631	83	1668	199.88	ng/L	99
12) Benzene	6.241	78	3890	204.00	ng/L	96
13) 1,2-Dichloroethane (EDC)	6.452	62	1293	198.54	ng/L	97
15) Trichloroethene (TCE)	6.862	130	883	204.82	ng/L	99
16) 1,2-Dichloropropane	7.431	63	1015	206.15	ng/L	88
18) c-1,3-Dichloropropene	8.218	75	1481	203.19	ng/L	88
20) Toluene	8.491	91	3602	193.10	ng/L	97
21) Tetrachloroethene (PCE)	8.960	166	775	194.78	ng/L	84
22) t-1,3-Dichloropropene	9.003	75	1320	200.67	ng/L	98
23) 1,1,2-Trichloroethane	9.218	97	878	195.31	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.785	107	946	220.34	ng/L	96
25) Ethylbenzene	10.493	91	3559	207.62	ng/L	96
26) m,p-Xylenes (2)	10.665	91	5219	391.80	ng/L	88
27) o-Xylene	11.133	91	2788	195.89	ng/L	95
30) 1,1,2,2-Tetrachloroeth...	11.934	83	1611	236.19	ug/L	97
31) 1,3.5-Trimethylbenzene	12.058	105	2207	197.47	ng/L	97
32) 1,2,3-Trichloropropane	12.058	110	414	223.20	ng/L	89
33) 1,2,4-Trimethylbenzene	12.404	105	2212	197.34	ng/L	91
34) 1,2-Dibromo-3-chloropr...	13.785	157	388	279.32	ng/L #	75
35) Naphthalene	14.674	128	2842	316.92	ng/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071229.D
Acq On : 13 Jul 2019 12:29 am
Operator : MM
Sample : 9G12037-CAL5
Misc : 1X 5mL 200PPT VOC
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 16 11:01:24 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071230.D
Acq On : 13 Jul 2019 12:55 am
Operator : MM
Sample : 9G12037-CAL6
Misc : 1X 5mL 500PPT VOC
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 11:01:28 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

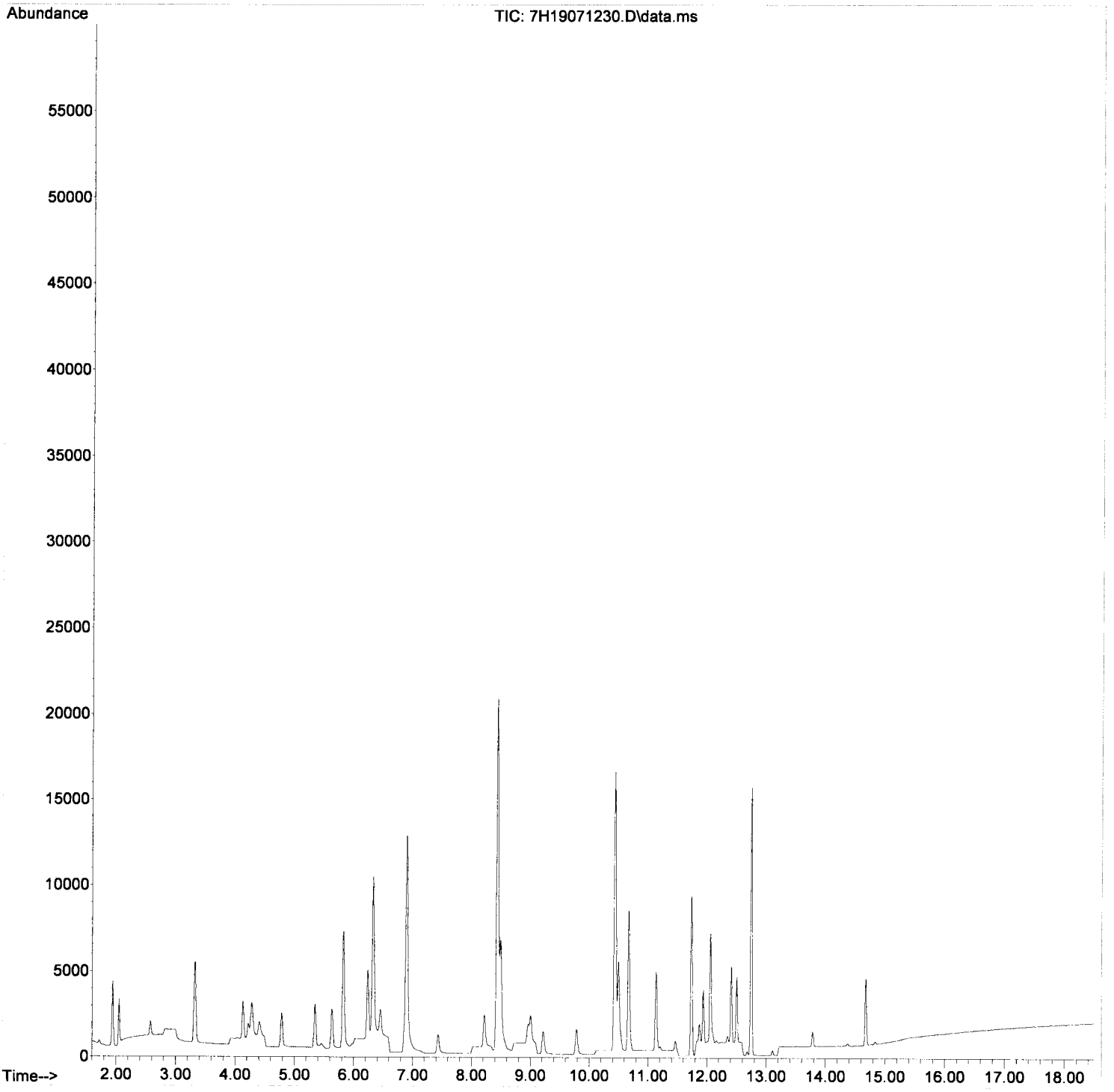
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.327	168	16412	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	24926	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	10307	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9013	2186.05	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	28778	2319.90	ng/L	0.00
19) Toluene-d8 (S)	8.438	98	39473	2616.34	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	9000	2313.16	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	4906	462.60	ng/L	100
3) Vinyl Chloride	2.049	62	3132	586.21	ng/L	94
4) 1,1-Dichloroethene	3.312	61	3167	578.67	ng/L	87
5) Carbon Disulfide	3.332	76	5982	526.74	ng/L	99
6) t-1,2-Dichloroethene	4.130	61	2946	547.28	ng/L	87
7) Methyl-tert-butyl-ether	4.281	73	6188	524.05	ng/L	73
8) 1,1-Dichloroethane	4.786	63	3712	501.69	ng/L	100
9) c-1,2-Dichloroethene	5.347	61	3028	502.18	ng/L	91
10) Chloroform	5.631	83	3736	481.39	ng/L	99
12) Benzene	6.241	78	8661	488.38	ng/L	97
13) 1,2-Dichloroethane (EDC)	6.452	62	2943	485.90	ng/L	99
15) Trichloroethene (TCE)	6.862	130	2015	502.58	ng/L	98
16) 1,2-Dichloropropane	7.431	63	2376	518.89	ng/L	88
18) c-1,3-Dichloropropene	8.218	75	3435	499.67	ng/L	88
20) Toluene	8.491	91	8426	478.94	ng/L	97
21) Tetrachloroethene (PCE)	8.960	166	1730	461.00	ng/L	86
22) t-1,3-Dichloropropene	9.003	75	3131	504.66	ng/L	99
23) 1,1,2-Trichloroethane	9.218	97	2065	487.03	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.785	107	2222	548.73	ng/L	96
25) Ethylbenzene	10.493	91	8538	528.09	ng/L	96
26) m,p-Xylenes (2)	10.665	91	12586	1001.79	ng/L	88
27) o-Xylene	11.133	91	6686	498.08	ng/L	94
30) 1,1,2,2-Tetrachloroeth...	11.934	83	3481	515.79	ug/L	95
31) 1,3.5-Trimethylbenzene	12.058	105	5286	478.00	ng/L	95
32) 1,2,3-Trichloropropane	12.058	110	946	515.47	ng/L	88
33) 1,2,4-Trimethylbenzene	12.404	105	5332	480.77	ng/L	90
34) 1,2-Dibromo-3-chloropr...	13.785	157	841	611.89	ng/L	77
35) Naphthalene	14.674	128	6049	681.75	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071230.D
Acq On : 13 Jul 2019 12:55 am
Operator : MM
Sample : 9G12037-CAL6
Misc : 1X 5mL 500PPT VOC
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 16 11:01:28 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071231.D
Acq On : 13 Jul 2019 01:22 am
Operator : MM
Sample : 9G12037-CAL7
Misc : 1X 5mL 1000PPT VOC
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 11:01:32 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

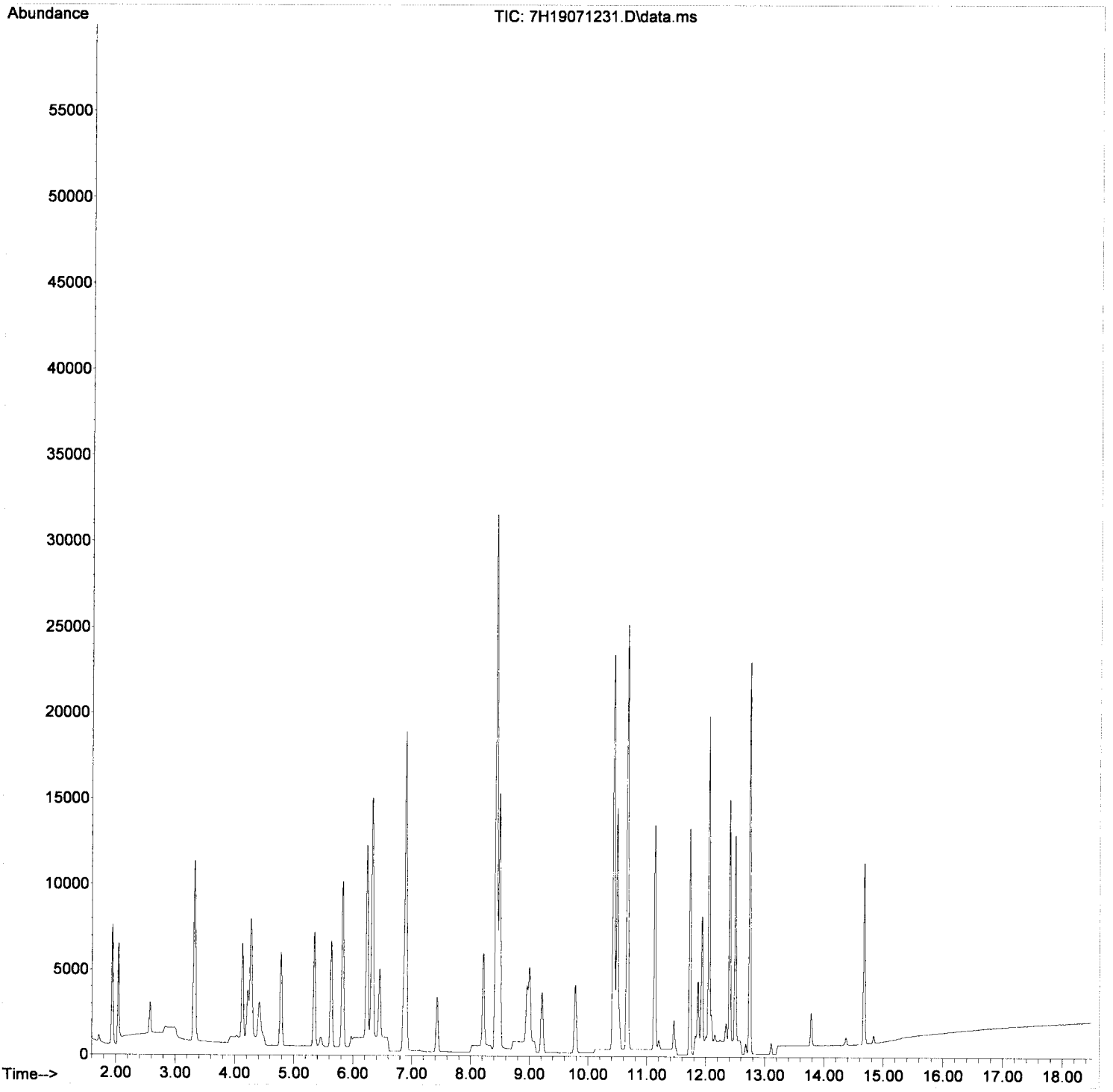
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.328	168	21648	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	31997	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.744	152	14461	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	11590	2131.17	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.895	114	36161	2210.00	ng/L	0.00
19) Toluene-d8 (S)	8.433	98	49504	2556.09	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.730	174	12009	2199.91	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	9213	680.18	ng/L	100
3) Vinyl Chloride	2.044	62	6549	929.29	ng/L	96
4) 1,1-Dichloroethene	3.313	61	7422	1028.12	ng/L	90
5) Carbon Disulfide	3.328	76	12692	847.28	ng/L	99
6) t-1,2-Dichloroethene	4.130	61	6942	977.70	ng/L	88
7) Methyl-tert-butyl-ether	4.277	73	15477	993.69	ng/L	79
8) 1,1-Dichloroethane	4.782	63	9171	939.69	ng/L	100
9) c-1,2-Dichloroethene	5.347	61	7341	923.00	ng/L	93
10) Chloroform	5.632	83	8951	874.39	ng/L	99
12) Benzene	6.236	78	21117	902.75	ng/L	97
13) 1,2-Dichloroethane (EDC)	6.452	62	6985	874.31	ng/L	98
15) Trichloroethene (TCE)	6.862	130	4781	904.05	ng/L	97
16) 1,2-Dichloropropane	7.432	63	5721	947.20	ng/L	89
18) c-1,3-Dichloropropene	8.218	75	8477	960.61	ng/L	86
20) Toluene	8.492	91	21218	939.52	ng/L	98
21) Tetrachloroethene (PCE)	8.960	166	4518	937.87	ng/L	85
22) t-1,3-Dichloropropene	9.003	75	7862	987.17	ng/L	100
23) 1,1,2-Trichloroethane	9.218	97	4945	908.54	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.780	107	5227	1005.56	ng/L	99
25) Ethylbenzene	10.493	91	22694	1093.46	ng/L	96
26) m,p-Xylenes (2)	10.666	91	33897	2101.80	ng/L	89
27) o-Xylene	11.134	91	17546	1018.25	ng/L	97
30) 1,1,2,2-Tetrachloroeth...	11.934	83	8074	852.69	ug/L	96
31) 1,3.5-Trimethylbenzene	12.053	105	15889	1024.97	ng/L	93
32) 1,2,3-Trichloropropane	12.053	110	2171	843.15	ng/L #	64
33) 1,2,4-Trimethylbenzene	12.405	105	15898	1021.69	ng/L	94
34) 1,2-Dibromo-3-chloropr...	13.786	157	1764	914.77	ng/L	79
35) Naphthalene	14.675	128	16455	1321.82	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071231.D
Acq On : 13 Jul 2019 01:22 am
Operator : MM
Sample : 9G12037-CAL7
Misc : 1X 5mL 1000PPT VOC
ALS Vial : 10 Sample Multiplier: 1

Quant Time: Jul 16 11:01:32 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071232.D
Acq On : 13 Jul 2019 01:49 am
Operator : MM
Sample : 9G12037-IBL4
Misc : 1X 5mL DI
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:19:39 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

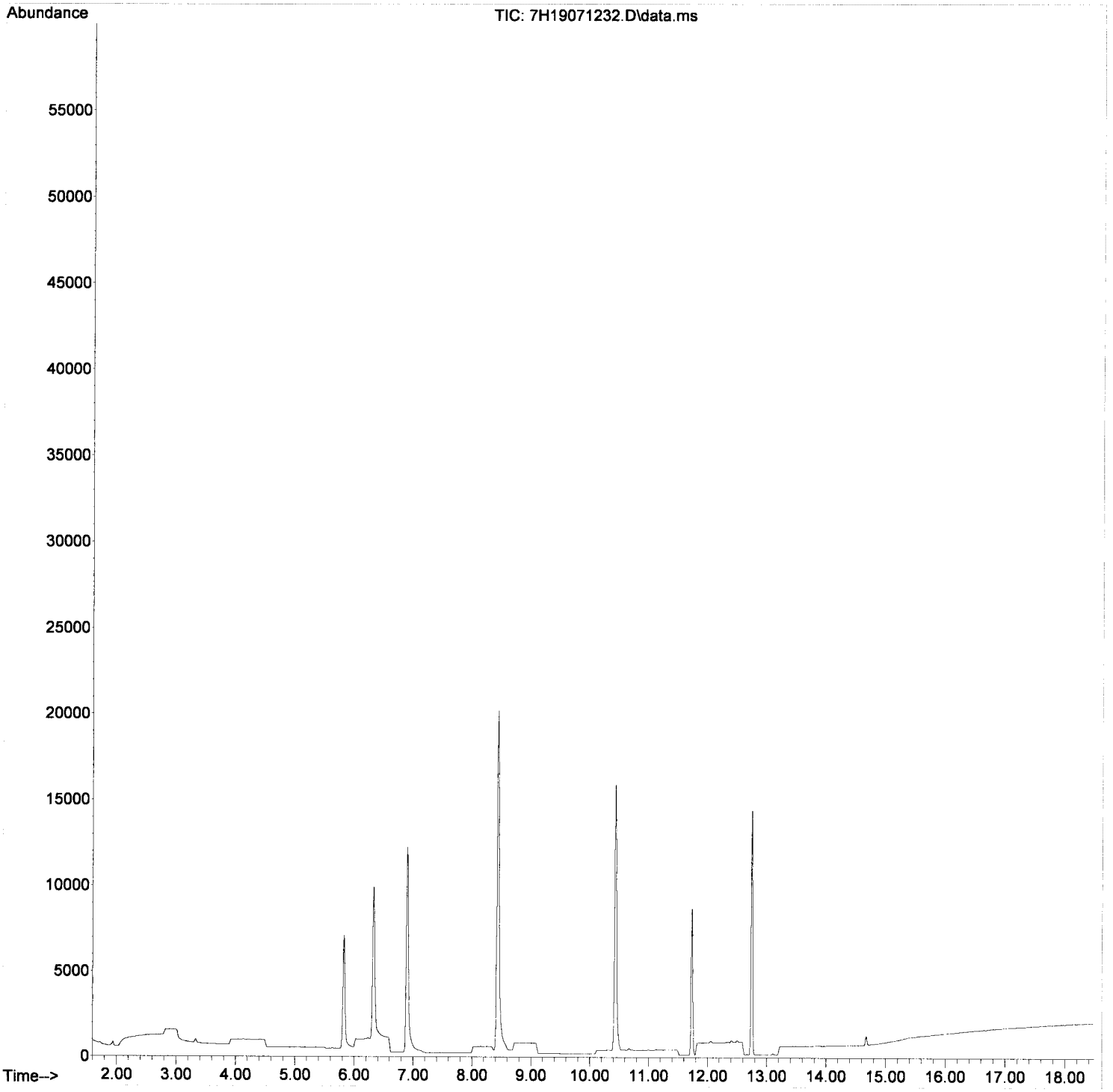
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.327	168	15943	2330.00 ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	23909	2330.00 ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9323	2330.00 ng/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.825	111	8856	2336.79 ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	27982	2355.44 ng/L	0.00
19) Toluene-d8 (S)	8.438	98	38314	2358.61 ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.729	174	8435	2394.81 ng/L	0.00
Target Compounds					Qvalue
2) Chloromethane	1.942	50	327	Below Cal	99
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	0.000		0	N.D.	
5) Carbon Disulfide	3.327	76	399	35.24 ng/L	75
6) t-1,2-Dichloroethene	4.125	61	43	7.49 ng/L #	72
7) Methyl-tert-butyl-ether	4.256	73	33	2.81 ng/L	69
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	5.346	61	26	4.40 ng/L	85
10) Chloroform	5.636	83	37	5.01 ng/L	74
12) Benzene	6.235	78	200	11.69 ng/L	90
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	0.000		0	N.D.	
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.491	91	115	6.64 ng/L	99
21) Tetrachloroethene (PCE)	8.960	166	37	10.54 ng/L	85
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.493	91	91	5.39 ng/L	89
26) m,p-Xylenes (2)	10.670	91	148	12.12 ng/L	91
27) o-Xylene	11.133	91	85	6.25 ng/L	82
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.058	105	99	9.88 ng/L	100
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.404	105	146	14.17 ng/L	80
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.674	128	864	76.32 ng/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071232.D
Acq On : 13 Jul 2019 01:49 am
Operator : MM
Sample : 9G12037-IBL4
Misc : 1X 5mL DI
ALS Vial : 11 Sample Multiplier: 1

Quant Time: Jul 16 11:19:39 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071233.D
Acq On : 13 Jul 2019 02:16 am
Operator : MM
Sample : 9G12037-CAL8
Misc : 1X 5mL 2000PPT VOC
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:01:36 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

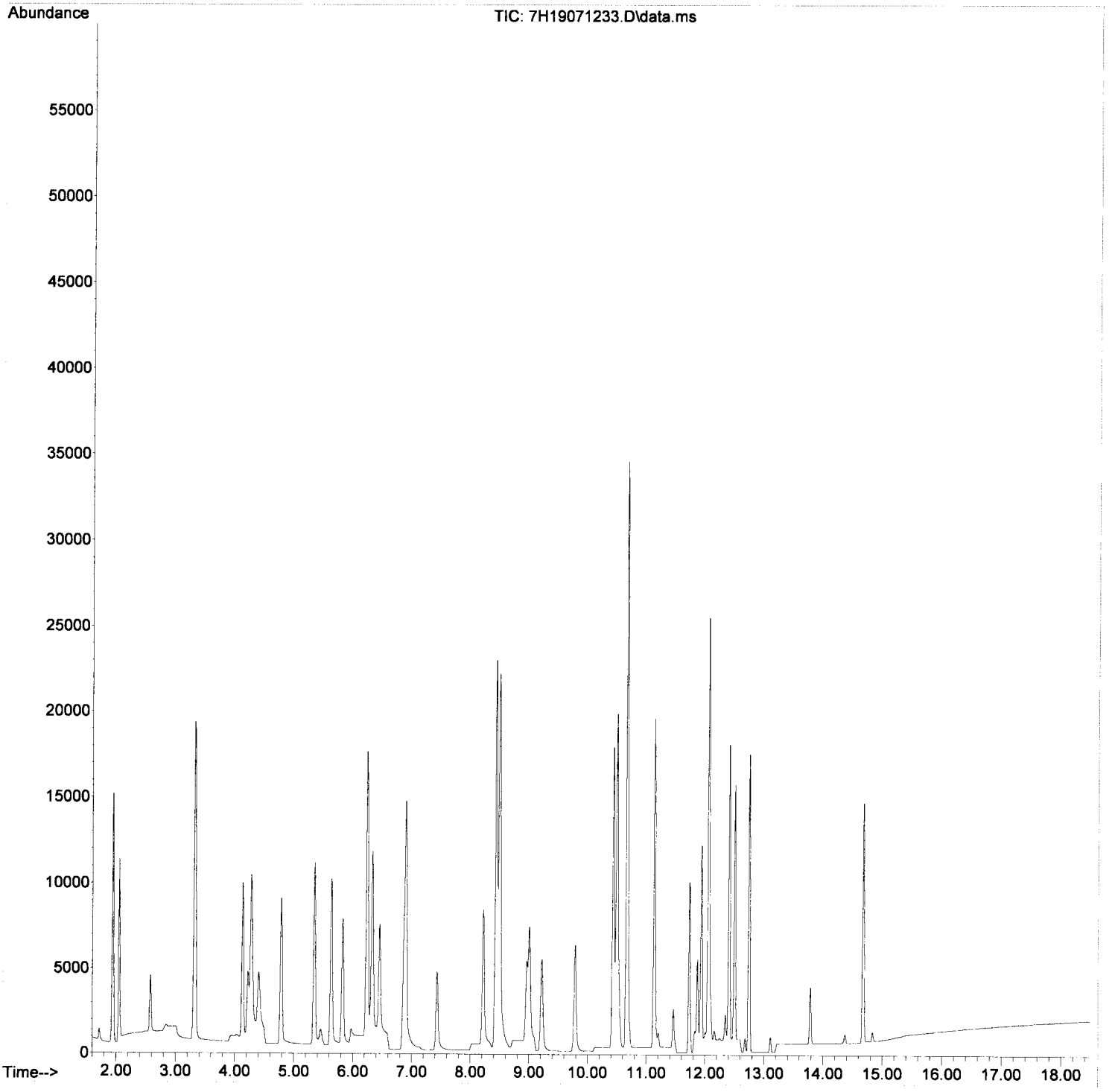
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.328	168	17311	2330.00	ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	26502	2330.00	ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	11143	2330.00	ng/L	0.00
System Monitoring Compounds						
11) Dibromofluoromethane (S)	5.825	111	9599	2207.27	ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.895	114	30697	2346.08	ng/L	0.00
19) Toluene-d8 (S)	8.433	98	41860	2609.56	ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.730	174	9673	2299.62	ng/L	0.00
Target Compounds						Qvalue
2) Chloromethane	1.942	50	18748	1707.50	ng/L	100
3) Vinyl Chloride	2.049	62	12216	2167.71	ng/L	94
4) 1,1-Dichloroethene	3.312	61	12830	2222.52	ng/L	88
5) Carbon Disulfide	3.327	76	23034	1922.93	ng/L	100
6) t-1,2-Dichloroethene	4.130	61	11744	2068.39	ng/L	87
7) Methyl-tert-butyl-ether	4.276	73	25727	2065.62	ng/L	83
8) 1,1-Dichloroethane	4.781	63	15247	1953.66	ng/L	99
9) c-1,2-Dichloroethene	5.347	61	12341	1940.41	ng/L	93
10) Chloroform	5.632	83	15330	1872.72	ng/L	99
12) Benzene	6.236	78	34681	1854.06	ng/L	98
13) 1,2-Dichloroethane (EDC)	6.452	62	12140	1900.27	ng/L	98
15) Trichloroethene (TCE)	6.862	130	8213	1942.10	ng/L	97
16) 1,2-Dichloropropane	7.432	63	9561	1979.57	ng/L	89
18) c-1,3-Dichloropropene	8.218	75	13895	1901.05	ng/L	88
20) Toluene	8.492	91	33962	1815.62	ng/L	97
21) Tetrachloroethene (PCE)	8.960	166	6817	1708.52	ng/L	85
22) t-1,3-Dichloropropene	9.003	75	12822	1943.78	ng/L	99
23) 1,1,2-Trichloroethane	9.218	97	8368	1856.23	ug/L	98
24) 1,2-Dibromoethane (EDB)	9.785	107	9084	2109.91	ng/L	96
25) Ethylbenzene	10.493	91	34033	1979.81	ng/L	95
26) m,p-Xylenes (2)	10.666	91	50826	3804.94	ng/L	89
27) o-Xylene	11.134	91	27167	1903.48	ng/L	96
30) 1,1,2,2-Tetrachloroeth...	11.934	83	12811	1755.83	ug/L	96
31) 1,3.5-Trimethylbenzene	12.053	105	20762	1736.60	ng/L	91
32) 1,2,3-Trichloropropane	12.059	110	3600	1814.44	ng/L #	82
33) 1,2,4-Trimethylbenzene	12.405	105	20573	1715.82	ng/L	92
34) 1,2-Dibromo-3-chloropr...	13.786	157	3062	2060.69	ng/L	79
35) Naphthalene	14.675	128	22085	2302.34	ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071233.D
Acq On : 13 Jul 2019 02:16 am
Operator : MM
Sample : 9G12037-CAL8
Misc : 1X 5mL 2000PPT VOC
ALS Vial : 12 Sample Multiplier: 1

Quant Time: Jul 16 11:01:36 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Fri Jul 12 17:59:49 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071234.D
Acq On : 13 Jul 2019 02:43 am
Operator : MM
Sample : 9G12037-IBL5
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 11:19:43 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

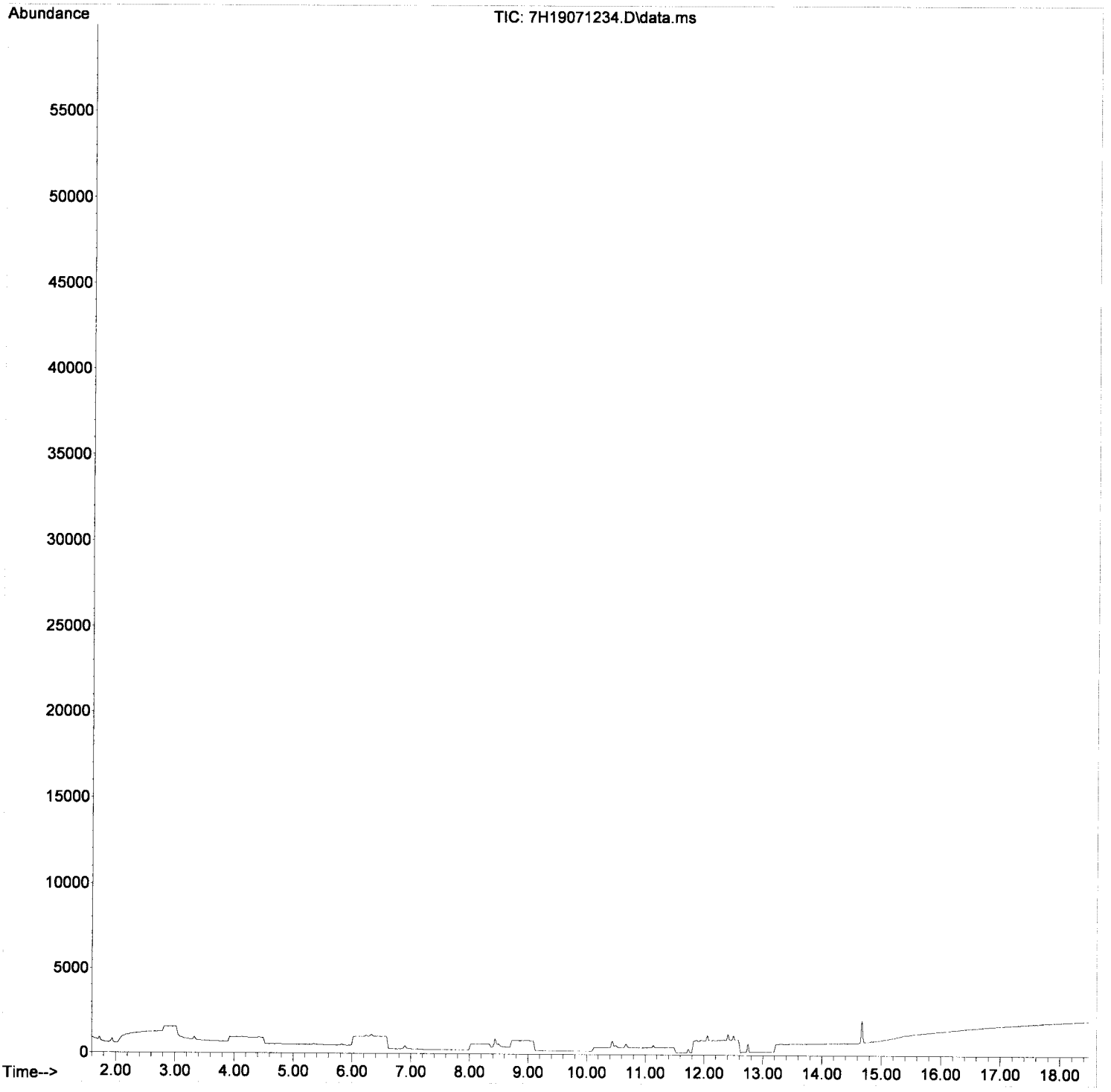
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.327	168	259	2330.00 ng/L	0.00
17) Chlorobenzene-d5 (I)	10.439	117	650	2330.00 ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	343	2330.00 ng/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.825	111	120	1949.10 ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	500	2590.80 ng/L	0.00
19) Toluene-d8 (S)	8.438	98	882	1997.17 ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.734	174	197	1520.25 ng/L	0.00
Target Compounds					Qvalue
2) Chloromethane	1.942	50	336	2316.68 ng/L	97
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	3.312	61	78	747.31 ng/L	83
5) Carbon Disulfide	3.327	76	301	1636.28 ng/L	81
6) t-1,2-Dichloroethene	4.130	61	76	814.79 ng/L	91
7) Methyl-tert-butyl-ether	0.000		0	N.D.	
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	5.341	61	54	561.96 ng/L	99
10) Chloroform	5.631	83	36	299.86 ng/L	94
12) Benzene	6.241	78	285	1025.83 ng/L	97
13) 1,2-Dichloroethane (EDC)	6.452	62	33	354.57 ng/L #	28
15) Trichloroethene (TCE)	6.862	130	47	743.80 ng/L	93
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.497	91	235	499.44 ng/L	95
21) Tetrachloroethene (PCE)	8.960	166	56	586.80 ng/L	91
22) t-1,3-Dichloropropene	0.000		0	N.D.	
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.498	91	220	479.20 ng/L	94
26) m,p-Xylenes (2)	10.671	91	394	1187.03 ng/L	87
27) o-Xylene	11.139	91	206	556.76 ng/L	96
30) 1,1,2,2-Tetrachloroeth...	11.934	83	34	145.50 ug/L #	17
31) 1,3.5-Trimethylbenzene	12.058	105	368	997.74 ng/L	89
32) 1,2,3-Trichloropropane	12.058	110	25	400.31 ng/L #	78
33) 1,2,4-Trimethylbenzene	12.404	105	442	1166.13 ng/L	92
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.674	128	2116	5080.77 ng/L	98

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071234.D
Acq On : 13 Jul 2019 02:43 am
Operator : MM
Sample : 9G12037-IBL5
Misc : 1X 5mL DI
ALS Vial : 13 Sample Multiplier: 1

Quant Time: Jul 16 11:19:43 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071235.D
Acq On : 13 Jul 2019 03:10 am
Operator : MM
Sample : 9G12037-IBL6
Misc : 1X 5mL DI
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 11:19:47 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

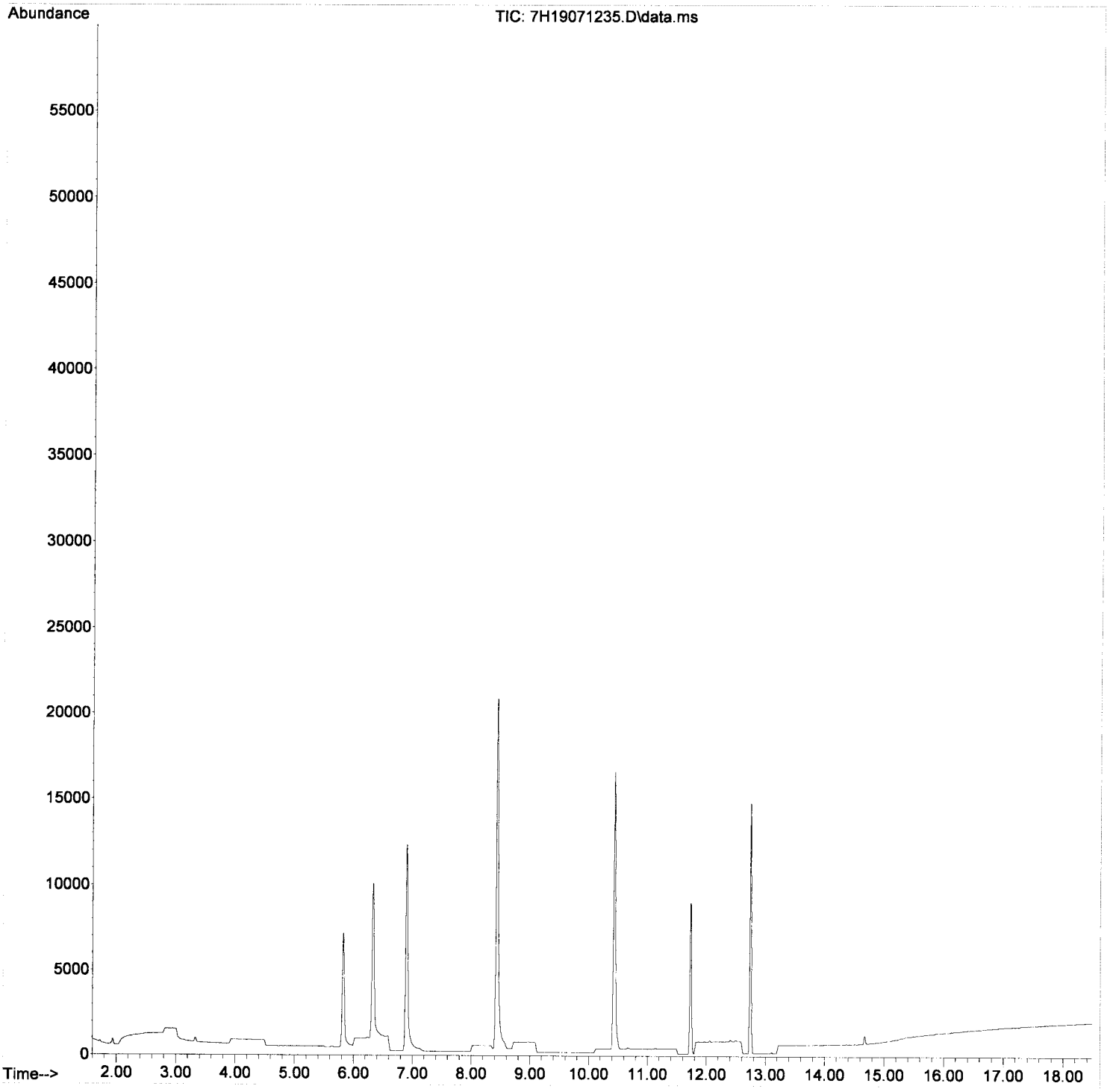
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.328	168	16247	2330.00 ng/L	0.00
17) Chlorobenzene-d5 (I)	10.434	117	24766	2330.00 ng/L	0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9576	2330.00 ng/L	0.00
System Monitoring Compounds					
11) Dibromofluoromethane (S)	5.825	111	9061	2346.15 ng/L	0.00
14) 1,4-Difluorobenzene (S)	6.900	114	28573	2360.19 ng/L	0.00
19) Toluene-d8 (S)	8.438	98	39294	2335.23 ng/L	0.00
29) 4-Bromofluorobenzene (S)	11.730	174	8723	2411.15 ng/L	0.00
Target Compounds					Qvalue
2) Chloromethane	1.937	50	431	Below Cal	100
3) Vinyl Chloride	0.000		0	N.D.	
4) 1,1-Dichloroethene	3.307	61	25	3.82 ng/L #	55
5) Carbon Disulfide	3.328	76	473	40.99 ng/L	90
6) t-1,2-Dichloroethene	0.000		0	N.D.	
7) Methyl-tert-butyl-ether	4.261	73	78	6.51 ng/L	88
8) 1,1-Dichloroethane	0.000		0	N.D.	
9) c-1,2-Dichloroethene	0.000		0	N.D.	
10) Chloroform	5.637	83	34	4.51 ng/L	94
12) Benzene	6.241	78	249	14.29 ng/L	86
13) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	
15) Trichloroethene (TCE)	0.000		0	N.D.	
16) 1,2-Dichloropropane	0.000		0	N.D.	
18) c-1,3-Dichloropropene	0.000		0	N.D.	
20) Toluene	8.492	91	132	7.36 ng/L	91
21) Tetrachloroethene (PCE)	8.955	166	36	9.90 ng/L #	56
22) t-1,3-Dichloropropene	9.009	75	47	7.62 ng/L	75
23) 1,1,2-Trichloroethane	0.000		0	N.D.	
24) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	
25) Ethylbenzene	10.493	91	82	4.69 ng/L	92
26) m,p-Xylenes (2)	10.666	91	136	10.75 ng/L	86
27) o-Xylene	11.134	91	62	4.40 ng/L	97
30) 1,1,2,2-Tetrachloroeth...	0.000		0	N.D.	
31) 1,3.5-Trimethylbenzene	12.053	105	108	10.49 ng/L	83
32) 1,2,3-Trichloropropane	0.000		0	N.D.	
33) 1,2,4-Trimethylbenzene	12.405	105	130	12.29 ng/L	85
34) 1,2-Dibromo-3-chloropr...	0.000		0	N.D.	
35) Naphthalene	14.675	128	828	71.21 ng/L	97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071235.D
Acq On : 13 Jul 2019 03:10 am
Operator : MM
Sample : 9G12037-IBL6
Misc : 1X 5mL DI
ALS Vial : 14 Sample Multiplier: 1

Quant Time: Jul 16 11:19:47 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071236.D
Acq On : 13 Jul 2019 03:37 am
Operator : MM
Sample : 9G12037-ICV1
Misc : 1X 5mL 200PPT
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 11:19:51 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M

MM 7/16/19

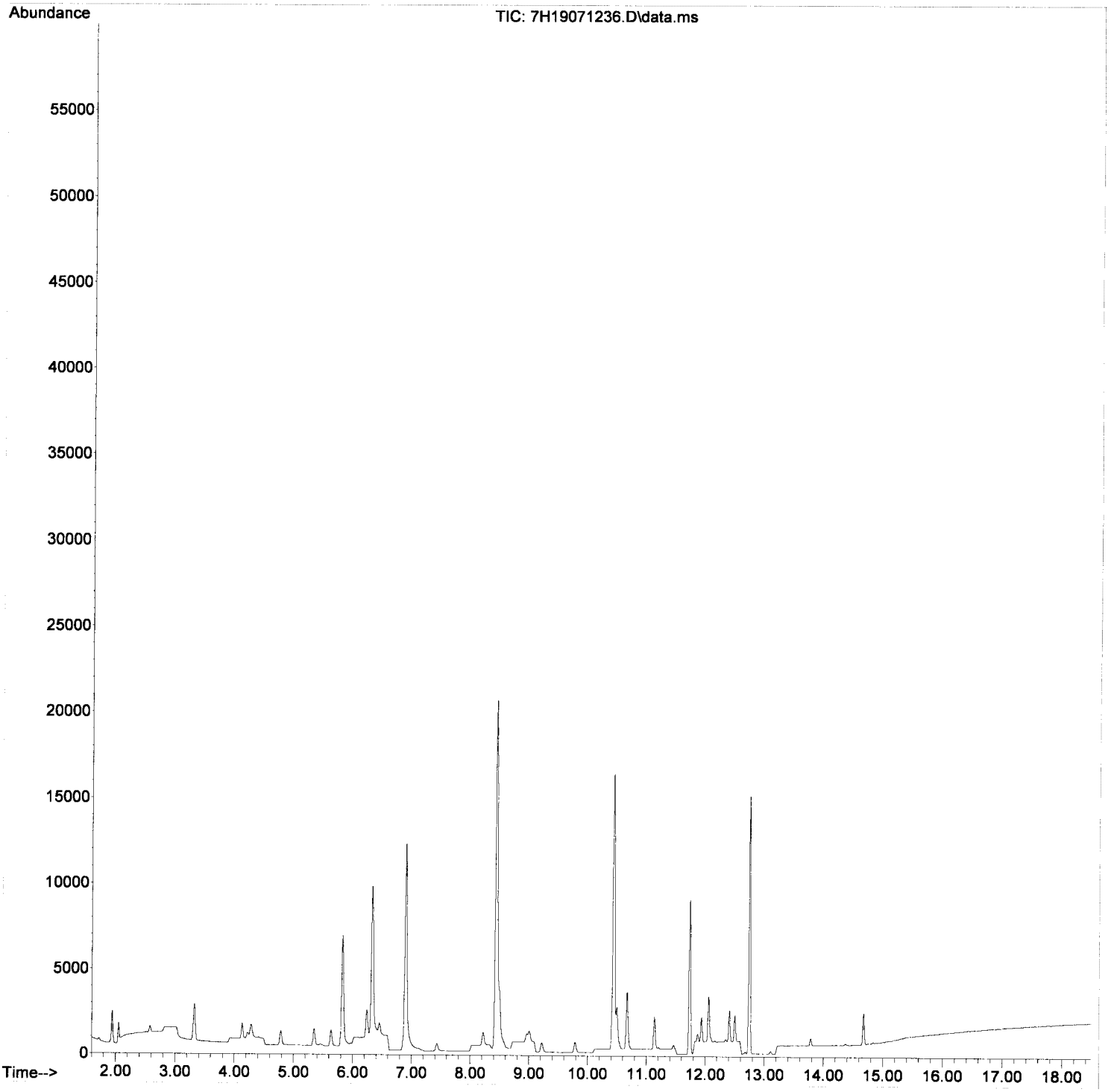
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.327	168	15927	2330.00	ng/L		0.00
17) Chlorobenzene-d5 (I)	10.434	117	25004	2330.00	ng/L		0.00
28) 1,4-Dichlorobenzene-d4...	12.749	152	9872	2330.00	ng/L		0.00
System Monitoring Compounds							
11) Dibromofluoromethane (S)	5.825	111	8785	2320.39	ng/L		0.00
14) 1,4-Difluorobenzene (S)	6.900	114	28073	2365.48	ng/L		0.00
19) Toluene-d8 (S)	8.438	98	38713	2278.80	ng/L		0.00
29) 4-Bromofluorobenzene (S)	11.729	174	8794	2357.89	ng/L		0.00
Target Compounds							Qvalue
2) Chloromethane	1.942	50	2444	302.89	ng/L		100
3) Vinyl Chloride	2.049	62	1265	237.08	ng/L		96
4) 1,1-Dichloroethene	3.312	61	1314	204.72	ng/L		88
5) Carbon Disulfide	3.327	76	2790	246.64	ng/L		98
6) t-1,2-Dichloroethene	4.130	61	1241	216.36	ng/L		86
7) Methyl-tert-butyl-ether	4.281	73	2465	209.78	ng/L		100
8) 1,1-Dichloroethane	4.786	63	1558	211.85	ng/L		98
9) c-1,2-Dichloroethene	5.346	61	1210	204.77	ng/L		91
10) Chloroform	5.636	83	1549	209.82	ng/L		99
12) Benzene	6.241	78	3713	217.33	ng/L		95
13) 1,2-Dichloroethane (EDC)	6.452	62	1226	214.21	ng/L		99
15) Trichloroethene (TCE)	6.862	130	815	209.74	ng/L		98
16) 1,2-Dichloropropane	7.431	63	973	211.37	ng/L		88
18) c-1,3-Dichloropropene	8.218	75	1400	197.87	ng/L		87
20) Toluene	8.491	91	3478	192.15	ng/L		96
21) Tetrachloroethene (PCE)	8.960	166	729	198.58	ng/L		84
22) t-1,3-Dichloropropene	9.003	75	1288	206.79	ng/L		99
23) 1,1,2-Trichloroethane	9.218	97	869	207.62	ug/L		97
24) 1,2-Dibromoethane (EDB)	9.785	107	905	199.20	ng/L		97
25) Ethylbenzene	10.493	91	3576	202.49	ng/L		94
26) m,p-Xylenes (2)	10.665	91	5158	403.97	ng/L		88
27) o-Xylene	11.133	91	2747	193.00	ng/L		96
30) 1,1,2,2-Tetrachloroeth...	11.934	83	1653	245.77	ug/L		96
31) 1,3.5-Trimethylbenzene	12.058	105	2192	206.49	ng/L		95
32) 1,2,3-Trichloropropane	12.058	110	435	242.01	ng/L		87
33) 1,2,4-Trimethylbenzene	12.404	105	2201	201.76	ng/L		91
34) 1,2-Dibromo-3-chloropr...	13.785	157	385	252.71	ng/L	#	76
35) Naphthalene	14.674	128	2921	243.69	ng/L		97

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\GCMS\1\data\2019-07\9G12037\
Data File : 7H19071236.D
Acq On : 13 Jul 2019 03:37 am
Operator : MM
Sample : 9G12037-ICV1
Misc : 1X 5mL 200PPT
ALS Vial : 15 Sample Multiplier: 1

Quant Time: Jul 16 11:19:51 2019
Quant Method : C:\GCMS\1\methods\VH190716SIMw.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jul 16 11:10:39 2019
Response via : Initial Calibration
DataAcq Meth:VH1907_SIM_RUN_.M



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Semivolatile Organic Compounds (PAHs) by EPA 8270D (Large Volume Injection)
Benchsheet & Analysis Sequence Data

Batch 9110387
Sequence 9K01025 (A9J1114-02RE1,04RE1,07RE1)

Apex Laboratories

PREPARATION BENCH SHEET

NOV 0 5 2019

BATCH #: 9110387 (Water)

Prep Method: EPA 3511 (Bottle Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9110387-BLK1		QC	11/01/19 12:28	125	5				50					
	9110387-BLK2		QC	11/01/19 12:28	125	5				50		Added 11/4/2019 by ams			
	9110387-BSD1		QC	11/01/19 12:28	125	5	A19H078		100	50					
	9110387-BS1		QC	11/01/19 12:28	125	5	A19H078		100	50					
	A9J1106-01	B	8270D PAH (125ml) LL	11/01/19 12:28	120.95	5				50	AQ-R4S-103019				
	A9J1106-03	B	8270D PAH (125ml) LL	11/01/19 12:28	117.83	5				50	AQ-G4S-103019				
	A9J1114-02	D	8270D PAH (125ml) LL	11/01/19 12:28	118.89	5				50	PDI-028PW-9-11-191030				
	A9J1114-02RE1	D	8270D PAH (125ml) LL	11/01/19 12:28	118.89	5				50	PDI-028PW-9-11-191030	Added 11/4/2019 by ams			
	A9J1114-04	D	8270D PAH (125ml) LL	11/01/19 12:28	118.17	5				50	PDI-038PW-9-11-191030				
	A9J1114-04RE1	D	8270D PAH (125ml) LL	11/01/19 12:28	118.17	5				50	PDI-038PW-9-11-191030	Added 11/4/2019 by ams			
	A9J1114-07	D	8270D PAH (125ml) LL	11/01/19 12:28	119.94	5				50	PDI-059PW-10-12-191030				
	A9J1114-07RE1	D	8270D PAH (125ml) LL	11/01/19 12:28	119.94	5				50	PDI-059PW-10-12-191030	Added 11/4/2019 by ams			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13F187	09/21/20	Sodium Sulfate Lot #121760
A13L219	11/30/23	Extractions Balance
A19H336	03/31/22	NaCl for LVI Extraction
A19I263	03/18/20	DCM CHEM PROD. 194934
A19I339	03/23/20	1:3 HCl

Analyte Spike(s)

Std ID	Exp. Date	Description
A19H078	02/02/20	LVI PAH Spike @2000ng/ml

Surrogate(s)

Std ID	Exp. Date	Description
A19H081	01/14/20	PAH Surrogate + EISTD for LVI @ 10ug/ml in

3x Rinsed 5ml Vials

Witness:_____

Bottle check:_____

Prepared By: Date

AMS 11/4/19

Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9110387 (Water)

Prep Method: EPA 3511 (Bottle Extraction)

initial | final

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments		pH <2	pH Other	pH >11
	9110387-BLK1		QC	11/01/19 12:28	125	5				50				✓		
	9110387-BSD1		QC	11/01/19 12:28	125	5	A19H078		100	50				-		
	9110387-BS1		QC	11/01/19 12:28	125	5	A19H078		100	50				✓		
	A9J1106-01	B	8270D PAH (125ml) LL	11/01/19 12:28	125	5				50	AQ-R4S-103019 D	233.78	112.83	✓		
	A9J1106-03	B	8270D PAH (125ml) LL	11/01/19 12:28	125	5				50	AQ-G4S-103019 D	236.69	118.86	✓		
	A9J1114-02	D	8270D PAH (125ml) LL	11/01/19 12:28	125	5				50	PDI-028PW-9-11-191030	230.31	111.42	✓		
	A9J1114-04	D	8270D PAH (125ml) LL	11/01/19 12:28	125	5				50	PDI-038PW-9-11-191030	231.27	113.10	✓		
	A9J1114-07	D	8270D PAH (125ml) LL	11/01/19 12:28	125	5				50	PDI-059PW-10-12-191030 D	239.03	119.09	✓		

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13F187	09/21/20	Sodium Sulfate Lot #121760
A13L219	11/30/23	Extractions Balance
A19H336	03/31/22	NaCl for LVI Extraction
A19I263	03/18/20	DCM CHEM PROD. 194934
A19I339	03/23/20	1:3 HCl

Analyte Spike(s)

Std ID	Exp. Date	Description
A19H078	02/02/20	LVI PAH Spike @2000ng/ml

Surrogate(s)

Std ID	Exp. Date	Description
A19H081	01/14/20	PAH Surrogate + EISTD for LVI @ 10ug/ml in

D = Decanted.
E = Emulsion

3x Rinsed 5ml Vials ✓

Witness: SCa 11/1/2019

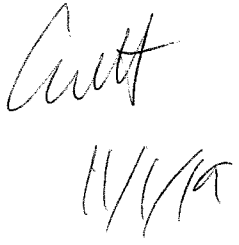
Bottle check: SCa 11 SCa 11/1/2019 11/1/2019

Prepared By: [signature] Date: 11/1/19

Reviewed By: [signature] Date: 11/1/19

3511 Micro-extraction Prep Worksheet

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)
9110387-BLK1				125
9110387-BS1				125
9110387-BSD1				125
A9J1106-01	B	233.78	112.83	120.95
A9J1106-03	B	236.69	118.86	117.83
A9J1114-02	D	230.31	111.42	118.89
A9J1114-04	D	231.27	113.10	118.17
A9J1114-07	D	239.03	119.09	119.94



ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9K01025**	Instrument:	**SV-GCMS8**
Date:	**11/01/19 09:57**	Calibration:	**A9G0205**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9K01025-IBL1	Water	QC	QC			A19H102	
2	9K01025-TUN1	Water	QC	QC			A19H102	A19J292
3	9K01025-CCV1	Water	QC	QC			A19H102	A19F400
4	9K01025-CCB1	Water	QC	QC			A19H102	
5	9K01025-IBL2	Water	QC	QC			A19H102	
6	9110387-BLK1	Water	QC	QC		9110387	A19H102	
7	9110387-BLK2	Water	QC	QC		9110387	A19H102	
8	9110387-BS1	Water	QC	QC		9110387	A19H102	
9	9110387-BSD1	Water	QC	QC		9110387	A19H102	
10	A9J1106-01	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/12/19	9110387	A19H102	
11	A9J1106-03	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/12/19	9110387	A19H102	
12	A9J1114-02	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
13	A9J1114-04	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
14	A9J1114-07	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
15	A9J1114-02RE1	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
16	A9J1114-04RE1	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
17	A9J1114-07RE1	Water	8270D PAH (125ml) LL	Anchor QEA, LLC	11/13/19	9110387	A19H102	
18	9K01025-IBL3	Water	QC	QC			A19H102	

Data Entered By: AMS 11/4/19

Data Reviewed By: [signature] 11/9/19

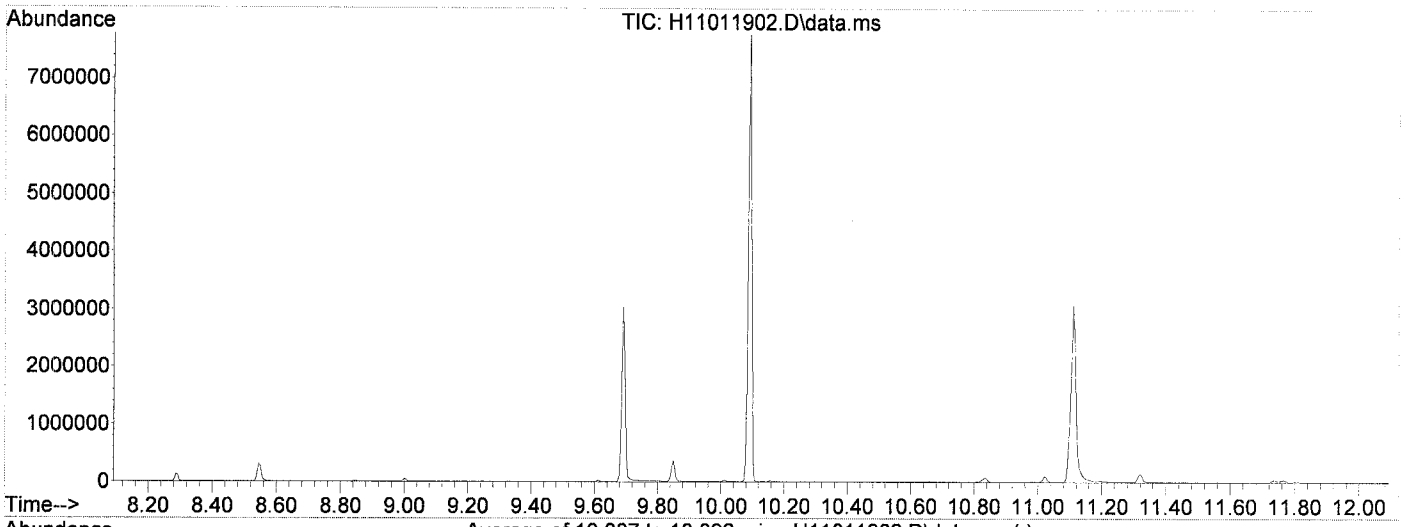
Comments:

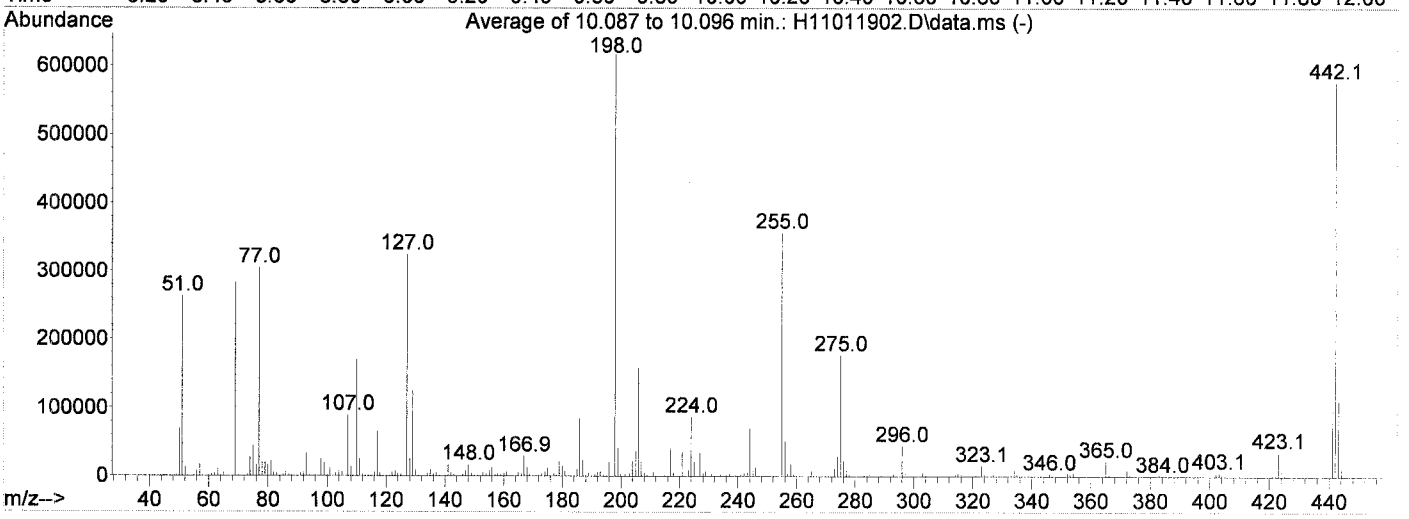
Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011902.D
Acq On : 1 Nov 2019 10:35 am
Operator : JK /AMS /DTH
Sample : 9K01025-TUN1
Misc : 1x, A19J292 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : V:\METHODS\DFTPP-LVI.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu Oct 10 08:41:39 2019

AMS 10/4/19
II AMS 11/4/19





AutoFind: Scans 1239, 1240, 1241; Background Corrected with Scan 1232

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
68	69	0.00	2	0.0	0	PASS
69	69	100	100	100.0	282952	PASS
70	69	0.00	2	0.5	1403	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	616789	PASS
199	198	5	9	6.6	40960	PASS
365	198	1	100	3.6	22279	PASS
441	443	0.01	150	87.1	96235	PASS
442	198	0.10	200	93.3	575509	PASS
443	442	15	24	19.2	110533	PASS

✓

No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011902.D
Acq On : 1 Nov 2019 10:35 am
Operator : JK /AMS /DTH
Sample : 9K01025-TUN1
Misc : 1x, A19J292 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-LVI.M

Quant Time: Nov 04 09:41:57 2019
Quant Method : V:\METHODS\DFTPP-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Oct 10 08:41:39 2019
Response via : Initial Calibration
InstName : SV-GCMS8

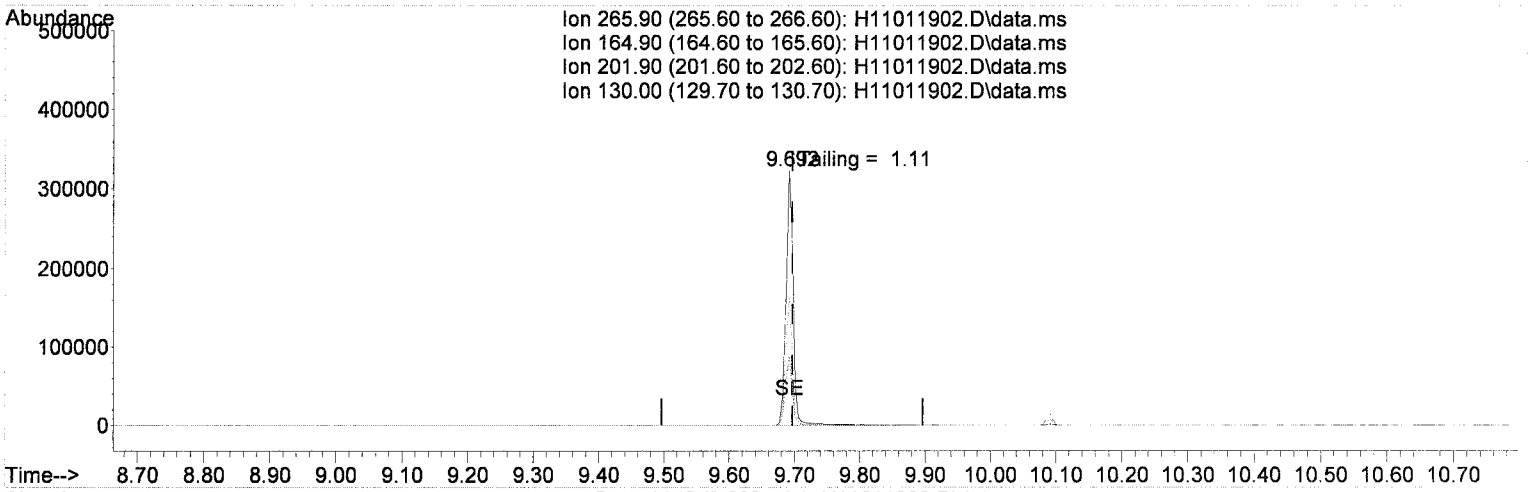
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.044	136	100113	2.00	ug/mL	0.00
2) Acenaphthene-d10	8.544	162	55307	2.00	ug/mL	0.00
4) Phenanthrene-d10	9.849	188	102309	2.00	ug/mL	0.00
10) Chrysene-d12	13.120	240	65059	2.00	ug/mL	0.00
11) Perylene-d12	16.363	264	50221	2.00	ug/mL	0.00
Target Compounds						Qvalue
3) Pentachlorophenol	9.692	266	246763	20.16	ug/mL#	87
5) DFTPP	10.096	442	546104	20.32	ug/mL#	48
6) Benzidine	11.111	184	1313022	24.18	ug/mL	87
7) 4,4-DDE	11.320	TIC	152196	No Calib	#	
8) 4,4-DDD	11.763	TIC	49712	No Calib	#	
9) 4,4-DDT	12.244	TIC	5540950	No Calib	#	

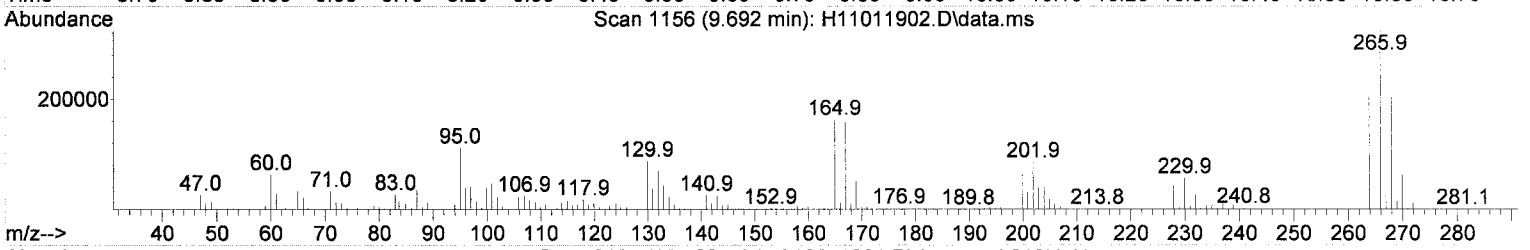
(#) = qualifier out of range (m) = manual integration (+) = signals summed

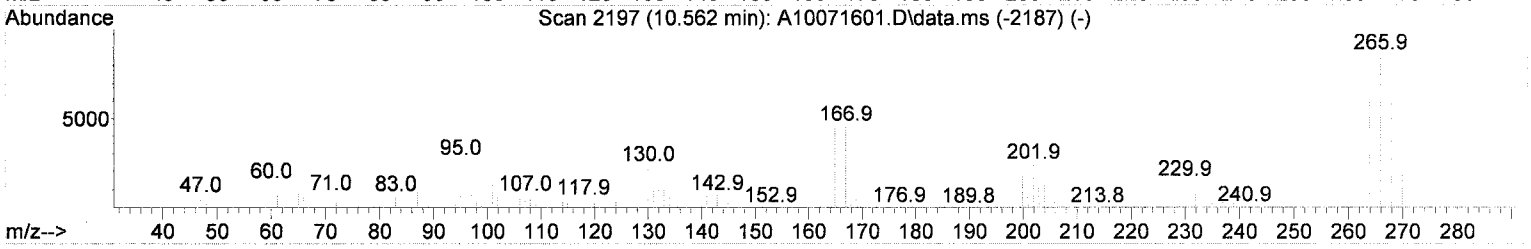
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011902.D
Acq On : 1 Nov 2019 10:35 am
Operator : JK /AMS /DTH
Sample : 9K01025-TUN1
Misc : 1x, A19J292 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-LVI.M

Quant Time: Nov 04 09:41:57 2019
Quant Method : V:\METHODS\DFTPP-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Oct 10 08:41:39 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011902.D\data.ms

(3) Pentachlorophenol

9.692min (-0.005) 20.16 ug/mL

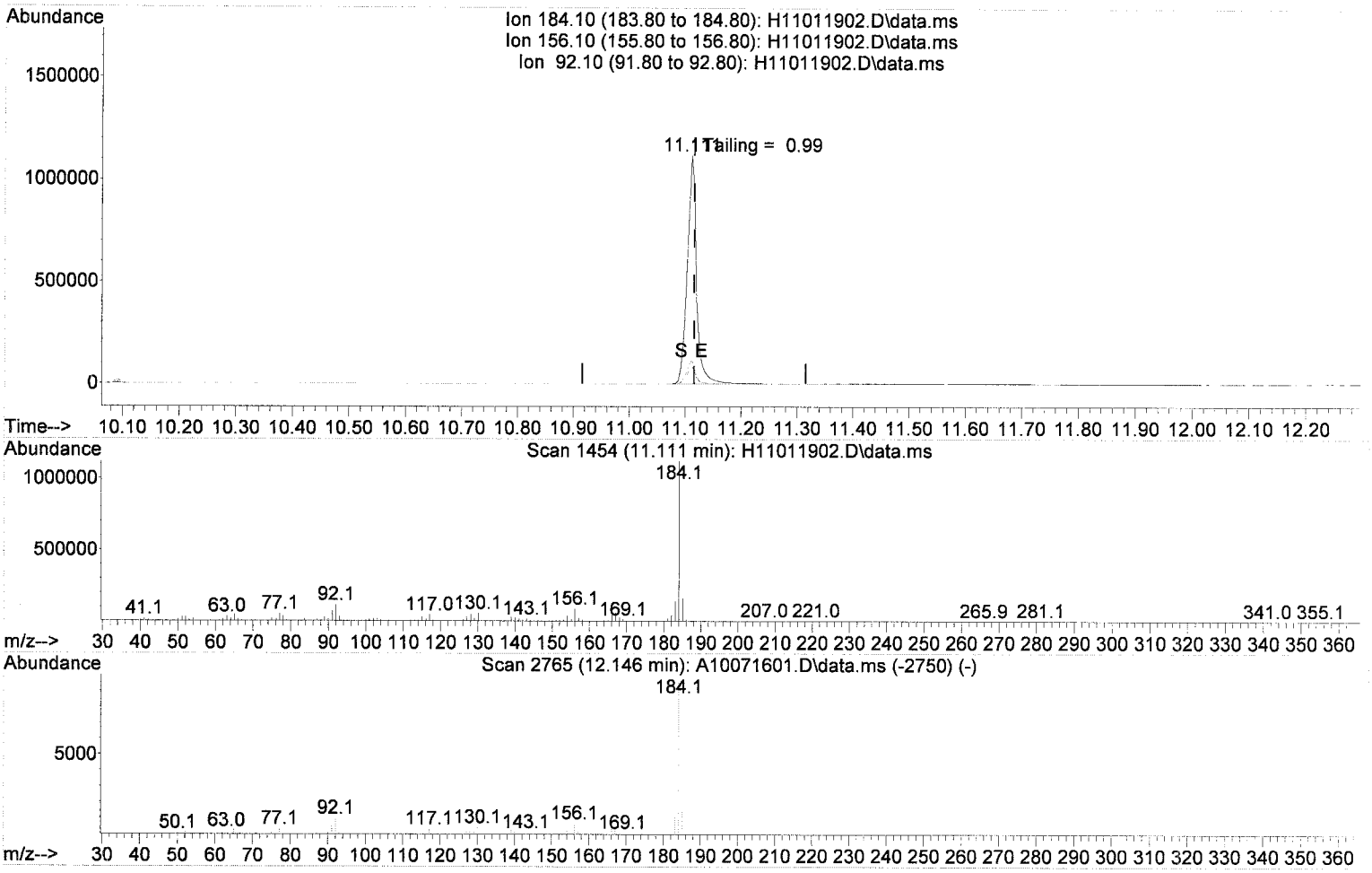
response 246763

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	40.50	50.47
201.90	23.90	25.79
130.00	19.70	27.21#

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011902.D
Acq On : 1 Nov 2019 10:35 am
Operator : JK /AMS /DTH
Sample : 9K01025-TUN1
Misc : 1x, A19J292 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-LVI.M

Quant Time: Nov 04 09:41:57 2019
Quant Method : V:\METHODS\DFTPP-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Oct 10 08:41:39 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011902.D\data.ms

(6) Benzidine

11.111min (-0.005) 24.18 ug/mL

response 1313022

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	10.40	7.62
92.10	17.30	10.04
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

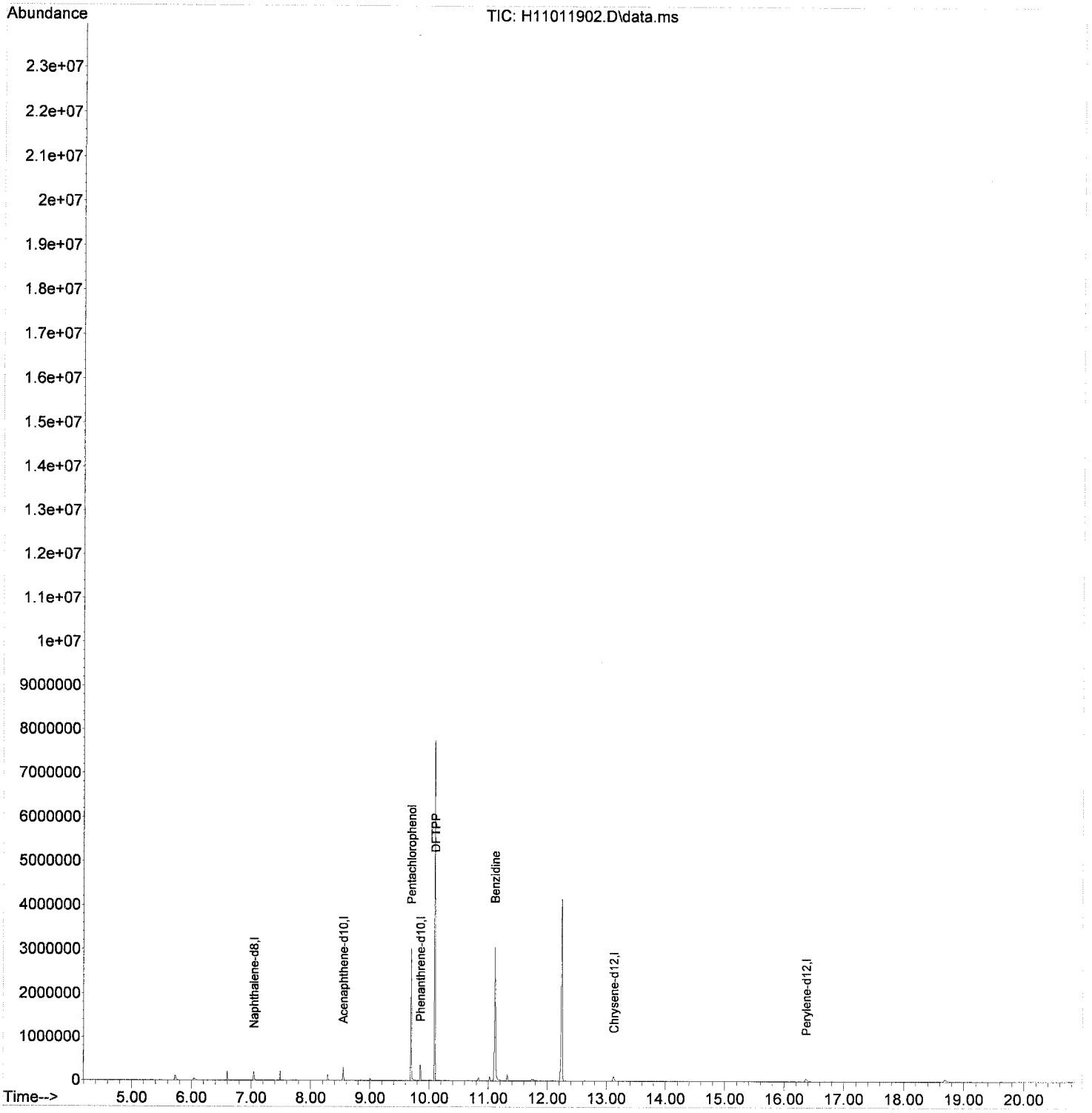
From:
9K01025-TUN1
SV-GCMS8

First Column Area Counts		Percent Breakdown	
DDE	152196		
DDD	49712		
DDT	5540950	**3.52**	**PASS**

Breakdown must be less than 20% to accept sample data.

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011902.D
Acq On : 1 Nov 2019 10:35 am
Operator : JK /AMS /DTH
Sample : 9K01025-TUN1
Misc : 1x, A19J292 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-LVI.M

Quant Time: Nov 04 09:41:57 2019
Quant Method : V:\METHODS\DFTPP-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Oct 10 08:41:39 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Evaluate Continuing Calibration Report

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011903.D
Acq On : 1 Nov 2019 11:04 am
Operator : JK /AMS /DTH
Sample : 9K01025-CCV1
Misc : 1x, A19F400@50
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19

Quant Time: Nov 04 09:43:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 20% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	54	0.00
2	T	Naphthalene	50.000	46.631	6.7	53	0.00
3	T	2-Methylnaphthalene	50.000	48.573	2.9	54	0.00
4	T	1-Methylnaphthalene	50.000	51.478	-3.0	56	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	57	0.00
6	T	Biphenyl	50.000	44.968	10.1	55	0.00
7	T	2,6-Dimethylnaphthalene	50.000	47.962	4.1	56	0.00
8	S	Acenaphthylene-d8 (Surr)	50.000	49.732	0.5	57	0.00
9	T	Acenaphthylene	50.000	51.493	-3.0	57	0.00
10	T	Acenaphthene	50.000	47.386	5.2	57	0.00
11	T	Dibenzofuran	50.000	46.444	7.1	55	0.00
12	T	1,6,7-Trimethylnaphthalene	50.000	47.841	4.3	54	0.00
13	T	Fluorene	50.000	47.235	5.5	55	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	53	0.00
15	T	Dibenzothiophene	50.000	47.978	4.0	51	0.00
16	T	Phenanthrene	50.000	47.214	5.6	51	0.00
17	T	Anthracene	50.000	51.236	-2.5	51	0.00
18	T	Carbazole	50.000	48.443	3.1	49	0.00
19	T	Fluoranthene	50.000	49.470	1.1	51	0.00
20	T	Pyrene	50.000	48.589	2.8	52	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	53	0.00
22	T	Benz(a)anthracene	50.000	52.420	-4.8	52	0.00
23	T	Chrysene	50.000	48.114	3.8	52	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	56	-0.01
25	T	Benzo(b)fluoranthene	50.000	52.366	-4.7	54	0.00
26	T	Benzo(k)fluoranthene	50.000	53.664	-7.3	56	0.00
27	T	Benzo(b+k)fluoranthene	100.000	105.910	-5.9	55	0.00
28	T	Benzo(e)pyrene	50.000	51.761	-3.5	55	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	50.000	55.052	-10.1	57	0.00
30	T	Benzo(a)pyrene	50.000	54.218	-8.4	55	0.00
31	T	Perylene	50.000	50.909	-1.8	54	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	59	0.00
33	T	Indeno(1,2,3-cd)pyrene	50.000	48.647	2.7	59	0.00
34	T	Dibenz(a,h)anthracene	50.000	52.063	-4.1	60	0.00
35	T	Benzo(g,h,i)perylene	50.000	53.444	-6.9	57	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	55	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	51	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011903.D
Acq On : 1 Nov 2019 11:04 am
Operator : JK /AMS /DTH
Sample : 9K01025-CCV1
Misc : 1x, A19F400@50
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

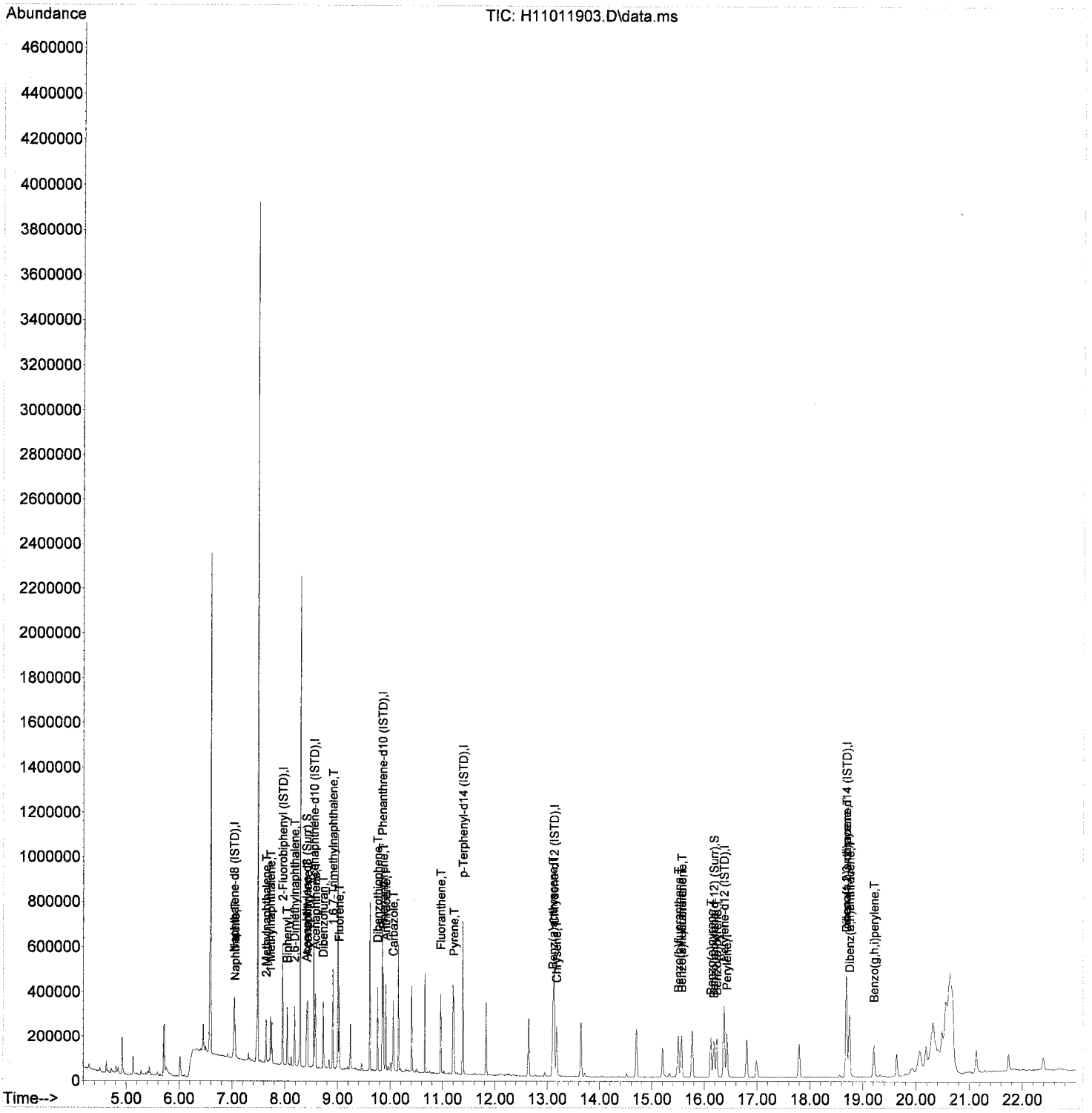
Quant Time: Nov 04 09:43:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	119820	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	102141	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	236517	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	232989	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.368	264	220662	100.00	ng/ml	-0.01
32) Dibenz(a,h)anthracene-...	18.687	292	203097	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	130799	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	223432	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.411	160	90898	49.73	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.178	264	94620	55.05	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.054	128	64835	46.63	ng/ml	95
3) 2-Methylnaphthalene	7.644	142	52153	48.57	ng/ml	96
4) 1-Methylnaphthalene	7.725	142	52319	51.48	ng/ml	90
6) Biphenyl	8.039	154	76808	44.97	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.177	156	57425	47.96	ng/ml	91
9) Acenaphthylene	8.425	152	104540	51.49	ng/ml	98
10) Acenaphthene	8.573	153	71757	47.39	ng/ml	99
11) Dibenzofuran	8.725	168	100488	46.44	ng/ml	84
12) 1,6,7-Trimethylnaphtha...	8.906	170	69072	47.84	ng/ml	84
13) Fluorene	9.025	166	88532	47.23	ng/ml	99
15) Dibenzothiophene	9.758	184	116969	47.98	ng/ml	96
16) Phenanthrene	9.868	178	133936	47.21	ng/ml	99
17) Anthracene	9.916	178	129078	51.24	ng/ml	98
18) Carbazole	10.058	167	118360	48.44	ng/ml	96
19) Fluoranthene	10.963	202	139658	49.47	ng/ml	95
20) Pyrene	11.216	202	148745	48.59	ng/ml	99
22) Benz(a)anthracene	13.106	228	128278	52.42	ng/ml	99
23) Chrysene	13.178	228	124173	48.11	ng/ml	99
25) Benzo(b)fluoranthene	15.501	252	126524	52.37	ng/ml	93
26) Benzo(k)fluoranthene	15.563	252	130611	53.66	ng/ml	90
27) Benzo(b+k)fluoranthene	15.563	252	258297	105.91	ng/ml	93
28) Benzo(e)pyrene	16.120	252	121428	51.76	ng/ml	98
30) Benzo(a)pyrene	16.235	252	115708	54.22	ng/ml	98
31) Perylene	16.425	252	119931	50.91	ng/ml	98
33) Indeno(1,2,3-cd)pyrene	18.687	276	116912	48.65	ng/ml	80
34) Dibenz(a,h)anthracene	18.749	278	124731	52.06	ng/ml	87
35) Benzo(g,h,i)perylene	19.206	276	113822	53.44	ng/ml	85

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011903.D
Acq On : 1 Nov 2019 11:04 am
Operator : JK /AMS /DTH
Sample : 9K01025-CCV1
Misc : 1x, A19F400@50
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011904.D
Acq On : 1 Nov 2019 11:36 am
Operator : JK /AMS /DTH
Sample : 9K01025-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19

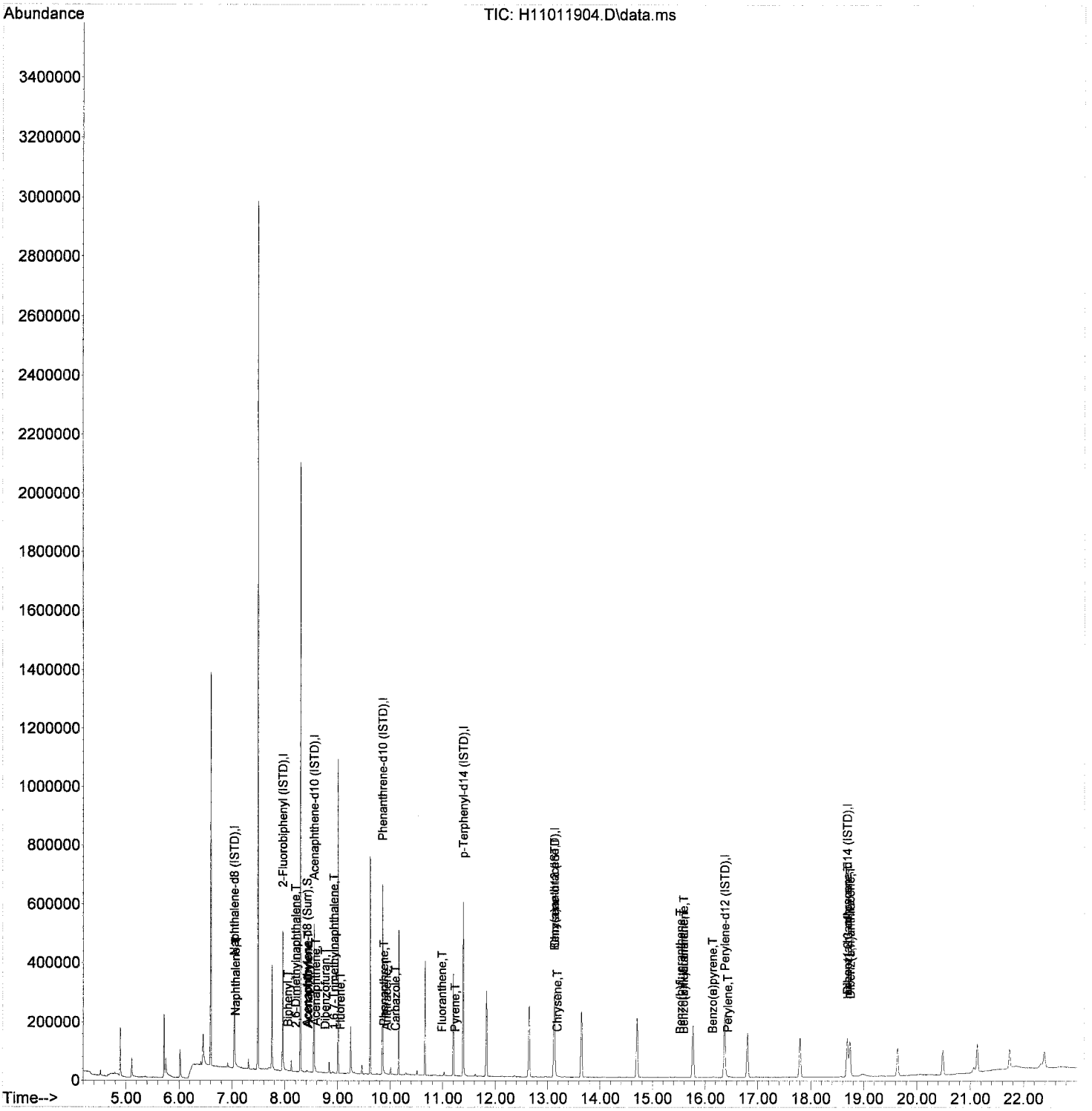
Quant Time: Nov 04 09:43:44 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	108035	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	88546	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	197253	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	167963	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.368	264	145787	100.00	ng/ml	-0.01
32) Dibenz(a,h)anthracene-...	18.687	292	111867	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	129484	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	200132	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.416	160	2139	0.43	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	0.000	264	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthalene	7.058	128	117	0.09	ng/ml	70
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
6) Biphenyl	8.049	154	224	0.15	ng/ml	80
7) 2,6-Dimethylnaphthalene	8.197	156	40	0.04	ng/ml#	65
9) Acenaphthylene	8.430	152	104	0.06	ng/ml	62
10) Acenaphthene	8.578	153	114	0.09	ng/ml#	46
11) Dibenzofuran	8.754	168	93	0.05	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.920	170	65	0.05	ng/ml#	61
13) Fluorene	9.044	166	67	0.04	ng/ml	72
15) Dibenzothiophene	0.000		0	N.D.		
16) Phenanthrene	9.873	178	209	0.09	ng/ml	74
17) Anthracene	9.925	178	115	0.05	ng/ml	63
18) Carbazole	10.092	167	35	0.02	ng/ml	62
19) Fluoranthene	10.978	202	139	0.06	ng/ml	58
20) Pyrene	11.230	202	239	0.09	ng/ml	80
22) Benz(a)anthracene	13.120	228	554	0.09	ng/ml	53
23) Chrysene	13.178	228	144	0.08	ng/ml	51
25) Benzo(b)fluoranthene	15.520	252	44	0.03	ng/ml	53
26) Benzo(k)fluoranthene	15.587	252	61	0.06	ng/ml	63
27) Benzo(b+k)fluoranthene	15.587	252	61	0.07	ng/ml	57
28) Benzo(e)pyrene	16.135	252	139	0.09	ng/ml	53
30) Benzo(a)pyrene	16.135	252	139	0.17	ng/ml	61
31) Perylene	16.425	252	56	0.04	ng/ml	66
33) Indeno(1,2,3-cd)pyrene	18.692	276	120	0.09	ng/ml#	1
34) Dibenz(a,h)anthracene	18.740	278	189	0.14	ng/ml	52
35) Benzo(g,h,i)perylene	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011904.D
Acq On : 1 Nov 2019 11:36 am
Operator : JK /AMS /DTH
Sample : 9K01025-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:44 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011906.D
Acq On : 1 Nov 2019 2:36 pm
Operator : JK /AMS /DTH
Sample : 9110387-BLK1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:47 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

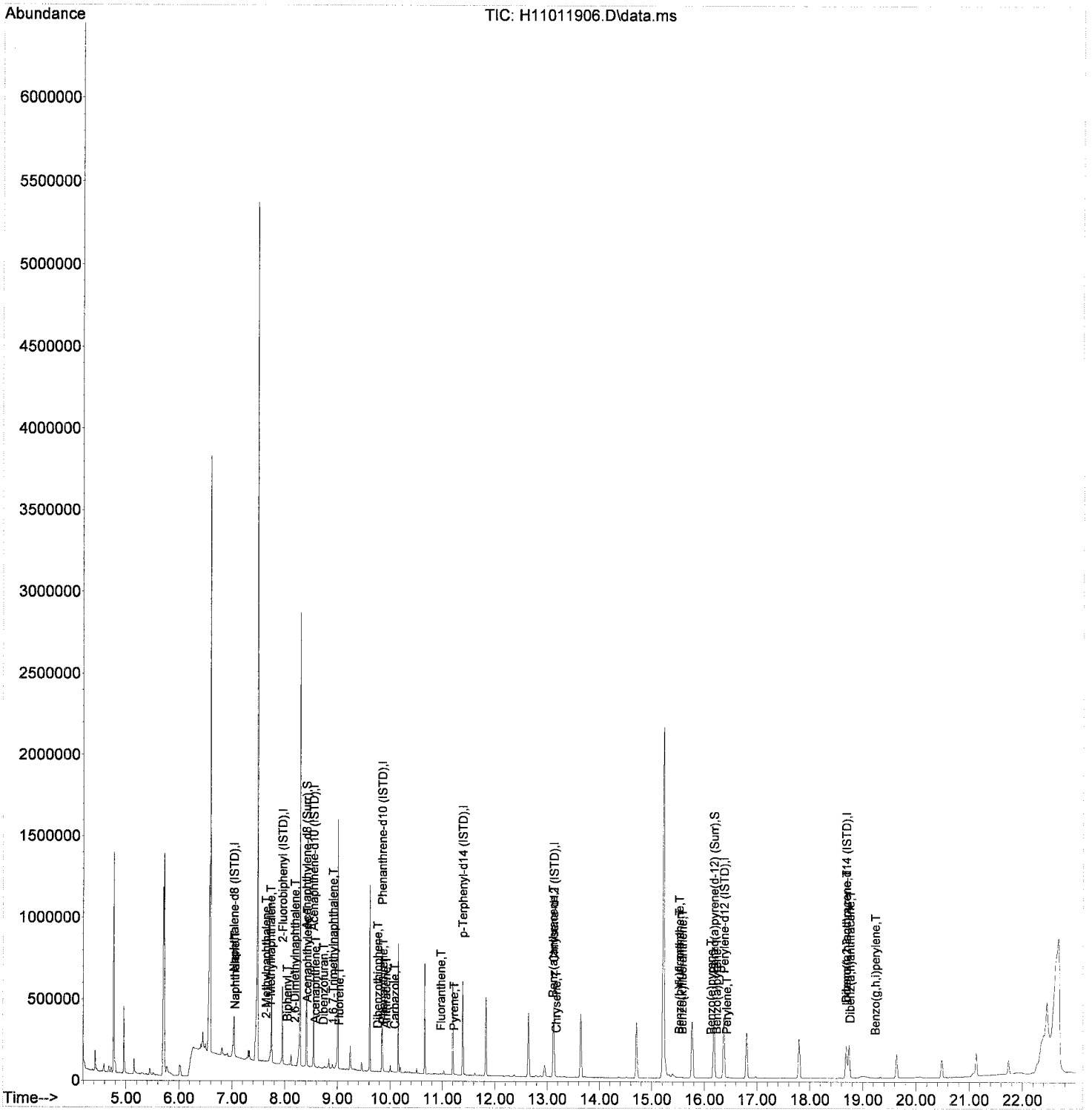
CONTAMINATED
DO NOT USE
Blank re-vialed + All other samples bottled at same time
AMS 11/4/19
11/4/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	150111	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.544	164	109145	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	224017	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	235710	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	241481	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.687	292	159233	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	134531	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	194365	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.411	160	204014	102.96	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.182	264	226625	108.74	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.054	128	1689	0.97	ng/ml	78
3) 2-Methylnaphthalene	7.644	142	368	0.27	ng/ml	81
4) 1-Methylnaphthalene	7.730	142	302	0.24	ng/ml#	59
6) Biphenyl	8.044	154	543	0.30	ng/ml	92
7) 2,6-Dimethylnaphthalene	8.187	156	268	0.21	ng/ml	73
9) Acenaphthylene	8.420	152	444	0.20	ng/ml	86
10) Acenaphthene	8.577	153	588	0.36	ng/ml	90
11) Dibenzofuran	8.735	168	308	0.13	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.911	170	264	0.17	ng/ml#	43
13) Fluorene	9.030	166	455	0.23	ng/ml#	56
15) Dibenzothiophene	9.763	184	274	0.12	ng/ml	89
16) Phenanthrene	9.868	178	2802	1.04	ng/ml	97
17) Anthracene	9.925	178	741	0.31	ng/ml	90
18) Carbazole	10.087	167	297	0.13	ng/ml	62
19) Fluoranthene	10.968	202	1472	0.55	ng/ml	94
20) Pyrene	11.220	202	1770	0.61	ng/ml	97
22) Benz(a)anthracene	13.111	228	1258	0.30	ng/ml	92
23) Chrysene	13.173	228	663	0.25	ng/ml	81
25) Benzo(b)fluoranthene	15.520	252	839	0.35	ng/ml	95
26) Benzo(k)fluoranthene	15.578	252	430	0.20	ng/ml	61
27) Benzo(b+k)fluoranthene	15.520	252	1269	0.54	ng/ml	95
28) Benzo(e)pyrene	16.120	252	698	0.27	ng/ml	84
30) Benzo(a)pyrene	16.230	252	622	0.36	ng/ml	95
31) Perylene	16.425	252	357	0.14	ng/ml	64
33) Indeno(1,2,3-cd)pyrene	18.692	276	375	0.20	ng/ml#	1
34) Dibenz(a,h)anthracene	18.759	278	194	0.10	ng/ml	67
35) Benzo(g,h,i)perylene	19.235	276	133	0.08	ng/ml	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011906.D
Acq On : 1 Nov 2019 2:36 pm
Operator : JK /AMS /DTH
Sample : 9110387-BLK1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:47 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011907.D
Acq On : 1 Nov 2019 3:20 pm
Operator : JK /AMS /DTH
Sample : 9110387-BLK2
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19

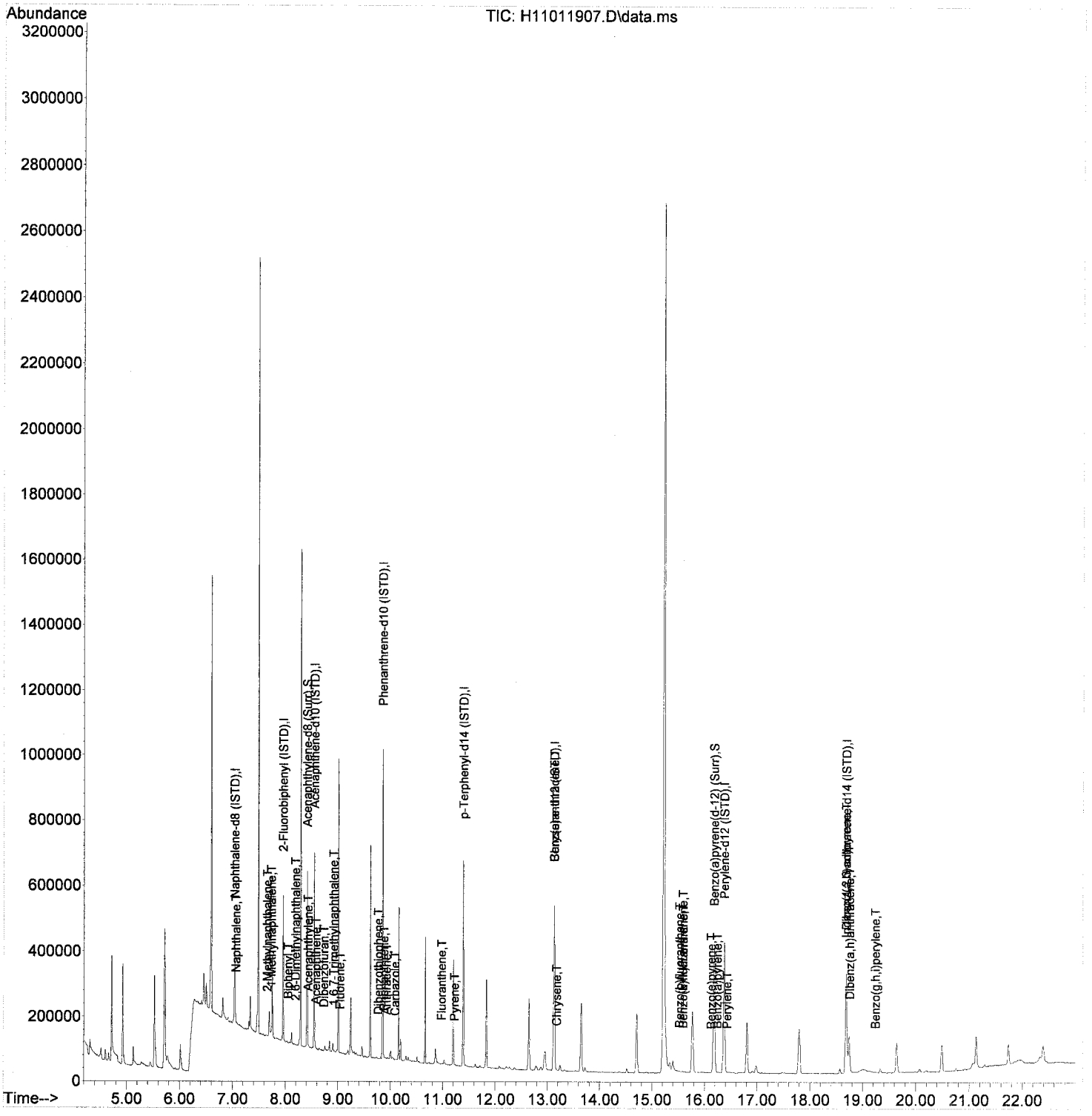
Quant Time: Nov 04 09:43:50 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	120412	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	103427	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	271208	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	269896	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	260445	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.687	292	224436	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.953	172	114000	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.392	244	222855	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.411	160	192893	102.74	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.182	264	238168	106.41	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.058	128	436	0.31	ng/ml	70
3) 2-Methylnaphthalene	7.653	142	124	0.11	ng/ml	68
4) 1-Methylnaphthalene	7.730	142	108	0.11	ng/ml#	42
6) Biphenyl	8.044	154	334	0.19	ng/ml	80
7) 2,6-Dimethylnaphthalene	8.187	156	68	0.06	ng/ml#	49
9) Acenaphthylene	8.425	152	212	0.10	ng/ml	77
10) Acenaphthene	8.577	153	138	0.09	ng/ml	82
11) Dibenzofuran	8.730	168	193	0.09	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.911	170	174	0.12	ng/ml#	57
13) Fluorene	9.034	166	124	0.07	ng/ml	72
15) Dibenzothiophene	9.763	184	35	0.01	ng/ml	68
16) Phenanthrene	9.873	178	499	0.15	ng/ml	73
17) Anthracene	9.920	178	246	0.09	ng/ml	86
18) Carbazole	10.082	167	265	0.09	ng/ml	62
19) Fluoranthene	10.973	202	369	0.11	ng/ml	81
20) Pyrene	11.220	202	349	0.10	ng/ml	72
22) Benz(a)anthracene	13.125	228	939	0.11	ng/ml	77
23) Chrysene	13.173	228	268	0.09	ng/ml	68
25) Benzo(b)fluoranthene	15.520	252	210	0.08	ng/ml	63
26) Benzo(k)fluoranthene	15.587	252	192	0.09	ng/ml	52
27) Benzo(b+k)fluoranthene	15.587	252	192	0.10	ng/ml	53
28) Benzo(e)pyrene	16.120	252	249	0.09	ng/ml	78
30) Benzo(a)pyrene	16.239	252	203	0.15	ng/ml	61
31) Perylene	16.425	252	82	0.03	ng/ml	75
33) Indeno(1,2,3-cd)pyrene	18.682	276	312	0.12	ng/ml#	1
34) Dibenz(a,h)anthracene	18.749	278	167	0.06	ng/ml	86
35) Benzo(g,h,i)perylene	19.235	276	37	0.02	ng/ml#	1

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011907.D
Acq On : 1 Nov 2019 3:20 pm
Operator : JK /AMS /DTH
Sample : 9110387-BLK2
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:50 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011908.D
Acq On : 1 Nov 2019 3:52 pm
Operator : JK /AMS /DTH
Sample : 9110387-BS1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS
11/4/19

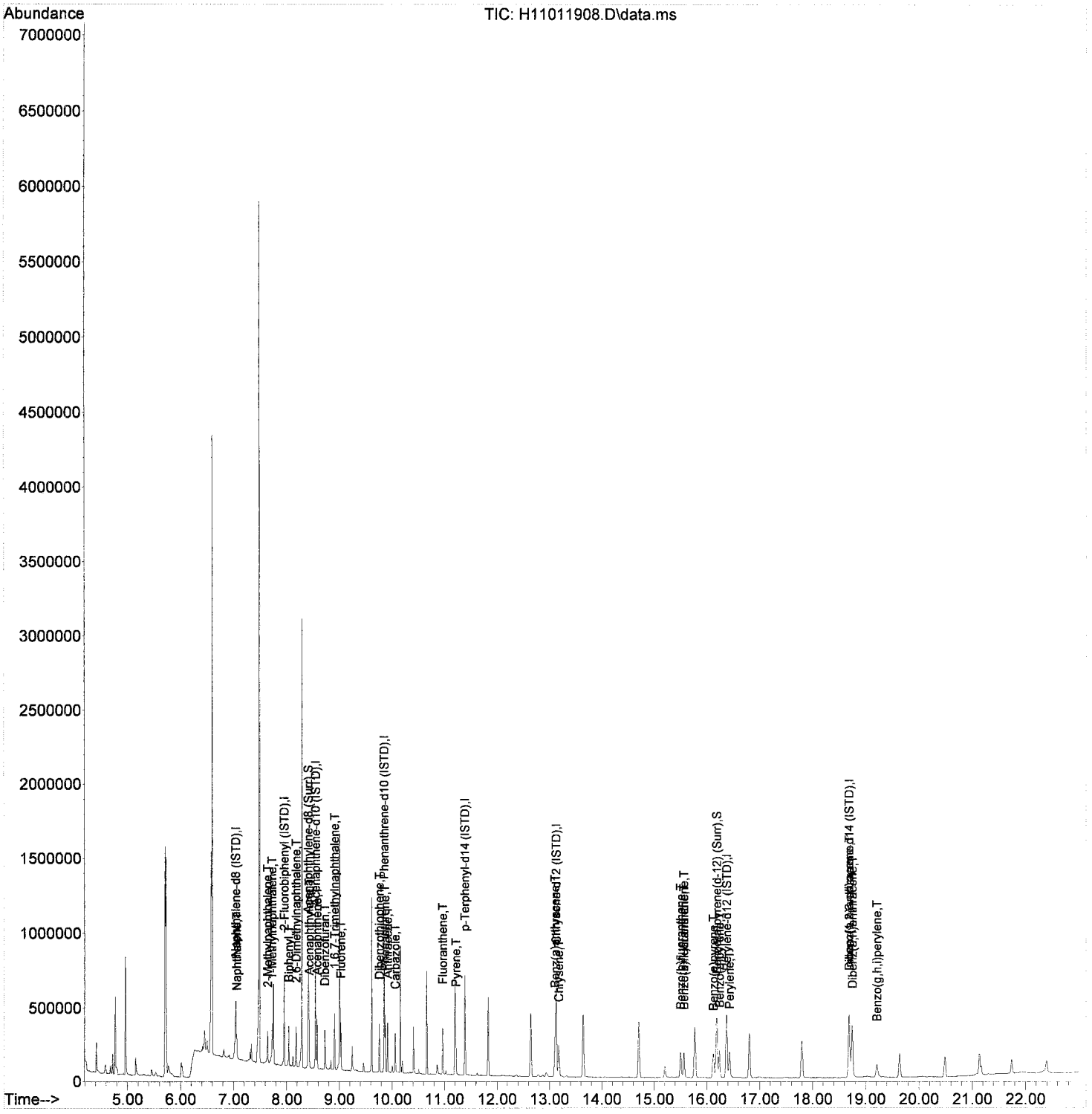
Quant Time: Nov 04 09:43:53 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	196206	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	137197	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	280806	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	295660	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	279845	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.687	292	229532	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	162438	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	230183	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.411	160	258237	103.65	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.187	264	263108	108.90	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.054	128	84955	37.31	ng/ml	96
3) 2-Methylnaphthalene	7.639	142	61062	34.73	ng/ml	97
4) 1-Methylnaphthalene	7.725	142	60831	36.55	ng/ml	92
6) Biphenyl	8.039	154	82745	36.07	ng/ml	94
7) 2,6-Dimethylnaphthalene	8.177	156	58731	36.52	ng/ml	91
9) Acenaphthylene	8.425	152	109655	40.21	ng/ml	98
10) Acenaphthene	8.573	153	74457	36.61	ng/ml	99
11) Dibenzofuran	8.725	168	95710	32.93	ng/ml	83
12) 1,6,7-Trimethylnaphtha...	8.906	170	61451	31.69	ng/ml	86
13) Fluorene	9.025	166	83314	33.09	ng/ml	100
15) Dibenzothiophene	9.758	184	102914	35.55	ng/ml	98
16) Phenanthrene	9.868	178	120902	35.90	ng/ml	98
17) Anthracene	9.916	178	115645	38.66	ng/ml	99
18) Carbazole	10.058	167	104171	35.91	ng/ml	96
19) Fluoranthene	10.963	202	126076	37.62	ng/ml	95
20) Pyrene	11.216	202	134859	37.10	ng/ml	99
22) Benz(a)anthracene	13.106	228	121537	39.64	ng/ml	98
23) Chrysene	13.178	228	121678	37.15	ng/ml	99
25) Benzo(b)fluoranthene	15.497	252	120424	39.99	ng/ml	94
26) Benzo(k)fluoranthene	15.558	252	125107	41.37	ng/ml	91
27) Benzo(b+k)fluoranthene	15.558	252	246925	81.31	ng/ml	94
28) Benzo(e)pyrene	16.116	252	114280	38.41	ng/ml	97
30) Benzo(a)pyrene	16.235	252	111358	42.23	ng/ml	97
31) Perylene	16.425	252	107843	36.10	ng/ml	96
33) Indeno(1,2,3-cd)pyrene	18.687	276	93511	34.43	ng/ml	82
34) Dibenz(a,h)anthracene	18.749	278	104776	38.70	ng/ml	88
35) Benzo(g,h,i)perylene	19.206	276	88172	36.63	ng/ml	86

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011908.D
Acq On : 1 Nov 2019 3:52 pm
Operator : JK /AMS /DTH
Sample : 9110387-BS1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:53 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011909.D
Acq On : 1 Nov 2019 4:24 pm
Operator : JK /AMS /DTH
Sample : 9110387-BSD1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19 Q-19

Quant Time: Nov 04 09:43:57 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

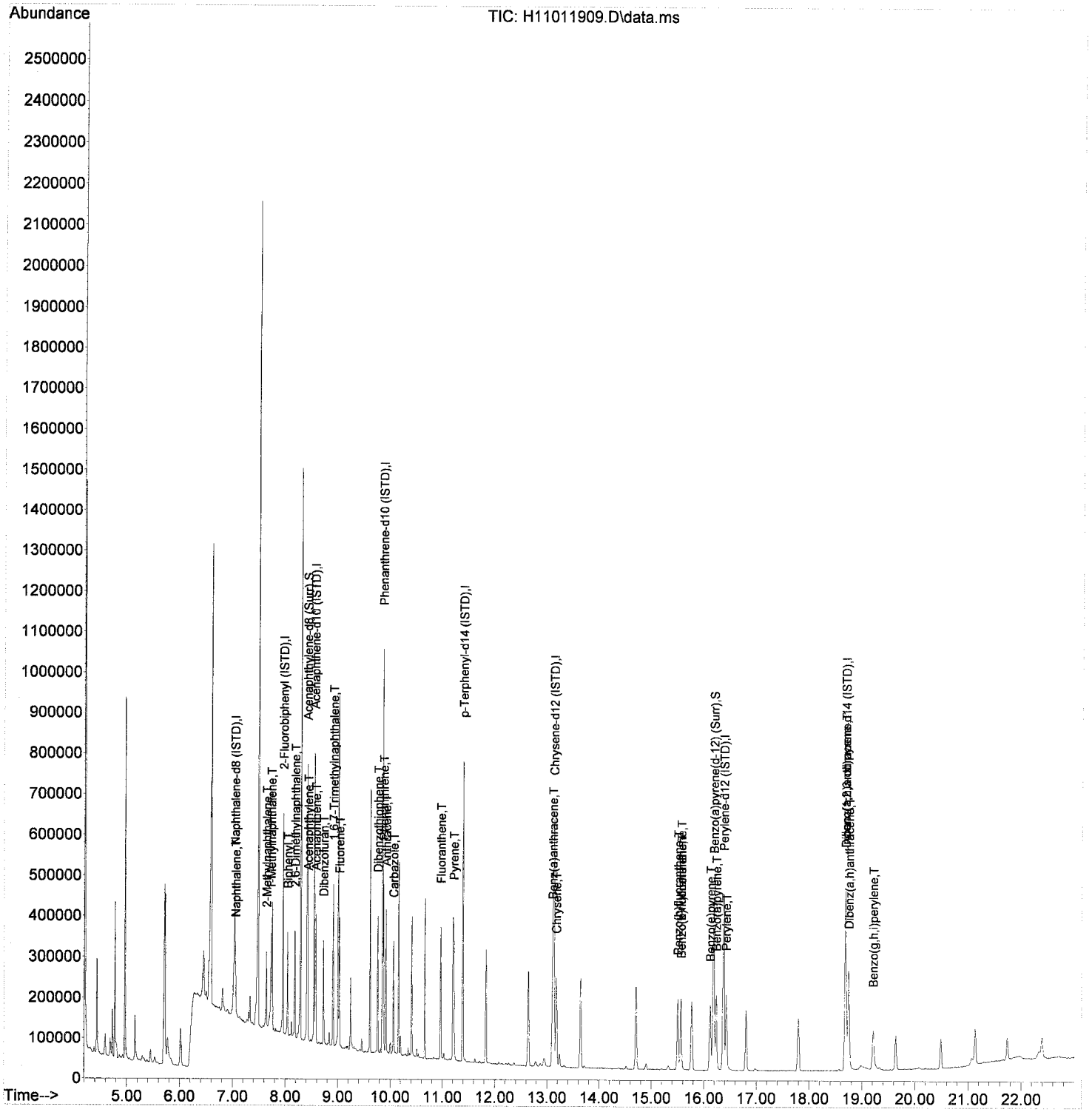
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.034	136	169648	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	128600	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	284664	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	298042	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	279387	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.687	292	233831	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	155059	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	246153	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.411	160	241558	103.45	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.187	264	261788	108.60	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.053	128	73083	37.13	ng/ml	96
3) 2-Methylnaphthalene	7.639	142	56447	37.13	ng/ml	96
4) 1-Methylnaphthalene	7.725	142	54555	37.91	ng/ml	93
6) Biphenyl	8.039	154	78637	36.57	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.177	156	56133	37.24	ng/ml	92
9) Acenaphthylene	8.425	152	103649	40.55	ng/ml	98
10) Acenaphthene	8.573	153	70765	37.12	ng/ml	98
11) Dibenzofuran	8.725	168	93168	34.20	ng/ml	82
12) 1,6,7-Trimethylnaphtha...	8.906	170	62352	34.30	ng/ml	86
13) Fluorene	9.025	166	80885	34.28	ng/ml	99
15) Dibenzothiophene	9.758	184	104487	35.61	ng/ml	97
16) Phenanthrene	9.868	178	125845	36.86	ng/ml	99
17) Anthracene	9.915	178	120338	39.69	ng/ml	97
18) Carbazole	10.058	167	107503	36.56	ng/ml	96
19) Fluoranthene	10.963	202	128625	37.86	ng/ml	96
20) Pyrene	11.211	202	135684	36.83	ng/ml	99
22) Benz(a)anthracene	13.106	228	124191	40.16	ng/ml	99
23) Chrysene	13.177	228	125842	38.12	ng/ml	98
25) Benzo(b)fluoranthene	15.501	252	118696	39.50	ng/ml	93
26) Benzo(k)fluoranthene	15.563	252	125160	41.45	ng/ml	91
27) Benzo(b+k)fluoranthene	15.563	252	245172	80.89	ng/ml	94
28) Benzo(e)pyrene	16.120	252	116274	39.15	ng/ml	99
30) Benzo(a)pyrene	16.235	252	112683	42.75	ng/ml	97
31) Perylene	16.425	252	111362	37.34	ng/ml	97
33) Indeno(1,2,3-cd)pyrene	18.687	276	99696	36.03	ng/ml	79
34) Dibenz(a,h)anthracene	18.749	278	105776	38.35	ng/ml	89
35) Benzo(g,h,i)perylene	19.211	276	94683	38.61	ng/ml	83

J

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011909.D
Acq On : 1 Nov 2019 4:24 pm
Operator : JK /AMS /DTH
Sample : 9110387-BSD1
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:43:57 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011912.D
Acq On : 1 Nov 2019 6:00 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Report 50X AMS 11/4/19 RR2 RO2 MOS

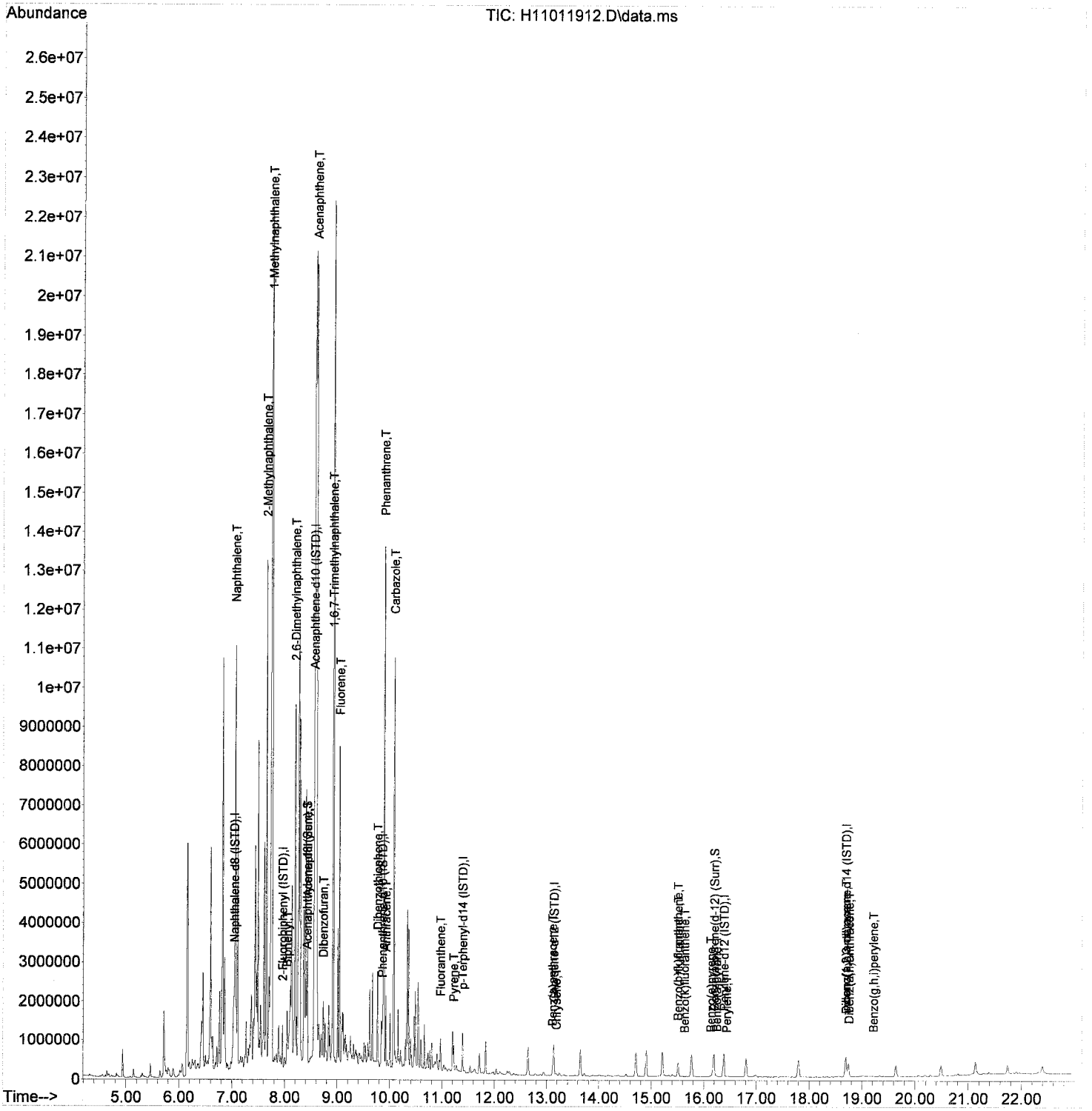
Quant Time: Nov 04 09:44:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8 (ISTD)	7.044	136	295644	100.00	ng/ml	0.00	
5) Acenaphthene-d10 (ISTD)	8.558	164	367361	100.00	ng/ml	0.00	
14) Phenanthrene-d10 (ISTD)	9.858	188	450834	100.00	ng/ml	0.00	
21) Chrysene-d12 (ISTD)	13.134	240	408350	100.00	ng/ml	0.00	
24) Perylene-d12 (ISTD)	16.382	264	379710	100.00	ng/ml	0.00	
32) Dibenz(a,h)anthracene-...	18.696	292	342304	100.00	ng/ml	0.00	
36) 2-Fluorobiphenyl (ISTD)	7.958	172	246396	100.00	ng/ml	0.00	
37) p-Terphenyl-d14 (ISTD)	11.392	244	336032	100.00	ng/ml	0.00	
System Monitoring Compounds							
8) Acenaphthylene-d8 (Surr)	8.420	160	460829	69.84	ng/ml	0.00	
29) Benzo(a)pyrene(d-12) (...	16.196	264	353629	108.04	ng/ml	0.00	
Target Compounds						Qvalue	
2) Naphthalene	7.063	128	4419165	*1288.16	ng/ml	94	RR2
3) 2-Methylnaphthalene	7.653	142	3033220	*1144.93	ng/ml	98	RR2
4) 1-Methylnaphthalene	7.758	142	9263030	*3693.83	ng/ml	92	RR2
6) Biphenyl	8.044	154	303825	49.46	ng/ml	93	
7) 2,6-Dimethylnaphthalene	8.196	156	1953693	453.69	ng/ml	93	
9) Acenaphthylene	8.430	152	106020	14.52	ng/ml#	31	RO2
10) Acenaphthene	8.601	153	5892748	*1081.97	ng/ml	96	RR2
11) Dibenzofuran	8.734	168	203821	26.19	ng/ml	85	
12) 1,6,7-Trimethylnaphtha...	8.911	170	258781	49.84	ng/ml#	41	
13) Fluorene	9.044	166	2210862	*327.97	ng/ml	100	RR2
15) Dibenzothiophene	9.768	184	787407	169.44	ng/ml	98	
16) Phenanthrene	9.892	178	5369595	993.02	ng/ml	98	
17) Anthracene	9.925	178	536908	111.81	ng/ml	97	
18) Carbazole	10.082	167	4700136	*1009.22	ng/ml	95	RR2
19) Fluoranthene	10.968	202	244211	45.38	ng/ml	98	
20) Pyrene	11.220	202	280390	48.05	ng/ml	98	
22) Benz(a)anthracene	13.111	228	29498	7.03	ng/ml	78	
23) Chrysene	13.182	228	33114	7.32	ng/ml	92	
25) Benzo(b)fluoranthene	~~15.506~~	~~252~~	~~26909~~	~~6.91~~	~~ng/ml~~	~~98~~	MI-HIT
26) Benzo(k)fluoranthene	~~15.630~~	~~252~~	~~226~~	~~0.08~~	~~ng/ml#~~	~~1~~	MI-MOS
27) Benzo(b+k)fluoranthene	15.506	252	27203	7.02	ng/ml	98	
28) Benzo(e)pyrene	16.130	252	14269	3.53	ng/ml	100	
30) Benzo(a)pyrene	16.244	252	21525	6.57	ng/ml	96	
31) Perylene	16.430	252	4250	1.05	ng/ml	87	
33) Indeno(1,2,3-cd)pyrene	18.696	276	13561	3.35	ng/ml#	64	
34) Dibenz(a,h)anthracene	18.754	278	3069	0.76	ng/ml	69	
35) Benzo(g,h,i)perylene	19.211	276	14801	4.12	ng/ml	94	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011912.D
Acq On : 1 Nov 2019 6:00 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011913.D
Acq On : 1 Nov 2019 6:32 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Report SOX

RO2 RR2 MOS AMS 11/4/19

AMS 11/4/19

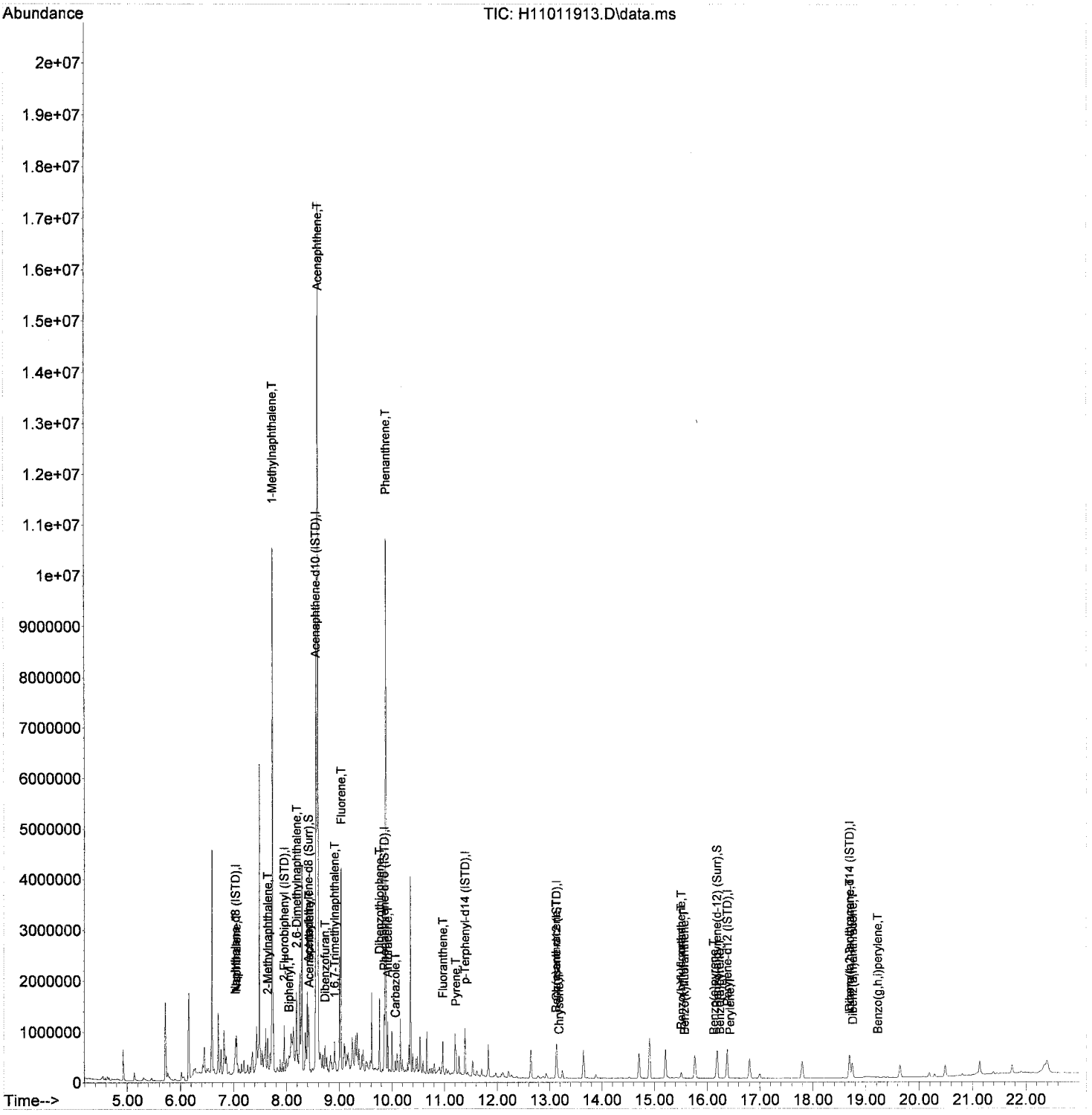
Quant Time: Nov 04 09:44:09 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8 (ISTD)	7.039	136	267108	100.00	ng/ml	0.00	
5) Acenaphthene-d10 (ISTD)	8.554	164	281699	100.00	ng/ml	0.00	
14) Phenanthrene-d10 (ISTD)	9.854	188	412161	100.00	ng/ml	0.00	
21) Chrysene-d12 (ISTD)	13.130	240	382769	100.00	ng/ml	0.00	
24) Perylene-d12 (ISTD)	16.382	264	362350	100.00	ng/ml	0.00	
32) Dibenz(a,h)anthracene-...	18.692	292	327539	100.00	ng/ml	0.00	
36) 2-Fluorobiphenyl (ISTD)	7.954	172	230859	100.00	ng/ml	0.00	
37) p-Terphenyl-d14 (ISTD)	11.392	244	319043	100.00	ng/ml	0.00	
System Monitoring Compounds							
8) Acenaphthylene-d8 (Surr)	8.416	160	393615	77.62	ng/ml	0.00	
29) Benzo(a)pyrene(d-12) (...	16.187	264	340662	108.90	ng/ml	0.00	
Target Compounds						Qvalue	
2) Naphthalene	7.054	128	255001	82.27	ng/ml	94	
3) 2-Methylnaphthalene	7.644	142	121404	50.72	ng/ml	96	
4) 1-Methylnaphthalene	7.735	142	2564455	*1131.88	ng/ml	94	RR2
6) Biphenyl	8.044	154	16029	3.40	ng/ml	94	
7) 2,6-Dimethylnaphthalene	8.187	156	248990	75.40	ng/ml	94	
9) Acenaphthylene	8.425	152	42649	T 7.62	ng/ml	63	RO2
10) Acenaphthene	8.592	153	4471214	*1070.61	ng/ml	96	RR2
11) Dibenzofuran	8.730	168	106472	17.84	ng/ml	86	
12) 1,6,7-Trimethylnaphtha...	8.906	170	51739	12.99	ng/ml#	70	
13) Fluorene	9.035	166	1027108	198.70	ng/ml	99	
15) Dibenzothiophene	9.763	184	442453	104.14	ng/ml	98	
16) Phenanthrene	9.882	178	3599522	728.13	ng/ml	99	
17) Anthracene	9.920	178	312462	71.17	ng/ml	97	
18) Carbazole	10.063	167	88217	20.72	ng/ml	96	
19) Fluoranthene	10.968	202	212430	43.18	ng/ml	97	
20) Pyrene	11.216	202	212097	39.76	ng/ml	99	
22) Benz(a)anthracene	13.120	228	3691	0.74	ng/ml	93	
23) Chrysene	13.182	228	3005	0.71	ng/ml	93	
25) Benzo(b)fluoranthene	15.506	252	2695	0.74	ng/ml	93	
26) Benzo(k)fluoranthene	15.568	252	1217	0.35	ng/ml	74	
27) Benzo(b+k)fluoranthene	15.506	252	4057	1.13	ng/ml	93	
28) Benzo(e)pyrene	16.125	252	1700	0.44	ng/ml	78	
30) Benzo(a)pyrene	16.239	252	2051	0.72	ng/ml	75	
31) Perylene	16.430	252	650	0.17	ng/ml	69	
33) Indeno(1,2,3-cd)pyrene	18.697	276	2030	0.52	ng/ml#	1	
34) Dibenz(a,h)anthracene	18.754	278	743	0.19	ng/ml#	24	
35) Benzo(g,h,i)perylene	19.220	276	2170	0.63	ng/ml	83	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011913.D
Acq On : 1 Nov 2019 6:32 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:09 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011914.D
Acq On : 1 Nov 2019 7:04 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Report SOX AMS 11/4/19 RR2 RO2

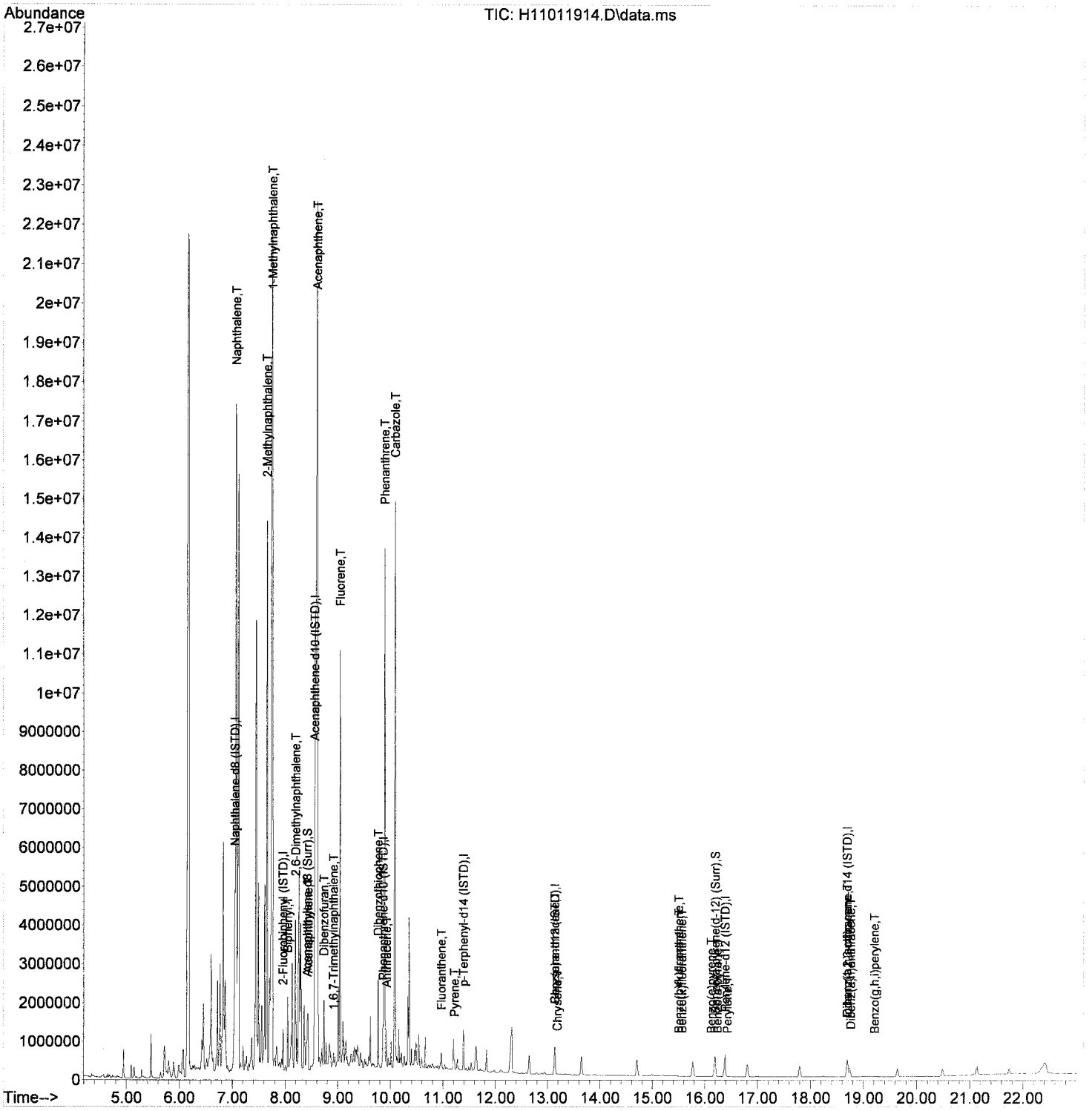
Quant Time: Nov 04 09:44:12 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
Internal Standards							
1) Naphthalene-d8 (ISTD)	7.044	136	316502	100.00	ng/ml	0.00	
5) Acenaphthene-d10 (ISTD)	8.558	164	297101	100.00	ng/ml	0.00	
14) Phenanthrene-d10 (ISTD)	9.858	188	421015	100.00	ng/ml	0.00	
21) Chrysene-d12 (ISTD)	13.135	240	393358	100.00	ng/ml	0.00	
24) Perylene-d12 (ISTD)	16.382	264	367446	100.00	ng/ml	0.00	
32) Dibenz(a,h)anthracene-...	18.692	292	324092	100.00	ng/ml	0.00	
36) 2-Fluorobiphenyl (ISTD)	7.954	172	251535	100.00	ng/ml	0.00	
37) p-Terphenyl-d14 (ISTD)	11.392	244	354982	100.00	ng/ml	0.00	
System Monitoring Compounds							
8) Acenaphthylene-d8 (Surr)	8.415	160	391495	73.29	ng/ml	0.00	
29) Benzo(a)pyrene(d-12) (...	16.192	264	339260	107.27	ng/ml	0.00	
Target Compounds						Qvalue	
2) Naphthalene	7.073	128	10745567	2925.85	ng/ml	90	RR2
3) 2-Methylnaphthalene	7.654	142	3839916	1353.91	ng/ml	98	RR2
4) 1-Methylnaphthalene	7.758	142	9483283	3532.44	ng/ml	92	RR2
6) Biphenyl	8.044	154	447279	90.03	ng/ml	93	
7) 2,6-Dimethylnaphthalene	8.192	156	765545	219.82	ng/ml	94	~~RR2~~ NR AMS 11/4/19
9) Acenaphthylene	8.430	152	97961	16.59	ng/ml	72	RO2
10) Acenaphthene	8.606	153	10320239	2343.02	ng/ml	94	RR2
11) Dibenzofuran	8.735	168	496051	178.82	ng/ml	88	
12) 1,6,7-Trimethylnaphtha...	8.911	170	49465	11.78	ng/ml	73	
13) Fluorene	9.039	166	2933650	538.10	ng/ml	99	RR2
15) Dibenzothiophene	9.763	184	691269	159.29	ng/ml	97	
16) Phenanthrene	9.887	178	5013885	992.91	ng/ml	98	RR2
17) Anthracene	9.925	178	327116	72.94	ng/ml	97	
18) Carbazole	10.087	167	7901144	1816.71	ng/ml	92	RR2
19) Fluoranthene	10.968	202	141920	28.24	ng/ml	97	
20) Pyrene	11.220	202	114205	20.96	ng/ml	97	
22) Benz(a)anthracene	13.135	228	1997	(0.27)	ng/ml	58	
23) Chrysene	13.182	228	508	0.12	ng/ml	49	
25) Benzo(b)fluoranthene	15.501	252	588	0.16	ng/ml#	35	
26) Benzo(k)fluoranthene	15.558	252	286	0.10	ng/ml#	1	
27) Benzo(b+k)fluoranthene	15.501	252	1184	0.35	ng/ml#	35	
28) Benzo(e)pyrene	16.116	252	473	0.12	ng/ml#	74	
30) Benzo(a)pyrene	16.235	252	454	(0.20)	ng/ml#	23	
31) Perylene	16.425	252	202	0.05	ng/ml#	36	
33) Indeno(1,2,3-cd)pyrene	18.697	276	599	0.16	ng/ml#	1	
34) Dibenz(a,h)anthracene	18.758	278	403	0.11	ng/ml#	1	
35) Benzo(g,h,i)perylene	19.206	276	485	0.14	ng/ml#	1	

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011914.D
Acq On : 1 Nov 2019 7:04 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07
Misc : 1x, 8270D PAH (125mL) LL
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:12 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50 Report all
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19 RO2

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

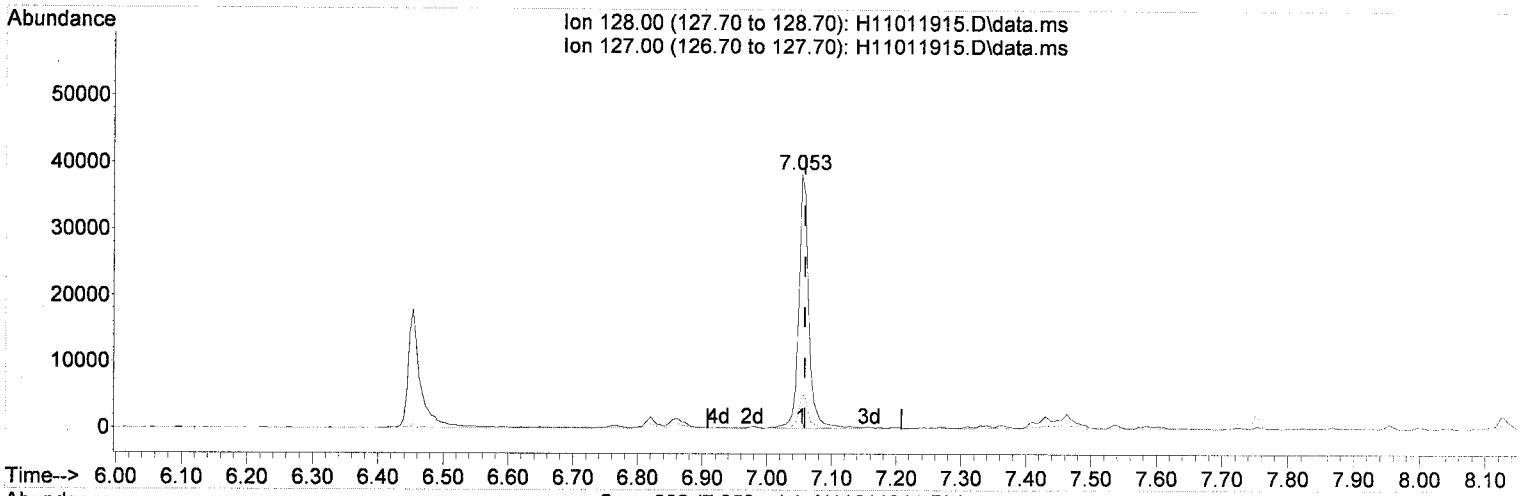
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	129724	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	126422	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	286732	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	237098	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	207477	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.692	292	177486	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	160548	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	268500	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.415	160	7819	2.62	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.182	264	4452	3.20	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.053	128	41792	27.76	ng/ml	97
3) 2-Methylnaphthalene	7.644	142	29807	25.64	ng/ml	97
4) 1-Methylnaphthalene	7.730	142	116166	105.57	ng/ml	95
6) Biphenyl	8.044	154	4370	2.07	ng/ml	92
7) 2,6-Dimethylnaphthalene	8.187	156	20733	13.99	ng/ml	94
9) Acenaphthylene	8.425	152	4064	1.62	ng/ml	69 RO2
10) Acenaphthene	8.577	153	74540	39.77	ng/ml	98
11) Dibenzofuran	8.730	168	3320	NR 1.24	ng/ml#	1 RO2 AMS 11/4/19
12) 1,6,7-Trimethylnaphtha...	8.906	170	3502	1.96	ng/ml#	1
13) Fluorene	~~9.030~~	~~166~~	~~32587~~	~~14.05~~	~~ng/ml~~	~~100~~ MI-HIT
15) Dibenzothiophene	9.763	184	12639	4.28	ng/ml	96
16) Phenanthrene	9.868	178	75723	22.02	ng/ml	99
17) Anthracene	9.915	178	9506	3.11	ng/ml	98
18) Carbazole	10.058	167	59901	20.22	ng/ml	97
19) Fluoranthene	10.968	202	4888	1.43	ng/ml	95
20) Pyrene	11.215	202	5476	1.48	ng/ml	98
22) Benz(a)anthracene	13.125	228	1449	(0.38)	ng/ml	78
23) Chrysene	13.173	228	865	(0.33)	ng/ml	84
25) Benzo(b)fluoranthene	15.515	252	556	(0.27)	ng/ml	84
26) Benzo(k)fluoranthene	15.573	252	526	(0.27)	ng/ml	59
27) Benzo(b+k)fluoranthene	15.515	252	1082	0.54	ng/ml	84
28) Benzo(e)pyrene	16.116	252	434	0.20	ng/ml	72
30) Benzo(a)pyrene	16.239	252	622	0.41	ng/ml	87
31) Perylene	16.416	252	304	0.14	ng/ml	66
33) Indeno(1,2,3-cd)pyrene	18.697	276	525	(0.25)	ng/ml#	1
34) Dibenz(a,h)anthracene	18.758	278	257	0.12	ng/ml#	18
35) Benzo(g,h,i)perylene	19.220	276	426	(0.23)	ng/ml	78

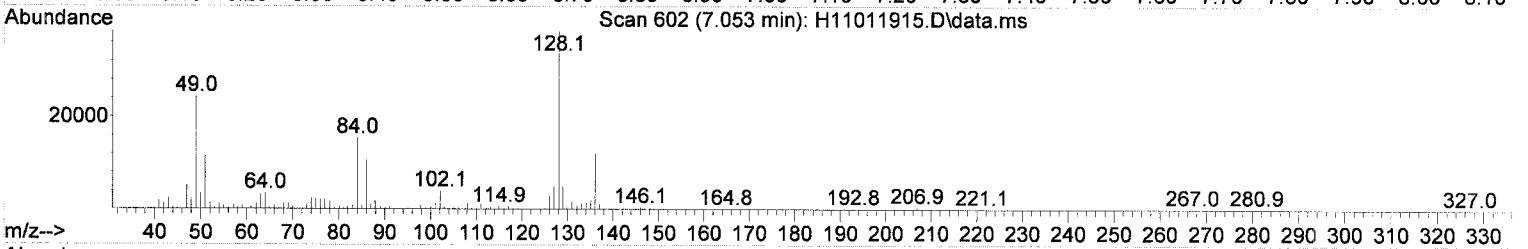
(#) = qualifier out of range (m) = manual integration (+) = signals summed

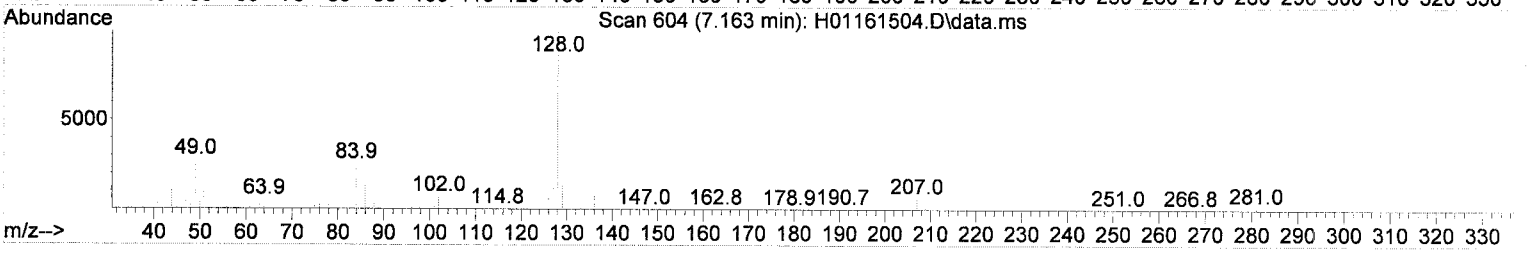
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011915.D\data.ms

(2) Naphthalene (T)

7.053min (-0.005) 27.76 ng/ml

response 41792

Ion	Exp%	Act%
128.00	100.00	100.00
127.00	11.50	12.84
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data File : H11011915.D
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Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
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QLast Update : Mon Oct 07 17:09:14 2019
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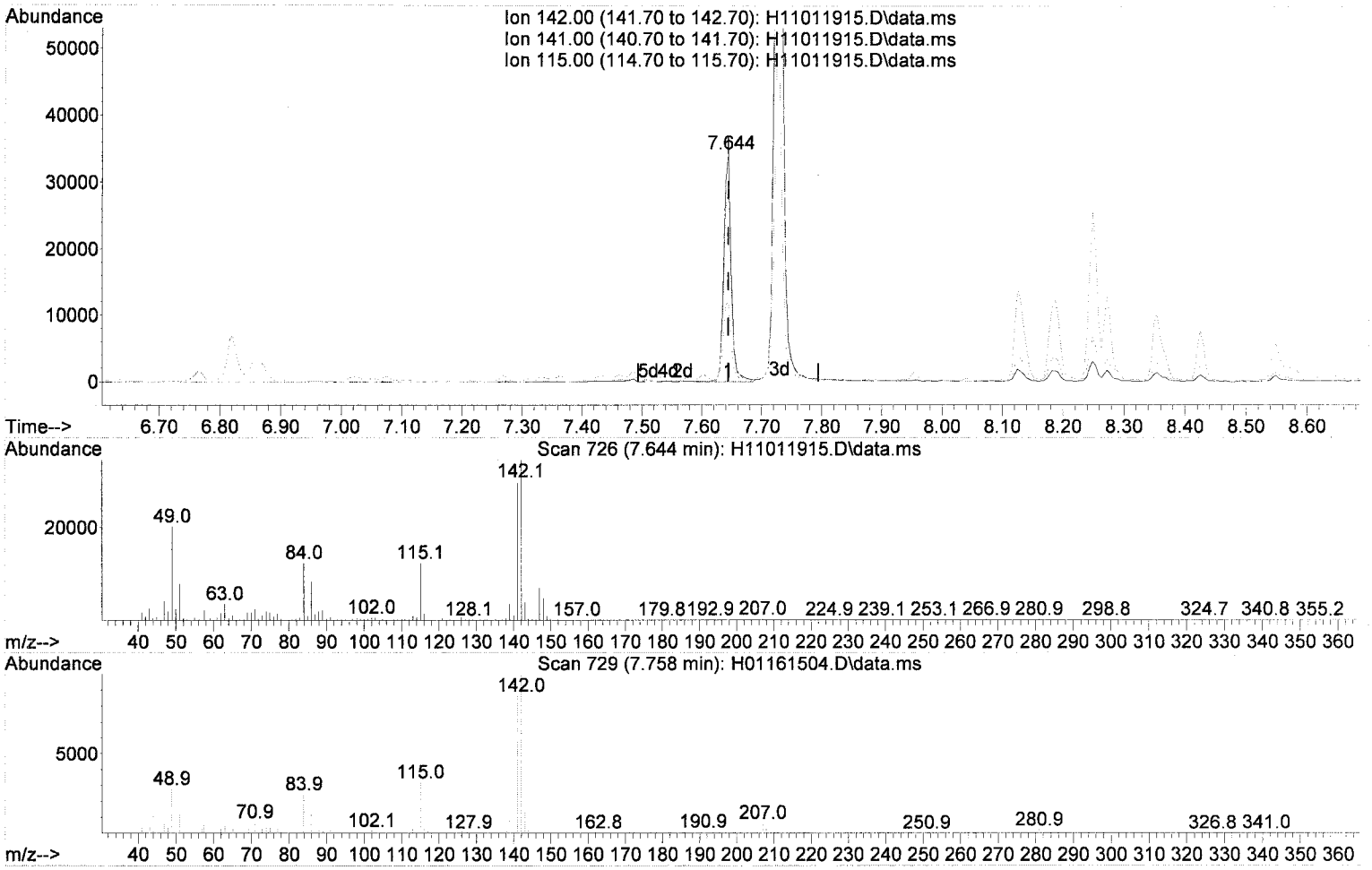

TIC: H11011915.D\data.ms

(3) 2-Methylnaphthalene (T)

7.644min (-0.000) 25.64 ng/ml

response 29807

Ion	Exp%	Act%
142.00	100.00	100.00
141.00	87.50	85.67
115.00	32.00	35.95
0.00	0.00	0.00

Quantitation Report (Qedit)

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Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
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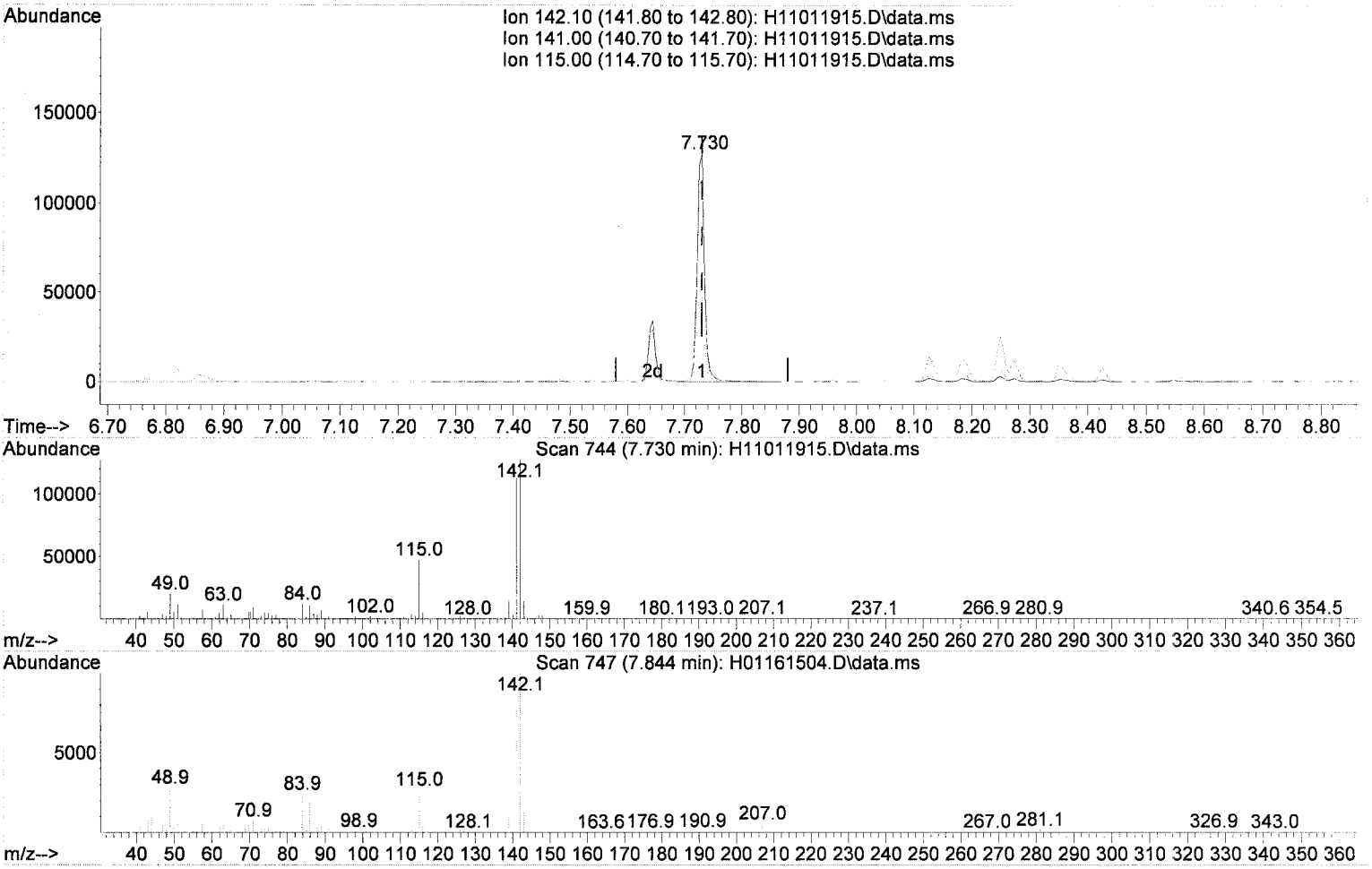
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(4) 1-Methylnaphthalene (T)

7.730min (-0.000) 105.57 ng/ml

response 116166

Ion	Exp%	Act%
142.10	100.00	100.00
141.00	88.10	88.36
115.00	26.90	37.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
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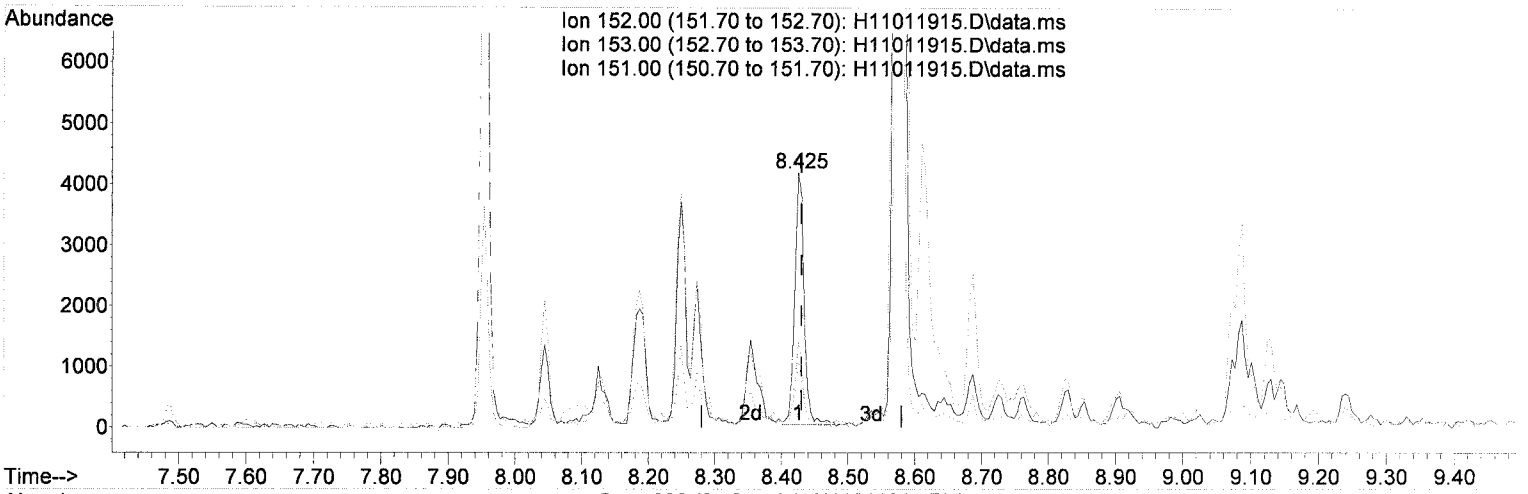
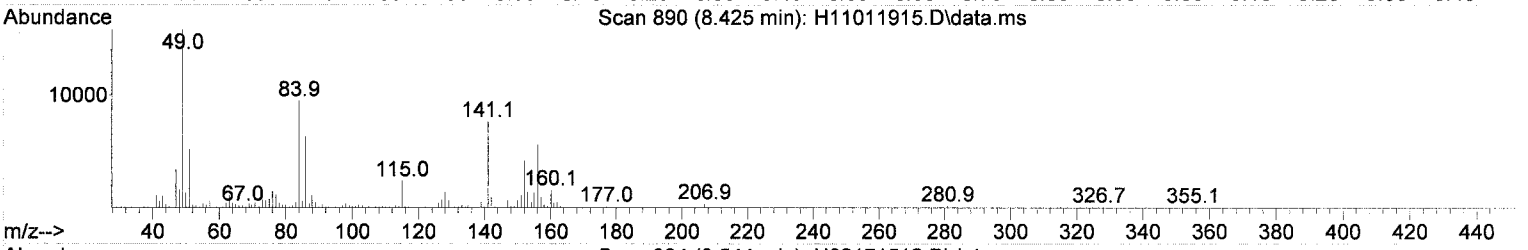
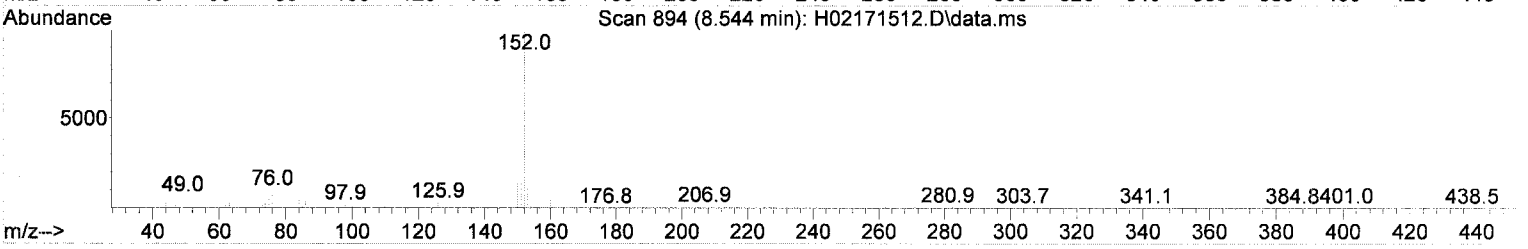
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011915.D\data.ms

(9) Acenaphthylene (T)

8.425min (-0.005) 1.62 ng/ml

response 4064

Ion	Exp%	Act%
152.00	100.00	100.00
153.00	13.00	33.36
151.00	18.40	25.84
0.00	0.00	0.00

Quantitation Report (Qedit)

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Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
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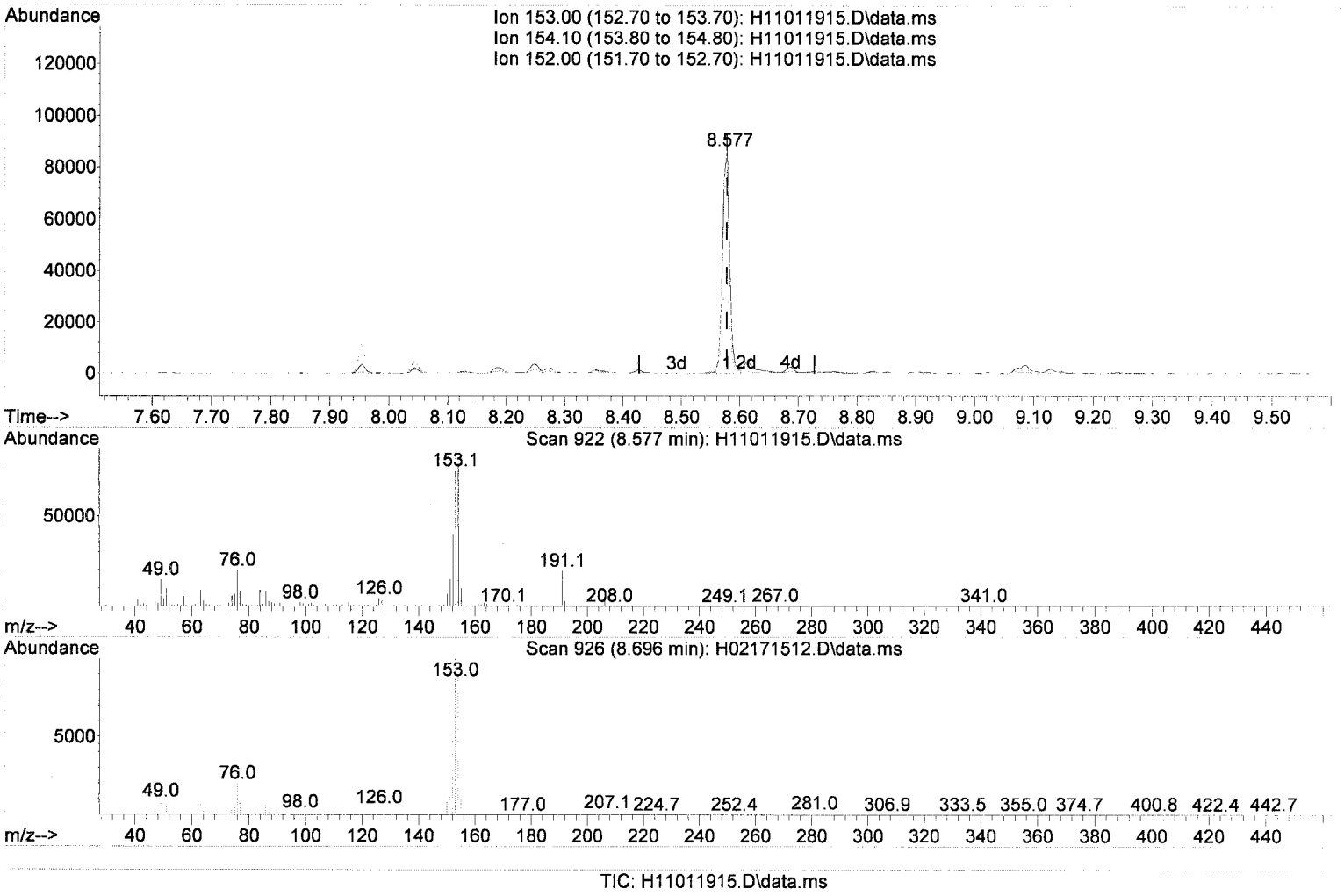
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(10) Acenaphthene (T)

8.577min (-0.000) 39.77 ng/ml

response 74540

Ion	Exp%	Act%
153.00	100.00	100.00
154.10	88.60	90.97
152.00	46.00	45.33
0.00	0.00	0.00

Quantitation Report (Qedit)

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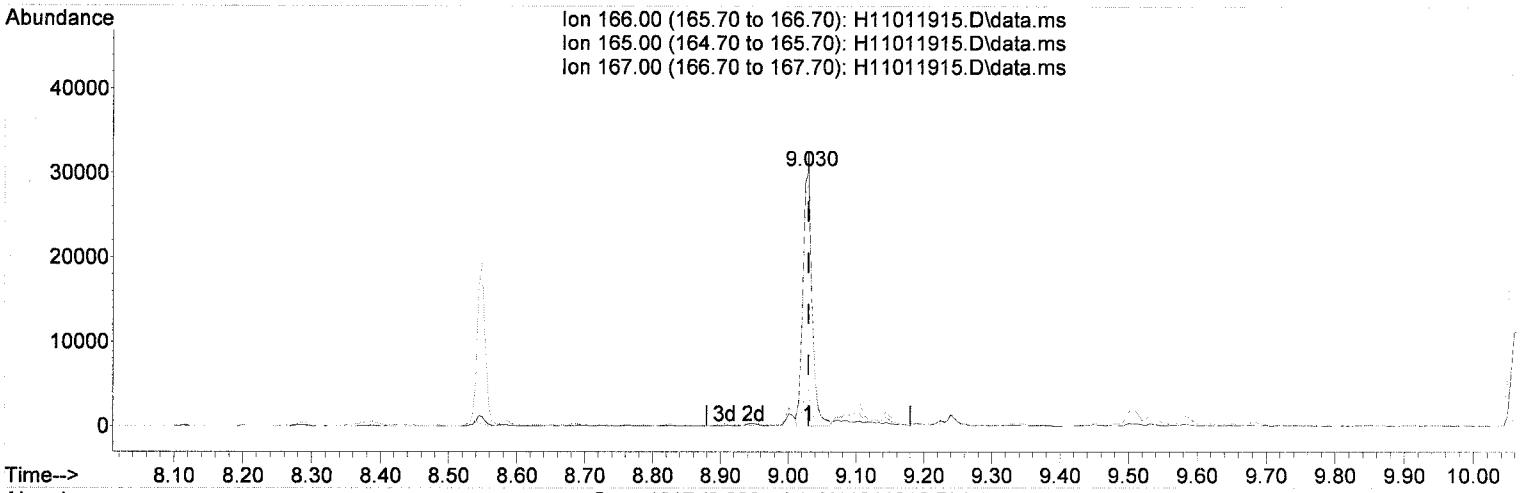
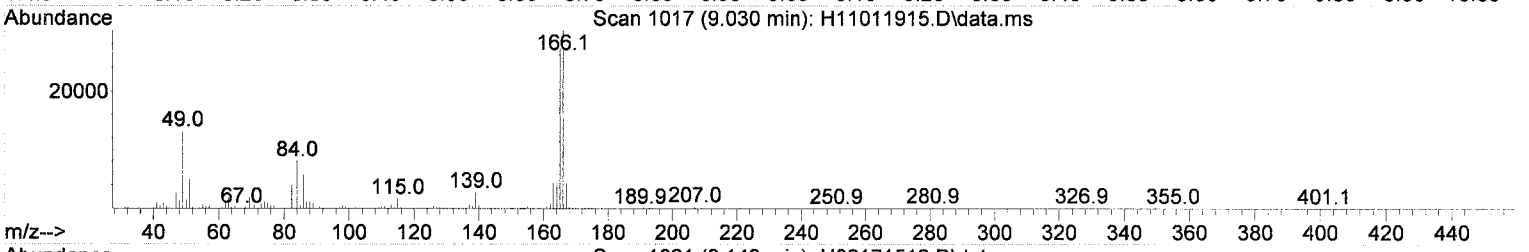
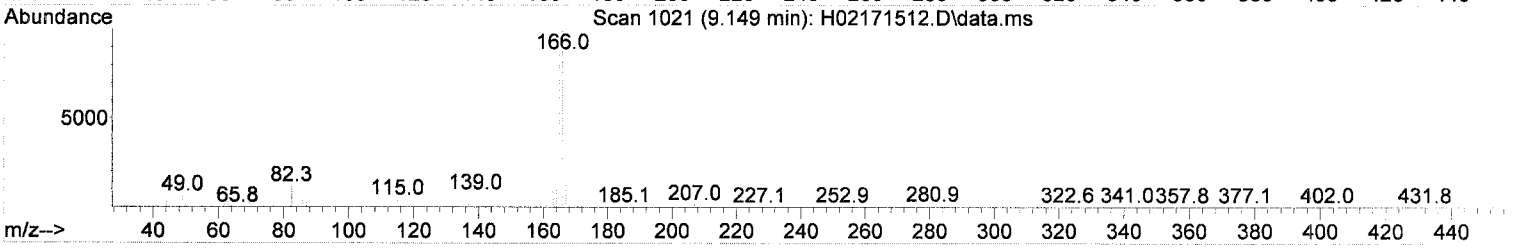
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011915.D\data.ms

(13) Fluorene (T)

9.030min (-0.000) 12.46 ng/ml m

response 28894

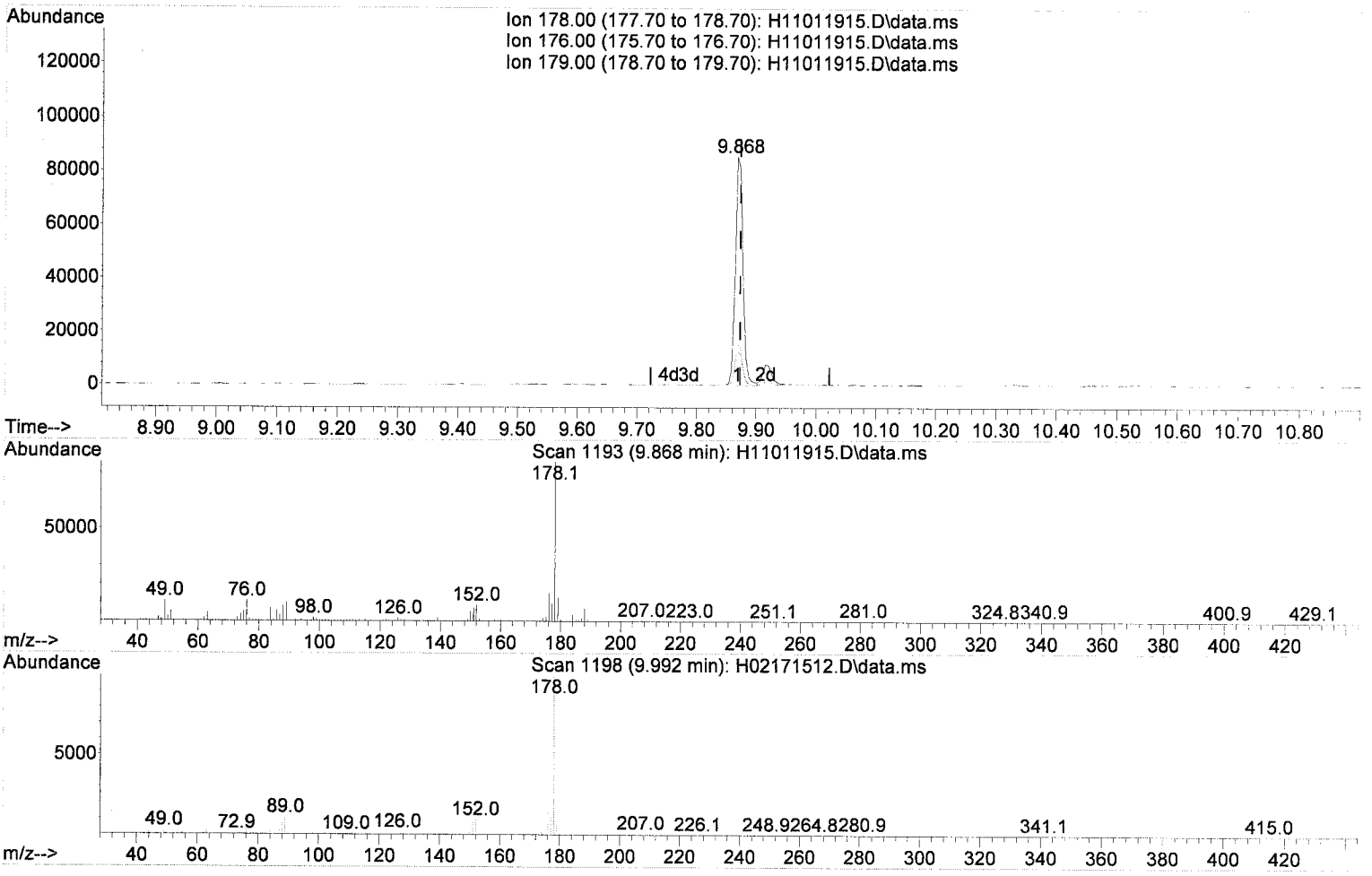
Ion	Exp%	Act%
166.00	100.00	100.00
165.00	94.50	94.51
167.00	13.50	14.05
0.00	0.00	0.00

11/4/19

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(16) Phenanthrene (T)

9.868min (-0.005) 22.02 ng/ml

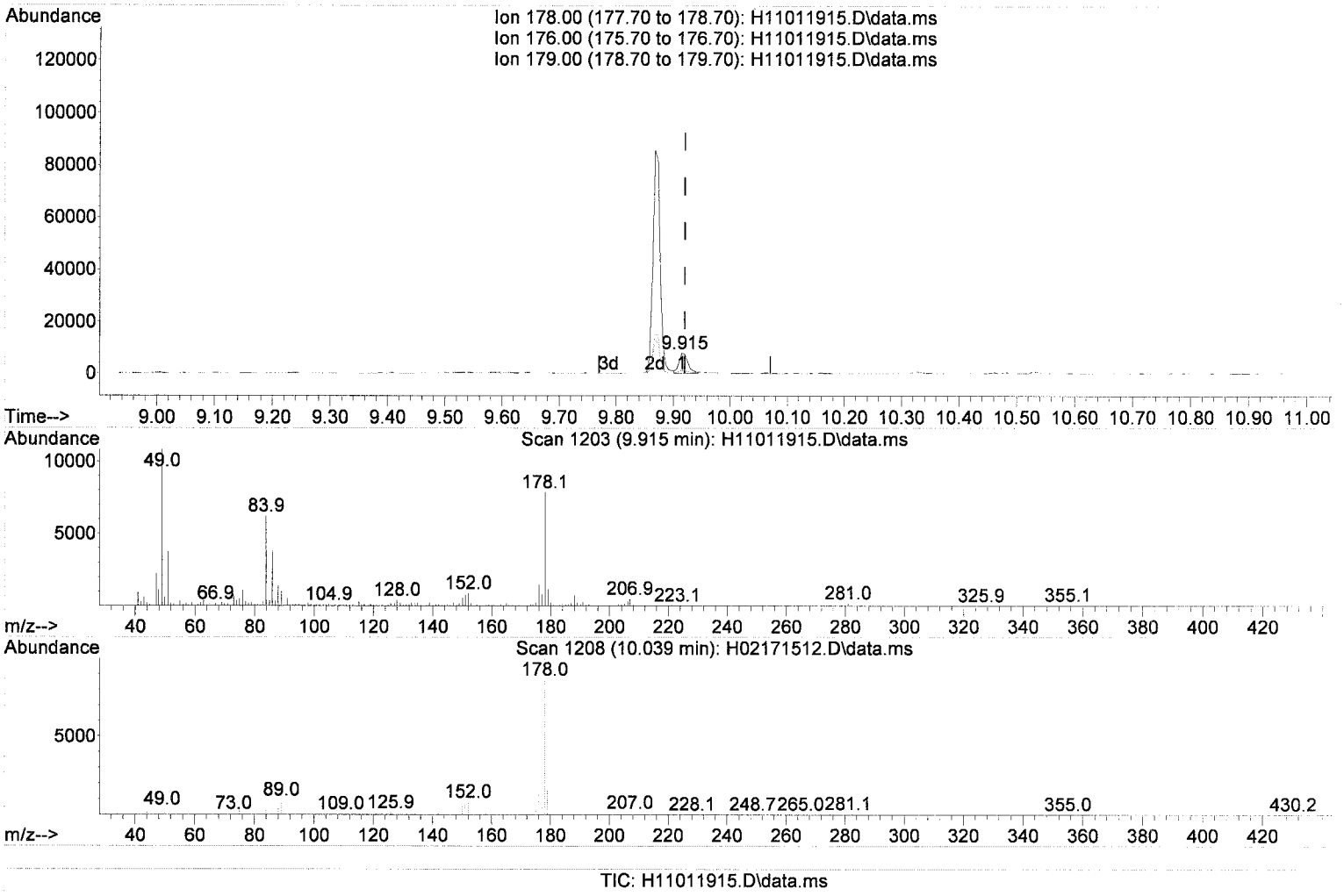
response 75723

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	18.90	17.78
179.00	15.00	14.96
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(17) Anthracene (T)

9.915min (-0.005) 3.11 ng/ml

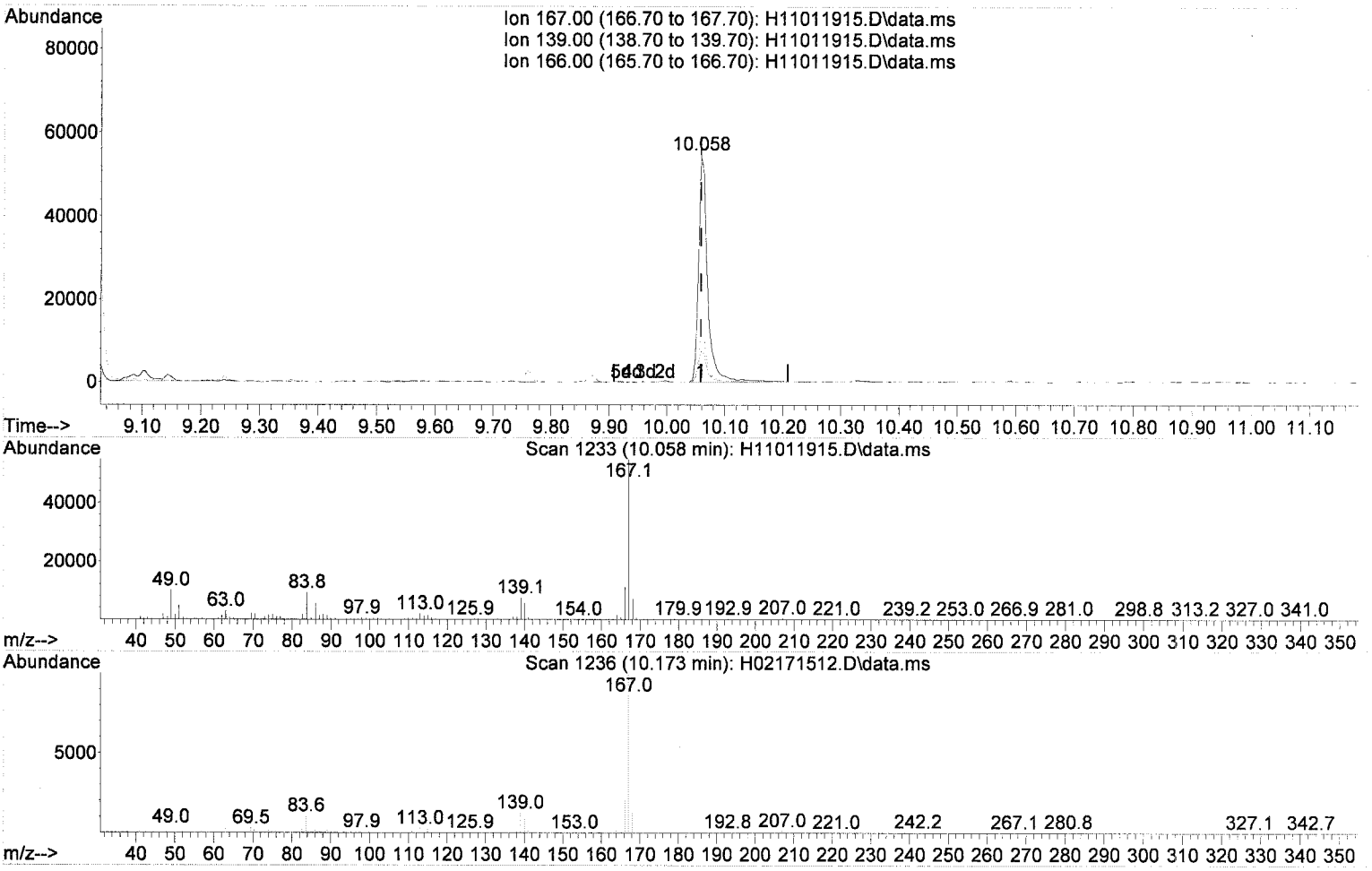
response 9506

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	17.30	18.66
179.00	14.00	14.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(18) Carbazole (T)

10.058min (-0.000) 20.22 ng/ml

response 59901

Ion	Exp%	Act%
167.00	100.00	100.00
139.00	11.20	13.53
166.00	19.90	20.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
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Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

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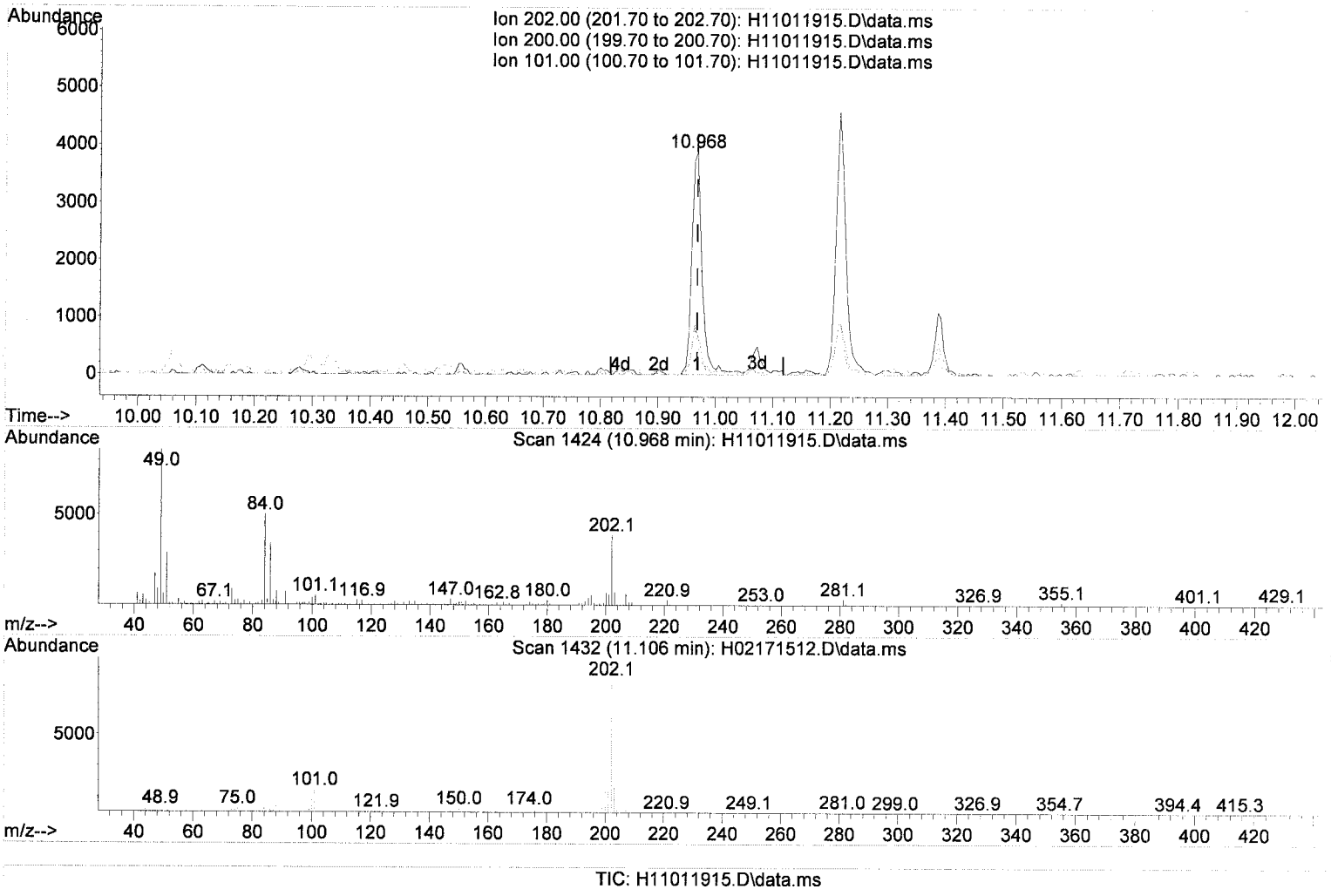
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(19) Fluoranthene (T)

10.968min (-0.000) 1.43 ng/ml

response 4888

Ion	Exp%	Act%
202.00	100.00	100.00
200.00	19.40	18.17
101.00	17.70	14.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
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Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
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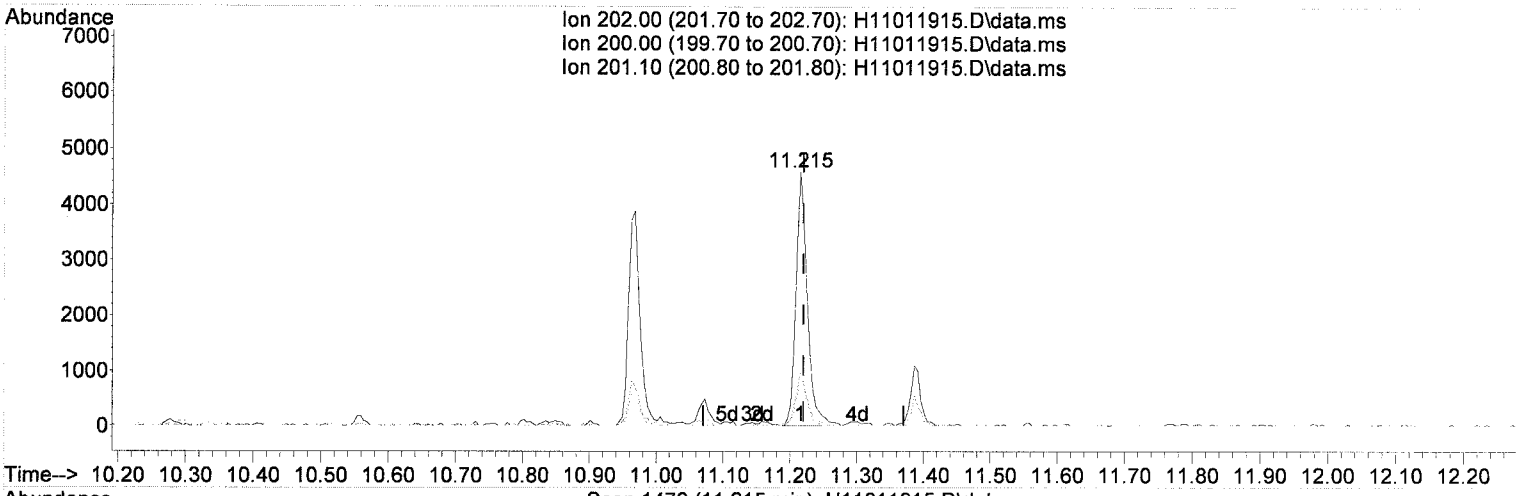
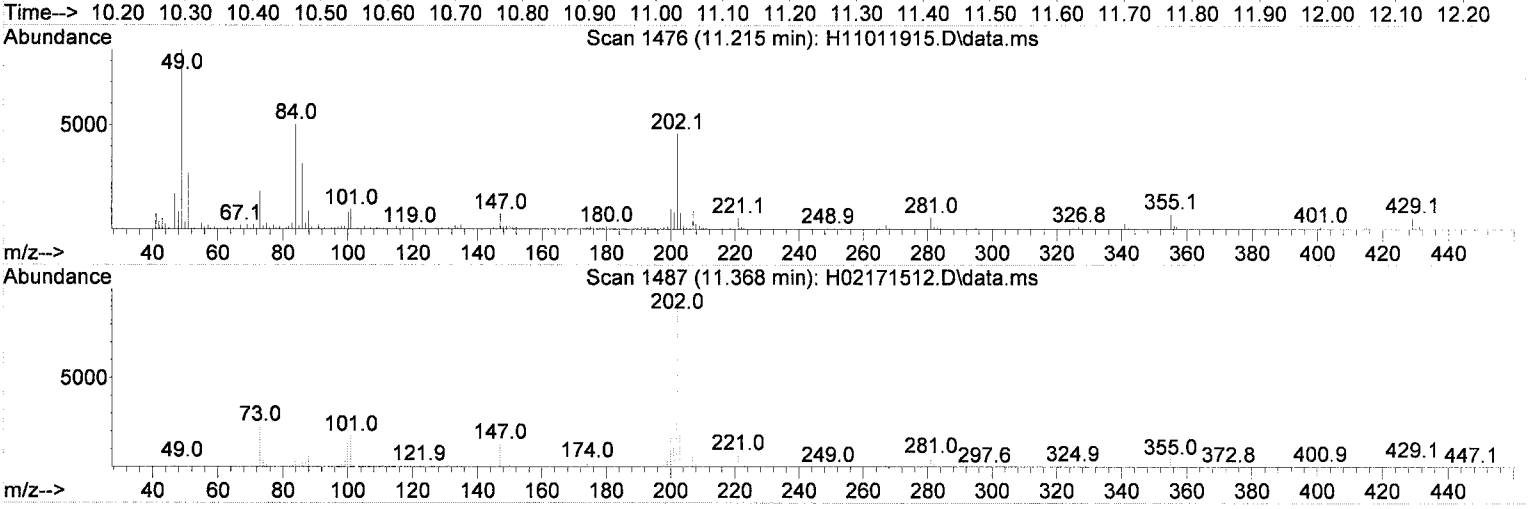
InstName : SV-GCMS8





TIC: H11011915.D\data.ms

(20) Pyrene (T)

11.215min (-0.005) 1.48 ng/ml

response 5476

Ion	Exp%	Act%
202.00	100.00	100.00
200.00	20.10	21.06
201.10	16.50	17.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
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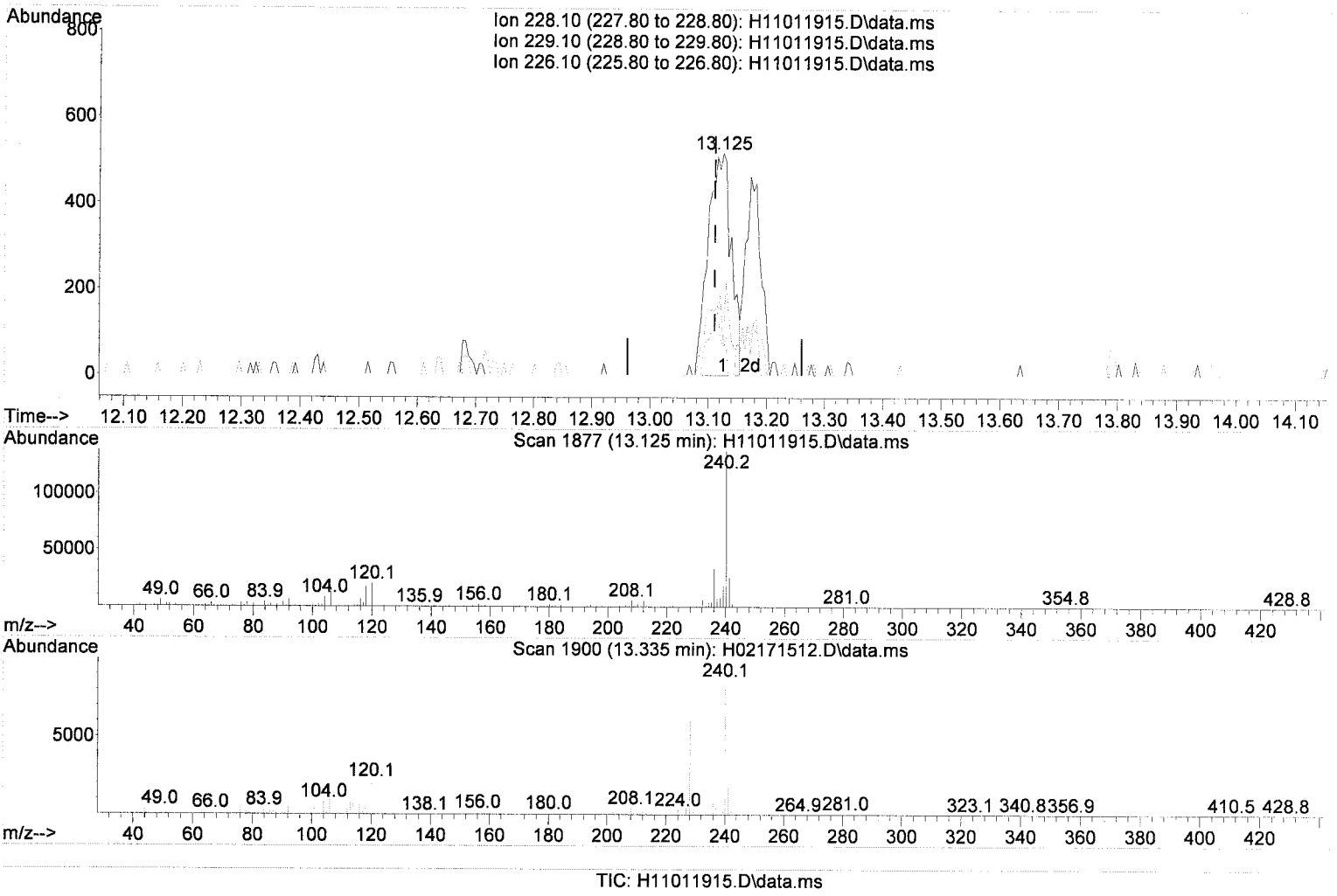
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(22) Benz(a)anthracene (T)

13.125min (+ 0.014) 0.38 ng/ml

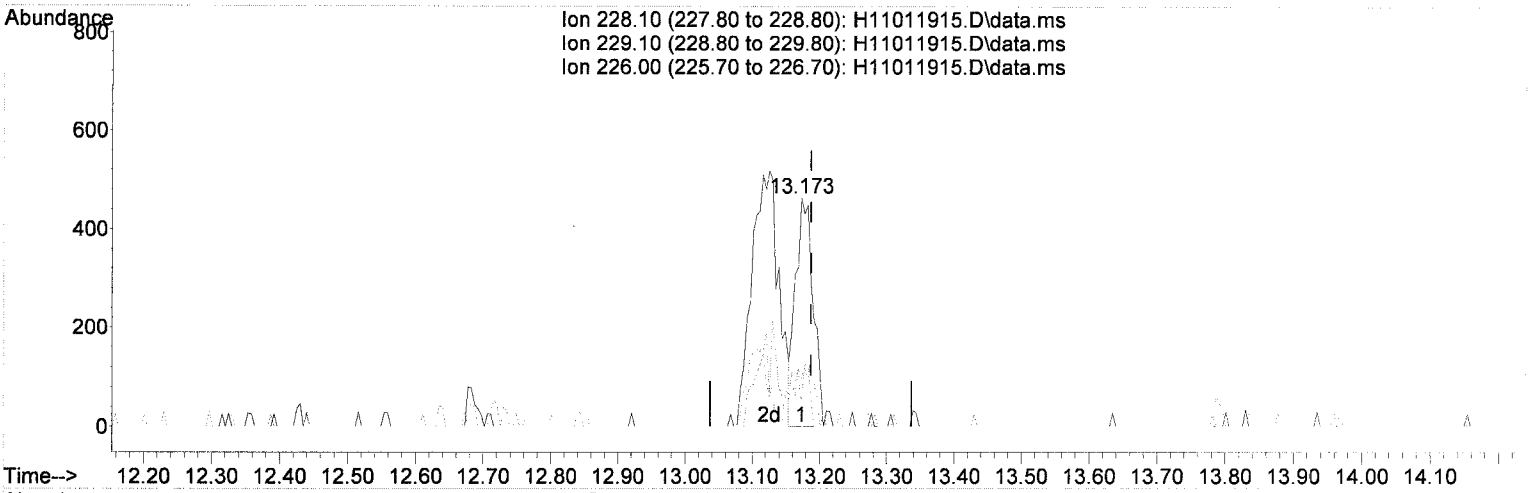
response 1449

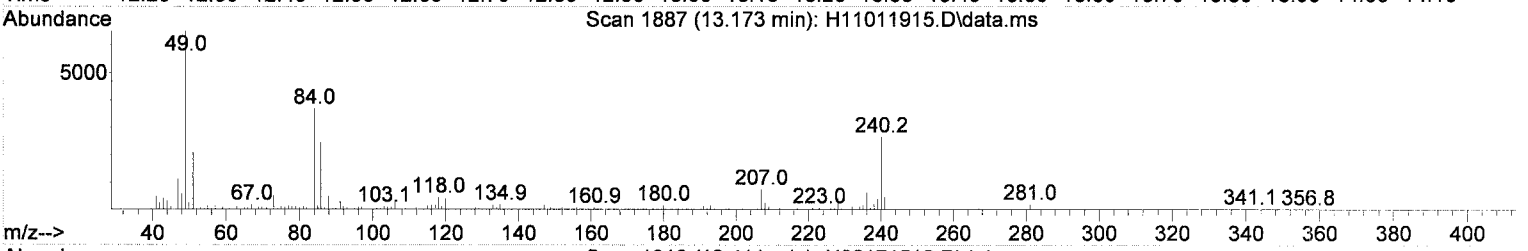
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.10	13.32
226.10	26.10	11.58
0.00	0.00	0.00

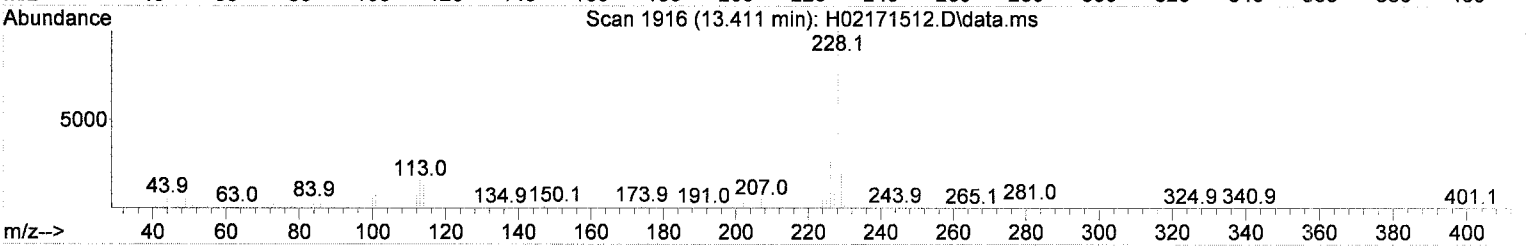
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011915.D\data.ms

(23) Chrysene (T)

13.173min (-0.014) 0.33 ng/ml

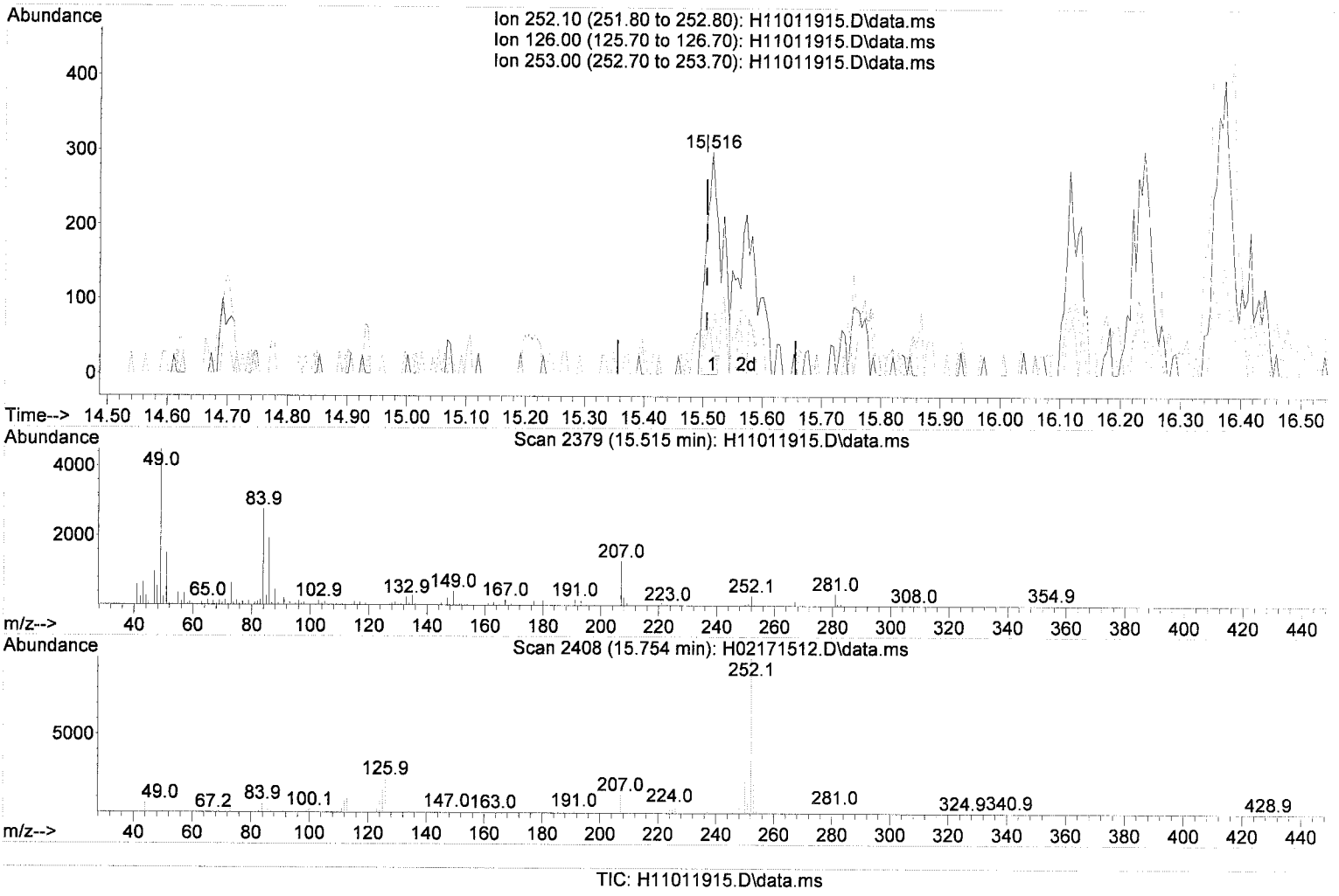
response 865

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.00	10.80
226.00	28.20	20.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(25) Benzo(b)fluoranthene (T)

15.515min (+ 0.009) 0.27 ng/ml

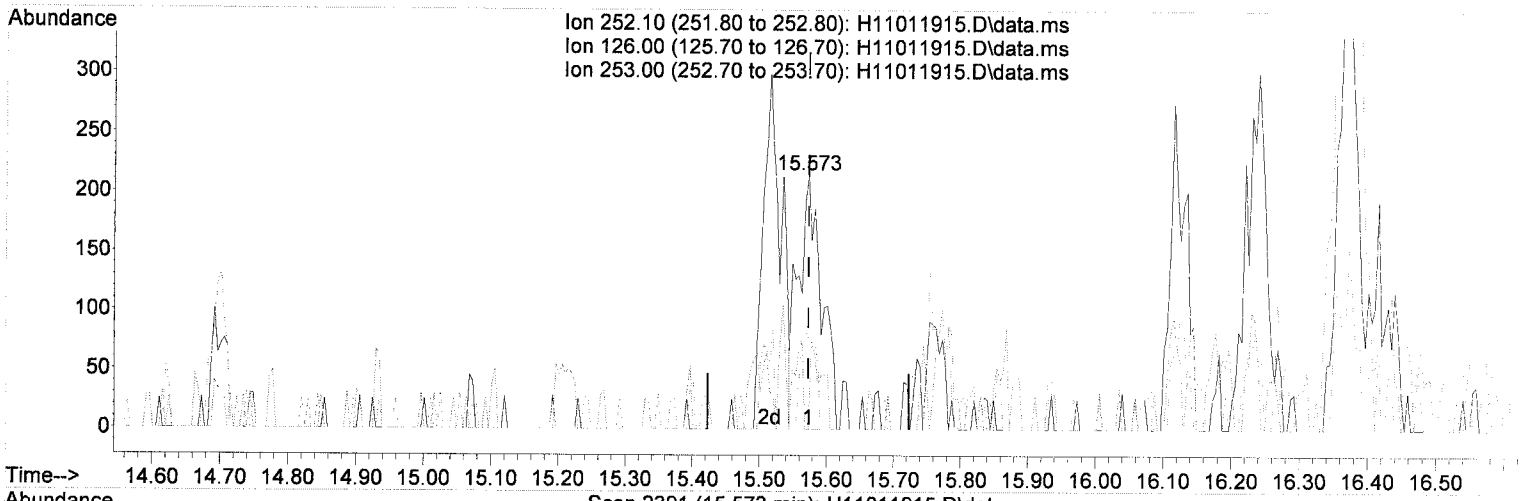
response 556

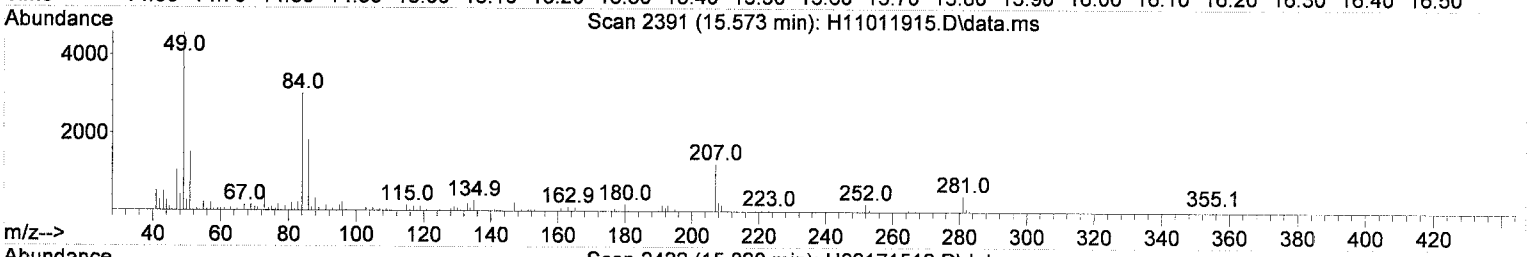
Ion	Exp%	Act%
252.10	100.00	100.00
126.00	22.30	10.37
253.00	22.60	19.06
0.00	0.00	0.00

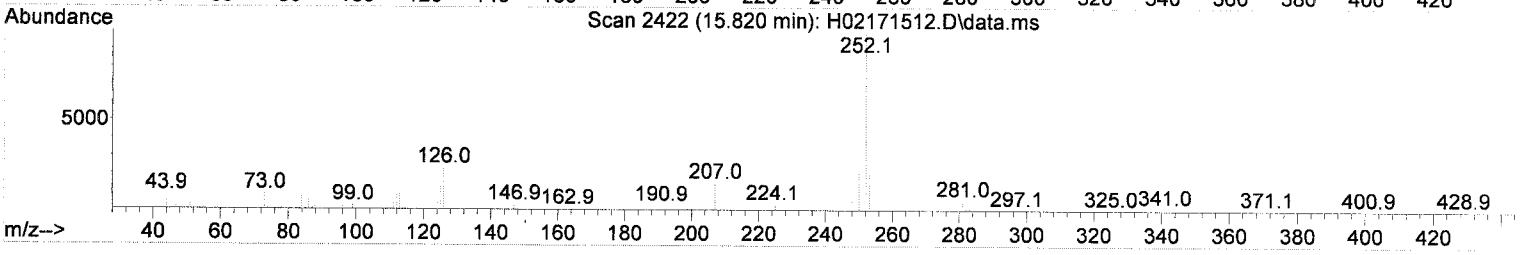
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011915.D\data.ms

(26) Benzo(k)fluoranthene (T)

15.573min (-0.000) 0.27 ng/ml

response 526

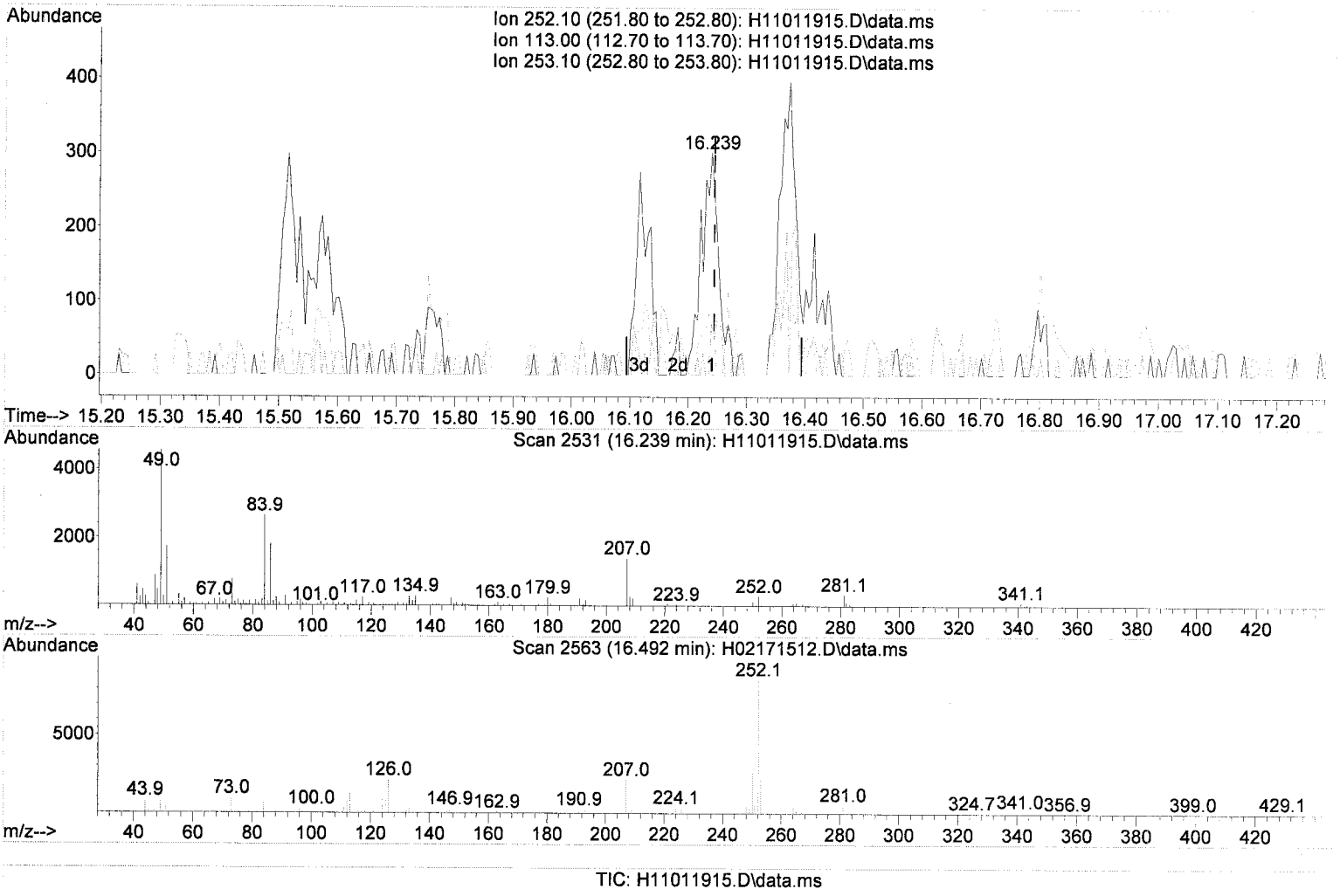
Ion	Exp%	Act%
252.10	100.00	100.00
126.00	25.80	0.00
253.00	21.50	34.88
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(30) Benzo(a)pyrene (T)

16.239min (-0.005) 0.41 ng/ml

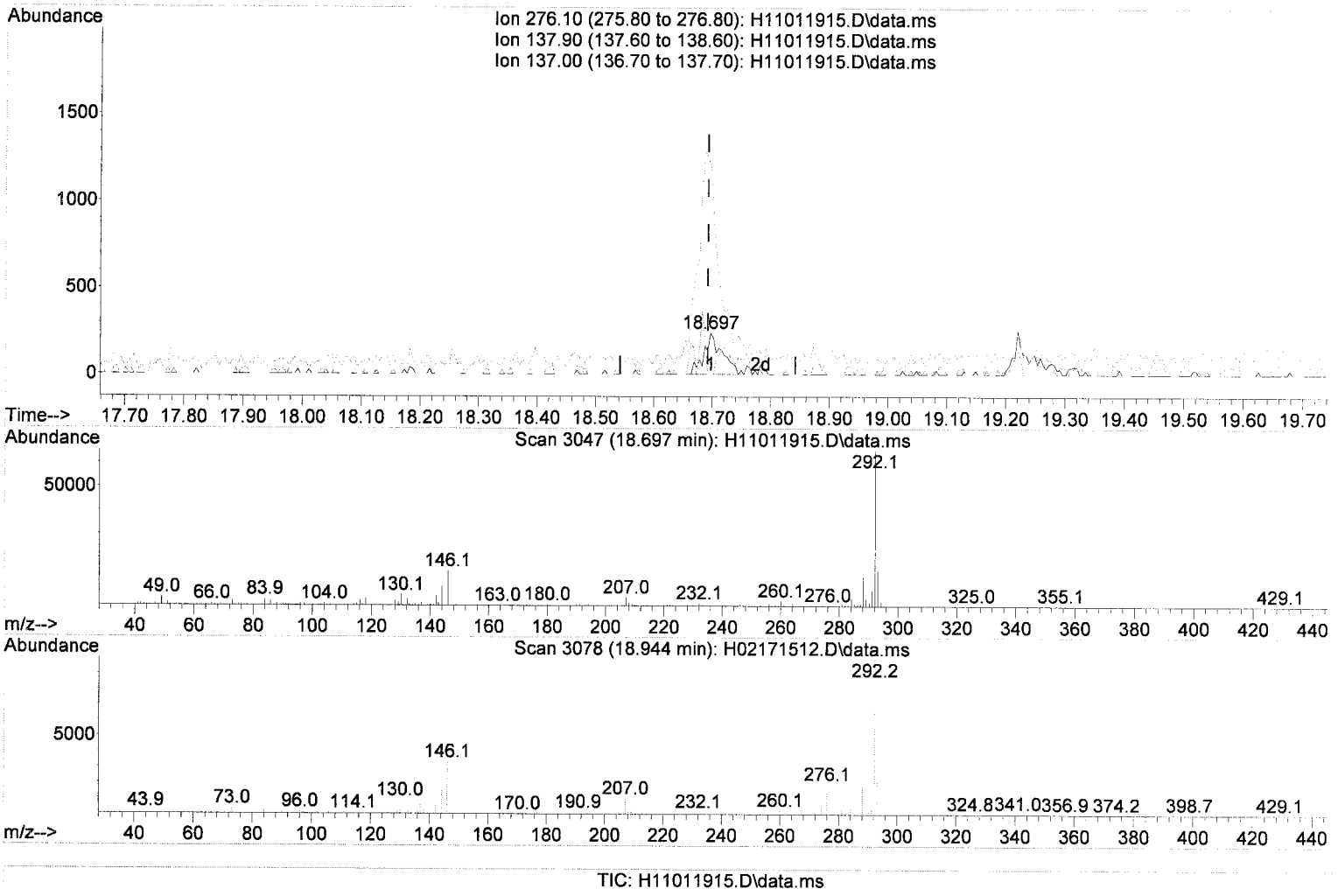
response 622

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.00	23.26
253.10	20.40	18.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011915.D\data.ms

(33) Indeno(1,2,3-cd)pyrene (T)

18.697min (+ 0.005) 0.25 ng/ml

response 525

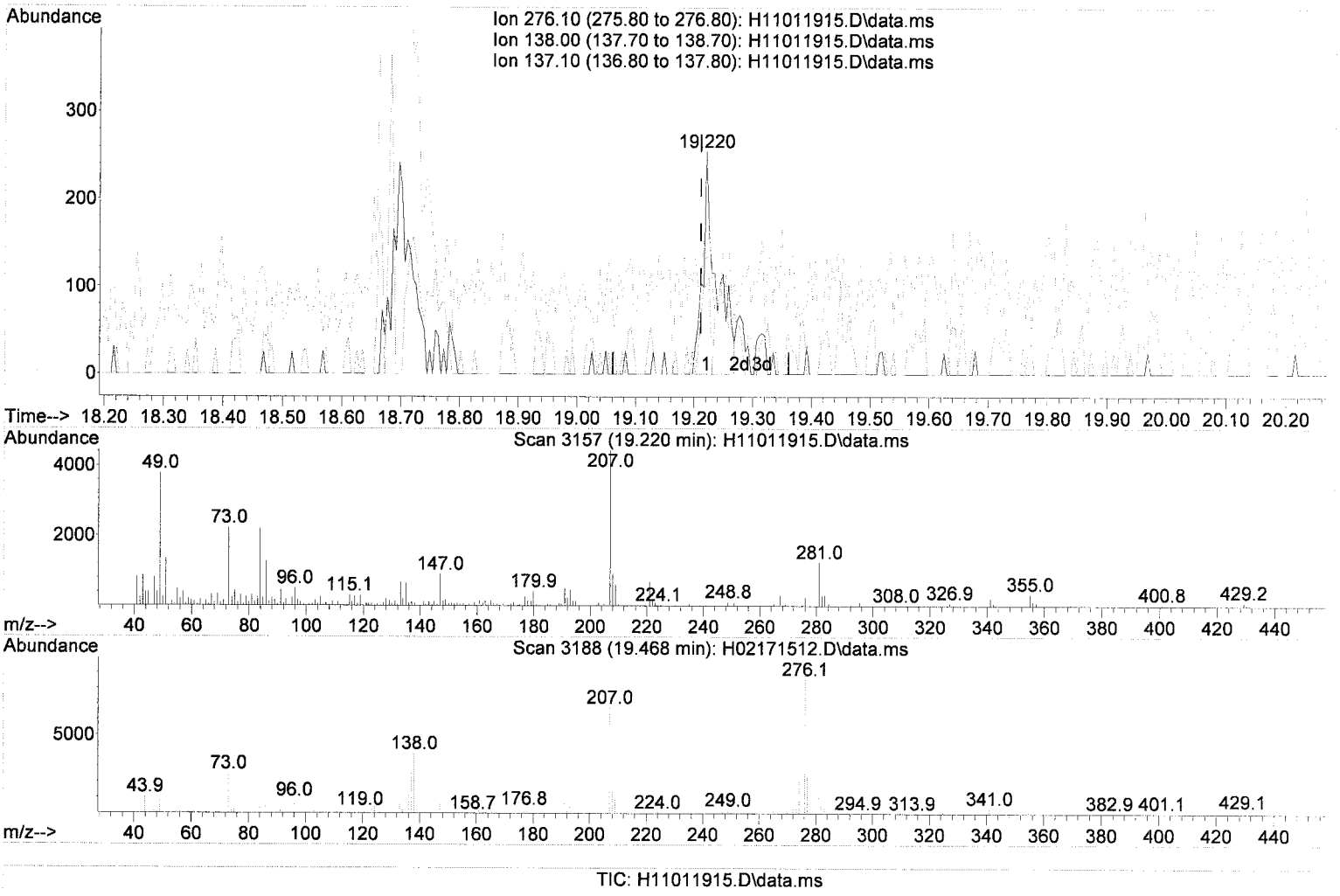
Ion	Exp%	Act%
276.10	100.00	100.00
137.90	37.00	0.00#
137.00	33.70	497.11#
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:53:05 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(35) Benzo(g,h,i)perylene (T)

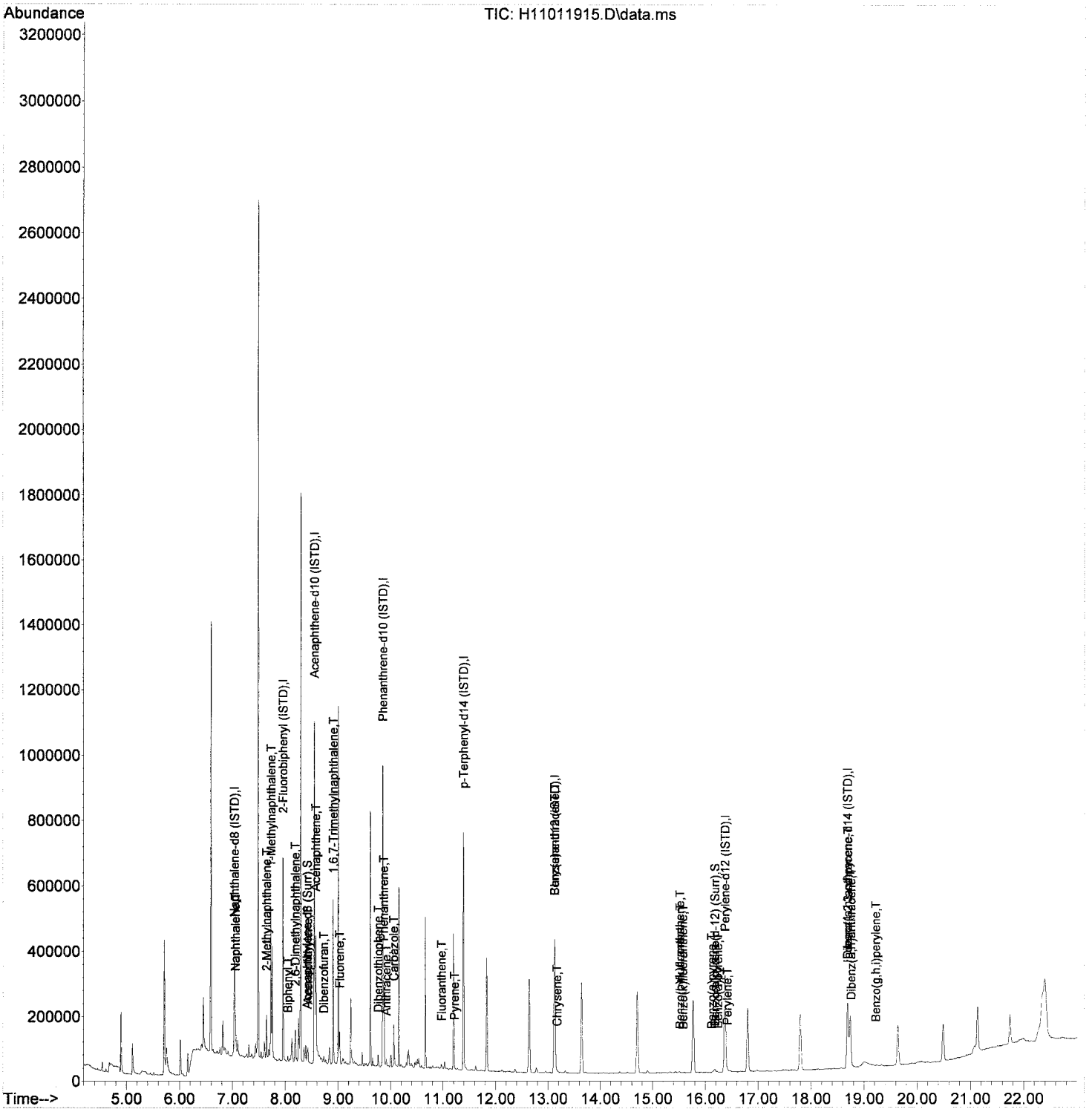
19.220min (+ 0.009) 0.23 ng/ml

response 426

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	34.50	40.00
137.10	31.20	50.59
0.00	0.00	0.00

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011915.D
Acq On : 1 Nov 2019 7:36 pm
Operator : JK /AMS /DTH
Sample : A9J1114-02RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:15 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16 Report all
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

AMS 11/4/19

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.039	136	142927	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	129248	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	272758	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	224066	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.373	264	199434	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.692	292	173283	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.954	172	171775	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.392	244	244565	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.415	160	7797	2.53	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.182	264	3682	2.77	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.058	128	3631	2.19	ng/ml	94
3) 2-Methylnaphthalene	7.649	142	1908	1.49	ng/ml	89
4) 1-Methylnaphthalene	7.730	142	30225	24.93	ng/ml	93
6) Biphenyl	8.049	154	612	0.28	ng/ml	92
7) 2,6-Dimethylnaphthalene	8.192	156	3579	2.36	ng/ml	87
9) Acenaphthylene	8.430	152	2868	1.12	ng/ml	88
10) Acenaphthene	8.577	153	58857	30.72	ng/ml	99
11) Dibenzofuran	8.734	168	1918	0.70	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.901	170	942	0.52	ng/ml#	65
13) Fluorene	9.030	166	15572	6.57	ng/ml	97
15) Dibenzothiophene	9.763	184	6850	2.44	ng/ml	97
16) Phenanthrene	9.873	178	49453	15.12	ng/ml	98
17) Anthracene	9.920	178	5935	2.04	ng/ml	93
18) Carbazole	10.073	167	2793	0.99	ng/ml	90
19) Fluoranthene	10.968	202	3917	1.20	ng/ml	97
20) Pyrene	11.220	202	3995	1.13	ng/ml	95
22) Benz(a)anthracene	13.125	228	894	0.16	ng/ml	75
23) Chrysene	13.173	228	337	0.14	ng/ml	79
25) Benzo(b)fluoranthene	15.520	252	413	0.21	ng/ml	72
26) Benzo(k)fluoranthene	15.587	252	198	0.12	ng/ml	52
27) Benzo(b+k)fluoranthene	15.520	252	612	0.33	ng/ml	72
28) Benzo(e)pyrene	16.116	252	137	0.06	ng/ml	88
30) Benzo(a)pyrene	16.230	252	272	0.22	ng/ml	84
31) Perylene	16.425	252	58	0.03	ng/ml	58
33) Indeno(1,2,3-cd)pyrene	18.697	276	330	0.16	ng/ml#	1
34) Dibenz(a,h)anthracene	18.744	278	187	0.09	ng/ml	58
35) Benzo(g,h,i)perylene	19.235	276	86	0.05	ng/ml#	40

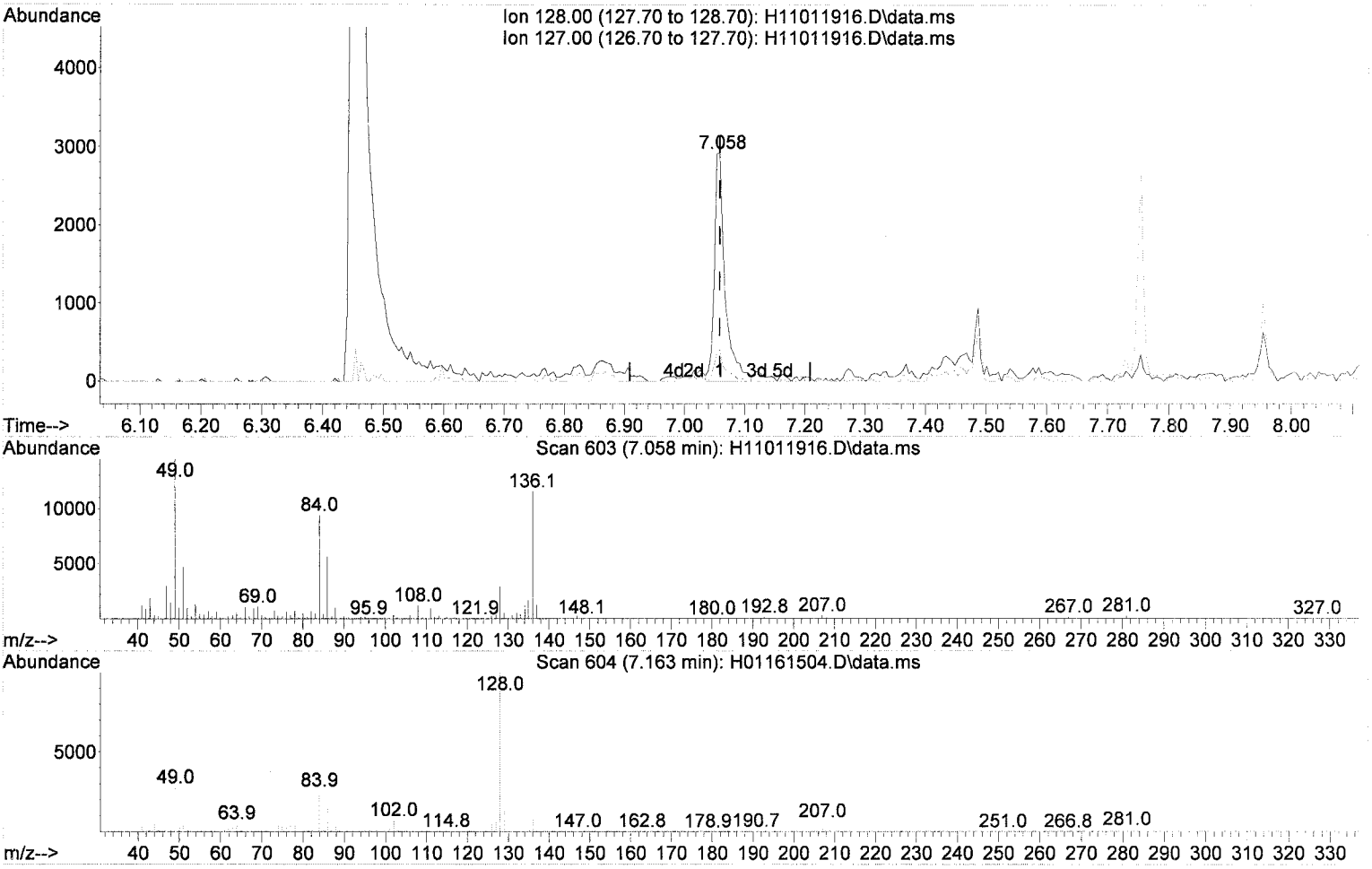
MI-HIT

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(2) Naphthalene (T)

7.058min (-0.000) 2.19 ng/ml

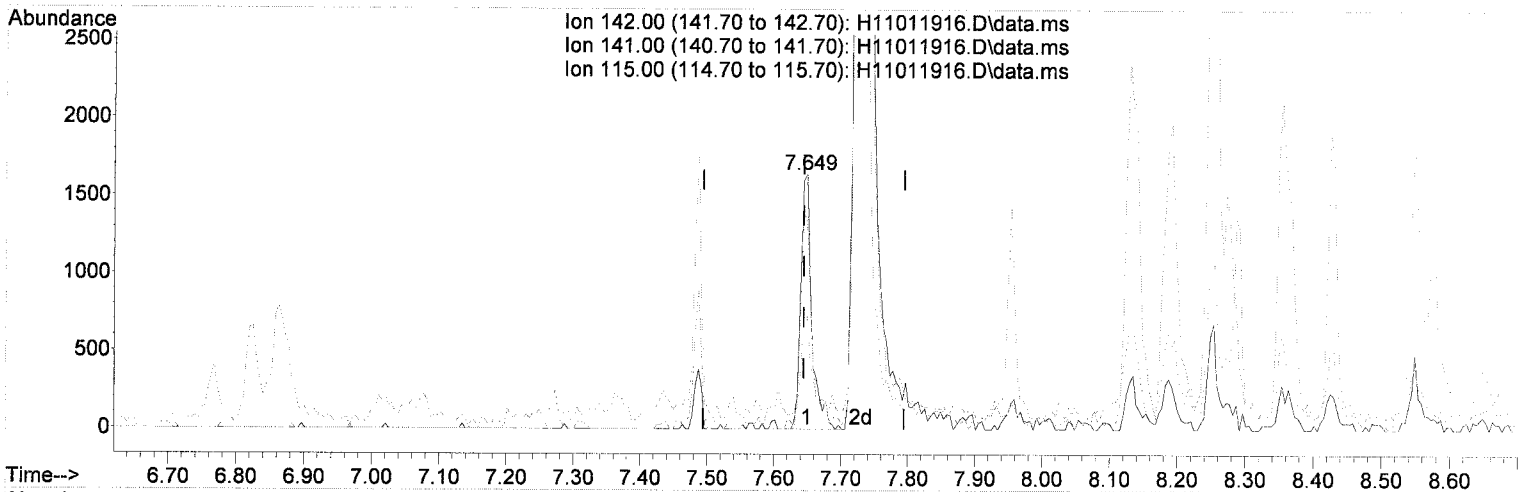
response 3631

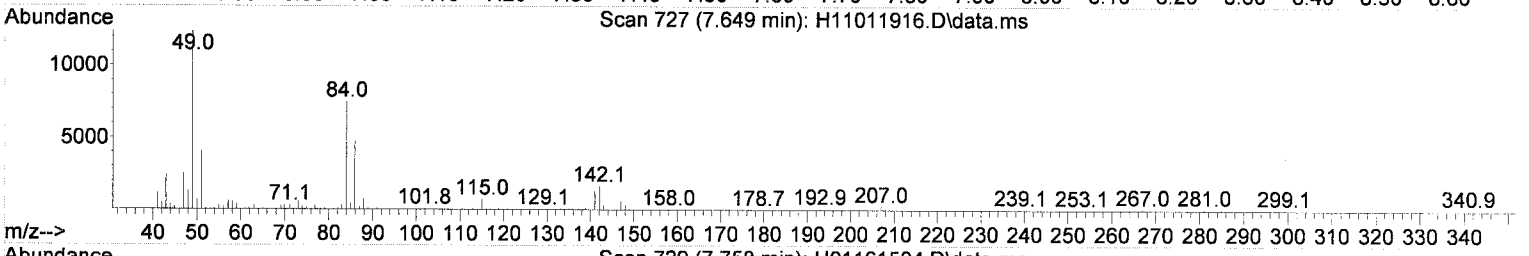
Ion	Exp%	Act%
128.00	100.00	100.00
127.00	11.50	13.83
0.00	0.00	0.00
0.00	0.00	0.00

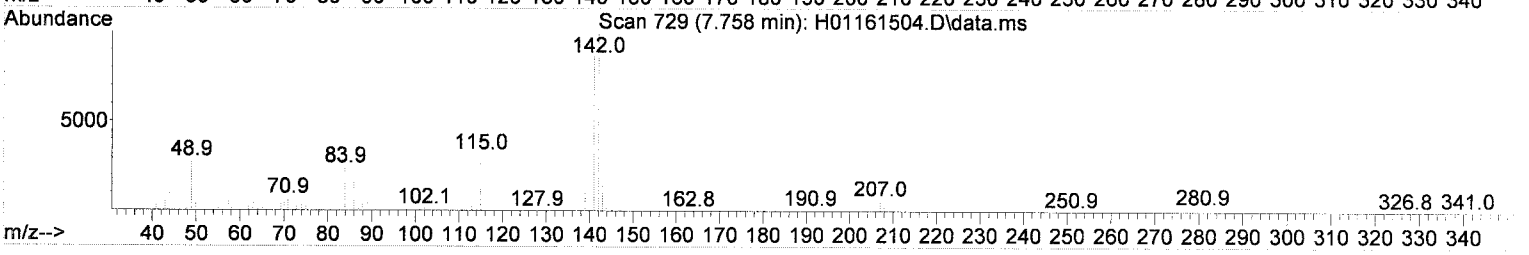
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011916.D\data.ms

(3) 2-Methylnaphthalene (T)

7.649min (+ 0.005) 1.49 ng/ml

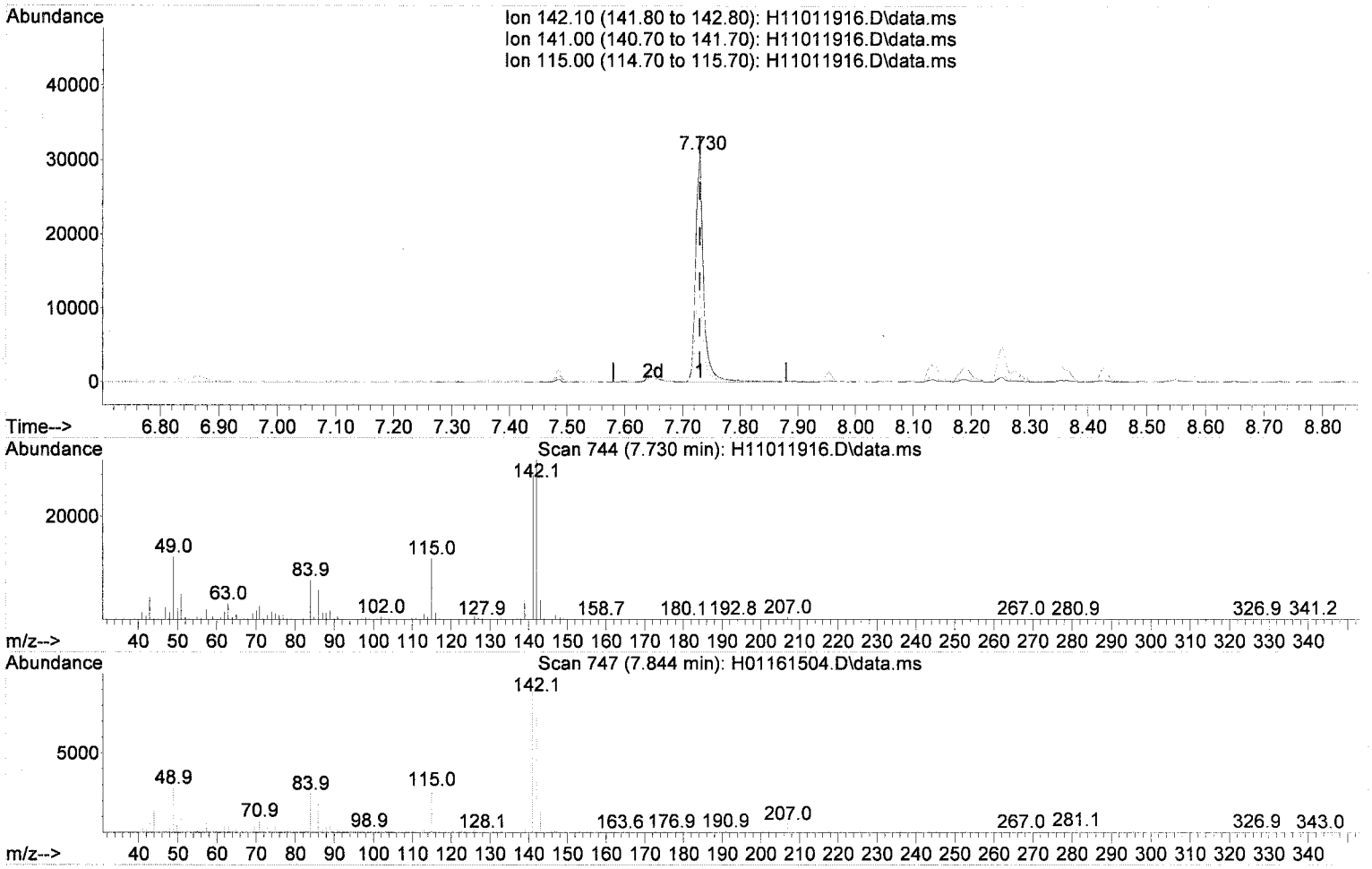
response 1908

Ion	Exp%	Act%
142.00	100.00	100.00
141.00	87.50	81.11
115.00	32.00	44.06
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(4) 1-Methylnaphthalene (T)

7.730min (-0.000) 24.93 ng/ml

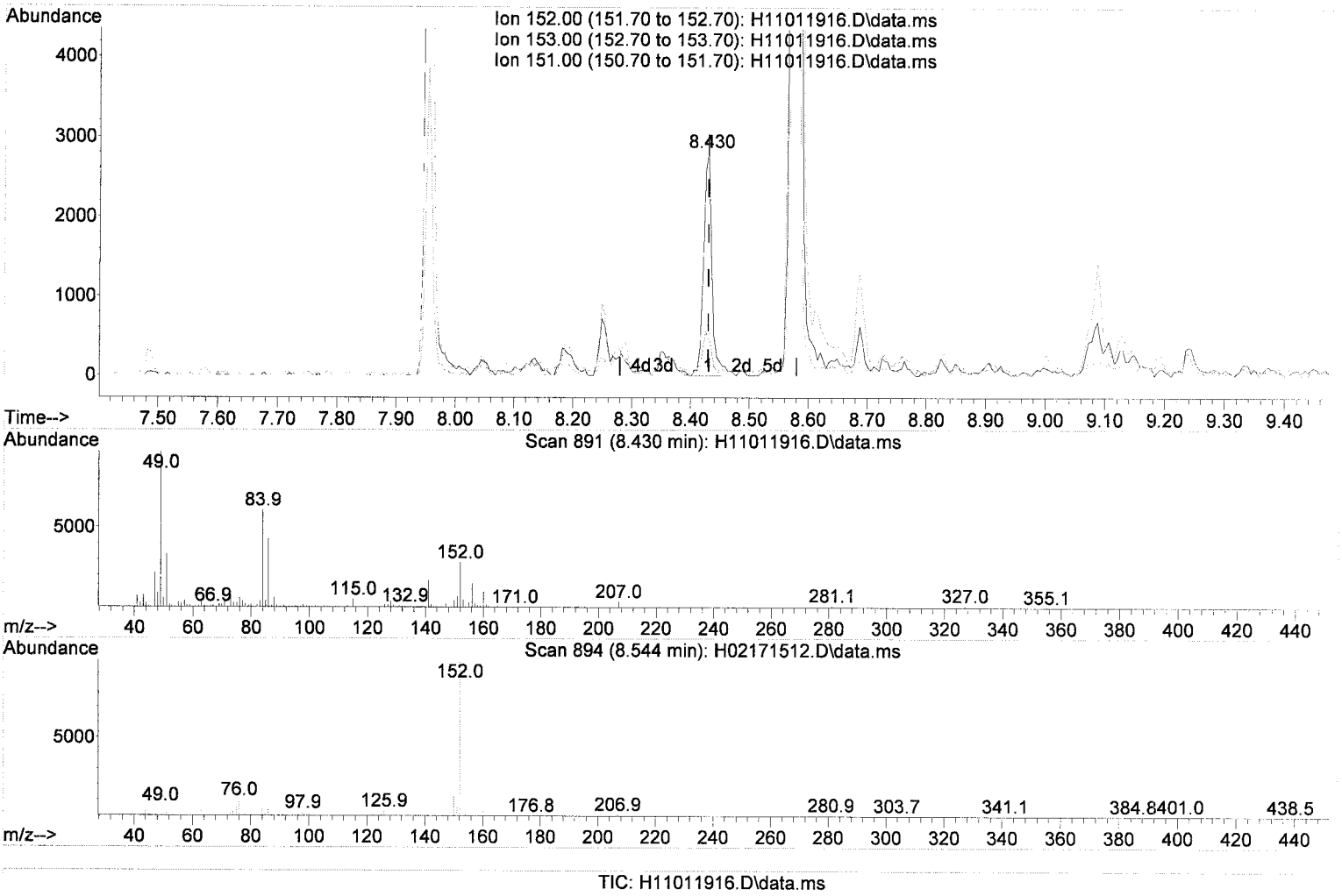
response 30225

Ion	Exp%	Act%
142.10	100.00	100.00
141.00	88.10	90.48
115.00	26.90	38.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(9) Acenaphthylene (T)

8.430min (-0.000) 1.12 ng/ml

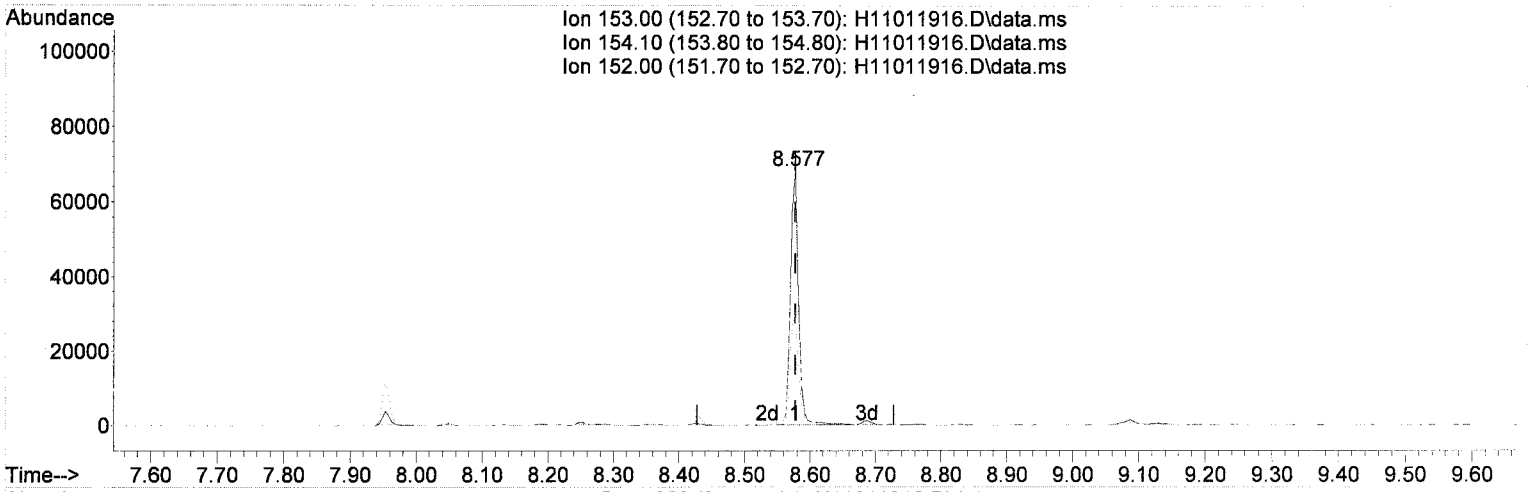
response 2868

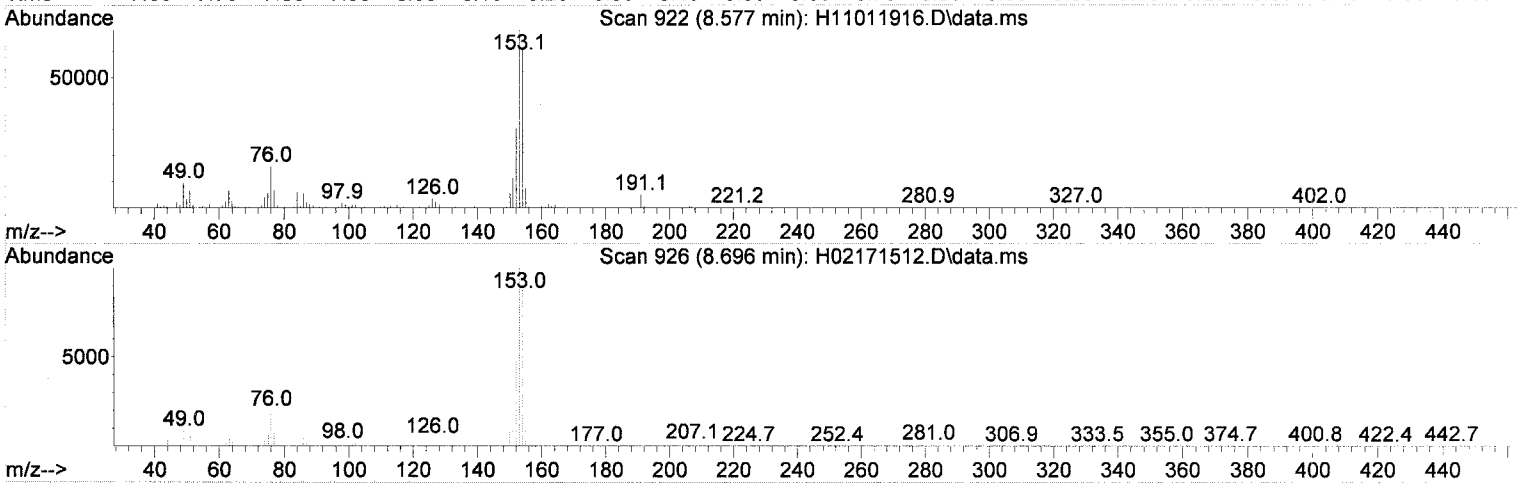
Ion	Exp%	Act%
152.00	100.00	100.00
153.00	13.00	16.96
151.00	18.40	24.26
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8





TIC: H11011916.D\data.ms

(10) Acenaphthene (T)

8.577min (-0.000) 30.72 ng/ml

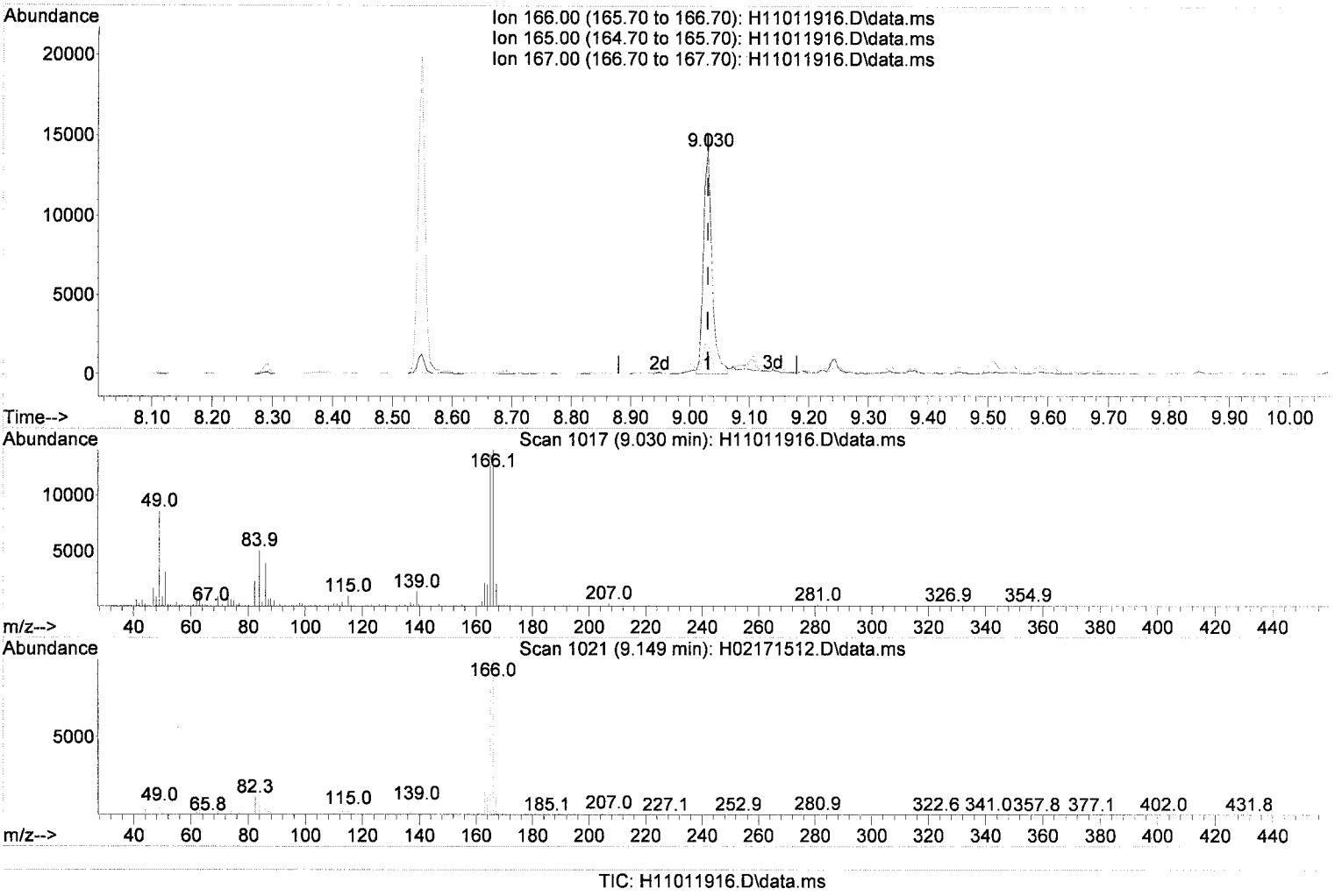
response 58857

Ion	Exp%	Act%
153.00	100.00	100.00
154.10	88.60	88.90
152.00	46.00	44.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(13) Fluorene (T)

9.030min (-0.000) 5.95 ng/ml m

response 14113

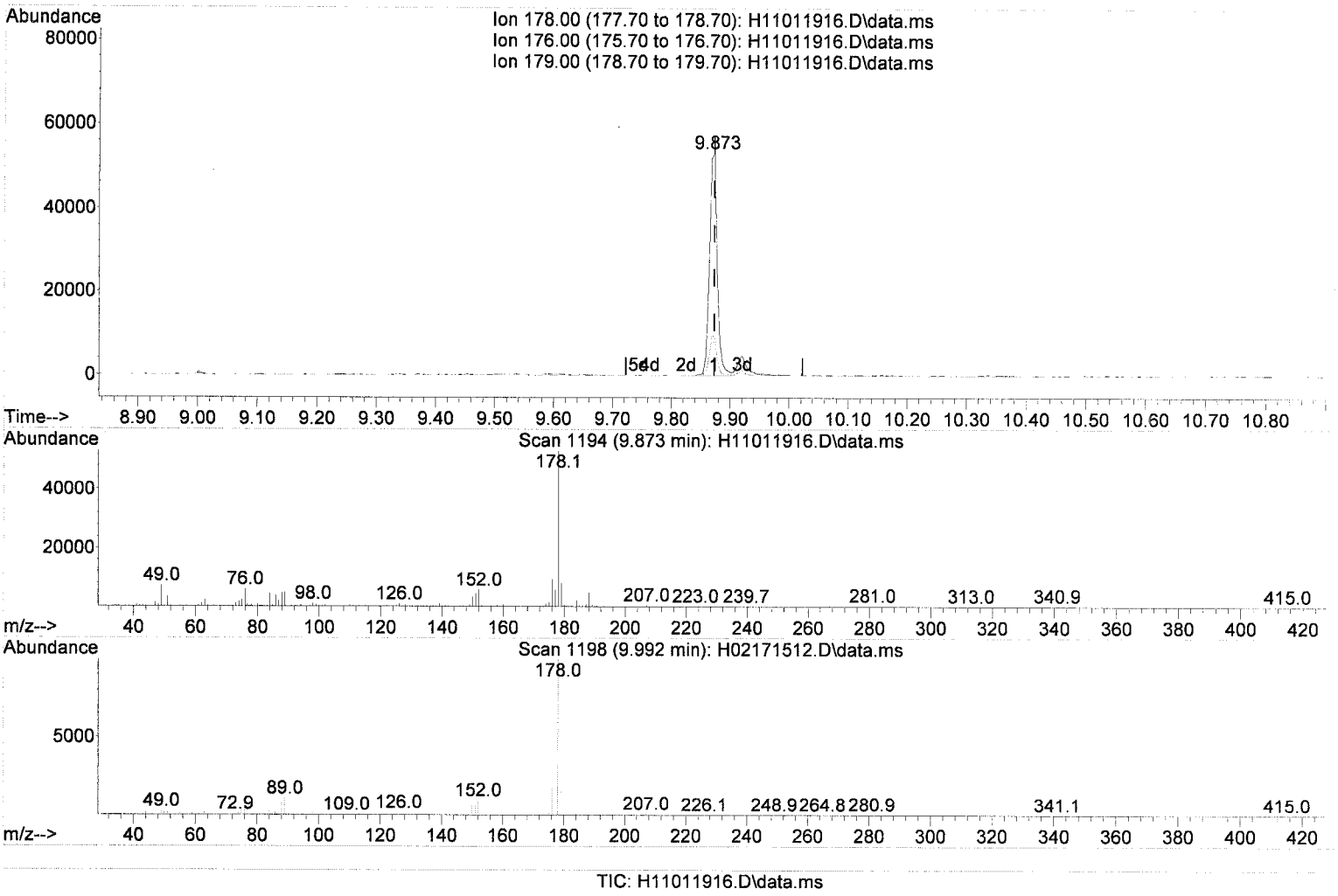
Ion	Exp%	Act%
166.00	100.00	100.00
165.00	94.50	97.14
167.00	13.50	14.31
0.00	0.00	0.00

GAMS 11/4/19 ✓

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(16) Phenanthrene (T)

9.873min (-0.000) 15.12 ng/ml

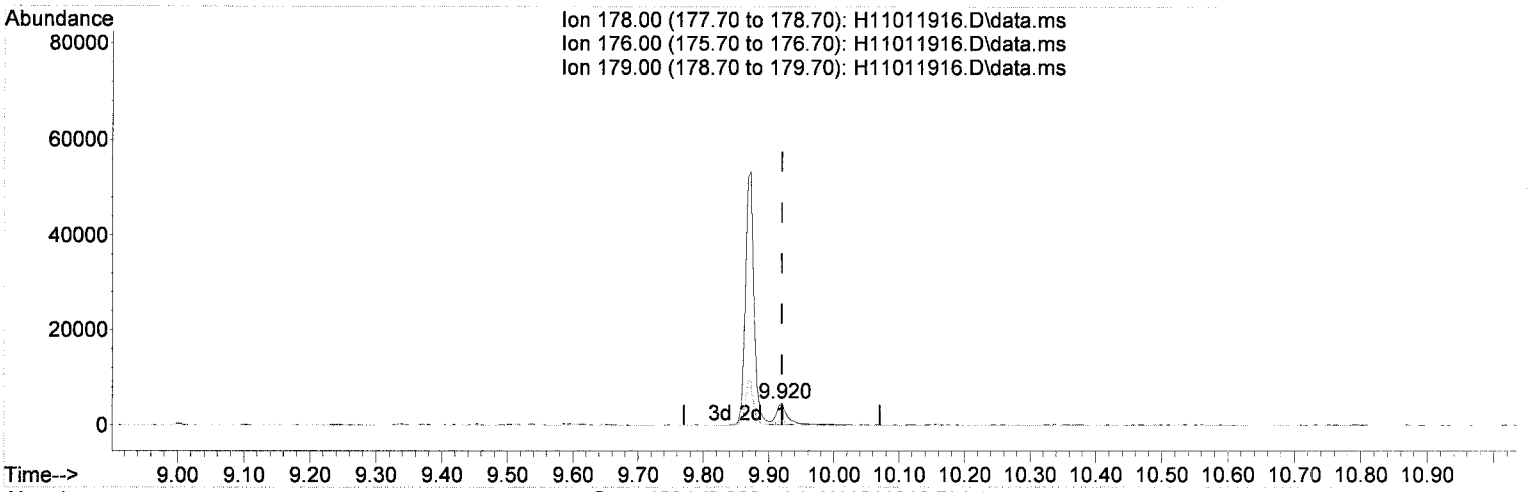
response 49453

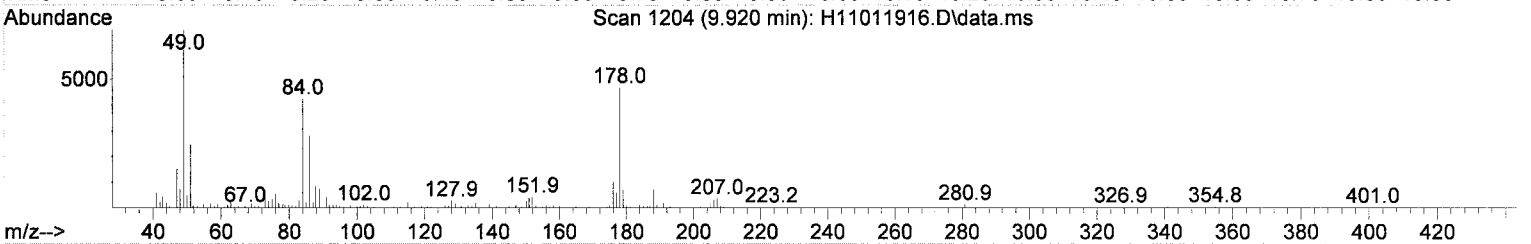
Ion	Exp%	Act%
178.00	100.00	100.00
176.00	18.90	17.81
179.00	15.00	15.26
0.00	0.00	0.00

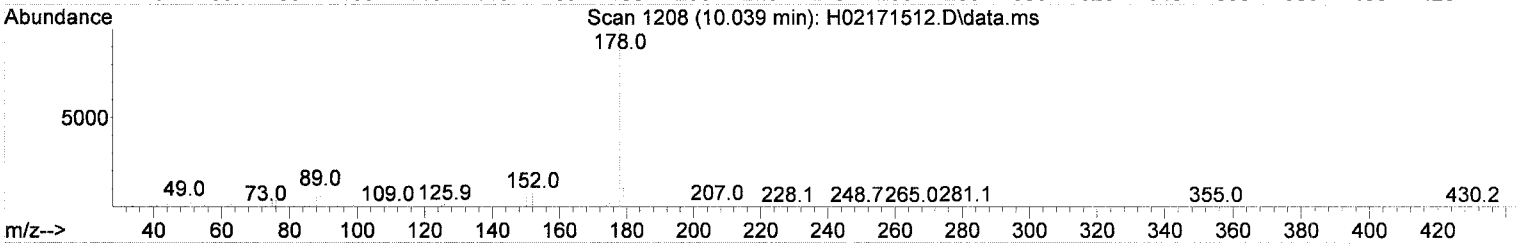
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011916.D\data.ms

(17) Anthracene (T)

9.920min (-0.000) 2.04 ng/ml

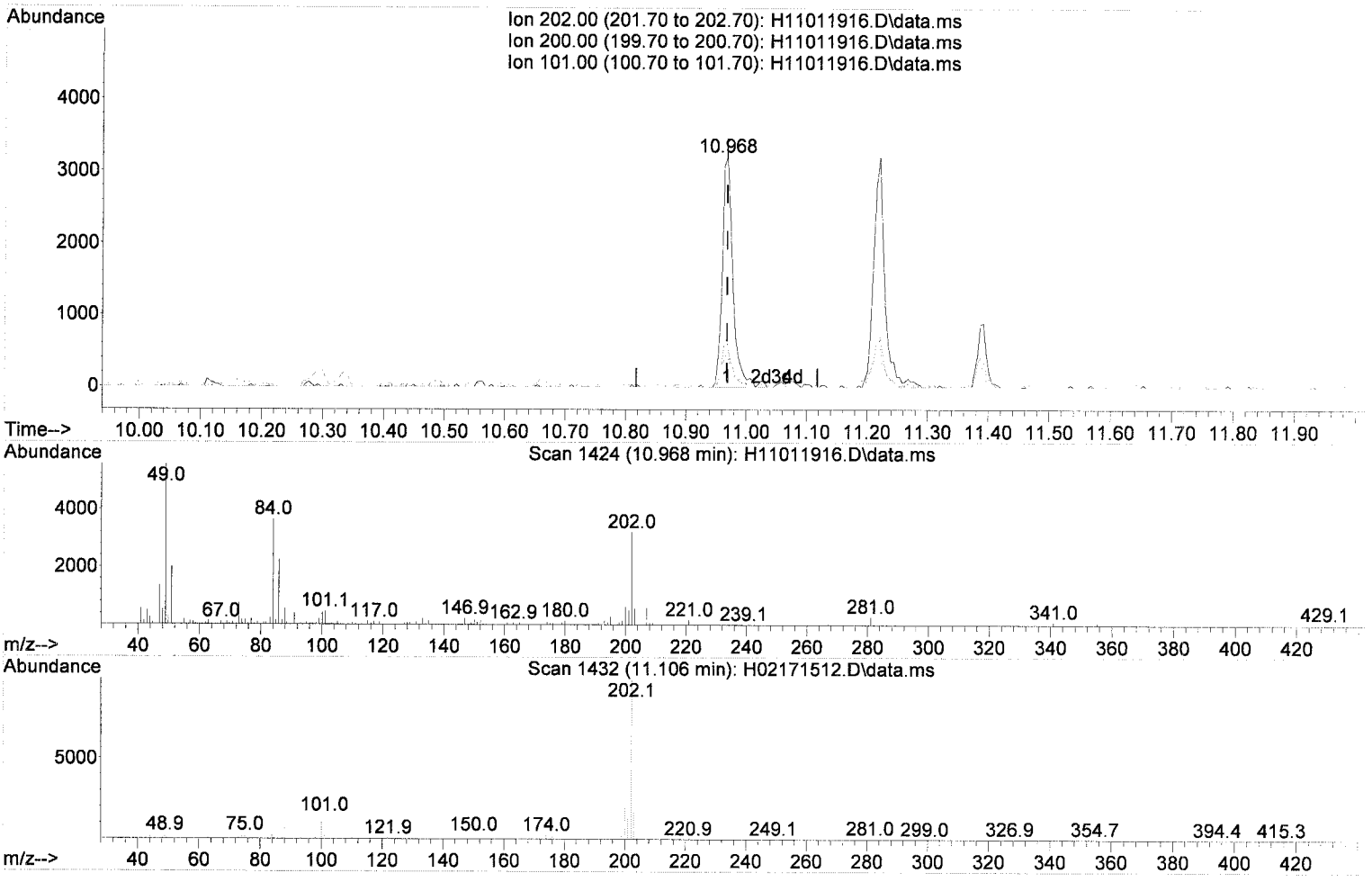
response 5935

Ion	Exp%	Act%
178.00	100.00	100.00
176.00	17.30	21.93
179.00	14.00	15.04
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011916.D\data.ms

(19) Fluoranthene (T)

10.968min (-0.000) 1.20 ng/ml

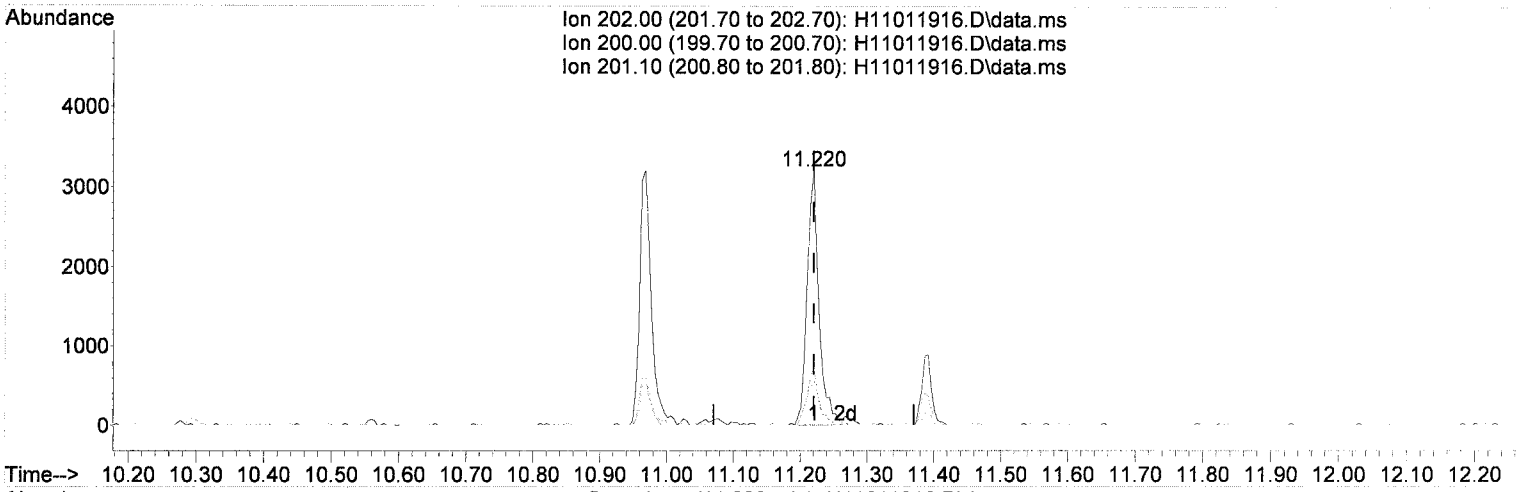
response 3917

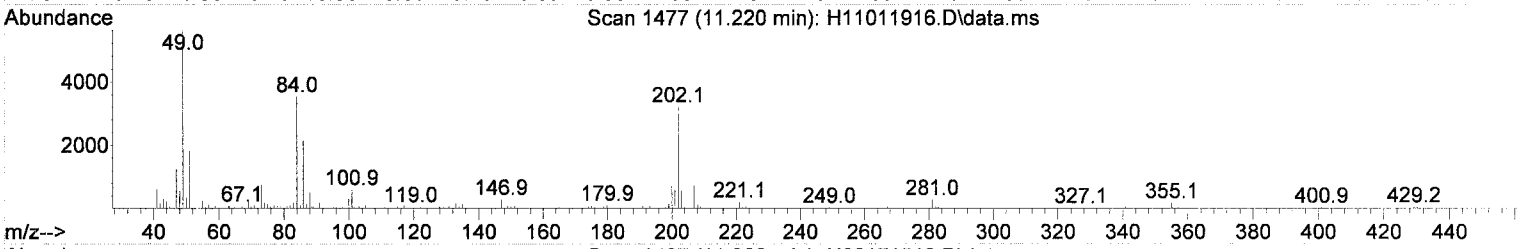
Ion	Exp%	Act%
202.00	100.00	100.00
200.00	19.40	19.52
101.00	17.70	14.85
0.00	0.00	0.00

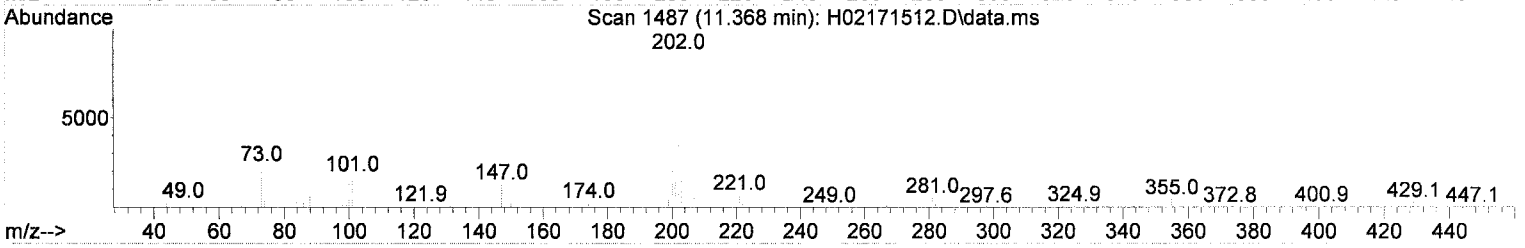
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011916.D\data.ms

(20) Pyrene (T)

11.220min (-0.000) 1.13 ng/ml

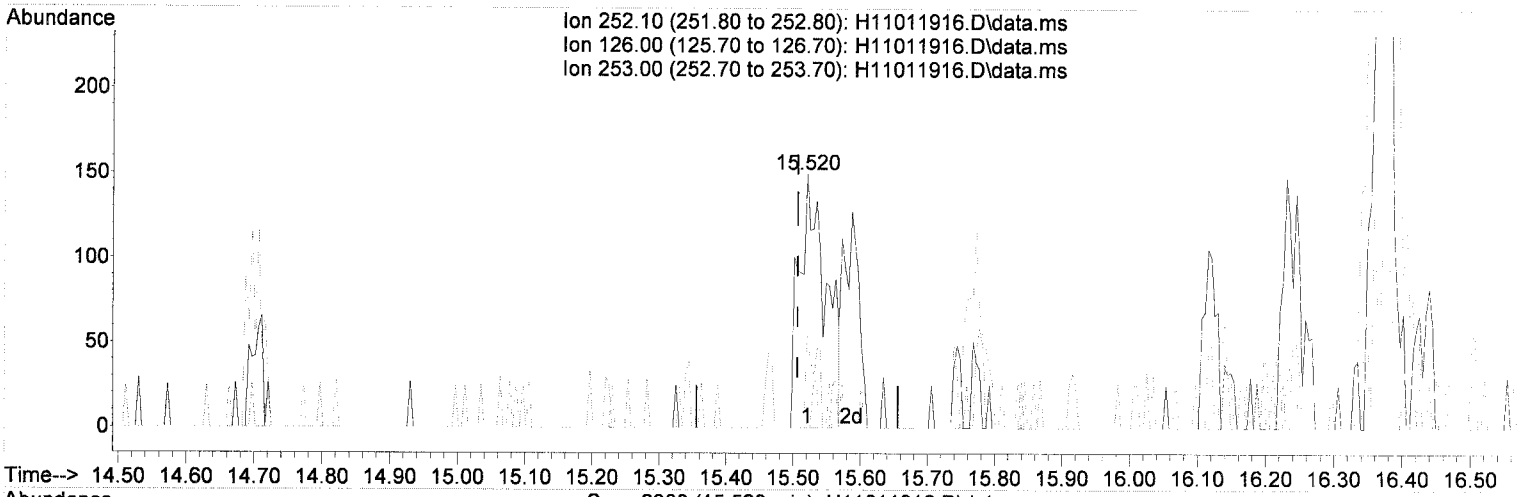
response 3995

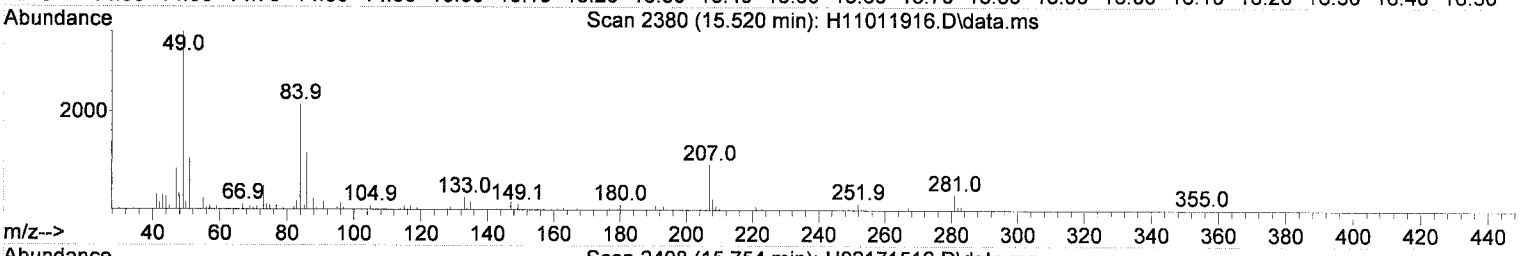
Ion	Exp%	Act%
202.00	100.00	100.00
200.00	20.10	22.89
201.10	16.50	18.09
0.00	0.00	0.00

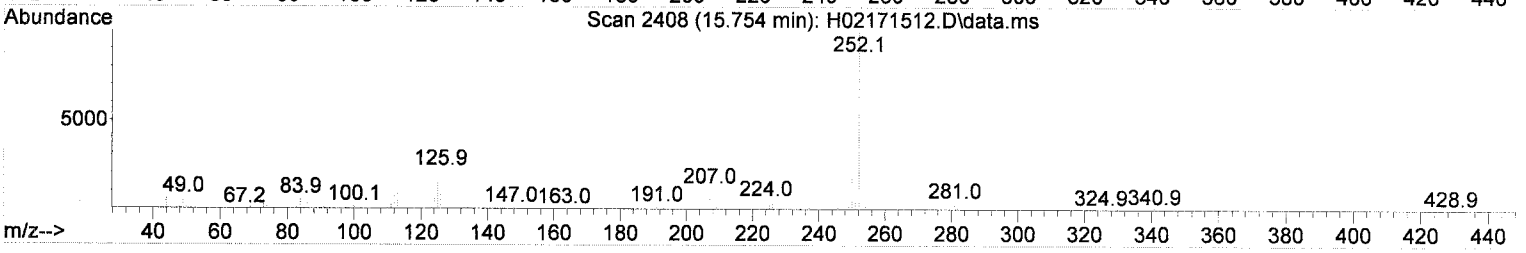
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011916.D\data.ms

(25) Benzo(b)fluoranthene (T)

15.520min (+ 0.014) 0.21 ng/ml

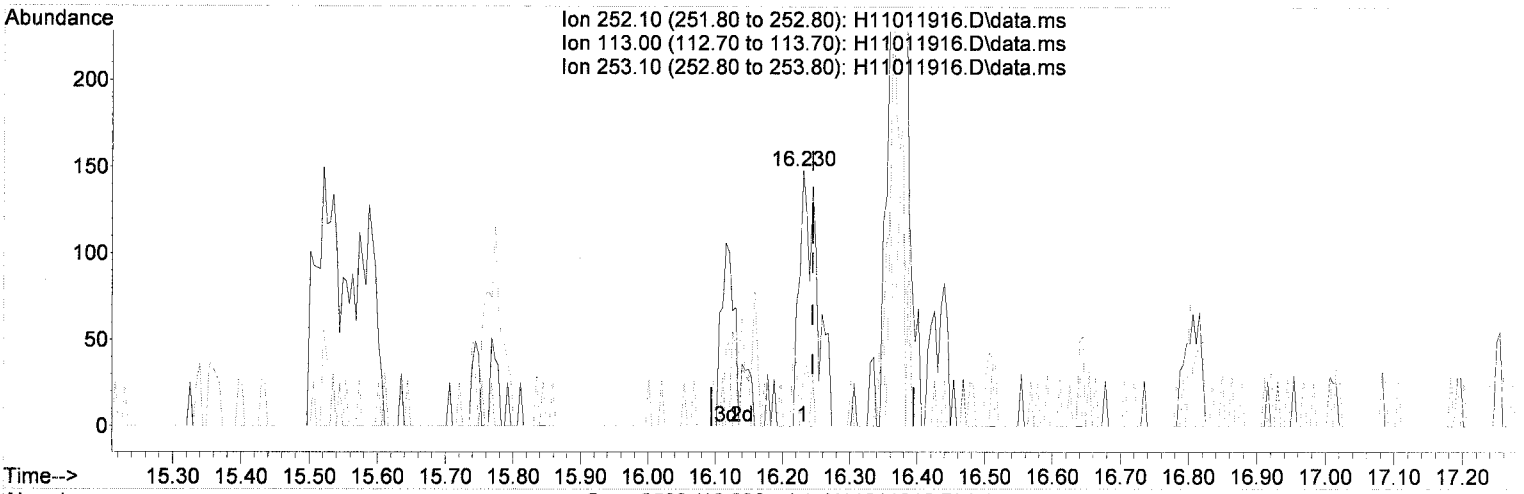
response 413

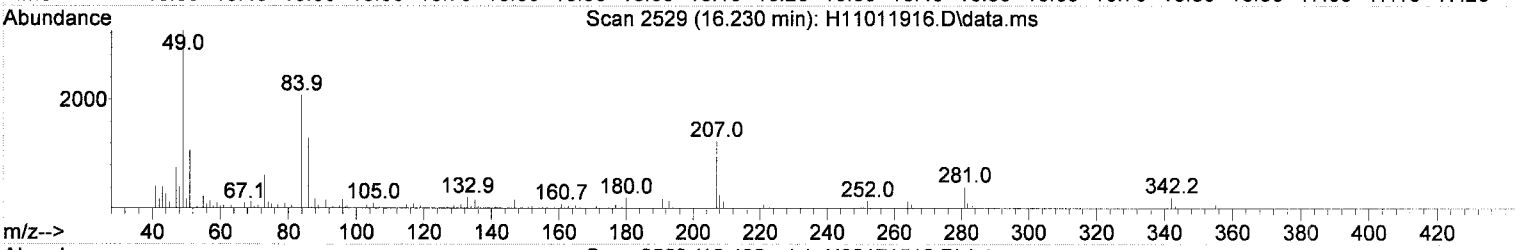
Ion	Exp%	Act%
252.10	100.00	100.00
126.00	22.30	0.00
253.00	22.60	27.18
0.00	0.00	0.00

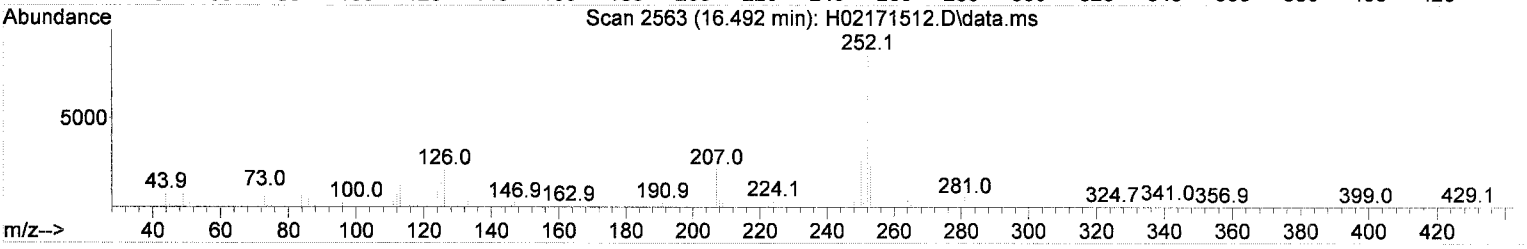
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011916.D\data.ms

(30) Benzo(a)pyrene (T)

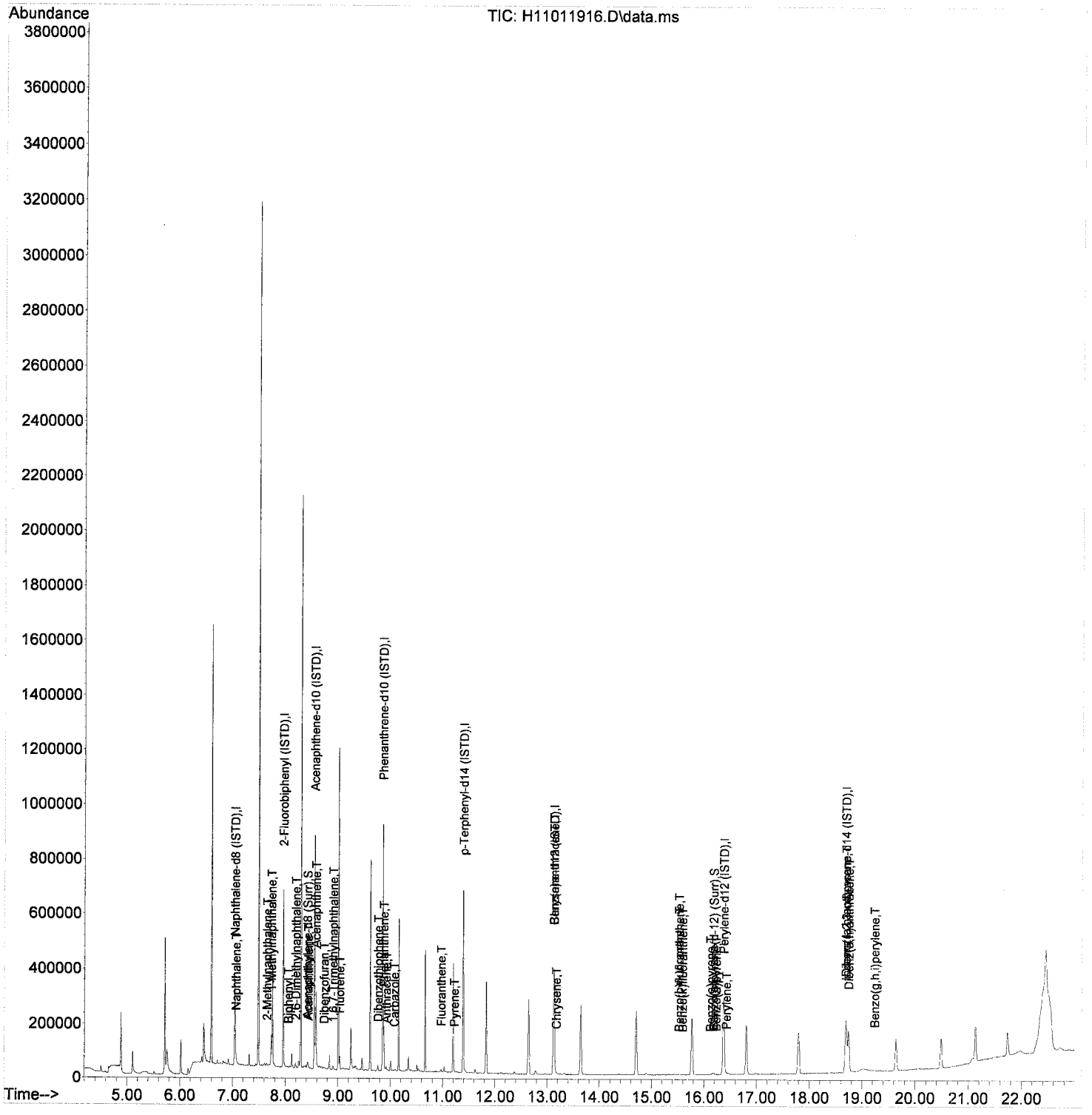
16.230min (-0.014) 0.22 ng/ml

response 272

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.00	0.00
253.10	20.40	16.89
0.00	0.00	0.00

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011916.D
Acq On : 1 Nov 2019 8:08 pm
Operator : JK /AMS /DTH
Sample : A9J1114-04RE1@50
Misc : 50x, #4,10,16
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:18 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



No Name Entered Quantitation Report (Not Reviewed)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

report all

AMS 11/4/19

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.034	136	153970	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.549	164	129606	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.849	188	262788	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.125	240	216648	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.368	264	182983	100.00	ng/ml	-0.01
32) Dibenz(a,h)anthracene-...	18.687	292	154516	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	7.953	172	181564	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.387	244	245695	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.415	160	7036	2.18	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.182	264	3057	2.52	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.053	128	129376	72.41	ng/ml	96
3) 2-Methylnaphthalene	7.639	142	45331	32.86	ng/ml	97
4) 1-Methylnaphthalene	7.725	142	141320	108.21	ng/ml	92
6) Biphenyl	8.044	154	6628	3.06	ng/ml	95
7) 2,6-Dimethylnaphthalene	8.187	156	9398	6.19	ng/ml	93
9) Acenaphthylene	8.425	152	5733	2.23	ng/ml	91
10) Acenaphthene	8.577	153	148041	77.05	ng/ml	98
11) Dibenzofuran	8.730	168	7067	2.57	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.901	170	938	0.51	ng/ml	78
13) Fluorene	~~9.025~~	~~166~~	~~38399~~	~~16.15~~	~~ng/ml~~	~~97~~
15) Dibenzothiophene	9.763	184	9499	3.51	ng/ml	95
16) Phenanthrene	9.868	178	63101	20.02	ng/ml	99
17) Anthracene	9.920	178	4742	1.69	ng/ml	92
18) Carbazole	10.058	167	88721	32.68	ng/ml	98
19) Fluoranthene	10.968	202	2576	0.82	ng/ml	93
20) Pyrene	11.215	202	2534	0.75	ng/ml	96
22) Benz(a)anthracene	13.130	228	821	0.14	ng/ml	61
23) Chrysene	13.177	228	284	0.12	ng/ml	51
25) Benzo(b)fluoranthene	15.515	252	255	0.14	ng/ml	72
26) Benzo(k)fluoranthene	15.592	252	119	0.09	ng/ml	66
27) Benzo(b+k)fluoranthene	15.592	252	119	0.09	ng/ml	60
28) Benzo(e)pyrene	16.120	252	115	0.06	ng/ml	53
30) Benzo(a)pyrene	16.230	252	184	0.18	ng/ml	61
31) Perylene	0.000		0	N.D.		
33) Indeno(1,2,3-cd)pyrene	18.687	276	152	0.08	ng/ml#	1
34) Dibenz(a,h)anthracene	18.744	278	217	0.12	ng/ml#	1
35) Benzo(g,h,i)perylene	19.235	276	37	0.02	ng/ml#	1

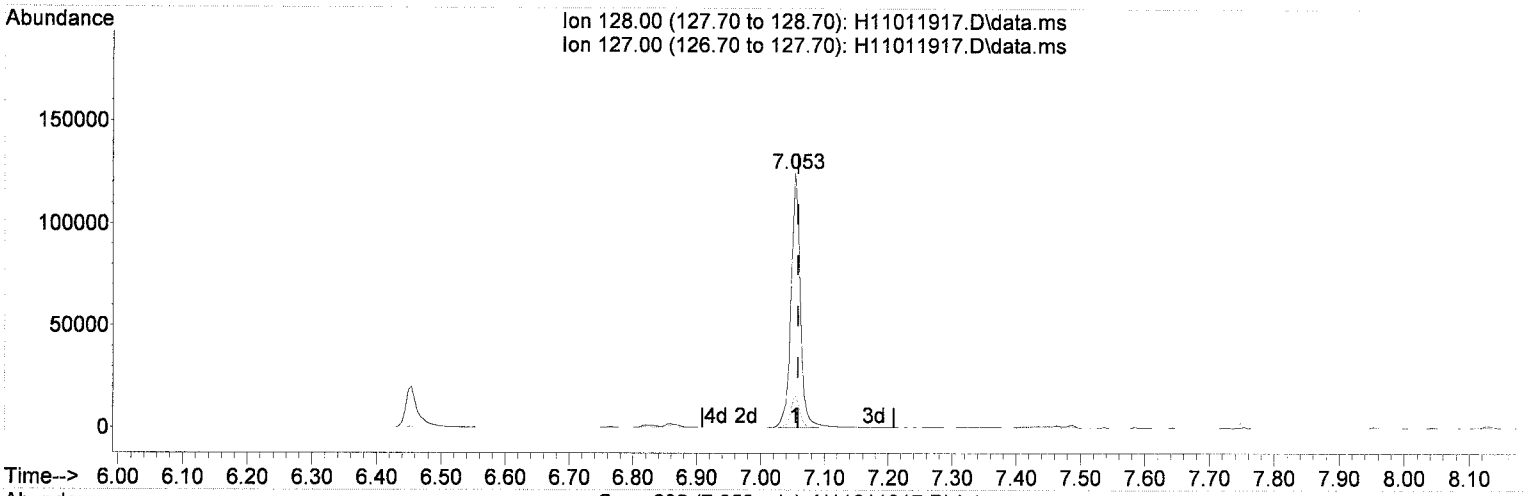
MI chit

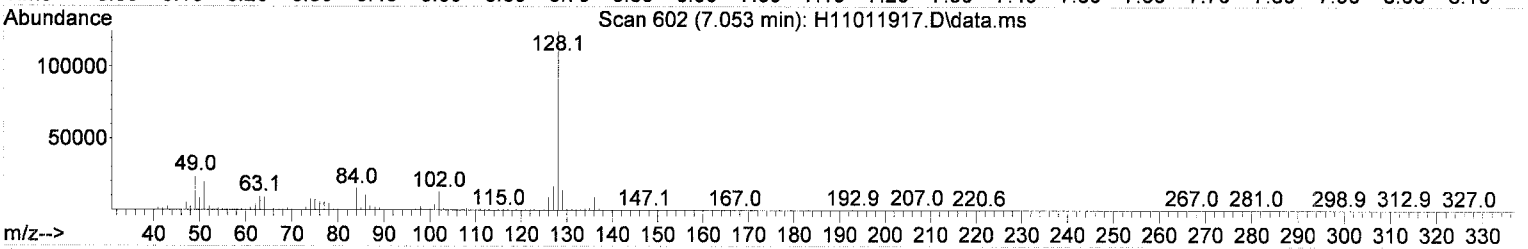
(#) = qualifier out of range (m) = manual integration (+) = signals summed

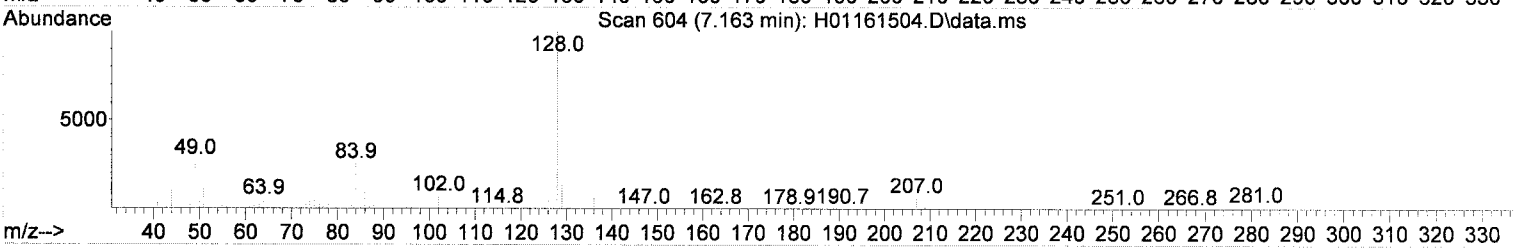
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011917.D\data.ms

(2) Naphthalene (T)

7.053min (-0.005) 72.41 ng/ml

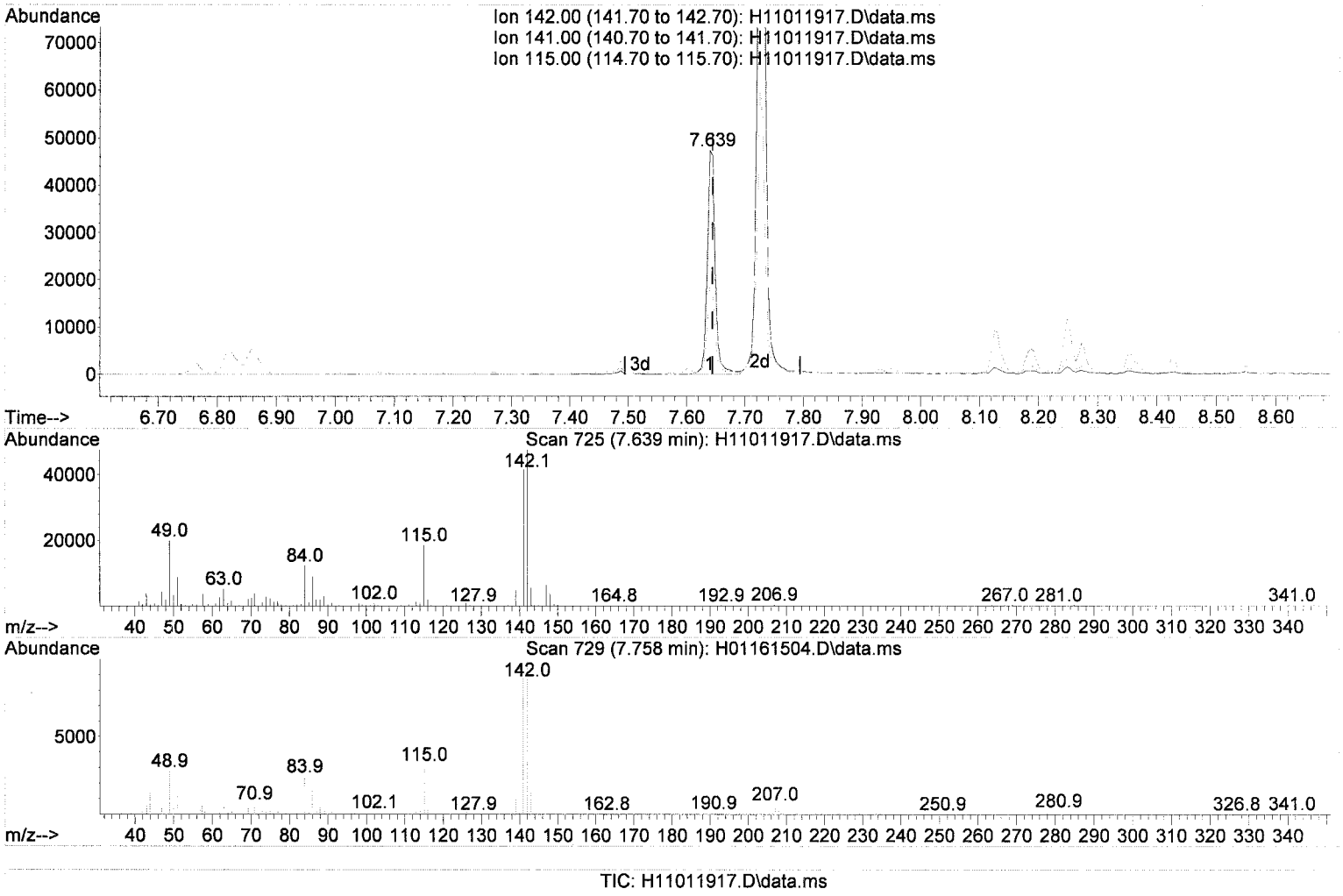
response 129376

Ion	Exp%	Act%
128.00	100.00	100.00
127.00	11.50	12.96
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(3) 2-Methylnaphthalene (T)

7.639min (-0.005) 32.86 ng/ml

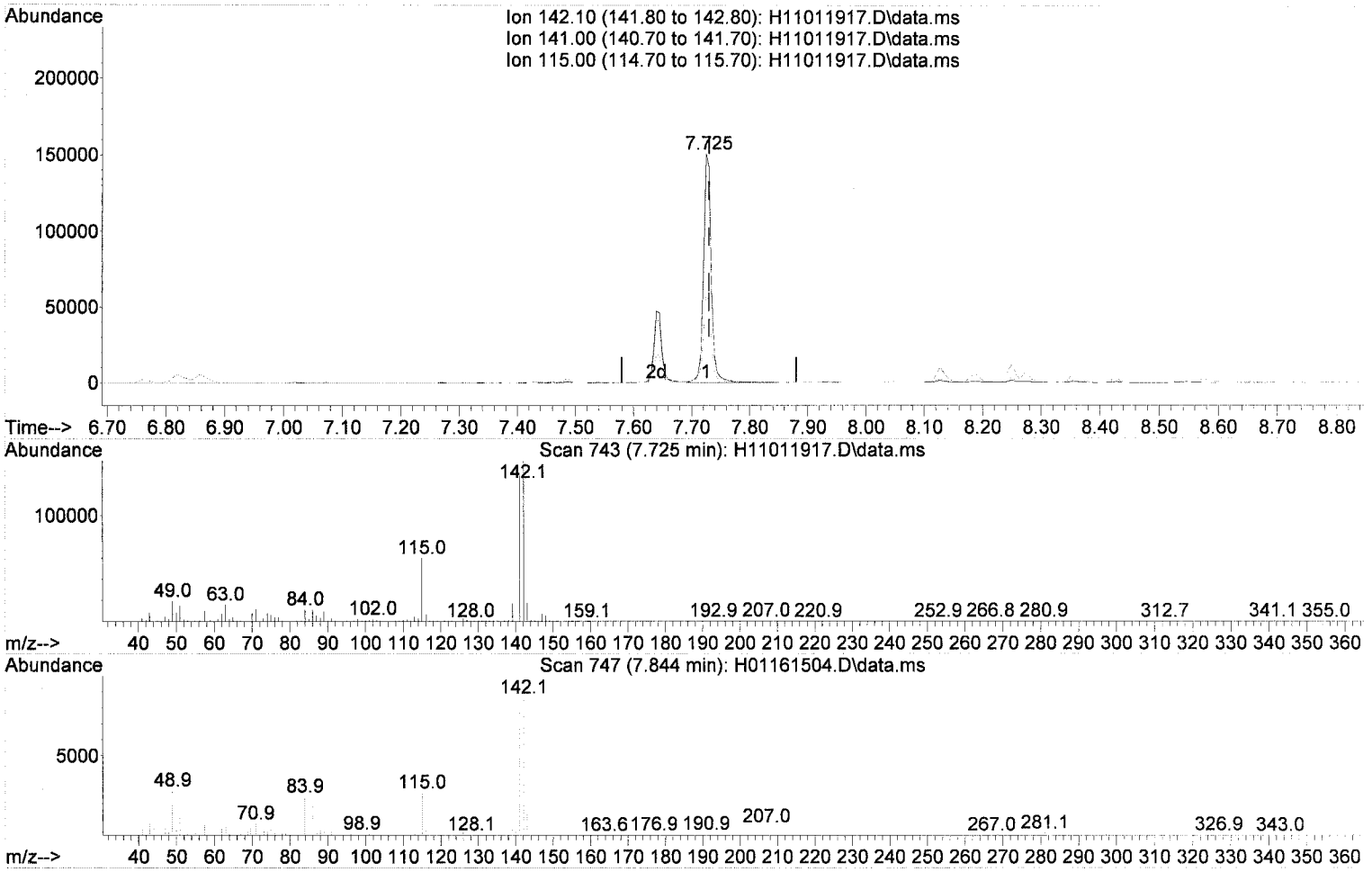
response 45331

Ion	Exp%	Act%
142.00	100.00	100.00
141.00	87.50	87.58
115.00	32.00	39.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(4) 1-Methylnaphthalene (T)

7.725min (-0.005) 108.21 ng/ml

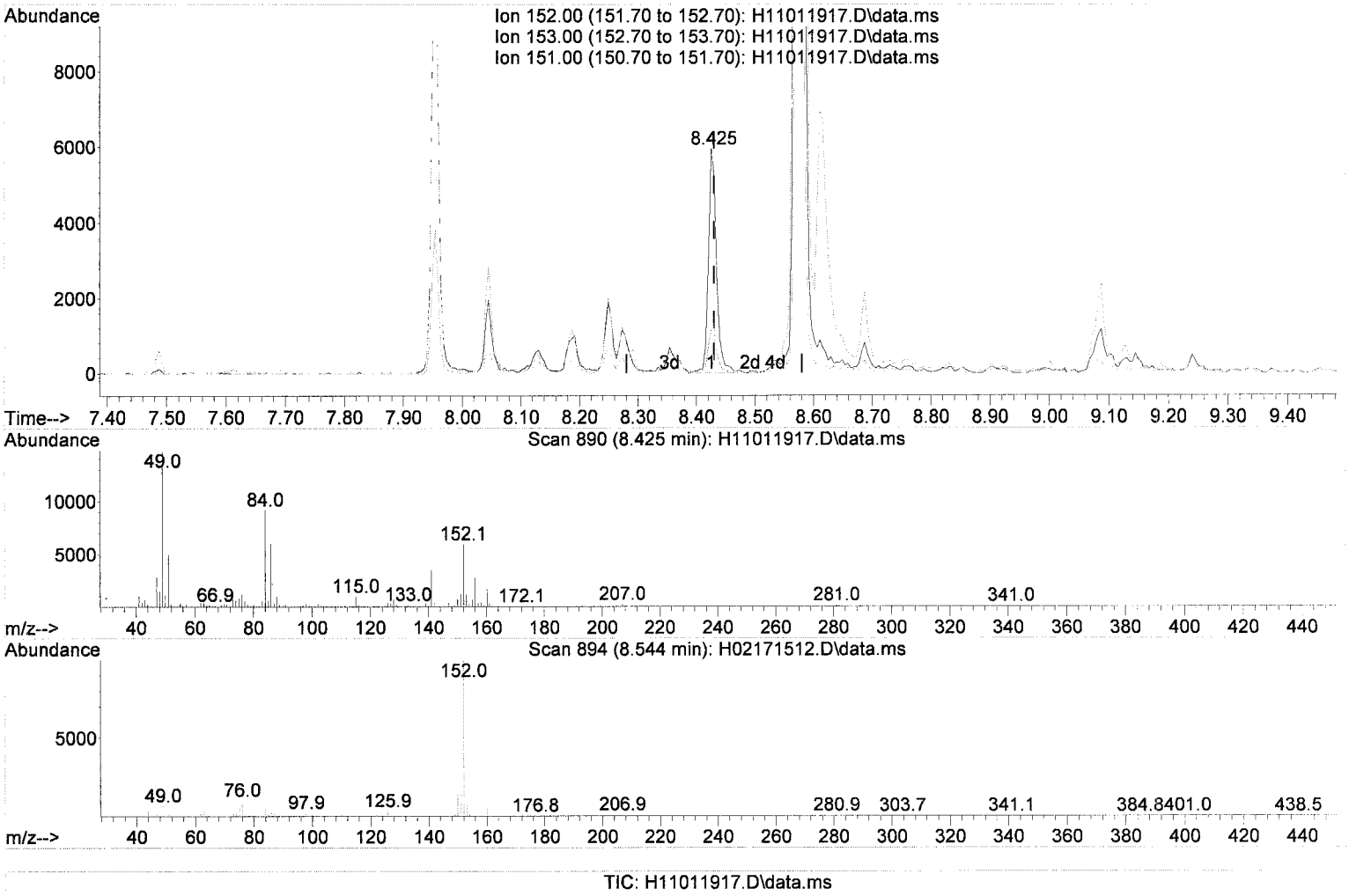
response 141320

Ion	Exp%	Act%
142.10	100.00	100.00
141.00	88.10	90.55
115.00	26.90	39.54
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:54:58 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(9) Acenaphthylene (T)

8.425min (-0.005) 2.23 ng/ml

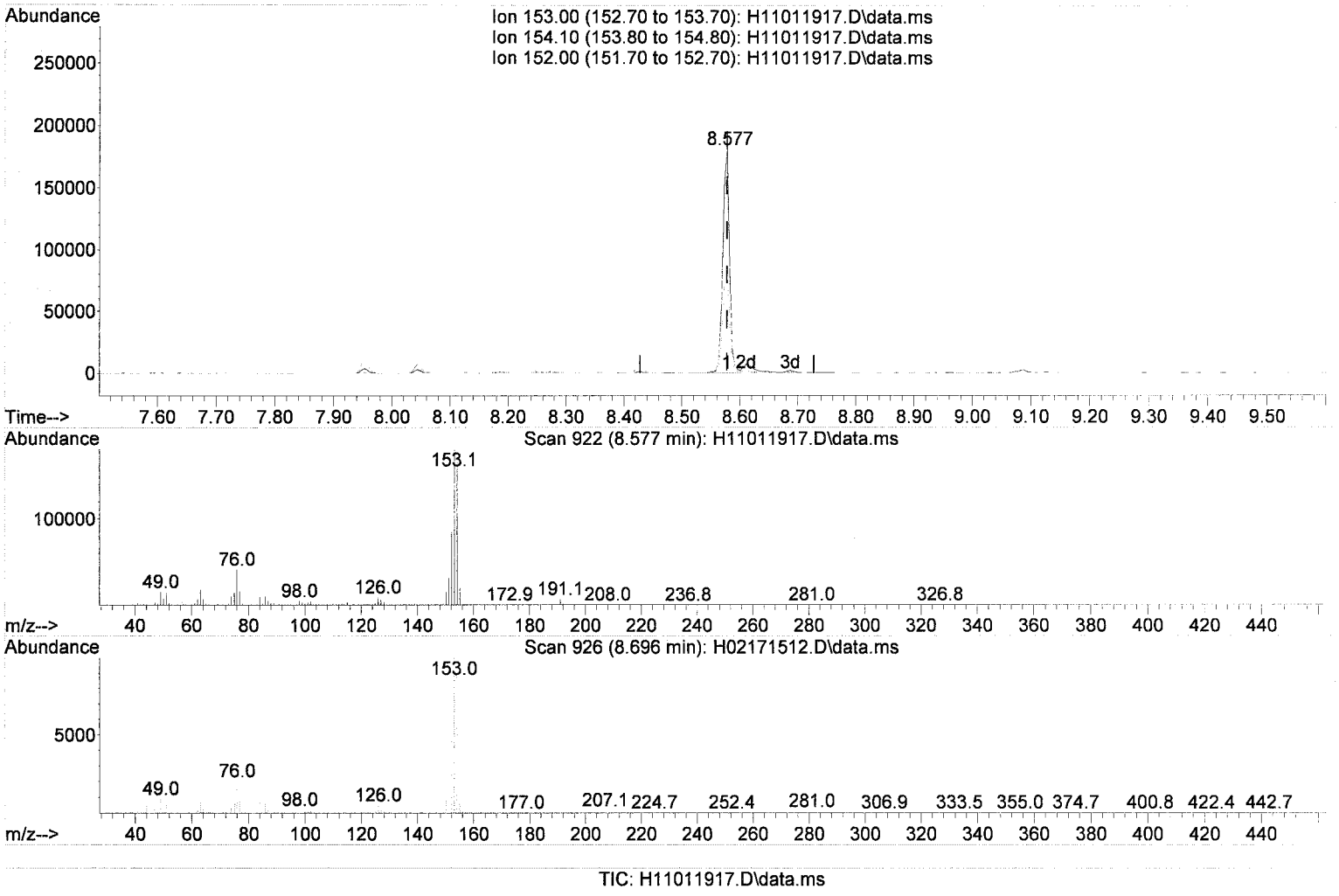
response 5733

Ion	Exp%	Act%
152.00	100.00	100.00
153.00	13.00	19.42
151.00	18.40	20.25
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(10) Acenaphthene (T)

8.577min (-0.000) 77.05 ng/ml

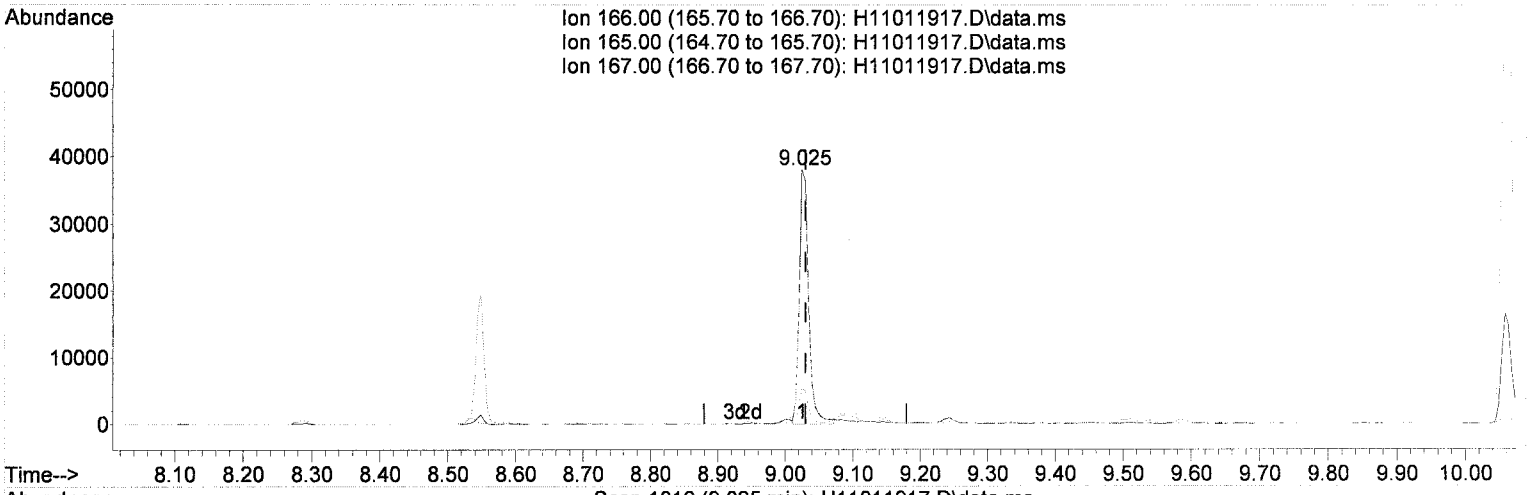
response 148041

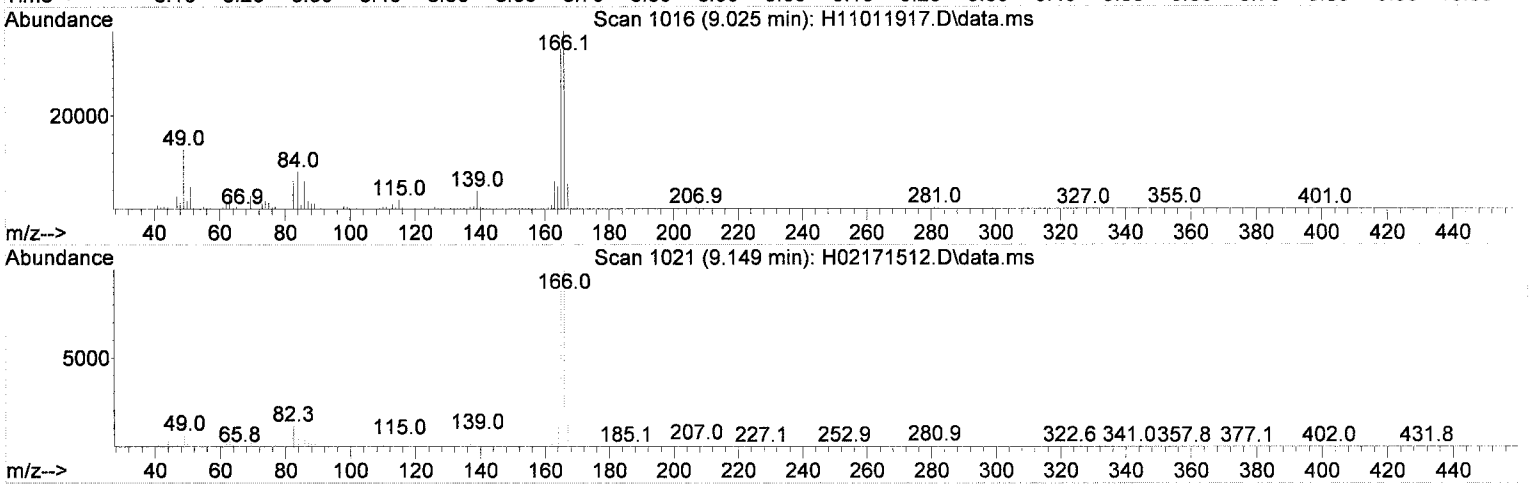
Ion	Exp%	Act%
153.00	100.00	100.00
154.10	88.60	91.55
152.00	46.00	46.73
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8





TIC: H11011917.D\data.ms

(13) Fluorene (T)

9.025min (-0.005) 15.19 ng/ml m

response 36122

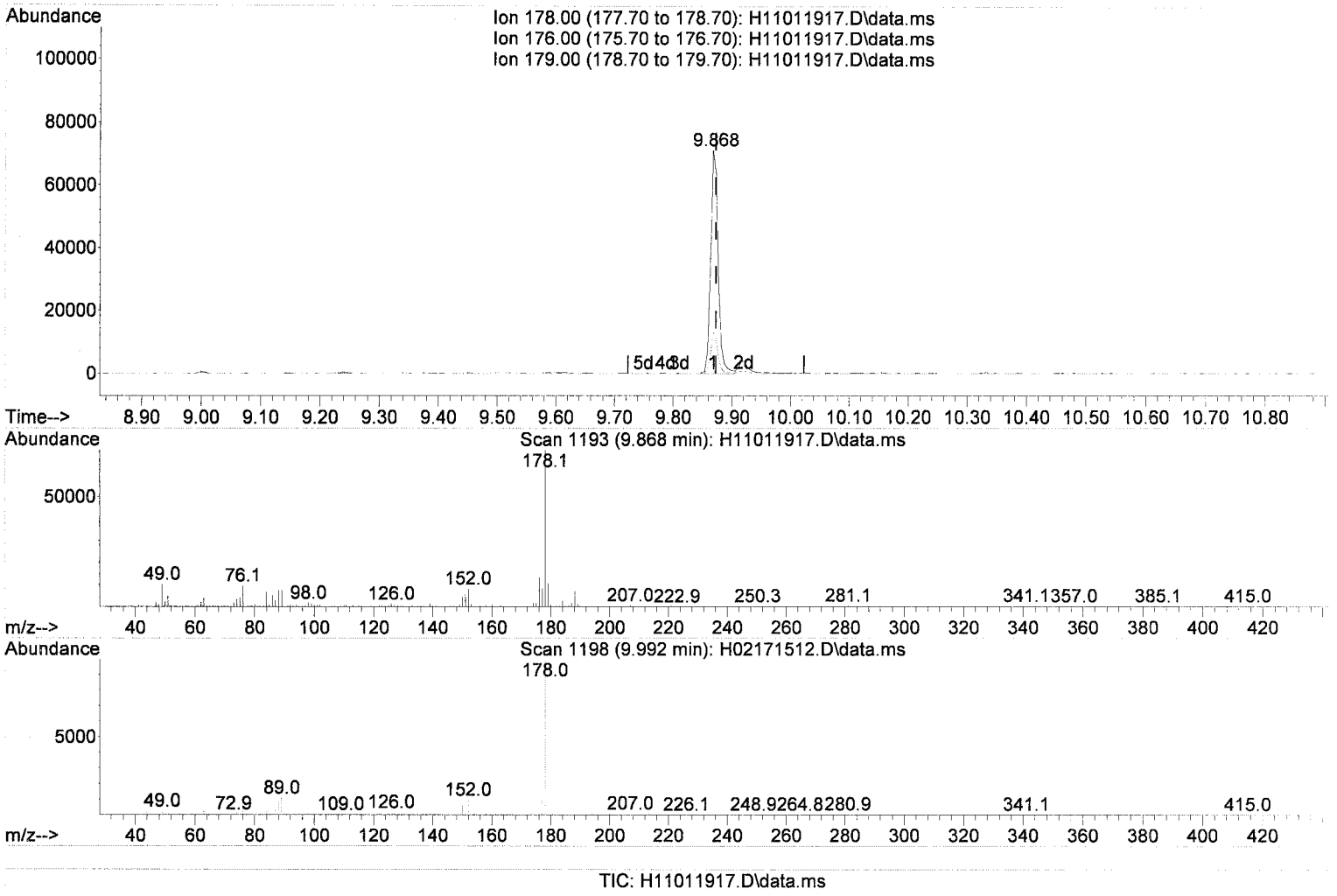
Ion	Exp%	Act%
166.00	100.00	100.00
165.00	94.50	91.03
167.00	13.50	14.05
0.00	0.00	0.00

AMS 11/4/19

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(16) Phenanthrene (T)

9.868min (-0.005) 20.02 ng/ml

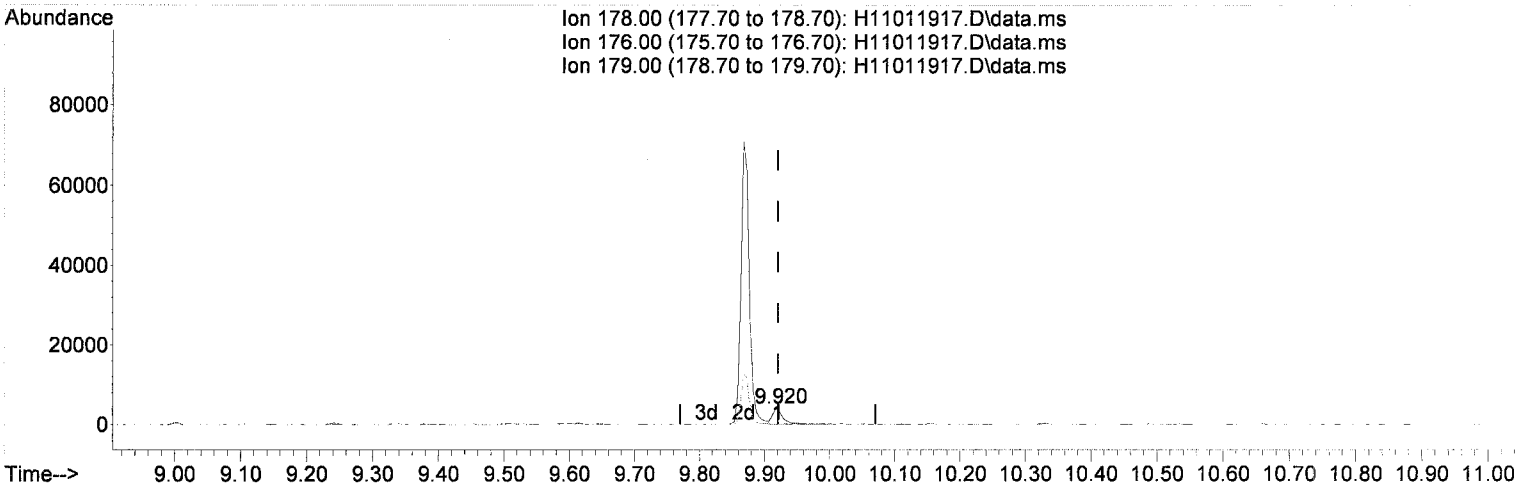
response 63101

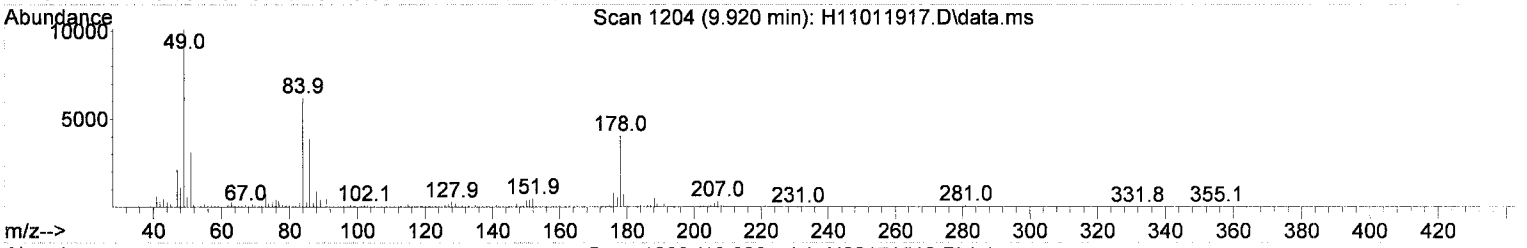
Ion	Exp%	Act%
178.00	100.00	100.00
176.00	18.90	18.44
179.00	15.00	14.74
0.00	0.00	0.00

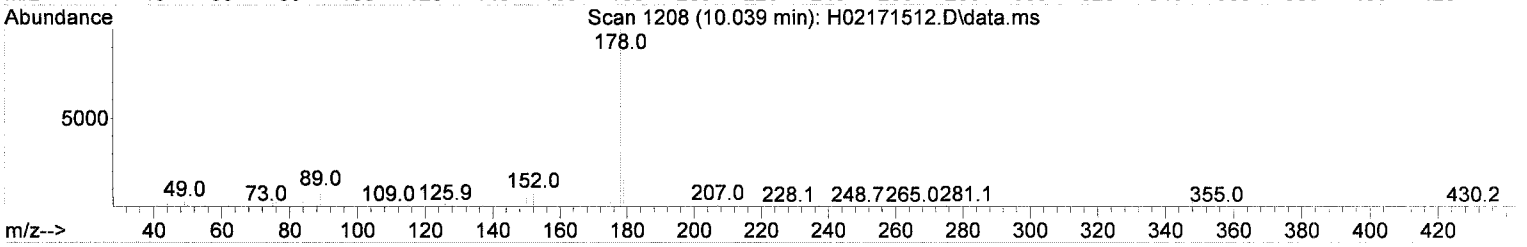
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:54:58 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011917.D\data.ms

(17) Anthracene (T)

9.920min (-0.000) 1.69 ng/ml

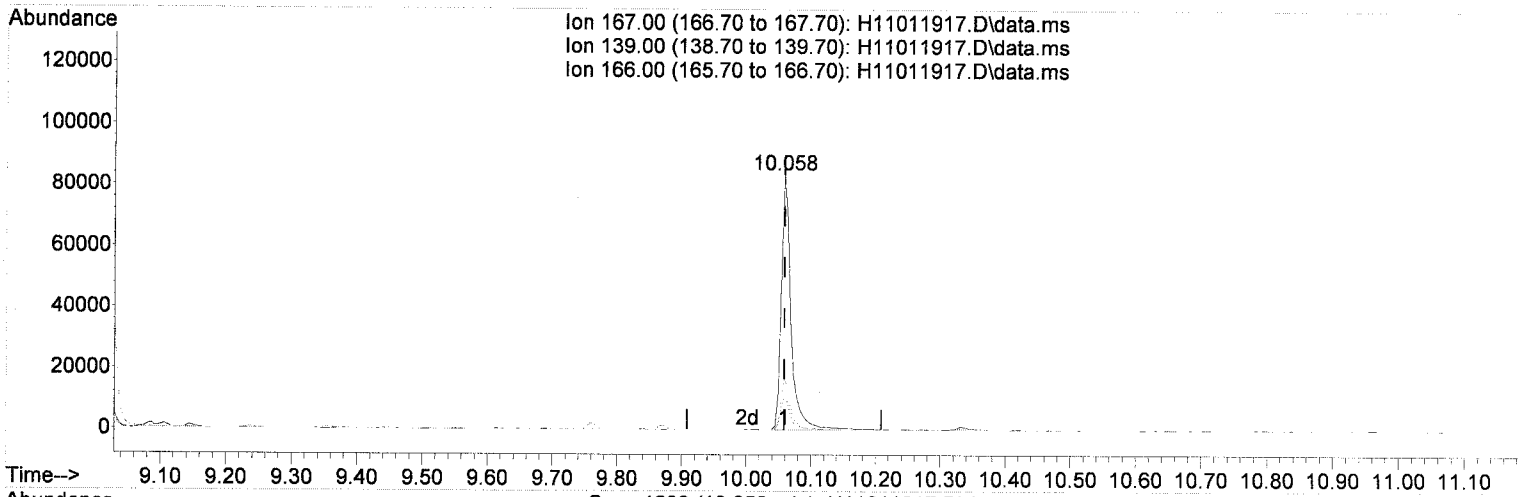
response 4742

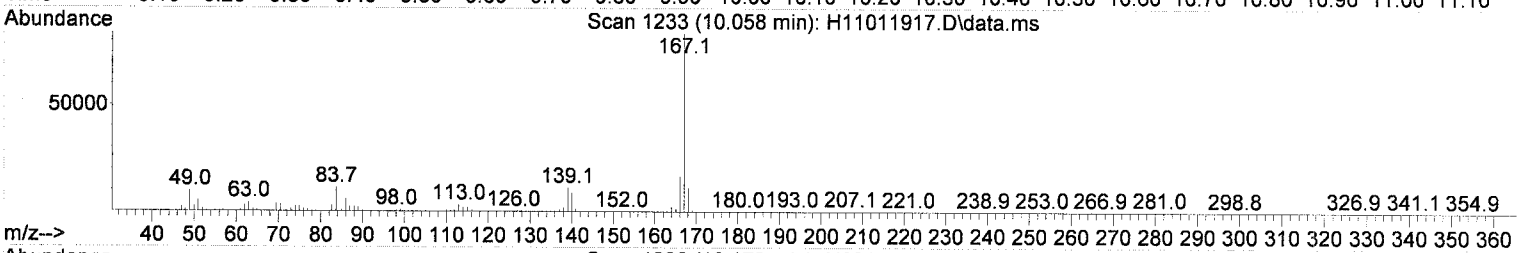
Ion	Exp%	Act%
178.00	100.00	100.00
176.00	17.30	20.09
179.00	14.00	18.17
0.00	0.00	0.00

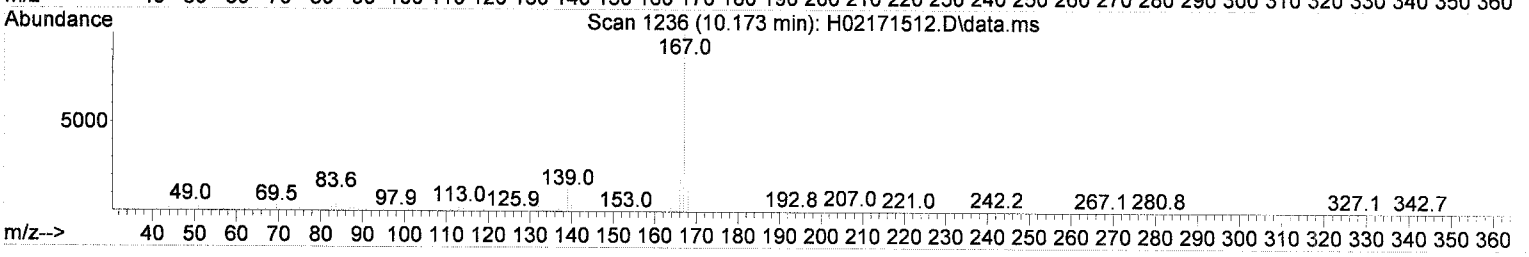
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011917.D\data.ms

(18) Carbazole (T)

10.058min (-0.000) 32.68 ng/ml

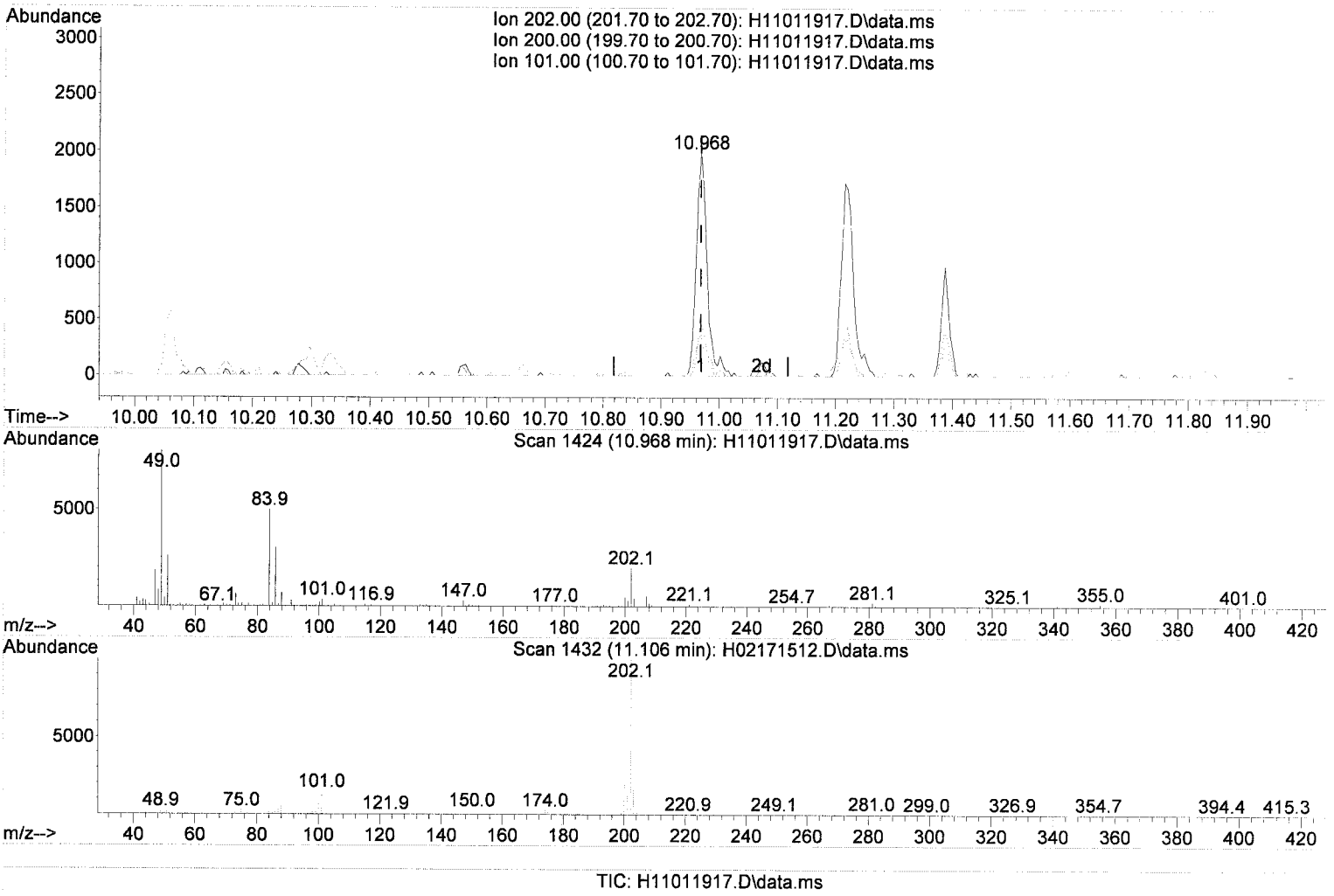
response 88721

Ion	Exp%	Act%
167.00	100.00	100.00
139.00	11.20	13.41
166.00	19.90	19.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:54:58 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



TIC: H11011917.D\data.ms

(19) Fluoranthene (T)

10.968min (-0.000) 0.82 ng/ml

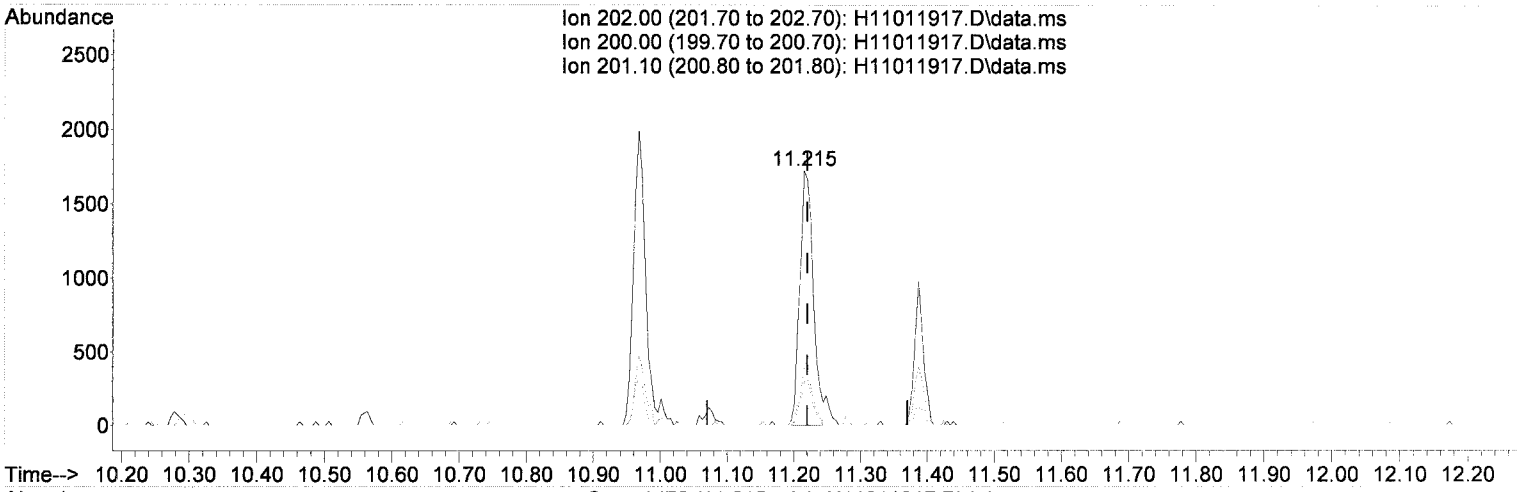
response 2576

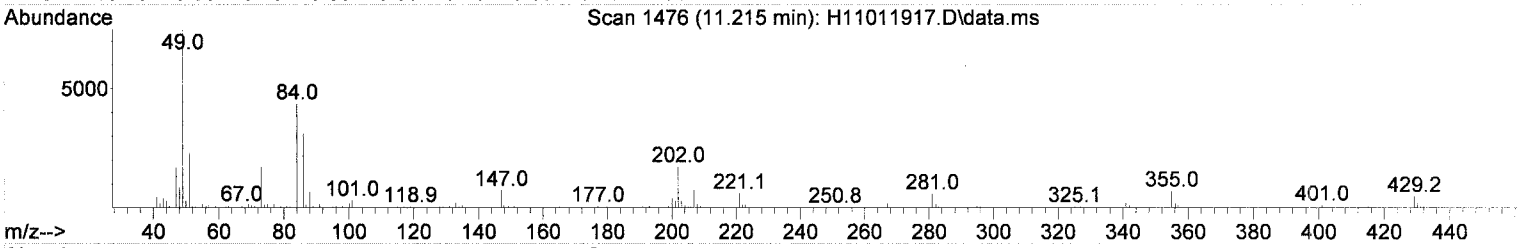
Ion	Exp%	Act%
202.00	100.00	100.00
200.00	19.40	24.25
101.00	17.70	18.98
0.00	0.00	0.00

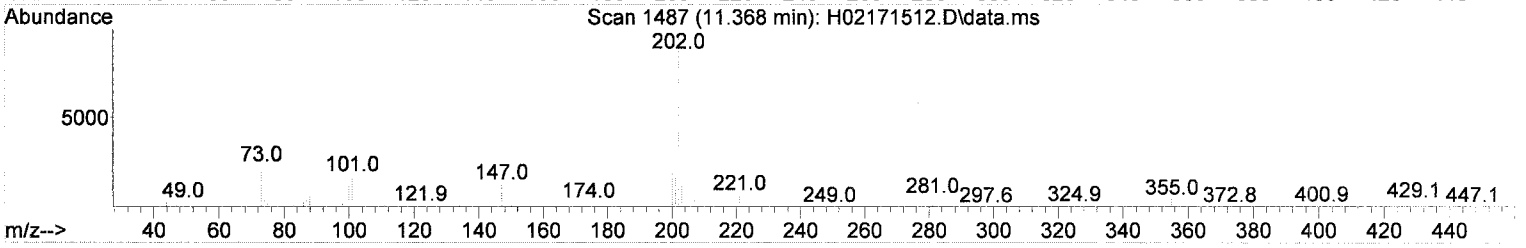
Quantitation Report (Qedit)

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 11:54:58 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8







TIC: H11011917.D\data.ms

(20) Pyrene (T)

11.215min (-0.005) 0.75 ng/ml

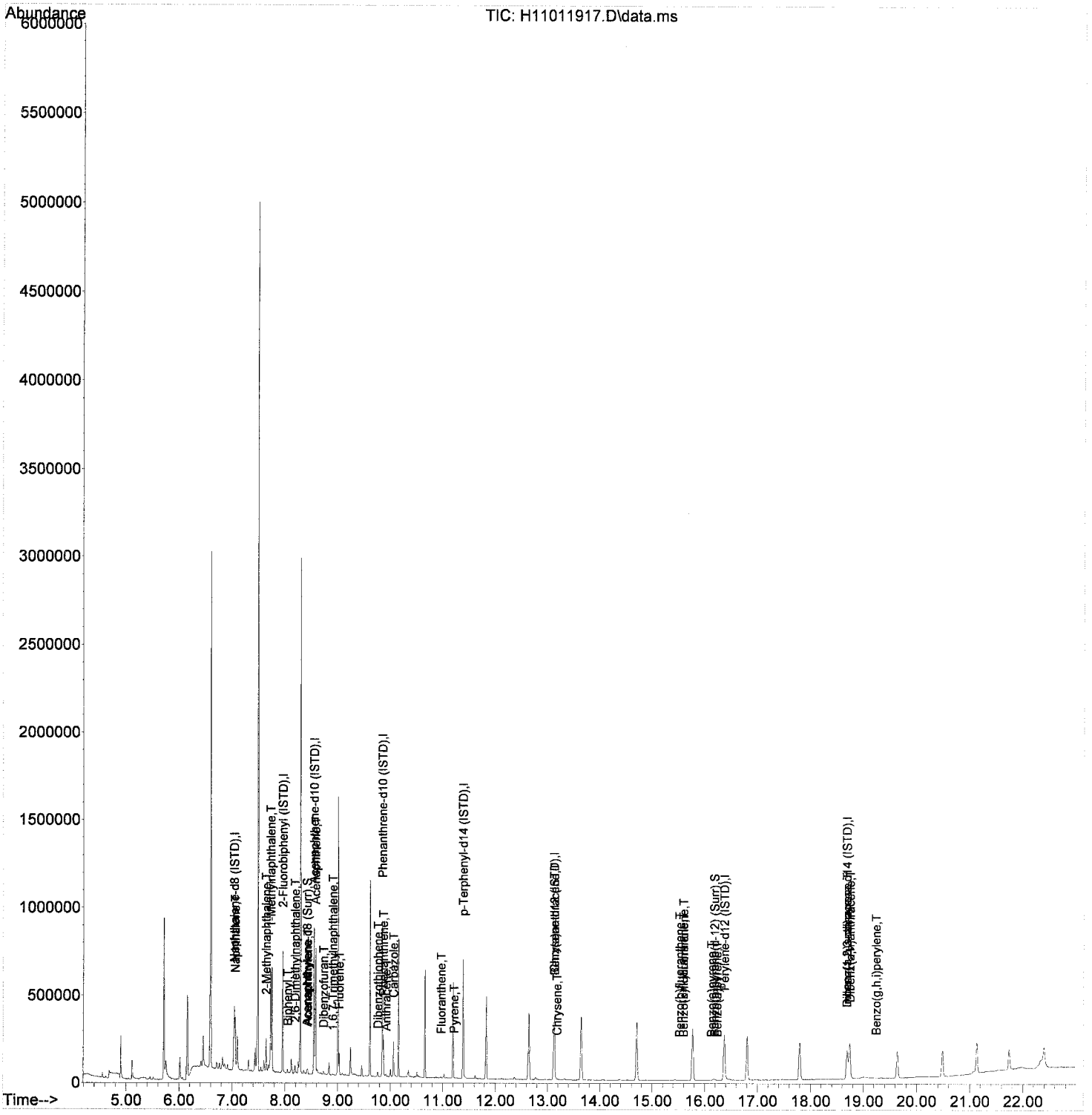
response 2534

Ion	Exp%	Act%
202.00	100.00	100.00
200.00	20.10	23.00
201.10	16.50	16.80
0.00	0.00	0.00

J

Data Path : V:\DATA\2019-11\9K01025\
Data File : H11011917.D
Acq On : 1 Nov 2019 8:40 pm
Operator : JK /AMS /DTH
Sample : A9J1114-07RE1@50
Misc : 50x, #2,3,4,10,13,16,18
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Nov 04 09:44:21 2019
Quant Method : V:\METHODS\LVI8_070119R2.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Oct 07 17:09:14 2019
Response via : Initial Calibration
InstName : SV-GCMS8



APEX LABORATORIES, LLC
6700 SW Sandburg St. Tigard OR 97223 phone 503-718-2323

Semivolatile Organic Compounds (PAHs) by EPA 8270D (Large Volume Injection)
Calibration Data

Sequence 9G01051 (Cal ID A9G0205) SV-GCMS8

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9G01051**	Instrument:	**SV-GCMS8**
Date:	**07/01/19 13:06**	Calibration:	**A9G0205**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G01051-TUN1	Water	QC	QC			A19B045	A19F170
2	9G01051-ICB1	Water	QC	QC			A19B045	
3	9G01051-CAL1	Water	QC	QC			A19B045	A19F394
4	9G01051-CAL2	Water	QC	QC			A19B045	A19F395
5	9G01051-CAL3	Water	QC	QC			A19B045	A19F396
6	9G01051-CAL4	Water	QC	QC			A19B045	A19F397
7	9G01051-CAL5	Water	QC	QC			A19B045	A19F398
8	9G01051-CAL6	Water	QC	QC			A19B045	A19F399
9	9G01051-CAL7	Water	QC	QC			A19B045	A19F400
10	9G01051-CAL8	Water	QC	QC			A19B045	A19F401
11	9G01051-CAL9	Water	QC	QC			A19B045	A19F402
12	9G01051-CALA	Water	QC	QC			A19B045	A19F403
13	9G01051-IBL1	Water	QC	QC			A19B045	
14	9G01051-ICV1	Water	QC	QC			A19B045	A19B042
15	9G01051-IBL2	Water	QC	QC			A19B045	

Data Entered By: AMS 7/2/19 GA 7/2/19

Data Reviewed By: MK 7/2/19

Comments: Benzo(a)pyrene is quadratic w/ r^2=0.98
All reqmnts evaluated to +/- 20%

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9G01051

Analysis Included

8270D PAH (125ml) 16
8270D PAH (125ml) LL
8270D PAH (125ml) LL (Diss)
8270D PAH (125ml) Naphthalene

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9G01051-TUN1	MS Tune	Water	A19F170	A19B045	7/1/2019	1:14:00PM
9G01051-ICB1	Initial Cal Blank	Water		A19B045	7/1/2019	1:45:00PM
9G01051-CAL1	Cal Standard	Water	A19F394	"	7/1/2019	2:19:00PM
9G01051-CAL2	Cal Standard	Water	A19F395	"	7/1/2019	2:52:00PM
9G01051-CAL3	Cal Standard	Water	A19F396	"	7/1/2019	3:26:00PM
9G01051-CAL4	Cal Standard	Water	A19F397	"	7/1/2019	4:00:00PM
9G01051-CAL5	Cal Standard	Water	A19F398	"	7/1/2019	4:34:00PM
9G01051-CAL6	Cal Standard	Water	A19F399	"	7/1/2019	5:07:00PM
9G01051-CAL7	Cal Standard	Water	A19F400	"	7/1/2019	5:41:00PM
9G01051-CAL8	Cal Standard	Water	A19F401	"	7/1/2019	6:15:00PM
9G01051-CAL9	Cal Standard	Water	A19F402	"	7/1/2019	6:48:00PM
9G01051-CALA	Cal Standard	Water	A19F403	"	7/1/2019	7:22:00PM
9G01051-ICV1	Initial Cal Check	Water	A19B042	"	7/1/2019	8:29:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9G0205** Instrument: **SV-GCMS8**

8270D PAH (125ml) 16 Sequence: **9G01051** Matrix: **Water**

9G01051-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9G01051-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9G01051

Compounds listed above have recalculated recoveries outside 70-130% of the true values, and the calibration levels are above the reporting level. If no compounds are listed, all are OK. Please see the next section for quadatic fit compounds.

Analytes With Quadratic Curve Fits

Qualifier	iMDL	iMRL	Spike Amt	%Difference	OK?	Raise MRL to ?
				———	☐	☐ ———

Analytes listed above have quadratic curve fits. If they are using a weighting otpion, they must be checked against the requanted curve points to determine if the recalculated results are within limits (70-130 or as specified).

ICV RECOVERIES

Calibration: **A9G0205** Instrument: **SV-GCMS8**

8270D PAH (125ml) 16 Sequence: **9G01051** Matrix: **Water**

9G01051-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual

Compounds listed above have Initial Calibration Verification standard recoveries outside 70-130% of the true values. If no compounds are listed, all have passing recoveries.

Calibration Status Report SV-GCMS8

Method Path : C:\msdchem\1\METHODS\
Method File : LVI8_070119.M
Title : LVI PAH/PCP Acquisition and Analysis
Last Update : Tue Jul 02 08:51:04 2019
Response Via : Initial Calibration

GK 7/2/19

#	ID	Conc	ISTD Conc	Path\File
1	0.20	-1	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011911.D
2	0.40	0	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011912.D
3	1.0	1	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011913.D
4	5.0	5	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011914.D
5	10	10	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011915.D
6	20	20	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011916.D
7	50	50	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011917.D
8	100	100	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011918.D
9	150	150	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011919.D
10	200	200	100	C:\msdchem\1\DATA\2019-07\9G01051\H06011920.D

#	ID	Update Time	Quant Time	Acquisition Time
1	0.20	Jul 02 08:50 2019	Jul 01 15:06 2019	1 Jul 2019 2:19 pm
2	0.40	Jul 02 08:50 2019	Jul 02 08:43 2019	1 Jul 2019 2:52 pm
3	1.0	Jul 02 08:50 2019	Jul 02 08:44 2019	1 Jul 2019 3:26 pm
4	5.0	Jul 02 08:50 2019	Jul 02 08:45 2019	1 Jul 2019 4:00 pm
5	10	Jul 02 08:50 2019	Jul 02 08:40 2019	1 Jul 2019 4:34 pm
6	20	Jul 02 08:50 2019	Jul 02 08:40 2019	1 Jul 2019 5:07 pm
7	50	Jul 02 08:50 2019	Jul 02 08:40 2019	1 Jul 2019 5:41 pm
8	100	Jul 02 08:50 2019	Jul 02 08:40 2019	1 Jul 2019 6:15 pm
9	150	Jul 02 08:50 2019	Jul 02 08:40 2019	1 Jul 2019 6:48 pm
10	200	Jul 02 08:51 2019	Jul 02 08:40 2019	1 Jul 2019 7:22 pm

LVI8_070119.M Tue Jul 02 09:34:35 2019

Compound List Report SV-GCMS8

Method Path : C:\msdchem\1\METHODS\
Method File : LVI8_070119.M
Title : LVI PAH/PCP Acquisition and Analysis
Last Update : Tue Jul 02 08:51:04 2019
Response Via : Initial Calibration

DG 7/2/19

Total Cpnds : 37

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Naphthalene-d8 (ISTD)	136	7.101	1.000	A	1	A	R
2	T	Naphthalene	128	7.115	1.002	A	1	A	R
3	T	2-Methylnaphthalene	142	7.706	1.085	A	2	A	R
4	T	1-Methylnaphthalene	142	7.792	1.097	A	2	A	R
5	I	Acenaphthene-d10 (ISTD)	164	8.616	1.000	A	2	A	R
6	T	Biphenyl	154	8.106	0.941	A	2	A	R
7	T	2,6-Dimethylnaphthalene	156	8.244	0.957	A	2	A	R
8	S	Acenaphthylene-d8 (Surr)	160	8.477	0.984	Q	1	A	R
9	T	Acenaphthylene	152	8.492	0.986	A	2	A	R
10	T	Acenaphthene	153	8.644	1.003	A	2	A	R
11	T	Dibenzofuran	168	8.792	1.020	A	2	A	R
12	T	1,6,7-Trimethylnaphthalene	170	8.973	1.041	A	3	A	R
13	T	Fluorene	166	9.092	1.055	A	2	A	R
14	I	Phenanthrene-d10 (ISTD)	188	9.916	1.000	A	2	A	R
15	T	Dibenzothiophene	184	9.825	0.991	A	3	A	R
16	T	Phenanthrene	178	9.934	1.002	A	2	A	R
17	T	Anthracene	178	9.982	1.007	A	2	A	R
18	T	Carbazole	167	10.120	1.021	A	2	A	R
19	T	Fluoranthene	202	11.044	1.114	A	2	A	R
20	T	Pyrene	202	11.301	1.140	A	2	A	R
21	I	Chrysene-d12 (ISTD)	240	13.263	1.000	A	2	A	R
22	T	Benz(a)anthracene	228	13.239	0.998	Q	2	A	R
23	T	Chrysene	228	13.316	1.004	A	2	A	R
24	I	Perylene-d12 (ISTD)	264	16.525	1.000	A	2	A	R
25	T	Benzo(b)fluoranthene	252	15.649	0.947	Q	2	A	R
26	T	Benzo(k)fluoranthene	252	15.711	0.951	Q	2	A	R
27	T	Benzo(b+k)fluoranthene	252	15.710	0.951	Q	2	A	R
28	T	Benzo(e)pyrene	252	16.273	0.985	A	2	A	R
29	S	Benzo(a)pyrene(d-12) (Surr)	264	16.329	0.988	Q	1	A	R
30	T	Benzo(a)pyrene	252	16.387	0.992	Q	2	A	R
31	T	Perylene	252	16.582	1.003	A	2	A	R
32	I	Dibenz(a,h)anthracene-d14 (...	292	18.844	1.000	A	2	A	R
33	T	Indeno(1,2,3-cd)pyrene	276	18.839	1.000	A	2	A	R
34	T	Dibenz(a,h)anthracene	278	18.906	1.003	A	2	A	R
35	T	Benzo(g,h,i)perylene	276	19.363	1.028	A	2	A	R
36	I	2-Fluorobiphenyl (ISTD)	172	8.020	1.000	A	2	A	R
37	I	p-Terphenyl-d14 (ISTD)	244	11.478	1.000	A	2	A	R

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
#Qual = number of qualifiers
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

LVI8_070119.M Tue Jul 02 09:27:36 2019

Response Factor Report SV-GCMS8

Method Path : C:\msdchem\1\METHODS\
Method File : LVI8_070119.M
Title : LVI PAH/PCP Acquisition and Analysis
Last Update : Tue Jul 02 08:51:04 2019
Response Via : Initial Calibration

7/2/19

Calibration Files
0.20=H06011911.D 0.40=H06011912.D 1.0 =H06011913.D 5.0 =H06011914.D 10 =H06011915.D 20 =H06011916.D 50 =H06011917.D
100 =H06011918.D 150 =H06011919.D 200 =H06011920.D

		Compound	0.20	0.40	1.0	5.0	10	20	50	100	150	200	Avg	%RSD
1)	I	Naphthalene-d8 (ISTD)	ISTD											5.57 Ams 7/2/19
2)	T	Naphthalene		1.325	1.264	1.159	1.125	1.130	1.098	1.108	1.130	1.107	1.160	6.85
3)	T	2-Methylnaphth...	0.948	0.950	0.938	0.875	0.839	0.840	0.870	0.888	0.885	0.928	0.896	4.73
4)	T	1-Methylnaphth...	0.875	0.834	0.845	0.879	0.832	0.794	0.837	0.851	0.843	0.892	0.848	3.32
5)	I	Acenaphthene-d10 (...	ISTD											6.23
6)	T	Biphenyl		2.078	1.677	1.623	1.568	1.630	1.569	1.621	1.657	1.628	1.672	9.33
7)	T	2,6-Dimethylna...	1.213	1.195	1.071	1.142	1.135	1.168	1.163	1.184	1.234	1.216	1.172	4.08
8)	S	Acenaphthylene...			3.403	2.053	1.852	1.848	1.787	1.824	1.868	1.867	2.063	26.52
9)	T	Acenaphthylene	1.886	1.794	1.726	1.902	1.938	2.043	2.063	2.125	2.199	2.199	1.988	8.27
10)	T	Acenaphthene	1.798	1.536	1.507	1.432	1.387	1.401	1.407	1.424	1.466	1.467	1.483	8.13
11)	T	Dibenzofuran	2.579	1.931	2.003	2.023	2.072	2.165	2.051	2.108	2.163	2.088	2.118	8.35
12)	T	1,6,7-Trimethy...	1.389	1.331	1.363	1.326	1.348	1.476	1.431	1.460	1.528	1.482	1.414	5.06
13)	T	Fluorene	1.991	1.791	1.680	1.736	1.755	1.903	1.825	1.869	1.938	1.862	1.835	5.26
14)	I	Phenanthrene-d10 (...	ISTD											3.73
15)	T	Dibenzothiophene	1.106	1.046	0.970	0.993	1.001	1.031	1.021	1.029	1.058	1.052	1.031	3.70
16)	T	Phenanthrene		1.342	1.198	1.155	1.154	1.195	1.157	1.177	1.210	1.208	1.199	4.82
17)	T	Anthracene	1.047	0.973	0.917	0.997	1.028	1.091	1.116	1.135	1.173	1.174	1.065	8.17
18)	T	Carbazole	1.045	0.936	0.972	0.950	0.998	1.041	1.076	1.085	1.126	1.101	1.033	6.39
19)	T	Fluoranthene	1.277	1.105	1.080	1.111	1.148	1.207	1.220	1.247	1.276	1.266	1.194	6.40
20)	T	Pyrene	1.495	1.253	1.263	1.214	1.221	1.265	1.284	1.315	1.326	1.306	1.294	6.16
21)	I	Chrysene-d12 (ISTD)	ISTD											5.75
22)	T	Benz(a)anthracene	2.222	1.526	1.138	1.007	1.002	1.099	1.115	1.138	1.179	1.165	1.259	29.24
23)	T	Chrysene	1.206	1.107	1.033	1.111	1.079	1.114	1.080	1.112	1.121	1.115	1.108	3.93
24)	I	Perylene-d12 (ISTD)	ISTD											7.03
25)	T	Benzo(b)fluora...	1.064	0.897	0.923	0.952	1.042	1.149	1.180	1.202	1.261	1.257	1.093	12.51
26)	T	Benzo(k)fluora...	1.005	0.810	0.832	0.951	1.061	1.168	1.194	1.241	1.292	1.291	1.085	16.65
27)	T	Benzo(b+k)fluo...	1.035	0.854	0.877	0.970	1.060	1.165	1.191	1.225	1.279	1.276	1.093	14.42
28)	T	Benzo(e)pyrene	1.040	0.897	0.892	1.012	1.033	1.094	1.120	1.160	1.192	1.192	1.063	10.29
29)	S	Benzo(a)pyrene...		0.510	0.487	0.627	0.669	0.790	0.846	0.908	0.944	0.941	0.747	24.05
30)	T	Benzo(a)pyrene	0.690	0.603	0.673	0.777	0.878	1.015	1.076	1.140	1.184	1.174	0.921	24.35
31)	T	Perylene	1.092	0.886	0.986	1.029	0.932	1.054	1.118	1.145	1.214	1.221	1.068	10.54
32)	I	Dibenz(a,h)anthrac...	ISTD											10.11
33)	T	Indeno(1,2,3-c...	1.492	1.264	1.098	1.073	1.096	1.128	1.150	1.165	1.191	1.175	1.183	10.30
34)	T	Dibenz(a,h)ant...	1.214	1.146	1.039	1.144	1.118	1.174	1.210	1.250	1.260	1.242	1.180	5.88
35)	T	Benzo(g,h,i)pe...	0.924	0.833	0.871	0.987	1.024	1.093	1.161	1.191	1.207	1.194	1.049	13.47

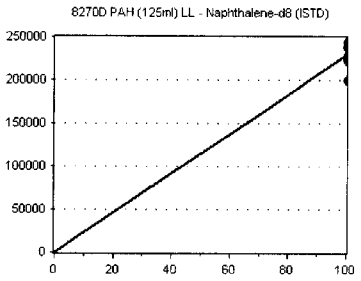
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Naphthalene-d8 (ISTD)

Curve Fit: **AVERAGE RF**

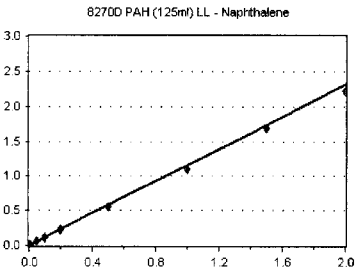


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	226171	2261.710	7.10
9G01051-CAL2	100	237437	2374.370	7.10
9G01051-CAL3	100	200447	2004.470	7.10
9G01051-CAL4	100	245257	2452.570	7.10
9G01051-CAL5	100	237364	2373.640	7.10
9G01051-CAL6	100	237164	2371.640	7.10
9G01051-CAL7	100	222732	2227.320	7.10
9G01051-CAL8	100	224200	2242.000	7.10
9G01051-CAL9	100	228839	2288.390	7.10
9G01051-CALA	100	238727	2387.270	7.10

AVE RF **2298.338** RF RSD **5.51** AVE RT **7.10**

Naphthalene

Curve Fit: **AVERAGE RF**

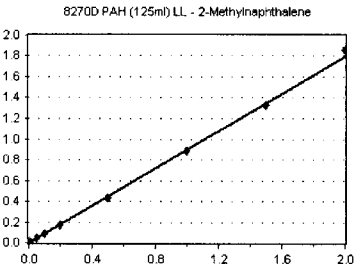


Standard	Concentration	Response	Response Factor	RT
~~9G01051-CAL1~~	~~0.2~~	~~783~~	~~1.731~~	~~7.12~~
9G01051-CAL2	0.4	1258	1.325	7.12
9G01051-CAL3	1	2534	1.264	7.12
9G01051-CAL4	5	14208	1.159	7.12
9G01051-CAL5	10	26697	1.125	7.12
9G01051-CAL6	20	53579	1.130	7.12
9G01051-CAL7	50	122253	1.098	7.12
9G01051-CAL8	100	248338	1.108	7.12
9G01051-CAL9	150	387711	1.130	7.12
9G01051-CALA	200	528470	1.107	7.12

AVE RF **1.160** RF RSD **6.85** AVE RT **7.12**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

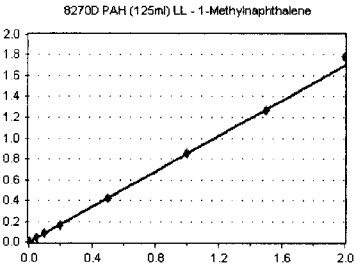


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	429	0.948	7.71
9G01051-CAL2	0.4	902	0.950	7.71
9G01051-CAL3	1	1881	0.938	7.71
9G01051-CAL4	5	10730	0.875	7.71
9G01051-CAL5	10	19906	0.839	7.71
9G01051-CAL6	20	39853	0.840	7.71
9G01051-CAL7	50	96882	0.870	7.71
9G01051-CAL8	100	198999	0.888	7.71
9G01051-CAL9	150	303853	0.885	7.71
9G01051-CALA	200	443011	0.928	7.71

AVE RF **0.896** RF RSD **4.73** AVE RT **7.71**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	396	0.875	7.79
9G01051-CAL2	0.4	792	0.834	7.79
9G01051-CAL3	1	1693	0.845	7.79
9G01051-CAL4	5	10780	0.879	7.79
9G01051-CAL5	10	19757	0.832	7.79
9G01051-CAL6	20	37675	0.794	7.79
9G01051-CAL7	50	93180	0.837	7.79
9G01051-CAL8	100	190884	0.851	7.79
9G01051-CAL9	150	289327	0.843	7.79
9G01051-CALA	200	425660	0.892	7.79

AVE RF **0.848** RF RSD **3.32** AVE RT **7.79**

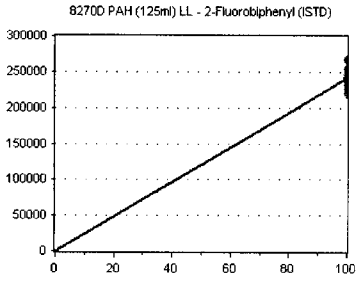
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

2-Fluorobiphenyl (ISTD)

Curve Fit: **AVERAGE RF**

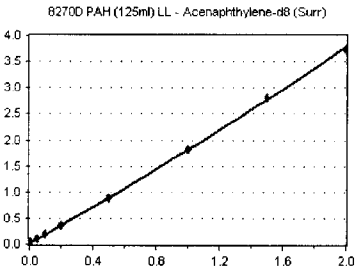


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	227562	2275.620	8.02
9G01051-CAL2	100	246901	2469.010	8.02
9G01051-CAL3	100	220227	2202.270	8.02
9G01051-CAL4	100	254896	2548.960	8.02
9G01051-CAL5	100	241032	2410.320	8.02
9G01051-CAL6	100	231104	2311.040	8.02
9G01051-CAL7	100	237200	2372.000	8.02
9G01051-CAL8	100	243913	2439.130	8.02
9G01051-CAL9	100	239674	2396.740	8.02
9G01051-CALA	100	267153	2671.530	8.02

AVE RF **2409.662** RF RSD **5.61** AVE RT **8.02**

Acenaphthylene-d8 (Surr)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

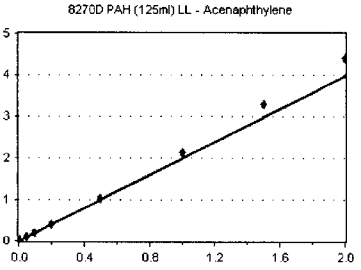


Standard	Concentration	Response	Response Factor	RT
~~9G01051-CAL1~~	~~0.2~~	~~6147~~	~~18.056~~	~~8.48~~
~~9G01051-CAL2~~	~~0.4~~	~~6161~~	~~8.055~~	~~8.48~~
9G01051-CAL3	1	5745	3.403	8.48
9G01051-CAL4	5	19755	2.053	8.48
9G01051-CAL5	10	34491	1.852	8.48
9G01051-CAL6	20	63570	1.848	8.48
9G01051-CAL7	50	158862	1.787	8.48
9G01051-CAL8	100	332809	1.824	8.48
9G01051-CAL9	150	498389	1.868	8.48
9G01051-CALA	200	763403	1.867	8.48

AVE RF **2.063** RF RSD **26.52** AVE RT **8.48**

Acenaphthylene

Curve Fit: **AVERAGE RF**

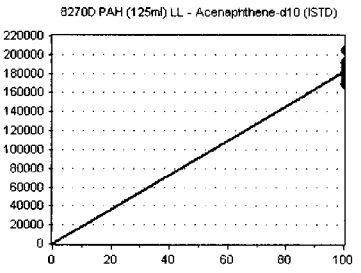


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	642	1.886	8.49
9G01051-CAL2	0.4	1372	1.794	8.49
9G01051-CAL3	1	2915	1.726	8.49
9G01051-CAL4	5	18304	1.902	8.49
9G01051-CAL5	10	36078	1.938	8.49
9G01051-CAL6	20	70272	2.043	8.49
9G01051-CAL7	50	183466	2.063	8.49
9G01051-CAL8	100	387885	2.125	8.49
9G01051-CAL9	150	586723	2.199	8.49
9G01051-CALA	200	899358	2.199	8.49

AVE RF **1.988** RF RSD **8.27** AVE RT **8.49**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	170224	1702.240	8.61
9G01051-CAL2	100	191205	1912.050	8.61
9G01051-CAL3	100	168841	1688.410	8.61
9G01051-CAL4	100	192433	1924.330	8.61
9G01051-CAL5	100	186187	1861.870	8.61
9G01051-CAL6	100	172012	1720.120	8.61
9G01051-CAL7	100	177842	1778.420	8.62
9G01051-CAL8	100	182494	1824.940	8.61
9G01051-CAL9	100	177847	1778.470	8.61
9G01051-CALA	100	204462	2044.620	8.61

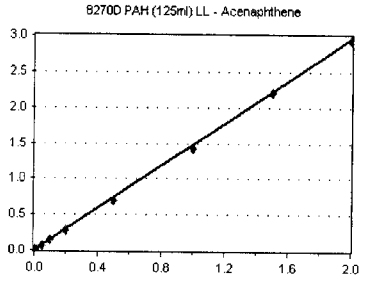
AVE RF **1823.547** RF RSD **6.23** AVE RT **8.61**

Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Acenaphthene

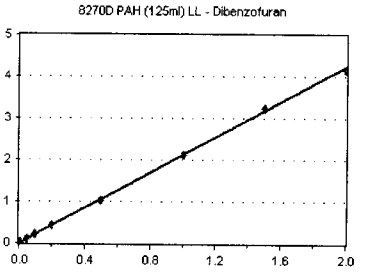


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	612	1.798	8.64
9G01051-CAL2	0.4	1175	1.536	8.64
9G01051-CAL3	1	2544	1.507	8.64
9G01051-CAL4	5	13774	1.432	8.64
9G01051-CAL5	10	25823	1.387	8.64
9G01051-CAL6	20	48203	1.401	8.64
9G01051-CAL7	50	125153	1.407	8.64
9G01051-CAL8	100	259899	1.424	8.64
9G01051-CAL9	150	391103	1.466	8.64
9G01051-CALA	200	600092	1.467	8.64

AVE RF **1.483** RF RSD **8.13** AVE RT **8.64**

Dibenzofuran

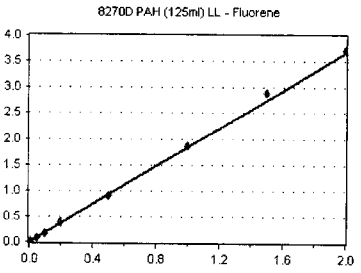


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	878	2.579	8.79
9G01051-CAL2	0.4	1477	1.931	8.79
9G01051-CAL3	1	3382	2.003	8.79
9G01051-CAL4	5	19460	2.023	8.79
9G01051-CAL5	10	38578	2.072	8.79
9G01051-CAL6	20	74487	2.165	8.79
9G01051-CAL7	50	182405	2.051	8.79
9G01051-CAL8	100	384696	2.108	8.79
9G01051-CAL9	150	576993	2.163	8.79
9G01051-CALA	200	853703	2.088	8.79

AVE RF **2.118** RF RSD **8.35** AVE RT **8.79**

Fluorene

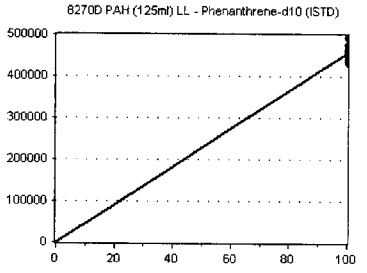


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	678	1.991	9.09
9G01051-CAL2	0.4	1370	1.791	9.09
9G01051-CAL3	1	2836	1.680	9.09
9G01051-CAL4	5	16703	1.736	9.09
9G01051-CAL5	10	32684	1.755	9.09
9G01051-CAL6	20	65459	1.903	9.09
9G01051-CAL7	50	162311	1.825	9.09
9G01051-CAL8	100	341047	1.869	9.09
9G01051-CAL9	150	516977	1.938	9.09
9G01051-CALA	200	761219	1.862	9.09

AVE RF **1.835** RF RSD **5.26** AVE RT **9.09**

Phenanthrene-d10 (ISTD)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	441148	4411.480	9.92
9G01051-CAL2	100	449057	4490.570	9.92
9G01051-CAL3	100	434435	4344.350	9.92
9G01051-CAL4	100	458424	4584.240	9.92
9G01051-CAL5	100	454809	4548.090	9.92
9G01051-CAL6	100	453703	4537.030	9.92
9G01051-CAL7	100	449650	4496.500	9.92
9G01051-CAL8	100	464459	4644.590	9.92
9G01051-CAL9	100	474967	4749.670	9.92
9G01051-CALA	100	493691	4936.910	9.92

AVE RF **4574.343** RF RSD **3.73** AVE RT **9.92**

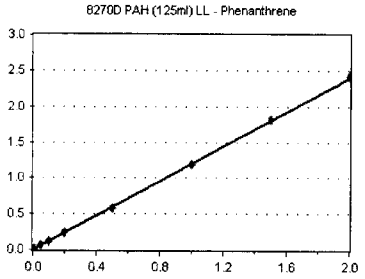
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Phenanthrene

Curve Fit: **AVERAGE RF**

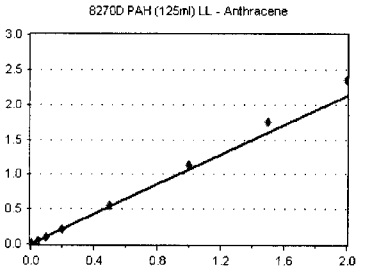


Standard	Concentration	Response	Response Factor	RT
~~9G01051-CAL1~~	~~0.2~~	~~1477~~	~~1.674~~	~~9.94~~
9G01051-CAL2	0.4	2410	1.342	9.94
9G01051-CAL3	1	5203	1.198	9.93
9G01051-CAL4	5	26479	1.155	9.93
9G01051-CAL5	10	52493	1.154	9.93
9G01051-CAL6	20	108414	1.195	9.93
9G01051-CAL7	50	260092	1.157	9.93
9G01051-CAL8	100	546686	1.177	9.94
9G01051-CAL9	150	861794	1.210	9.94
9G01051-CALA	200	1192385	1.208	9.94

AVE RF **1.199** RF RSD **4.82** AVE RT **9.94**

Anthracene

Curve Fit: **AVERAGE RF**

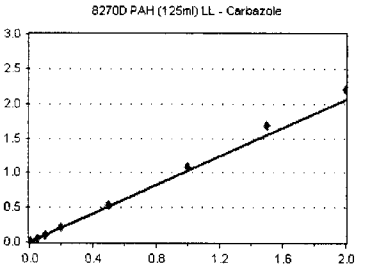


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	924	1.047	9.98
9G01051-CAL2	0.4	1748	0.973	9.98
9G01051-CAL3	1	3985	0.917	9.98
9G01051-CAL4	5	22858	0.997	9.98
9G01051-CAL5	10	46769	1.028	9.98
9G01051-CAL6	20	99029	1.091	9.98
9G01051-CAL7	50	250861	1.116	9.98
9G01051-CAL8	100	526935	1.135	9.98
9G01051-CAL9	150	835574	1.173	9.98
9G01051-CALA	200	1159111	1.174	9.98

AVE RF **1.065** RF RSD **8.17** AVE RT **9.98**

Carbazole

Curve Fit: **AVERAGE RF**

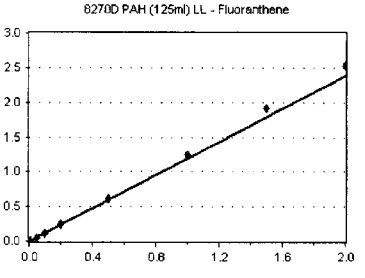


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	922	1.045	10.12
9G01051-CAL2	0.4	1682	0.936	10.12
9G01051-CAL3	1	4222	0.972	10.12
9G01051-CAL4	5	21769	0.950	10.12
9G01051-CAL5	10	45411	0.998	10.12
9G01051-CAL6	20	94428	1.041	10.12
9G01051-CAL7	50	241951	1.076	10.12
9G01051-CAL8	100	504021	1.085	10.12
9G01051-CAL9	150	802342	1.126	10.12
9G01051-CALA	200	1086682	1.101	10.12

AVE RF **1.033** RF RSD **6.39** AVE RT **10.12**

Fluoranthene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	1127	1.277	11.04
9G01051-CAL2	0.4	1984	1.105	11.04
9G01051-CAL3	1	4690	1.080	11.04
9G01051-CAL4	5	25465	1.111	11.04
9G01051-CAL5	10	52232	1.148	11.04
9G01051-CAL6	20	109483	1.207	11.04
9G01051-CAL7	50	274291	1.220	11.04
9G01051-CAL8	100	579086	1.247	11.04
9G01051-CAL9	150	908792	1.276	11.04
9G01051-CALA	200	1250210	1.266	11.04

AVE RF **1.194** RF RSD **6.40** AVE RT **11.04**

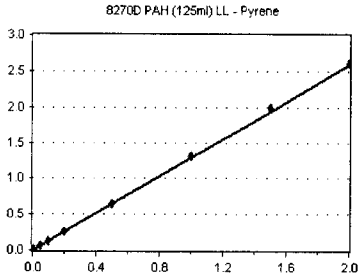
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Pyrene

Curve Fit: **AVERAGE RF**

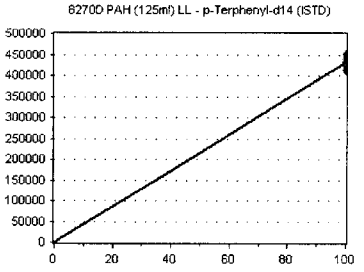


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	1319	1.495	11.30
9G01051-CAL2	0.4	2251	1.253	11.30
9G01051-CAL3	1	5488	1.263	11.30
9G01051-CAL4	5	27834	1.214	11.30
9G01051-CAL5	10	55553	1.221	11.30
9G01051-CAL6	20	114772	1.265	11.30
9G01051-CAL7	50	288704	1.284	11.30
9G01051-CAL8	100	610600	1.315	11.30
9G01051-CAL9	150	944807	1.326	11.30
9G01051-CALA	200	1289789	1.306	11.31

AVE RF **1.294** RF RSD **6.16** AVE RT **11.30**

p-Terphenyl-d14 (ISTD)

Curve Fit: **AVERAGE RF**

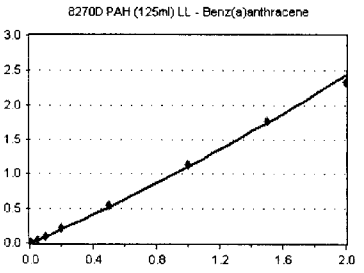


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	413880	4138.800	11.48
9G01051-CAL2	100	412625	4126.250	11.48
9G01051-CAL3	100	424512	4245.120	11.48
9G01051-CAL4	100	430869	4308.690	11.48
9G01051-CAL5	100	432080	4320.800	11.48
9G01051-CAL6	100	433689	4336.890	11.48
9G01051-CAL7	100	434321	4343.210	11.48
9G01051-CAL8	100	441046	4410.460	11.48
9G01051-CAL9	100	451005	4510.050	11.48
9G01051-CALA	100	450750	4507.500	11.48

AVE RF **4324.777** RF RSD **3.05** AVE RT **11.48**

Benz(a)anthracene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

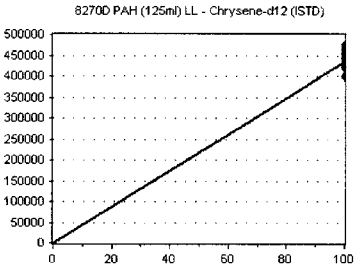


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	1777	2.222	13.25
9G01051-CAL2	0.4	2448	1.526	13.24
9G01051-CAL3	1	4814	1.138	13.24
9G01051-CAL4	5	21489	1.007	13.24
9G01051-CAL5	10	42737	1.002	13.24
9G01051-CAL6	20	97344	1.099	13.24
9G01051-CAL7	50	247094	1.115	13.24
9G01051-CAL8	100	516954	1.138	13.24
9G01051-CAL9	150	821572	1.179	13.24
9G01051-CALA	200	1105899	1.165	13.25

AVE RF **1.259** RF RSD **29.24** AVE RT **13.24**

Chrysene-d12 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	399823	3998.230	13.26
9G01051-CAL2	100	400979	4009.790	13.26
9G01051-CAL3	100	422954	4229.540	13.26
9G01051-CAL4	100	426655	4266.550	13.26
9G01051-CAL5	100	426442	4264.420	13.26
9G01051-CAL6	100	442821	4428.210	13.26
9G01051-CAL7	100	443314	4433.140	13.26
9G01051-CAL8	100	454246	4542.460	13.26
9G01051-CAL9	100	464736	4647.360	13.27
9G01051-CALA	100	474804	4748.040	13.27

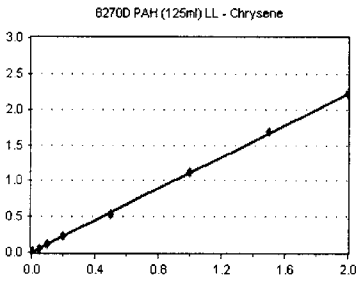
AVE RF **4356.774** RF RSD **5.75** AVE RT **13.26**

Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Chrysene

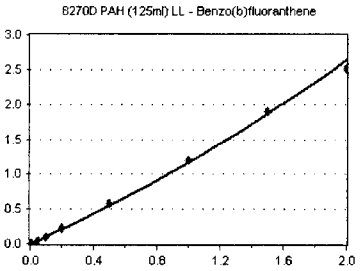


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	964	1.206	13.31
9G01051-CAL2	0.4	1776	1.107	13.31
9G01051-CAL3	1	4368	1.033	13.31
9G01051-CAL4	5	23698	1.111	13.31
9G01051-CAL5	10	46002	1.079	13.31
9G01051-CAL6	20	98622	1.114	13.31
9G01051-CAL7	50	239451	1.080	13.32
9G01051-CAL8	100	505327	1.112	13.32
9G01051-CAL9	150	781486	1.121	13.32
9G01051-CALA	200	1058383	1.115	13.33

AVE RF **1.108** RF RSD **3.93** AVE RT **13.31**

Benzo(b)fluoranthene

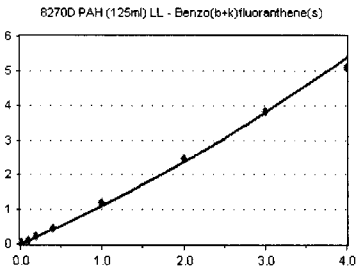


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	739	1.064	15.64
9G01051-CAL2	0.4	1236	0.897	15.65
9G01051-CAL3	1	3521	0.923	15.65
9G01051-CAL4	5	18004	0.952	15.64
9G01051-CAL5	10	38876	1.042	15.64
9G01051-CAL6	20	92479	1.149	15.64
9G01051-CAL7	50	232462	1.180	15.65
9G01051-CAL8	100	501350	1.202	15.65
9G01051-CAL9	150	785531	1.261	15.66
9G01051-CALA	200	1051021	1.257	15.66

AVE RF **1.093** RF RSD **12.51** AVE RT **15.65**

Benzo(b+k)fluoranthene(s)

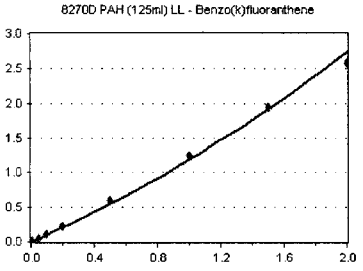


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.4	1437	1.035	15.64
9G01051-CAL2	0.8	2352	0.854	15.65
9G01051-CAL3	2	6695	0.877	15.65
9G01051-CAL4	10	36706	0.970	15.64
9G01051-CAL5	20	79081	1.060	15.71
9G01051-CAL6	40	187520	1.165	15.64
9G01051-CAL7	100	469282	1.191	15.71
9G01051-CAL8	200	1022018	1.225	15.72
9G01051-CAL9	300	1593161	1.279	15.73
9G01051-CALA	400	2134617	1.276	15.73

AVE RF **1.093** RF RSD **14.42** AVE RT **15.68**

Benzo(k)fluoranthene



Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	698	1.005	15.71
9G01051-CAL2	0.4	1115	0.810	15.71
9G01051-CAL3	1	3174	0.832	15.71
9G01051-CAL4	5	17999	0.951	15.71
9G01051-CAL5	10	39586	1.061	15.71
9G01051-CAL6	20	94005	1.168	15.71
9G01051-CAL7	50	235280	1.194	15.71
9G01051-CAL8	100	517957	1.241	15.72
9G01051-CAL9	150	804711	1.292	15.73
9G01051-CALA	200	1079720	1.291	15.73

AVE RF **1.085** RF RSD **16.65** AVE RT **15.71**

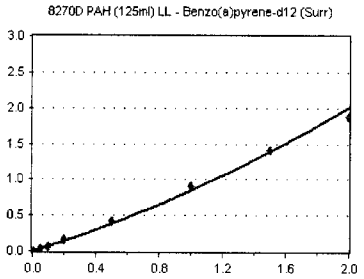
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Benzo(a)pyrene-d12 (Surr)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

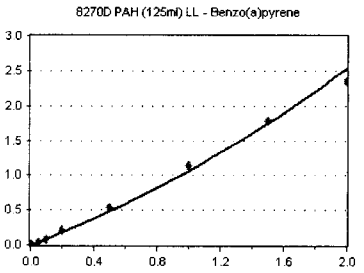


Standard	Concentration	Response	Response Factor	RT
~~9G01051-CAL1~~	~~0.2~~	~~411~~	~~0.592~~	~~16.32~~
9G01051-CAL2	0.4	703	0.510	16.33
9G01051-CAL3	1	1857	0.487	16.32
9G01051-CAL4	5	11870	0.627	16.33
9G01051-CAL5	10	24957	0.669	16.33
9G01051-CAL6	20	63553	0.790	16.33
9G01051-CAL7	50	166645	0.846	16.33
9G01051-CAL8	100	378999	0.908	16.34
9G01051-CAL9	150	587870	0.944	16.34
9G01051-CALA	200	787130	0.941	16.35

AVE RF **0.747** RF RSD **24.05** AVE RT **16.33**

Benzo(a)pyrene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

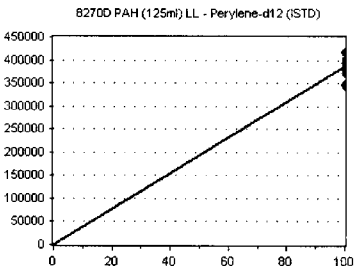


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	479	0.690	16.38
9G01051-CAL2	0.4	830	0.603	16.37
9G01051-CAL3	1	2569	0.673	16.38
9G01051-CAL4	5	14702	0.777	16.38
9G01051-CAL5	10	32764	0.878	16.38
9G01051-CAL6	20	81687	1.015	16.38
9G01051-CAL7	50	211927	1.076	16.39
9G01051-CAL8	100	475524	1.140	16.39
9G01051-CAL9	150	737782	1.184	16.40
9G01051-CALA	200	981717	1.174	16.41

AVE RF **0.921** RF RSD **24.35** AVE RT **16.39**

Perylene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

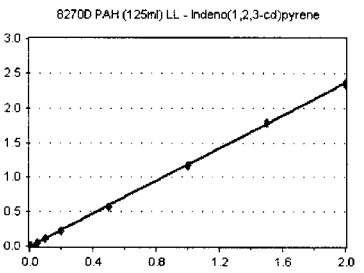


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	347189	3471.890	16.52
9G01051-CAL2	100	344338	3443.380	16.52
9G01051-CAL3	100	381661	3816.610	16.52
9G01051-CAL4	100	378340	3783.400	16.52
9G01051-CAL5	100	373007	3730.070	16.52
9G01051-CAL6	100	402383	4023.830	16.52
9G01051-CAL7	100	394032	3940.320	16.53
9G01051-CAL8	100	417215	4172.150	16.53
9G01051-CAL9	100	415251	4152.510	16.53
9G01051-CALA	100	418167	4181.670	16.53

AVE RF **3871.583** RF RSD **7.03** AVE RT **16.52**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	885	1.492	18.83
9G01051-CAL2	0.4	1492	1.264	18.84
9G01051-CAL3	1	3749	1.098	18.84
9G01051-CAL4	5	17697	1.073	18.84
9G01051-CAL5	10	34953	1.096	18.83
9G01051-CAL6	20	76588	1.128	18.84
9G01051-CAL7	50	198968	1.150	18.84
9G01051-CAL8	100	454748	1.165	18.85
9G01051-CAL9	150	677855	1.191	18.85
9G01051-CALA	200	911198	1.175	18.86

AVE RF **1.183** RF RSD **10.30** AVE RT **18.84**

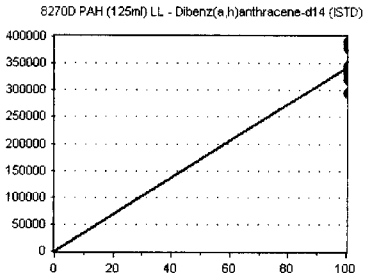
Element Calibration Review Sheet

Calibration ID: **A9G0205** Instrument: **SV-GCMS8** Calibration Date: **07/02/2019**

Analysis: **8270D PAH (125ml) LL** Instrument Cal ID: **A9G0205**

Dibenz(a,h)anthracene-d14 (ISTD)

Curve Fit: **AVERAGE RF**

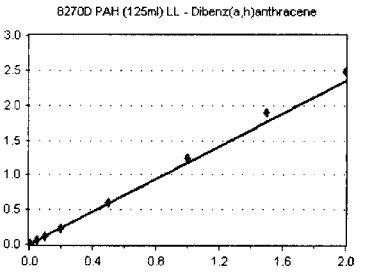


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	100	296516	2965.160	18.84
9G01051-CAL2	100	295116	2951.160	18.84
9G01051-CAL3	100	341309	3413.090	18.84
9G01051-CAL4	100	329943	3299.430	18.84
9G01051-CAL5	100	318957	3189.570	18.84
9G01051-CAL6	100	339347	3393.470	18.84
9G01051-CAL7	100	345981	3459.810	18.84
9G01051-CAL8	100	390282	3902.820	18.84
9G01051-CAL9	100	379328	3793.280	18.85
9G01051-CALA	100	387820	3878.200	18.85

AVE RF **3424.599** RF RSD **10.11** AVE RT **18.84**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**

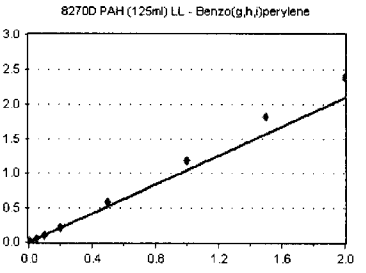


Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	720	1.214	18.89
9G01051-CAL2	0.4	1353	1.146	18.90
9G01051-CAL3	1	3547	1.039	18.90
9G01051-CAL4	5	18877	1.144	18.90
9G01051-CAL5	10	35647	1.118	18.90
9G01051-CAL6	20	79659	1.174	18.90
9G01051-CAL7	50	209258	1.210	18.91
9G01051-CAL8	100	487911	1.250	18.91
9G01051-CAL9	150	716680	1.260	18.92
9G01051-CALA	200	963080	1.242	18.93

AVE RF **1.180** RF RSD **5.88** AVE RT **18.91**

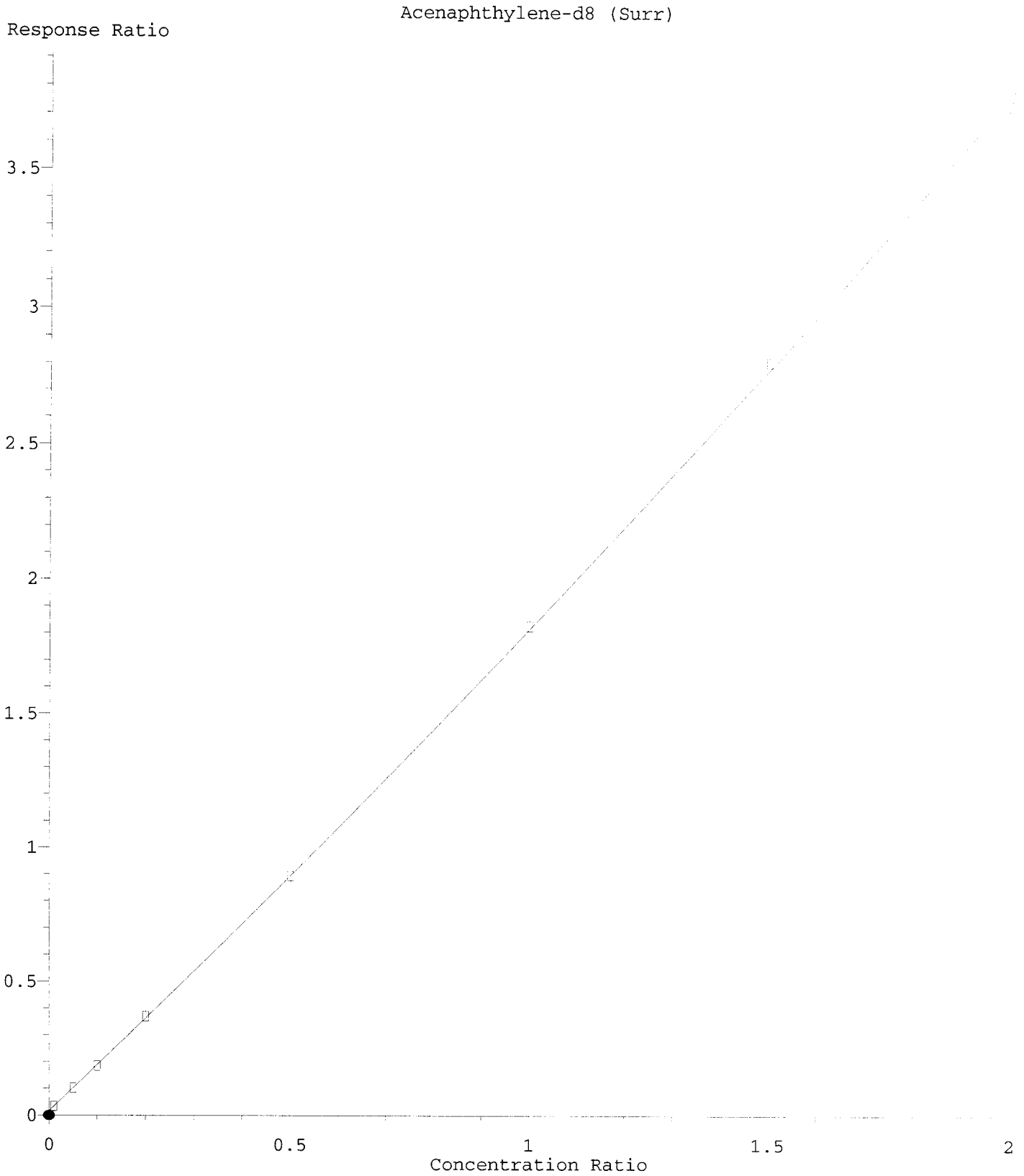
Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9G01051-CAL1	0.2	548	0.924	19.34
9G01051-CAL2	0.4	983	0.833	19.36
9G01051-CAL3	1	2972	0.871	19.35
9G01051-CAL4	5	16282	0.987	19.35
9G01051-CAL5	10	32675	1.024	19.35
9G01051-CAL6	20	74206	1.093	19.35
9G01051-CAL7	50	200896	1.161	19.36
9G01051-CAL8	100	464914	1.191	19.37
9G01051-CAL9	150	686846	1.207	19.38
9G01051-CALA	200	926323	1.194	19.39

AVE RF **1.049** RF RSD **13.47** AVE RT **19.36**

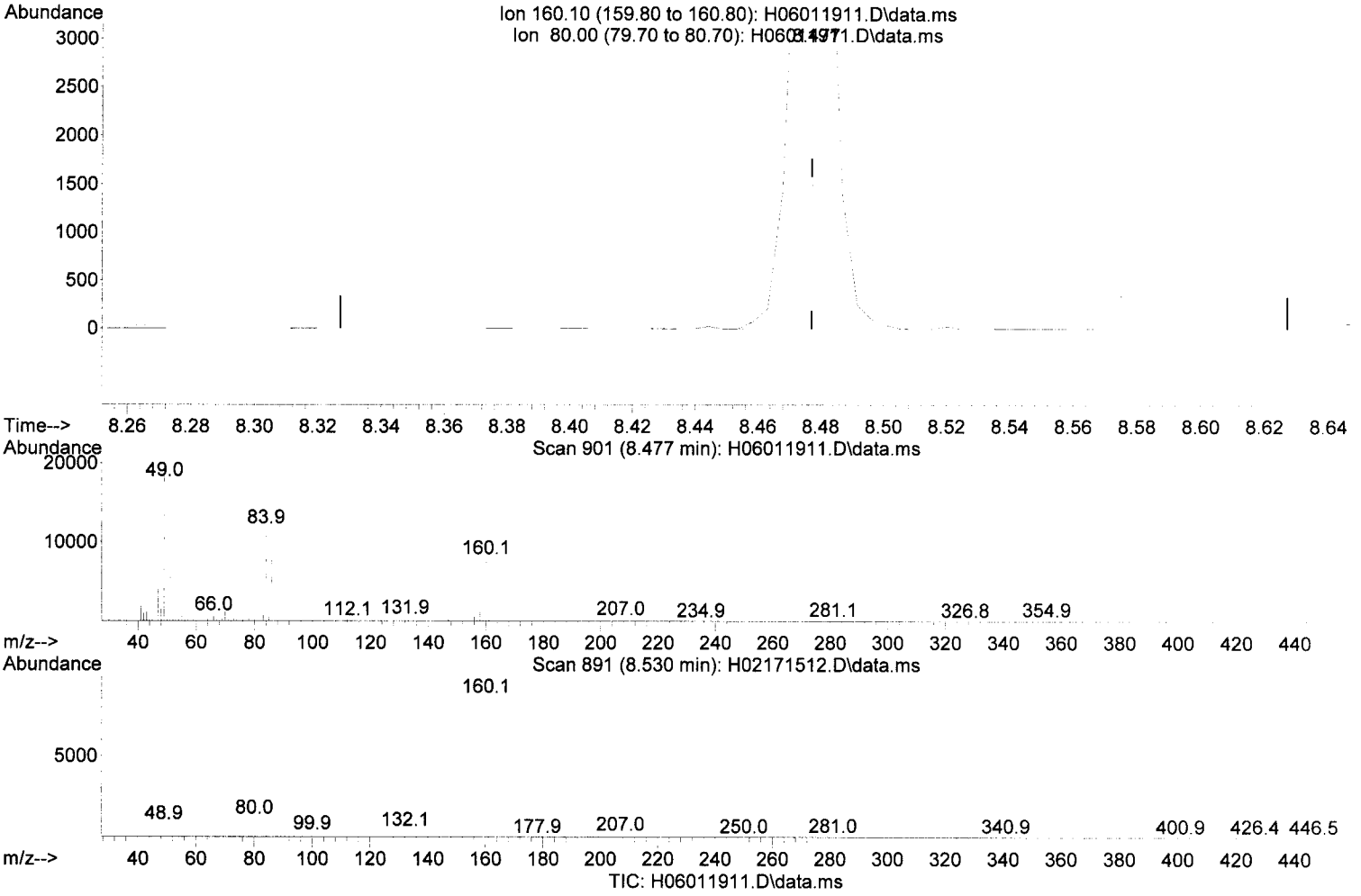


R = 8.18e-002 A*A + 1.71e+000 A + 1.68e-002
Coef of Det (r^2) = 1.000 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

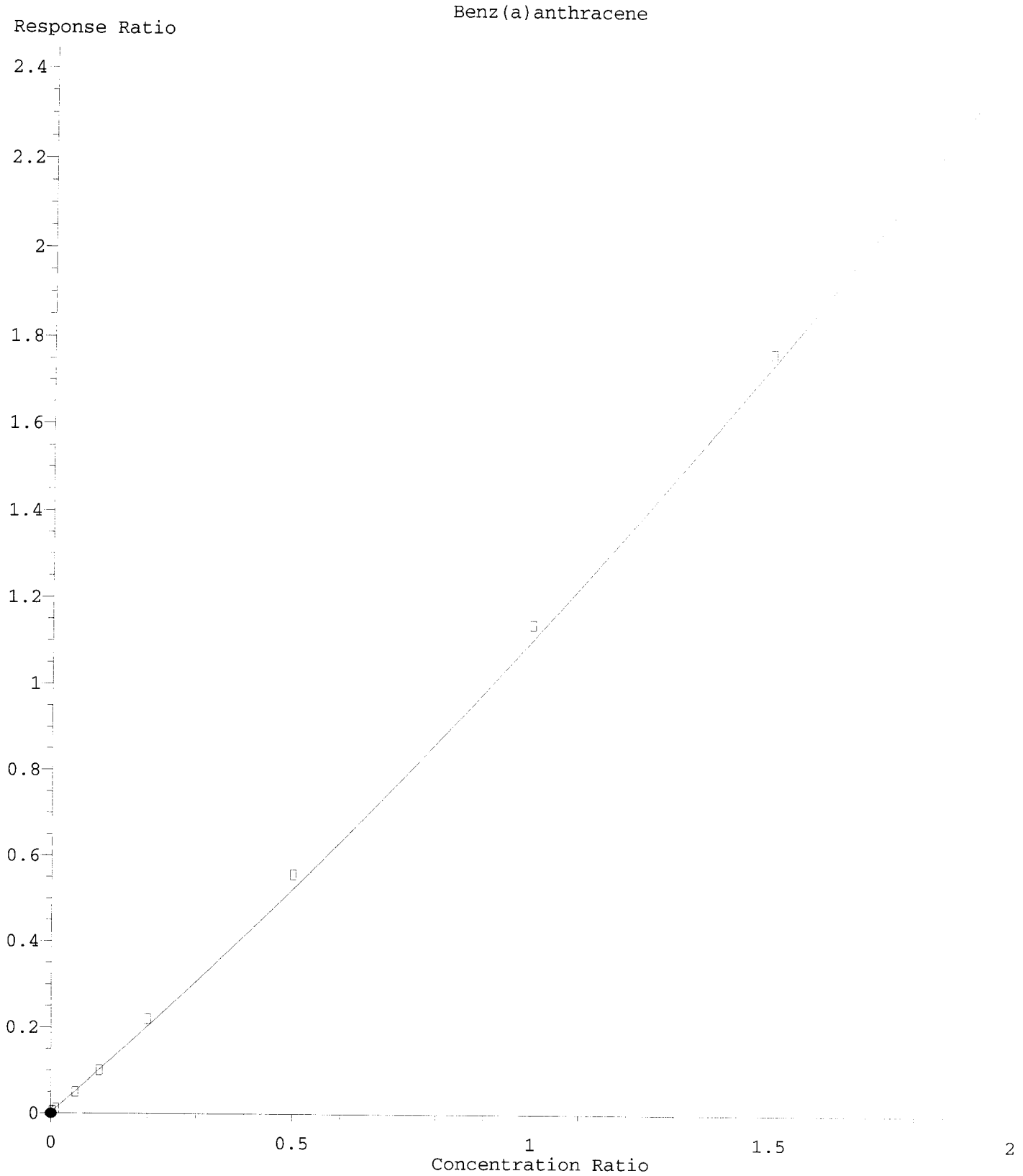


(8) Acenaphthylene-d8 (Surr) (S)

8.477min (+ 0.000) 0.47 ng/ml m

response 4234

Ion	Exp%	Act%
160.10	100.00	100.00
80.00	12.30	18.95
0.00	0.00	0.00
0.00	0.00	0.00

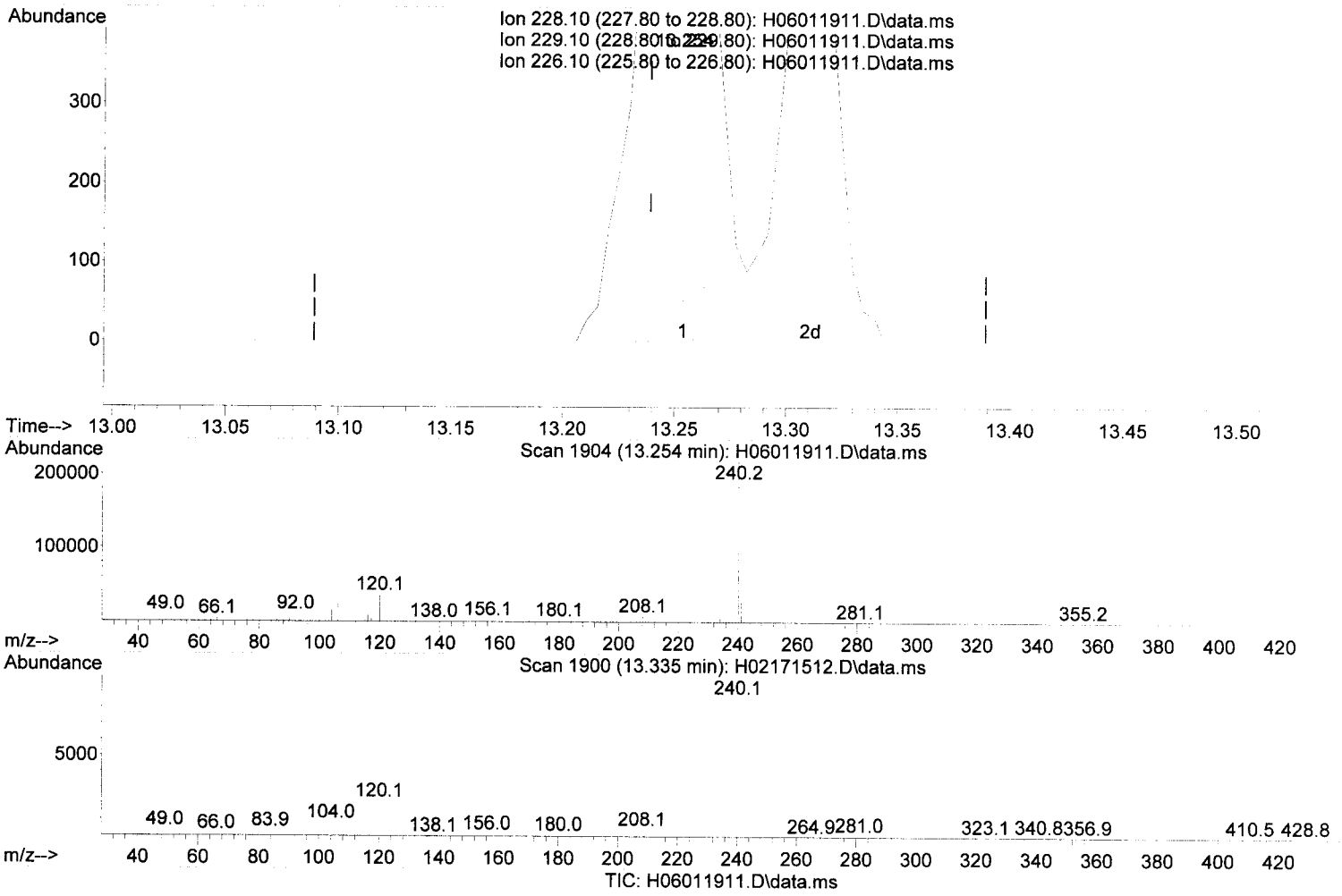


R = 1.16e-001 A*A + 9.85e-001 A + 2.38e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

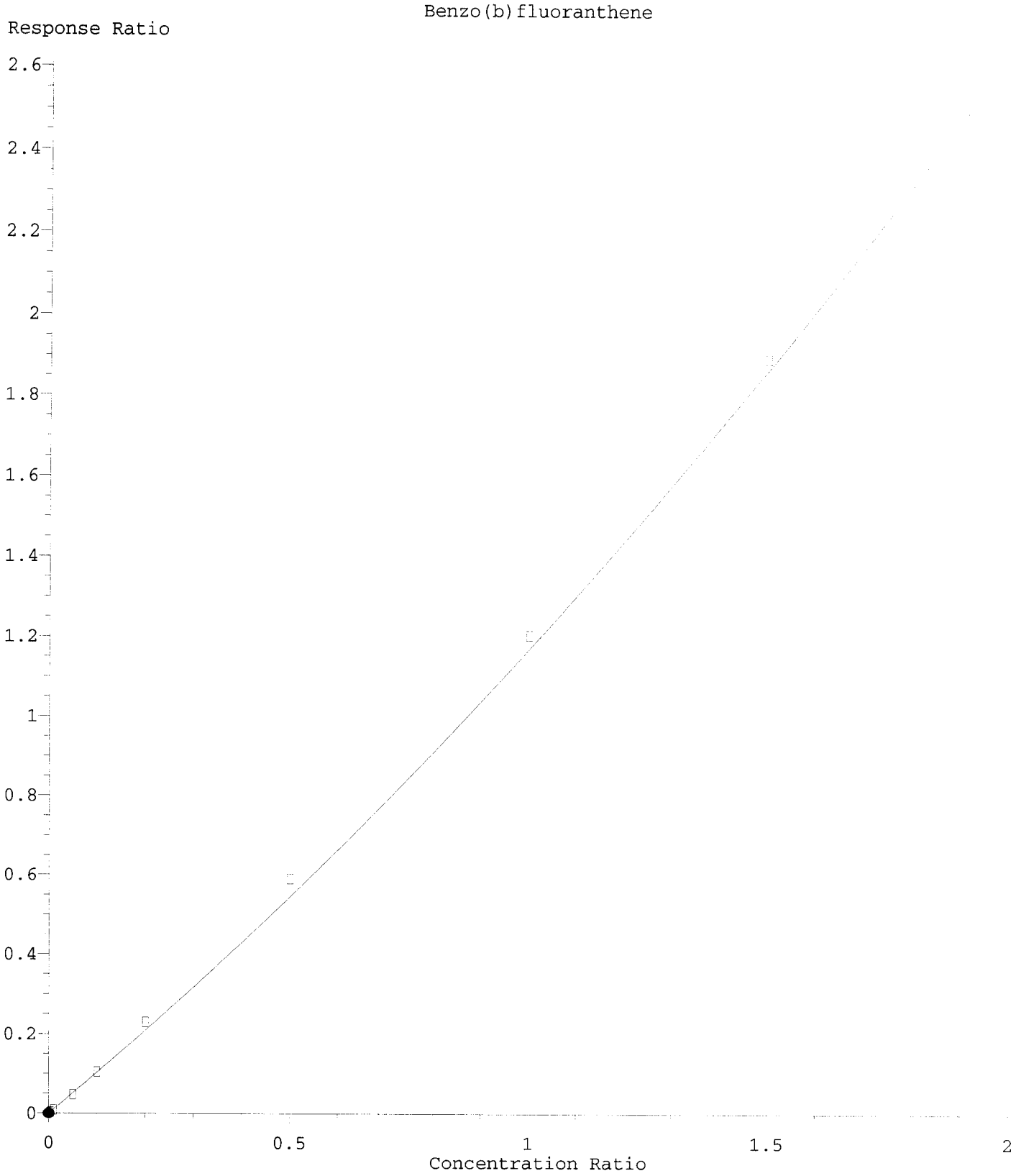


(22) Benz(a)anthracene (T)

13.254min (+ 0.015) 0.05 ng/ml m ✓

response 1136

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.10	22.01
226.10	26.10	6.17
0.00	0.00	0.00

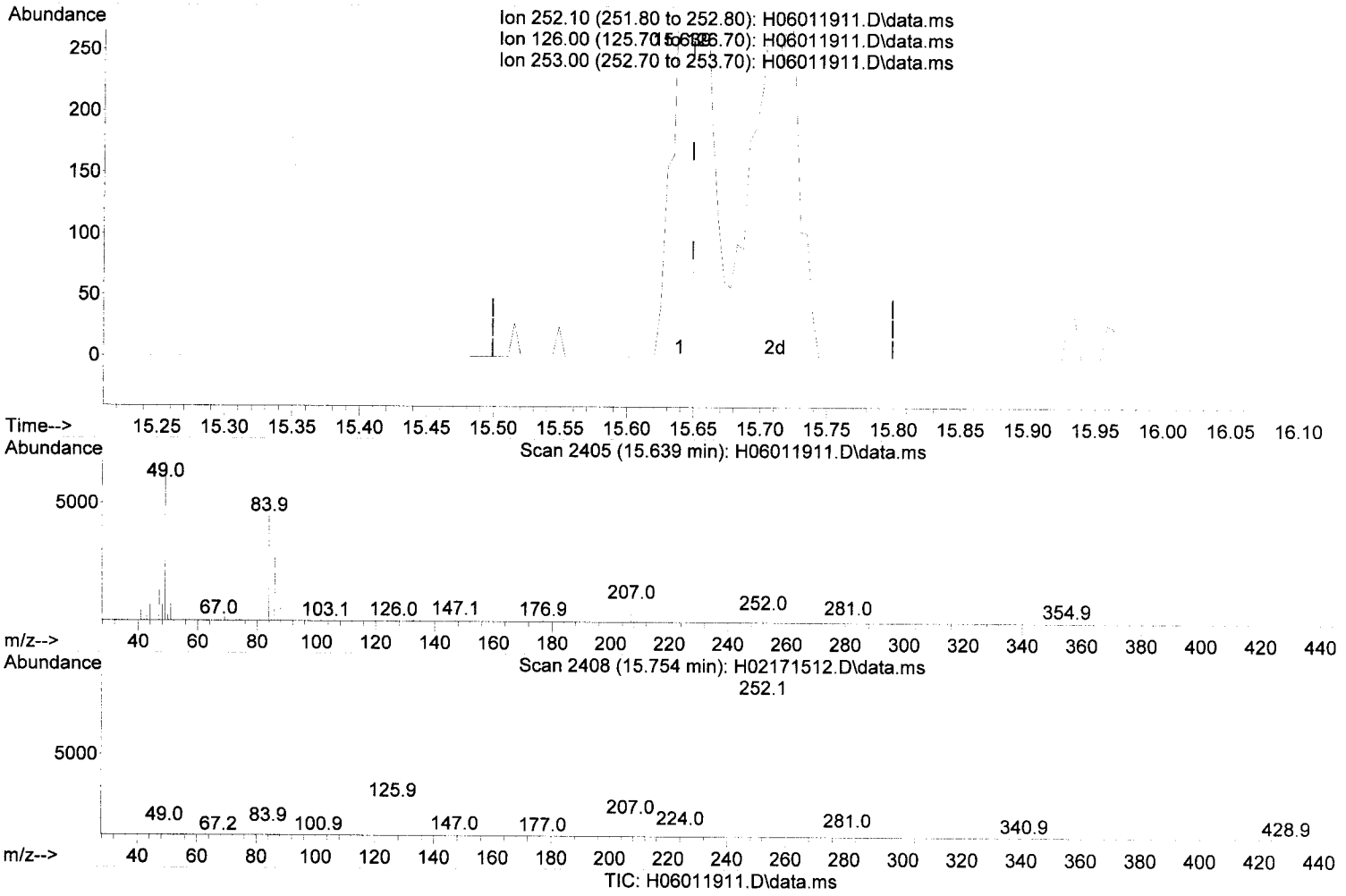


R = 1.51e-001 A*A + 1.02e+000 A - 4.88e-005
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

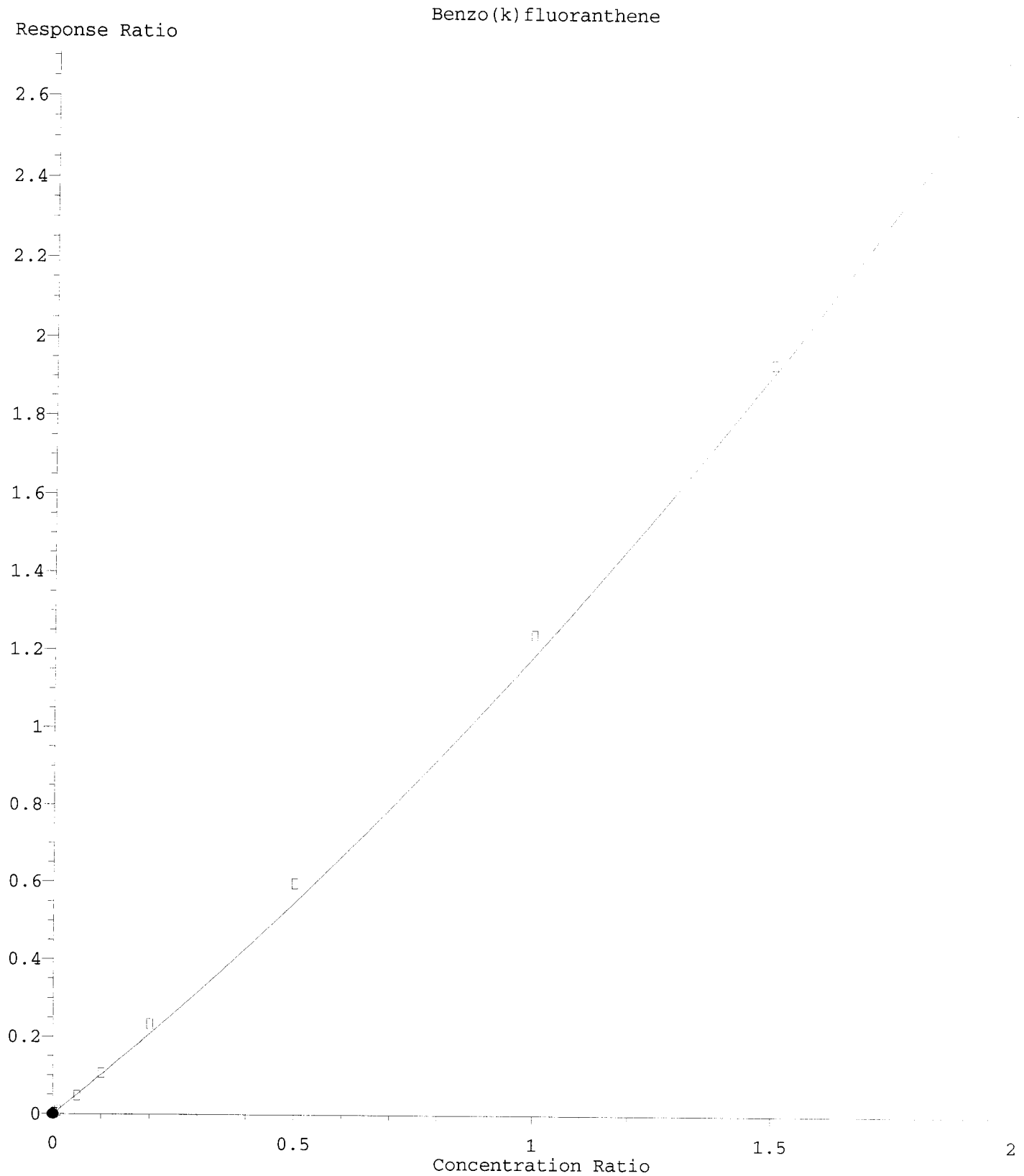


(25) Benzo(b)fluoranthene (T)

15.639min (-0.010) 0.07 ng/ml m ✓

response 220

Ion	Exp%	Act%
252.10	100.00	100.00
126.00	22.30	18.23
253.00	22.60	24.63
0.00	0.00	0.00

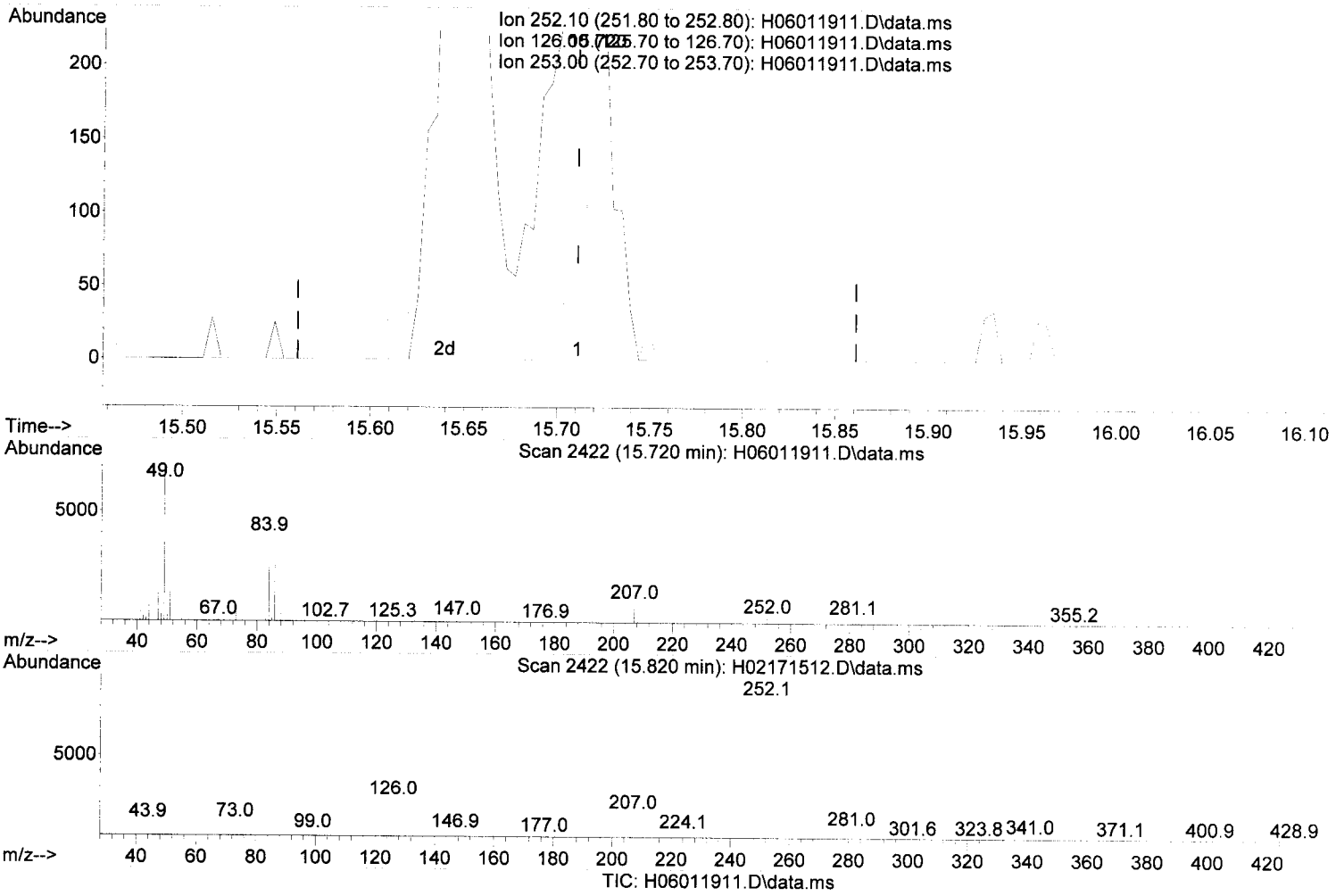


R = 1.80e-001 A*A + 1.01e+000 A - 2.11e-004
Coef of Det (r^2) = 0.990 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

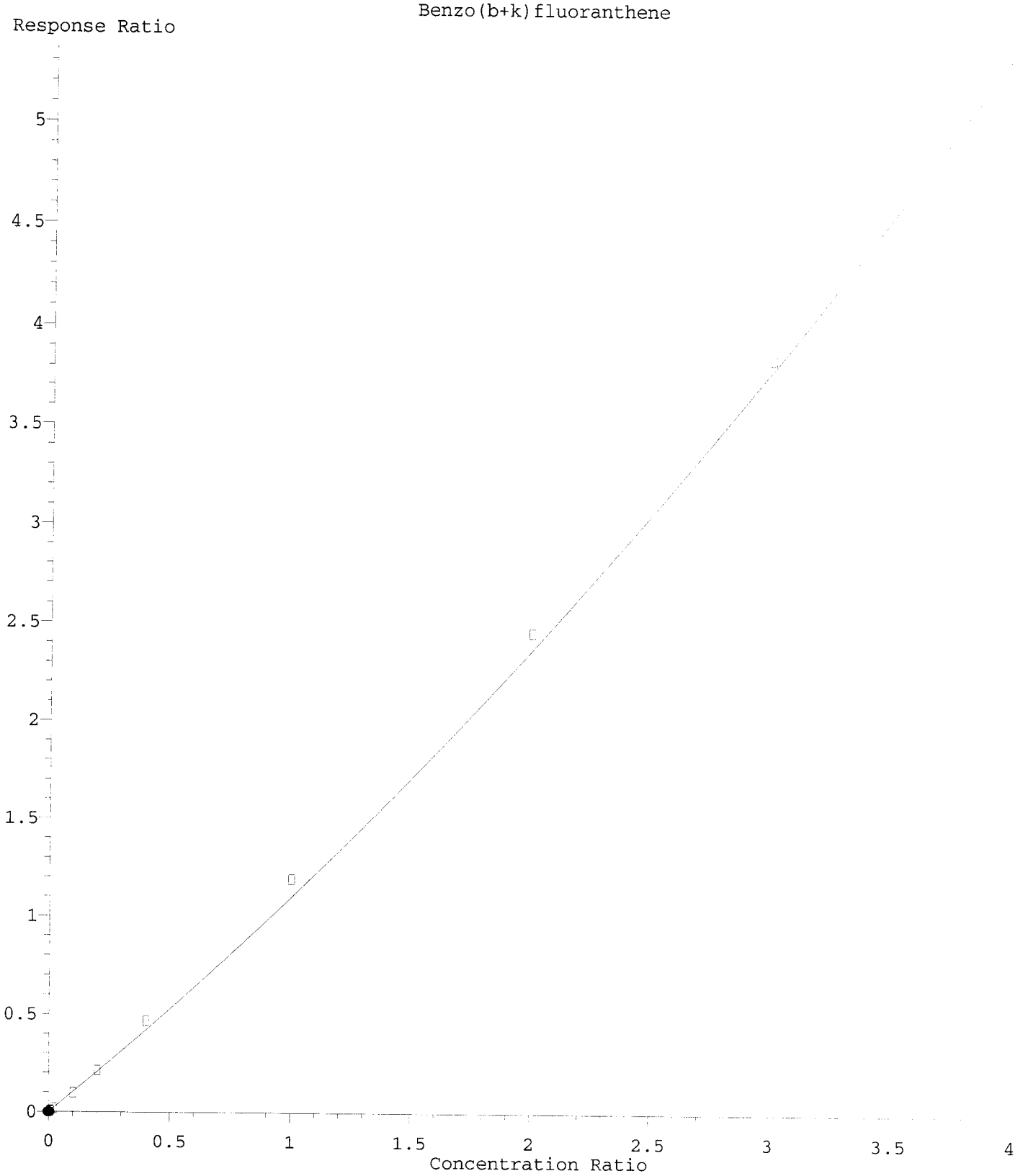


(26) Benzo(k)fluoranthene (T)

15.720min (+ 0.009) 0.09 ng/ml m

response 233

Ion	Exp%	Act%
252.10	100.00	100.00
126.00	25.80	0.00
253.00	21.50	13.96
0.00	0.00	0.00

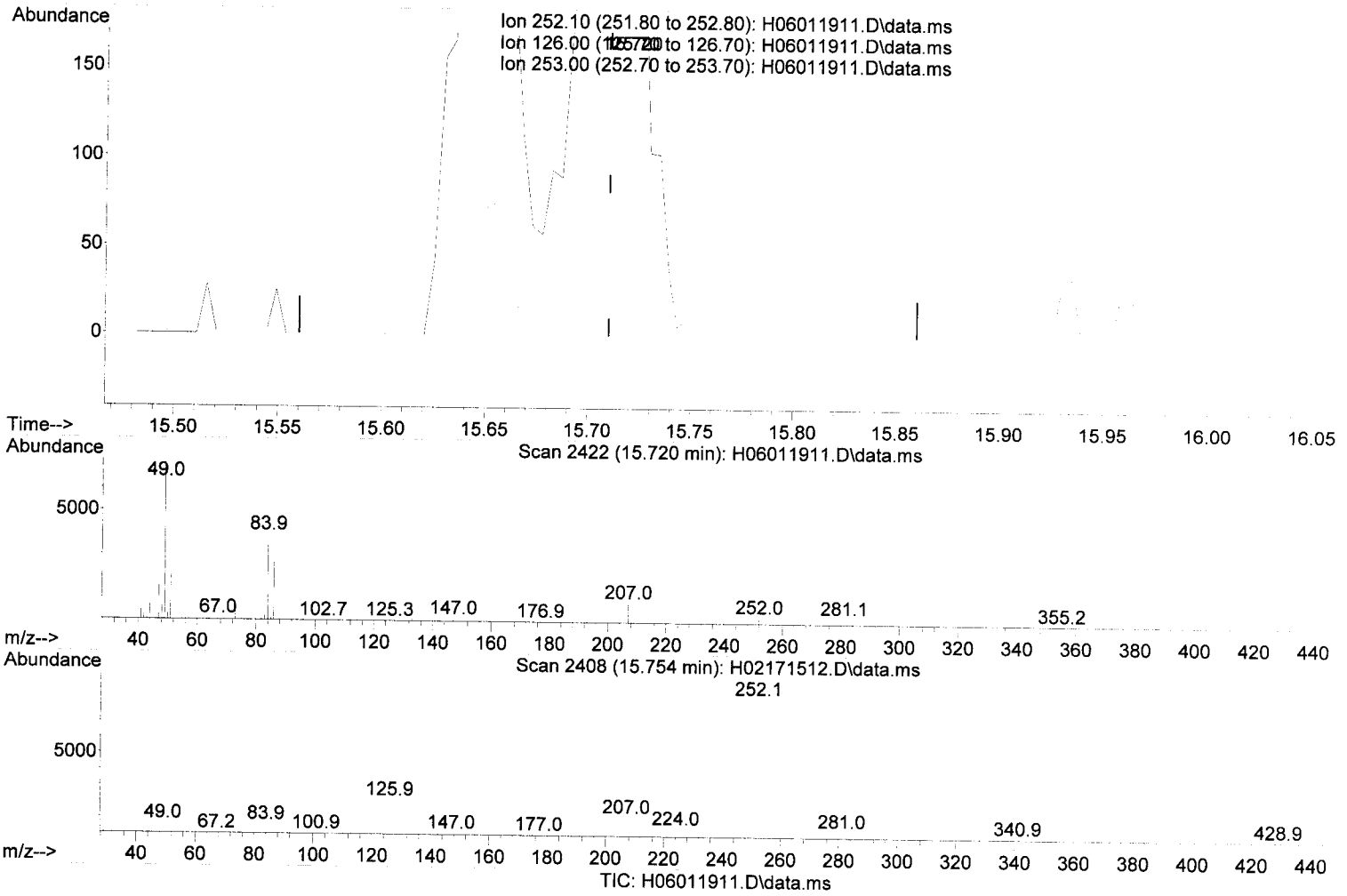


R = 8.09e-002 A*A + 1.02e+000 A - 3.03e-004
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

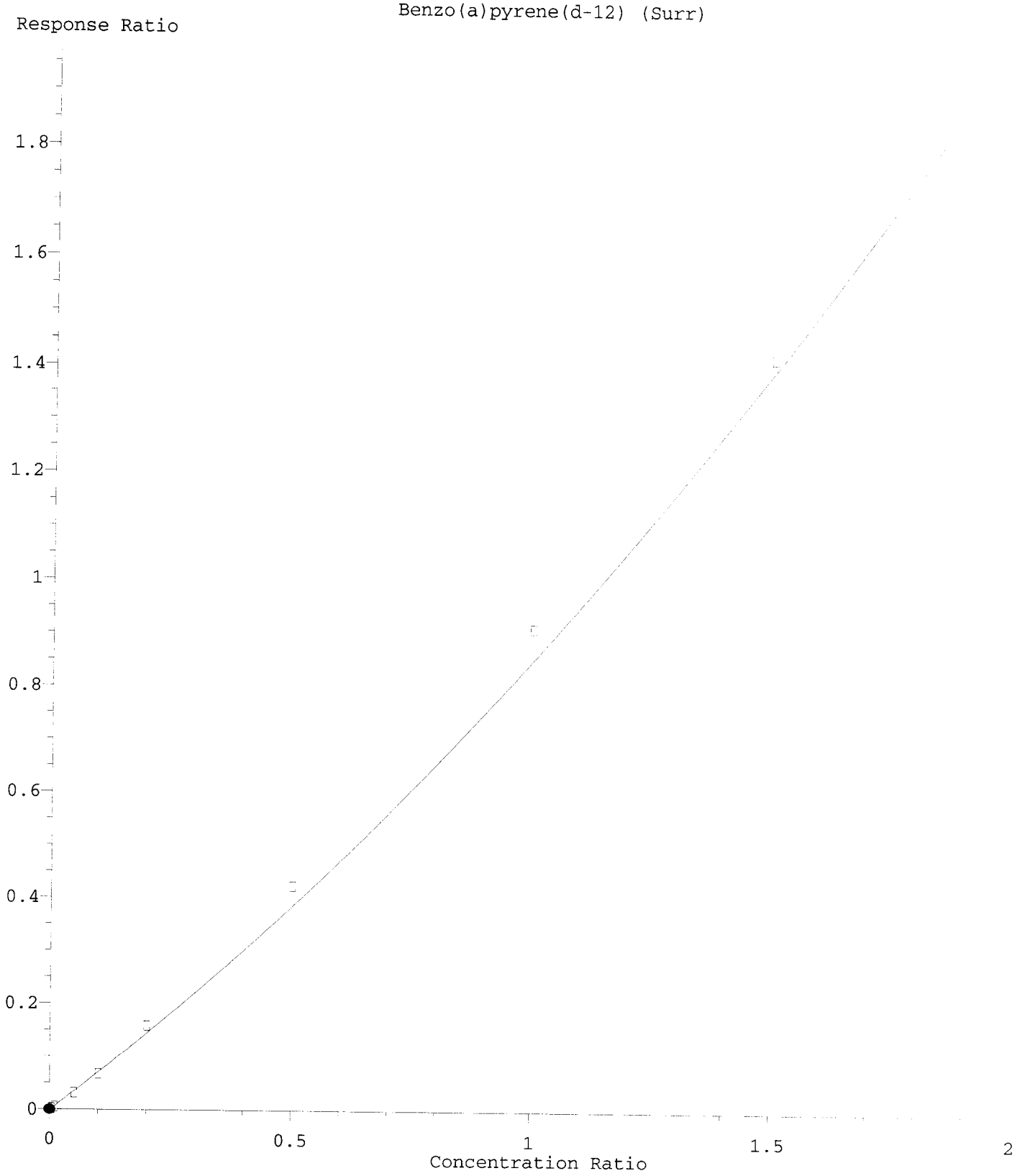


(27) Benzo(b+k)fluoranthene (T)

15.720min (+ 0.010) 0.07 ng/ml m

response 145

Ion	Exp%	Act%
252.10	100.00	100.00
126.00	22.30	0.00
253.00	22.60	13.96
0.00	0.00	0.00

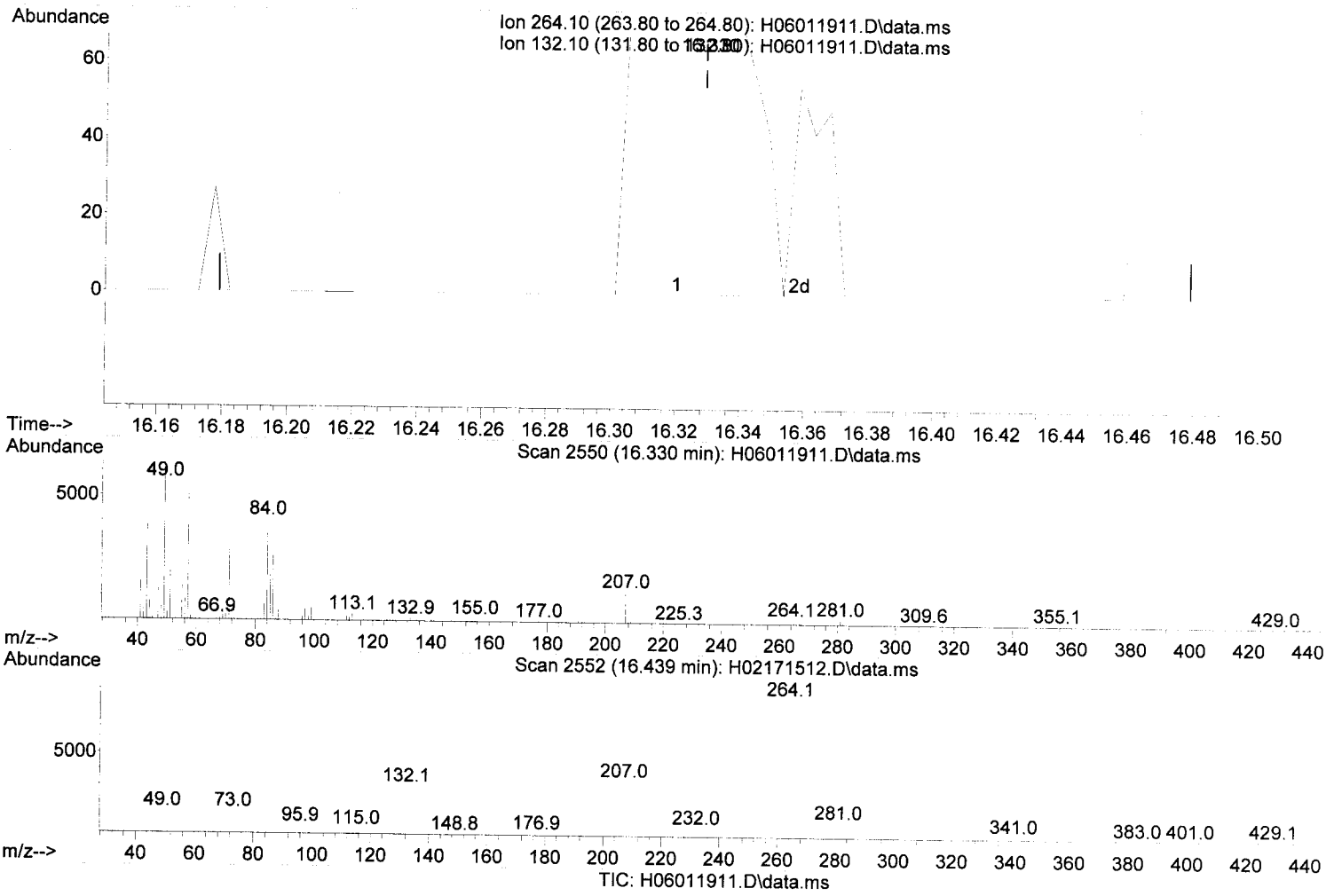


R = 1.55e-001 A*A + 6.95e-001 A - 9.42e-004
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

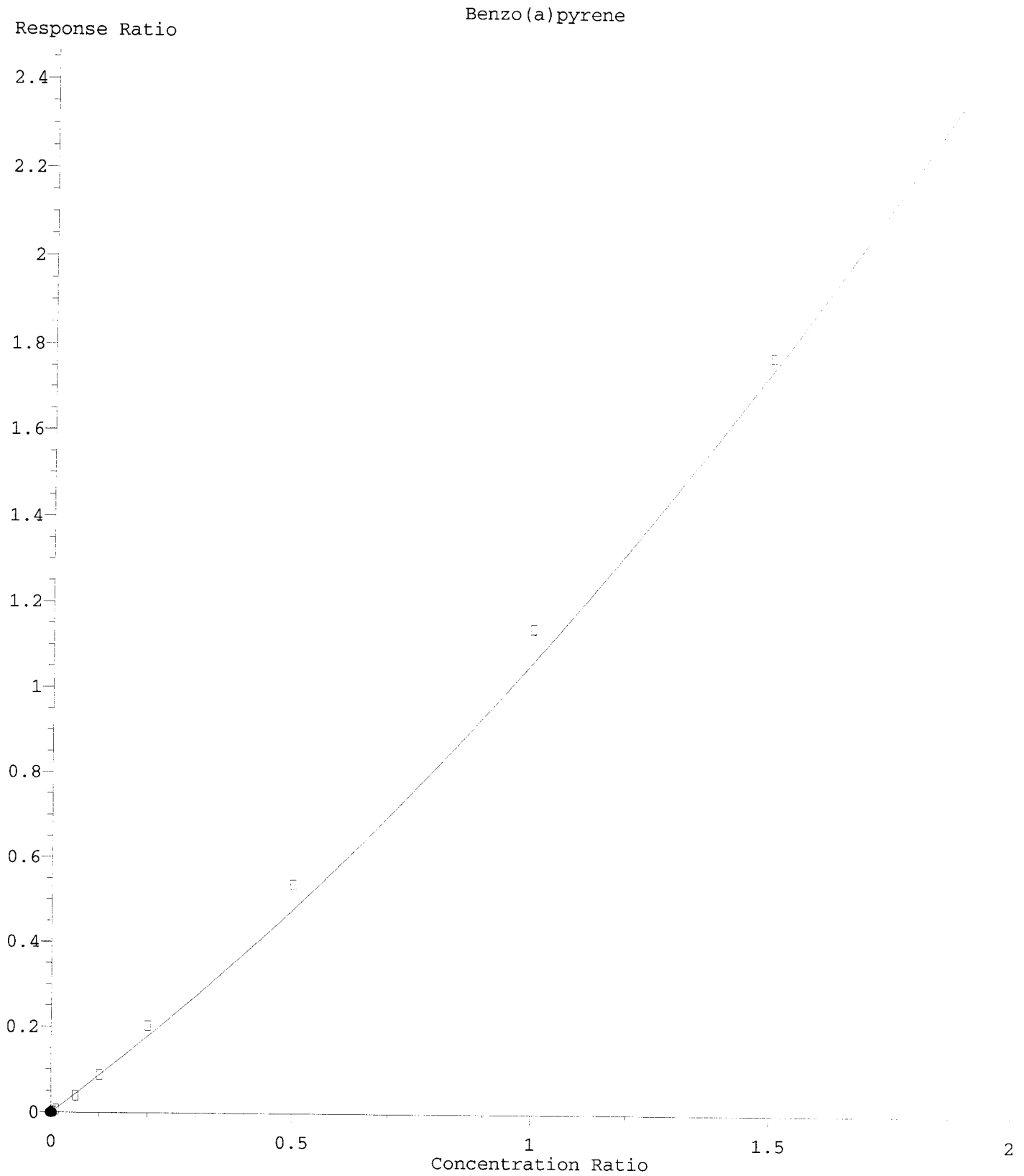


(29) Benzo(a)pyrene(d-12) (Surr) (S)

16.330min (+ 0.001) 0.19 ng/ml m

response 140

Ion	Exp%	Act%
264.10	100.00	100.00
132.10	33.60	14.98
0.00	0.00	0.00
0.00	0.00	0.00

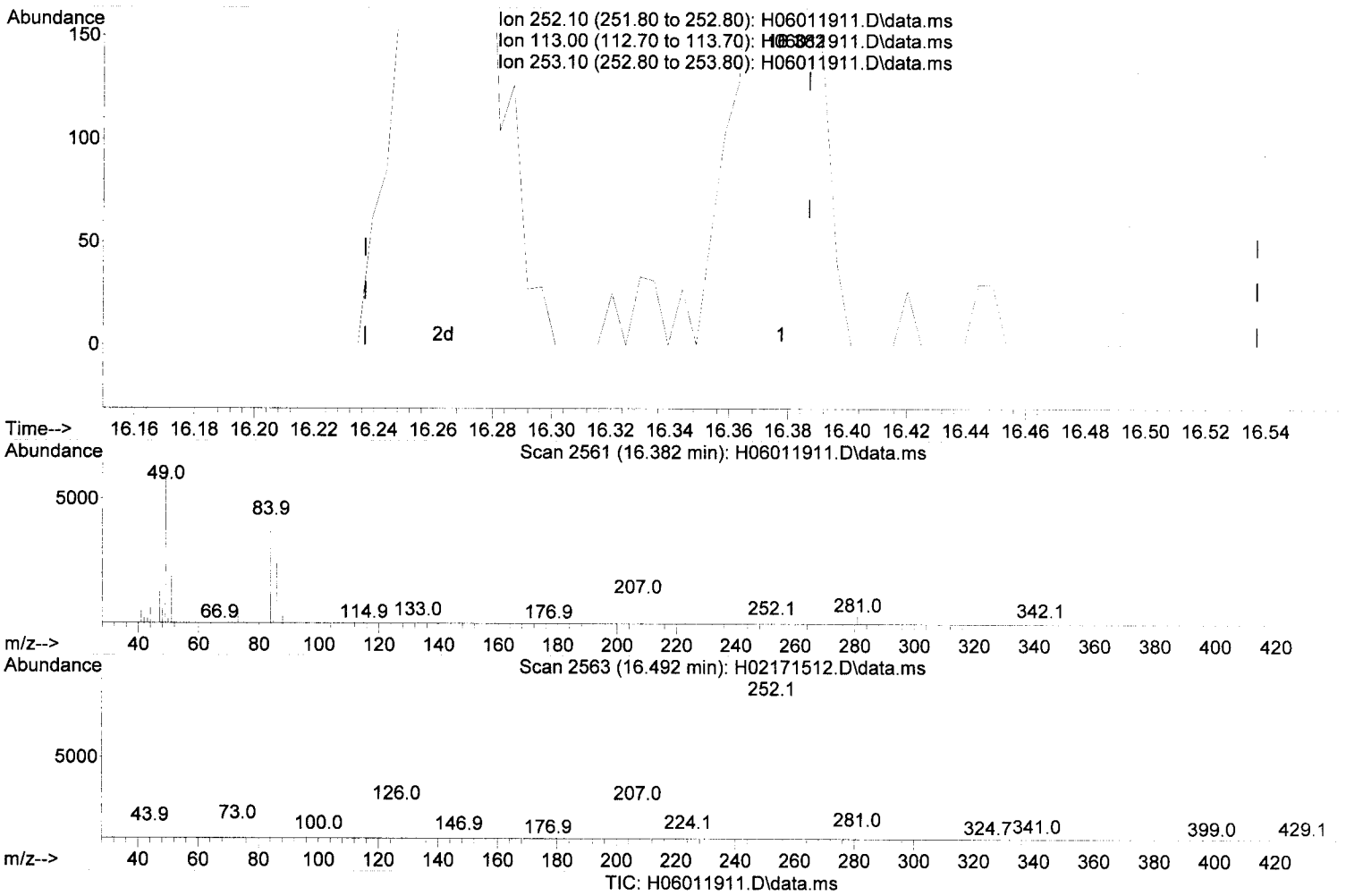


R = 2.05e-001 A*A + 8.57e-001 A - 5.17e-004
Coef of Det (r^2) = 0.988 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\LV18_070119.M
Calibration Table Last Updated: Tue Jul 02 08:58:54 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:30:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(30) Benzo(a)pyrene (T)

16.382min (-0.005) 0.10 ng/ml m ✓

response 107

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.00	0.00
253.10	20.40	16.67
0.00	0.00	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:32:08 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	-1.000	0.298	0.0	0	0.00
3	T	2-Methylnaphthalene	0.200	0.212	-6.0	100	0.00
4	T	1-Methylnaphthalene	0.200	0.206	-3.0	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	-1.000	0.345	0.0	0	0.00
7	T	2,6-Dimethylnaphthalene	0.200	0.207	-3.5	100	0.00
8	S	Acenaphthylene-d8 (Surr)	-1.000	1.123	0.0	0	0.00
9	T	Acenaphthylene	0.200	0.190	5.0	100	0.00
10	T	Acenaphthene	0.200	0.243	-21.5	100	0.00
11	T	Dibenzofuran	0.200	0.243	-21.5	100	0.00
12	T	1,6,7-Trimethylnaphthalene	0.200	0.197	1.5	100	0.00
13	T	Fluorene	0.200	0.217	-8.5	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	0.200	0.215	-7.5	100	0.00
16	T	Phenanthrene	-1.000	0.279	0.0	0	0.00
17	T	Anthracene	0.200	0.197	1.5	100	0.00
18	T	Carbazole	0.200	0.202	-1.0	100	0.00
19	T	Fluoranthene	0.200	0.214	-7.0	100	0.00
20	T	Pyrene	0.200	0.231	-15.5	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	0.200	0.209	-4.5	100	0.01
23	T	Chrysene	0.200	0.218	-9.0	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	0.200	0.214	-7.0	100	0.00
26	T	Benzo(k)fluoranthene	0.200	0.221	-10.5	100	0.00
27	T	Benzo(b+k)fluoranthene	0.400	0.435	-8.7	100	-0.07
28	T	Benzo(e)pyrene	0.200	0.196	2.0	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	-1.000	0.306	0.0	0	0.00
30	T	Benzo(a)pyrene	0.200	0.221	-10.5	100	0.00
31	T	Perylene	0.200	0.204	-2.0	100	-0.02
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	0.200	0.252	-26.0	100	0.00
34	T	Dibenz(a,h)anthracene	0.200	0.206	-3.0	100	-0.01
35	T	Benzo(g,h,i)perylene	0.200	0.176	12.0	100	-0.02
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

< 20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011912.D
Acq On : 1 Jul 2019 2:52 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL2
Misc : 1x, A19F395@0.4
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:32:24 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	0.400	0.457	-14.2	100	0.00
3	T	2-Methylnaphthalene	0.400	0.424	-6.0	100	0.00
4	T	1-Methylnaphthalene	0.400	0.393	1.8	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	0.400	0.497	-24.2	100	0.00
7	T	2,6-Dimethylnaphthalene	0.400	0.408	-2.0	100	0.00
8	S	Acenaphthylene-d8 (Surr)	-1.000	0.896	0.0	0	0.00
9	T	Acenaphthylene	0.400	0.361	9.8	100	0.00
10	T	Acenaphthene	0.400	0.415	-3.7	100	0.00
11	T	Dibenzofuran	0.400	0.365	8.8	100	0.00
12	T	1,6,7-Trimethylnaphthalene	0.400	0.377	5.8	100	0.00
13	T	Fluorene	0.400	0.390	2.5	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	0.400	0.406	-1.5	100	0.00
16	T	Phenanthrene	0.400	0.447	-11.7	100	0.00
17	T	Anthracene	0.400	0.365	8.8	100	0.00
18	T	Carbazole	0.400	0.363	9.3	100	0.00
19	T	Fluoranthene	0.400	0.370	7.5	100	0.00
20	T	Pyrene	0.400	0.387	3.3	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	0.400	0.378	5.5	100	0.00
23	T	Chrysene	0.400	0.400	0.0	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	0.400	0.358	10.5	100	0.00
26	T	Benzo(k)fluoranthene	0.400	0.342	14.5	100	0.00
27	T	Benzo(b+k)fluoranthene	0.800	0.699	12.6	100	-0.06
28	T	Benzo(e)pyrene	0.400	0.337	15.8	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	0.400	0.429	-7.2	100	0.00
30	T	Benzo(a)pyrene	0.400	0.341	14.8	100	-0.01
31	T	Perylene	0.400	0.332	17.0	100	-0.02
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	0.400	0.427	-6.7	100	0.00
34	T	Dibenz(a,h)anthracene	0.400	0.389	2.8	100	0.00
35	T	Benzo(g,h,i)perylene	0.400	0.318	20.5	100	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

<20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011913.D
Acq On : 1 Jul 2019 3:26 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL3
Misc : 1x, A19F394@1.0
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:32:37 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	1.000	1.089	-8.9	100	0.00
3	T	2-Methylnaphthalene	1.000	1.047	-4.7	100	0.00
4	T	1-Methylnaphthalene	1.000	0.996	0.4	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	1.000	1.003	-0.3	100	0.00
7	T	2,6-Dimethylnaphthalene	1.000	0.914	8.6	100	0.00
8	S	Acenaphthylene-d8 (Surr)	1.000	1.002	-0.2	100	0.00
9	T	Acenaphthylene	1.000	0.869	13.1	100	0.00
10	T	Acenaphthene	1.000	1.016	-1.6	100	0.00
11	T	Dibenzofuran	1.000	0.946	5.4	100	0.00
12	T	1,6,7-Trimethylnaphthalene	1.000	0.965	3.5	100	0.00
13	T	Fluorene	1.000	0.915	8.5	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	1.000	0.941	5.9	100	0.00
16	T	Phenanthrene	1.000	0.999	0.1	100	0.00
17	T	Anthracene	1.000	0.861	13.9	100	0.00
18	T	Carbazole	1.000	0.941	5.9	100	0.00
19	T	Fluoranthene	1.000	0.904	9.6	100	0.00
20	T	Pyrene	1.000	0.976	2.4	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	1.000	0.913	8.7	100	0.00
23	T	Chrysene	1.000	0.932	6.8	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	1.000	0.912	8.8	100	0.00
26	T	Benzo(k)fluoranthene	1.000	0.846	15.4	100	0.00
27	T	Benzo(b+k)fluoranthene	2.000	1.747	12.6	100	-0.06
28	T	Benzo(e)pyrene	1.000	0.839	16.1	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	1.000	0.834	16.6	100	0.00
30	T	Benzo(a)pyrene	1.000	0.844	15.6	100	0.00
31	T	Perylene	1.000	0.924	7.6	100	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	1.000	0.928	7.2	100	0.00
34	T	Dibenz(a,h)anthracene	1.000	0.881	11.9	100	0.00
35	T	Benzo(g,h,i)perylene	1.000	0.830	17.0	100	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

<20%

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011914.D
Acq On : 1 Jul 2019 4:00 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL4
Misc : 1x, A19F394@5.0
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:32:50 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GM 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	5.000	4.992	0.2	100	0.00
3	T	2-Methylnaphthalene	5.000	4.882	2.4	100	0.00
4	T	1-Methylnaphthalene	5.000	5.182	-3.6	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	5.000	4.852	3.0	100	0.00
7	T	2,6-Dimethylnaphthalene	5.000	4.872	2.6	100	0.00
8	S	Acenaphthylene-d8 (Surr)	5.000	4.992	0.2	100	0.00
9	T	Acenaphthylene	5.000	4.786	4.3	100	0.00
10	T	Acenaphthene	5.000	4.828	3.4	100	0.00
11	T	Dibenzofuran	5.000	4.774	4.5	100	0.00
12	T	1,6,7-Trimethylnaphthalene	5.000	4.692	6.2	100	0.00
13	T	Fluorene	5.000	4.730	5.4	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	5.000	4.819	3.6	100	0.00
16	T	Phenanthrene	5.000	4.816	3.7	100	0.00
17	T	Anthracene	5.000	4.681	6.4	100	0.00
18	T	Carbazole	5.000	4.597	8.1	100	0.00
19	T	Fluoranthene	5.000	4.654	6.9	100	0.00
20	T	Pyrene	5.000	4.691	6.2	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	5.000	4.844	3.1	100	0.00
23	T	Chrysene	5.000	5.014	-0.3	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	5.000	4.657	6.9	100	0.00
26	T	Benzo(k)fluoranthene	5.000	4.706	5.9	100	0.00
27	T	Benzo(b+k)fluoranthene	10.000	9.452	5.5	100	-0.07
28	T	Benzo(e)pyrene	5.000	4.757	4.9	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	5.000	4.601	8.0	100	0.00
30	T	Benzo(a)pyrene	5.000	4.546	9.1	100	0.00
31	T	Perylene	5.000	4.817	3.7	100	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	5.000	4.533	9.3	100	0.00
34	T	Dibenz(a,h)anthracene	5.000	4.850	3.0	100	0.00
35	T	Benzo(g,h,i)perylene	5.000	4.706	5.9	100	-0.01
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

<20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011915.D
Acq On : 1 Jul 2019 4:34 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL5
Misc : 1x, A19F394@10
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:33:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00	
2	T	Naphthalene	10.000	9.693	3.1	100	0.00	
3	T	2-Methylnaphthalene	10.000	9.359	6.4	100	0.00	
4	T	1-Methylnaphthalene	10.000	9.813	1.9	100	0.00	
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00	
6	T	Biphenyl	10.000	9.377	6.2	100	0.00	
7	T	2,6-Dimethylnaphthalene	10.000	9.685	3.1	100	0.00	
8	S	Acenaphthylene-d8 (Surr)	10.000	9.775	2.2	100	0.00	
9	T	Acenaphthylene	10.000	9.749	2.5	100	0.00	
10	T	Acenaphthene	10.000	9.355	6.4	100	0.00	
11	T	Dibenzofuran	10.000	9.782	2.2	100	0.00	
12	T	1,6,7-Trimethylnaphthalene	10.000	9.535	4.6	100	0.00	
13	T	Fluorene	10.000	9.566	4.3	100	0.00	
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00	
15	T	Dibenzothiophene	10.000	9.711	2.9	100	0.00	
16	T	Phenanthrene	10.000	9.623	3.8	100	0.00	
17	T	Anthracene	10.000	9.654	3.5	100	0.00	
18	T	Carbazole	10.000	9.666	3.3	100	0.00	
19	T	Fluoranthene	10.000	9.622	3.8	100	0.00	
20	T	Pyrene	10.000	9.437	5.6	100	0.00	
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00	
22	T	Benz(a)anthracene	10.000	9.819	1.8	100	0.00	
23	T	Chrysene	10.000	9.739	2.6	100	0.00	
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00	
25	T	Benzo(b)fluoranthene	10.000	10.113	-1.1	100	0.00	
26	T	Benzo(k)fluoranthene	10.000	10.369	-3.7	100	0.00	
27	T	Benzo(b+k)fluoranthene	20.000	20.485	-2.4	100	0.00	
28	T	Benzo(e)pyrene	10.000	9.718	2.8	100	0.00	
29	S	Benzo(a)pyrene(d-12) (Surr)	10.000	9.556	4.4	100	0.00	
30	T	Benzo(a)pyrene	10.000	10.068	-0.7	100	0.00	<20%
31	T	Perylene	10.000	8.730	12.7	100	0.00	
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00	
33	T	Indeno(1,2,3-cd)pyrene	10.000	9.261	7.4	100	0.00	
34	T	Dibenz(a,h)anthracene	10.000	9.474	5.3	100	0.00	
35	T	Benzo(g,h,i)perylene	10.000	9.769	2.3	100	0.00	
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00	
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011916.D
Acq On : 1 Jul 2019 5:07 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL6
Misc : 1x, A19F394@20
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:33:13 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	20.000	19.469	2.7	100	0.00
3	T	2-Methylnaphthalene	20.000	18.752	6.2	100	0.00
4	T	1-Methylnaphthalene	20.000	18.728	6.4	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	20.000	19.495	2.5	100	0.00
7	T	2,6-Dimethylnaphthalene	20.000	19.933	0.3	100	0.00
8	S	Acenaphthylene-d8 (Surr)	20.000	20.371	-1.9	100	0.00
9	T	Acenaphthylene	20.000	20.554	-2.8	100	0.00
10	T	Acenaphthene	20.000	18.902	5.5	100	0.00
11	T	Dibenzofuran	20.000	20.443	-2.2	100	0.00
12	T	1,6,7-Trimethylnaphthalene	20.000	20.882	-4.4	100	0.00
13	T	Fluorene	20.000	20.738	-3.7	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	20.000	20.002	-0.0	100	0.00
16	T	Phenanthrene	20.000	19.923	0.4	100	0.00
17	T	Anthracene	20.000	20.491	-2.5	100	0.00
18	T	Carbazole	20.000	20.148	-0.7	100	0.00
19	T	Fluoranthene	20.000	20.217	-1.1	100	0.00
20	T	Pyrene	20.000	19.544	2.3	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	20.000	21.530	-7.7	100	0.00
23	T	Chrysene	20.000	20.106	-0.5	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	20.000	21.915	-9.6	100	0.00
26	T	Benzo(k)fluoranthene	20.000	22.333	-11.7	100	0.00
27	T	Benzo(b+k)fluoranthene	40.000	44.166	-10.4	100	-0.07
28	T	Benzo(e)pyrene	20.000	20.575	-2.9	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	20.000	21.772	-8.9	100	0.00
30	T	Benzo(a)pyrene	20.000	22.536	-12.7	100	0.00
31	T	Perylene	20.000	20.006	-0.0	101	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	20.000	19.073	4.6	100	0.00
34	T	Dibenz(a,h)anthracene	20.000	19.900	0.5	100	0.00
35	T	Benzo(g,h,i)perylene	20.000	20.853	-4.3	100	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011917.D
Acq On : 1 Jul 2019 5:41 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL7
Misc : 1x, A19F394@50
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:33:24 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JJ 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	50.000	47.302	5.4	100	0.00
3	T	2-Methylnaphthalene	50.000	48.541	2.9	100	0.00
4	T	1-Methylnaphthalene	50.000	49.321	1.4	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	50.000	46.919	6.2	100	0.00
7	T	2,6-Dimethylnaphthalene	50.000	49.625	0.8	100	0.00
8	S	Acenaphthylene-d8 (Surr)	50.000	49.919	0.2	100	0.00
9	T	Acenaphthylene	50.000	51.902	-3.8	100	0.00
10	T	Acenaphthene	50.000	47.468	5.1	100	0.00
11	T	Dibenzofuran	50.000	48.419	3.2	100	0.00
12	T	1,6,7-Trimethylnaphthalene	50.000	50.603	-1.2	100	0.00
13	T	Fluorene	50.000	49.736	0.5	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	50.000	49.534	0.9	100	0.00
16	T	Phenanthrene	50.000	48.227	3.5	100	0.00
17	T	Anthracene	50.000	52.377	-4.8	100	0.00
18	T	Carbazole	50.000	52.089	-4.2	100	0.00
19	T	Fluoranthene	50.000	51.107	-2.2	100	0.00
20	T	Pyrene	50.000	49.606	0.8	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	50.000	53.035	-6.1	100	0.00
23	T	Chrysene	50.000	48.762	2.5	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	50.000	53.775	-7.5	100	0.00
26	T	Benzo(k)fluoranthene	50.000	54.097	-8.2	100	0.00
27	T	Benzo(b+k)fluoranthene	100.000	107.590	-7.6	100	0.00
28	T	Benzo(e)pyrene	50.000	52.673	-5.3	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	50.000	54.327	-8.7	100	0.00
30	T	Benzo(a)pyrene	50.000	55.463	-10.9	100	0.00
31	T	Perylene	50.000	52.380	-4.8	100	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	50.000	48.599	2.8	100	0.00
34	T	Dibenz(a,h)anthracene	50.000	51.273	-2.5	100	0.00
35	T	Benzo(g,h,i)perylene	50.000	55.373	-10.7	100	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

<20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011918.D
Acq On : 1 Jul 2019 6:15 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL8
Misc : 1x, A19F394@100
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:33:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	100.000	95.457	4.5	100	0.00
3	T	2-Methylnaphthalene	100.000	99.051	0.9	100	0.00
4	T	1-Methylnaphthalene	100.000	100.375	-0.4	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	100.000	96.961	3.0	100	0.00
7	T	2,6-Dimethylnaphthalene	100.000	100.981	-1.0	100	0.00
8	S	Acenaphthylene-d8 (Surr)	100.000	100.539	-0.5	100	0.00
9	T	Acenaphthylene	100.000	106.935	-6.9	100	0.00
10	T	Acenaphthene	100.000	96.061	3.9	100	0.00
11	T	Dibenzofuran	100.000	99.515	0.5	100	0.00
12	T	1,6,7-Trimethylnaphthalene	100.000	103.302	-3.3	100	0.00
13	T	Fluorene	100.000	101.842	-1.8	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	100.000	99.805	0.2	100	0.00
16	T	Phenanthrene	100.000	98.135	1.9	100	0.00
17	T	Anthracene	100.000	106.510	-6.5	100	0.00
18	T	Carbazole	100.000	105.049	-5.0	100	0.00
19	T	Fluoranthene	100.000	104.457	-4.5	100	0.00
20	T	Pyrene	100.000	101.570	-1.6	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	100.000	102.848	-2.8	100	0.00
23	T	Chrysene	100.000	100.428	-0.4	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	100.000	102.614	-2.6	100	0.00
26	T	Benzo(k)fluoranthene	100.000	103.998	-4.0	100	0.00
27	T	Benzo(b+k)fluoranthene	200.000	206.428	-3.2	100	0.01
28	T	Benzo(e)pyrene	100.000	109.108	-9.1	100	0.00
29	S	Benzo(a)pyrene(d-12) (Surr)	100.000	105.779	-5.8	100	0.01
30	T	Benzo(a)pyrene	100.000	106.115	-6.1	100	0.00
31	T	Perylene	100.000	110.425	-10.4	103	0.00
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	100.000	98.467	1.5	100	0.00
34	T	Dibenz(a,h)anthracene	100.000	105.980	-6.0	100	0.00
35	T	Benzo(g,h,i)perylene	100.000	113.599	-13.6	100	0.00
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011919.D
Acq On : 1 Jul 2019 6:48 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL9
Misc : 1x, A19F394@150
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:33:49 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GJ 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	150.000	146.008	2.7	100	0.00
3	T	2-Methylnaphthalene	150.000	148.176	1.2	100	0.00
4	T	1-Methylnaphthalene	150.000	149.057	0.6	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	150.000	148.592	0.9	100	0.00
7	T	2,6-Dimethylnaphthalene	150.000	157.862	-5.2	100	0.00
8	S	Acenaphthylene-d8 (Surr)	150.000	151.482	-1.0	100	0.00
9	T	Acenaphthylene	150.000	165.978	-10.7	100	0.00
10	T	Acenaphthene	150.000	148.332	1.1	100	0.00
11	T	Dibenzofuran	150.000	153.159	-2.1	100	0.00
12	T	1,6,7-Trimethylnaphthalene	150.000	162.140	-8.1	100	0.00
13	T	Fluorene	150.000	158.411	-5.6	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	150.000	153.961	-2.6	100	0.00
16	T	Phenanthrene	150.000	151.277	-0.9	100	0.00
17	T	Anthracene	150.000	165.160	-10.1	100	0.00
18	T	Carbazole	150.000	163.527	-9.0	100	0.00
19	T	Fluoranthene	150.000	160.303	-6.9	100	0.00
20	T	Pyrene	150.000	153.687	-2.5	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	150.000	152.033	-1.4	100	0.00
23	T	Chrysene	150.000	151.806	-1.2	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	150.000	151.870	-1.2	100	0.00
26	T	Benzo(k)fluoranthene	150.000	151.487	-1.0	100	0.01
27	T	Benzo(b+k)fluoranthene	300.000	303.279	-1.1	100	0.02
28	T	Benzo(e)pyrene	150.000	168.164	-12.1	100	0.01
29	S	Benzo(a)pyrene(d-12) (Surr)	150.000	152.081	-1.4	100	0.02
30	T	Benzo(a)pyrene	150.000	152.055	-1.4	100	0.01
31	T	Perylene	150.000	172.085	-14.7	101	0.01
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	150.000	151.016	-0.7	100	0.01
34	T	Dibenz(a,h)anthracene	150.000	160.167	-6.8	100	0.01
35	T	Benzo(g,h,i)perylene	150.000	172.635	-15.1	100	0.01
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\REQUANT\
Data File : H06011920.D
Acq On : 1 Jul 2019 7:22 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CALA
Misc : 1x, A19F394@200
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:34:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	100	0.00
2	T	Naphthalene	200.000	190.773	4.6	100	0.00
3	T	2-Methylnaphthalene	200.000	207.090	-3.5	100	0.00
4	T	1-Methylnaphthalene	200.000	210.210	-5.1	100	0.00
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
6	T	Biphenyl	200.000	194.698	2.7	100	0.00
7	T	2,6-Dimethylnaphthalene	200.000	207.470	-3.7	100	0.00
8	S	Acenaphthylene-d8 (Surr)	200.000	198.030	1.0	100	0.00
9	T	Acenaphthylene	200.000	221.302	-10.7	100	0.00
10	T	Acenaphthene	200.000	197.968	1.0	100	0.00
11	T	Dibenzofuran	200.000	197.111	1.4	100	0.00
12	T	1,6,7-Trimethylnaphthalene	200.000	209.756	-4.9	100	0.00
13	T	Fluorene	200.000	202.888	-1.4	100	0.00
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	100	0.00
15	T	Dibenzothiophene	200.000	204.173	-2.1	100	0.00
16	T	Phenanthrene	200.000	201.370	-0.7	100	0.00
17	T	Anthracene	200.000	220.421	-10.2	100	0.00
18	T	Carbazole	200.000	213.079	-6.5	100	0.00
19	T	Fluoranthene	200.000	212.163	-6.1	100	0.00
20	T	Pyrene	200.000	201.847	-0.9	100	0.00
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
22	T	Benz(a)anthracene	200.000	192.581	3.7	100	0.01
23	T	Chrysene	200.000	201.235	-0.6	100	0.00
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	100	0.00
25	T	Benzo(b)fluoranthene	200.000	192.327	3.8	100	0.01
26	T	Benzo(k)fluoranthene	200.000	191.168	4.4	100	0.02
27	T	Benzo(b+k)fluoranthene	400.000	383.765	4.1	100	0.02
28	T	Benzo(e)pyrene	200.000	224.307	-12.2	100	0.01
29	S	Benzo(a)pyrene(d-12) (Surr)	200.000	190.145	4.9	100	0.02
30	T	Benzo(a)pyrene	200.000	188.749	5.6	100	0.02
31	T	Perylene	200.000	227.569	-13.8	99	0.02
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	100	0.00
33	T	Indeno(1,2,3-cd)pyrene	200.000	198.556	0.7	100	0.02
34	T	Dibenz(a,h)anthracene	200.000	210.520	-5.3	100	0.02
35	T	Benzo(g,h,i)perylene	200.000	227.711	-13.9	100	0.02
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	100	0.00
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	100	0.00

<20%

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011922.D
Acq On : 1 Jul 2019 8:29 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICV1
Misc : 1x, A19B042@50
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:34:20 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GK 7/2/19

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 30% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)	
1	I	Naphthalene-d8 (ISTD)	100.000	100.000	0.0	99	0.00	
2	T	Naphthalene	50.000	46.514	7.0	98	0.00	
3	T	2-Methylnaphthalene	50.000	49.012	2.0	100	0.00	
4	T	1-Methylnaphthalene	50.000	50.577	-1.2	102	0.00	
5	I	Acenaphthene-d10 (ISTD)	100.000	100.000	0.0	103	0.00	
6	T	Biphenyl	50.000	47.064	5.9	103	0.00	
7	T	2,6-Dimethylnaphthalene	50.000	47.922	4.2	99	0.00	
8	S	Acenaphthylene-d8 (Surr)	50.000	50.277	-0.6	104	0.00	
9	T	Acenaphthylene	50.000	52.072	-4.1	103	0.00	
10	T	Acenaphthene	50.000	46.137	7.7	100	0.00	
11	T	Dibenzofuran	50.000	47.382	5.2	101	0.00	
12	T	1,6,7-Trimethylnaphthalene	50.000	50.179	-0.4	102	0.00	
13	T	Fluorene	50.000	48.818	2.4	101	0.00	
14	I	Phenanthrene-d10 (ISTD)	100.000	100.000	0.0	106	0.00	
15	T	Dibenzothiophene	50.000	47.845	4.3	102	0.00	
16	T	Phenanthrene	50.000	47.610	4.8	104	0.00	
17	T	Anthracene	50.000	51.577	-3.2	104	0.00	
18	T	Carbazole	50.000	50.097	-0.2	102	0.00	
19	T	Fluoranthene	50.000	50.890	-1.8	105	0.00	
20	T	Pyrene	50.000	49.055	1.9	105	0.00	
21	I	Chrysene-d12 (ISTD)	100.000	100.000	0.0	103	0.00	
22	T	Benz(a)anthracene	50.000	53.709	-7.4	104	0.00	
23	T	Chrysene	50.000	51.788	-3.6	109	0.00	
24	I	Perylene-d12 (ISTD)	100.000	100.000	0.0	101	0.00	
25	T	Benzo(b)fluoranthene	50.000	56.285	-12.6	107	0.00	
26	T	Benzo(k)fluoranthene	50.000	57.657	-15.3	109	0.00	
27	T	Benzo(b+k)fluoranthene	100.000	113.709	-13.7	108	0.00	
28	T	Benzo(e)pyrene	50.000	56.383	-12.8	109	0.00	
29	S	Benzo(a)pyrene(d-12) (Surr)	50.000	55.190	-10.4	103	0.00	
30	T	Benzo(a)pyrene	50.000	58.593	-17.2	108	0.00	< 20%
31	T	Perylene	50.000	54.673	-9.3	106	0.00	
32	I	Dibenz(a,h)anthracene-d14 (	100.000	100.000	0.0	122	0.00	
33	T	Indeno(1,2,3-cd)pyrene	50.000	43.902	12.2	110	0.00	
34	T	Dibenz(a,h)anthracene	50.000	46.817	6.4	111	0.00	
35	T	Benzo(g,h,i)perylene	50.000	50.138	-0.3	110	0.00	
36	I	2-Fluorobiphenyl (ISTD)	100.000	100.000	0.0	99	0.00	
37	I	p-Terphenyl-d14 (ISTD)	100.000	100.000	0.0	104	0.00	

(#) = Out of Range SPCC's out = 0 CCC's out = 0

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011909.D
Acq On : 1 Jul 2019 1:14 pm
Operator : JK /AMS /DTH
Sample : 9G01051-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270-LVI.M

Quant Time: Jul 01 14:22:57 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 14:22:45 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/1/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.101	136	254902	2.00	ug/mL	0.00
2) Acenaphthene-d10	8.611	162	131171	2.00	ug/mL	0.00
4) Phenanthrene-d10	9.915	188	253264	2.00	ug/mL	0.00
10) Chrysene-d12	13.254	240	192935	2.00	ug/mL	0.00
11) Perylene-d12	16.516	264	142313	2.00	ug/mL	0.00
Target Compounds						Qvalue
3) Pentachlorophenol	9.758	266	858896	29.59	ug/mL	95
5) DFTPP	10.163	442	1097665	16.50	ug/mL#	62
6) Benzidine	11.196	184	3326111	24.74	ug/mL	89
7) 4,4-DDE	11.411	TIC	151675	No Calib	#	
8) 4,4-DDD	11.863	TIC	125351	No Calib	#	
9) 4,4-DDT	12.368	TIC	11518263	No Calib	#	

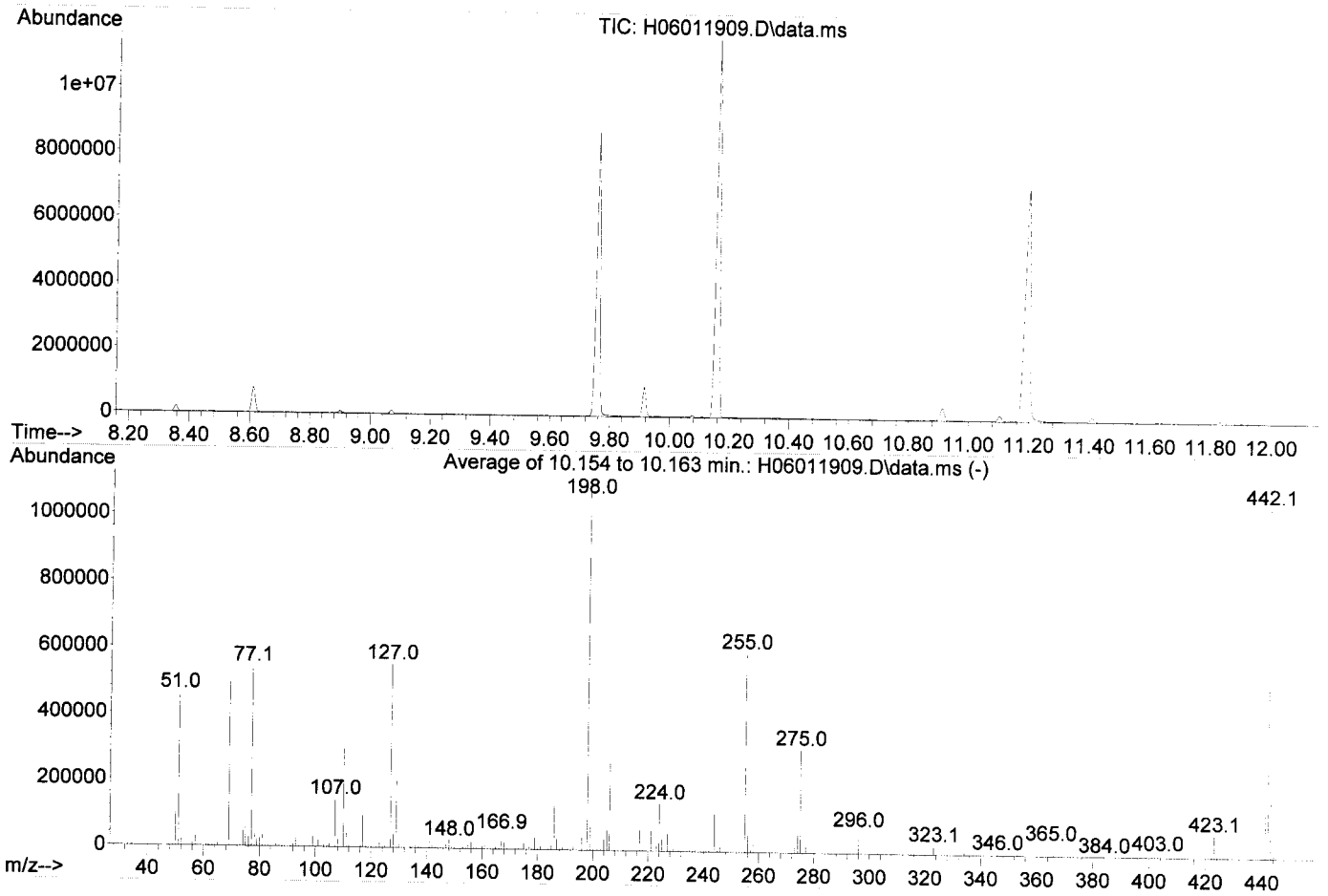
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011909.D
Acq On : 1 Jul 2019 1:14 pm
Operator : JK /AMS /DTH
Sample : 9G01051-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-8270-LVI.M
Title : DFTPP Tune Methodug/mL
Last Update : Mon Jul 01 14:22:45 2019

7/1/19



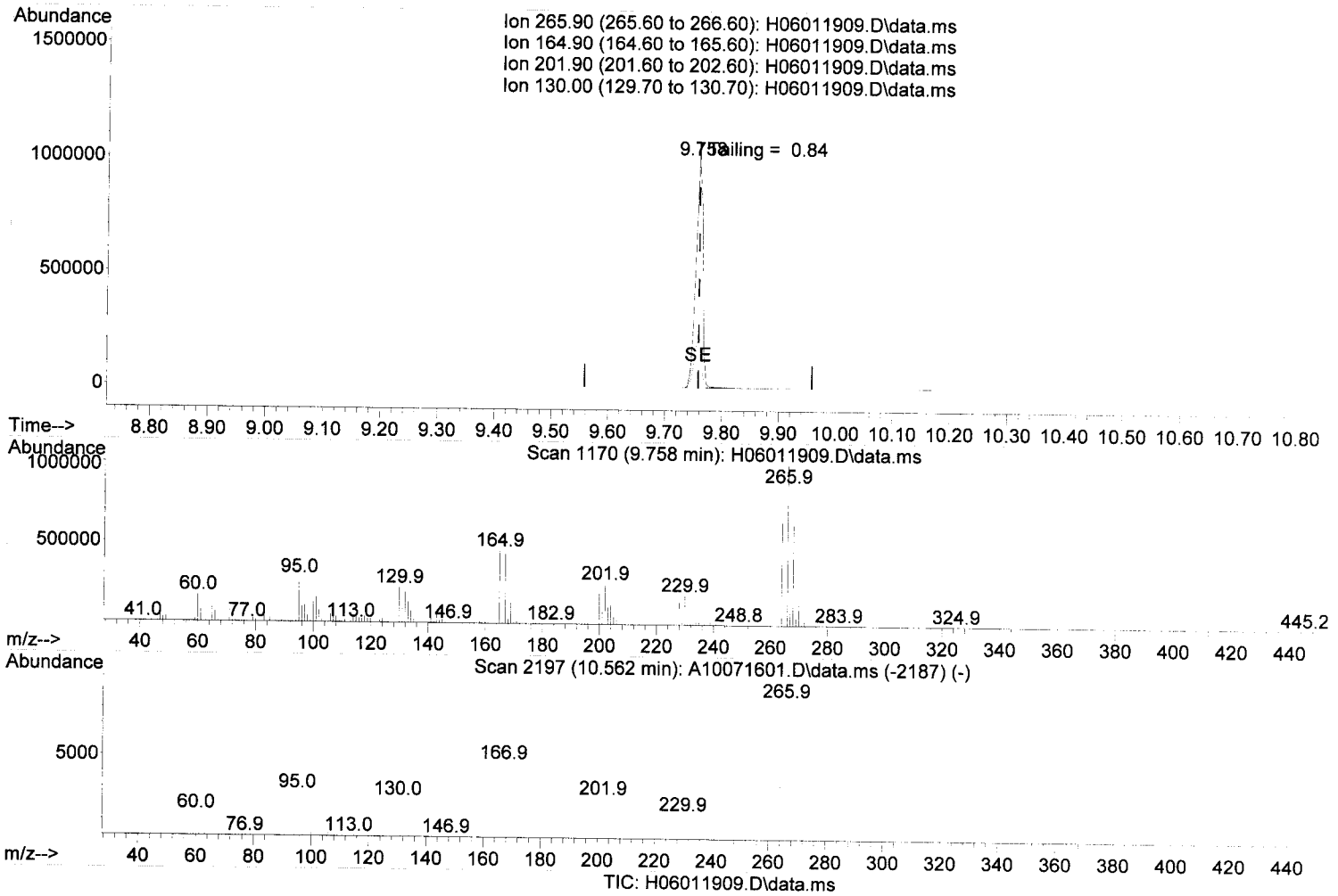
AutoFind: Scans 1253, 1254, 1255; Background Corrected with Scan 1246

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	42.7	459227	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	45.9	493292	PASS
70	69	0.00	2	0.5	2314	PASS
127	198	10	80	51.4	552853	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	1075200	PASS
199	198	5	9	6.7	72384	PASS
275	198	10	60	28.9	310869	PASS
365	198	1	100	3.3	35011	PASS
441	442	0.01	24	17.7	186637	PASS
442	198	50	200	97.9	1052331	PASS
443	442	15	24	19.3	203091	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011909.D
Acq On : 1 Jul 2019 1:14 pm
Operator : JK /AMS /DTH
Sample : 9G01051-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270-LVI.M

Quant Time: Jul 01 14:22:57 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 14:22:45 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(3) Pentachlorophenol

9.758min (0.000) 29.59 ug/mL

response 858896

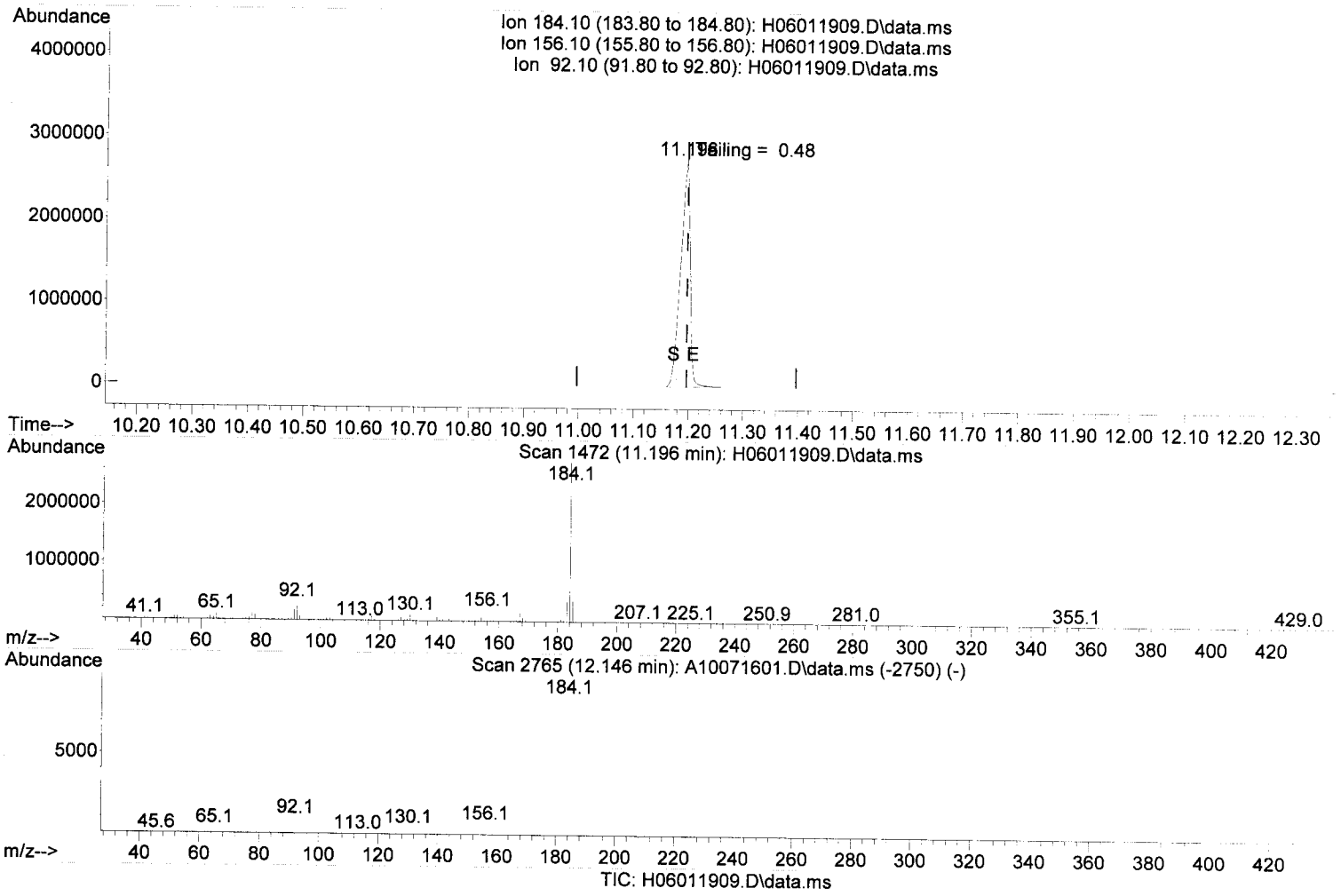
Ion	Exp%	Act%
265.90	100.00	100.00
164.90	40.50	44.96
201.90	23.90	24.28
130.00	19.70	22.40

7/1/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011909.D
Acq On : 1 Jul 2019 1:14 pm
Operator : JK /AMS /DTH
Sample : 9G01051-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270-LVI.M

Quant Time: Jul 01 14:22:57 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 14:22:45 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(6) Benzidine

11.196min (0.000) 24.74 ug/mL

response 3326111

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	10.40	7.08
92.10	17.30	11.86
0.00	0.00	0.00

7/1/19

DDT Breakdown Check (Validated 5/1/2013)

From:
9G01051-TUN1
SV-GCMS8

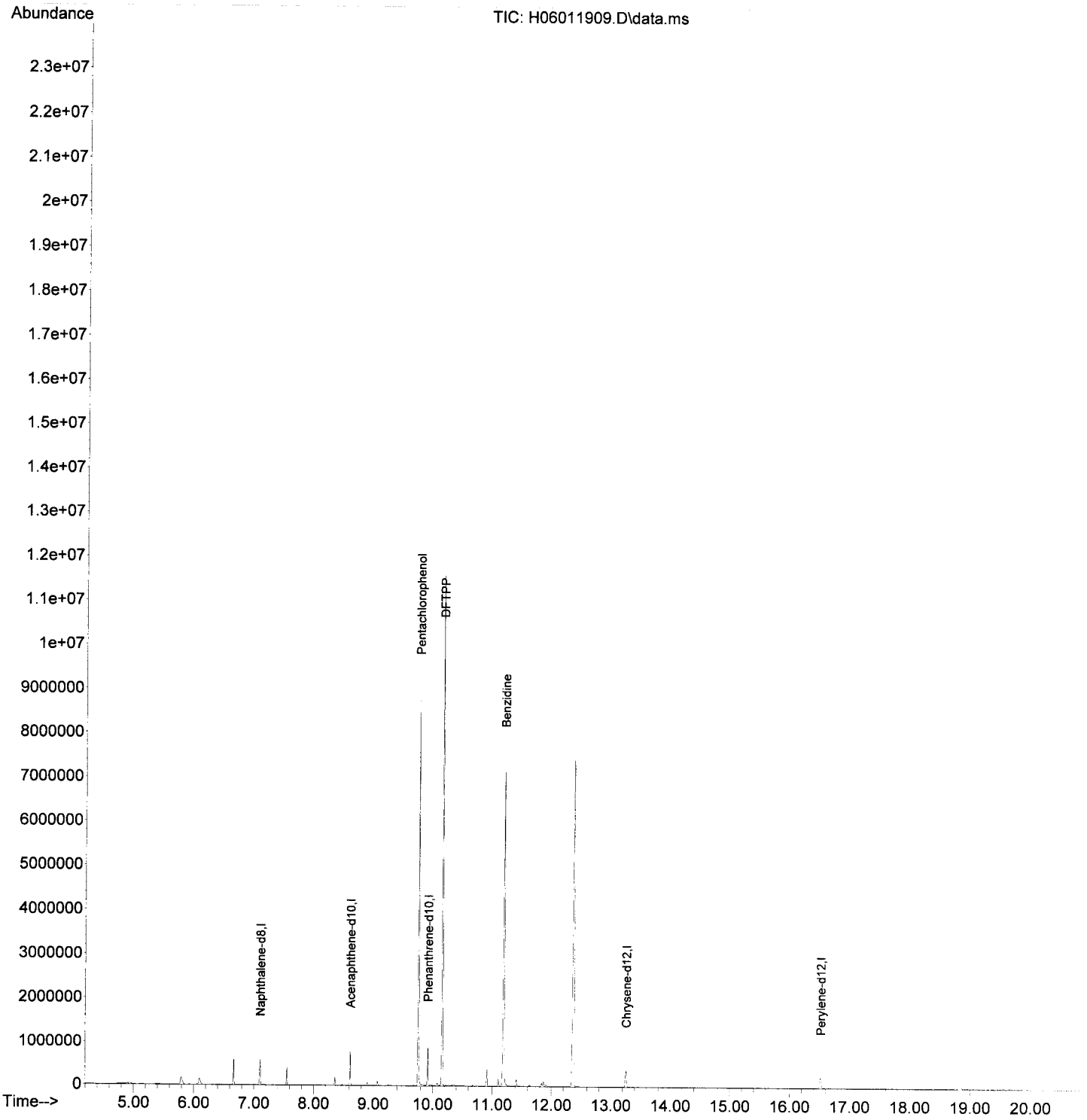
First Column Area Counts		Percent Breakdown	
DDE	151675		
DDD	125351		
DDT	11518263	2.35	PASS

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011909.D
Acq On : 1 Jul 2019 1:14 pm
Operator : JK /AMS /DTH
Sample : 9G01051-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270-LVI.M

Quant Time: Jul 01 14:22:57 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270-LVI.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 14:22:45 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011910.D
Acq On : 1 Jul 2019 1:45 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 14:27:22 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/1/19

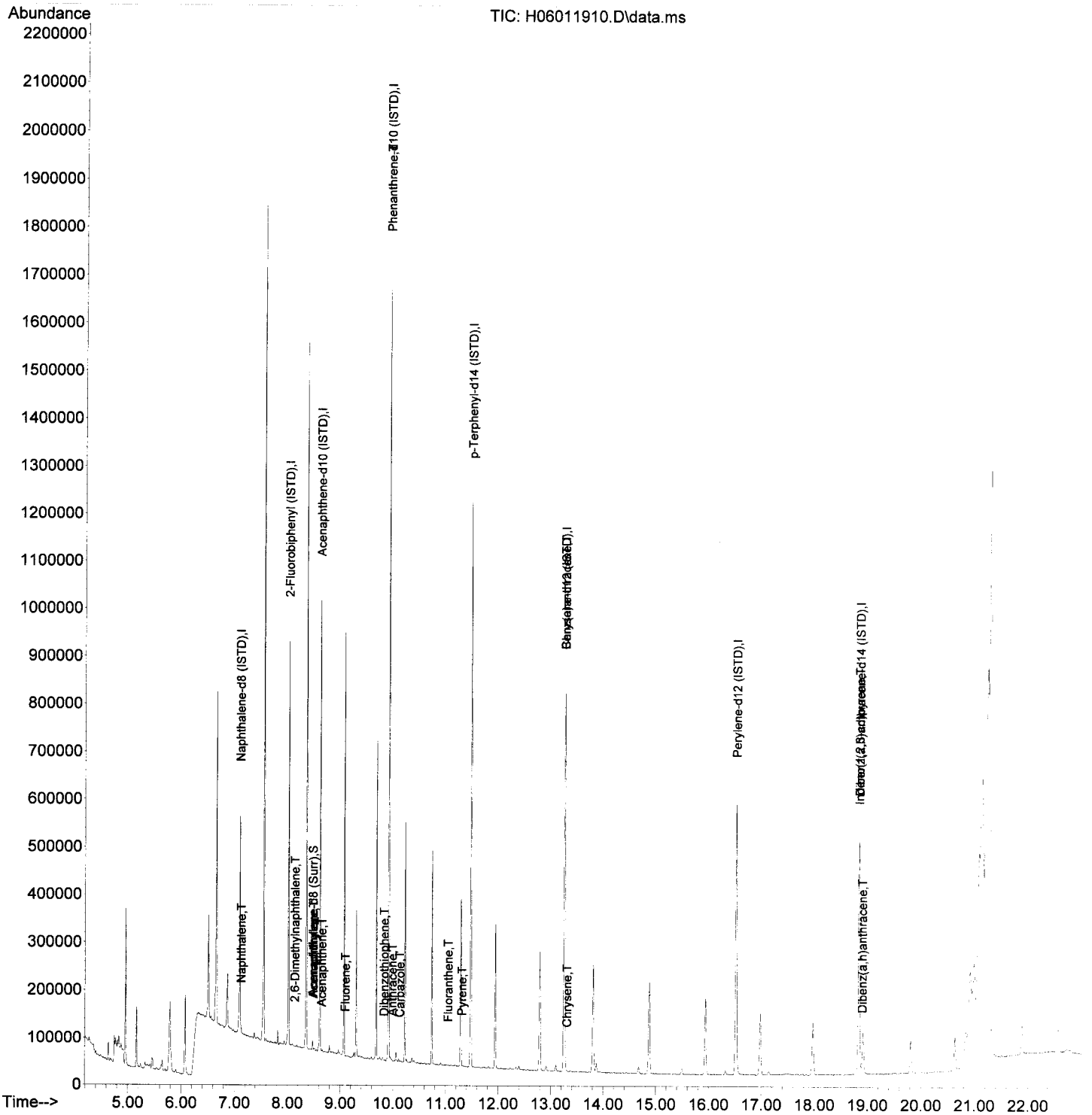
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	209215	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.615	164	170869	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	468424	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	422572	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	344534	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	340561	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	220082	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	429020	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	5612	0.83	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	0.000	264	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthalene	7.120	128	155	0.06	ng/ml	70
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
6) Biphenyl	8.106	154	417	Below Cal		86
7) 2,6-Dimethylnaphthalene	8.134	156	53	0.03	ng/ml#	43
9) Acenaphthylene	8.482	152	41	0.01	ng/ml	62
10) Acenaphthene	8.644	153	47	0.02	ng/ml#	14
11) Dibenzofuran	0.000		0	N.D.		
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.		
13) Fluorene	9.092	166	49	0.02	ng/ml#	25
15) Dibenzothiophene	9.825	184	43	0.01	ng/ml	68
16) Phenanthrene	9.915	178	377	0.07	ng/ml#	1
17) Anthracene	9.982	178	64	0.01	ng/ml#	36
18) Carbazole	10.125	167	74	0.02	ng/ml	62
19) Fluoranthene	11.044	202	158	0.03	ng/ml	58
20) Pyrene	11.306	202	183	0.03	ng/ml	59
22) Benz(a)anthracene	13.258	228	1112	0.04	ng/ml	77
23) Chrysene	13.306	228	156	0.03	ng/ml	73
25) Benzo(b)fluoranthene	0.000		0	N.D.		
26) Benzo(k)fluoranthene	0.000		0	N.D.		
27) Benzo(b+k)fluoranthene	0.000		0	N.D.		
28) Benzo(e)pyrene	0.000		0	N.D.		
30) Benzo(a)pyrene	0.000		0	N.D.		
31) Perylene	0.000		0	N.D.		
33) Indeno(1,2,3-cd)pyrene	18.835	276	264	0.00	ng/ml#	1
34) Dibenz(a,h)anthracene	18.897	278	147	0.04	ng/ml	72
35) Benzo(g,h,i)perylene	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011910.D
Acq On : 1 Jul 2019 1:45 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 14:27:22 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011910.D
Acq On : 1 Jul 2019 1:45 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Final Reqmnt

Quant Time: Jul 02 09:34:15 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/2/19

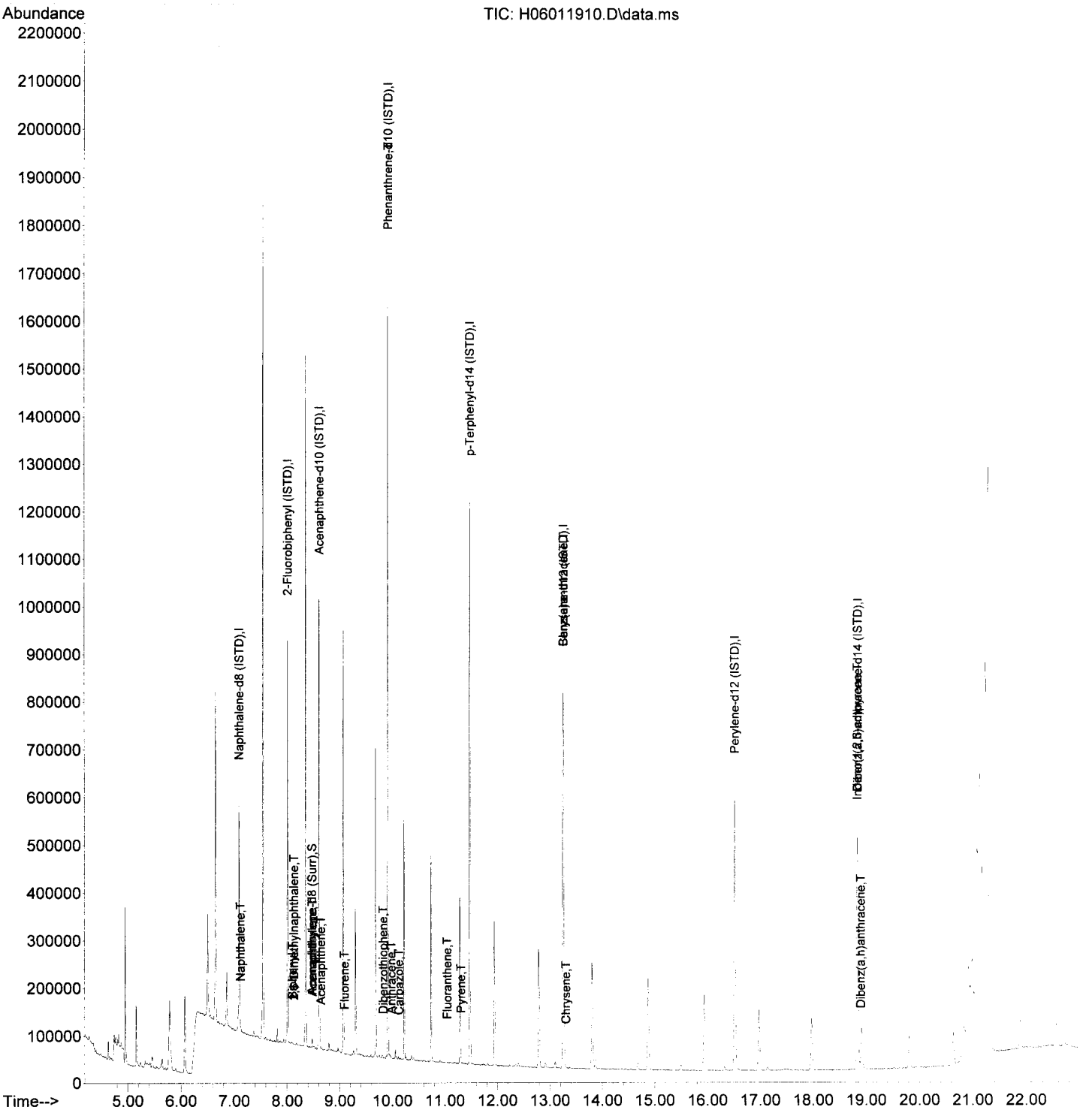
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	209215	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.615	164	170869	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	468424	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	422572	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	344534	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	340561	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	220082	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	429020	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	5612	0.93	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	0.000	264	0	0.00	ng/ml	
Target Compounds						Qvalue
2) Naphthalene	7.120	128	155	0.06	ng/ml	70
3) 2-Methylnaphthalene	0.000		0	N.D.		
4) 1-Methylnaphthalene	0.000		0	N.D.		
6) Biphenyl	8.106	154	417	0.15	ng/ml	86
7) 2,6-Dimethylnaphthalene	8.134	156	53	0.03	ng/ml#	43
9) Acenaphthylene	8.482	152	41	0.01	ng/ml	62
10) Acenaphthene	8.644	153	47	0.02	ng/ml#	14
11) Dibenzofuran	0.000		0	N.D.		
12) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.		
13) Fluorene	9.092	166	49	0.02	ng/ml#	25
15) Dibenzothiophene	9.825	184	43	0.01	ng/ml	68
16) Phenanthrene	9.915	178	377	0.07	ng/ml#	1
17) Anthracene	9.982	178	64	0.01	ng/ml#	36
18) Carbazole	10.125	167	74	0.02	ng/ml	62
19) Fluoranthene	11.044	202	158	0.03	ng/ml	58
20) Pyrene	11.306	202	183	0.03	ng/ml	59
22) Benz(a)anthracene	13.258	228	1112	0.03	ng/ml	77
23) Chrysene	13.306	228	156	0.03	ng/ml	73
25) Benzo(b)fluoranthene	0.000		0	N.D.		
26) Benzo(k)fluoranthene	0.000		0	N.D.		
27) Benzo(b+k)fluoranthene	0.000		0	N.D.		
28) Benzo(e)pyrene	0.000		0	N.D.		
30) Benzo(a)pyrene	0.000		0	N.D.		
31) Perylene	0.000		0	N.D.		
33) Indeno(1,2,3-cd)pyrene	18.835	276	264	0.07	ng/ml#	1
34) Dibenz(a,h)anthracene	18.897	278	147	0.04	ng/ml	72
35) Benzo(g,h,i)perylene	0.000		0	N.D.		

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011910.D
Acq On : 1 Jul 2019 1:45 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:34:15 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 15:05:42 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GH 7/1/19

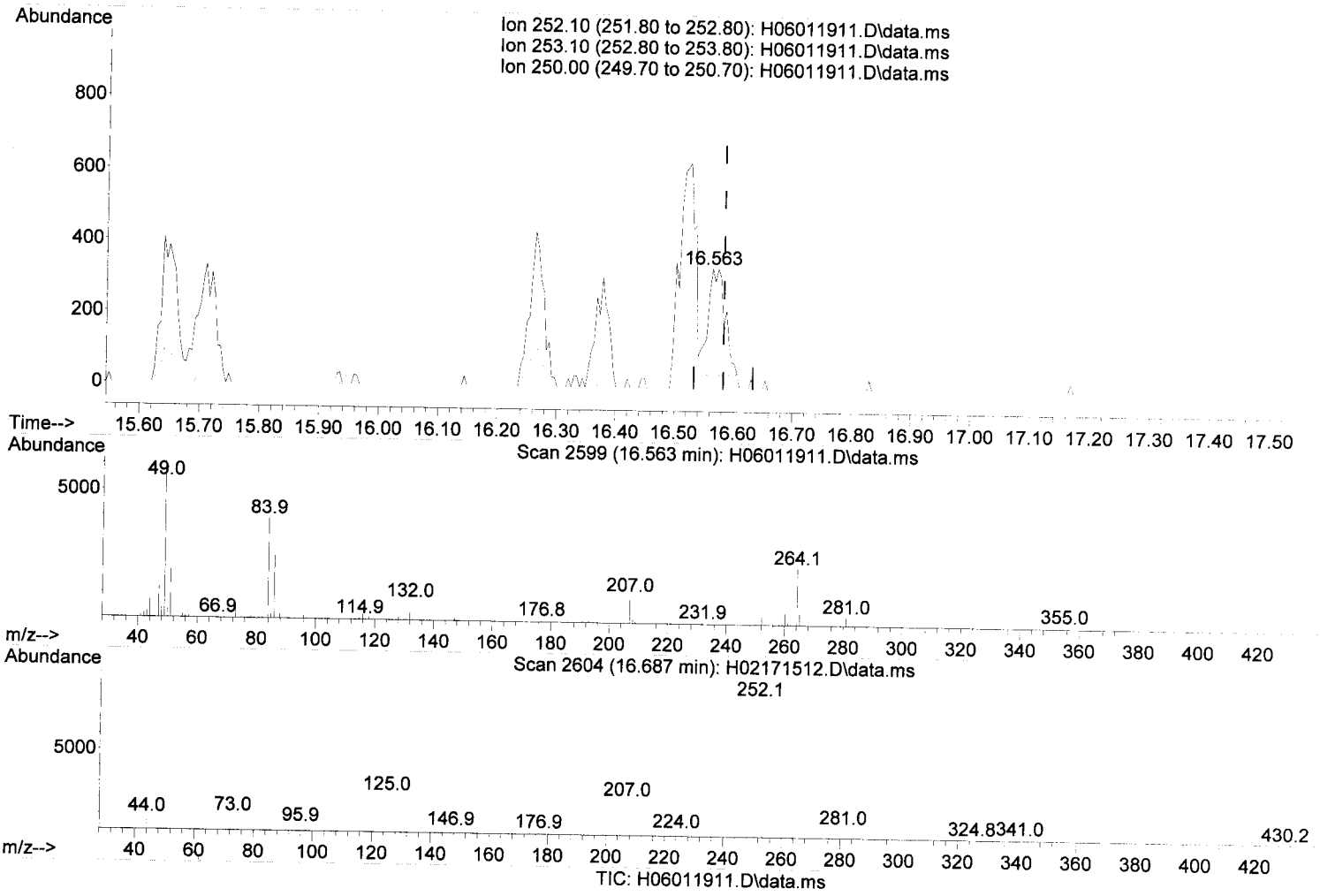
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	226171	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	170224	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.916	188	441148	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	399823	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	347189	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	296516	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	227562	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	413880	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	6147	1.02	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.320	264	411	0.38	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.120	128	783	0.30	ng/ml	91
3) 2-Methylnaphthalene	7.706	142	429	0.22	ng/ml	96
4) 1-Methylnaphthalene	7.787	142	396	0.21	ng/ml	76
6) Biphenyl	8.106	154	982	0.20	ng/ml	90
7) 2,6-Dimethylnaphthalene	8.244	156	413	0.21	ng/ml#	43
9) Acenaphthylene	8.487	152	642	0.19	ng/ml	95
10) Acenaphthene	8.644	153	612	0.26	ng/ml	94
11) Dibenzofuran	8.792	168	878	0.25	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.973	170	473	0.21	ng/ml#	1
13) Fluorene	9.092	166	678	0.23	ng/ml	83
15) Dibenzothiophene	9.825	184	976	0.22	ng/ml	80
16) Phenanthrene	9.935	178	1477	0.27	ng/ml	88
17) Anthracene	9.982	178	924	0.21	ng/ml	92
18) Carbazole	10.120	167	922	0.21	ng/ml	90
19) Fluoranthene	11.044	202	1127	0.23	ng/ml	91
20) Pyrene	11.301	202	1319	0.25	ng/ml	92
22) Benz(a)anthracene	13.254	228	1777	0.22	ng/ml	75
23) Chrysene	13.311	228	964	0.22	ng/ml	94
25) Benzo(b)fluoranthene	15.639	252	739	0.23	ng/ml	94
26) Benzo(k)fluoranthene	15.711	252	698	0.26	ng/ml	92
27) Benzo(b+k)fluoranthene	15.639	252	1437	0.49	ng/ml	94
28) Benzo(e)pyrene	16.263	252	722	0.20	ng/ml	96
30) Benzo(a)pyrene	16.378	252	479	0.27	ng/ml	61
31) Perylene	16.563	252	577	0.30	ng/ml	89
33) Indeno(1,2,3-cd)pyrene	18.830	276	885	0.23	ng/ml#	1
34) Dibenz(a,h)anthracene	18.892	278	720	0.23	ng/ml	74
35) Benzo(g,h,i)perylene	19.344	276	548	0.36	ng/ml	70

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 15:05:42 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.563min (-0.019) 0.30 ng/ml

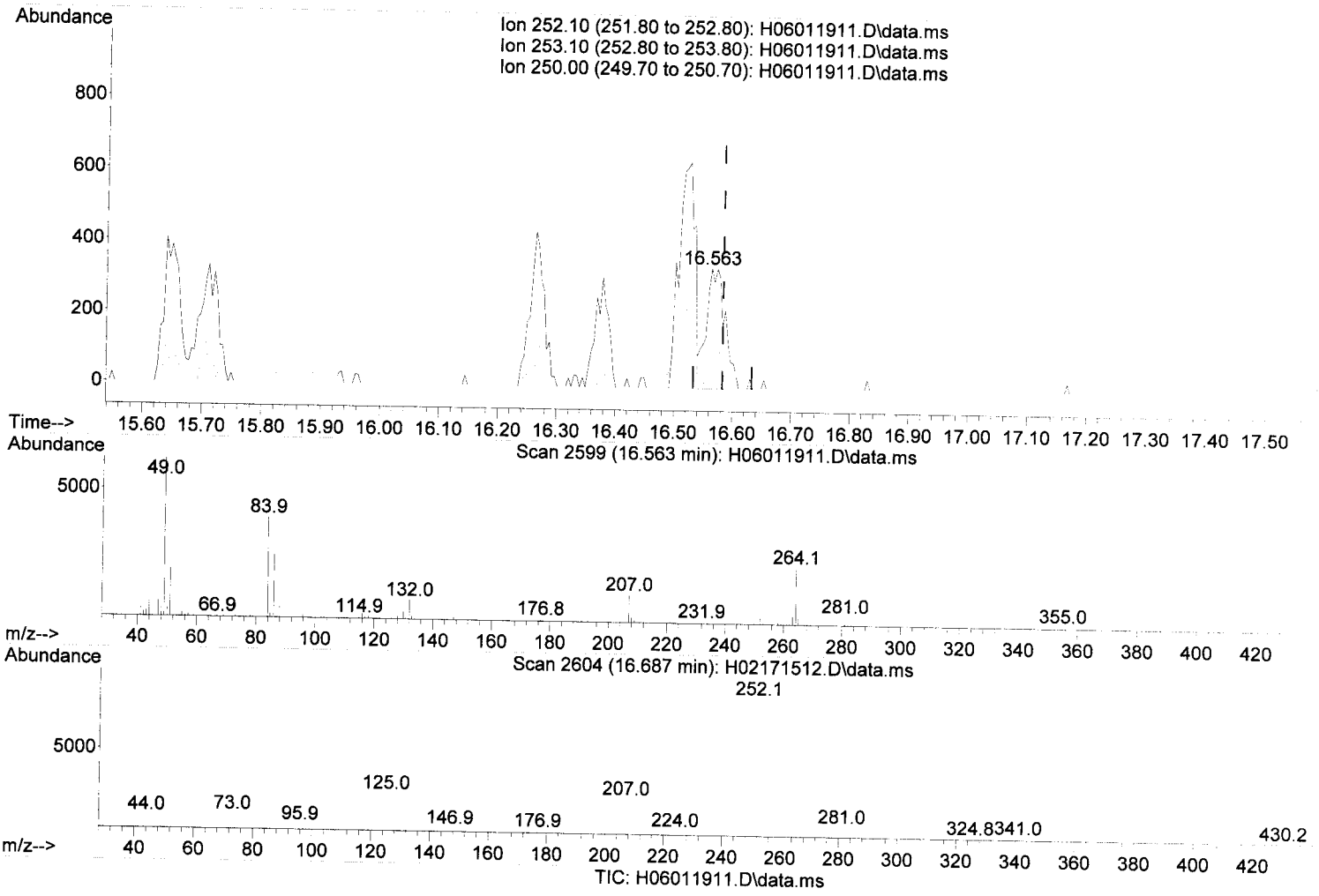
response 577

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	28.99
250.00	27.60	33.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 15:05:42 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.563min (-0.019) 0.35 ng/ml m

response 758

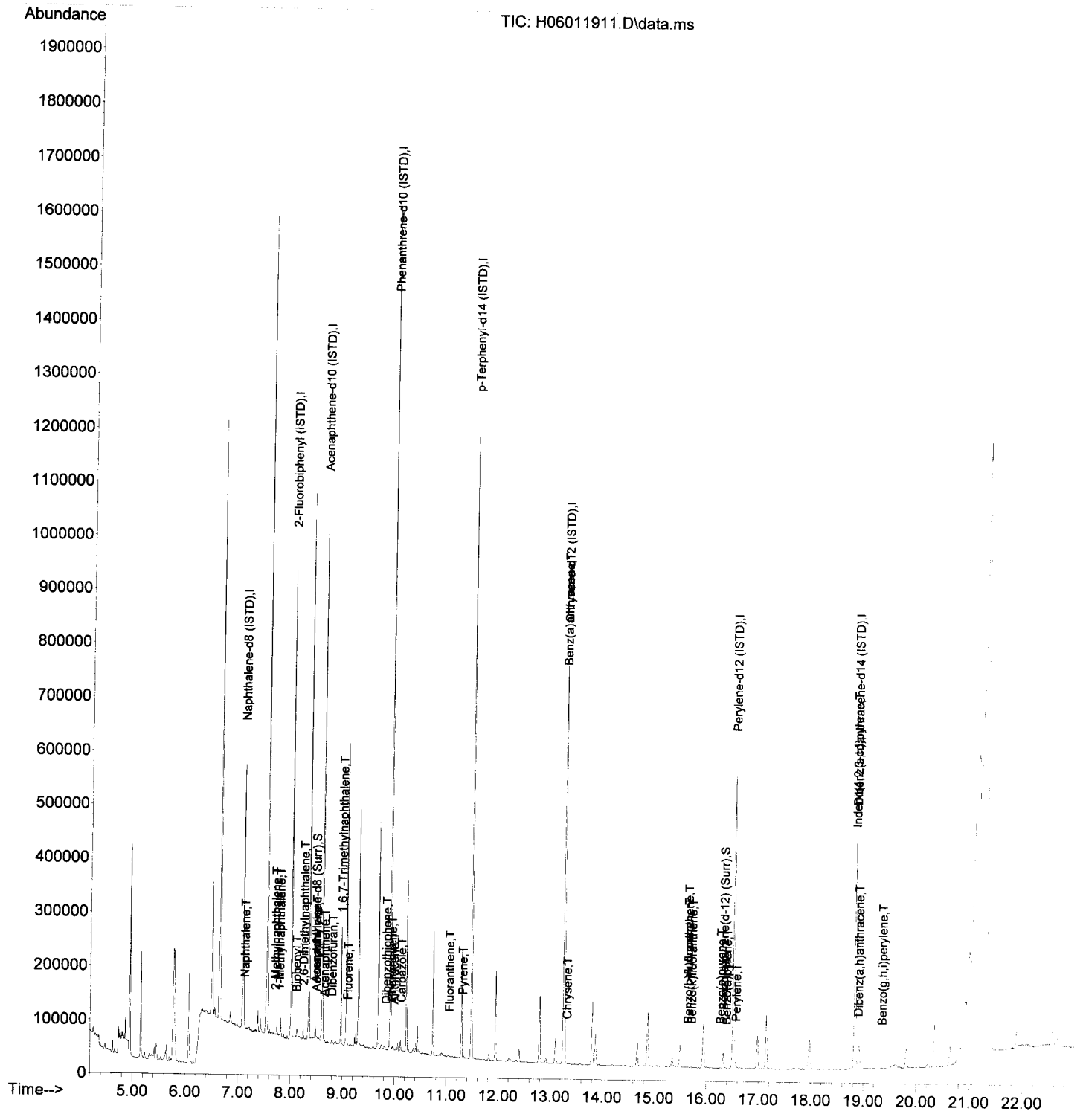
Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	28.99
250.00	27.60	33.43
0.00	0.00	0.00

7/1/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011911.D
Acq On : 1 Jul 2019 2:19 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL1
Misc : 1x, A19F394@0.2
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 01 15:05:42 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011912.D
Acq On : 1 Jul 2019 2:52 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL2
Misc : 1x, A19F395@0.4
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	237437	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	191205	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.916	188	449057	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.259	240	400979	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	344338	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.835	292	295116	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.016	172	246901	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.478	244	412625	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	6161	0.79	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.330	264	703	0.51	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.116	128	1258	0.46	ng/ml	88
3) 2-Methylnaphthalene	7.706	142	902	0.44	ng/ml	99
4) 1-Methylnaphthalene	7.792	142	792	0.40	ng/ml	97
6) Biphenyl	8.106	154	1589	0.36	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	914	0.41	ng/ml	85
9) Acenaphthylene	8.492	152	1372	0.37	ng/ml	88
10) Acenaphthene	8.639	153	1175	0.44	ng/ml	97
11) Dibenzofuran	8.792	168	1477	0.37	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.973	170	1018	0.41	ng/ml#	1
13) Fluorene	9.092	166	1370	0.42	ng/ml	92
15) Dibenzothiophene	9.825	184	1878	0.42	ng/ml	94
16) Phenanthrene	9.935	178	2410	0.43	ng/ml	94
17) Anthracene	9.982	178	1748	0.38	ng/ml	97
18) Carbazole	10.120	167	1682	0.38	ng/ml	93
19) Fluoranthene	11.044	202	1984	0.40	ng/ml	93
20) Pyrene	11.301	202	2251	0.41	ng/ml	99
22) Benz(a)anthracene	13.239	228	2448	0.38	ng/ml	95
23) Chrysene	13.311	228	1776	0.41	ng/ml	94
25) Benzo(b)fluoranthene	15.649	252	1236	0.37	ng/ml	89
26) Benzo(k)fluoranthene	15.706	252	1115	0.38	ng/ml	89
27) Benzo(b+k)fluoranthene	15.649	252	2352	0.74	ng/ml	89
28) Benzo(e)pyrene	16.263	252	1235	0.34	ng/ml	96
30) Benzo(a)pyrene	16.373	252	830	0.39	ng/ml	99
31) Perylene	~~16.563~~	~~252~~	~~864~~	~~0.38~~	~~ng/ml~~	~~88~~
33) Indeno(1,2,3-cd)pyrene	18.835	276	1492	0.45	ng/ml#	1
34) Dibenz(a,h)anthracene	18.897	278	1353	0.44	ng/ml	94
35) Benzo(g,h,i)perylene	19.359	276	983	0.52	ng/ml	76

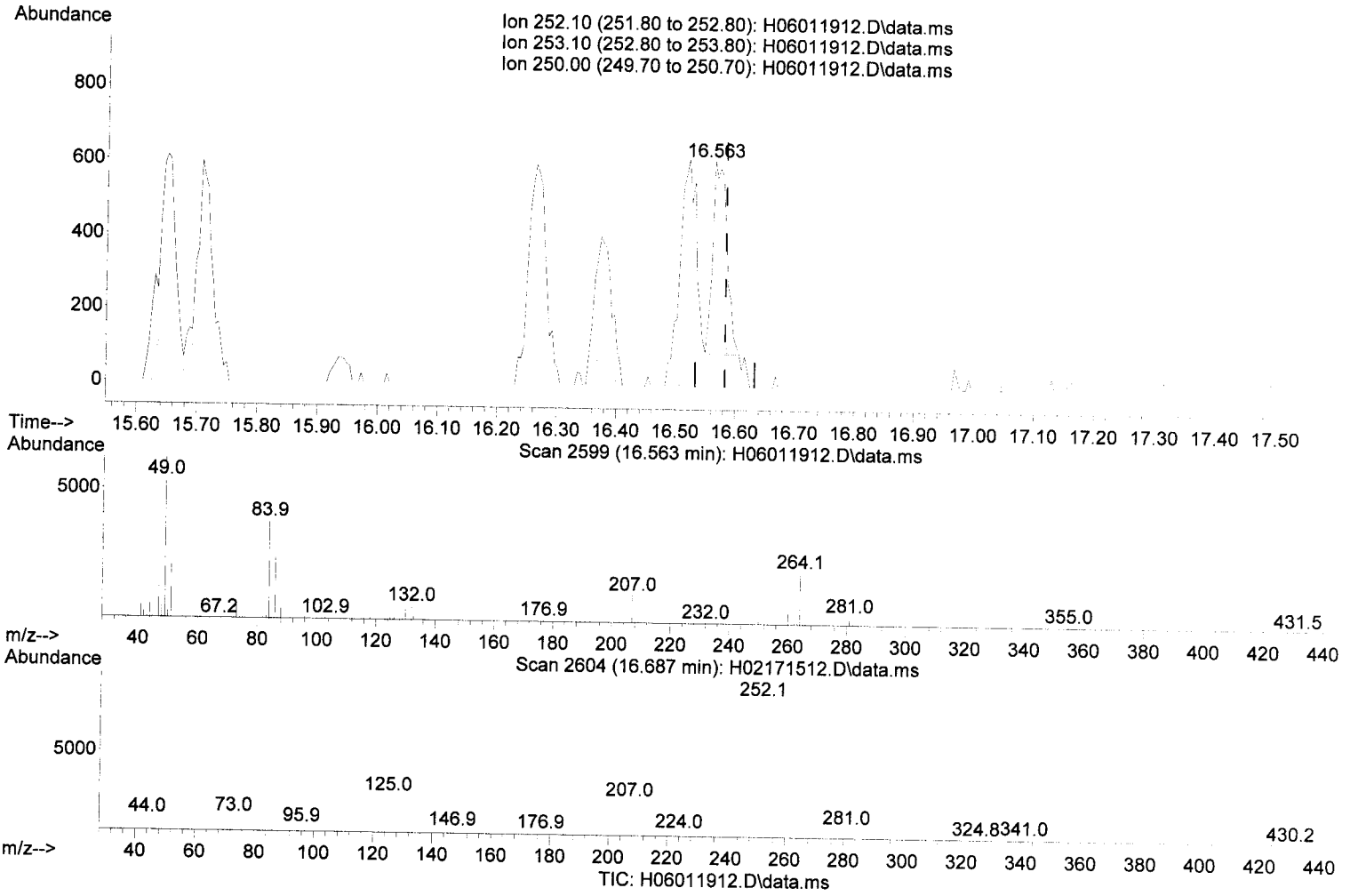
See MI

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011912.D
Acq On : 1 Jul 2019 2:52 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL2
Misc : 1x, A19F395@0.4
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.563min (-0.019) 0.38 ng/ml

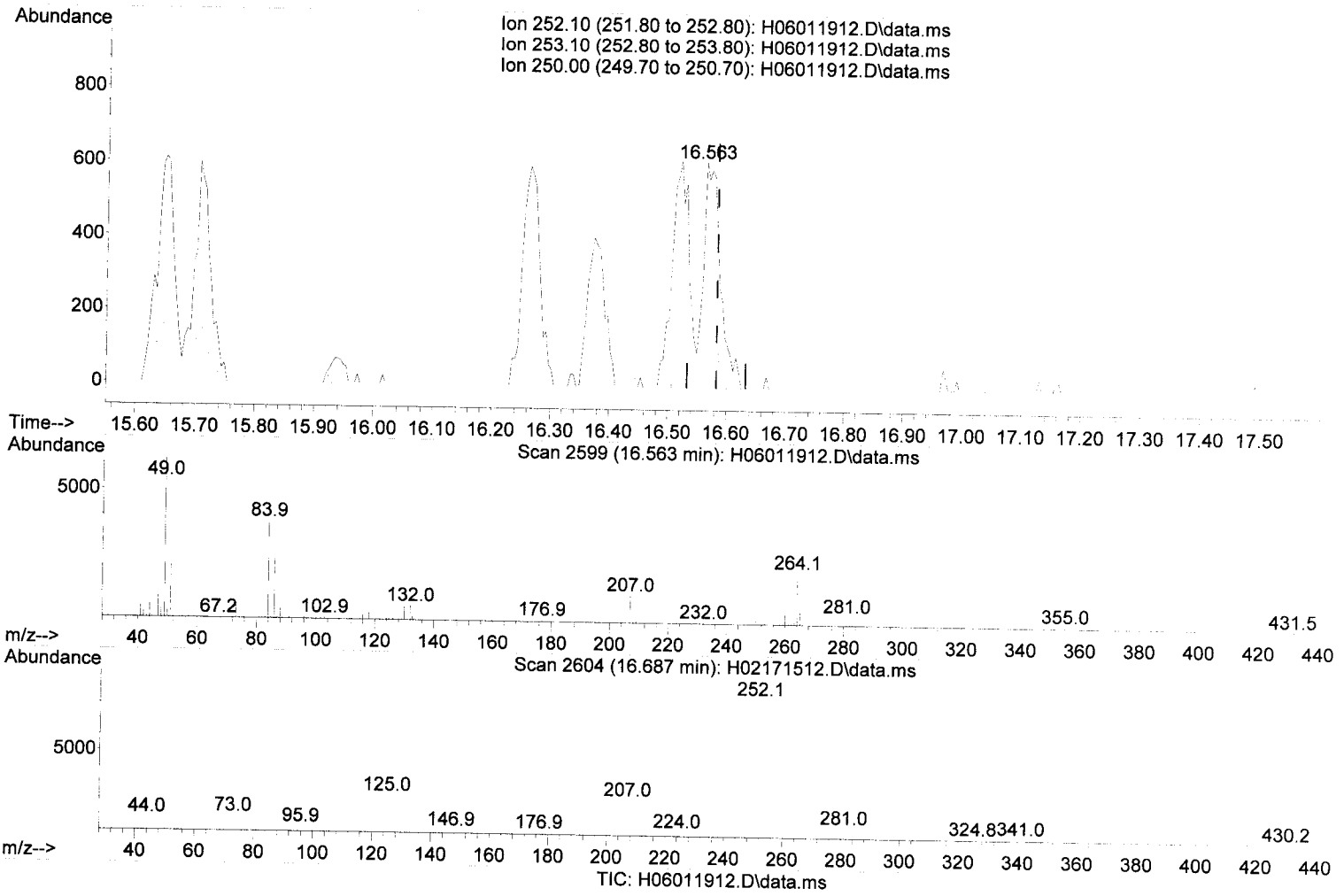
response 864

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	16.83
250.00	27.60	33.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011912.D
Acq On : 1 Jul 2019 2:52 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL2
Misc : 1x, A19F395@0.4
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.563min (-0.019) 0.48 ng/ml (m)

response 1220

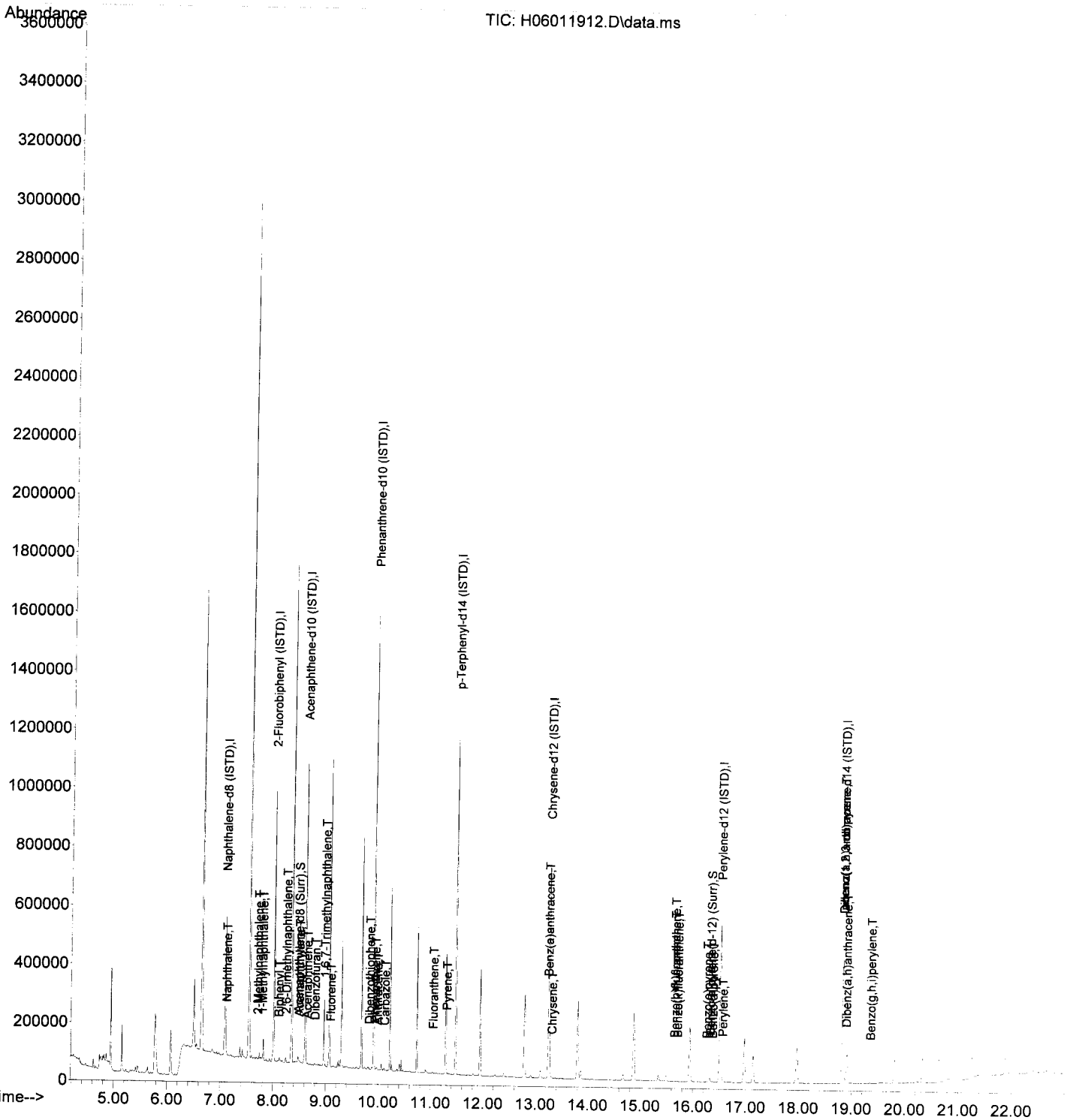
Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	16.83
250.00	27.60	33.01
0.00	0.00	0.00

JK 7/2/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011912.D
Acq On : 1 Jul 2019 2:52 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL2
Misc : 1x, A19F395@0.4
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:02 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011913.D
Acq On : 1 Jul 2019 3:26 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL3
Misc : 1x, A19F394@1.0
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:07 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	200447	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	168841	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	434435	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	422954	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	381661	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.835	292	341309	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	220227	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	424512	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	5745	0.90	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.320	264	1857	0.90	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.120	128	2534	1.09	ng/ml	98
3) 2-Methylnaphthalene	7.706	142	1881	1.08	ng/ml	95
4) 1-Methylnaphthalene	7.792	142	1693	1.02	ng/ml	96
6) Biphenyl	8.106	154	2831	0.89	ng/ml	96
7) 2,6-Dimethylnaphthalene	8.244	156	1809	0.92	ng/ml	88
9) Acenaphthylene	8.492	152	2915	0.89	ng/ml	95
10) Acenaphthene	8.639	153	2544	1.08	ng/ml	89
11) Dibenzofuran	8.792	168	3382	0.97	ng/ml#	1
12) 1,6,7-Trimethylnaphtha...	8.973	170	2302	1.04	ng/ml#	41
13) Fluorene	9.092	166	2836	0.98	ng/ml	96
15) Dibenzothiophene	9.825	184	4216	0.97	ng/ml	93
16) Phenanthrene	9.934	178	5203	0.97	ng/ml	99
17) Anthracene	9.982	178	3985	0.90	ng/ml	97
18) Carbazole	10.120	167	4222	0.99	ng/ml	96
19) Fluoranthene	11.039	202	4690	0.97	ng/ml	97
20) Pyrene	11.301	202	5488	1.04	ng/ml	96
22) Benz(a)anthracene	13.239	228	4814	0.90	ng/ml	96
23) Chrysene	13.311	228	4368	0.95	ng/ml	94
25) Benzo(b)fluoranthene	15.649	252	3521	0.91	ng/ml	94
26) Benzo(k)fluoranthene	15.706	252	3174	0.85	ng/ml	86
27) Benzo(b+k)fluoranthene	15.649	252	6695	1.75	ng/ml	94
28) Benzo(e)pyrene	16.268	252	3406	0.85	ng/ml	95
30) Benzo(a)pyrene	16.382	252	2569	0.87	ng/ml	100
31) Perylene	~~16.573~~	~~252~~	~~2704~~	~~0.80~~	~~ng/ml~~	81
33) Indeno(1,2,3-cd)pyrene	18.835	276	3749	1.08	ng/ml#	1
34) Dibenz(a,h)anthracene	18.901	278	3547	0.99	ng/ml	83
35) Benzo(g,h,i)perylene	19.354	276	2972	1.12	ng/ml#	67

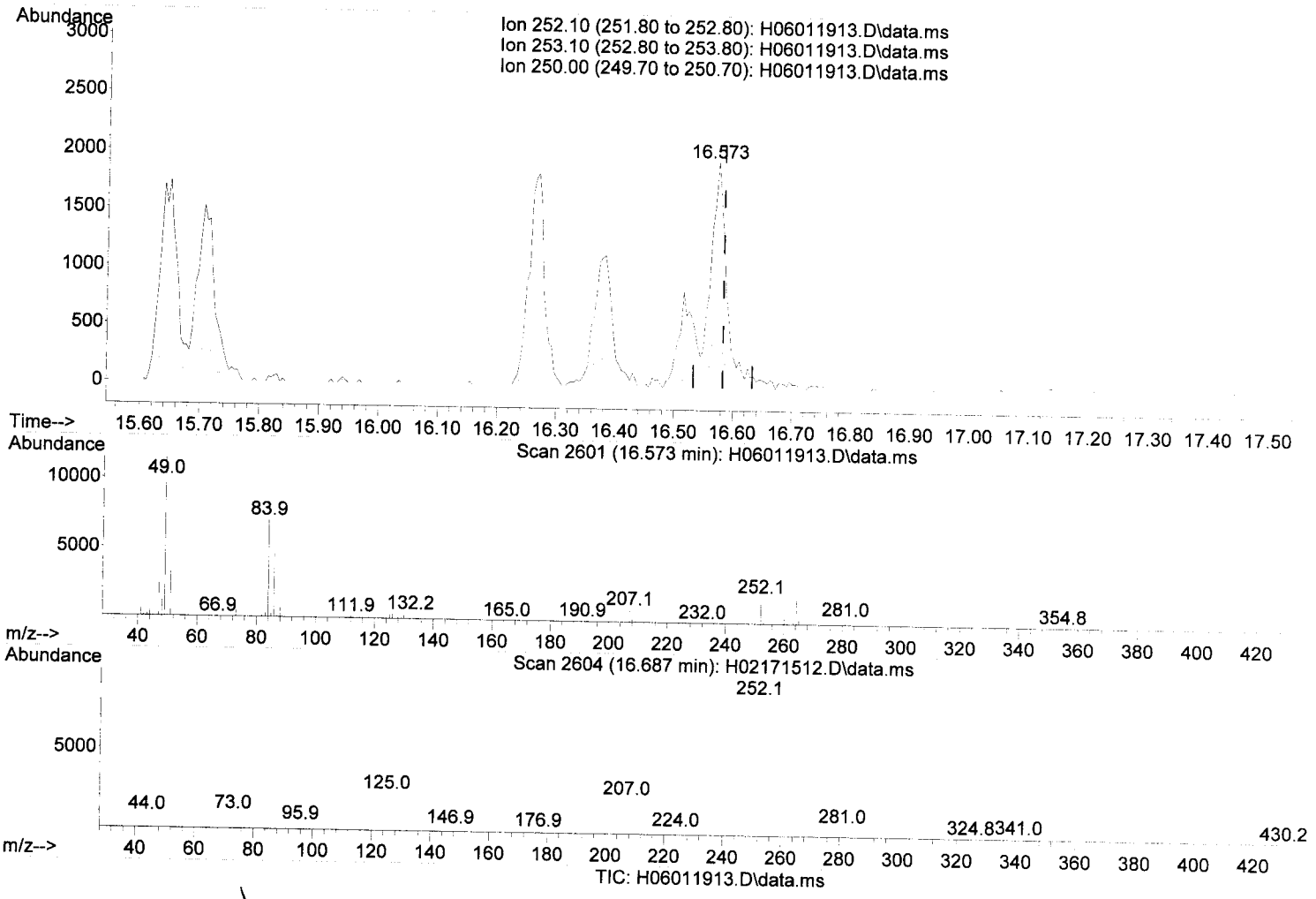
See NJ

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011913.D
Acq On : 1 Jul 2019 3:26 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL3
Misc : 1x, A19F394@1.0
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:07 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.573min (-0.010) 0.80 ng/ml

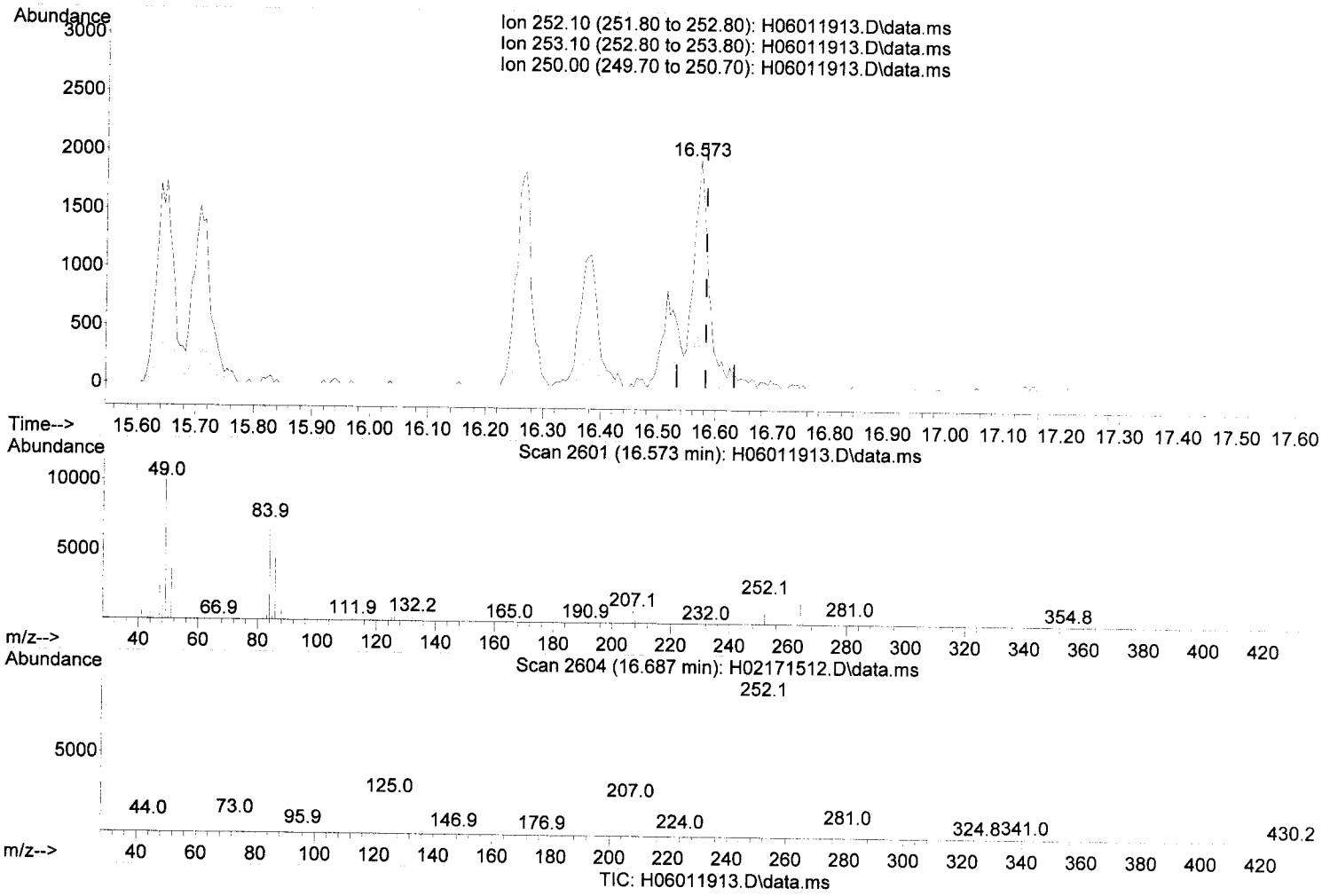
response 2704

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	17.15
250.00	27.60	15.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011913.D
Acq On : 1 Jul 2019 3:26 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL3
Misc : 1x, A19F394@1.0
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:07 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.573min (-0.010) 1.06 ng/ml (m)

response 3763

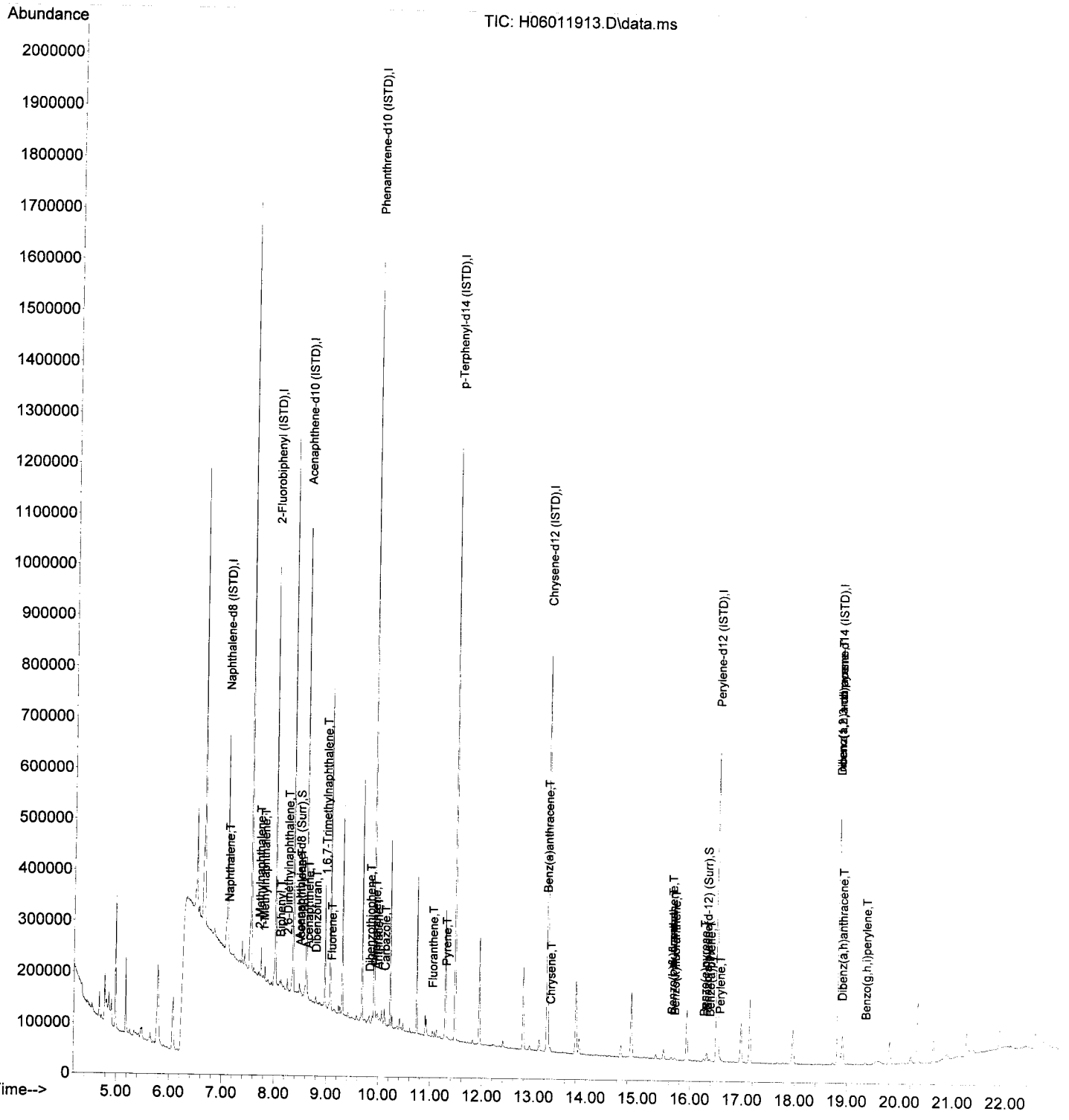
Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	17.15
250.00	27.60	15.31
0.00	0.00	0.00

7/2/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011913.D
Acq On : 1 Jul 2019 3:26 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL3
Misc : 1x, A19F394@1.0
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:07 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011914.D
Acq On : 1 Jul 2019 4:00 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL4
Misc : 1x, A19F394@5.0
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:11 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/2/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	245257	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	192433	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	458424	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	426655	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	378340	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	329943	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	254896	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	430869	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	19755	4.98	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.325	264	11870	4.62	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.120	128	14208	4.98	ng/ml	96
3) 2-Methylnaphthalene	7.706	142	10730	5.01	ng/ml	93
4) 1-Methylnaphthalene	7.792	142	10780	5.30	ng/ml	95
6) Biphenyl	8.106	154	15613	4.90	ng/ml	92
7) 2,6-Dimethylnaphthalene	8.244	156	10989	4.88	ng/ml	92
9) Acenaphthylene	8.487	152	18304	4.88	ng/ml	97
10) Acenaphthene	8.639	153	13774	5.13	ng/ml	99
11) Dibenzofuran	8.792	168	19460	4.90	ng/ml#	40
12) 1,6,7-Trimethylnaphtha...	8.972	170	12763	5.08	ng/ml	80
13) Fluorene	9.092	166	16703	5.06	ng/ml	99
15) Dibenzothiophene	9.825	184	22772	4.98	ng/ml	98
16) Phenanthrene	9.934	178	26479	4.68	ng/ml	98
17) Anthracene	9.982	178	22858	4.90	ng/ml	97
18) Carbazole	10.120	167	21769	4.83	ng/ml	98
19) Fluoranthene	11.044	202	25465	4.98	ng/ml	98
20) Pyrene	11.296	202	27834	5.00	ng/ml	97
22) Benz(a)anthracene	13.239	228	21489	4.68	ng/ml	96
23) Chrysene	13.311	228	23698	5.11	ng/ml	98
25) Benzo(b)fluoranthene	15.644	252	18004	4.58	ng/ml	96
26) Benzo(k)fluoranthene	15.706	252	17999	4.51	ng/ml	94
27) Benzo(b+k)fluoranthene	15.644	252	36706	9.21	ng/ml	96
28) Benzo(e)pyrene	16.268	252	19136	4.79	ng/ml	95
30) Benzo(a)pyrene	16.382	252	14702	4.42	ng/ml	97
31) Perylene	16.577	252	16355	4.15	ng/ml	95
33) Indeno(1,2,3-cd)pyrene	18.835	276	17697	5.57	ng/ml	74
34) Dibenz(a,h)anthracene	18.896	278	18877	5.44	ng/ml	93
35) Benzo(g,h,i)perylene	19.349	276	16282	5.58	ng/ml	90

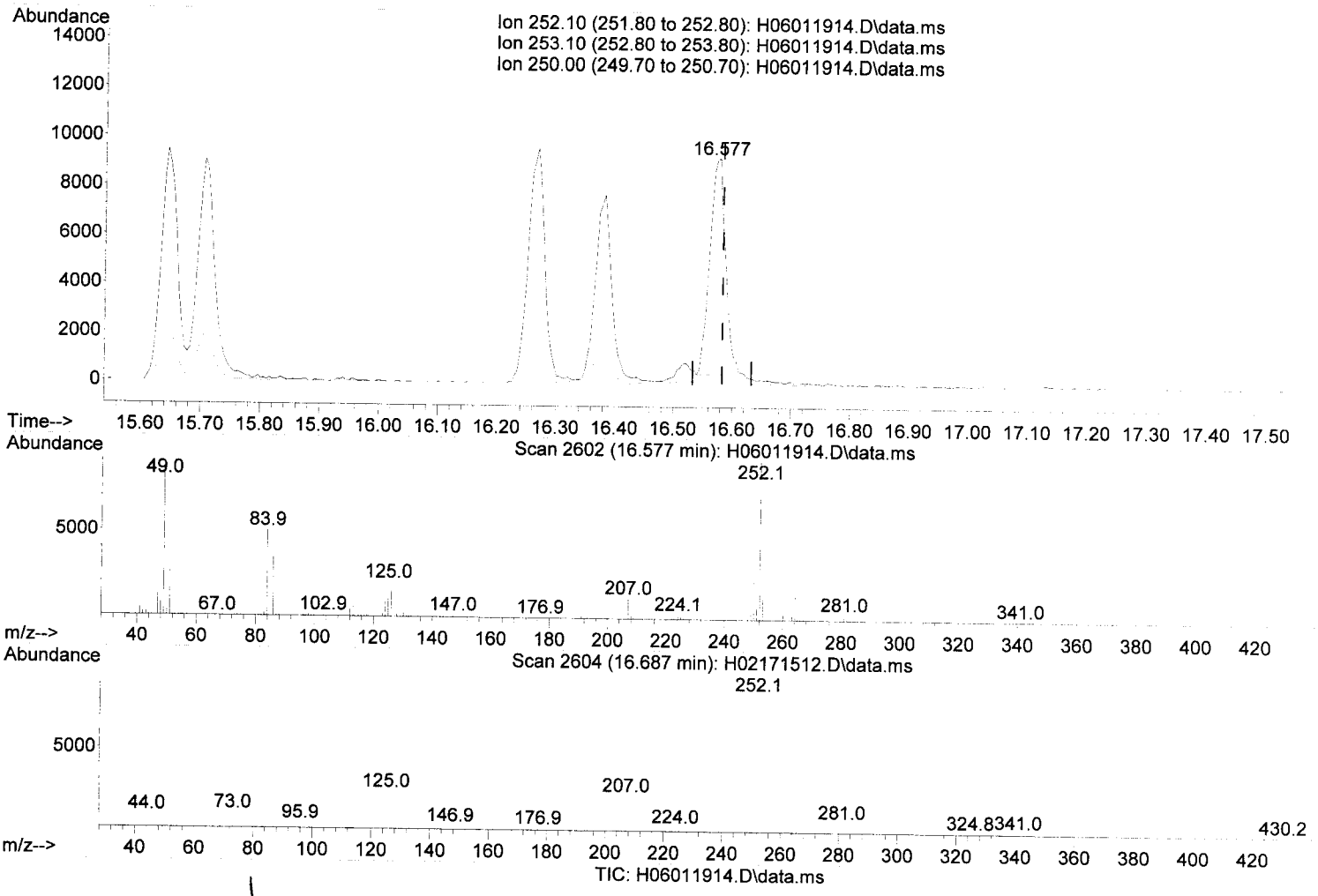
Re MJ

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011914.D
Acq On : 1 Jul 2019 4:00 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL4
Misc : 1x, A19F394@5.0
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:11 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.577min (-0.005) 4.15 ng/ml

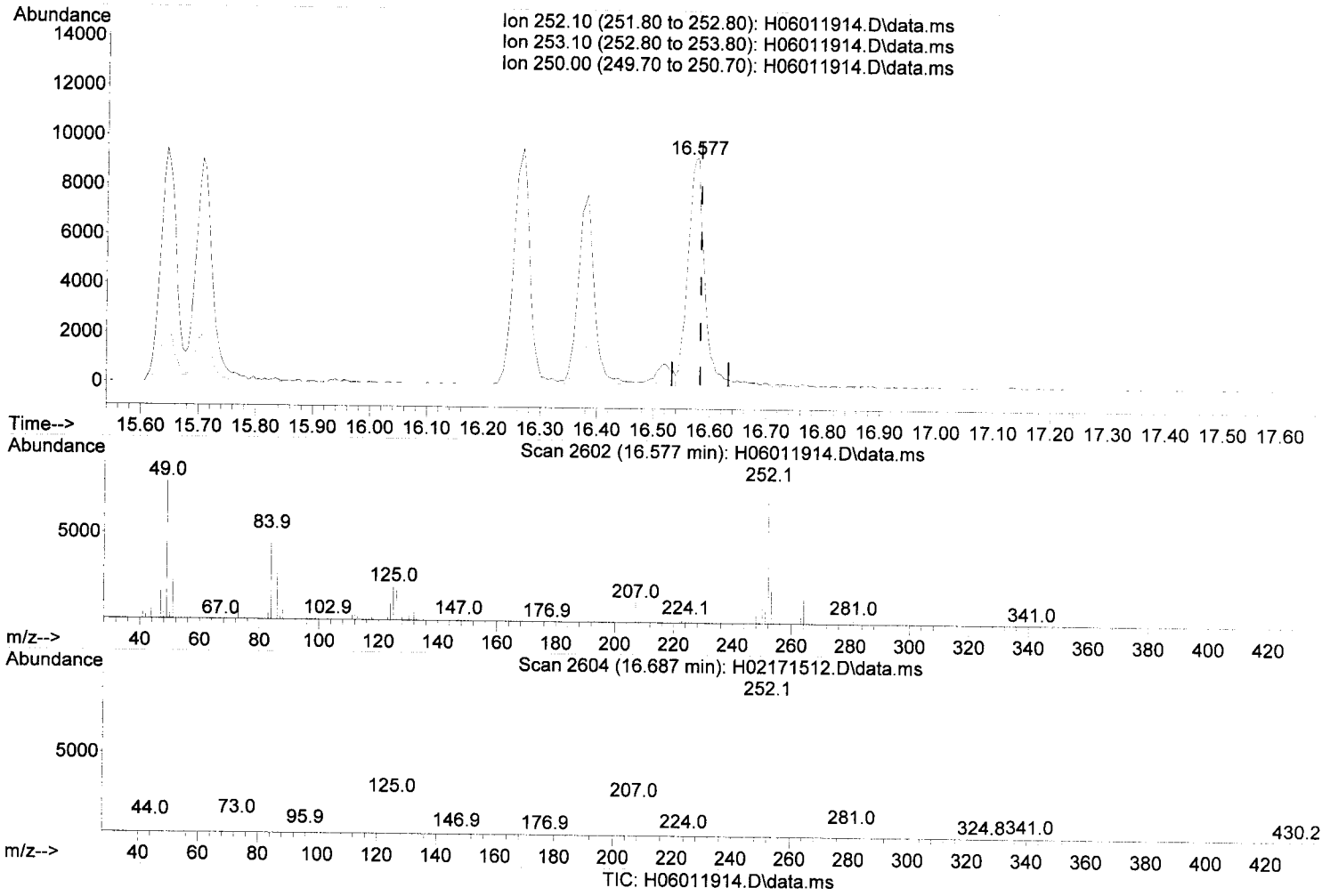
response 16355

Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	20.79
250.00	27.60	24.95
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011914.D
Acq On : 1 Jul 2019 4:00 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL4
Misc : 1x, A19F394@5.0
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:11 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



(31) Perylene (T)

16.577min (-0.005) 4.90 ng/ml m

response 19457

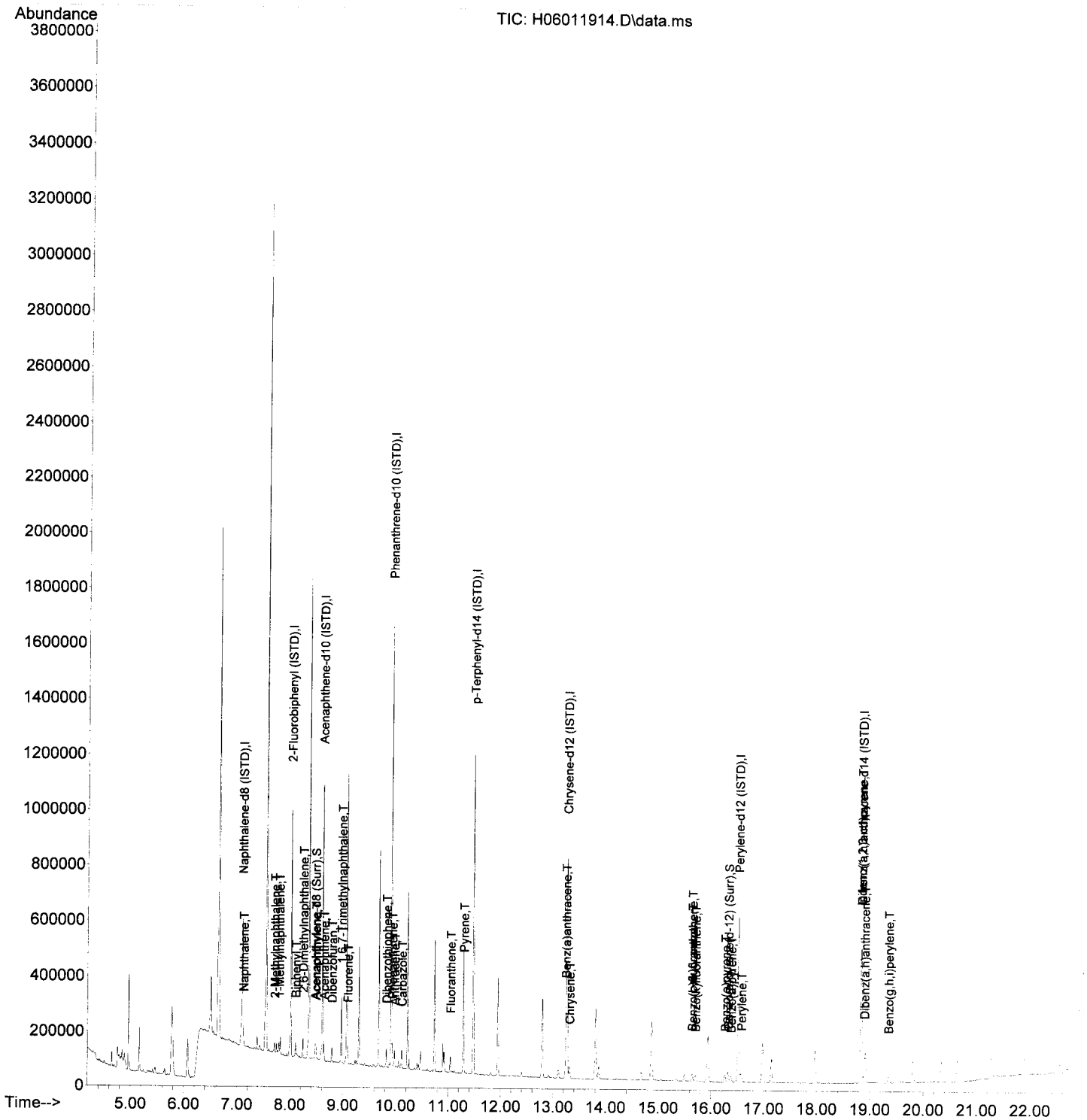
Ion	Exp%	Act%
252.10	100.00	100.00
253.10	23.40	20.79
250.00	27.60	24.95
0.00	0.00	0.00

7/2/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011914.D
Acq On : 1 Jul 2019 4:00 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL4
Misc : 1x, A19F394@5.0
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:11 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011915.D
Acq On : 1 Jul 2019 4:34 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL5
Misc : 1x, A19F394@10
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:15 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

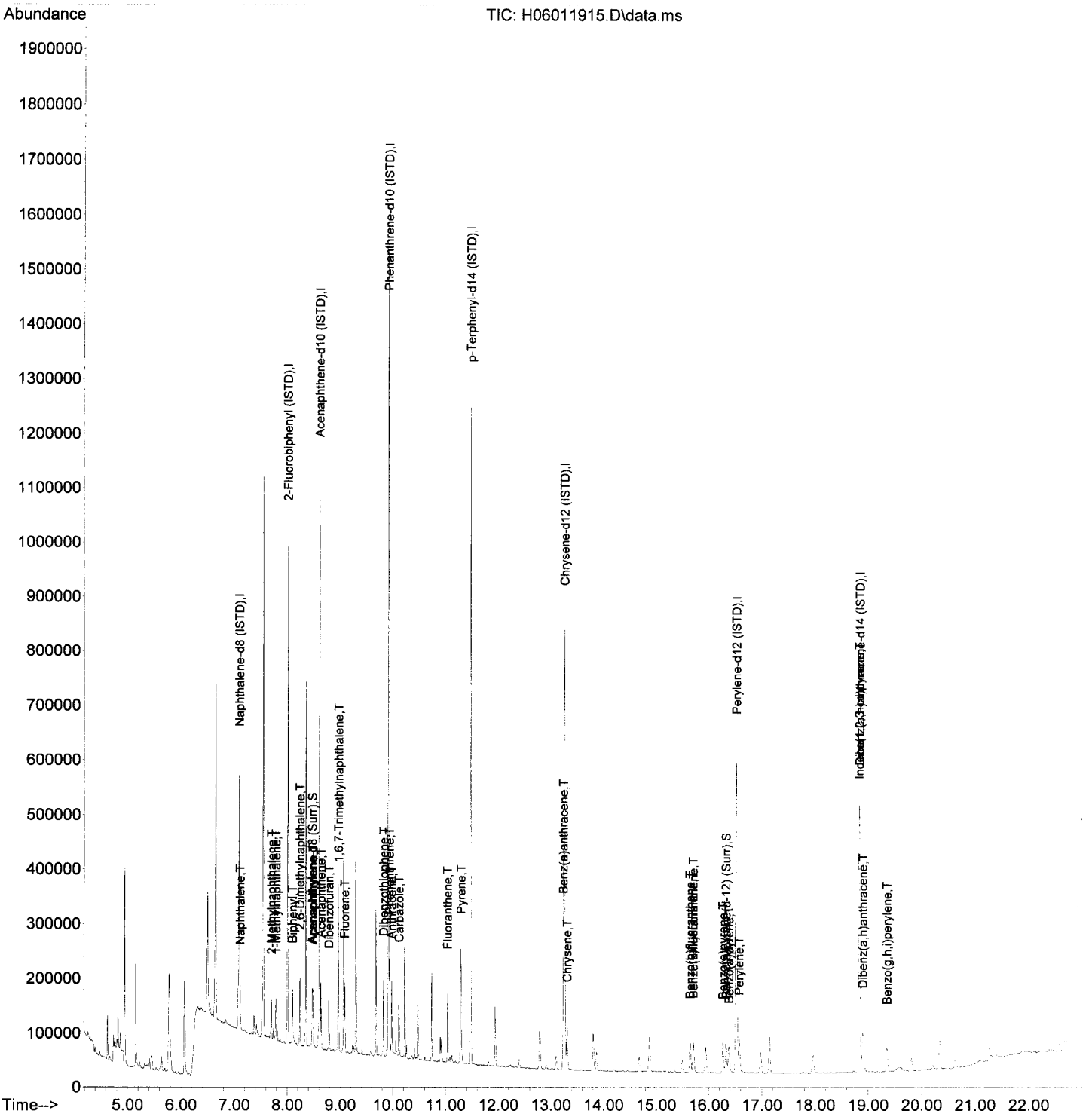
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	237364	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	186187	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	454809	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	426442	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	373007	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	318957	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	241032	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	432080	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	34491	9.87	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.325	264	24957	9.50	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	26697	9.66	ng/ml	94
3) 2-Methylnaphthalene	7.706	142	19906	9.61	ng/ml	96
4) 1-Methylnaphthalene	7.792	142	19757	10.04	ng/ml	97
6) Biphenyl	8.106	154	29196	9.62	ng/ml	94
7) 2,6-Dimethylnaphthalene	8.244	156	21138	9.71	ng/ml	91
9) Acenaphthylene	8.487	152	36078	9.93	ng/ml	98
10) Acenaphthene	8.639	153	25823	9.94	ng/ml	98
11) Dibenzofuran	8.792	168	38578	10.03	ng/ml	80
12) 1,6,7-Trimethylnaphtha...	8.973	170	25095	10.32	ng/ml	86
13) Fluorene	9.092	166	32684	10.24	ng/ml	99
15) Dibenzothiophene	9.825	184	45528	10.03	ng/ml	97
16) Phenanthrene	9.934	178	52493	9.35	ng/ml	98
17) Anthracene	9.982	178	46769	10.10	ng/ml	98
18) Carbazole	10.120	167	45411	10.15	ng/ml	96
19) Fluoranthene	11.039	202	52232	10.29	ng/ml	98
20) Pyrene	11.296	202	55553	10.05	ng/ml	98
22) Benz(a)anthracene	13.239	228	42737	9.48	ng/ml	98
23) Chrysene	13.311	228	46002	9.93	ng/ml	100
25) Benzo(b)fluoranthene	15.644	252	38876	9.93	ng/ml	96
26) Benzo(k)fluoranthene	15.706	252	39586	9.90	ng/ml	95
27) Benzo(b+k)fluoranthene	15.706	252	79081	19.85	ng/ml	98
28) Benzo(e)pyrene	16.268	252	38536	9.79	ng/ml	97
30) Benzo(a)pyrene	16.382	252	32764	9.72	ng/ml	99
31) Perylene	16.573	252	34765	8.72	ng/ml	98
33) Indeno(1,2,3-cd)pyrene	18.830	276	34953	11.39	ng/ml	90
34) Dibenz(a,h)anthracene	18.901	278	35647	10.63	ng/ml	91
35) Benzo(g,h,i)perylene	19.354	276	32675	11.32	ng/ml	95

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011915.D
Acq On : 1 Jul 2019 4:34 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL5
Misc : 1x, A19F394@10
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:15 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011916.D
Acq On : 1 Jul 2019 5:07 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL6
Misc : 1x, A19F394@20
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:20 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/2/19

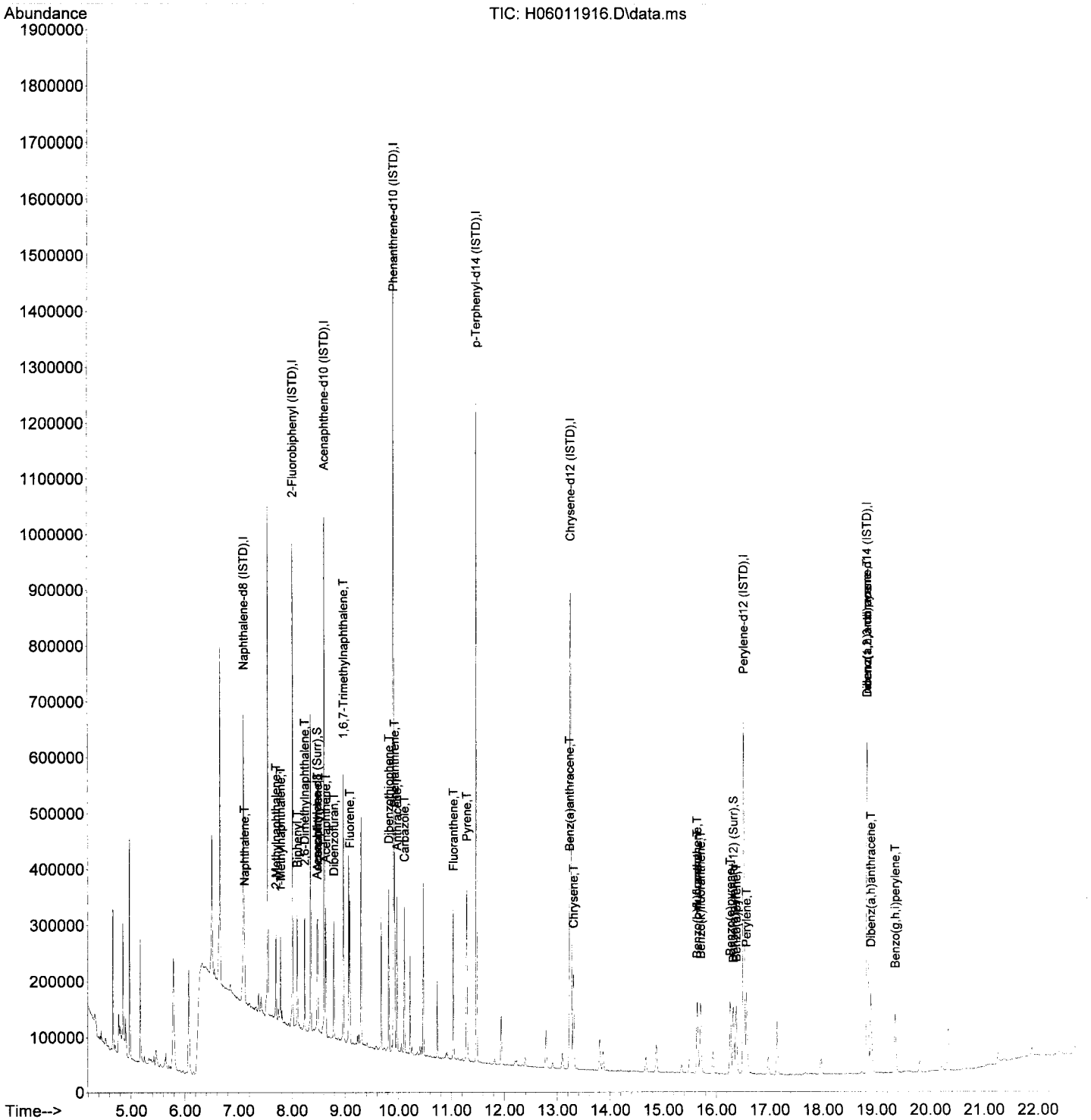
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	237164	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	172012	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	453703	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	442821	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.520	264	402383	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.835	292	339347	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	231104	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	433689	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	63570	20.64	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.325	264	63553	21.59	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	53579	19.40	ng/ml	95
3) 2-Methylnaphthalene	7.706	142	39853	19.26	ng/ml	98
4) 1-Methylnaphthalene	7.792	142	37675	19.16	ng/ml	94
6) Biphenyl	8.106	154	56077	20.17	ng/ml	91
7) 2,6-Dimethylnaphthalene	8.244	156	40192	19.98	ng/ml	94
9) Acenaphthylene	8.487	152	70272	20.94	ng/ml	99
10) Acenaphthene	8.639	153	48203	20.08	ng/ml	97
11) Dibenzofuran	8.792	168	74487	20.96	ng/ml	83
12) 1,6,7-Trimethylnaphtha...	8.973	170	50774	22.59	ng/ml	86
13) Fluorene	9.092	166	65459	22.20	ng/ml	98
15) Dibenzothiophene	9.825	184	93543	20.67	ng/ml	98
16) Phenanthrene	9.934	178	108414	19.36	ng/ml	98
17) Anthracene	9.982	178	99029	21.44	ng/ml	99
18) Carbazole	10.120	167	94428	21.16	ng/ml	96
19) Fluoranthene	11.044	202	109483	21.63	ng/ml	96
20) Pyrene	11.296	202	114772	20.81	ng/ml	98
22) Benz(a)anthracene	13.239	228	97344	20.85	ng/ml	99
23) Chrysene	13.311	228	98622	20.49	ng/ml	99
25) Benzo(b)fluoranthene	15.644	252	92479	21.50	ng/ml	93
26) Benzo(k)fluoranthene	15.711	252	94005	21.33	ng/ml	94
27) Benzo(b+k)fluoranthene	15.644	252	187520	42.79	ng/ml	93
28) Benzo(e)pyrene	16.268	252	88018	20.73	ng/ml	99
30) Benzo(a)pyrene	16.382	252	81687	21.74	ng/ml	98
31) Perylene	16.573	252	84802	19.30	ng/ml	96
33) Indeno(1,2,3-cd)pyrene	18.835	276	76588	23.29	ng/ml	86
34) Dibenz(a,h)anthracene	18.901	278	79659	22.33	ng/ml	92
35) Benzo(g,h,i)perylene	19.354	276	74206	23.58	ng/ml	89

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011916.D
Acq On : 1 Jul 2019 5:07 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL6
Misc : 1x, A19F394@20
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:20 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011917.D
Acq On : 1 Jul 2019 5:41 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL7
Misc : 1x, A19F394@50
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:25 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

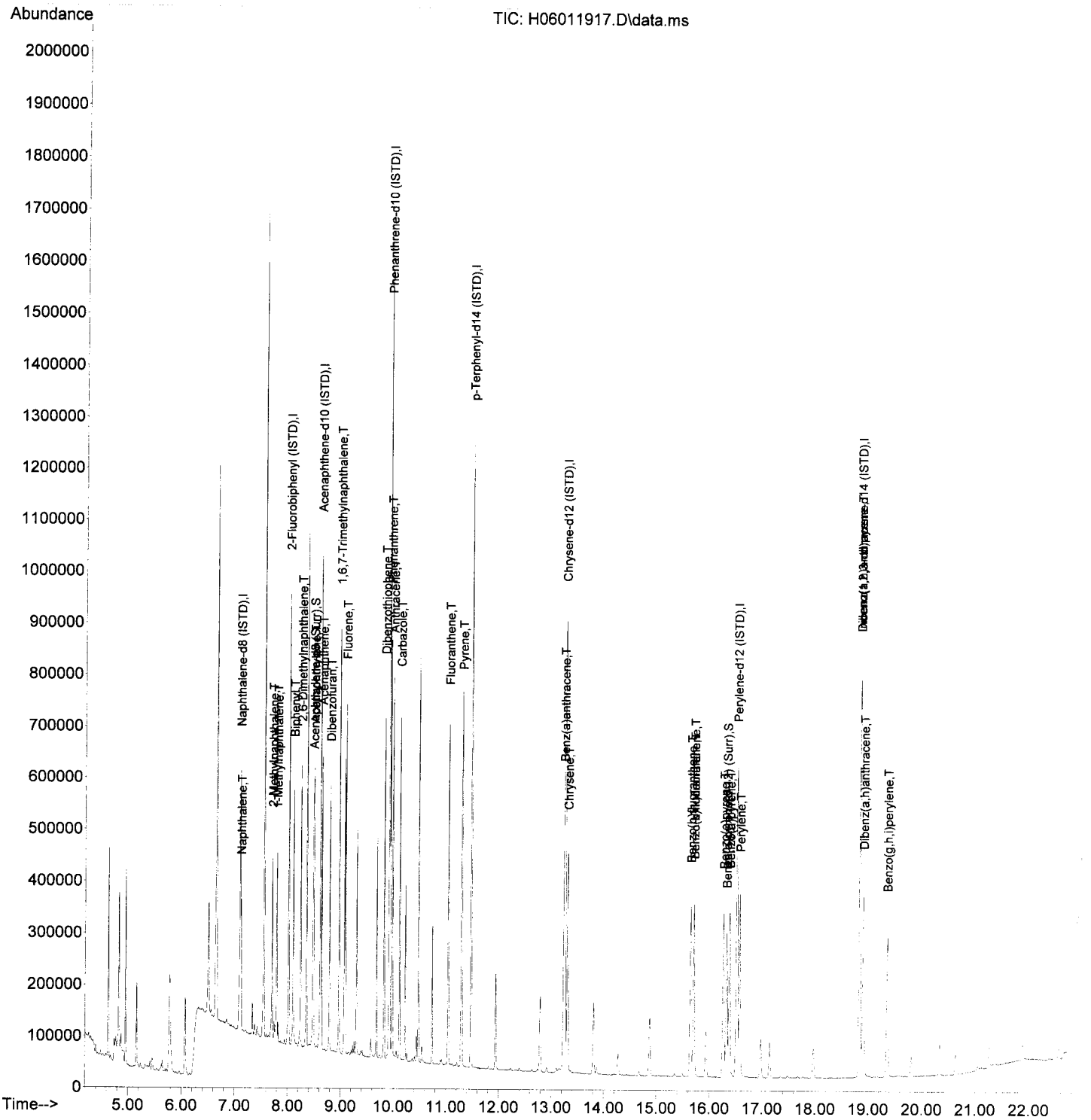
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	222732	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.615	164	177842	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	449650	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.263	240	443314	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.525	264	394032	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	345981	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	237200	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	434321	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	158862	50.38	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.330	264	166645	53.87	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	122253	47.14	ng/ml	95
3) 2-Methylnaphthalene	7.706	142	96882	49.85	ng/ml	98
4) 1-Methylnaphthalene	7.792	142	93180	50.45	ng/ml	95
6) Biphenyl	8.106	154	139537	48.67	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	103453	49.74	ng/ml	96
9) Acenaphthylene	8.487	152	183466	52.89	ng/ml	97
10) Acenaphthene	8.639	153	125153	50.44	ng/ml	97
11) Dibenzofuran	8.792	168	182405	49.65	ng/ml	94
12) 1,6,7-Trimethylnaphtha...	8.973	170	127208	54.75	ng/ml	91
13) Fluorene	9.092	166	162311	53.23	ng/ml	99
15) Dibenzothiophene	9.825	184	229587	51.18	ng/ml	99
16) Phenanthrene	9.934	178	260092	46.86	ng/ml	99
17) Anthracene	9.982	178	250861	54.79	ng/ml	99
18) Carbazole	10.120	167	241951	54.71	ng/ml	97
19) Fluoranthene	11.044	202	274291	54.68	ng/ml	97
20) Pyrene	11.301	202	288704	52.83	ng/ml	98
22) Benz(a)anthracene	13.239	228	247094	51.81	ng/ml	99
23) Chrysene	13.315	228	239451	49.71	ng/ml	99
25) Benzo(b)fluoranthene	15.649	252	232462	52.74	ng/ml	94
26) Benzo(k)fluoranthene	15.711	252	235280	52.02	ng/ml	95
27) Benzo(b+k)fluoranthene	15.711	252	469282	104.54	ng/ml	97
28) Benzo(e)pyrene	16.273	252	220653	53.07	ng/ml	96
30) Benzo(a)pyrene	16.387	252	211927	53.72	ng/ml	99
31) Perylene	16.582	252	220349	49.25	ng/ml	97
33) Indeno(1,2,3-cd)pyrene	18.839	276	198968	57.60	ng/ml	83
34) Dibenz(a,h)anthracene	18.906	278	209258	57.52	ng/ml	91
35) Benzo(g,h,i)perylene	19.358	276	200896	59.43	ng/ml	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011917.D
Acq On : 1 Jul 2019 5:41 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL7
Misc : 1x, A19F394@50
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:25 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011918.D
Acq On : 1 Jul 2019 6:15 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL8
Misc : 1x, A19F394@100
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:30 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

GD 7/2/19

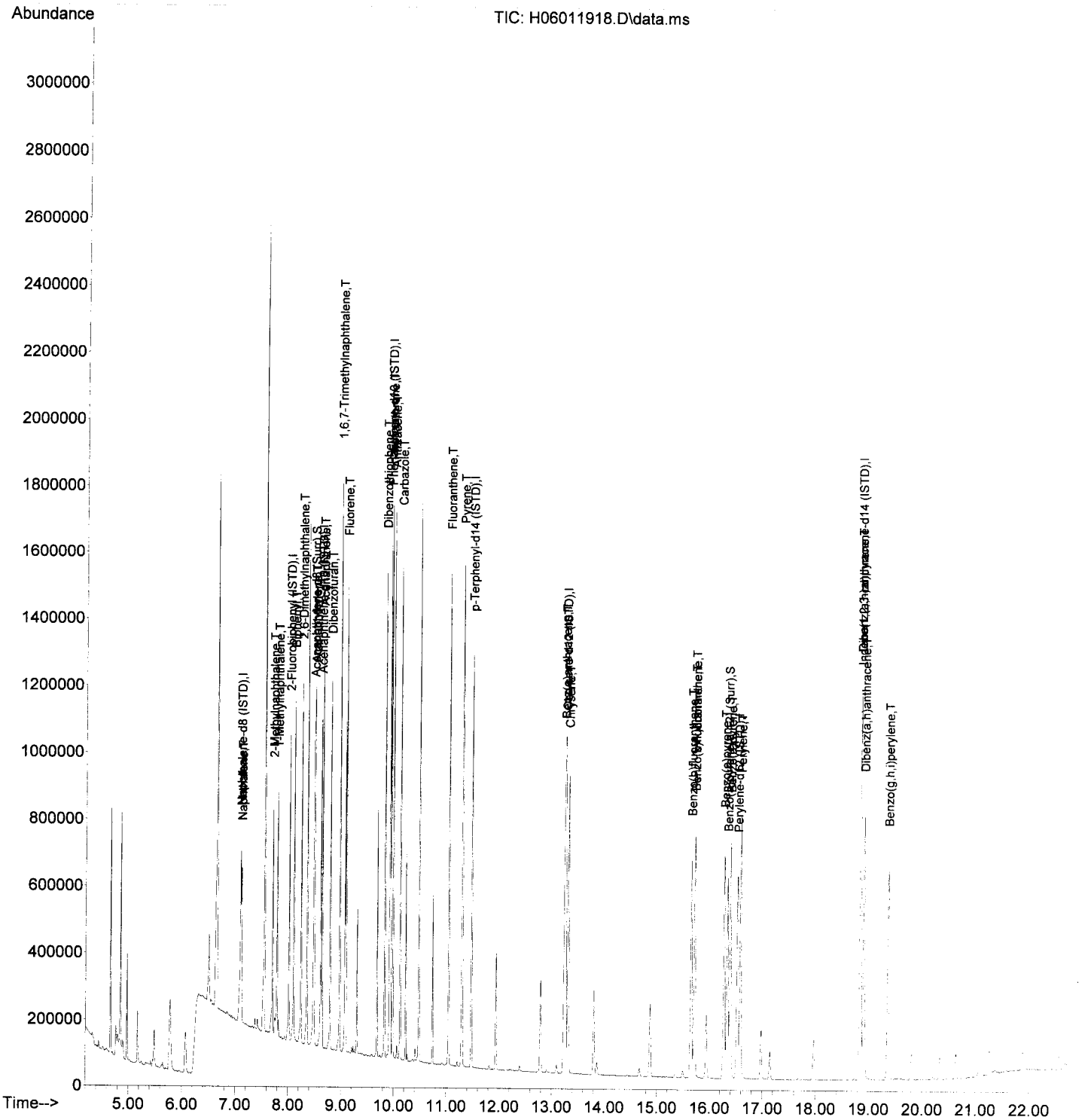
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	224200	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	182494	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.916	188	464459	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.263	240	454246	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.530	264	417215	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.844	292	390282	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	243913	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	441046	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	332809	100.44	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.339	264	378999	105.07	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	248338	95.13	ng/ml	96
3) 2-Methylnaphthalene	7.706	142	198999	101.73	ng/ml	100
4) 1-Methylnaphthalene	7.792	142	190884	102.68	ng/ml	95
6) Biphenyl	8.106	154	295903	100.45	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	216019	101.22	ng/ml	95
9) Acenaphthylene	8.492	152	387885	108.96	ng/ml	98
10) Acenaphthene	8.639	153	259899	102.07	ng/ml	97
11) Dibenzofuran	8.792	168	384696	102.05	ng/ml	93
12) 1,6,7-Trimethylnaphtha...	8.973	170	266477	111.76	ng/ml	90
13) Fluorene	9.092	166	341047	109.00	ng/ml	100
15) Dibenzothiophene	9.825	184	477825	103.12	ng/ml	98
16) Phenanthrene	9.935	178	546686	95.36	ng/ml	99
17) Anthracene	9.982	178	526935	111.43	ng/ml	98
18) Carbazole	10.120	167	504021	110.34	ng/ml	96
19) Fluoranthene	11.044	202	579086	111.77	ng/ml	98
20) Pyrene	11.301	202	610600	108.17	ng/ml	99
22) Benz(a)anthracene	13.244	228	516954	101.78	ng/ml	99
23) Chrysene	13.316	228	505327	102.37	ng/ml	100
25) Benzo(b)fluoranthene	15.654	252	501350	100.63	ng/ml	95
26) Benzo(k)fluoranthene	15.720	252	517957	101.01	ng/ml	95
27) Benzo(b+k)fluoranthene	15.720	252	1022018	201.43	ng/ml	99
28) Benzo(e)pyrene	16.278	252	483957	109.92	ng/ml	98
30) Benzo(a)pyrene	16.392	252	475524	103.42	ng/ml	99
31) Perylene	16.587	252	477887	95.74	ng/ml	97
33) Indeno(1,2,3-cd)pyrene	18.849	276	454748	111.32	ng/ml	83
34) Dibenz(a,h)anthracene	18.911	278	487911	118.90	ng/ml	94
35) Benzo(g,h,i)perylene	19.368	276	464914	113.66	ng/ml	94

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011918.D
Acq On : 1 Jul 2019 6:15 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL8
Misc : 1x, A19F394@100
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:30 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011919.D
Acq On : 1 Jul 2019 6:48 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL9
Misc : 1x, A19F394@150
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

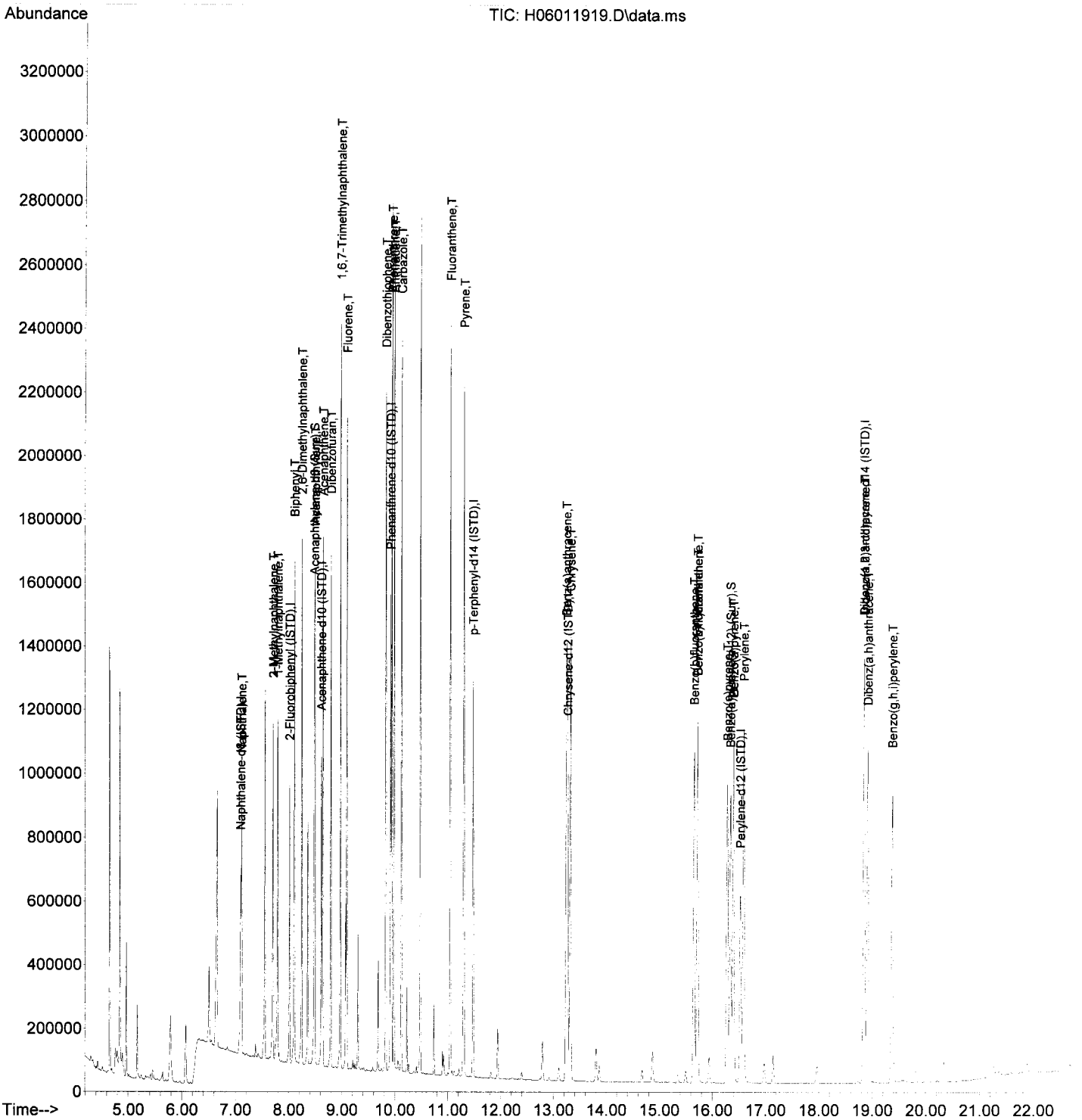
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.096	136	228839	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	177847	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	474967	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.268	240	464736	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.530	264	415251	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.849	292	379328	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	239674	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	451005	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	498389	149.86	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.344	264	587870	151.32	ng/ml	0.01
Target Compounds						Qvalue
2) Naphthalene	7.115	128	387711	145.51	ng/ml	95
3) 2-Methylnaphthalene	7.706	142	303853	152.18	ng/ml	99
4) 1-Methylnaphthalene	7.792	142	289327	152.48	ng/ml	94
6) Biphenyl	8.106	154	441920	153.53	ng/ml	92
7) 2,6-Dimethylnaphthalene	8.244	156	329101	158.23	ng/ml	96
9) Acenaphthylene	8.492	152	586723	169.13	ng/ml	97
10) Acenaphthene	8.644	153	391103	157.62	ng/ml	97
11) Dibenzofuran	8.792	168	576993	157.05	ng/ml	91
12) 1,6,7-Trimethylnaphtha...	8.973	170	407603	175.42	ng/ml	90
13) Fluorene	9.092	166	516977	169.54	ng/ml	99
15) Dibenzothiophene	9.825	184	753776	159.07	ng/ml	97
16) Phenanthrene	9.939	178	861794	147.00	ng/ml	99
17) Anthracene	9.982	178	835574	172.78	ng/ml	98
18) Carbazole	10.120	167	802342	171.77	ng/ml	96
19) Fluoranthene	11.044	202	908792	171.52	ng/ml	99
20) Pyrene	11.301	202	944807	163.67	ng/ml	98
22) Benz(a)anthracene	13.244	228	821572	152.10	ng/ml	99
23) Chrysene	13.320	228	781486	154.75	ng/ml	99
25) Benzo(b)fluoranthene	15.658	252	785531	148.94	ng/ml	97
26) Benzo(k)fluoranthene	15.725	252	804711	148.28	ng/ml	95
27) Benzo(b+k)fluoranthene	15.725	252	1593161	297.03	ng/ml	98
28) Benzo(e)pyrene	16.287	252	742397	169.42	ng/ml	98
30) Benzo(a)pyrene	16.401	252	737782	148.84	ng/ml	98
31) Perylene	16.596	252	755906	144.54	ng/ml	98
33) Indeno(1,2,3-cd)pyrene	18.854	276	677855	163.37	ng/ml	82
34) Dibenz(a,h)anthracene	18.920	278	716680	179.69	ng/ml	92
35) Benzo(g,h,i)perylene	19.377	276	686846	162.85	ng/ml	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011919.D
Acq On : 1 Jul 2019 6:48 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CAL9
Misc : 1x, A19F394@150
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:34 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011920.D
Acq On : 1 Jul 2019 7:22 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CALA
Misc : 1x, A19F394@200
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:39 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

JK 7/2/19

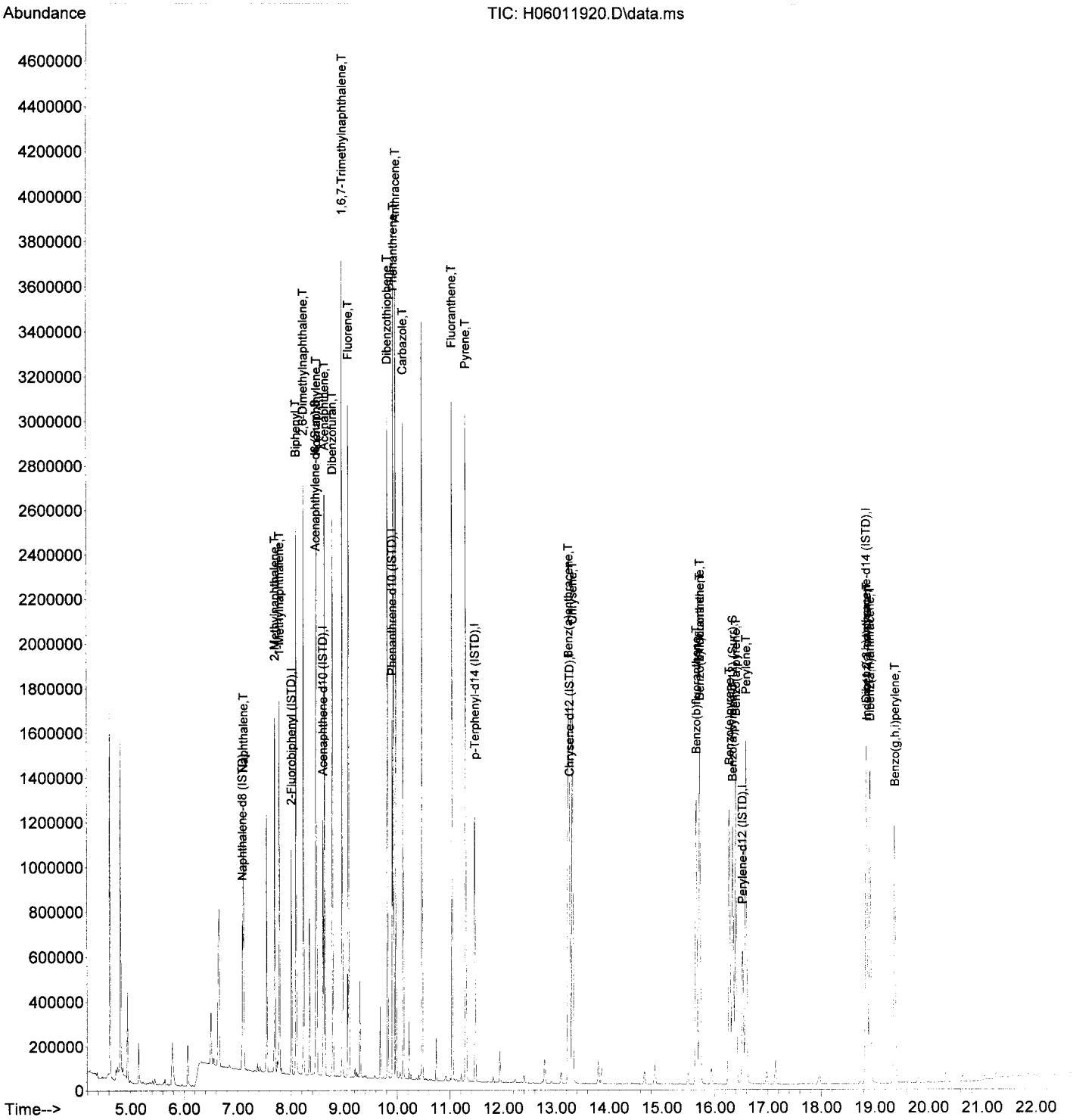
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.097	136	238727	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	204462	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.916	188	493691	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.268	240	474804	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.530	264	418167	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.854	292	387820	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.016	172	267153	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.478	244	450750	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.478	160	763403	194.30	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.349	264	787130	189.39	ng/ml	0.02
Target Compounds						Qvalue
2) Naphthalene	7.116	128	528470	190.13	ng/ml	95
3) 2-Methylnaphthalene	7.706	142	443011	212.68	ng/ml	99
4) 1-Methylnaphthalene	7.792	142	425660	215.04	ng/ml	96
6) Biphenyl	8.106	154	665698	200.65	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	497247	207.96	ng/ml	94
9) Acenaphthylene	8.492	152	899358	225.50	ng/ml	98
10) Acenaphthene	8.644	153	600092	210.36	ng/ml	98
11) Dibenzofuran	8.792	168	853703	202.13	ng/ml	91
12) 1,6,7-Trimethylnaphtha...	8.973	170	606216	226.93	ng/ml	90
13) Fluorene	9.092	166	761219	217.14	ng/ml	98
15) Dibenzothiophene	9.825	184	1039017	210.94	ng/ml	97
16) Phenanthrene	9.939	178	1192385	195.68	ng/ml	100
17) Anthracene	9.982	178	1159111	230.59	ng/ml	98
18) Carbazole	10.120	167	1086682	223.82	ng/ml	96
19) Fluoranthene	11.044	202	1250210	227.01	ng/ml	99
20) Pyrene	11.306	202	1289789	214.95	ng/ml	98
22) Benz(a)anthracene	13.249	228	1105899	194.19	ng/ml	99
23) Chrysene	13.325	228	1058383	205.13	ng/ml	99
25) Benzo(b)fluoranthene	15.663	252	1051021	188.63	ng/ml	96
26) Benzo(k)fluoranthene	15.730	252	1079720	188.14	ng/ml	95
27) Benzo(b+k)fluoranthene	15.730	252	2134617	376.83	ng/ml	98
28) Benzo(e)pyrene	16.287	252	997204	225.98	ng/ml	98
30) Benzo(a)pyrene	16.411	252	981717	185.28	ng/ml	98
31) Perylene	16.601	252	1021188	186.02	ng/ml	98
33) Indeno(1,2,3-cd)pyrene	18.863	276	911198	207.26	ng/ml	83
34) Dibenz(a,h)anthracene	18.925	278	963080	236.18	ng/ml	93
35) Benzo(g,h,i)perylene	19.387	276	926323	204.82	ng/ml	92

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011920.D
Acq On : 1 Jul 2019 7:22 pm
Operator : JK /AMS /DTH
Sample : 9G01051-CALA
Misc : 1x, A19F394@200
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:39 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011922.D
Acq On : 1 Jul 2019 8:29 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICV1
Misc : 1x, A19B042@50
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:55 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8

7/2/19

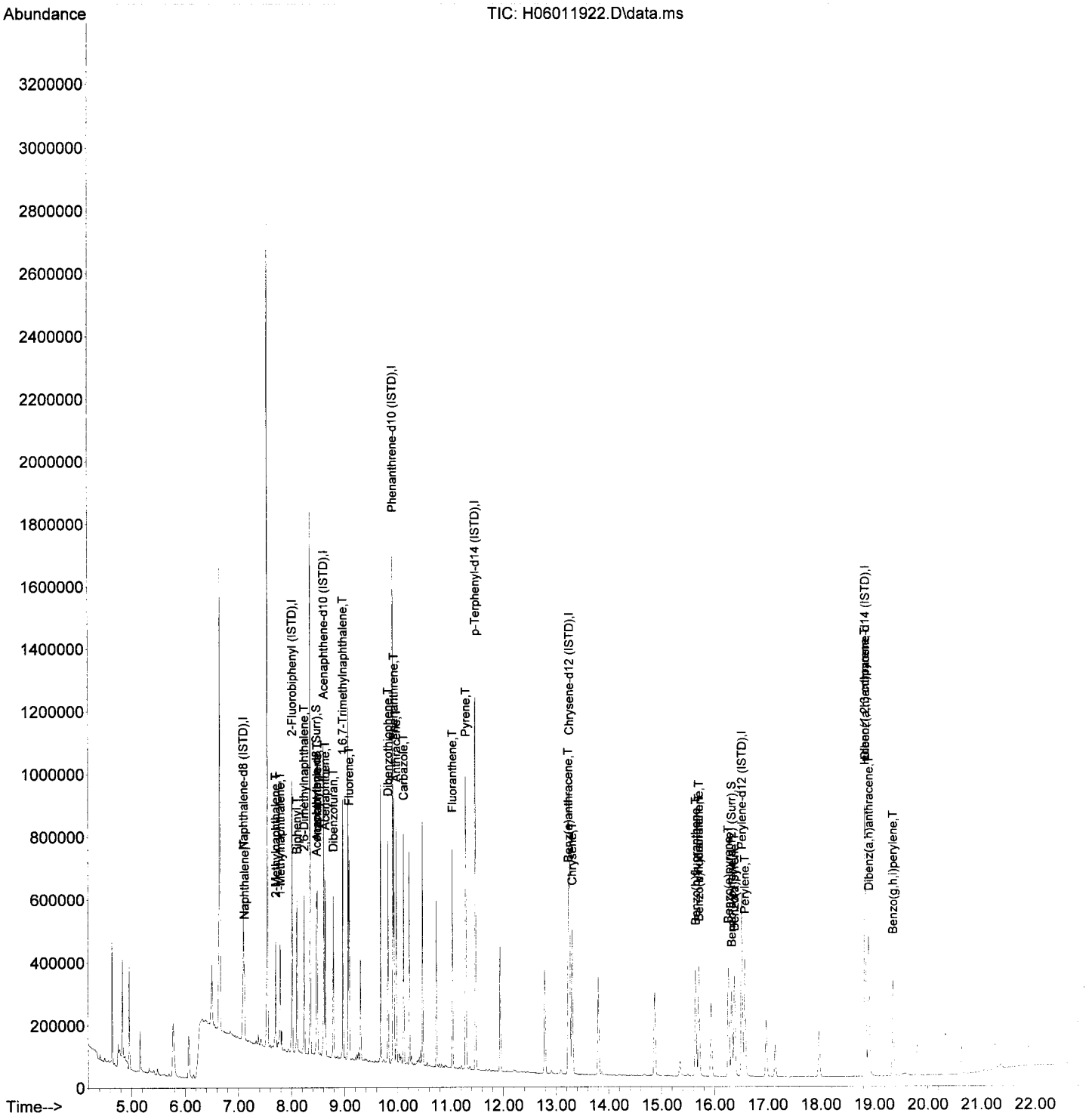
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	221361	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	182926	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	475962	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	455684	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.525	264	399591	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	421176	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	235267	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	450197	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	164581	50.74	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.330	264	171882	54.70	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	119478	46.36	ng/ml	96
3) 2-Methylnaphthalene	7.706	142	97221	50.34	ng/ml	99
4) 1-Methylnaphthalene	7.792	142	94964	51.74	ng/ml	96
6) Biphenyl	8.106	154	143967	48.82	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	102758	48.03	ng/ml	95
9) Acenaphthylene	8.487	152	189329	53.06	ng/ml	98
10) Acenaphthene	8.639	153	125121	49.02	ng/ml	96
11) Dibenzofuran	8.792	168	183599	48.59	ng/ml	94
12) 1,6,7-Trimethylnaphtha...	8.973	170	129746	54.29	ng/ml	91
13) Fluorene	9.092	166	163870	52.25	ng/ml	100
15) Dibenzothiophene	9.825	184	234736	49.43	ng/ml	99
16) Phenanthrene	9.934	178	271794	46.27	ng/ml	99
17) Anthracene	9.982	178	261484	53.96	ng/ml	98
18) Carbazole	10.120	167	246314	52.62	ng/ml	97
19) Fluoranthene	11.044	202	289109	54.45	ng/ml	97
20) Pyrene	11.296	202	302203	52.24	ng/ml	98
22) Benz(a)anthracene	13.239	228	257394	52.48	ng/ml	99
23) Chrysene	13.311	228	261405	52.79	ng/ml	99
25) Benzo(b)fluoranthene	15.649	252	247603	55.20	ng/ml	95
26) Benzo(k)fluoranthene	15.711	252	255782	55.49	ng/ml	94
27) Benzo(b+k)fluoranthene	15.711	252	505112	110.50	ng/ml	97
28) Benzo(e)pyrene	16.268	252	239529	56.80	ng/ml	98
30) Benzo(a)pyrene	16.382	252	228559	56.78	ng/ml	99
31) Perylene	16.577	252	233239	51.29	ng/ml	97
33) Indeno(1,2,3-cd)pyrene	18.835	276	218802	52.28	ng/ml	84
34) Dibenz(a,h)anthracene	18.906	278	232600	52.52	ng/ml	90
35) Benzo(g,h,i)perylene	19.358	276	221437	54.20	ng/ml	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011922.D
Acq On : 1 Jul 2019 8:29 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICV1
Misc : 1x, A19B042@50
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 08:40:55 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Mon Jul 01 14:27:07 2019
Response via : Initial Calibration
InstName : SV-GCMS8



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011922.D
Acq On : 1 Jul 2019 8:29 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICV1
Misc : 1x, A19B042@50
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Final Reqmant
JK 7/2/19

Quant Time: Jul 02 09:34:20 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8 (ISTD)	7.101	136	221361	100.00	ng/ml	0.00
5) Acenaphthene-d10 (ISTD)	8.611	164	182926	100.00	ng/ml	0.00
14) Phenanthrene-d10 (ISTD)	9.915	188	475962	100.00	ng/ml	0.00
21) Chrysene-d12 (ISTD)	13.258	240	455684	100.00	ng/ml	0.00
24) Perylene-d12 (ISTD)	16.525	264	399591	100.00	ng/ml	0.00
32) Dibenz(a,h)anthracene-...	18.839	292	421176	100.00	ng/ml	0.00
36) 2-Fluorobiphenyl (ISTD)	8.015	172	235267	100.00	ng/ml	0.00
37) p-Terphenyl-d14 (ISTD)	11.477	244	450197	100.00	ng/ml	0.00
System Monitoring Compounds						
8) Acenaphthylene-d8 (Surr)	8.477	160	164581	50.28	ng/ml	0.00
29) Benzo(a)pyrene(d-12) (...	16.330	264	171823	55.19	ng/ml	0.00
Target Compounds						Qvalue
2) Naphthalene	7.115	128	119478	46.51	ng/ml	96
3) 2-Methylnaphthalene	7.706	142	97221	49.01	ng/ml	99
4) 1-Methylnaphthalene	7.792	142	94964	50.58	ng/ml	96
6) Biphenyl	8.106	154	143967	47.06	ng/ml	93
7) 2,6-Dimethylnaphthalene	8.244	156	102758	47.92	ng/ml	95
9) Acenaphthylene	8.487	152	189329	52.07	ng/ml	98
10) Acenaphthene	8.639	153	125121	46.14	ng/ml	96
11) Dibenzofuran	8.792	168	183599	47.38	ng/ml	94
12) 1,6,7-Trimethylnaphtha...	8.973	170	129746	50.18	ng/ml	91
13) Fluorene	9.092	166	163870	48.82	ng/ml	100
15) Dibenzothiophene	9.825	184	234736	47.85	ng/ml	99
16) Phenanthrene	9.934	178	271794	47.61	ng/ml	99
17) Anthracene	9.982	178	261484	51.58	ng/ml	98
18) Carbazole	10.120	167	246314	50.10	ng/ml	97
19) Fluoranthene	11.044	202	289109	50.89	ng/ml	97
20) Pyrene	11.296	202	302203	49.06	ng/ml	98
22) Benz(a)anthracene	13.239	228	257394	53.71	ng/ml	99
23) Chrysene	13.311	228	261405	51.79	ng/ml	99
25) Benzo(b)fluoranthene	15.649	252	247603	56.29	ng/ml	95
26) Benzo(k)fluoranthene	15.711	252	255782	57.66	ng/ml	94
27) Benzo(b+k)fluoranthene	15.711	252	505061	113.71	ng/ml	97
28) Benzo(e)pyrene	16.268	252	239529	56.38	ng/ml	98
30) Benzo(a)pyrene	16.382	252	228559	58.59	ng/ml	99
31) Perylene	16.577	252	233239	54.67	ng/ml	97
33) Indeno(1,2,3-cd)pyrene	18.835	276	218802	43.90	ng/ml	84
34) Dibenz(a,h)anthracene	18.906	278	232600	46.82	ng/ml	90
35) Benzo(g,h,i)perylene	19.358	276	221437	50.14	ng/ml	93

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01051\
Data File : H06011922.D
Acq On : 1 Jul 2019 8:29 pm
Operator : JK /AMS /DTH
Sample : 9G01051-ICV1
Misc : 1x, A19B042@50
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:LVI8_ACQUISITION.M

Quant Time: Jul 02 09:34:20 2019
Quant Method : C:\msdchem\1\METHODS\LVI8_070119.M
Quant Title : LVI PAH/PCP Acquisition and Analysis
QLast Update : Tue Jul 02 08:51:04 2019
Response via : Initial Calibration
InstName : SV-GCMS8