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

Level IV Data Package for
Hahn and Associates
Mult 802 Decommissioning
Apex Laboratories Work Order number:
A9F0684

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

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Analytical Case Narrative

Analytical Case Narrative

Client: Hahn and Associates Date: 10/17/2019
Project: Mult 802 Decommissioning
Apex Work Order Number: A9F0684

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

Analytical Case Narrative

Client: Hahn and Associates Date: 10/12/2018
Project: Mult 802 Decommissioning
Apex Work Order Number: A9F0684

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Estella Rieben,
Quality Systems Manager
Apex Laboratories, LLC

Analytical Report

Apex Laboratories, LLC

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

Tuesday, July 16, 2019

Rob Ede
Hahn and Associates
434 NW 6th Ave. Suite 203
Portland, OR 97209

RE: A9F0684 - Mult 802 Decommissioning - 2708-60F

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 A9F0684, which was received by the laboratory on 6/20/2019 at 4:11:00PM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	5.7 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.

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Philip Nerenberg, Lab Director

Apex Laboratories, LLC

6700 S.W. Sandburg Street
Tigard, OR 97223
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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
2708-190619-OIL	**A9F0684-01**	**Oil**	**06/19/19 14:00**	**06/20/19 16:11**

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9070624**		
Diesel	**681000**	---	167000	mg/kg	100	07/04/19 00:11	NWTPH-Dx	**F-17**
Oil	ND	---	333000	mg/kg	100	07/04/19 00:11	NWTPH-Dx	
Surrogate: o-Terphenyl (Surr)			*Recovery: %*	*Limits: 50-150 %*	*100*	*07/04/19 00:11*	*NWTPH-Dx*	*S-01*

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061492**		**V-16**
Gasoline Range Organics	**412000**	---	10600	mg/kg	10000	06/28/19 19:17	NWTPH-Gx (MS)	
Surrogate: 4-Bromofluorobenzene (Sur)		*Recovery: 101 %*		*Limits: 50-150 %*	*1*	*06/28/19 19:17*	*NWTPH-Gx (MS)*	
1,4-Difluorobenzene (Sur)			*93 %*	*50-150 %*	*1*	*06/28/19 19:17*	*NWTPH-Gx (MS)*	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061492**		**V-16**
Acetone	ND	---	2130	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Acrylonitrile	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Benzene	**10500**	---	21.3	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Bromobenzene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Bromochloromethane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Bromodichloromethane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Bromoform	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Bromomethane	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
2-Butanone (MEK)	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
n-Butylbenzene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
sec-Butylbenzene	**614**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
tert-Butylbenzene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Carbon disulfide	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Carbon tetrachloride	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Chlorobenzene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Chloroethane	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Chloroform	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Chloromethane	ND	---	532	mg/kg	10000	06/28/19 19:17	5035A/8260C	
2-Chlorotoluene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
4-Chlorotoluene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Dibromochloromethane	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2-Dibromo-3-chloropropane	ND	---	532	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2-Dibromoethane (EDB)	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Dibromomethane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2-Dichlorobenzene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,3-Dichlorobenzene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,4-Dichlorobenzene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Dichlorodifluoromethane	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1-Dichloroethane	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2-Dichloroethane (EDC)	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1-Dichloroethene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
cis-1,2-Dichloroethene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
trans-1,2-Dichloroethene	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061492**		**V-16**
1,2-Dichloropropane	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,3-Dichloropropane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
2,2-Dichloropropane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1-Dichloropropene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
cis-1,3-Dichloropropene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
trans-1,3-Dichloropropene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Ethylbenzene	**891**	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Hexachlorobutadiene	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
2-Hexanone	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Isopropylbenzene	**181**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
4-Isopropyltoluene	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Methylene chloride	ND	---	532	mg/kg	10000	06/28/19 19:17	5035A/8260C	
4-Methyl-2-pentanone (MiBK)	ND	---	1060	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Methyl tert-butyl ether (MTBE)	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
n-Propylbenzene	**140**	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Styrene	**2710**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1,1,2-Tetrachloroethane	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1,2,2-Tetrachloroethane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Tetrachloroethene (PCE)	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Toluene	**9020**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2,3-Trichlorobenzene	ND	---	532	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2,4-Trichlorobenzene	ND	---	532	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1,1-Trichloroethane	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,1,2-Trichloroethane	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Trichloroethene (TCE)	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Trichlorofluoromethane	ND	---	213	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2,3-Trichloropropane	ND	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,2,4-Trimethylbenzene	**2740**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
1,3,5-Trimethylbenzene	**1030**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Vinyl chloride	ND	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
m,p-Xylene	**5720**	---	106	mg/kg	10000	06/28/19 19:17	5035A/8260C	
o-Xylene	**2480**	---	53.2	mg/kg	10000	06/28/19 19:17	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)		*Recovery: 101 %*		*Limits: 80-120 %*	*1*	*06/28/19 19:17*	*5035A/8260C*	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061492**		**V-16**
Surrogate: Toluene-d8 (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*	*1*	*06/28/19 19:17*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*	*1*	*06/28/19 19:17*	*5035A/8260C*	
2708-190619-OIL (A9F0684-01RE1)				**Matrix: Oil**		**Batch: 9070494**		**V-16**
Naphthalene	**140000**	---	4260	mg/kg	200000	07/01/19 13:08	5035A/8260C	
Surrogate: 1,4-Difluorobenzene (Surr)			*Recovery: 101 %*	*Limits: 80-120 %*	*1*	*07/01/19 13:08*	*5035A/8260C*	
Toluene-d8 (Surr)			*96 %*	*80-120 %*	*1*	*07/01/19 13:08*	*5035A/8260C*	
4-Bromofluorobenzene (Surr)			*98 %*	*80-120 %*	*1*	*07/01/19 13:08*	*5035A/8260C*	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061508**		
Acenaphthene	**3470**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Acenaphthylene	**6520**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Anthracene	**3280**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benz(a)anthracene	**1870**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzo(a)pyrene	**1940**	---	1360	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzo(b)fluoranthene	**1620**	---	1360	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzo(k)fluoranthene	ND	---	1360	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzo(g,h,i)perylene	**1420**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Chrysene	**2320**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Dibenz(a,h)anthracene	ND	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Fluoranthene	**7220**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Fluorene	**6690**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**1160**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1-Methylnaphthalene	**21800**	---	1820	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Methylnaphthalene	**43900**	---	1820	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Naphthalene	**131000**	---	1820	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Phenanthrene	**25500**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Pyrene	**8710**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Carbazole	ND	---	1360	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Dibenzofuran	**2000**	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Chloro-3-methylphenol	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Chlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4-Dichlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4-Dimethylphenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4-Dinitrophenol	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4,6-Dinitro-2-methylphenol	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Methylphenol	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
3+4-Methylphenol(s)	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Nitrophenol	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Nitrophenol	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Pentachlorophenol (PCP)	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Phenol	ND	---	1820	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,3,4,6-Tetrachlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	

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ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061508**		
2,3,5,6-Tetrachlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4,5-Trichlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4,6-Trichlorophenol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Bis(2-ethylhexyl)phthalate	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Butyl benzyl phthalate	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Diethylphthalate	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Dimethylphthalate	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Di-n-butylphthalate	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Di-n-octyl phthalate	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
N-Nitrosodimethylamine	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
N-Nitroso-di-n-propylamine	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
N-Nitrosodiphenylamine	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Bis(2-Chloroethoxy) methane	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Bis(2-Chloroethyl) ether	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,2'-Oxybis(1-Chloropropane)	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Hexachlorobenzene	ND	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Hexachlorobutadiene	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Hexachlorocyclopentadiene	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Hexachloroethane	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Chloronaphthalene	ND	---	909	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,2-Dichlorobenzene	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,3-Dichlorobenzene	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,4-Dichlorobenzene	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,2,4-Trichlorobenzene	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Bromophenyl phenyl ether	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Chlorophenyl phenyl ether	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Aniline	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Chloroaniline	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2-Nitroaniline	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
3-Nitroaniline	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
4-Nitroaniline	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Nitrobenzene	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
2,4-Dinitrotoluene	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**		**Batch: 9061508**		
2,6-Dinitrotoluene	ND	---	9090	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzoic acid	ND	---	114000	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Benzyl alcohol	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Isophorone	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Azobenzene (1,2-DPH)	ND	---	2270	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Bis(2-Ethylhexyl) adipate	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
3,3'-Dichlorobenzidine	ND	---	18200	mg/kg	1000	07/01/19 20:22	EPA 8270D	Q-52
1,2-Dinitrobenzene	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,3-Dinitrobenzene	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
1,4-Dinitrobenzene	ND	---	22700	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Pyridine	ND	---	4550	mg/kg	1000	07/01/19 20:22	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*195 %*	*Limits: 37-122 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*106 %*	*44-115 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-05*
Phenol-d6 (Surr)			*%*	*33-122 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-01*
p-Terphenyl-d14 (Surr)			*118 %*	*54-127 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-05*
2-Fluorophenol (Surr)			*77 %*	*35-115 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-05*
2,4,6-Tribromophenol (Surr)			*%*	*39-132 %*	*1000*	*07/01/19 20:22*	*EPA 8270D*	*S-01*

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

ANALYTICAL SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
2708-190619-OIL (A9F0684-01)				**Matrix: Oil**				
Batch: 9061422								
Aluminum	ND	---	111	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Antimony	ND	---	2.21	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Arsenic	ND	---	4.42	mg/kg	5	06/27/19 18:28	EPA 6020A	Q-42, R-04
Barium	ND	---	4.42	mg/kg	5	06/27/19 18:28	EPA 6020A	Q-42, R-04
Beryllium	ND	---	0.442	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Cadmium	ND	---	0.885	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Calcium	ND	---	221	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Chromium	ND	---	4.42	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Copper	ND	---	2.21	mg/kg	5	06/27/19 18:28	EPA 6020A	Q-42, R-04
Iron	**161**	---	111	mg/kg	5	06/27/19 18:28	EPA 6020A	
Lead	**1.21**	---	0.885	mg/kg	5	06/27/19 18:28	EPA 6020A	
Magnesium	ND	---	111	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Manganese	**2.72**	---	2.21	mg/kg	5	06/27/19 18:28	EPA 6020A	
Mercury	ND	---	0.354	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Nickel	ND	---	2.21	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Potassium	ND	---	221	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Selenium	ND	---	4.42	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Silver	ND	---	0.885	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Sodium	ND	---	221	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Thallium	ND	---	0.442	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Vanadium	ND	---	2.21	mg/kg	5	06/27/19 18:28	EPA 6020A	R-04
Zinc	**10.1**	---	8.85	mg/kg	5	06/27/19 18:28	EPA 6020A	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
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QUALITY CONTROL (QC) SAMPLE RESULTS

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070624 - EPA 3580A							**Oil**					
Blank (9070624-BLK1)			Prepared: 07/03/19 15:48		Analyzed: 07/03/19 23:26							
NWTPH-Dx												
Diesel	ND	---	200	mg/kg	1	---	---	---	---	---	---	
Oil	ND	---	400	mg/kg	1	---	---	---	---	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 111 %*	*Limits: 50-150 %*		*Dilution: 1x*							
LCS (9070624-BS1)			Prepared: 07/03/19 15:48		Analyzed: 07/03/19 23:48							
NWTPH-Dx												
Diesel	13300	---	2000	mg/kg	1	12500	---	106	70-130%	---	---	
Surr: o-Terphenyl (Surr)		*Recovery: 114 %*	*Limits: 50-150 %*		*Dilution: 1x*							
Duplicate (9070624-DUP1)			Prepared: 07/03/19 15:48		Analyzed: 07/04/19 00:34							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
NWTPH-Dx												
Diesel	**697000**	---	167000	mg/kg	100	---	681000	---	---	2	30%	F-17
Oil	ND	---	333000	mg/kg	100	---	ND	---	---	---	30%	
Surr: o-Terphenyl (Surr)		*Recovery: %*	*Limits: 50-150 %*		*Dilution: 100x*							S-01

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Blank (9061492-BLK1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 12:25									
NWTPH-Gx (MS)												
Gasoline Range Organics	ND	---	3.33	mg/kg	50	---	---	---	---	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 96 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*94 %*	*50-150 %*			*"*					
LCS (9061492-BS2)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 11:57									
NWTPH-Gx (MS)												
Gasoline Range Organics	25.6	---	5.00	mg/kg	50	25.0	---	102	80-120%	---	---	
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 95 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*95 %*	*50-150 %*			*"*					
Duplicate (9061492-DUP1)			Prepared: 06/26/19 15:04 Analyzed: 06/28/19 16:32									
QC Source Sample: Non-SDG (A9F0873-01)												
Gasoline Range Organics	**6.86**	---	6.45	mg/kg	50	---	4.38	---	---	**44**	**30%**	Q-05
Surr: 4-Bromofluorobenzene (Sur)			*Recovery: 104 %*	*Limits: 50-150 %*			*Dilution: 1x*					
1,4-Difluorobenzene (Sur)			*99 %*	*50-150 %*			*"*					

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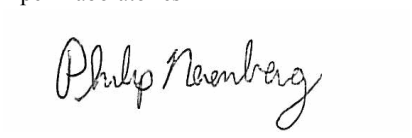

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Blank (9061492-BLK1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 12:25									
5035A/8260C												
Acetone	ND	---	0.667	mg/kg	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							Soil					
Blank (9061492-BLK1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 12:25									
1,2-Dichloropropane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Methylene chloride	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 102 %* *Limits: 80-120 %* *Dilution: 1x*

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Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Blank (9061492-BLK1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 12:25									
Surr: Toluene-d8 (Surr)			*Recovery: 97 %*	*Limits: 80-120 %*				*Dilution: 1x*				
4-Bromofluorobenzene (Surr)			*100 %*	*80-120 %*				*"*				
LCS (9061492-BS1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 11:30									
5035A/8260C												
Acetone	1.80	---	1.00	mg/kg	50	2.00	---	90	80-120%	---	---	
Acrylonitrile	1.02	---	0.100	mg/kg	50	1.00	---	102	80-120%	---	---	
Benzene	1.10	---	0.0100	mg/kg	50	1.00	---	110	80-120%	---	---	
Bromobenzene	1.05	---	0.0250	mg/kg	50	1.00	---	105	80-120%	---	---	
Bromochloromethane	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	
Bromodichloromethane	1.16	---	0.0500	mg/kg	50	1.00	---	116	80-120%	---	---	
Bromoform	0.990	---	0.100	mg/kg	50	1.00	---	99	80-120%	---	---	
Bromomethane	1.11	---	0.500	mg/kg	50	1.00	---	111	80-120%	---	---	
2-Butanone (MEK)	1.94	---	0.500	mg/kg	50	2.00	---	97	80-120%	---	---	
n-Butylbenzene	1.01	---	0.0500	mg/kg	50	1.00	---	101	80-120%	---	---	
sec-Butylbenzene	1.09	---	0.0500	mg/kg	50	1.00	---	109	80-120%	---	---	
tert-Butylbenzene	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	
Carbon disulfide	1.27	---	0.500	mg/kg	50	1.00	---	**127**	**80-120%**	---	---	Q-56
Carbon tetrachloride	1.26	---	0.0500	mg/kg	50	1.00	---	**126**	**80-120%**	---	---	Q-56
Chlorobenzene	1.02	---	0.0250	mg/kg	50	1.00	---	102	80-120%	---	---	
Chloroethane	1.01	---	0.500	mg/kg	50	1.00	---	101	80-120%	---	---	E-05
Chloroform	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	
Chloromethane	0.898	---	0.250	mg/kg	50	1.00	---	90	80-120%	---	---	
2-Chlorotoluene	1.07	---	0.0500	mg/kg	50	1.00	---	107	80-120%	---	---	
4-Chlorotoluene	1.02	---	0.0500	mg/kg	50	1.00	---	102	80-120%	---	---	
Dibromochloromethane	0.973	---	0.100	mg/kg	50	1.00	---	97	80-120%	---	---	
1,2-Dibromo-3-chloropropane	0.997	---	0.250	mg/kg	50	1.00	---	100	80-120%	---	---	
1,2-Dibromoethane (EDB)	1.13	---	0.0500	mg/kg	50	1.00	---	113	80-120%	---	---	
Dibromomethane	1.10	---	0.0500	mg/kg	50	1.00	---	110	80-120%	---	---	
1,2-Dichlorobenzene	1.04	---	0.0250	mg/kg	50	1.00	---	104	80-120%	---	---	
1,3-Dichlorobenzene	1.00	---	0.0250	mg/kg	50	1.00	---	100	80-120%	---	---	
1,4-Dichlorobenzene	1.02	---	0.0250	mg/kg	50	1.00	---	102	80-120%	---	---	
Dichlorodifluoromethane	0.936	---	0.100	mg/kg	50	1.00	---	94	80-120%	---	---	
1,1-Dichloroethane	1.09	---	0.0250	mg/kg	50	1.00	---	109	80-120%	---	---	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
LCS (9061492-BS1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 11:30									
1,2-Dichloroethane (EDC)	1.04	---	0.0250	mg/kg	50	1.00	---	104	80-120%	---	---	
1,1-Dichloroethene	1.28	---	0.0250	mg/kg	50	1.00	---	**128**	**80-120%**	---	---	Q-56
cis-1,2-Dichloroethene	1.01	---	0.0250	mg/kg	50	1.00	---	101	80-120%	---	---	
trans-1,2-Dichloroethene	1.15	---	0.0250	mg/kg	50	1.00	---	115	80-120%	---	---	
1,2-Dichloropropane	1.02	---	0.0250	mg/kg	50	1.00	---	102	80-120%	---	---	
1,3-Dichloropropane	1.03	---	0.0500	mg/kg	50	1.00	---	103	80-120%	---	---	
2,2-Dichloropropane	1.27	---	0.0500	mg/kg	50	1.00	---	**127**	**80-120%**	---	---	Q-56
1,1-Dichloropropene	1.08	---	0.0500	mg/kg	50	1.00	---	108	80-120%	---	---	
cis-1,3-Dichloropropene	1.13	---	0.0500	mg/kg	50	1.00	---	113	80-120%	---	---	
trans-1,3-Dichloropropene	1.10	---	0.0500	mg/kg	50	1.00	---	110	80-120%	---	---	
Ethylbenzene	1.02	---	0.0250	mg/kg	50	1.00	---	102	80-120%	---	---	
Hexachlorobutadiene	1.09	---	0.100	mg/kg	50	1.00	---	109	80-120%	---	---	
2-Hexanone	1.96	---	0.500	mg/kg	50	2.00	---	98	80-120%	---	---	
Isopropylbenzene	1.07	---	0.0500	mg/kg	50	1.00	---	107	80-120%	---	---	
4-Isopropyltoluene	1.08	---	0.0500	mg/kg	50	1.00	---	108	80-120%	---	---	
Methylene chloride	1.21	---	0.250	mg/kg	50	1.00	---	**121**	**80-120%**	---	---	Q-56
4-Methyl-2-pentanone (MiBK)	1.91	---	0.500	mg/kg	50	2.00	---	96	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1.08	---	0.0500	mg/kg	50	1.00	---	108	80-120%	---	---	
Naphthalene	1.12	---	0.100	mg/kg	50	1.00	---	112	80-120%	---	---	
n-Propylbenzene	1.04	---	0.0250	mg/kg	50	1.00	---	104	80-120%	---	---	
Styrene	1.12	---	0.0500	mg/kg	50	1.00	---	112	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1.21	---	0.0250	mg/kg	50	1.00	---	**121**	**80-120%**	---	---	Q-56
1,1,2,2-Tetrachloroethane	0.992	---	0.0500	mg/kg	50	1.00	---	99	80-120%	---	---	
Tetrachloroethene (PCE)	1.08	---	0.0250	mg/kg	50	1.00	---	108	80-120%	---	---	
Toluene	1.02	---	0.0500	mg/kg	50	1.00	---	102	80-120%	---	---	
1,2,3-Trichlorobenzene	1.14	---	0.250	mg/kg	50	1.00	---	114	80-120%	---	---	
1,2,4-Trichlorobenzene	1.12	---	0.250	mg/kg	50	1.00	---	112	80-120%	---	---	
1,1,1-Trichloroethane	1.14	---	0.0250	mg/kg	50	1.00	---	114	80-120%	---	---	
1,1,2-Trichloroethane	1.06	---	0.0250	mg/kg	50	1.00	---	106	80-120%	---	---	
Trichloroethene (TCE)	1.15	---	0.0250	mg/kg	50	1.00	---	115	80-120%	---	---	
Trichlorofluoromethane	1.05	---	0.100	mg/kg	50	1.00	---	105	80-120%	---	---	
1,2,3-Trichloropropane	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	
1,2,4-Trimethylbenzene	1.02	---	0.0500	mg/kg	50	1.00	---	102	80-120%	---	---	
1,3,5-Trimethylbenzene	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
LCS (9061492-BS1)			Prepared: 06/28/19 09:35 Analyzed: 06/28/19 11:30									
Vinyl chloride	0.994	---	0.0250	mg/kg	50	1.00	---	99	80-120%	---	---	
m,p-Xylene	2.09	---	0.0500	mg/kg	50	2.00	---	105	80-120%	---	---	
o-Xylene	1.00	---	0.0250	mg/kg	50	1.00	---	100	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				
Duplicate (9061492-DUP1)			Prepared: 06/26/19 15:04 Analyzed: 06/28/19 16:32									
QC Source Sample: Non-SDG (A9F0873-01)												
Acetone	ND	---	1.29	mg/kg	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0129	mg/kg	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.323	mg/kg	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.323	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Duplicate (9061492-DUP1)			Prepared: 06/26/19 15:04 Analyzed: 06/28/19 16:32									
QC Source Sample: Non-SDG (A9F0873-01)												
1,3-Dichlorobenzene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0323	mg/kg	50	---	0.0199	---	---	***	**30%**	Q-05
Hexachlorobutadiene	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.323	mg/kg	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.645	mg/kg	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0323	mg/kg	50	---	0.0217	---	---	***	**30%**	Q-05
Styrene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.323	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.323	mg/kg	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	

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Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Duplicate (9061492-DUP1)			Prepared: 06/26/19 15:04 Analyzed: 06/28/19 16:32									
QC Source Sample: Non-SDG (A9F0873-01)												
Trichloroethene (TCE)	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.129	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0645	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0645	mg/kg	50	---	0.0738	---	---	***	**30%**	Q-05
1,3,5-Trimethylbenzene	ND	---	0.0645	mg/kg	50	---	0.0386	---	---	***	**30%**	Q-05
Vinyl chloride	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0645	mg/kg	50	---	0.0474	---	---	***	30%	
o-Xylene	ND	---	0.0323	mg/kg	50	---	ND	---	---	---	**30%**	Q-05
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*104 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*95 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*97 %*		*80-120 %*			*"*				
Matrix Spike (9061492-MS1)			Prepared: 06/28/19 13:20 Analyzed: 06/28/19 15:10									
QC Source Sample: Non-SDG (A9F0843-07)												
5035A/8260C												
Acetone	2.14	---	1.21	mg/kg	50	2.43	ND	88	36-164%	---	---	
Acrylonitrile	1.19	---	0.121	mg/kg	50	1.21	ND	98	65-134%	---	---	
Benzene	1.28	---	0.0121	mg/kg	50	1.21	ND	105	77-121%	---	---	
Bromobenzene	1.18	---	0.0303	mg/kg	50	1.21	ND	97	78-121%	---	---	
Bromochloromethane	1.21	---	0.0607	mg/kg	50	1.21	ND	100	78-125%	---	---	
Bromodichloromethane	1.31	---	0.0607	mg/kg	50	1.21	ND	108	75-127%	---	---	
Bromoform	1.20	---	0.121	mg/kg	50	1.21	ND	99	67-132%	---	---	
Bromomethane	1.34	---	0.607	mg/kg	50	1.21	ND	110	53-143%	---	---	
2-Butanone (MEK)	2.29	---	0.607	mg/kg	50	2.43	ND	94	51-148%	---	---	
n-Butylbenzene	1.05	---	0.0607	mg/kg	50	1.21	ND	86	70-128%	---	---	
sec-Butylbenzene	1.14	---	0.0607	mg/kg	50	1.21	ND	94	73-126%	---	---	
tert-Butylbenzene	1.09	---	0.0607	mg/kg	50	1.21	ND	90	73-125%	---	---	
Carbon disulfide	1.48	---	0.607	mg/kg	50	1.21	ND	122	63-132%	---	---	Q-54h
Carbon tetrachloride	1.48	---	0.0607	mg/kg	50	1.21	ND	122	70-135%	---	---	Q-54f
Chlorobenzene	1.13	---	0.0303	mg/kg	50	1.21	ND	93	79-120%	---	---	
Chloroethane	1.38	---	0.607	mg/kg	50	1.21	ND	114	59-139%	---	---	E-05
Chloroform	1.28	---	0.0607	mg/kg	50	1.21	ND	105	78-123%	---	---	
Chloromethane	1.05	---	0.303	mg/kg	50	1.21	ND	87	50-136%	---	---	

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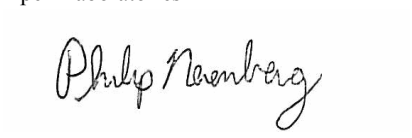

Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Matrix Spike (9061492-MS1)			Prepared: 06/28/19 13:20 Analyzed: 06/28/19 15:10									
QC Source Sample: Non-SDG (A9F0843-07)												
2-Chlorotoluene	1.16	---	0.0607	mg/kg	50	1.21	ND	96	75-122%	---	---	
4-Chlorotoluene	1.11	---	0.0607	mg/kg	50	1.21	ND	91	72-124%	---	---	
Dibromochloromethane	1.09	---	0.121	mg/kg	50	1.21	ND	90	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1.05	---	0.303	mg/kg	50	1.21	ND	86	61-132%	---	---	
1,2-Dibromoethane (EDB)	1.25	---	0.0607	mg/kg	50	1.21	ND	103	78-122%	---	---	
Dibromomethane	1.27	---	0.0607	mg/kg	50	1.21	ND	105	78-125%	---	---	
1,2-Dichlorobenzene	1.15	---	0.0303	mg/kg	50	1.21	ND	95	78-121%	---	---	
1,3-Dichlorobenzene	1.12	---	0.0303	mg/kg	50	1.21	ND	93	77-121%	---	---	
1,4-Dichlorobenzene	1.10	---	0.0303	mg/kg	50	1.21	ND	91	75-120%	---	---	
Dichlorodifluoromethane	1.18	---	0.121	mg/kg	50	1.21	ND	97	29-149%	---	---	
1,1-Dichloroethane	1.38	---	0.0303	mg/kg	50	1.21	ND	114	76-125%	---	---	
1,2-Dichloroethane (EDC)	1.18	---	0.0303	mg/kg	50	1.21	ND	97	73-128%	---	---	
1,1-Dichloroethene	1.52	---	0.0303	mg/kg	50	1.21	ND	125	70-131%	---	---	Q-54j
cis-1,2-Dichloroethene	1.27	---	0.0303	mg/kg	50	1.21	ND	104	77-123%	---	---	
trans-1,2-Dichloroethene	1.35	---	0.0303	mg/kg	50	1.21	ND	111	74-125%	---	---	
1,2-Dichloropropane	1.18	---	0.0303	mg/kg	50	1.21	ND	97	76-123%	---	---	
1,3-Dichloropropane	1.13	---	0.0607	mg/kg	50	1.21	ND	93	77-121%	---	---	
2,2-Dichloropropane	1.38	---	0.0607	mg/kg	50	1.21	ND	114	67-133%	---	---	Q-54i
1,1-Dichloropropene	1.27	---	0.0607	mg/kg	50	1.21	ND	105	76-125%	---	---	
cis-1,3-Dichloropropene	1.19	---	0.0607	mg/kg	50	1.21	ND	98	74-126%	---	---	
trans-1,3-Dichloropropene	1.23	---	0.0607	mg/kg	50	1.21	ND	101	71-130%	---	---	
Ethylbenzene	1.13	---	0.0303	mg/kg	50	1.21	ND	93	76-122%	---	---	
Hexachlorobutadiene	1.11	---	0.121	mg/kg	50	1.21	ND	92	61-135%	---	---	
2-Hexanone	2.24	---	0.607	mg/kg	50	2.43	ND	92	53-145%	---	---	
Isopropylbenzene	1.16	---	0.0607	mg/kg	50	1.21	ND	95	68-134%	---	---	
4-Isopropyltoluene	1.12	---	0.0607	mg/kg	50	1.21	ND	93	73-127%	---	---	
Methylene chloride	1.43	---	0.303	mg/kg	50	1.21	ND	118	70-128%	---	---	Q-54
4-Methyl-2-pentanone (MiBK)	2.23	---	0.607	mg/kg	50	2.43	ND	92	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1.23	---	0.0607	mg/kg	50	1.21	ND	101	73-125%	---	---	
Naphthalene	1.17	---	0.121	mg/kg	50	1.21	ND	96	62-129%	---	---	
n-Propylbenzene	1.09	---	0.0303	mg/kg	50	1.21	ND	90	73-125%	---	---	
Styrene	1.29	---	0.0607	mg/kg	50	1.21	ND	106	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1.32	---	0.0303	mg/kg	50	1.21	ND	109	78-125%	---	---	Q-54a

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061492 - EPA 5035A							**Soil**					
Matrix Spike (9061492-MS1)			Prepared: 06/28/19 13:20 Analyzed: 06/28/19 15:10									
QC Source Sample: Non-SDG (A9F0843-07)												
1,1,2,2-Tetrachloroethane	1.15	---	0.0607	mg/kg	50	1.21	ND	95	70-124%	---	---	
Tetrachloroethene (PCE)	1.17	---	0.0303	mg/kg	50	1.21	ND	96	73-128%	---	---	
Toluene	1.14	---	0.0607	mg/kg	50	1.21	ND	94	77-121%	---	---	
1,2,3-Trichlorobenzene	1.16	---	0.303	mg/kg	50	1.21	ND	96	66-130%	---	---	
1,2,4-Trichlorobenzene	1.15	---	0.303	mg/kg	50	1.21	ND	94	67-129%	---	---	
1,1,1-Trichloroethane	1.34	---	0.0303	mg/kg	50	1.21	ND	111	73-130%	---	---	
1,1,2-Trichloroethane	1.17	---	0.0303	mg/kg	50	1.21	ND	97	78-121%	---	---	
Trichloroethene (TCE)	1.33	---	0.0303	mg/kg	50	1.21	ND	110	77-123%	---	---	
Trichlorofluoromethane	1.52	---	0.121	mg/kg	50	1.21	ND	125	62-140%	---	---	
1,2,3-Trichloropropane	1.10	---	0.0607	mg/kg	50	1.21	ND	90	73-125%	---	---	
1,2,4-Trimethylbenzene	1.10	---	0.0607	mg/kg	50	1.21	ND	90	75-123%	---	---	
1,3,5-Trimethylbenzene	1.11	---	0.0607	mg/kg	50	1.21	ND	92	73-124%	---	---	
Vinyl chloride	1.23	---	0.0303	mg/kg	50	1.21	ND	101	56-135%	---	---	
m,p-Xylene	2.31	---	0.0607	mg/kg	50	2.43	ND	95	77-124%	---	---	
o-Xylene	1.12	---	0.0303	mg/kg	50	1.21	ND	92	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery: 103 %*		*Limits: 80-120 %*			*Dilution: 1x*					
Toluene-d8 (Surr)			*94 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*		*"*					

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Blank (9070494-BLK1)			Prepared: 07/01/19 09:30 Analyzed: 07/01/19 12:13									
5035A/8260C												
Acetone	ND	---	0.667	mg/kg	50	---	---	---	---	---	---	
Acrylonitrile	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
Benzene	ND	---	0.00667	mg/kg	50	---	---	---	---	---	---	
Bromobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Bromochloromethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Bromodichloromethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Bromoform	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
Bromomethane	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
2-Butanone (MEK)	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
n-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
sec-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
tert-Butylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Carbon disulfide	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Carbon tetrachloride	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Chlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Chloroethane	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Chloroform	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Chloromethane	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
2-Chlorotoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
4-Chlorotoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Dibromochloromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,2-Dibromo-3-chloropropane	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,2-Dibromoethane (EDB)	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Dibromomethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Dichlorodifluoromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,2-Dichloroethane (EDC)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
cis-1,2-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
trans-1,2-Dichloroethene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Blank (9070494-BLK1)			Prepared: 07/01/19 09:30 Analyzed: 07/01/19 12:13									
1,2-Dichloropropane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,3-Dichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
2,2-Dichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,1-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
cis-1,3-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
trans-1,3-Dichloropropene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Ethylbenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
2-Hexanone	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Isopropylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
4-Isopropyltoluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Methylene chloride	**0.282**	---	0.167	mg/kg	50	---	---	---	---	---	---	B, B-07
4-Methyl-2-pentanone (MiBK)	ND	---	0.333	mg/kg	50	---	---	---	---	---	---	
Methyl tert-butyl ether (MTBE)	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Naphthalene	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
n-Propylbenzene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Styrene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,1,1,2-Tetrachloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1,2,2-Tetrachloroethane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Tetrachloroethene (PCE)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Toluene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2,3-Trichlorobenzene	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.167	mg/kg	50	---	---	---	---	---	---	
1,1,1-Trichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
1,1,2-Trichloroethane	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Trichloroethene (TCE)	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
Trichlorofluoromethane	ND	---	0.0667	mg/kg	50	---	---	---	---	---	---	
1,2,3-Trichloropropane	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,2,4-Trimethylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
1,3,5-Trimethylbenzene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
Vinyl chloride	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	
m,p-Xylene	ND	---	0.0333	mg/kg	50	---	---	---	---	---	---	
o-Xylene	ND	---	0.0167	mg/kg	50	---	---	---	---	---	---	

Surr: 1,4-Difluorobenzene (Surr) *Recovery: 101 %* *Limits: 80-120 %* *Dilution: 1x*

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Blank (9070494-BLK1)				Prepared: 07/01/19 09:30 Analyzed: 07/01/19 12:13								
Surr: Toluene-d8 (Surr)			*Recovery: 96 %*	*Limits: 80-120 %*			*Dilution: 1x*					
4-Bromofluorobenzene (Surr)			*99 %*	*80-120 %*			*"*					
LCS (9070494-BS1)				Prepared: 07/01/19 09:30 Analyzed: 07/01/19 11:18								
5035A/8260C												
Acetone	1.59	---	1.00	mg/kg	50	2.00	---	**79**	**80-120%**	---	---	Q-55
Acrylonitrile	0.932	---	0.100	mg/kg	50	1.00	---	93	80-120%	---	---	
Benzene	1.06	---	0.0100	mg/kg	50	1.00	---	106	80-120%	---	---	
Bromobenzene	0.999	---	0.0250	mg/kg	50	1.00	---	100	80-120%	---	---	
Bromochloromethane	0.955	---	0.0500	mg/kg	50	1.00	---	95	80-120%	---	---	
Bromodichloromethane	1.09	---	0.0500	mg/kg	50	1.00	---	109	80-120%	---	---	
Bromoform	0.980	---	0.100	mg/kg	50	1.00	---	98	80-120%	---	---	
Bromomethane	1.05	---	0.500	mg/kg	50	1.00	---	105	80-120%	---	---	
2-Butanone (MEK)	1.76	---	0.500	mg/kg	50	2.00	---	88	80-120%	---	---	
n-Butylbenzene	0.986	---	0.0500	mg/kg	50	1.00	---	99	80-120%	---	---	
sec-Butylbenzene	1.03	---	0.0500	mg/kg	50	1.00	---	103	80-120%	---	---	
tert-Butylbenzene	0.982	---	0.0500	mg/kg	50	1.00	---	98	80-120%	---	---	
Carbon disulfide	1.25	---	0.500	mg/kg	50	1.00	---	**125**	**80-120%**	---	---	Q-56
Carbon tetrachloride	1.26	---	0.0500	mg/kg	50	1.00	---	**126**	**80-120%**	---	---	Q-56
Chlorobenzene	0.968	---	0.0250	mg/kg	50	1.00	---	97	80-120%	---	---	
Chloroethane	0.902	---	0.500	mg/kg	50	1.00	---	90	80-120%	---	---	E-05
Chloroform	0.992	---	0.0500	mg/kg	50	1.00	---	99	80-120%	---	---	
Chloromethane	0.839	---	0.250	mg/kg	50	1.00	---	84	80-120%	---	---	
2-Chlorotoluene	1.01	---	0.0500	mg/kg	50	1.00	---	101	80-120%	---	---	
4-Chlorotoluene	0.952	---	0.0500	mg/kg	50	1.00	---	95	80-120%	---	---	
Dibromochloromethane	0.963	---	0.100	mg/kg	50	1.00	---	96	80-120%	---	---	
1,2-Dibromo-3-chloropropane	0.989	---	0.250	mg/kg	50	1.00	---	99	80-120%	---	---	
1,2-Dibromoethane (EDB)	1.08	---	0.0500	mg/kg	50	1.00	---	108	80-120%	---	---	
Dibromomethane	1.02	---	0.0500	mg/kg	50	1.00	---	102	80-120%	---	---	
1,2-Dichlorobenzene	1.01	---	0.0250	mg/kg	50	1.00	---	101	80-120%	---	---	
1,3-Dichlorobenzene	0.963	---	0.0250	mg/kg	50	1.00	---	96	80-120%	---	---	
1,4-Dichlorobenzene	0.951	---	0.0250	mg/kg	50	1.00	---	95	80-120%	---	---	
Dichlorodifluoromethane	0.844	---	0.100	mg/kg	50	1.00	---	84	80-120%	---	---	
1,1-Dichloroethane	1.01	---	0.0250	mg/kg	50	1.00	---	101	80-120%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
LCS (9070494-BS1)			Prepared: 07/01/19 09:30 Analyzed: 07/01/19 11:18									
1,2-Dichloroethane (EDC)	0.960	---	0.0250	mg/kg	50	1.00	---	96	80-120%	---	---	
1,1-Dichloroethene	1.21	---	0.0250	mg/kg	50	1.00	---	**121**	**80-120%**	---	---	Q-56
cis-1,2-Dichloroethene	0.960	---	0.0250	mg/kg	50	1.00	---	96	80-120%	---	---	
trans-1,2-Dichloroethene	1.09	---	0.0250	mg/kg	50	1.00	---	109	80-120%	---	---	
1,2-Dichloropropane	0.978	---	0.0250	mg/kg	50	1.00	---	98	80-120%	---	---	
1,3-Dichloropropane	0.965	---	0.0500	mg/kg	50	1.00	---	96	80-120%	---	---	
2,2-Dichloropropane	1.24	---	0.0500	mg/kg	50	1.00	---	**124**	**80-120%**	---	---	Q-56
1,1-Dichloropropene	1.06	---	0.0500	mg/kg	50	1.00	---	106	80-120%	---	---	
cis-1,3-Dichloropropene	1.12	---	0.0500	mg/kg	50	1.00	---	112	80-120%	---	---	
trans-1,3-Dichloropropene	1.09	---	0.0500	mg/kg	50	1.00	---	109	80-120%	---	---	
Ethylbenzene	0.968	---	0.0250	mg/kg	50	1.00	---	97	80-120%	---	---	
Hexachlorobutadiene	1.06	---	0.100	mg/kg	50	1.00	---	106	80-120%	---	---	
2-Hexanone	1.78	---	0.500	mg/kg	50	2.00	---	89	80-120%	---	---	
Isopropylbenzene	1.00	---	0.0500	mg/kg	50	1.00	---	100	80-120%	---	---	
4-Isopropyltoluene	1.04	---	0.0500	mg/kg	50	1.00	---	104	80-120%	---	---	
Methylene chloride	1.49	---	0.250	mg/kg	50	1.00	---	**149**	**80-120%**	---	---	B, Q-56
4-Methyl-2-pentanone (MiBK)	1.76	---	0.500	mg/kg	50	2.00	---	88	80-120%	---	---	
Methyl tert-butyl ether (MTBE)	1.02	---	0.0500	mg/kg	50	1.00	---	102	80-120%	---	---	
Naphthalene	1.11	---	0.100	mg/kg	50	1.00	---	111	80-120%	---	---	
n-Propylbenzene	0.976	---	0.0250	mg/kg	50	1.00	---	98	80-120%	---	---	
Styrene	1.08	---	0.0500	mg/kg	50	1.00	---	108	80-120%	---	---	
1,1,1,2-Tetrachloroethane	1.19	---	0.0250	mg/kg	50	1.00	---	119	80-120%	---	---	
1,1,2,2-Tetrachloroethane	0.959	---	0.0500	mg/kg	50	1.00	---	96	80-120%	---	---	
Tetrachloroethene (PCE)	1.03	---	0.0250	mg/kg	50	1.00	---	103	80-120%	---	---	
Toluene	0.987	---	0.0500	mg/kg	50	1.00	---	99	80-120%	---	---	
1,2,3-Trichlorobenzene	1.10	---	0.250	mg/kg	50	1.00	---	110	80-120%	---	---	
1,2,4-Trichlorobenzene	1.10	---	0.250	mg/kg	50	1.00	---	110	80-120%	---	---	
1,1,1-Trichloroethane	1.08	---	0.0250	mg/kg	50	1.00	---	108	80-120%	---	---	
1,1,2-Trichloroethane	1.02	---	0.0250	mg/kg	50	1.00	---	102	80-120%	---	---	
Trichloroethene (TCE)	1.11	---	0.0250	mg/kg	50	1.00	---	111	80-120%	---	---	
Trichlorofluoromethane	0.951	---	0.100	mg/kg	50	1.00	---	95	80-120%	---	---	
1,2,3-Trichloropropane	0.984	---	0.0500	mg/kg	50	1.00	---	98	80-120%	---	---	
1,2,4-Trimethylbenzene	0.973	---	0.0500	mg/kg	50	1.00	---	97	80-120%	---	---	
1,3,5-Trimethylbenzene	1.00	---	0.0500	mg/kg	50	1.00	---	100	80-120%	---	---	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
LCS (9070494-BS1)			Prepared: 07/01/19 09:30 Analyzed: 07/01/19 11:18									
Vinyl chloride	0.941	---	0.0250	mg/kg	50	1.00	---	94	80-120%	---	---	
m,p-Xylene	2.00	---	0.0500	mg/kg	50	2.00	---	100	80-120%	---	---	
o-Xylene	0.973	---	0.0250	mg/kg	50	1.00	---	97	80-120%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				
Duplicate (9070494-DUP1)			Prepared: 06/28/19 17:43 Analyzed: 07/01/19 14:30									**V-15**
QC Source Sample: Non-SDG (A9F0922-01)												
Acetone	ND	---	1.01	mg/kg	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0101	mg/kg	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.253	mg/kg	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
4-Chlorotoluene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.253	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Duplicate (9070494-DUP1)			Prepared: 06/28/19 17:43		Analyzed: 07/01/19 14:30							V-15
QC Source Sample: Non-SDG (A9F0922-01)												
1,3-Dichlorobenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.354	mg/kg	50	---	ND	---	---	---	30%	A-01
4-Methyl-2-pentanone (MiBK)	ND	---	0.505	mg/kg	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Styrene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Tetrachloroethene (PCE)	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.253	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.253	mg/kg	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Duplicate (9070494-DUP1)			Prepared: 06/28/19 17:43		Analyzed: 07/01/19 14:30							**V-15**
QC Source Sample: Non-SDG (A9F0922-01)												
Trichloroethene (TCE)	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.101	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0505	mg/kg	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0253	mg/kg	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*102 %*	*Limits:*	*80-120 %*		*Dilution: 1x*					
Toluene-d8 (Surr)			*95 %*		*80-120 %*		*"*					
4-Bromofluorobenzene (Surr)			*99 %*		*80-120 %*		*"*					
Duplicate (9070494-DUP2)			Prepared: 07/01/19 10:45		Analyzed: 07/01/19 17:43							
QC Source Sample: Non-SDG (A9G0019-01)												
Acetone	ND	---	1.20	mg/kg	50	---	ND	---	---	---	30%	
Acrylonitrile	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
Benzene	ND	---	0.0120	mg/kg	50	---	ND	---	---	---	30%	
Bromobenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Bromochloromethane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Bromodichloromethane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Bromoform	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
Bromomethane	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
2-Butanone (MEK)	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
n-Butylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
sec-Butylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
tert-Butylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Carbon disulfide	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
Carbon tetrachloride	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Chlorobenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Chloroethane	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
Chloroform	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Chloromethane	ND	---	0.300	mg/kg	50	---	ND	---	---	---	30%	
2-Chlorotoluene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Duplicate (9070494-DUP2)			Prepared: 07/01/19 10:45 Analyzed: 07/01/19 17:43									
QC Source Sample: Non-SDG (A9G0019-01)												
4-Chlorotoluene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Dibromochloromethane	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromo-3-chloropropane	ND	---	0.300	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dibromoethane (EDB)	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Dibromomethane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Dichlorodifluoromethane	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethane	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloroethane (EDC)	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloroethene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
cis-1,2-Dichloroethene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
trans-1,2-Dichloroethene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,2-Dichloropropane	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,3-Dichloropropane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
2,2-Dichloropropane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,1-Dichloropropene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
cis-1,3-Dichloropropene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
trans-1,3-Dichloropropene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Ethylbenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
2-Hexanone	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
Isopropylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
4-Isopropyltoluene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Methylene chloride	ND	---	0.300	mg/kg	50	---	ND	---	---	---	30%	
4-Methyl-2-pentanone (MiBK)	ND	---	0.600	mg/kg	50	---	ND	---	---	---	30%	
Methyl tert-butyl ether (MTBE)	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Naphthalene	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
n-Propylbenzene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Styrene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,1,1,2-Tetrachloroethane	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,1,2,2-Tetrachloroethane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Duplicate (9070494-DUP2)			Prepared: 07/01/19 10:45 Analyzed: 07/01/19 17:43									
QC Source Sample: Non-SDG (A9G0019-01)												
Tetrachloroethene (PCE)	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Toluene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichlorobenzene	ND	---	0.300	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	0.300	mg/kg	50	---	ND	---	---	---	30%	
1,1,1-Trichloroethane	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
1,1,2-Trichloroethane	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Trichloroethene (TCE)	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Trichlorofluoromethane	ND	---	0.120	mg/kg	50	---	ND	---	---	---	30%	
1,2,3-Trichloropropane	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,2,4-Trimethylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
1,3,5-Trimethylbenzene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
Vinyl chloride	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
m,p-Xylene	ND	---	0.0600	mg/kg	50	---	ND	---	---	---	30%	
o-Xylene	ND	---	0.0300	mg/kg	50	---	ND	---	---	---	30%	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*96 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*98 %*		*80-120 %*			*"*				
Matrix Spike (9070494-MS1)			Prepared: 06/27/19 16:45 Analyzed: 07/01/19 15:25									
QC Source Sample: Non-SDG (A9F0923-01)												
5035A/8260C												
Acetone	2.39	---	1.42	mg/kg	50	2.84	ND	84	36-164%	---	---	Q-54k
Acrylonitrile	1.38	---	0.142	mg/kg	50	1.42	ND	97	65-134%	---	---	
Benzene	1.59	---	0.0142	mg/kg	50	1.42	ND	112	77-121%	---	---	
Bromobenzene	1.48	---	0.0355	mg/kg	50	1.42	ND	105	78-121%	---	---	
Bromochloromethane	1.38	---	0.0710	mg/kg	50	1.42	ND	97	78-125%	---	---	
Bromodichloromethane	1.62	---	0.0710	mg/kg	50	1.42	ND	114	75-127%	---	---	
Bromoform	1.39	---	0.142	mg/kg	50	1.42	ND	98	67-132%	---	---	
Bromomethane	1.67	---	0.710	mg/kg	50	1.42	ND	118	53-143%	---	---	
2-Butanone (MEK)	2.67	---	0.710	mg/kg	50	2.84	ND	94	51-148%	---	---	
n-Butylbenzene	2.51	---	0.0710	mg/kg	50	1.42	0.731	125	70-128%	---	---	
sec-Butylbenzene	2.75	---	0.0710	mg/kg	50	1.42	1.08	118	73-126%	---	---	
tert-Butylbenzene	1.71	---	0.0710	mg/kg	50	1.42	ND	116	73-125%	---	---	

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Philip Nerenberg, Lab Director

Apex Laboratories, LLC

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

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Matrix Spike (9070494-MS1)			Prepared: 06/27/19 16:45		Analyzed: 07/01/19 15:25							
QC Source Sample: Non-SDG (A9F0923-01)												
Carbon disulfide	1.81	---	0.710	mg/kg	50	1.42	ND	128	63-132%	---	---	Q-54e
Carbon tetrachloride	1.82	---	0.0710	mg/kg	50	1.42	ND	128	70-135%	---	---	Q-54g
Chlorobenzene	1.44	---	0.0355	mg/kg	50	1.42	ND	101	79-120%	---	---	
Chloroethane	1.43	---	0.710	mg/kg	50	1.42	ND	101	59-139%	---	---	E-05
Chloroform	1.54	---	0.0710	mg/kg	50	1.42	ND	109	78-123%	---	---	
Chloromethane	1.22	---	0.355	mg/kg	50	1.42	ND	86	50-136%	---	---	
2-Chlorotoluene	1.64	---	0.0710	mg/kg	50	1.42	ND	115	75-122%	---	---	
4-Chlorotoluene	1.46	---	0.0710	mg/kg	50	1.42	ND	103	72-124%	---	---	
Dibromochloromethane	1.45	---	0.142	mg/kg	50	1.42	ND	102	74-126%	---	---	
1,2-Dibromo-3-chloropropane	1.43	---	0.355	mg/kg	50	1.42	ND	101	61-132%	---	---	
1,2-Dibromoethane (EDB)	1.61	---	0.0710	mg/kg	50	1.42	ND	114	78-122%	---	---	
Dibromomethane	1.55	---	0.0710	mg/kg	50	1.42	ND	109	78-125%	---	---	
1,2-Dichlorobenzene	1.47	---	0.0355	mg/kg	50	1.42	ND	104	78-121%	---	---	
1,3-Dichlorobenzene	1.42	---	0.0355	mg/kg	50	1.42	ND	100	77-121%	---	---	
1,4-Dichlorobenzene	1.41	---	0.0355	mg/kg	50	1.42	ND	99	75-120%	---	---	
Dichlorodifluoromethane	1.28	---	0.142	mg/kg	50	1.42	ND	90	29-149%	---	---	
1,1-Dichloroethane	1.59	---	0.0355	mg/kg	50	1.42	ND	112	76-125%	---	---	
1,2-Dichloroethane (EDC)	1.40	---	0.0355	mg/kg	50	1.42	ND	99	73-128%	---	---	
1,1-Dichloroethene	1.79	---	0.0355	mg/kg	50	1.42	ND	126	70-131%	---	---	Q-54b
cis-1,2-Dichloroethene	1.47	---	0.0355	mg/kg	50	1.42	ND	104	77-123%	---	---	
trans-1,2-Dichloroethene	1.66	---	0.0355	mg/kg	50	1.42	ND	117	74-125%	---	---	
1,2-Dichloropropane	1.48	---	0.0355	mg/kg	50	1.42	ND	104	76-123%	---	---	
1,3-Dichloropropane	1.43	---	0.0710	mg/kg	50	1.42	ND	101	77-121%	---	---	
2,2-Dichloropropane	1.77	---	0.0710	mg/kg	50	1.42	ND	125	67-133%	---	---	Q-54d
1,1-Dichloropropene	1.60	---	0.0710	mg/kg	50	1.42	ND	113	76-125%	---	---	
cis-1,3-Dichloropropene	1.63	---	0.0710	mg/kg	50	1.42	ND	115	74-126%	---	---	
trans-1,3-Dichloropropene	1.59	---	0.0710	mg/kg	50	1.42	ND	112	71-130%	---	---	
Ethylbenzene	1.46	---	0.0355	mg/kg	50	1.42	ND	103	76-122%	---	---	
Hexachlorobutadiene	2.00	---	0.142	mg/kg	50	1.42	ND	**141**	**61-135%**	---	---	Q-01
2-Hexanone	2.84	---	0.710	mg/kg	50	2.84	ND	100	53-145%	---	---	
Isopropylbenzene	1.67	---	0.0710	mg/kg	50	1.42	0.0511	114	68-134%	---	---	
4-Isopropyltoluene	1.89	---	0.0710	mg/kg	50	1.42	0.314	111	73-127%	---	---	
Methylene chloride	1.84	---	0.362	mg/kg	50	1.42	ND	**130**	**70-128%**	---	---	B, Q-54c

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Volatile Organic Compounds by EPA 5035A/8260C

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9070494 - EPA 5035A							**Soil**					
Matrix Spike (9070494-MS1)			Prepared: 06/27/19 16:45		Analyzed: 07/01/19 15:25							
QC Source Sample: Non-SDG (A9F0923-01)												
4-Methyl-2-pentanone (MiBK)	2.86	---	0.710	mg/kg	50	2.84	ND	101	65-135%	---	---	
Methyl tert-butyl ether (MTBE)	1.50	---	0.0710	mg/kg	50	1.42	ND	106	73-125%	---	---	
Naphthalene	3.38	---	0.142	mg/kg	50	1.42	1.76	115	62-129%	---	---	
n-Propylbenzene	1.61	---	0.0355	mg/kg	50	1.42	0.0561	109	73-125%	---	---	
Styrene	1.67	---	0.0710	mg/kg	50	1.42	ND	118	76-124%	---	---	
1,1,1,2-Tetrachloroethane	1.71	---	0.0355	mg/kg	50	1.42	ND	120	78-125%	---	---	
1,1,2,2-Tetrachloroethane	1.48	---	0.213	mg/kg	50	1.42	ND	104	70-124%	---	---	
Tetrachloroethene (PCE)	1.60	---	0.0355	mg/kg	50	1.42	ND	113	73-128%	---	---	
Toluene	1.44	---	0.0710	mg/kg	50	1.42	ND	102	77-121%	---	---	
1,2,3-Trichlorobenzene	1.87	---	0.355	mg/kg	50	1.42	ND	**132**	**66-130%**	---	---	Q-01
1,2,4-Trichlorobenzene	1.77	---	0.355	mg/kg	50	1.42	ND	124	67-129%	---	---	
1,1,1-Trichloroethane	1.63	---	0.0355	mg/kg	50	1.42	ND	115	73-130%	---	---	
1,1,2-Trichloroethane	1.63	---	0.0355	mg/kg	50	1.42	ND	115	78-121%	---	---	
Trichloroethene (TCE)	1.69	---	0.0355	mg/kg	50	1.42	ND	119	77-123%	---	---	
Trichlorofluoromethane	1.51	---	0.142	mg/kg	50	1.42	ND	106	62-140%	---	---	
1,2,3-Trichloropropane	1.70	---	0.497	mg/kg	50	1.42	ND	120	73-125%	---	---	
1,2,4-Trimethylbenzene	6.72	---	0.0710	mg/kg	50	1.42	5.71	**71**	**75-123%**	---	---	Q-03
1,3,5-Trimethylbenzene	3.56	---	0.0710	mg/kg	50	1.42	2.17	98	73-124%	---	---	
Vinyl chloride	1.45	---	0.0355	mg/kg	50	1.42	ND	102	56-135%	---	---	
m,p-Xylene	4.04	---	0.0710	mg/kg	50	2.84	1.11	103	77-124%	---	---	
o-Xylene	2.23	---	0.0355	mg/kg	50	1.42	0.757	104	77-123%	---	---	
Surr: 1,4-Difluorobenzene (Surr)		*Recovery:*	*101 %*	*Limits:*	*80-120 %*		*Dilution:*	*1x*				
Toluene-d8 (Surr)			*95 %*		*80-120 %*			*"*				
4-Bromofluorobenzene (Surr)			*100 %*		*80-120 %*			*"*				

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Blank (9061508-BLK1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:11							
EPA 8270D												
Acenaphthene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Acenaphthylene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Anthracene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	---	0.150	mg/kg	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	---	0.150	mg/kg	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	---	0.150	mg/kg	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Chrysene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Fluoranthene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Fluorene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	---	0.200	mg/kg	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	---	0.200	mg/kg	1	---	---	---	---	---	---	
Naphthalene	ND	---	0.200	mg/kg	1	---	---	---	---	---	---	
Phenanthrene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Pyrene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Carbazole	ND	---	0.150	mg/kg	1	---	---	---	---	---	---	
Dibenzofuran	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
4-Chloro-3-methylphenol	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
2-Chlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
2,4-Dichlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
2,4-Dimethylphenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
2,4-Dinitrophenol	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
4,6-Dinitro-2-methylphenol	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
2-Methylphenol	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
3+4-Methylphenol(s)	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
2-Nitrophenol	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
4-Nitrophenol	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Pentachlorophenol (PCP)	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
Phenol	ND	---	0.200	mg/kg	1	---	---	---	---	---	---	
2,3,4,6-Tetrachlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Blank (9061508-BLK1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:11							
2,3,5,6-Tetrachlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
2,4,5-Trichlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
2,4,6-Trichlorophenol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
Diethylphthalate	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Dimethylphthalate	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Di-n-butylphthalate	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
N-Nitrosodimethylamine	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
N-Nitroso-di-n-propylamine	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
N-Nitrosodiphenylamine	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Bis(2-Chloroethoxy) methane	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Bis(2-Chloroethyl) ether	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
2,2'-Oxybis(1-Chloropropane)	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Hexachlorobenzene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
Hexachlorobutadiene	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Hexachlorocyclopentadiene	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Hexachloroethane	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
2-Chloronaphthalene	ND	---	0.100	mg/kg	1	---	---	---	---	---	---	
1,2-Dichlorobenzene	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
1,3-Dichlorobenzene	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
1,4-Dichlorobenzene	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
1,2,4-Trichlorobenzene	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
4-Bromophenyl phenyl ether	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
4-Chlorophenyl phenyl ether	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Aniline	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
4-Chloroaniline	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
2-Nitroaniline	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
3-Nitroaniline	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
4-Nitroaniline	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	
Nitrobenzene	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
2,4-Dinitrotoluene	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	
2,6-Dinitrotoluene	ND	---	1.00	mg/kg	1	---	---	---	---	---	---	

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Blank (9061508-BLK1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:11							
Benzoic acid	ND	---	12.5	mg/kg	1	---	---	---	---	---	---	
Benzyl alcohol	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Isophorone	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Azobenzene (1,2-DPH)	ND	---	0.250	mg/kg	1	---	---	---	---	---	---	
Bis(2-Ethylhexyl) adipate	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
3,3'-Dichlorobenzidine	ND	---	2.00	mg/kg	1	---	---	---	---	---	---	Q-52
1,2-Dinitrobenzene	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
1,3-Dinitrobenzene	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
1,4-Dinitrobenzene	ND	---	2.50	mg/kg	1	---	---	---	---	---	---	
Pyridine	ND	---	0.500	mg/kg	1	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)		*Recovery:*	*82 %*	*Limits:*	*37-122 %*		*Dilution:*	*1x*				
2-Fluorobiphenyl (Surr)			*81 %*		*44-115 %*			*"*				
Phenol-d6 (Surr)			*74 %*		*33-122 %*			*"*				
p-Terphenyl-d14 (Surr)			*83 %*		*54-127 %*			*"*				
2-Fluorophenol (Surr)			*79 %*		*35-115 %*			*"*				
2,4,6-Tribromophenol (Surr)			*87 %*		*39-132 %*			*"*				
LCS (9061508-BS1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:46							**Q-18**
EPA 8270D												
Acenaphthene	8.06	---	0.100	mg/kg	1	8.00	---	101	40-122%	---	---	
Acenaphthylene	8.01	---	0.100	mg/kg	1	8.00	---	100	32-132%	---	---	
Anthracene	7.65	---	0.100	mg/kg	1	8.00	---	96	47-123%	---	---	
Benz(a)anthracene	7.90	---	0.100	mg/kg	1	8.00	---	99	49-126%	---	---	
Benzo(a)pyrene	8.04	---	0.150	mg/kg	1	8.00	---	101	45-129%	---	---	
Benzo(b)fluoranthene	7.99	---	0.150	mg/kg	1	8.00	---	100	45-132%	---	---	
Benzo(k)fluoranthene	7.70	---	0.150	mg/kg	1	8.00	---	96	47-132%	---	---	
Benzo(g,h,i)perylene	8.18	---	0.100	mg/kg	1	8.00	---	102	43-134%	---	---	
Chrysene	7.64	---	0.100	mg/kg	1	8.00	---	95	50-124%	---	---	
Dibenz(a,h)anthracene	7.82	---	0.100	mg/kg	1	8.00	---	98	45-134%	---	---	
Fluoranthene	7.69	---	0.100	mg/kg	1	8.00	---	96	50-127%	---	---	
Fluorene	7.45	---	0.100	mg/kg	1	8.00	---	93	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	7.63	---	0.100	mg/kg	1	8.00	---	95	45-133%	---	---	
1-Methylnaphthalene	7.71	---	0.200	mg/kg	1	8.00	---	96	40-120%	---	---	
2-Methylnaphthalene	7.74	---	0.200	mg/kg	1	8.00	---	97	38-122%	---	---	

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Philip Nerenberg, Lab Director

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
LCS (9061508-BS1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:46							**Q-18**
Naphthalene	7.76	---	0.200	mg/kg	1	8.00	---	97	35-123%	---	---	
Phenanthrene	7.68	---	0.100	mg/kg	1	8.00	---	96	50-121%	---	---	
Pyrene	7.60	---	0.100	mg/kg	1	8.00	---	95	47-127%	---	---	
Carbazole	7.47	---	0.150	mg/kg	1	8.00	---	93	50-122%	---	---	
Dibenzofuran	7.99	---	0.100	mg/kg	1	8.00	---	100	44-120%	---	---	
4-Chloro-3-methylphenol	7.87	---	1.00	mg/kg	1	8.00	---	98	45-122%	---	---	
2-Chlorophenol	8.15	---	0.500	mg/kg	1	8.00	---	102	34-121%	---	---	
2,4-Dichlorophenol	8.31	---	0.500	mg/kg	1	8.00	---	104	40-122%	---	---	
2,4-Dimethylphenol	8.56	---	0.500	mg/kg	1	8.00	---	107	30-127%	---	---	
2,4-Dinitrophenol	7.64	---	2.50	mg/kg	1	8.00	---	96	5-137%	---	---	
4,6-Dinitro-2-methylphenol	8.34	---	2.50	mg/kg	1	8.00	---	104	29-132%	---	---	
2-Methylphenol	8.13	---	0.250	mg/kg	1	8.00	---	102	32-122%	---	---	
3+4-Methylphenol(s)	8.35	---	0.250	mg/kg	1	8.00	---	104	34-120%	---	---	
2-Nitrophenol	8.82	---	1.00	mg/kg	1	8.00	---	110	36-123%	---	---	
4-Nitrophenol	7.40	---	1.00	mg/kg	1	8.00	---	93	30-132%	---	---	
Pentachlorophenol (PCP)	7.20	---	1.00	mg/kg	1	8.00	---	90	25-133%	---	---	
Phenol	8.07	---	0.200	mg/kg	1	8.00	---	101	34-120%	---	---	
2,3,4,6-Tetrachlorophenol	8.05	---	0.500	mg/kg	1	8.00	---	101	44-125%	---	---	
2,3,5,6-Tetrachlorophenol	7.85	---	0.500	mg/kg	1	8.00	---	98	40-120%	---	---	
2,4,5-Trichlorophenol	8.36	---	0.500	mg/kg	1	8.00	---	104	41-124%	---	---	
2,4,6-Trichlorophenol	8.33	---	0.500	mg/kg	1	8.00	---	104	39-126%	---	---	
Bis(2-ethylhexyl)phthalate	8.58	---	2.00	mg/kg	1	8.00	---	107	51-133%	---	---	
Butyl benzyl phthalate	8.54	---	2.00	mg/kg	1	8.00	---	107	48-132%	---	---	
Diethylphthalate	7.63	---	0.500	mg/kg	1	8.00	---	95	50-124%	---	---	
Dimethylphthalate	8.01	---	0.500	mg/kg	1	8.00	---	100	48-124%	---	---	
Di-n-butylphthalate	8.18	---	0.500	mg/kg	1	8.00	---	102	51-128%	---	---	
Di-n-octyl phthalate	8.32	---	2.00	mg/kg	1	8.00	---	104	44-140%	---	---	
N-Nitrosodimethylamine	7.17	---	0.250	mg/kg	1	8.00	---	90	23-120%	---	---	
N-Nitroso-di-n-propylamine	7.66	---	0.250	mg/kg	1	8.00	---	96	36-120%	---	---	
N-Nitrosodiphenylamine	7.93	---	0.250	mg/kg	1	8.00	---	99	38-127%	---	---	
Bis(2-Chloroethoxy) methane	7.65	---	0.250	mg/kg	1	8.00	---	96	36-121%	---	---	
Bis(2-Chloroethyl) ether	7.48	---	0.250	mg/kg	1	8.00	---	93	31-120%	---	---	
2,2'-Oxybis(1-Chloropropane)	7.33	---	0.250	mg/kg	1	8.00	---	92	33-131%	---	---	
Hexachlorobenzene	7.62	---	0.100	mg/kg	1	8.00	---	95	44-122%	---	---	

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Philip Nerenberg, Lab Director

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
LCS (9061508-BS1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 19:46							**Q-18**
Hexachlorobutadiene	7.82	---	0.250	mg/kg	1	8.00	---	98	32-123%	---	---	
Hexachlorocyclopentadiene	9.11	---	0.500	mg/kg	1	8.00	---	114	5-140%	---	---	
Hexachloroethane	7.71	---	0.250	mg/kg	1	8.00	---	96	28-120%	---	---	
2-Chloronaphthalene	8.02	---	0.100	mg/kg	1	8.00	---	100	41-120%	---	---	
1,2-Dichlorobenzene	7.69	---	0.250	mg/kg	1	8.00	---	96	33-120%	---	---	
1,3-Dichlorobenzene	7.56	---	0.250	mg/kg	1	8.00	---	95	30-120%	---	---	
1,4-Dichlorobenzene	7.77	---	0.250	mg/kg	1	8.00	---	97	31-120%	---	---	
1,2,4-Trichlorobenzene	7.55	---	0.250	mg/kg	1	8.00	---	94	34-120%	---	---	
4-Bromophenyl phenyl ether	8.00	---	0.250	mg/kg	1	8.00	---	100	46-124%	---	---	
4-Chlorophenyl phenyl ether	7.65	---	0.250	mg/kg	1	8.00	---	96	45-121%	---	---	
Aniline	4.38	---	0.500	mg/kg	1	8.00	---	55	7-120%	---	---	Q-31
4-Chloroaniline	2.93	---	0.250	mg/kg	1	8.00	---	37	16-120%	---	---	Q-31
2-Nitroaniline	8.59	---	2.00	mg/kg	1	8.00	---	107	44-127%	---	---	
3-Nitroaniline	7.81	---	2.00	mg/kg	1	8.00	---	98	33-120%	---	---	
4-Nitroaniline	8.17	---	2.00	mg/kg	1	8.00	---	102	35-120%	---	---	
Nitrobenzene	7.70	---	1.00	mg/kg	1	8.00	---	96	34-122%	---	---	
2,4-Dinitrotoluene	7.97	---	1.00	mg/kg	1	8.00	---	100	48-126%	---	---	
2,6-Dinitrotoluene	8.53	---	1.00	mg/kg	1	8.00	---	107	46-124%	---	---	
Benzoic acid	14.7	---	12.5	mg/kg	1	16.0	---	92	5-140%	---	---	
Benzyl alcohol	8.14	---	0.500	mg/kg	1	8.00	---	102	29-122%	---	---	
Isophorone	7.53	---	0.250	mg/kg	1	8.00	---	94	30-122%	---	---	
Azobenzene (1,2-DPH)	7.83	---	0.250	mg/kg	1	8.00	---	98	39-125%	---	---	
Bis(2-Ethylhexyl) adipate	8.65	---	2.50	mg/kg	1	8.00	---	108	60-121%	---	---	Q-41
3,3'-Dichlorobenzidine	45.6	---	2.00	mg/kg	1	16.0	---	**285**	**22-121%**	---	---	Q-29, Q-41
1,2-Dinitrobenzene	8.11	---	2.50	mg/kg	1	8.00	---	101	44-120%	---	---	
1,3-Dinitrobenzene	8.29	---	2.50	mg/kg	1	8.00	---	104	42-127%	---	---	
1,4-Dinitrobenzene	8.20	---	2.50	mg/kg	1	8.00	---	102	37-132%	---	---	
Pyridine	6.15	---	0.500	mg/kg	1	8.00	---	77	5-120%	---	---	

Surr: Nitrobenzene-d5 (Surr)	*Recovery: 94 %*	*Limits: 37-122 %*	*Dilution: 1x*
2-Fluorobiphenyl (Surr)	*99 %*	*44-115 %*	*"*
Phenol-d6 (Surr)	*99 %*	*33-122 %*	*"*
p-Terphenyl-d14 (Surr)	*98 %*	*54-127 %*	*"*
2-Fluorophenol (Surr)	*104 %*	*35-115 %*	*"*
2,4,6-Tribromophenol (Surr)	*105 %*	*39-132 %*	*"*

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EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Duplicate (9061508-DUP1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 20:58							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
EPA 8270D												
Acenaphthene	**3380**	---	1000	mg/kg	1000	---	3470	---	---	3	30%	
Acenaphthylene	**6460**	---	1000	mg/kg	1000	---	6520	---	---	0.9	30%	
Anthracene	**3310**	---	1000	mg/kg	1000	---	3280	---	---	0.9	30%	
Benz(a)anthracene	**2080**	---	1000	mg/kg	1000	---	1870	---	---	11	30%	
Benzo(a)pyrene	**1840**	---	1500	mg/kg	1000	---	1940	---	---	6	30%	
Benzo(b)fluoranthene	**1680**	---	1500	mg/kg	1000	---	1620	---	---	4	30%	
Benzo(k)fluoranthene	ND	---	1500	mg/kg	1000	---	806	---	---	***	30%	
Benzo(g,h,i)perylene	**1360**	---	1000	mg/kg	1000	---	1420	---	---	4	30%	
Chrysene	**2140**	---	1000	mg/kg	1000	---	2320	---	---	8	30%	
Dibenz(a,h)anthracene	ND	---	1000	mg/kg	1000	---	ND	---	---	---	30%	
Fluoranthene	**7410**	---	1000	mg/kg	1000	---	7220	---	---	3	30%	
Fluorene	**6670**	---	1000	mg/kg	1000	---	6690	---	---	0.3	30%	
Indeno(1,2,3-cd)pyrene	**1220**	---	1000	mg/kg	1000	---	1160	---	---	5	30%	
1-Methylnaphthalene	**22200**	---	2000	mg/kg	1000	---	21800	---	---	2	30%	
2-Methylnaphthalene	**43600**	---	2000	mg/kg	1000	---	43900	---	---	0.6	30%	
Naphthalene	**129000**	---	2000	mg/kg	1000	---	131000	---	---	2	30%	
Phenanthrene	**25500**	---	1000	mg/kg	1000	---	25500	---	---	0.2	30%	
Pyrene	**8550**	---	1000	mg/kg	1000	---	8710	---	---	2	30%	
Carbazole	ND	---	1500	mg/kg	1000	---	1070	---	---	***	30%	
Dibenzofuran	**2010**	---	1000	mg/kg	1000	---	2000	---	---	0.2	30%	
4-Chloro-3-methylphenol	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
2-Chlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,4-Dichlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,4-Dimethylphenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,4-Dinitrophenol	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
4,6-Dinitro-2-methylphenol	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
2-Methylphenol	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
3+4-Methylphenol(s)	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
2-Nitrophenol	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
4-Nitrophenol	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
Pentachlorophenol (PCP)	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Duplicate (9061508-DUP1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 20:58							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
Phenol	ND	---	2000	mg/kg	1000	---	ND	---	---	---	30%	
2,3,4,6-Tetrachlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,3,5,6-Tetrachlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,4,5-Trichlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
2,4,6-Trichlorophenol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Bis(2-ethylhexyl)phthalate	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	
Butyl benzyl phthalate	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	
Diethylphthalate	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Dimethylphthalate	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Di-n-butylphthalate	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Di-n-octyl phthalate	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	
N-Nitrosodimethylamine	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
N-Nitroso-di-n-propylamine	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
N-Nitrosodiphenylamine	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Bis(2-Chloroethoxy) methane	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Bis(2-Chloroethyl) ether	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
2,2'-Oxybis(1-Chloropropane)	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Hexachlorobenzene	ND	---	1000	mg/kg	1000	---	ND	---	---	---	30%	
Hexachlorobutadiene	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Hexachlorocyclopentadiene	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Hexachloroethane	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
2-Chloronaphthalene	ND	---	1000	mg/kg	1000	---	ND	---	---	---	30%	
1,2-Dichlorobenzene	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
1,3-Dichlorobenzene	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
1,4-Dichlorobenzene	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
1,2,4-Trichlorobenzene	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
4-Bromophenyl phenyl ether	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
4-Chlorophenyl phenyl ether	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Aniline	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
4-Chloroaniline	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
2-Nitroaniline	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	
3-Nitroaniline	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	
4-Nitroaniline	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061508 - EPA 3580A							**Oil**					
Duplicate (9061508-DUP1)			Prepared: 06/28/19 14:11		Analyzed: 07/01/19 20:58							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
Nitrobenzene	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
2,4-Dinitrotoluene	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
2,6-Dinitrotoluene	ND	---	10000	mg/kg	1000	---	ND	---	---	---	30%	
Benzoic acid	ND	---	125000	mg/kg	1000	---	ND	---	---	---	30%	
Benzyl alcohol	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Isophorone	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Azobenzene (1,2-DPH)	ND	---	2500	mg/kg	1000	---	ND	---	---	---	30%	
Bis(2-Ethylhexyl) adipate	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
3,3'-Dichlorobenzidine	ND	---	20000	mg/kg	1000	---	ND	---	---	---	30%	Q-52
1,2-Dinitrobenzene	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
1,3-Dinitrobenzene	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
1,4-Dinitrobenzene	ND	---	25000	mg/kg	1000	---	ND	---	---	---	30%	
Pyridine	ND	---	5000	mg/kg	1000	---	ND	---	---	---	30%	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 86 %*		*Limits: 37-122 %*		*Dilution: 1000x*					S-05
2-Fluorobiphenyl (Surr)			*136 %*		*44-115 %*		*"*					S-05
Phenol-d6 (Surr)			*%*		*33-122 %*		*"*					S-01
p-Terphenyl-d14 (Surr)			*135 %*		*54-127 %*		*"*					S-05
2-Fluorophenol (Surr)			*64 %*		*35-115 %*		*"*					S-05
2,4,6-Tribromophenol (Surr)			*%*		*39-132 %*		*"*					S-01

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503-718-2323
EPA ID: OR01039

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061422 - EPA 3051A							Oil					
Blank (9061422-BLK1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:11							
EPA 6020A												
Aluminum	ND	---	25.0	mg/kg	5	---	---	---	---	---	---	
Antimony	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Arsenic	ND	---	1.00	mg/kg	5	---	---	---	---	---	---	
Barium	ND	---	1.00	mg/kg	5	---	---	---	---	---	---	
Beryllium	ND	---	0.100	mg/kg	5	---	---	---	---	---	---	
Cadmium	ND	---	0.200	mg/kg	5	---	---	---	---	---	---	
Calcium	ND	---	50.0	mg/kg	5	---	---	---	---	---	---	
Chromium	ND	---	1.00	mg/kg	5	---	---	---	---	---	---	
Copper	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Iron	ND	---	25.0	mg/kg	5	---	---	---	---	---	---	
Lead	ND	---	0.200	mg/kg	5	---	---	---	---	---	---	
Magnesium	ND	---	25.0	mg/kg	5	---	---	---	---	---	---	
Manganese	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Mercury	ND	---	0.0800	mg/kg	5	---	---	---	---	---	---	
Nickel	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Potassium	ND	---	50.0	mg/kg	5	---	---	---	---	---	---	
Selenium	ND	---	1.00	mg/kg	5	---	---	---	---	---	---	
Silver	ND	---	0.200	mg/kg	5	---	---	---	---	---	---	
Sodium	ND	---	50.0	mg/kg	5	---	---	---	---	---	---	
Thallium	ND	---	0.100	mg/kg	5	---	---	---	---	---	---	
Vanadium	ND	---	0.500	mg/kg	5	---	---	---	---	---	---	
Zinc	ND	---	2.00	mg/kg	5	---	---	---	---	---	---	
LCS (9061422-BS1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:15							
EPA 6020A												
Aluminum	1180	---	25.0	mg/kg	5	1250	---	94	80-120%	---	---	
Antimony	12.0	---	0.500	mg/kg	5	12.5	---	96	80-120%	---	---	
Arsenic	23.9	---	1.00	mg/kg	5	25.0	---	95	80-120%	---	---	
Barium	25.2	---	1.00	mg/kg	5	25.0	---	101	80-120%	---	---	
Beryllium	11.8	---	0.100	mg/kg	5	12.5	---	95	80-120%	---	---	
Cadmium	24.6	---	0.200	mg/kg	5	25.0	---	98	80-120%	---	---	
Calcium	1170	---	50.0	mg/kg	5	1250	---	93	80-120%	---	---	
Chromium	24.4	---	1.00	mg/kg	5	25.0	---	98	80-120%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061422 - EPA 3051A							**Oil**					
LCS (9061422-BS1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:15							
Copper	25.5	---	0.500	mg/kg	5	25.0	---	102	80-120%	---	---	
Iron	1110	---	25.0	mg/kg	5	1250	---	89	80-120%	---	---	
Lead	25.2	---	0.200	mg/kg	5	25.0	---	101	80-120%	---	---	
Magnesium	1200	---	25.0	mg/kg	5	1250	---	96	80-120%	---	---	
Manganese	25.1	---	0.500	mg/kg	5	25.0	---	100	80-120%	---	---	
Mercury	0.478	---	0.0800	mg/kg	5	0.500	---	96	80-120%	---	---	
Nickel	25.3	---	0.500	mg/kg	5	25.0	---	101	80-120%	---	---	
Potassium	1230	---	50.0	mg/kg	5	1250	---	99	80-120%	---	---	
Selenium	11.2	---	1.00	mg/kg	5	12.5	---	90	80-120%	---	---	
Silver	11.9	---	0.200	mg/kg	5	12.5	---	96	80-120%	---	---	
Sodium	1190	---	50.0	mg/kg	5	1250	---	95	80-120%	---	---	
Thallium	11.9	---	0.100	mg/kg	5	12.5	---	95	80-120%	---	---	
Vanadium	25.0	---	0.500	mg/kg	5	25.0	---	100	80-120%	---	---	
Zinc	25.6	---	2.00	mg/kg	5	25.0	---	102	80-120%	---	---	
Duplicate (9061422-DUP1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:32							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
EPA 6020A												
Aluminum	ND	---	94.7	mg/kg	5	---	58.8	---	---	***	40%	
Antimony	ND	---	1.89	mg/kg	5	---	ND	---	---	---	40%	
Arsenic	ND	---	3.79	mg/kg	5	---	ND	---	---	---	**40%**	Q-05
Barium	ND	---	3.79	mg/kg	5	---	ND	---	---	---	**40%**	Q-05
Beryllium	ND	---	0.379	mg/kg	5	---	ND	---	---	---	40%	
Cadmium	ND	---	0.758	mg/kg	5	---	ND	---	---	---	40%	
Calcium	ND	---	189	mg/kg	5	---	ND	---	---	---	40%	
Chromium	ND	---	3.79	mg/kg	5	---	ND	---	---	---	40%	
Copper	ND	---	1.89	mg/kg	5	---	ND	---	---	---	**40%**	Q-05
Iron	**203**	---	94.7	mg/kg	5	---	161	---	---	23	40%	
Lead	**1.26**	---	0.758	mg/kg	5	---	1.21	---	---	4	40%	
Magnesium	ND	---	94.7	mg/kg	5	---	ND	---	---	---	40%	
Manganese	**3.12**	---	1.89	mg/kg	5	---	2.72	---	---	14	40%	
Mercury	ND	---	0.303	mg/kg	5	---	ND	---	---	---	40%	
Nickel	**2.00**	---	1.89	mg/kg	5	---	1.93	---	---	4	40%	
Potassium	ND	---	189	mg/kg	5	---	ND	---	---	---	40%	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

QUALITY CONTROL (QC) SAMPLE RESULTS

Total Metals by EPA 6020A (ICPMS)

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9061422 - EPA 3051A							**Oil**					
Duplicate (9061422-DUP1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:32							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
Selenium	ND	---	3.79	mg/kg	5	---	ND	---	---	---	40%	
Silver	ND	---	0.758	mg/kg	5	---	ND	---	---	---	40%	
Sodium	ND	---	189	mg/kg	5	---	ND	---	---	---	40%	
Thallium	ND	---	0.379	mg/kg	5	---	ND	---	---	---	40%	
Vanadium	**2.09**	---	1.89	mg/kg	5	---	2.01	---	---	4	40%	
Zinc	**10.5**	---	7.58	mg/kg	5	---	10.1	---	---	3	40%	
Matrix Spike (9061422-MS1)			Prepared: 06/27/19 08:07		Analyzed: 06/27/19 18:36							
QC Source Sample: 2708-190619-OIL (A9F0684-01)												
EPA 6020A												
Aluminum	5000	---	108	mg/kg	5	5390	58.8	92	75-125%	---	---	
Antimony	49.6	---	2.16	mg/kg	5	53.9	ND	92	75-125%	---	---	
Arsenic	104	---	4.31	mg/kg	5	108	ND	96	75-125%	---	---	
Barium	107	---	4.31	mg/kg	5	108	ND	99	75-125%	---	---	
Beryllium	49.4	---	0.431	mg/kg	5	53.9	ND	92	75-125%	---	---	
Cadmium	103	---	0.862	mg/kg	5	108	ND	95	75-125%	---	---	
Calcium	4980	---	216	mg/kg	5	5390	ND	92	75-125%	---	---	
Chromium	103	---	4.31	mg/kg	5	108	ND	96	75-125%	---	---	
Copper	110	---	2.16	mg/kg	5	108	ND	102	75-125%	---	---	
Iron	4850	---	108	mg/kg	5	5390	161	87	75-125%	---	---	
Lead	106	---	0.862	mg/kg	5	108	1.21	97	75-125%	---	---	
Magnesium	5030	---	108	mg/kg	5	5390	ND	93	75-125%	---	---	
Manganese	107	---	2.16	mg/kg	5	108	2.72	97	75-125%	---	---	
Mercury	1.90	---	0.345	mg/kg	5	2.16	ND	88	75-125%	---	---	
Nickel	108	---	2.16	mg/kg	5	108	1.93	99	75-125%	---	---	
Potassium	5200	---	216	mg/kg	5	5390	ND	97	75-125%	---	---	
Selenium	48.4	---	4.31	mg/kg	5	53.9	ND	90	75-125%	---	---	
Silver	49.8	---	0.862	mg/kg	5	53.9	ND	92	75-125%	---	---	
Sodium	5010	---	216	mg/kg	5	5390	ND	93	75-125%	---	---	
Thallium	49.6	---	0.431	mg/kg	5	53.9	ND	92	75-125%	---	---	
Vanadium	105	---	2.16	mg/kg	5	108	2.01	96	75-125%	---	---	
Zinc	115	---	8.62	mg/kg	5	108	10.1	98	75-125%	---	---	

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434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

SAMPLE PREPARATION INFORMATION

Diesel and/or Oil Hydrocarbons by NWTPH-Dx

Prep: EPA 3580A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9070624							
A9F0684-01	Oil	NWTPH-Dx	06/19/19 14:00	07/03/19 15:48	0.12g/5mL	0.1g/5mL	0.83

Gasoline Range Hydrocarbons (Benzene through Naphthalene) by NWTPH-Gx

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9061492							
A9F0684-01	Oil	NWTPH-Gx (MS)	06/19/19 14:00	06/26/19 18:50	0.47g/5mL	5g/5mL	10.60

Volatile Organic Compounds by EPA 5035A/8260C

Prep: EPA 5035A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9061492							
A9F0684-01	Oil	5035A/8260C	06/19/19 14:00	06/26/19 18:50	0.47g/5mL	5g/5mL	10.60
Batch: 9070494							
A9F0684-01RE1	Oil	5035A/8260C	06/19/19 14:00	06/26/19 18:50	0.47g/5mL	5g/5mL	10.60

Semivolatile Organic Compounds by EPA 8270D

Prep: EPA 3580A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9061508							
A9F0684-01	Oil	EPA 8270D	06/19/19 14:00	06/28/19 14:11	0.11g/5mL	1g/5mL	9.09

Total Metals by EPA 6020A (ICPMS)

Prep: EPA 3051A

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9061422							
A9F0684-01	Oil	EPA 6020A	06/19/19 14:00	06/27/19 08:07	0.113g/50mL	0.25g/50mL	2.21
A9F0684-01	Oil	EPA 6020A	06/19/19 14:00	06/27/19 08:07	0.113g/50mL	0.5g/50mL	4.42

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QUALIFIER DEFINITIONS

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

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A-01	Reporting limit raised due to possible lab contamination.
B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
B-07	Analyte detected in the corresponding extraction blank at a level greater than the MRL, and detected in this sample at a level below that found in the blank. Reporting level for this analyte has been raised above the potential analyte contamination.
E-05	Estimated Result. Initial Calibration Verification (ICV) failed high. No affect on non-detect results.
F-17	No fuel pattern detected. The Diesel result represents carbon range C12 to C24, and the Oil result represents >C24 to C40.
Q-01	Spike recovery and/or RPD is outside acceptance limits.
Q-03	Spike recovery and/or RPD is outside control limits due to the high concentration of analyte present in the sample.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-18	Matrix Spike results for this extraction batch are not reported due to the high dilution necessary for analysis of the source sample.
Q-29	Recovery for Lab Control Spike (LCS) is above the upper control limit. Data may be biased high.
Q-31	Estimated Results. Recovery of Continuing Calibration Verification sample below lower control limit for this analyte. Results are likely biased low.
Q-41	Estimated Results. Recovery of Continuing Calibration Verification sample above upper control limit for this analyte. Results are likely biased high.
Q-42	Matrix Spike and/or Duplicate analysis was performed on this sample. % Recovery or RPD for this analyte is outside laboratory control limits. (Refer to the QC Section of Analytical Report.)
Q-52	Due to erratic or low blank spike recoveries, results for this analyte are considered Estimated Values.
Q-54	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +0.5%. 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 +0.8%. 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 +1.0%. 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 +28.6%.. 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 +3.6%. 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 +5.4%. The results are reported as Estimated Values.
Q-54f	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +5.5%. The results are reported as Estimated Values.

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Q-54g	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +5.7%. The results are reported as Estimated Values.
Q-54h	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +6.9%. The results are reported as Estimated Values.
Q-54i	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +7.0%. The results are reported as Estimated Values.
Q-54j	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by +8.3%. The results are reported as Estimated Values.
Q-54k	Daily Continuing Calibration Verification recovery for this analyte failed the +/-20% criteria listed in EPA method 8260C/8270D by -0.6%. The results are reported as Estimated Values.
Q-55	Daily CCV/LCS recovery for this analyte was below the +/-20% criteria listed in EPA 8260C, however there is adequate sensitivity to ensure detection at the reporting level.
Q-56	Daily CCV/LCS recovery for this analyte was above the +/-20% criteria listed in EPA 8260C
R-04	Reporting levels elevated due to preparation and/or analytical dilution necessary for analysis.
S-01	Surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
V-15	Sample aliquot was subsampled from the sample container. The subsampled aliquot was preserved in the laboratory within 48 hours of sampling.
V-16	Sample aliquot was subsampled from the sample container in the laboratory. The subsampled aliquot was not preserved within 48 hours of sampling.

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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.

Apex Laboratories

Philip Nerenberg, Lab Director

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.

Apex Laboratories, LLC

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

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

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.

Apex Laboratories, LLC

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

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

Philip Nerenberg, Lab Director

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Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	**A9F0684 - 07 16 19 1045**

A9F0684

CHAIN OF CUSTODY

HAHN AND ASSOCIATES, INC.
Environmental Consultants
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

Laboratory: Apex Labs
Lab Project No.:
Chain of Custody No.:

Project Manager: Rob Ede
Project No.: 2708-60F
Project Name: Mult. 802 Decommissioning
Collected by: Ben Uhl / Andrew Bixler

Liquid with Sediment Sample — Test Filtrate ____ Test Sediment ____ Test Both ____
Multi-Phase Sample — Test One (which) ____ Test Separately ____ Shake ____

Samples Received at 4C (Y or N)
Appropriate Containers Used (Y or N)
Provide Verbal Results (Y or N)
Provide Preliminary Fax Results

Comments
Sample Number Prefix: 2708-190619-

Lab ID	Sample #	Date	Time	Sample Description	Matrix: Soil	Water	Air	Other	Number of Containers	Analyses to be Performed: VOCs by EPA Method 8260C	SVOCs by EPA Method 8270D - Full List	NWTPH-Dx	NWTPH-Gx	Gasco Metals by EPA 6000/7000 Series	Total Cyanide by EPA Method 335.4	RUSH	Remarks
	OIL	19-Jun-19	14:00	MULT 802				X	1								HOLD

Relinquished by: Hahn and Associates, Inc. — Company — Date 6/20/19 — Time 1611 — Received by — Company Apex Labs
Relinquished by — Company — Date — Time — Received by — Company
Relinquished by — Company — Date — Time — Received by — Company

Apex Laboratories

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Philip Nerenberg

Philip Nerenberg, Lab Director

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

Hahn and Associates	Project: **Mult 802 Decommissioning**	
434 NW 6th Ave. Suite 203	Project Number: **2708-60F**	**Report ID:**
Portland, OR 97209	Project Manager: **Rob Ede**	A9F0684 - 07 16 19 1045

APEX LABS COOLER RECEIPT FORM

Client: Hahn+Ass. Inc. Element WO#: A9 F0684

Project/Project #: Mult 802 Decommissioning / 2708-60F

Delivery Info:

Date/time received: 6-20-19 @ 1611 By: MK

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

Cooler Inspection Date/time inspected: 6-20-19 @ 1750 By: MK

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)	5.7						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Gel						
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: 6/20/19 @ 1830 By: CB

All samples intact? Yes X No ___ Comments: ___

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

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

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

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

Comments ___

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

Comments: ___

Additional information: ___

Labeled by: CB Witness: TM Cooler Inspected by: CB See Project Contact Form: Y

Apex Laboratories

Philip Nerenberg

Philip Nerenberg, Lab Director

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.

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

A9F0684

Apex Laboratories

Client: Hahn and Associates
Project: Mult 802 Decommissioning
Project Manager: Philip Nerenberg
Project Number: 2708-60F

Report To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone: (503) 796-0717
Fax: (503) 227-2209

Invoice To:
Hahn and Associates
Rob Ede
434 NW 6th Ave. Suite 203
Portland, OR 97209
Phone :(503) 796-0717
Fax: (503) 227-2209

Date Due: 07/09/19 17:00 (12 day TAT)
Received By: Mike Kachnik
Date Received: 06/20/19 16:11
Logged In By: Cameron L O'Brien
Date Logged In: 06/20/19 18:34

Cooler #1 received at 5.7°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
A9F0684-01 2708-190619-OIL [Oil] Sampled 06/19/19 14:00 (GMT-08:00)				**MULT 802**
Pacific Time (US & Canada) 2 Containers				
Dry Weight				
~~Dry Weight~~	07/05/19 17:00	10	06/21/19 14:00	For 8260C Full List in batch 9060476
Fuels				
NWTPH-Dx (Diesel/Oil)	07/05/19 17:00	10	07/03/19 14:00	6th priority Added 6/26/19
Metals				
Metals, Select 1	07/05/19 17:00	10	12/16/19 14:00	4th priority Added 6/26/19 Ag, Al, As, Ba, Be, Cd, Cr, Cu, Fe, H
Project Mgmt				
Data Package	08/23/19 17:00	12	09/26/19 14:00	
Sample Control				
Archive Samples	06/21/19 17:00	1	06/20/19 14:00	
Semivols (Scan)				
8270D LL Full List	07/05/19 17:00	10	07/03/19 14:00	2nd priority Added 6/26/19
Volatiles				
8260C Full List	07/05/19 17:00	10	06/21/19 14:00	1st priority Added 6/26/19
NWTPH-Gx	07/05/19 17:00	10	06/21/19 14:00	5th priority Added 6/26/19

Analysis groups included in this work order

Metals, Select 1

Ag (Silver) - 6020 - Total	Al (Aluminum) - 6020 - Total	As (Arsenic) - 6020 - Total	Ba (Barium) - 6020 - Total
Be (Beryllium) - 6020 - Total	Ca (Calcium) - 6020 - Total	Cd (Cadmium) - 6020 - Total	Cr (Chromium) - 6020 - Total
Cu (Copper) - 6020 - Total	Fe (Iron) - 6020 - Total	Hg (Mercury) - 6020 - Total	K (Potassium) - 6020 - Total
Mg (Magnesium) - 6020 - Total	Mn (Manganese) - 6020 - Total	Na (Sodium) - 6020 - Total	Ni (Nickel) - 6020 - Total
Pb (Lead) - 6020 - Total	Sb (Antimony) - 6020 - Total	Se (Selenium) - 6020 - Total	Tl (Thallium) - 6020 - Total
V (Vanadium) - 6020 - Total	Zn (Zinc) - 6020 - Total		

Reviewed By

Date

A9F0684

HAHN AND ASSOCIATES, INC.
Environmental Consultants
434 NW Sixth Avenue, Suite 203 • Portland OR 97209
(503) 796-0717 • Fax (503) 227-2209

Laboratory Apex Labs
Lab Project No.

CHAIN OF CUSTODY
Chain of Custody No.

Project Manager: Rob Ede
Project No.: 2708-60F
Project Name: Mult 802 Decommissioning
Collected by: Ben Uhl / Andrew Bieber

Liquid with Sediment Sample
Test Filtrate ____ Test Sediment ____ Test Both ____
Multi-Phase Sample
Test One (which) ____ Test Separately ____ Shake ____

Samples Received at 4C (Y or N)
Appropriate Containers Used (Y or N)
Provide Verbal Results (Y or N)
Provide Preliminary Fax Results

Comments
Sample Number Prefix: 2708-190619-

Lab ID	Sample #	Date	Time	Sample Description	Matrix: Soil	Water	Air	Other	Number of Containers	VOCs by EPA Method 8260C	SVOCs by EPA Method 8270D - Full List	NWTPH-Dx	NWTPH-Gx	Gasco Metals by EPA 6000/7000 Series	Total Cyanide by EPA Method 225.4				RUSH	Remarks
	OIL	19-Jun-19	14:00	MULT 802				X	1											HOLD

Analyses to be Performed

Relinquished by	Company	Date	Time	Received by	Company
	Hahn and Associates, Inc.	6/20/19	1611		Apex Labs
Relinquished by	Company	Date	Time	Received by	Company
Relinquished by	Company	Date	Time	Received by	Company

APEX LABS COOLER RECEIPT FORM

Client: Hahn+Ass. Inc. Element WO#: A9 F0684

Project/Project #: Mult 802 Decommissioning / 2708-60F

Delivery Info:

Date/time received: 6-20-19 @ 1611 By: MK

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

Cooler Inspection Date/time inspected: 6-20-19 @ 1750 By: MK

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)	5.7						
Received on ice? (Y/N)	Y						
Temp. blanks? (Y/N)	Y						
Ice type: (Gel/Real/Other)	Gel						
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: 6/20/19 @ 1830 By: CB

All samples intact? Yes X No ___ Comments: ___

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

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

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

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

Comments ___

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

Comments: ___

Additional information: ___

Labeled by: CB Witness: MM Cooler Inspected by: CB See Project Contact Form: Y

CLP-Like Forms

Apex Laboratories

SDG: A9F0684

CLASS: GC

METHOD: NWTPH-Dx

ANALYSES DATA PACKAGE COVER PAGE

NWTPH-Dx

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190619-OIL	A9F0684-01	Oil

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: 10/1/2019 2:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Dx

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Oil

Analyte	MDL	MRL	Units
Diesel	1000	2000	mg/kg
Oil	2000	4000	mg/kg

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

ORGANIC ANALYSIS DATA SHEET

NWTPH-Dx

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	1R070308.D
Sampled:	06/19/19 14:00	Prepared:	07/03/19 15:48	Analyzed:	07/04/19 00:11
		Preparation:	EPA 3580A	Initial/Final:	0.12 g / 5 mL

Batch: 9070624 Sequence: 9G03031 Calibration: A9D2603 Instrument: DUALFID1R

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg)	Q
68334-30-5	Diesel	100	681000	D
Oil	Oil	100	167000	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
o-Terphenyl (Surr)	2080	ND		50 - 150	D

* Values outside of QC limits

PREPARATION BATCH SUMMARY

NWTPH-Dx

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9070624 Batch Matrix: Oil Preparation: EPA 3580A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9070624-BLK1	1R070306.D	07/03/19 15:48	
LCS	9070624-BS1	1R070307.D	07/03/19 15:48	
2708-190619-OIL (Dup)	9070624-DUP1	1R070309.D	07/03/19 15:48	
2708-190619-OIL	A9F0684-01	1R070308.D	07/03/19 15:48	

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
NWTPH-Dx

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	9070624-BLK1	File ID:	1R070306.D
Prepared:	07/03/19 15:48	Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL
Analyzed:	07/03/19 23:26	Instrument:	DUALFID1R		
Batch:	9070624	Sequence:	9G03031	Calibration:	A9D2603

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
68334-30-5	Diesel	100	U
Oil	Oil	200	U

SYSTEM MONITORING COMPOUND	ADDED (mg/kg)	CONC (mg/kg)	% REC	QC LIMITS	Q
o-Terphenyl (Surr)	250	277	111	50 - 150	

LCS / LCS DUPLICATE RECOVERY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Oil		
Batch:	9070624	Laboratory ID:	9070624-BS1
Preparation:	EPA 3580A	Initial/Final:	0.1 g / 5 mL

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Diesel	12500	13300	106	70 - 130

* = Values outside of QC limits

DUPLICATES

NWTPH-Dx

2708-190619-OIL

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Matrix: Oil
Laboratory ID: 9070624-DUP1
Batch: 9070624
Lab Source ID: A9F0684-01
Preparation: EPA 3580A
Initial/Final: 0.12 g / 5 mL
Source Sample Name: 2708-190619-OIL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Diesel	30	681000		697000		2		NWTPH-Dx
Oil	30	35400		ND				NWTPH-Dx

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9D25028	Instrument:	DUALFID1R
Matrix:	Oil	Calibration:	A9D2603

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Blank	9D25028-ICB1	1R042504.D	04/25/19 17:41
Cal Standard	9D25028-CAL1	1R042505.D	04/25/19 18:03
Cal Standard	9D25028-CAL2	1R042506.D	04/25/19 18:26
Cal Standard	9D25028-CAL3	1R042507.D	04/25/19 18:49
Cal Standard	9D25028-CAL4	1R042508.D	04/25/19 19:12
Cal Standard	9D25028-CAL5	1R042509.D	04/25/19 19:35
Cal Standard	9D25028-CAL6	1R042510.D	04/25/19 19:58
Cal Standard	9D25028-CAL7	1R042511.D	04/25/19 20:20
Cal Standard	9D25028-CAL8	1R042512.D	04/25/19 20:43
Cal Standard	9D25028-CAL9	1R042513.D	04/25/19 21:06
Cal Standard	9D25028-CALA	1R042514.D	04/25/19 21:29
Cal Standard	9D25028-CALB	1R042515.D	04/25/19 21:51
Cal Standard	9D25028-CALC	1R042516.D	04/25/19 22:14
Cal Standard	9D25028-CALD	1R042517.D	04/25/19 22:37
Cal Standard	9D25028-CALE	1R042518.D	04/25/19 22:59
Cal Standard	9D25028-CALF	1R042519.D	04/25/19 23:22
Cal Standard	9D25028-CALG	1R042520.D	04/25/19 23:45
Cal Standard	9D25028-CALH	1R042521.D	04/26/19 00:07
Cal Standard	9D25028-CALI	1R042522.D	04/26/19 00:30
Cal Standard	9D25028-CALJ	1R042523.D	04/26/19 00:52
Cal Standard	9D25028-CALK	1R042525.D	04/26/19 01:38
Initial Cal Check	9D25028-ICV1	1R042527.D	04/26/19 02:23
Initial Cal Check	9D25028-ICV2	1R042528.D	04/26/19 02:45

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

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G03031	Instrument:	DUALFID1R
Matrix:	Oil	Calibration:	A9D2603

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	9G03031-CCV1	1R070303.D	07/03/19 17:31
Calibration Check	9G03031-CCV2	1R070304.D	07/03/19 17:54
Calibration Blank	9G03031-CCB1	1R070305.D	07/03/19 23:03
Blank	9070624-BLK1	1R070306.D	07/03/19 23:26
LCS	9070624-BS1	1R070307.D	07/03/19 23:48
2708-190619-OIL	A9F0684-01	1R070308.D	07/04/19 00:11
2708-190619-OIL (Dup)	9070624-DUP1	1R070309.D	07/04/19 00:34
Calibration Check	9G03031-CCV3	1R070311.D	07/04/19 01:19
Calibration Check	9G03031-CCV4	1R070312.D	07/04/19 01:42

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.

INITIAL CALIBRATION DATA (Summary)

NWTPH-Dx

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9D2603 Date: 04/26/19 11:04 Instrument: DUALFID1R

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Diesel	1518134	Ave	2.08932	6	0			15	
Oil	1437932	Ave	4.985177	10	0			15	
o-Terphenyl (Surr)	1692363	Ave	2.502525	6.682	0.0676017			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

NWTPH-Dx

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9D2603
Instrument: DUALFID1R
Calibration Date: 04/26/19 11:04

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Diesel	25	1552229	40	1531739	100	1536459	250	1558046	500	1512813	1000	1479073
Diesel Range Organics (C12-C24)	25	1552229	40	1531739	100	1536459	250	1558046	500	1512813	1000	1479073

INITIAL CALIBRATION DATA (Continued)

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9D2603	Instrument:	DUALFID1R
Matrix:		Calibration Date:	04/26/19 11:04

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Diesel	2500	1474755	5000	1499957								
Diesel Range Organics (C12-C24)	2500	1474755	5000	1499957								
o-Terphenyl (Surr)					10	1698554	25	1652187	50	1645242	100	1735458

INITIAL CALIBRATION DATA (Continued)

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9D2603	Instrument:	DUALFID1R
Matrix:		Calibration Date:	04/26/19 11:04

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF	ug/mL	RF
Oil			40	1510452	80	1551176	250	1411689	500	1373406	1000	1459338
o-Terphenyl (Surr)	200	1730373										
Residual Range Organics (>C24-C			40	1510452	80	1551176	250	1411689	500	1373406	1000	1459338

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R042527.D		
Sequence:	9D25028	Inject Date:	04/26/19
Lab Sample ID:	9D25028-ICV1	Inject Time:	02:23

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Diesel	1000	966	-3.4	85 - 115

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R042528.D		
Sequence:	9D25028	Inject Date:	04/26/19
Lab Sample ID:	9D25028-ICV2	Inject Time:	02:45

ANALYTE	EXPECTED (ug/mL)	FOUND (ug/mL)	% DRIFT	QC LIMIT
Oil	1000	965	-3.5	85 - 115

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R070303.D	Calibration Date:	04/26/19 11:04
Sequence:	9G03031	Injection Date:	07/03/19
Lab Sample ID:	9G03031-CCV1	Injection Time:	17:31

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Oil	Ave	500	495		1437932	1422880	-1.0	15

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R070304.D	Calibration Date:	04/26/19 11:04
Sequence:	9G03031	Injection Date:	07/03/19
Lab Sample ID:	9G03031-CCV2	Injection Time:	17:54

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Diesel	Ave	1000	1090		1518134	1648089	8.6	15

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R070311.D	Calibration Date:	04/26/19 11:04
Sequence:	9G03031	Injection Date:	07/04/19
Lab Sample ID:	9G03031-CCV3	Injection Time:	01:19

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Diesel	Ave	1000	1060		1518134	1607291	5.9	15

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	DUALFID1R	Calibration:	A9D2603
Lab File ID:	1R070312.D	Calibration Date:	04/26/19 11:04
Sequence:	9G03031	Injection Date:	07/04/19
Lab Sample ID:	9G03031-CCV4	Injection Time:	01:42

COMPOUND	Curve Fit	Calculated Concentration (ug/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Oil	Ave	500	515		1437932	1480702	3.0	15

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

* = Values outside of QC limits

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Dx

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G03031	Instrument:	DUALFID1R
Matrix:	Oil	Calibration:	A9D2603

Surrogate Compound	Spike Level ug/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9G03031-CCV1)			Lab File ID: 1R070303.D		Analyzed: 07/03/19 17:31			
o-Terphenyl (Surr)	50.0	111	80 - 120	6.65	6.682	-0.0320	+/-1.0	
Calibration Check (9G03031-CCV2)			Lab File ID: 1R070304.D		Analyzed: 07/03/19 17:54			
o-Terphenyl (Surr)	50.0	113	80 - 120	6.65	6.682	-0.0320	+/-1.0	
Calibration Blank (9G03031-CCB1)			Lab File ID: 1R070305.D		Analyzed: 07/03/19 23:03			
o-Terphenyl (Surr)			50 - 150	0	6.682	-6.6820	+/-1.0	
Blank (9070624-BLK1)			Lab File ID: 1R070306.D		Analyzed: 07/03/19 23:26			
o-Terphenyl (Surr)	250	111	50 - 150	6.65	6.682	-0.0320	+/-1.0	
LCS (9070624-BS1)			Lab File ID: 1R070307.D		Analyzed: 07/03/19 23:48			
o-Terphenyl (Surr)	2500	114	50 - 150	6.65	6.682	-0.0320	+/-1.0	
2708-190619-OIL (A9F0684-01)			Lab File ID: 1R070308.D		Analyzed: 07/04/19 00:11			
o-Terphenyl (Surr)	2080		50 - 150	0	6.682	-6.6820	+/-1.0	*
Duplicate (9070624-DUP1)			Lab File ID: 1R070309.D		Analyzed: 07/04/19 00:34			
o-Terphenyl (Surr)	2080		50 - 150	0	6.682	-6.6820	+/-1.0	*
Calibration Check (9G03031-CCV3)			Lab File ID: 1R070311.D		Analyzed: 07/04/19 01:19			
o-Terphenyl (Surr)	50.0	110	80 - 120	6.65	6.682	-0.0320	+/-1.0	
Calibration Check (9G03031-CCV4)			Lab File ID: 1R070312.D		Analyzed: 07/04/19 01:42			
o-Terphenyl (Surr)	50.0	115	80 - 120	6.65	6.682	-0.0320	+/-1.0	

HOLDING TIME SUMMARY

NWTPH-Dx

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

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
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	07/03/19 15:48	14.08	14.00	07/04/19 00:11	0.35	40.00	*

Apex Laboratories

SDG: A9F0684

CLASS: GCMS

METHOD: NWTPH-Gx (MS)

ANALYSES DATA PACKAGE COVER PAGE

NWTPH-Gx (MS)

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190619-OIL	A9F0684-01	Oil

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: 10/1/2019 2:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

NWTPH-Gx (MS)

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
Gasoline Range Organics	2.50	5.00	mg/kg

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

ORGANIC ANALYSIS DATA SHEET

NWTPH-Gx (MS)

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	VC19062819.D
Sampled:	06/19/19 14:00	Prepared:	06/26/19 18:50	Analyzed:	06/28/19 19:17
		Preparation:	EPA 5035A	Initial/Final:	0.47 g / 5 mL

Batch: 9061492 Sequence: 9F28034 Calibration: A9F1104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (mg/kg wet)	Q
8006-61-9	Gasoline Range Organics	10000	412000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Sur)	50.0	50.4	101	50 - 150	
1,4-Difluorobenzene (Sur)	50.0	46.3	93	50 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	365157	6.03	334072	6.028	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

NWTPH-Gx (MS)

Laboratory: Apex Laboratories | SDG: A9F0684

Client: Hahn and Associates | Project: Mult 802 Decommissioning

Batch: 9061492 | Batch Matrix: Soil | Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9061492-BLK1	VC19062804.D	06/28/19 09:35	
LCS	9061492-BS2	VC19062803.D	06/28/19 09:35	
2708-190619-OIL	A9F0684-01	VC19062819.D	06/26/19 18:50	

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
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9061492-BLK1	File ID:	VC19062804.D
Prepared:	06/28/19 09:35	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/28/19 12:25	Instrument:	VOA-GCMS3		
Batch:	9061492	Sequence:	9F28034	Calibration:	A9F1104

CAS NO.	COMPOUND	CONC. (mg/kg wet)	Q
8006-61-9	Gasoline Range Organics	1.67	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Sur)	50.0	47.8	96	50 - 150	
1,4-Difluorobenzene (Sur)	50.0	47.0	94	50 - 150	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (IS)	350970	6.034	334072	6.028	

LCS / LCS DUPLICATE RECOVERY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9061492	Laboratory ID:	9061492-BS2
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (mg/kg wet)	LCS CONCENTRATION (mg/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Gasoline Range Organics	25.0	25.6	102	80 - 120

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F10052	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F10052-TUN2	VC19061021.D	06/10/19 23:52
Initial Cal Blank	9F10052-ICB2	VC19061023.D	06/11/19 00:46
Cal Standard	9F10052-CALC	VC19061024.D	06/11/19 01:14
Cal Standard	9F10052-CALD	VC19061025.D	06/11/19 01:41
Cal Standard	9F10052-CALE	VC19061026.D	06/11/19 02:09
Cal Standard	9F10052-CALF	VC19061027.D	06/11/19 02:36
Cal Standard	9F10052-CALG	VC19061028.D	06/11/19 03:04
Cal Standard	9F10052-CALI	VC19061029.D	06/11/19 03:31
Cal Standard	9F10052-CALJ	VC19061030.D	06/11/19 03:59
Cal Standard	9F10052-CALH	VC19061031.D	06/11/19 04:27
Initial Cal Check	9F10052-ICV2	VC19061034.D	06/11/19 05:49

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
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F28034-TUN1	VC19062801.D	06/28/19 11:02
Calibration Check	9F28034-CCV2	VC19062803.D	06/28/19 11:57
Blank	9061492-BLK1	VC19062804.D	06/28/19 12:25
2708-190619-OIL	A9F0684-01	VC19062819.D	06/28/19 19:17

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

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19061021.D	Injection Date:	06/10/19
Instrument ID:	VOA-GCMS3	Injection Time:	23:52
Sequence:	9F10052	Lab Sample ID:	9F10052-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		116.35	
m/z 96	5 - 9% of m/z 95	6.92	PASS
m/z 173		0.00	
m/z 174	50 - 200% of m/z 95	85.94	PASS
m/z 175	5 - 9% of m/z 174	7.10	PASS
m/z 176	95 - 101% of m/z 174	97.48	PASS
m/z 177	5 - 9% of m/z 176	6.58	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19062801.D	Injection Date:	06/28/19
Instrument ID:	VOA-GCMS3	Injection Time:	11:02
Sequence:	9F28034	Lab Sample ID:	9F28034-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		112.77	
m/z 96	5 - 9% of m/z 95	7.04	PASS
m/z 173		0.23	
m/z 174	50 - 200% of m/z 95	88.68	PASS
m/z 175	5 - 9% of m/z 174	7.38	PASS
m/z 176	95 - 101% of m/z 174	96.64	PASS
m/z 177	5 - 9% of m/z 176	6.70	PASS

INITIAL CALIBRATION DATA (Summary)

NWTPH-Gx (MS)

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F1104 Date: 06/11/19 10:42 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Gasoline Range Organics	0.9420503	XXX	22.43054	9.906	1.149889E-02				
4-Bromofluorobenzene (Sur)	2.826588	Ave	2.172717	10.83337	1.788041E-02			15	
1,4-Difluorobenzene (Sur)	4.010166	Ave	2.890726	6.584714	3.862501E-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 (Continued)

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9F1104	Instrument:	VOA-GCMS3
Matrix:		Calibration Date:	06/11/19 10:42

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics											50	0.5176206
4-Bromofluorobenzene (Sur)											50	2.788696
1,4-Difluorobenzene (Sur)											50	3.916828

INITIAL CALIBRATION DATA (Continued)

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Calibration:	A9F1104	Instrument:	VOA-GCMS3
Matrix:		Calibration Date:	06/11/19 10:42

Compound	Level 13		Level 14		Level 15		Level 16		Level 17		Level 18	
	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF	ug/L	RF
Gasoline Range Organics	100	0.7469875	250	0.9268841	500	0.9912842	1000	1.104009	2500	1.063726	5000	1.143622
4-Bromofluorobenzene (Sur)	50	2.856173	50	2.847174	50	2.837244	50	2.893513	50	2.777299	50	2.895248
1,4-Difluorobenzene (Sur)	50	3.879878	50	3.984687	50	4.009973	50	4.001431	50	4.036899	50	4.241469

SECOND-SOURCE CALIBRATION VERIFICATION

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9F1104
Lab File ID:	VC19061034.D		
Sequence:	9F10052	Inject Date:	06/11/19
Lab Sample ID:	9F10052-ICV2	Inject Time:	05:49

ANALYTE	EXPECTED (ug/L)	FOUND (ug/L)	% DRIFT	QC LIMIT
Gasoline Range Organics	500	493	-1.4	70 - 130
4-Bromofluorobenzene (Sur)	50.0	48.2	-3.5	0 - 200
1,4-Difluorobenzene (Sur)	50.0	48.0	-4.1	0 - 200
Pentafluorobenzene (IS)	50.0	50.0	0.0	50 - 200

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F10052	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9F10052-ICV2)				Lab File ID: VC19061034.D		Analyzed: 06/11/19 05:49		
4-Bromofluorobenzene (Sur)	50.0	96	0 - 200	10.835	10.83337	0.0016	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	96	0 - 200	6.583	6.584714	-0.0017	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9061492-BS2)			Lab File ID: VC19062803.D		Analyzed: 06/28/19 11:57			
4-Bromofluorobenzene (Sur)	50.0	95	50 - 150	10.834	10.83337	0.0006	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	95	50 - 150	6.581	6.584714	-0.0037	+/-1.0	
Blank (9061492-BLK1)			Lab File ID: VC19062804.D		Analyzed: 06/28/19 12:25			
4-Bromofluorobenzene (Sur)	50.0	96	50 - 150	10.834	10.83337	0.0006	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	94	50 - 150	6.588	6.584714	0.0033	+/-1.0	
2708-190619-OIL (A9F0684-01)			Lab File ID: VC19062819.D		Analyzed: 06/28/19 19:17			
4-Bromofluorobenzene (Sur)	50.0	101	50 - 150	10.83	10.83337	-0.0034	+/-1.0	
1,4-Difluorobenzene (Sur)	50.0	93	50 - 150	6.584	6.584714	-0.0007	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
NWTPH-Gx (MS)

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9061492-BS2)			Lab File ID: VC19062803.D			Analyzed: 06/28/19 11:57			
Pentafluorobenzene (IS)	334072	6.028	334072	6.028	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F28034-CCV2)			Lab File ID: VC19062803.D			Analyzed: 06/28/19 11:57			
Pentafluorobenzene (IS)	334072	6.028				50 - 200	6.0280	+/-0.50	*
Blank (9061492-BLK1)			Lab File ID: VC19062804.D			Analyzed: 06/28/19 12:25			
Pentafluorobenzene (IS)	350970	6.034	334072	6.028	105	50 - 200	0.0060	+/-0.50	
Duplicate (9061492-DUP1)			Lab File ID: VC19062813.D			Analyzed: 06/28/19 16:32			
Pentafluorobenzene (IS)	310817	6.031	334072	6.028	93	50 - 200	0.0030	+/-0.50	
2708-190619-OIL (A9F0684-01)			Lab File ID: VC19062819.D			Analyzed: 06/28/19 19:17			
Pentafluorobenzene (IS)	365157	6.03	334072	6.028	109	50 - 200	0.0020	+/-0.50	

HOLDING TIME SUMMARY

NWTPH-Gx (MS)

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

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
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/26/19 18:50	7.20	2.00	06/28/19 19:17	2.02	14.00	*

Apex Laboratories

SDG: A9F0684

CLASS: GCMS

METHOD: 5035A/8260C

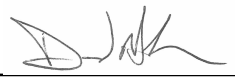
ANALYSES DATA PACKAGE COVER PAGE

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190619-OIL	A9F0684-01	Oil

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: 10/1/2019 2:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

5035A/8260C

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
Acetone	500	1000	ug/kg
Acrylonitrile	50.0	100	ug/kg
Benzene	5.00	10.0	ug/kg
Bromobenzene	12.5	25.0	ug/kg
Bromochloromethane	25.0	50.0	ug/kg
Bromodichloromethane	25.0	50.0	ug/kg
Bromoform	50.0	100	ug/kg
Bromomethane	500	500	ug/kg
2-Butanone (MEK)	250	500	ug/kg
n-Butylbenzene	25.0	50.0	ug/kg
sec-Butylbenzene	25.0	50.0	ug/kg
tert-Butylbenzene	25.0	50.0	ug/kg
Carbon disulfide	250	500	ug/kg
Carbon tetrachloride	25.0	50.0	ug/kg
Chlorobenzene	12.5	25.0	ug/kg
Chloroethane	250	500	ug/kg
Chloroform	25.0	50.0	ug/kg
Chloromethane	125	250	ug/kg
2-Chlorotoluene	25.0	50.0	ug/kg
4-Chlorotoluene	25.0	50.0	ug/kg
Dibromochloromethane	50.0	100	ug/kg
1,2-Dibromo-3-chloropropane	125	250	ug/kg
1,2-Dibromoethane (EDB)	25.0	50.0	ug/kg
Dibromomethane	25.0	50.0	ug/kg
1,2-Dichlorobenzene	12.5	25.0	ug/kg
1,3-Dichlorobenzene	12.5	25.0	ug/kg
1,4-Dichlorobenzene	12.5	25.0	ug/kg
Dichlorodifluoromethane	50.0	100	ug/kg
1,1-Dichloroethane	12.5	25.0	ug/kg
1,2-Dichloroethane (EDC)	12.5	25.0	ug/kg
1,1-Dichloroethene	12.5	25.0	ug/kg
cis-1,2-Dichloroethene	12.5	25.0	ug/kg
trans-1,2-Dichloroethene	12.5	25.0	ug/kg
1,2-Dichloropropane	12.5	25.0	ug/kg
1,3-Dichloropropane	25.0	50.0	ug/kg
2,2-Dichloropropane	25.0	50.0	ug/kg
1,1-Dichloropropene	25.0	50.0	ug/kg

METHOD DETECTION AND REPORTING LIMITS

5035A/8260C

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Soil

Analyte	MDL	MRL	Units
cis-1,3-Dichloropropene	25.0	50.0	ug/kg
trans-1,3-Dichloropropene	25.0	50.0	ug/kg
Ethylbenzene	12.5	25.0	ug/kg
Hexachlorobutadiene	50.0	100	ug/kg
2-Hexanone	250	500	ug/kg
Isopropylbenzene	25.0	50.0	ug/kg
4-Isopropyltoluene	25.0	50.0	ug/kg
Methylene chloride	125	250	ug/kg
4-Methyl-2-pentanone (MiBK)	250	500	ug/kg
Methyl tert-butyl ether (MTBE)	25.0	50.0	ug/kg
Naphthalene	50.0	100	ug/kg
n-Propylbenzene	12.5	25.0	ug/kg
Styrene	25.0	50.0	ug/kg
1,1,1,2-Tetrachloroethane	12.5	25.0	ug/kg
1,1,2,2-Tetrachloroethane	25.0	50.0	ug/kg
Tetrachloroethene (PCE)	12.5	25.0	ug/kg
Toluene	25.0	50.0	ug/kg
1,2,3-Trichlorobenzene	125	250	ug/kg
1,2,4-Trichlorobenzene	125	250	ug/kg
1,1,1-Trichloroethane	12.5	25.0	ug/kg
1,1,2-Trichloroethane	12.5	25.0	ug/kg
Trichloroethene (TCE)	12.5	25.0	ug/kg
Trichlorofluoromethane	50.0	100	ug/kg
1,2,3-Trichloropropane	25.0	50.0	ug/kg
1,2,4-Trimethylbenzene	25.0	50.0	ug/kg
1,3,5-Trimethylbenzene	25.0	50.0	ug/kg
Vinyl chloride	12.5	25.0	ug/kg
m,p-Xylene	25.0	50.0	ug/kg
o-Xylene	12.5	25.0	ug/kg

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

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	VC19062819.D
Sampled:	06/19/19 14:00	Prepared:	06/26/19 18:50	Analyzed:	06/28/19 19:17
		Preparation:	EPA 5035A	Initial/Final:	0.47 g / 5 mL

Batch: 9061492 Sequence: 9F28034 Calibration: A9F1104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
67-64-1	Acetone	10000	1060000	U
107-13-1	Acrylonitrile	10000	106000	U
71-43-2	Benzene	10000	10500000	D
108-86-1	Bromobenzene	10000	26600	U
74-97-5	Bromochloromethane	10000	53200	U
75-27-4	Bromodichloromethane	10000	53200	U
75-25-2	Bromoform	10000	106000	U
74-83-9	Bromomethane	10000	1060000	U
78-93-3	2-Butanone (MEK)	10000	532000	U
104-51-8	n-Butylbenzene	10000	59600	JD
135-98-8	sec-Butylbenzene	10000	614000	D
98-06-6	tert-Butylbenzene	10000	53200	U
75-15-0	Carbon disulfide	10000	532000	U
56-23-5	Carbon tetrachloride	10000	53200	U
108-90-7	Chlorobenzene	10000	26600	U
75-00-3	Chloroethane	10000	532000	U
67-66-3	Chloroform	10000	53200	U
74-87-3	Chloromethane	10000	266000	U
95-49-8	2-Chlorotoluene	10000	53200	U
106-43-4	4-Chlorotoluene	10000	53200	U
124-48-1	Dibromochloromethane	10000	106000	U
96-12-8	1,2-Dibromo-3-chloropropane	10000	266000	U
106-93-4	1,2-Dibromoethane (EDB)	10000	53200	U
74-95-3	Dibromomethane	10000	53200	U
95-50-1	1,2-Dichlorobenzene	10000	26600	U
541-73-1	1,3-Dichlorobenzene	10000	26600	U
106-46-7	1,4-Dichlorobenzene	10000	26600	U
75-71-8	Dichlorodifluoromethane	10000	106000	U
75-34-3	1,1-Dichloroethane	10000	26600	U
107-06-2	1,2-Dichloroethane (EDC)	10000	26600	U
75-35-4	1,1-Dichloroethene	10000	26600	U
156-59-2	cis-1,2-Dichloroethene	10000	26600	U
156-60-5	trans-1,2-Dichloroethene	10000	26600	U
78-87-5	1,2-Dichloropropane	10000	26600	U
142-28-9	1,3-Dichloropropane	10000	53200	U
594-20-7	2,2-Dichloropropane	10000	53200	U
563-58-6	1,1-Dichloropropene	10000	53200	U
10061-01-5	cis-1,3-Dichloropropene	10000	53200	U
10061-02-6	trans-1,3-Dichloropropene	10000	53200	U
100-41-4	Ethylbenzene	10000	891000	D

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	VC19062819.D
Sampled:	06/19/19 14:00	Prepared:	06/26/19 18:50	Analyzed:	06/28/19 19:17
		Preparation:	EPA 5035A	Initial/Final:	0.47 g / 5 mL

Batch: 9061492 Sequence: 9F28034 Calibration: A9F1104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
87-68-3	Hexachlorobutadiene	10000	106000	U
591-78-6	2-Hexanone	10000	532000	U
98-82-8	Isopropylbenzene	10000	181000	D
99-87-6	4-Isopropyltoluene	10000	69100	JD
75-09-2	Methylene chloride	10000	266000	U
108-10-1	4-Methyl-2-pentanone (MiBK)	10000	532000	U
1634-04-4	Methyl tert-butyl ether (MTBE)	10000	53200	U
103-65-1	n-Propylbenzene	10000	140000	D
100-42-5	Styrene	10000	2710000	D
630-20-6	1,1,1,2-Tetrachloroethane	10000	26600	U
79-34-5	1,1,2,2-Tetrachloroethane	10000	53200	U
127-18-4	Tetrachloroethene (PCE)	10000	26600	U
87-61-6	1,2,3-Trichlorobenzene	10000	266000	U
120-82-1	1,2,4-Trichlorobenzene	10000	266000	U
71-55-6	1,1,1-Trichloroethane	10000	26600	U
79-00-5	1,1,2-Trichloroethane	10000	26600	U
79-01-6	Trichloroethene (TCE)	10000	26600	U
75-69-4	Trichlorofluoromethane	10000	106000	U
96-18-4	1,2,3-Trichloropropane	10000	53200	U
95-63-6	1,2,4-Trimethylbenzene	10000	2740000	D
108-67-8	1,3,5-Trimethylbenzene	10000	1030000	D
108-88-3	Toluene	10000	9020000	D
75-01-4	Vinyl chloride	10000	26600	U
179601-23-1	m,p-Xylene	10000	5720000	D
95-47-6	o-Xylene	10000	2480000	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.4	101	80 - 120	
Toluene-d8 (Surr)	50.0	48.1	96	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	49.5	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	365157	6.03	328903	6.029	
Chlorobenzene-d5 (ISTD)	539064	9.747	489277	9.746	
1,4-Dichlorobenzene-d4 (ISTD)	217408	11.725	192230	11.723	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

5035A/8260C

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01RE1	File ID:	VC19070107.D
Sampled:	06/19/19 14:00	Prepared:	06/26/19 18:50	Analyzed:	07/01/19 13:08
		Preparation:	EPA 5035A	Initial/Final:	0.47 g / 5 mL

Batch: 9070494 Sequence: 9G01037 Calibration: A9F1104 Instrument: VOA-GCMS3

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg wet)	Q
91-20-3	Naphthalene	200000	140000000	D

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.5	101	80 - 120	
Toluene-d8 (Surr)	50.0	48.2	96	80 - 120	
4-Bromofluorobenzene (Surr)	50.0	48.9	98	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	358397	6.028	358431	6.028	
Chlorobenzene-d5 (ISTD)	529439	9.745	528045	9.751	
1,4-Dichlorobenzene-d4 (ISTD)	218980	11.729	208380	11.728	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

5035A/8260C

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9061492 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9061492-BLK1	VC19062804.D	06/28/19 09:35	
LCS	9061492-BS1	VC19062802.D	06/28/19 09:35	
2708-190619-OIL	A9F0684-01	VC19062819.D	06/26/19 18:50	

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

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9070494 Batch Matrix: Soil Preparation: EPA 5035A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9070494-BLK1	VC19070105.D	07/01/19 09:30	
LCS	9070494-BS1	VC19070103.D	07/01/19 09:30	
2708-190619-OIL	A9F0684-01RE1	VC19070107.D	06/26/19 18:50	

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
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9061492-BLK1	File ID:	VC19062804.D
Prepared:	06/28/19 09:35	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/28/19 12:25	Instrument:	VOA-GCMS3		
Batch:	9061492	Sequence:	9F28034	Calibration:	A9F1104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-64-1	Acetone	333	U
107-13-1	Acrylonitrile	33.3	U
71-43-2	Benzene	3.33	U
108-86-1	Bromobenzene	8.33	U
74-97-5	Bromochloromethane	16.7	U
75-27-4	Bromodichloromethane	16.7	U
75-25-2	Bromoform	33.3	U
74-83-9	Bromomethane	333	U
78-93-3	2-Butanone (MEK)	167	U
104-51-8	n-Butylbenzene	16.7	U
135-98-8	sec-Butylbenzene	16.7	U
98-06-6	tert-Butylbenzene	16.7	U
75-15-0	Carbon disulfide	167	U
56-23-5	Carbon tetrachloride	16.7	U
108-90-7	Chlorobenzene	8.33	U
75-00-3	Chloroethane	167	U
67-66-3	Chloroform	16.7	U
74-87-3	Chloromethane	83.3	U
95-49-8	2-Chlorotoluene	16.7	U
106-43-4	4-Chlorotoluene	16.7	U
124-48-1	Dibromochloromethane	33.3	U
96-12-8	1,2-Dibromo-3-chloropropane	83.3	U
106-93-4	1,2-Dibromoethane (EDB)	16.7	U
74-95-3	Dibromomethane	16.7	U
95-50-1	1,2-Dichlorobenzene	8.33	U
541-73-1	1,3-Dichlorobenzene	8.33	U
106-46-7	1,4-Dichlorobenzene	8.33	U
75-71-8	Dichlorodifluoromethane	33.3	U
75-34-3	1,1-Dichloroethane	8.33	U
107-06-2	1,2-Dichloroethane (EDC)	8.33	U
75-35-4	1,1-Dichloroethene	8.33	U
156-59-2	cis-1,2-Dichloroethene	8.33	U
156-60-5	trans-1,2-Dichloroethene	8.33	U
78-87-5	1,2-Dichloropropane	8.33	U
142-28-9	1,3-Dichloropropane	16.7	U

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9061492-BLK1	File ID:	VC19062804.D
Prepared:	06/28/19 09:35	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/28/19 12:25	Instrument:	VOA-GCMS3		
Batch:	9061492	Sequence:	9F28034	Calibration:	A9F1104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
594-20-7	2,2-Dichloropropane	16.7	U
563-58-6	1,1-Dichloropropene	16.7	U
10061-01-5	cis-1,3-Dichloropropene	16.7	U
10061-02-6	trans-1,3-Dichloropropene	16.7	U
100-41-4	Ethylbenzene	8.33	U
87-68-3	Hexachlorobutadiene	33.3	U
591-78-6	2-Hexanone	167	U
98-82-8	Isopropylbenzene	16.7	U
99-87-6	4-Isopropyltoluene	16.7	U
75-09-2	Methylene chloride	83.3	U
108-10-1	4-Methyl-2-pentanone (MiBK)	167	U
1634-04-4	Methyl tert-butyl ether (MTBE)	16.7	U
91-20-3	Naphthalene	33.3	U
103-65-1	n-Propylbenzene	8.33	U
100-42-5	Styrene	16.7	U
630-20-6	1,1,1,2-Tetrachloroethane	8.33	U
79-34-5	1,1,2,2-Tetrachloroethane	16.7	U
127-18-4	Tetrachloroethene (PCE)	8.33	U
87-61-6	1,2,3-Trichlorobenzene	83.3	U
120-82-1	1,2,4-Trichlorobenzene	83.3	U
71-55-6	1,1,1-Trichloroethane	8.33	U
79-00-5	1,1,2-Trichloroethane	8.33	U
79-01-6	Trichloroethene (TCE)	8.33	U
75-69-4	Trichlorofluoromethane	33.3	U
96-18-4	1,2,3-Trichloropropane	16.7	U
95-63-6	1,2,4-Trimethylbenzene	16.7	U
108-67-8	1,3,5-Trimethylbenzene	16.7	U
108-88-3	Toluene	16.7	U
75-01-4	Vinyl chloride	8.33	U
179601-23-1	m,p-Xylene	16.7	U
95-47-6	o-Xylene	8.33	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	51.1	102	80 - 120	
Toluene-d8 (Surr)	50.0	48.6	97	80 - 120	

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9061492-BLK1	File ID:	VC19062804.D
Prepared:	06/28/19 09:35	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	06/28/19 12:25	Instrument:	VOA-GCMS3		
Batch:	9061492	Sequence:	9F28034	Calibration:	A9F1104

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	49.8	100	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	350970	6.034	328903	6.029	
Chlorobenzene-d5 (ISTD)	518347	9.751	489277	9.746	
1,4-Dichlorobenzene-d4 (ISTD)	198565	11.728	192230	11.723	

METHOD BLANK DATA SHEET
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9070494-BLK1	File ID:	VC19070105.D
Prepared:	07/01/19 09:30	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	07/01/19 12:13	Instrument:	VOA-GCMS3		
Batch:	9070494	Sequence:	9G01037	Calibration:	A9F1104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
67-64-1	Acetone	667	U
107-13-1	Acrylonitrile	33.3	U
71-43-2	Benzene	3.33	U
108-86-1	Bromobenzene	8.33	U
74-97-5	Bromochloromethane	16.7	U
75-27-4	Bromodichloromethane	16.7	U
75-25-2	Bromoform	33.3	U
74-83-9	Bromomethane	333	U
78-93-3	2-Butanone (MEK)	167	U
104-51-8	n-Butylbenzene	16.7	U
135-98-8	sec-Butylbenzene	16.7	U
98-06-6	tert-Butylbenzene	16.7	U
75-15-0	Carbon disulfide	167	U
56-23-5	Carbon tetrachloride	16.7	U
108-90-7	Chlorobenzene	8.33	U
75-00-3	Chloroethane	167	U
67-66-3	Chloroform	16.7	U
74-87-3	Chloromethane	83.3	U
95-49-8	2-Chlorotoluene	16.7	U
106-43-4	4-Chlorotoluene	16.7	U
124-48-1	Dibromochloromethane	33.3	U
96-12-8	1,2-Dibromo-3-chloropropane	83.3	U
106-93-4	1,2-Dibromoethane (EDB)	16.7	U
74-95-3	Dibromomethane	16.7	U
95-50-1	1,2-Dichlorobenzene	8.33	U
541-73-1	1,3-Dichlorobenzene	8.33	U
106-46-7	1,4-Dichlorobenzene	8.33	U
75-71-8	Dichlorodifluoromethane	33.3	U
75-34-3	1,1-Dichloroethane	8.33	U
107-06-2	1,2-Dichloroethane (EDC)	8.33	U
75-35-4	1,1-Dichloroethene	8.33	U
156-59-2	cis-1,2-Dichloroethene	8.33	U
156-60-5	trans-1,2-Dichloroethene	8.33	U
78-87-5	1,2-Dichloropropane	8.33	U
142-28-9	1,3-Dichloropropane	16.7	U

METHOD BLANK DATA SHEET

5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9070494-BLK1	File ID:	VC19070105.D
Prepared:	07/01/19 09:30	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	07/01/19 12:13	Instrument:	VOA-GCMS3		
Batch:	9070494	Sequence:	9G01037	Calibration:	A9F1104

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
594-20-7	2,2-Dichloropropane	16.7	U
563-58-6	1,1-Dichloropropene	16.7	U
10061-01-5	cis-1,3-Dichloropropene	16.7	U
10061-02-6	trans-1,3-Dichloropropene	16.7	U
100-41-4	Ethylbenzene	8.33	U
87-68-3	Hexachlorobutadiene	33.3	U
591-78-6	2-Hexanone	167	U
98-82-8	Isopropylbenzene	16.7	U
99-87-6	4-Isopropyltoluene	16.7	U
75-09-2	Methylene chloride	282	B
108-10-1	4-Methyl-2-pentanone (MiBK)	167	U
1634-04-4	Methyl tert-butyl ether (MTBE)	16.7	U
91-20-3	Naphthalene	33.3	U
103-65-1	n-Propylbenzene	8.33	U
100-42-5	Styrene	16.7	U
630-20-6	1,1,1,2-Tetrachloroethane	8.33	U
79-34-5	1,1,2,2-Tetrachloroethane	16.7	U
127-18-4	Tetrachloroethene (PCE)	8.33	U
87-61-6	1,2,3-Trichlorobenzene	83.3	U
120-82-1	1,2,4-Trichlorobenzene	83.3	U
71-55-6	1,1,1-Trichloroethane	8.33	U
79-00-5	1,1,2-Trichloroethane	8.33	U
79-01-6	Trichloroethene (TCE)	8.33	U
75-69-4	Trichlorofluoromethane	33.3	U
96-18-4	1,2,3-Trichloropropane	16.7	U
95-63-6	1,2,4-Trimethylbenzene	16.7	U
108-67-8	1,3,5-Trimethylbenzene	16.7	U
108-88-3	Toluene	16.7	U
75-01-4	Vinyl chloride	8.33	U
179601-23-1	m,p-Xylene	16.7	U
95-47-6	o-Xylene	8.33	U

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
1,4-Difluorobenzene (Surr)	50.0	50.4	101	80 - 120	
Toluene-d8 (Surr)	50.0	47.8	96	80 - 120	

METHOD BLANK DATA SHEET
5035A/8260C

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Soil	Laboratory ID:	9070494-BLK1	File ID:	VC19070105.D
Prepared:	07/01/19 09:30	Preparation:	EPA 5035A	Initial/Final:	7.5 g / 5 mL
Analyzed:	07/01/19 12:13	Instrument:	VOA-GCMS3		
Batch:	9070494	Sequence:	9G01037	Calibration:	A9F1104

SYSTEM MONITORING COMPOUND	ADDED (ng/mL)	CONC (ng/mL)	% REC	QC LIMITS	Q
4-Bromofluorobenzene (Surr)	50.0	49.4	99	80 - 120	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Pentafluorobenzene (ISTD)	358316	6.031	358431	6.028	
Chlorobenzene-d5 (ISTD)	527657	9.748	528045	9.751	
1,4-Dichlorobenzene-d4 (ISTD)	205279	11.725	208380	11.728	

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Matrix: Soil
Batch: 9061492
Laboratory ID: 9061492-BS1
Preparation: EPA 5035A
Initial/Final: 5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	2000	1800	90	80 - 120
Acrylonitrile	1000	1020	102	80 - 120
Benzene	1000	1100	110	80 - 120
Bromobenzene	1000	1050	105	80 - 120
Bromochloromethane	1000	1040	104	80 - 120
Bromodichloromethane	1000	1160	116	80 - 120
Bromoform	1000	990	99	80 - 120
Bromomethane	1000	1110	111	80 - 120
2-Butanone (MEK)	2000	1940	97	80 - 120
n-Butylbenzene	1000	1010	101	80 - 120
sec-Butylbenzene	1000	1090	109	80 - 120
tert-Butylbenzene	1000	1040	104	80 - 120
Carbon disulfide	1000	1270	127 *	80 - 120
Carbon tetrachloride	1000	1260	126 *	80 - 120
Chlorobenzene	1000	1020	102	80 - 120
Chloroethane	1000	1010	101	80 - 120
Chloroform	1000	1040	104	80 - 120
Chloromethane	1000	898	90	80 - 120
2-Chlorotoluene	1000	1070	107	80 - 120
4-Chlorotoluene	1000	1020	102	80 - 120
Dibromochloromethane	1000	972	97	80 - 120
1,2-Dibromo-3-chloropropane	1000	997	100	80 - 120
1,2-Dibromoethane (EDB)	1000	1130	113	80 - 120
Dibromomethane	1000	1100	110	80 - 120
1,2-Dichlorobenzene	1000	1040	104	80 - 120
1,3-Dichlorobenzene	1000	1000	100	80 - 120
1,4-Dichlorobenzene	1000	1020	102	80 - 120
Dichlorodifluoromethane	1000	936	94	80 - 120
1,1-Dichloroethane	1000	1090	109	80 - 120
1,2-Dichloroethane (EDC)	1000	1040	104	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9061492	Laboratory ID:	9061492-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	1000	1280	128 *	80 - 120
cis-1,2-Dichloroethene	1000	1010	101	80 - 120
trans-1,2-Dichloroethene	1000	1150	115	80 - 120
1,2-Dichloropropane	1000	1020	102	80 - 120
1,3-Dichloropropane	1000	1030	103	80 - 120
2,2-Dichloropropane	1000	1270	127 *	80 - 120
1,1-Dichloropropene	1000	1080	108	80 - 120
cis-1,3-Dichloropropene	1000	1130	113	80 - 120
trans-1,3-Dichloropropene	1000	1100	110	80 - 120
Ethylbenzene	1000	1020	102	80 - 120
Hexachlorobutadiene	1000	1090	109	80 - 120
2-Hexanone	2000	1960	98	80 - 120
Isopropylbenzene	1000	1070	107	80 - 120
4-Isopropyltoluene	1000	1080	108	80 - 120
Methylene chloride	1000	1210	121 *	80 - 120
4-Methyl-2-pentanone (MiBK)	2000	1910	96	80 - 120
Methyl tert-butyl ether (MTBE)	1000	1080	108	80 - 120
Naphthalene	1000	1120	112	80 - 120
n-Propylbenzene	1000	1040	104	80 - 120
Styrene	1000	1120	112	80 - 120
1,1,1,2-Tetrachloroethane	1000	1210	121 *	80 - 120
1,1,2,2-Tetrachloroethane	1000	992	99	80 - 120
Tetrachloroethene (PCE)	1000	1080	108	80 - 120
1,2,3-Trichlorobenzene	1000	1140	114	80 - 120
1,2,4-Trichlorobenzene	1000	1120	112	80 - 120
1,1,1-Trichloroethane	1000	1140	114	80 - 120
1,1,2-Trichloroethane	1000	1060	106	80 - 120
Trichloroethene (TCE)	1000	1150	115	80 - 120
Trichlorofluoromethane	1000	1050	105	80 - 120
1,2,3-Trichloropropane	1000	1040	104	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9061492	Laboratory ID:	9061492-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	1000	1020	102	80 - 120
1,3,5-Trimethylbenzene	1000	1040	104	80 - 120
Toluene	1000	1020	102	80 - 120
Vinyl chloride	1000	994	99	80 - 120
m,p-Xylene	2000	2090	105	80 - 120
o-Xylene	1000	1000	100	80 - 120

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9070494	Laboratory ID:	9070494-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acetone	2000	1590	79 *	80 - 120
Acrylonitrile	1000	932	93	80 - 120
Benzene	1000	1060	106	80 - 120
Bromobenzene	1000	999	100	80 - 120
Bromochloromethane	1000	954	95	80 - 120
Bromodichloromethane	1000	1090	109	80 - 120
Bromoform	1000	980	98	80 - 120
Bromomethane	1000	1050	105	80 - 120
2-Butanone (MEK)	2000	1760	88	80 - 120
n-Butylbenzene	1000	986	99	80 - 120
sec-Butylbenzene	1000	1030	103	80 - 120
tert-Butylbenzene	1000	982	98	80 - 120
Carbon disulfide	1000	1250	125 *	80 - 120
Carbon tetrachloride	1000	1260	126 *	80 - 120
Chlorobenzene	1000	968	97	80 - 120
Chloroethane	1000	902	90	80 - 120
Chloroform	1000	992	99	80 - 120
Chloromethane	1000	839	84	80 - 120
2-Chlorotoluene	1000	1010	101	80 - 120
4-Chlorotoluene	1000	952	95	80 - 120
Dibromochloromethane	1000	963	96	80 - 120
1,2-Dibromo-3-chloropropane	1000	988	99	80 - 120
1,2-Dibromoethane (EDB)	1000	1080	108	80 - 120
Dibromomethane	1000	1020	102	80 - 120
1,2-Dichlorobenzene	1000	1010	101	80 - 120
1,3-Dichlorobenzene	1000	963	96	80 - 120
1,4-Dichlorobenzene	1000	951	95	80 - 120
Dichlorodifluoromethane	1000	844	84	80 - 120
1,1-Dichloroethane	1000	1010	101	80 - 120
1,2-Dichloroethane (EDC)	1000	960	96	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9070494	Laboratory ID:	9070494-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,1-Dichloroethene	1000	1210	121 *	80 - 120
cis-1,2-Dichloroethene	1000	960	96	80 - 120
trans-1,2-Dichloroethene	1000	1090	109	80 - 120
1,2-Dichloropropane	1000	978	98	80 - 120
1,3-Dichloropropane	1000	965	96	80 - 120
2,2-Dichloropropane	1000	1240	124 *	80 - 120
1,1-Dichloropropene	1000	1060	106	80 - 120
cis-1,3-Dichloropropene	1000	1120	112	80 - 120
trans-1,3-Dichloropropene	1000	1090	109	80 - 120
Ethylbenzene	1000	968	97	80 - 120
Hexachlorobutadiene	1000	1060	106	80 - 120
2-Hexanone	2000	1780	89	80 - 120
Isopropylbenzene	1000	1000	100	80 - 120
4-Isopropyltoluene	1000	1040	104	80 - 120
Methylene chloride	1000	1490	149 *	80 - 120
4-Methyl-2-pentanone (MiBK)	2000	1760	88	80 - 120
Methyl tert-butyl ether (MTBE)	1000	1020	102	80 - 120
Naphthalene	1000	1110	111	80 - 120
n-Propylbenzene	1000	976	98	80 - 120
Styrene	1000	1080	108	80 - 120
1,1,1,2-Tetrachloroethane	1000	1190	119	80 - 120
1,1,2,2-Tetrachloroethane	1000	959	96	80 - 120
Tetrachloroethene (PCE)	1000	1030	103	80 - 120
1,2,3-Trichlorobenzene	1000	1100	110	80 - 120
1,2,4-Trichlorobenzene	1000	1100	110	80 - 120
1,1,1-Trichloroethane	1000	1080	108	80 - 120
1,1,2-Trichloroethane	1000	1020	102	80 - 120
Trichloroethene (TCE)	1000	1110	111	80 - 120
Trichlorofluoromethane	1000	951	95	80 - 120
1,2,3-Trichloropropane	1000	984	98	80 - 120

LCS / LCS DUPLICATE RECOVERY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Soil		
Batch:	9070494	Laboratory ID:	9070494-BS1
Preparation:	EPA 5035A	Initial/Final:	5 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
1,2,4-Trimethylbenzene	1000	972	97	80 - 120
1,3,5-Trimethylbenzene	1000	1000	100	80 - 120
Toluene	1000	987	99	80 - 120
Vinyl chloride	1000	941	94	80 - 120
m,p-Xylene	2000	2000	100	80 - 120
o-Xylene	1000	972	97	80 - 120

* = Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F10052	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F10052-TUN1	VC19061002.D	06/10/19 15:06
Initial Cal Blank	9F10052-ICB1	VC19061003.D	06/10/19 15:34
Cal Standard	9F10052-CAL1	VC19061004.D	06/10/19 16:02
Cal Standard	9F10052-CAL2	VC19061005.D	06/10/19 16:29
Cal Standard	9F10052-CAL3	VC19061006.D	06/10/19 16:57
Cal Standard	9F10052-CAL4	VC19061007.D	06/10/19 17:25
Cal Standard	9F10052-CAL5	VC19061008.D	06/10/19 17:52
Cal Standard	9F10052-CAL6	VC19061009.D	06/10/19 18:20
Cal Standard	9F10052-CAL7	VC19061010.D	06/10/19 18:48
Cal Standard	9F10052-CAL8	VC19061011.D	06/10/19 19:15
Cal Standard	9F10052-CAL9	VC19061012.D	06/10/19 19:43
Cal Standard	9F10052-CALA	VC19061014.D	06/10/19 20:38
Cal Standard	9F10052-CALB	VC19061016.D	06/10/19 21:34
Initial Cal Check	9F10052-ICV1	VC19061019.D	06/10/19 22:56

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

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9F28034-TUN1	VC19062801.D	06/28/19 11:02
Calibration Check	9F28034-CCV1	VC19062802.D	06/28/19 11:30
Blank	9061492-BLK1	VC19062804.D	06/28/19 12:25
2708-190619-OIL	A9F0684-01	VC19062819.D	06/28/19 19:17

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

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01037	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9G01037-TUN1	VC19070102.D	07/01/19 10:51
Calibration Check	9G01037-CCV1	VC19070103.D	07/01/19 11:18
Blank	9070494-BLK1	VC19070105.D	07/01/19 12:13
2708-190619-OIL	A9F0684-01RE1	VC19070107.D	07/01/19 13:08

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.

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19061002.D	Injection Date:	06/10/19
Instrument ID:	VOA-GCMS3	Injection Time:	15:06
Sequence:	9F10052	Lab Sample ID:	9F10052-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		116.07	
m/z 96	5 - 9% of m/z 95	6.98	PASS
m/z 173		0.00	
m/z 174	50 - 200% of m/z 95	86.15	PASS
m/z 175	5 - 9% of m/z 174	7.28	PASS
m/z 176	95 - 101% of m/z 174	96.72	PASS
m/z 177	5 - 9% of m/z 176	6.90	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19062801.D	Injection Date:	06/28/19
Instrument ID:	VOA-GCMS3	Injection Time:	11:02
Sequence:	9F28034	Lab Sample ID:	9F28034-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		112.77	
m/z 96	5 - 9% of m/z 95	7.04	PASS
m/z 173		0.23	
m/z 174	50 - 200% of m/z 95	88.68	PASS
m/z 175	5 - 9% of m/z 174	7.38	PASS
m/z 176	95 - 101% of m/z 174	96.64	PASS
m/z 177	5 - 9% of m/z 176	6.70	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	VC19070102.D	Injection Date:	07/01/19
Instrument ID:	VOA-GCMS3	Injection Time:	10:51
Sequence:	9G01037	Lab Sample ID:	9G01037-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 50			
m/z 75			
m/z 95		111.04	
m/z 96	5 - 9% of m/z 95	7.37	PASS
m/z 173		0.00	
m/z 174	50 - 200% of m/z 95	90.05	PASS
m/z 175	5 - 9% of m/z 174	7.38	PASS
m/z 176	95 - 101% of m/z 174	96.14	PASS
m/z 177	5 - 9% of m/z 176	6.71	PASS

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F1104 Date: 06/11/19 10:42 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acetone	0.176633	Ave	7.377004	3.830286	0.0886388			20	
Acrylonitrile	0.2295564	Ave	5.110365	4.596	5.436559E-02			20	
Benzene	1.651784	Ave	6.123034	5.931364	0.0725995			20	
Bromobenzene	0.6817221	Ave	10.54626	10.9191	2.201428E-02			20	
Bromochloromethane	0.2950404	Ave	8.159501	5.2651	9.010003E-02			20	
Bromodichloromethane	0.3653081	Ave	12.29459	7.1805	3.415836E-02			20	
Bromoform	0.1009589	XXX	35.68451	10.38888	2.056528E-02				
Bromomethane	0.2024021	Ave	12.47783	2.305	0.2185499			20	
2-Butanone (MEK)	0.305357	Ave	3.865142	5.688286	0.1257986			20	
n-Butylbenzene	1.696663	Ave	14.22585	11.929	1.924249E-02			20	
sec-Butylbenzene	2.328596	Ave	6.460657	11.49655	1.527806E-02			20	
tert-Butylbenzene	1.097456	Ave	8.753387	11.35773	2.587041E-02			20	
Carbon disulfide	0.4905422	XXX	13.81065	3.097	0.1203447				
Carbon tetrachloride	0.335013	Ave	14.51492	5.472	3.991685E-02			20	
Chlorobenzene	0.7560179	Ave	8.779183	9.7645	1.488722E-02			20	
Chloroethane	0.134112	Ave	6.873681	2.439833	0.4100434			20	
Chloroform	0.6486375	Ave	4.84742	5.3509	8.801198E-02			20	
Chloromethane	0.5214914	Ave	8.0818	1.861556	0.296782			20	
2-Chlorotoluene	0.6197418	Ave	5.989762	11.07122	2.355875E-02			20	
4-Chlorotoluene	1.80559	Ave	5.894317	11.20618	2.412852E-02			20	
Dibromochloromethane	0.1786651	XXX	30.97619	9.004111	4.209466E-02				
1,2-Dibromo-3-chloropropane	0.13689	XXX	28.3226	12.67087	1.690337E-02				
1,2-Dibromoethane (EDB)	0.2384746	Ave	13.62497	9.2437	2.889734E-02			20	
Dibromomethane	0.2283398	Ave	5.936871	6.996667	3.826916E-02			20	
1,2-Dichlorobenzene	0.9855712	Ave	3.647129	12.05855	1.059929E-02			20	
1,3-Dichlorobenzene	1.141635	Ave	10.28927	11.66973	2.018363E-02			20	
1,4-Dichlorobenzene	1.142824	Ave	12.30905	11.73773	0.0411155			20	
Dichlorodifluoromethane	0.3299861	Ave	6.551197	1.665556	0.3291407			20	
1,1-Dichloroethane	0.5633588	Ave	7.478436	4.5174	7.688988E-02			20	
1,2-Dichloroethane (EDC)	0.516509	Ave	6.495481	6.1479	5.027529E-02			20	
1,1-Dichloroethene	0.3807141	XXX	3.838894	3.0903	0.1593114				
cis-1,2-Dichloroethene	0.5161397	Ave	4.108126	5.0674	0.1078244			20	
trans-1,2-Dichloroethene	0.4540201	Ave	3.630787	3.8849	0.0873195			20	

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F1104 Date: 06/11/19 10:42 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,2-Dichloropropane	0.4368331	Ave	3.377727	7.105333	0.0438426			20	
1,3-Dichloropropane	0.4690739	Ave	3.623766	9.1087	3.222657E-02			20	
2,2-Dichloropropane	0.4255531	Ave	5.934921	5.170889	5.623545E-02			20	
1,1-Dichloropropene	0.510342	Ave	3.651165	5.6757	0.074363			20	
cis-1,3-Dichloropropene	0.3489512	Ave	14.23346	7.886	0.0400254			20	
trans-1,3-Dichloropropene	0.3234507	Ave	13.48241	8.6425	3.510445E-02			20	
Ethylbenzene	1.256703	Ave	10.86202	9.794909	0.0195563			20	
Hexachlorobutadiene	0.1453276	Ave	5.700627	13.18113	2.291453E-02			20	
2-Hexanone	0.2285528	Ave	10.87138	9.499	3.804604E-02			20	
Isopropylbenzene	1.062392	Ave	6.853466	10.59345	0.0197701			20	
4-Isopropyltoluene	1.94566	Ave	8.145156	11.60618	2.346166E-02			20	
Methylene chloride	0.3356954	Ave	9.860283	3.104667	48.98986			20	
4-Methyl-2-pentanone (MiBK)	0.3359308	Ave	5.210881	8.61625	4.103386E-02			20	
Methyl tert-butyl ether (MTBE)	1.29273	Ave	3.109168	4.0387	0.1210654			20	
Naphthalene	1.862818	Ave	13.8658	13.49063	0.0154103			20	
n-Propylbenzene	3.025689	Ave	10.28157	10.94418	2.719667E-02			20	
Styrene	0.6338786	Ave	11.96553	10.3692	3.767346E-02			20	
1,1,1,2-Tetrachloroethane	0.1973921	Ave	14.60727	9.829143	2.302002E-02			20	
1,1,2,2-Tetrachloroethane	0.6469802	Ave	3.580347	11.0093	0.0114886			20	
Tetrachloroethene (PCE)	0.2678135	Ave	5.376405	8.5988	3.328266E-02			20	
1,2,3-Trichlorobenzene	0.5348235	Ave	11.02318	13.6512	1.837817E-02			20	
1,2,4-Trichlorobenzene	0.5659842	Ave	7.479238	13.21389	2.261069E-02			20	
1,1,1-Trichloroethane	0.5022544	Ave	5.253381	5.5456	7.536457E-02			20	
1,1,2-Trichloroethane	0.2549644	Ave	4.886925	8.8185	3.708031E-02			20	
Trichloroethene (TCE)	0.4313967	Ave	7.755557	6.5475	5.021484E-02			20	
Trichlorofluoromethane	0.1986685	Ave	7.368556	2.560125	0.2709867			20	
1,2,3-Trichloropropane	0.2642923	Ave	7.008717	11.11444	2.914568E-02			20	
1,2,4-Trimethylbenzene	2.108515	Ave	11.35556	11.41255	1.370078E-02			20	
1,3,5-Trimethylbenzene	2.071808	Ave	7.782596	11.10345	2.003937E-02			20	
Toluene	1.24682	Ave	11.42315	8.1529	3.976842E-02			20	
Vinyl chloride	0.3534017	Ave	5.104478	1.953333	0.3566626			20	
m,p-Xylene	0.9022054	Ave	9.863479	9.9336	2.868655E-02			20	
o-Xylene	0.9381569	Ave	6.282236	10.3181	1.836792E-02			20	

INITIAL CALIBRATION DATA (Summary)

5035A/8260C

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9F1104 Date: 06/11/19 10:42 Instrument: VOA-GCMS3

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
1,4-Difluorobenzene (Surr)	1.684805	Ave	0.6880543	6.587818	2.769011E-02			20	
Toluene-d8 (Surr)	1.396844	Ave	1.042643	8.093091	3.500953E-02			20	
4-Bromofluorobenzene (Surr)	0.9028859	Ave	1.520755	10.83509	1.533069E-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

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Calibration Date: 06/11/19 10:42

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	~~0~~	0.8	~~0~~	2	~~0~~	4	0.1837594	10	0.1874082
Acrylonitrile	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	0.2120014	5	0.2293648
Benzene	0.1	1.807468	0.2	1.739375	0.4	1.758647	1	1.631511	2	1.638186	5	1.68977
Bromobenzene	0.1	~~0~~	0.2	0.5051486	0.4	0.749167	1	0.7382958	2	0.702432	5	0.7282043
Bromochloromethane	0.1	~~0~~	0.2	0.2433694	0.4	0.3005446	1	0.2631372	2	0.2917348	5	0.3112742
Bromodichloromethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.3205051	2	0.3215417	5	0.3558418
Bromoform	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	5.577505E-02	2	0.0702919	5	7.978372E-02
Bromomethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0.5501994~~	1	~~0.3873839~~	2	~~0.3035086~~	5	0.2433908
2-Butanone (MEK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	~~0~~	4	0.2998945	10	0.3164353
n-Butylbenzene	0.1	2.34672	0.2	1.859613	0.4	1.5617	1	1.567739	2	1.612104	5	1.696734
sec-Butylbenzene	0.1	2.330193	0.2	2.177413	0.4	2.289745	1	2.324265	2	2.281905	5	2.458161
tert-Butylbenzene	0.1	1.222938	0.2	1.040828	0.4	0.8937199	1	1.05897	2	1.080019	5	1.161395
Carbon disulfide	0.1	~~0~~	0.2	~~0~~	0.4	~~0.4668582~~	1	~~0.3831568~~	2	0.4357766	5	0.4377816
Carbon tetrachloride	0.1	~~0~~	0.2	~~0.2091704~~	0.4	~~0~~	1	0.2761205	2	0.2979198	5	0.3211714
Chlorobenzene	0.1	~~0~~	0.2	0.89586	0.4	0.8275393	1	0.7397087	2	0.749347	5	0.7844454
Chloroethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	~~0~~	5	0.1407155
Chloroform	0.1	~~0~~	0.2	0.6792073	0.4	0.6918057	1	0.6209314	2	0.6230383	5	0.6747058
Chloromethane	0.1	~~0~~	0.2	~~0.7460146~~	0.4	0.6254278	1	0.5089132	2	0.5210988	5	0.5252468
2-Chlorotoluene	0.1	~~0~~	0.2	~~0~~	0.4	0.5610501	1	0.6731114	2	0.5920194	5	0.6445541
4-Chlorotoluene	0.1	1.939073	0.2	1.801327	0.4	1.871267	1	1.788151	2	1.712394	5	1.873904
Dibromochloromethane	0.1	~~0~~	0.2	~~0~~	0.4	9.171785E-02	1	0.1373169	2	0.1386081	5	0.1574055
1,2-Dibromo-3-chloropropane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1019196	2	8.417464E-02	5	0.1175202
1,2-Dibromoethane (EDB)	0.1	~~0~~	0.2	0.2185964	0.4	0.1662873	1	0.2071948	2	0.2459177	5	0.2408205
Dibromomethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2360105	1	0.198372	2	0.2228064	5	0.2290004
1,2-Dichlorobenzene	0.1	1.005343	0.2	0.9422965	0.4	0.9861282	1	0.9929568	2	0.9855891	5	1.051965
1,3-Dichlorobenzene	0.1	1.457059	0.2	1.16434	0.4	1.172265	1	1.092943	2	1.085613	5	1.193485
1,4-Dichlorobenzene	0.1	1.514901	0.2	1.265647	0.4	1.106259	1	1.092391	2	1.109187	5	1.150824
Dichlorodifluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	0.2909567	1	0.297256	2	0.3248205	5	0.3504378
1,1-Dichloroethane	0.1	~~0~~	0.2	0.4517444	0.4	0.5841259	1	0.5599403	2	0.5523215	5	0.580349
1,2-Dichloroethane (EDC)	0.1	~~0~~	0.2	0.4414052	0.4	0.5044724	1	0.5468061	2	0.5164787	5	0.5646532
1,1-Dichloroethene	0.1	~~0~~	0.2	0.3594868	0.4	0.3982677	1	0.3596058	2	0.3670717	5	0.3882048

INITIAL CALIBRATION DATA

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Calibration Date: 06/11/19 10:42

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	0.5463881	0.4	0.5133228	1	0.4921557	2	0.4875661	5	0.534051
trans-1,2-Dichloroethene	0.1	~~0~~	0.2	0.4549257	0.4	0.4432572	1	0.4237672	2	0.4514252	5	0.4459482
1,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.4535826	1	0.4281453	2	0.4065658	5	0.4418801
1,3-Dichloropropane	0.1	~~0~~	0.2	0.4382941	0.4	0.4502749	1	0.4670895	2	0.470675	5	0.4930806
2,2-Dichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.3746666	1	0.4391659	2	0.3971767	5	0.4268826
1,1-Dichloropropene	0.1	~~0~~	0.2	0.4668556	0.4	0.5166417	1	0.5154048	2	0.4950923	5	0.5250343
cis-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	~~0.2637213~~	1	0.2980678	2	0.2915658	5	0.3500324
trans-1,3-Dichloropropene	0.1	~~0~~	0.2	~~0~~	0.4	~~0.2543676~~	1	0.2787692	2	0.2793999	5	0.3126279
Ethylbenzene	0.1	1.594509	0.2	1.342964	0.4	1.28431	1	1.226203	2	1.232032	5	1.262266
Hexachlorobutadiene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.132026	2	0.1407794	5	0.1541946
n-Hexane	0.1	~~2.015489~~	0.2	~~0.7881668~~	0.4	~~0.4510013~~	1	~~0.212261~~	2	0.1329387	5	0.1075024
2-Hexanone	0.2	~~0~~	0.4	~~0~~	0.8	0.1890219	2	0.202158	4	0.2001395	10	0.2318681
Isopropylbenzene	0.1	1.171631	0.2	1.167867	0.4	1.053846	1	0.9796686	2	1.016893	5	1.079211
4-Isopropyltoluene	0.1	2.244808	0.2	1.969247	0.4	1.691731	1	1.868526	2	1.851709	5	2.002697
Methylene chloride	0.1	~~3.006284~~	0.2	~~1.691656~~	0.4	~~1.067947~~	1	~~0.5887752~~	2	~~0.4615596~~	5	0.397768
4-Methyl-2-pentanone (MiBK)	0.2	~~0~~	0.4	~~0~~	0.8	~~0~~	2	0.3130189	4	0.3060453	10	0.3573265
Methyl tert-butyl ether (MTBE)	0.1	~~0~~	0.2	1.27252	0.4	1.263762	1	1.313724	2	1.256882	5	1.34847
Naphthalene	0.1	~~0~~	0.2	~~0~~	0.4	~~1.472592~~	1	1.471896	2	1.47572	5	1.847477
n-Propylbenzene	0.1	3.688096	0.2	3.223792	0.4	2.922081	1	2.904295	2	2.924536	5	3.106113
Styrene	0.1	~~0~~	0.2	0.5726456	0.4	0.5175693	1	0.5582807	2	0.5563042	5	0.6597427
1,1,1,2-Tetrachloroethane	0.1	~~0~~	0.2	~~0~~	0.4	0.151997	1	0.1831245	2	0.1766136	5	0.203248
1,1,2,2-Tetrachloroethane	0.1	~~0~~	0.2	0.6578034	0.4	0.6521383	1	0.6380334	2	0.5921526	5	0.6795567
Tetrachloroethene (PCE)	0.1	~~0~~	0.2	0.2868734	0.4	0.2465729	1	0.295841	2	0.25564	5	0.2684436
1,2,3-Trichlorobenzene	0.1	~~0~~	0.2	0.5398429	0.4	0.4013159	1	0.4946831	2	0.4821395	5	0.5502791
1,2,4-Trichlorobenzene	0.1	~~0~~	0.2	~~0~~	0.4	0.5135259	1	0.5118077	2	0.5122399	5	0.5849041
1,1,1-Trichloroethane	0.1	~~0~~	0.2	0.4827621	0.4	0.4871404	1	0.4545647	2	0.4783259	5	0.5052704
1,1,2-Trichloroethane	0.1	~~0~~	0.2	0.2307101	0.4	0.2587847	1	0.2620155	2	0.2344276	5	0.2684436
Trichloroethene (TCE)	0.1	~~0~~	0.2	0.3467616	0.4	0.4432572	1	0.4616602	2	0.4082052	5	0.4472233
Trichlorofluoromethane	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	0.1826713	2	0.2205709	5	0.209449
1,2,3-Trichloropropane	0.1	~~0~~	0.2	~~0~~	0.4	0.2283804	1	0.2878056	2	0.2707706	5	0.2869239
1,1,2-Trichloro-1,2,2-trifluoroethan	0.1	~~0~~	0.2	~~0~~	0.4	0.2419107	1	0.2749127	2	0.31409	5	0.3104849

INITIAL CALIBRATION DATA

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Calibration Date: 06/11/19 10:42

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
1,2,4-Trimethylbenzene	0.1	2.735085	0.2	2.188515	0.4	2.026381	1	2.008562	2	1.998082	5	2.146698
1,3,5-Trimethylbenzene	0.1	2.385281	0.2	2.185739	0.4	2.001959	1	1.920453	2	1.961855	5	2.131327
Toluene	0.1	~~0~~	0.2	1.58799	0.4	1.330299	1	1.272223	2	1.244302	5	1.257019
Vinyl chloride	0.1	~~0.2958516~~	0.2	~~0~~	0.4	0.3123451	1	0.3372625	2	0.3636439	5	0.3671961
m,p-Xylene	0.2	~~1.300238~~	0.4	1.066277	0.8	0.9367952	2	0.9198642	4	0.8963777	10	0.9420083
o-Xylene	0.1	~~1.330755~~	0.2	1.01094	0.4	1.035139	1	0.9113813	2	0.9045403	5	0.9650031
Xylenes, total	0.3	~~1.310411~~	0.6	1.047831	1.2	0.9695764	3	0.9170366	6	0.8990985	15	0.9496732
trans-1,4-Dichloro-2-butene	0.1	~~0~~	0.2	~~0~~	0.4	~~0~~	1	~~0~~	2	4.954583E-02	5	0.0670388
1,4-Difluorobenzene (Surr)	50	1.676403	50	1.692963	50	1.665733	50	1.673127	50	1.680119	50	1.693838
Toluene-d8 (Surr)	50	1.407368	50	1.390502	50	1.393322	50	1.396775	50	1.390721	50	1.406481
4-Bromofluorobenzene (Surr)	50	0.8880516	50	0.8982098	50	0.9111086	50	0.9119182	50	0.9036413	50	0.9097106

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 06/11/19 10:42

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	0.180434	40	0.1786716	100	0.183453	200	0.1739961	400	0.1487088		
Acrylonitrile	10	0.2349003	20	0.2264823	50	0.2464662	100	0.2386513	200	0.2190284		
Benzene	10	1.654162	20	1.635907	50	1.605023	100	1.579832	200	1.429744		
Bromobenzene	10	0.7107478	20	0.6846997	50	0.6920889	100	0.6880087	200	0.6184281		
Bromochloromethane	10	0.3033452	20	0.3168872	50	0.3128519	100	0.3139356	200	0.2933243		
Bromodichloromethane	10	0.3611259	20	0.3960232	50	0.4368108	100	~~0.4705047~~	200	~~0.4652982~~		
Bromoform	10	8.284668E-02	20	9.755614E-02	50	0.122523	100	0.1408428	200	0.1580523		
Bromomethane	10	0.2216269	20	0.198743	50	0.1773913	100	0.1853883	200	0.1878726		
2-Butanone (MEK)	20	0.2993329	40	0.3074206	100	0.3197304	200	0.3097445	400	0.2849407		
n-Butylbenzene	10	1.67494	20	1.685259	50	1.669101	100	1.559918	200	1.429465		
sec-Butylbenzene	10	2.522786	20	2.468343	50	2.458678	100	2.303379	200	1.999689		
tert-Butylbenzene	10	1.188885	20	1.169098	50	1.147882	100	1.109646	200	0.99863		
Carbon disulfide	10	0.4668576	20	0.5148764	50	0.5974187	100	~~0.6417113~~	200	~~0.6427177~~		
Carbon tetrachloride	10	0.3355046	20	0.36956	50	0.4098014	100	~~0.4341891~~	200	~~0.431916~~		
Chlorobenzene	10	0.7400147	20	0.7327942	50	0.7238269	100	0.7103063	200	0.656336		
Chloroethane	10	0.1204613	20	0.1336297	50	0.1259003	100	0.1406815	200	0.143284		
Chloroform	10	0.6454182	20	0.6611108	50	0.6498217	100	0.6533988	200	0.5869364		
Chloromethane	10	0.5198903	20	0.5180332	50	0.4953108	100	0.505876	200	0.4736257		
2-Chlorotoluene	10	0.636806	20	0.6280675	50	0.6363806	100	0.6355401	200	0.5701467		
4-Chlorotoluene	10	1.902745	20	1.838839	50	1.816409	100	1.767407	200	1.549969		
Dibromochloromethane	10	0.1650072	20	0.1908547	50	0.2220912	100	0.2472265	200	0.2577581		
1,2-Dibromo-3-chloropropane	10	0.1235549	20	0.1297782	50	0.1630072	100	0.1806818	200	0.1944831		
1,2-Dibromoethane (EDB)	10	0.2503452	20	0.2552847	50	0.2682124	100	0.2697995	200	0.2622878		
Dibromomethane	10	0.2290296	20	0.2340795	50	0.2390261	100	0.2452842	200	0.2214492		
1,2-Dichlorobenzene	10	1.019485	20	0.9889741	50	0.9902931	100	0.9577758	200	0.9204766		
1,3-Dichlorobenzene	10	1.114397	20	1.107102	50	1.096919	100	1.07553	200	0.9983351		
1,4-Dichlorobenzene	10	1.112977	20	1.10639	50	1.076334	100	1.045619	200	0.990535		
Dichlorodifluoromethane	10	0.337871	20	0.3389996	50	0.3384478	100	0.3452417	200	0.3458438		
1,1-Dichloroethane	10	0.5882594	20	0.5901242	50	0.5884185	100	0.5869284	200	0.5513769		
1,2-Dichloroethane (EDC)	10	0.520937	20	0.5231751	50	0.5291737	100	0.5286363	200	0.4893518		
1,1-Dichloroethene	10	0.3795266	20	0.3915604	50	0.396194	100	0.390698	200	0.3765254		

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 06/11/19 10:42

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	0.5143079	20	0.5350709	50	0.5239272	100	0.5277055	200	0.486902		
trans-1,2-Dichloroethene	10	0.4603499	20	0.4700919	50	0.474756	100	0.4749327	200	0.4407466		
1,2-Dichloropropane	10	0.4397648	20	0.4469198	50	0.4425734	100	0.4482705	200	0.4237959		
1,3-Dichloropropane	10	0.4773819	20	0.4833241	50	0.4804964	100	0.4769364	200	0.4531863		
2,2-Dichloropropane	10	0.4180269	20	0.4404943	50	0.4488727	100	0.4505189	200	0.4341729		
1,1-Dichloropropene	10	0.5194655	20	0.5255856	50	0.522546	100	0.5195316	200	0.4972624		
cis-1,3-Dichloropropene	10	0.3504727	20	0.3809744	50	0.4225943	100	~~0.4307634~~	200	~~0.4388938~~		
trans-1,3-Dichloropropene	10	0.3242506	20	0.3558323	50	0.3898242	100	~~0.4074738~~	200	~~0.4067733~~		
Ethylbenzene	10	1.258123	20	1.229988	50	1.207283	100	1.146446	200	1.039606		
Hexachlorobutadiene	10	0.1534538	20	0.1537385	50	0.1484779	100	0.1396608	200	0.1402895		
n-Hexane	10	9.078967E-02	20	7.871806E-02	50	7.828629E-02	100	7.391729E-02	200	7.254715E-02		
2-Hexanone	20	0.2398996	40	0.2381115	100	0.2514282	200	0.2512015	400	0.253147		
Isopropylbenzene	10	1.0856	20	1.084103	50	1.085409	100	1.035404	200	0.926677		
4-Isopropyltoluene	10	2.037086	20	2.047588	50	2.032316	100	1.939581	200	1.716967		
Methylene chloride	10	0.3434534	20	0.3259471	50	0.3239812	100	0.3205401	200	0.3024826		
4-Methyl-2-pentanone (MiBK)	20	0.3392777	40	0.3386005	100	0.3477892	200	0.3457471	400	0.3396415		
Methyl tert-butyl ether (MTBE)	10	1.314091	20	1.312177	50	1.317908	100	1.315493	200	1.212278		
Naphthalene	10	1.903018	20	2.012992	50	2.149115	100	2.083741	200	1.958587		
n-Propylbenzene	10	3.13925	20	3.115362	50	3.020527	100	2.838624	200	2.399906		
Styrene	10	0.6627312	20	0.6966152	50	0.7226778	100	0.7252356	200	0.6669838		
1,1,1,2-Tetrachloroethane	10	0.2087107	20	0.2210099	50	0.2370409	100	~~0.2455033~~	200	~~0.2461683~~		
1,1,2,2-Tetrachloroethane	10	0.6321641	20	0.6513029	50	0.6626731	100	0.6532928	200	0.6506846		
Tetrachloroethene (PCE)	10	0.2717853	20	0.2612881	50	0.264469	100	0.2611135	200	0.266108		
1,2,3-Trichlorobenzene	10	0.5712468	20	0.5753101	50	0.5911872	100	0.5749015	200	0.5673286		
1,2,4-Trichlorobenzene	10	0.576462	20	0.6161006	50	0.6116939	100	0.5896192	200	0.5775044		
1,1,1-Trichloroethane	10	0.5053275	20	0.5208392	50	0.5309597	100	0.539312	200	0.5180418		
1,1,2-Trichloroethane	10	0.2579353	20	0.2584191	50	0.2593507	100	0.2650158	200	0.2545412		
Trichloroethene (TCE)	10	0.4437544	20	0.4455391	50	0.4494211	100	0.4477578	200	0.4203869		
Trichlorofluoromethane	10	0.1866611	20	0.1977131	50	0.1820981	100	0.1965467	200	0.213638		
1,2,3-Trichloropropane	10	0.273541	20	0.264222	50	0.2607804	100	0.2530874	200	0.2531193		
1,1,2-Trichloro-1,2,2-trifluoroethan	10	0.2958059	20	0.3021108	50	0.3020364	100	0.2979461	200	0.2897		

INITIAL CALIBRATION DATA (Continued)

5035A/8260C

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9F1104
Instrument: VOA-GCMS3
Matrix:
Calibration Date: 06/11/19 10:42

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
1,2,4-Trimethylbenzene	10	2.131943	20	2.135575	50	2.07276	100	2.002156	200	1.747913		
1,3,5-Trimethylbenzene	10	2.143138	20	2.139568	50	2.115224	100	2.037843	200	1.767502		
Toluene	10	1.236493	20	1.187969	50	1.161022	100	1.12446	200	1.066426		
Vinyl chloride	10	0.3666932	20	0.3652614	50	0.3525918	100	0.3594204	200	0.3562013		
m,p-Xylene	20	0.9265834	40	0.9070246	100	0.8834541	200	0.8277949	400	0.7158746		
o-Xylene	10	0.9434578	20	0.937412	50	0.9390238	100	0.9116712	200	0.8230011		
Xylenes, total	30	0.9322082	60	0.9171537	150	0.9019774	300	0.8557537	600	0.7515834		
trans-1,4-Dichloro-2-butene	10	6.878116E-02	20	8.249029E-02	50	9.185275E-02	100	9.773295E-02	200	0.103487		
1,4-Difluorobenzene (Surr)	50	1.695745	50	1.680713	50	1.684626	50	1.706354	50	1.683238		
Toluene-d8 (Surr)	50	1.395542	50	1.380245	50	1.389246	50	1.382402	50	1.432675		
4-Bromofluorobenzene (Surr)	50	0.9121928	50	0.9137957	50	0.9081421	50	0.9067174	50	0.8682567		

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9F1104
Lab File ID:	VC19061019.D		
Sequence:	9F10052	Inject Date:	06/10/19
Lab Sample ID:	9F10052-ICV1	Inject Time:	22:56

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acetone	40.0	39.7	-0.8	70 - 130
Acrylonitrile	20.0	19.6	-2.2	70 - 130
Benzene	20.0	20.3	1.5	70 - 130
Bromobenzene	20.0	19.7	-1.6	70 - 130
Bromochloromethane	20.0	21.0	5.0	70 - 130
Bromodichloromethane	20.0	20.9	4.4	70 - 130
Bromoform	20.0	18.0	-10.0	70 - 130
Bromomethane	20.0	24.3	21.3	70 - 130
2-Butanone (MEK)	40.0	39.6	-0.9	70 - 130
n-Butylbenzene	20.0	19.0	-5.0	70 - 130
sec-Butylbenzene	20.0	20.3	1.3	70 - 130
tert-Butylbenzene	20.0	19.8	-1.0	70 - 130
Carbon disulfide	20.0	25.6	28.1	70 - 130
Carbon tetrachloride	20.0	22.9	14.4	70 - 130
Chlorobenzene	20.0	19.2	-4.0	70 - 130
Chloroethane	20.0	27.6	37.8	70 - 130
Chloroform	20.0	20.4	1.8	70 - 130
Chloromethane	20.0	23.6	17.8	70 - 130
2-Chlorotoluene	20.0	19.6	-2.2	70 - 130
4-Chlorotoluene	20.0	19.1	-4.4	70 - 130
Dibromochloromethane	20.0	18.1	-9.4	70 - 130
1,2-Dibromo-3-chloropropane	20.0	17.7	-11.5	70 - 130
1,2-Dibromoethane (EDB)	20.0	21.7	8.4	70 - 130
Dibromomethane	20.0	19.9	-0.3	70 - 130
1,2-Dichlorobenzene	20.0	19.3	-3.4	70 - 130
1,3-Dichlorobenzene	20.0	18.5	-7.4	70 - 130
1,4-Dichlorobenzene	20.0	18.3	-8.6	70 - 130
Dichlorodifluoromethane	20.0	25.5	27.6	70 - 130
1,1-Dichloroethane	20.0	23.8	18.8	70 - 130
1,2-Dichloroethane (EDC)	20.0	20.6	3.2	70 - 130
1,1-Dichloroethene	20.0	25.5	27.4	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9F1104
Lab File ID:	VC19061019.D		
Sequence:	9F10052	Inject Date:	06/10/19
Lab Sample ID:	9F10052-ICV1	Inject Time:	22:56

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	23.9	19.6	70 - 130
1,2-Dichloropropane	20.0	19.9	-0.7	70 - 130
1,3-Dichloropropane	20.0	20.3	1.5	70 - 130
2,2-Dichloropropane	20.0	19.4	-3.2	70 - 130
1,1-Dichloropropene	20.0	20.7	3.4	70 - 130
cis-1,3-Dichloropropene	20.0	22.0	10.0	70 - 130
trans-1,3-Dichloropropene	20.0	21.3	6.4	70 - 130
Ethylbenzene	20.0	19.7	-1.6	70 - 130
Hexachlorobutadiene	20.0	20.2	0.8	70 - 130
2-Hexanone	40.0	43.5	8.8	70 - 130
Isopropylbenzene	20.0	20.0	-0.1	70 - 130
4-Isopropyltoluene	20.0	19.6	-1.8	70 - 130
Methylene chloride	20.0	22.0	10.0	70 - 130
4-Methyl-2-pentanone (MiBK)	40.0	41.0	2.4	70 - 130
Methyl tert-butyl ether (MTBE)	20.0	20.6	2.8	70 - 130
Naphthalene	20.0	20.9	4.6	70 - 130
n-Propylbenzene	20.0	18.8	-5.8	70 - 130
Styrene	20.0	21.6	7.8	70 - 130
1,1,1,2-Tetrachloroethane	20.0	21.8	8.9	70 - 130
1,1,2,2-Tetrachloroethane	20.0	20.1	0.6	70 - 130
Tetrachloroethene (PCE)	20.0	19.9	-0.4	70 - 130
1,2,3-Trichlorobenzene	20.0	20.1	0.6	70 - 130
1,2,4-Trichlorobenzene	20.0	20.0	0.1	70 - 130
1,1,1-Trichloroethane	20.0	21.9	9.6	70 - 130
1,1,2-Trichloroethane	20.0	20.4	1.8	70 - 130
Trichloroethene (TCE)	20.0	20.2	0.8	70 - 130
Trichlorofluoromethane	20.0	24.1	20.4	70 - 130
1,2,3-Trichloropropane	20.0	18.7	-6.6	70 - 130
1,2,4-Trimethylbenzene	20.0	19.0	-4.8	70 - 130
1,3,5-Trimethylbenzene	20.0	19.5	-2.4	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	VOA-GCMS3	Calibration:	A9F1104
Lab File ID:	VC19061019.D		
Sequence:	9F10052	Inject Date:	06/10/19
Lab Sample ID:	9F10052-ICV1	Inject Time:	22:56

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Toluene	20.0	19.2	-4.0	70 - 130
Vinyl chloride	20.0	22.2	11.2	70 - 130
m,p-Xylene	40.0	40.0	0.0	70 - 130
o-Xylene	20.0	19.6	-2.0	70 - 130
1,4-Difluorobenzene (Surr)	50.0	49.7	-0.6	70 - 130
Toluene-d8 (Surr)	50.0	50.4	0.7	70 - 130
4-Bromofluorobenzene (Surr)	50.0	49.4	-1.2	70 - 130

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F10052	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9F10052-ICV1)				Lab File ID: VC19061019.D		Analyzed: 06/10/19 22:56		
1,4-Difluorobenzene (Surr)	50.0	99	70 - 130	6.582	6.587818	-0.0058	+/-1.0	
Toluene-d8 (Surr)	50.0	101	70 - 130	8.091	8.093091	-0.0021	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	70 - 130	10.835	10.83509	-0.0001	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9061492-BS1)			Lab File ID: VC19062802.D		Analyzed: 06/28/19 11:30			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.589	6.587818	0.0012	+/-1.0	
Toluene-d8 (Surr)	50.0	96	80 - 120	8.091	8.093091	-0.0021	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	98	80 - 120	10.835	10.83509	-0.0001	+/-1.0	
Blank (9061492-BLK1)			Lab File ID: VC19062804.D		Analyzed: 06/28/19 12:25			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.588	6.587818	0.0002	+/-1.0	
Toluene-d8 (Surr)	50.0	97	80 - 120	8.097	8.093091	0.0039	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.834	10.83509	-0.0011	+/-1.0	
2708-190619-OIL (A9F0684-01)			Lab File ID: VC19062819.D		Analyzed: 06/28/19 19:17			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.584	6.587818	-0.0038	+/-1.0	
Toluene-d8 (Surr)	50.0	96	80 - 120	8.093	8.093091	-0.0001	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	10.836	10.83509	0.0009	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01037	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
LCS (9070494-BS1)			Lab File ID: VC19070103.D		Analyzed: 07/01/19 11:18			
1,4-Difluorobenzene (Surr)	50.0	102	80 - 120	6.582	6.587818	-0.0058	+/-1.0	
Toluene-d8 (Surr)	50.0	96	80 - 120	8.097	8.093091	0.0039	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	100	80 - 120	10.834	10.83509	-0.0011	+/-1.0	
Blank (9070494-BLK1)			Lab File ID: VC19070105.D		Analyzed: 07/01/19 12:13			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.59	6.587818	0.0022	+/-1.0	
Toluene-d8 (Surr)	50.0	96	80 - 120	8.099	8.093091	0.0059	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	99	80 - 120	10.837	10.83509	0.0019	+/-1.0	
2708-190619-OIL (A9F0684-01RE1)			Lab File ID: VC19070107.D		Analyzed: 07/01/19 13:08			
1,4-Difluorobenzene (Surr)	50.0	101	80 - 120	6.582	6.587818	-0.0058	+/-1.0	
Toluene-d8 (Surr)	50.0	96	80 - 120	8.091	8.093091	-0.0021	+/-1.0	
4-Bromofluorobenzene (Surr)	50.0	98	80 - 120	10.834	10.83509	-0.0011	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F28034	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9061492-BS1)			Lab File ID: VC19062802.D			Analyzed: 06/28/19 11:30			
Pentafluorobenzene (ISTD)	328903	6.029	328903	6.029	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	489277	9.746	489277	9.746	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	192230	11.723	192230	11.723	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9F28034-CCV1)			Lab File ID: VC19062802.D			Analyzed: 06/28/19 11:30			
Pentafluorobenzene (ISTD)	328903	6.029	334993	6.028	98	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	489277	9.746	489718	9.752	100	50 - 200	-0.0060	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	192230	11.723	189689	11.729	101	50 - 200	-0.0060	+/-0.50	
Blank (9061492-BLK1)			Lab File ID: VC19062804.D			Analyzed: 06/28/19 12:25			
Pentafluorobenzene (ISTD)	350970	6.034	328903	6.029	107	50 - 200	0.0050	+/-0.50	
Chlorobenzene-d5 (ISTD)	518347	9.751	489277	9.746	106	50 - 200	0.0050	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	198565	11.728	192230	11.723	103	50 - 200	0.0050	+/-0.50	
Matrix Spike (9061492-MS1)			Lab File ID: VC19062810.D			Analyzed: 06/28/19 15:10			
Pentafluorobenzene (ISTD)	332559	6.029	328903	6.029	101	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	516646	9.746	489277	9.746	106	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	215484	11.729	192230	11.723	112	50 - 200	0.0060	+/-0.50	
Duplicate (9061492-DUP1)			Lab File ID: VC19062813.D			Analyzed: 06/28/19 16:32			
Pentafluorobenzene (ISTD)	310817	6.031	328903	6.029	95	50 - 200	0.0020	+/-0.50	
Chlorobenzene-d5 (ISTD)	476170	9.748	489277	9.746	97	50 - 200	0.0020	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	193020	11.725	192230	11.723	100	50 - 200	0.0020	+/-0.50	
2708-190619-OIL (A9F0684-01)			Lab File ID: VC19062819.D			Analyzed: 06/28/19 19:17			
Pentafluorobenzene (ISTD)	365157	6.03	328903	6.029	111	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	539064	9.747	489277	9.746	110	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	217408	11.725	192230	11.723	113	50 - 200	0.0020	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
5035A/8260C

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01037	Instrument:	VOA-GCMS3
Matrix:	Soil	Calibration:	A9F1104

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS (9070494-BS1)			Lab File ID: VC19070103.D			Analyzed: 07/01/19 11:18			
Pentafluorobenzene (ISTD)	358431	6.028	358431	6.028	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	528045	9.751	528045	9.751	100	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	208380	11.728	208380	11.728	100	50 - 200	0.0000	+/-0.50	
Calibration Check (9G01037-CCV1)			Lab File ID: VC19070103.D			Analyzed: 07/01/19 11:18			
Pentafluorobenzene (ISTD)	358431	6.028	334993	6.028	107	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	528045	9.751	489718	9.752	108	50 - 200	-0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	208380	11.728	189689	11.729	110	50 - 200	-0.0010	+/-0.50	
Blank (9070494-BLK1)			Lab File ID: VC19070105.D			Analyzed: 07/01/19 12:13			
Pentafluorobenzene (ISTD)	358316	6.031	358431	6.028	100	50 - 200	0.0030	+/-0.50	
Chlorobenzene-d5 (ISTD)	527657	9.748	528045	9.751	100	50 - 200	-0.0030	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	205279	11.725	208380	11.728	99	50 - 200	-0.0030	+/-0.50	
2708-190619-OIL (A9F0684-01RE1)			Lab File ID: VC19070107.D			Analyzed: 07/01/19 13:08			
Pentafluorobenzene (ISTD)	358397	6.028	358431	6.028	100	50 - 200	0.0000	+/-0.50	
Chlorobenzene-d5 (ISTD)	529439	9.745	528045	9.751	100	50 - 200	-0.0060	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	218980	11.729	208380	11.728	105	50 - 200	0.0010	+/-0.50	
Duplicate (9070494-DUP1)			Lab File ID: VC19070110.D			Analyzed: 07/01/19 14:30			
Pentafluorobenzene (ISTD)	360649	6.029	358431	6.028	101	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	542147	9.746	528045	9.751	103	50 - 200	-0.0050	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	219492	11.723	208380	11.728	105	50 - 200	-0.0050	+/-0.50	
Matrix Spike (9070494-MS1)			Lab File ID: VC19070112.D			Analyzed: 07/01/19 15:25			
Pentafluorobenzene (ISTD)	352100	6.029	358431	6.028	98	50 - 200	0.0010	+/-0.50	
Chlorobenzene-d5 (ISTD)	531905	9.752	528045	9.751	101	50 - 200	0.0010	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	212695	11.729	208380	11.728	102	50 - 200	0.0010	+/-0.50	
Duplicate (9070494-DUP2)			Lab File ID: VC19070117.D			Analyzed: 07/01/19 17:43			
Pentafluorobenzene (ISTD)	355926	6.034	358431	6.028	99	50 - 200	0.0060	+/-0.50	
Chlorobenzene-d5 (ISTD)	535309	9.751	528045	9.751	101	50 - 200	0.0000	+/-0.50	
1,4-Dichlorobenzene-d4 (ISTD)	225631	11.728	208380	11.728	108	50 - 200	0.0000	+/-0.50	

HOLDING TIME SUMMARY

5035A/8260C

Laboratory: Apex Laboratories

SDG: A9F0684

Client: Hahn and Associates

Project: Mult 802 Decommissioning

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
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/26/19 18:50	7.20	2.00	06/28/19 19:17	2.02	14.00	*
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/26/19 18:50	7.20	2.00	07/01/19 13:08	4.76	14.00	*

Apex Laboratories

SDG: A9F0684

CLASS: GCMS

METHOD: EPA 8270D

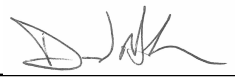
ANALYSES DATA PACKAGE COVER PAGE

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190619-OIL	A9F0684-01	Oil

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: 10/1/2019 2:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Oil

Analyte	MDL	MRL	Units
Acenaphthene	50.0	100	ug/kg
Acenaphthylene	50.0	100	ug/kg
Anthracene	50.0	100	ug/kg
Benz(a)anthracene	50.0	100	ug/kg
Benzo(a)pyrene	75.0	150	ug/kg
Benzo(b)fluoranthene	75.0	150	ug/kg
Benzo(k)fluoranthene	75.0	150	ug/kg
Benzo(g,h,i)perylene	50.0	100	ug/kg
Chrysene	50.0	100	ug/kg
Dibenz(a,h)anthracene	50.0	100	ug/kg
Fluoranthene	50.0	100	ug/kg
Fluorene	50.0	100	ug/kg
Indeno(1,2,3-cd)pyrene	50.0	100	ug/kg
1-Methylnaphthalene	100	200	ug/kg
2-Methylnaphthalene	100	200	ug/kg
Naphthalene	100	200	ug/kg
Phenanthrene	50.0	100	ug/kg
Pyrene	50.0	100	ug/kg
Carbazole	75.0	150	ug/kg
Dibenzofuran	50.0	100	ug/kg
4-Chloro-3-methylphenol	500	1000	ug/kg
2-Chlorophenol	250	500	ug/kg
2,4-Dichlorophenol	250	500	ug/kg
2,4-Dimethylphenol	250	500	ug/kg
2,4-Dinitrophenol	1250	2500	ug/kg
4,6-Dinitro-2-methylphenol	1250	2500	ug/kg
2-Methylphenol	125	250	ug/kg
3+4-Methylphenol(s)	125	250	ug/kg
2-Nitrophenol	500	1000	ug/kg
4-Nitrophenol	500	1000	ug/kg
Pentachlorophenol (PCP)	500	1000	ug/kg
Phenol	100	200	ug/kg
2,3,4,6-Tetrachlorophenol	250	500	ug/kg
2,3,5,6-Tetrachlorophenol	250	500	ug/kg
2,4,5-Trichlorophenol	250	500	ug/kg
2,4,6-Trichlorophenol	250	500	ug/kg
Bis(2-ethylhexyl)phthalate	1000	2000	ug/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Oil

Analyte	MDL	MRL	Units
Butyl benzyl phthalate	1000	2000	ug/kg
Diethylphthalate	250	500	ug/kg
Dimethylphthalate	250	500	ug/kg
Di-n-butylphthalate	250	500	ug/kg
Di-n-octyl phthalate	1000	2000	ug/kg
N-Nitrosodimethylamine	125	250	ug/kg
N-Nitroso-di-n-propylamine	125	250	ug/kg
N-Nitrosodiphenylamine	125	250	ug/kg
Bis(2-Chloroethoxy) methane	125	250	ug/kg
Bis(2-Chloroethyl) ether	125	250	ug/kg
2,2'-Oxybis(1-Chloropropane)	125	250	ug/kg
Hexachlorobenzene	50.0	100	ug/kg
Hexachlorobutadiene	125	250	ug/kg
Hexachlorocyclopentadiene	250	500	ug/kg
Hexachloroethane	125	250	ug/kg
2-Chloronaphthalene	50.0	100	ug/kg
1,2-Dichlorobenzene	125	250	ug/kg
1,3-Dichlorobenzene	125	250	ug/kg
1,4-Dichlorobenzene	125	250	ug/kg
1,2,4-Trichlorobenzene	125	250	ug/kg
4-Bromophenyl phenyl ether	125	250	ug/kg
4-Chlorophenyl phenyl ether	125	250	ug/kg
Aniline	250	500	ug/kg
4-Chloroaniline	125	250	ug/kg
2-Nitroaniline	1000	2000	ug/kg
3-Nitroaniline	1000	2000	ug/kg
4-Nitroaniline	1000	2000	ug/kg
Nitrobenzene	500	1000	ug/kg
2,4-Dinitrotoluene	500	1000	ug/kg
2,6-Dinitrotoluene	500	1000	ug/kg
Benzoic acid	6250	12500	ug/kg
Benzyl alcohol	250	500	ug/kg
Isophorone	125	250	ug/kg
Azobenzene (1,2-DPH)	125	250	ug/kg
Bis(2-Ethylhexyl) adipate	1250	2500	ug/kg
3,3'-Dichlorobenzidine	1000	2000	ug/kg
1,2-Dinitrobenzene	1250	2500	ug/kg

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Oil

Analyte	MDL	MRL	Units
1,3-Dinitrobenzene	1250	2500	ug/kg
1,4-Dinitrobenzene	1250	2500	ug/kg
Pyridine	250	500	ug/kg

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

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	I07011912.D
Sampled:	06/19/19 14:00	Prepared:	06/28/19 14:11	Analyzed:	07/01/19 20:22
		Preparation:	EPA 3580A	Initial/Final:	0.11 g / 5 mL

Batch: 9061508 Sequence: 9G01054 Calibration: A9E1009 Instrument: SV-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q
83-32-9	Acenaphthene	1000	3470000	D
208-96-8	Acenaphthylene	1000	6520000	D
120-12-7	Anthracene	1000	3280000	D
56-55-3	Benz(a)anthracene	1000	1870000	D
50-32-8	Benzo(a)pyrene	1000	1940000	D
205-99-2	Benzo(b)fluoranthene	1000	1620000	D
207-08-9	Benzo(k)fluoranthene	1000	806000	JD
191-24-2	Benzo(g,h,i)perylene	1000	1420000	D
218-01-9	Chrysene	1000	2320000	D
53-70-3	Dibenz(a,h)anthracene	1000	455000	U
206-44-0	Fluoranthene	1000	7220000	D
86-73-7	Fluorene	1000	6690000	D
193-39-5	Indeno(1,2,3-cd)pyrene	1000	1160000	D
90-12-0	1-Methylnaphthalene	1000	21800000	D
91-57-6	2-Methylnaphthalene	1000	43900000	D
91-20-3	Naphthalene	1000	131000000	D
85-01-8	Phenanthrene	1000	25500000	D
129-00-0	Pyrene	1000	8710000	D
86-74-8	Carbazole	1000	1070000	JD
132-64-9	Dibenzofuran	1000	2000000	D
59-50-7	4-Chloro-3-methylphenol	1000	4550000	U
95-57-8	2-Chlorophenol	1000	2270000	U
120-83-2	2,4-Dichlorophenol	1000	2270000	U
105-67-9	2,4-Dimethylphenol	1000	2270000	U
51-28-5	2,4-Dinitrophenol	1000	11400000	U
534-52-1	4,6-Dinitro-2-methylphenol	1000	11400000	U
95-48-7	2-Methylphenol	1000	1140000	U
NA	3+4-Methylphenol(s)	1000	1140000	U
88-75-5	2-Nitrophenol	1000	4550000	U
100-02-7	4-Nitrophenol	1000	4550000	U
87-86-5	Pentachlorophenol (PCP)	1000	4550000	U
108-95-2	Phenol	1000	909000	U
58-90-2	2,3,4,6-Tetrachlorophenol	1000	2270000	U
935-95-5	2,3,5,6-Tetrachlorophenol	1000	2270000	U
95-95-4	2,4,5-Trichlorophenol	1000	2270000	U
88-06-2	2,4,6-Trichlorophenol	1000	2270000	U
117-81-7	Bis(2-ethylhexyl)phthalate	1000	9090000	U
85-68-7	Butyl benzyl phthalate	1000	9090000	U
84-66-2	Diethylphthalate	1000	2270000	U
131-11-3	Dimethylphthalate	1000	2270000	U

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	I07011912.D
Sampled:	06/19/19 14:00	Prepared:	06/28/19 14:11	Analyzed:	07/01/19 20:22
		Preparation:	EPA 3580A	Initial/Final:	0.11 g / 5 mL

Batch: 9061508 Sequence: 9G01054 Calibration: A9E1009 Instrument: SV-GCMS9

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg)	Q
84-74-2	Di-n-butylphthalate	1000	2270000	U
117-84-0	Di-n-octyl phthalate	1000	9090000	U
62-75-9	N-Nitrosodimethylamine	1000	1140000	U
621-64-7	N-Nitroso-di-n-propylamine	1000	1140000	U
86-30-6	N-Nitrosodiphenylamine	1000	1140000	U
111-91-1	Bis(2-Chloroethoxy) methane	1000	1140000	U
111-44-4	Bis(2-Chloroethyl) ether	1000	1140000	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1000	1140000	U
118-74-1	Hexachlorobenzene	1000	455000	U
87-68-3	Hexachlorobutadiene	1000	1140000	U
77-47-4	Hexachlorocyclopentadiene	1000	2270000	U
67-72-1	Hexachloroethane	1000	1140000	U
91-58-7	2-Chloronaphthalene	1000	909000	U
95-50-1	1,2-Dichlorobenzene	1000	1140000	U
541-73-1	1,3-Dichlorobenzene	1000	1140000	U
106-46-7	1,4-Dichlorobenzene	1000	1140000	U
120-82-1	1,2,4-Trichlorobenzene	1000	1140000	U
101-55-3	4-Bromophenyl phenyl ether	1000	1140000	U
7005-72-3	4-Chlorophenyl phenyl ether	1000	1140000	U
62-53-3	Aniline	1000	2270000	U
106-47-8	4-Chloroaniline	1000	1140000	U
88-74-4	2-Nitroaniline	1000	9090000	U
99-09-2	3-Nitroaniline	1000	9090000	U
100-01-6	4-Nitroaniline	1000	9090000	U
98-95-3	Nitrobenzene	1000	4550000	U
121-14-2	2,4-Dinitrotoluene	1000	4550000	U
606-20-2	2,6-Dinitrotoluene	1000	4550000	U
65-85-0	Benzoic acid	1000	56800000	U
100-51-6	Benzyl alcohol	1000	2270000	U
78-59-1	Isophorone	1000	1140000	U
103-33-3	Azobenzene (1,2-DPH)	1000	1140000	U
103-23-1	Bis(2-Ethylhexyl) adipate	1000	11400000	U
91-94-1	3,3'-Dichlorobenzidine	1000	9090000	U
528-29-0	1,2-Dinitrobenzene	1000	11400000	U
99-65-0	1,3-Dinitrobenzene	1000	11400000	U
100-25-4	1,4-Dinitrobenzene	1000	11400000	U
110-86-1	Pyridine	1000	2270000	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	45500	88500	195	37 - 122	D
2-Fluorobiphenyl (Surr)	45500	48000	106	44 - 115	D

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

2708-190619-OIL

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	A9F0684-01	File ID:	I07011912.D
Sampled:	06/19/19 14:00	Prepared:	06/28/19 14:11	Analyzed:	07/01/19 20:22
		Preparation:	EPA 3580A	Initial/Final:	0.11 g / 5 mL

Batch: 9061508 Sequence: 9G01054 Calibration: A9E1009 Instrument: SV-GCMS9

SYSTEM MONITORING COMPOUND	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
Phenol-d6 (Surr)	45500	0.00		33 - 122	D
p-Terphenyl-d14 (Surr)	45500	53600	118	54 - 127	D
2-Fluorophenol (Surr)	45500	35000	77	35 - 115	D
2,4,6-Tribromophenol (Surr)	45500	0.00		39 - 132	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	115476	6.584	108363	6.584	
Naphthalene-d8 (ISTD)	440735	7.841	411652	7.841	
Acenaphthene-d10 (ISTD)	200689	9.612	197429	9.612	
Phenanthrene-d10 (ISTD)	373678	11.115	374232	11.115	
Chrysene-d12 (ISTD)	380732	14.848	356296	14.853	
Perylene-d12 (ISTD)	349379	18.314	334168	18.314	
Dibenz(a,h)anthracene-d14 (ISTD)	332293	20.694	329125	20.7	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8270D

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Batch: 9061508 Batch Matrix: Oil Preparation: EPA 3580A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9061508-BLK1	I07011910.D	06/28/19 14:11	
LCS	9061508-BS1	I07011911.D	06/28/19 14:11	
2708-190619-OIL (Dup)	9061508-DUP1	I07011913.D	06/28/19 14:11	
2708-190619-OIL	A9F0684-01	I07011912.D	06/28/19 14:11	

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

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	9061508-BLK1	File ID:	I07011910.D
Prepared:	06/28/19 14:11	Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL
Analyzed:	07/01/19 19:11	Instrument:	SV-GCMS9		
Batch:	9061508	Sequence:	9G01054	Calibration:	A9E1009

CAS NO.	COMPOUND	CONC. (ug/kg)	Q
83-32-9	Acenaphthene	50.0	U
208-96-8	Acenaphthylene	50.0	U
120-12-7	Anthracene	50.0	U
56-55-3	Benz(a)anthracene	50.0	U
50-32-8	Benzo(a)pyrene	75.0	U
205-99-2	Benzo(b)fluoranthene	75.0	U
207-08-9	Benzo(k)fluoranthene	75.0	U
191-24-2	Benzo(g,h,i)perylene	50.0	U
218-01-9	Chrysene	50.0	U
53-70-3	Dibenz(a,h)anthracene	50.0	U
206-44-0	Fluoranthene	50.0	U
86-73-7	Fluorene	50.0	U
193-39-5	Indeno(1,2,3-cd)pyrene	50.0	U
90-12-0	1-Methylnaphthalene	100	U
91-57-6	2-Methylnaphthalene	100	U
91-20-3	Naphthalene	100	U
85-01-8	Phenanthrene	50.0	U
129-00-0	Pyrene	50.0	U
86-74-8	Carbazole	75.0	U
132-64-9	Dibenzofuran	50.0	U
59-50-7	4-Chloro-3-methylphenol	500	U
95-57-8	2-Chlorophenol	250	U
120-83-2	2,4-Dichlorophenol	250	U
105-67-9	2,4-Dimethylphenol	250	U
51-28-5	2,4-Dinitrophenol	1250	U
534-52-1	4,6-Dinitro-2-methylphenol	1250	U
95-48-7	2-Methylphenol	125	U
NA	3+4-Methylphenol(s)	125	U
88-75-5	2-Nitrophenol	500	U
100-02-7	4-Nitrophenol	500	U
87-86-5	Pentachlorophenol (PCP)	500	U
108-95-2	Phenol	100	U
58-90-2	2,3,4,6-Tetrachlorophenol	250	U
935-95-5	2,3,5,6-Tetrachlorophenol	250	U
95-95-4	2,4,5-Trichlorophenol	250	U

METHOD BLANK DATA SHEET
EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	9061508-BLK1	File ID:	I07011910.D
Prepared:	06/28/19 14:11	Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL
Analyzed:	07/01/19 19:11	Instrument:	SV-GCMS9		
Batch:	9061508	Sequence:	9G01054	Calibration:	A9E1009

CAS NO.	COMPOUND	CONC. (ug/kg)	Q
88-06-2	2,4,6-Trichlorophenol	250	U
117-81-7	Bis(2-ethylhexyl)phthalate	1000	U
85-68-7	Butyl benzyl phthalate	1000	U
84-66-2	Diethylphthalate	250	U
131-11-3	Dimethylphthalate	250	U
84-74-2	Di-n-butylphthalate	250	U
117-84-0	Di-n-octyl phthalate	1000	U
62-75-9	N-Nitrosodimethylamine	125	U
621-64-7	N-Nitroso-di-n-propylamine	125	U
86-30-6	N-Nitrosodiphenylamine	125	U
111-91-1	Bis(2-Chloroethoxy) methane	125	U
111-44-4	Bis(2-Chloroethyl) ether	125	U
108-60-1	2,2'-Oxybis(1-Chloropropane)	125	U
118-74-1	Hexachlorobenzene	50.0	U
87-68-3	Hexachlorobutadiene	125	U
77-47-4	Hexachlorocyclopentadiene	250	U
67-72-1	Hexachloroethane	125	U
91-58-7	2-Chloronaphthalene	50.0	U
95-50-1	1,2-Dichlorobenzene	125	U
541-73-1	1,3-Dichlorobenzene	125	U
106-46-7	1,4-Dichlorobenzene	125	U
120-82-1	1,2,4-Trichlorobenzene	125	U
101-55-3	4-Bromophenyl phenyl ether	125	U
7005-72-3	4-Chlorophenyl phenyl ether	125	U
62-53-3	Aniline	250	U
106-47-8	4-Chloroaniline	125	U
88-74-4	2-Nitroaniline	1000	U
99-09-2	3-Nitroaniline	1000	U
100-01-6	4-Nitroaniline	1000	U
98-95-3	Nitrobenzene	500	U
121-14-2	2,4-Dinitrotoluene	500	U
606-20-2	2,6-Dinitrotoluene	500	U
65-85-0	Benzoic acid	6250	U
100-51-6	Benzyl alcohol	250	U
78-59-1	Isophorone	125	U

METHOD BLANK DATA SHEET
EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	9061508-BLK1	File ID:	I07011910.D
Prepared:	06/28/19 14:11	Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL
Analyzed:	07/01/19 19:11	Instrument:	SV-GCMS9		
Batch:	9061508	Sequence:	9G01054	Calibration:	A9E1009

CAS NO.	COMPOUND	CONC. (ug/kg)	Q
103-33-3	Azobenzene (1,2-DPH)	125	U
103-23-1	Bis(2-Ethylhexyl) adipate	1250	U
91-94-1	3,3'-Dichlorobenzidine	1000	U
528-29-0	1,2-Dinitrobenzene	1250	U
99-65-0	1,3-Dinitrobenzene	1250	U
100-25-4	1,4-Dinitrobenzene	1250	U
110-86-1	Pyridine	250	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg)	CONC (ug/kg)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	5000	4090	82	37 - 122	
2-Fluorobiphenyl (Surr)	5000	4060	81	44 - 115	
Phenol-d6 (Surr)	5000	3720	74	33 - 122	
p-Terphenyl-d14 (Surr)	5000	4170	83	54 - 127	
2-Fluorophenol (Surr)	5000	3970	79	35 - 115	
2,4,6-Tribromophenol (Surr)	5000	4350	87	39 - 132	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	120657	6.584	108363	6.584	
Naphthalene-d8 (ISTD)	463135	7.841	411652	7.841	
Acenaphthene-d10 (ISTD)	214779	9.612	197429	9.612	
Phenanthrene-d10 (ISTD)	401451	11.115	374232	11.115	
Chrysene-d12 (ISTD)	399515	14.848	356296	14.853	
Perylene-d12 (ISTD)	371048	18.314	334168	18.314	
Dibenz(a,h)anthracene-d14 (ISTD)	344390	20.694	329125	20.7	

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Oil		
Batch:	9061508	Laboratory ID:	9061508-BS1
Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	8000	8060	101	40 - 122
Acenaphthylene	8000	8010	100	32 - 132
Anthracene	8000	7650	96	47 - 123
Benz(a)anthracene	8000	7900	99	49 - 126
Benzo(a)pyrene	8000	8040	101	45 - 129
Benzo(b)fluoranthene	8000	7990	100	45 - 132
Benzo(k)fluoranthene	8000	7700	96	47 - 132
Benzo(g,h,i)perylene	8000	8180	102	43 - 134
Chrysene	8000	7640	95	50 - 124
Dibenz(a,h)anthracene	8000	7820	98	45 - 134
Fluoranthene	8000	7690	96	50 - 127
Fluorene	8000	7450	93	43 - 125
Indeno(1,2,3-cd)pyrene	8000	7630	95	45 - 133
1-Methylnaphthalene	8000	7710	96	40 - 120
2-Methylnaphthalene	8000	7740	97	38 - 122
Naphthalene	8000	7760	97	35 - 123
Phenanthrene	8000	7680	96	50 - 121
Pyrene	8000	7600	95	47 - 127
Carbazole	8000	7470	93	50 - 122
Dibenzofuran	8000	7990	100	44 - 120
4-Chloro-3-methylphenol	8000	7870	98	45 - 122
2-Chlorophenol	8000	8150	102	34 - 121
2,4-Dichlorophenol	8000	8310	104	40 - 122
2,4-Dimethylphenol	8000	8560	107	30 - 127
2,4-Dinitrophenol	8000	7640	96	5 - 137
4,6-Dinitro-2-methylphenol	8000	8340	104	29 - 132
2-Methylphenol	8000	8130	102	32 - 122
3+4-Methylphenol(s)	8000	8350	104	34 - 120
2-Nitrophenol	8000	8820	110	36 - 123
4-Nitrophenol	8000	7400	93	30 - 132

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Oil		
Batch:	9061508	Laboratory ID:	9061508-BS1
Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Pentachlorophenol (PCP)	8000	7200	90	25 - 133
Phenol	8000	8070	101	34 - 120
2,3,4,6-Tetrachlorophenol	8000	8050	101	44 - 125
2,3,5,6-Tetrachlorophenol	8000	7850	98	40 - 120
2,4,5-Trichlorophenol	8000	8360	104	41 - 124
2,4,6-Trichlorophenol	8000	8330	104	39 - 126
Bis(2-ethylhexyl)phthalate	8000	8580	107	51 - 133
Butyl benzyl phthalate	8000	8540	107	48 - 132
Diethylphthalate	8000	7630	95	50 - 124
Dimethylphthalate	8000	8010	100	48 - 124
Di-n-butylphthalate	8000	8180	102	51 - 128
Di-n-octyl phthalate	8000	8320	104	44 - 140
N-Nitrosodimethylamine	8000	7170	90	23 - 120
N-Nitroso-di-n-propylamine	8000	7660	96	36 - 120
N-Nitrosodiphenylamine	8000	7930	99	38 - 127
Bis(2-Chloroethoxy) methane	8000	7650	96	36 - 121
Bis(2-Chloroethyl) ether	8000	7480	93	31 - 120
2,2'-Oxybis(1-Chloropropane)	8000	7330	92	33 - 131
Hexachlorobenzene	8000	7620	95	44 - 122
Hexachlorobutadiene	8000	7820	98	32 - 123
Hexachlorocyclopentadiene	8000	9110	114	5 - 140
Hexachloroethane	8000	7710	96	28 - 120
2-Chloronaphthalene	8000	8020	100	41 - 120
1,2-Dichlorobenzene	8000	7690	96	33 - 120
1,3-Dichlorobenzene	8000	7560	95	30 - 120
1,4-Dichlorobenzene	8000	7770	97	31 - 120
1,2,4-Trichlorobenzene	8000	7550	94	34 - 120
4-Bromophenyl phenyl ether	8000	8000	100	46 - 124
4-Chlorophenyl phenyl ether	8000	7650	96	45 - 121
Aniline	8000	4380	55	7 - 120

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Oil		
Batch:	9061508	Laboratory ID:	9061508-BS1
Preparation:	EPA 3580A	Initial/Final:	1 g / 5 mL

COMPOUND	SPIKE ADDED (ug/kg)	LCS CONCENTRATION (ug/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
4-Chloroaniline	8000	2930	37	16 - 120
2-Nitroaniline	8000	8590	107	44 - 127
3-Nitroaniline	8000	7810	98	33 - 120
4-Nitroaniline	8000	8170	102	35 - 120
Nitrobenzene	8000	7700	96	34 - 122
2,4-Dinitrotoluene	8000	7970	100	48 - 126
2,6-Dinitrotoluene	8000	8530	107	46 - 124
Benzoic acid	16000	14700	92	5 - 140
Benzyl alcohol	8000	8140	102	29 - 122
Isophorone	8000	7530	94	30 - 122
Azobenzene (1,2-DPH)	8000	7830	98	39 - 125
Bis(2-Ethylhexyl) adipate	8000	8650	108	60 - 121
3,3'-Dichlorobenzidine	16000	45600	285 *	22 - 121
1,2-Dinitrobenzene	8000	8110	101	44 - 120
1,3-Dinitrobenzene	8000	8290	104	42 - 127
1,4-Dinitrobenzene	8000	8200	102	37 - 132
Pyridine	8000	6150	77	5 - 120

* = Values outside of QC limits

DUPLICATES

EPA 8270D

2708-190619-OIL

Laboratory: Apex Laboratories
Client: Hahn and Associates
Matrix: Oil
Batch: 9061508
Preparation: EPA 3580A
Source Sample Name: 2708-190619-OIL

SDG: A9F0684
Project: Mult 802 Decommissioning
Laboratory ID: 9061508-DUP1
Lab Source ID: A9F0684-01
Initial/Final: 0.1 g / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg)	C	DUPLICATE CONCENTRATION (ug/kg)	C	RPD %	Q	METHOD
Acenaphthene	30	3470000		3380000		3		EPA 8270D
Acenaphthylene	30	6520000		6460000		0.9		EPA 8270D
Anthracene	30	3280000		3310000		0.9		EPA 8270D
Benz(a)anthracene	30	1870000		2080000		11		EPA 8270D
Benzo(a)pyrene	30	1940000		1840000		6		EPA 8270D
Benzo(b)fluoranthene	30	1620000		1680000		4		EPA 8270D
Benzo(k)fluoranthene	30	806000		835000		4		EPA 8270D
Benzo(g,h,i)perylene	30	1420000		1360000		4		EPA 8270D
Chrysene	30	2320000		2140000		8		EPA 8270D
Dibenz(a,h)anthracene	30	267000		ND				EPA 8270D
Fluoranthene	30	7220000		7410000		3		EPA 8270D
Fluorene	30	6690000		6670000		0.3		EPA 8270D
Indeno(1,2,3-cd)pyrene	30	1160000		1220000		5		EPA 8270D
1-Methylnaphthalene	30	21800000		22200000		2		EPA 8270D
2-Methylnaphthalene	30	43900000		43600000		0.6		EPA 8270D
Naphthalene	30	131000000		129000000		2		EPA 8270D
Phenanthrene	30	25500000		25500000		0.2		EPA 8270D
Pyrene	30	8710000		8550000		2		EPA 8270D
Carbazole	30	1070000		1140000		6		EPA 8270D
Dibenzofuran	30	2000000		2010000		0.2		EPA 8270D
4-Chloro-3-methylphenol	30	3060000		ND				EPA 8270D
2-Chlorophenol	30	0.00		ND				EPA 8270D
2,4-Dichlorophenol	30	1380000		ND				EPA 8270D
2,4-Dimethylphenol	30	0.00		ND				EPA 8270D
2,4-Dinitrophenol	30	0.00		ND				EPA 8270D
4,6-Dinitro-2-methylphenol	30	0.00		ND				EPA 8270D
2-Methylphenol	30	0.00		ND				EPA 8270D
3+4-Methylphenol(s)	30	0.00		ND				EPA 8270D
2-Nitrophenol	30	0.00		ND				EPA 8270D
4-Nitrophenol	30	3590000		ND				EPA 8270D
Pentachlorophenol (PCP)	30	0.00		ND				EPA 8270D
Phenol	30	0.00		ND				EPA 8270D

DUPLICATES

EPA 8270D

2708-190619-OIL

Laboratory: Apex Laboratories
Client: Hahn and Associates
Matrix: Oil
Batch: 9061508
Preparation: EPA 3580A
Source Sample Name: 2708-190619-OIL

SDG: A9F0684
Project: Mult 802 Decommissioning
Laboratory ID: 9061508-DUP1
Lab Source ID: A9F0684-01
Initial/Final: 0.1 g / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg)	C	DUPLICATE CONCENTRATION (ug/kg)	C	RPD %	Q	METHOD
2,3,4,6-Tetrachlorophenol	30	0.00		ND				EPA 8270D
2,3,5,6-Tetrachlorophenol	30	0.00		ND				EPA 8270D
2,4,5-Trichlorophenol	30	0.00		ND				EPA 8270D
2,4,6-Trichlorophenol	30	0.00		ND				EPA 8270D
Bis(2-ethylhexyl)phthalate	30	262000		ND				EPA 8270D
Butyl benzyl phthalate	30	0.00		ND				EPA 8270D
Diethylphthalate	30	0.00		ND				EPA 8270D
Dimethylphthalate	30	0.00		ND				EPA 8270D
Di-n-butylphthalate	30	0.00		ND				EPA 8270D
Di-n-octyl phthalate	30	2640000		ND				EPA 8270D
N-Nitrosodimethylamine	30	0.00		ND				EPA 8270D
N-Nitroso-di-n-propylamine	30	0.00		ND				EPA 8270D
N-Nitrosodiphenylamine	30	572000		ND				EPA 8270D
Bis(2-Chloroethoxy) methane	30	0.00		ND				EPA 8270D
Bis(2-Chloroethyl) ether	30	0.00		ND				EPA 8270D
2,2'-Oxybis(1-Chloropropane)	30	0.00		ND				EPA 8270D
Hexachlorobenzene	30	0.00		ND				EPA 8270D
Hexachlorobutadiene	30	0.00		ND				EPA 8270D
Hexachlorocyclopentadiene	30	0.00		ND				EPA 8270D
Hexachloroethane	30	0.00		ND				EPA 8270D
2-Chloronaphthalene	30	652000		ND				EPA 8270D
1,2-Dichlorobenzene	30	0.00		ND				EPA 8270D
1,3-Dichlorobenzene	30	0.00		ND				EPA 8270D
1,4-Dichlorobenzene	30	0.00		ND				EPA 8270D
1,2,4-Trichlorobenzene	30	0.00		ND				EPA 8270D
4-Bromophenyl phenyl ether	30	0.00		ND				EPA 8270D
4-Chlorophenyl phenyl ether	30	0.00		ND				EPA 8270D
Aniline	30	0.00		ND				EPA 8270D
4-Chloroaniline	30	146000		ND				EPA 8270D
2-Nitroaniline	30	0.00		ND				EPA 8270D
3-Nitroaniline	30	0.00		ND				EPA 8270D
4-Nitroaniline	30	706000		ND				EPA 8270D

DUPLICATES

EPA 8270D

2708-190619-OIL

Laboratory: Apex Laboratories
Client: Hahn and Associates
Matrix: Oil
Batch: 9061508
Preparation: EPA 3580A
Source Sample Name: 2708-190619-OIL

SDG: A9F0684
Project: Mult 802 Decommissioning
Laboratory ID: 9061508-DUP1
Lab Source ID: A9F0684-01
Initial/Final: 0.1 g / 5 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg)	C	DUPLICATE CONCENTRATION (ug/kg)	C	RPD %	Q	METHOD
Nitrobenzene	30	0.00		ND				EPA 8270D
2,4-Dinitrotoluene	30	1560000		ND				EPA 8270D
2,6-Dinitrotoluene	30	353000		ND				EPA 8270D
Benzoic acid	30	32300000		ND				EPA 8270D
Benzyl alcohol	30	0.00		ND				EPA 8270D
Isophorone	30	0.00		ND				EPA 8270D
Azobenzene (1,2-DPH)	30	0.00		ND				EPA 8270D
Bis(2-Ethylhexyl) adipate	30	3380000		ND				EPA 8270D
3,3'-Dichlorobenzidine	30	0.00		ND				EPA 8270D
1,2-Dinitrobenzene	30	0.00		ND				EPA 8270D
1,3-Dinitrobenzene	30	254000		ND				EPA 8270D
1,4-Dinitrobenzene	30	3900000		ND				EPA 8270D
Pyridine	30	0.00		ND				EPA 8270D
1,4-Dichlorobenzene-d4 (ISTD)		2000		2000				EPA 8270D

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08056	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E08056-TUN1	I05081917.D	05/08/19 19:08
Initial Cal Blank	9E08056-ICB1	I05081918.D	05/08/19 19:35
Cal Standard	9E08056-CAL1	I05081919.D	05/08/19 20:12
Cal Standard	9E08056-CAL2	I05081920.D	05/08/19 20:48
Cal Standard	9E08056-CAL3	I05081921.D	05/08/19 21:25
Cal Standard	9E08056-CAL4	I05081922.D	05/08/19 22:01
Cal Standard	9E08056-CAL5	I05081923.D	05/08/19 22:38
Cal Standard	9E08056-CAL6	I05081924.D	05/08/19 23:14
Cal Standard	9E08056-CAL7	I05081925.D	05/08/19 23:50
Cal Standard	9E08056-CAL8	I05081926.D	05/09/19 00:26
Cal Standard	9E08056-CAL9	I05081927.D	05/09/19 01:01
Cal Standard	9E08056-CALA	I05081928.D	05/09/19 01:37
Initial Cal Check	9E08056-ICV1	I05081930.D	05/09/19 02:48

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

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01054	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9G01054-TUN2	I07011907.D	07/01/19 17:31
Calibration Check	9G01054-CCV2	I07011908.D	07/01/19 17:59
Calibration Blank	9G01054-CCB1	I07011909.D	07/01/19 18:35
Blank	9061508-BLK1	I07011910.D	07/01/19 19:11
LCS	9061508-BS1	I07011911.D	07/01/19 19:46
2708-190619-OIL	A9F0684-01	I07011912.D	07/01/19 20:22
2708-190619-OIL (Dup)	9061508-DUP1	I07011913.D	07/01/19 20:58

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

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	I05081917.D	Injection Date:	05/08/19
Instrument ID:	SV-GCMS9	Injection Time:	19:08
Sequence:	9E08056	Lab Sample ID:	9E08056-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	7.11	PASS
m/z 365	1 - 100% of m/z 198	2.92	PASS
m/z 441	Less than 24% of m/z 443	43.20	FAIL
m/z 442	50 - 200% of m/z 198	91.72	PASS
m/z 443	15 - 24% of m/z 442	20.20	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Lab File ID:	I07011907.D	Injection Date:	07/01/19
Instrument ID:	SV-GCMS9	Injection Time:	17:31
Sequence:	9G01054	Lab Sample ID:	9G01054-TUN2

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	0.38	PASS
m/z 197	Less than 2% of m/z 198	0.51	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.68	PASS
m/z 365	1 - 100% of m/z 198	3.44	PASS
m/z 441	Less than 24% of m/z 443	55.21	FAIL
m/z 442	50 - 200% of m/z 198	107.94	PASS
m/z 443	15 - 24% of m/z 442	19.57	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8270D

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1009 Date: 05/10/19 17:06 Instrument: SV-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.246362	Ave	13.87219	9.7507	7.072931E-02			20	
Acenaphthylene	1.978454	Ave	13.33308	9.573111	0.0608599			20	
Anthracene	1.06825	Ave	14.38712	11.30011	5.303121E-02			20	
Benz(a)anthracene	1.161693	Ave	5.391775	15.0358	9.314707E-02			20	
Benzo(a)pyrene	1.052651	XXX	11.81329	18.4065	0.1593326				
Benzo(b)fluoranthene	1.222586	XXX	9.234768	17.6298	0.1366649				
Benzo(k)fluoranthene	1.138397	XXX	12.73071	17.6977	0.1499183				
Benzo(g,h,i)perylene	1.073878	Ave	6.075218	21.4733	0.1473093			20	
Chrysene	1.071717	Ave	4.434002	15.121	0.1256095			20	
Dibenz(a,h)anthracene	0.9695725	Ave	6.841868	21.0005	0.1397927			20	
Fluoranthene	1.248412	Ave	12.71245	12.52533	4.516384E-02			20	
Fluorene	1.461705	Ave	10.98918	10.27013	5.132872E-02			20	
Indeno(1,2,3-cd)pyrene	1.098245	Ave	1.815585	20.9369	0.1565769			20	
1-Methylnaphthalene	0.7088084	Ave	10.96283	8.7613	6.246145E-02			20	
2-Methylnaphthalene	0.7525787	Ave	7.980811	8.661	0.0255116			20	
Naphthalene	0.9975462	Ave	12.5204	7.9701	8.103341E-02			20	
Phenanthrene	1.068375	Ave	13.94355	11.24767	5.196918E-02			20	
Pyrene	1.270483	Ave	14.04786	12.82278	5.314098E-02			20	
Carbazole	0.9362039	Ave	13.91313	10.18222	37.50003			20	
Dibenzofuran	1.696097	Ave	12.81337	9.922555	0.0510292			20	
4-Chloro-3-methylphenol	0.2730857	XXX	27.63199	8.5	0.0714853				
2-Chlorophenol	1.365821	Ave	3.539145	6.501	4.083644E-02			20	
2,4-Dichlorophenol	0.2377673	XXX	17.70644	7.809889	0.1048885				
2,4-Dimethylphenol	0.2837466	Ave	10.48648	7.604222	0.132719			20	
2,4-Dinitrophenol	0.1206814	XXX	47.41214	9.773857	0.1200607				
4,6-Dinitro-2-methylphenol	0.16763	XXX	34.03061	10.32113	0.1426601				
2-Methylphenol	1.035993	Ave	6.10587	6.9347	7.623988E-02			20	
3+4-Methylphenol(s)	1.288151	Ave	6.68875	7.0835	0.1181184			20	
2-Nitrophenol	0.189115	Ave	13.19256	7.5663	6.919828E-02			20	
4-Nitrophenol	0.2179687	XXX	28.71261	9.8415	0.1154792				
Pentachlorophenol (PCP)	0.1023087	XXX	26.74241	11.03775	4.677226E-02				
Phenol	1.808658	Ave	5.593781	6.3574	0.1392597			20	
2,3,4,6-Tetrachlorophenol	0.2799104	XXX	22.91784	10.0523	6.591509E-02				

INITIAL CALIBRATION DATA (Summary)

EPA 8270D

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1009 Date: 05/10/19 17:06 Instrument: SV-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
2,3,5,6-Tetrachlorophenol	0.2621185	XXX	27.45989	10.00878	6.369047E-02				
2,4,5-Trichlorophenol	0.3135775	XXX	23.07667	8.986556	0.0636193				
2,4,6-Trichlorophenol	0.3274987	XXX	25.5561	8.946111	5.780616E-02				
Bis(2-ethylhexyl)phthalate	0.7051378	Ave	13.69529	15.18638	5.498995E-02			20	
Butyl benzyl phthalate	0.5385928	XXX	25.47746	13.8463	6.957219E-02				
Diethylphthalate	1.355775	Ave	11.16852	10.13525	0.0608516			20	
Dimethylphthalate	1.399174	Ave	11.07178	9.4309	0.1625335			20	
Di-n-butylphthalate	1.213073	Ave	9.341261	11.79386	3.268408E-02			20	
Di-n-octyl phthalate	1.274584	XXX	23.84729	16.85238	8.408778E-02				
N-Nitrosodimethylamine	0.9994518	Ave	8.417646	4.1749	0.2456573			20	
N-Nitroso-di-n-propylamine	1.038343	Ave	7.40199	7.0852	0.1718028			20	
N-Nitrosodiphenylamine	0.617737	Ave	13.50961	10.37925	5.837758E-02			20	
Bis(2-Chloroethoxy) methane	0.4346998	Ave	8.397769	7.6893	0.1028808			20	
Bis(2-Chloroethyl) ether	1.522164	Ave	6.931483	6.435	9.991866E-02			20	
2,2'-Oxybis(1-Chloropropane)	1.85392	Ave	12.12271	6.9534	6.513491E-02			20	
Hexachlorobenzene	0.2442594	Ave	12.77258	10.84067	5.620959E-02			20	
Hexachlorobutadiene	0.166018	Ave	9.741395	8.0965	0.0548252			20	
Hexachlorocyclopentadiene	0.2556701	XXX	31.73959	8.827333	2.881535E-02				
Hexachloroethane	0.4701075	Ave	5.054182	7.1958	3.747133E-02			20	
2-Chloronaphthalene	1.20418	Ave	9.88966	9.151125	3.653769E-02			20	
1,2-Dichlorobenzene	1.407877	Ave	8.949005	6.8642	4.142653E-02			20	
1,3-Dichlorobenzene	1.562184	Ave	8.093414	6.6448	4.455832E-02			20	
1,4-Dichlorobenzene	1.459183	Ave	7.343118	6.7133	5.823049E-02			20	
1,2,4-Trichlorobenzene	0.3197364	Ave	11.19025	7.8916	4.780519E-02			20	
4-Bromophenyl phenyl ether	0.2198931	Ave	11.23192	10.7598	5.866323E-02			20	
4-Chlorophenyl phenyl ether	0.6829022	Ave	12.71016	10.26144	4.740166E-02			20	
Aniline	1.539056	Ave	16.89665	6.384111	7.810778E-02			20	
4-Chloroaniline	0.2556341	Ave	13.18349	8.0254	0.1733764			20	
2-Nitroaniline	0.4040472	Ave	13.26209	9.254857	0.1020166			20	
3-Nitroaniline	0.2422426	XXX	16.75589	8.054333	48.98985				
4-Nitroaniline	0.2995021	Ave	9.169683	10.29186	0.1663535			20	
Nitrobenzene	1.39112	Ave	7.217683	7.2535	0.1071721			20	
2,4-Dinitrotoluene	0.3672234	XXX	24.74855	9.902889	0.1393943				

INITIAL CALIBRATION DATA (Summary)

EPA 8270D

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

Calibration: A9E1009 Date: 05/10/19 17:06 Instrument: SV-GCMS9

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
2,6-Dinitrotoluene	0.3128654	Ave	12.47982	9.492625	0.1125431			20	
Benzoic acid	0.1697623	XXX	41.45533	7.755	0.8960374				
Benzyl alcohol	0.7337486	XXX	26.01605	6.830444	0.1320465				
Isophorone	0.7406279	Ave	4.835266	7.4862	0.1627337			20	
Azobenzene (1,2-DPH)	0.6933106	Ave	13.73276	10.42267	5.956098E-02			20	
Bis(2-Ethylhexyl) adipate	0.5272206	Ave	11.82306	14.017	5.882476E-02			20	
3,3'-Dichlorobenzidine	0.1639363	XXX	47.84628	14.99883	8.565957E-02				
1,2-Dinitrobenzene	0.1551751	Ave	7.871382	9.555429	0.181337			20	
1,3-Dinitrobenzene	0.2246904	Ave	10.69776	9.466571	0.1621668			20	
1,4-Dinitrobenzene	0.1817709	XXX	28.96064	9.38025	0.1133143				
Pyridine	1.52558	Ave	9.076905	4.1931	0.5452424			20	
Nitrobenzene-d5 (Surr)	1.414255	Ave	4.398612	7.2342	8.875683E-02			20	
2-Fluorobiphenyl (Surr)	1.499573	Ave	12.95656	9.024889	4.749493E-02			20	
Phenol-d6 (Surr)	1.700623	Ave	9.466828	6.344	0.1309956			20	
p-Terphenyl-d14 (Surr)	0.9800873	Ave	6.065597	13.0273	5.271297E-02			20	
2-Fluorophenol (Surr)	1.306892	Ave	11.05673	5.469	4.502382E-02			20	
2,4,6-Tribromophenol (Surr)	9.203934E-02	Ave	11.41246	10.518	6.801967E-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

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1009
Instrument: SV-GCMS9
Calibration Date: 05/10/19 17:06

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
Acenaphthene	20	1.288501	50	1.419587	100	1.406563	200	1.39259	500	1.371812	1000	1.306586
Acenaphthylene	20	1.863144	50	2.010742	100	2.189345	200	2.231277	500	2.22154	1000	2.159684
Anthracene	20	1.127751	50	1.14128	100	1.199078	200	1.200488	500	1.187601	1000	1.107107
Benz(a)anthracene	20	1.238278	50	1.146912	100	1.156658	200	1.2101	500	1.232807	1000	1.201567
Benzo(a)pyrene	20	0.831374	50	0.9495318	100	1.011327	200	1.09916	500	1.217697	1000	1.226816
Benzo(b)fluoranthene	20	1.040836	50	1.069929	100	1.095045	200	1.220618	500	1.317848	1000	1.340094
Benzo(k)fluoranthene	20	1.017948	50	1.107924	100	1.153141	200	1.268315	500	1.343987	1000	1.310869
Benzo(b+k)fluoranthene(s)	40	1.029392	100	1.129669	200	1.170828	400	1.277505	1000	1.367083	2000	1.355767
Benzo(g,h,i)perylene	20	1.007868	50	1.040986	100	1.074444	200	1.126319	500	1.174934	1000	1.133316
Chrysene	20	1.103678	50	1.076118	100	1.102162	200	1.124544	500	1.126938	1000	1.0793
Dibenz(a,h)anthracene	20	0.9716498	50	0.9790812	100	1.003394	200	1.034606	500	1.04517	1000	0.998845
Fluoranthene	20	1.230029	50	1.262474	100	1.342926	200	1.395811	500	1.432339	1000	1.352739
Fluorene	20	1.519659	50	1.512221	100	1.603912	200	1.583846	500	1.575582	1000	1.45017
Indeno(1,2,3-cd)pyrene	20	1.127763	50	1.08833	100	1.108311	200	1.085168	500	1.136381	1000	1.091439
1-Methylnaphthalene	20	0.7161269	50	0.7230382	100	0.7606168	200	0.7740158	500	0.8013938	1000	0.7657356
2-Methylnaphthalene	20	0.6944655	50	0.7202952	100	0.7636913	200	0.7871127	500	0.8385005	1000	0.8146151
Naphthalene	20	1.068125	50	1.095144	100	1.106694	200	1.09884	500	1.083677	1000	1.048114
Phenanthrene	20	1.134929	50	1.183318	100	1.186359	200	1.183071	500	1.169809	1000	1.091993
Pyrene	20	1.317504	50	1.337785	100	1.404394	200	1.440178	500	1.421049	1000	1.349333
Carbazole	20	0.8810276	50	0.9494272	100	1.015353	200	1.061283	500	1.074229	1000	1.02904
Dibenzofuran	20	1.47976	50	1.738961	100	1.834585	200	1.920675	500	1.943877	1000	1.835112
4-Chloro-3-methylphenol	20	~~0.1122062~~	50	~~0.1230065~~	100	0.1262715	200	0.1919174	500	0.2659416	1000	0.3083995
2-Chlorophenol	20	1.314571	50	1.287184	100	1.360969	200	1.367597	500	1.432557	1000	1.399386
2,4-Dichlorophenol	20	~~0.1483808~~	50	0.1514651	100	0.1950366	200	0.2221574	500	0.2530891	1000	0.2715491
2,4-Dimethylphenol	20	~~0.2241958~~	50	0.2187544	100	0.2603808	200	0.2803587	500	0.3010278	1000	0.3104036
2,4-Dinitrophenol	20	~~0~~	50	~~0~~	100	~~1.038239E-02~~	200	2.957144E-02	500	6.577932E-02	1000	0.1079237
4,6-Dinitro-2-methylphenol	20	~~0~~	50	~~3.688344E-02~~	100	0.063634	200	0.1025415	500	0.1526732	1000	0.1872498
2-Methylphenol	20	1.00711	50	0.9144437	100	1.105322	200	1.011356	500	1.117853	1000	1.061494
3+4-Methylphenol(s)	20	1.187918	50	1.142116	100	1.289658	200	1.31547	500	1.405096	1000	1.34953
2-Nitrophenol	20	0.1412325	50	0.1586655	100	0.1719994	200	0.1975182	500	0.2268856	1000	0.2034607
4-Nitrophenol	20	~~7.502884E-02~~	50	~~6.883775E-02~~	100	0.1087639	200	0.1442678	500	0.1998079	1000	0.2380584

INITIAL CALIBRATION DATA

EPA 8270D

Laboratory: Apex Laboratories

Client: Hahn and Associates

Calibration: A9E1009

SDG: A9F0684

Project: Mult 802 Decommissioning

Instrument: SV-GCMS9

Calibration Date: 05/10/19 17:06

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
Pentachlorophenol (PCP)	20	~~0.1155115~~	50	~~6.994367E-02~~	100	5.531214E-02	200	6.709891E-02	500	9.704437E-02	1000	0.1095413
Phenol	20	1.607183	50	1.682112	100	1.785201	200	1.828256	500	1.90949	1000	1.842957
2,3,4,6-Tetrachlorophenol	20	0.1526598	50	0.1844172	100	0.2538662	200	0.2928592	500	0.32725	1000	0.3393464
2,3,5,6-Tetrachlorophenol	20	~~9.237655E-02~~	50	0.1223782	100	0.1637738	200	0.2411398	500	0.2918818	1000	0.3153475
2,4,5-Trichlorophenol	20	~~0.1799825~~	50	0.1840772	100	0.2253983	200	0.259576	500	0.3397883	1000	0.3769458
2,4,6-Trichlorophenol	20	~~0.1491903~~	50	0.1677601	100	0.2172766	200	0.2906159	500	0.3703367	1000	0.3945046
Bis(2-ethylhexyl)phthalate	20	~~0.3788428~~	50	~~0.4304644~~	100	0.502371	200	0.6149371	500	0.7295725	1000	0.7456653
Butyl benzyl phthalate	20	0.3139959	50	0.3724338	100	0.395015	200	0.4909578	500	0.561584	1000	0.6001846
Diethylphthalate	20	1.340544	50	1.40208	100	1.484431	200	1.508918	500	1.456733	1000	1.378609
Dimethylphthalate	20	1.304548	50	1.473468	100	1.54212	200	1.564146	500	1.574707	1000	1.490367
Di-n-butylphthalate	20	~~1.054631~~	50	1.069906	100	1.202292	200	1.27455	500	1.355582	1000	1.325249
Di-n-octyl phthalate	20	~~0.5162564~~	50	~~0.5928279~~	100	0.6860704	200	0.9387831	500	1.249867	1000	1.418885
N-Nitrosodimethylamine	20	1.210628	50	0.9731538	100	0.974643	200	0.9311297	500	0.9375772	1000	0.9187962
N-Nitroso-di-n-propylamine	20	1.076114	50	1.073166	100	1.092687	200	1.10156	500	1.119614	1000	1.066619
N-Nitrosodiphenylamine	20	0.5463807	50	0.5694775	100	0.6706257	200	0.7125663	500	0.7210734	1000	0.6544348
Bis(2-Chloroethoxy) methane	20	0.4094011	50	0.4633102	100	0.4797537	200	0.460457	500	0.473139	1000	0.4511814
Bis(2-Chloroethyl) ether	20	1.678808	50	1.527145	100	1.547209	200	1.557647	500	1.532854	1000	1.567433
2,2'-Oxybis(1-Chloropropane)	20	1.993257	50	1.994095	100	2.12341	200	2.027618	500	2.009041	1000	1.880868
Hexachlorobenzene	20	0.2330417	50	0.2783436	100	0.2804081	200	0.2604668	500	0.2659926	1000	0.2488493
Hexachlorobutadiene	20	0.1854219	50	0.1720377	100	0.175507	200	0.1750512	500	0.1796679	1000	0.1706737
Hexachlorocyclopentadiene	20	~~2.428679E-02~~	50	0.1006221	100	0.1502935	200	0.2171563	500	0.2812816	1000	0.3091032
Hexachloroethane	20	0.4935101	50	0.4806035	100	0.4810039	200	0.4791992	500	0.5047321	1000	0.4718837
2-Chloronaphthalene	20	1.065583	50	1.120441	100	1.219931	200	1.313217	500	1.372841	1000	1.297531
1,2-Dichlorobenzene	20	1.391437	50	1.480723	100	1.532497	200	1.531708	500	1.54352	1000	1.441976
1,3-Dichlorobenzene	20	1.764408	50	1.575956	100	1.688793	200	1.623242	500	1.642191	1000	1.568358
1,4-Dichlorobenzene	20	1.513722	50	1.546942	100	1.518996	200	1.558894	500	1.55659	1000	1.498483
1,2,4-Trichlorobenzene	20	0.3312033	50	0.342361	100	0.3540885	200	0.3497403	500	0.3512451	1000	0.3360108
4-Bromophenyl phenyl ether	20	0.2189111	50	0.2219057	100	0.2460077	200	0.2401504	500	0.2493611	1000	0.2342623
4-Chlorophenyl phenyl ether	20	0.6297218	50	0.7293402	100	0.7569097	200	0.7838675	500	0.7622339	1000	0.708171
Aniline	20	~~1.936481~~	50	1.733996	100	1.841108	200	1.763659	500	1.793414	1000	1.388555
4-Chloroaniline	20	0.2961118	50	0.2936727	100	0.2846738	200	0.27282	500	0.2289061	1000	0.2636523

INITIAL CALIBRATION DATA

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1009
Instrument: SV-GCMS9
Calibration Date: 05/10/19 17:06

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
2-Nitroaniline	20	~~8.587116E-02~~	50	~~0.129007~~	100	~~0.1619318~~	200	0.2871081	500	0.3920173	1000	0.435502
3-Nitroaniline	20	~~0.1210003~~	50	~~0.1550124~~	100	~~0.1898135~~	200	0.2568432	500	0.2979709	1000	0.2738699
4-Nitroaniline	20	~~0.1717423~~	50	~~0.2158616~~	100	~~0.2287475~~	200	0.3129678	500	0.3374728	1000	0.326831
Nitrobenzene	20	1.478783	50	1.409383	100	1.486975	200	1.519155	500	1.461204	1000	1.390457
2,4-Dinitrotoluene	20	~~0.1795488~~	50	0.1842472	100	0.2569641	200	0.3623215	500	0.4347267	1000	0.4479817
2,6-Dinitrotoluene	20	~~0.134011~~	50	~~0.1776184~~	100	0.237539	200	0.3087666	500	0.3578841	1000	0.3501717
Benzoic acid	40	~~0~~	100	~~6.728927E-03~~	200	~~1.234135E-02~~	400	~~1.925137E-02~~	1000	5.611395E-02	2000	0.1323593
Benzyl alcohol	20	~~0.3441469~~	50	0.4212107	100	0.501601	200	0.5794619	500	0.72107	1000	0.7850446
Isophorone	20	0.6732373	50	0.7113805	100	0.716058	200	0.7557014	500	0.7964985	1000	0.7778429
Azobenzene (1,2-DPH)	20	0.6298181	50	0.6864676	100	0.7844185	200	0.8002232	500	0.8012009	1000	0.7384806
Benzidine	40	~~0.5985291~~	100	~~0.2982892~~	200	~~0.325898~~	400	0.4124002	1000	0.3544726	2000	0.2808198
Bis(2-Ethylhexyl) adipate	20	0.635031	50	0.4416961	100	0.4385854	200	0.4728715	500	0.5076291	1000	0.5356732
3,3'-Dichlorobenzidine	40	~~0.275493~~	100	~~0.2664131~~	200	~~0.2975086~~	400	0.3011133	1000	0.211599	2000	0.14549
1,2-Dinitrobenzene	20	~~4.683881E-02~~	50	~~0.0882143~~	100	~~0.1055822~~	200	0.1418205	500	0.1608034	1000	0.1702692
1,3-Dinitrobenzene	20	~~0.0477062~~	50	~~0.1048713~~	100	~~0.139325~~	200	0.1724933	500	0.2276633	1000	0.2437779
1,4-Dinitrobenzene	20	~~5.030835E-02~~	50	~~5.150083E-02~~	100	7.996115E-02	200	0.1238737	500	0.177304	1000	0.2047553
Pyridine	20	1.39231	50	1.405629	100	1.367027	200	1.433441	500	1.518192	1000	1.469142
2,3,5-Trimethylnaphthalene	20	1.268551	50	1.270524	100	1.338324	200	1.303468	500	1.307919	1000	1.207273
2,6-Dimethylnaphthalene	20	1.11459	50	1.215284	100	1.31354	200	1.402747	500	1.409564	1000	1.340618
Benzo(e)pyrene	20	1.085456	50	1.132828	100	1.183546	200	1.245102	500	1.321292	1000	1.297193
1,1'-Biphenyl	20	1.43162	50	1.544515	100	1.686134	200	1.811608	500	1.920156	1000	1.818692
Perylene	20	1.029276	50	0.9863375	100	1.041456	200	1.03607	500	1.098192	1000	1.079829
Nitrobenzene-d5 (Surr)	20	1.553028	50	1.376274	100	1.414972	200	1.465448	500	1.447388	1000	1.395719
2-Fluorobiphenyl (Surr)	20	1.342713	50	1.501853	100	1.633133	200	1.702499	500	1.728598	1000	1.620679
Phenol-d6 (Surr)	20	1.463061	50	1.475944	100	1.583384	200	1.633634	500	1.720105	1000	1.694929
p-Terphenyl-d14 (Surr)	20	0.975051	50	0.9304463	100	1.015495	200	1.036821	500	1.060335	1000	1.023652
2-Fluorophenol (Surr)	20	1.132016	50	1.060195	100	1.213847	200	1.246799	500	1.324304	1000	1.304523
2,4,6-Tribromophenol (Surr)	20	~~6.639108E-02~~	50	7.065921E-02	100	8.120293E-02	200	9.200568E-02	500	0.1017594	1000	0.1038965

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1009
Instrument: SV-GCMS9
Matrix:
Calibration Date: 05/10/19 17:06

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	2000	1.222855	4000	1.106924	6000	1.010154	8000	0.9380463				
Acenaphthylene	2000	1.960702	4000	1.71094	6000	1.458714	8000	~~1.265118~~				
Anthracene	2000	1.003325	4000	0.8786621	6000	0.7689579	8000	~~0.7009088~~				
Benz(a)anthracene	2000	1.160517	4000	1.142753	6000	1.081444	8000	1.045892				
Benzo(a)pyrene	2000	1.147208	4000	1.065859	6000	1.009417	8000	0.9681162				
Benzo(b)fluoranthene	2000	1.329545	4000	1.268328	6000	1.25114	8000	1.292479				
Benzo(k)fluoranthene	2000	1.20272	4000	1.090877	6000	0.9800293	8000	0.9081583				
Benzo(b+k)fluoranthene(s)	4000	1.294432	8000	1.210313	12000	1.145537	16000	1.109431				
Benzo(g,h,i)perylene	2000	1.118641	4000	1.079451	6000	1.010582	8000	0.9722367				
Chrysene	2000	1.062123	4000	1.050158	6000	1.011204	8000	0.9809463				
Dibenz(a,h)anthracene	2000	1.007409	4000	0.9374441	6000	0.8774625	8000	0.8406638				
Fluoranthene	2000	1.198634	4000	1.08033	6000	0.9404231	8000	~~0.8869122~~				
Fluorene	2000	1.306492	4000	1.141754	6000	~~1.005022~~	8000	~~0.9276221~~				
Indeno(1,2,3-cd)pyrene	2000	1.081306	4000	1.100069	6000	1.079962	8000	1.083719				
1-Methylnaphthalene	2000	0.7168087	4000	0.6691839	6000	0.6008326	8000	0.5603313				
2-Methylnaphthalene	2000	0.7727834	4000	0.7348567	6000	0.6468876	8000	~~0.6157905~~				
Naphthalene	2000	0.982297	4000	0.9083996	6000	0.8158451	8000	0.7683261				
Phenanthrene	2000	1.004201	4000	0.8809291	6000	0.7807684	8000	~~0.7273861~~				
Pyrene	2000	1.182555	4000	1.055062	6000	0.9264856	8000	~~0.8683642~~				
Carbazole	2000	0.9197705	4000	0.8243731	6000	0.6713318	8000	~~0.5631641~~				
Dibenzofuran	2000	1.689888	4000	1.501242	6000	1.320772	8000	~~1.198853~~				
4-Chloro-3-methylphenol	2000	0.3181131	4000	0.3406578	6000	0.3199417	8000	0.3134429				
2-Chlorophenol	2000	1.423161	4000	1.393311	6000	1.364312	8000	1.315164				
2,4-Dichlorophenol	2000	0.2770721	4000	0.2777324	6000	0.2482813	8000	0.2435223				
2,4-Dimethylphenol	2000	0.3111687	4000	0.306541	6000	0.2855238	8000	0.2795605				
2,4-Dinitrophenol	2000	0.1240746	4000	0.1643289	6000	0.1747016	8000	0.1783903				
4,6-Dinitro-2-methylphenol	2000	0.1923731	4000	0.2155312	6000	0.2141173	8000	0.2129201				
2-Methylphenol	2000	1.063794	4000	1.078184	6000	1.035697	8000	0.9646772				
3+4-Methylphenol(s)	2000	1.354181	4000	1.357124	6000	1.282245	8000	1.198168				
2-Nitrophenol	2000	0.2014452	4000	0.2030443	6000	0.1945933	8000	0.1923049				
4-Nitrophenol	2000	0.2340118	4000	0.272251	6000	0.2740057	8000	0.2725831				

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1009
Instrument: SV-GCMS9
Matrix:
Calibration Date: 05/10/19 17:06

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
Pentachlorophenol (PCP)	2000	0.1143396	4000	0.1277543	6000	0.1252676	8000	0.1221115				
Phenol	2000	1.896969	4000	1.899182	6000	1.877133	8000	1.758094				
2,3,4,6-Tetrachlorophenol	2000	0.3279991	4000	0.3252399	6000	0.3048896	8000	0.290577				
2,3,5,6-Tetrachlorophenol	2000	0.3109245	4000	0.3167555	6000	0.3048764	8000	0.2919889				
2,4,5-Trichlorophenol	2000	0.3792326	4000	0.3753727	6000	0.3481242	8000	0.3336824				
2,4,6-Trichlorophenol	2000	0.3934518	4000	0.3887167	6000	0.371188	8000	0.3536381				
Bis(2-ethylhexyl)phthalate	2000	0.7515566	4000	0.7829898	6000	0.7668836	8000	0.7471264				
Butyl benzyl phthalate	2000	0.6211495	4000	0.673607	6000	0.675999	8000	0.681001				
Diethylphthalate	2000	1.215101	4000	1.059783	6000	~~0.9303606~~	8000	~~0.8566059~~				
Dimethylphthalate	2000	1.401869	4000	1.296864	6000	1.192857	8000	1.150796				
Di-n-butylphthalate	2000	1.189422	4000	1.074511	6000	~~0.9489944~~	8000	~~0.8745828~~				
Di-n-octyl phthalate	2000	1.467974	4000	1.530108	6000	1.46188	8000	1.443103				
N-Nitrosodimethylamine	2000	0.9762372	4000	1.00744	6000	1.029661	8000	1.035252				
N-Nitroso-di-n-propylamine	2000	1.037705	4000	0.9990181	6000	0.9296044	8000	0.887346				
N-Nitrosodiphenylamine	2000	0.5747862	4000	0.4925515	6000	~~0.4307178~~	8000	~~0.4069141~~				
Bis(2-Chloroethoxy) methane	2000	0.4283134	4000	0.4194047	6000	0.3862396	8000	0.3757984				
Bis(2-Chloroethyl) ether	2000	1.61302	4000	1.507799	6000	1.355938	8000	1.333792				
2,2'-Oxybis(1-Chloropropane)	2000	1.829203	4000	1.678026	6000	1.566936	8000	1.436743				
Hexachlorobenzene	2000	0.2334501	4000	0.2089622	6000	0.18882	8000	~~0.177374~~				
Hexachlorobutadiene	2000	0.1669681	4000	0.1565817	6000	0.1427606	8000	0.1355106				
Hexachlorocyclopentadiene	2000	0.3148038	4000	0.3217185	6000	0.3129752	8000	0.2930771				
Hexachloroethane	2000	0.4664723	4000	0.4523443	6000	0.4482731	8000	0.4230528				
2-Chloronaphthalene	2000	1.193474	4000	1.050421	6000	~~0.9557868~~	8000	~~0.8778734~~				
1,2-Dichlorobenzene	2000	1.412957	4000	1.314003	6000	1.257389	8000	1.172556				
1,3-Dichlorobenzene	2000	1.531631	4000	1.453453	6000	1.42144	8000	1.352365				
1,4-Dichlorobenzene	2000	1.445139	4000	1.380193	6000	1.317908	8000	1.254964				
1,2,4-Trichlorobenzene	2000	0.3154796	4000	0.2942943	6000	0.2679857	8000	0.2549555				
4-Bromophenyl phenyl ether	2000	0.2222988	4000	0.2034246	6000	0.1869045	8000	0.175705				
4-Chlorophenyl phenyl ether	2000	0.6557002	4000	0.5898911	6000	0.5302842	8000	~~0.4866619~~				
Aniline	2000	1.120234	4000	1.260284	6000	1.39553	8000	1.554727				
4-Chloroaniline	2000	0.2089627	4000	0.2255068	6000	0.2118092	8000	0.2702255				

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Calibration: A9E1009
Instrument: SV-GCMS9
Matrix:
Calibration Date: 05/10/19 17:06

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
2-Nitroaniline	2000	0.4291441	4000	0.4333246	6000	0.4265592	8000	0.4246749				
3-Nitroaniline	2000	0.2254168	4000	0.2021134	6000	0.1972412	8000	~~0.2228819~~				
4-Nitroaniline	2000	0.287495	4000	0.2936802	6000	0.2768043	8000	0.2612633				
Nitrobenzene	2000	1.353928	4000	1.327597	6000	1.275361	8000	1.208355				
2,4-Dinitrotoluene	2000	0.4353404	4000	0.4297613	6000	0.3941739	8000	0.3594939				
2,6-Dinitrotoluene	2000	0.3369258	4000	0.3240152	6000	0.3019617	8000	0.285659				
Benzoic acid	4000	0.1490699	8000	0.2179232	12000	0.2258705	16000	0.2372372				
Benzyl alcohol	2000	0.8528164	4000	0.9348581	6000	0.9246661	8000	0.883009				
Isophorone	2000	0.7565157	4000	0.7587814	6000	0.7284766	8000	0.7317872				
Azobenzene (1,2-DPH)	2000	0.6682561	4000	0.5947416	6000	0.5361888	8000	~~0.5056705~~				
Benzidine	4000	0.1934969	8000	0.3139192	12000	0.340993	16000	0.3675681				
Bis(2-Ethylhexyl) adipate	2000	0.5432156	4000	0.5707897	6000	0.5639242	8000	0.5627904				
3,3'-Dichlorobenzidine	4000	0.116084	8000	0.1017726	12000	0.1075586	16000	~~0.1177742~~				
1,2-Dinitrobenzene	2000	0.1639202	4000	0.1621875	6000	0.1492804	8000	0.1379443				
1,3-Dinitrobenzene	2000	0.2344492	4000	0.2397918	6000	0.2313103	8000	0.2233469				
1,4-Dinitrobenzene	2000	0.2064962	4000	0.2207801	6000	0.2204162	8000	0.2205809				
Pyridine	2000	1.53678	4000	1.706171	6000	1.7048	8000	1.722311				
2,3,5-Trimethylnaphthalene	2000	1.087459	4000	0.9300448	6000	~~0.816687~~	8000	~~0.7644802~~				
2,6-Dimethylnaphthalene	2000	1.236377	4000	1.084785	6000	0.9655195	8000	~~0.890492~~				
Benzo(e)pyrene	2000	1.261601	4000	1.194903	6000	1.135328	8000	1.100916				
1,1'-Biphenyl	2000	1.679269	4000	1.477851	6000	~~1.309359~~	8000	~~1.20655~~				
Perylene	2000	1.033019	4000	0.976321	6000	0.9367363	8000	0.9079865				
Nitrobenzene-d5 (Surr)	2000	1.393371	4000	1.394111	6000	1.376127	8000	1.326111				
2-Fluorobiphenyl (Surr)	2000	1.495217	4000	1.313224	6000	1.158242	8000	~~1.073407~~				
Phenol-d6 (Surr)	2000	1.792311	4000	1.893767	6000	1.901965	8000	1.847127				
p-Terphenyl-d14 (Surr)	2000	1.00833	4000	0.9646131	6000	0.9057975	8000	0.880332				
2-Fluorophenol (Surr)	2000	1.390615	4000	1.440466	6000	1.492937	8000	1.463219				
2,4,6-Tribromophenol (Surr)	2000	9.822309E-02	4000	9.740403E-02	6000	9.328247E-02	8000	8.992075E-02				

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I05081930.D		
Sequence:	9E08056	Inject Date:	05/09/19
Lab Sample ID:	9E08056-ICV1	Inject Time:	02:48

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	1000	1040	3.9	70 - 130
Acenaphthylene	1000	1090	8.9	70 - 130
Anthracene	1000	1030	2.7	70 - 130
Benz(a)anthracene	1000	1040	4.5	70 - 130
Benzo(a)pyrene	1000	1030	2.6	70 - 130
Benzo(b)fluoranthene	1000	1040	3.5	70 - 130
Benzo(k)fluoranthene	1000	1010	0.9	70 - 130
Benzo(g,h,i)perylene	1000	1060	5.6	70 - 130
Chrysene	1000	1000	0.005	70 - 130
Dibenz(a,h)anthracene	1000	1030	2.8	70 - 130
Fluoranthene	1000	1070	6.8	70 - 130
Fluorene	1000	981	-1.9	70 - 130
Indeno(1,2,3-cd)pyrene	1000	987	-1.3	70 - 130
1-Methylnaphthalene	1000	1040	4.2	70 - 130
2-Methylnaphthalene	1000	1060	6.2	70 - 130
Naphthalene	1000	1010	1.0	70 - 130
Phenanthrene	1000	1010	0.7	70 - 130
Pyrene	1000	1040	4.1	70 - 130
Carbazole	1000	1080	8.4	70 - 130
Dibenzofuran	1000	1070	7.4	70 - 130
4-Chloro-3-methylphenol	1000	1010	0.7	70 - 130
2-Chlorophenol	1000	1030	2.8	70 - 130
2,4-Dichlorophenol	1000	1030	3.5	70 - 130
2,4-Dimethylphenol	1000	1030	2.9	70 - 130
2,4-Dinitrophenol	1000	947	-5.3	70 - 130
4,6-Dinitro-2-methylphenol	1000	1160	16.4	70 - 130
2-Methylphenol	1000	1040	4.3	70 - 130
3+4-Methylphenol(s)	1000	1050	5.3	70 - 130
2-Nitrophenol	1000	1110	11.2	70 - 130
4-Nitrophenol	1000	1030	3.5	70 - 130
Pentachlorophenol (PCP)	1000	1040	3.8	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I05081930.D		
Sequence:	9E08056	Inject Date:	05/09/19
Lab Sample ID:	9E08056-ICV1	Inject Time:	02:48

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Phenol	1000	1060	5.5	70 - 130
2,3,4,6-Tetrachlorophenol	1000	1060	5.8	70 - 130
2,3,5,6-Tetrachlorophenol	1000	1040	3.6	70 - 130
2,4,5-Trichlorophenol	1000	1090	8.7	70 - 130
2,4,6-Trichlorophenol	1000	1040	4.3	70 - 130
Bis(2-ethylhexyl)phthalate	1000	1060	6.0	70 - 130
Butyl benzyl phthalate	1000	1060	6.2	70 - 130
Diethylphthalate	1000	1010	0.9	70 - 130
Dimethylphthalate	1000	1060	6.2	70 - 130
Di-n-butylphthalate	1000	1080	7.6	70 - 130
Di-n-octyl phthalate	1000	1010	1.3	70 - 130
N-Nitrosodimethylamine	1000	980	-2.0	70 - 130
N-Nitroso-di-n-propylamine	1000	1030	3.4	70 - 130
N-Nitrosodiphenylamine	1000	1040	4.1	70 - 130
Bis(2-Chloroethoxy) methane	1000	1030	3.0	70 - 130
Bis(2-Chloroethyl) ether	1000	1040	3.9	70 - 130
2,2'-Oxybis(1-Chloropropane)	1000	986	-1.4	70 - 130
Hexachlorobenzene	1000	1010	0.9	70 - 130
Hexachlorobutadiene	1000	1020	2.3	70 - 130
Hexachlorocyclopentadiene	1000	1070	7.2	70 - 130
Hexachloroethane	1000	1000	0.3	70 - 130
2-Chloronaphthalene	1000	1080	7.6	70 - 130
1,2-Dichlorobenzene	1000	1020	2.2	70 - 130
1,3-Dichlorobenzene	1000	989	-1.1	70 - 130
1,4-Dichlorobenzene	1000	1010	0.8	70 - 130
1,2,4-Trichlorobenzene	1000	1010	1.2	70 - 130
4-Bromophenyl phenyl ether	1000	1070	6.8	70 - 130
4-Chlorophenyl phenyl ether	1000	1020	2.1	70 - 130
Aniline	1000	1020	1.7	70 - 130
4-Chloroaniline	1000	967	-3.3	70 - 130
2-Nitroaniline	1000	1100	10.0	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I05081930.D		
Sequence:	9E08056	Inject Date:	05/09/19
Lab Sample ID:	9E08056-ICV1	Inject Time:	02:48

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
3-Nitroaniline	1000	1150	14.8	70 - 130
4-Nitroaniline	1000	1150	14.8	70 - 130
Nitrobenzene	1000	998	-0.2	70 - 130
2,4-Dinitrotoluene	1000	1030	2.8	70 - 130
2,6-Dinitrotoluene	1000	1130	12.6	70 - 130
Benzoic acid	2000	1880	-5.8	70 - 130
Benzyl alcohol	1000	966	-3.4	70 - 130
Isophorone	1000	1040	4.2	70 - 130
Azobenzene (1,2-DPH)	1000	1060	6.3	70 - 130
Bis(2-Ethylhexyl) adipate	1000	996	-0.4	70 - 130
3,3'-Dichlorobenzidine	2000	2070	3.7	70 - 130
1,2-Dinitrobenzene	1000	1070	7.0	70 - 130
1,3-Dinitrobenzene	1000	1100	9.6	70 - 130
1,4-Dinitrobenzene	1000	1070	7.3	70 - 130
Pyridine	1000	944	-5.6	70 - 130
Nitrobenzene-d5 (Surr)	1000	983	-1.7	70 - 130
2-Fluorobiphenyl (Surr)	1000	1080	8.0	70 - 130
Phenol-d6 (Surr)	1000	1000	0.3	70 - 130
p-Terphenyl-d14 (Surr)	1000	1040	4.3	70 - 130
2-Fluorophenol (Surr)	1000	1020	1.5	70 - 130
2,4,6-Tribromophenol (Surr)	1000	1090	8.6	70 - 130

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I07011908.D	Calibration Date:	05/10/19 17:06
Sequence:	9G01054	Injection Date:	07/01/19
Lab Sample ID:	9G01054-CCV2	Injection Time:	17:59

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1030		1.246362	1.286143	3.2	20
Acenaphthylene	Ave	1000	1060		1.978454	2.097868	6.0	20
Anthracene	Ave	1000	1020		1.06825	1.092205	2.2	20
Benz(a)anthracene	Ave	1000	1010		1.161693	1.169791	0.7	20
Benzo(a)pyrene	XXX	1000	1020	1.8				20
Benzo(b)fluoranthene	XXX	1000	1020	1.5				20
Benzo(k)fluoranthene	XXX	1000	995	-0.5				20
Benzo(g,h,i)perylene	Ave	1000	1060		1.073878	1.13984	6.1	20
Chrysene	Ave	1000	1000		1.071717	1.073647	0.2	20
Dibenz(a,h)anthracene	Ave	1000	1020		0.9695725	0.9887793	2.0	20
Fluoranthene	Ave	1000	1020		1.248412	1.278945	2.4	20
Fluorene	Ave	1000	990		1.461705	1.447001	-1.0	20
Indeno(1,2,3-cd)pyrene	Ave	1000	979		1.098245	1.074941	-2.1	20
1-Methylnaphthalene	Ave	1000	995		0.7088084	0.7054211	-0.5	20
2-Methylnaphthalene	Ave	1000	996		0.7525787	0.7499441	-0.4	20
Naphthalene	Ave	1000	1010		0.9975462	1.009139	1.2	20
Phenanthrene	Ave	1000	998		1.068375	1.065809	-0.2	20
Pyrene	Ave	1000	1000		1.270483	1.275118	0.4	20
Carbazole	Ave	1000	983		0.9362039	0.9199908	-1.7	20
Dibenzofuran	Ave	1000	1060		1.696097	1.791956	5.7	20
4-Chloro-3-methylphenol	XXX	1000	978	-2.2				20
2-Chlorophenol	Ave	1000	1050		1.365821	1.428975	4.6	20
2,4-Dichlorophenol	XXX	1000	998	-0.2				20
2,4-Dimethylphenol	Ave	1000	1010		0.2837466	0.2866742	1.0	20
2,4-Dinitrophenol	XXX	1000	1080	7.7				20
4,6-Dinitro-2-methylphenol	XXX	1000	1020	1.7				20
2-Methylphenol	Ave	1000	1010		1.035993	1.045744	0.9	20
3+4-Methylphenol(s)	Ave	1000	1060		1.288151	1.359523	5.5	20
2-Nitrophenol	Ave	1000	1130		0.189115	0.2130586	12.7	20
4-Nitrophenol	XXX	1000	953	-4.7				20

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I07011908.D	Calibration Date:	05/10/19 17:06
Sequence:	9G01054	Injection Date:	07/01/19
Lab Sample ID:	9G01054-CCV2	Injection Time:	17:59

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Pentachlorophenol (PCP)	XXX	1000	819	-18.1				20
Phenol	Ave	1000	1010		1.808658	1.82662	1.0	20
2,3,4,6-Tetrachlorophenol	XXX	1000	1070	6.9				20
2,3,5,6-Tetrachlorophenol	XXX	1000	975	-2.5				20
2,4,5-Trichlorophenol	XXX	1000	1110	11.3				20
2,4,6-Trichlorophenol	XXX	1000	1060	6.1				20
Bis(2-ethylhexyl)phthalate	Ave	1000	1120		0.7051378	0.7868009	11.6	20
Butyl benzyl phthalate	XXX	1000	1120	12.3				20
Diethylphthalate	Ave	1000	1040		1.355775	1.414929	4.4	20
Dimethylphthalate	Ave	1000	1060		1.399174	1.47645	5.5	20
Di-n-butylphthalate	Ave	1000	1090		1.213073	1.327503	9.4	20
Di-n-octyl phthalate	XXX	1000	1050	5.1				20
N-Nitrosodimethylamine	Ave	1000	915		0.9994518	0.9145742	-8.5	20
N-Nitroso-di-n-propylamine	Ave	1000	987		1.038343	1.024852	-1.3	20
N-Nitrosodiphenylamine	Ave	1000	1040		0.617737	0.6406828	3.7	20
Bis(2-Chloroethoxy) methane	Ave	1000	954		0.4346998	0.4145783	-4.6	20
Bis(2-Chloroethyl) ether	Ave	1000	1020		1.522164	1.559628	2.5	20
2,2'-Oxybis(1-Chloropropane)	Ave	1000	988		1.85392	1.831585	-1.2	20
Hexachlorobenzene	Ave	1000	990		0.2442594	0.241882	-1.0	20
Hexachlorobutadiene	Ave	1000	1020		0.166018	0.1698619	2.3	20
Hexachlorocyclopentadiene	XXX	1000	1150	14.9				20
Hexachloroethane	Ave	1000	997		0.4701075	0.4685363	-0.3	20
2-Chloronaphthalene	Ave	1000	1070		1.20418	1.28275	6.5	20
1,2-Dichlorobenzene	Ave	1000	1030		1.407877	1.451252	3.1	20
1,3-Dichlorobenzene	Ave	1000	997		1.562184	1.557026	-0.3	20
1,4-Dichlorobenzene	Ave	1000	1010		1.459183	1.47794	1.3	20
1,2,4-Trichlorobenzene	Ave	1000	988		0.3197364	0.3158202	-1.2	20
4-Bromophenyl phenyl ether	Ave	1000	1040		0.2198931	0.2289329	4.1	20
4-Chlorophenyl phenyl ether	Ave	1000	1010		0.6829022	0.6917018	1.3	20
Aniline	Ave	1000	625		1.539056	0.9618228	-37.5*	20

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Instrument ID:	SV-GCMS9	Calibration:	A9E1009
Lab File ID:	I07011908.D	Calibration Date:	05/10/19 17:06
Sequence:	9G01054	Injection Date:	07/01/19
Lab Sample ID:	9G01054-CCV2	Injection Time:	17:59

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
4-Chloroaniline	Ave	1000	714		0.2556341	0.18263	-28.6*	20
2-Nitroaniline	Ave	1000	1100		0.4040472	0.4463377	10.5	20
3-Nitroaniline	XXX	1000	928	-7.2				20
4-Nitroaniline	Ave	1000	1000		0.2995021	0.2996318	0.04	20
Nitrobenzene	Ave	1000	974		1.39112	1.354374	-2.6	20
2,4-Dinitrotoluene	XXX	1000	1020	1.6				20
2,6-Dinitrotoluene	Ave	1000	1090		0.3128654	0.3399804	8.7	20
Benzoic acid	XXX	2000	2090	4.3				20
Benzyl alcohol	XXX	1000	1010	1.3				20
Isophorone	Ave	1000	945		0.7406279	0.6999116	-5.5	20
Azobenzene (1,2-DPH)	Ave	1000	1050		0.6933106	0.7259828	4.7	20
Bis(2-Ethylhexyl) adipate	Ave	1000	1210		0.5272206	0.6375317	20.9*	20
3,3'-Dichlorobenzidine	XXX	2000	2520	26.1 *				20
1,2-Dinitrobenzene	Ave	1000	1090		0.1551751	0.1696813	9.3	20
1,3-Dinitrobenzene	Ave	1000	1100		0.2246904	0.2460429	9.5	20
1,4-Dinitrobenzene	XXX	1000	1090	9.5				20
Pyridine	Ave	1000	960		1.52558	1.464024	-4.0	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

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9E08056	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9E08056-ICV1)				Lab File ID: I05081930.D		Analyzed: 05/09/19 02:48		
Nitrobenzene-d5 (Surr)	1000	98	70 - 130	7.231	7.2342	-0.0032	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	108	70 - 130	9.023	9.024889	-0.0019	+/-1.0	
Phenol-d6 (Surr)	1000	100	70 - 130	6.338	6.344	-0.0060	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	104	70 - 130	13.024	13.0273	-0.0033	+/-1.0	
2-Fluorophenol (Surr)	1000	102	70 - 130	5.466	5.469	-0.0030	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	109	70 - 130	10.516	10.518	-0.0020	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01054	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9G01054-CCV2)			Lab File ID: I07011908.D		Analyzed: 07/01/19 17:59			
Nitrobenzene-d5 (Surr)	1000	99	80 - 120	7.13	7.2342	-0.1042	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	107	80 - 120	8.922	9.024889	-0.1029	+/-1.0	
Phenol-d6 (Surr)	1000	101	80 - 120	6.242	6.344	-0.1020	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	103	80 - 120	12.88	13.0273	-0.1473	+/-1.0	
2-Fluorophenol (Surr)	1000	106	80 - 120	5.349	5.469	-0.1200	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	117	80 - 120	10.409	10.518	-0.1090	+/-1.0	
Calibration Blank (9G01054-CCB1)			Lab File ID: I07011909.D		Analyzed: 07/01/19 18:35			
Nitrobenzene-d5 (Surr)			37 - 122	0	7.2342	-7.2342	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 115	0	9.024889	-9.0249	+/-1.0	
Phenol-d6 (Surr)			33 - 122	0	6.344	-6.3440	+/-1.0	
p-Terphenyl-d14 (Surr)			54 - 127	0	13.0273	-13.0273	+/-1.0	
2-Fluorophenol (Surr)			35 - 115	0	5.469	-5.4690	+/-1.0	
2,4,6-Tribromophenol (Surr)			39 - 132	0	10.518	-10.5180	+/-1.0	
Blank (9061508-BLK1)			Lab File ID: I07011910.D		Analyzed: 07/01/19 19:11			
Nitrobenzene-d5 (Surr)	5000	82	37 - 122	7.125	7.2342	-0.1092	+/-1.0	
2-Fluorobiphenyl (Surr)	5000	81	44 - 115	8.922	9.024889	-0.1029	+/-1.0	
Phenol-d6 (Surr)	5000	74	33 - 122	6.242	6.344	-0.1020	+/-1.0	
p-Terphenyl-d14 (Surr)	5000	83	54 - 127	12.885	13.0273	-0.1423	+/-1.0	
2-Fluorophenol (Surr)	5000	79	35 - 115	5.359	5.469	-0.1100	+/-1.0	
2,4,6-Tribromophenol (Surr)	5000	87	39 - 132	10.409	10.518	-0.1090	+/-1.0	
LCS (9061508-BS1)			Lab File ID: I07011911.D		Analyzed: 07/01/19 19:46			
Nitrobenzene-d5 (Surr)	5000	94	37 - 122	7.13	7.2342	-0.1042	+/-1.0	
2-Fluorobiphenyl (Surr)	5000	99	44 - 115	8.922	9.024889	-0.1029	+/-1.0	
Phenol-d6 (Surr)	5000	99	33 - 122	6.247	6.344	-0.0970	+/-1.0	
p-Terphenyl-d14 (Surr)	5000	98	54 - 127	12.885	13.0273	-0.1423	+/-1.0	
2-Fluorophenol (Surr)	5000	104	35 - 115	5.365	5.469	-0.1040	+/-1.0	
2,4,6-Tribromophenol (Surr)	5000	105	39 - 132	10.414	10.518	-0.1040	+/-1.0	
2708-190619-OIL (A9F0684-01)			Lab File ID: I07011912.D		Analyzed: 07/01/19 20:22			
Nitrobenzene-d5 (Surr)	45500	195	37 - 122	7.103	7.2342	-0.1312	+/-1.0	*
2-Fluorobiphenyl (Surr)	45500	106	44 - 115	8.927	9.024889	-0.0979	+/-1.0	
Phenol-d6 (Surr)	45500		33 - 122	0	6.344	-6.3440	+/-1.0	*
p-Terphenyl-d14 (Surr)	45500	118	54 - 127	12.89	13.0273	-0.1373	+/-1.0	
2-Fluorophenol (Surr)	45500	77	35 - 115	5.327	5.469	-0.1420	+/-1.0	
2,4,6-Tribromophenol (Surr)	45500		39 - 132	0	10.518	-10.5180	+/-1.0	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01054	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Surrogate Compound	Spike Level ug/kg	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Duplicate (9061508-DUP1)				Lab File ID: I07011913.D		Analyzed: 07/01/19 20:58		
Nitrobenzene-d5 (Surr)	50000	86	37 - 122	7.135	7.2342	-0.0992	+/-1.0	
2-Fluorobiphenyl (Surr)	50000	136	44 - 115	8.916	9.024889	-0.1089	+/-1.0	*
Phenol-d6 (Surr)	50000		33 - 122	0	6.344	-6.3440	+/-1.0	*
p-Terphenyl-d14 (Surr)	50000	135	54 - 127	12.885	13.0273	-0.1423	+/-1.0	*
2-Fluorophenol (Surr)	50000	64	35 - 115	5.354	5.469	-0.1150	+/-1.0	
2,4,6-Tribromophenol (Surr)	50000		39 - 132	0	10.518	-10.5180	+/-1.0	*

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01054	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9G01054-CCV2)			Lab File ID: I07011908.D			Analyzed: 07/01/19 17:59			
1,4-Dichlorobenzene-d4 (ISTD)	108363	6.584	116694	6.697	93	50 - 200	-0.1130	+/-0.50	
Naphthalene-d8 (ISTD)	411652	7.841	435111	7.948	95	50 - 200	-0.1070	+/-0.50	
Acenaphthene-d10 (ISTD)	197429	9.612	224844	9.719	88	50 - 200	-0.1070	+/-0.50	
Phenanthrene-d10 (ISTD)	374232	11.115	425173	11.222	88	50 - 200	-0.1070	+/-0.50	
Chrysene-d12 (ISTD)	356296	14.853	428978	15.057	83	50 - 200	-0.2040	+/-0.50	
Perylene-d12 (ISTD)	334168	18.314	400554	18.539	83	50 - 200	-0.2250	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	329125	20.7	399119	20.924	82	50 - 200	-0.2240	+/-0.50	
Calibration Blank (9G01054-CCB1)			Lab File ID: I07011909.D			Analyzed: 07/01/19 18:35			
1,4-Dichlorobenzene-d4 (ISTD)	129884	6.59	108363	6.584	120	50 - 200	0.0060	+/-0.50	
Naphthalene-d8 (ISTD)	510661	7.841	411652	7.841	124	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	242857	9.612	197429	9.612	123	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	454000	11.115	374232	11.115	121	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	461266	14.853	356296	14.853	129	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	428580	18.314	334168	18.314	128	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	400276	20.694	329125	20.7	122	50 - 200	-0.0060	+/-0.50	
Blank (9061508-BLK1)			Lab File ID: I07011910.D			Analyzed: 07/01/19 19:11			
1,4-Dichlorobenzene-d4 (ISTD)	120657	6.584	108363	6.584	111	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	463135	7.841	411652	7.841	113	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	214779	9.612	197429	9.612	109	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	401451	11.115	374232	11.115	107	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	399515	14.848	356296	14.853	112	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	371048	18.314	334168	18.314	111	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	344390	20.694	329125	20.7	105	50 - 200	-0.0060	+/-0.50	
LCS (9061508-BS1)			Lab File ID: I07011911.D			Analyzed: 07/01/19 19:46			
1,4-Dichlorobenzene-d4 (ISTD)	103191	6.59	108363	6.584	95	50 - 200	0.0060	+/-0.50	
Naphthalene-d8 (ISTD)	387480	7.847	411652	7.841	94	50 - 200	0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	192368	9.617	197429	9.612	97	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	367679	11.12	374232	11.115	98	50 - 200	0.0050	+/-0.50	
Chrysene-d12 (ISTD)	340877	14.859	356296	14.853	96	50 - 200	0.0060	+/-0.50	
Perylene-d12 (ISTD)	328423	18.319	334168	18.314	98	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	326359	20.705	329125	20.7	99	50 - 200	0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9G01054	Instrument:	SV-GCMS9
Matrix:	Oil	Calibration:	A9E1009

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
2708-190619-OIL (A9F0684-01)			Lab File ID: I07011912.D			Analyzed: 07/01/19 20:22			
1,4-Dichlorobenzene-d4 (ISTD)	115476	6.584	108363	6.584	107	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	440735	7.841	411652	7.841	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	200689	9.612	197429	9.612	102	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	373678	11.115	374232	11.115	100	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	380732	14.848	356296	14.853	107	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	349379	18.314	334168	18.314	105	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	332293	20.694	329125	20.7	101	50 - 200	-0.0060	+/-0.50	
Duplicate (9061508-DUP1)			Lab File ID: I07011913.D			Analyzed: 07/01/19 20:58			
1,4-Dichlorobenzene-d4 (ISTD)	118737	6.584	108363	6.584	110	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	460025	7.836	411652	7.841	112	50 - 200	-0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	208384	9.606	197429	9.612	106	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10 (ISTD)	399790	11.115	374232	11.115	107	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	420103	14.843	356296	14.853	118	50 - 200	-0.0100	+/-0.50	
Perylene-d12 (ISTD)	391111	18.309	334168	18.314	117	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	366244	20.689	329125	20.7	111	50 - 200	-0.0110	+/-0.50	

HOLDING TIME SUMMARY

EPA 8270D

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

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
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/28/19 14:11	9.01	14.00	07/01/19 20:22	3.26	40.00	

Apex Laboratories

SDG: A9F0684

CLASS: METALS

METHOD: EPA 6020A

ANALYSES DATA PACKAGE COVER PAGE

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning

Client Sample Id:	Lab Sample Id:	Matrix
2708-190619-OIL	A9F0684-01	Oil

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: 10/1/2019 2:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 6020A

Laboratory: Apex Laboratories **SDG:** A9F0684

Client: Hahn and Associates **Project:** Mult 802 Decommissioning

Batch Matrix: Oil

Analyte	MDL	MRL	Units
Aluminum	25.0	50.0	mg/kg
Antimony	0.500	1.00	mg/kg
Arsenic	0.500	1.00	mg/kg
Barium	0.500	1.00	mg/kg
Beryllium	0.100	0.200	mg/kg
Cadmium	0.100	0.200	mg/kg
Calcium	50.0	100	mg/kg
Chromium	0.500	1.00	mg/kg
Copper	0.500	1.00	mg/kg
Iron	25.0	50.0	mg/kg
Lead	0.100	0.200	mg/kg
Magnesium	25.0	50.0	mg/kg
Manganese	0.500	1.00	mg/kg
Mercury	0.0400	0.0800	mg/kg
Nickel	0.500	1.00	mg/kg
Potassium	50.0	100	mg/kg
Selenium	0.500	1.00	mg/kg
Silver	0.100	0.200	mg/kg
Sodium	50.0	100	mg/kg
Thallium	0.100	0.200	mg/kg
Vanadium	0.500	1.00	mg/kg
Zinc	2.00	4.00	mg/kg

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

INORGANIC ANALYSIS DATA SHEET

EPA 6020A

2708-190619-OIL

Laboratory: Apex Laboratories | SDG: A9F0684

Client: Hahn and Associates | Project: Mult 802 Decommissioning

Matrix: Oil | Laboratory ID: A9F0684-01 | File ID: 9F27029-075

Sampled: 06/19/19 14:00 | Prepared: 06/27/19 08:07 | Analyzed: 06/27/19 18:28

Solids: N/A | Preparation: EPA 3051A | Initial/Final: 0.113 g / 50 mL

Batch: 9061422 | Sequence: 9F27029 | Instrument: ICPMS5

CAS NO.	Analyte	Concentration (mg/kg)	Dilution Factor	Q	Method
7429-90-5	Aluminum	58.8	5	J	EPA 6020A
7440-36-0	Antimony	1.11	5	U	EPA 6020A
7440-38-2	Arsenic	2.21	5	U	EPA 6020A
7440-39-3	Barium	2.21	5	U	EPA 6020A
7440-41-7	Beryllium	0.221	5	U	EPA 6020A
7440-43-9	Cadmium	0.442	5	U	EPA 6020A
7440-70-2	Calcium	111	5	U	EPA 6020A
7440-47-3	Chromium	2.21	5	U	EPA 6020A
7440-50-8	Copper	1.11	5	U	EPA 6020A
7439-89-6	Iron	161	5		EPA 6020A
7439-92-1	Lead	1.21	5		EPA 6020A
7439-95-4	Magnesium	55.3	5	U	EPA 6020A
7439-96-5	Manganese	2.72	5		EPA 6020A
7439-97-6	Mercury	0.177	5	U	EPA 6020A
7440-02-0	Nickel	1.93	5	J	EPA 6020A
7440-09-7	Potassium	111	5	U	EPA 6020A
7782-49-2	Selenium	2.21	5	U	EPA 6020A
7440-22-4	Silver	0.442	5	U	EPA 6020A
7440-23-5	Sodium	111	5	U	EPA 6020A
7440-28-0	Thallium	0.221	5	U	EPA 6020A
7440-62-2	Vanadium	2.01	5	J	EPA 6020A
7440-66-6	Zinc	10.1	5		EPA 6020A

PREPARATION BATCH SUMMARY

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Batch: 9061422 Batch Matrix: Oil Preparation: EPA 3051A

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9061422-BLK1	9F27029-071	06/27/19 08:07	
LCS	9061422-BS1	9F27029-072	06/27/19 08:07	
2708-190619-OIL (Dup)	9061422-DUP1	9F27029-076	06/27/19 08:07	
2708-190619-OIL (MS)	9061422-MS1	9F27029-077	06/27/19 08:07	
2708-190619-OIL	A9F0684-01	9F27029-075	06/27/19 08:07	

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 6020A

Laboratory:	Apex Laboratories			SDG:	A9F0684
Client:	Hahn and Associates			Project:	Mult 802 Decommissioning
Matrix:	Oil	Laboratory ID:	9061422-BLK1	File ID:	9F27029-071
Prepared:	06/27/19 08:07	Preparation:	EPA 3051A	Initial/Final:	0.5 g / 50 mL
Analyzed:	06/27/19 18:11	Instrument:	ICPMS5		
Batch:	9061422	Sequence:	9F27029	Calibration:	UNASSIGNED

CAS NO.	COMPOUND	CONC. (mg/kg)	Q
7429-90-5	Aluminum	12.5	U
7440-36-0	Antimony	0.250	U
7440-38-2	Arsenic	0.500	U
7440-39-3	Barium	0.500	U
7440-41-7	Beryllium	0.0500	U
7440-43-9	Cadmium	0.100	U
7440-70-2	Calcium	25.0	U
7440-47-3	Chromium	0.500	U
7440-50-8	Copper	0.250	U
7439-89-6	Iron	12.5	U
7439-92-1	Lead	0.100	U
7439-95-4	Magnesium	12.5	U
7439-96-5	Manganese	0.250	U
7439-97-6	Mercury	0.0400	U
7440-02-0	Nickel	0.250	U
7440-09-7	Potassium	25.0	U
7782-49-2	Selenium	0.500	U
7440-22-4	Silver	0.100	U
7440-23-5	Sodium	25.0	U
7440-28-0	Thallium	0.0500	U
7440-62-2	Vanadium	0.250	U
7440-66-6	Zinc	1.00	U

LCS / LCS DUPLICATE RECOVERY

EPA 6020A

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Matrix:	Oil		
Batch:	9061422	Laboratory ID:	9061422-BS1
Preparation:	EPA 3051A	Initial/Final:	0.5 g / 50 mL

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Aluminum	1250	1180	94	80 - 120
Antimony	12.5	12.0	96	80 - 120
Arsenic	25.0	23.9	95	80 - 120
Barium	25.0	25.2	101	80 - 120
Beryllium	12.5	11.8	95	80 - 120
Cadmium	25.0	24.6	98	80 - 120
Calcium	1250	1170	93	80 - 120
Chromium	25.0	24.4	98	80 - 120
Copper	25.0	25.5	102	80 - 120
Iron	1250	1110	89	80 - 120
Lead	25.0	25.2	101	80 - 120
Magnesium	1250	1200	96	80 - 120
Manganese	25.0	25.1	100	80 - 120
Mercury	0.500	0.478	96	80 - 120
Nickel	25.0	25.3	101	80 - 120
Potassium	1250	1230	99	80 - 120
Selenium	12.5	11.2	90	80 - 120
Silver	12.5	11.9	96	80 - 120
Sodium	1250	1190	95	80 - 120
Thallium	12.5	11.9	95	80 - 120
Vanadium	25.0	25.0	100	80 - 120
Zinc	25.0	25.6	102	80 - 120

* = Values outside of QC limits

DUPLICATES

EPA 6020A

2708-190619-OIL

Laboratory: Apex Laboratories
Client: Hahn and Associates
Matrix: Oil
Batch: 9061422
Preparation: EPA 3051A
Source Sample Name: 2708-190619-OIL

SDG: A9F0684
Project: Mult 802 Decommissioning
Laboratory ID: 9061422-DUP1
Lab Source ID: A9F0684-01
Initial/Final: 0.132 g / 50 mL
% Solids:

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (mg/kg)	C	DUPLICATE CONCENTRATION (mg/kg)	C	RPD %	Q	METHOD
Aluminum	40	58.8		66.4		12		EPA 6020A
Antimony	40	0.272		ND				EPA 6020A
Arsenic	40	1.93		1.92		200	*	EPA 6020A
Barium	40	1.92		2.11		200	*	EPA 6020A
Beryllium	40	0.00949		ND				EPA 6020A
Cadmium	40	0.0272		ND				EPA 6020A
Calcium	40	63.8		ND				EPA 6020A
Chromium	40	1.25		ND				EPA 6020A
Copper	40	0.999		0.988		200	*	EPA 6020A
Iron	40	161		203		23		EPA 6020A
Lead	40	1.21		1.26		4		EPA 6020A
Magnesium	40	11.7		ND				EPA 6020A
Manganese	40	2.72		3.12		14		EPA 6020A
Mercury	40	0.0264		ND				EPA 6020A
Nickel	40	1.93		2.00		4		EPA 6020A
Potassium	40	7.05		ND				EPA 6020A
Selenium	40	0.390		ND				EPA 6020A
Silver	40	0.00165		ND				EPA 6020A
Sodium	40	12.6		ND				EPA 6020A
Thallium	40	0.00220		ND				EPA 6020A
Vanadium	40	2.01		2.09		4		EPA 6020A
Zinc	40	10.1		10.5		3		EPA 6020A

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 6020A

2708-190619-OIL

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Matrix: Oil
Batch: 9061422
Laboratory ID: 9061422-MS1
Preparation: EPA 3051A
Initial/Final: 0.116 g / 50 mL
Source Sample Name: 2708-190619-OIL

COMPOUND	SPIKE ADDED (mg/kg)	SAMPLE CONCENTRATION (mg/kg)	MS CONCENTRATION (mg/kg)	MS % REC. (*=Out)	QC LIMITS REC.
Aluminum	5390	58.8	5000	92	75 - 125
Antimony	53.9	ND	49.6	92	75 - 125
Arsenic	108	ND	104	96	75 - 125
Barium	108	ND	107	99	75 - 125
Beryllium	53.9	ND	49.4	92	75 - 125
Cadmium	108	ND	103	95	75 - 125
Calcium	5390	ND	4980	92	75 - 125
Chromium	108	ND	103	96	75 - 125
Copper	108	ND	110	102	75 - 125
Iron	5390	161	4850	87	75 - 125
Lead	108	1.21	106	97	75 - 125
Magnesium	5390	ND	5030	93	75 - 125
Manganese	108	2.72	107	97	75 - 125
Mercury	2.16	ND	1.90	88	75 - 125
Nickel	108	1.93	108	99	75 - 125
Potassium	5390	ND	5200	97	75 - 125
Selenium	53.9	ND	48.4	90	75 - 125
Silver	53.9	ND	49.8	92	75 - 125
Sodium	5390	ND	5010	93	75 - 125
Thallium	53.9	ND	49.6	92	75 - 125
Vanadium	108	2.01	105	96	75 - 125
Zinc	108	10.1	115	98	75 - 125

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 6020A

Laboratory:	Apex Laboratories	SDG:	A9F0684
Client:	Hahn and Associates	Project:	Mult 802 Decommissioning
Sequence:	9F27029	Instrument:	ICPMS5
Matrix:	Oil	Calibration:	UNASSIGNED

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Initial Cal Check	9F27029-ICV1	9F27029-015	06/27/19 13:38
Initial Cal Blank	9F27029-ICB1	9F27029-016	06/27/19 13:43
Instrument RL Check	9F27029-CRL1	9F27029-017	06/27/19 13:50
Instrument RL Check	9F27029-CRL2	9F27029-018	06/27/19 13:54
Instrument RL Check	9F27029-CRL3	9F27029-019	06/27/19 13:58
Calibration Check	9F27029-CCV1	9F27029-033	06/27/19 15:04
Calibration Blank	9F27029-CCB1	9F27029-035	06/27/19 15:12
Calibration Check	9F27029-CCV3	9F27029-046	06/27/19 16:00
Calibration Blank	9F27029-CCB2	9F27029-047	06/27/19 16:04
Instrument RL Check	9F27029-CRL4	9F27029-048	06/27/19 16:08
Instrument RL Check	9F27029-CRL5	9F27029-049	06/27/19 16:12
Instrument RL Check	9F27029-CRL6	9F27029-050	06/27/19 16:17
Calibration Check	9F27029-CCV4	9F27029-061	06/27/19 17:27
Calibration Blank	9F27029-CCB3	9F27029-062	06/27/19 17:32
Blank	9061422-BLK1	9F27029-071	06/27/19 18:11
LCS	9061422-BS1	9F27029-072	06/27/19 18:15
Calibration Check	9F27029-CCV5	9F27029-073	06/27/19 18:19
Calibration Blank	9F27029-CCB4	9F27029-074	06/27/19 18:23
2708-190619-OIL	A9F0684-01	9F27029-075	06/27/19 18:28
2708-190619-OIL (Dup)	9061422-DUP1	9F27029-076	06/27/19 18:32
2708-190619-OIL (MS)	9061422-MS1	9F27029-077	06/27/19 18:36
Calibration Check	9F27029-CCV6	9F27029-085	06/27/19 19:11
Calibration Blank	9F27029-CCB5	9F27029-086	06/27/19 19:15
Instrument RL Check	9F27029-CRL7	9F27029-087	06/27/19 19:19
Instrument RL Check	9F27029-CRL8	9F27029-088	06/27/19 19:24
Instrument RL Check	9F27029-CRL9	9F27029-089	06/27/19 19:28

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.

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Control Limt: +/- 10.00%
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	Method
9F27029-ICV1	Aluminum	4000	4010	100	ug/L	EPA 6020A
	Antimony	40.0	38.0	95	ug/L	EPA 6020A
	Arsenic	100	96.9	97	ug/L	EPA 6020A
	Barium	100	103	103	ug/L	EPA 6020A
	Beryllium	40.0	39.9	100	ug/L	EPA 6020A
	Cadmium	100	99.0	99	ug/L	EPA 6020A
	Calcium	4000	3950	99	ug/L	EPA 6020A
	Chromium	100	97.1	97	ug/L	EPA 6020A
	Copper	100	102	102	ug/L	EPA 6020A
	Iron	4000	3650	91	ug/L	EPA 6020A
	Lead	100	101	101	ug/L	EPA 6020A
	Magnesium	4000	4250	106	ug/L	EPA 6020A
	Manganese	100	99.1	99	ug/L	EPA 6020A
	Mercury	800	783	98	ng/L	EPA 6020A
	Nickel	100	103	103	ug/L	EPA 6020A
	Potassium	4000	4220	105	ug/L	EPA 6020A
	Selenium	40.0	38.8	97	ug/L	EPA 6020A
	Silver	40.0	39.2	98	ug/L	EPA 6020A
	Sodium	4000	4000	100	ug/L	EPA 6020A
	Thallium	40.0	38.9	97	ug/L	EPA 6020A
	Vanadium	100	99.0	99	ug/L	EPA 6020A
	Zinc	100	104	104	ug/L	EPA 6020A
9F27029-CCV1	Aluminum	4000	3770	94	ug/L	EPA 6020A
	Antimony	40.0	36.2	91	ug/L	EPA 6020A
	Arsenic	100	97.0	97	ug/L	EPA 6020A
	Barium	100	102	102	ug/L	EPA 6020A
	Beryllium	40.0	39.3	98	ug/L	EPA 6020A
	Cadmium	100	98.0	98	ug/L	EPA 6020A
	Calcium	4000	3960	99	ug/L	EPA 6020A
	Chromium	100	97.6	98	ug/L	EPA 6020A
	Copper	100	105	105	ug/L	EPA 6020A
	Iron	4000	3650	91	ug/L	EPA 6020A
	Lead	100	99.6	100	ug/L	EPA 6020A
	Magnesium	4000	4060	102	ug/L	EPA 6020A
	Manganese	100	97.7	98	ug/L	EPA 6020A
	Mercury	800	783	98	ng/L	EPA 6020A
	Nickel	100	104	104	ug/L	EPA 6020A
	Potassium	4000	4080	102	ug/L	EPA 6020A
	Selenium	40.0	39.1	98	ug/L	EPA 6020A
	Silver	40.0	39.2	98	ug/L	EPA 6020A
	Sodium	4000	3880	97	ug/L	EPA 6020A
	Thallium	40.0	38.6	97	ug/L	EPA 6020A
	Vanadium	100	99.6	100	ug/L	EPA 6020A
	Zinc	100	104	104	ug/L	EPA 6020A
9F27029-CCV3	Aluminum	4000	3840	96	ug/L	EPA 6020A
	Antimony	40.0	36.4	91	ug/L	EPA 6020A

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Control Limt: +/- 10.00%
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	Method
9F27029-CCV3	Arsenic	100	96.8	97	ug/L	EPA 6020A
	Barium	100	102	102	ug/L	EPA 6020A
	Beryllium	40.0	38.9	97	ug/L	EPA 6020A
	Cadmium	100	98.1	98	ug/L	EPA 6020A
	Calcium	4000	3850	96	ug/L	EPA 6020A
	Chromium	100	98.4	98	ug/L	EPA 6020A
	Copper	100	105	105	ug/L	EPA 6020A
	Iron	4000	3660	92	ug/L	EPA 6020A
	Lead	100	99.0	99	ug/L	EPA 6020A
	Magnesium	4000	4290	107	ug/L	EPA 6020A
	Manganese	100	97.5	98	ug/L	EPA 6020A
	Mercury	800	800	100	ng/L	EPA 6020A
	Nickel	100	105	105	ug/L	EPA 6020A
	Potassium	4000	4190	105	ug/L	EPA 6020A
	Selenium	40.0	39.3	98	ug/L	EPA 6020A
	Silver	40.0	39.3	98	ug/L	EPA 6020A
	Sodium	4000	3860	97	ug/L	EPA 6020A
	Thallium	40.0	39.3	98	ug/L	EPA 6020A
	Vanadium	100	99.6	100	ug/L	EPA 6020A
	Zinc	100	106	106	ug/L	EPA 6020A
9F27029-CCV4	Aluminum	4000	3890	97	ug/L	EPA 6020A
	Antimony	40.0	36.8	92	ug/L	EPA 6020A
	Arsenic	100	97.3	97	ug/L	EPA 6020A
	Barium	100	102	102	ug/L	EPA 6020A
	Beryllium	40.0	39.3	98	ug/L	EPA 6020A
	Cadmium	100	99.9	100	ug/L	EPA 6020A
	Calcium	4000	3940	99	ug/L	EPA 6020A
	Chromium	100	99.0	99	ug/L	EPA 6020A
	Copper	100	105	105	ug/L	EPA 6020A
	Iron	4000	3690	92	ug/L	EPA 6020A
	Lead	100	101	101	ug/L	EPA 6020A
	Magnesium	4000	4290	107	ug/L	EPA 6020A
	Manganese	100	99.4	99	ug/L	EPA 6020A
	Mercury	800	774	97	ng/L	EPA 6020A
	Nickel	100	105	105	ug/L	EPA 6020A
	Potassium	4000	4180	105	ug/L	EPA 6020A
	Selenium	40.0	39.5	99	ug/L	EPA 6020A
	Silver	40.0	39.6	99	ug/L	EPA 6020A
	Sodium	4000	4020	101	ug/L	EPA 6020A
	Thallium	40.0	39.0	98	ug/L	EPA 6020A
	Vanadium	100	101	101	ug/L	EPA 6020A
	Zinc	100	105	105	ug/L	EPA 6020A
9F27029-CCV5	Aluminum	4000	3810	95	ug/L	EPA 6020A
	Antimony	40.0	37.0	92	ug/L	EPA 6020A
	Arsenic	100	94.9	95	ug/L	EPA 6020A
	Barium	100	101	101	ug/L	EPA 6020A

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Control Limt: +/- 10.00%
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	Method
9F27029-CCV5	Beryllium	40.0	39.5	99	ug/L	EPA 6020A
	Cadmium	100	99.2	99	ug/L	EPA 6020A
	Calcium	4000	3900	97	ug/L	EPA 6020A
	Chromium	100	95.9	96	ug/L	EPA 6020A
	Copper	100	103	103	ug/L	EPA 6020A
	Iron	4000	3660	91	ug/L	EPA 6020A
	Lead	100	101	101	ug/L	EPA 6020A
	Magnesium	4000	4200	105	ug/L	EPA 6020A
	Manganese	100	97.1	97	ug/L	EPA 6020A
	Mercury	800	792	99	ng/L	EPA 6020A
	Nickel	100	102	102	ug/L	EPA 6020A
	Potassium	4000	4120	103	ug/L	EPA 6020A
	Selenium	40.0	39.1	98	ug/L	EPA 6020A
	Silver	40.0	39.2	98	ug/L	EPA 6020A
	Sodium	4000	3890	97	ug/L	EPA 6020A
	Thallium	40.0	39.1	98	ug/L	EPA 6020A
	Vanadium	100	97.9	98	ug/L	EPA 6020A
	Zinc	100	103	103	ug/L	EPA 6020A
9F27029-CCV6	Aluminum	4000	3870	97	ug/L	EPA 6020A
	Antimony	40.0	37.1	93	ug/L	EPA 6020A
	Arsenic	100	96.8	97	ug/L	EPA 6020A
	Barium	100	103	103	ug/L	EPA 6020A
	Beryllium	40.0	39.1	98	ug/L	EPA 6020A
	Cadmium	100	99.4	99	ug/L	EPA 6020A
	Calcium	4000	3840	96	ug/L	EPA 6020A
	Chromium	100	97.7	98	ug/L	EPA 6020A
	Copper	100	104	104	ug/L	EPA 6020A
	Iron	4000	3640	91	ug/L	EPA 6020A
	Lead	100	101	101	ug/L	EPA 6020A
	Magnesium	4000	4240	106	ug/L	EPA 6020A
	Manganese	100	98.4	98	ug/L	EPA 6020A
	Mercury	800	790	99	ng/L	EPA 6020A
	Nickel	100	104	104	ug/L	EPA 6020A
	Potassium	4000	4210	105	ug/L	EPA 6020A
	Selenium	40.0	38.8	97	ug/L	EPA 6020A
	Silver	40.0	39.8	99	ug/L	EPA 6020A
	Sodium	4000	3860	97	ug/L	EPA 6020A
	Thallium	40.0	39.4	98	ug/L	EPA 6020A
	Vanadium	100	100	100	ug/L	EPA 6020A
	Zinc	100	104	104	ug/L	EPA 6020A

* Values outside of QC limits

INSTRUMENT BLANKS
EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Instrument ID: ICPMS5
Project: Mult 802 Decommissioning
Sequence: 9F27029
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9F27029-ICB1	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A
	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
9F27029-CCB1	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A

INSTRUMENT BLANKS
EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Instrument ID: ICPMS5
Project: Mult 802 Decommissioning
Sequence: 9F27029
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9F27029-CCB1	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
9F27029-CCB2	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A
	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A
	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A

INSTRUMENT BLANKS
EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Instrument ID: ICPMS5
Project: Mult 802 Decommissioning
Sequence: 9F27029
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9F27029-CCB3	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A
	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
9F27029-CCB4	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A
	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A

INSTRUMENT BLANKS
EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Instrument ID: ICPMS5
Project: Mult 802 Decommissioning
Sequence: 9F27029
Calibration: UNASSIGNED

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9F27029-CCB4	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
9F27029-CCB5	Mercury	ND	40.0 (Inst)	ng/L		EPA 6020A
	Copper	ND	0.500 (Inst)	ug/L		EPA 6020A
	Selenium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Calcium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Thallium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Vanadium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Chromium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Cadmium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Beryllium	ND	0.100 (Inst)	ug/L		EPA 6020A
	Barium	ND	0.500 (Inst)	ug/L		EPA 6020A
	Arsenic	ND	0.500 (Inst)	ug/L		EPA 6020A
	Zinc	ND	2.00 (Inst)	ug/L		EPA 6020A
	Sodium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Antimony	ND	0.500 (Inst)	ug/L		EPA 6020A
	Silver	ND	0.100 (Inst)	ug/L		EPA 6020A
	Potassium	ND	50.0 (Inst)	ug/L		EPA 6020A
	Nickel	ND	0.500 (Inst)	ug/L		EPA 6020A
	Manganese	ND	0.500 (Inst)	ug/L		EPA 6020A
	Magnesium	ND	25.0 (Inst)	ug/L		EPA 6020A
	Lead	ND	0.100 (Inst)	ug/L		EPA 6020A
	Aluminum	ND	25.0 (Inst)	ug/L		EPA 6020A
	Iron	ND	25.0 (Inst)	ug/L		EPA 6020A

(Inst) indicates on-Instrument Result and Reporting Level. Used for non-digested Instrument Blanks.

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL1	Aluminum	9.00	9.83	109	ug/L	70 - 130
	Arsenic	0.180	0.188	104	ug/L	70 - 130
	Barium	0.180	0.205	114	ug/L	70 - 130
	Beryllium	0.180	0.172	95	ug/L	70 - 130
	Cadmium	0.180	0.228	127	ug/L	70 - 130
	Calcium	9.00	8.13	90	ug/L	70 - 130
	Chromium	0.180	0.171	95	ug/L	70 - 130
	Copper	0.180	0.209	116	ug/L	70 - 130
	Iron	9.00	9.03	100	ug/L	70 - 130
	Lead	0.180	0.214	119	ug/L	70 - 130
	Magnesium	9.00	9.41	105	ug/L	70 - 130
	Manganese	0.180	0.181	100	ug/L	70 - 130
	Nickel	0.180	0.179	100	ug/L	70 - 130
	Selenium	0.180	0.178	99	ug/L	70 - 130
	Silver	0.180	0.197	109	ug/L	70 - 130
	Sodium	9.00	8.54	95	ug/L	70 - 130
	Thallium	0.180	0.178	99	ug/L	70 - 130
	Zinc	0.180	0.185	103	ug/L	70 - 130
9F27029-CRL2	Aluminum	45.0	45.3	101	ug/L	70 - 130
	Antimony	0.900	0.951	106	ug/L	70 - 130
	Arsenic	0.900	0.809	90	ug/L	70 - 130
	Barium	0.900	1.01	112	ug/L	70 - 130
	Beryllium	0.900	0.906	101	ug/L	70 - 130
	Cadmium	0.900	0.898	100	ug/L	70 - 130
	Calcium	45.0	45.3	101	ug/L	70 - 130
	Chromium	0.900	0.869	97	ug/L	70 - 130
	Copper	0.900	0.936	104	ug/L	70 - 130
	Iron	45.0	42.0	93	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL2	Lead	0.900	0.954	106	ug/L	70 - 130
	Magnesium	45.0	44.9	100	ug/L	70 - 130
	Manganese	0.900	0.898	100	ug/L	70 - 130
	Mercury	36.0	40.7	113	ng/L	70 - 130
	Nickel	0.900	0.932	104	ug/L	70 - 130
	Potassium	45.0	51.3	114	ug/L	70 - 130
	Selenium	0.900	0.896	100	ug/L	70 - 130
	Silver	0.900	0.894	99	ug/L	70 - 130
	Sodium	45.0	44.0	98	ug/L	70 - 130
	Thallium	0.900	0.897	100	ug/L	70 - 130
	Vanadium	0.900	0.820	91	ug/L	70 - 130
	Zinc	0.900	0.956	106	ug/L	70 - 130
9F27029-CRL3	Aluminum	90.0	88.8	99	ug/L	70 - 130
	Antimony	1.80	1.83	102	ug/L	70 - 130
	Arsenic	1.80	1.85	103	ug/L	70 - 130
	Barium	1.80	1.95	108	ug/L	70 - 130
	Beryllium	1.80	1.77	98	ug/L	70 - 130
	Cadmium	1.80	1.92	106	ug/L	70 - 130
	Calcium	90.0	88.7	99	ug/L	70 - 130
	Chromium	1.80	1.78	99	ug/L	70 - 130
	Copper	1.80	1.97	109	ug/L	70 - 130
	Iron	90.0	86.6	96	ug/L	70 - 130
	Lead	1.80	1.88	104	ug/L	70 - 130
	Magnesium	90.0	91.9	102	ug/L	70 - 130
	Manganese	1.80	1.80	100	ug/L	70 - 130
	Mercury	72.0	74.7	104	ng/L	70 - 130
	Nickel	1.80	1.89	105	ug/L	70 - 130
	Potassium	90.0	94.5	105	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL3	Selenium	1.80	1.76	98	ug/L	70 - 130
	Silver	1.80	1.74	97	ug/L	70 - 130
	Sodium	90.0	89.8	100	ug/L	70 - 130
	Thallium	1.80	1.83	101	ug/L	70 - 130
	Vanadium	1.80	1.75	97	ug/L	70 - 130
	Zinc	1.80	1.96	109	ug/L	70 - 130
9F27029-CRL4	Aluminum	9.00	11.6	129	ug/L	70 - 130
	Arsenic	0.180	0.190	106	ug/L	70 - 130
	Beryllium	0.180	0.189	105	ug/L	70 - 130
	Cadmium	0.180	0.205	114	ug/L	70 - 130
	Chromium	0.180	0.204	113	ug/L	70 - 130
	Iron	9.00	11.5	128	ug/L	70 - 130
	Lead	0.180	0.212	118	ug/L	70 - 130
	Nickel	0.180	0.232	129	ug/L	70 - 130
	Selenium	0.180	0.210	117	ug/L	70 - 130
	Silver	0.180	0.187	104	ug/L	70 - 130
	Thallium	0.180	0.180	100	ug/L	70 - 130
	Vanadium	0.180	0.167	93	ug/L	70 - 130
9F27029-CRL5	Aluminum	45.0	43.1	96	ug/L	70 - 130
	Antimony	0.900	0.913	101	ug/L	70 - 130
	Arsenic	0.900	0.886	98	ug/L	70 - 130
	Barium	0.900	1.03	114	ug/L	70 - 130
	Beryllium	0.900	0.890	99	ug/L	70 - 130
	Cadmium	0.900	0.915	102	ug/L	70 - 130
	Calcium	45.0	52.1	116	ug/L	70 - 130
	Chromium	0.900	0.873	97	ug/L	70 - 130
	Copper	0.900	1.04	116	ug/L	70 - 130
	Iron	45.0	45.0	100	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL5	Lead	0.900	0.944	105	ug/L	70 - 130
	Magnesium	45.0	46.1	102	ug/L	70 - 130
	Manganese	0.900	0.983	109	ug/L	70 - 130
	Mercury	36.0	44.6	124	ng/L	70 - 130
	Nickel	0.900	0.927	103	ug/L	70 - 130
	Potassium	45.0	52.3	116	ug/L	70 - 130
	Selenium	0.900	0.963	107	ug/L	70 - 130
	Silver	0.900	0.880	98	ug/L	70 - 130
	Sodium	45.0	51.3	114	ug/L	70 - 130
	Thallium	0.900	0.896	100	ug/L	70 - 130
	Vanadium	0.900	0.895	99	ug/L	70 - 130
	Zinc	0.900	0.919	102	ug/L	70 - 130
9F27029-CRL6	Aluminum	90.0	90.9	101	ug/L	70 - 130
	Antimony	1.80	1.71	95	ug/L	70 - 130
	Arsenic	1.80	1.71	95	ug/L	70 - 130
	Barium	1.80	1.89	105	ug/L	70 - 130
	Beryllium	1.80	1.85	103	ug/L	70 - 130
	Cadmium	1.80	1.81	101	ug/L	70 - 130
	Calcium	90.0	96.3	107	ug/L	70 - 130
	Chromium	1.80	1.76	98	ug/L	70 - 130
	Copper	1.80	1.96	109	ug/L	70 - 130
	Iron	90.0	87.3	97	ug/L	70 - 130
	Lead	1.80	1.89	105	ug/L	70 - 130
	Magnesium	90.0	91.6	102	ug/L	70 - 130
	Manganese	1.80	1.89	105	ug/L	70 - 130
	Mercury	72.0	75.0	104	ng/L	70 - 130
	Nickel	1.80	1.90	106	ug/L	70 - 130
	Potassium	90.0	98.5	109	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL6	Selenium	1.80	1.78	99	ug/L	70 - 130
	Silver	1.80	1.79	99	ug/L	70 - 130
	Sodium	90.0	93.0	103	ug/L	70 - 130
	Thallium	1.80	1.82	101	ug/L	70 - 130
	Vanadium	1.80	1.79	100	ug/L	70 - 130
	Zinc	1.80	2.31	128	ug/L	70 - 130
9F27029-CRL7	Aluminum	9.00	9.54	106	ug/L	70 - 130
	Arsenic	0.180	0.137	76	ug/L	70 - 130
	Beryllium	0.180	0.180	100	ug/L	70 - 130
	Cadmium	0.180	0.190	106	ug/L	70 - 130
	Calcium	9.00	9.63	107	ug/L	70 - 130
	Chromium	0.180	0.142	79	ug/L	70 - 130
	Iron	9.00	9.26	103	ug/L	70 - 130
	Lead	0.180	0.183	102	ug/L	70 - 130
	Magnesium	9.00	10.0	111	ug/L	70 - 130
	Manganese	0.180	0.185	103	ug/L	70 - 130
	Nickel	0.180	0.205	114	ug/L	70 - 130
	Selenium	0.180	0.185	103	ug/L	70 - 130
	Silver	0.180	0.156	87	ug/L	70 - 130
	Sodium	9.00	9.39	104	ug/L	70 - 130
	Thallium	0.180	0.177	98	ug/L	70 - 130
9F27029-CRL8	Aluminum	45.0	44.4	99	ug/L	70 - 130
	Antimony	0.900	0.931	103	ug/L	70 - 130
	Arsenic	0.900	0.875	97	ug/L	70 - 130
	Barium	0.900	0.997	111	ug/L	70 - 130
	Beryllium	0.900	0.882	98	ug/L	70 - 130
	Cadmium	0.900	0.933	104	ug/L	70 - 130
	Calcium	45.0	46.2	103	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL8	Chromium	0.900	0.959	107	ug/L	70 - 130
	Copper	0.900	1.03	115	ug/L	70 - 130
	Iron	45.0	44.3	98	ug/L	70 - 130
	Lead	0.900	0.915	102	ug/L	70 - 130
	Magnesium	45.0	45.7	101	ug/L	70 - 130
	Manganese	0.900	0.923	103	ug/L	70 - 130
	Nickel	0.900	0.959	107	ug/L	70 - 130
	Potassium	45.0	51.9	115	ug/L	70 - 130
	Selenium	0.900	0.862	96	ug/L	70 - 130
	Silver	0.900	0.882	98	ug/L	70 - 130
	Sodium	45.0	45.0	100	ug/L	70 - 130
	Thallium	0.900	0.905	101	ug/L	70 - 130
	Vanadium	0.900	0.839	93	ug/L	70 - 130
9F27029-CRL9	Aluminum	90.0	88.7	99	ug/L	70 - 130
	Antimony	1.80	1.79	100	ug/L	70 - 130
	Arsenic	1.80	1.82	101	ug/L	70 - 130
	Barium	1.80	1.95	108	ug/L	70 - 130
	Beryllium	1.80	1.72	96	ug/L	70 - 130
	Cadmium	1.80	1.79	99	ug/L	70 - 130
	Calcium	90.0	89.9	100	ug/L	70 - 130
	Chromium	1.80	1.78	99	ug/L	70 - 130
	Copper	1.80	1.97	110	ug/L	70 - 130
	Iron	90.0	84.4	94	ug/L	70 - 130
	Lead	1.80	1.85	103	ug/L	70 - 130
	Magnesium	90.0	91.0	101	ug/L	70 - 130
	Manganese	1.80	1.86	103	ug/L	70 - 130
	Mercury	72.0	84.0	117	ng/L	70 - 130
	Nickel	1.80	1.83	102	ug/L	70 - 130

CRDL STANDARD

EPA 6020A

Laboratory: Apex Laboratories
SDG: A9F0684
Client: Hahn and Associates
Project: Mult 802 Decommissioning
Instrument ID: ICPMS5
Calibration: UNASSIGNED
Sequence: 9F27029

Lab Sample ID	Analyte	True	Found	%R	Units	QC Limts
9F27029-CRL9	Potassium	90.0	99.7	111	ug/L	70 - 130
	Selenium	1.80	1.82	101	ug/L	70 - 130
	Silver	1.80	1.72	96	ug/L	70 - 130
	Sodium	90.0	86.9	97	ug/L	70 - 130
	Thallium	1.80	1.82	101	ug/L	70 - 130
	Vanadium	1.80	1.80	100	ug/L	70 - 130
	Zinc	1.80	2.33	130	ug/L	70 - 130

* Values outside of QC limits

HOLDING TIME SUMMARY

EPA 6020A

Laboratory: Apex Laboratories SDG: A9F0684

Client: Hahn and Associates Project: Mult 802 Decommissioning

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
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/27/19 08:07	7.75	28.00	06/27/19 18:28	8.19	28.00	
2708-190619-OIL	06/19/19 14:00	06/20/19 16:11	06/27/19 08:07	7.75	180.00	06/27/19 18:28	8.19	180.00	

Raw Data

Diesel and /or Oil Hydrocarbons by NWTPH-Dx
Benchsheet & Analysis Sequence Data

Batch 9070624

Sequence 9G03031 (A9F0684-01)

Apex Laboratories

PREPARATION BENCH SHEET

JUL 0 9 2019

BATCH #: 9070624 (Oil)

Prep Method: EPA 3580A

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9070624-BLK1		QC	07/03/19 15:48	1	5				100					
	9070624-BS1		QC	07/03/19 15:48	0.1	5	A19G002		100	100					
	A9F0684-01	A	NWTPH-Dx (Diesel/Oil)	07/03/19 15:48	0.12	5				100	2708-190619-OIL	6th priority Added 6/26/19			
	9070624-DUP1		QC	07/03/19 15:48	0.12	5		A9F0684-01		100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19F362	12/23/19	Sodium Sulfate Lot # 183474

Analyte Spike(s)

Std ID	Exp. Date	Description
A19G002	12/28/19	NWTPH-DX Spike in Methanol

Surrogate(s)

Std ID	Exp. Date	Description
A19F139	08/31/19	NWTPH-DX Soil Surrogate in DCM

Method 3546 digestion time and temperature achieved.
Initial:

Witness: _____

Prepared By: _____ Date

Reviewed By: Ben Yoshida 7.5.19 Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9070624 (Oil)

Prep Method: EPA ~~3546 (Fuels)~~ 3580A cas 19
7/3/19

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
1	9070624-BLK1		QC	07/03/19 15:48	~~0.1~~ 1.0	5				100					
2	9070624-BS1		QC	07/03/19 15:48	0.1	5	A19G002		100	100					
3	A9F0684-01	A	NWTPH-Dx (Diesel/Oil)	07/03/19 15:48	~~0.1~~ 0.12	5				100	2708-190619-OIL	6th priority Added 6/26/19 Liquid, color			
4	9070624-DUP1		QC	07/03/19 15:48	~~0.1~~ 0.12	5		A9F0684-01		100		Liquid, color			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19D007	09/30/20	DCM CHEM PROD. 186806
A19F362	12/23/19	Sodium Sulfate Lot # 183474

Analyte Spike(s) cas

Std ID	Exp. Date	Description
A19G002	12/28/19	NWTPH-DX Spike in Methanol

Surrogate(s) cas

Std ID	Exp. Date	Description
A19F139	08/31/19	NWTPH-DX Soil Surrogate in DCM

~~Method 3546 digestion time and temperature achieved.~~ cas
~~Initial:~~ 7/3/19

Witness: CAH 07/03/19

cas 7/3/19
Prepared By: Date

CAH 07-03-19
Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9G03031**	Instrument:	**DUALFID1R**
Date:	**07/03/19 12:35**	Calibration:	**A9D2603**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G03031-RES1	Soil	QC	QC				A19E278
2	9G03031-CCV1	Soil	QC	QC				A19F379
3	9G03031-CCV2	Soil	QC	QC				A19F378
4	9G03031-CCB1	Soil	QC	QC				
5	9070624-BLK1	Oil	QC	QC		9070624		
6	9070624-BS1	Oil	QC	QC		9070624		
7	A9F0684-01	Oil	NWTPH-Dx (Diesel/Oil)	Hahn and Associates	07/05/19	9070624		
8	9070624-DUP1	Oil	QC	QC		9070624		
9	9G03031-CCV3	Soil	QC	QC				A19F378
10	9G03031-CCV4	Soil	QC	QC				A19F379
11	9G03031-CAL1	Soil	QC	QC				A19F062
12	9G03031-CAL2	Soil	QC	QC				A19F321
13	9G03031-CAL3	Soil	QC	QC				A19E329
14	9G03031-CCB2	Soil	QC	QC				
15	9070610-BLK1	Soil	QC	QC		9070610		
16	A9G0088-03	Soil	NWTPH-HCID		07/09/19	9070610		
17	9070610-DUP1	Soil	QC	QC		9070610		
18	A9G0088-04	Soil	NWTPH-HCID		07/09/19	9070610		
19	A9G0095-01	Soil	NWTPH-HCID		07/08/19	9070610		
20	A9G0122-01	Soil	NWTPH-HCID		07/05/19	9070610		
21	A9G0122-02	Soil	NWTPH-HCID		07/05/19	9070610		
22	A9G0122-03	Soil	NWTPH-HCID		07/05/19	9070610		
23	A9G0122-04	Soil	NWTPH-HCID		07/05/19	9070610		
24	A9G0122-05	Soil	NWTPH-HCID		07/05/19	9070610		
25	A9G0122-06	Soil	NWTPH-HCID		07/05/19	9070610		
26	A9G0122-07	Soil	NWTPH-HCID		07/05/19	9070610		

Data Entered By: AL 7.5.19

Data Reviewed By: [signature] 7/5/19

Comments:

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070302.D Vial: 95
Acq On : 3 Jul 2019 17:08 Operator: BLL
Sample : 9G03031-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

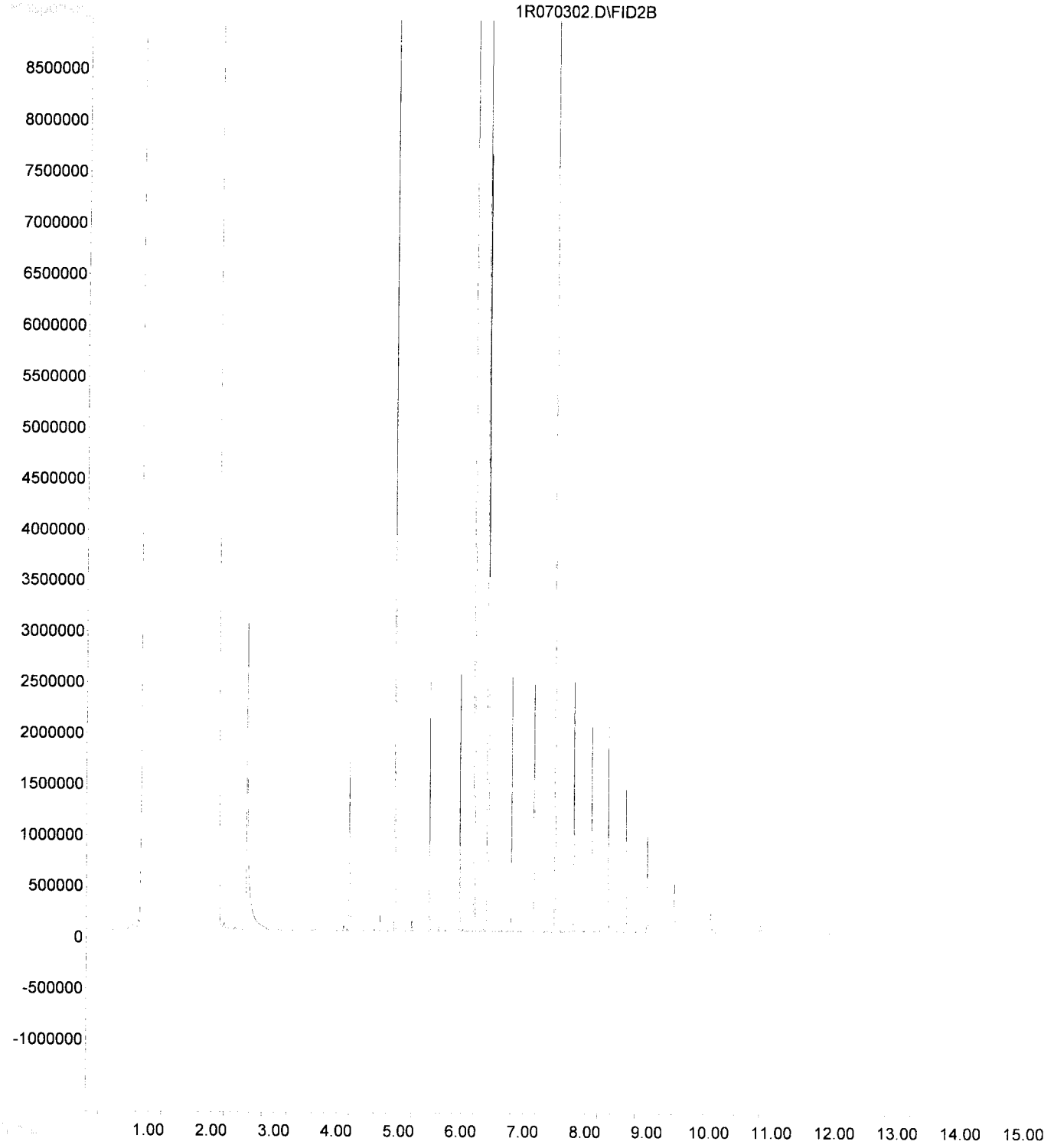
		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.65	118682	0.070	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	536794051	353.588	ug/ml
2)	H	Diesel	6.00	536794051	353.588	ug/ml
3)	H	DRO(C12-C24)	6.00	454047653	299.083	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	371317790	329.863	ug/ml
5)	H	TPHd (C10-C25)	6.00	473609501	340.970	ug/ml
7)	H	Oil	10.00	331268921	230.379	ug/mL
8)	H	RRO (C24-C40)	10.00	85708768	59.606	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	143595280	155.275	ug/mL
10)	H	TPHmo (C25-C36)	8.00	76536198	87.409	ug/mL

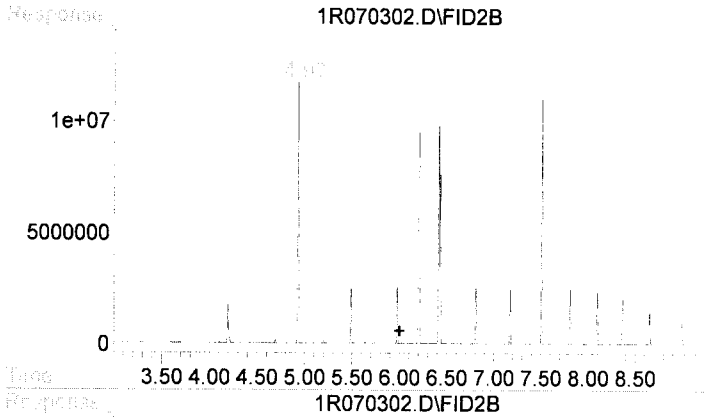
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070302.D Vial: 95
Acq On : 3 Jul 2019 17:08 Operator: BLL
Sample : 9G03031-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

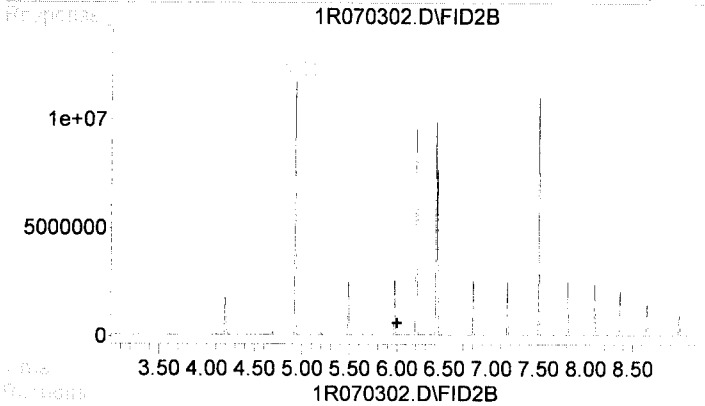
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





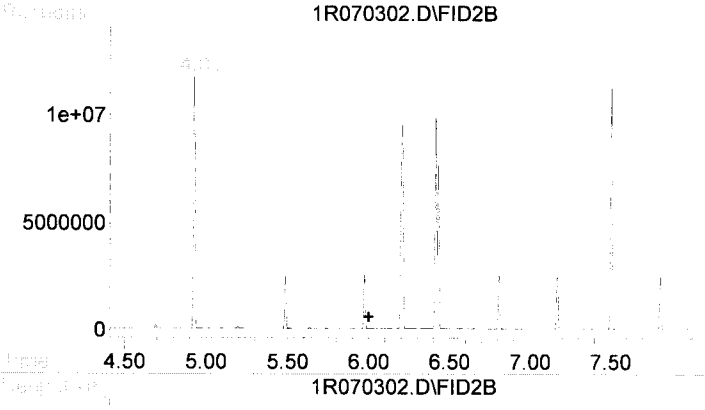
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 536794051
Conc: 353.59 ug/ml m



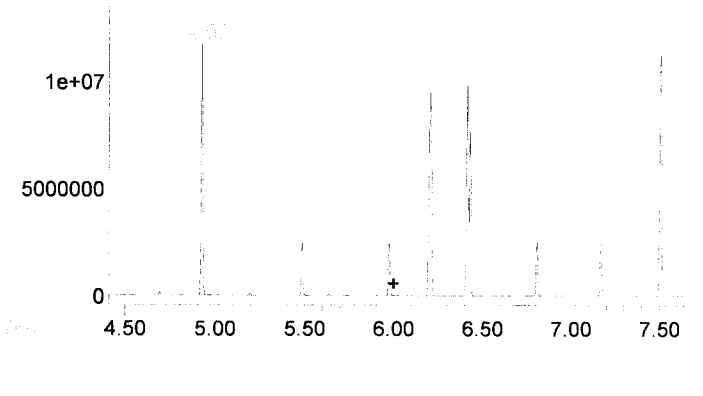
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 536794051
Conc: 353.59 ug/ml m



#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 454047653
Conc: 299.08 ug/mL m



#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 371317790
Conc: 329.86 ug/ml m

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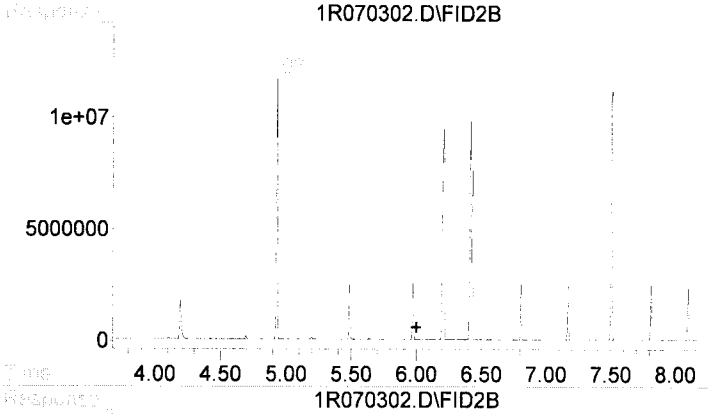
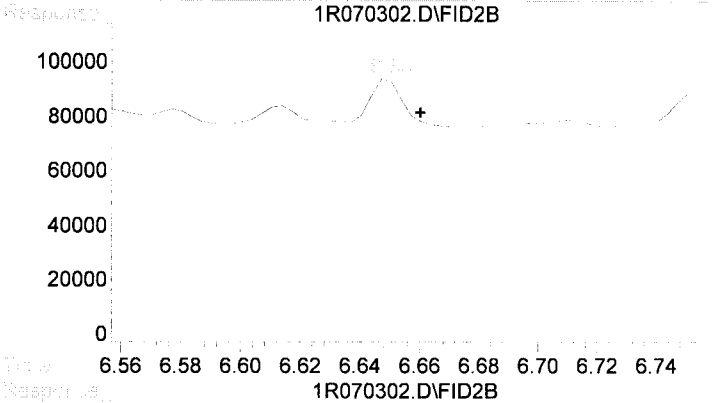


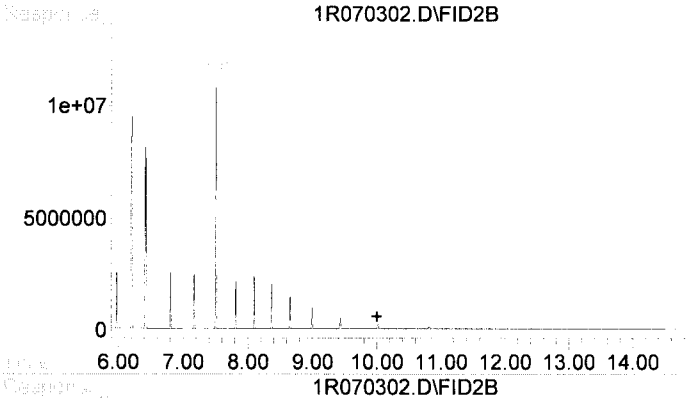
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 473609501
Conc: 340.97 ug/ml m



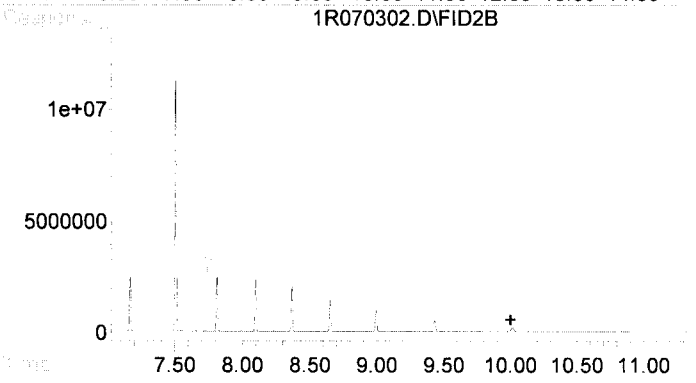
#6 o-Terphenyl

R.T.: 6.650 min
Delta R.T.: -0.010 min
Response: 118682
Conc: 0.07 ug/mL



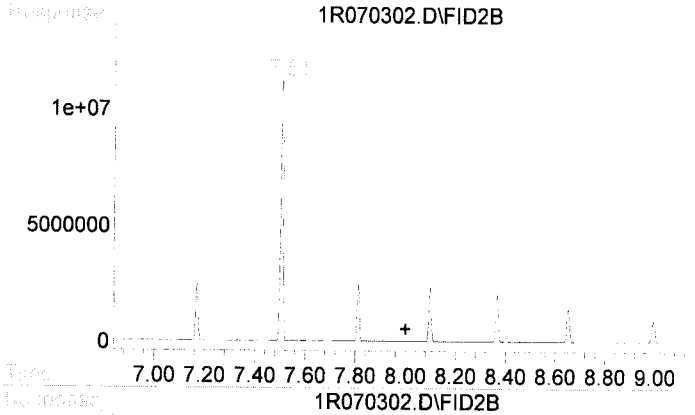
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 331268921
Conc: 230.38 ug/mL m



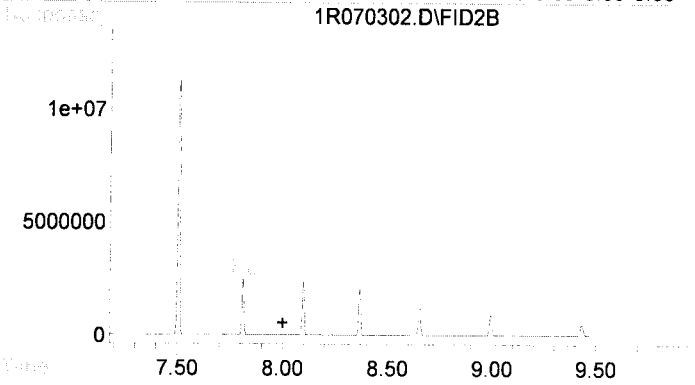
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 85708768
Conc: 59.61 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 143595280
Conc: 155.27 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 76536198
Conc: 87.41 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070302.D Vial: 95
Acq On : 3 Jul 2019 17:08 Operator: BLL
Sample : 9G03031-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 10:53 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
2)	S	BFB (Surr.)	0.00	0	N.D.	ug/ml
4)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Gasoline Range	4.00	2605784	94.188	ug/mL
3)	H	Diesel (C12 - C24)	6.00	14193802	336.715	ug/mL
5)	H	Oil (>C24)	10.00	2979522	82.554	ug/mL

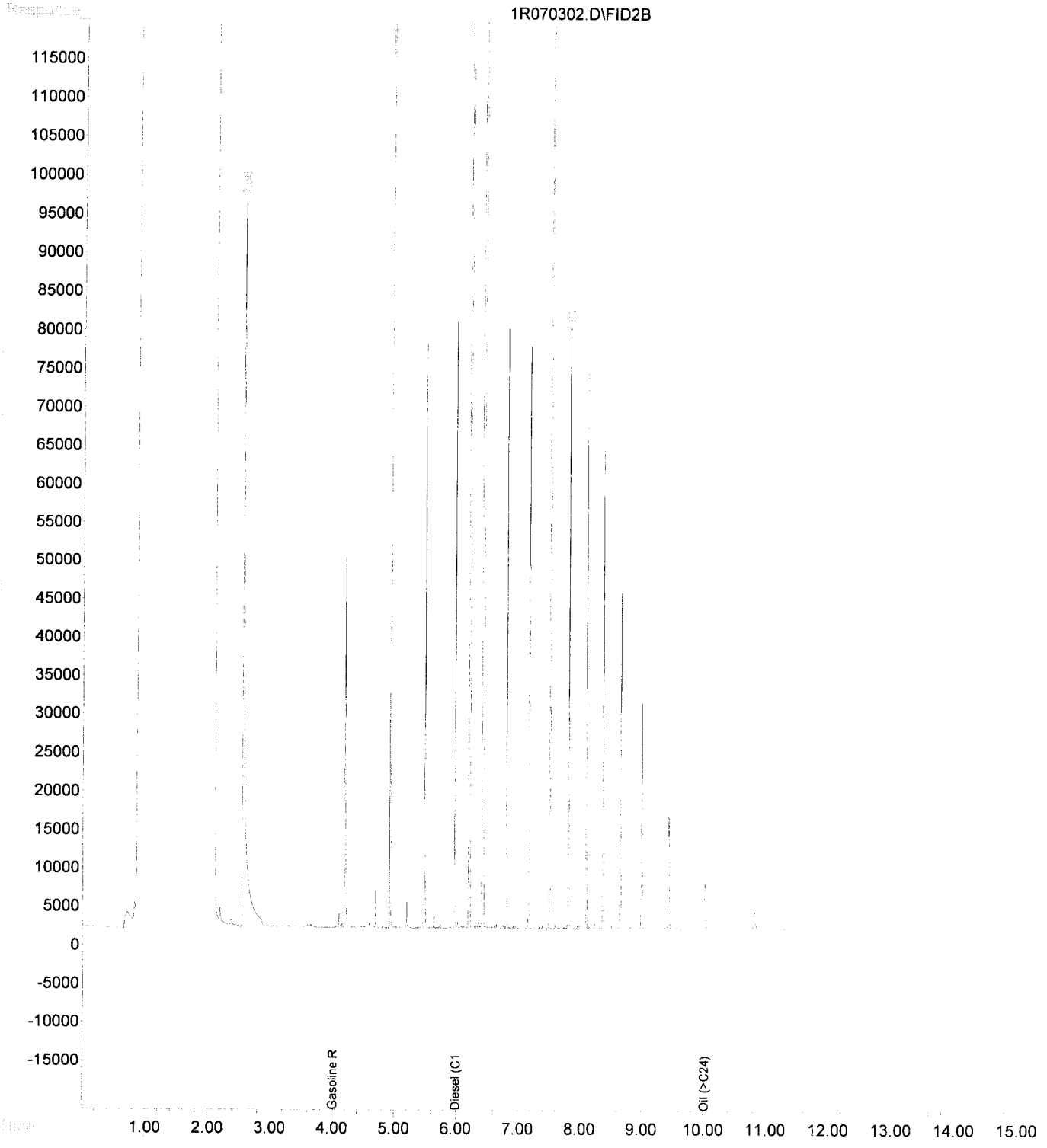
(f)=RT Delta > 1/2 window (m)=manual int.

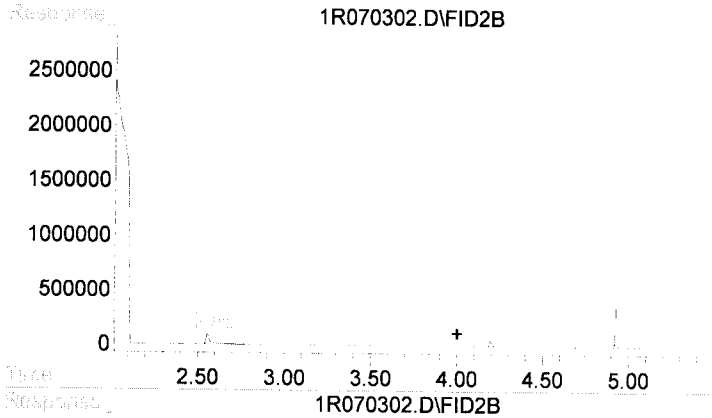
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070302.D Vial: 95
Acq On : 3 Jul 2019 17:08 Operator: BLL
Sample : 9G03031-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 10:53 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

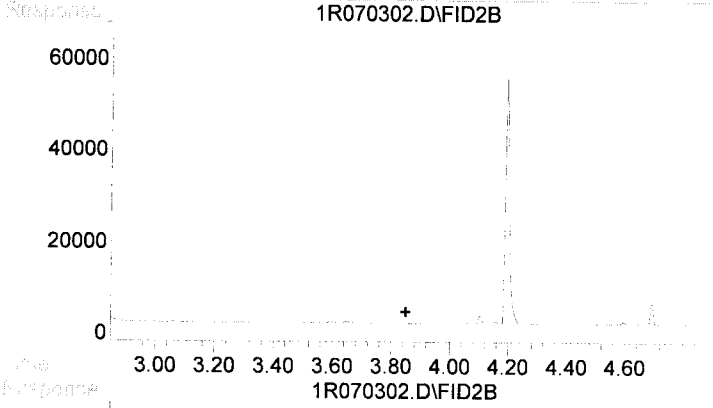
Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





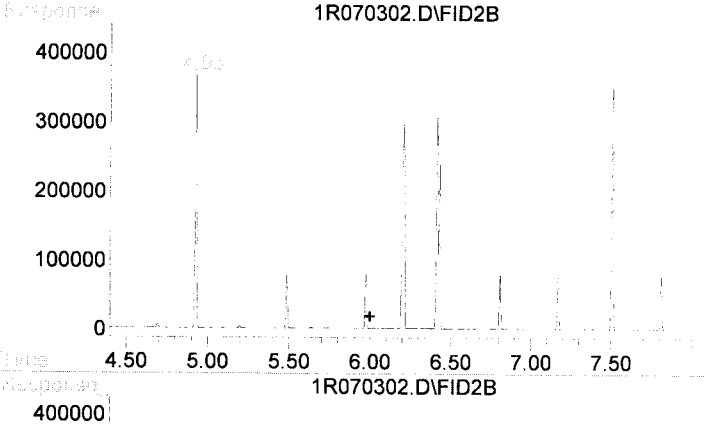
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 2605784
Conc: 94.19 ug/mL m



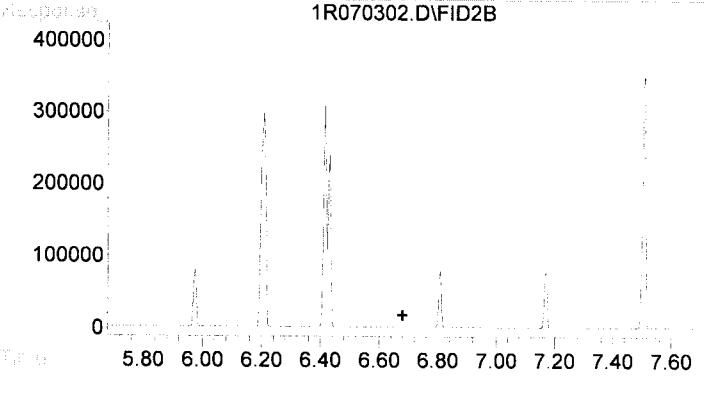
#2 BFB (Surr.)

R.T.: 0.000 min
Exp R.T. : 3.850 min
Response: 0
Conc: N.D.



#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 14193802
Conc: 336.72 ug/mL m



#4 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.680 min
Response: 0
Conc: N.D.

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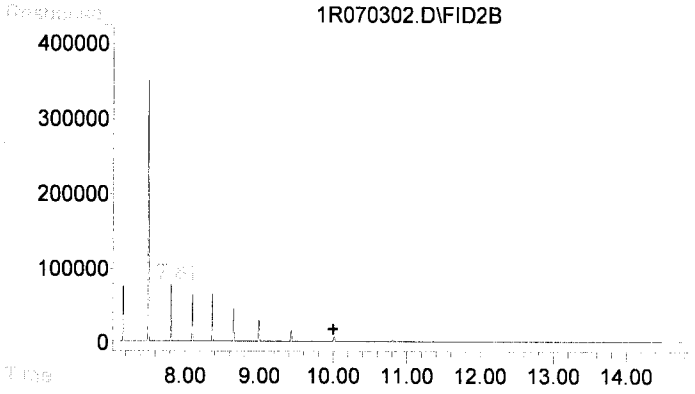

#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 2979522
Conc: 82.55 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-07\9G03031\1R070303.D
Acq On : 3 Jul 2019 17:31
Sample : 9G03031-CCV1
Misc :
IntFile : SUR.E

Vial: 2
Operator: BLL
Inst : HP G1530A
Multiplr: 1.00

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	365.703	0.0	107	0.00
2	H	Diesel	-1.000	365.703	0.0	107	0.00
3	H	DRO(C12-C24)	-1.000	85.748	0.0	25	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	39.455	0.0	109	0.00
5	H	TPHd (C10-C25)	-1.000	135.317	0.0	106	0.00
6	S	o-Terphenyl	-1.000	55.699	0.0	0	0.00
7	H	Oil	500.000	494.766	1.0	104	0.00
8	H	RRO (C24-C40)	500.000	389.947	22.0#	82	0.00
9	H	Ca Luft ORO (C23-C32)	500.000	513.148	-2.6	106	0.00
10	H	TPHmo (C25-C36)	500.000	512.788	-2.6	106	0.00

AL

7.5.19

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

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070303.D Vial: 2
Acq On : 3 Jul 2019 17:31 Operator: BLL
Sample : 9G03031-CCV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.65	94263460	55.699	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	555186037	365.703	ug/ml
2)	H	Diesel	6.00	555186037	365.703	ug/ml
3)	H	DRO(C12-C24)	6.00	130177210	85.748	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	44413443	39.455	ug/ml
5)	H	TPHd (C10-C25)	6.00	187956782	135.317	ug/ml
7)	H	Oil	10.00	711440217	494.766	ug/mL
8)	H	RRO (C24-C40)	10.00	560718021	389.947	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	474550345	513.148	ug/mL
10)	H	TPHmo (C25-C36)	8.00	449001710	512.788	ug/mL

AL

7.5.19

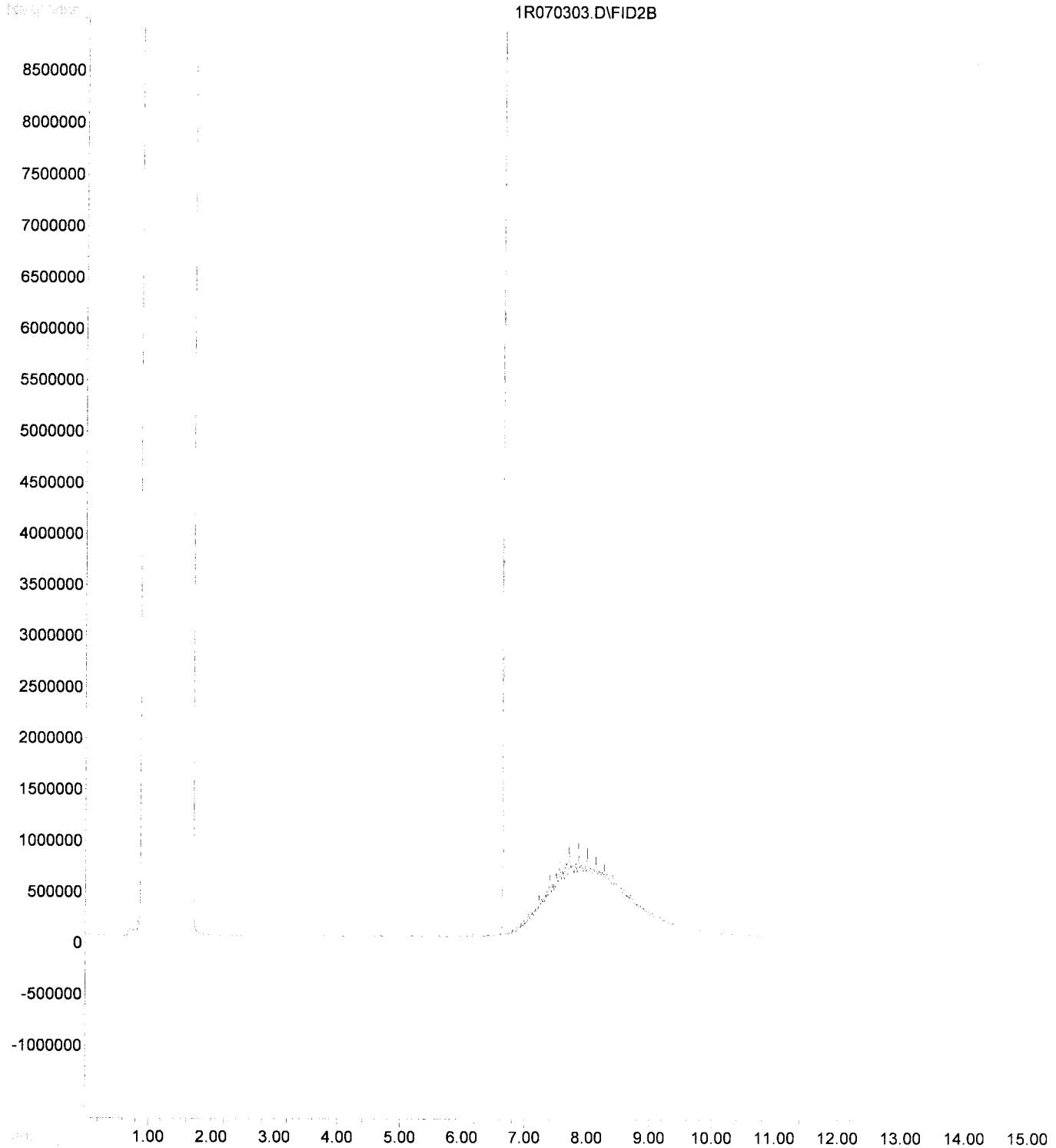
(f)=RT Delta > 1/2 Window (m)=manual int.

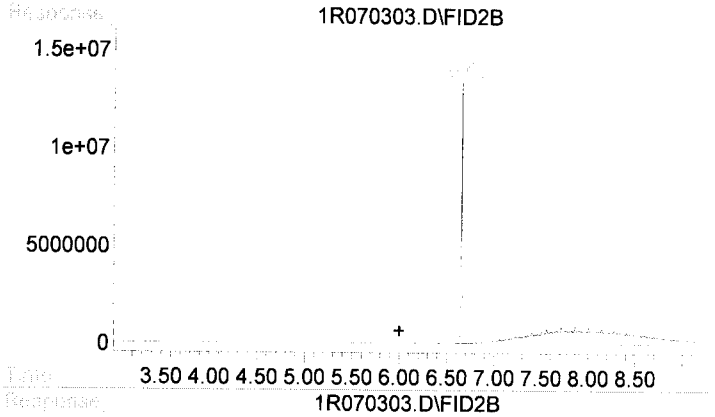
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070303.D Vial: 2
Acq On : 3 Jul 2019 17:31 Operator: BLL
Sample : 9G03031-CCV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

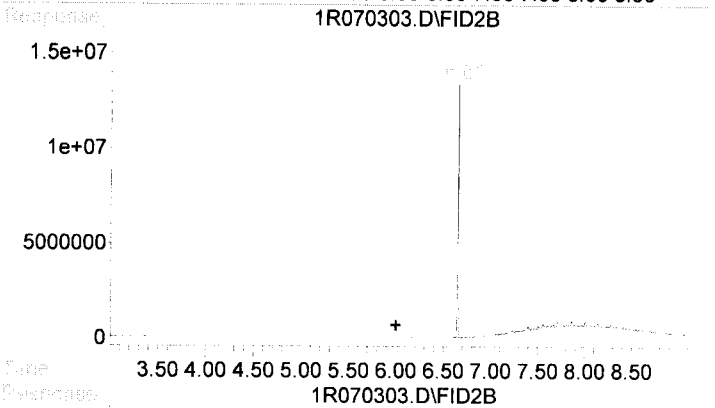
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





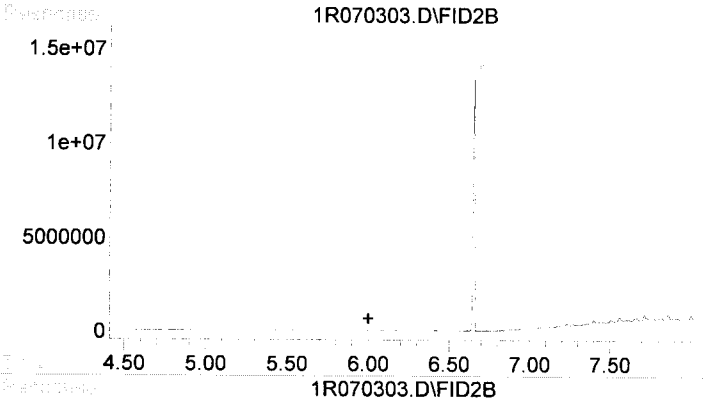
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 555186037
Conc: 365.70 ug/ml m



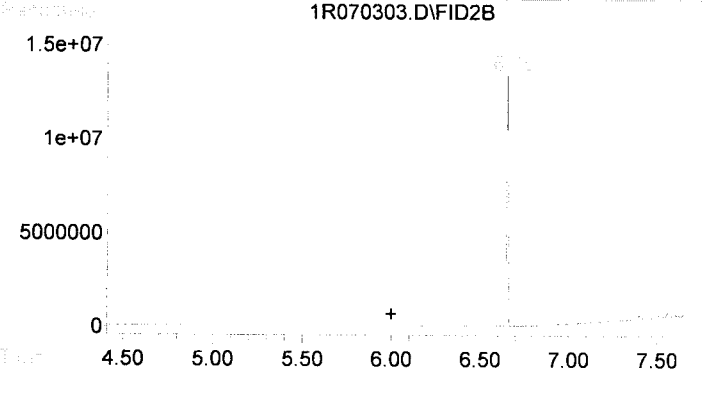
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 555186037
Conc: 365.70 ug/ml m



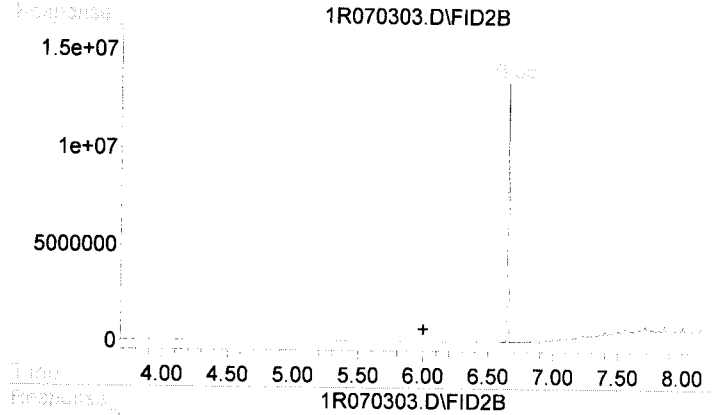
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 130177210
Conc: 85.75 ug/mL m



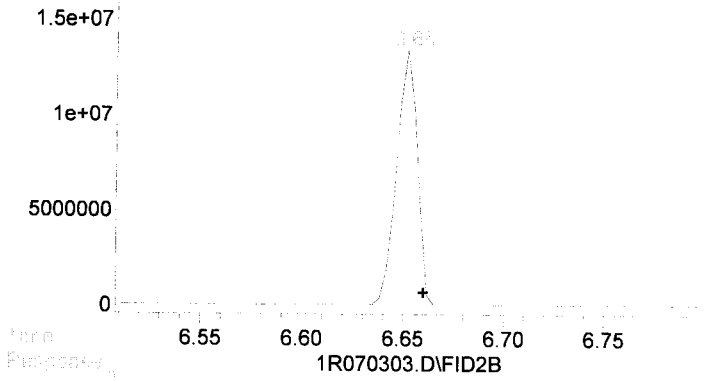
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 44413443
Conc: 39.45 ug/ml m



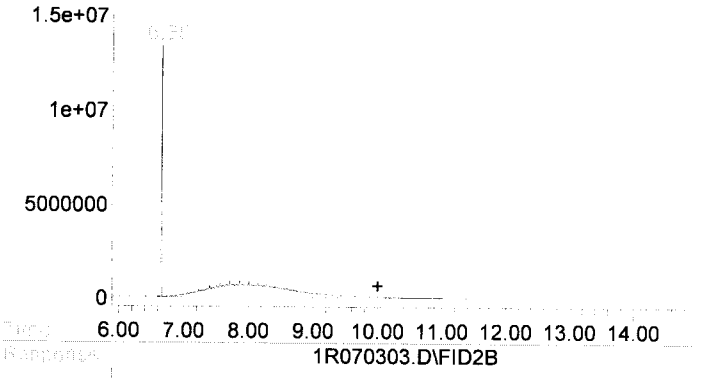
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 187956782
Conc: 135.32 ug/ml m



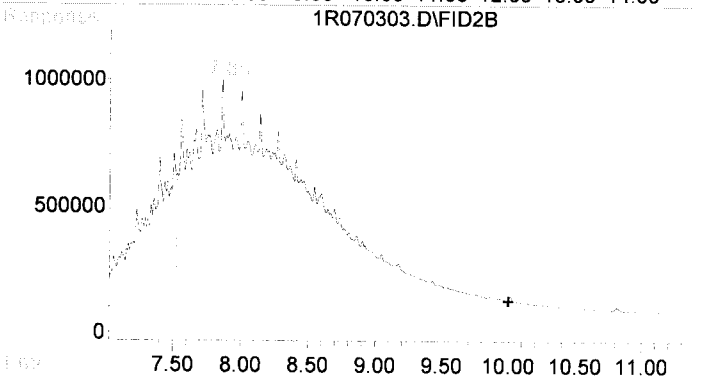
#6 o-Terphenyl

R.T.: 6.653 min
Delta R.T.: -0.007 min
Response: 94263460
Conc: 55.70 ug/mL



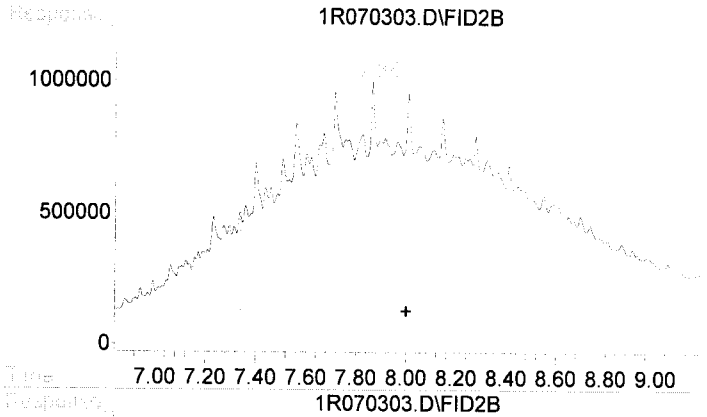
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 711440217
Conc: 494.77 ug/mL m



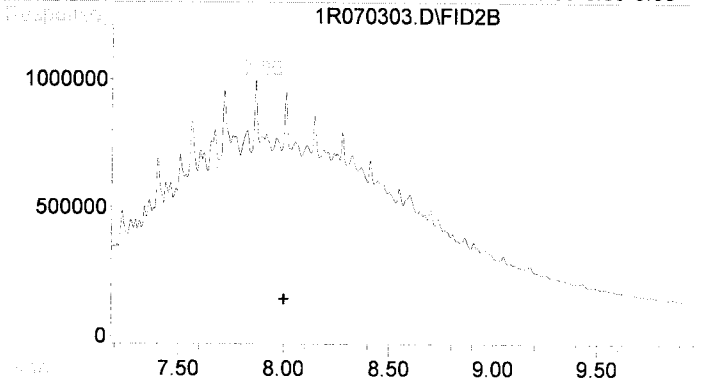
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 560718021
Conc: 389.95 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 474550345
Conc: 513.15 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 449001710
Conc: 512.79 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-07\9G03031\1R070304.D Vial: 1
Acq On : 3 Jul 2019 17:54 Operator: BLL
Sample : 9G03031-CCV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	1085.602	-8.6	111	0.00
2	H	Diesel	1000.000	1085.602	-8.6	111	0.00
3	H	DRO(C12-C24)	1000.000	862.801	13.7	89	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	1113.442	-11.3	112	0.00
5	H	TPHd (C10-C25)	1000.000	1111.835	-11.2	112	0.00
6	S	o-Terphenyl	-1.000	56.484	0.0	0	0.00
7	H	Oil	-1.000	302.637	0.0	103	0.00
8	H	RRO (C24-C40)	-1.000	17.190	0.0	6	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	47.588	0.0	90	0.00
10	H	TPHmo (C25-C36)	-1.000	16.214	0.0	86	0.00

AL
7.5.19

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

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070304.D Vial: 1
Acq On : 3 Jul 2019 17:54 Operator: BLL
Sample : 9G03031-CCV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.65	95591142	56.484	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1648088571	1085.602	ug/ml
2)	H	Diesel	6.00	1648088571	1085.602	ug/ml
3)	H	DRO(C12-C24)	6.00	1309846640	862.801	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1253372814	1113.442	ug/ml
5)	H	TPHd (C10-C25)	6.00	1544346476	1111.835	ug/ml
7)	H	Oil	10.00	435170927	302.637	ug/mL
8)	H	RRO (C24-C40)	10.00	24718124	17.190	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	44008697	47.588	ug/mL
10)	H	TPHmo (C25-C36)	8.00	14197043	16.214	ug/mL

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(f)=RT Delta > 1/2 window (m)=manual int.

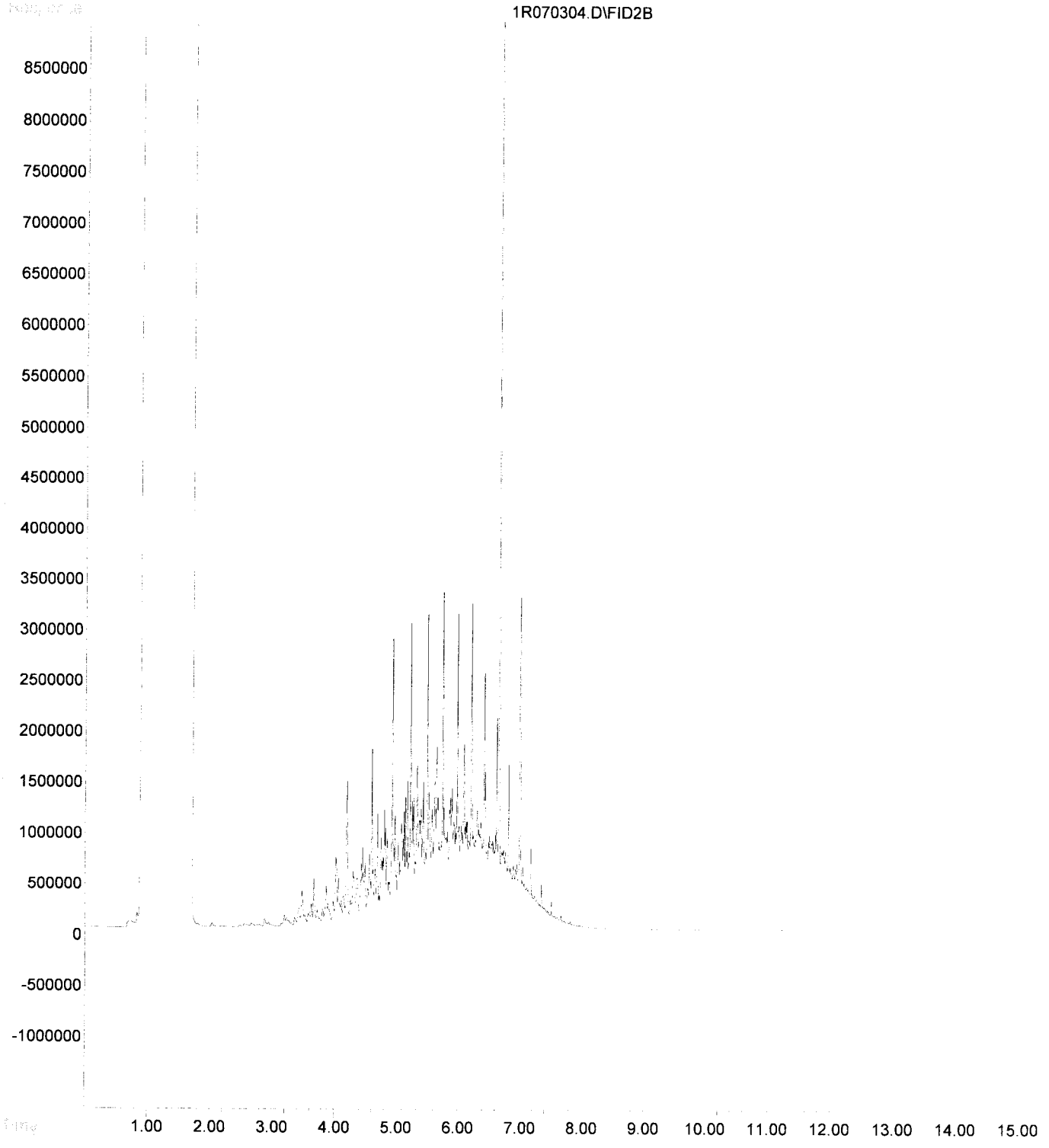
1R070304.D 1R90425D.M Fri Jul 05 09:37:14 2019 SV-GCMS3 Page 1

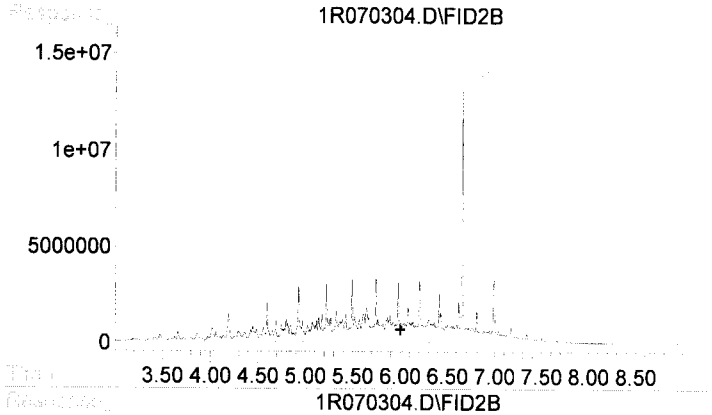
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070304.D Vial: 1
Acq On : 3 Jul 2019 17:54 Operator: BLL
Sample : 9G03031-CCV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

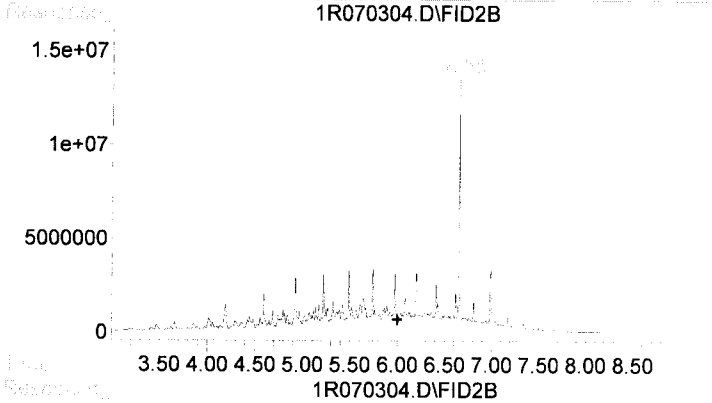
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





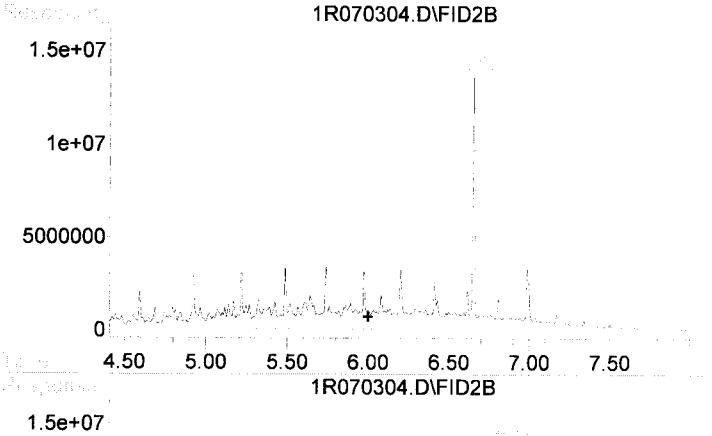
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1648088571
Conc: 1085.60 ug/ml m



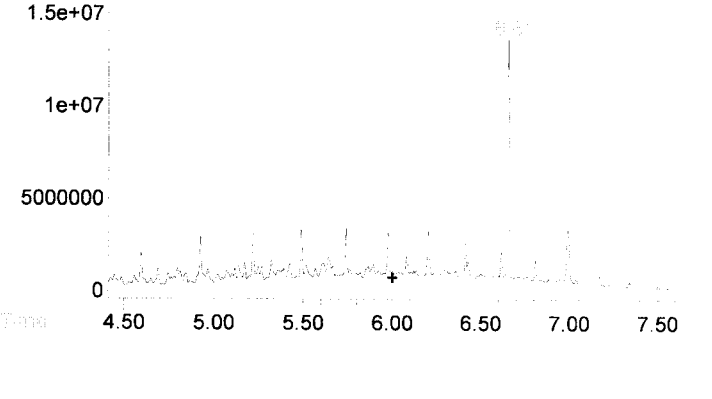
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1648088571
Conc: 1085.60 ug/ml m



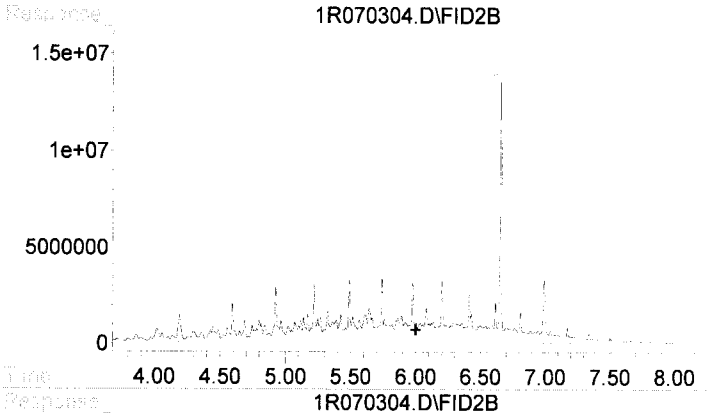
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1309846640
Conc: 862.80 ug/mL m



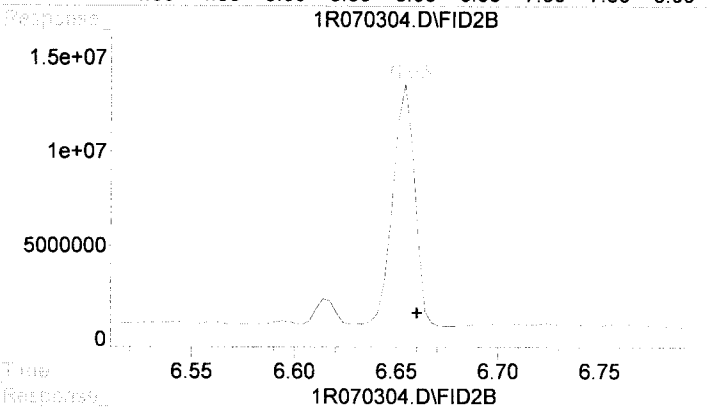
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1253372814
Conc: 1113.44 ug/ml m



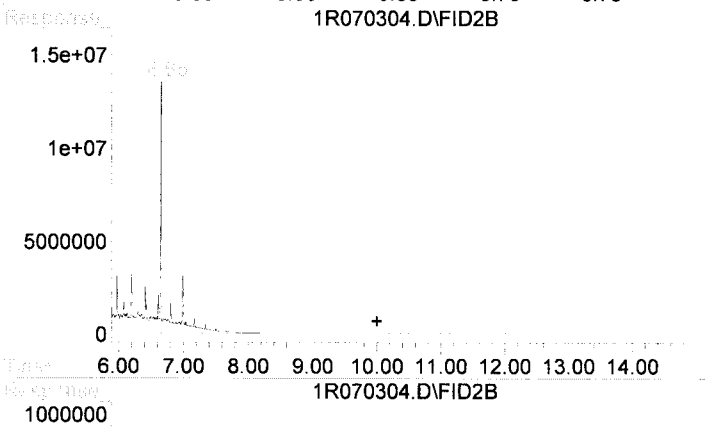
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1544346476
Conc: 1111.83 ug/ml m



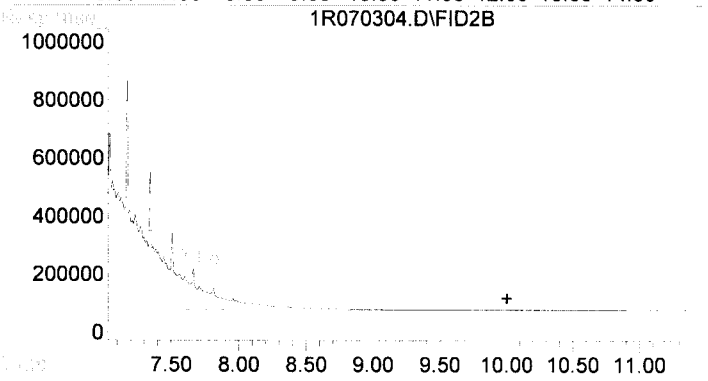
#6 o-Terphenyl

R.T.: 6.655 min
Delta R.T.: -0.005 min
Response: 95591142
Conc: 56.48 ug/mL



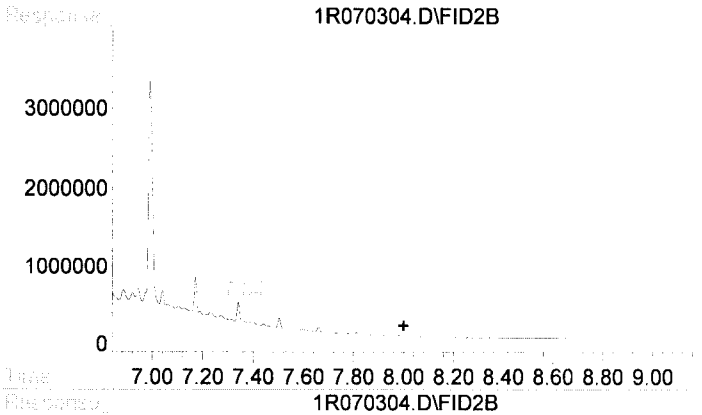
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 435170927
Conc: 302.64 ug/mL m



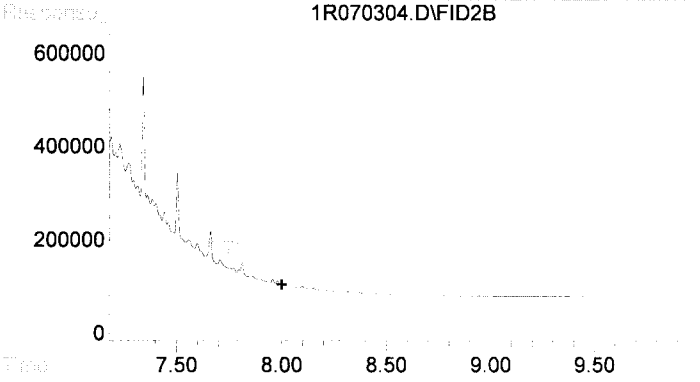
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 24718124
Conc: 17.19 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 44008697
Conc: 47.59 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 14197043
Conc: 16.21 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070305.D Vial: 100
Acq On : 3 Jul 2019 23:03 Operator: BLL
Sample : 9G03031-CCB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	8721763	5.745	ug/ml
2)	H	Diesel	6.00	8721763	5.745	ug/ml
3)	H	DRO(C12-C24)	6.00	2843780	1.873	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2684643	2.385	ug/ml
5)	H	TPHd (C10-C25)	6.00	4429590	3.189	ug/ml
7)	H	Oil	10.00	26533541	18.453	ug/mL
8)	H	RRO (C24-C40)	10.00	12544530	8.724	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	3157631	3.414	ug/mL
10)	H	TPHmo (C25-C36)	8.00	6292479	7.186	ug/mL

$< 1/2$ RL

M

7.5.19

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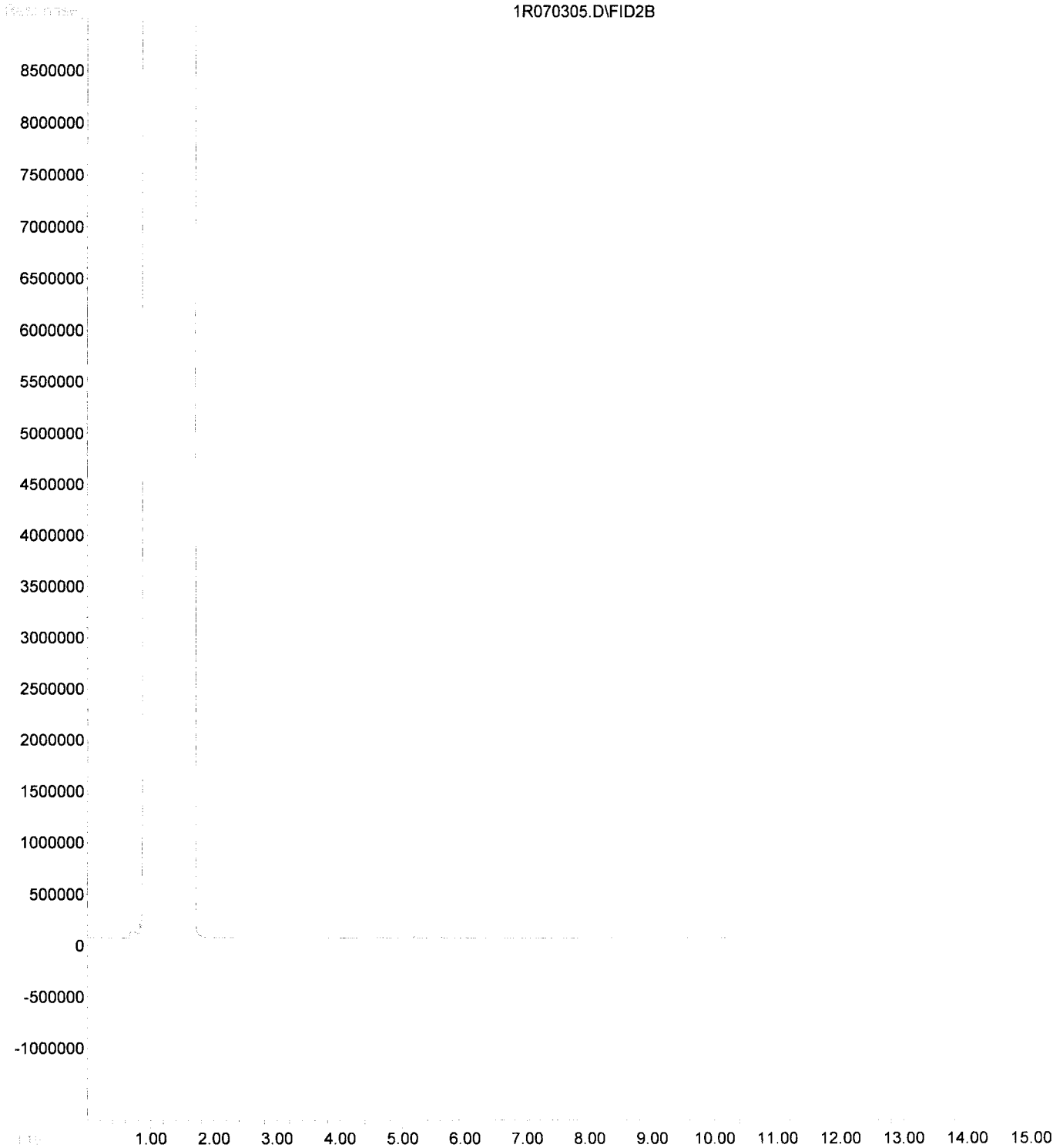
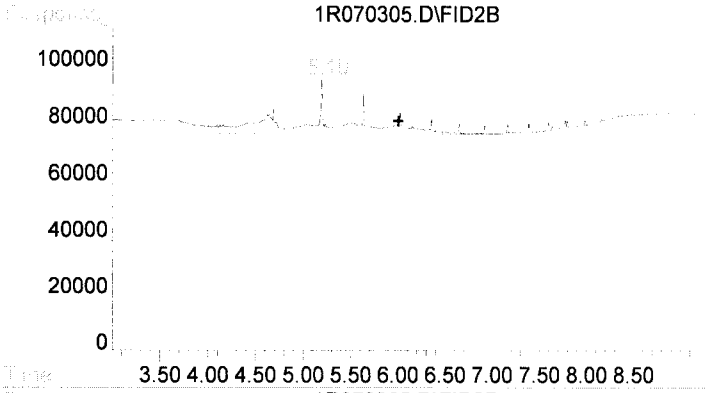
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070305.D Vial: 100
Acq On : 3 Jul 2019 23:03 Operator: BLL
Sample : 9G03031-CCB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

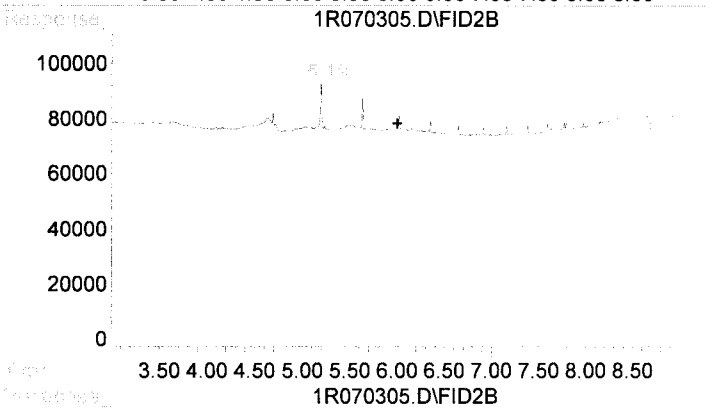
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





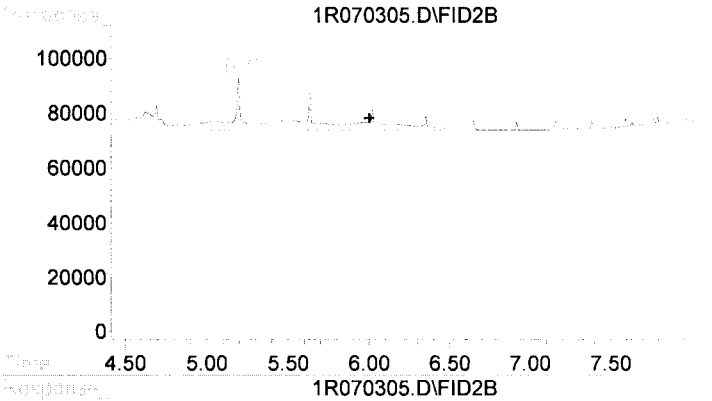
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 8721763
Conc: 5.75 ug/ml m



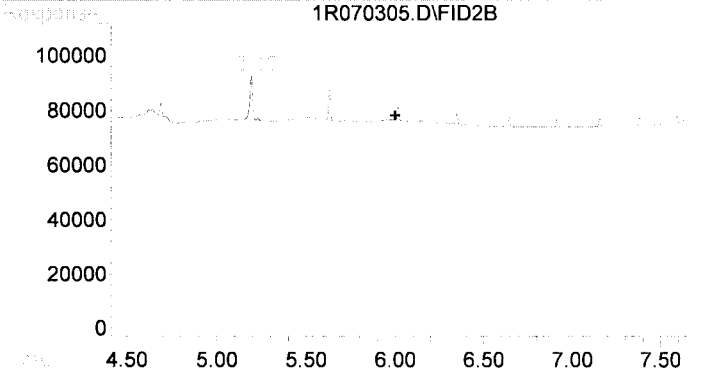
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 8721763
Conc: 5.75 ug/ml m



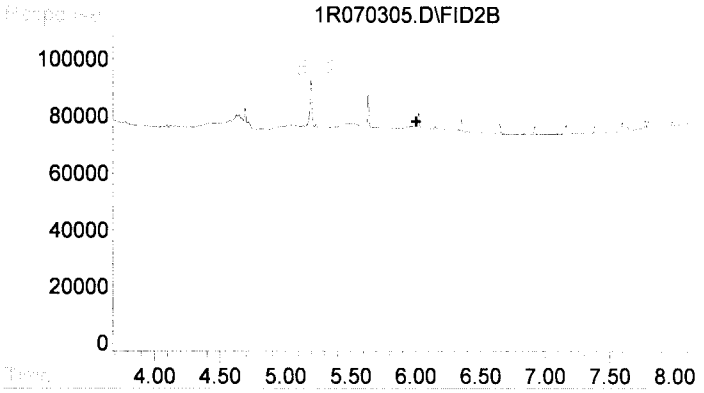
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2843780
Conc: 1.87 ug/mL m



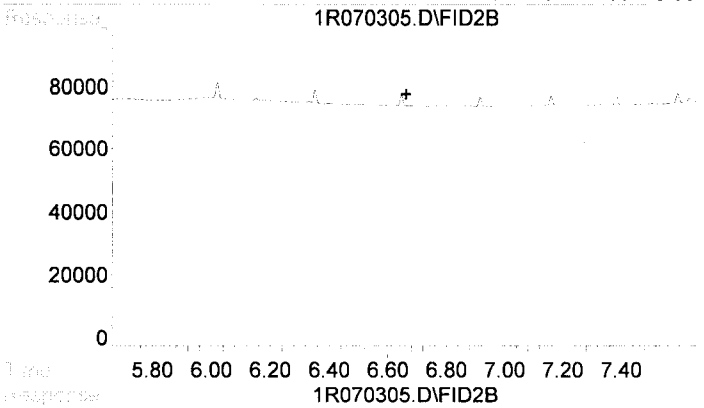
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2684643
Conc: 2.38 ug/ml m



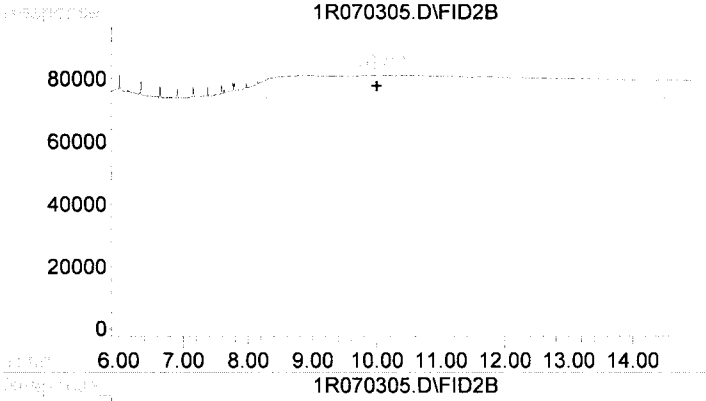
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 4429590
Conc: 3.19 ug/ml m



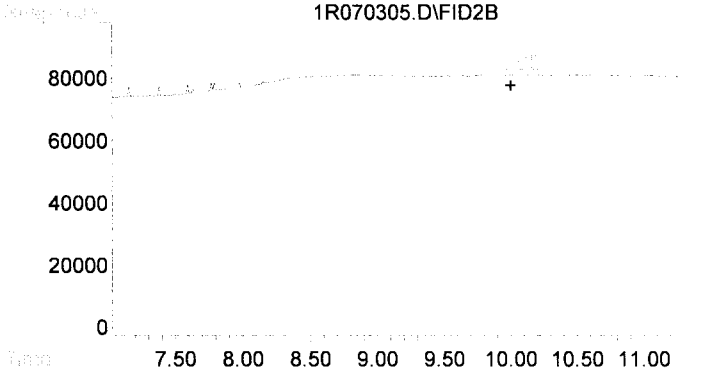
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.660 min
Response: 0
Conc: N.D.



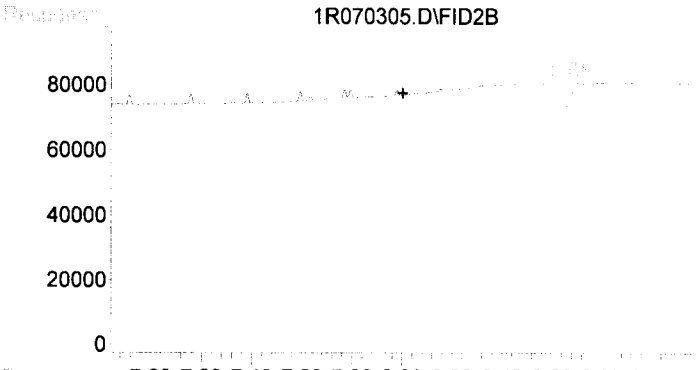
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 26533541
Conc: 18.45 ug/mL m



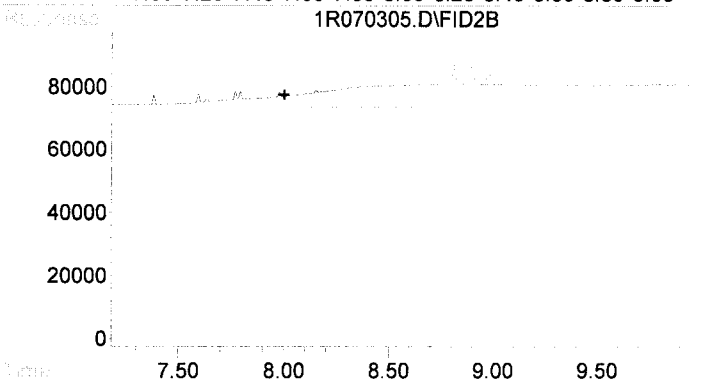
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 12544530
Conc: 8.72 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	3157631
Conc:	3.41 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	6292479
Conc:	7.19 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070306.D Vial: 51
Acq On : 3 Jul 2019 23:26 Operator: BLL
Sample : 9070624-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.65	93783369	55.416	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	7936441	5.228	ug/ml
2)	H	Diesel	6.00	7936441	5.228	ug/ml
3)	H	DRO(C12-C24)	6.00	2692523	1.774	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2625668	2.333	ug/ml
5)	H	TPHd (C10-C25)	6.00	4313375	3.105	ug/ml
7)	H	Oil	10.00	22299622	15.508	ug/mL
8)	H	RRO (C24-C40)	10.00	10296010	7.160	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2229900	2.411	ug/mL
10)	H	TPHmo (C25-C36)	8.00	5002257	5.713	ug/mL

< 1/2 RL

m

7.5.19

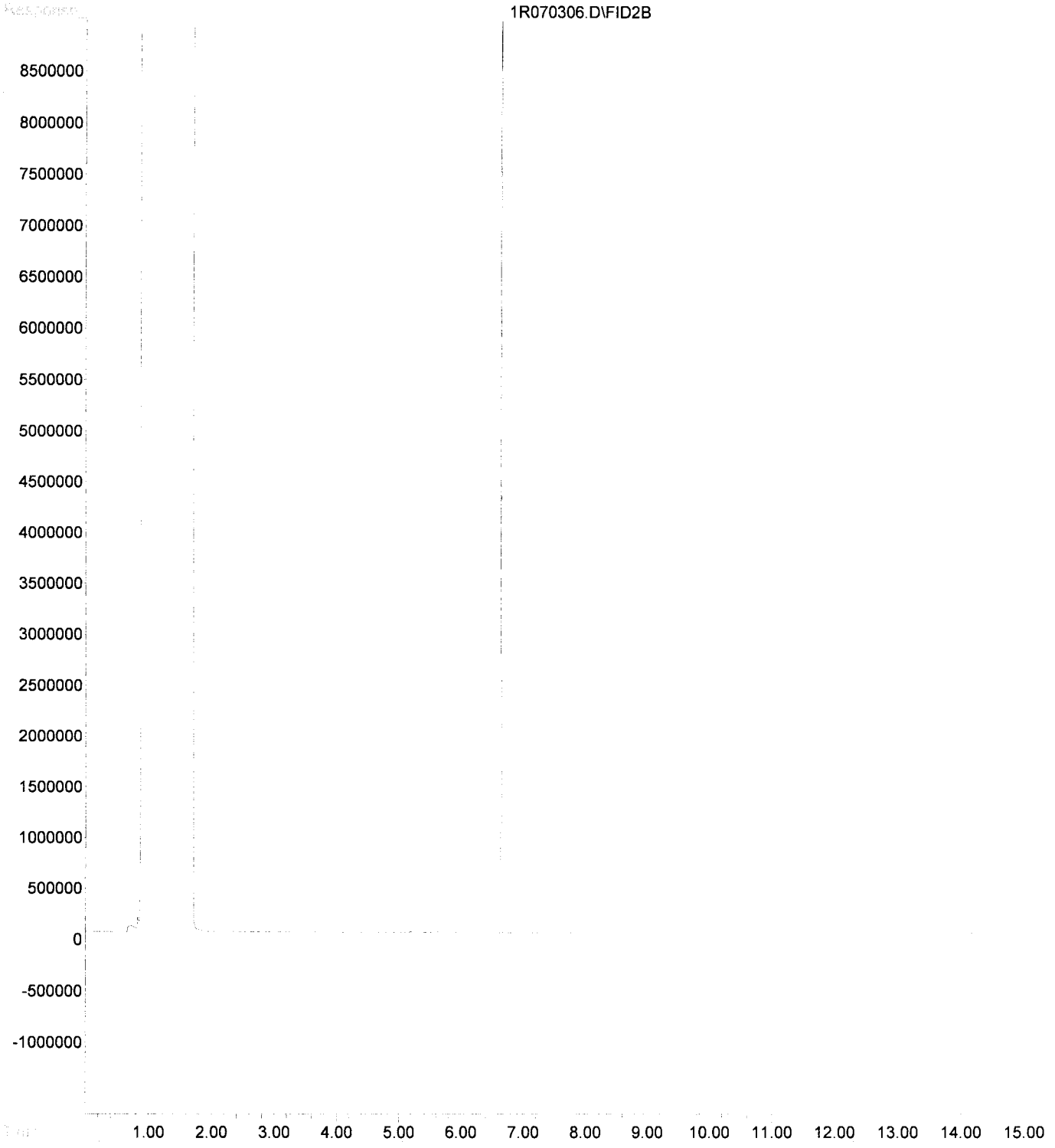
(f)=RT Delta > 1/2 Window (m)=manual int.

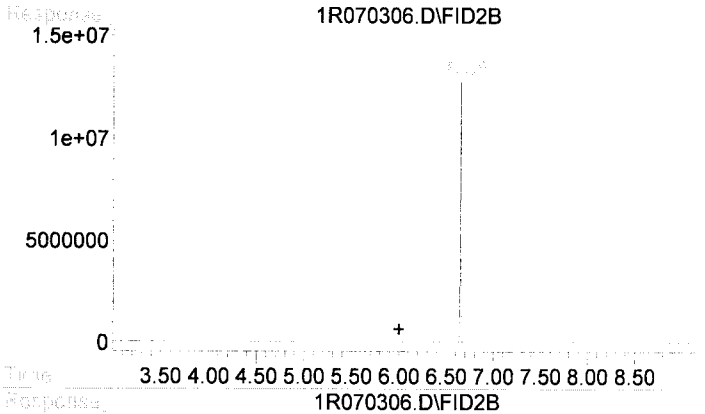
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070306.D Vial: 51
Acq On : 3 Jul 2019 23:26 Operator: BLL
Sample : 9070624-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

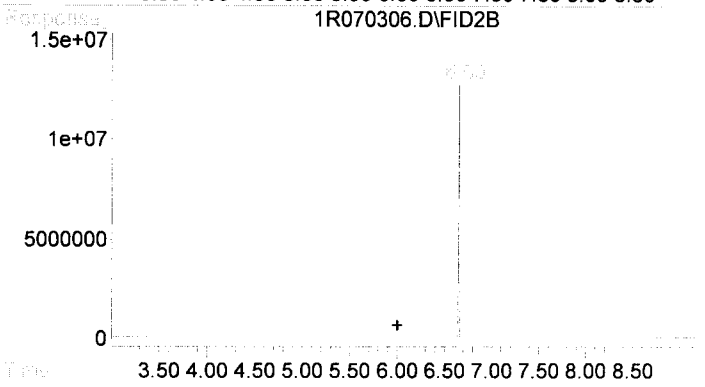
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





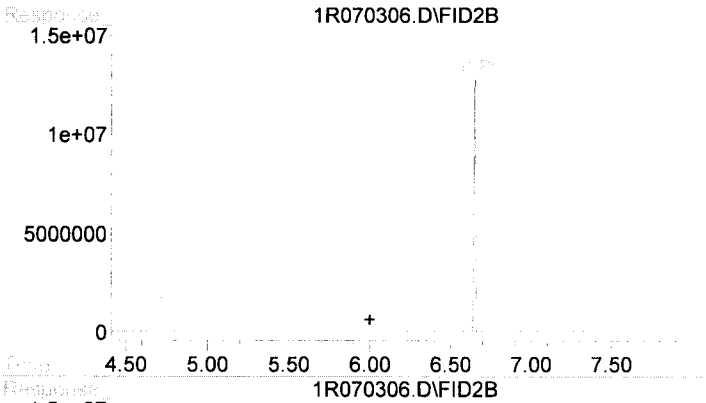
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 7936441
Conc: 5.23 ug/ml m



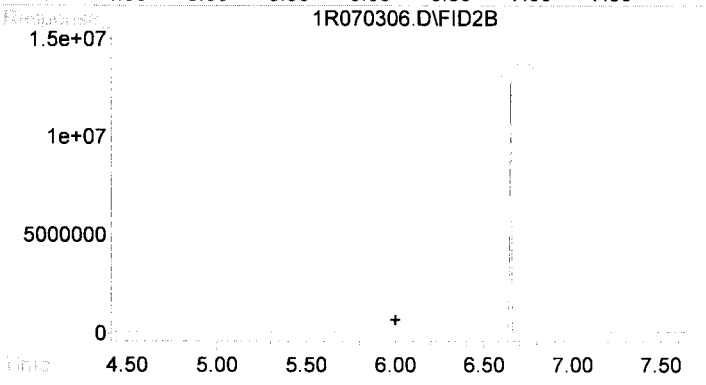
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 7936441
Conc: 5.23 ug/ml m



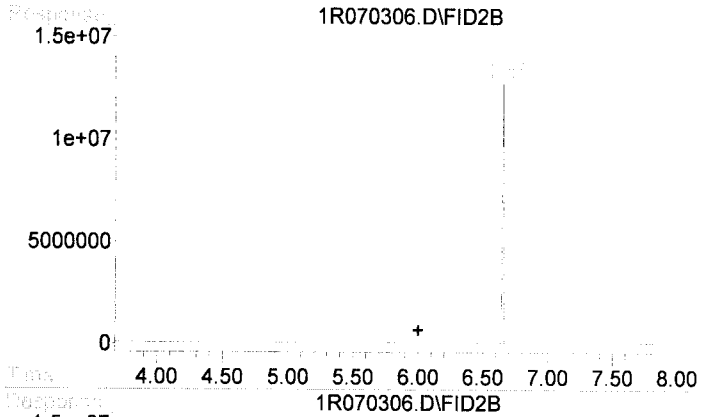
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2692523
Conc: 1.77 ug/mL m



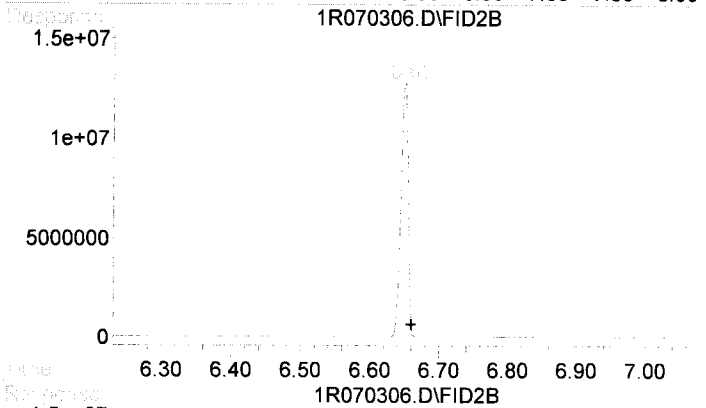
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2625668
Conc: 2.33 ug/ml m



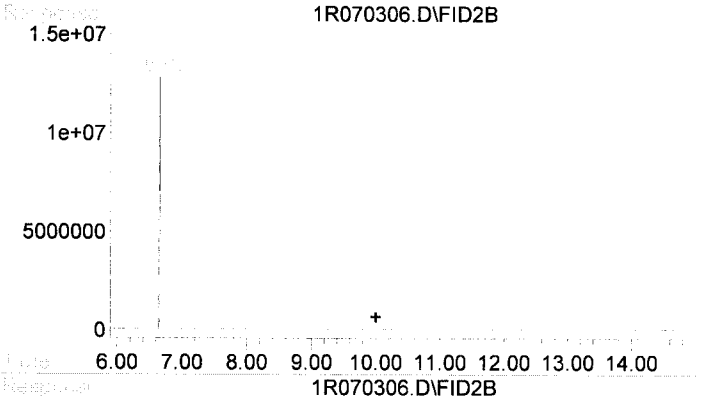
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 4313375
Conc: 3.11 ug/ml m



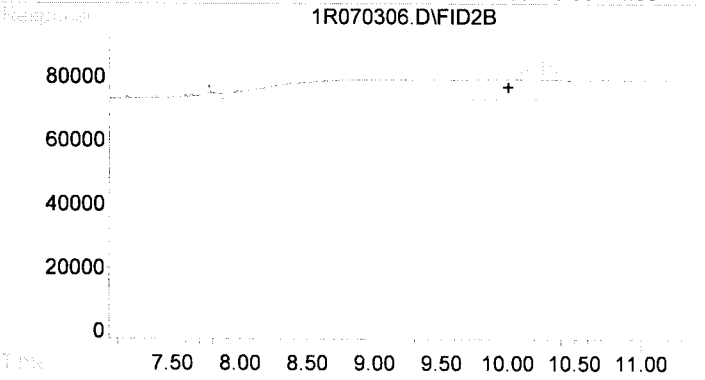
#6 o-Terphenyl

R.T.: 6.651 min
Delta R.T.: -0.009 min
Response: 93783369
Conc: 55.42 ug/mL



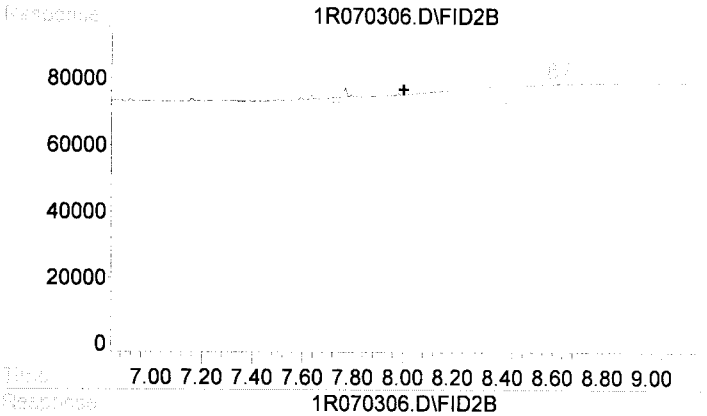
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 22299622
Conc: 15.51 ug/mL m



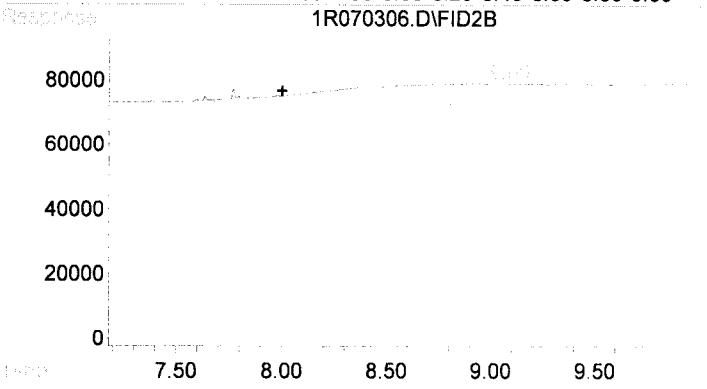
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 10296010
Conc: 7.16 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	2229900
Conc:	2.41 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	5002257
Conc:	5.71 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070307.D Vial: 52
Acq On : 3 Jul 2019 23:48 Operator: BLL
Sample : 9070624-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.65	96599639	57.080 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	402926112	265.409 ug/ml
2)	H	Diesel	6.00	402926112	265.409 ug/ml
3)	H	DRO(C12-C24)	6.00	309992915	204.193 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	301923929	268.216 ug/ml
5)	H	TPHd (C10-C25)	6.00	367686830	264.712 ug/ml
7)	H	Oil	10.00	105215141	73.171 ug/mL
8)	H	RRO (C24-C40)	10.00	8779539	6.106 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	9766707	10.561 ug/mL
10)	H	TPHmo (C25-C36)	8.00	5629045	6.429 ug/mL

AL

7.5.19

✓

(f)=RT Delta > 1/2 window (m)=manual int.

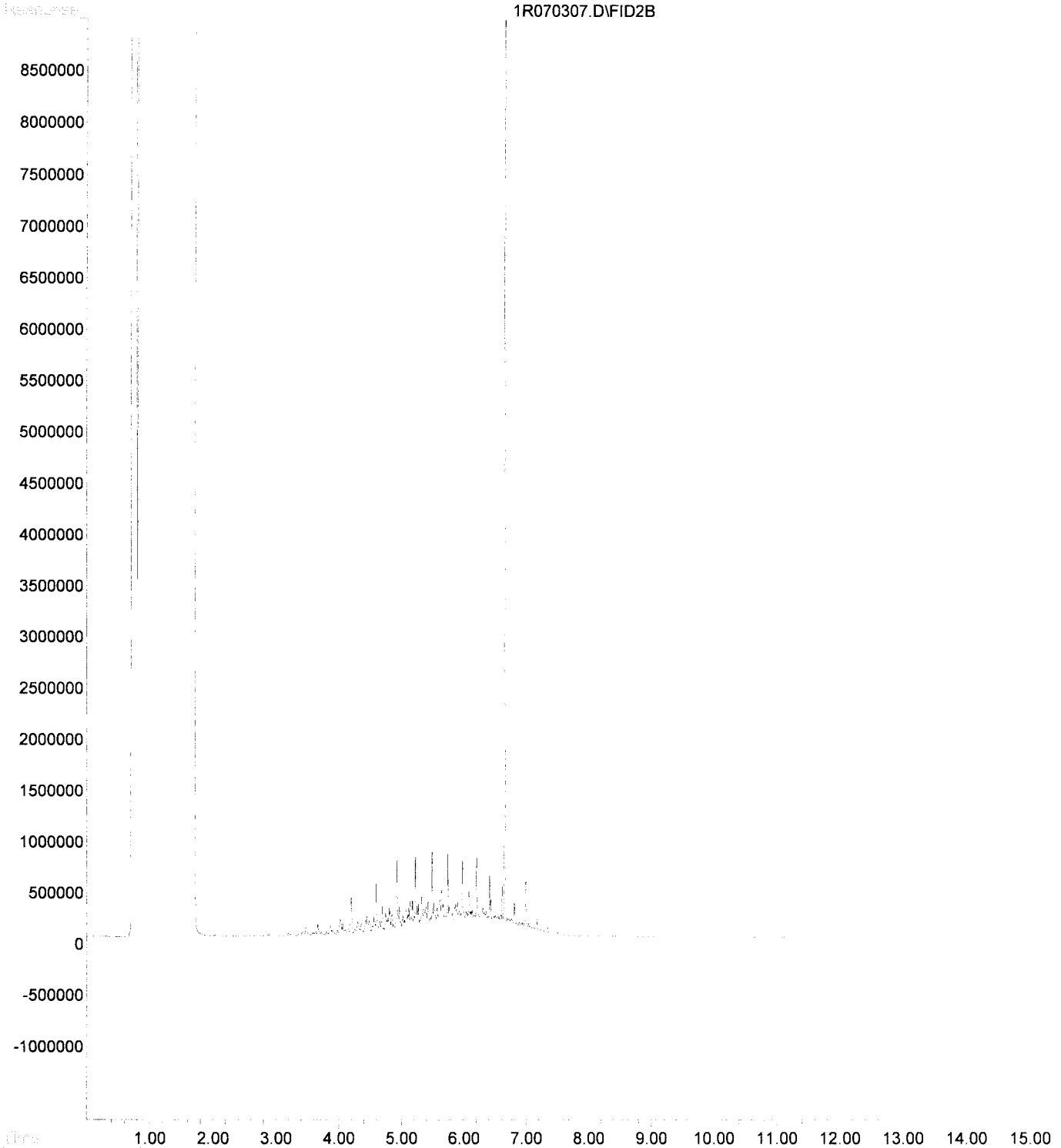
1R070307.D 1R90425D.M Fri Jul 05 09:37:23 2019 SV-GCMS3

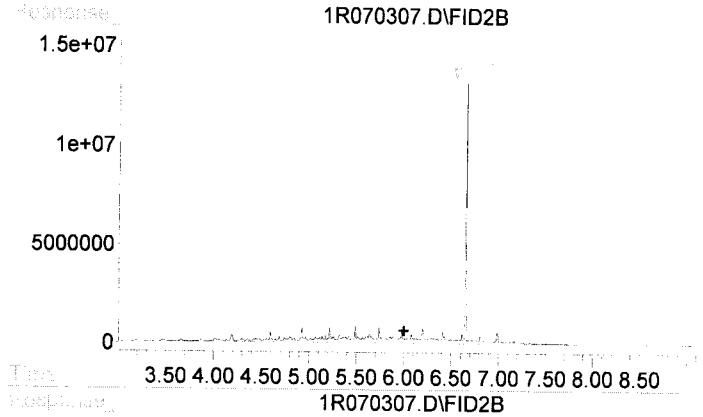
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070307.D Vial: 52
Acq On : 3 Jul 2019 23:48 Operator: BLL
Sample : 9070624-BS1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

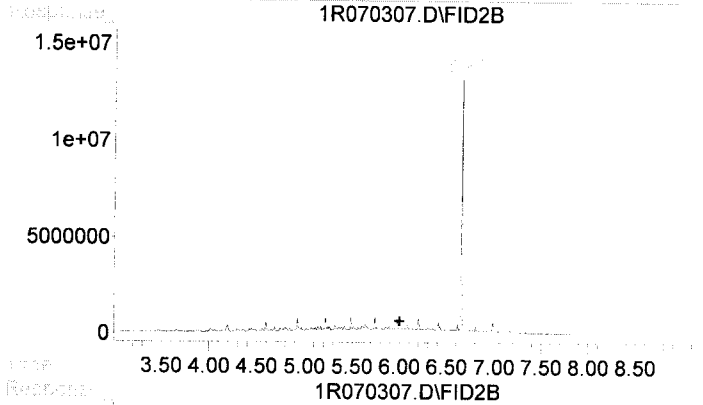
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





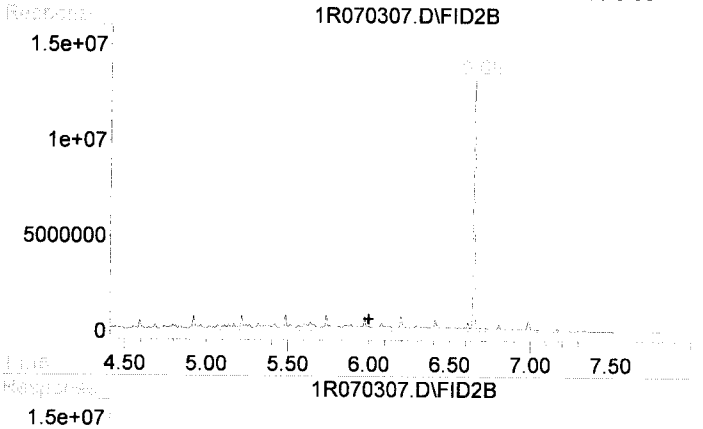
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 402926112
Conc: 265.41 ug/ml m



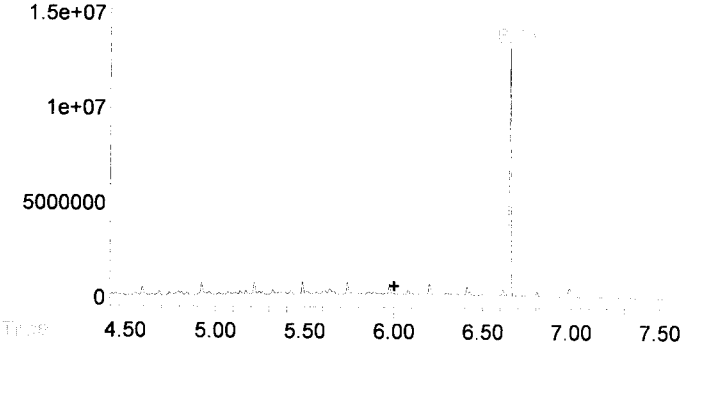
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 402926112
Conc: 265.41 ug/ml m



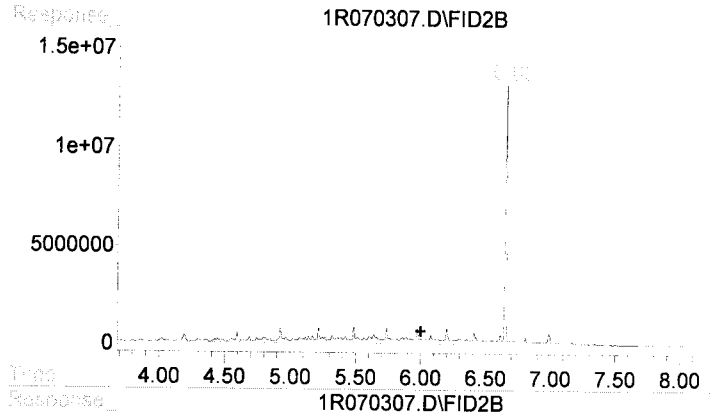
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 309992915
Conc: 204.19 ug/mL m



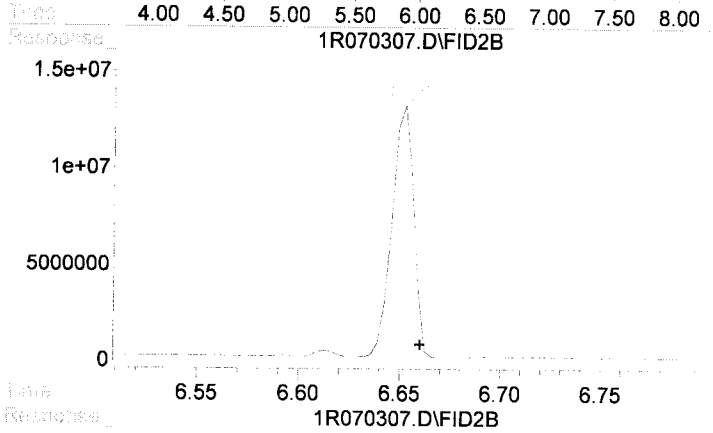
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 301923929
Conc: 268.22 ug/ml m



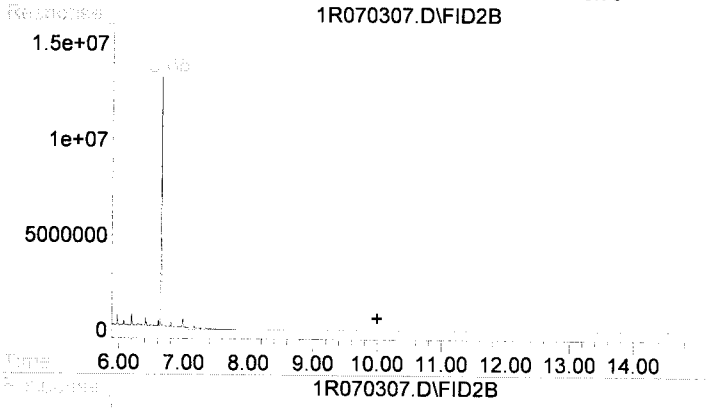
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 367686830
Conc: 264.71 ug/ml m



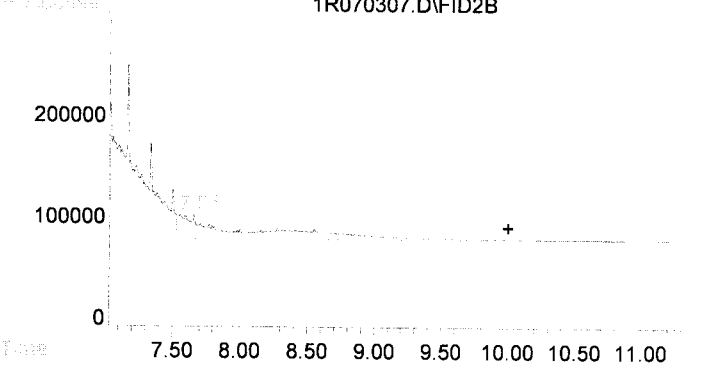
#6 o-Terphenyl

R.T.: 6.653 min
Delta R.T.: -0.007 min
Response: 96599639
Conc: 57.08 ug/mL



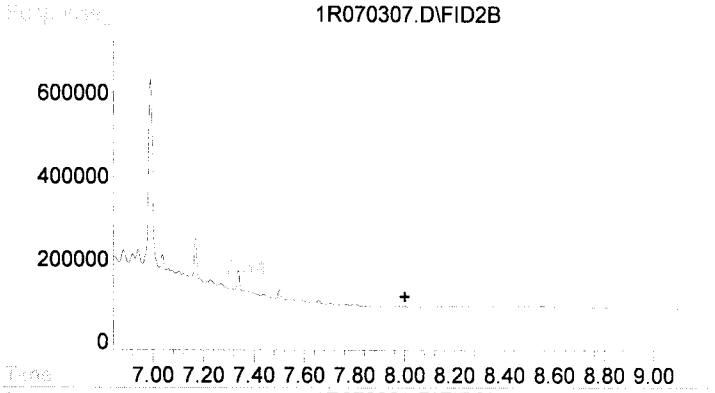
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 105215141
Conc: 73.17 ug/mL m



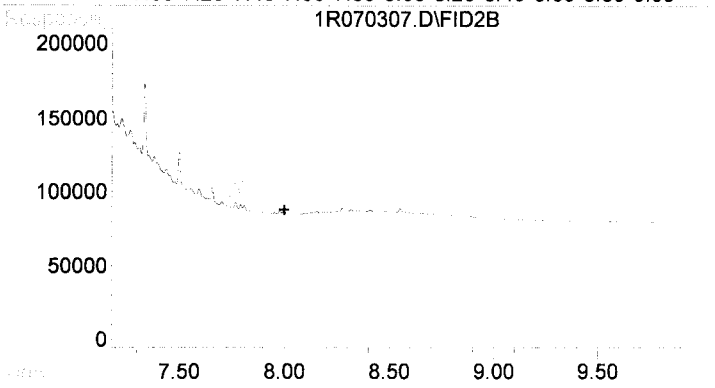
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 8779539
Conc: 6.11 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 9766707
Conc: 10.56 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 5629045
Conc: 6.43 ug/mL m

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070308.D Vial: 53
Acq On : 4 Jul 2019 00:11 Operator: BLL
Sample : A9F0684-01@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 10:50 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	286188549	188.513	ug/ml
2)	H	Diesel	6.00	286188549	188.513	ug/ml
3)	H	DRO(C12-C24)	6.00	248811050	163.893	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	243109153	215.968	ug/ml
5)	H	TPHd (C10-C25)	6.00	272298031	196.038	ug/ml
7)	H	Oil	10.00	64457933	44.827	ug/mL
8)	H	RRO (C24-C40)	10.00	12221074	8.499	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	11253490	12.169	ug/mL
10)	H	TPHmo (C25-C36)	8.00	8578564	9.797	ug/mL

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Report DRO/RRO

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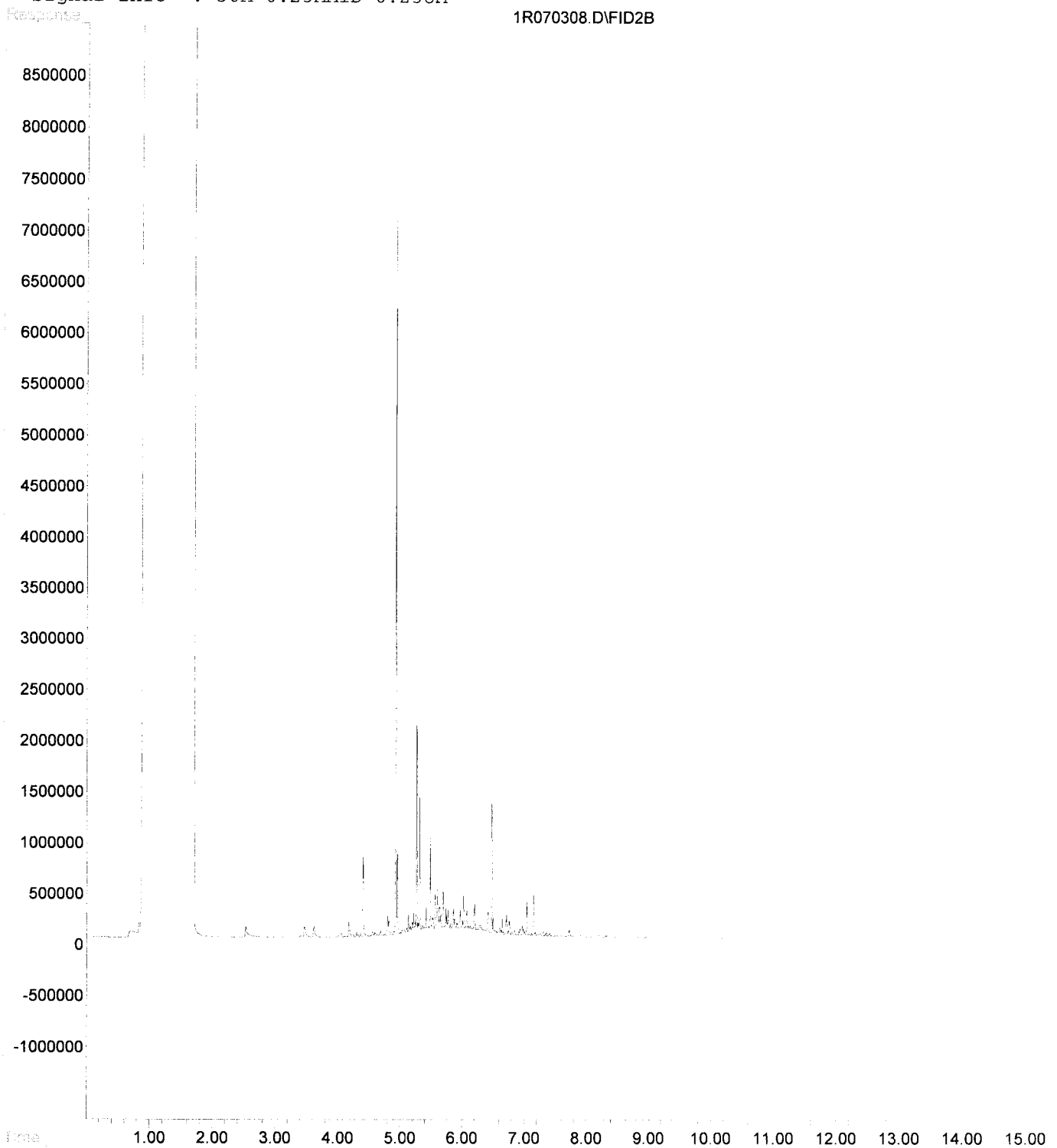
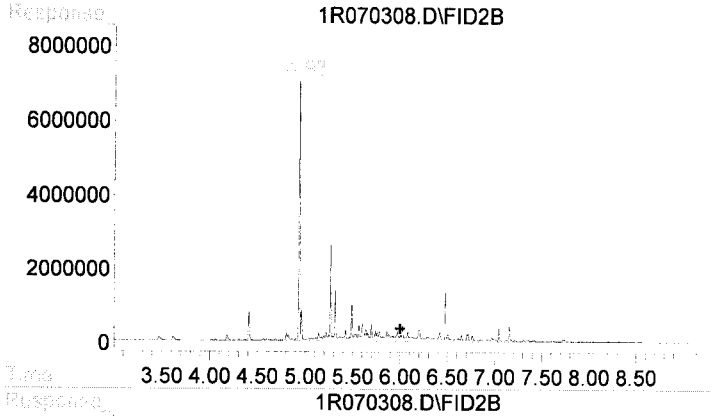
Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070308.D Vial: 53
Acq On : 4 Jul 2019 00:11 Operator: BLL
Sample : A9F0684-01@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 10:50 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

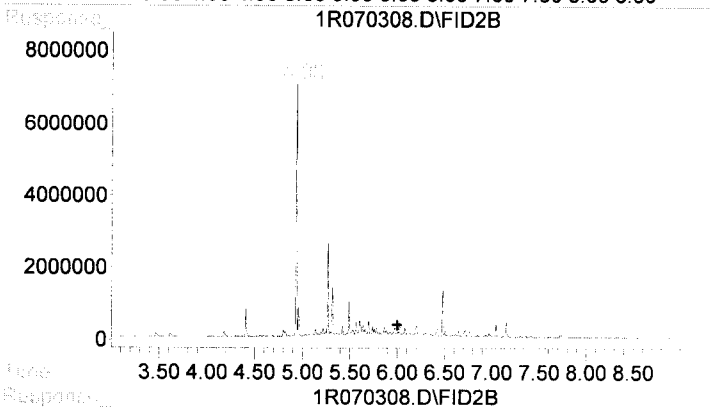
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





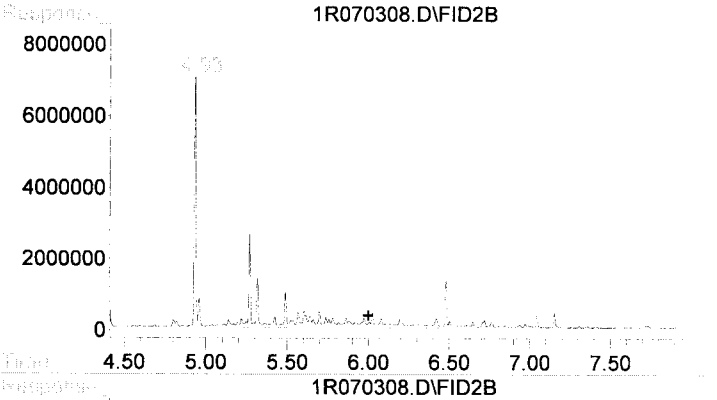
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 286188549
Conc: 188.51 ug/ml m



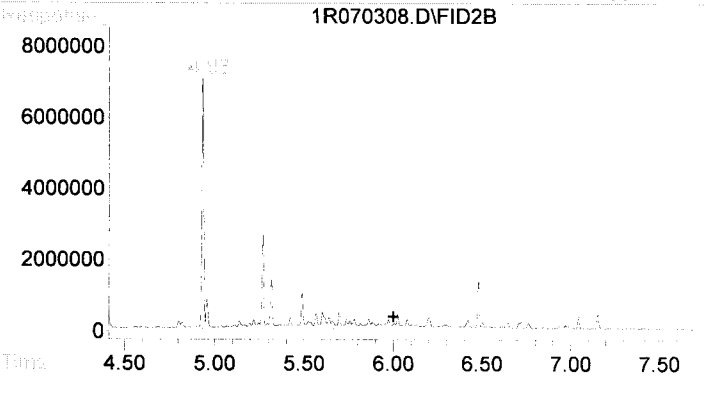
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 286188549
Conc: 188.51 ug/ml m



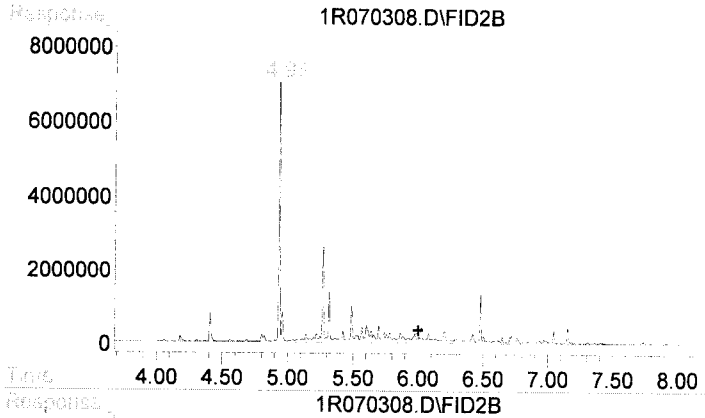
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 248811050
Conc: 163.89 ug/mL m



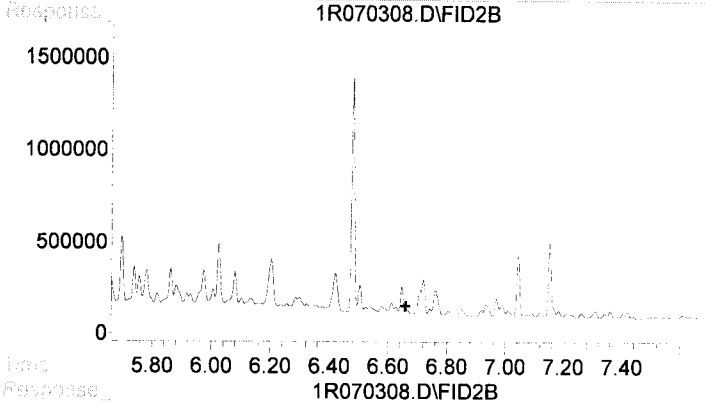
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 243109153
Conc: 215.97 ug/ml m



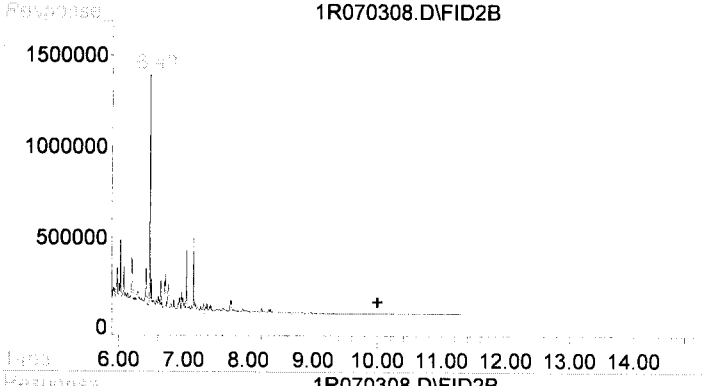
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 272298031
Conc: 196.04 ug/ml m



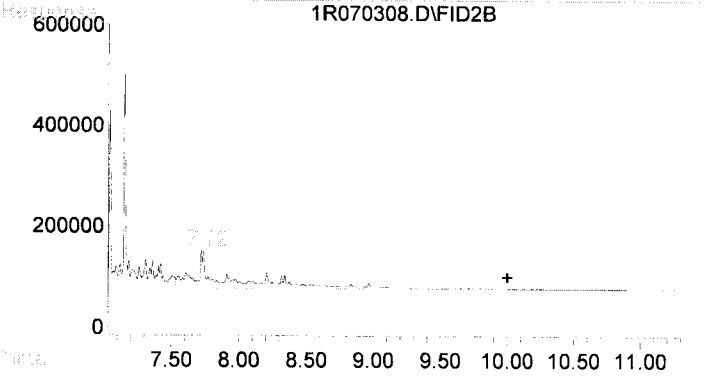
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.660 min
Response: 0
Conc: N.D.



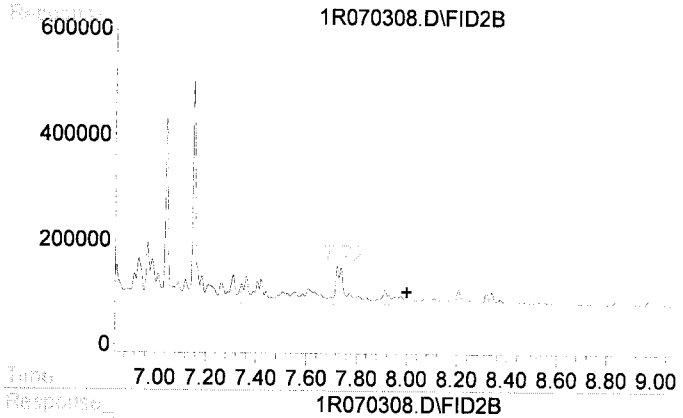
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 64457933
Conc: 44.83 ug/mL m



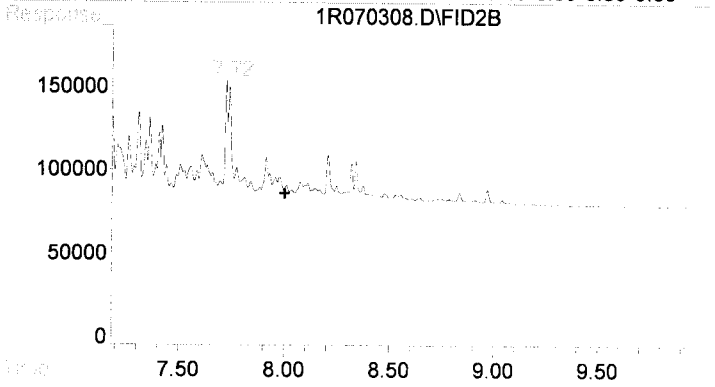
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 12221074
Conc: 8.50 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	11253490
Conc:	12.17 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	8578564
Conc:	9.80 ug/mL m

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070309.D Vial: 54
Acq On : 4 Jul 2019 00:34 Operator: BLL
Sample : 9070624-DUP1@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E AAF0684.01
Quant Time: Jul 5 10:50 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	294035537	193.682	ug/ml
2)	H	Diesel	6.00	294035537	193.682	ug/ml
3)	H	DRO(C12-C24)	6.00	254515343	167.650	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	248555745	220.806	ug/ml
5)	H	TPHd (C10-C25)	6.00	279097030	200.933	ug/ml
7)	H	Oil	10.00	66931155	46.547	ug/mL
8)	H	RRO (C24-C40)	10.00	13074960	9.093	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	12300586	13.301	ug/mL
10)	H	TPHmo (C25-C36)	8.00	9570463	10.930	ug/mL

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Report DRO/RRO

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(f)=RT Delta > 1/2 window (m)=manual int.

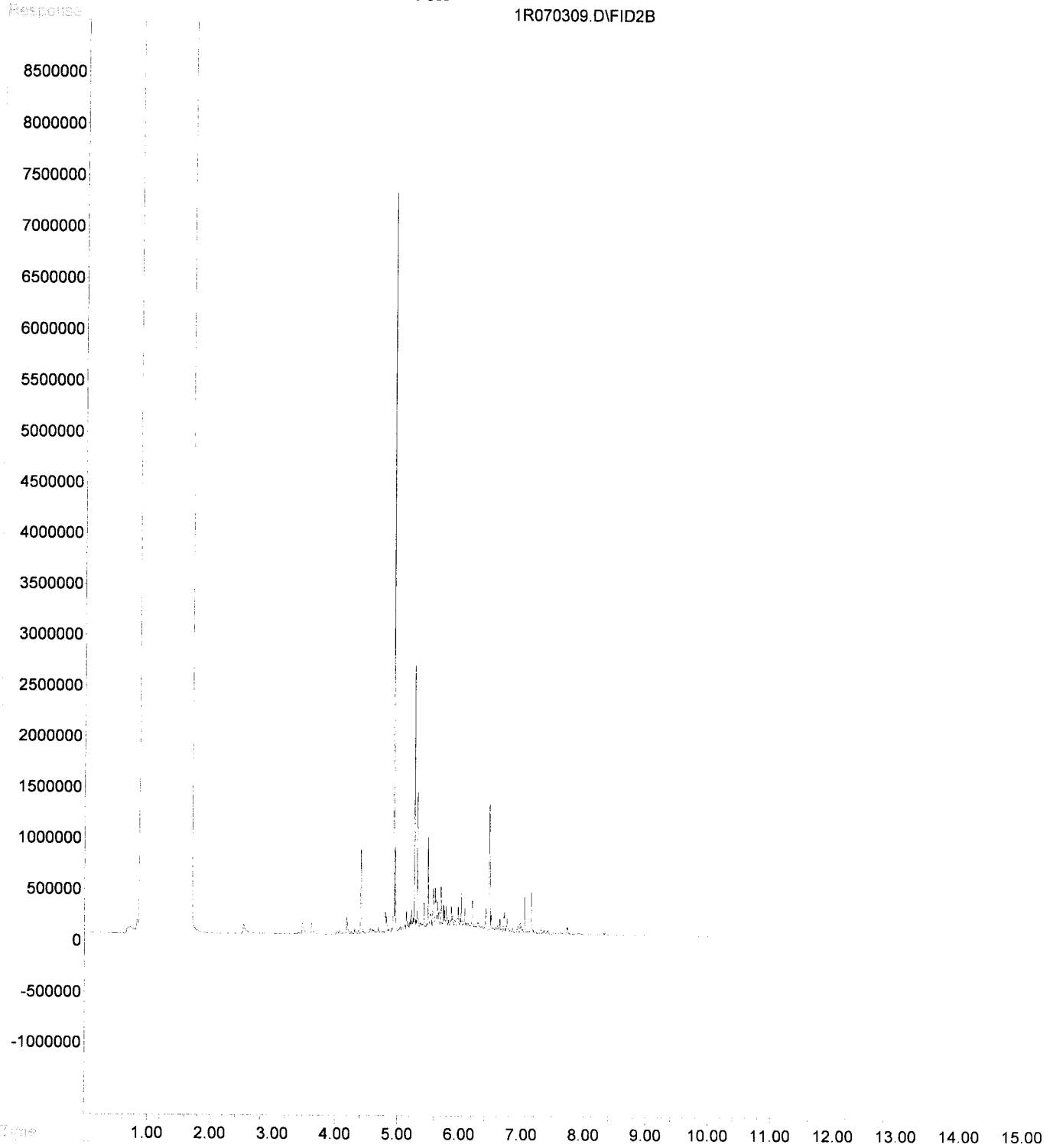
1R070309.D 1R90425D.M Fri Jul 05 10:50:24 2019 SV-GCMS3

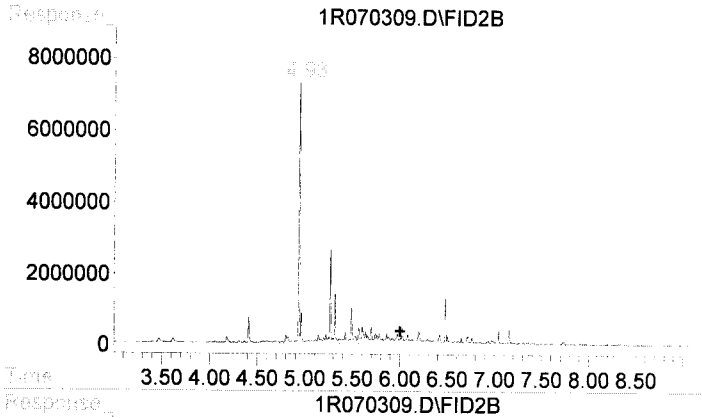
Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070309.D Vial: 54
Acq On : 4 Jul 2019 00:34 Operator: BLL
Sample : 9070624-DUP1@100 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 10:50 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

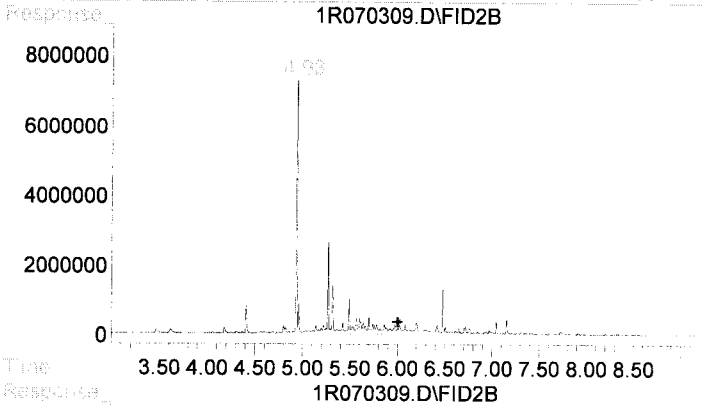
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





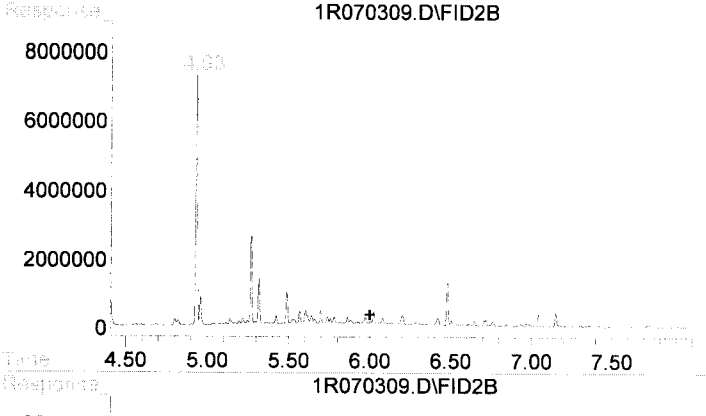
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 294035537
Conc: 193.68 ug/ml m



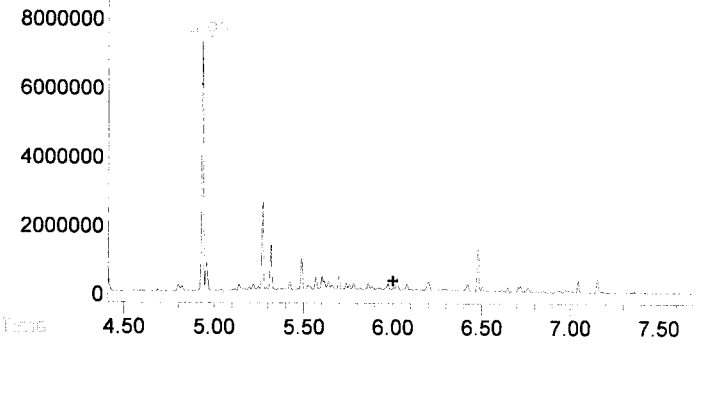
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 294035537
Conc: 193.68 ug/ml m



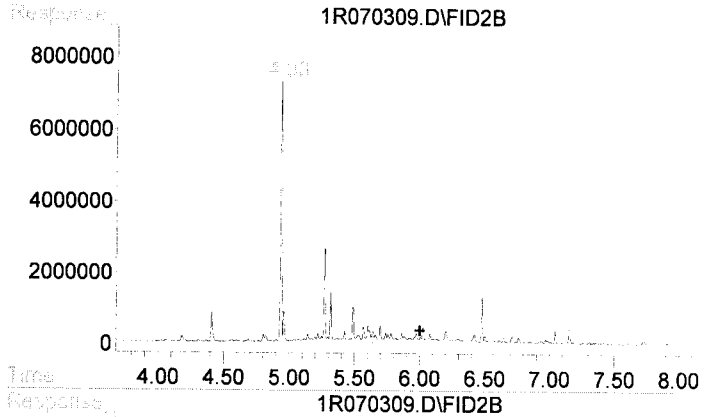
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 254515343
Conc: 167.65 ug/mL m



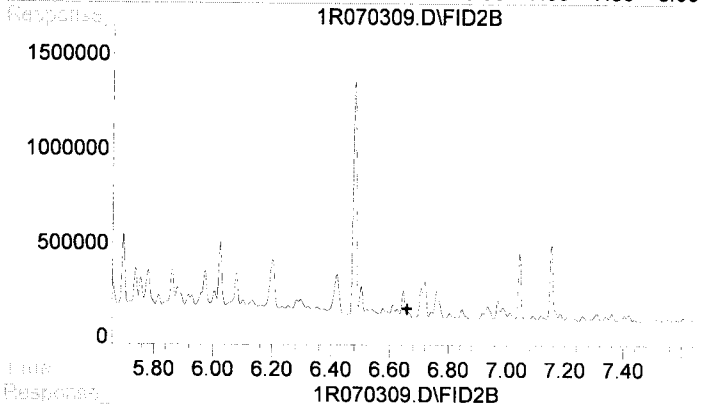
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 248555745
Conc: 220.81 ug/ml m



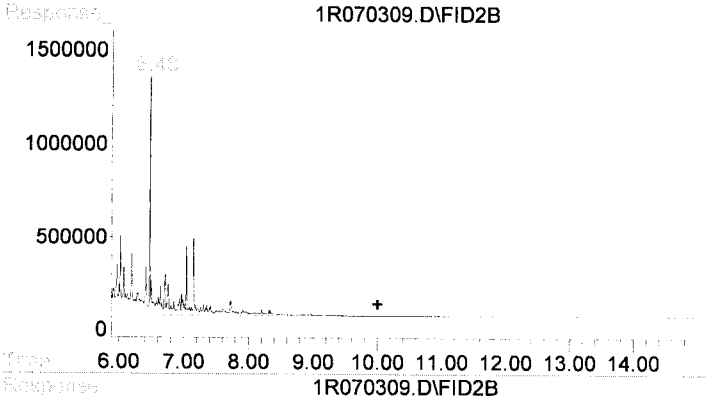
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 279097030
Conc: 200.93 ug/ml m



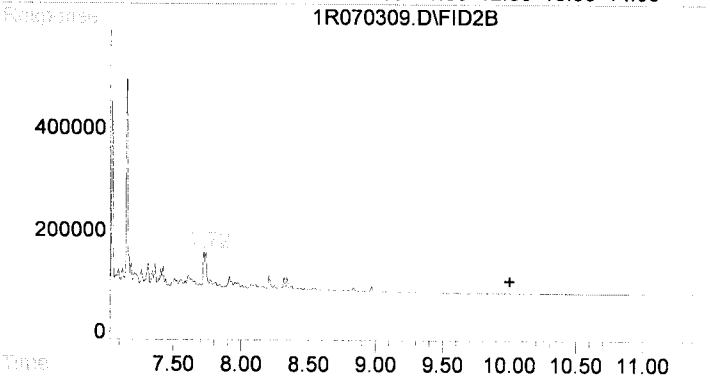
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.660 min
Response: 0
Conc: N.D.



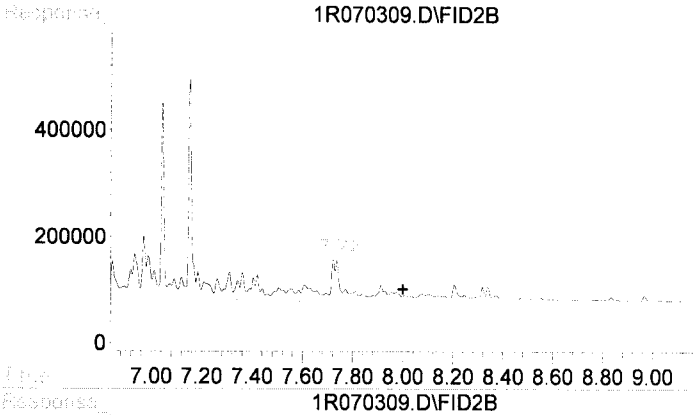
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 66931155
Conc: 46.55 ug/mL m



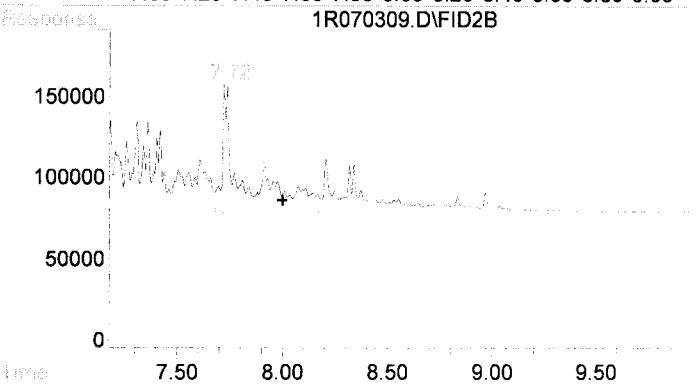
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 13074960
Conc: 9.09 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 12300586
Conc: 13.30 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 9570463
Conc: 10.93 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070310.D Vial: 100
Acq On : 4 Jul 2019 00:56 Operator: BLL
Sample : 9G03031-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	9375013	6.175	ug/ml
2)	H	Diesel	6.00	9375013	6.175	ug/ml
3)	H	DRO(C12-C24)	6.00	3627407	2.389	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	3465052	3.078	ug/ml
5)	H	TPHd (C10-C25)	6.00	5400089	3.888	ug/ml
7)	H	Oil	10.00	24970347	17.365	ug/mL
8)	H	RRO (C24-C40)	10.00	11317803	7.871	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2694567	2.914	ug/mL
10)	H	TPHmo (C25-C36)	8.00	5516043	6.300	ug/mL

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(f)=RT Delta > 1/2 Window (m)=manual int.

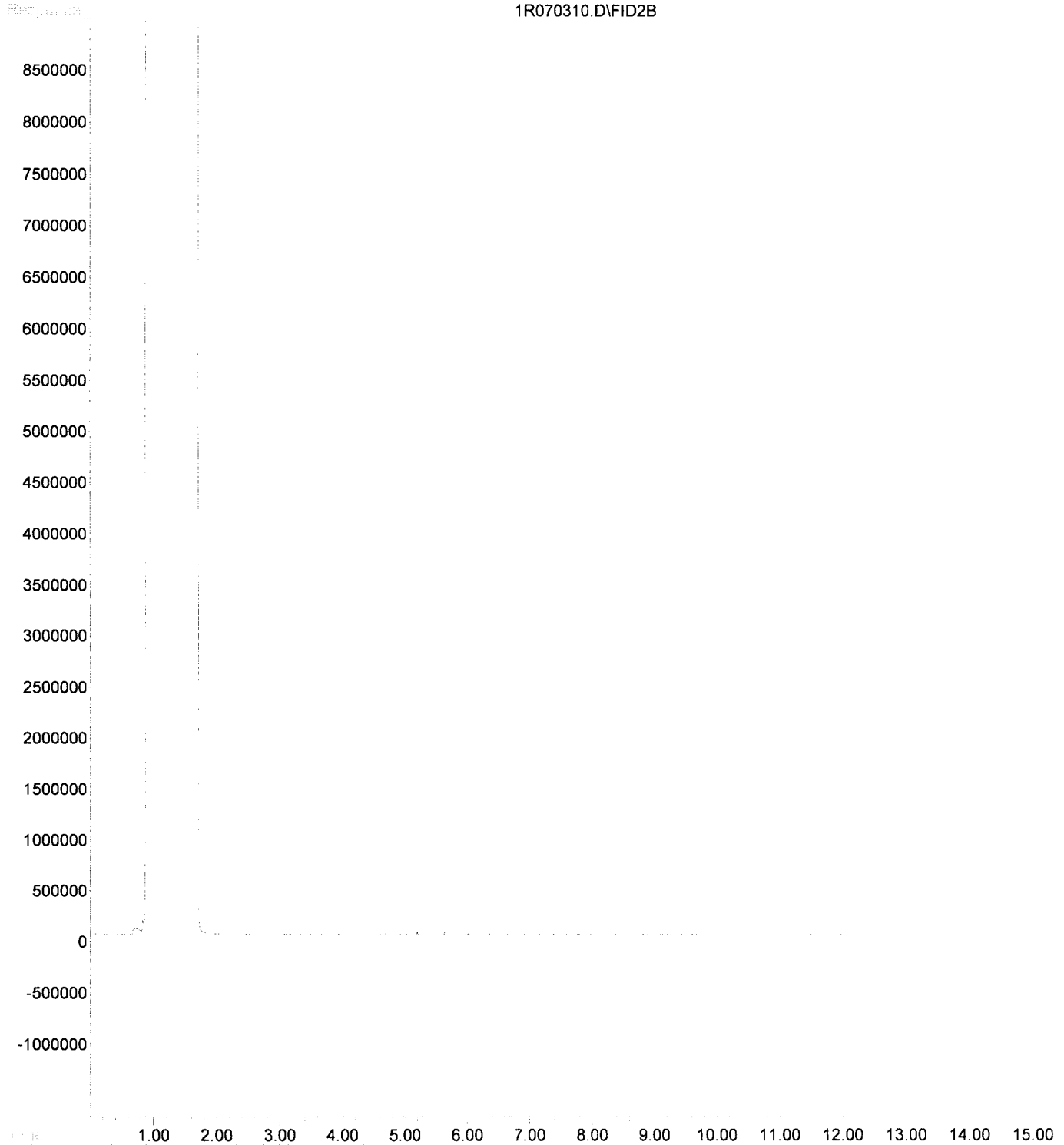
1R070310.D 1R90425D.M Fri Jul 05 09:37:32 2019 SV-GCMS3

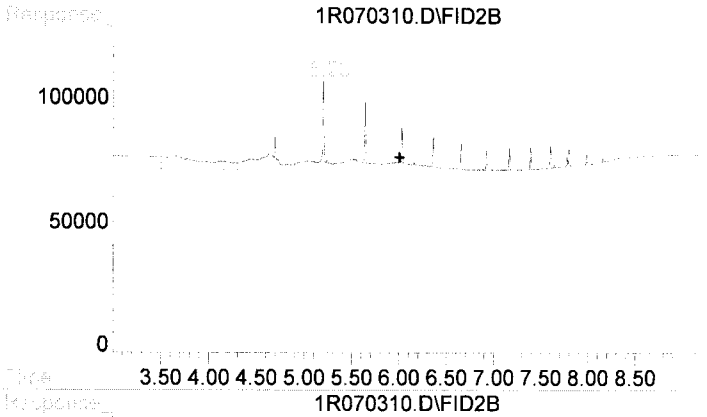
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070310.D Vial: 100
Acq On : 4 Jul 2019 00:56 Operator: BLL
Sample : 9G03031-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

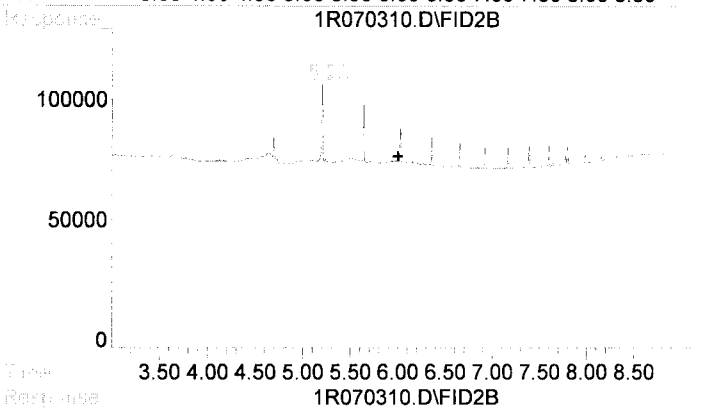
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





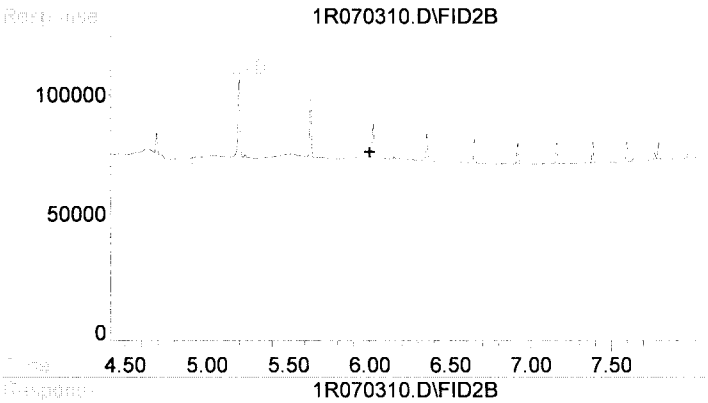
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9375013
Conc: 6.18 ug/ml m



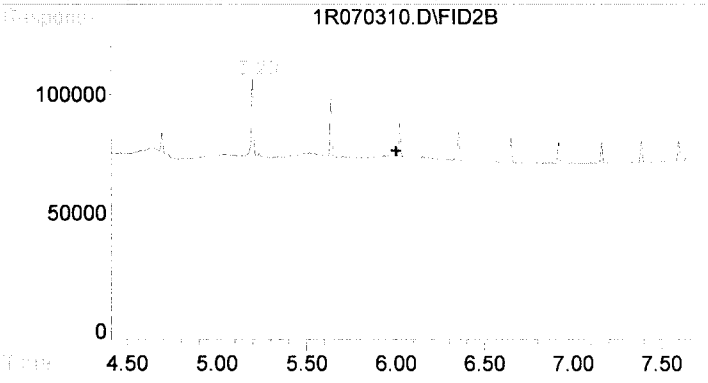
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 9375013
Conc: 6.18 ug/ml m



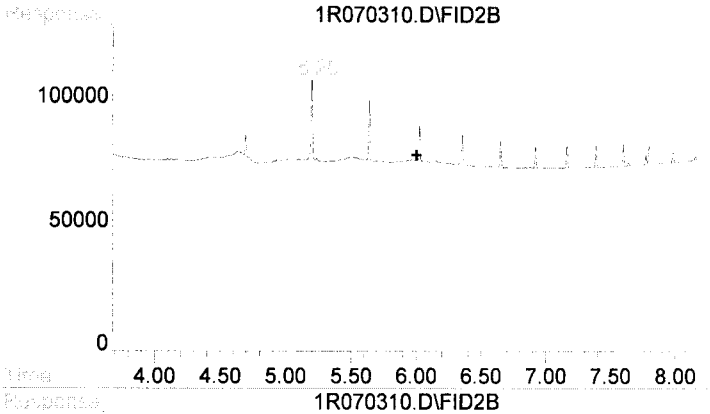
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3627407
Conc: 2.39 ug/mL m



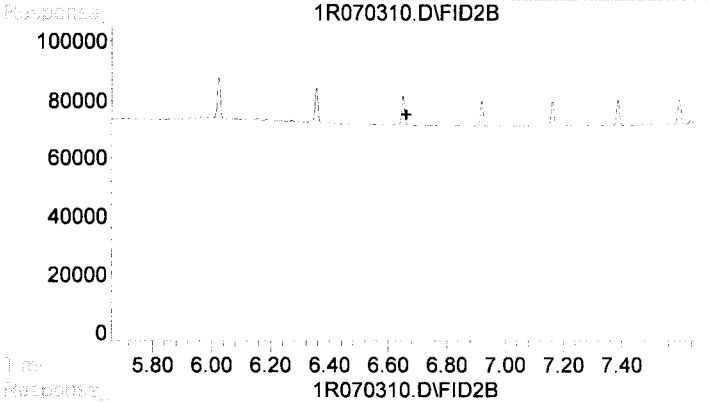
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 3465052
Conc: 3.08 ug/ml m



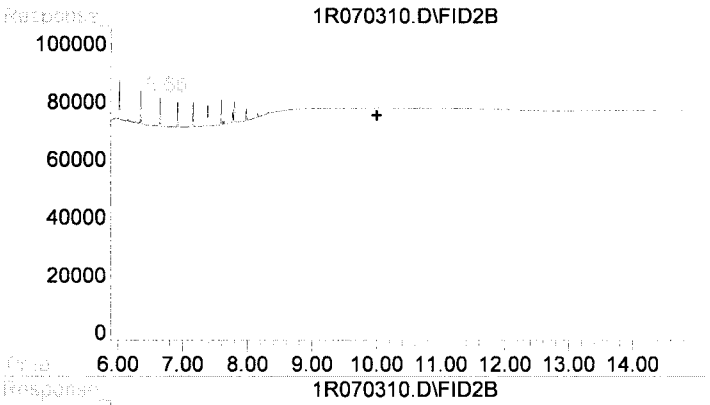
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 5400089
Conc: 3.89 ug/ml m



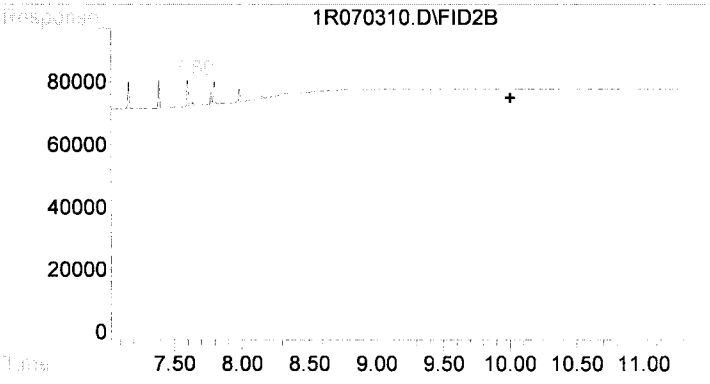
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.660 min
Response: 0
Conc: N.D.



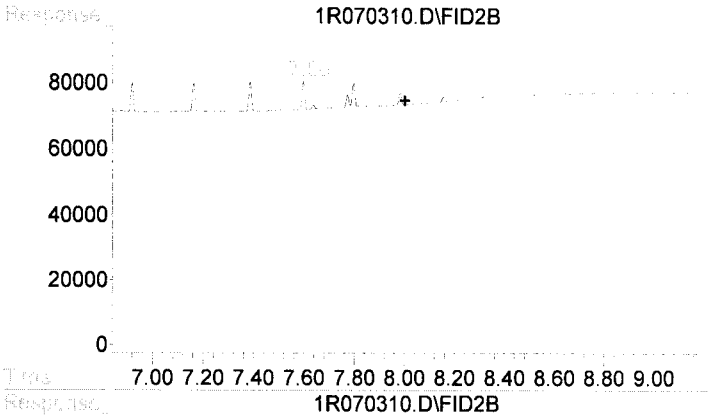
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 24970347
Conc: 17.37 ug/mL m



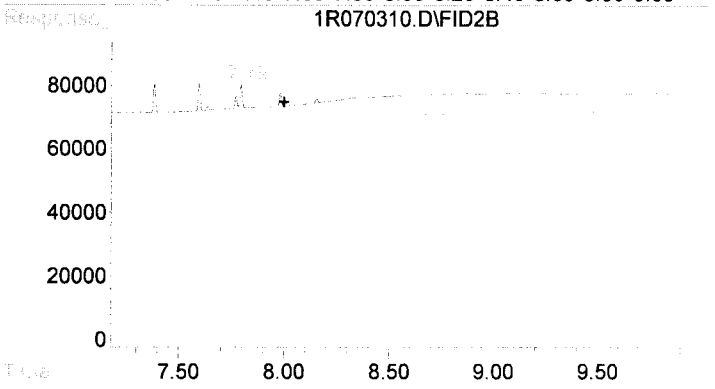
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 11317803
Conc: 7.87 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	2694567
Conc:	2.91 ug/mL m



#10 TPHmo (C25-C36)

R.T.:	8.000 min
Delta R.T.:	0.000 min
Response:	5516043
Conc:	6.30 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-07\9G03031\1R070311.D Vial: 55
Acq On : 4 Jul 2019 1:19 Operator: BLL
Sample : 9G03031-CCV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	1058.728	-5.9	109	0.00
2	H	Diesel	1000.000	1058.728	-5.9	109	0.00
3	H	DRO(C12-C24)	1000.000	841.300	15.9#	86	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	1087.418	-8.7	109	0.00
5	H	TPHd (C10-C25)	1000.000	1084.665	-8.5	109	0.00
6	S	o-Terphenyl	-1.000	55.057	0.0	0	0.00
7	H	Oil	-1.000	290.883	0.0	99	0.00
8	H	RRO (C24-C40)	-1.000	15.814	0.0	5	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	44.391	0.0	84	0.00
10	H	TPHmo (C25-C36)	-1.000	14.962	0.0	79	0.00

AL
7.5.19

✓

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

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070311.D Vial: 55
Acq On : 4 Jul 2019 1:19 Operator: BLL
Sample : 9G03031-CCV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.65	93177126	55.057	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1607290913	1058.728	ug/ml
2)	H	Diesel	6.00	1607290913	1058.728	ug/ml
3)	H	DRO(C12-C24)	6.00	1277206101	841.300	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1224078125	1087.418	ug/ml
5)	H	TPHd (C10-C25)	6.00	1506607386	1084.665	ug/ml
7)	H	Oil	10.00	418270137	290.883	ug/mL
8)	H	RRO (C24-C40)	10.00	22739956	15.814	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	41051957	44.391	ug/mL
10)	H	TPHmo (C25-C36)	8.00	13100783	14.962	ug/mL

M
7.5.19

✓

(f)=RT Delta > 1/2 Window (m)=Manual Int.

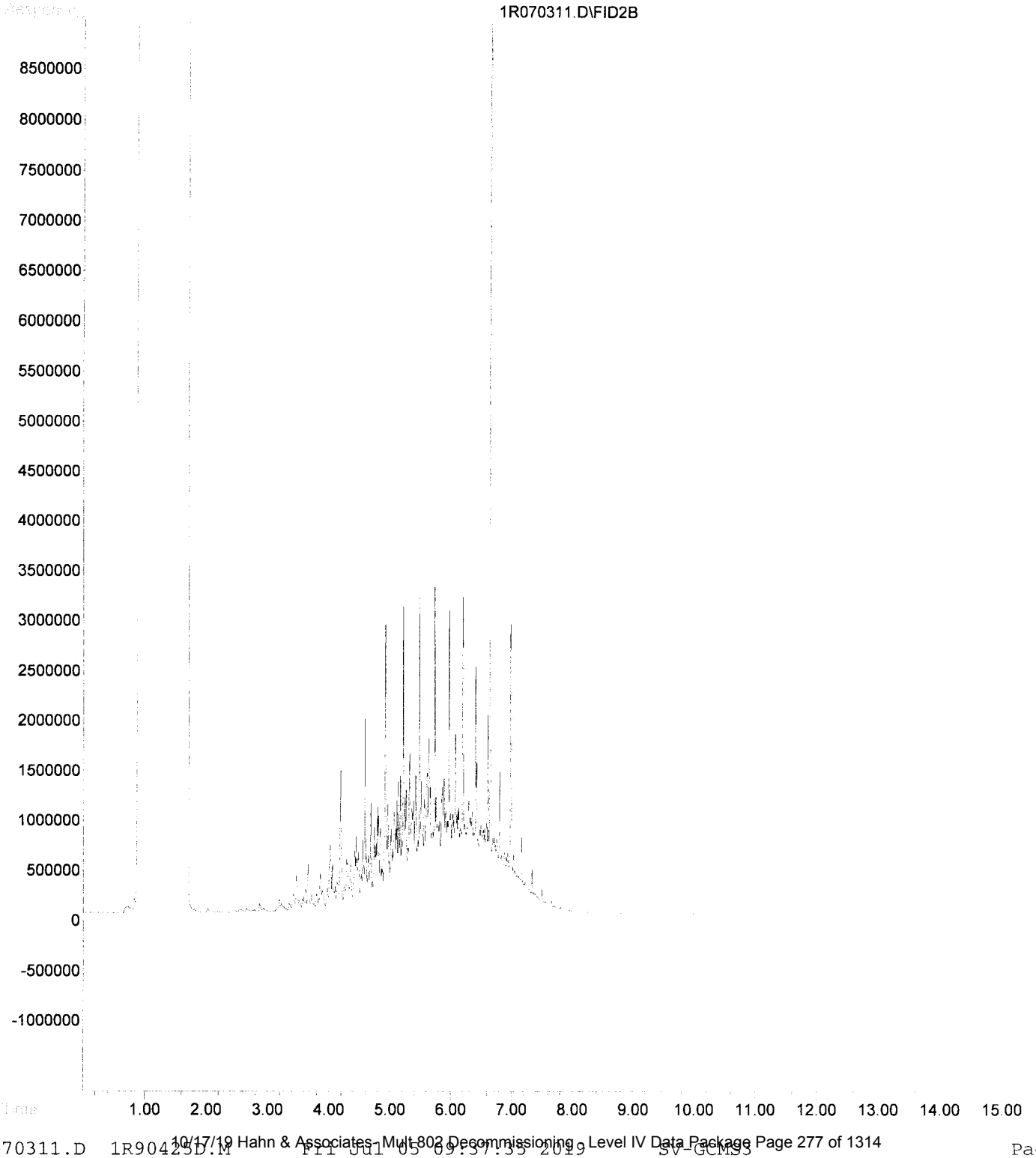
1R070311.D 1R90425D.M Fri Jul 05 09:37:35 2019 SV-GCMS3 Page 1

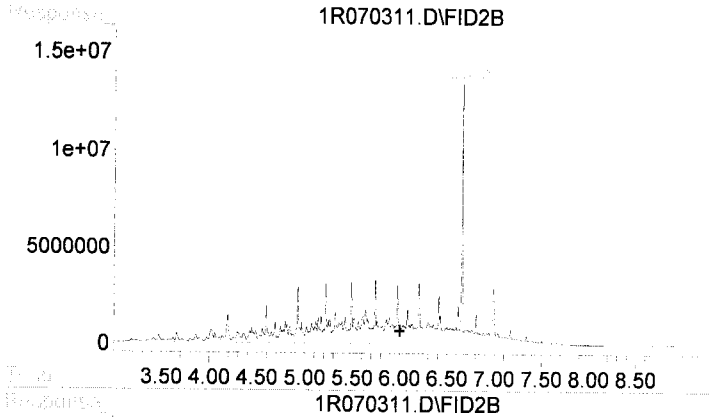
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070311.D Vial: 55
Acq On : 4 Jul 2019 1:19 Operator: BLL
Sample : 9G03031-CCV3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

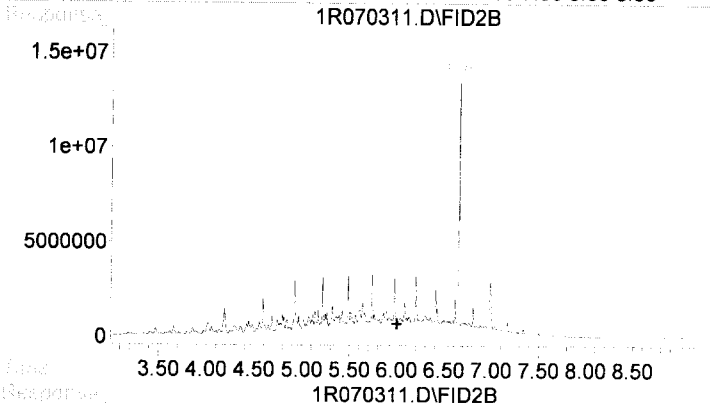
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





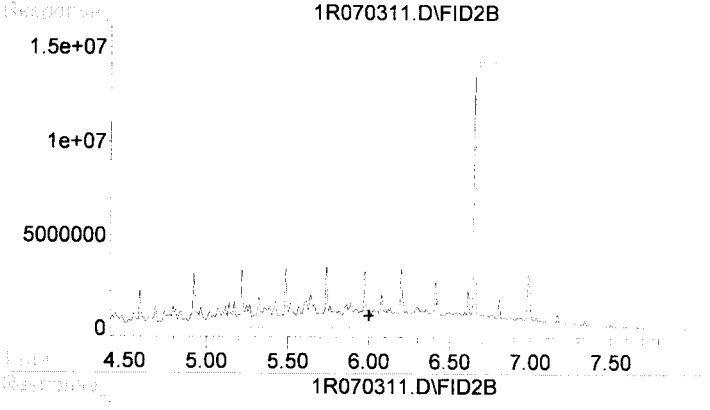
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1607290913
Conc: 1058.73 ug/ml m



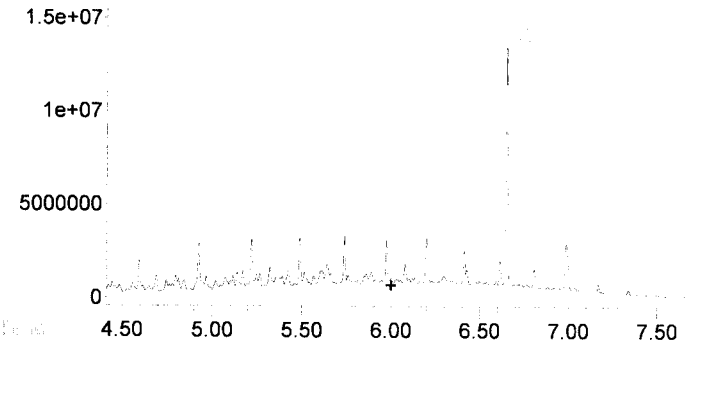
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1607290913
Conc: 1058.73 ug/ml m



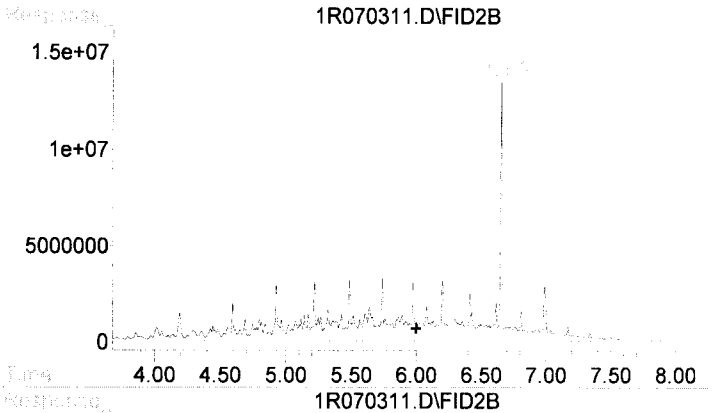
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1277206101
Conc: 841.30 ug/mL m



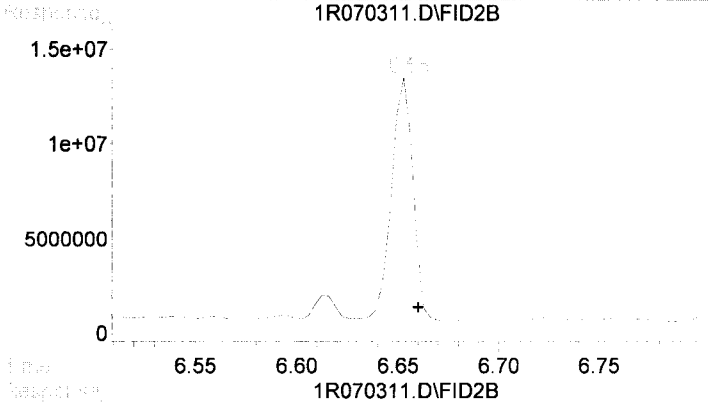
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1224078125
Conc: 1087.42 ug/ml m



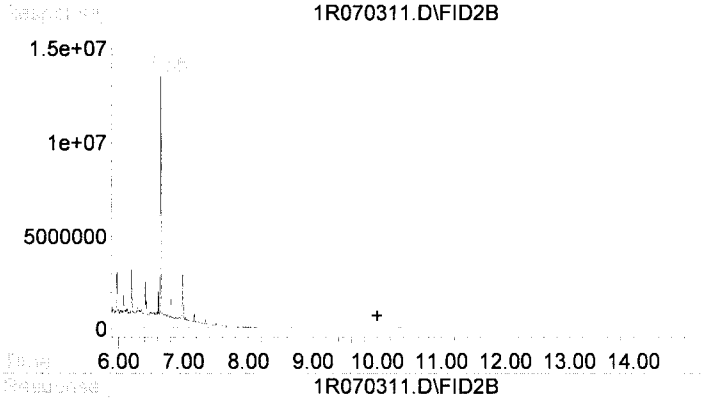
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 1506607386
Conc: 1084.66 ug/ml m



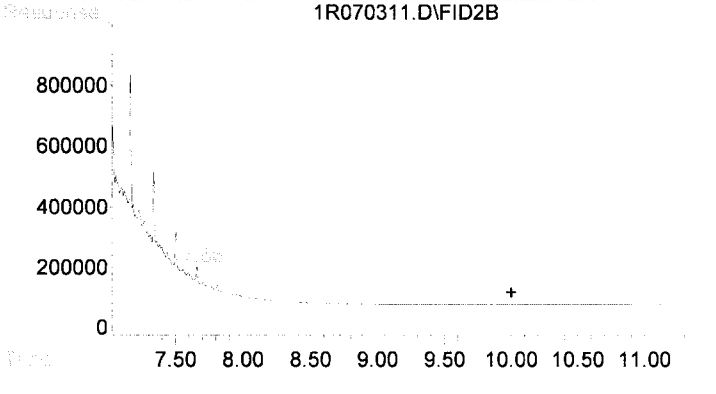
#6 o-Terphenyl

R.T.: 6.654 min
Delta R.T.: -0.006 min
Response: 93177126
Conc: 55.06 ug/mL



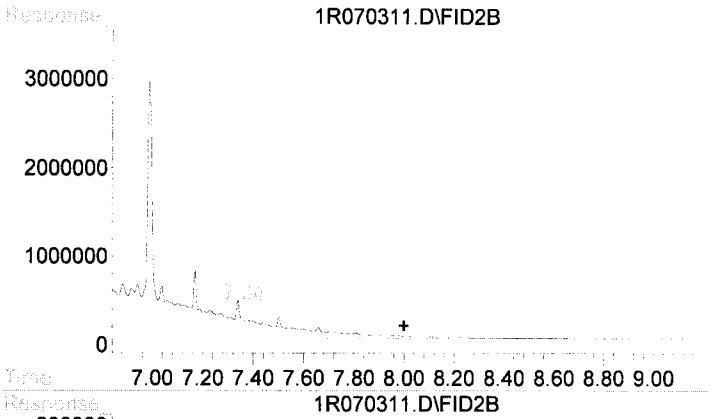
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 418270137
Conc: 290.88 ug/mL m



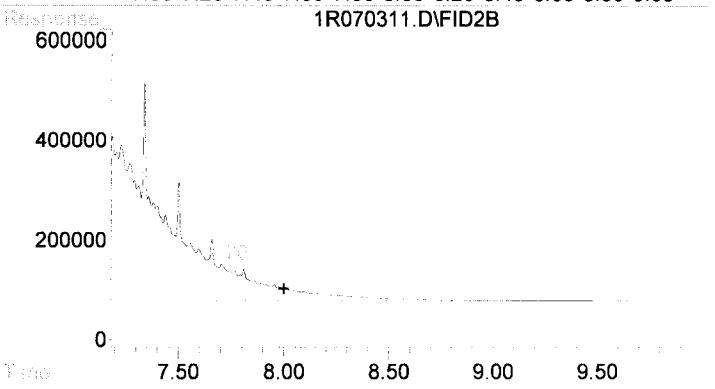
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 22739956
Conc: 15.81 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 41051957
Conc: 44.39 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 13100783
Conc: 14.96 ug/mL m

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-07\9G03031\1R070312.D
Acq On : 4 Jul 2019 1:42
Sample : 9G03031-CCV4
Misc :
IntFile : SUR.E

Vial: 56
Operator: BLL
Inst : HP G1530A
Multiplr: 1.00

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	377.210	0.0	111	0.00
2	H	Diesel	-1.000	377.210	0.0	111	0.00
3	H	DRO(C12-C24)	-1.000	88.306	0.0	26	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	40.751	0.0	112	0.00
5	H	TPHd (C10-C25)	-1.000	139.279	0.0	109	0.00
6	S	o-Terphenyl	-1.000	57.421	0.0	0	0.00
7	H	Oil	500.000	514.872	-3.0	108	0.00
8	H	RRO (C24-C40)	500.000	406.642	18.7#	85	0.00
9	H	Ca Luft ORO (C23-C32)	500.000	528.778	-5.8	110	0.00
10	H	TPHmo (C25-C36)	500.000	534.308	-6.9	111	0.00

MN

7.5.19

✓

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

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070312.D Vial: 56
Acq On : 4 Jul 2019 1:42 Operator: BLL
Sample : 9G03031-CCV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.65	97177508	57.421 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	572654988	377.210 ug/ml
2)	H	Diesel	6.00	572654988	377.210 ug/ml
3)	H	DRO(C12-C24)	6.00	134060676	88.306 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	45872711	40.751 ug/ml
5)	H	TPHd (C10-C25)	6.00	193458895	139.279 ug/ml
7)	H	Oil	10.00	740351168	514.872 ug/mL
8)	H	RRO (C24-C40)	10.00	584723437	406.642 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	489004489	528.778 ug/mL
10)	H	TPHmo (C25-C36)	8.00	467844707	534.308 ug/mL

AL
7.5.19

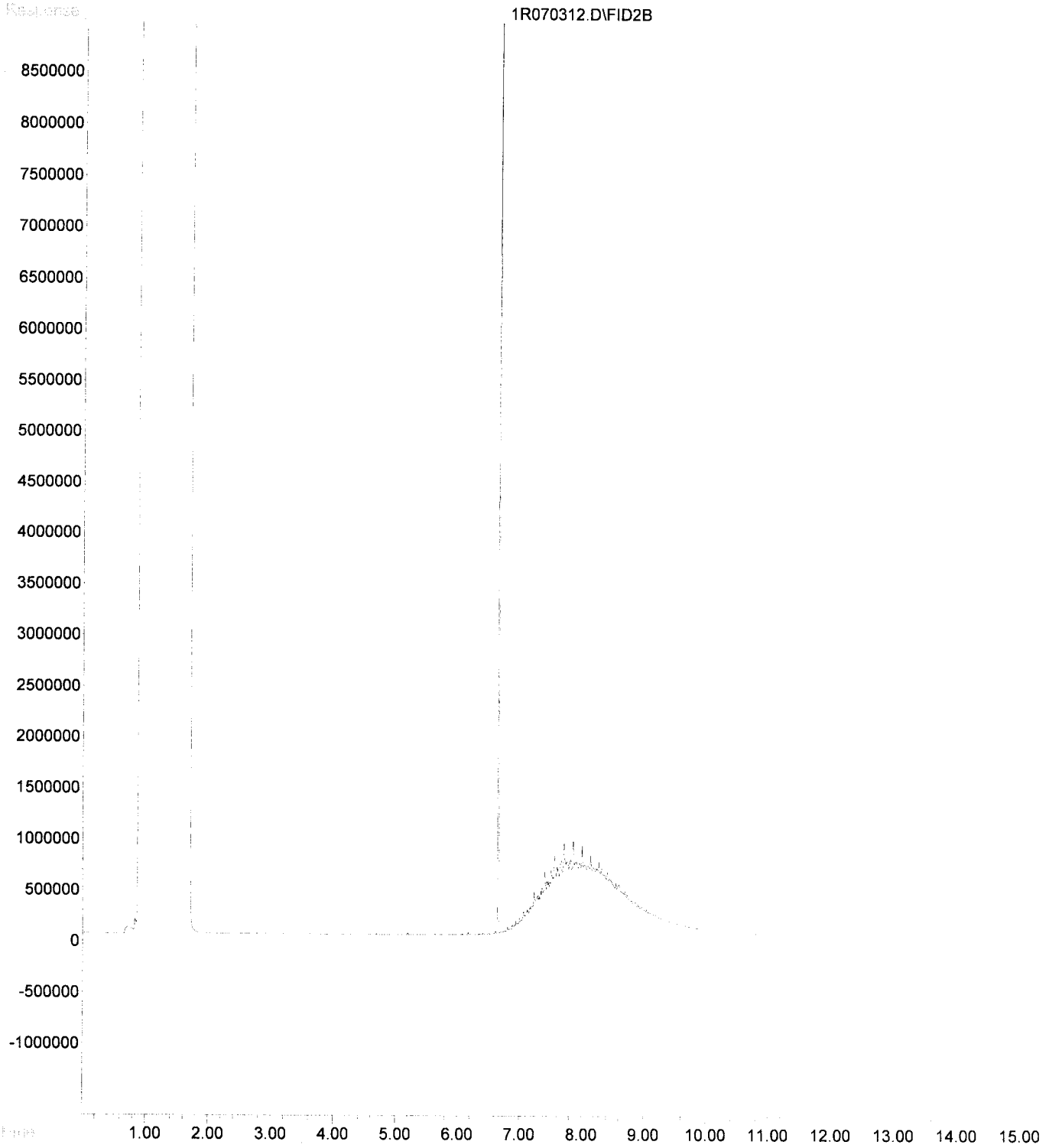
(f)=RT Delta > 1/2 Window (m)=manual int.

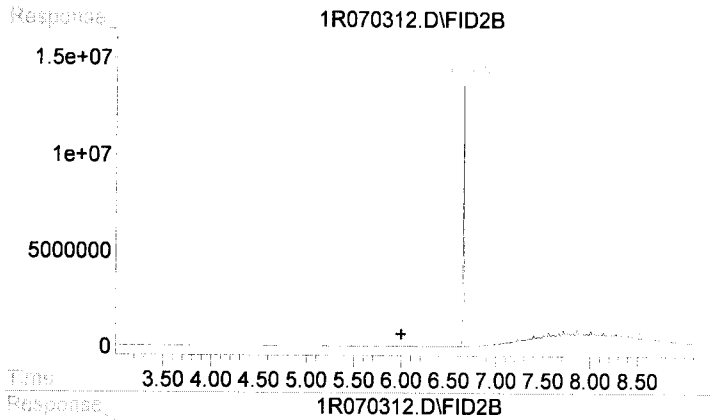
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070312.D Vial: 56
Acq On : 4 Jul 2019 1:42 Operator: BLL
Sample : 9G03031-CCV4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Jul 5 9:37 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Mon Jul 01 10:39:25 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

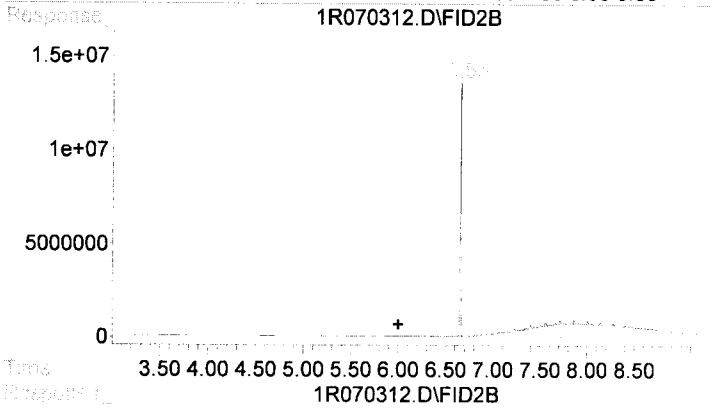
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





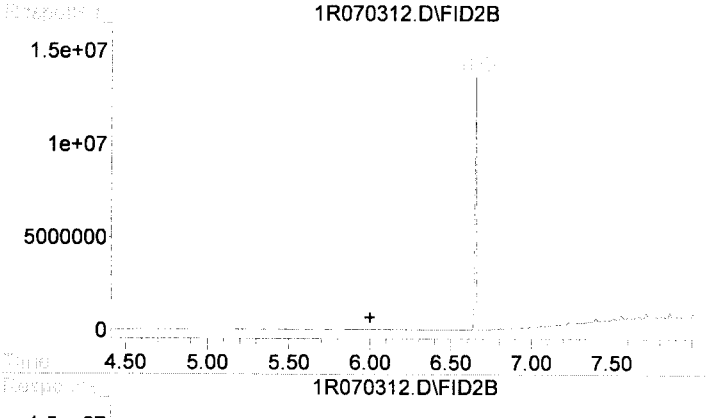
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 572654988
Conc: 377.21 ug/ml m



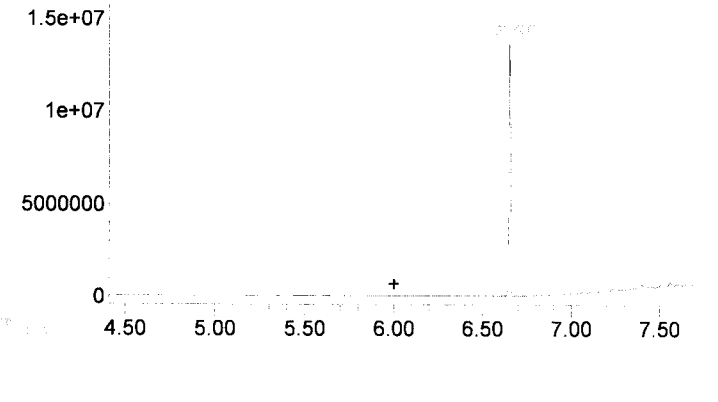
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 572654988
Conc: 377.21 ug/ml m



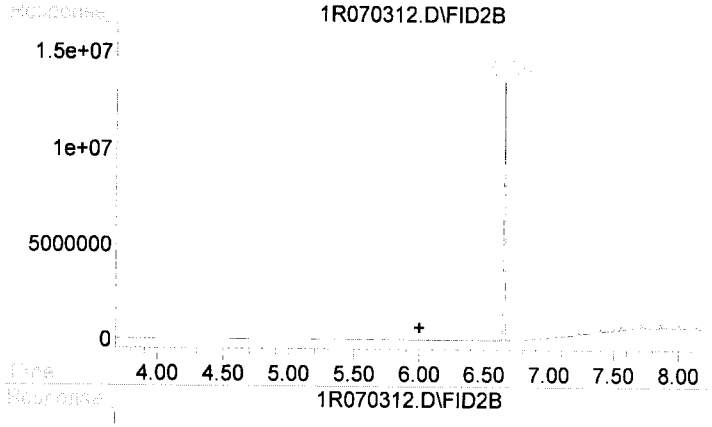
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 134060676
Conc: 88.31 ug/mL m



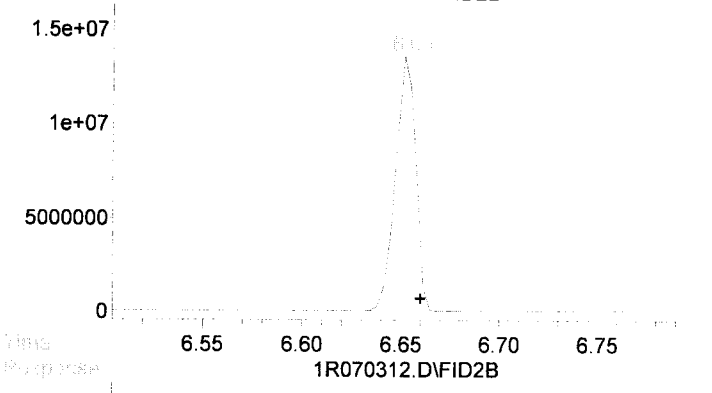
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 45872711
Conc: 40.75 ug/ml m



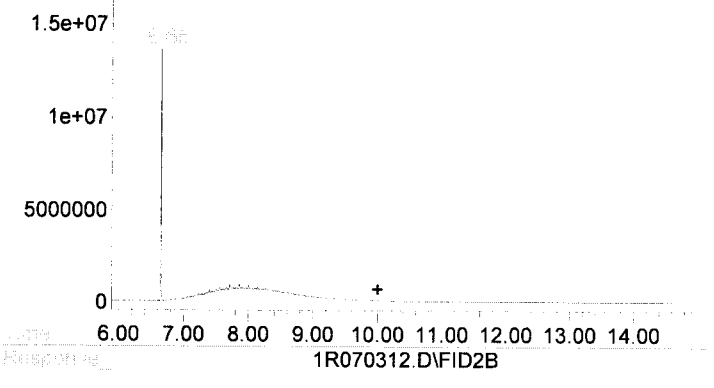
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 193458895
Conc: 139.28 ug/ml m



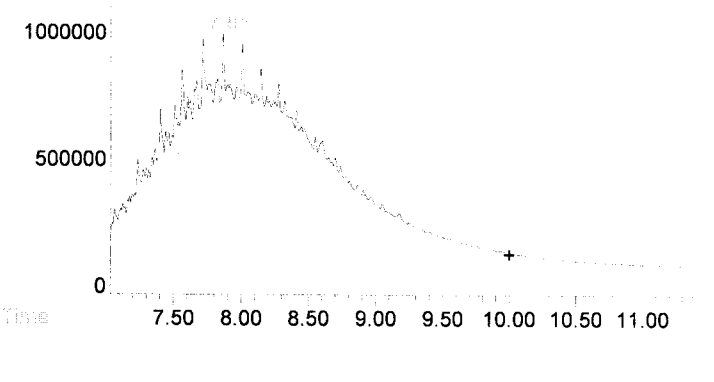
#6 o-Terphenyl

R.T.: 6.654 min
Delta R.T.: -0.006 min
Response: 97177508
Conc: 57.42 ug/mL



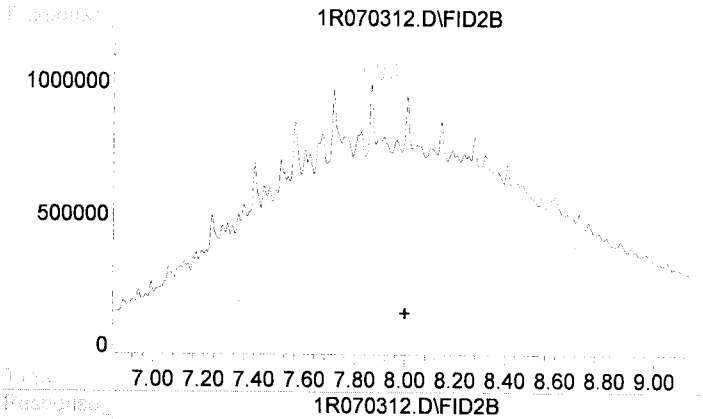
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 740351168
Conc: 514.87 ug/mL m



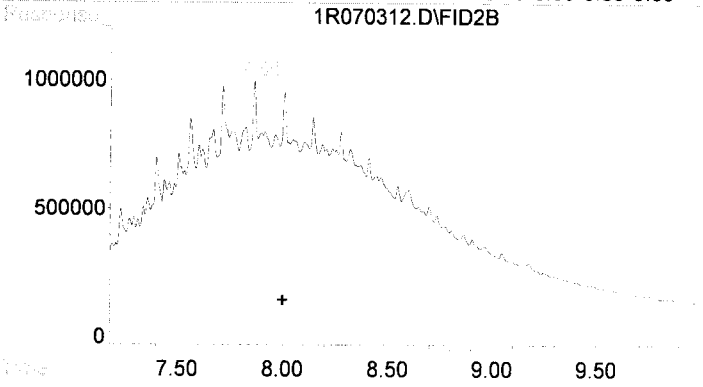
#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 584723437
Conc: 406.64 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 489004489
Conc: 528.78 ug/mL m



#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 467844707
Conc: 534.31 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070313.D Vial: 57
Acq On : 4 Jul 2019 2:04 Operator: BLL
Sample : 9G03031-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:42 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
2)	S	BFB (Surr.)	0.00	0	N.D.	ug/ml
4)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Gasoline Range	4.00	553315	20.000	ug/mL
3)	H	Diesel (C12 - C24)	6.00	107411	2.548	ug/mL
5)	H	Oil (>C24)	10.00	765004	21.196	ug/mL

AR
7.5.19

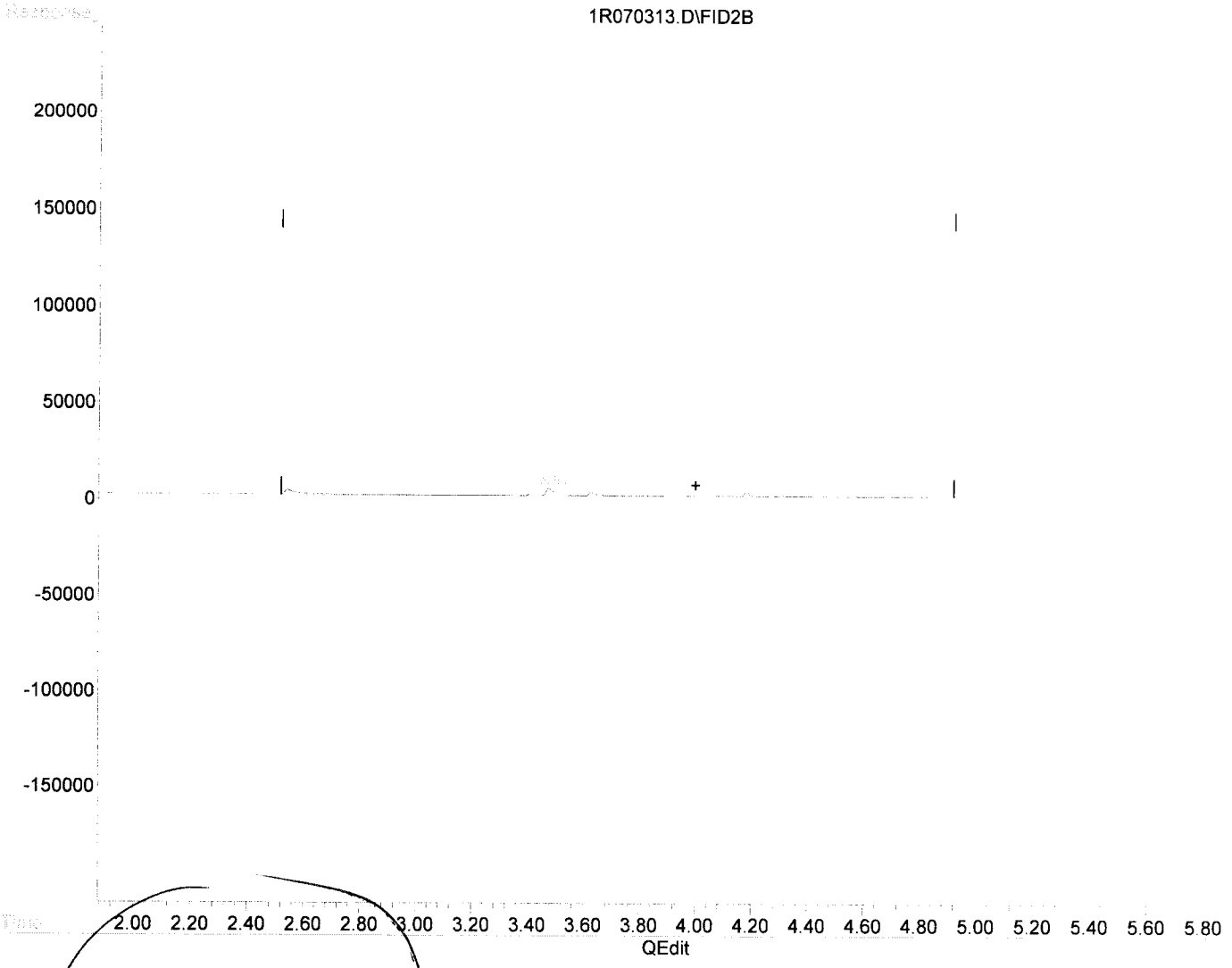
(f)=RT Delta > 1/2 Window (m)=manual inc.

1R070313.D 1R90703H.M Fri Jul 05 09:42:49 2019 SV-GCMS3

Quantitation Report (Qedit)

Data File : F:\1\DATA\2019-07\9G03031\1R070313.D Vial: 57
Acq On : 4 Jul 2019 2:04 Operator: BLL
Sample : 9G03031-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:42 2019 Quant Results File: 1R90703H.RES

Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Multiple Level Calibration



(1) Gasoline Range (H)

4.00min 20.000ug/mL m

response 553315

7.5.19

(+) = Expected Retention Time

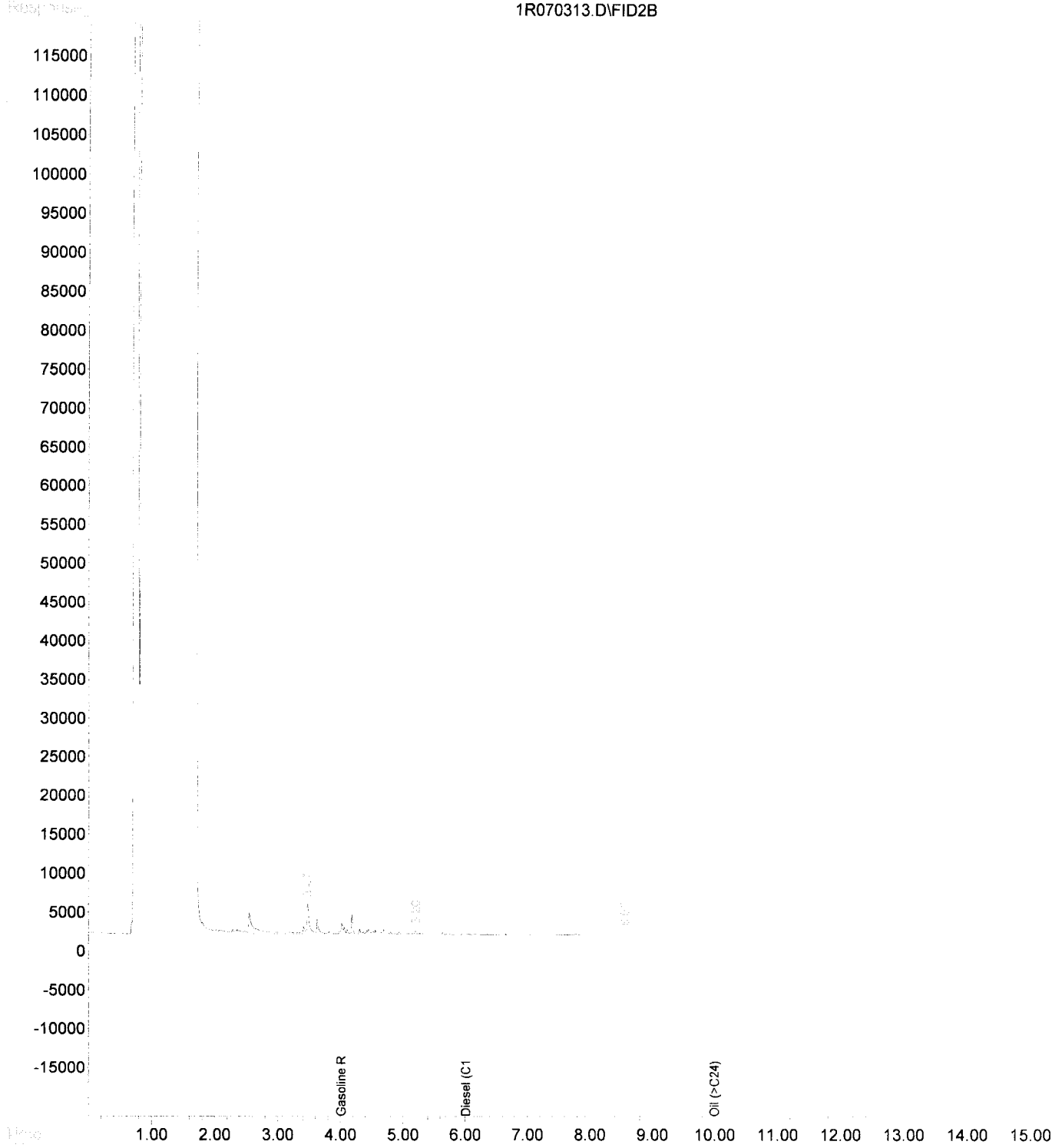
Quantitation Report (Not Reviewed)

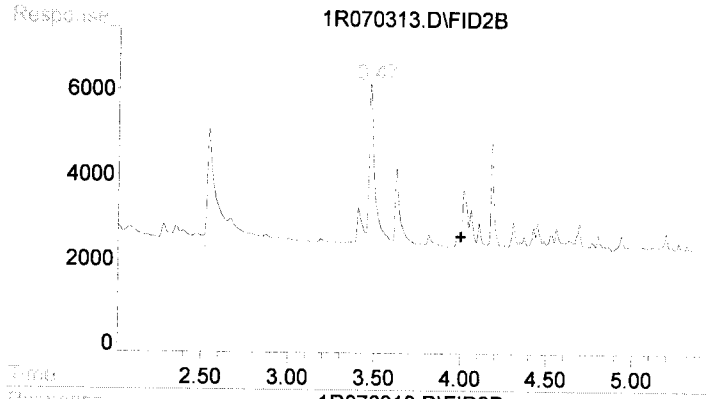
Data File : F:\1\DATA\2019-07\9G03031\1R070313.D Vial: 57
Acq On : 4 Jul 2019 2:04 Operator: BLL
Sample : 9G03031-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:42 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

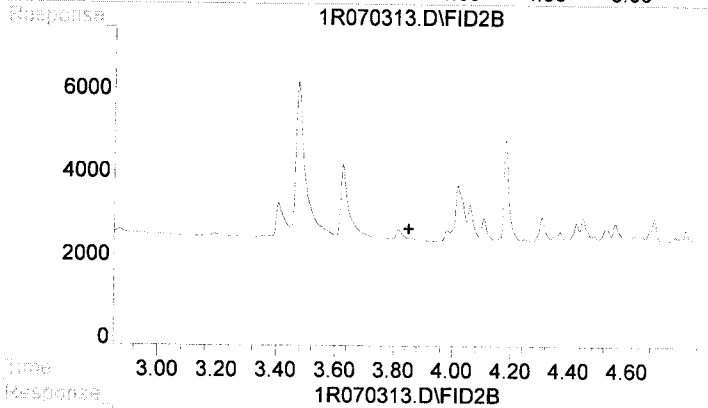
1R070313.D\FID2B





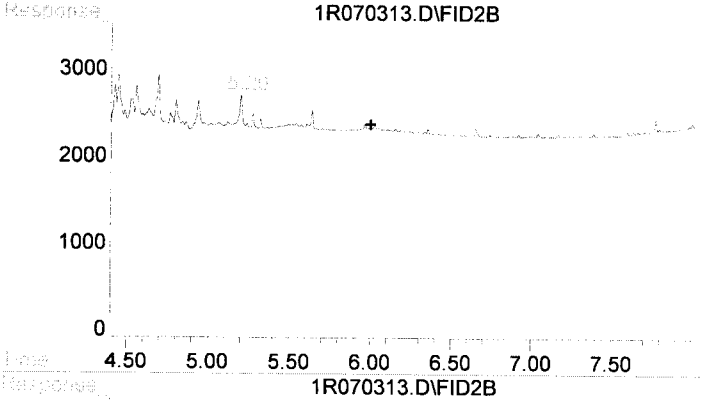
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 553315
Conc: 20.00 ug/mL m



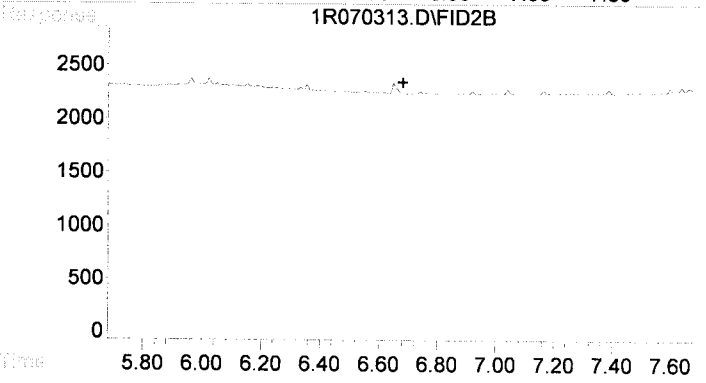
#2 BFB (Surr.)

R.T.: 0.000 min
Exp R.T. : 3.850 min
Response: 0
Conc: N.D.



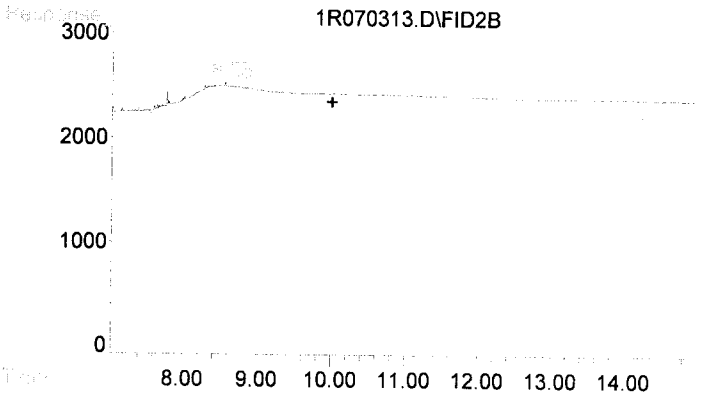
#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 107411
Conc: 2.55 ug/mL m



#4 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.680 min
Response: 0
Conc: N.D.



#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 765004
Conc: 21.20 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070314.D Vial: 58
Acq On : 4 Jul 2019 2:27 Operator: BLL
Sample : 9G03031-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
System Monitoring Compounds						
2)	S	BFB (Surr.)	0.00	0	N.D.	ug/ml
4)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
Target Compounds						
1)	H	Gasoline Range	4.00	499620	18.059	ug/mL
3)	H	Diesel (C12 - C24)	6.00	2107686	50.000	ug/mL
5)	H	Oil (>C24)	10.00	252387	6.993	ug/mL

AL
7.5.19

✓

(f)=RT Delta > 1/2 window (m)=manual int.

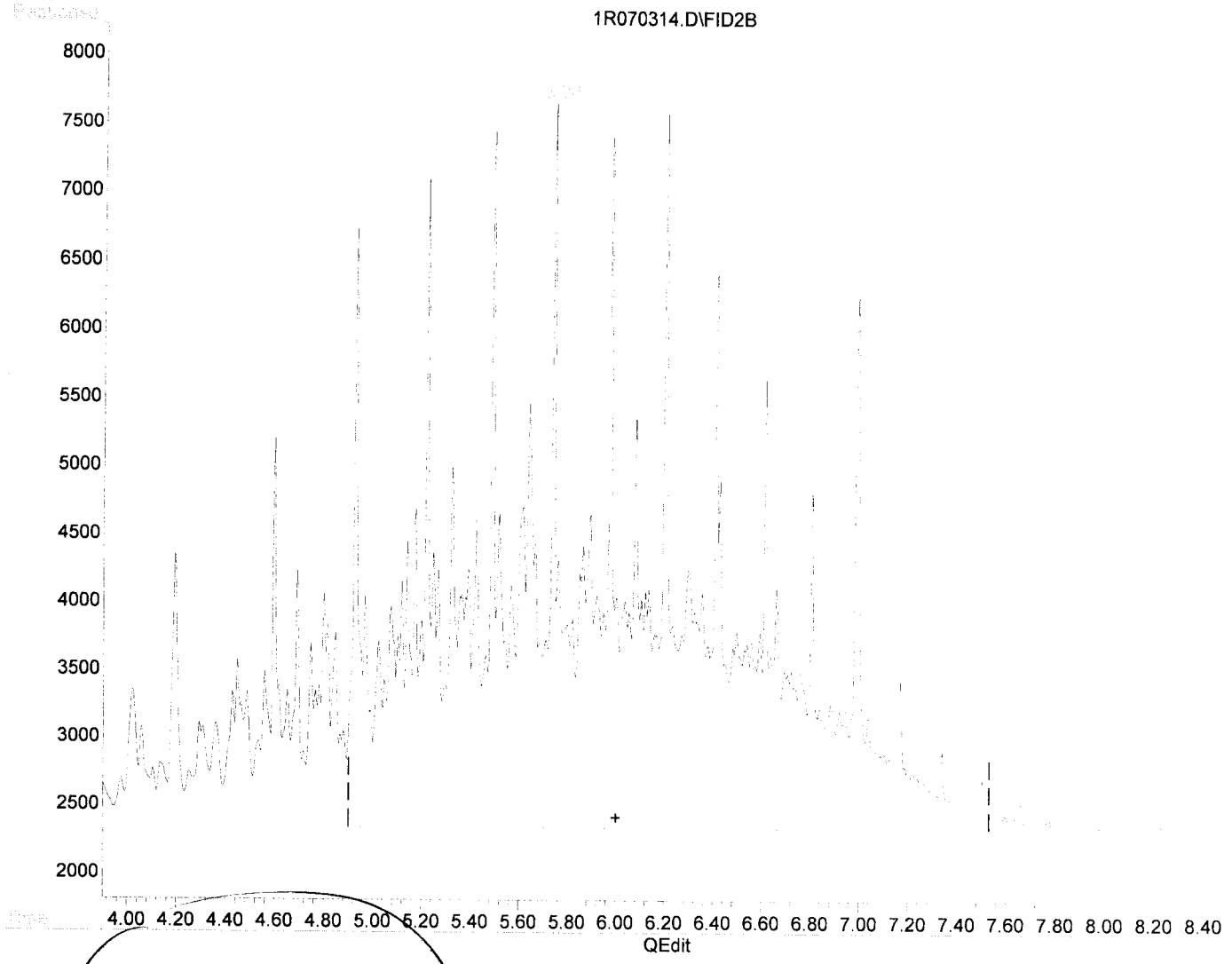
1R070314.D 1R90703H.M Fri Jul 05 09:43:09 2019 SV-GCMS3

Quantitation Report (Qedit)

Data File : F:\1\DATA\2019-07\9G03031\1R070314.D
Acq On : 4 Jul 2019 2:27
Sample : 9G03031-CAL2
Misc :
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Vial: 58
Operator: BLL
Inst : HP G1530A
Multiplr: 1.00

Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Multiple Level Calibration



(3) Diesel (C12 - C24) (H)

6.00min 50.000ug/mL m

response 2107686

AL 7.5.19 J

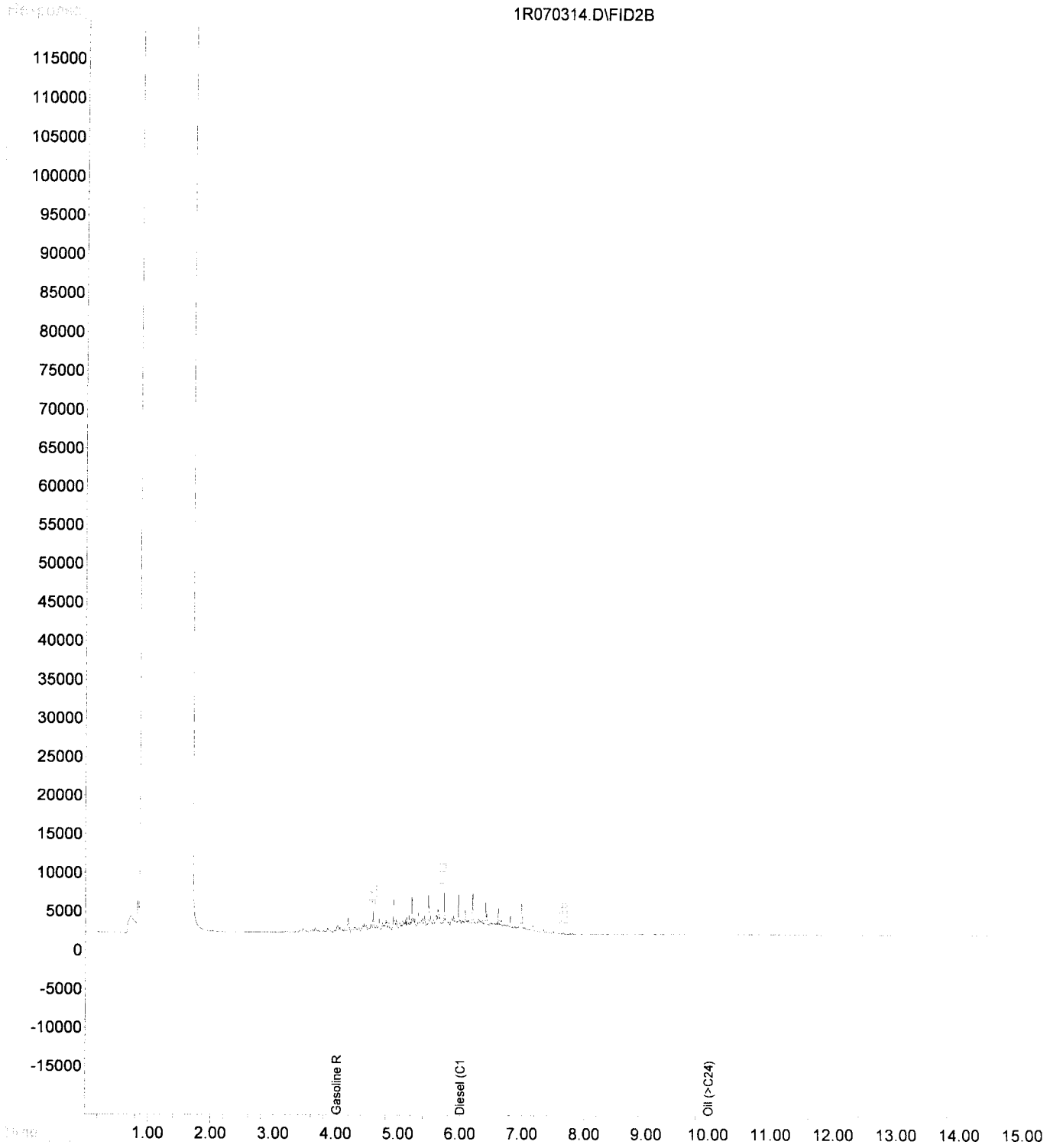
(+) = Expected Retention Time

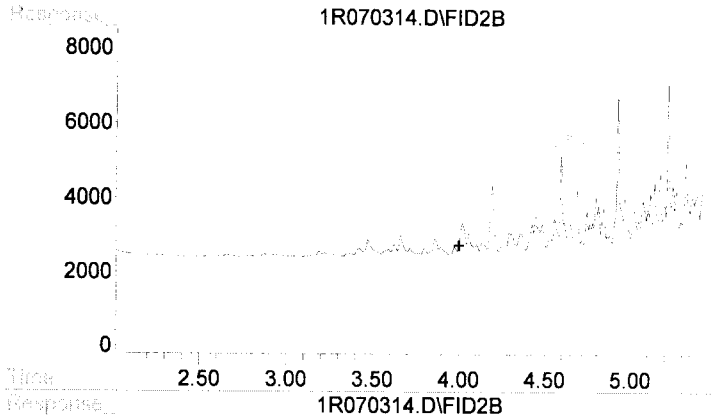
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070314.D Vial: 58
Acq On : 4 Jul 2019 2:27 Operator: BLL
Sample : 9G03031-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

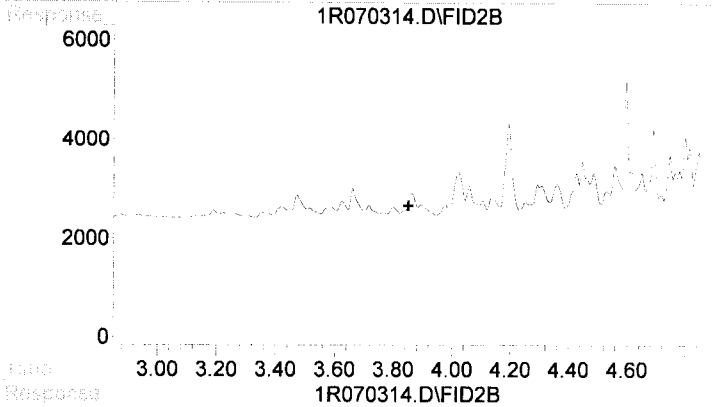
Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





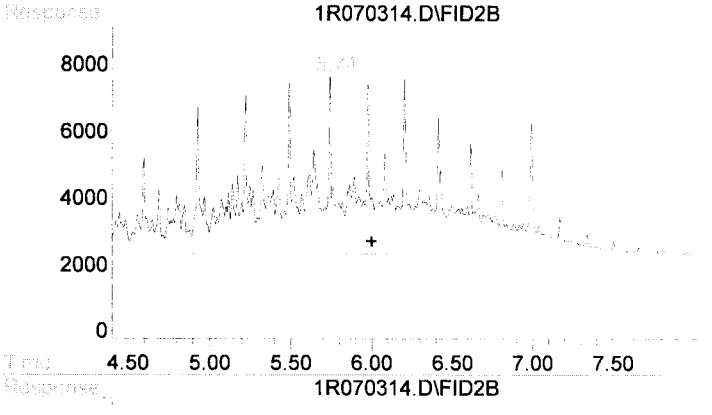
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 499620
Conc: 18.06 ug/mL m



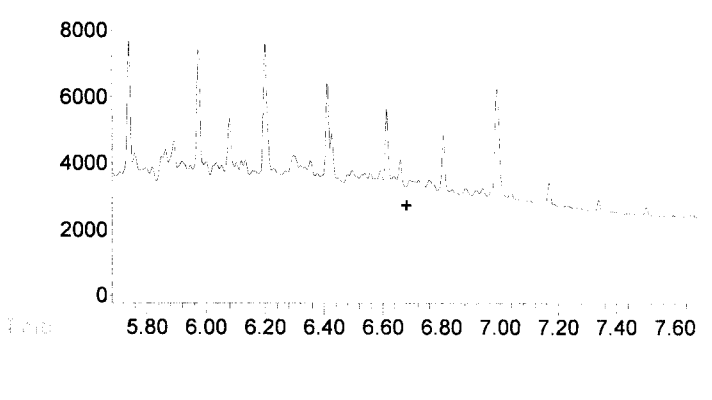
#2 BFB (Surr.)

R.T.: 0.000 min
Exp R.T. : 3.850 min
Response: 0
Conc: N.D.



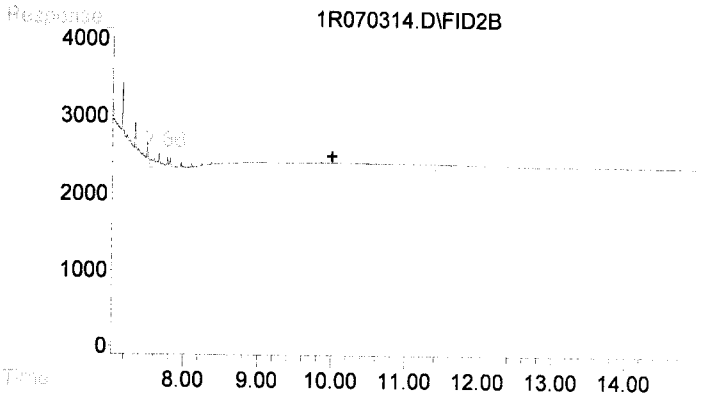
#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 2107686
Conc: 50.00 ug/mL m



#4 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.680 min
Response: 0
Conc: N.D.



#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 252387
Conc: 6.99 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070315.D Vial: 59
Acq On : 4 Jul 2019 2:49 Operator: BLL
Sample : 9G03031-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
2)	S	BFB (Surr.)	3.82	1216108	50.000	ug/ml
4)	S	o-Terphenyl	6.65	1431811	25.000	ug/mL
		Target Compounds				
1)	H	Gasoline Range	4.00	129344	4.675	ug/mL
3)	H	Diesel (C12 - C24)	6.00	847751	20.111	ug/mL
5)	H	Oil (>C24)	10.00	3609200	100.000	ug/mL

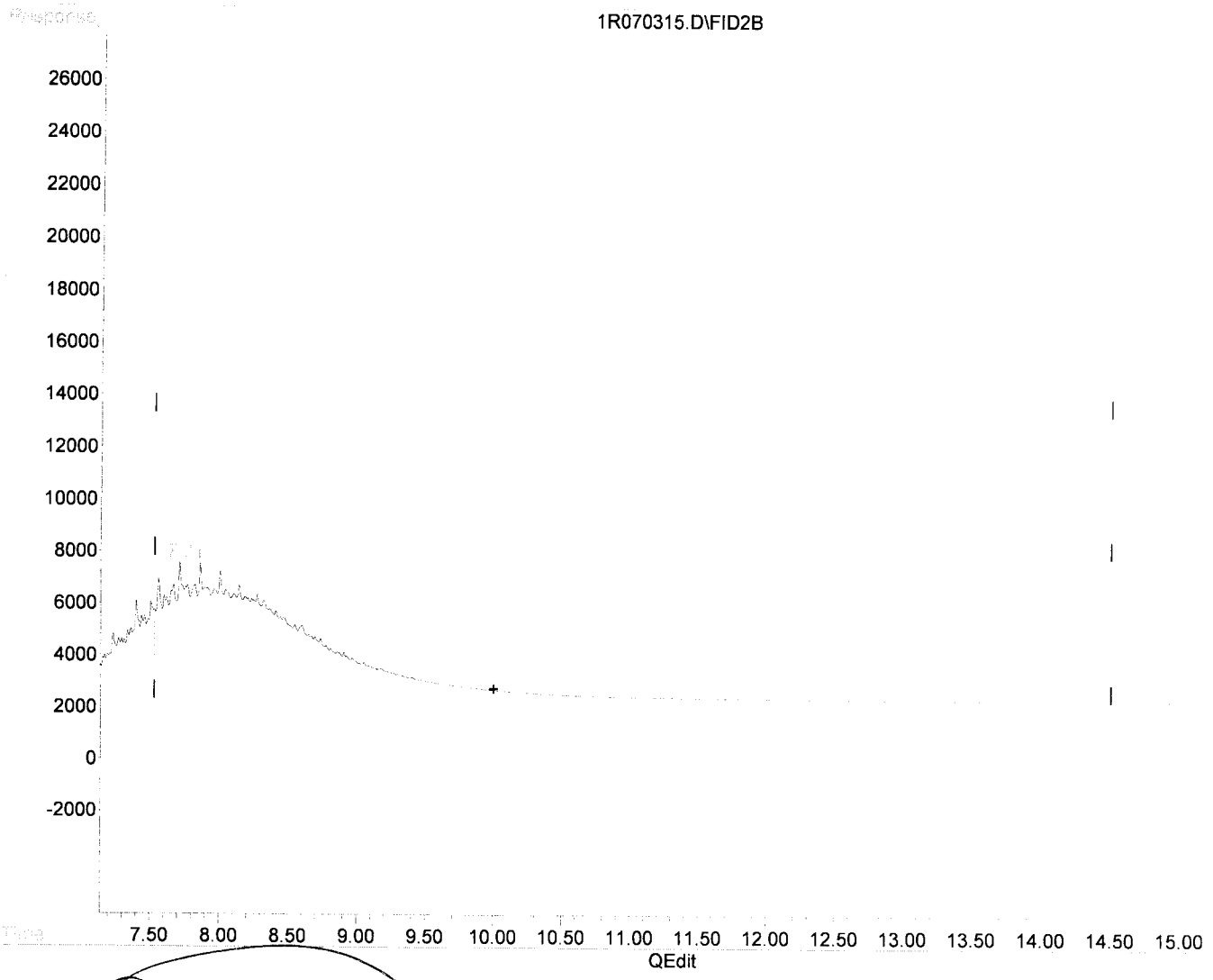
AR
7.5.19

Quantitation Report (Qedit)

Data File : F:\1\DATA\2019-07\9G03031\1R070315.D
Acq On : 4 Jul 2019 2:49
Sample : 9G03031-CAL3
Misc :
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Vial: 59
Operator: BLL
Inst : HP G1530A
Multiplr: 1.00

Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Multiple Level Calibration



(5) Oil (>C24) (H)

10.00min 100.000ug/mL m

response 3609200

M
7.5.19

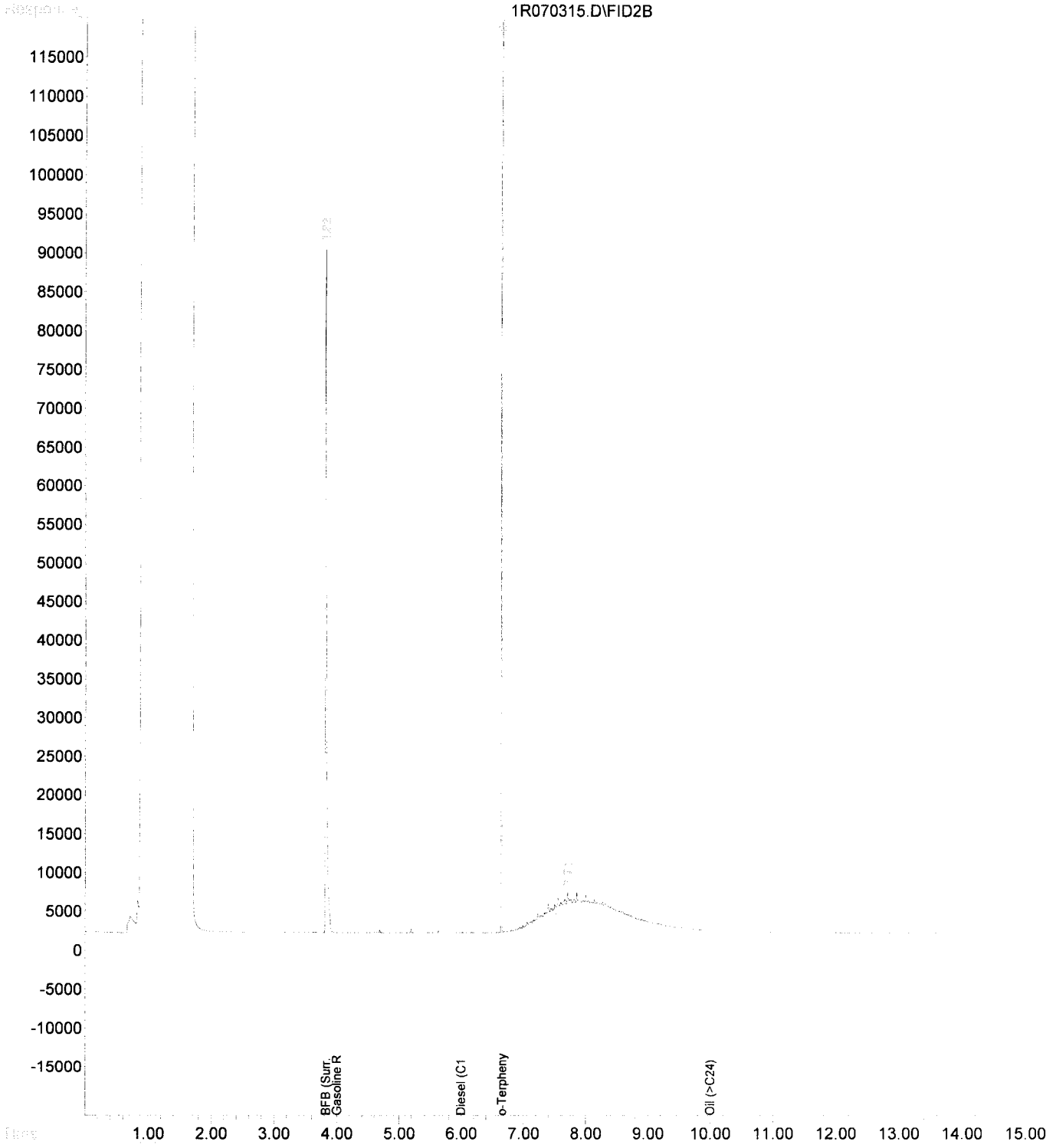
(+) = Expected Retention Time

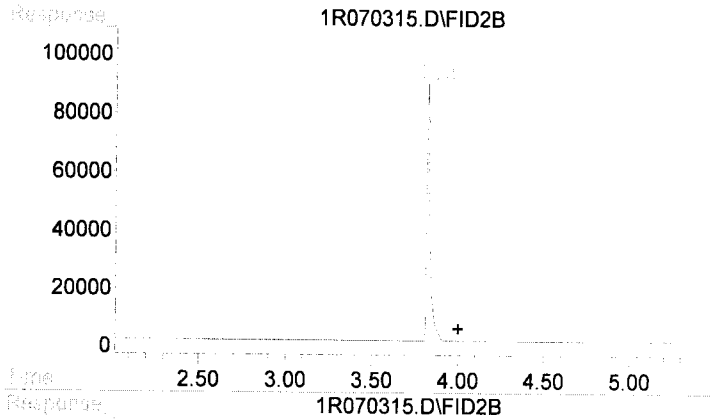
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070315.D Vial: 59
Acq On : 4 Jul 2019 2:49 Operator: BLL
Sample : 9G03031-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

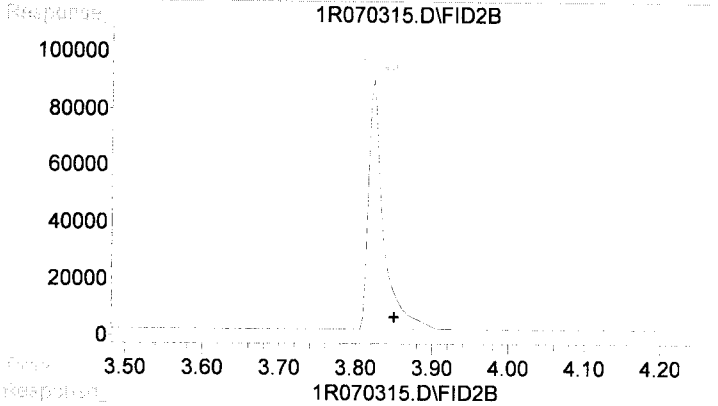
Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





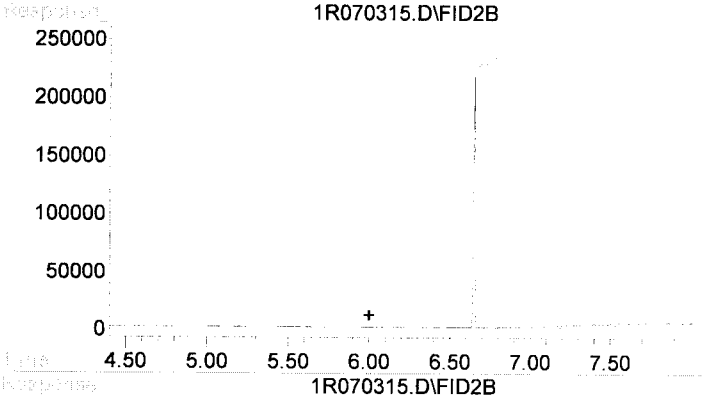
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 129344
Conc: 4.68 ug/mL m



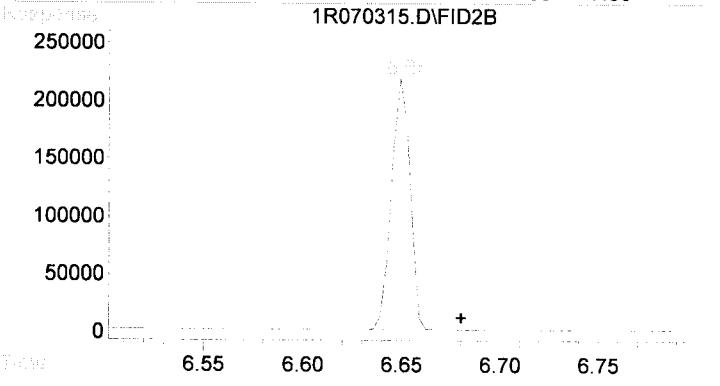
#2 BFB (Surr.)

R.T.: 3.823 min
Delta R.T.: -0.027 min
Response: 1216108
Conc: 50.00 ug/ml



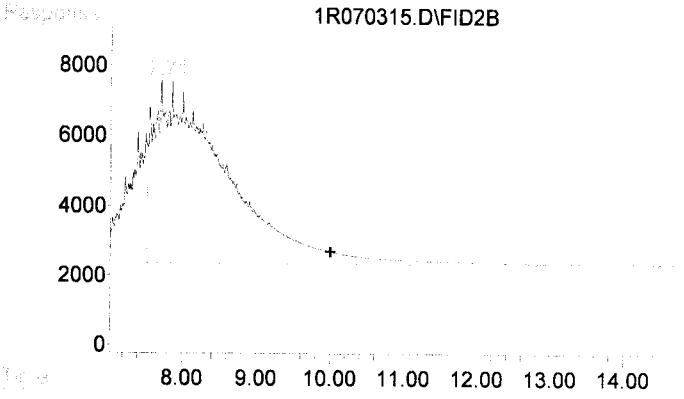
#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 847751
Conc: 20.11 ug/mL m



#4 o-Terphenyl

R.T.: 6.651 min
Delta R.T.: -0.029 min
Response: 1431811
Conc: 25.00 ug/mL



#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 3609200
Conc: 100.00 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070316.D Vial: 100
Acq On : 4 Jul 2019 3:12 Operator: BLL
Sample : 9G03031-CCB2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
2)	S	BFB (Surr.)	0.00	0	N.D.	ug/ml
4)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Gasoline Range	4.00	123359	4.459	ug/mL
3)	H	Diesel (C12 - C24)	6.00	130820	3.103	ug/mL
5)	H	Oil (>C24)	10.00	720335	19.958	ug/mL

< 1/2 RL

MR
7.5.19

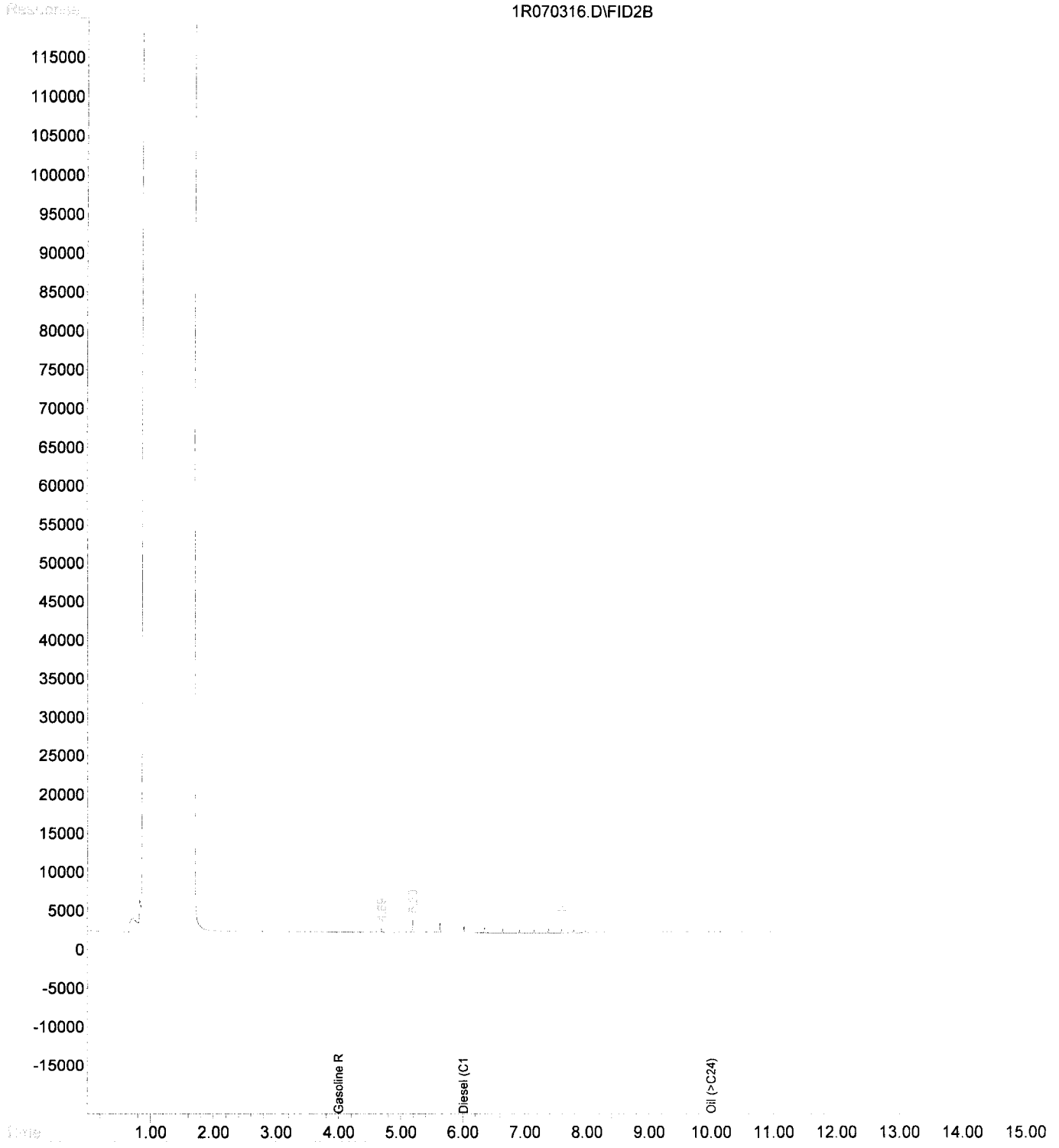
✓

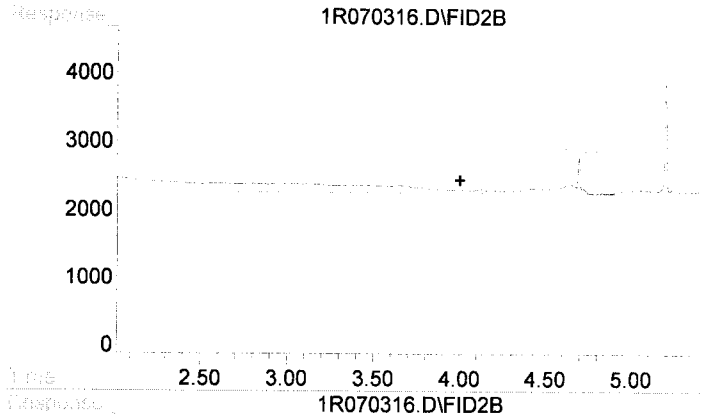
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070316.D Vial: 100
Acq On : 4 Jul 2019 3:12 Operator: BLL
Sample : 9G03031-CCB2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:43 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

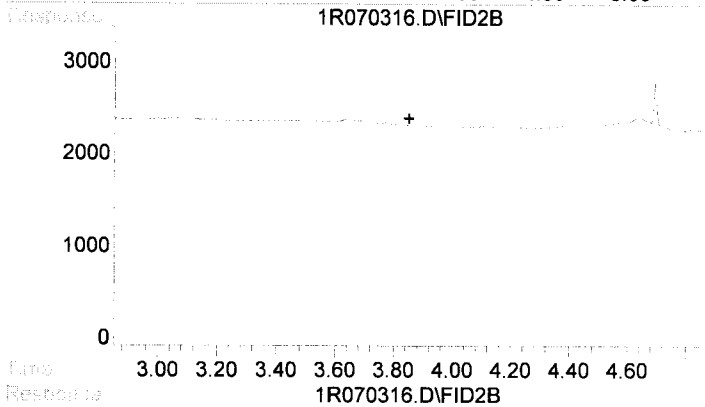
Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





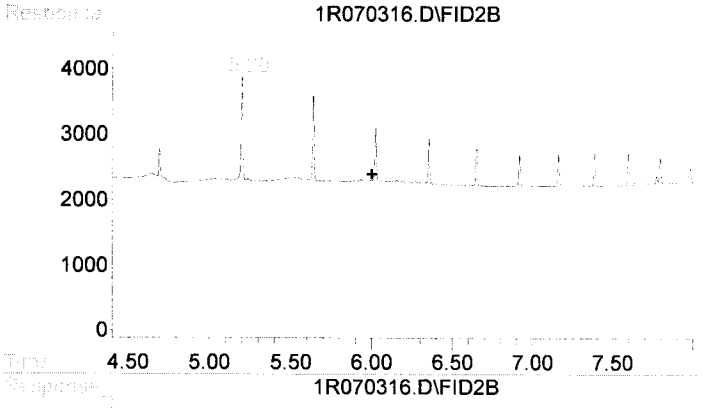
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 123359
Conc: 4.46 ug/mL m



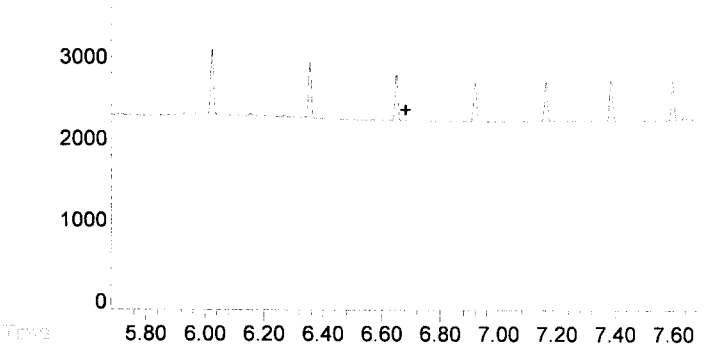
#2 BFB (Surr.)

R.T.: 0.000 min
Exp R.T. : 3.850 min
Response: 0
Conc: N.D.



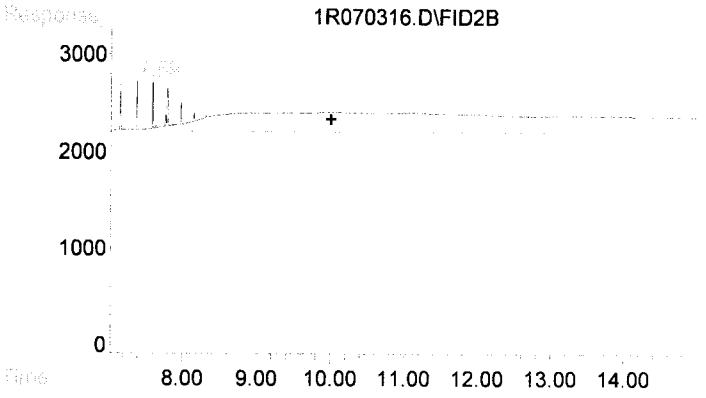
#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 130820
Conc: 3.10 ug/mL m



#4 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.680 min
Response: 0
Conc: N.D.



#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 720335
Conc: 19.96 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070317.D Vial: 60
Acq On : 4 Jul 2019 3:34 Operator: BLL
Sample : 9070610-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:44 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
2)	S	BFB (Surr.)	3.82	1170257	48.115 ug/ml
4)	S	o-Terphenyl	6.65	1423726	24.859 ug/mL
		Target Compounds			
1)	H	Gasoline Range	4.00	125247	4.527 ug/mL
3)	H	Diesel (C12 - C24)	6.00	88327	2.095 ug/mL
5)	H	Oil (>C24)	10.00	692652	19.191 ug/mL

< 1/2 RL

MT
7.5.19

J

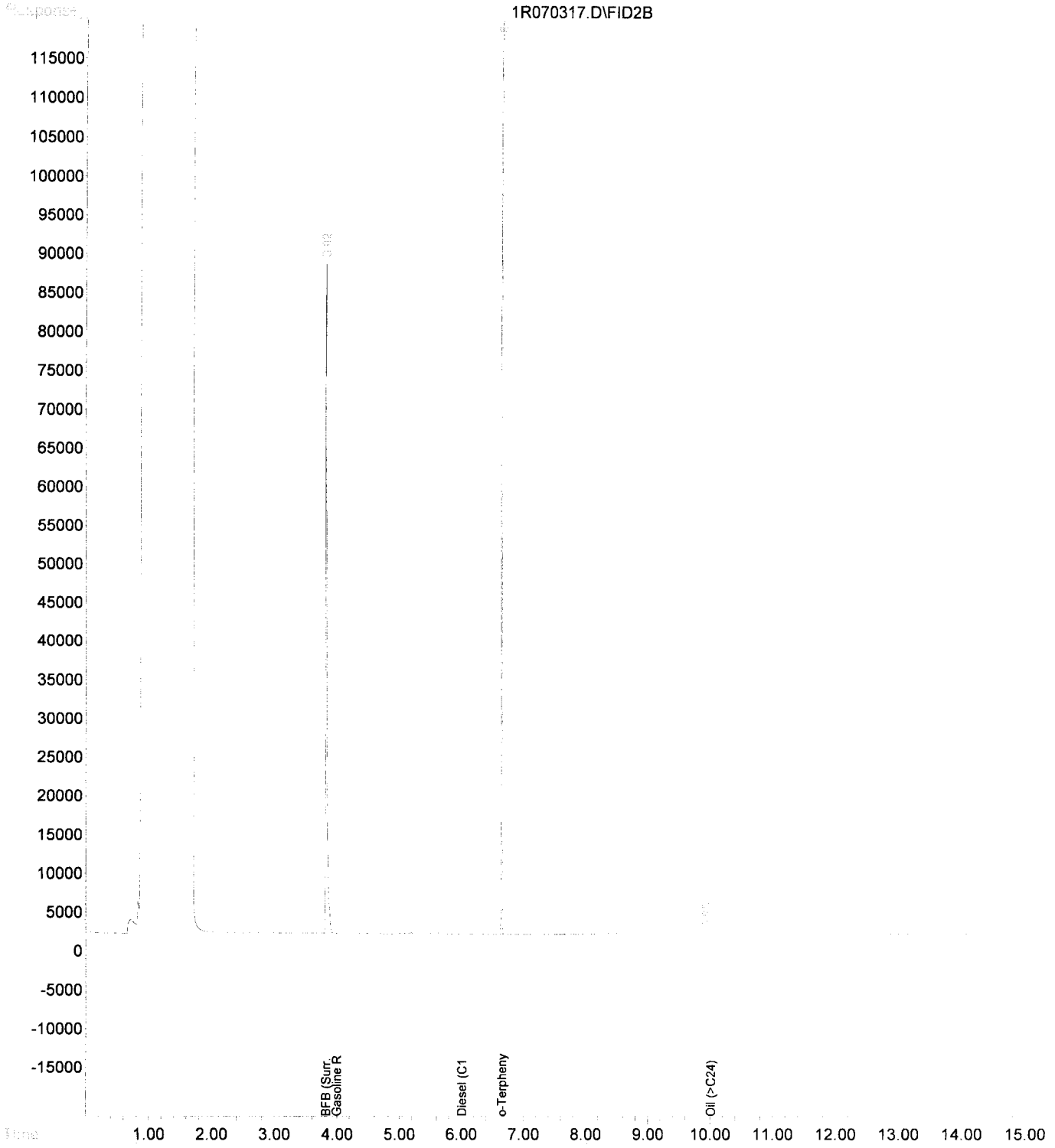
(f)=RT Delta > 1/2 Window (m)=manual int.

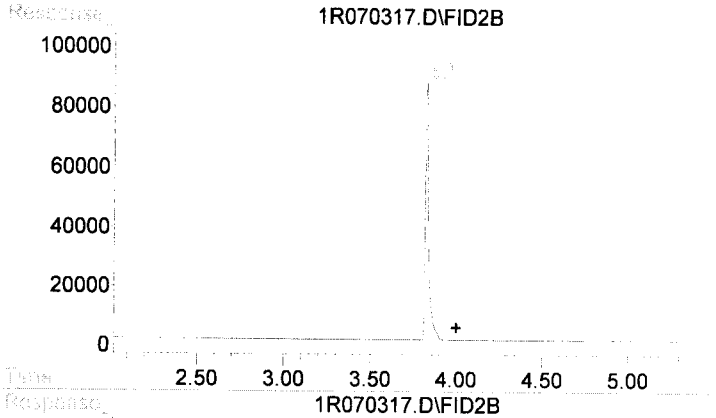
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-07\9G03031\1R070317.D Vial: 60
Acq On : 4 Jul 2019 3:34 Operator: BLL
Sample : 9070610-BLK1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : EVENTS2.E
Quant Time: Jul 5 9:44 2019 Quant Results File: 1R90703H.RES

Quant Method : F:\2\METHODS\1R90703H.M (Chemstation Integrator)
Title : DUALFID1R, HCID
Last Update : Fri Jul 05 09:42:06 2019
Response via : Single Level Calibration
DataAcq Meth : A1F40422.M

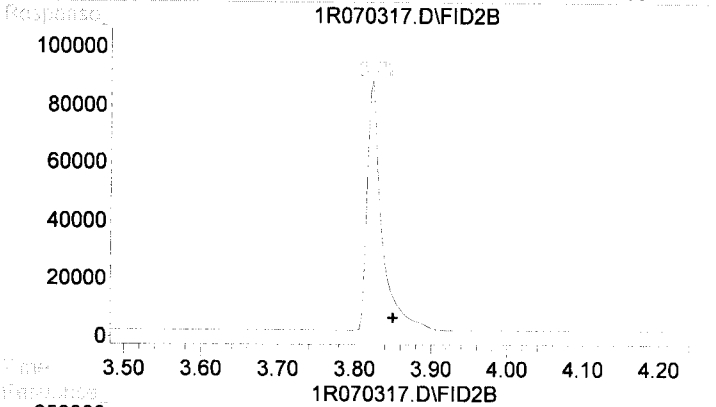
Volume Inj. : 1 uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





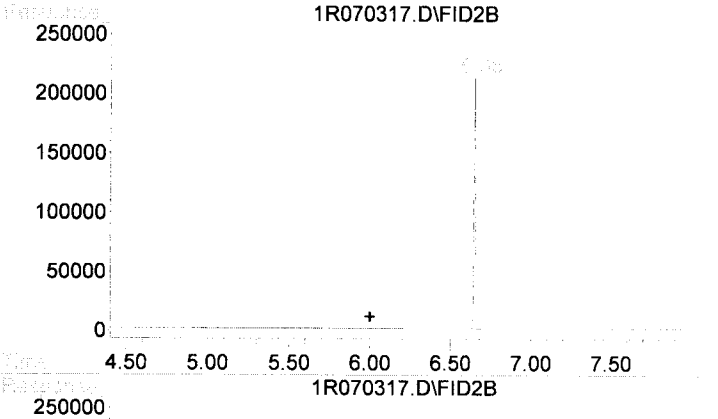
#1 Gasoline Range

R.T.: 4.000 min
Delta R.T.: 0.000 min
Response: 125247
Conc: 4.53 ug/mL m



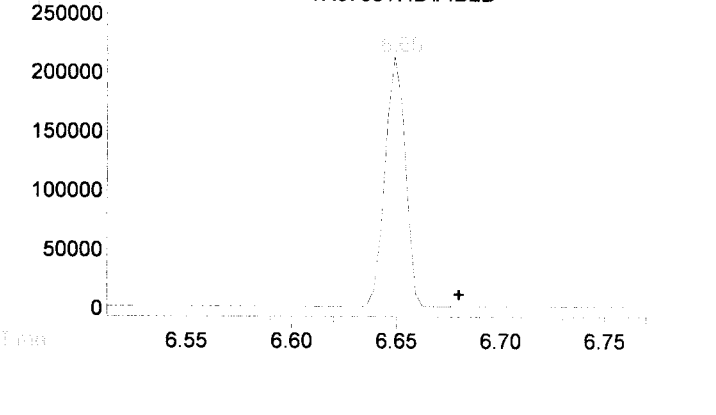
#2 BFB (Surr.)

R.T.: 3.823 min
Delta R.T.: -0.027 min
Response: 1170257
Conc: 48.11 ug/ml



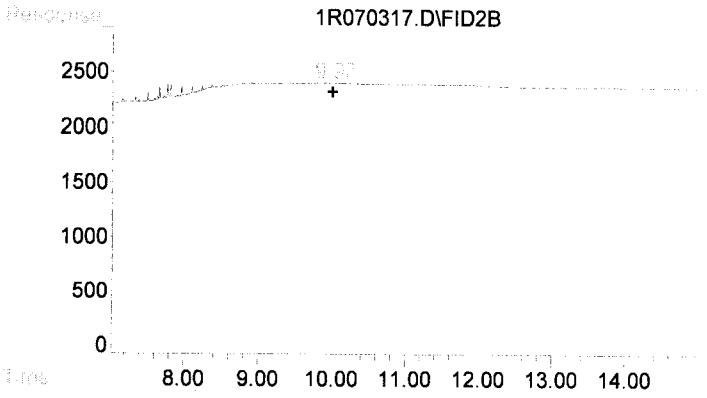
#3 Diesel (C12 - C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 88327
Conc: 2.10 ug/mL m



#4 o-Terphenyl

R.T.: 6.651 min
Delta R.T.: -0.029 min
Response: 1423726
Conc: 24.86 ug/mL



#5 Oil (>C24)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 692652
Conc: 19.19 ug/mL m

Diesel and /or Oil Hydrocarbons by NWTPH-Dx
Calibration Data

Sequence 9D25028 (Cal ID A9D2603) DUALFID1R

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D25028**	Instrument:	**DUALFID1R**
Date:	**04/25/19 11:47**	Calibration:	**A9D2603**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D25028-RES1	Soil	QC	QC				A19C198
2	9D25028-ICB1	Soil	QC	QC				
3	9D25028-CAL1	Soil	QC	QC				A19C305
4	9D25028-CAL2	Soil	QC	QC				A19C306
5	9D25028-CAL3	Soil	QC	QC				A19C307
6	9D25028-CAL4	Soil	QC	QC				A19C308
7	9D25028-CAL5	Soil	QC	QC				A19C309
8	9D25028-CAL6	Soil	QC	QC				A19C310
9	9D25028-CAL7	Soil	QC	QC				A19C311
10	9D25028-CAL8	Soil	QC	QC				A19C204
11	9D25028-CAL9	Soil	QC	QC				A19D191
12	9D25028-CALA	Soil	QC	QC				A19D192
13	9D25028-CALB	Soil	QC	QC				A19D193
14	9D25028-CALC	Soil	QC	QC				A19D194
15	9D25028-CALD	Soil	QC	QC				A19C210
16	9D25028-CALE	Soil	QC	QC				A19C365
17	9D25028-CALF	Soil	QC	QC				A19C366
18	9D25028-CALG	Soil	QC	QC				A19C367
19	9D25028-CALH	Soil	QC	QC				A19C368
20	9D25028-CALI	Soil	QC	QC				A19C373
21	9D25028-CALJ	Soil	QC	QC				A19C370
22	9D25028-IBL1	Soil	QC	QC				
23	9D25028-CALK	Soil	QC	QC				A19C364
24	9D25028-IBL2	Soil	QC	QC				
25	9D25028-ICV1	Soil	QC	QC				A19D271
26	9D25028-ICV2	Soil	QC	QC				A19D272

Comments:

Data Entered By: KEH 4/26/19

Data Reviewed By: 9/2 4/26/19

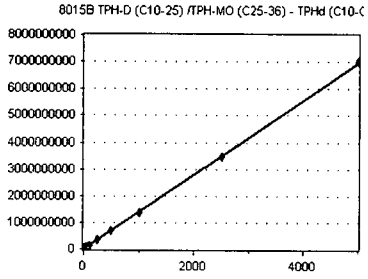
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **8015B TPH-D (C10-25) /TPH-** Instrument Cal ID: **1R90425D.m**

TPHd (C10-C25)

Curve Fit: **AVERAGE RF**

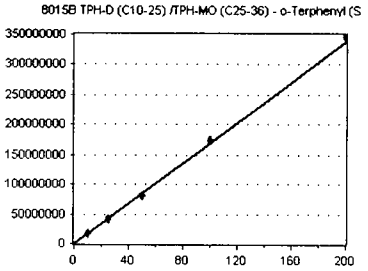


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	325636E+07	1330254.000	6.00
9D25028-CAL2	40	423356E+07	1355839.000	6.00
9D25028-CAL3	100	409025E+08	1409025.000	6.00
9D25028-CAL4	250	610629E+08	1444252.000	6.00
9D25028-CAL5	500	047175E+08	1409435.000	6.00
9D25028-CAL6	1000	381274E+09	1381274.000	6.00
9D25028-CAL7	2500	447423E+09	1378969.000	6.00
9D25028-CAL8	5000	015051E+09	1403010.000	6.00

AVE RF **1389007.000** RF RSD **2.55** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

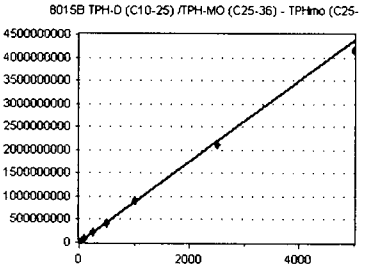


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

TPHmo (C25-C36)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	618433E+07	904608.200	8.00
9D25028-CALF	80	559894E+07	944986.800	8.00
9D25028-CALG	250	164557E+08	865822.800	8.00
9D25028-CALH	500	217532E+08	843506.400	8.00
9D25028-CALI	1000	1.91649E+08	891649.000	8.00
9D25028-CALJ	2500	121384E+09	848553.600	8.00
9D25028-CALK	5000	150676E+09	830135.200	8.00

AVE RF **875608.900** RF RSD **4.62** AVE RT **8.00**

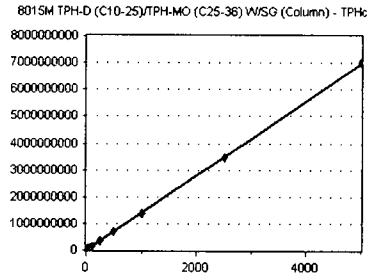
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **8015M TPH-D (C10-25)/TPH-** Instrument Cal ID: **1R90425D.m**

TPHd (C10-C25)

Curve Fit: **AVERAGE RF**

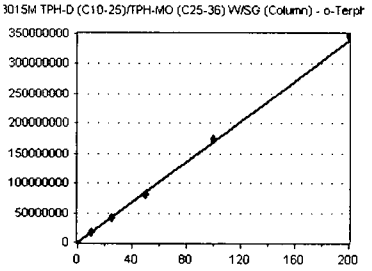


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	325636E+07	1330254.000	6.00
9D25028-CAL2	40	423356E+07	1355839.000	6.00
9D25028-CAL3	100	409025E+08	1409025.000	6.00
9D25028-CAL4	250	510629E+08	1444252.000	6.00
9D25028-CAL5	500	047175E+08	1409435.000	6.00
9D25028-CAL6	1000	381274E+09	1381274.000	6.00
9D25028-CAL7	2500	447423E+09	1378969.000	6.00
9D25028-CAL8	5000	015051E+09	1403010.000	6.00

AVE RF **1389007.000** RF RSD **2.55** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

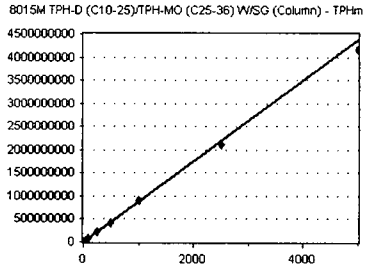


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

TPHmo (C25-C36)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	618433E+07	904608.200	8.00
9D25028-CALF	80	559894E+07	944986.800	8.00
9D25028-CALG	250	164557E+08	865822.800	8.00
9D25028-CALH	500	217532E+08	843506.400	8.00
9D25028-CALI	1000	1.91649E+08	891649.000	8.00
9D25028-CALJ	2500	121384E+09	848553.600	8.00
9D25028-CALK	5000	150676E+09	830135.200	8.00

AVE RF **875608.900** RF RSD **4.62** AVE RT **8.00**

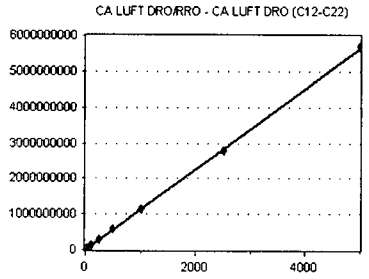
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **CA LUFT DRO/RRO** Instrument Cal ID: **1R90425D.m**

CA LUFT DRO (C12-C22)

Curve Fit: **AVERAGE RF**

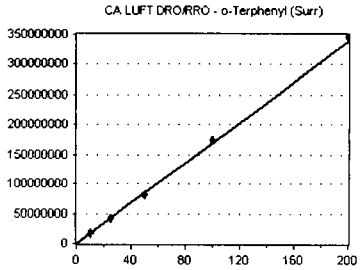


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	687192E+07	1074877.000	6.00
9D25028-CAL2	40	1.35776E+07	1089440.000	6.00
9D25028-CAL3	100	.13723E+08	1137230.000	6.00
9D25028-CAL4	250	931422E+08	1172569.000	6.00
9D25028-CAL5	500	724635E+08	1144927.000	6.00
9D25028-CAL6	1000	123185E+09	1123185.000	6.00
9D25028-CAL7	2500	804541E+09	1121816.000	6.00
9D25028-CAL8	5000	706747E+09	1141349.000	6.00

AVE RF **1125674.000** RF RSD **2.78** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

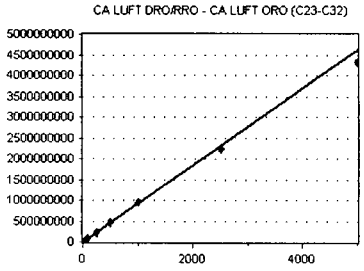


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

CA LUFT ORO (C23-C32)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	832828E+07	958207.000	8.00
9D25028-CALF	80	009616E+07	1001202.000	8.00
9D25028-CALG	250	290312E+08	916124.800	8.00
9D25028-CALH	500	463801E+08	892760.200	8.00
9D25028-CALI	1000	448249E+08	944824.900	8.00
9D25028-CALJ	2500	233126E+09	893250.400	8.00
9D25028-CALK	5000	335514E+09	867102.800	8.00

AVE RF **924781.700** RF RSD **4.99** AVE RT **8.00**

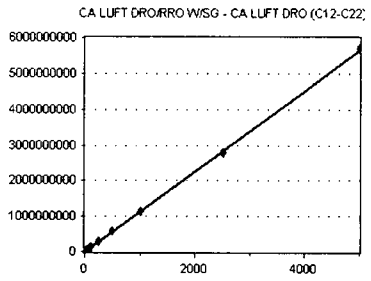
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **CA LUFT DRO/RRO W/SG** Instrument Cal ID: **1R90425D.m**

CA LUFT DRO (C12-C22)

Curve Fit: **AVERAGE RF**

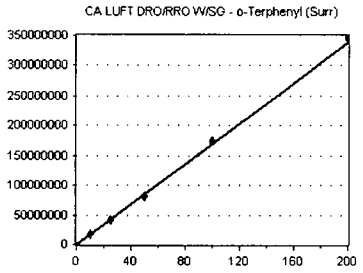


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	687192E+07	1074877.000	6.00
9D25028-CAL2	40	1.35776E+07	1089440.000	6.00
9D25028-CAL3	100	.13723E+08	1137230.000	6.00
9D25028-CAL4	250	931422E+08	1172569.000	6.00
9D25028-CAL5	500	724635E+08	1144927.000	6.00
9D25028-CAL6	1000	123185E+09	1123185.000	6.00
9D25028-CAL7	2500	804541E+09	1121816.000	6.00
9D25028-CAL8	5000	706747E+09	1141349.000	6.00

AVE RF **1125674.000** RF RSD **2.78** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

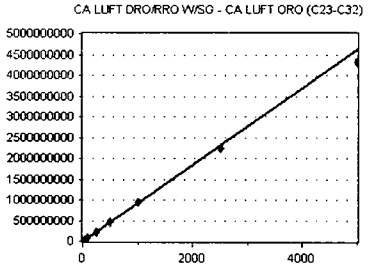


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

CA LUFT ORO (C23-C32)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	832828E+07	958207.000	8.00
9D25028-CALF	80	009616E+07	1001202.000	8.00
9D25028-CALG	250	290312E+08	916124.800	8.00
9D25028-CALH	500	463801E+08	892760.200	8.00
9D25028-CALI	1000	448249E+08	944824.900	8.00
9D25028-CALJ	2500	233126E+09	893250.400	8.00
9D25028-CALK	5000	335514E+09	867102.800	8.00

AVE RF **924781.700** RF RSD **4.99** AVE RT **8.00**

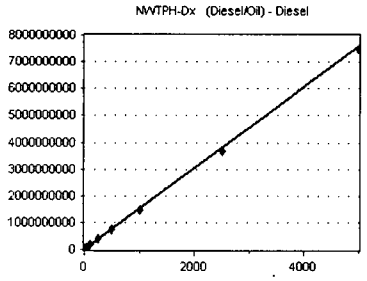
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil)** Instrument Cal ID: **1R90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

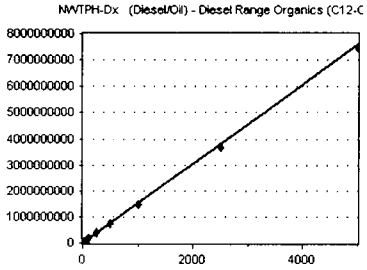


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

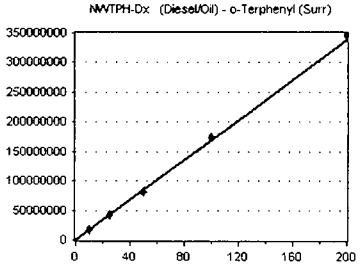


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

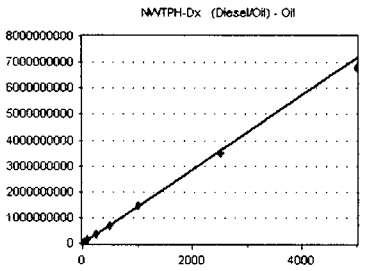


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

Oil

Curve Fit: **AVERAGE RF**

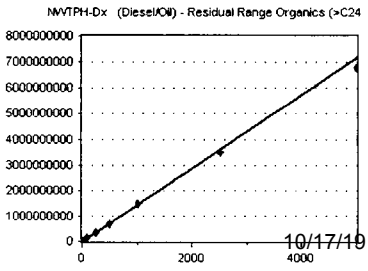


Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

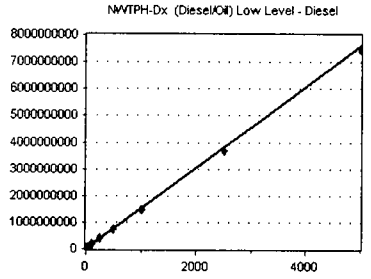
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) Low** Instrument Cal ID: **1R90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

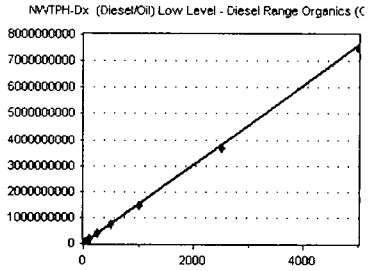


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

Diesel Range Organics (C12-C24)

Curve Fit: **AVERAGE RF**

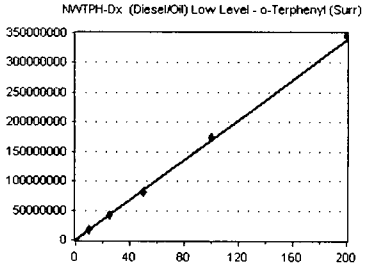


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

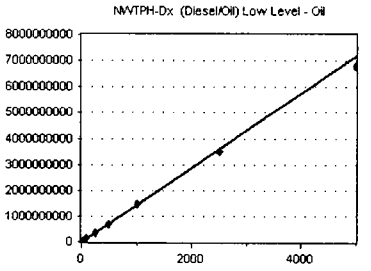


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	598554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

Oil

Curve Fit: **AVERAGE RF**

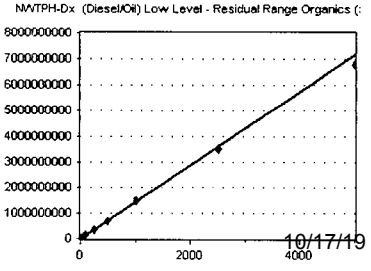


Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

Residual Range Organics (>C24)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

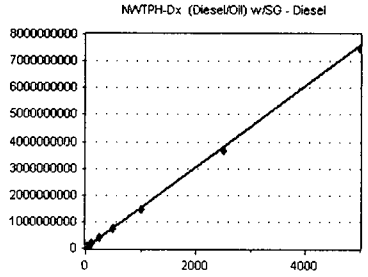
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/S** Instrument Cal ID: **1R90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

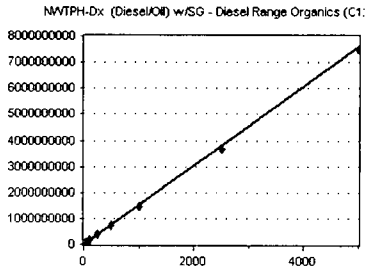


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

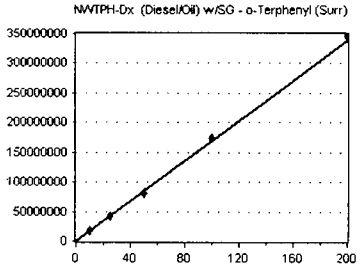


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

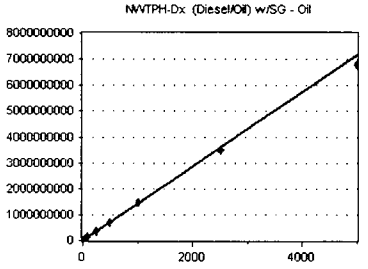


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

Oil

Curve Fit: **AVERAGE RF**

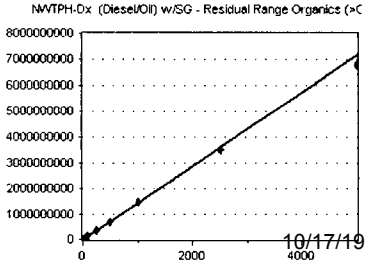


Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

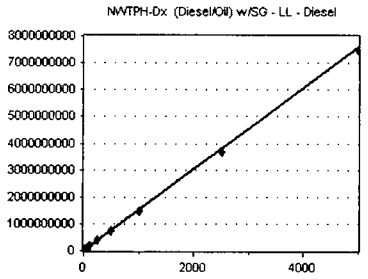
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/S(** Instrument Cal ID: **1R90425D.m**

Diesel

Curve Fit: **AVERAGE RF**

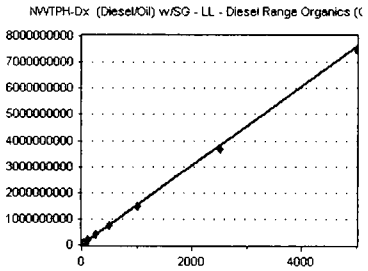


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**

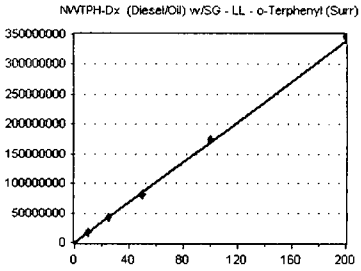


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL1	25	880572E+07	1552229.000	6.00
9D25028-CAL2	40	126955E+07	1531739.000	6.00
9D25028-CAL3	100	536459E+08	1536459.000	6.00
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**

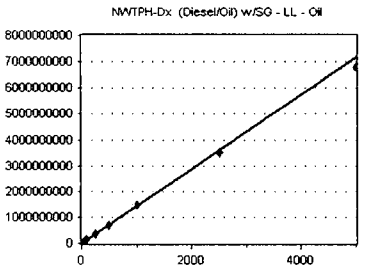


Standard	Concentration	Response	Response Factor	RT
9D25028-CAL9	10	698554E+07	1698554.000	6.68
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

Oil

Curve Fit: **AVERAGE RF**

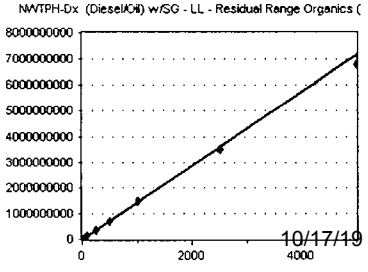


Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

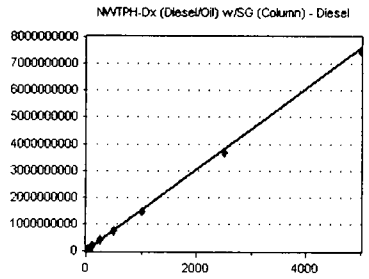
Element Calibration Review Sheet

Calibration ID: **A9D2603** Instrument: **DUALFID1R** Calibration Date: **04/26/2019**

Analysis: **NWTPH-Dx (Diesel/Oil) w/SG** Instrument Cal ID: **1R90425D.m**

Diesel

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
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9D25028-CAL2	40	126955E+07	1531739.000	6.00
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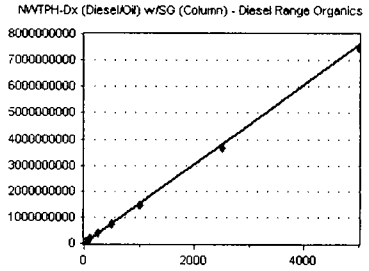
9D25028-CAL4	250	895114E+08	1558046.000	6.00
9D25028-CAL5	500	564064E+08	1512813.000	6.00
9D25028-CAL6	1000	479073E+09	1479073.000	6.00
9D25028-CAL7	2500	686887E+09	1474755.000	6.00
9D25028-CAL8	5000	499785E+09	1499957.000	6.00

AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

Diesel Range Organics (C12-C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
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9D25028-CAL2	40	126955E+07	1531739.000	6.00
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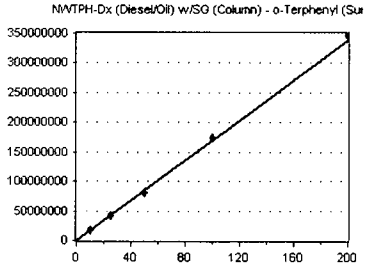
AVE RF **1518134.000** RF RSD **2.09** AVE RT **6.00**

o-Terphenyl (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
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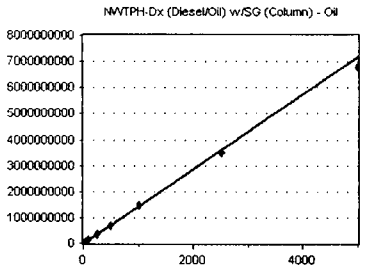
9D25028-CALA	25	130467E+07	1652187.000	6.68
9D25028-CALB	50	226211E+07	1645242.000	6.68
9D25028-CALC	100	735458E+08	1735458.000	6.68
9D25028-CALD	200	460745E+08	1730373.000	6.69

AVE RF **1692363.000** RF RSD **2.50** AVE RT **6.68**

Oil

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
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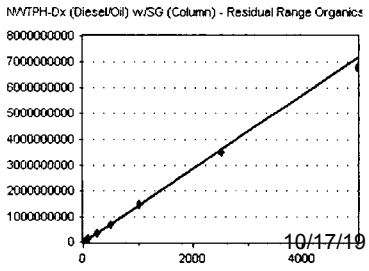
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

Residual Range Organics (>C24

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D25028-CALE	40	041808E+07	1510452.000	10.00
9D25028-CALF	80	240941E+08	1551176.000	10.00
9D25028-CALG	250	529222E+08	1411689.000	10.00
9D25028-CALH	500	867028E+08	1373406.000	10.00
9D25028-CALI	1000	459338E+09	1459338.000	10.00
9D25028-CALJ	2500	494841E+09	1397936.000	10.00
9D25028-CALK	5000	807643E+09	1361529.000	10.00

AVE RF **1437932.000** RF RSD **4.99** AVE RT **10.00**

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25028 **Seq. Date: 4/26/2019**

SEQUENCE LOG

SampleID	Analysis	Matrix	STDID	Analyzed
9D25028-ICB1	8015B TPH-D (C10-25) /TPH-MO	Soil		4/25/2019 5:41:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"		"
"	+CA LUFT DRO/RRO	"		"
"	+CA LUFT DRO/RRO W/SG	"		"
"	+NWTPH-Dx (Diesel/Oil)	"		"
"	+NWTPH-Dx (Diesel/Oil) Low L	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"		"
9D25028-CAL1	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C305	4/25/2019 6:03:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C305	"
"	+CA LUFT DRO/RRO	"	A19C305	"
"	+CA LUFT DRO/RRO W/SG	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C305	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C305	"
9D25028-CAL2	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C306	4/25/2019 6:26:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C306	"
"	+CA LUFT DRO/RRO	"	A19C306	"
"	+CA LUFT DRO/RRO W/SG	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C306	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C306	"
9D25028-CAL3	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C307	4/25/2019 6:49:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C307	"
"	+CA LUFT DRO/RRO	"	A19C307	"
"	+CA LUFT DRO/RRO W/SG	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C307	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C307	"
9D25028-CAL4	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C308	4/25/2019 7:12:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C308	"
"	+CA LUFT DRO/RRO	"	A19C308	"
"	+CA LUFT DRO/RRO W/SG	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C308	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C308	"

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25028 **Seq. Date: 4/26/2019**

9D25028-CAL5	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C309	4/25/2019	7:35:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C309		"
"	+CA LUFT DRO/RRO	"	A19C309		"
"	+CA LUFT DRO/RRO W/SG	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C309		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C309		"
9D25028-CAL6	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C310	4/25/2019	7:58:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C310		"
"	+CA LUFT DRO/RRO	"	A19C310		"
"	+CA LUFT DRO/RRO W/SG	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C310		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C310		"
9D25028-CAL7	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C311	4/25/2019	8:20:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C311		"
"	+CA LUFT DRO/RRO	"	A19C311		"
"	+CA LUFT DRO/RRO W/SG	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C311		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C311		"
9D25028-CAL8	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C204	4/25/2019	8:43:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C204		"
"	+CA LUFT DRO/RRO	"	A19C204		"
"	+CA LUFT DRO/RRO W/SG	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C204		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C204		"
9D25028-CAL9	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D191	4/25/2019	9:06:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D191		"
"	+CA LUFT DRO/RRO	"	A19D191		"
"	+CA LUFT DRO/RRO W/SG	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D191		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D191		"
9D25028-CALA	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D192	4/25/2019	9:29:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D192		"
"	+CA LUFT DRO/RRO	"	A19D192		"
"	+CA LUFT DRO/RRO W/SG	"	A19D192		"

"	+NWTPH-Dx (Diesel/Oil)	"	A19D192	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D192	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D192	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D192	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D192	"
9D25028-CALB	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D193	4/25/2019 9:51:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D193	"
"	+CA LUFT DRO/RRO	"	A19D193	"
"	+CA LUFT DRO/RRO W/SG	"	A19D193	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D193	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D193	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D193	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D193	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D193	"
9D25028-CALC	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D194	4/25/2019 10:14:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D194	"
"	+CA LUFT DRO/RRO	"	A19D194	"
"	+CA LUFT DRO/RRO W/SG	"	A19D194	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D194	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19D194	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D194	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D194	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D194	"
9D25028-CALD	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C210	4/25/2019 10:37:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C210	"
"	+CA LUFT DRO/RRO	"	A19C210	"
"	+CA LUFT DRO/RRO W/SG	"	A19C210	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C210	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C210	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C210	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C210	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C210	"
9D25028-CALE	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C365	4/25/2019 10:59:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C365	"
"	+CA LUFT DRO/RRO	"	A19C365	"
"	+CA LUFT DRO/RRO W/SG	"	A19C365	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C365	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C365	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C365	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C365	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C365	"
9D25028-CALF	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C366	4/25/2019 11:22:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C366	"
"	+CA LUFT DRO/RRO	"	A19C366	"
"	+CA LUFT DRO/RRO W/SG	"	A19C366	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C366	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C366	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C366	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C366	"

"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C366	"
9D25028-CALG	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C367	4/25/2019 11:45:00PM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C367	"
"	+CA LUFT DRO/RRO	"	A19C367	"
"	+CA LUFT DRO/RRO W/SG	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C367	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C367	"
9D25028-CALH	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C368	4/26/2019 12:07:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C368	"
"	+CA LUFT DRO/RRO	"	A19C368	"
"	+CA LUFT DRO/RRO W/SG	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C368	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C368	"
9D25028-CALI	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C373	4/26/2019 12:30:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C373	"
"	+CA LUFT DRO/RRO	"	A19C373	"
"	+CA LUFT DRO/RRO W/SG	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C373	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C373	"
9D25028-CALJ	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C370	4/26/2019 12:52:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C370	"
"	+CA LUFT DRO/RRO	"	A19C370	"
"	+CA LUFT DRO/RRO W/SG	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C370	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C370	"
9D25028-CALK	8015B TPH-D (C10-25) /TPH-MO	Soil	A19C364	4/26/2019 1:38:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19C364	"
"	+CA LUFT DRO/RRO	"	A19C364	"
"	+CA LUFT DRO/RRO W/SG	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil)	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) Low Le	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19C364	"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19C364	"
9D25028-ICV1	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D271	4/26/2019 2:23:00AM
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D271	"
"	+CA LUFT DRO/RRO	"	A19D271	"

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9D25028 **Seq. Date: 4/26/2019**

"	+CA LUFT DRO/RRO W/SG	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D271		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D271		"
9D25028-ICV2	8015B TPH-D (C10-25) /TPH-MO	Soil	A19D272	4/26/2019 2:45:00AM	
"	+8015M TPH-D (C10-25)/TPH-M	"	A19D272		"
"	+CA LUFT DRO/RRO	"	A19D272		"
"	+CA LUFT DRO/RRO W/SG	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil)	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) Low L	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG -	"	A19D272		"
"	+NWTPH-Dx (Diesel/Oil) w/SG (	"	A19D272		"

CALIBRATION STANDARD RECOVERIES

Calibration: **A9D2603** Instrument: **DUALFID1R**

8015B TPH-D (C10-25) /TPH- Sequence: **9D25028** Matrix: **Soil**

9D25028-CAL1	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL2	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL3	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL4	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL5	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL6	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL7	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CAL8	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALJ	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D25028-CALK	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**

Compounds listed above have recalculated recoveries outside 85-115% 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: 9D25028 **Seq. Date: 4/26/2019**

Analytes With Quadratic Curve Fits

Qualifier	MRL	Recalc Value	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 (85-115 or as specified).

ICV RECOVERIES

Calibration: **A9D2603** Instrument: **DUALFID1R**

NWTPH-Dx (Diesel/Oil) w/S(Sequence: **9D25028** Matrix: **Soil**

9D25028-ICV1	**Inst. MRL**	**ICV Level**	**Result**	**%Rec.**	**Qual**
9D25028-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.

Calibration Status Report HP G1530A

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019
Response via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	D1	25.00	0.00	F:\1\DATA\2019-04\9D25028\1R042505.D
2	D2	40.00	0.00	F:\1\DATA\2019-04\9D25028\1R042506.D
3	D3	100.00	0.00	F:\1\DATA\2019-04\9D25028\1R042507.D
4	D4	250.00	0.00	F:\1\DATA\2019-04\9D25028\1R042508.D
5	D5	500.00	0.00	F:\1\DATA\2019-04\9D25028\1R042509.D
6	D6	1000.00	0.00	F:\1\DATA\2019-04\9D25028\1R042510.D
7	D7	2500.00	0.00	F:\1\DATA\2019-04\9D25028\1R042511.D
8	D8	5000.00	0.00	F:\1\DATA\2019-04\9D25028\1R042512.D
9	S1	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042513.D
10	S2	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042514.D
11	S3	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042515.D
12	S4	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042516.D
13	S5	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042517.D
14	O1	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042518.D
15	O2	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042519.D
16	O3	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042520.D
17	O4	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042521.D
18	O5	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042522.D
19	O6	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042523.D
20	O7	-1.00	0.00	F:\1\DATA\2019-04\9D25028\1R042525.D

A9D2603
4/26/19

#	ID	Update Time	Quant Time	Acquisition Time
1	D1	Apr 26 10:41 2019	Apr 26 10:19 2019	25 Apr 2019 18:03
2	D2	Apr 26 10:41 2019	Apr 26 10:19 2019	25 Apr 2019 18:26
3	D3	Apr 26 10:41 2019	Apr 26 10:20 2019	25 Apr 2019 18:49
4	D4	Apr 26 10:41 2019	Apr 26 10:20 2019	25 Apr 2019 19:12
5	D5	Apr 26 10:41 2019	Apr 26 10:24 2019	25 Apr 2019 19:35
6	D6	Apr 26 10:42 2019	Apr 26 10:24 2019	25 Apr 2019 19:58
7	D7	Apr 26 10:42 2019	Apr 26 10:25 2019	25 Apr 2019 20:20
8	D8	Apr 26 10:42 2019	Apr 26 10:26 2019	25 Apr 2019 20:43
9	S1	Apr 26 10:42 2019	Apr 26 10:26 2019	25 Apr 2019 21:06
10	S2	Apr 26 10:43 2019	Apr 26 10:26 2019	25 Apr 2019 21:29
11	S3	Apr 26 10:43 2019	Apr 26 10:27 2019	25 Apr 2019 21:51
12	S4	Apr 26 10:43 2019	Apr 26 10:27 2019	25 Apr 2019 22:14
13	S5	Apr 26 10:43 2019	Apr 26 10:27 2019	25 Apr 2019 22:37
14	O1	Apr 26 10:44 2019	Apr 26 10:27 2019	25 Apr 2019 22:59
15	O2	Apr 26 10:44 2019	Apr 26 10:28 2019	25 Apr 2019 23:22
16	O3	Apr 26 10:44 2019	Apr 26 10:28 2019	25 Apr 2019 23:45
17	O4	Apr 26 10:44 2019	Apr 26 10:28 2019	26 Apr 2019 00:07
18	O5	Apr 26 10:44 2019	Apr 26 10:29 2019	26 Apr 2019 00:30
19	O6	Apr 26 10:45 2019	Apr 26 10:29 2019	26 Apr 2019 00:52
20	O7	Apr 26 10:45 2019	Apr 26 10:30 2019	26 Apr 2019 1:38

1R90425D.M Fri Apr 26 10:52:14 2019 SV-GCMS3

Response Factor Report HP G1530A

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019

Calibration Files
D1 =1R042505.D D2 =1R042506.D D3 =1R042507.D
D4 =1R042508.D D5 =1R042509.D D6 =1R042510.D

		Compound	D1	D2	D3	D4	D5	D6	Avg		%RSD
1)	H	Mineral Oil	1.552	1.532	1.536	1.558	1.513	1.479	1.518	E6	2.09
2)	H	Diesel	1.552	1.532	1.536	1.558	1.513	1.479	1.518	E6	2.09
3)	H	DRO(C12-C24)	1.552	1.532	1.536	1.558	1.513	1.479	1.518	E6	2.09
4)	H	Ca Luft DRO (C12-C2	1.075	1.089	1.137	1.173	1.145	1.123	1.126	E6	2.78
5)	H	TPHd (C10-C25)	1.330	1.356	1.409	1.444	1.409	1.381	1.389	E6	2.55
6)	S	o-Terphenyl							1.692	E6	2.50
7)	H	Oil							1.438	E6	4.99
8)	H	RRO (C24-C40)							1.438	E6	4.99
9)	H	Ca Luft ORO (C23-C3							0.925	E6	4.99
10)	H	TPHmo (C25-C36)							8.756	E5	4.62

KEH 4/26/19

(#) = Out of Range ### Number of calibration levels exceeded format ###

Compound List Report HP G1530A

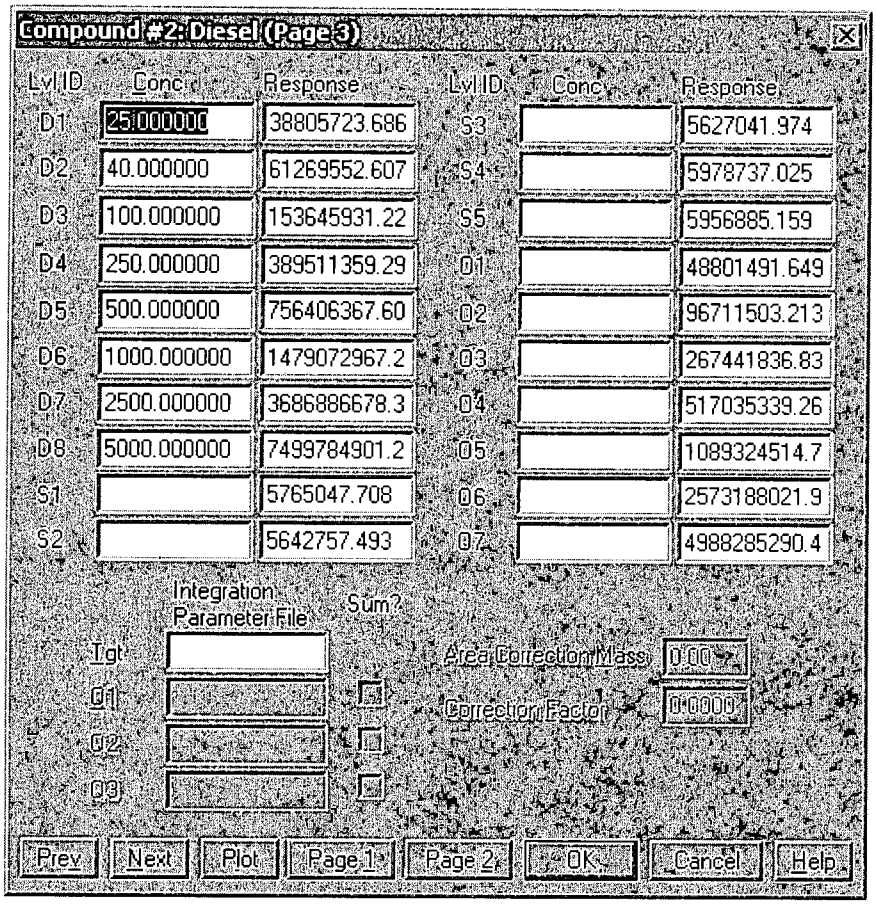
Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019
Response via : Initial Calibration
Total Cpnds : 10

PK#	Type	Compound Name	Exp_RT	Rel_RT	Cal	A/H	ID
1	H	Mineral Oil	6.00	1.000	A	A	A
2	H	Diesel	6.00	1.000	A	A	A
3	H	DRO(C12-C24)	6.00	1.000	A	A	A
4	H	Ca Luft DRO (C12-C22)	6.00	1.000	A	A	A
5	H	TPHd (C10-C25)	6.00	1.000	A	A	A
6	S	o-Terphenyl	6.68	1.000	A	A	R
7	H	Oil	10.00	1.000	A	A	A
8	H	RRO (C24-C40)	10.00	1.000	A	A	A
9	H	Ca Luft ORO (C23-C32)	8.00	1.000	A	A	A
10	H	TPHmo (C25-C36)	8.00	1.000	A	A	A

KZH 4/26/19

Cal A = Average L = Linear LO = Linear w/origin Q = Quad QO = Quad w/origin
A/H = Area or Height
ID R = R.T. B = R.T. & Q Q = Qvalue L = Largest A = All

1R90425D.M Fri Apr 26 10:52:27 2019 SV-GCMS3


Compound #2: Diesel (Page 3)
Lvl ID
Conc
Response
D1 25.000000 38805723.686
D2 40.000000 61269552.607
D3 100.000000 153645931.22
D4 250.000000 389511359.29
D5 500.000000 756406367.60
D6 1000.000000 1479072967.2
D7 2500.000000 3686886678.3
D8 5000.000000 7499784901.2
S1 5765047.708
S2 5642757.493
S3 5627041.974
S4 5978737.025
S5 5956885.159
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02 96711503.213
03 267441836.83
04 517035339.26
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07 4988285290.4
Integration Parameter File
Sum?
Tgt
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02
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Correction Factor
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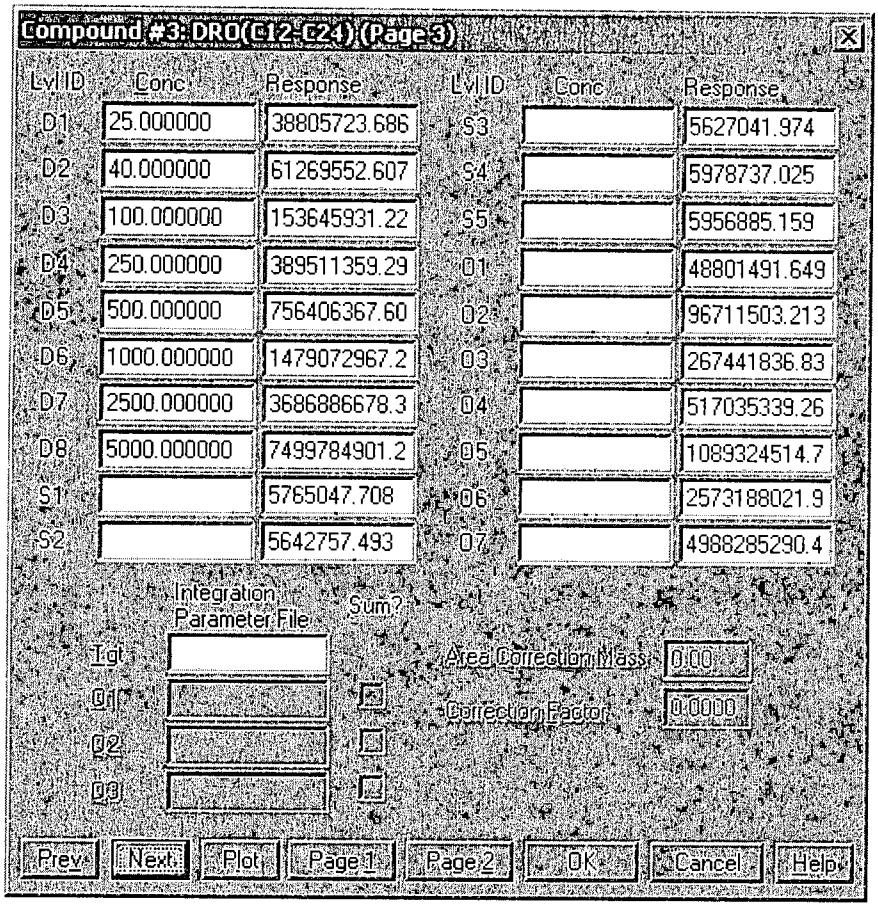
OK
Cancel
Help

KCH 4/26/19


Compound #3: DRO(C12-C24) (Page 3)
Lvl ID
Conc
Response
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D2 40.000000 61269552.607
D3 100.000000 153645931.22
D4 250.000000 389511359.29
D5 500.000000 756406367.60
D6 1000.000000 1479072967.2
D7 2500.000000 3686886678.3
D8 5000.000000 7499784901.2
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S2 5642757.493
S3 5627041.974
S4 5978737.025
S5 5956885.159
01 48801491.649
02 96711503.213
03 267441836.83
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05 1089324514.7
06 2573188021.9
07 4988285290.4
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Sum?
Tgt
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02
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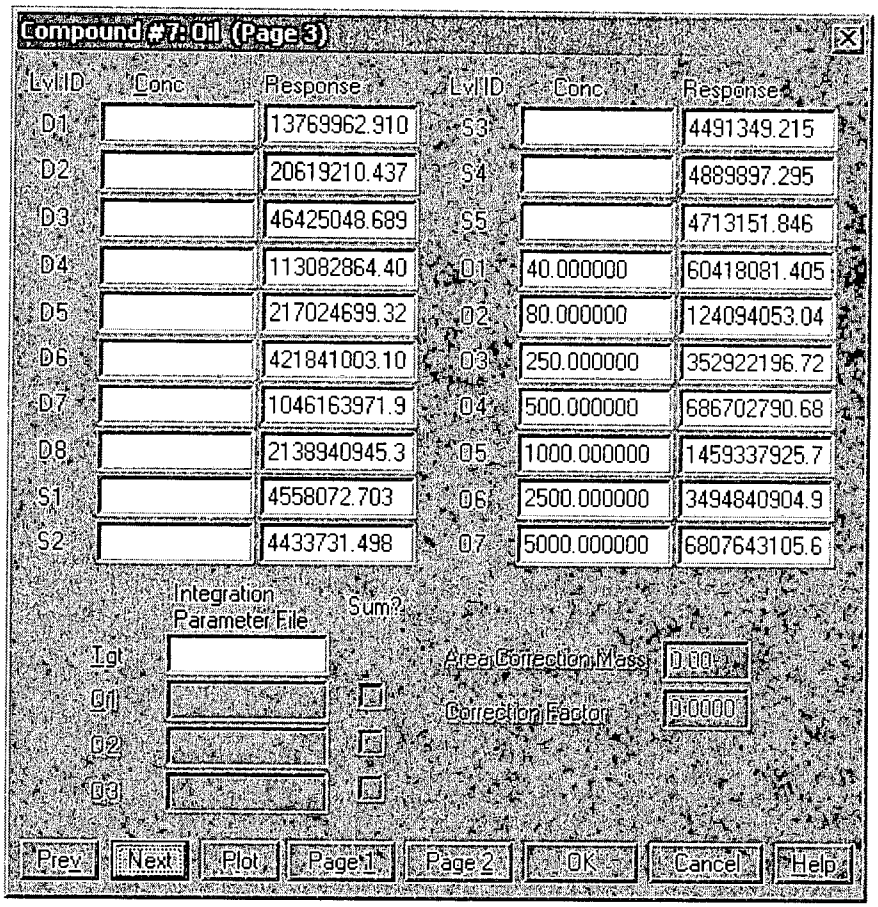
KSH 4/26/19


Compound #7: Oil (Page 3)
Lvl ID
Conc
Response
D1
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D2
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D3
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D4
113082864.40
D5
217024699.32
D6
421841003.10
D7
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D8
2138940945.3
S1
4558072.703
S2
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Response
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S5
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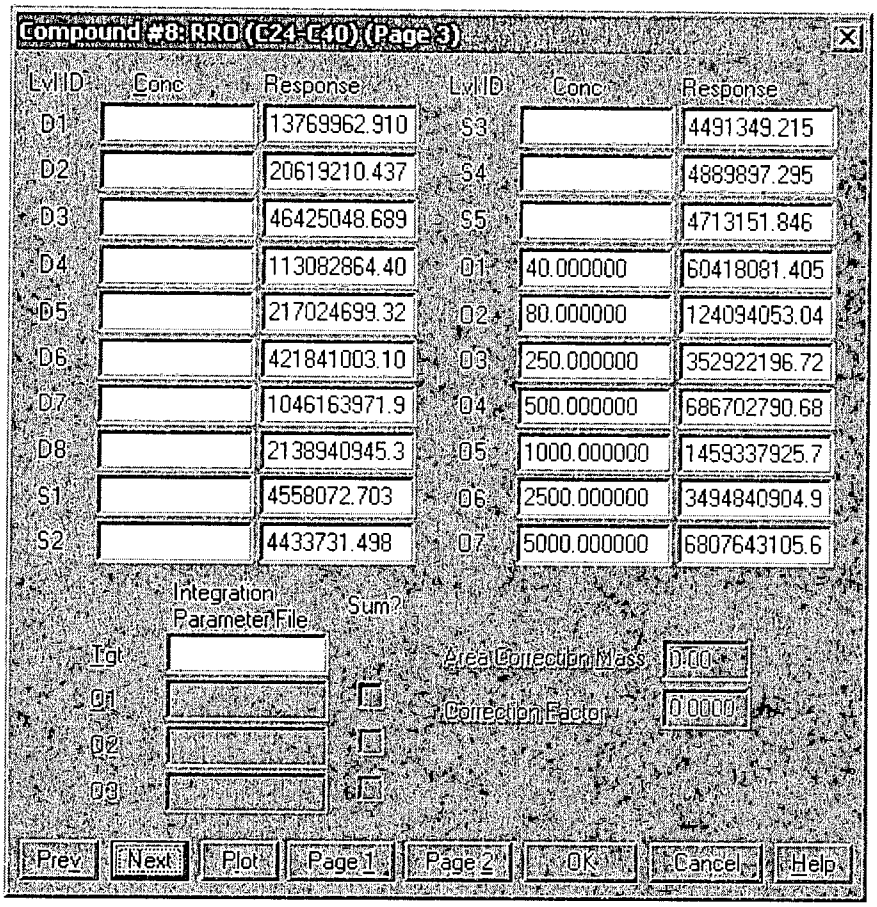
KEH 4/24/19


Compound #8: RRO (C24-C40) (Page 3)
LvlID Conc Response
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D2 20619210.437
D3 46425048.689
D4 113082864.40
D5 217024699.32
D6 421841003.10
D7 1046163971.9
D8 2138940945.3
S1 4558072.703
S2 4433731.498
LvlID Conc Response
S3 4491349.215
S4 4889897.295
S5 4713151.846
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02 80.000000 124094053.04
03 250.000000 352922196.72
04 500.000000 686702790.68
05 1000.000000 1459337925.7
06 2500.000000 3494840904.9
07 5000.000000 6807643105.6
Integration Parameter File
Sum?
Tgt
01
02
03
Area Correction Mass 0.00
Correction Factor 0.0000
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Plot
Page 1
Page 2
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Cancel
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Kat 4/24/19

✓

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\REQUANTR\1R042504.D Vial: 100
Acq On : 25 Apr 2019 17:41 Operator: KEH
Sample : 9D25028-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:48 2019 Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	6501415	4.283	ug/ml
2)	H	Diesel	6.00	6501415	4.283	ug/ml
3)	H	DRO(C12-C24)	6.00	6501415	4.283	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2330860	2.071	ug/ml
5)	H	TPHd (C10-C25)	6.00	3784168	2.724	ug/ml
7)	H	Oil	10.00	4750769	3.304	ug/mL
8)	H	RRO (C24-C40)	10.00	4750769	3.304	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1135519	1.228	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1563281	1.785	ug/mL

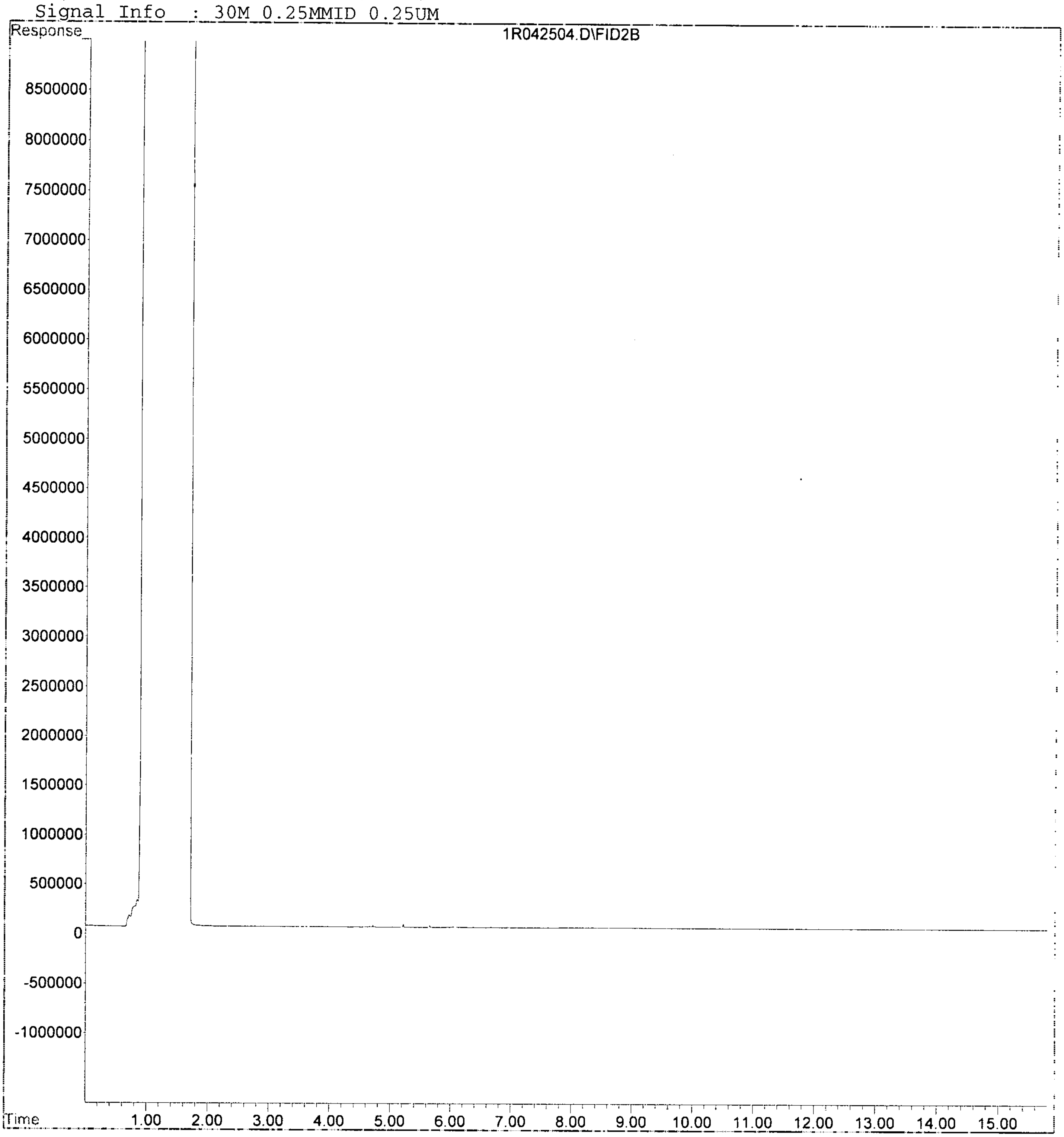
~ 1/2 MRL

KAA 4/26/19

```
Data File : F:\1\DATA\2019-04\9D25028\REQUANTR\1R042504.D Vial: 100
Acq On    : 25 Apr 2019  17:41                          Operator: KEH
Sample    : 9D25028-ICB1                                Inst    : HP G1530A
Misc      :                                             Multiplr: 1.00
IntFile   : SUR.E
Quant Time: Apr 26 10:48 2019  Quant Results File: 1R90425D.RES

Quant Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title        : DUALFID1R, NWTPH-Dx
Last Update  : Fri Apr 26 10:45:22 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj.  : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info  : 30M 0.25MMID 0.25UM
```



Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-04\9D25028\REQUANTR\1R042527.D Vial: 21
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25028-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	1000.000	966.288	3.4	99	0.00
2	H	Diesel	1000.000	966.288	3.4	99	0.00
3	H	DRO(C12-C24)	1000.000	966.288	3.4	99	0.00
4	H	Ca Luft DRO (C12-C22)	1000.000	991.656	0.8	99	0.00
5	H	TPHd (C10-C25)	1000.000	986.242	1.4	99	0.00
7	H	Oil	-1.000	295.311	0.0	101	0.00
8	H	RRO (C24-C40)	-1.000	295.311	0.0	101	0.00
9	H	Ca Luft ORO (C23-C32)	-1.000	53.326	0.0	101	0.00
10	H	TPHmo (C25-C36)	-1.000	19.362	0.0	102	0.00

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

Evaluate Continuing Calibration Report

Data File : F:\1\DATA\2019-04\9D25028\REQUANTR\1R042528.D Vial: 22
Acq On : 26 Apr 2019 2:45 Operator: KEH
Sample : 9D25028-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E

Method : F:\2\METHODS\1R90425D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:45:22 2019
Response via : Multiple Level Calibration

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.50min
Max. RRF Dev : 15% Max. Rel. Area : 150%

		Compound	Amount	Calc.	%Dev	Area%	Dev(min)
1	H	Mineral Oil	-1.000	706.950	0.0	99	0.00
2	H	Diesel	-1.000	706.950	0.0	99	0.00
3	H	DRO(C12-C24)	-1.000	706.950	0.0	99	0.00
4	H	Ca Luft DRO (C12-C22)	-1.000	91.805	0.0	0	0.00
5	H	TPHd (C10-C25)	-1.000	283.019	0.0	106	0.00
7	H	Oil	1000.000	964.874	3.5	95	0.00
8	H	RRO (C24-C40)	1000.000	964.874	3.5	95	0.00
9	H	Ca Luft ORO (C23-C32)	1000.000	973.457	2.7	95	0.00
10	H	TPHmo (C25-C36)	1000.000	918.153	8.2	90	0.00

4/24/19

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

Sequence: C:\HPCHEM\1\SEQUENCE\9D25027.S

Sequence Table (Front Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 99	DCM	A1F40422	1	Sample		
2	Vial 94	9D25027-RES1	A1F40422	1	Sample		
3	Vial 99	9D25027-ICB1	A1F40422	1	Sample		
4	Vial 1	9D25027-CAL1	A1F40422	1	Sample		
5	Vial 2	9D25027-CAL2	A1F40422	1	Sample		
6	Vial 3	9D25027-CAL3	A1F40422	1	Sample		
7	Vial 4	9D25027-CAL4	A1F40422	1	Sample		
8	Vial 5	9D25027-CAL5	A1F40422	1	Sample		
9	Vial 6	9D25027-CAL6	A1F40422	1	Sample		
10	Vial 7	9D25027-CAL7	A1F40422	1	Sample		
11	Vial 8	9D25027-CAL8	A1F40422	1	Sample		
12	Vial 9	9D25027-CAL9	A1F40422	1	Sample		
13	Vial 10	9D25027-CALA	A1F40422	1	Sample		
14	Vial 11	9D25027-CALB	A1F40422	1	Sample		
15	Vial 12	9D25027-CALC	A1F40422	1	Sample		
16	Vial 13	9D25027-CALD	A1F40422	1	Sample		
17	Vial 14	9D25027-CALE	A1F40422	1	Sample		
18	Vial 15	9D25027-CALF	A1F40422	1	Sample		
19	Vial 16	9D25027-CALG	A1F40422	1	Sample		
20	Vial 17	9D25027-CALH	A1F40422	1	Sample		
21	Vial 18	9D25027-CALI	A1F40422	1	Sample		
22	Vial 19	9D25027-CALJ	A1F40422	1	Sample		
23	Vial 99	9D25027-IBL1	A1F40422	1	Sample		
24	Vial 20	9D25027-CALK	A1F40422	1	Sample		
25	Vial 99	9D25027-IBL2	A1F40422	1	Sample		
26	Vial 21	9D25027-ICV1	A1F40422	1	Sample		
27	Vial 22	9D25027-ICV2	A1F40422	1	Sample		
28	Vial 99	DCM	A1F40422	1	Sample		
29	Vial 99	DCM	A1F40422	1	Sample		

Sequence Table (Back Injector):

Method and Injection Info Part:

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
1	Vial 100	DCM	A1F40422	1	Sample		
2	Vial 100	DCM	A1F40422	1	Sample		
3	Vial 95	9D25028-RES1	A1F40422	1	Sample		
4	Vial 100	9D25028-ICB1	A1F40422	1	Sample		
5	Vial 1	9D25028-CAL1	A1F40422	1	Sample		
6	Vial 2	9D25028-CAL2	A1F40422	1	Sample		
7	Vial 3	9D25028-CAL3	A1F40422	1	Sample		
8	Vial 4	9D25028-CAL4	A1F40422	1	Sample		
9	Vial 5	9D25028-CAL5	A1F40422	1	Sample		
10	Vial 6	9D25028-CAL6	A1F40422	1	Sample		
11	Vial 7	9D25028-CAL7	A1F40422	1	Sample		
12	Vial 8	9D25028-CAL8	A1F40422	1	Sample		
13	Vial 9	9D25028-CAL9	A1F40422	1	Sample		
14	Vial 10	9D25028-CALA	A1F40422	1	Sample		
15	Vial 11	9D25028-CALB	A1F40422	1	Sample		
16	Vial 12	9D25028-CALC	A1F40422	1	Sample		
17	Vial 13	9D25028-CALD	A1F40422	1	Sample		
18	Vial 14	9D25028-CALE	A1F40422	1	Sample		
19	Vial 15	9D25028-CALF	A1F40422	1	Sample		
20	Vial 16	9D25028-CALG	A1F40422	1	Sample		
21	Vial 17	9D25028-CALH	A1F40422	1	Sample		

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Sequence: C:\HPCHEM\1\SEQUENCE\9D25027.S

Line	Location	SampleName	Method	Inj	SampleType	InjVolume	DataFile
22	Vial 18	9D25028-CALI	A1F40422	1	Sample		
23	Vial 19	9D25028-CALJ	A1F40422	1	Sample		
24	Vial 100	9D25028-IBL1	A1F40422	1	Sample		
25	Vial 20	9D25028-CALK	A1F40422	1	Sample		
26	Vial 100	9D25028-IBL2	A1F40422	1	Sample		
27	Vial 21	9D25028-ICV1	A1F40422	1	Sample		
28	Vial 22	9D25028-ICV2	A1F40422	1	Sample		
29	Vial 100	DCM	A1F40422	1	Sample		

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042503.D Vial: 95
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25028-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

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		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	518209095	233.439	ug/ml
2)	H	Diesel	6.00	518209095	233.439	ug/ml
3)	H	DRO(C12-C24)	6.00	518209095	233.439	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	353415767	215.237	ug/ml
5)	H	TPHd (C10-C25)	6.00	450788096	225.835	ug/ml
7)	H	Oil	10.00	344525438	172.336	ug/mL
8)	H	RRO (C24-C40)	10.00	344525438	172.336	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	142365504	109.533	ug/mL
10)	H	TPHmo (C25-C36)	8.00	91612176	74.086	ug/mL

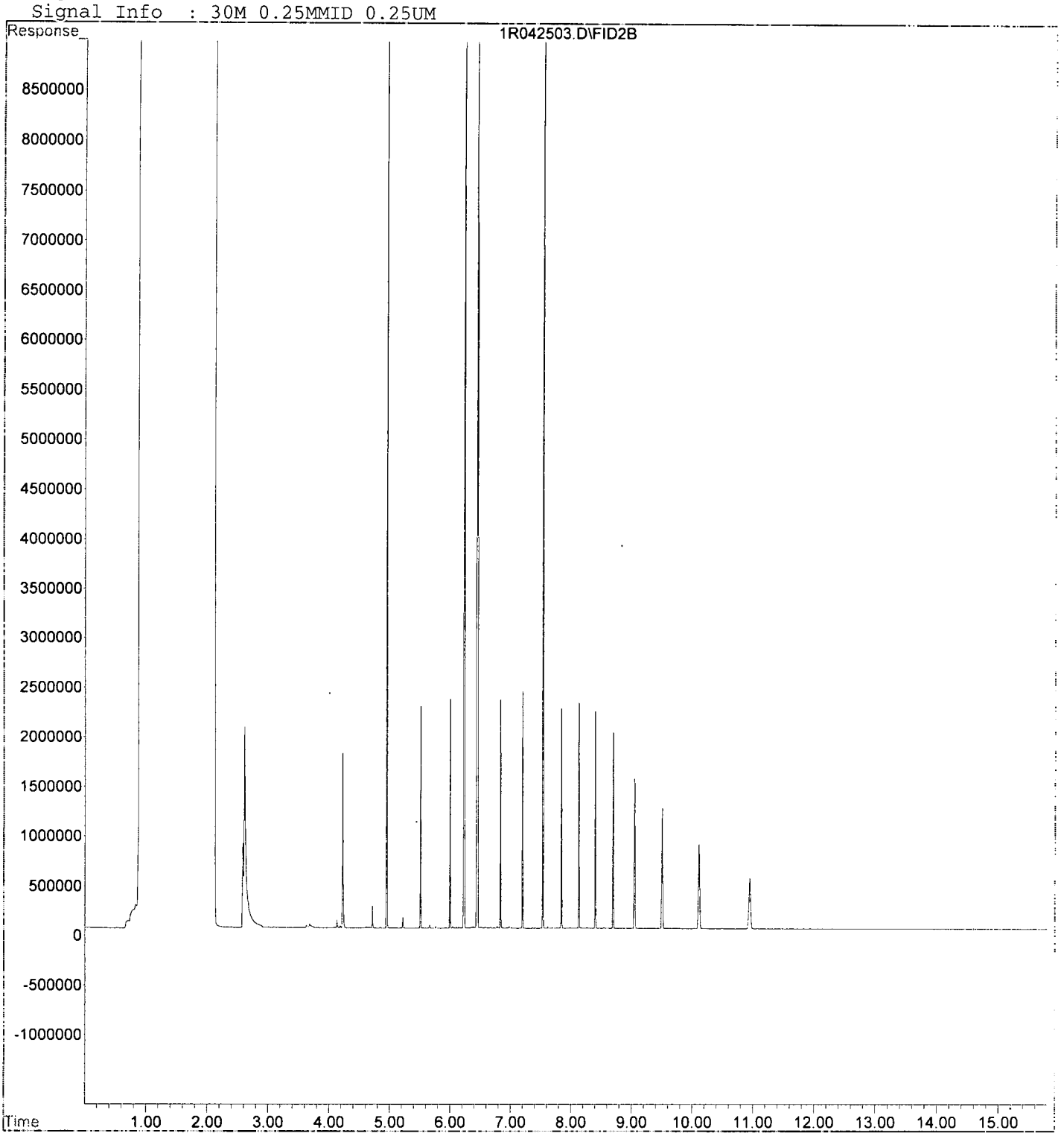
✓

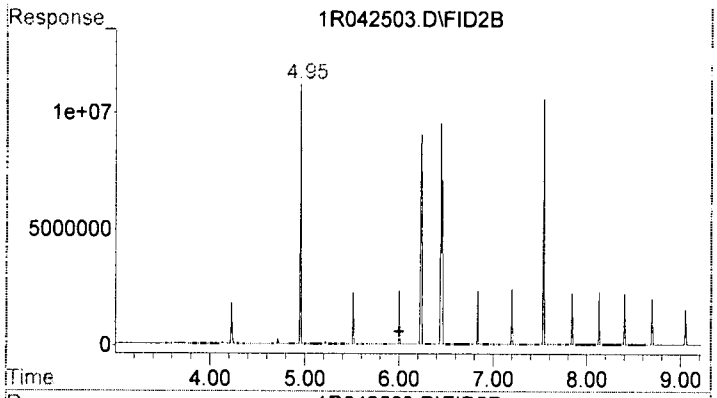
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042503.D Vial: 95
Acq On : 25 Apr 2019 17:18 Operator: KEH
Sample : 9D25028-RES1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

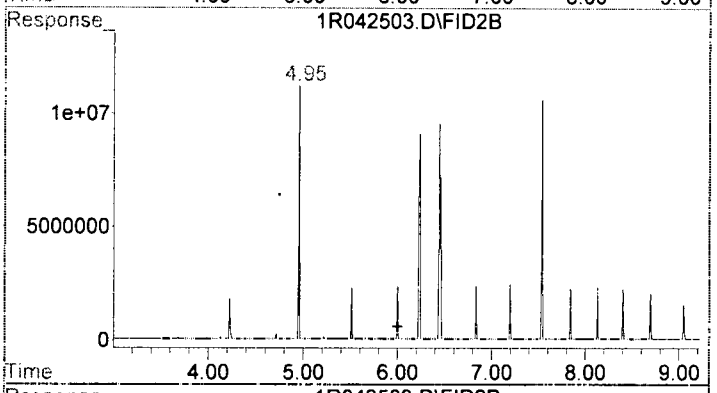
Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM





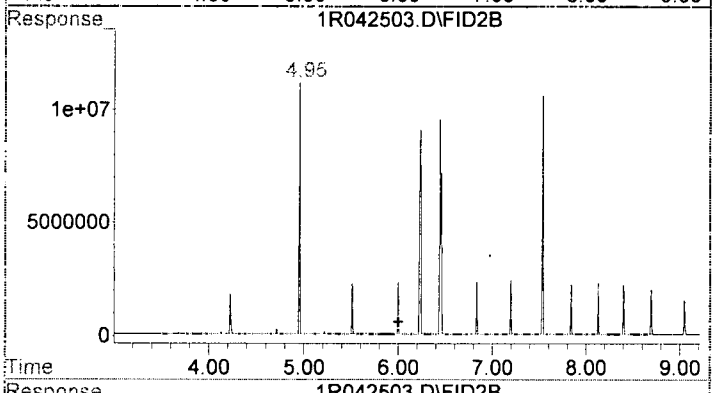
#1 Mineral Oil

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 518209095
Conc: 233.44 ug/ml m



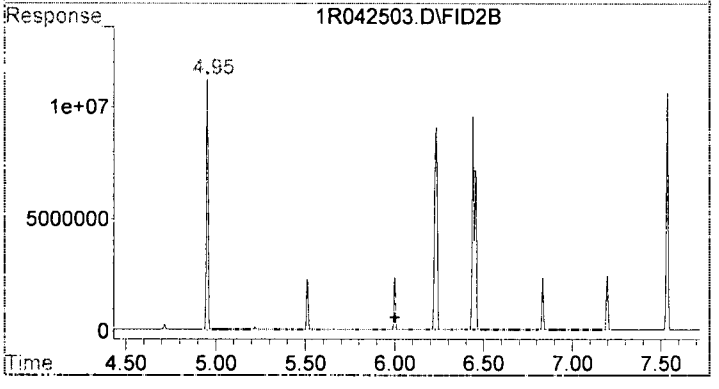
#2 Diesel

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 518209095
Conc: 233.44 ug/ml m



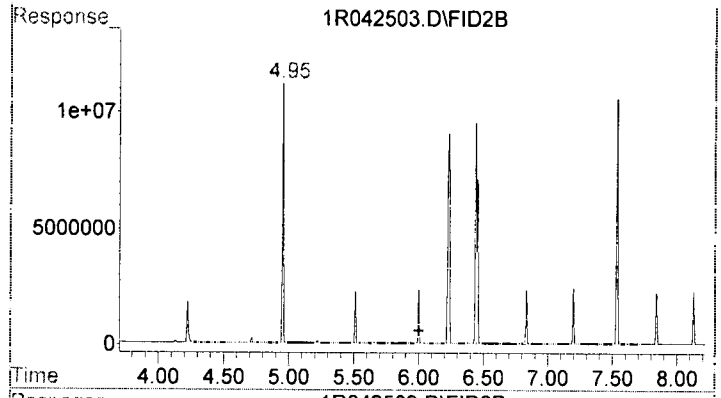
#3 DRO(C12-C24)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 518209095
Conc: 233.44 ug/mL m



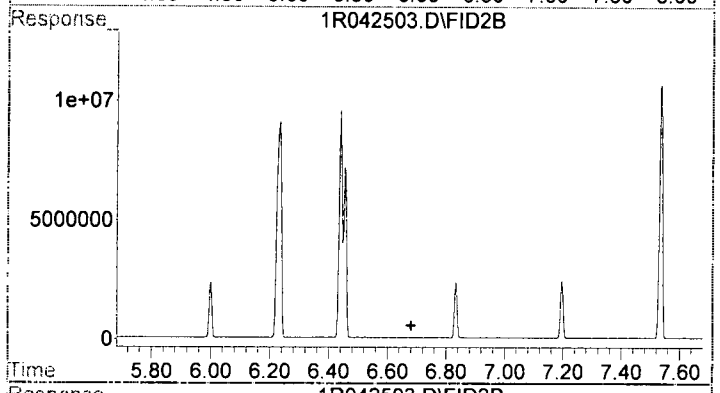
#4 Ca Luft DRO (C12-C22)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 353415767
Conc: 215.24 ug/ml m



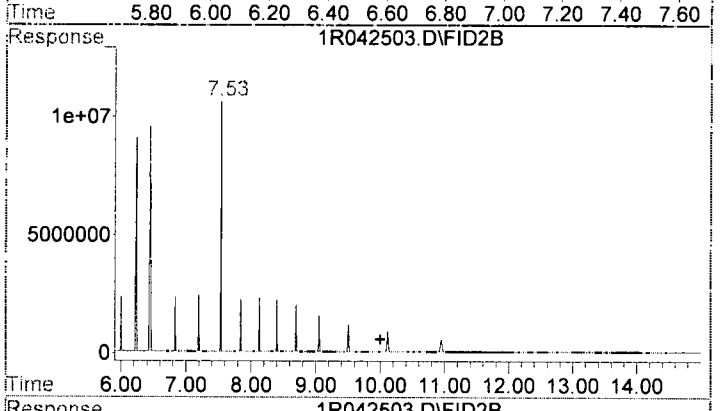
#5 TPHd (C10-C25)

R.T.: 6.000 min
Delta R.T.: 0.000 min
Response: 450788096
Conc: 225.83 ug/ml m



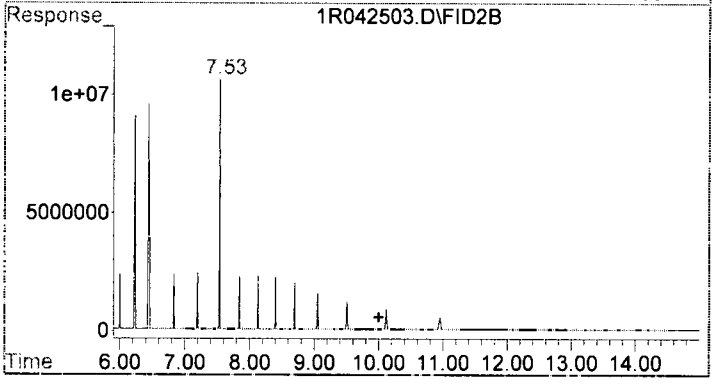
#6 o-Terphenyl

R.T.: 0.000 min
Exp R.T. : 6.680 min
Response: 0
Conc: N.D.



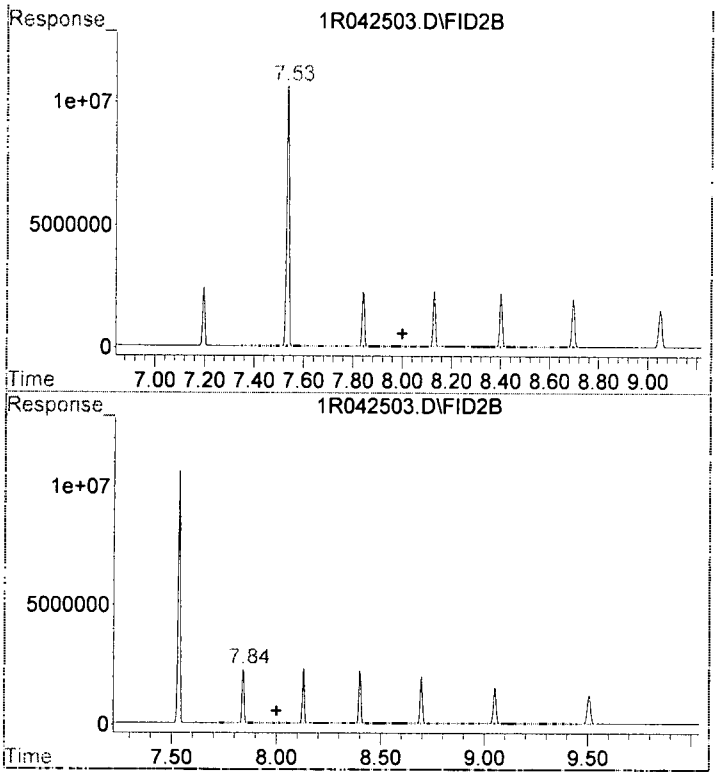
#7 Oil

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 344525438
Conc: 172.34 ug/mL m



#8 RRO (C24-C40)

R.T.: 10.000 min
Delta R.T.: 0.000 min
Response: 344525438
Conc: 172.34 ug/mL m



#9 Ca Luft ORO (C23-C32)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 142365504
Conc: 109.53 ug/mL m

#10 TPHmo (C25-C36)

R.T.: 8.000 min
Delta R.T.: 0.000 min
Response: 91612176
Conc: 74.09 ug/mL m

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042504.D Vial: 100
Acq On : 25 Apr 2019 17:41 Operator: KEH
Sample : 9D25028-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:18 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	6501415	2.929	ug/ml
2)	H	Diesel	6.00	6501415	2.929	ug/ml
3)	H	DRO(C12-C24)	6.00	6501415	2.929	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2330860	1.420	ug/ml
5)	H	TPHd (C10-C25)	6.00	3784168	1.896	ug/ml
7)	H	Oil	10.00	4750769	2.376	ug/mL
8)	H	RRO (C24-C40)	10.00	4750769	2.376	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1135519	0.874	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1563281	1.264	ug/mL

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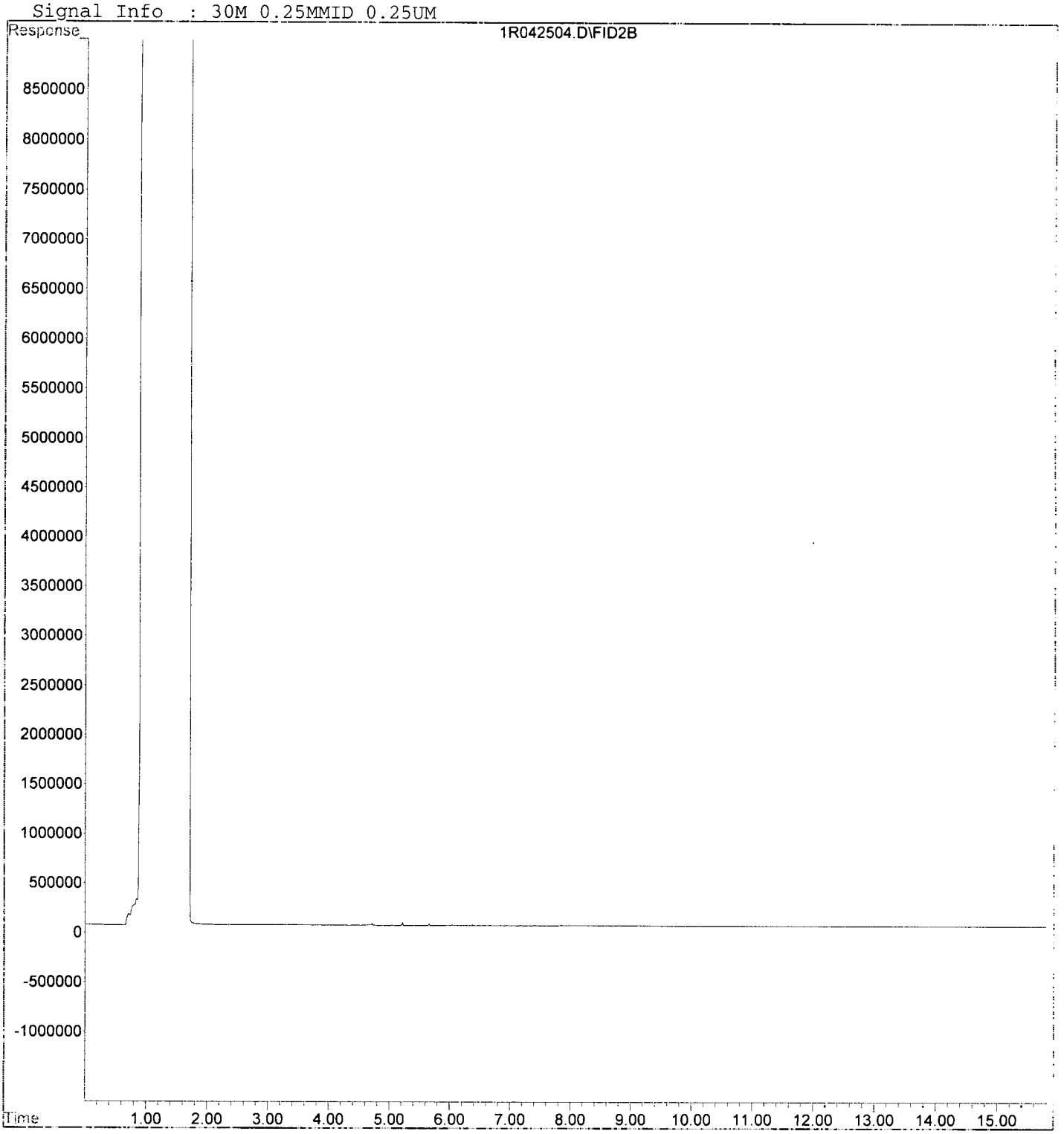
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042504.D Vial: 100
Acq On : 25 Apr 2019 17:41 Operator: KEH
Sample : 9D25028-ICB1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:18 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042505.D Vial: 1
Acq On : 25 Apr 2019 18:03 Operator: KEH
Sample : 9D25028-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:19 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	38805724	17.481	ug/ml
2)	H	Diesel	6.00	38805724	17.481	ug/ml
3)	H	DRO(C12-C24)	6.00	38805724	17.481	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	26871917	16.366	ug/ml
5)	H	TPHd (C10-C25)	6.00	33256362	16.661	ug/ml
7)	H	Oil	10.00	13769963	6.888	ug/mL
8)	H	RRO (C24-C40)	10.00	13769963	6.888	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1804511	1.388	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1383631	1.119	ug/mL

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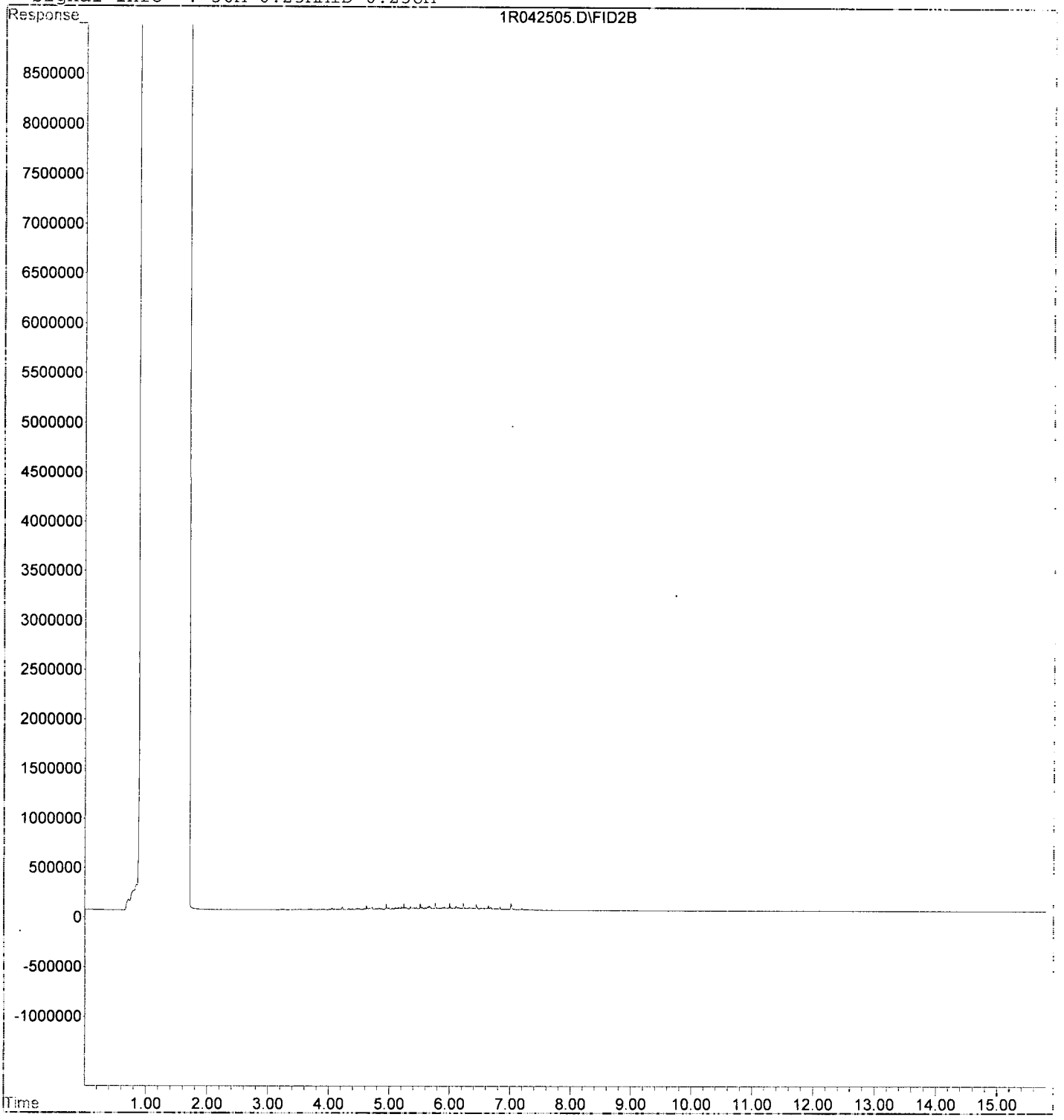
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042505.D Vial: 1
Acq On : 25 Apr 2019 18:03 Operator: KEH
Sample : 9D25028-CAL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:19 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042506.D Vial: 2
Acq On : 25 Apr 2019 18:26 Operator: KEH
Sample : 9D25028-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:19 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	61269553	27.600	ug/ml
2)	H	Diesel	6.00	61269553	27.600	ug/ml
3)	H	DRO(C12-C24)	6.00	61269553	27.600	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	43577605	26.540	ug/ml
5)	H	TPHd (C10-C25)	6.00	54233559	27.170	ug/ml
7)	H	Oil	10.00	20619210	10.314	ug/mL
8)	H	RRO (C24-C40)	10.00	20619210	10.314	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2576860	1.983	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1599340	1.293	ug/mL

KEH 4/26/19

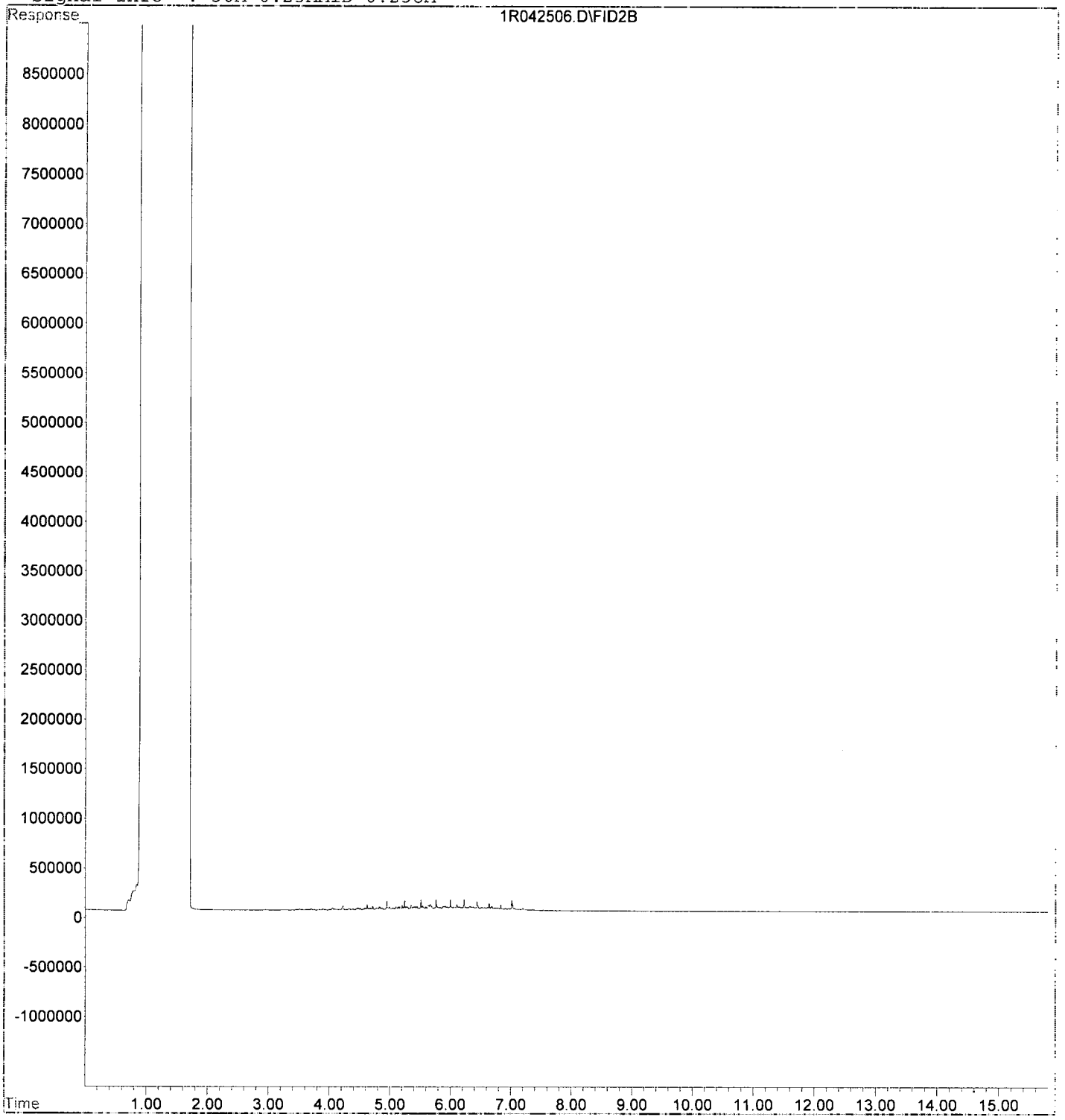
J

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042506.D Vial: 2
Acq On : 25 Apr 2019 18:26 Operator: KEH
Sample : 9D25028-CAL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:19 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042507.D Vial: 3
Acq On : 25 Apr 2019 18:49 Operator: KEH
Sample : 9D25028-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:20 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	153645931	69.213	ug/ml
2)	H	Diesel	6.00	153645931	69.213	ug/ml
3)	H	DRO(C12-C24)	6.00	153645931	69.213	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	113722970	69.260	ug/ml
5)	H	TPHd (C10-C25)	6.00	140902543	70.589	ug/ml
7)	H	Oil	10.00	46425049	23.222	ug/mL
8)	H	RRO (C24-C40)	10.00	46425049	23.222	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	5530675	4.255	ug/mL
10)	H	TPHmo (C25-C36)	8.00	2596101	2.099	ug/mL

KEH 4/26/19

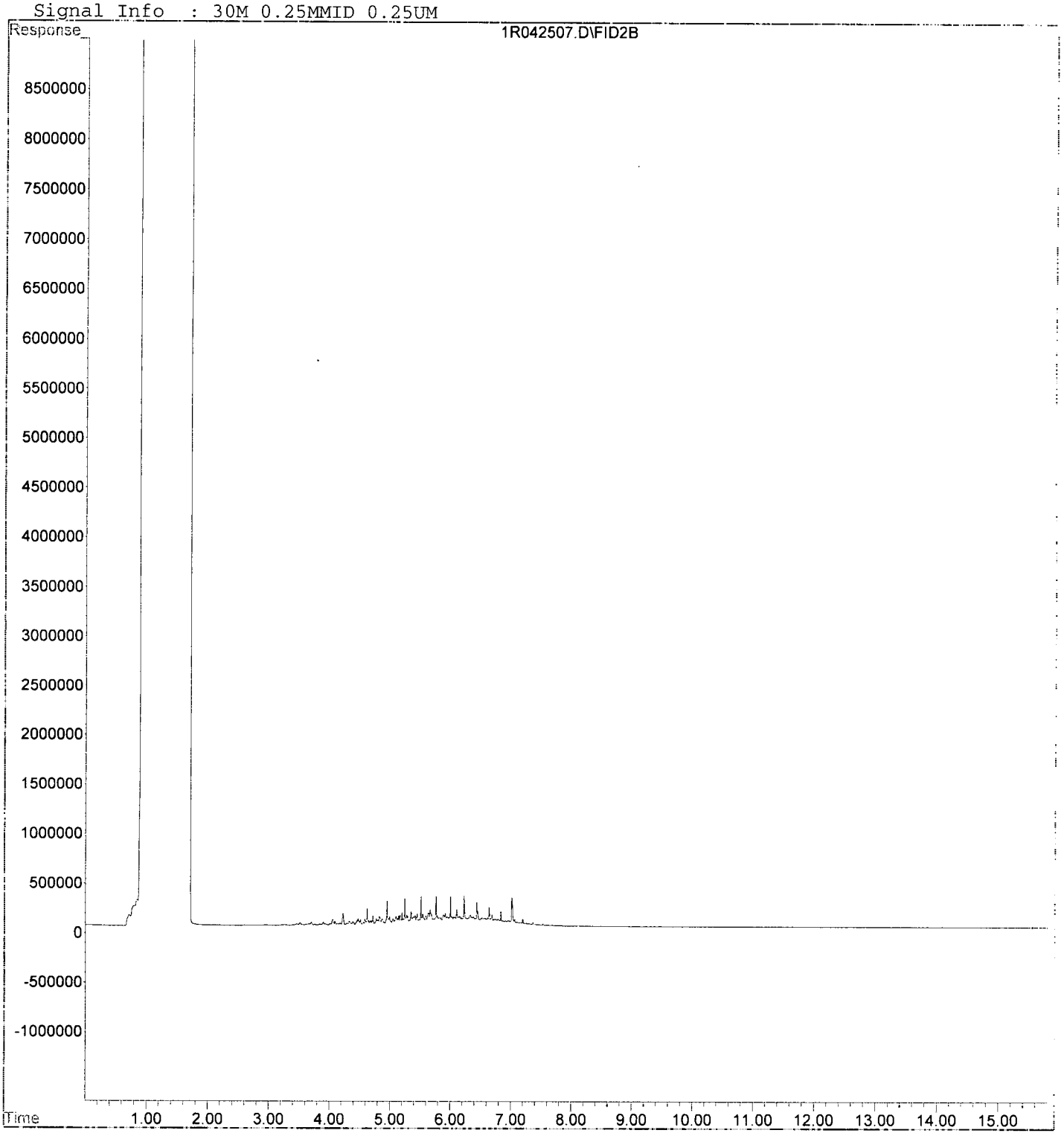
(f)=RT Delta > 1/2 Window (m)=manual Ind.

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042507.D Vial: 3
Acq On : 25 Apr 2019 18:49 Operator: KEH
Sample : 9D25028-CAL3 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:20 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042508.D Vial: 4
Acq On : 25 Apr 2019 19:12 Operator: KEH
Sample : 9D25028-CAL4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:20 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	389511359	175.464	ug/ml
2)	H	Diesel	6.00	389511359	175.464	ug/ml
3)	H	DRO(C12-C24)	6.00	389511359	175.464	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	293142164	178.529	ug/ml
5)	H	TPHd (C10-C25)	6.00	361062887	180.884	ug/ml
7)	H	Oil	10.00	113082864	56.565	ug/mL
8)	H	RRO (C24-C40)	10.00	113082864	56.565	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	13428092	10.331	ug/mL
10)	H	TPHmo (C25-C36)	8.00	5164874	4.177	ug/mL

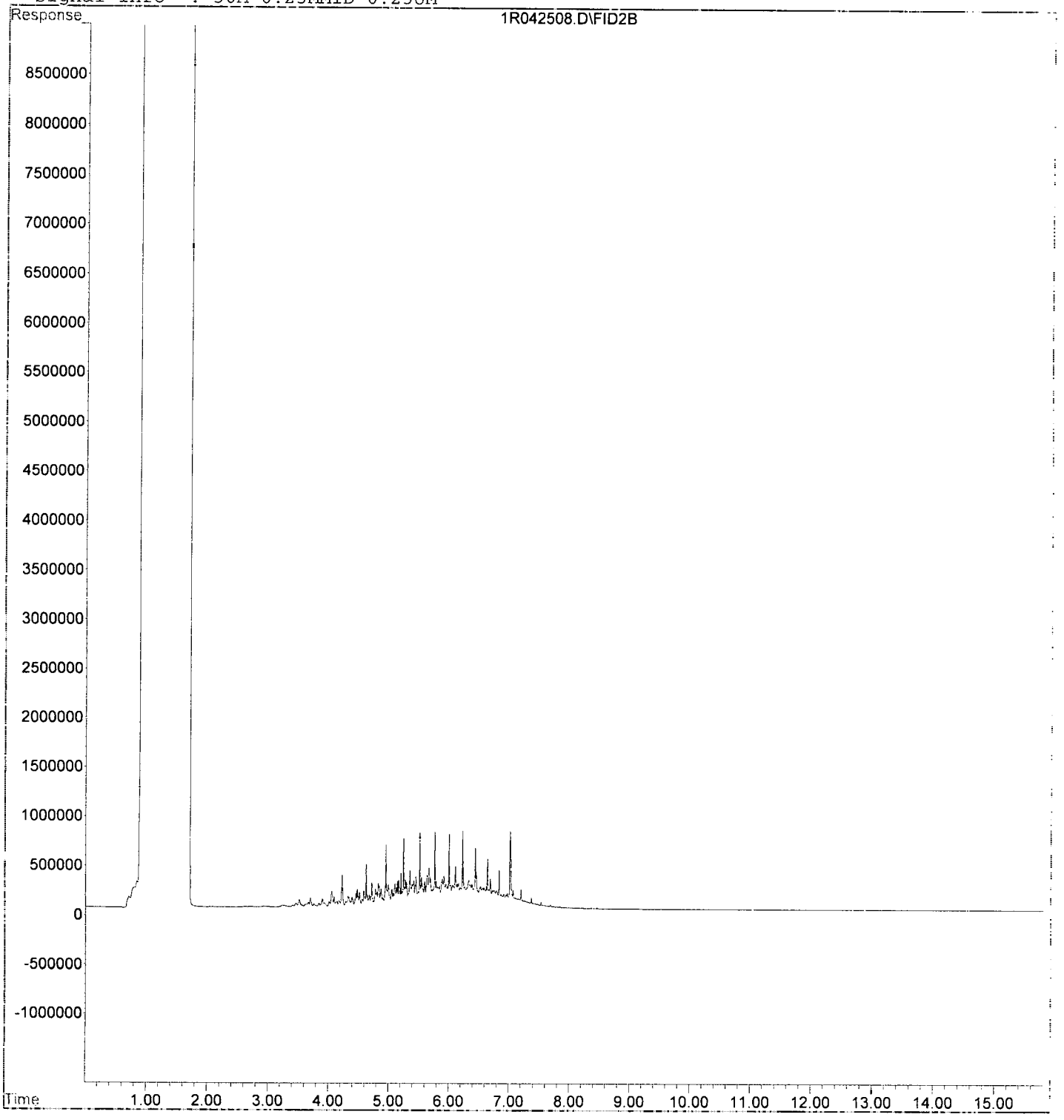
KEH 4/26/19

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042508.D Vial: 4
Acq On : 25 Apr 2019 19:12 Operator: KEH
Sample : 9D25028-CAL4 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:20 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042509.D Vial: 5
Acq On : 25 Apr 2019 19:35 Operator: KEH
Sample : 9D25028-CAL5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:24 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	756406368	340.740	ug/ml
2)	H	Diesel	6.00	756406368	340.740	ug/ml
3)	H	DRO(C12-C24)	6.00	756406368	340.740	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	572463475	348.642	ug/ml
5)	H	TPHd (C10-C25)	6.00	704717529	353.047	ug/ml
7)	H	Oil	10.00	217024699	108.558	ug/mL
8)	H	RRO (C24-C40)	10.00	217024699	108.558	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	25361988	19.513	ug/mL
10)	H	TPHmo (C25-C36)	8.00	9017031	7.292	ug/mL

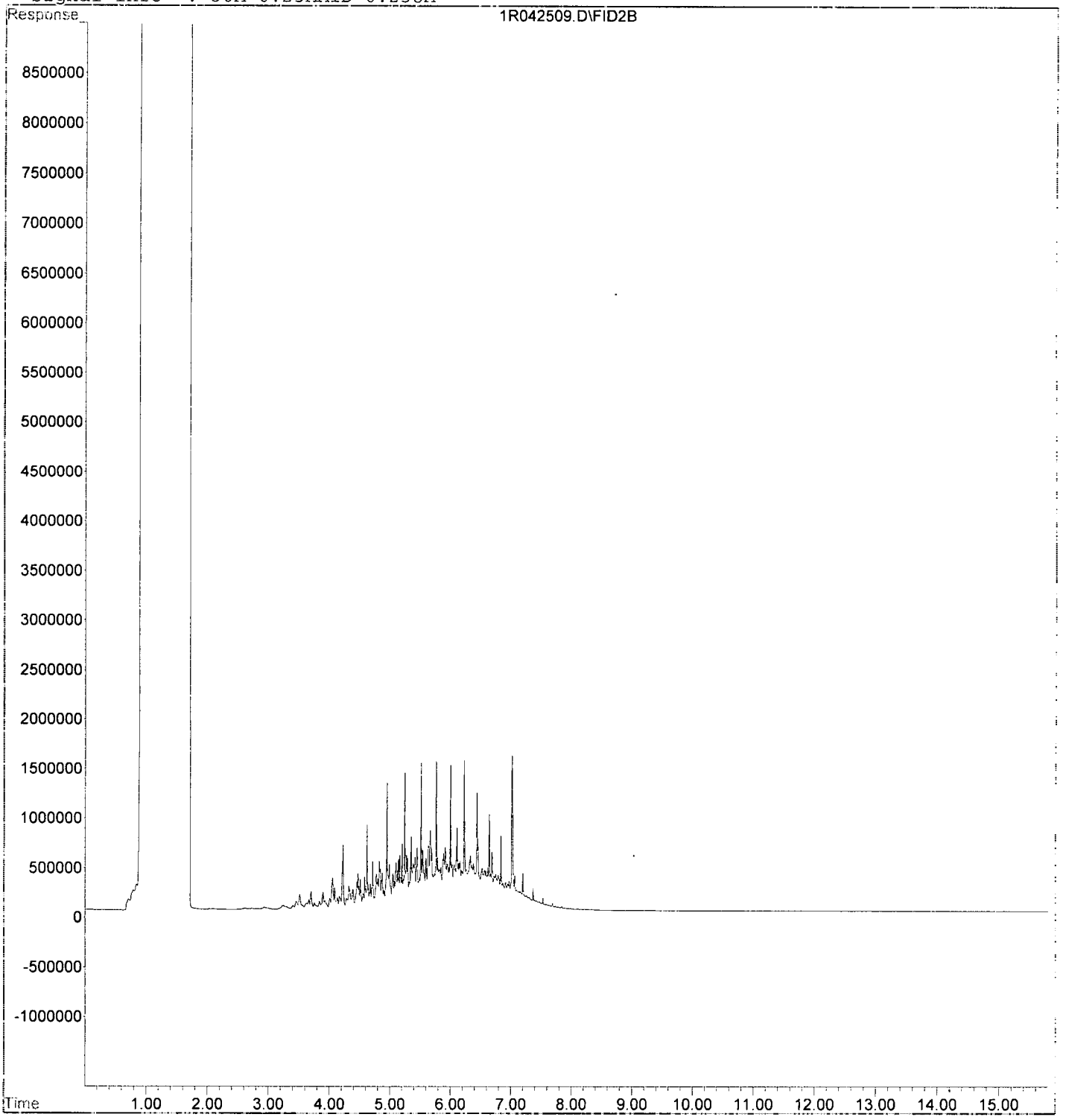
KEH 4/26/19

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042509.D Vial: 5
Acq On : 25 Apr 2019 19:35 Operator: KEH
Sample : 9D25028-CAL5 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:24 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042510.D Vial: 6
Acq On : 25 Apr 2019 19:58 Operator: KEH
Sample : 9D25028-CAL6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:24 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	1479072967	666.281	ug/ml
2)	H	Diesel	6.00	1479072967	666.281	ug/ml
3)	H	DRO(C12-C24)	6.00	1479072967	666.281	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1123184782	684.042	ug/ml
5)	H	TPHd (C10-C25)	6.00	1381274352	691.987	ug/ml
7)	H	Oil	10.00	421841003	211.010	ug/mL
8)	H	RRO (C24-C40)	10.00	421841003	211.010	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	49019327	37.715	ug/mL
10)	H	TPHmo (C25-C36)	8.00	16579500	13.408	ug/mL

KAH 4/26/19

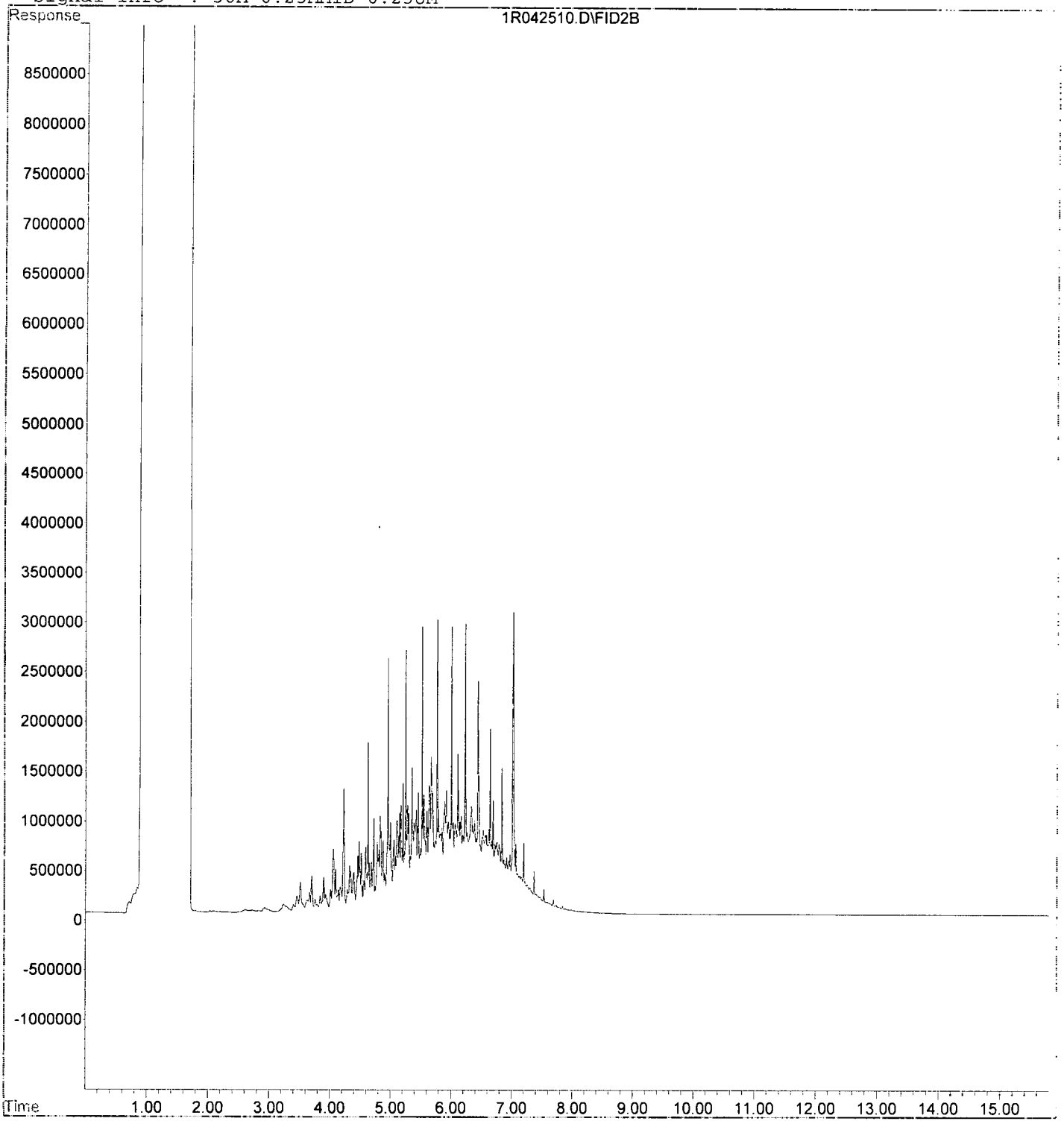
(f)=RT Delta > 1/2 window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042510.D Vial: 6
Acq On : 25 Apr 2019 19:58 Operator: KEH
Sample : 9D25028-CAL6 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:24 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042511.D Vial: 7
Acq On : 25 Apr 2019 20:20 Operator: KEH
Sample : 9D25028-CAL7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:25 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	3686886678	1660.840	ug/ml
2)	H	Diesel	6.00	3686886678	1660.840	ug/ml
3)	H	DRO(C12-C24)	6.00	3686886678	1660.840	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2804540739	1708.022	ug/ml
5)	H	TPHd (C10-C25)	6.00	3447423566	1727.081	ug/ml
7)	H	Oil	10.00	1046163972	523.304	ug/mL
8)	H	RRO (C24-C40)	10.00	1046163972	523.304	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	121248442	93.286	ug/mL
10)	H	TPHmo (C25-C36)	8.00	39651896	32.066	ug/mL

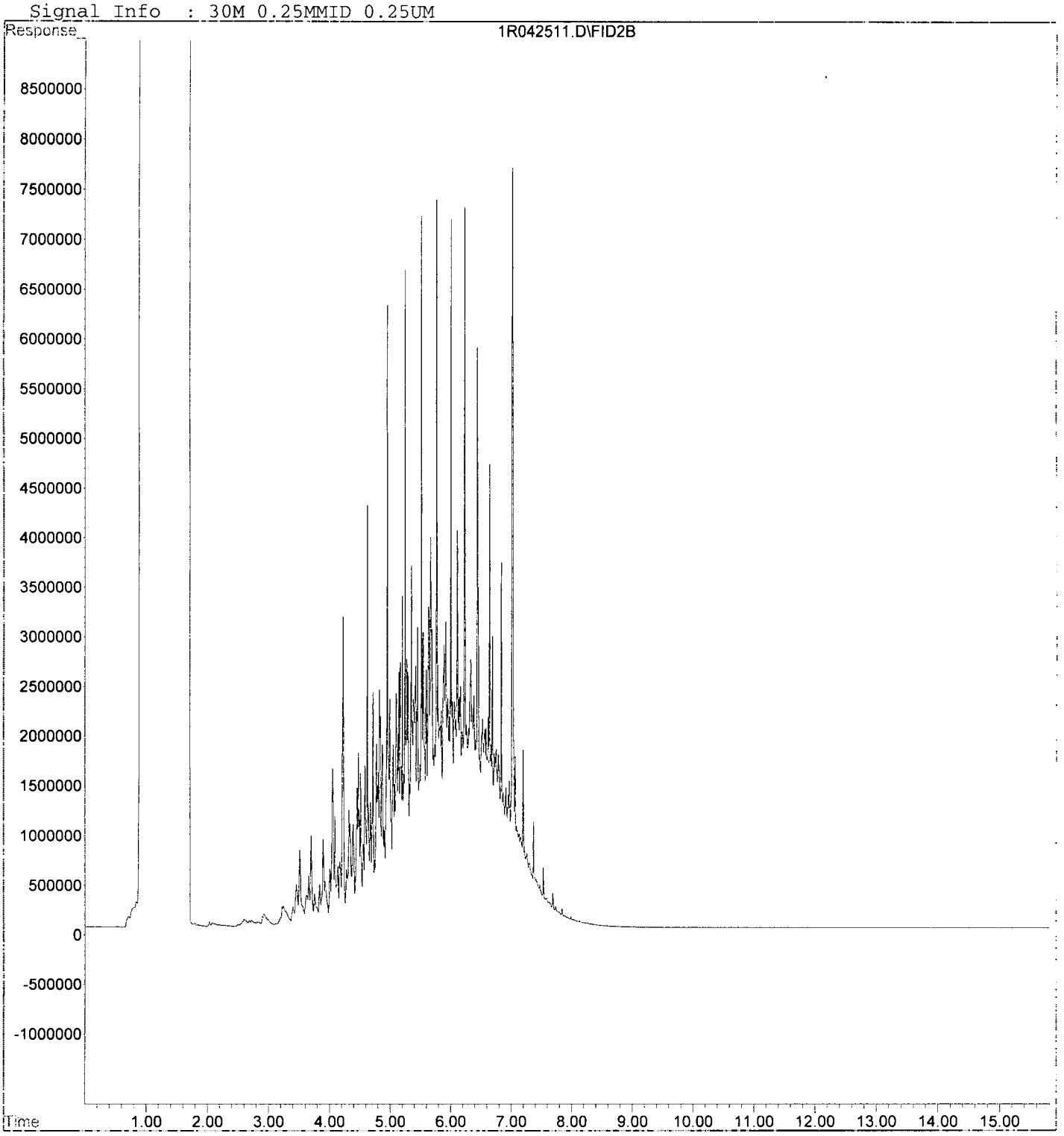
KEH 4/26/19

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042511.D Vial: 7
Acq On : 25 Apr 2019 20:20 Operator: KEH
Sample : 9D25028-CAL7 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:25 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042512.D Vial: 8
Acq On : 25 Apr 2019 20:43 Operator: KEH
Sample : 9D25028-CAL8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	7499784901	3378.446	ug/ml
2)	H	Diesel	6.00	7499784901	3378.446	ug/ml
3)	H	DRO(C12-C24)	6.00	7499784901	3378.446	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	5706747037	3475.524	ug/ml
5)	H	TPHd (C10-C25)	6.00	7015051433	3514.382	ug/ml
7)	H	Oil	10.00	2138940945	1069.924	ug/mL
8)	H	RRO (C24-C40)	10.00	2138940945	1069.924	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	247405661	190.349	ug/mL
10)	H	TPHmo (C25-C36)	8.00	80143227	64.811	ug/mL

KEH 4/24/19

(f)=RT Delta > 1/2 Window (m)=Manually Int.

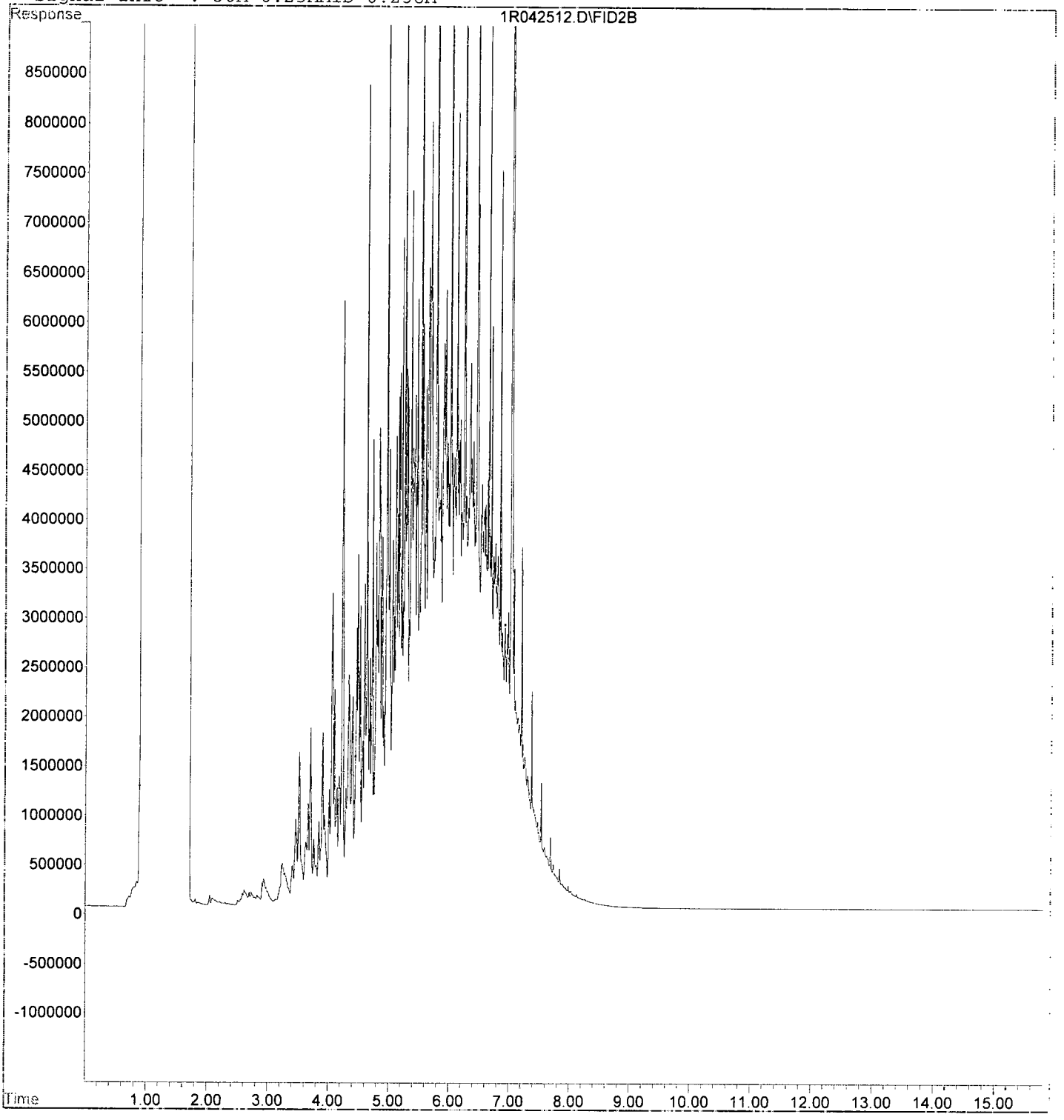
1R042512.D 1R90401D.M Fri Apr 26 10:32:22 2019 SV-GCMS3 Page 1

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042512.D Vial: 8
Acq On : 25 Apr 2019 20:43 Operator: KEH
Sample : 9D25028-CAL8 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:18:09 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042513.D Vial: 9
Acq On : 25 Apr 2019 21:06 Operator: KEH
Sample : 9D25028-CAL9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.68	16985540	6.688 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	5765048	2.597 ug/ml
2)	H	Diesel	6.00	5765048	2.597 ug/ml
3)	H	DRO(C12-C24)	6.00	5765048	2.597 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1752409	1.067 ug/ml
5)	H	TPHd (C10-C25)	6.00	3175206	1.591 ug/ml
7)	H	Oil	10.00	4558073	2.280 ug/mL
8)	H	RRO (C24-C40)	10.00	4558073	2.280 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1025806	0.789 ug/mL
10)	H	TPHmo (C25-C36)	8.00	1033667	0.836 ug/mL

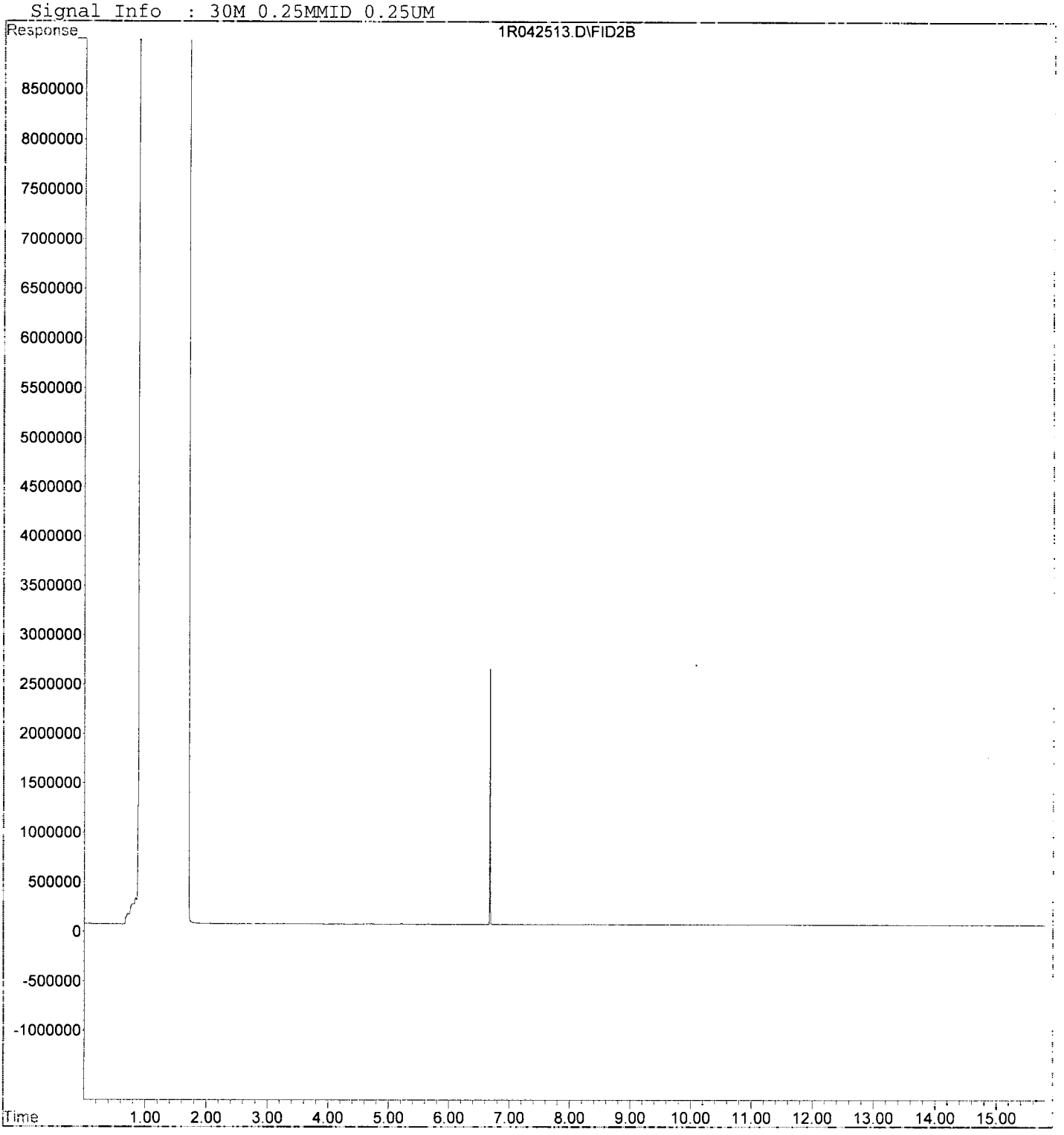
KEH 4/26/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042513.D Vial: 9
Acq On : 25 Apr 2019 21:06 Operator: KEH
Sample : 9D25028-CAL9 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042514.D Vial: 10
Acq On : 25 Apr 2019 21:29 Operator: KEH
Sample : 9D25028-CALA Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc Units
		System Monitoring Compounds			
6)	S	o-Terphenyl	6.68	41304670	16.264 ug/mL
		Target Compounds			
1)	H	Mineral Oil	6.00	5642757	2.542 ug/ml
2)	H	Diesel	6.00	5642757	2.542 ug/ml
3)	H	DRO(C12-C24)	6.00	5642757	2.542 ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1690240	1.029 ug/ml
5)	H	TPHd (C10-C25)	6.00	3088258	1.547 ug/ml
7)	H	Oil	10.00	4433731	2.218 ug/mL
8)	H	RRO (C24-C40)	10.00	4433731	2.218 ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1021788	0.786 ug/mL
10)	H	TPHmo (C25-C36)	8.00	1056466	0.854 ug/mL

KEH 4/26/19

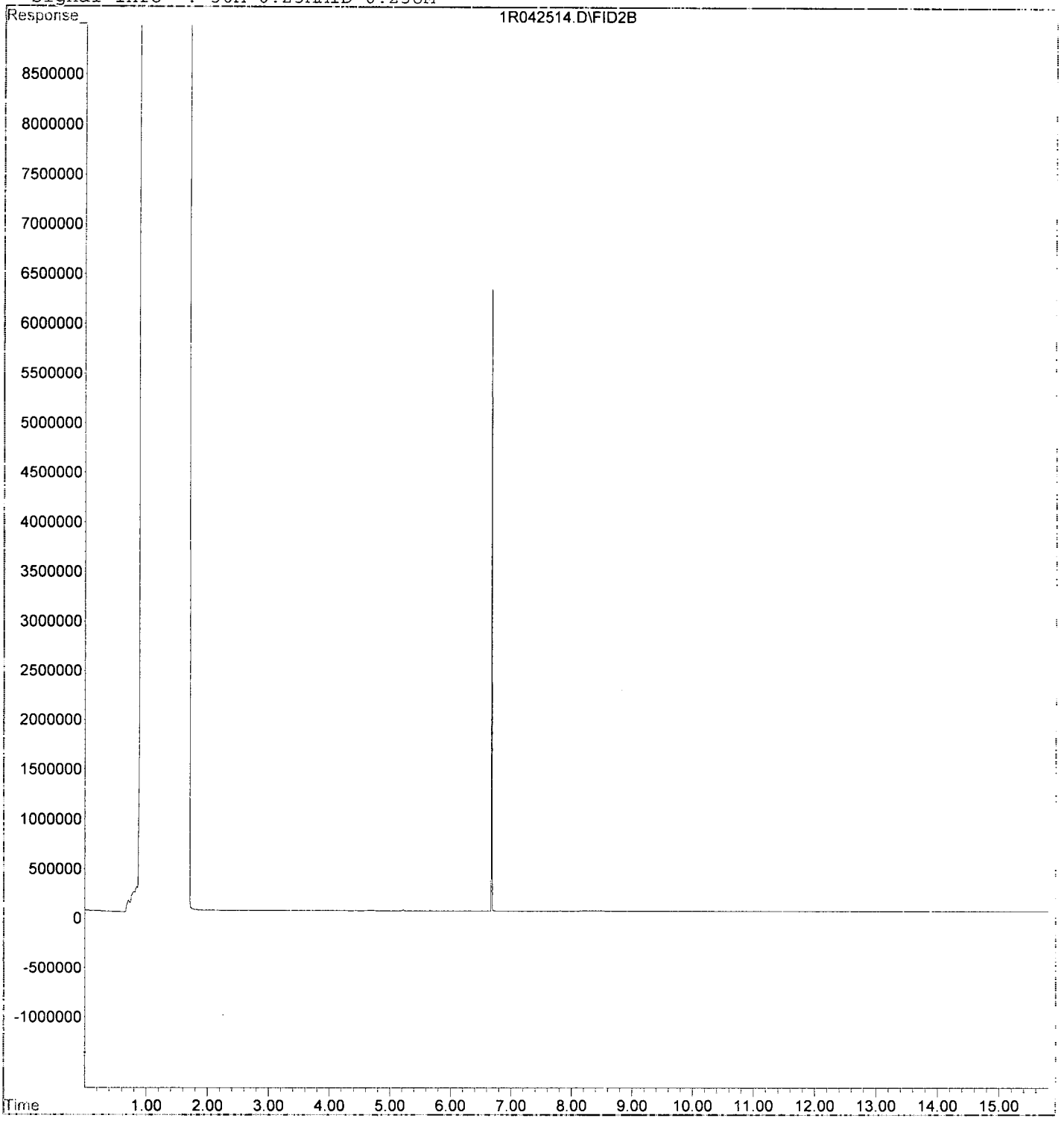
✓

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042514.D Vial: 10
Acq On : 25 Apr 2019 21:29 Operator: KEH
Sample : 9D25028-CALA Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:26 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042515.D Vial: 11
Acq On : 25 Apr 2019 21:51 Operator: KEH
Sample : 9D25028-CALB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.68	82262116	32.391	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	5627042	2.535	ug/ml
2)	H	Diesel	6.00	5627042	2.535	ug/ml
3)	H	DRO(C12-C24)	6.00	5627042	2.535	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1744139	1.062	ug/ml
5)	H	TPHd (C10-C25)	6.00	3115701	1.561	ug/ml
7)	H	Oil	10.00	4491349	2.247	ug/mL
8)	H	RRO (C24-C40)	10.00	4491349	2.247	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1002525	0.771	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1093671	0.884	ug/mL

Ref 4/26/19

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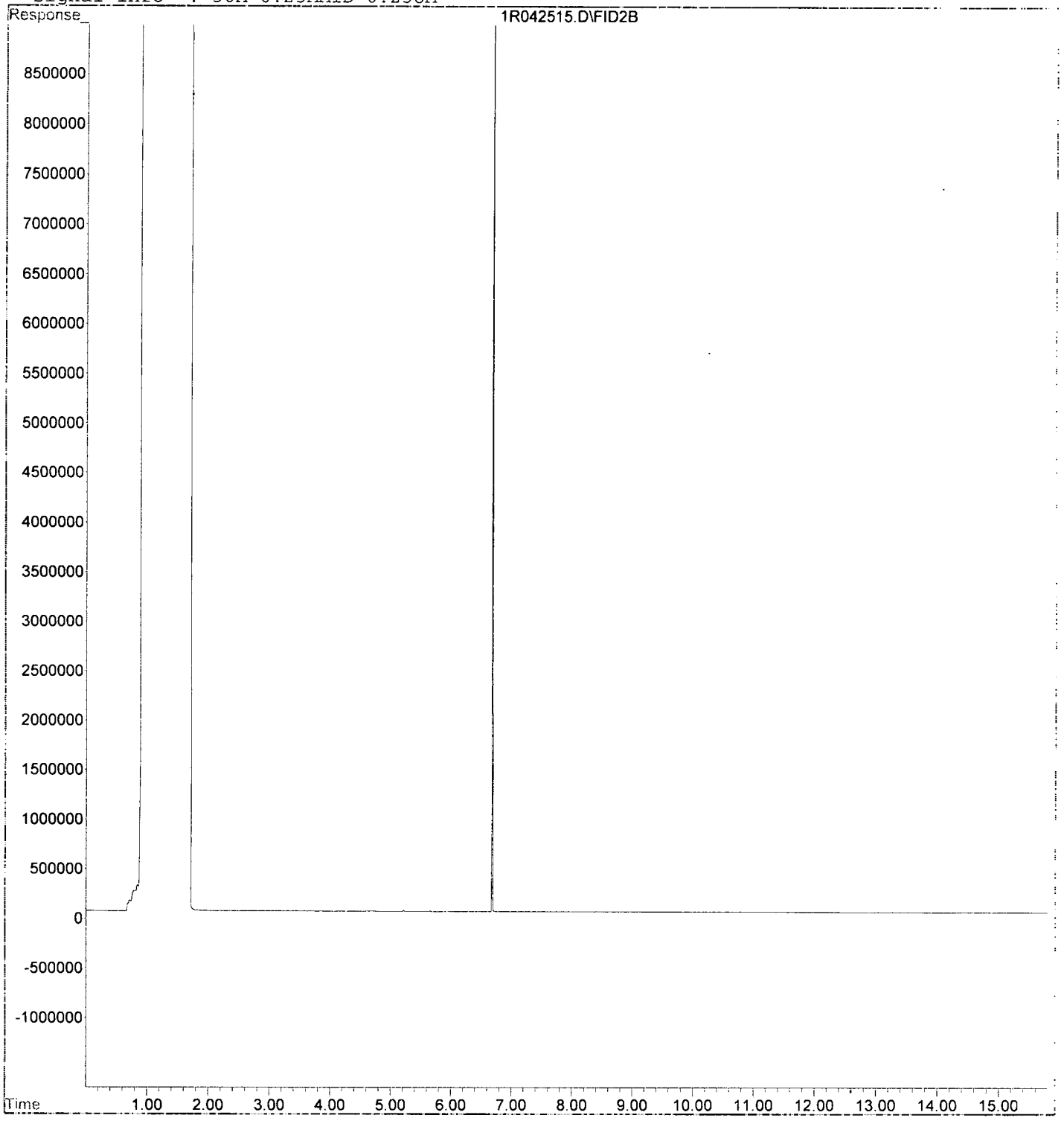
(f)=RT Delta > 1/2 Window (m) Manual Integ.

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042515.D Vial: 11
Acq On : 25 Apr 2019 21:51 Operator: KEH
Sample : 9D25028-CALB Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042516.D Vial: 12
Acq On : 25 Apr 2019 22:14 Operator: KEH
Sample : 9D25028-CALC Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.68	173545774	68.334	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	5978737	2.693	ug/ml
2)	H	Diesel	6.00	5978737	2.693	ug/ml
3)	H	DRO(C12-C24)	6.00	5978737	2.693	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1868215	1.138	ug/ml
5)	H	TPHd (C10-C25)	6.00	3302316	1.654	ug/ml
7)	H	Oil	10.00	4889897	2.446	ug/mL
8)	H	RRO (C24-C40)	10.00	4889897	2.446	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1145988	0.882	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1201428	0.972	ug/mL

KEH 4/26/19

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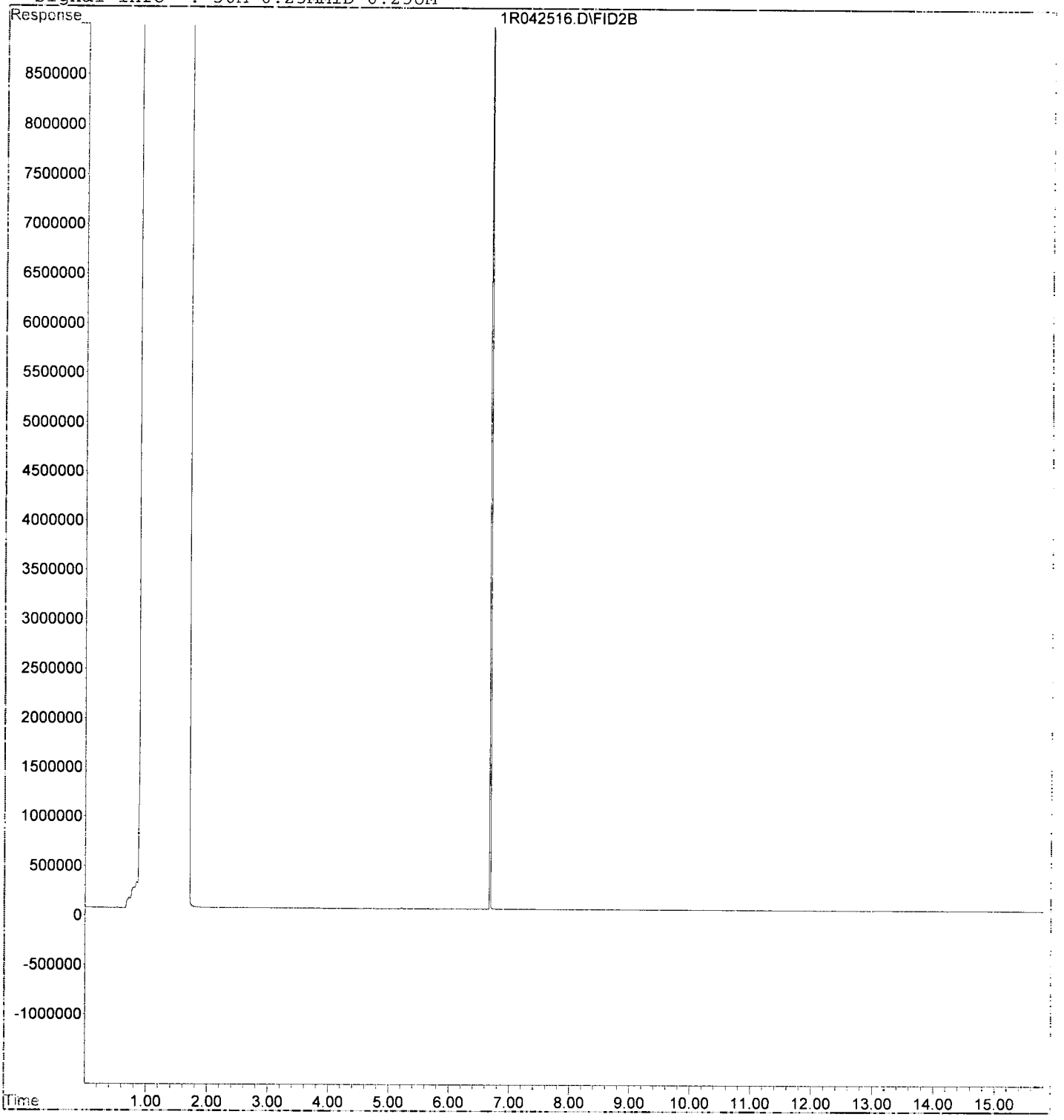
(f)=RT Delta > 1/2 window (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042516.D Vial: 12
Acq On : 25 Apr 2019 22:14 Operator: KEH
Sample : 9D25028-CALC Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042517.D Vial: 13
Acq On : 25 Apr 2019 22:37 Operator: KEH
Sample : 9D25028-CALD Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	6.69	346074514	136.268	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	5956885	2.683	ug/ml
2)	H	Diesel	6.00	5956885	2.683	ug/ml
3)	H	DRO(C12-C24)	6.00	5956885	2.683	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1922981	1.171	ug/ml
5)	H	TPHd (C10-C25)	6.00	3334581	1.671	ug/ml
7)	H	Oil	10.00	4713152	2.358	ug/mL
8)	H	RRO (C24-C40)	10.00	4713152	2.358	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	1242446	0.956	ug/mL
10)	H	TPHmo (C25-C36)	8.00	1210699	0.979	ug/mL

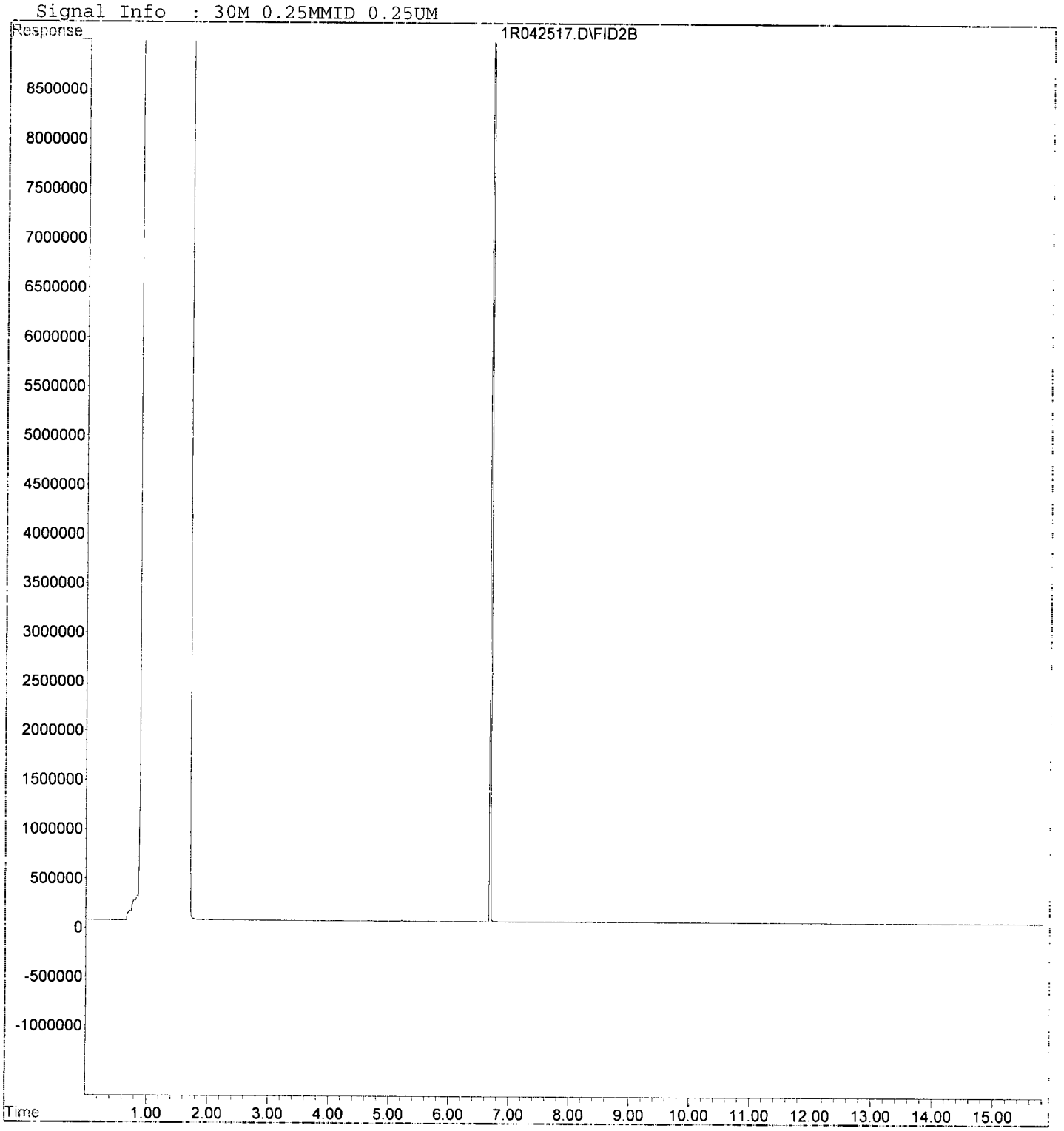
KEH 4/26/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042517.D Vial: 13
Acq On : 25 Apr 2019 22:37 Operator: KEH
Sample : 9D25028-CALD Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042518.D Vial: 14
Acq On : 25 Apr 2019 22:59 Operator: KEH
Sample : 9D25028-CALE Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	48801492	21.984	ug/ml
2)	H	Diesel	6.00	48801492	21.984	ug/ml
3)	H	DRO(C12-C24)	6.00	48801492	21.984	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	5083970	3.096	ug/ml
5)	H	TPHd (C10-C25)	6.00	17933874	8.984	ug/ml
7)	H	Oil	10.00	60418081	30.222	ug/mL
8)	H	RRO (C24-C40)	10.00	60418081	30.222	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	38328280	29.489	ug/mL
10)	H	TPHmo (C25-C36)	8.00	36184329	29.262	ug/mL

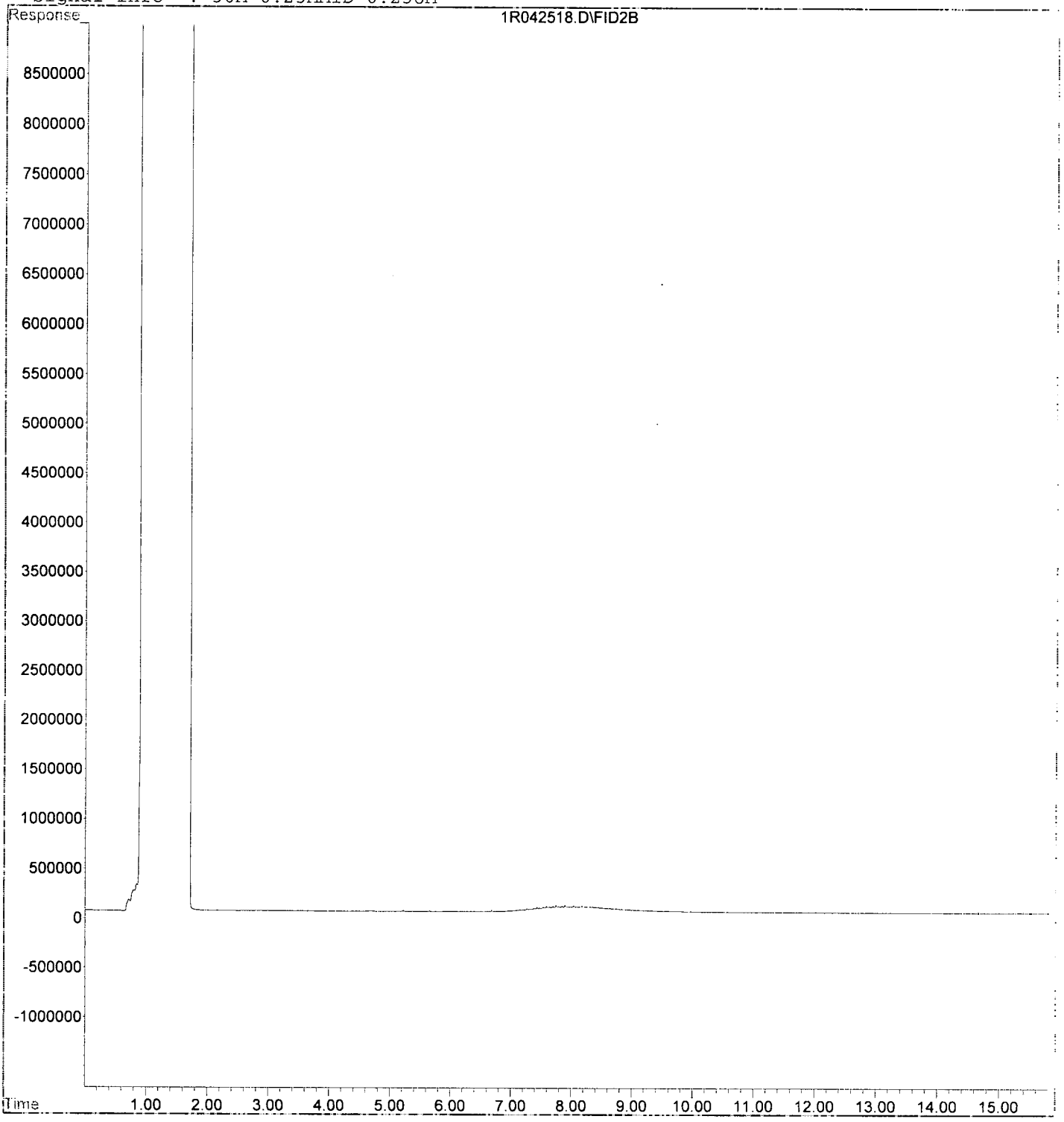
KEH 4/26/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042518.D Vial: 14
Acq On : 25 Apr 2019 22:59 Operator: KEH
Sample : 9D25028-CALE Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:27 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042519.D Vial: 15
Acq On : 25 Apr 2019 23:22 Operator: KEH
Sample : 9D25028-CALF Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	96711503	43.566	ug/ml
2)	H	Diesel	6.00	96711503	43.566	ug/ml
3)	H	DRO(C12-C24)	6.00	96711503	43.566	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	8631236	5.257	ug/ml
5)	H	TPHd (C10-C25)	6.00	34130883	17.099	ug/ml
7)	H	Oil	10.00	124094053	62.073	ug/mL
8)	H	RRO (C24-C40)	10.00	124094053	62.073	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	80096162	61.624	ug/mL
10)	H	TPHmo (C25-C36)	8.00	75598936	61.136	ug/mL

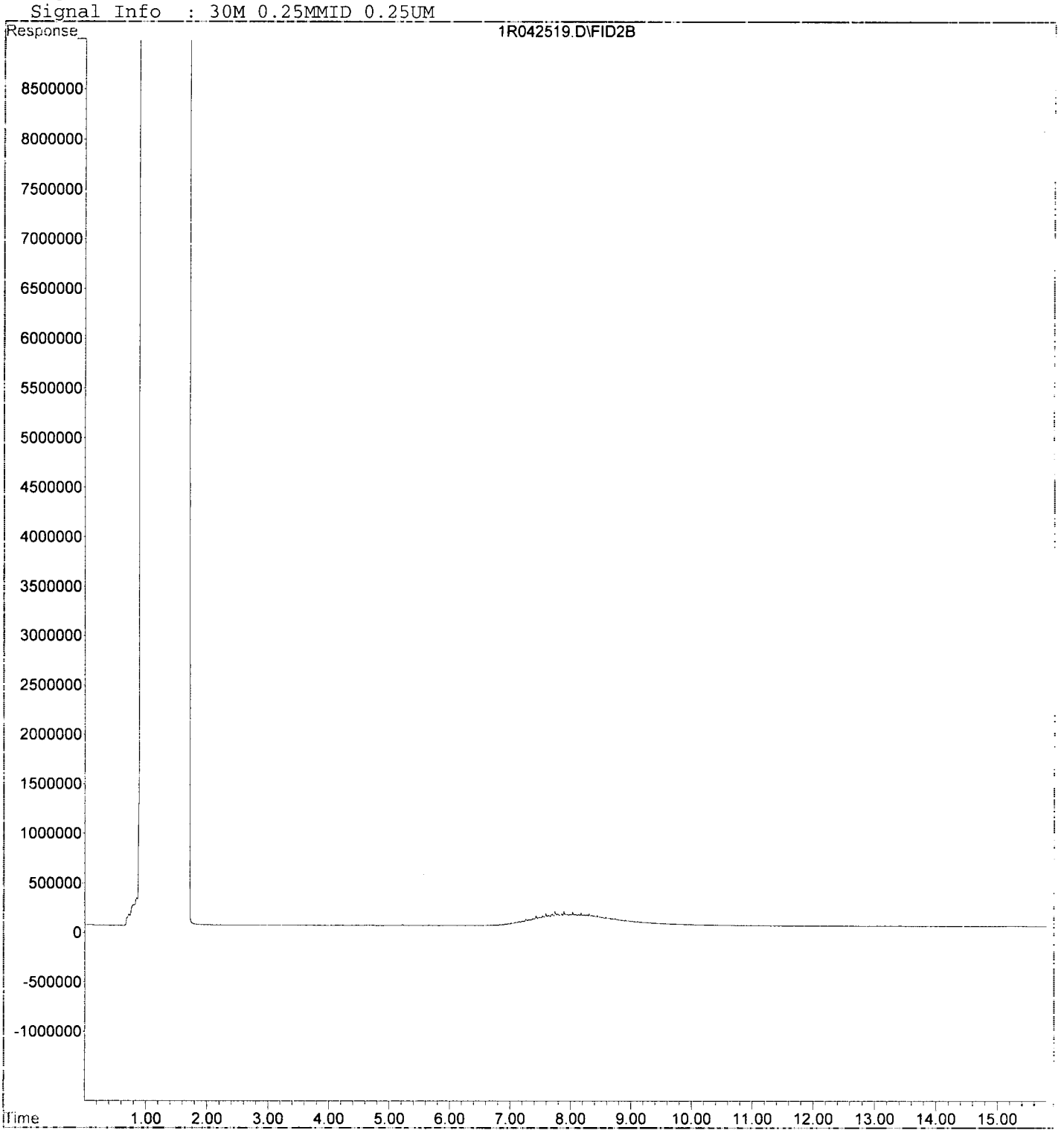
KEH 4/24/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042519.D Vial: 15
Acq On : 25 Apr 2019 23:22 Operator: KEH
Sample : 9D25028-CALF Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042520.D Vial: 16
Acq On : 25 Apr 2019 23:45 Operator: KEH
Sample : 9D25028-CALG Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	267441837	120.475	ug/ml
2)	H	Diesel	6.00	267441837	120.475	ug/ml
3)	H	DRO(C12-C24)	6.00	267441837	120.475	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	21555871	13.128	ug/ml
5)	H	TPHd (C10-C25)	6.00	92248062	46.214	ug/ml
7)	H	Oil	10.00	352922197	176.536	ug/mL
8)	H	RRO (C24-C40)	10.00	352922197	176.536	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	229031146	176.212	ug/mL
10)	H	TPHmo (C25-C36)	8.00	216455701	175.045	ug/mL

KGH 4/26/19

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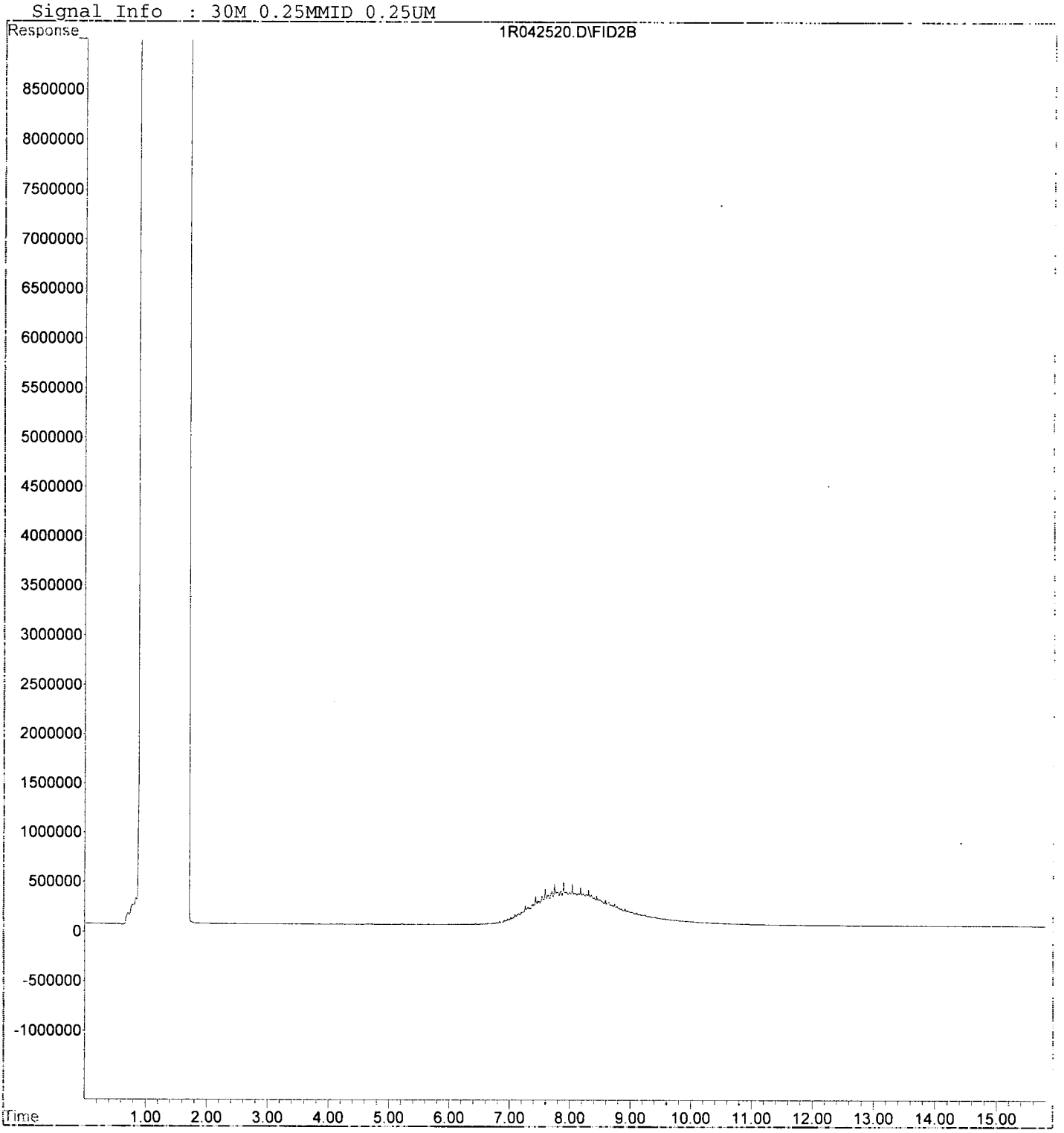
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042520.D Vial: 16
Acq On : 25 Apr 2019 23:45 Operator: KEH
Sample : 9D25028-CALG Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042521.D Vial: 17
Acq On : 26 Apr 2019 00:07 Operator: KEH
Sample : 9D25028-CALH Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	517035339	232.910	ug/ml
2)	H	Diesel	6.00	517035339	232.910	ug/ml
3)	H	DRO(C12-C24)	6.00	517035339	232.910	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	40810143	24.854	ug/ml
5)	H	TPHd (C10-C25)	6.00	177528858	88.938	ug/ml
7)	H	Oil	10.00	686702791	343.497	ug/mL
8)	H	RRO (C24-C40)	10.00	686702791	343.497	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	446380086	343.436	ug/mL
10)	H	TPHmo (C25-C36)	8.00	421753152	341.067	ug/mL

KEH 4/24/19

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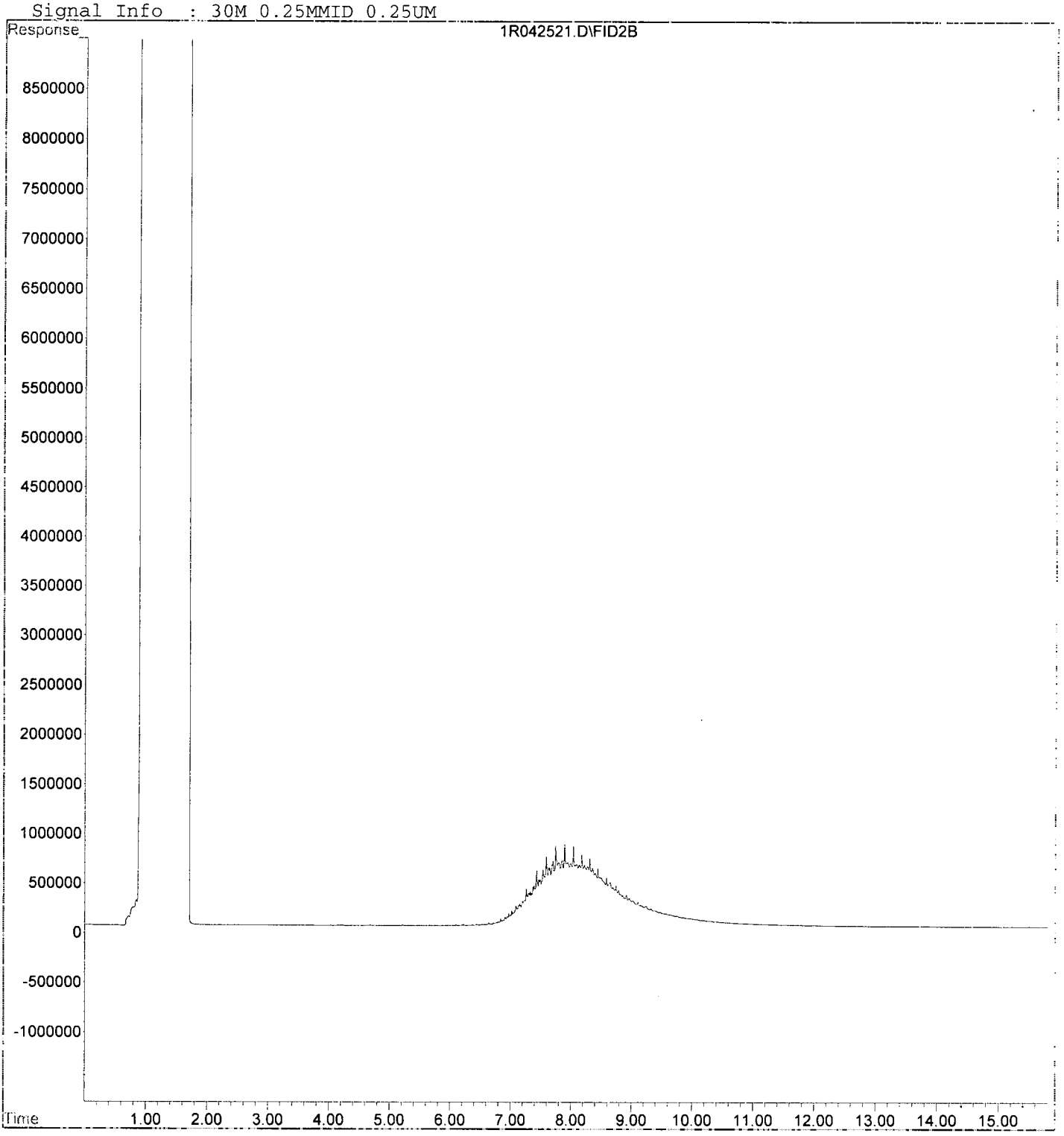
Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042521.D Vial: 17
Acq On : 26 Apr 2019 00:07 Operator: KEH
Sample : 9D25028-CALH Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:28 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042522.D Vial: 18
Acq On : 26 Apr 2019 00:30 Operator: KEH
Sample : 9D25028-CALI Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1089324515	490.711	ug/ml
2)	H	Diesel	6.00	1089324515	490.711	ug/ml
3)	H	DRO(C12-C24)	6.00	1089324515	490.711	ug/mL
4)	H	Ca Luft DRO (C12-C22)	0.00	0	N.D.	ug/ml
5)	H	TPHd (C10-C25)	6.00	372497419	186.613	ug/ml
7)	H	Oil	10.00	1459337926	729.979	ug/mL
8)	H	RRO (C24-C40)	10.00	1459337926	729.979	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	944824916	726.930	ug/mL
10)	H	TPHmo (C25-C36)	8.00	891649023	721.067	ug/mL

KEH 4/24/19

✓

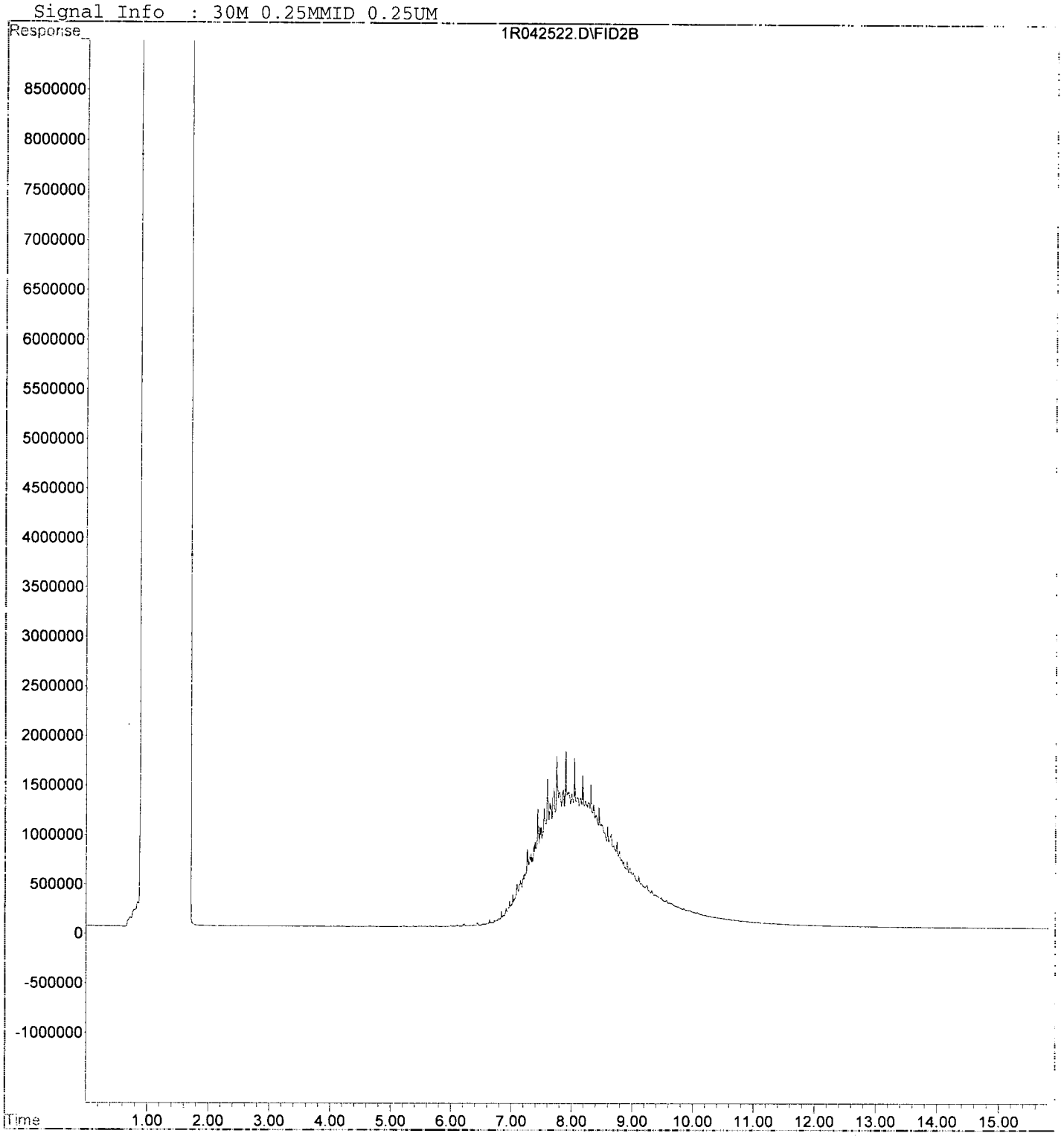
(f)=RT Delta > 1/2 Window (m) =manual int.

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042522.D Vial: 18
Acq On : 26 Apr 2019 00:30 Operator: KEH
Sample : 9D25028-CALI Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042523.D Vial: 19
Acq On : 26 Apr 2019 00:52 Operator: KEH
Sample : 9D25028-CALJ Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	2573188022	1159.150	ug/ml
2)	H	Diesel	6.00	2573188022	1159.150	ug/ml
3)	H	DRO(C12-C24)	6.00	2573188022	1159.150	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	199453735	121.471	ug/ml
5)	H	TPHd (C10-C25)	6.00	878386560	440.052	ug/ml
7)	H	Oil	10.00	3494840905	1748.162	ug/mL
8)	H	RRO (C24-C40)	10.00	3494840905	1748.162	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	2233126394	1718.123	ug/mL
10)	H	TPHmo (C25-C36)	8.00	2121384250	1715.541	ug/mL

KAK 4/26/19

✓

(f)=RT Delta > 1/2 Window (m) =Manual Int.:

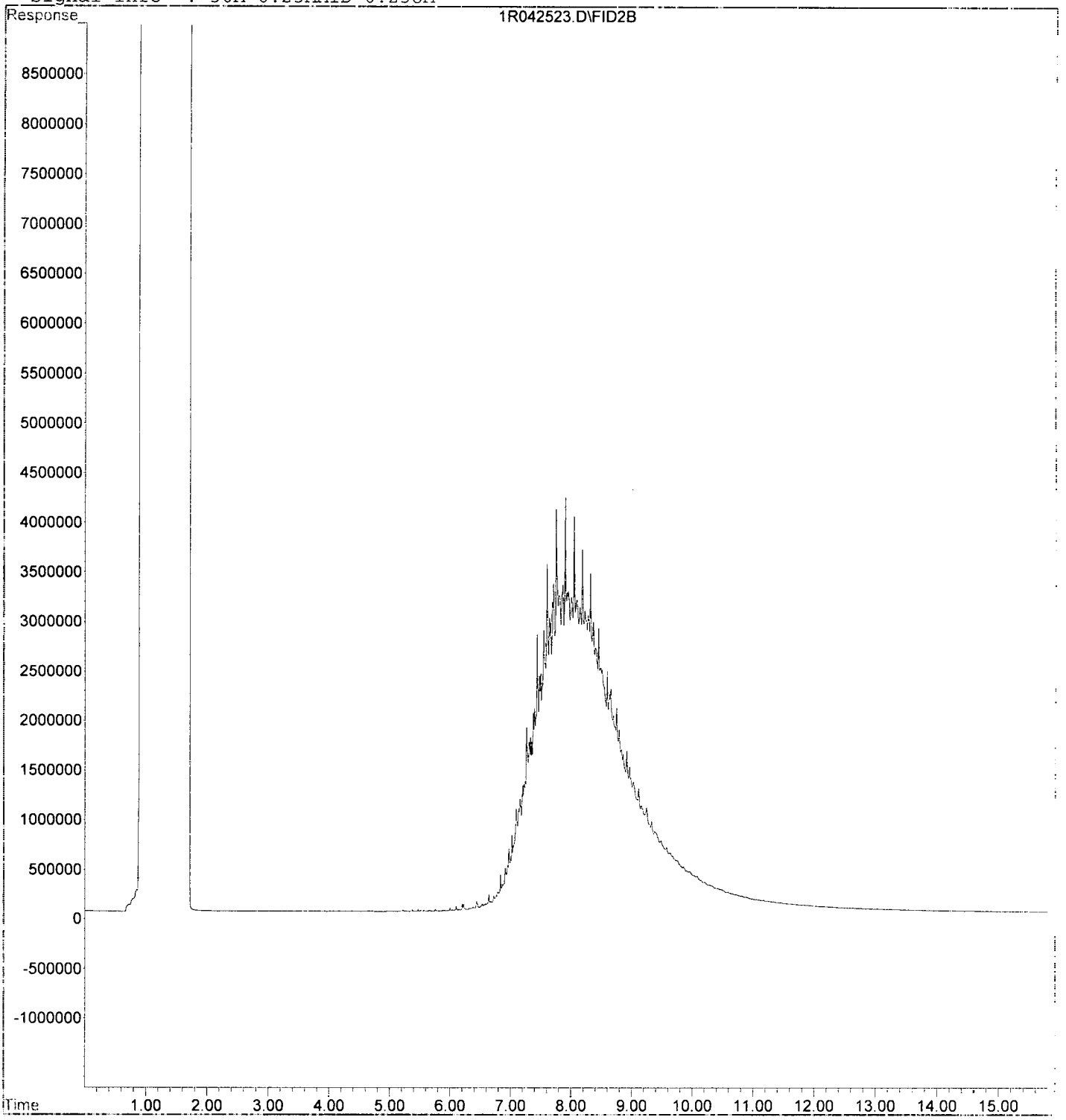
1R042523.D 1R90401D.M Fri Apr 26 10:32:29 2019 SV-GCMS3 Page 1

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042523.D Vial: 19
Acq On : 26 Apr 2019 00:52 Operator: KEH
Sample : 9D25028-CALJ Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042524.D Vial: 100
Acq On : 26 Apr 2019 1:15 Operator: KEH
Sample : 9D25028-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	9975430	4.494	ug/ml
2)	H	Diesel	6.00	9975430	4.494	ug/ml
3)	H	DRO(C12-C24)	6.00	9975430	4.494	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2267889	1.381	ug/ml
5)	H	TPHd (C10-C25)	6.00	4137240	2.073	ug/ml
7)	H	Oil	10.00	13398361	6.702	ug/mL
8)	H	RRO (C24-C40)	10.00	13398361	6.702	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	4665307	3.589	ug/mL
10)	H	TPHmo (C25-C36)	8.00	6689871	5.410	ug/mL

NR
KAH 4/26/19

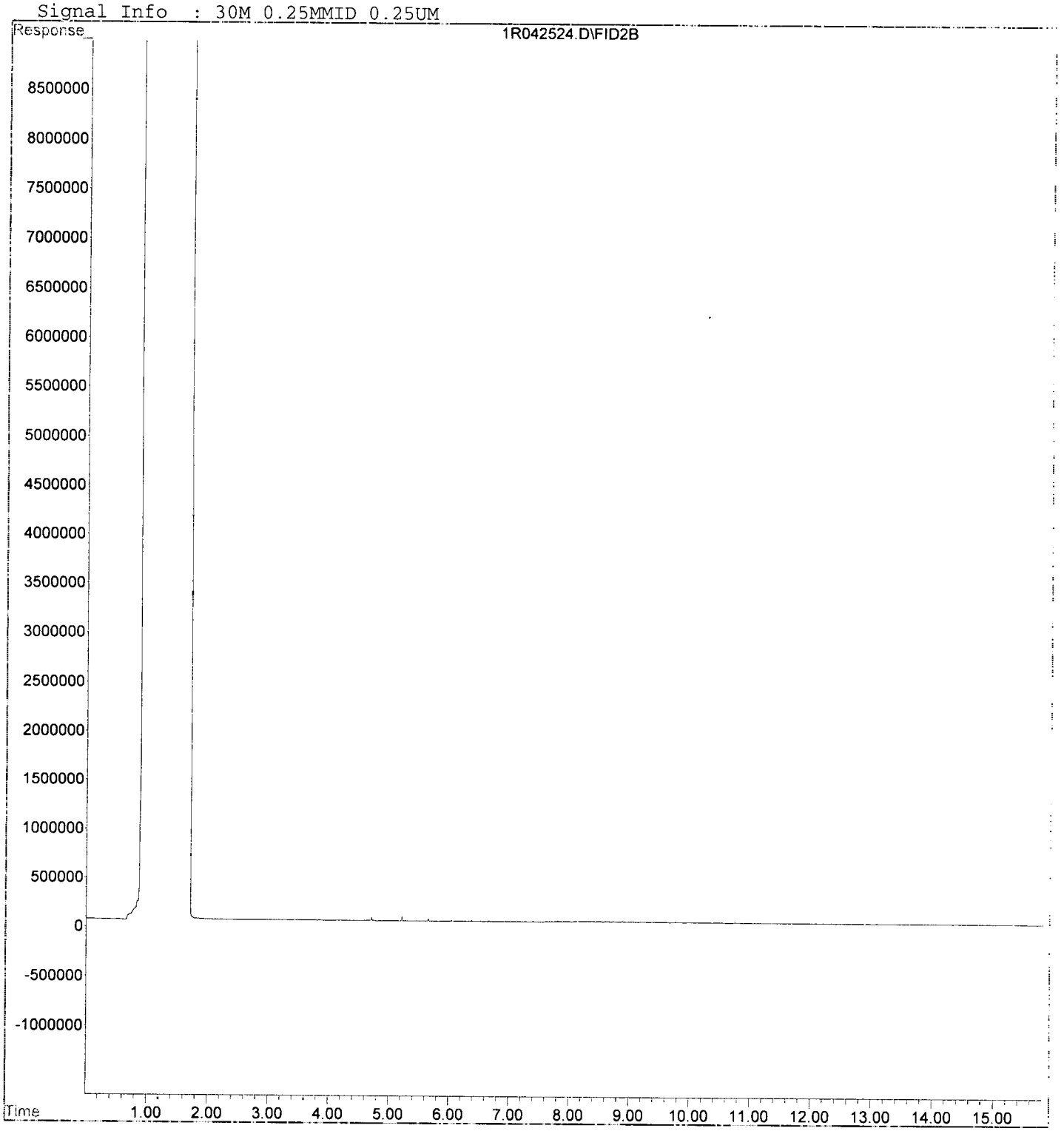
(f)=RT Delta > 1/2 window (m) =manual int.

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042524.D Vial: 100
Acq On : 26 Apr 2019 1:15 Operator: KEH
Sample : 9D25028-IBL1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:29 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042525.D Vial: 20
Acq On : 26 Apr 2019 1:38 Operator: KEH
Sample : 9D25028-CALK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:30 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	4988285290	2247.084	ug/ml
2)	H	Diesel	6.00	4988285290	2247.084	ug/ml
3)	H	DRO(C12-C24)	6.00	4988285290	2247.084	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	386046965	235.110	ug/ml
5)	H	TPHd (C10-C25)	6.00	1686745572	845.021	ug/ml
7)	H	Oil	10.00	6807643106	3405.266	ug/mL
8)	H	RRO (C24-C40)	10.00	6807643106	3405.266	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	4335513573	3335.658	ug/mL
10)	H	TPHmo (C25-C36)	8.00	4150676466	3356.609	ug/mL

KEH 4/26/19

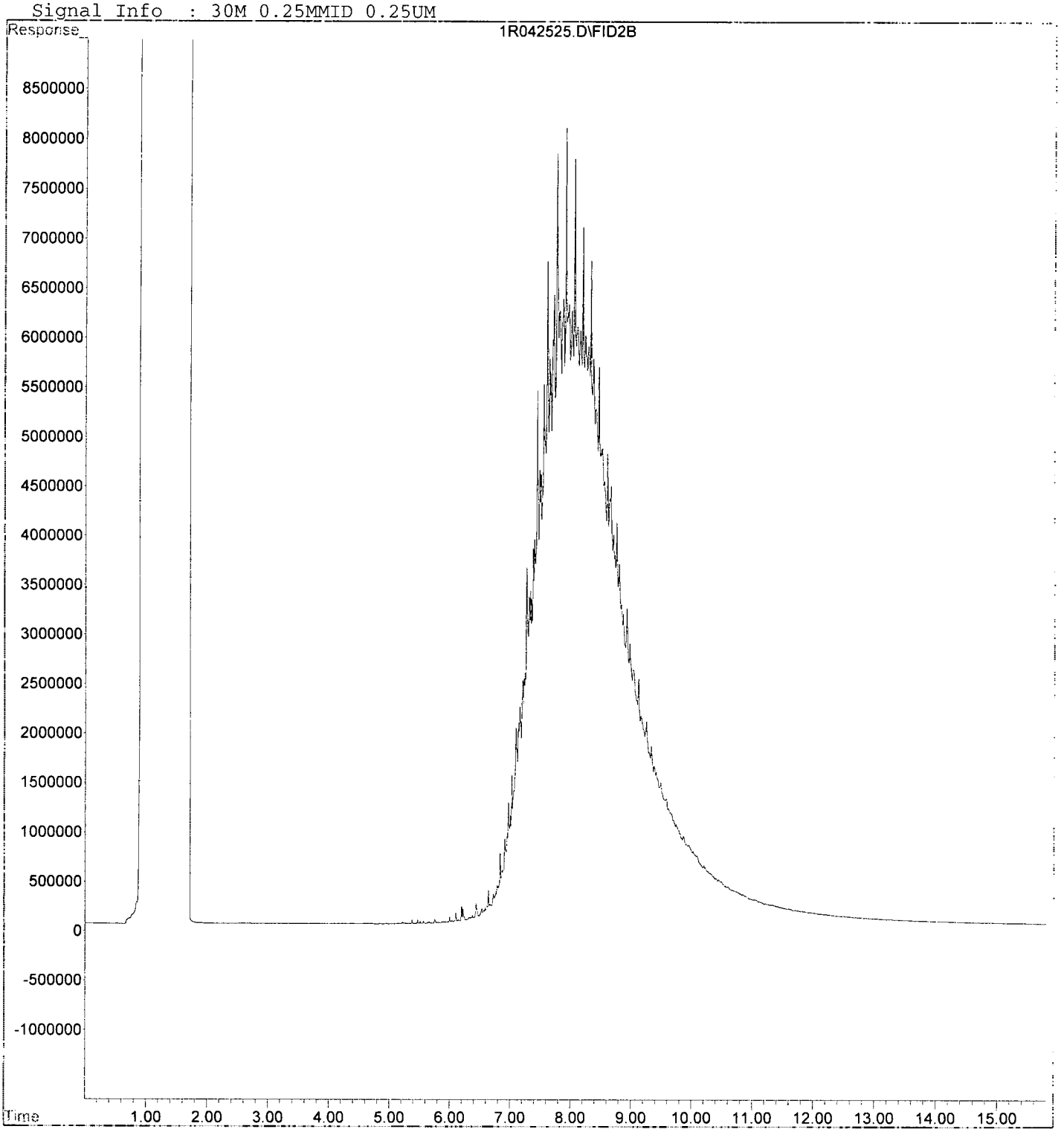
✓

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042525.D Vial: 20
Acq On : 26 Apr 2019 1:38 Operator: KEH
Sample : 9D25028-CALK Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:30 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042526.D Vial: 100
Acq On : 26 Apr 2019 2:00 Operator: KEH
Sample : 9D25028-IBL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:30 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	13558465	6.108	ug/ml
2)	H	Diesel	6.00	13558465	6.108	ug/ml
3)	H	DRO(C12-C24)	6.00	13558465	6.108	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	2498358	1.522	ug/ml
5)	H	TPHd (C10-C25)	6.00	4654674	2.332	ug/ml
7)	H	Oil	10.00	23077114	11.543	ug/mL
8)	H	RRO (C24-C40)	10.00	23077114	11.543	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	7998020	6.154	ug/mL
10)	H	TPHmo (C25-C36)	8.00	11861605	9.592	ug/mL

NR
KEH 4/24/19

✓

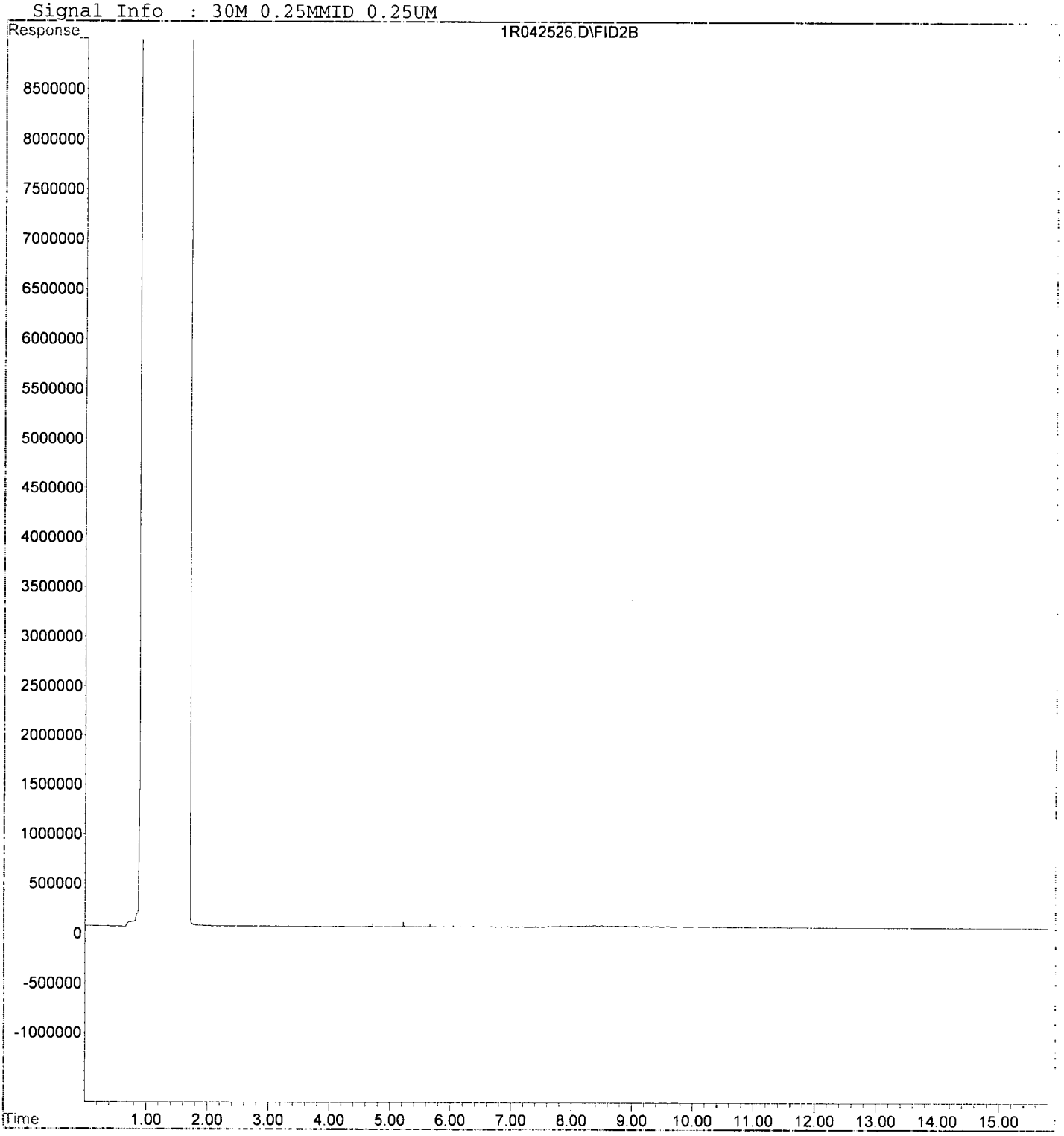
(f)=RT Delta > 1/2 window (m)=manual int.

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042526.D Vial: 100
Acq On : 26 Apr 2019 2:00 Operator: KEH
Sample : 9D25028-IBL2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:30 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042527.D Vial: 21
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25028-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mLd
		Target Compounds				
1)	H	Mineral Oil	6.00	1466953665	660.822	ug/ml
2)	H	Diesel	6.00	1466953665	660.822	ug/ml
3)	H	DRO(C12-C24)	6.00	1466953665	660.822	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	1116280994	678.838	ug/ml
5)	H	TPHd (C10-C25)	6.00	1369897074	686.287	ug/ml
7)	H	Oil	10.00	424636577	212.408	ug/mL
8)	H	RRO (C24-C40)	10.00	424636577	212.408	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	49314942	37.942	ug/mL
10)	H	TPHmo (C25-C36)	8.00	16953228	13.710	ug/mL

KH 4/24/19

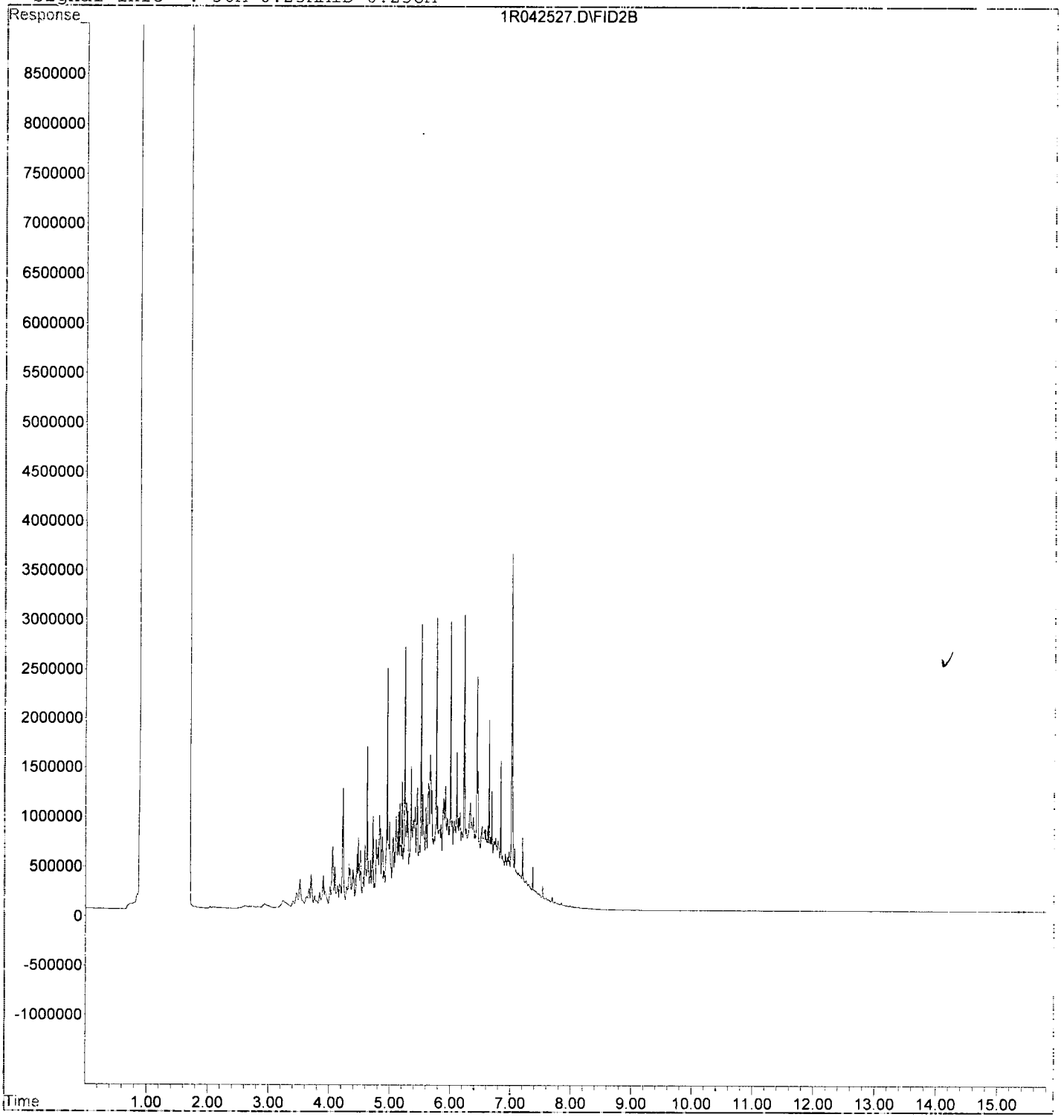
(f)=RT Delta > 1/2 window (m)=manual int.

Quantitation Report (QT Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042527.D Vial: 21
Acq On : 26 Apr 2019 2:23 Operator: KEH
Sample : 9D25028-ICV1 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042528.D Vial: 22
Acq On : 26 Apr 2019 2:45 Operator: KEH
Sample : 9D25028-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Initial Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM

		Compound	R.T.	Response	Conc	Units
		System Monitoring Compounds				
6)	S	o-Terphenyl	0.00	0	N.D.	ug/mL
		Target Compounds				
1)	H	Mineral Oil	6.00	1073244350	483.467	ug/ml
2)	H	Diesel	6.00	1073244350	483.467	ug/ml
3)	H	DRO(C12-C24)	6.00	1073244350	483.467	ug/mL
4)	H	Ca Luft DRO (C12-C22)	6.00	103342830	62.938	ug/ml
5)	H	TPHd (C10-C25)	6.00	393115144	196.942	ug/ml
7)	H	Oil	10.00	1387422753	694.006	ug/mL
8)	H	RRO (C24-C40)	10.00	1387422753	694.006	ug/mL
9)	H	Ca Luft ORO (C23-C32)	8.00	900235462	692.623	ug/mL
10)	H	TPHmo (C25-C36)	8.00	803942584	650.140	ug/mL

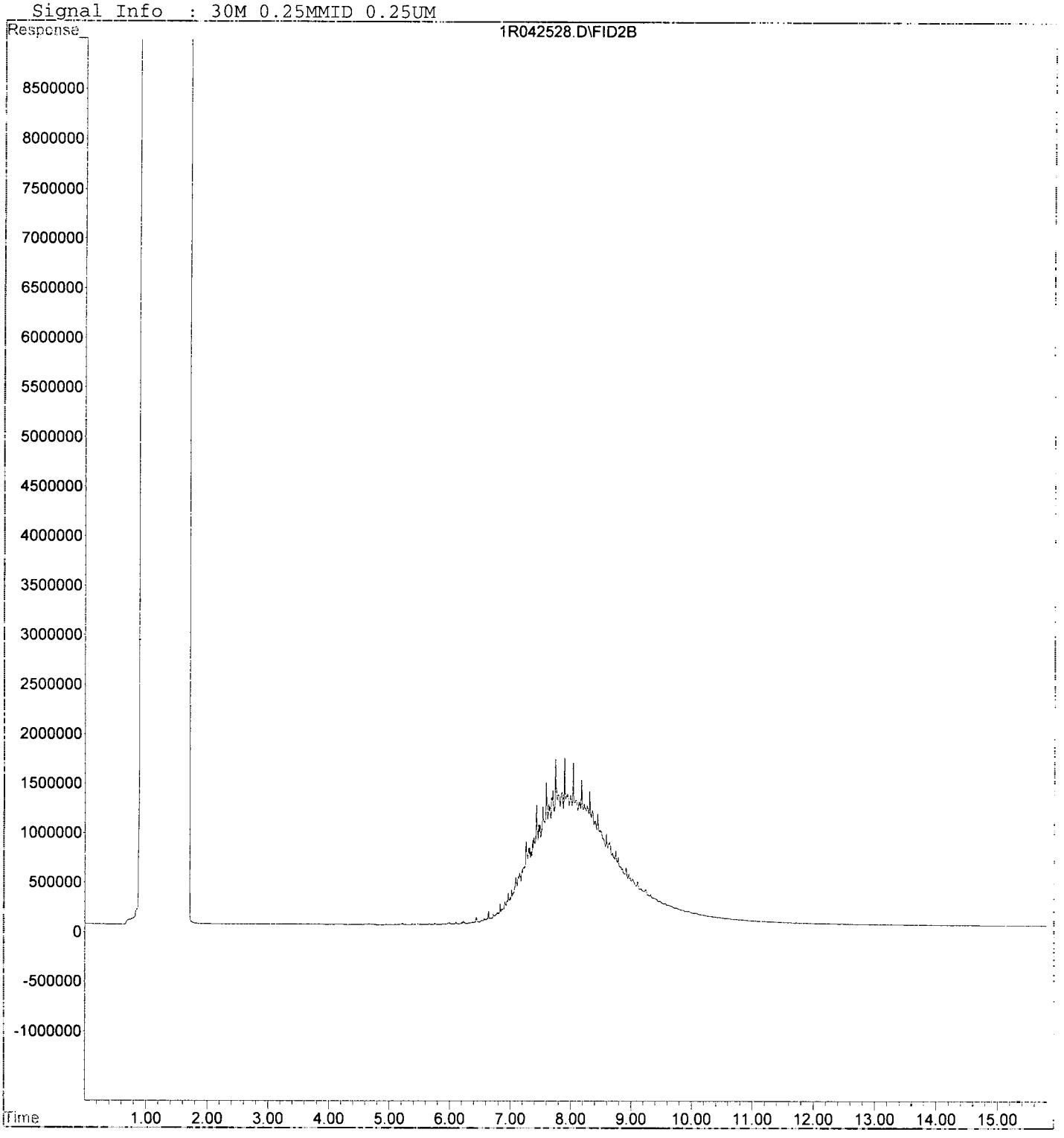
KEH 4/26/19

Quantitation Report (Not Reviewed)

Data File : F:\1\DATA\2019-04\9D25028\1R042528.D Vial: 22
Acq On : 26 Apr 2019 2:45 Operator: KEH
Sample : 9D25028-ICV2 Inst : HP G1530A
Misc : Multiplr: 1.00
IntFile : SUR.E
Quant Time: Apr 26 10:31 2019 Quant Results File: 1R90401D.RES

Quant Method : F:\2\METHODS\1R90401D.M (Chemstation Integrator)
Title : DUALFID1R, NWTPH-Dx
Last Update : Fri Apr 26 10:26:31 2019
Response via : Multiple Level Calibration
DataAcq Meth : A1F40422.M

Volume Inj. : 1uL
Signal Phase : Restek Rxi-5Sil MS
Signal Info : 30M 0.25MMID 0.25UM



Gasoline Range Hydrocarbons (Benzene though Naphthalene) by NWTPH-Gx

Benchsheet & Analysis Sequence Data

Batch 9061492

Sequence 9F28034 (A9F0684-01)

PREPARATION BENCH SHEET

BATCH #: 9061492 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9061492-BLK1		QC	06/28/19 09:35	7.5	5							
9061492-BS1		QC	06/28/19 09:35	5	5	A19F368		250				
9061492-BS2		QC	06/28/19 09:35	5	5	A19F151		250				
A9F0682-01	B	8260C BTEX+N	(Date Sampled)	6.59	5					14786 S@85"	FP	
A9F0684-01	B	8260C Full List	06/26/19 18:50	0.47	5					2708-190619-OIL	MOD	
A9F0684-01	B	NWTPH-Gx	06/26/19 18:50	0.47	5					2708-190619-OIL	MOD	
A9F0699-08RE1	B	8260C Full List	(Date Sampled)	6.37	5					HC04-12	FP, 500X NAP RR2	
A9F0756-02	B	8260C BTEX+N	(Date Sampled)	5.2	5					SPB@9'BGS	FP	
A9F0788-01	B	8260C BTEX+N	(Date Sampled)	6.14	5					14804 N@79"	FP	
A9F0843-05	B	8260C BTEX+N	(Date Sampled)	4.39	5					UG-E-SWI@15'BGS	FP	
A9F0843-07	B	8260C Full List	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
A9F0843-07	B	8260C BTEX	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
A9F0843-07	B	8260C BTEX+N	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP	
A9F0843-07	B	NWTPH-Gx	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
9061492-MS1		QC	06/28/19 13:20	5.39	5	A19F368	A9F0843-07	327			DW=71.4% @50X	
A9F0844-05RE1	B	8260C Full List	(Date Sampled)	5.6	5					B-4-13'	FP	
A9F0844-05RE1	B	NWTPH-Gx	(Date Sampled)	5.6	5					B-4-13'	FP	
A9F0844-07RE1	B	8260C Full List	(Date Sampled)	5.75	5					B-5-10.5'	FP	
A9F0844-07RE1	B	NWTPH-Gx	(Date Sampled)	5.75	5					B-5-10.5'	FP	
A9F0873-01	B	8260C Full List	(Date Sampled)	5.9	5					SP-1	FP, Added for BatchQC in: 906149	
A9F0873-01	B	8260C BTEX	(Date Sampled)	5.9	5					SP-1	FP	
A9F0873-01	B	8260C BTEX+N	(Date Sampled)	5.9	5					SP-1	FP, Added for BatchQC in: 906149	

Prepared By: _____ Date 7/1/19

Reviewed By: _____ Date 07/01/19

PREPARATION BENCH SHEET

BATCH #: 9061492 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0873-01	B	NWTPH-Gx	(Date Sampled)	5.9	5					SP-1	FP	
9061492-DUP1		QC	06/26/19 15:04	5.17	5		A9F0873-01					
A9F0878-01	B	8260C BTEX+N	06/27/19 17:40	5.98	5					19-25468 E(IT)-76"	MOD	

*pH <2 verified_____

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19D063	09/30/19	Methanol - Fisher (P/T) #185562
A19F143	12/09/19	Methanol - Fisher (P/T) #185042

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F151	12/10/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19F368	12/07/19	8260 Cal. Std. B VOC+OXY Spike (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

SOIL MS3

Prepared By: Date

Reviewed By: Date

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: ~~9061430~~ 9061492 MK 7/2/19

Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
5.390	5	50	71.4
			0.714

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1699.78	**327**

Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9F0843-07

7/1/19

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9F0682-01	B	39.85	33.26	6.59	
A9F0756-02	B	38.94	33.74	5.2	
A9F0788-01	B	39.75	33.61	6.14	
A9F0843-05	B	38.22	33.83	4.39	
A9F0843-07	B	38.97	33.58	5.39	
A9F0873-01	B	39.17	33.27	5.9	
A9F0873-01	C DUP	38.54	33.37	5.17	

7/1/19

A9F0684

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0684-01	2708-190619-OIL	Sampled: 06/19/19 14:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Oil	40 mL VOA - In House Prep - 5035 (MeOH)	A	0.47	(5) 10 15	OD	@ 6/26/19 1850	Y (N)	Mod.

8260C Full List Expires: 06/21/19 14:00 Due: 07/05/19 17:00
Comments: 1st priority Added 6/26/19

NWTPH-Gx Expires: 06/21/19 14:00 Due: 07/05/19 17:00 10000
Comments: 5th priority Added 6/26/19

A9F0878

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0878-01	19-25468 E(IT)-76'	Sampled: 06/27/19 13:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.98	(5) 10 15	[illegible]	@ 6/27/19 17:40	(Y) N	mod

BTEXN

Expires: Due:

A9F0878-02	19-25468 W(IT)-76'	Sampled: 06/27/19 13:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.71	(5) 10 15	[illegible]	@ 6/27/19 17:40	(Y) N	mod

Expires: Due:

500X

A9F0682

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0682-01	14786 S@85'	Sampled: 06/20/19 00:00

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.85	33.26	5 10 15 Other	DX - 28900

BTEXN

Due: TAT:

500X

Weighed by: TAM @ 6/20/19

Methanol Reagent ID: A19F143

Balance ID: A18J327

Print Date: 6/20/201918:44:04

A9F0756

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0756-01 **SPW@7'BGS** Sampled: **06/24/19 10:00**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.18	33.59	(5) 10 15 Other	

Due: TAT:

A9F0756-02 **SPB@9'BGS** Sampled: **06/24/19 11:05**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.94	33.74	(5) 10 15 Other	DX=62600

BTEXN Due: TAT:

A9F0756-03 **NPB@10'BGS** Sampled: **06/24/19 11:05**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.85	33.94	(5) 10 15 Other	

Due: TAT:

1000X

Weighed by: TAM @ 6/24/19 18:33

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9F0788

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0788-01		14804 N@79"			Sampled: 06/25/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.75	Tare Weight (g): 33.61	Volume MeOH (mL): (5) 10 15 Other	Notes: DX = 27200
BTEXN		Due:	TAT:		

A9F0788-02		14804 S@79"			Sampled: 06/25/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 40.31	Tare Weight (g): 33.70	Volume MeOH (mL): (5) 10 15 Other	Notes:
		Due:	TAT:		

500P

Weighed by: AHK @ 1742 6/25/19

Methanol Reagent ID: A19E143~ Balance ID: A18J327~

A9F0843

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0843-01	SRC-NTE-SWI@15'	Sampled: 06/25/19 12:30

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.74	33.75	5 10 15 Other	
BTEXN		Due:	TAT:		

A9F0843-03	CG-N-SWI@15'BGS	Sampled: 06/25/19 11:00

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		40.58	33.89	5 10 15 Other	
		Due:	TAT:		

A9F0843-05	UG-E-SWI@15'BGS	Sampled: 06/25/19 13:45

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.22	33.83	5 10 15 Other	
		Due:	TAT:		

A9F0843-07	DG-W-SWI@15'BGS	Sampled: 06/25/19 13:20

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
NS		38.97	33.58	5 10 15 Other	DW = 71.4%
		Due:	TAT:		

Weighed by: TAH @ 6/26/19 18:45

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9F0873

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0873-01	SP-1	Sampled: 06/26/19 15:04

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.17	Tare Weight (g): 33.27	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.54	Tare Weight (g): 33.37	Volume MeOH (mL): 5 10 15 Other	Notes:

Dup

8260C BTEX Due: 07/01/19 17:00 TAT: 2

Comments: soil ppm water ppb

NWTPH-Gx Due: 07/01/19 17:00 TAT: 2

50X

Weighed by: WS @ 6/27/19 16:16

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9F28034**	Instrument:	**VOA-GCMS3**
Date:	**06/28/19 10:52**	Calibration:	**A9F1104**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F28034-TUN1	Soil	QC	QC			A19C135	
2	9F28034-CCV1	Soil	QC	QC			A19C135	
3	9061492-BS1	Soil	QC	QC		9061492	A19C135	
4	9F28034-CCV2	Soil	QC	QC			A19C135	
5	9061492-BS2	Soil	QC	QC		9061492	A19C135	
6	9061492-BLK1	Soil	QC	QC		9061492	A19C135	
7	A9F0844-07RE1	Soil	8260C Full List		07/08/19	9061492	A19C135	
8	"	Soil	NWTPH-Gx	"	07/08/19	9061492	A19C135	
9	A9F0844-05RE1	Soil	8260C Full List		07/08/19	9061492	A19C135	
10	"	Soil	NWTPH-Gx	"	07/08/19	9061492	A19C135	
11	9F28034-IBL1	Soil	QC	QC			A19C135	
12	A9F0843-05	Soil	8260C BTEX+N		06/28/19	9061492	A19C135	
13	A9F0843-07	Soil	8260C BTEX+N		06/28/19	9061492	A19C135	
14	"	Soil	8260C Full List	(QC Source)		9061492	A19C135	
15	"	Soil	8260C BTEX	(QC Source)		9061492	A19C135	
16	"	Soil	NWTPH-Gx	(QC Source)		9061492	A19C135	
17	9061492-MS1	Soil	QC	QC		9061492	A19C135	
18	9F28034-IBL2	Soil	QC	QC			A19C135	
19	A9F0873-01	Soil	8260C BTEX		07/01/19	9061492	A19C135	
20	"	Soil	NWTPH-Gx	"	07/01/19	9061492	A19C135	
21	"	Soil	8260C Full List	(QC Source)		9061492	A19C135	
22	"	Soil	8260C BTEX+N	(QC Source)		9061492	A19C135	
23	9061492-DUP1	Soil	QC	QC		9061492	A19C135	
24	A9F0756-02	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
25	A9F0788-01	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
26	A9F0682-01	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
27	9F28034-IBL3	Soil	QC	QC			A19C135	
28	A9F0699-08RE1	Soil	8260C Full List		07/01/19	9061492	A19C135	
29	A9F0684-01	Soil	8260C Full List		07/05/19	9061492	A19C135	
30	"	Soil	NWTPH-Gx	"	07/05/19	9061492	A19C135	
31	9F28034-IBL4	Soil	QC	QC			A19C135	
32	A9F0878-01	Soil	8260C BTEX+N		07/02/19	9061492	A19C135	
33	9F28034-IBL5	Soil	QC	QC			A19C135	
34	9F28034-IBL6	Soil	QC	QC			A19C135	

Data Entered By: 7/1/19

Data Reviewed By: 7/1/19

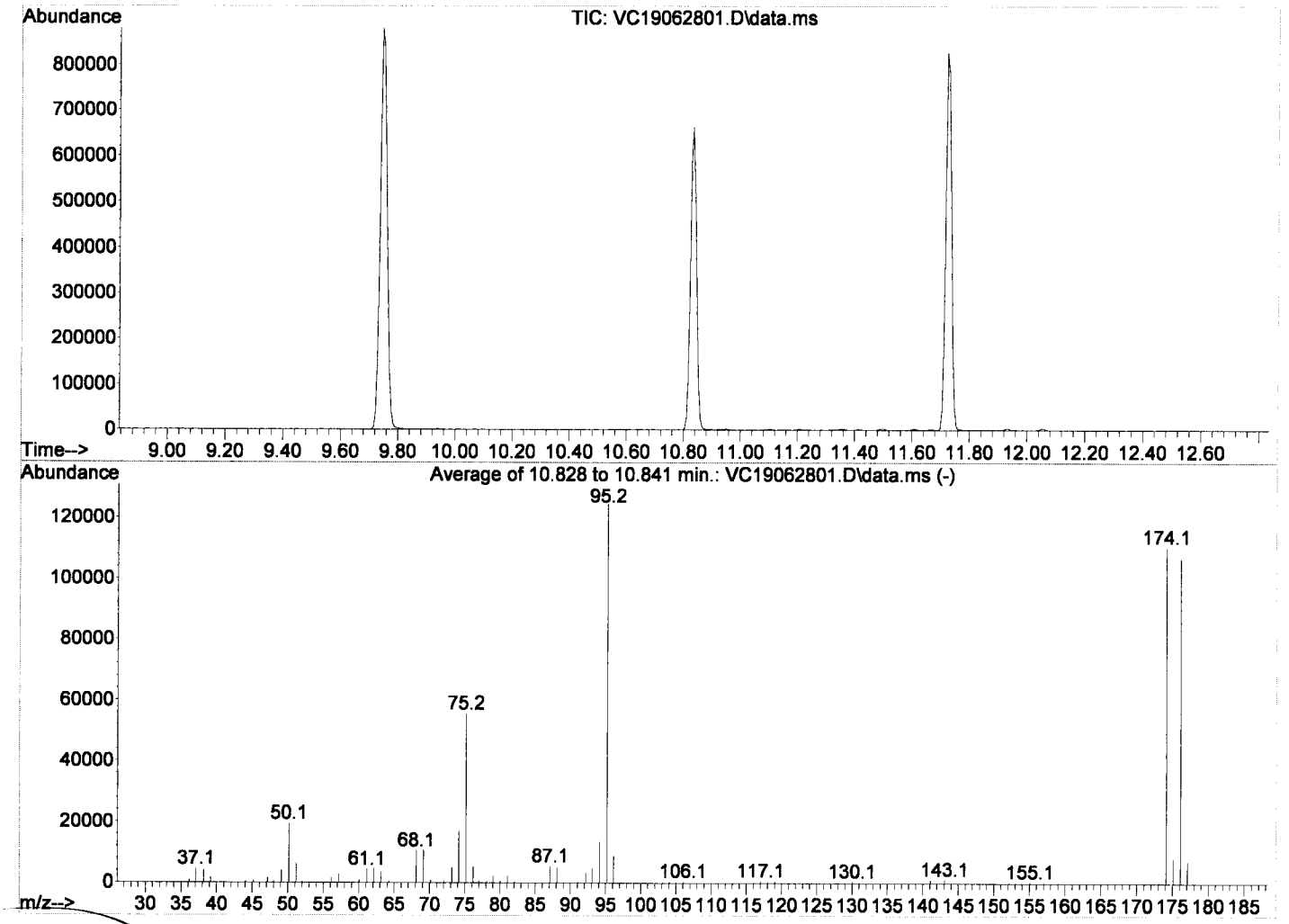
Comments: chloroethane EOS

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019

6/28/19



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	15.5	19350	PASS
75	95	30	60	44.6	55594	PASS
95	95	100	100	100.0	124541	PASS
96	95	5	9	7.0	8763	PASS
173	174	0.00	2	0.2	249	PASS
174	95	50	200	88.7	110440	PASS
175	174	5	9	7.4	8145	PASS
176	174	95	101	96.6	106725	PASS
177	176	5	9	6.7	7155	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:27:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/29/19

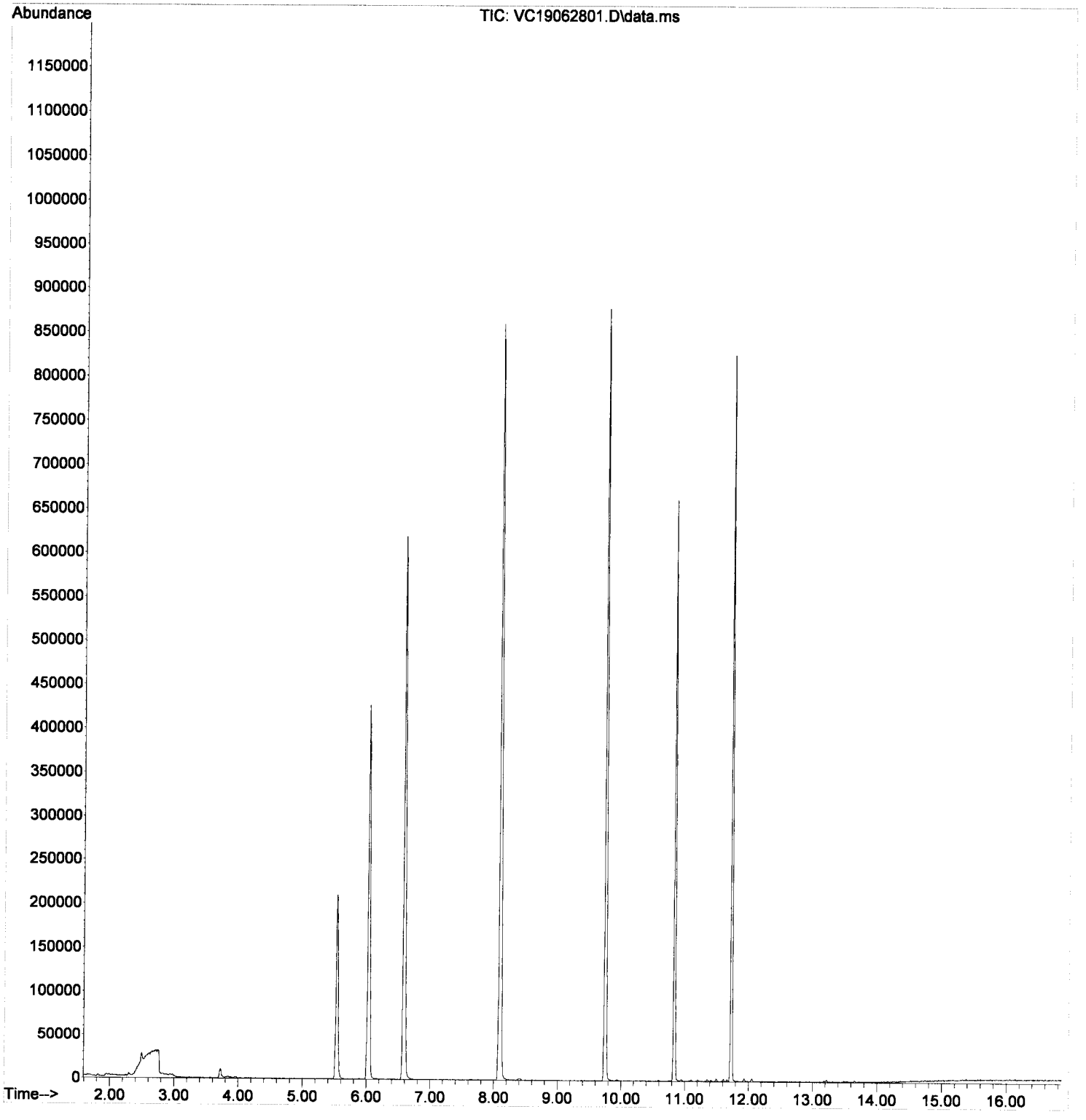
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	346970	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	519330	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	200430	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.536	111	149070	47.14 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	597773	51.13 ug/L		0.00
39) Toluene-d8 (S)	8.091	98	703133	48.46 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	178501	49.32 ug/L		0.00
Target Compounds						Qvalue
3) Chloromethane	1.855	50	563	0.16 ug/L		79
5) Bromomethane	2.293	96	1655	1.18 ug/L		99
6) Chloroethane	2.433	64	227	0.24 ug/L	#	1
9) Carbon Disulfide	3.102	76	435	0.30 ug/L		77
11) Iodomethane	3.236	142	416	1.69 ug/L	#	56
12) Methylene Chloride	3.723	84	6478	2.78 ug/L		91
13) Acetone	3.838	43	2317	1.89 ug/L		94
52) m,p-Xylenes (2)	9.940	91	769	0.08 ug/L		86
60) n-Propylbenzene	10.950	91	1717	0.14 ug/L		93
63) 1,3,5-Trimethylbenzene	11.102	105	981	0.12 ug/L		94
67) tert-Butylbenzene	11.364	91	834	0.19 ug/L	#	77
68) 1,2,4-Trimethylbenzene	11.412	105	977	0.12 ug/L		96
69) sec-Butylbenzene	11.498	105	2146	0.23 ug/L		97
70) 4-Isopropyltoluene	11.613	119	1670	0.21 ug/L		90
71) 1,3-Dichlorobenzene	11.668	146	421	0.09 ug/L	#	27
72) 1,4-Dichlorobenzene	11.735	146	632	0.14 ug/L	#	1
73) n-Butylbenzene	11.929	91	1994	0.29 ug/L		94
74) 1,2-Dichlorobenzene	12.063	146	356	0.09 ug/L	#	55
76) Hexachlorobutadiene	13.177	223	242	0.42 ug/L	#	66
77) 1,2,4-Trichlorobenzene	13.219	180	814	0.36 ug/L		96
78) Naphthalene	13.499	128	827	0.11 ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	573	0.27 ug/L		70

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:27:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/29/19

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	98	0.00	
2		Dichlorodifluoromethane	20.000	18.715	6.4	89	0.00	
3	P	Chloromethane	20.000	17.968	10.2	89	0.00	
4	C	Vinyl Chloride	20.000	19.870	0.6	94	0.00	
5		Bromomethane	20.000	22.269	-11.3	111	0.00	
6		Chloroethane	20.000	20.194	-1.0	99	0.00	← EOS ✓
7		Trichlorofluoromethane	20.000	21.083	-5.4	104	0.01	
8	C	1,1-Dichloroethene	20.000	25.652	-28.3#	127	0.00	-QS6 ✓
9		Carbon Disulfide	20.000	25.378	-26.9#	127	0.01	✓
10		Freon 113	20.000	24.787	-23.9#	118	0.00	NR ↓
11		Iodomethane	20.000	18.964	5.2	104	0.00	
12		Methylene Chloride	20.000	24.106	-20.5#	122	0.00	-QSL ✓
13		Acetone	40.000	36.061	9.8	88	0.00	
14		t-1,2-Dichloroethene	20.000	23.004	-15.0	109	0.00	
15		n-Hexane	20.000	22.503	-12.5	113	0.00	
16		Methyl-tert-butyl-ether	20.000	21.511	-7.6	104	0.00	
17	P	1,1-Dichloroethane	20.000	21.718	-8.6	102	0.00	
18		Acrylonitrile	20.000	20.470	-2.3	102	0.00	
19		c-1,2-Dichloroethene	20.000	20.232	-1.2	96	0.00	
20		2,2-Dichloropropane	20.000	25.398	-27.0#	120	0.00	-QSL ✓
21		Bromochloromethane	20.000	20.744	-3.7	95	0.00	
22	C	Chloroform	20.000	20.900	-4.5	101	0.00	
23		Carbon Tetrachloride	20.000	25.099	-25.5#	112	0.00	-QSL ✓
24		Tetrahydrofuran	20.000	18.617	6.9	91	0.00	
25		1,1,1-Trichloroethane	20.000	22.731	-13.7	108	0.00	
26	S	Dibromofluoromethane (S)	50.000	49.408	1.2	94	0.00	
27		1,1-Dichloropropene	20.000	21.667	-8.3	103	0.00	
28		2-Butanone (MEK)	40.000	38.767	3.1	95	0.00	
29		Benzene	20.000	21.979	-9.9	109	0.00	
30		1,2-Dichloroethane (EDC)	20.000	20.710	-3.6	100	0.00	
31		iso-Butyl Alcohol	500.000	478.032	4.4	94	0.01	
32	S	1,4-Difluorobenzene (S)	50.000	51.127	-2.3	101	0.00	
33		Trichloroethene (TCE)	20.000	22.928	-14.6	109	0.00	
34		Dibromomethane	20.000	21.932	-9.7	105	0.00	
35	C	1,2-Dichloropropane	20.000	20.342	-1.7	98	0.00	
36		Bromodichloromethane	20.000	23.228	-16.1	105	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	100	0.00	
38		c-1,3-Dichloropropene	20.000	22.537	-12.7	103	0.00	
39	S	Toluene-d8 (S)	50.000	48.059	3.9	97	0.00	
40	C	Toluene	20.000	20.458	-2.3	107	0.00	
41		Tetrachloroethene (PCE)	20.000	21.657	-8.3	111	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	38.241	4.4	95	0.00	
43		t-1,3-Dichloropropene	20.000	22.089	-10.4	100	0.00	
44		1,1,2-Trichloroethane	20.000	21.165	-5.8	104	0.00	
45		Dibromochloromethane	20.000	19.452	2.7	106	0.00	
46		1,3-Dichloropropane	20.000	20.508	-2.5	99	0.00	
47		1,2-Dibromoethane (EDB)	20.000	22.524	-12.6	105	0.00	
48		2-Hexanone	40.000	39.198	2.0	94	0.00	
49	P	Chlorobenzene	20.000	20.366	-1.8	105	0.00	
50	C	Ethylbenzene	20.000	20.461	-2.3	104	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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		1,1,1,2-Tetrachloroethane	20.000	24.166	-20.8#	108	0.00
52		m,p-Xylenes (2)	40.000	41.831	-4.6	104	0.00
53		o-Xylene	20.000	20.105	-0.5	101	0.00
54		Styrene	20.000	22.439	-12.2	102	0.00
55	P	Bromoform	20.000	19.814	0.9	111	0.00
56		Isopropylbenzene	20.000	21.403	-7.0	105	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	101	0.00
58	S	4-Bromofluorobenzene (S)	50.000	49.121	1.8	98	0.00
59		Bromobenzene	20.000	20.954	-4.8	106	0.00
60		n-Propylbenzene	20.000	20.703	-3.5	102	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	19.832	0.8	100	0.00
62		2-Chlorotoluene	20.000	21.351	-6.8	107	0.00
63		1,3,5-Trimethylbenzene	20.000	20.874	-4.4	102	0.00
64		1,2,3-Trichloropropane	20.000	20.890	-4.5	106	0.00
65		t-1,4-Dichloro-2-butene	20.000	20.730	-3.7	109	0.00
66		4-Chlorotoluene	20.000	20.300	-1.5	101	0.00
67		tert-Butylbenzene	20.000	20.780	-3.9	99	0.00
68		1,2,4-Trimethylbenzene	20.000	20.456	-2.3	102	0.00
69		sec-Butylbenzene	20.000	21.766	-8.8	104	0.00
70		4-Isopropyltoluene	20.000	21.505	-7.5	104	0.00
71		1,3-Dichlorobenzene	20.000	20.022	-0.1	105	0.00
72		1,4-Dichlorobenzene	20.000	20.358	-1.8	107	0.00
73		n-Butylbenzene	20.000	20.131	-0.7	103	0.00
74		1,2-Dichlorobenzene	20.000	20.903	-4.5	106	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	19.937	0.3	116	0.00
76		Hexachlorobutadiene	20.000	21.839	-9.2	105	0.00
77		1,2,4-Trichlorobenzene	20.000	22.462	-12.3	105	0.00
78		Naphthalene	20.000	22.337	-11.7	105	0.00
79		1,2,3-Trichlorobenzene	20.000	22.730	-13.7	107	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	328903	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	489277	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	192230	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.536	111	148115	49.41 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	566627	51.13 ug/L	0.00
39) Toluene-d8 (S)	8.091	98	656908	48.06 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	170511	49.12 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.667	85	40623	18.71 ug/L	97
3) Chloromethane	1.862	50	61636	17.97 ug/L	98
4) Vinyl Chloride	1.953	62	46191	19.87 ug/L	99
5) Bromomethane	2.306	96	29649	22.27 ug/L	99
6) Chloroethane	2.440	64	17815	20.19 ug/L	83
7) Trichlorofluoromethane	2.567	101	27552	21.08 ug/L	94
8) 1,1-Dichloroethene	3.091	61	66602	25.65 ug/L	93
9) Carbon Disulfide	3.109	76	87452	25.38 ug/L	98
10) Freon 113	3.145	101	47628	24.79 ug/L	87
11) Iodomethane	3.243	142	19665	18.96 ug/L	96
12) Methylene Chloride	3.723	84	53232	24.11 ug/L	94
13) Acetone	3.833	43	41899	36.06 ug/L	91
14) t-1,2-Dichloroethene	3.888	61	68704	23.00 ug/L	88
15) n-Hexane	3.967	86	11935	22.50 ug/L	97
16) Methyl-tert-butyl-ether	4.034	73	182924	21.51 ug/L	98
17) 1,1-Dichloroethane	4.520	63	80481	21.72 ug/L	96
18) Acrylonitrile	4.593	53	30910	20.47 ug/L	94
19) c-1,2-Dichloroethene	5.068	61	68691	20.23 ug/L	96
20) 2,2-Dichloropropane	5.171	77	71097	25.40 ug/L	91
21) Bromochloromethane	5.269	49	40259	20.74 ug/L	95
22) Chloroform	5.354	83	89177	20.90 ug/L	98
23) Carbon Tetrachloride	5.475	117	55312	25.10 ug/L	94
24) Tetrahydrofuran	5.536	42	29503	18.62 ug/L	92
25) 1,1,1-Trichloroethane	5.548	97	75100	22.73 ug/L	97
27) 1,1-Dichloropropene	5.676	75	72738	21.67 ug/L	95
28) 2-Butanone (MEK)	5.688	43	77869	38.77 ug/L	95
29) Benzene	5.932	78	238811	21.98 ug/L	98
30) 1,2-Dichloroethane (EDC)	6.151	62	70365	20.71 ug/L	99
31) iso-Butyl Alcohol	6.260	43	100574	478.03 ug/L	92
33) Trichloroethene (TCE)	6.546	130	65065	22.93 ug/L	97
34) Dibromomethane	6.996	93	32942	21.93 ug/L	92
35) 1,2-Dichloropropane	7.106	63	58452	20.34 ug/L	94
36) Bromodichloromethane	7.179	83	55817	23.23 ug/L	99
38) c-1,3-Dichloropropene	7.884	75	76956	22.54 ug/L	95
40) Toluene	8.152	91	249606	20.46 ug/L	98
41) Tetrachloroethene (PCE)	8.596	166	56756	21.66 ug/L	97
42) 4-Methyl-2-Pentanone (...	8.614	43	125707	38.24 ug/L	100
43) t-1,3-Dichloropropene	8.645	75	69916	22.09 ug/L	95
44) 1,1,2-Trichloroethane	8.821	97	52805	21.16 ug/L	93
45) Dibromochloromethane	9.004	129	39539	19.45 ug/L	90
46) 1,3-Dichloropropane	9.107	76	94134	20.51 ug/L	95
47) 1,2-Dibromoethane (EDB)	9.247	107	52562	22.52 ug/L	93
48) 2-Hexanone	9.497	43	87666	39.20 ug/L	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

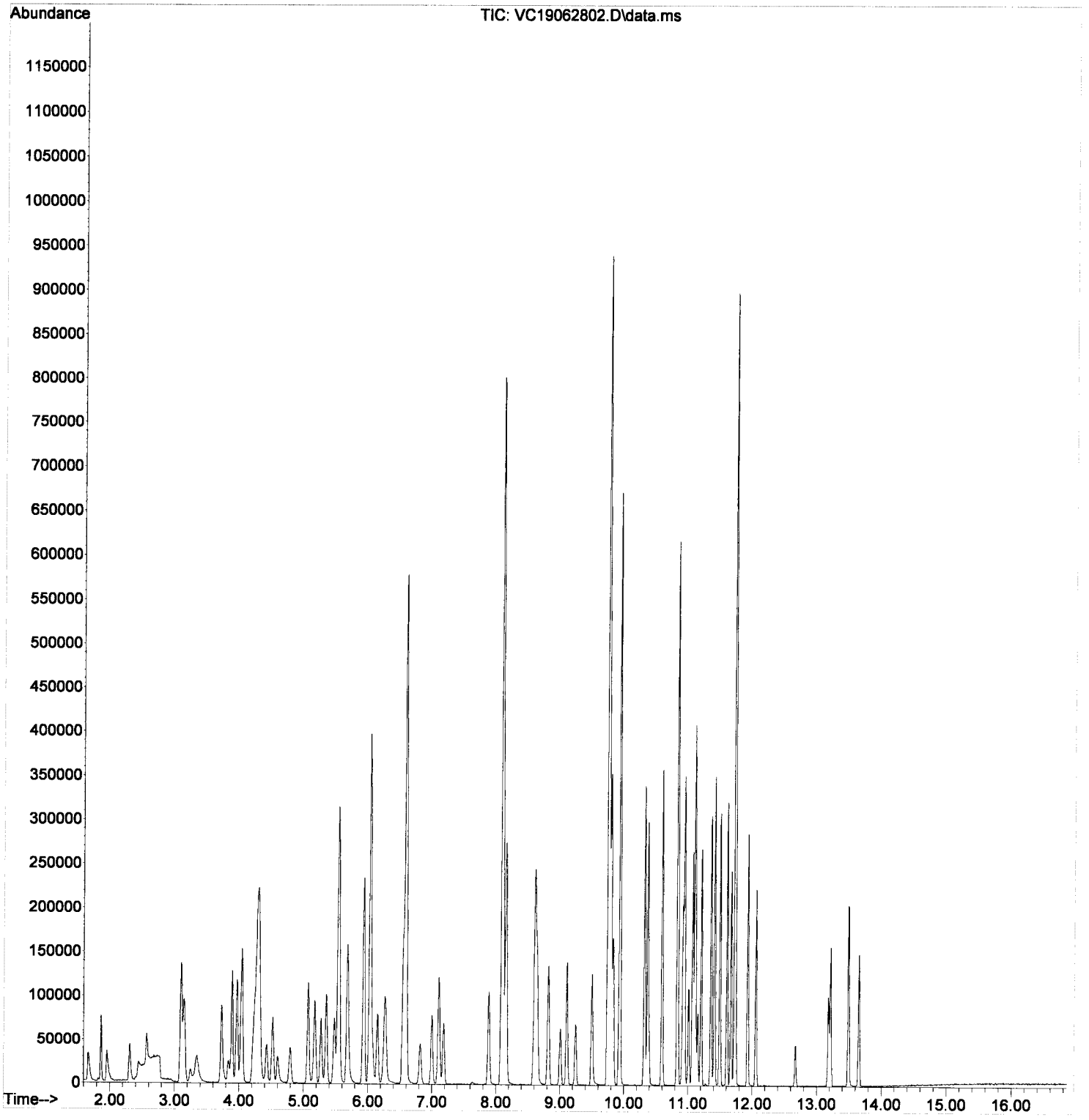
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	150668	20.37 ug/L	99
50) Ethylbenzene	9.795	91	251616	20.46 ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.831	131	46679	24.17 ug/L	99
52) m,p-Xylenes (2)	9.928	91	369312	41.83 ug/L	100
53) o-Xylene	10.318	91	184571	20.10 ug/L	99
54) Styrene	10.367	104	139183	22.44 ug/L	99
55) Bromoform	10.391	173	21300	19.81 ug/L	98
56) Isopropylbenzene	10.592	105	222512	21.40 ug/L	96
59) Bromobenzene	10.920	156	54920	20.95 ug/L	92
60) n-Propylbenzene	10.938	91	240827	20.70 ug/L	97
61) 1,1,2,2-Tetrachloroethane	11.011	83	49329	19.83 ug/L	100
62) 2-Chlorotoluene	11.072	126	50872	21.35 ug/L	97
63) 1,3,5-Trimethylbenzene	11.103	105	166268	20.87 ug/L	99
64) 1,2,3-Trichloropropane	11.115	110	21226	20.89 ug/L	93
65) t-1,4-Dichloro-2-butene	11.151	88	6826	20.73 ug/L #	84
66) 4-Chlorotoluene	11.206	91	140915	20.30 ug/L	97
67) tert-Butylbenzene	11.358	91	87678	20.78 ug/L	98
68) 1,2,4-Trimethylbenzene	11.413	105	165822	20.46 ug/L	97
69) sec-Butylbenzene	11.498	105	194857	21.77 ug/L	98
70) 4-Isopropyltoluene	11.608	119	160866	21.51 ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	87880	20.02 ug/L	99
72) 1,4-Dichlorobenzene	11.735	146	89448	20.36 ug/L	98
73) n-Butylbenzene	11.930	91	131312	20.13 ug/L	100
74) 1,2-Dichlorobenzene	12.058	146	79205	20.90 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	11430	19.94 ug/L	96
76) Hexachlorobutadiene	13.177	223	12202	21.84 ug/L	96
77) 1,2,4-Trichlorobenzene	13.214	180	48876	22.46 ug/L	98
78) Naphthalene	13.493	128	159974	22.34 ug/L	97
79) 1,2,3-Trichlorobenzene	13.652	180	46738	22.73 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19

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 (IS)	50.000	50.000	0.0	101	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	47.652	4.7	96	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	47.306	5.4	95	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	97	0.00
5	H	CA-LUFT (C5-C12)	500.000	556.001	-11.2	112	0.00
6	H	TPHg (C5-C9)	500.000	571.665	-14.3	113	0.00
7	H	TPHg (C6-C10)	500.000	558.782	-11.8	113	0.00
8	H	NWTPH-Gx	500.000	512.342	-2.5	111	0.00
9		Benzene (NR)	-1.000	0.000	0.0	115	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	97	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	116	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	98	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	121	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19 6/28/19 6/28/19

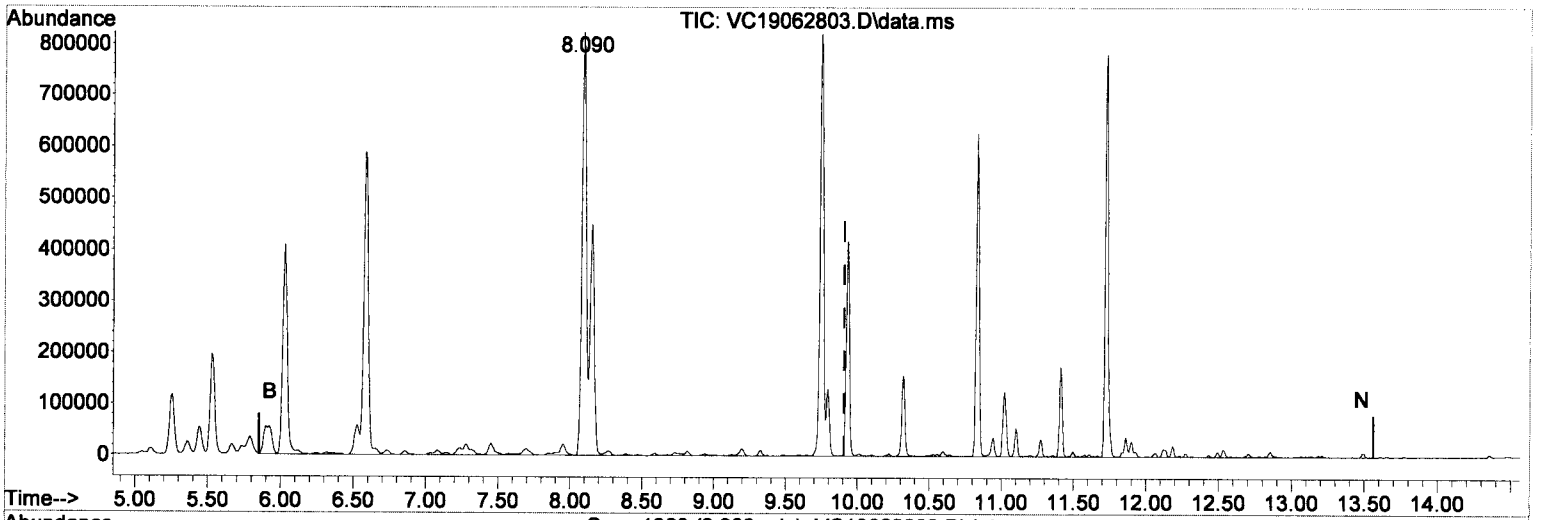
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	334072	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1276778	47.65	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	893413	47.31	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1406698	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1766378	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1115295	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6748046m	556.00	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5891497m	571.66	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4554175m	558.78	ug/L	
8) NWTPH-Gx	9.906	TIC	3652095m	512.34	ug/L	

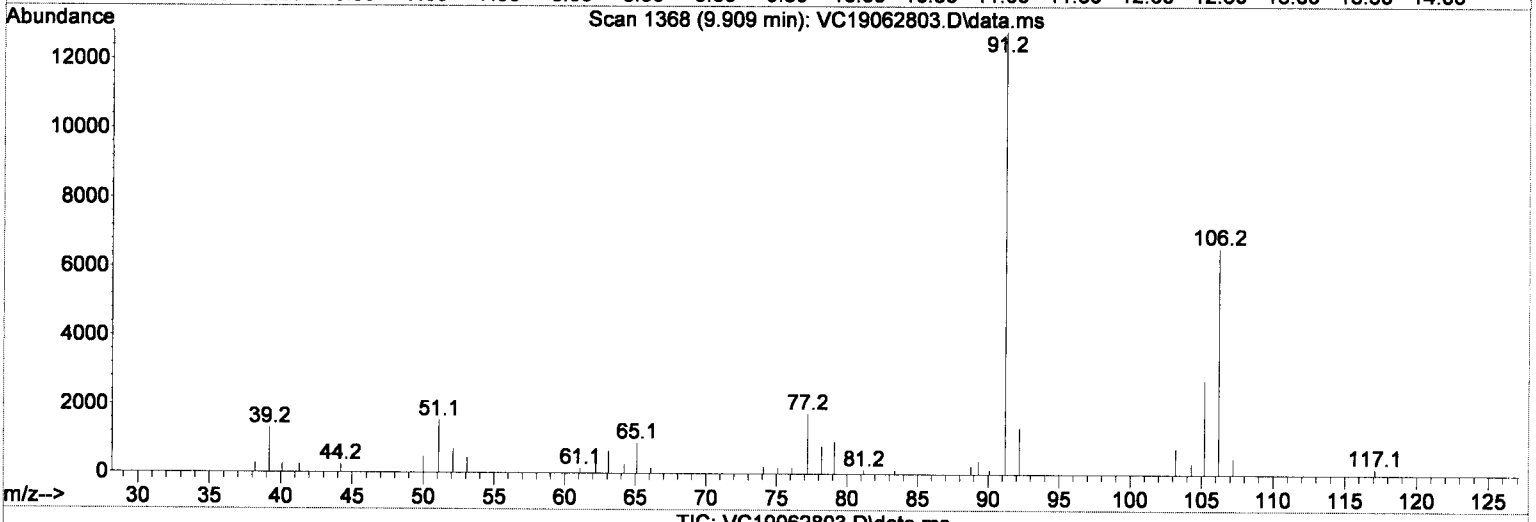
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





TIC: VC19062803.D\data.ms

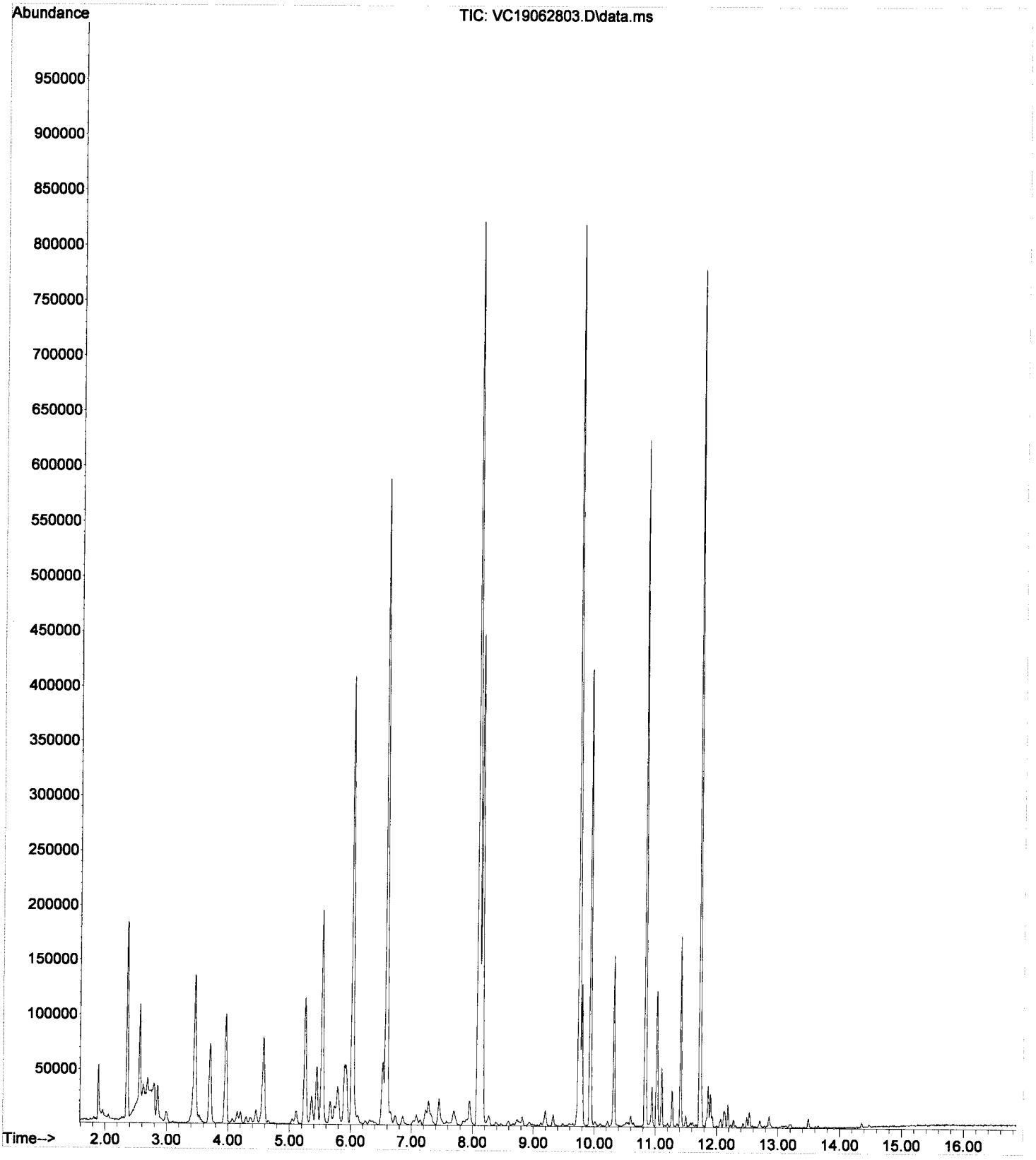
(8) NWTPH-Gx (H)

9.906min (0.000) 512.34 ug/L m

response 3652095

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-06\9F28034\VC19062803.D
Operator : TB
Acquired : 28 Jun 2019 11:57 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9061492-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
Vial Number: 3



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.034	168	350970	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1322693	46.99	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	947924	47.78	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1471392	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1818302	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1126652	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	544921m	11.78	ug/L	
6) TPHg (C5-C9)	9.906	TIC	544609m	8.26	ug/L	
7) TPHg (C6-C10)	9.906	TIC	467447m	16.95	ug/L	
8) NWTPH-Gx	9.906	TIC	4019m	34.37	ug/L	

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

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:19 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

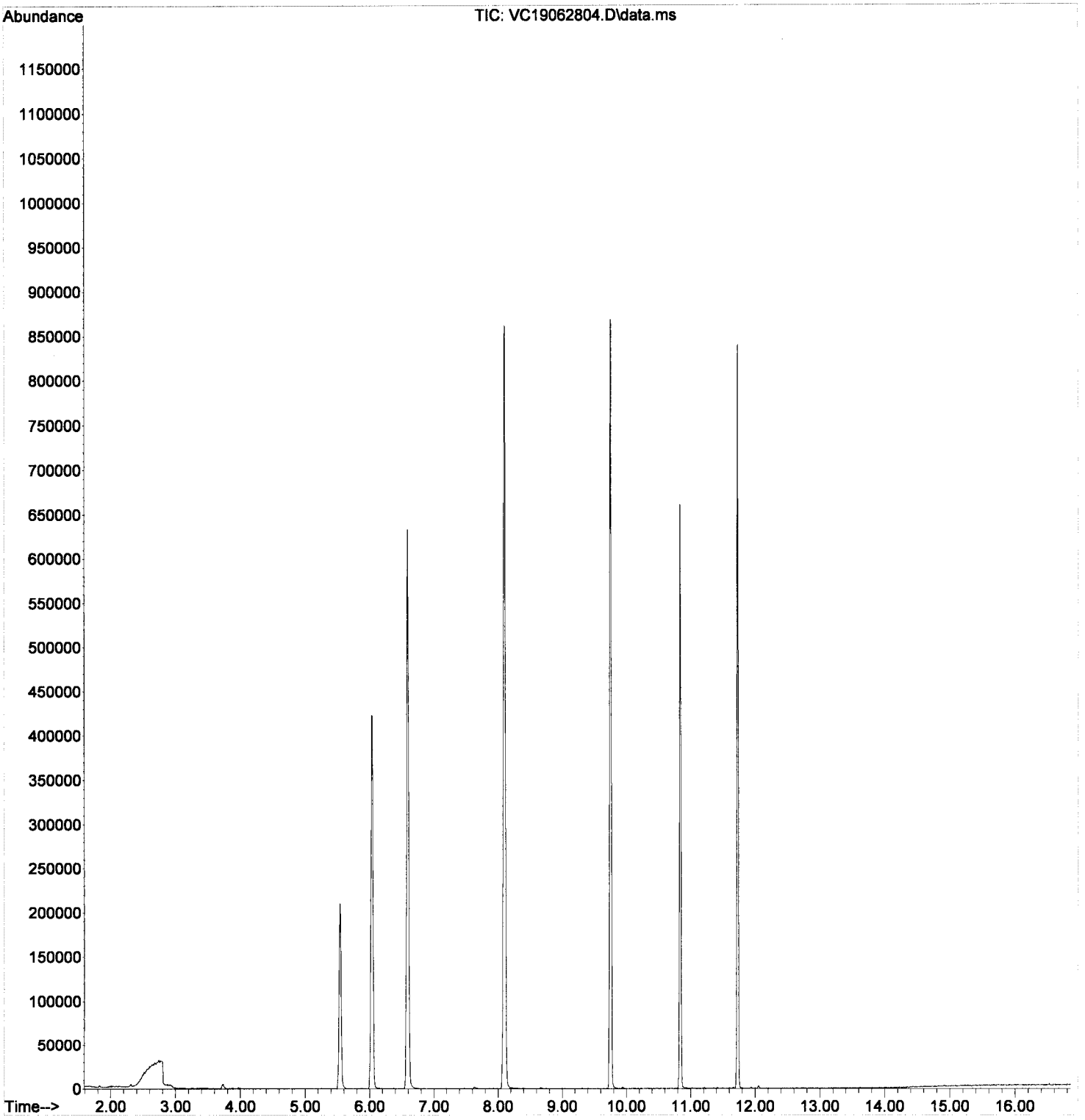
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.034	168	350970	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	518347	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	198565	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.535	111	148612	46.46 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	604079	51.08 ug/L	0.00
39) Toluene-d8 (S)	8.097	98	704161	48.63 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	178421	49.76 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.861	50	565	0.15 ug/L	77
5) Bromomethane	2.311	96	1771	1.25 ug/L	80
6) Chloroethane	2.488	64	260	0.28 ug/L #	1
9) Carbon Disulfide	3.108	76	147	0.21 ug/L	77
11) Iodomethane	3.254	142	495	1.76 ug/L #	83
12) Methylene Chloride	3.729	84	3058	1.30 ug/L	92
13) Acetone	3.862	43	336	0.27 ug/L #	42
27) 1,1-Dichloropropene	5.608	75	329	0.09 ug/L #	41
52) m,p-Xylenes (2)	9.940	91	855	0.09 ug/L	83
68) 1,2,4-Trimethylbenzene	11.418	105	682	0.08 ug/L	89
73) n-Butylbenzene	11.935	91	812	0.12 ug/L	67

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:19 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	332559	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	516646	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	215484	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.530	111	165510	54.60 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	577696	51.55 ug/L	0.00
39) Toluene-d8 (S)	8.091	98	677305	46.93 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	190198	48.88 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.661	85	42568	19.39 ug/L	99
3) Chloromethane	1.862	50	60297	17.38 ug/L	98
4) Vinyl Chloride	1.947	62	47544	20.23 ug/L	94
5) Bromomethane	2.300	96	29729	22.08 ug/L	98
6) Chloroethane	2.434	64	20265	22.72 ug/L	91
7) Trichlorofluoromethane	2.568	101	33102	25.05 ug/L	97
8) 1,1-Dichloroethene	3.103	61	65903	25.10 ug/L	91
9) Carbon Disulfide	3.115	76	84396	24.37 ug/L	98
10) Freon 113	3.152	101	46390	23.88 ug/L	88
11) Iodomethane	3.249	142	20541	19.54 ug/L	100
12) Methylene Chloride	3.730	84	52544	23.53 ug/L	96
13) Acetone	3.833	43	41416	35.25 ug/L	86
14) t-1,2-Dichloroethene	3.888	61	67242	22.27 ug/L	91
15) n-Hexane	3.973	86	10668	19.68 ug/L	95
16) Methyl-tert-butyl-ether	4.034	73	174441	20.29 ug/L	98
17) 1,1-Dichloroethane	4.520	63	85183	22.73 ug/L	99
18) Acrylonitrile	4.593	53	30057	19.69 ug/L	99
19) c-1,2-Dichloroethene	5.068	61	71594	20.86 ug/L	94
20) 2,2-Dichloropropane	5.171	77	64626	22.83 ug/L	85
21) Bromochloromethane	5.263	49	39179	19.97 ug/L	98
22) Chloroform	5.348	83	90957	21.08 ug/L	97
23) Carbon Tetrachloride	5.476	117	54214	24.33 ug/L	99
24) Tetrahydrofuran	5.530	42	27837	17.37 ug/L	92
25) 1,1,1-Trichloroethane	5.549	97	73864	22.11 ug/L	95
27) 1,1-Dichloropropene	5.676	75	71042	20.93 ug/L	98
28) 2-Butanone (MEK)	5.682	43	76609	37.72 ug/L	95
29) Benzene	5.932	78	231640	21.08 ug/L	97
30) 1,2-Dichloroethane (EDC)	6.145	62	66574	19.38 ug/L	100
31) iso-Butyl Alcohol	6.260	43	99657	468.47 ug/L	94
33) Trichloroethene (TCE)	6.546	130	62874	21.91 ug/L	94
34) Dibromomethane	6.996	93	31824	20.95 ug/L	96
35) 1,2-Dichloropropane	7.106	63	56383	19.41 ug/L	99
36) Bromodichloromethane	7.185	83	52554	21.63 ug/L	100
38) c-1,3-Dichloropropene	7.891	75	70978	19.69 ug/L	97
40) Toluene	8.152	91	242337	18.81 ug/L	97
41) Tetrachloroethene (PCE)	8.602	166	53416	19.30 ug/L	98
42) 4-Methyl-2-Pentanone (...	8.615	43	127550	36.75 ug/L	98
43) t-1,3-Dichloropropene	8.645	75	67535	20.21 ug/L	97
44) 1,1,2-Trichloroethane	8.815	97	50903	19.32 ug/L	98
45) Dibromochloromethane	9.004	129	38433	17.97 ug/L	98
46) 1,3-Dichloropropane	9.107	76	90432	18.66 ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	50683	20.57 ug/L	100
48) 2-Hexanone	9.497	43	87039	36.86 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

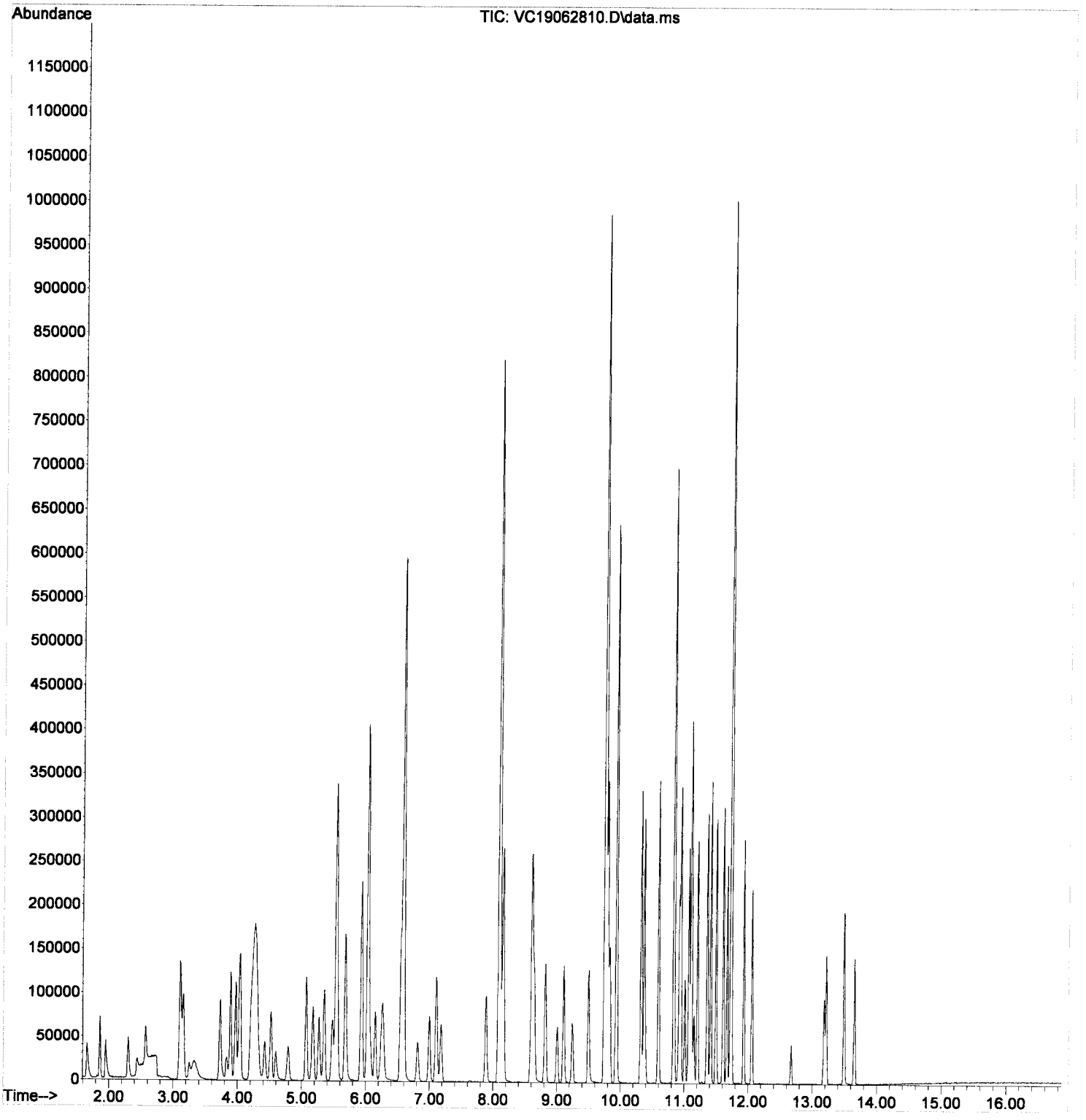
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	145675	18.65 ug/L	99
50) Ethylbenzene	9.795	91	241128	18.57 ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.825	131	44394	21.77 ug/L	97
52) m,p-Xylenes (2)	9.929	91	355097	38.09 ug/L	99
53) o-Xylene	10.318	91	179011	18.47 ug/L	99
54) Styrene	10.367	104	139469	21.29 ug/L	97
55) Bromoform	10.385	173	22477	19.80 ug/L	98
56) Isopropylbenzene	10.592	105	209671	19.10 ug/L	97
59) Bromobenzene	10.920	156	57214	19.47 ug/L	99
60) n-Propylbenzene	10.938	91	234361	17.97 ug/L	97
61) 1,1,2,2-Tetrachloroethane	11.005	83	53059	19.03 ug/L	97
62) 2-Chlorotoluene	11.066	126	51090	19.13 ug/L	94
63) 1,3,5-Trimethylbenzene	11.103	105	163873	18.35 ug/L	97
64) 1,2,3-Trichloropropane	11.115	110	20597	18.08 ug/L	87
65) t-1,4-Dichloro-2-butene	11.151	88	6299	17.32 ug/L #	88
66) 4-Chlorotoluene	11.206	91	142276	18.28 ug/L	94
67) tert-Butylbenzene	11.358	91	84842	17.94 ug/L	96
68) 1,2,4-Trimethylbenzene	11.413	105	164176	18.07 ug/L	98
69) sec-Butylbenzene	11.498	105	189116	18.84 ug/L	99
70) 4-Isopropyltoluene	11.608	119	155421	18.54 ug/L	98
71) 1,3-Dichlorobenzene	11.669	146	91227	18.54 ug/L	99
72) 1,4-Dichlorobenzene	11.742	146	89702	18.21 ug/L	98
73) n-Butylbenzene	11.930	91	126222	17.26 ug/L	99
74) 1,2-Dichlorobenzene	12.058	146	80648	18.99 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	10980	17.25 ug/L	90
76) Hexachlorobutadiene	13.177	223	11499	18.36 ug/L	91
77) 1,2,4-Trichlorobenzene	13.214	180	46099	18.90 ug/L	91
78) Naphthalene	13.494	128	154315	19.22 ug/L	98
79) 1,2,3-Trichlorobenzene	13.652	180	44089	19.13 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:59:14 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

7/1/19

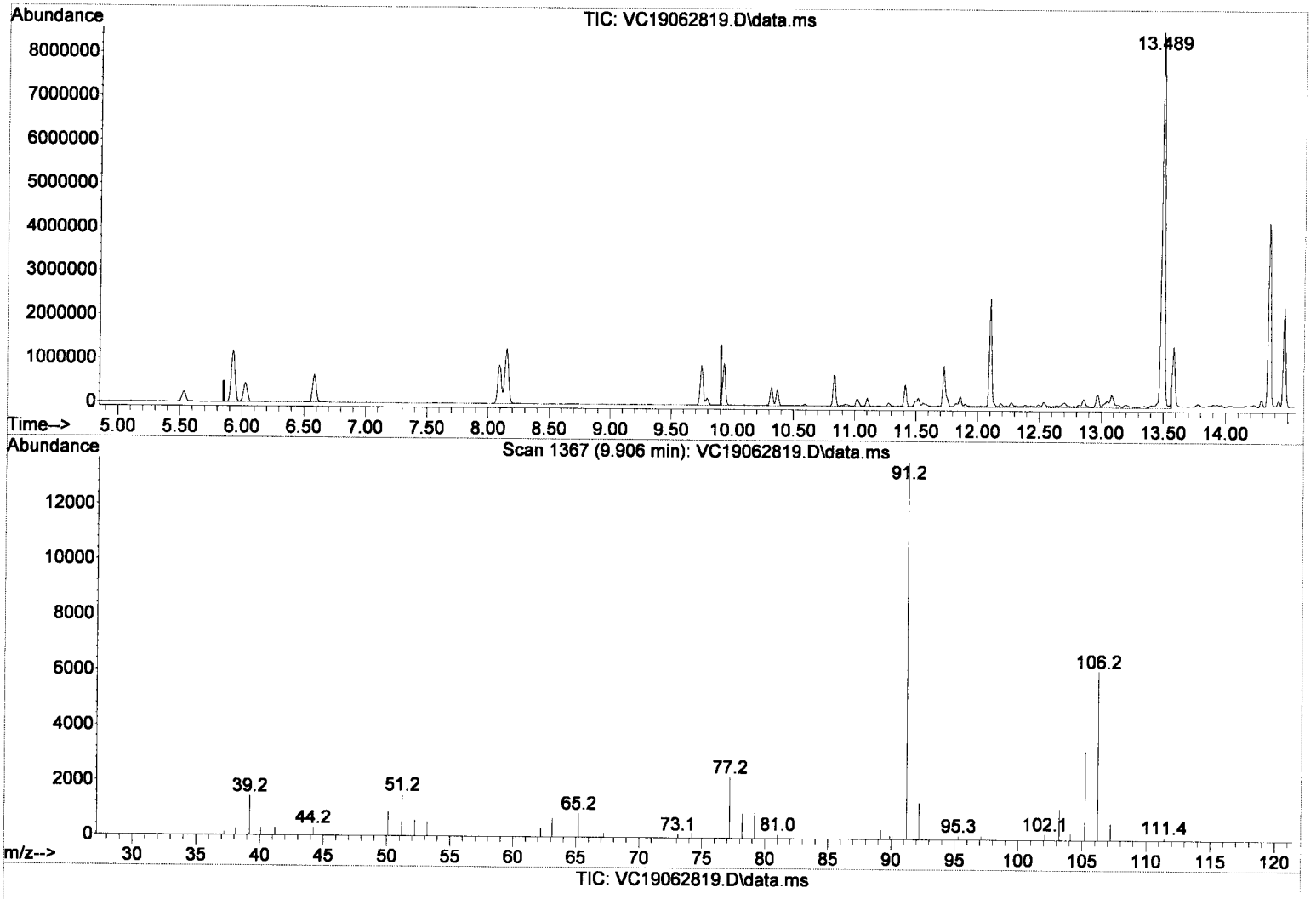
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.030	168	365157	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.584	TIC	1354940	46.26	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.830	TIC	1040226	50.39	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.747	TIC	1560923	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1831516	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1469302	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	15596023m	1216.05	ug/L	
6) TPHg (C5-C9)	9.906	TIC	8920757m	810.69	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8846319m	1026.83	ug/L	
8) NWTPH-Gx	9.906	TIC	31173433m	3874.03	ug/L	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:59:14 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 3874.03 ug/L m

response 31173433

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	2.54#
0.00	0.00	1.83#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

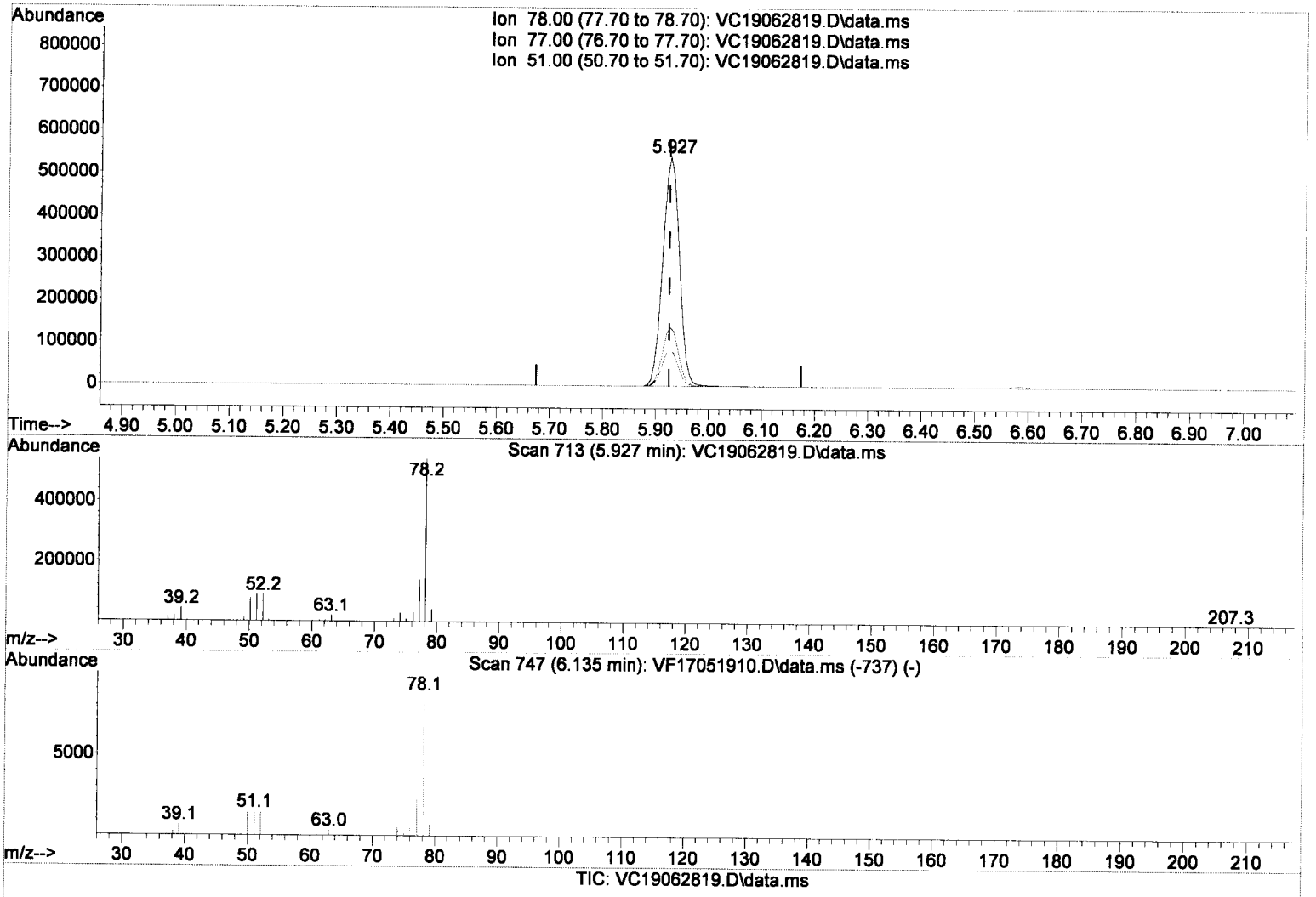
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.030	168	365157	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.747	117	539064	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	217408	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.532	111	161090	48.40 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.584	114	619478	50.35 ug/L	0.00
39) Toluene-d8 (S)	8.093	98	724674	48.12 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.836	174	194450	49.53 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.851	50	404	0.11 ug/L	92 CMOL
5) Bromomethane	2.295	96	1394	0.94 ug/L	93
6) Chloroethane	2.435	64	132	0.13 ug/L #	1
9) Carbon Disulfide	3.110	76	882	0.43 ug/L	77
11) Iodomethane	3.250	142	179	1.48 ug/L #	47
12) Methylene Chloride	3.719	84	4487	1.83 ug/L	96
13) Acetone	3.840	43	298	0.23 ug/L #	42
15) n-Hexane	3.962	86	583	Below Cal #	41
29) Benzene	5.927	78	1187495	98.44 ug/L	96
40) Toluene	8.154	91	1140346	84.83 ug/L	98
42) 4-Methyl-2-Pentanone (...	8.585	43	385	0.11 ug/L #	41
50) Ethylbenzene	9.796	91	113528	8.38 ug/L	99
52) m,p-Xylenes (2)	9.930	91	523154	53.78 ug/L	99
53) o-Xylene	10.319	91	235897	23.32 ug/L	98
54) Styrene	10.368	104	174031	25.47 ug/L	99
56) Isopropylbenzene	10.593	105	19476	1.70 ug/L	95
60) n-Propylbenzene	10.946	91	17368	1.32 ug/L	98
62) 2-Chlorotoluene	~~11.013~~	~~126~~	~~1384~~	~~0.51 ug/L #~~	~~1~~ MI CMOL
63) 1,3,5-Trimethylbenzene	11.104	105	87018	9.66 ug/L	98
67) tert-Butylbenzene	11.360	91	1951	0.41 ug/L	89 CMOL
68) 1,2,4-Trimethylbenzene	11.414	105	236420	25.79 ug/L	97
69) sec-Butylbenzene	11.493	105	58425	5.77 ug/L	96
70) 4-Isopropyltoluene	11.609	119	5491	0.65 ug/L	90
73) n-Butylbenzene	11.931	91	4148	0.56 ug/L	91
77) 1,2,4-Trichlorobenzene	13.258	180	213	0.09 ug/L #	1 CMOL
78) Naphthalene	13.495	128	~~5126879~~	~~632.96 ug/L~~	73 RR2
79) 1,2,3-Trichlorobenzene	13.641	180	~~799~~	~~0.34 ug/L #~~	1 CMOL

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(29) Benzene

5.927min (+0.002) 98.44 ug/L

response 1187495

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	25.73
51.00	15.50	16.19
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On    : 28 Jun 2019   7:17 pm
Operator  : TB
Sample    : A9F0684-01@10000
Misc      : 10000X  ~5g/5mLx5uL/50mL GX/8260
ALS Vial  : 19   Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title  : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration
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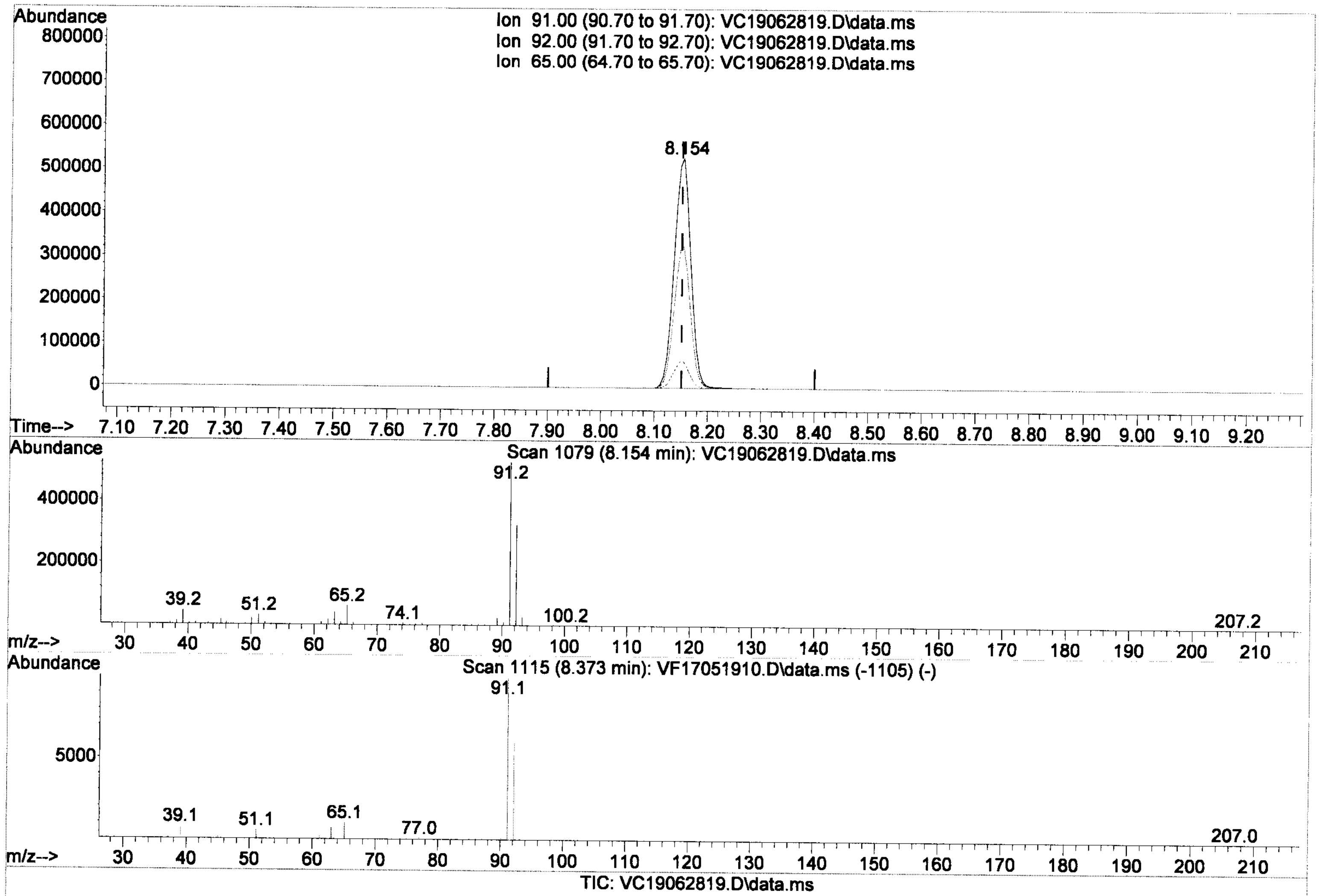


(40) Toluene (C)

8.154min (+0.003) 84.83 ug/L

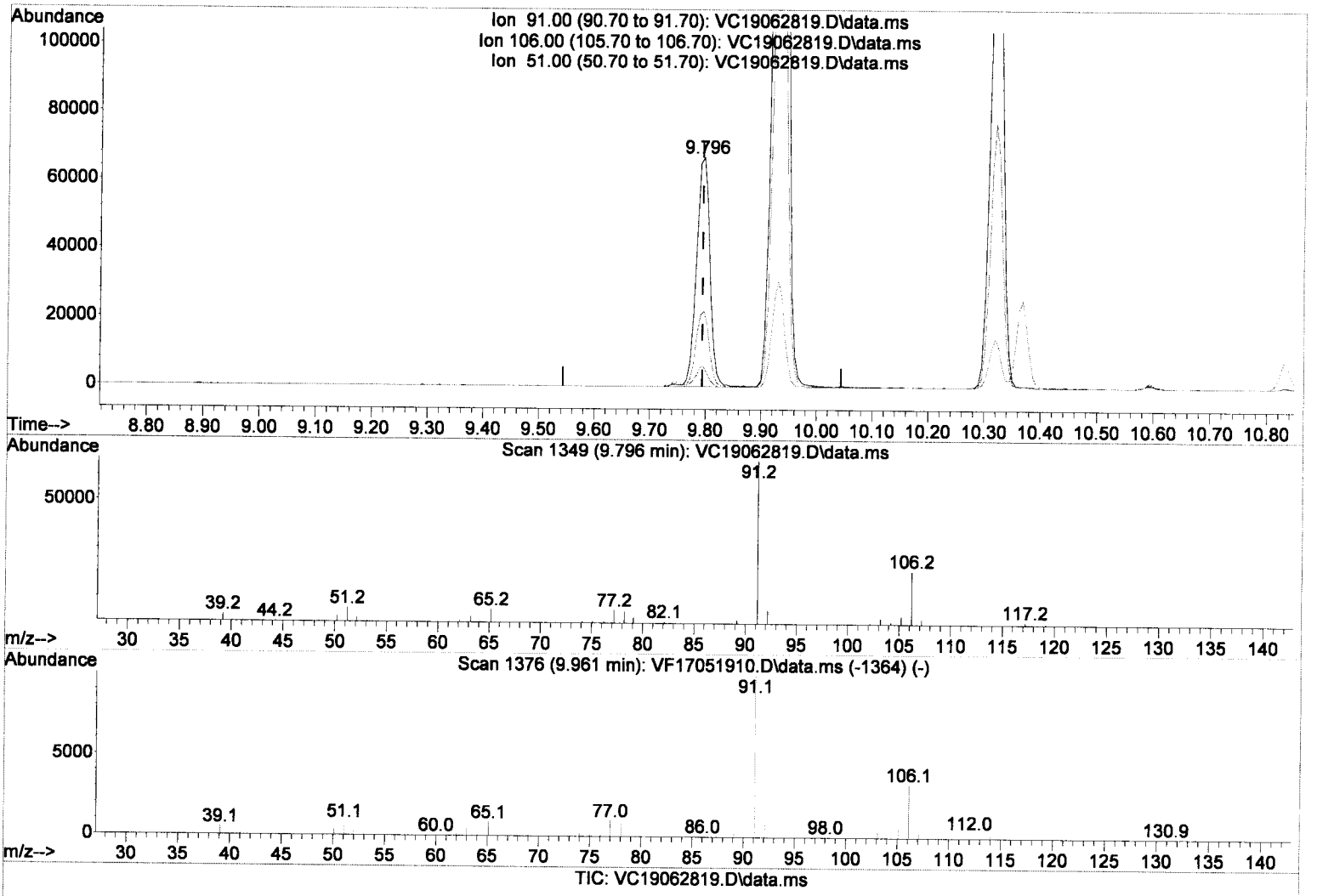
response 1140346

Ion	Exp%	Act%
91.00	100	100
92.00	60.20	61.57
65.00	11.90	11.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(50) Ethylbenzene (C)

9.796min (+0.002) 8.38 ug/L

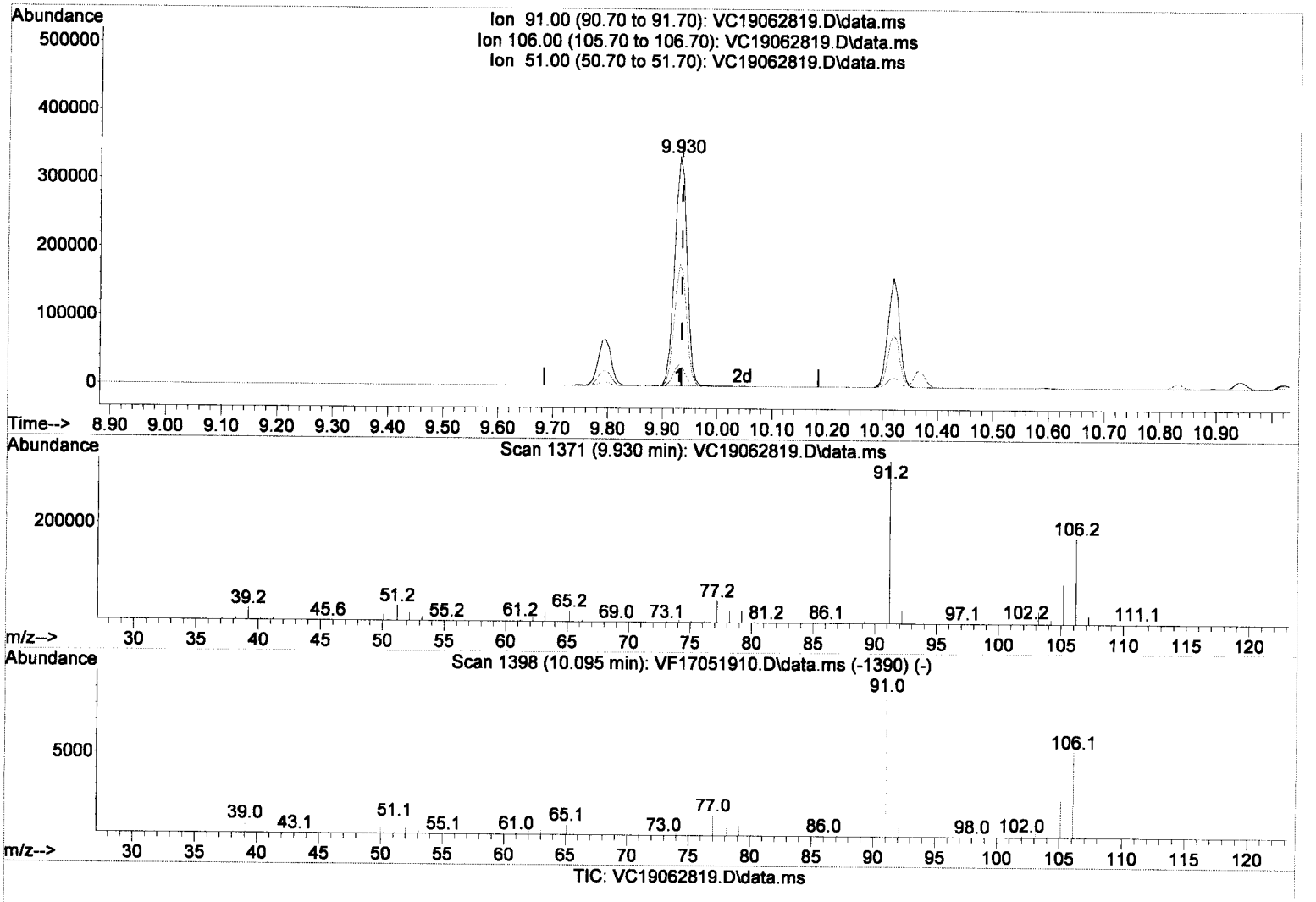
response 113528

Ion	Exp%	Act%
91.00	100	100
106.00	33.20	32.88
51.00	9.50	8.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(52) m,p-Xylenes (2)

9.930min (-0.004) 53.78 ug/L

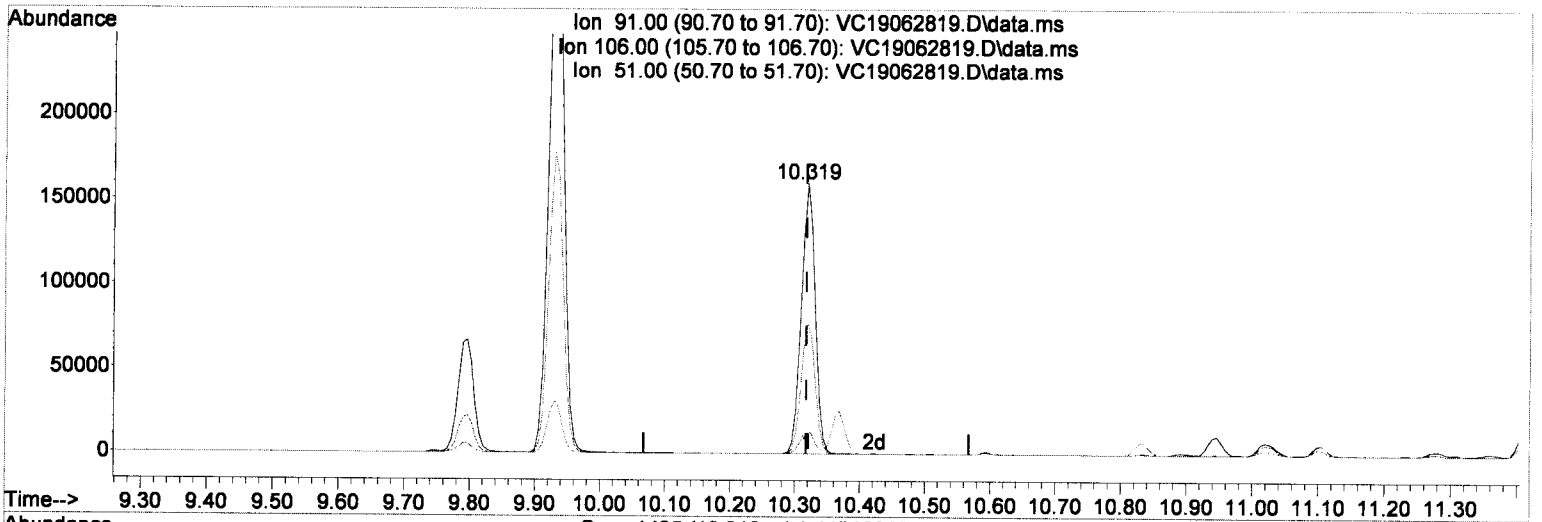
response 523154

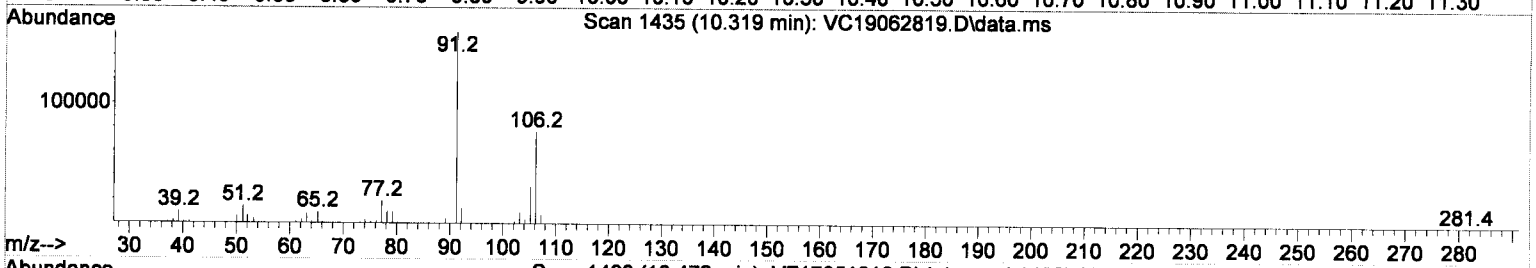
Ion	Exp%	Act%
91.00	100	100
106.00	52.70	53.10
51.00	10.10	9.16
0.00	0.00	0.00

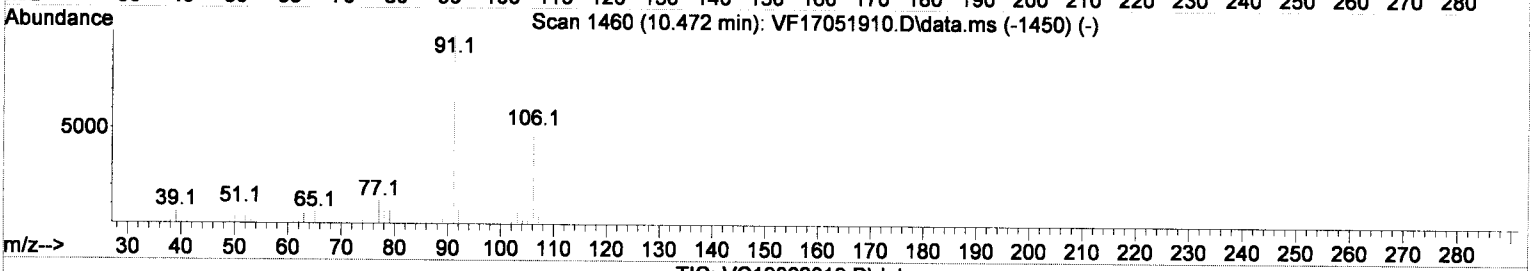
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(53) o-Xylene

10.319min (+0.002) 23.32 ug/L

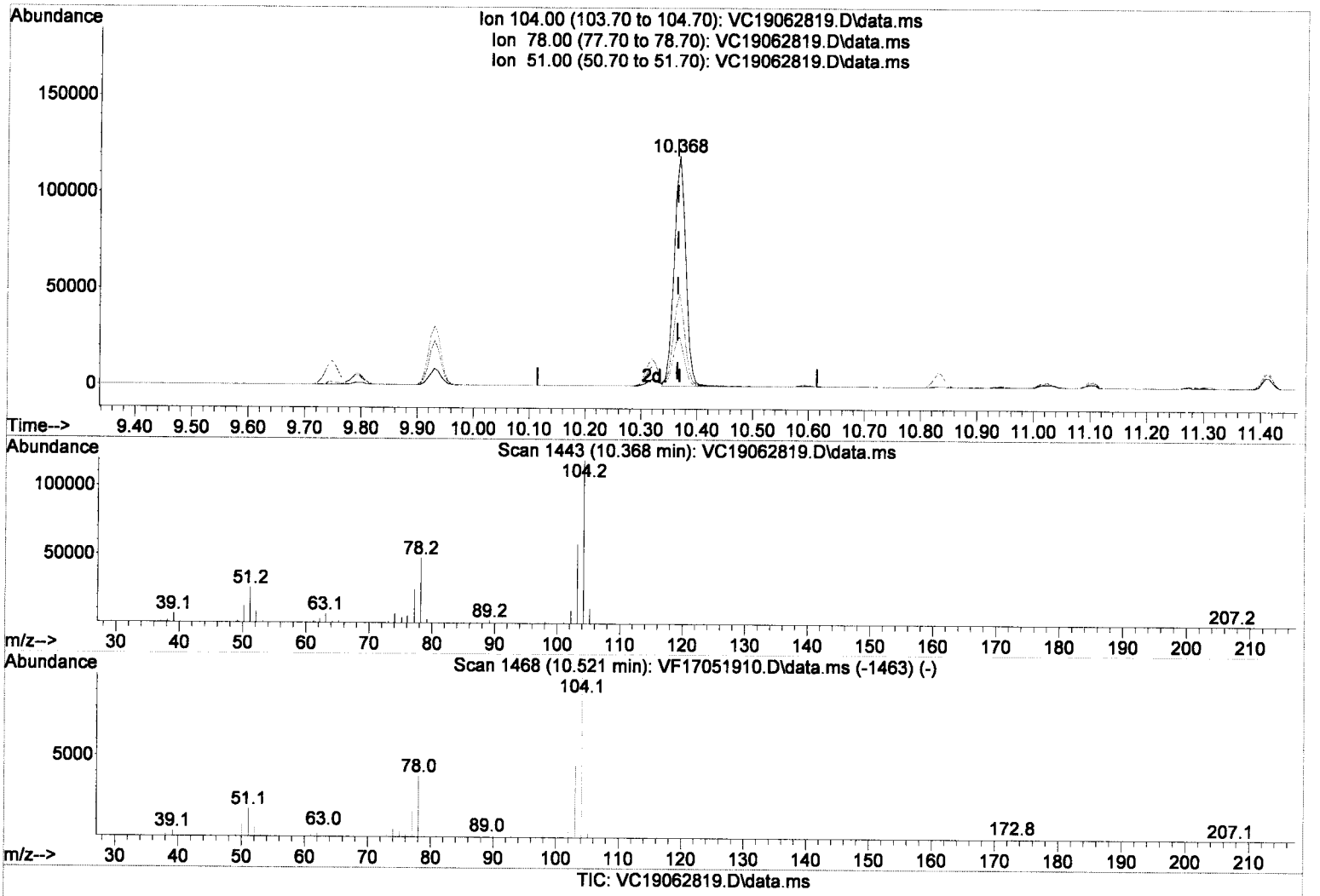
response 235897

Ion	Exp%	Act%
91.00	100	100
106.00	49.40	48.15
51.00	10.00	8.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(54) Styrene

10.368min (+0.003) 25.47 ug/L

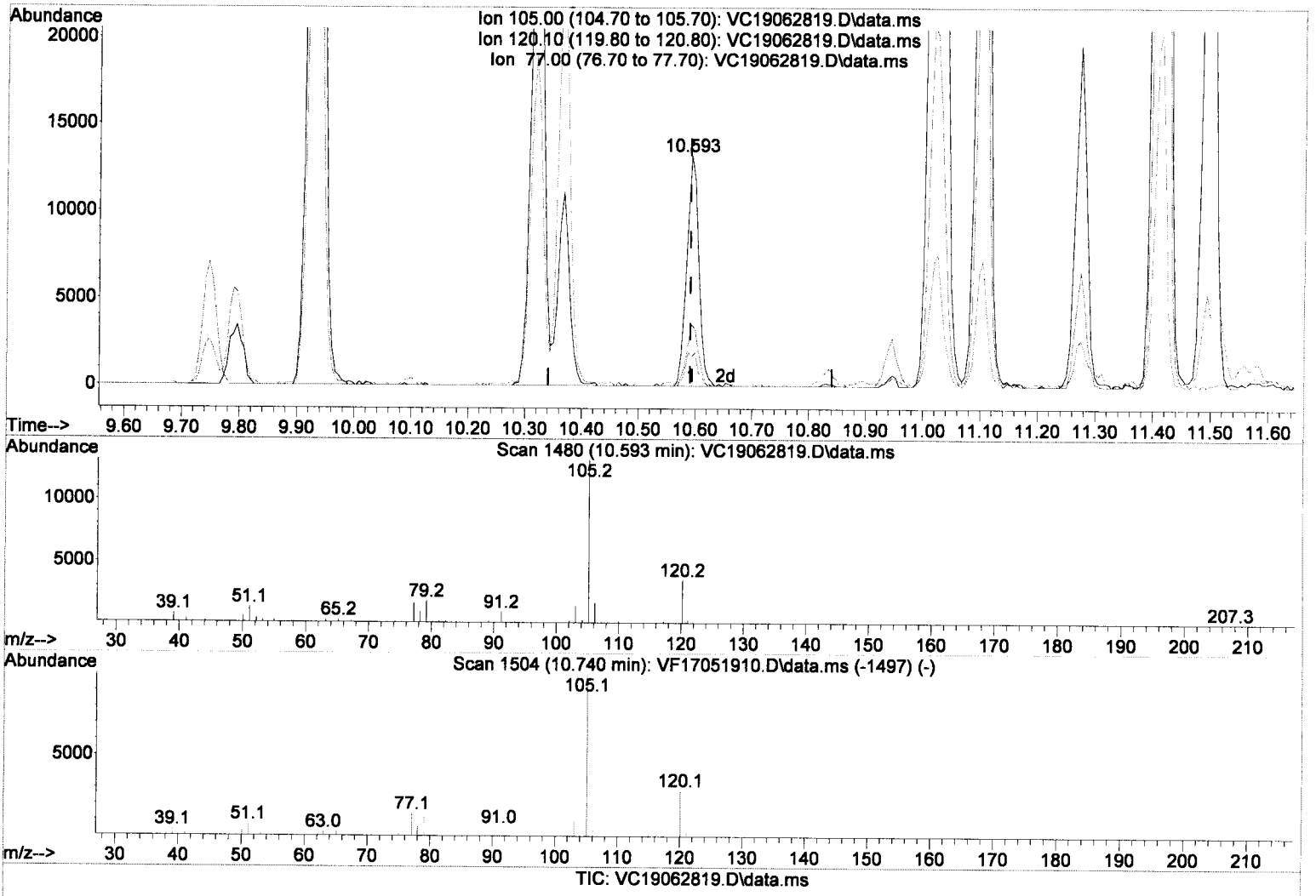
response 174031

Ion	Exp%	Act%
104.00	100	100
78.00	40.60	39.91
51.00	21.90	21.36
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(56) Isopropylbenzene

10.593min (+0.002) 1.70 ug/L

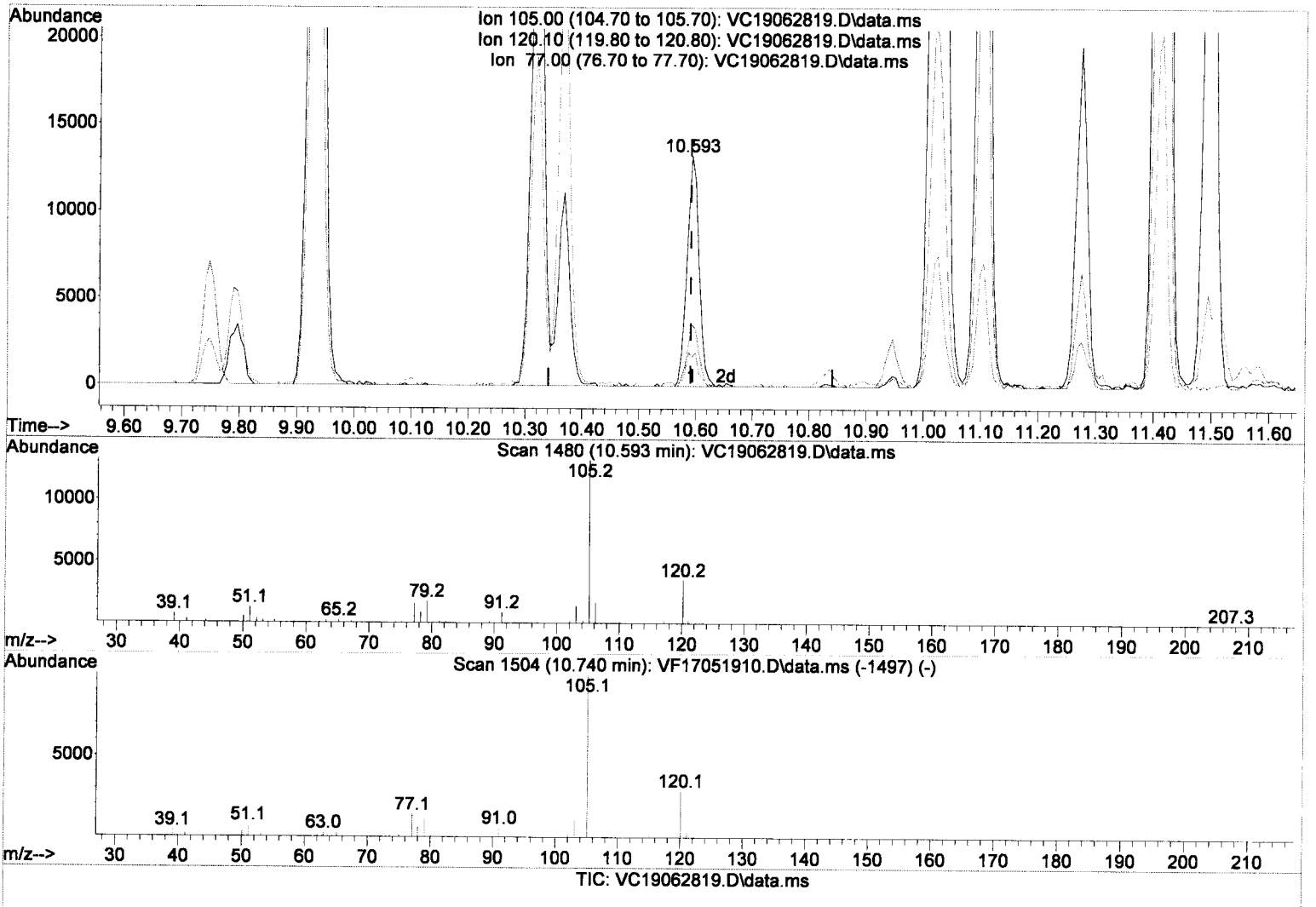
response 19476

Ion	Exp%	Act%
105.00	100	100
120.10	28.60	26.91
77.00	15.60	12.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(56) Isopropylbenzene

10.593min (+0.002) 1.70 ug/L

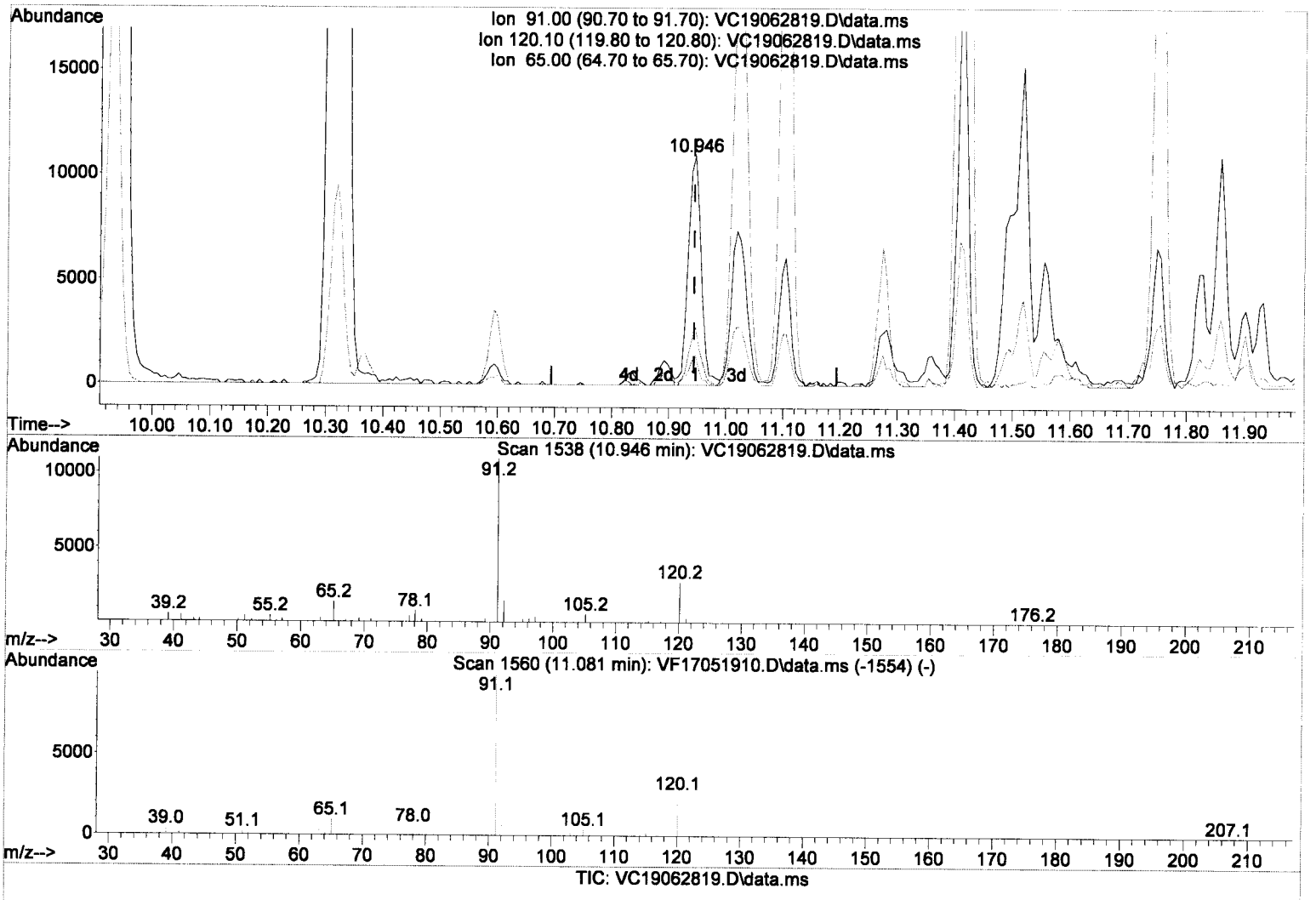
response 19476

Ion	Exp%	Act%
105.00	100	100
120.10	28.60	26.91
77.00	15.60	12.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(60) n-Propylbenzene

10.946min (+0.002) 1.32 ug/L

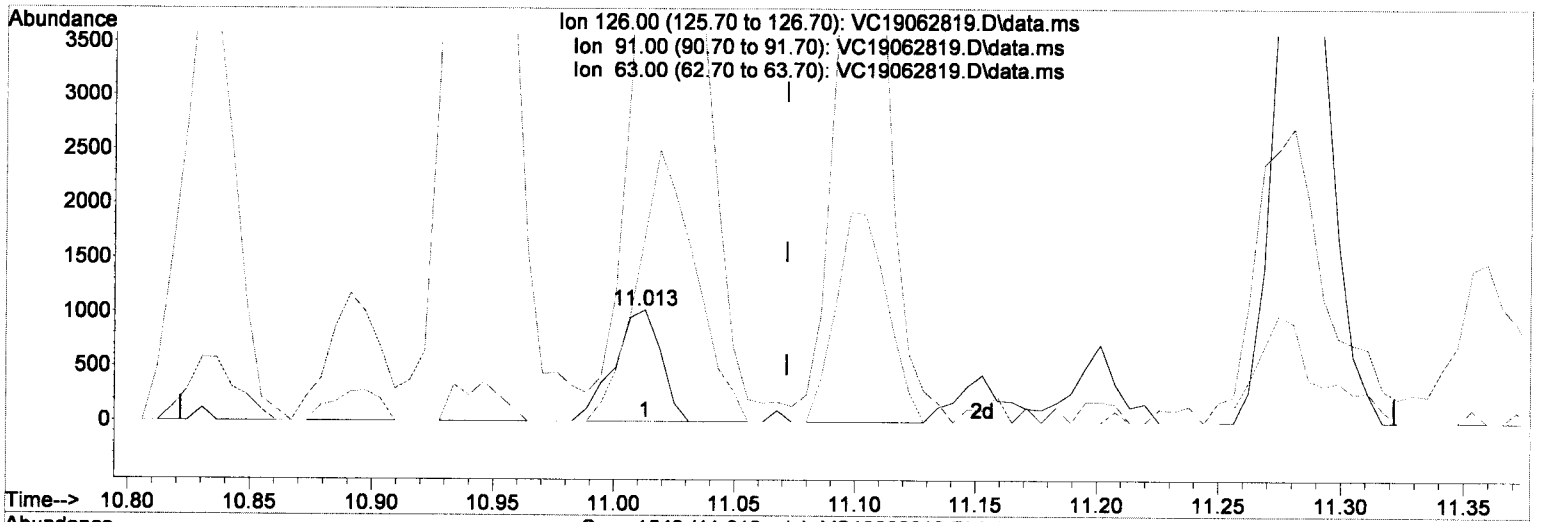
response 17368

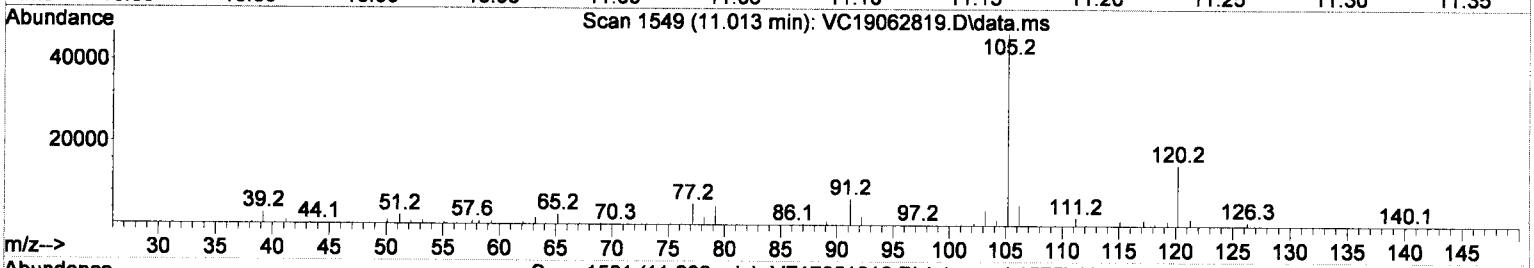
Ion	Exp%	Act%
91.00	100	100
120.10	25.40	25.46
65.00	10.50	13.16
0.00	0.00	0.00

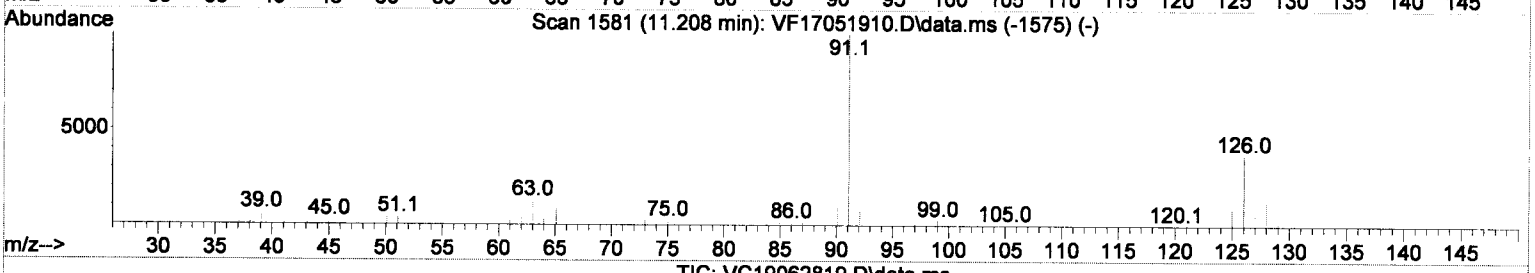
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(62) 2-Chlorotoluene

11.013min (-0.059) 0.51 ug/L

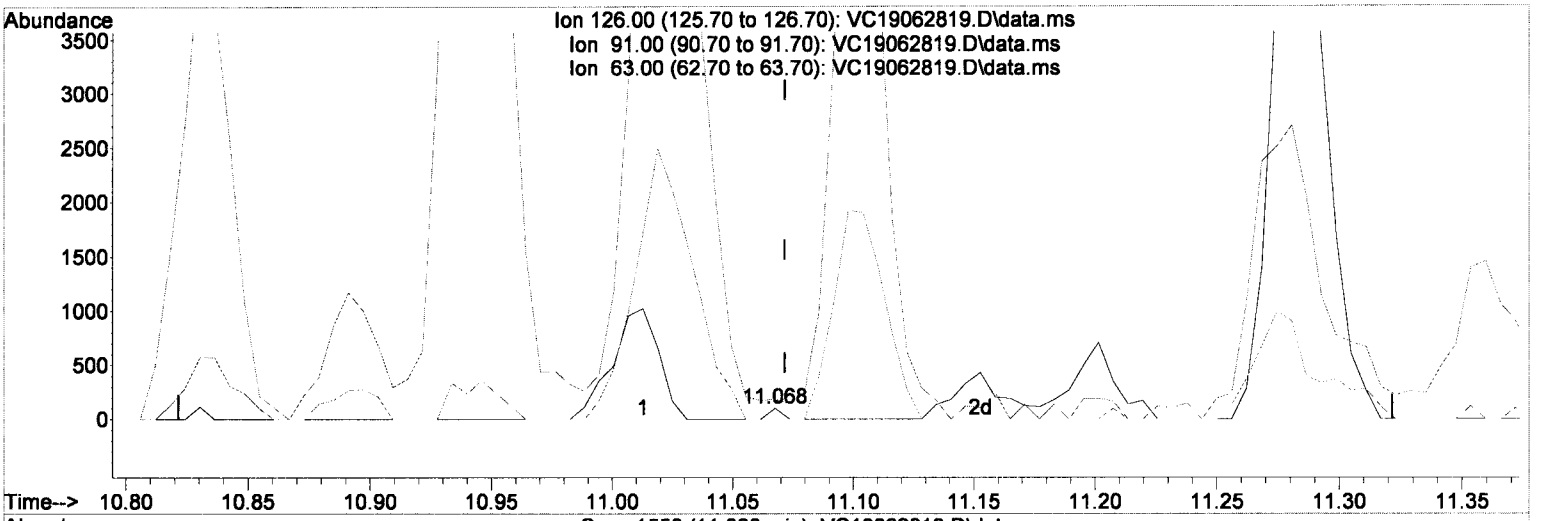
response 1384

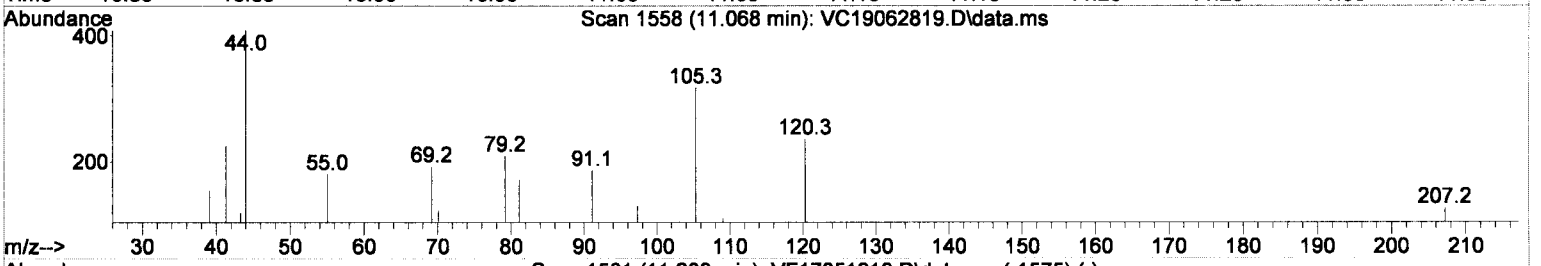
Ion	Exp%	Act%
126.00	100	100
91.00	264.00	630.01#
63.00	35.40	168.13#
0.00	0.00	0.00

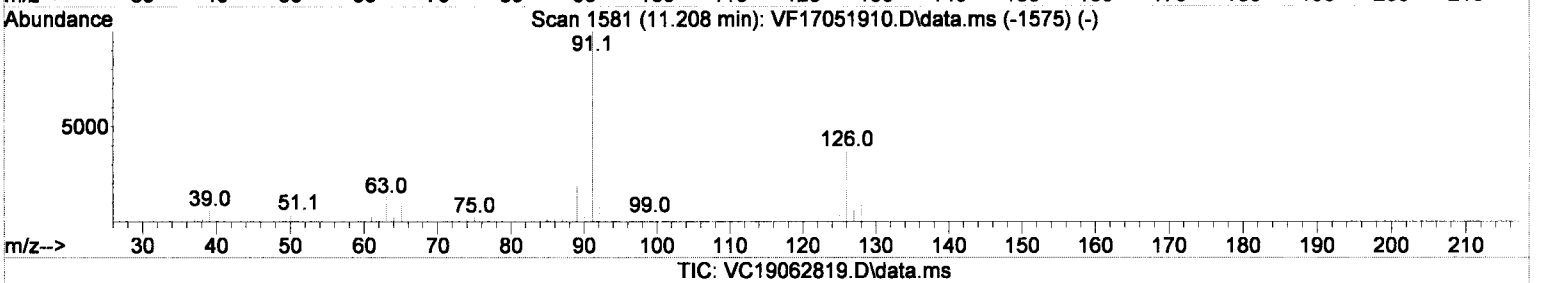
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(62) 2-Chlorotoluene

11.068min (-0.004) 0.01 ug/L (m)

response 38

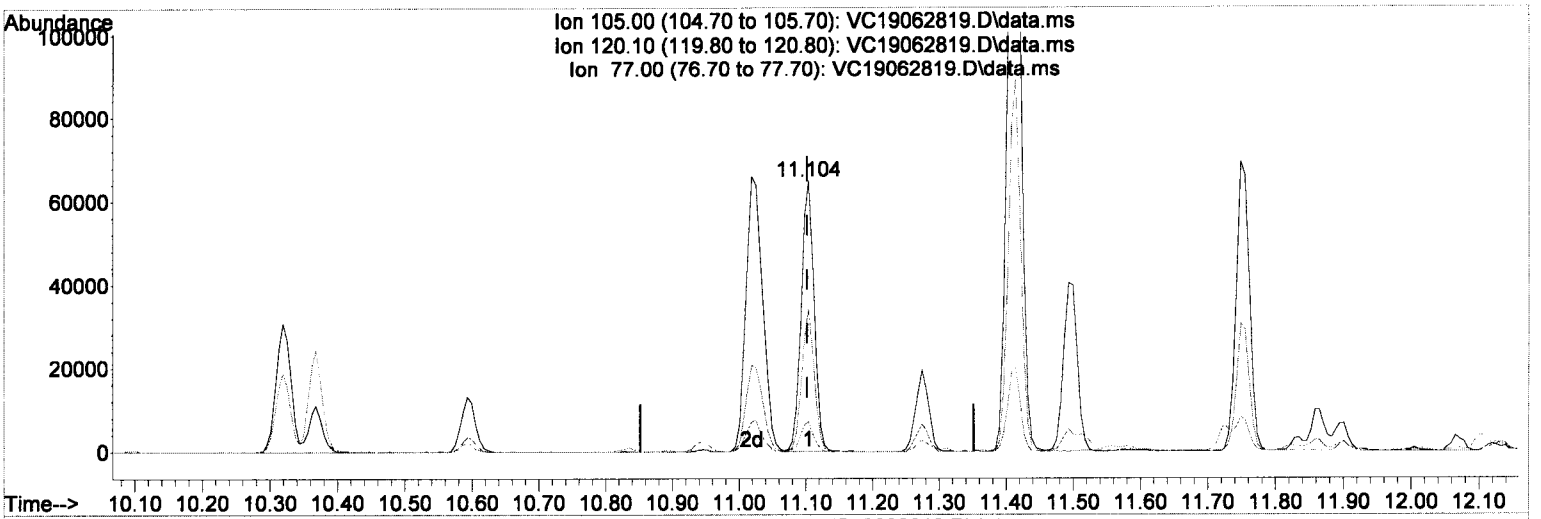
Ion	Exp%	Act%
126.00	100	100
91.00	264.00	178.85#
63.00	35.40	0.00#
0.00	0.00	0.00

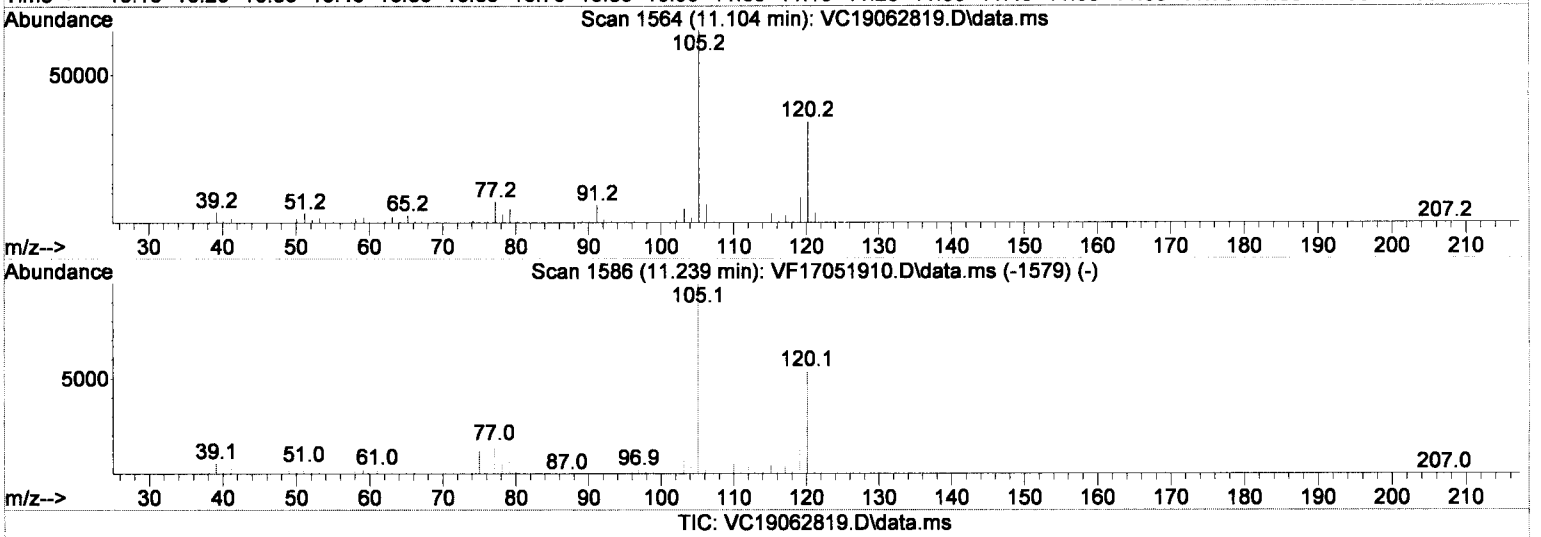
7/1/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration





TIC: VC19062819.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.104min (+0.002) 9.66 ug/L

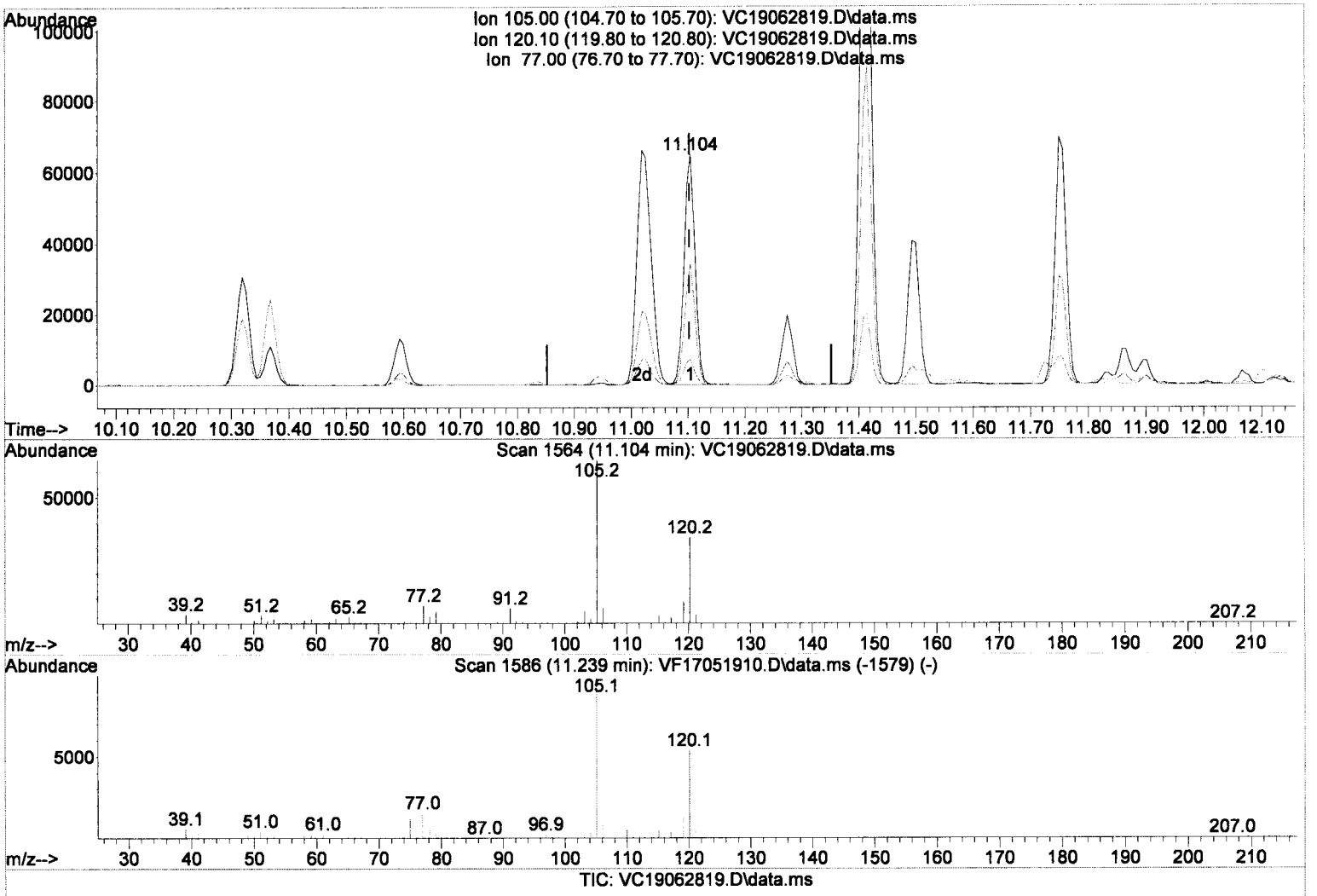
response 87018

Ion	Exp%	Act%
105.00	100	100
120.10	52.70	52.67
77.00	15.40	11.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.104min (+0.002) 9.66 ug/L

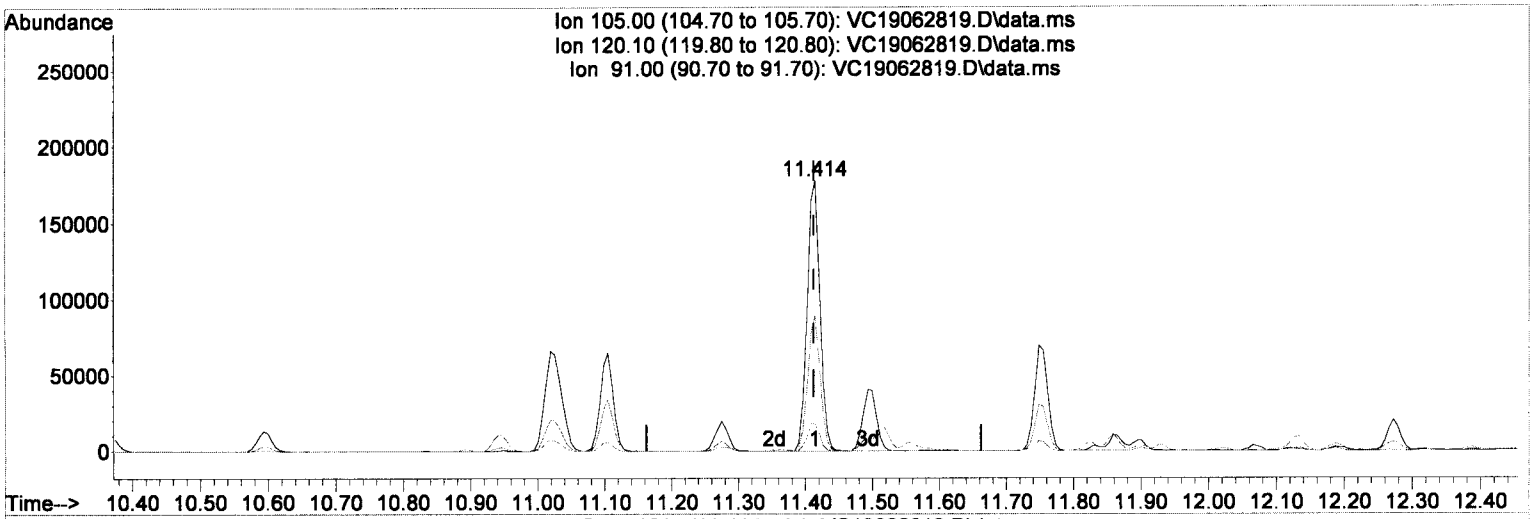
response 87018

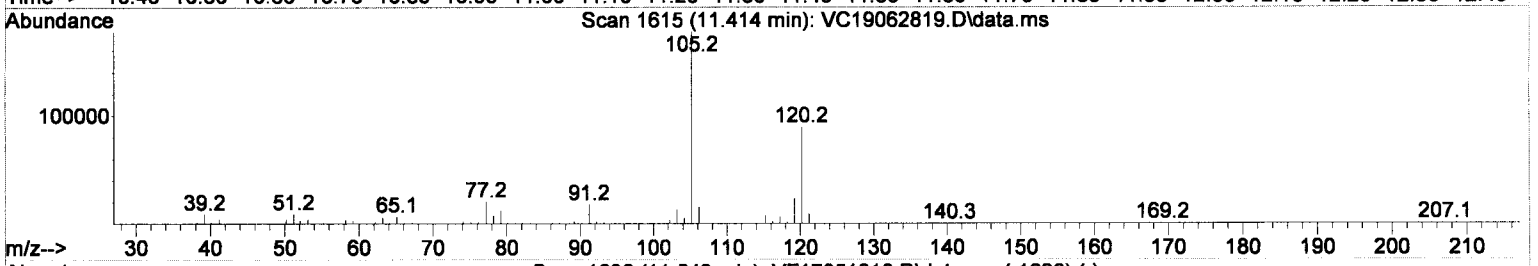
Ion	Exp%	Act%
105.00	100	100
120.10	52.70	52.67
77.00	15.40	11.14
0.00	0.00	0.00

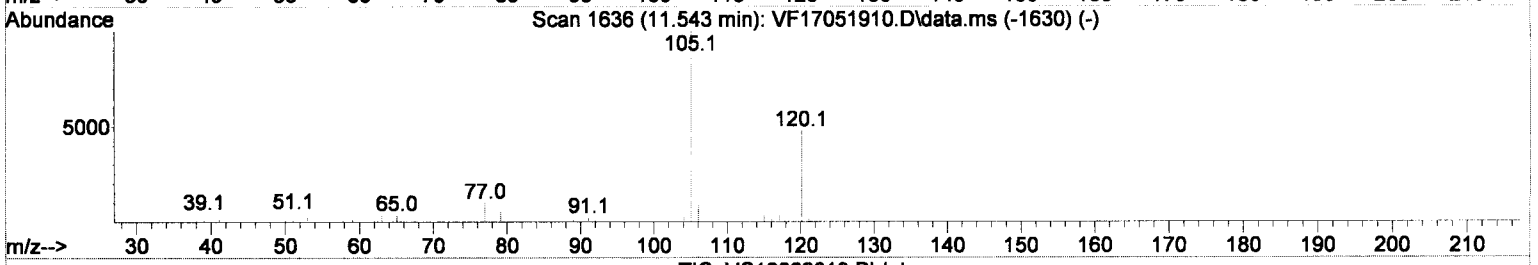
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(68) 1,2,4-Trimethylbenzene

11.414min (+0.002) 25.79 ug/L

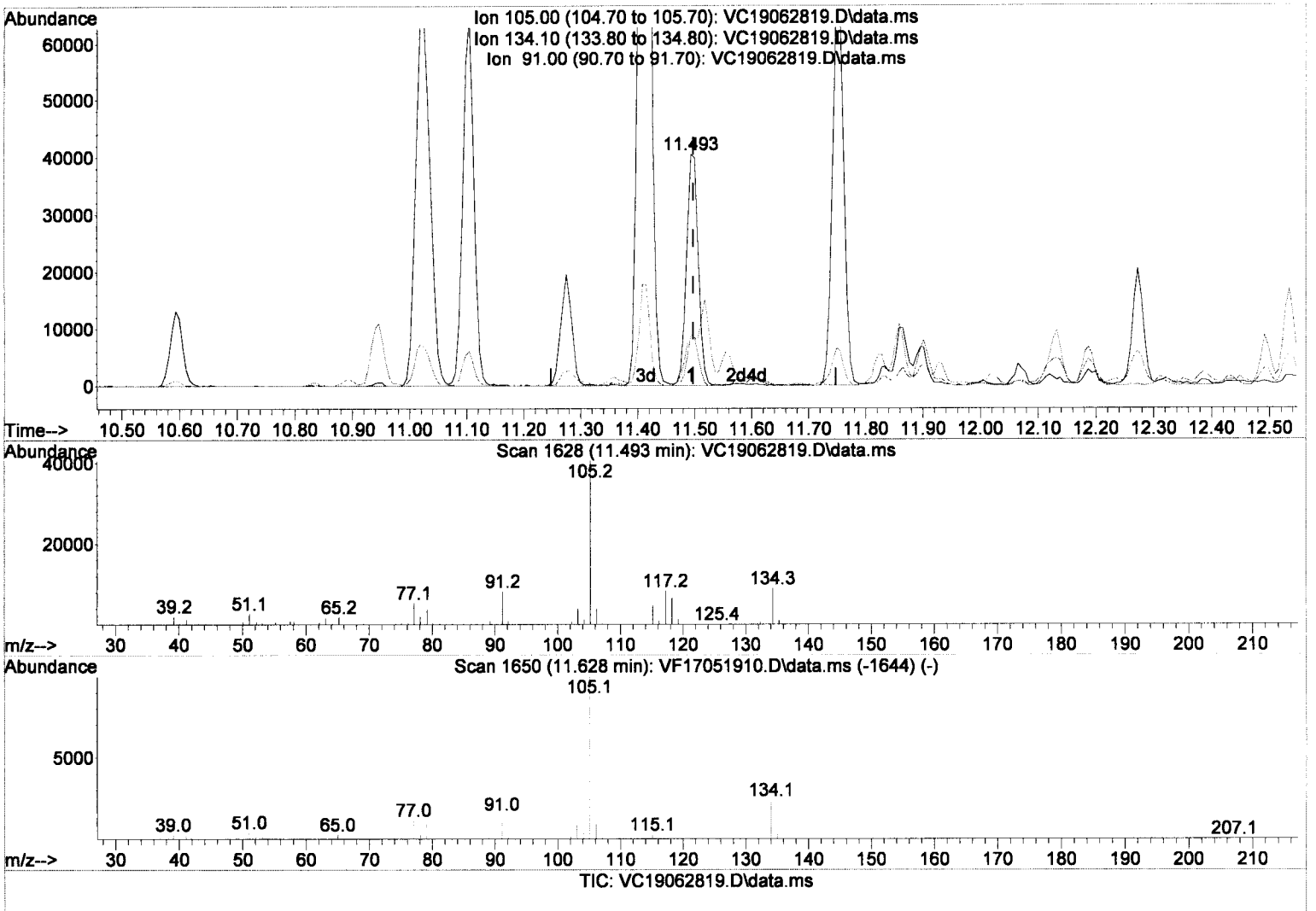
response 236420

Ion	Exp%	Act%
105.00	100	100
120.10	48.00	50.33
91.00	10.60	9.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(69) sec-Butylbenzene

11.493min (-0.004) 5.77 ug/L

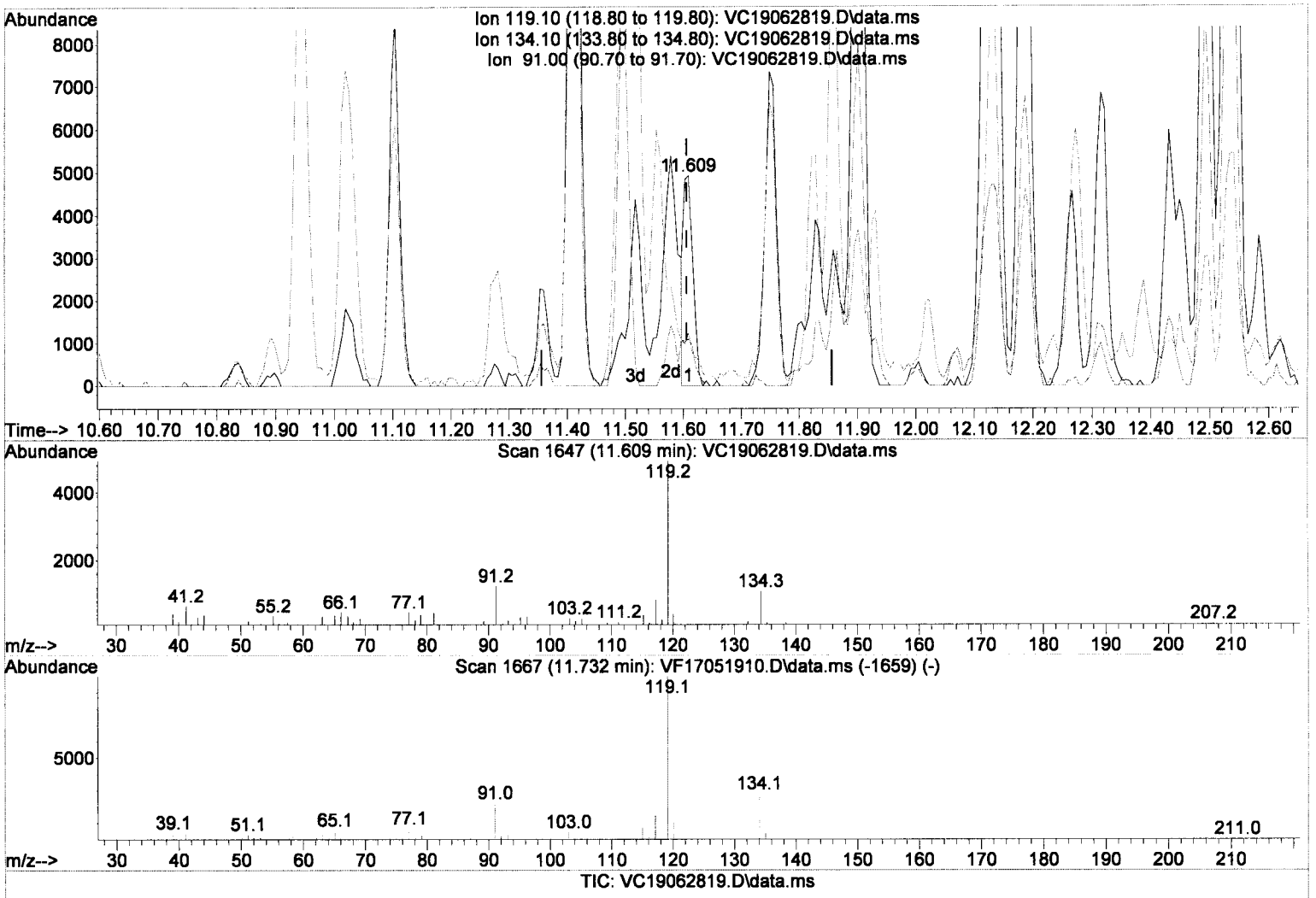
response 58425

Ion	Exp%	Act%
105.00	100	100
134.10	22.70	22.03
91.00	16.40	20.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(70) 4-Isopropyltoluene

11.609min (+0.003) 0.65 ug/L

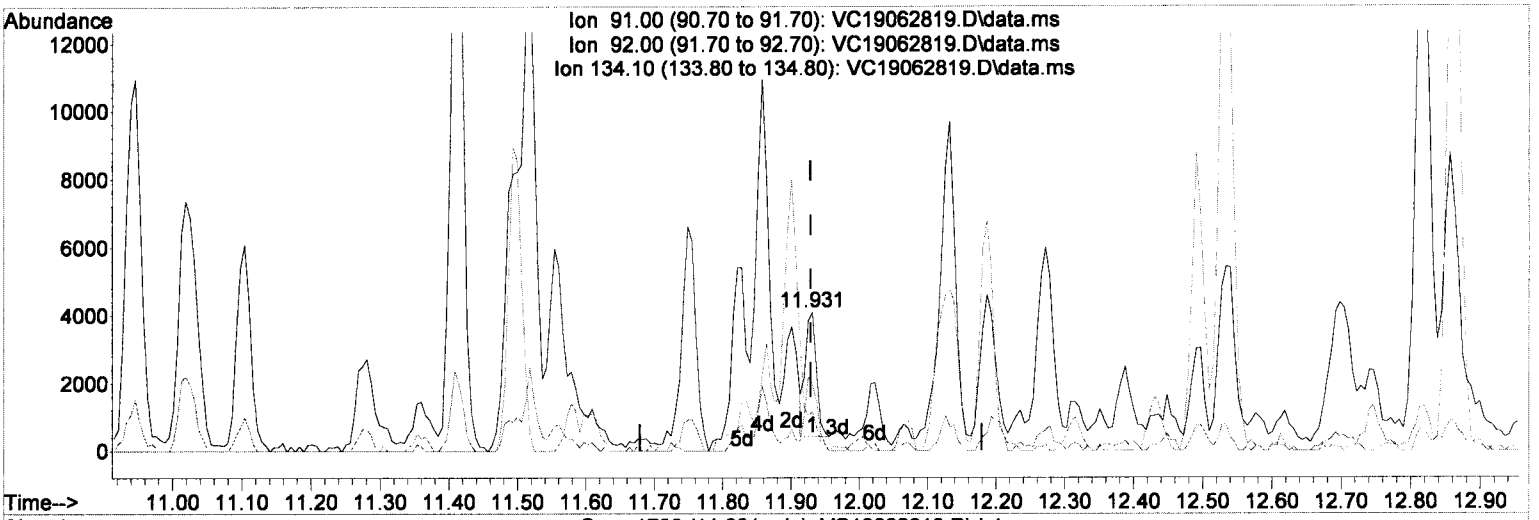
response 5491

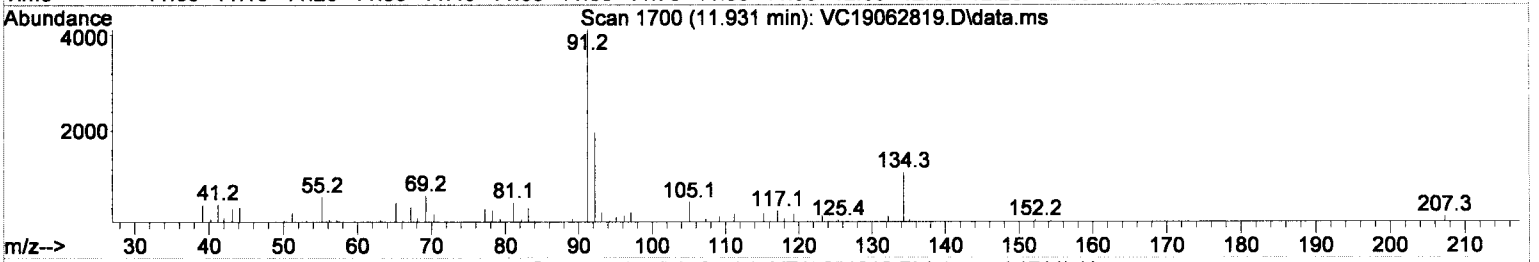
Ion	Exp%	Act%
119.10	100	100
134.10	29.30	22.16
91.00	22.50	25.29
0.00	0.00	0.00

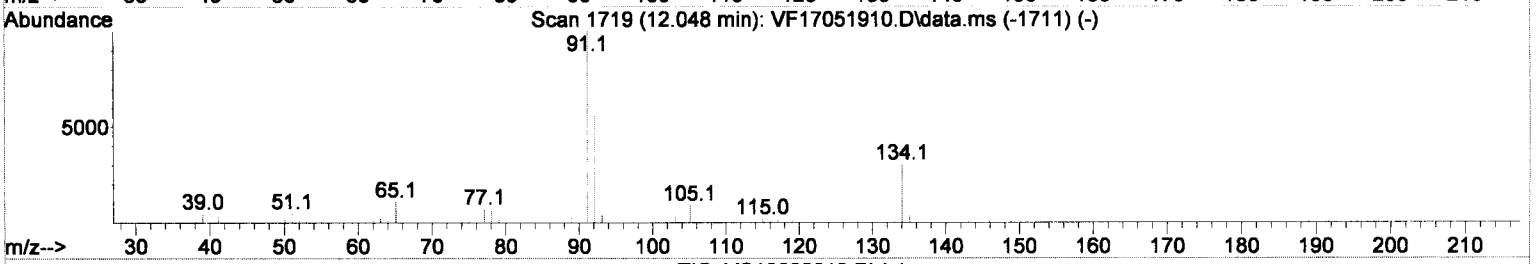
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(73) n-Butylbenzene

11.931min (+0.002) 0.56 ug/L

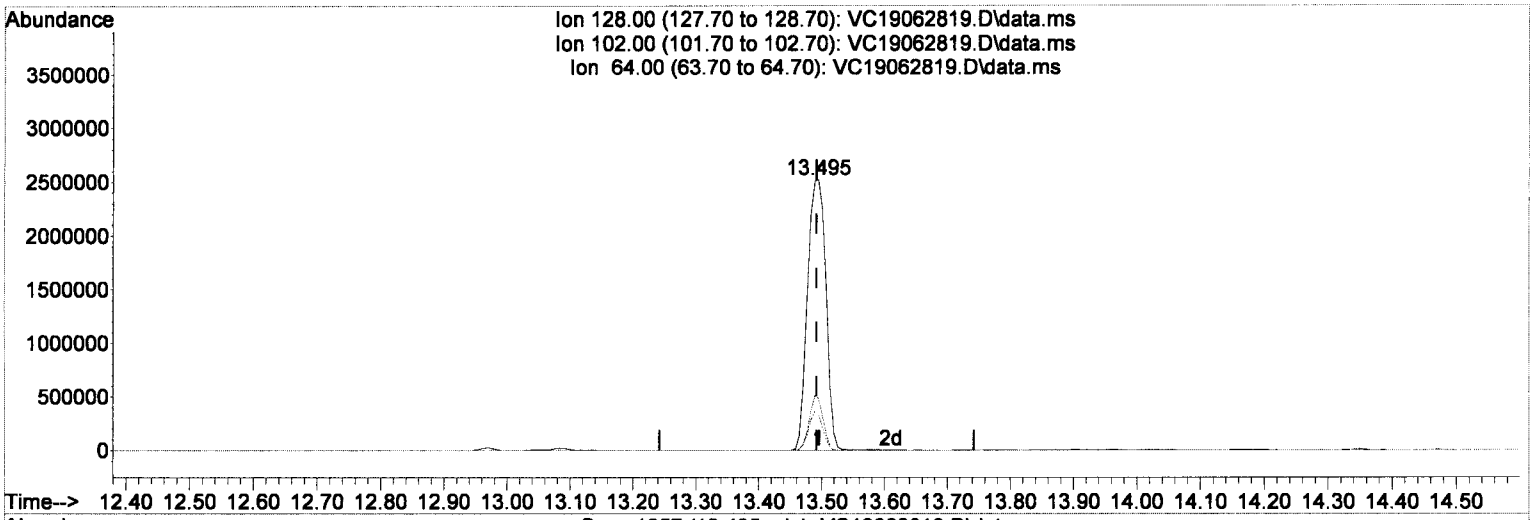
response 4148

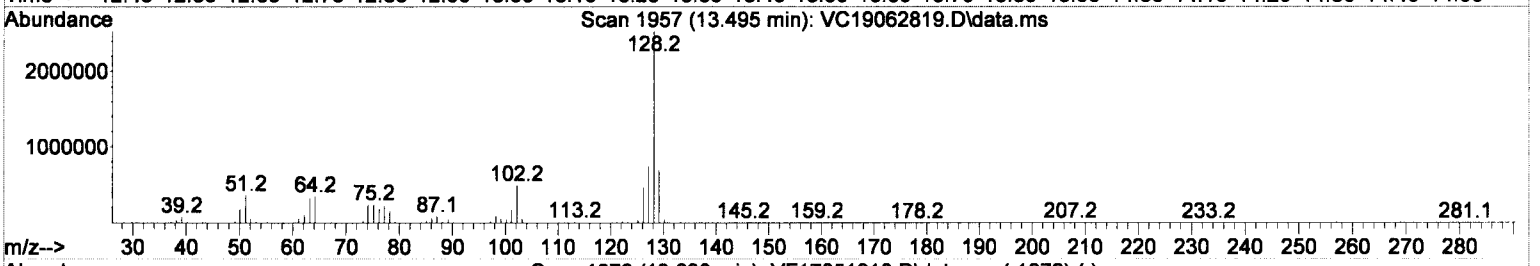
Ion	Exp%	Act%
91.00	100	100
92.00	56.60	48.10
134.10	30.00	27.82
0.00	0.00	0.00

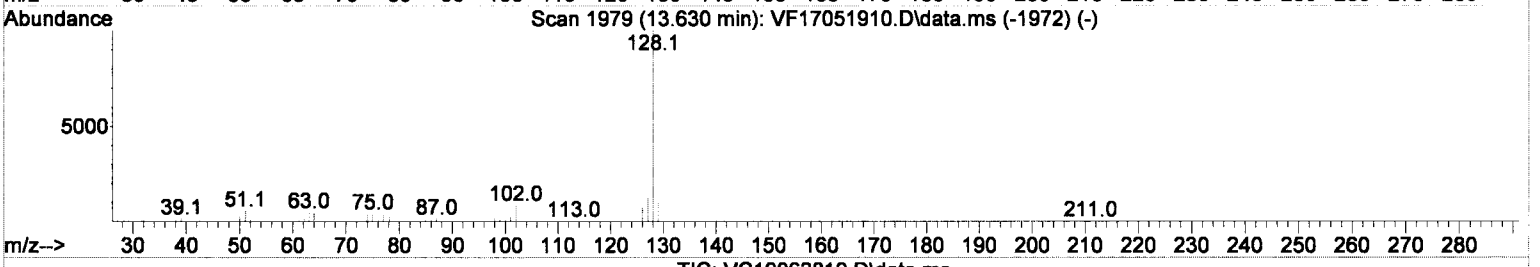
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(78) Naphthalene

13.495min (+0.003) 632.96 ug/L

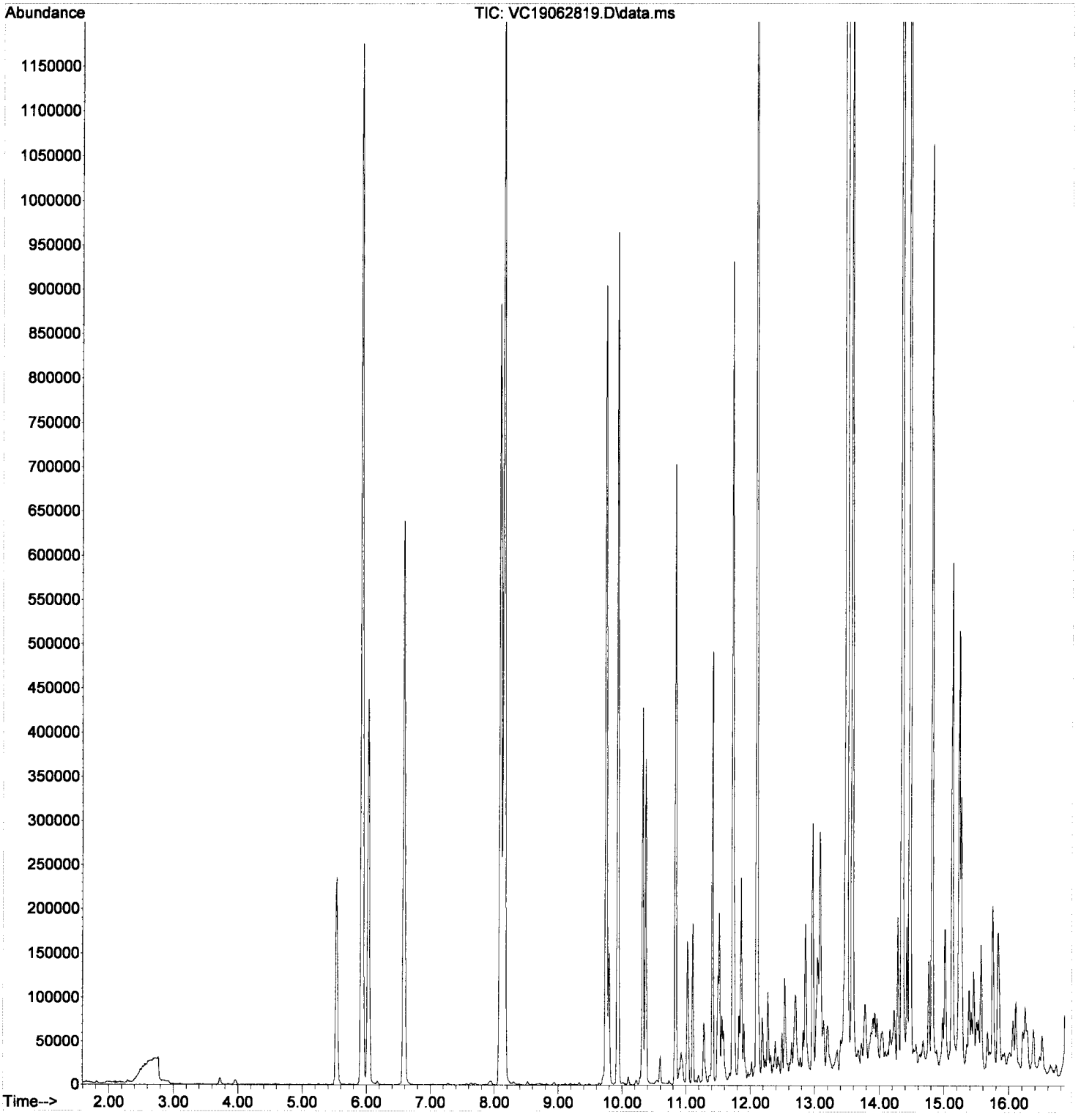
response 5126879

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	19.47
64.00	6.40	13.58
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Gasoline Range Hydrocarbons (Benzene though Naphthalene) by NWTPH-Gx

Calibration Data

Sequence 9F10052 (Cal ID A9F1104) VOA-GCMS3

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F10052	Instrument:	VOA-GCMS3
Date:	06/10/19 12:46	Calibration:	A9F1104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F10052-IBL1	Soil	QC	QC			A19C135	
2	9F10052-TUN1	Soil	QC	QC			A19C135	
3	9F10052-ICB1	Soil	QC	QC			A19C135	
4	9F10052-CAL1	Soil	QC	QC			A19C135	A19F090
5	9F10052-CAL2	Soil	QC	QC			A19C135	A19F091
6	9F10052-CAL3	Soil	QC	QC			A19C135	A19F092
7	9F10052-CAL4	Soil	QC	QC			A19C135	A19F093
8	9F10052-CAL5	Soil	QC	QC			A19C135	A19F094
9	9F10052-CAL6	Soil	QC	QC			A19C135	A19F095
10	9F10052-CAL7	Soil	QC	QC			A19C135	A19F096
11	9F10052-CAL8	Soil	QC	QC			A19C135	A19F097
12	9F10052-CAL9	Soil	QC	QC			A19C135	A19F098
13	9F10052-IBL2	Soil	QC	QC			A19C135	
14	9F10052-CALA	Soil	QC	QC			A19C135	A19F099
15	9F10052-IBL3	Soil	QC	QC			A19C135	
16	9F10052-CALB	Soil	QC	QC			A19C135	A19F100
17	9F10052-IBL4	Soil	QC	QC			A19C135	
18	9F10052-IBL5	Soil	QC	QC			A19C135	
19	9F10052-ICV1	Soil	QC	QC			A19C135	A19F101
20	9F10052-IBL6	Soil	QC	QC			A19C135	
21	9F10052-TUN2	Soil	QC	QC			A19C135	
22	9F10052-IBL7	Soil	QC	QC			A19C135	
23	9F10052-ICB2	Soil	QC	QC			A19C135	
24	9F10052-CALC	Soil	QC	QC			A19C135	A19E372
25	9F10052-CALD	Soil	QC	QC			A19C135	A19E373
26	9F10052-CALE	Soil	QC	QC			A19C135	A19E374
27	9F10052-CALF	Soil	QC	QC			A19C135	A19E375
28	9F10052-CALG	Soil	QC	QC			A19C135	A19E183
29	9F10052-CALI	Soil	QC	QC			A19C135	A19E185
30	9F10052-CALJ	Soil	QC	QC			A19C135	A19E186
31	9F10052-CALH	Soil	QC	QC			A19C135	A19E184
32	9F10052-IBL8	Soil	QC	QC			A19C135	
33	9F10052-IBL9	Soil	QC	QC			A19C135	
34	9F10052-ICV2	Soil	QC	QC			A19C135	A19B262
35	9F10052-IBLA	Soil	QC	QC			A19C135	

Chlorobenzene E-05

Comments:

Data Entered By: 6/11/19

Data Reviewed By: MH 6/13/19

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	-1	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061004.D
2	2	0	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061005.D
3	3	0	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061006.D
4	4	1	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061007.D
5	5	2	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061008.D
6	6	5	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061009.D
7	7	10	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061010.D
8	8	20	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061011.D
9	9	50	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061012.D
10	10	100	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061014.D
11	11	200	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061016.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jun 11 09:27 2019	Jun 11 09:04 2019	10 Jun 2019 4:02 pm
2	2	Jun 11 09:27 2019	Jun 11 09:08 2019	10 Jun 2019 4:29 pm
3	3	Jun 11 09:27 2019	Jun 11 09:11 2019	10 Jun 2019 4:57 pm
4	4	Jun 11 09:27 2019	Jun 11 09:20 2019	10 Jun 2019 5:25 pm
5	5	Jun 11 09:27 2019	Jun 11 09:20 2019	10 Jun 2019 5:52 pm
6	6	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 6:20 pm
7	7	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 6:48 pm
8	8	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 7:15 pm
9	9	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 7:43 pm
10	10	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 8:38 pm
11	11	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 9:34 pm

VC190611S.M Tue Jun 11 09:55:45 2019

Compound List Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

Total Cpnds : 79

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.028	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.661	0.275	A	2	A	R
3	P	Chloromethane	50	1.855	0.308	A	2	A	R
4	C	Vinyl Chloride	62	1.946	0.323	A	2	A	R
5		Bromomethane	96	2.299	0.381	A	2	A	R
6		Chloroethane	64	2.439	0.405	A	2	A	R
7		Trichlorofluoromethane	101	2.555	0.424	A	2	A	R
8	C	1,1-Dichloroethene	61	3.090	0.513	Q	2	A	R
9		Carbon Disulfide	76	3.096	0.514	Q	2	A	R
10		Freon 113	101	3.139	0.521	A	2	A	R
11		Iodomethane	142	3.236	0.537	Q	2	A	R
12		Methylene Chloride	84	3.722	0.617	A	2	A	R
13		Acetone	43	3.826	0.635	A	1	A	R
14		t-1,2-Dichloroethene	61	3.881	0.644	A	2	A	R
15		n-Hexane	86	3.960	0.657	Q	3	A	R
16		Methyl-tert-butyl-ether	73	4.033	0.669	A	3	A	R
17	P	1,1-Dichloroethane	63	4.514	0.749	A	2	A	R
18		Acrylonitrile	53	4.593	0.762	A	2	A	R
19		c-1,2-Dichloroethene	61	5.061	0.840	A	2	A	R
20		2,2-Dichloropropane	77	5.171	0.858	A	2	A	R
21		Bromochloromethane	49	5.262	0.873	A	2	A	R
22	C	Chloroform	83	5.347	0.887	A	2	A	R
23		Carbon Tetrachloride	117	5.468	0.907	A	2	A	R
24		Tetrahydrofuran	42	5.530	0.917	A	2	A	R
25		1,1,1-Trichloroethane	97	5.548	0.920	A	2	A	R
26	S	Dibromofluoromethane (S)	111	5.530	0.917	A	2	A	R
27		1,1-Dichloropropene	75	5.670	0.940	A	2	A	R
28		2-Butanone (MEK)	43	5.682	0.942	A	2	A	R
29		Benzene	78	5.925	0.983	A	2	A	R
30		1,2-Dichloroethane (EDC)	62	6.144	1.019	A	2	A	R
31		iso-Butyl Alcohol	43	6.247	1.036	A	2	A	R
32	S	1,4-Difluorobenzene (S)	114	6.588	1.093	A	2	A	R
33		Trichloroethene (TCE)	130	6.546	1.086	A	2	A	R
34		Dibromomethane	93	6.996	1.160	A	2	A	R
35	C	1,2-Dichloropropane	63	7.105	1.179	A	2	A	R
36		Bromodichloromethane	83	7.178	1.191	A	2	A	R
37	I	Chlorobenzene-d5 (I)	117	9.752	1.000	A	2	A	R
38		c-1,3-Dichloropropene	75	7.883	0.808	A	2	A	R
39	S	Toluene-d8 (S)	98	8.091	0.830	A	2	A	R
40	C	Toluene	91	8.151	0.836	A	2	A	R
41		Tetrachloroethene (PCE)	166	8.596	0.881	A	2	A	R
42		4-Methyl-2-Pentanone (MIBK)	43	8.614	0.883	A	2	A	R
43		t-1,3-Dichloropropene	75	8.638	0.886	A	2	A	R
44		1,1,2-Trichloroethane	97	8.815	0.904	A	2	A	R
45		Dibromochloromethane	129	9.003	0.923	Q	2	A	R
46		1,3-Dichloropropane	76	9.107	0.934	A	2	A	R
47		1,2-Dibromoethane (EDB)	107	9.240	0.948	A	2	A	R
48		2-Hexanone	43	9.496	0.974	A	2	A	R
49	P	Chlorobenzene	112	9.764	1.001	A	2	A	R
50	C	Ethylbenzene	91	9.794	1.004	A	2	A	R
51		1,1,1,2-Tetrachloroethane	131	9.830	1.008	A	2	A	R
52		m,p-Xylenes (2)	91	9.934	1.019	A	2	A	R
53		o-Xylene	91	10.317	1.058	A	2	A	R
54		Styrene	104	10.365	1.063	A	2	A	R
55	P	Bromoform	173	10.390	1.065	Q	2	A	R

56	Isopropylbenzene	105	10.591	1.086	A	2	A	R
57 I	1,4-Dichlorobenzene-d4 (I)	152	11.729	1.000	A	2	A	R
58 S	4-Bromofluorobenzene (S)	174	10.834	0.924	A	2	A	R
59	Bromobenzene	156	10.920	0.931	A	2	A	R
60	n-Propylbenzene	91	10.944	0.933	A	2	A	R
61 P	1,1,2,2-Tetrachloroethane	83	11.011	0.939	A	2	A	R
62	2-Chlorotoluene	126	11.072	0.944	A	2	A	R
63	1,3,5-Trimethylbenzene	105	11.102	0.947	A	2	A	R
64	1,2,3-Trichloropropane	110	11.114	0.948	A	2	A	R
65	t-1,4-Dichloro-2-butene	88	11.150	0.951	Q	3	A	R
66	4-Chlorotoluene	91	11.205	0.955	A	2	A	R
67	tert-Butylbenzene	91	11.358	0.968	A	2	A	R
68	1,2,4-Trimethylbenzene	105	11.412	0.973	A	2	A	R
69	sec-Butylbenzene	105	11.497	0.980	A	2	A	R
70	4-Isopropyltoluene	119	11.606	0.990	A	2	A	R
71	1,3-Dichlorobenzene	146	11.668	0.995	A	2	A	R
72	1,4-Dichlorobenzene	146	11.734	1.000	A	2	A	R
73	n-Butylbenzene	91	11.929	1.017	A	2	A	R
74	1,2-Dichlorobenzene	146	12.057	1.028	A	2	A	R
75	1,2-Dibromo-3-Chloropropane	157	12.671	1.080	Q	2	A	R
76	Hexachlorobutadiene	223	13.183	1.124	A	3	A	R
77	1,2,4-Trichlorobenzene	180	13.213	1.127	A	2	A	R
78	Naphthalene	128	13.492	1.150	A	2	A	R
79	1,2,3-Trichlorobenzene	180	13.651	1.164	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

VC190611S.M Tue Jun 11 09:55:40 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

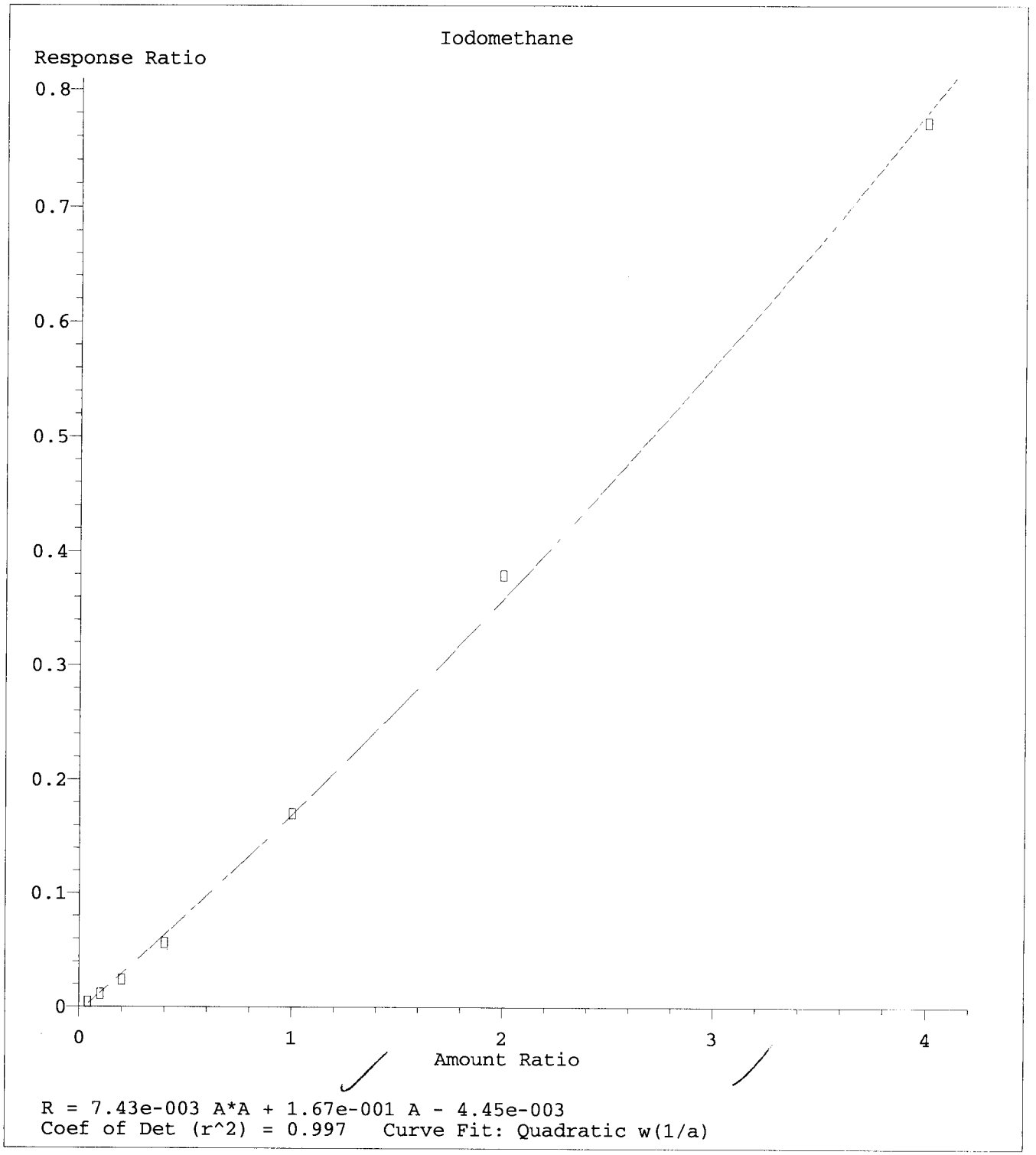
Calibration Files
1 =VC19061004.D 2 =VC19061005.D 3 =VC19061006.D 4 =VC19061007.D 5 =VC19061008.D 6 =VC19061009.D
7 =VC19061010.D 8 =VC19061011.D 9 =VC19061012.D 10 =VC19061014.D 11 =VC19061016.D

		Compound	1	2	3	4	5	6	7	8	9	10	11	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD												
2)		Dichlorodifluo...		0.291	0.297	0.325	0.350	0.338	0.339	0.338	0.345	0.346	0.330		6.55
3)	P	Chloromethane		0.625	0.509	0.521	0.525	0.520	0.518	0.495	0.506	0.474	0.521		8.08
4)	C	Vinyl Chloride		0.312	0.337	0.364	0.367	0.367	0.365	0.353	0.359	0.356	0.353		5.10
5)		Bromomethane					0.243	0.222	0.199	0.177	0.185	0.188	0.202		12.48
6)		Chloroethane					0.141	0.120	0.134	0.126	0.141	0.143	0.134		6.87
7)		Trichlorofluor...			0.183	0.221	0.209	0.187	0.198	0.182	0.197	0.214	0.199		7.37
8)	C	1,1-Dichloroet...	0.359	0.398	0.360	0.367	0.388	0.380	0.392	0.396	0.391	0.377	0.381		3.84
9)		Carbon Disulfide				0.436	0.438	0.467	0.515	0.597			0.491		13.81
10)		Freon 113		0.242	0.275	0.314	0.310	0.296	0.302	0.302	0.298	0.290	0.292		7.55
11)		Iodomethane				0.103	0.111	0.119	0.141	0.170	0.189	0.193	0.147		25.62
12)		Methylene Chlo...					0.398	0.343	0.326	0.324	0.321	0.302	0.336		9.86
13)		Acetone				0.184	0.187	0.180	0.179	0.183	0.174	0.149	0.177		7.38
14)		t-1,2-Dichloro...	0.455	0.443	0.424	0.451	0.446	0.460	0.470	0.475	0.475	0.441	0.454		3.63
15)		n-Hexane				0.133	0.108	0.091	0.079	0.078	0.074	0.073	0.091		24.56
16)		Methyl-tert-bu...	1.273	1.264	1.314	1.257	1.348	1.314	1.312	1.318	1.315	1.212	1.293		3.11
17)	P	1,1-Dichloroet...	0.452	0.584	0.560	0.552	0.580	0.588	0.590	0.588	0.587	0.551	0.563		7.48
18)		Acrylonitrile				0.212	0.229	0.235	0.226	0.246	0.239	0.219	0.230		5.11
19)		c-1,2-Dichloro...	0.546	0.513	0.492	0.488	0.534	0.514	0.535	0.524	0.528	0.487	0.516		4.11
20)		2,2-Dichloropr...		0.375	0.439	0.397	0.427	0.418	0.440	0.449	0.451	0.434	0.426		5.93
21)		Bromochloromet...	0.243	0.301	0.263	0.292	0.311	0.303	0.317	0.313	0.314	0.293	0.295		8.16
22)	C	Chloroform	0.679	0.692	0.621	0.623	0.675	0.645	0.661	0.650	0.653	0.587	0.649		4.85
23)		Carbon Tetrach...			0.276	0.298	0.321	0.336	0.370	0.410			0.335		14.51
24)		Tetrahydrofuran			0.246	0.228	0.260	0.249	0.242	0.249	0.239	0.216	0.241		5.65
25)		1,1,1-Trichlor...	0.483	0.487	0.455	0.478	0.505	0.505	0.521	0.531	0.539	0.518	0.502		5.25
26)	S	Dibromofluorom...	0.437	0.455	0.450	0.444	0.448	0.454	0.457	0.471	0.467	0.478	0.451	0.456	2.66
27)		1,1-Dichloropr...	0.467	0.517	0.515	0.495	0.525	0.519	0.526	0.523	0.520	0.497	0.510		3.65
28)		2-Butanone (MEK)				0.300	0.316	0.299	0.307	0.320	0.310	0.285	0.305		3.87
29)		Benzene	1.807	1.739	1.759	1.632	1.638	1.690	1.654	1.636	1.605	1.580	1.430	1.652	6.12
30)		1,2-Dichloroet...	0.441	0.504	0.547	0.516	0.565	0.521	0.523	0.529	0.529	0.489	0.517		6.50
31)		iso-Butyl Alcohol			0.028	0.027	0.032	0.032	0.032	0.035	0.035	0.035	0.032		9.60
32)	S	1,4-Difluorobe...	1.676	1.693	1.666	1.673	1.680	1.694	1.696	1.681	1.685	1.706	1.683	1.685	0.69
33)		Trichloroethen...	0.347	0.443	0.462	0.408	0.447	0.444	0.446	0.449	0.448	0.420	0.431		7.76
34)		Dibromomethane		0.236	0.198	0.223	0.229	0.229	0.234	0.239	0.245	0.221	0.228		5.94
35)	C	1,2-Dichloropr...		0.454	0.428	0.407	0.442	0.440	0.447	0.443	0.448	0.424	0.437		3.38
36)		Bromodichlorom...			0.321	0.322	0.356	0.361	0.396	0.437			0.365		12.29
37)		Chlorobenzene-d5 (I)	ISTD												
38)		c-1,3-Dichloro...			0.298	0.292	0.350	0.350	0.381	0.423			0.349		14.23
39)	S	Toluene-d8 (S)	1.407	1.391	1.393	1.397	1.391	1.406	1.396	1.380	1.389	1.382	1.433	1.397	1.04
40)	C	Toluene	1.588	1.330	1.272	1.244	1.257	1.236	1.188	1.161	1.124	1.066	1.247		11.42

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds

41)		Tetrachloroeth...		0.287	0.247	0.296	0.256	0.268	0.272	0.261	0.264	0.261	0.266	0.268	5.38
42)		4-Methyl-2-Pen...				0.313	0.306	0.357	0.339	0.339	0.348	0.346	0.340	0.336	5.21
43)		t-1,3-Dichloro...				0.279	0.279	0.313	0.324	0.356	0.390			0.323	13.48
44)		1,1,2-Trichlor...		0.231	0.259	0.262	0.234	0.268	0.258	0.258	0.259	0.265	0.255	0.255	4.89
45)		Dibromochlorom...			0.092	0.137	0.139	0.157	0.165	0.191	0.222	0.247	0.258	0.179	30.98
46)		1,3-Dichloropr...		0.438	0.450	0.467	0.471	0.493	0.477	0.483	0.480	0.477	0.453	0.469	3.62
47)		1,2-Dibromoeth...		0.219	0.166	0.207	0.246	0.241	0.250	0.255	0.268	0.270	0.262	0.238	13.62
48)		2-Hexanone			0.189	0.202	0.200	0.232	0.240	0.238	0.251	0.251	0.253	0.229	10.87
49)	P	Chlorobenzene		0.896	0.828	0.740	0.749	0.784	0.740	0.733	0.724	0.710	0.656	0.756	8.78
50)	C	Ethylbenzene	1.595	1.343	1.284	1.226	1.232	1.262	1.258	1.230	1.207	1.146	1.040	1.257	10.86
51)		1,1,1,2-Tetrac...			0.152	0.183	0.177	0.203	0.209	0.221	0.237			0.197	14.61
52)		m,p-Xylenes (2)		1.066	0.937	0.920	0.896	0.942	0.927	0.907	0.883	0.828	0.716	0.902	9.86
53)		o-Xylene		1.011	1.035	0.911	0.905	0.965	0.943	0.937	0.939	0.912	0.823	0.938	6.28
54)		Styrene		0.573	0.518	0.558	0.556	0.660	0.663	0.697	0.723	0.725	0.667	0.634	11.97
55)	P	Bromoform				0.056	0.070	0.080	0.083	0.098	0.123	0.141	0.158	0.101	35.68
56)		Isopropylbenzene	1.172	1.168	1.054	0.980	1.017	1.079	1.086	1.084	1.085	1.035	0.927	1.062	6.85
57)	I	1,4-Dichlorobenzen...	----------	ISTD	----------										
58)	S	4-Bromofluorob...	0.888	0.898	0.911	0.912	0.904	0.910	0.912	0.914	0.908	0.907	0.868	0.903	1.52
59)		Bromobenzene		0.505	0.749	0.738	0.702	0.728	0.711	0.685	0.692	0.688	0.618	0.682	10.55
60)		n-Propylbenzene	3.688	3.224	2.922	2.904	2.925	3.106	3.139	3.115	3.021	2.839	2.400	3.026	10.28
61)	P	1,1,2,2-Tetrac...		0.658	0.652	0.638	0.592	0.680	0.632	0.651	0.663	0.653	0.651	0.647	3.58
62)		2-Chlorotoluene			0.561	0.673	0.592	0.645	0.637	0.628	0.636	0.636	0.570	0.620	5.99
63)		1,3,5-Trimethy...	2.385	2.186	2.002	1.920	1.962	2.131	2.143	2.140	2.115	2.038	1.768	2.072	7.78
64)		1,2,3-Trichlor...			0.228	0.288	0.271	0.287	0.274	0.264	0.261	0.253	0.253	0.264	7.01
65)		t-1,4-Dichloro...					0.050	0.067	0.069	0.082	0.092	0.098	0.103	0.080	24.08
66)		4-Chlorotoluene	1.939	1.801	1.871	1.788	1.712	1.874	1.903	1.839	1.816	1.767	1.550	1.806	5.89
67)		tert-Butylbenzene	1.223	1.041	0.894	1.059	1.080	1.161	1.189	1.169	1.148	1.110	0.999	1.097	8.75
68)		1,2,4-Trimethy...	2.735	2.189	2.026	2.009	1.998	2.147	2.132	2.136	2.073	2.002	1.748	2.109	11.36
69)		sec-Butylbenzene	2.330	2.177	2.290	2.324	2.282	2.458	2.523	2.468	2.459	2.303	2.000	2.329	6.46
70)		4-Isopropyltol...	2.245	1.969	1.692	1.869	1.852	2.003	2.037	2.048	2.032	1.940	1.717	1.946	8.15
71)		1,3-Dichlorobe...	1.457	1.164	1.172	1.093	1.086	1.193	1.114	1.107	1.097	1.076	0.998	1.142	10.29
72)		1,4-Dichlorobe...	1.515	1.266	1.106	1.092	1.109	1.151	1.113	1.106	1.076	1.046	0.991	1.143	12.31
73)		n-Butylbenzene	2.347	1.860	1.562	1.568	1.612	1.697	1.675	1.685	1.669	1.560	1.429	1.697	14.23
74)		1,2-Dichlorobe...	1.005	0.942	0.986	0.993	0.986	1.052	1.019	0.989	0.990	0.958	0.920	0.986	3.65
75)		1,2-Dibromo-3-...				0.102	0.084	0.118	0.124	0.130	0.163	0.181	0.194	0.137	28.32
76)		Hexachlorobuta...				0.132	0.141	0.154	0.153	0.154	0.148	0.140	0.140	0.145	5.70
77)		1,2,4-Trichlor...			0.514	0.512	0.512	0.585	0.576	0.616	0.612	0.590	0.578	0.566	7.48
78)		Naphthalene				1.472	1.476	1.847	1.903	2.013	2.149	2.084	1.959	1.863	13.87
79)		1,2,3-Trichlor...		0.540	0.401	0.495	0.482	0.550	0.571	0.575	0.591	0.575	0.567	0.535	11.02

(#) = Out of Range

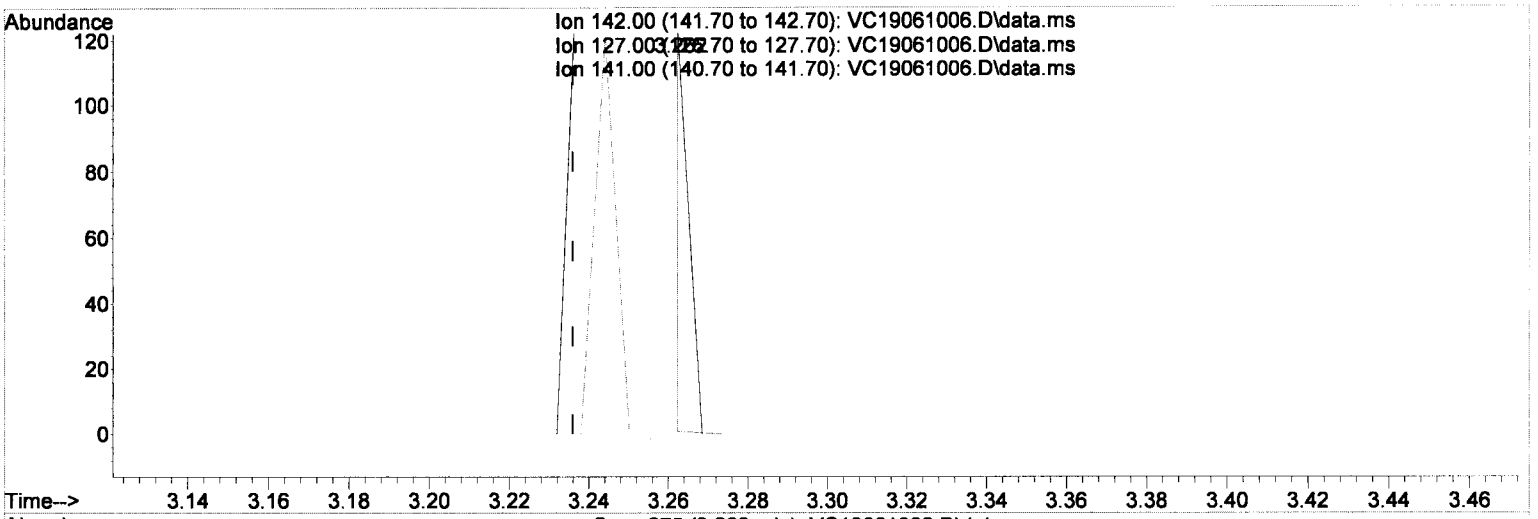


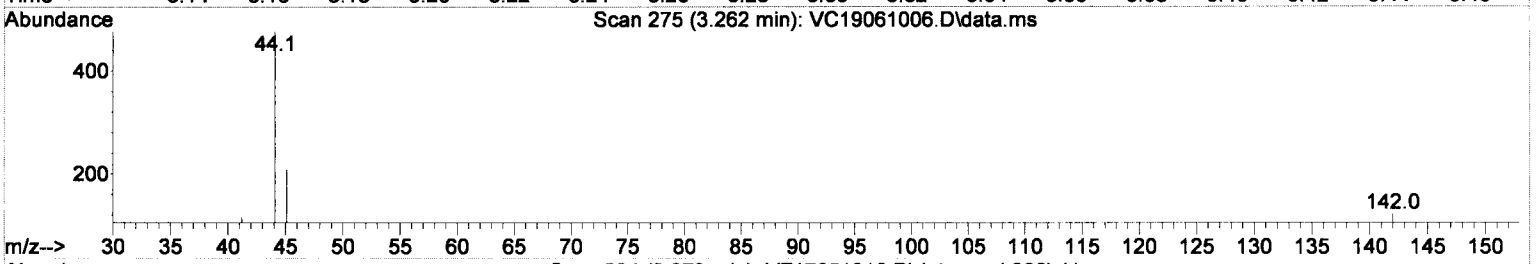
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:30:03 2019

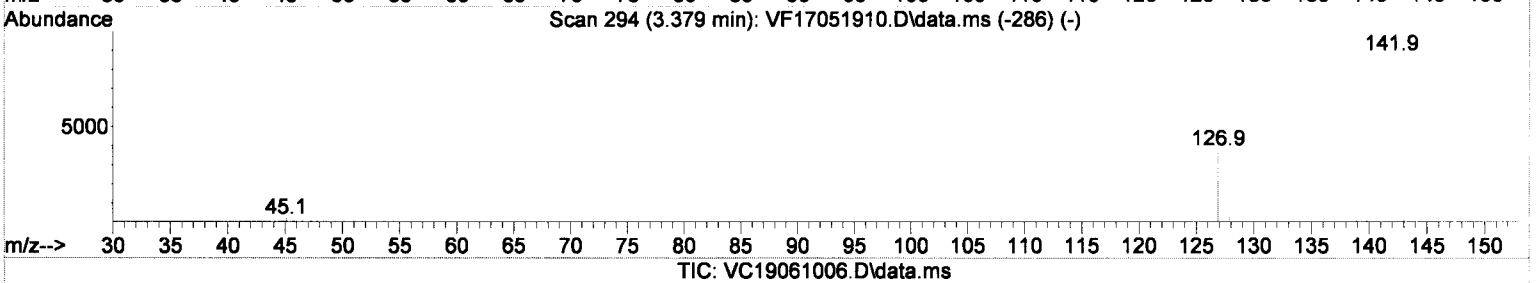
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







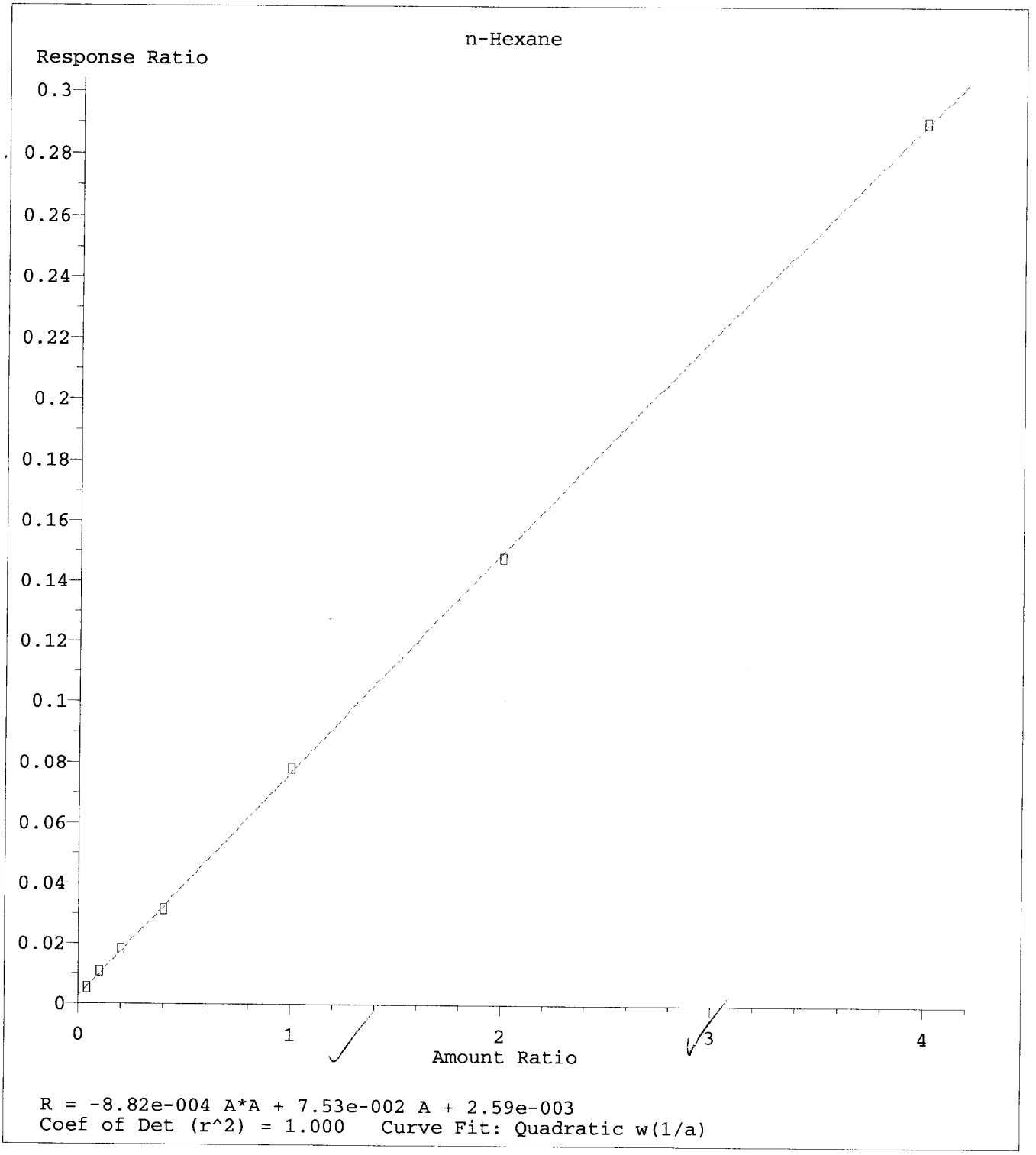
TIC: VC19061006.D\data.ms

(11) Iodomethane

3.262min (+0.026) 1.33 ug/L m

response 0

Ion	Exp%	Act%
142.00	100	0.00
127.00	35.00	0.00#
141.00	15.00	0.00#
0.00	0.00	0.00

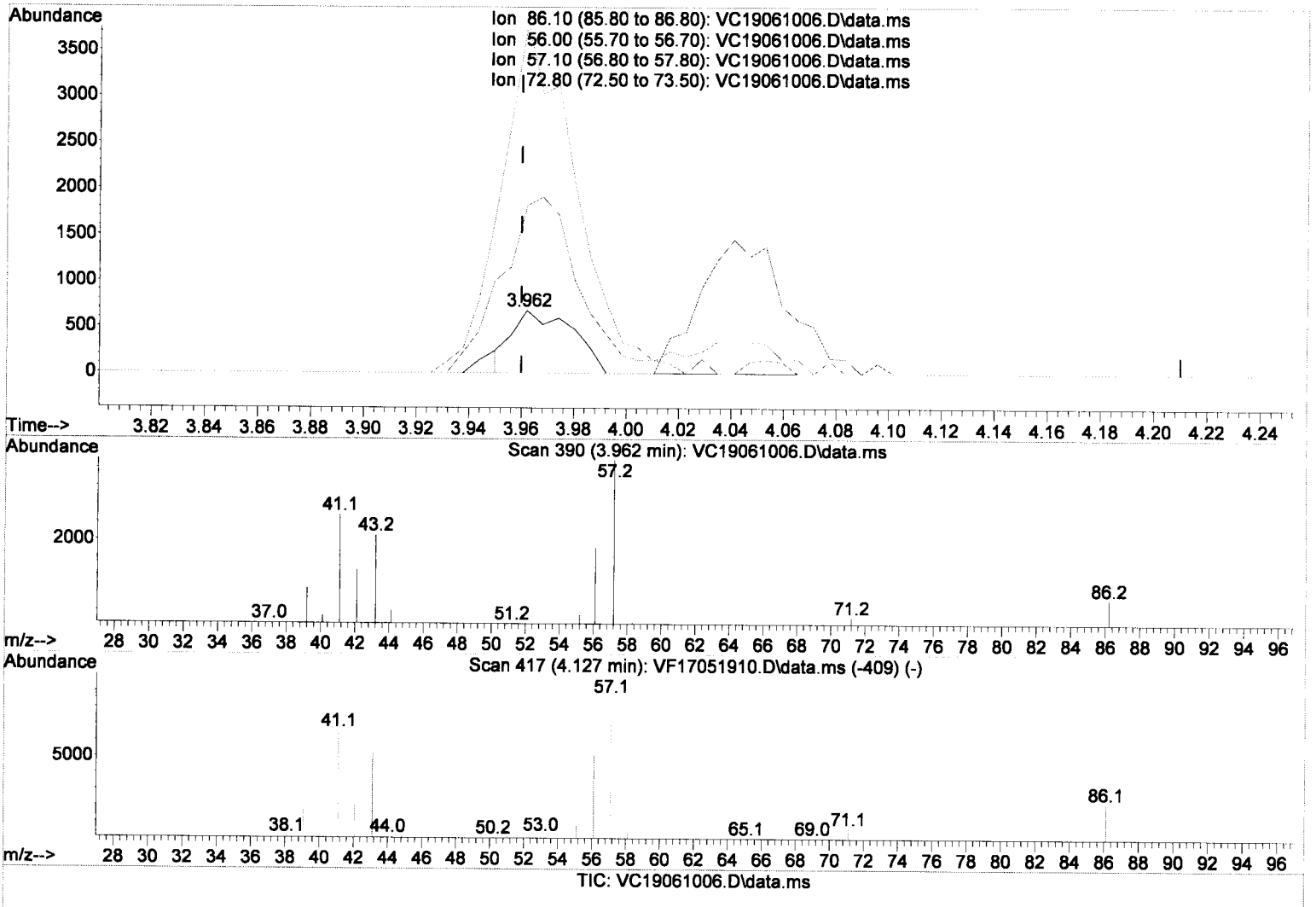


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:31:46 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



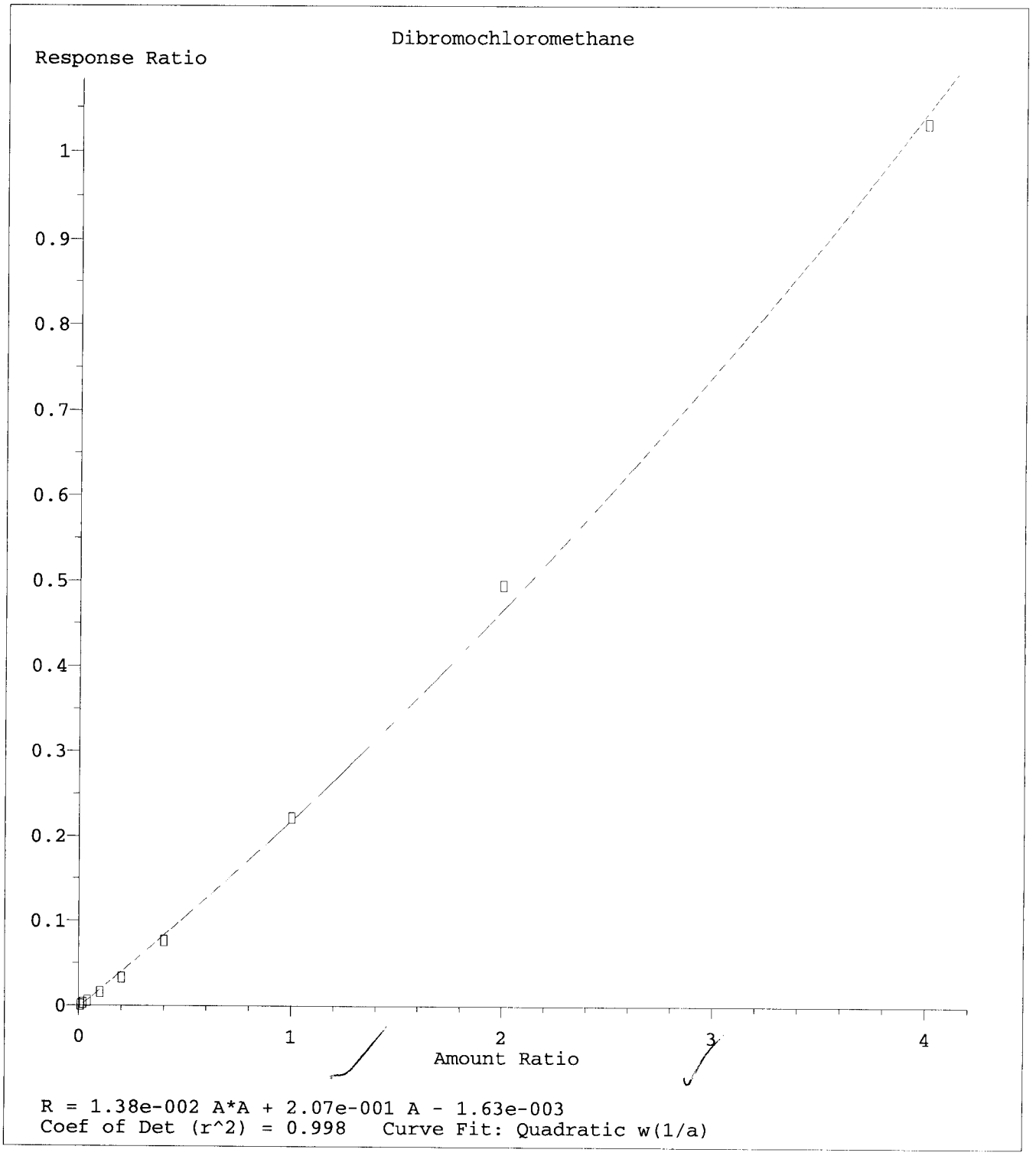
TIC: VC19061006.D\data.ms

(15) n-Hexane

3.962min (+0.002) 0.40 ug/L m

response 1084

Ion	Exp%	Act%
86.10	100	100
56.00	275.70	267.89
57.10	523.30	558.76#
72.80	1.70	0.00

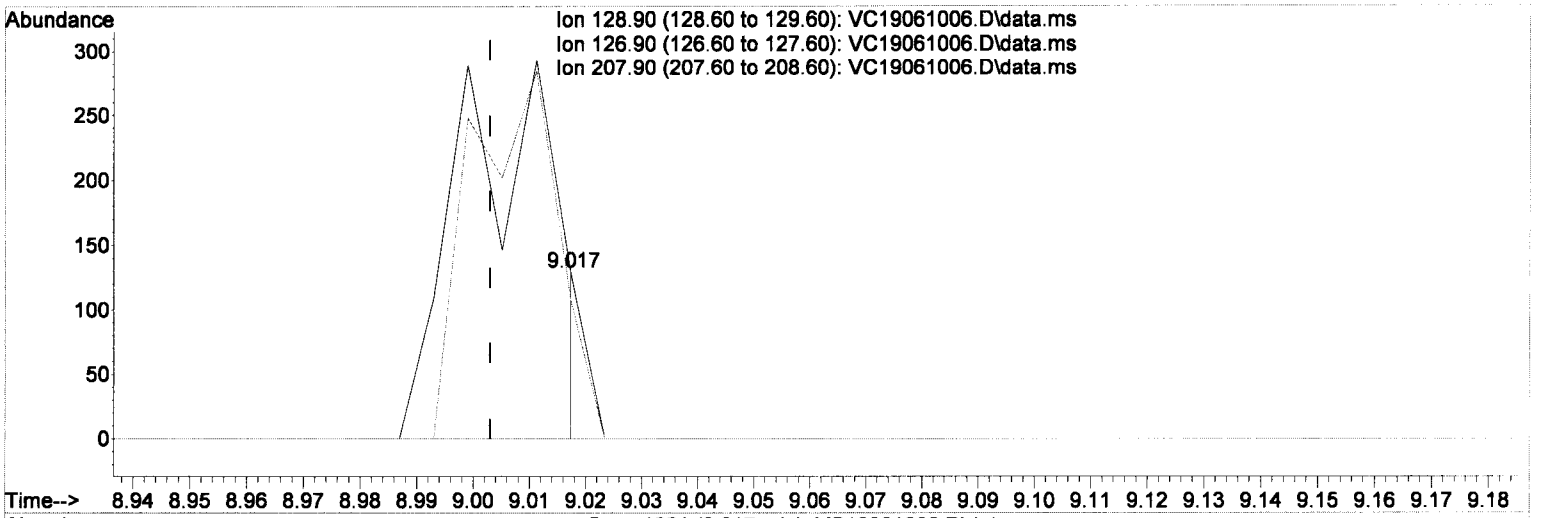


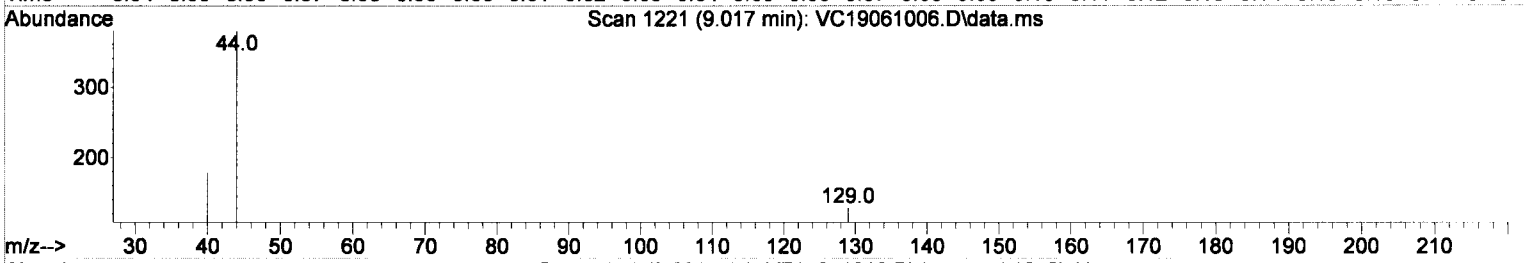
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:35:42 2019

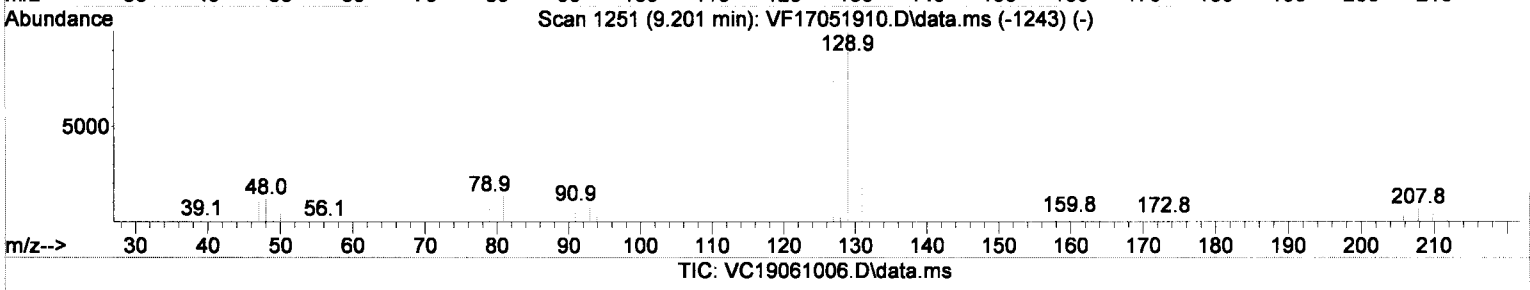
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







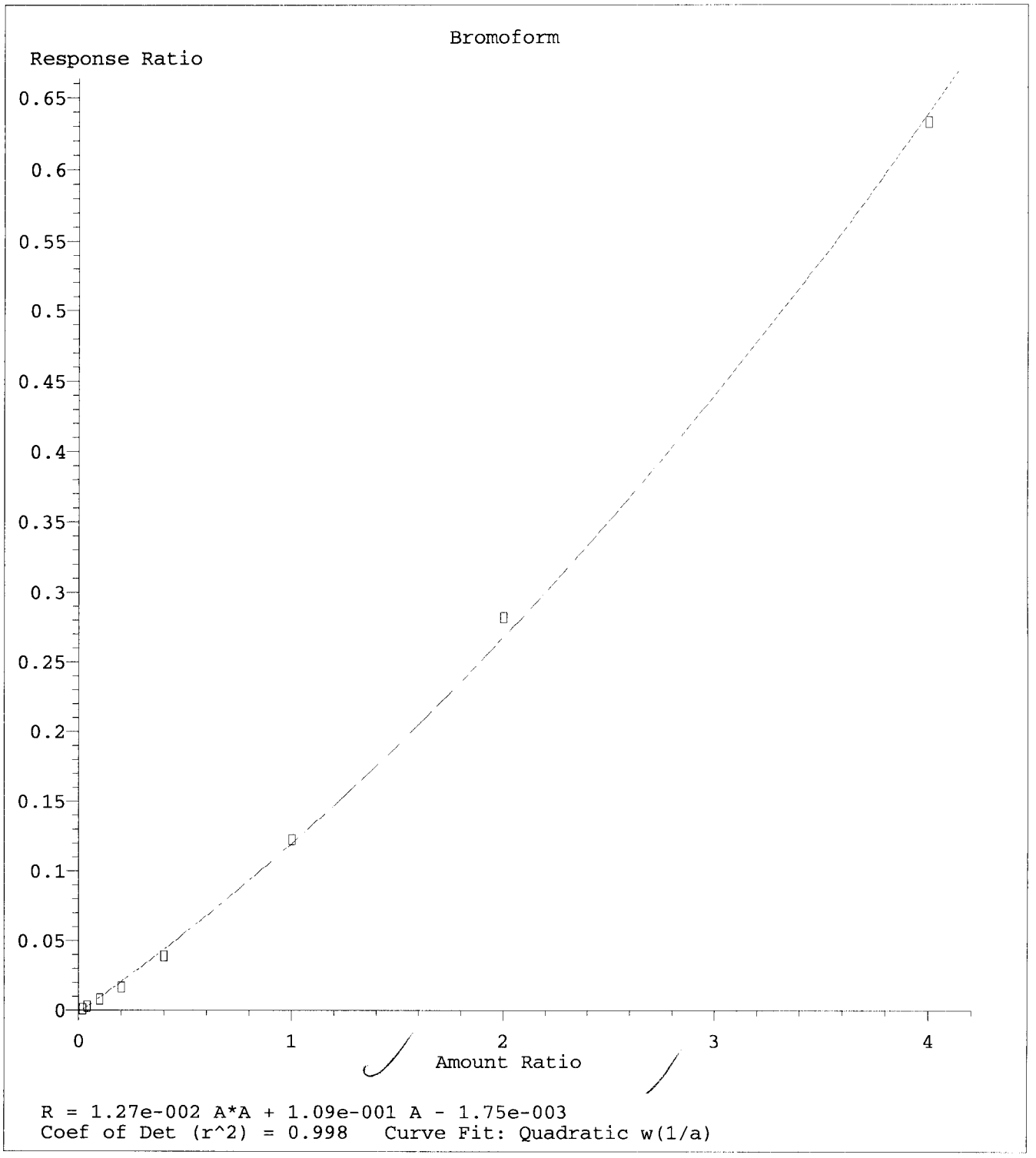
TIC: VC19061006.D\data.ms

(45) Dibromochloromethane

9.017min (+0.014) 0.39 ug/L m

response 0

Ion	Exp%	Act%
128.90	100	0.00
126.90	81.20	0.00#
207.90	7.40	0.00
0.00	0.00	0.00

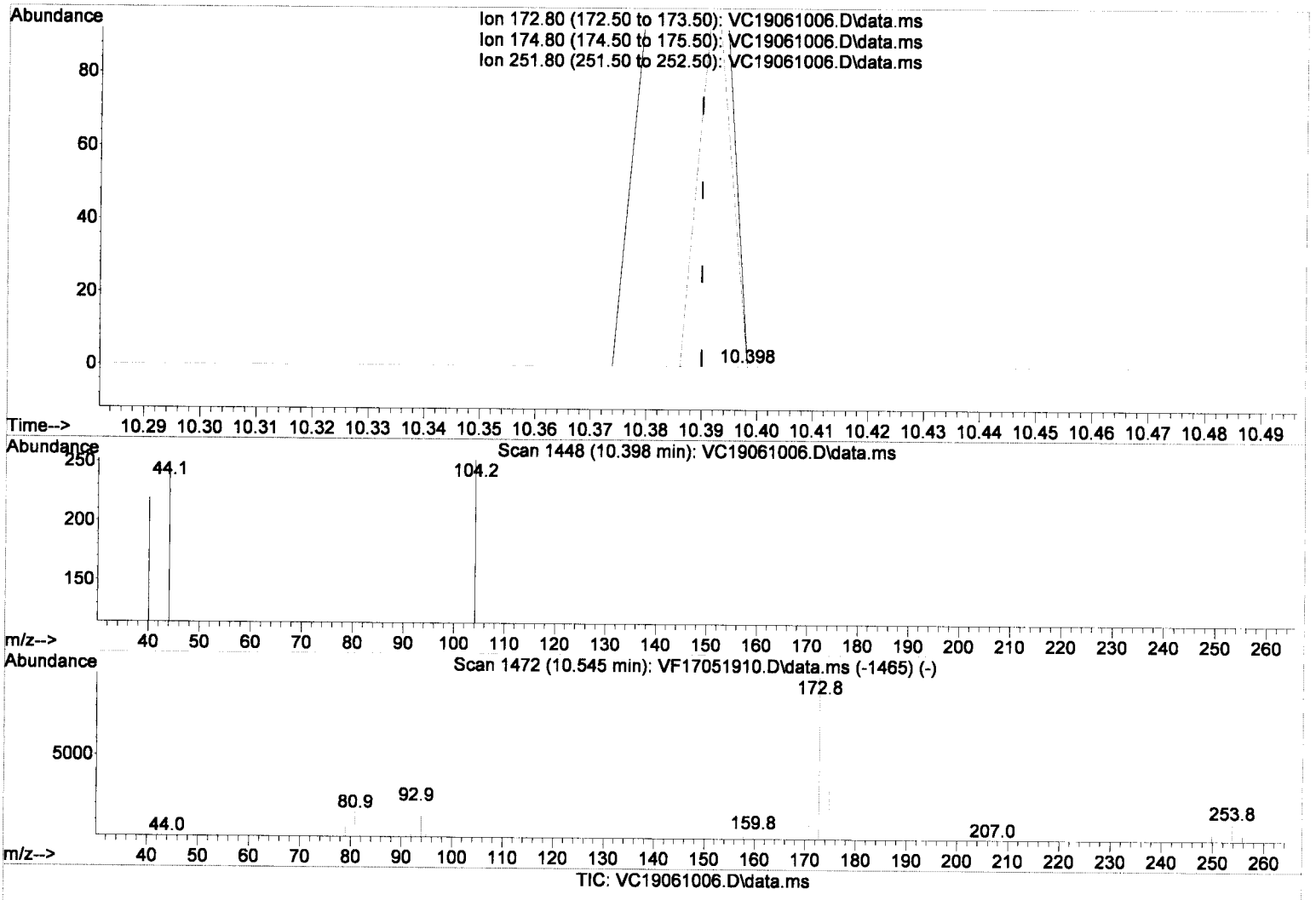


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:37:16 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



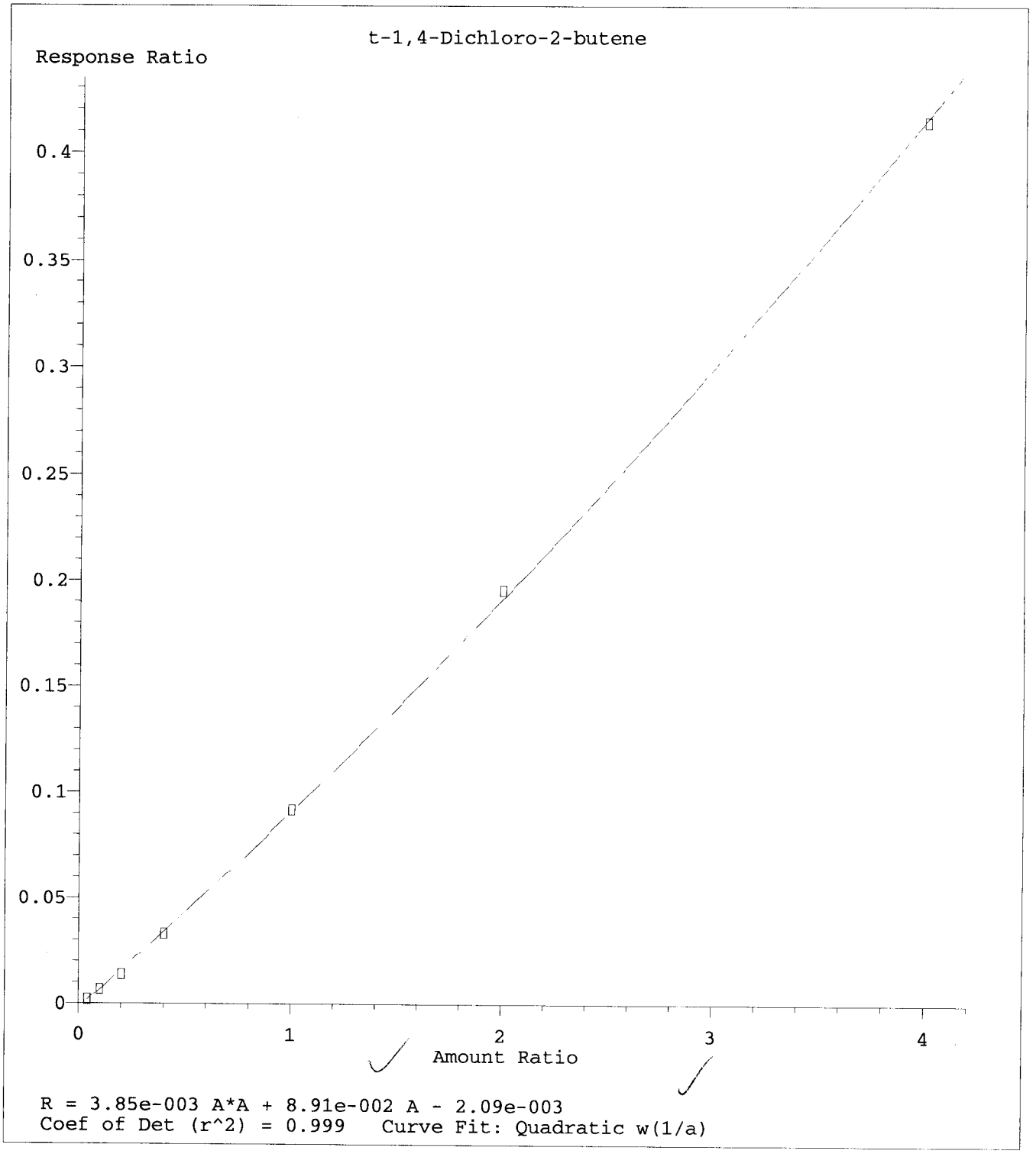
TIC: VC19061006.D\data.ms

(55) Bromoform (P)

10.398min (+0.008) 0.80 ug/L m

response 0

Ion	Exp%	Act%
172.80	100	0.00
174.80	49.10	0.00#
251.80	12.50	0.00
0.00	0.00	0.00

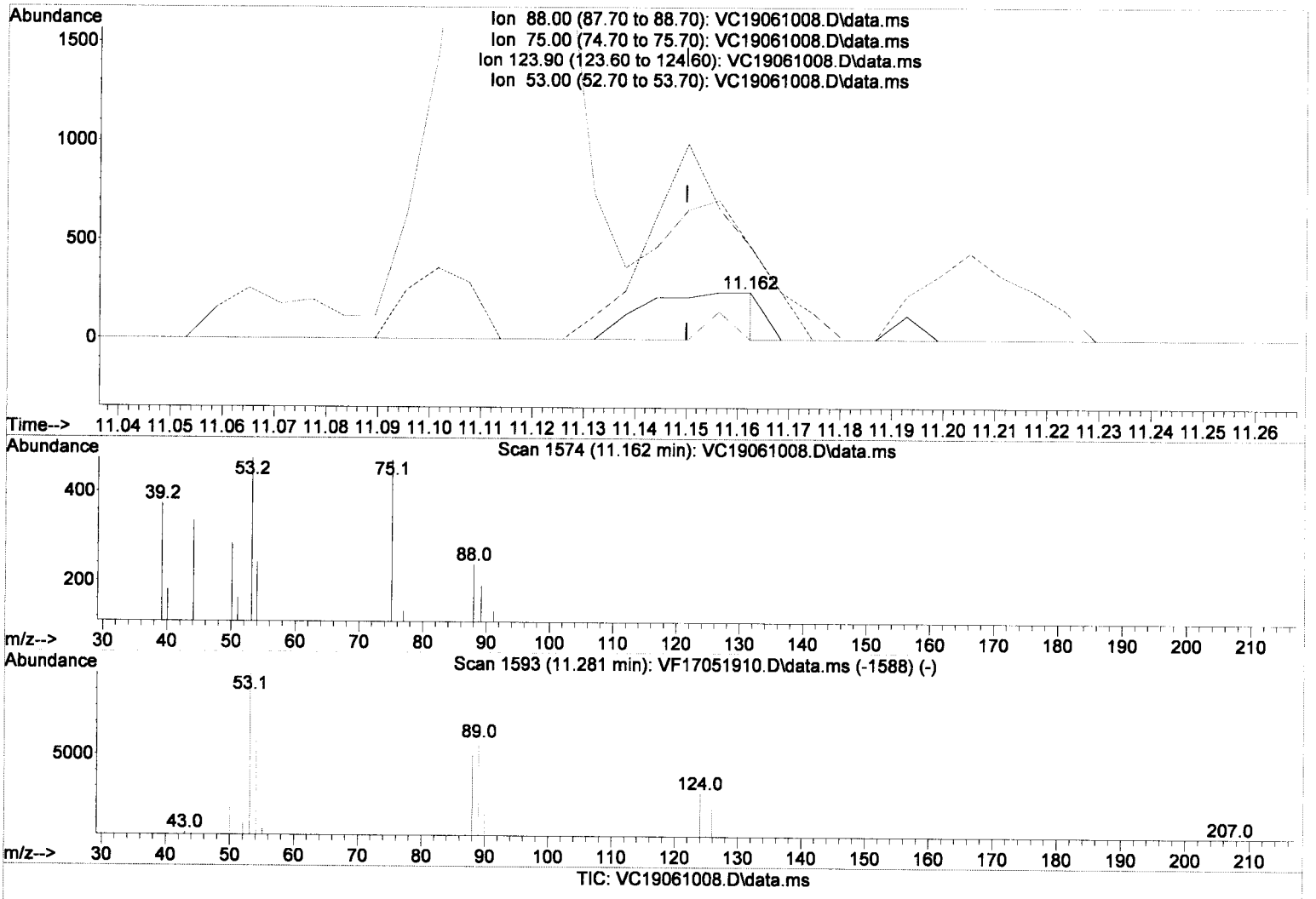


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:38:16 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

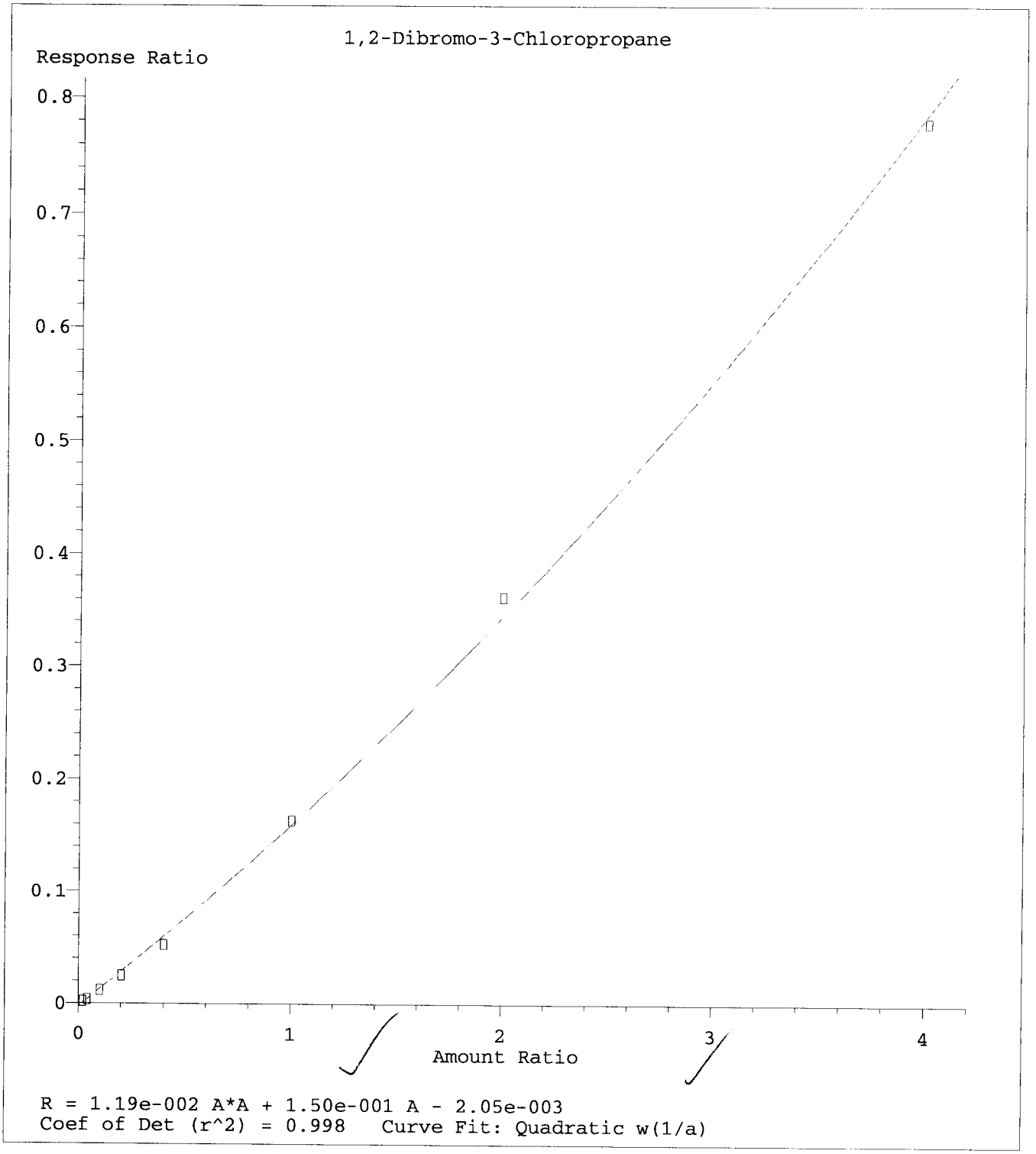


(65) t-1,4-Dichloro-2-butene

11.162min (+0.012) 1.17 ug/L m

response 0

Ion	Exp%	Act%
88.00	100	0.00
75.00	240.20	0.00#
123.90	48.30	0.00#
53.00	249.20	0.00#

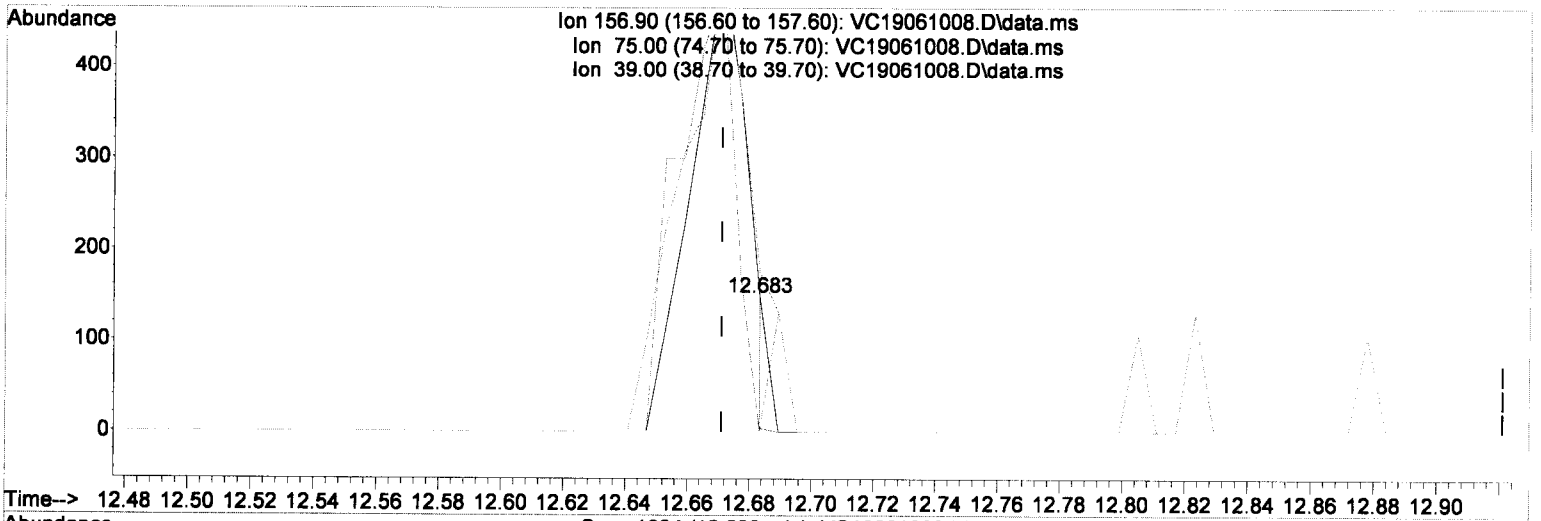


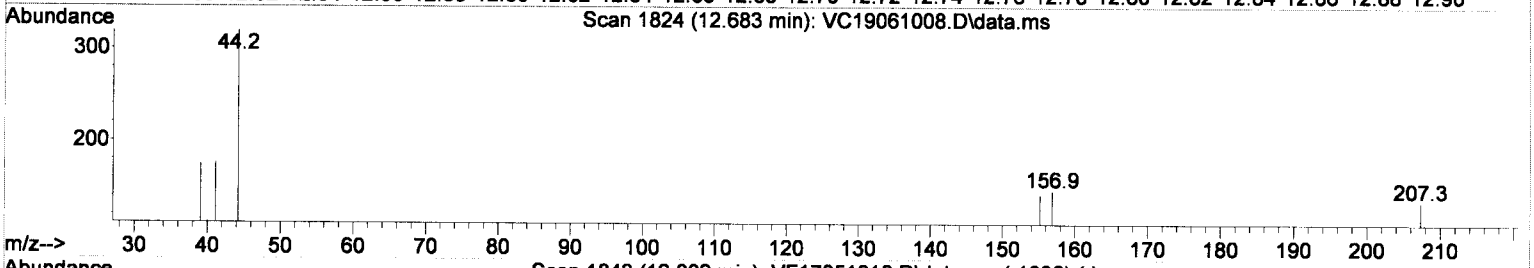
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:39:22 2019

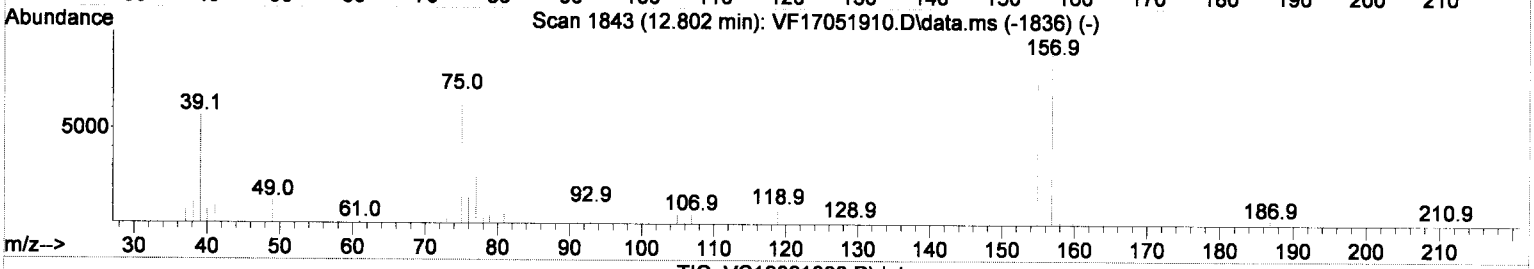
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







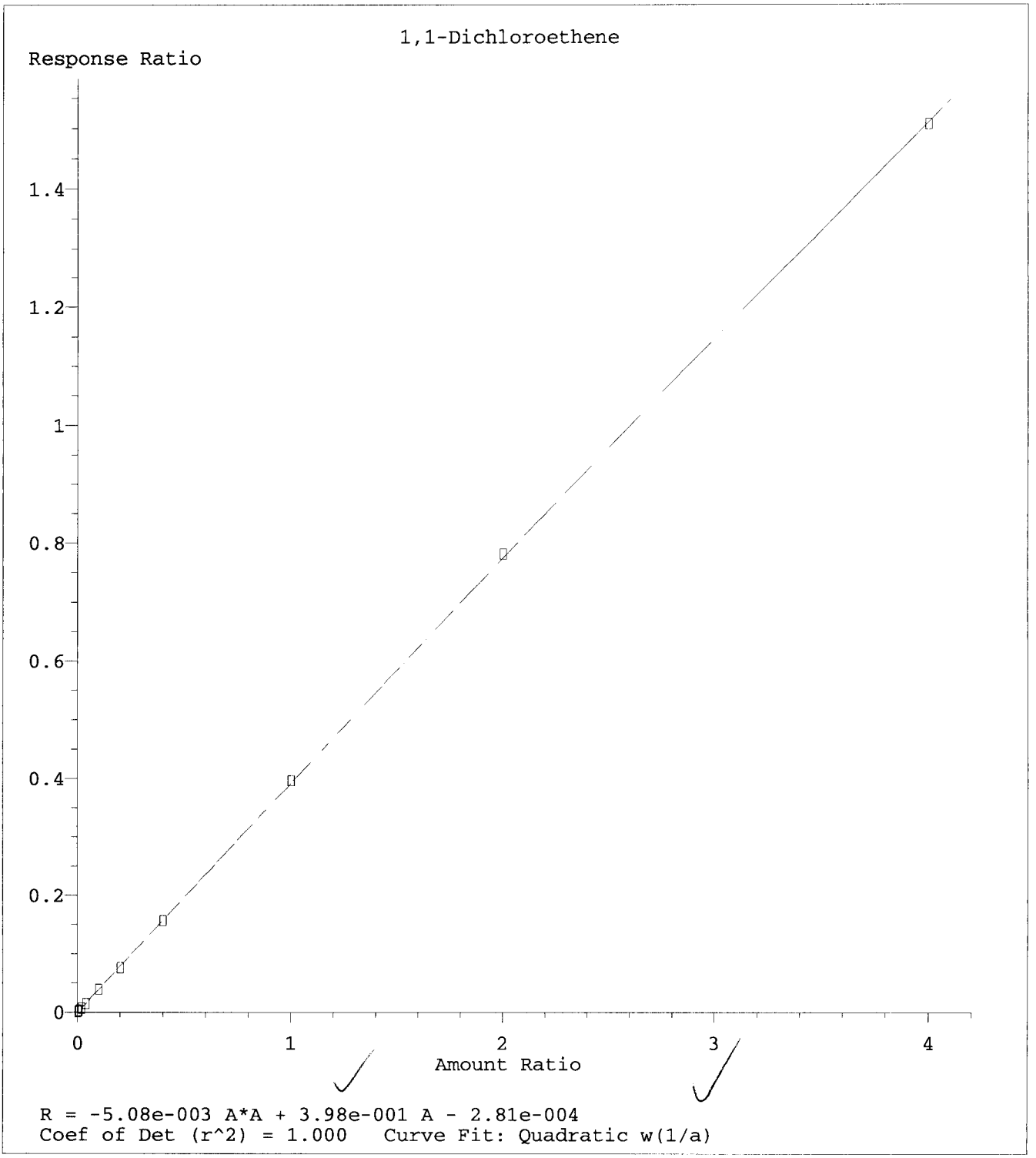
TIC: VC19061008.D\data.ms

(75) 1,2-Dibromo-3-Chloropropane

12.683min (+0.012) 0.68 ug/L m

response -1

Ion	Exp%	Act%
156.90	100	100
75.00	79.00	0.00#
39.00	63.10	119.05#
0.00	0.00	-0.00

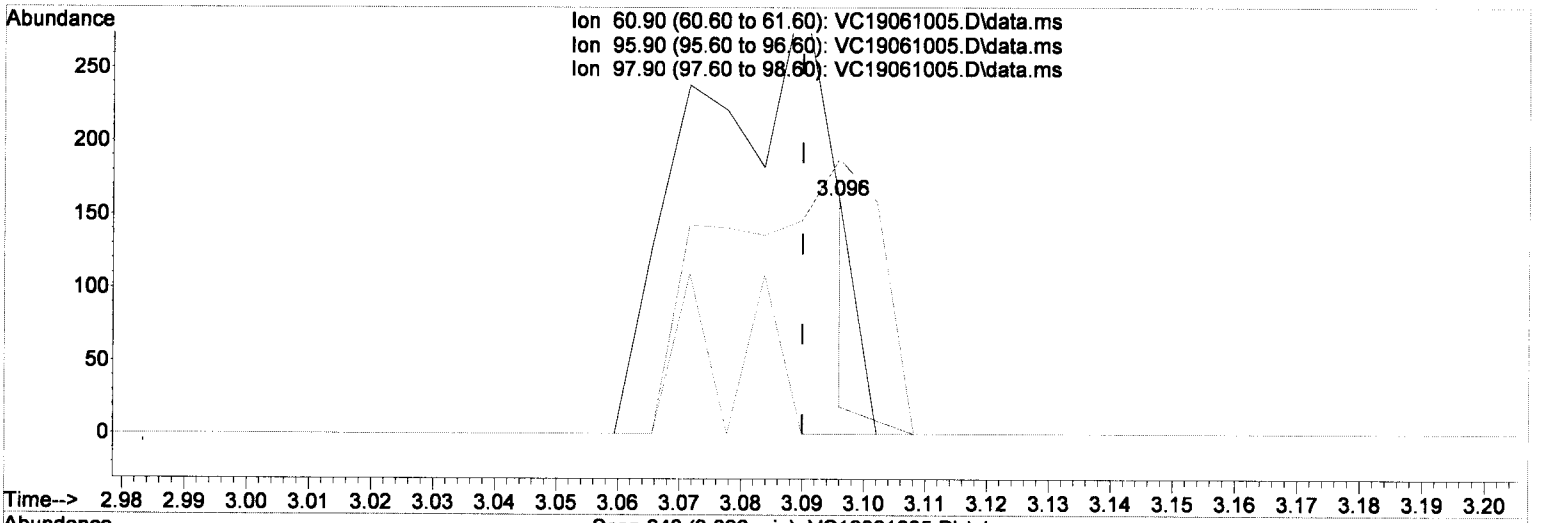


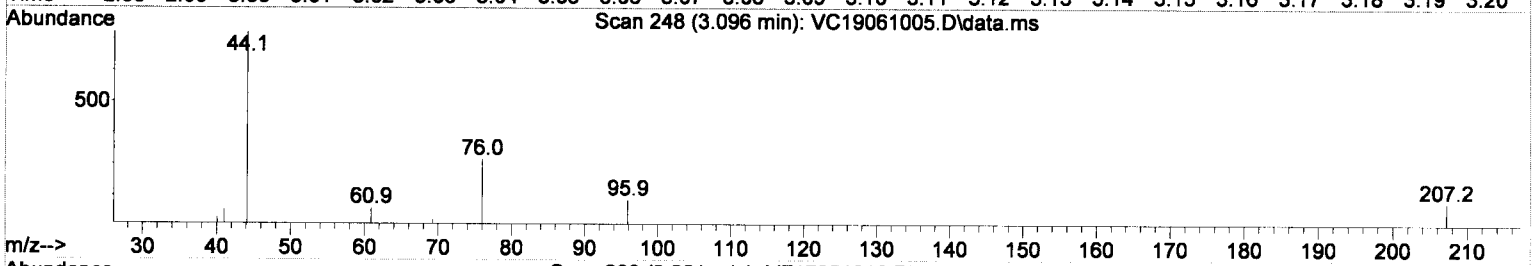
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:42:50 2019

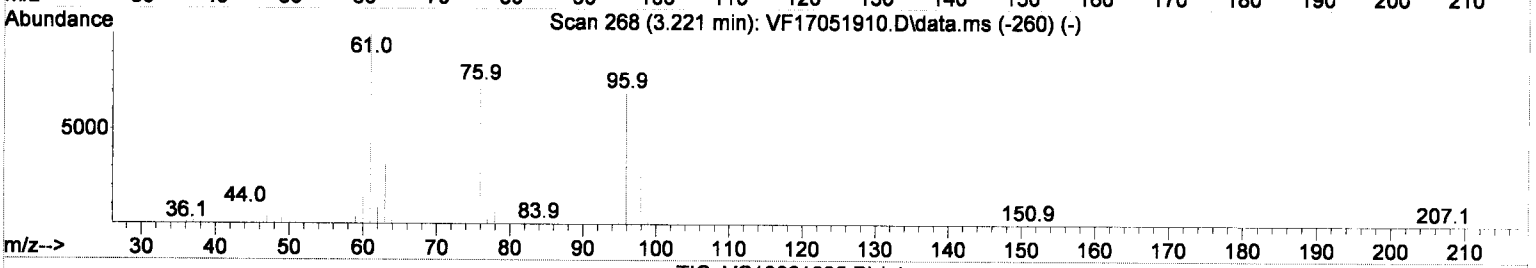
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:46:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







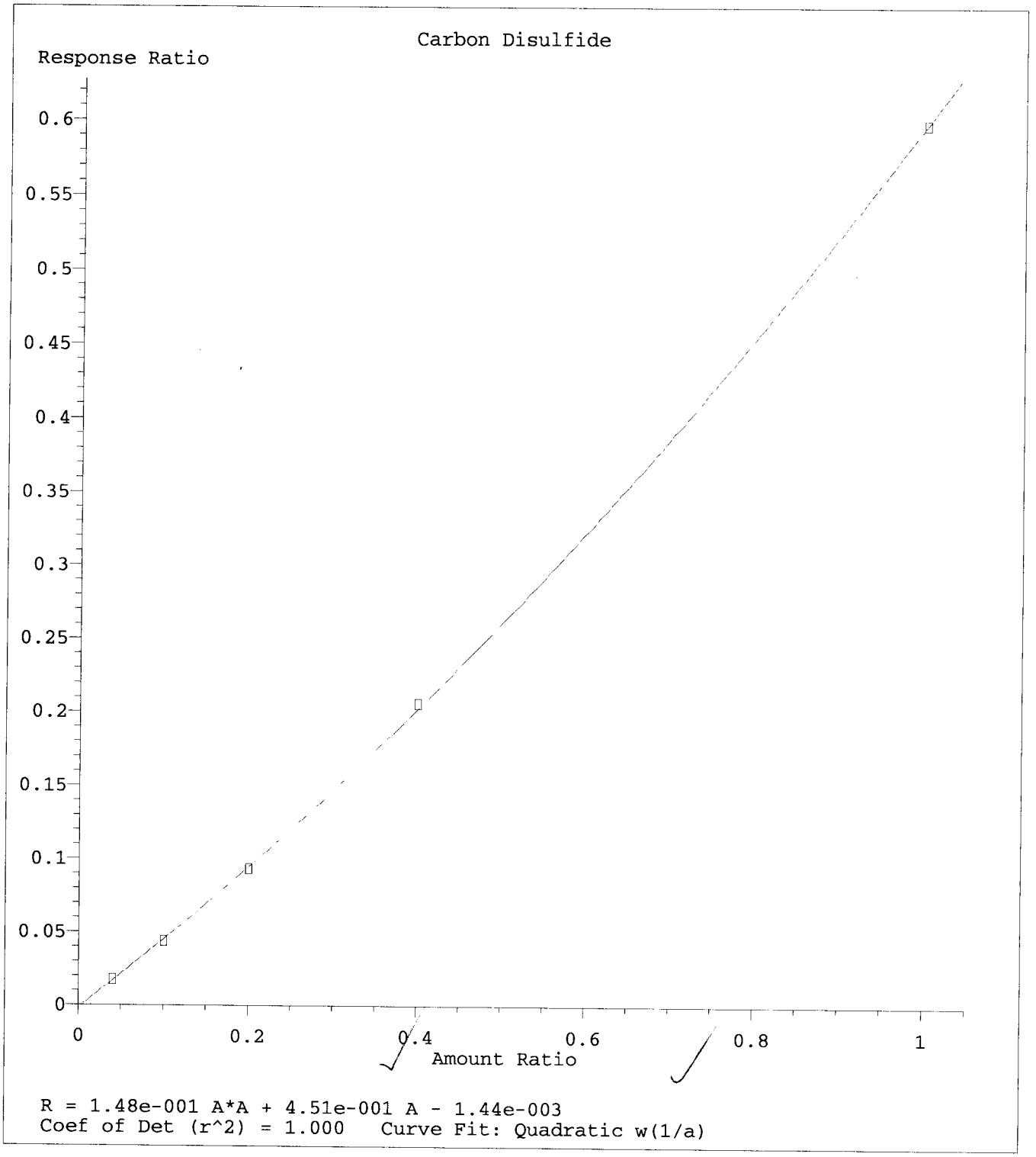
TIC: VC19061005.D\data.ms

(8) 1,1-Dichloroethene (C)

3.096min (+0.006) 0.03 ug/L m

response -7

Ion	Exp%	Act%
60.90	100	100
95.90	75.30	117.50#
97.90	48.50	0.00#
0.00	0.00	-0.00

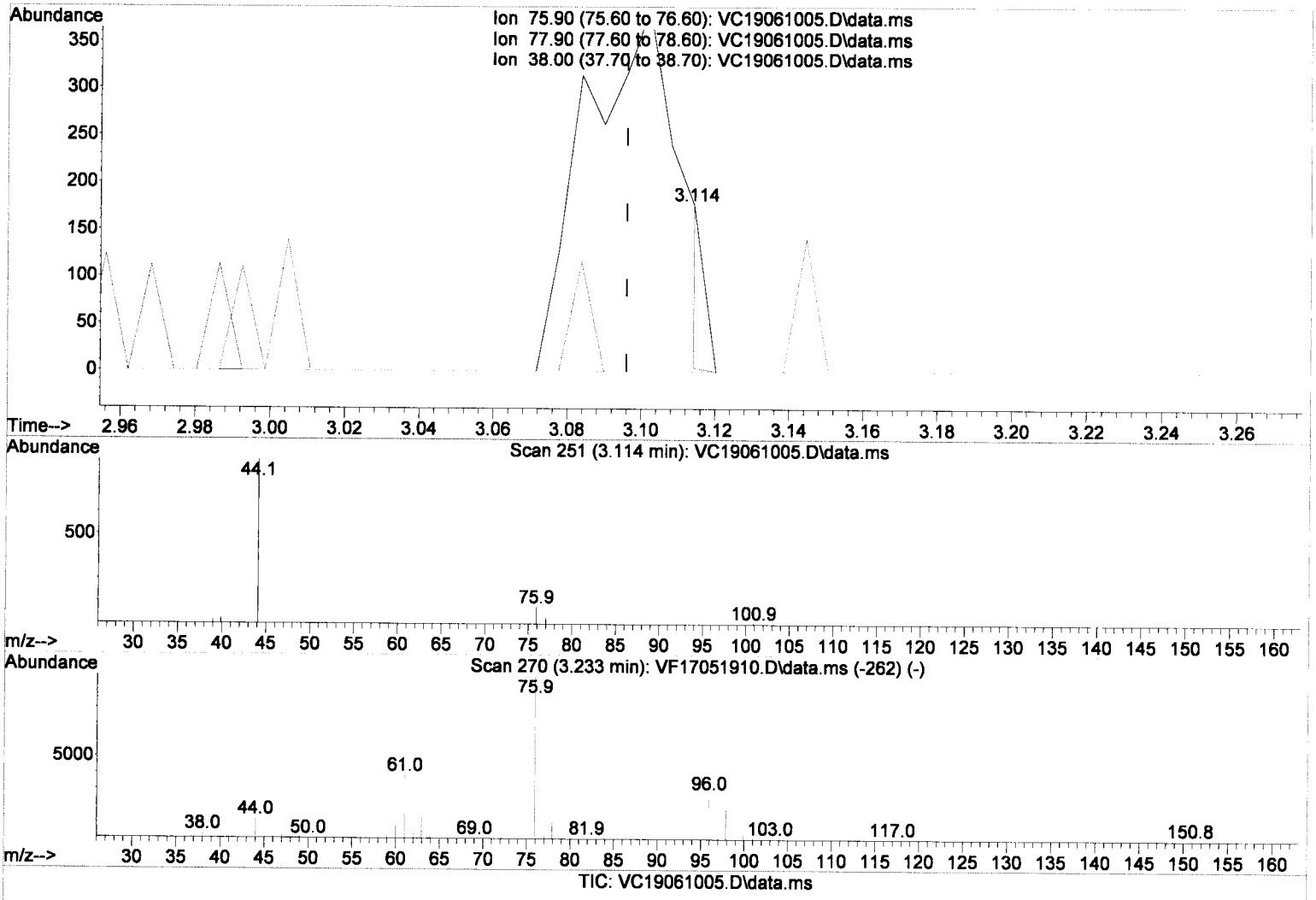


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:42:50 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:46:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(9) Carbon Disulfide

3.114min (+0.018) 0.16 ug/L m

response -1

Ion	Exp%	Act%
75.90	100	100
77.90	9.50	0.00
38.00	1.60	0.00
0.00	0.00	-0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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	102	0.00
2		Dichlorodifluoromethane	20.000	25.535	-27.7#	127	0.00
3	P	Chloromethane	20.000	23.570	-17.9	121	0.00
4	C	Vinyl Chloride	20.000	22.244	-11.2	110	0.00
5		Bromomethane	20.000	24.261	~~-21.3#~~	126	0.00
6		Chloroethane	20.000	27.566	~~-37.8#~~	141	0.00
7		Trichlorofluoromethane	20.000	24.068	~~-20.3#~~	123	0.01
8	C	1,1-Dichloroethene	20.000	25.482	-27.4#	131	0.00
9		Carbon Disulfide	20.000	25.618	-28.1#	133	0.00
10		Freon 113	20.000	21.860	-9.3	108	0.00
11		Iodomethane	20.000	21.337	-6.7	123	0.00
12		Methylene Chloride	20.000	21.995	-10.0	116	0.00
13		Acetone	40.000	39.677	0.8	100	0.00
14		t-1,2-Dichloroethene	20.000	23.932	-19.7	118	0.00
15		n-Hexane	20.000	21.392	-7.0	112	0.00
16		Methyl-tert-butyl-ether	20.000	20.559	-2.8	103	0.00
17	P	1,1-Dichloroethane	20.000	23.768	-18.8	116	0.00
18		Acrylonitrile	20.000	19.569	2.2	101	0.00
19		c-1,2-Dichloroethene	20.000	20.727	-3.6	102	0.00
20		2,2-Dichloropropane	20.000	19.374	3.1	95	0.00
21		Bromochloromethane	20.000	21.009	-5.0	100	0.00
22	C	Chloroform	20.000	20.361	-1.8	102	0.00
23		Carbon Tetrachloride	20.000	22.887	-14.4	106	0.00
24		Tetrahydrofuran	20.000	19.628	1.9	100	0.00
25		1,1,1-Trichloroethane	20.000	21.919	-9.6	108	0.00
26	S	Dibromofluoromethane (S)	50.000	52.938	-5.9	104	0.00
27		1,1-Dichloropropene	20.000	20.665	-3.3	102	0.00
28		2-Butanone (MEK)	40.000	39.636	0.9	100	0.00
29		Benzene	20.000	20.304	-1.5	105	0.00
30		1,2-Dichloroethane (EDC)	20.000	20.652	-3.3	104	0.00
31		iso-Butyl Alcohol	500.000	514.254	-2.9	105	0.02
32	S	1,4-Difluorobenzene (S)	50.000	49.716	0.6	102	0.00
33		Trichloroethene (TCE)	20.000	20.159	-0.8	100	0.00
34		Dibromomethane	20.000	19.936	0.3	99	0.00
35	C	1,2-Dichloropropane	20.000	19.857	0.7	99	0.00
36		Bromodichloromethane	20.000	20.869	-4.3	98	0.00
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	99	0.00
38		c-1,3-Dichloropropene	20.000	21.994	-10.0	99	0.00
39	S	Toluene-d8 (S)	50.000	50.348	-0.7	101	0.00
40	C	Toluene	20.000	19.187	4.1	99	0.00
41		Tetrachloroethene (PCE)	20.000	19.916	0.4	101	0.00
42		4-Methyl-2-Pentanone (MIBK)	40.000	40.967	-2.4	100	0.00
43		t-1,3-Dichloropropene	20.000	21.285	-6.4	96	0.00
44		1,1,2-Trichloroethane	20.000	20.349	-1.7	99	0.00
45		Dibromochloromethane	20.000	18.106	9.5	97	0.00
46		1,3-Dichloropropane	20.000	20.296	-1.5	97	0.00
47		1,2-Dibromoethane (EDB)	20.000	21.668	-8.3	100	0.00
48		2-Hexanone	40.000	43.511	-8.8	103	0.00
49	P	Chlorobenzene	20.000	19.214	3.9	98	0.00
50	C	Ethylbenzene	20.000	19.666	1.7	99	0.00

EOS

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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		1,1,1,2-Tetrachloroethane	20.000	21.780	-8.9	96	0.00
52		m,p-Xylenes (2)	40.000	40.003	-0.0	98	0.00
53		o-Xylene	20.000	19.594	2.0	97	0.00
54		Styrene	20.000	21.565	-7.8	97	0.00
55	P	Bromoform	20.000	18.002	10.0	99	0.00
56		Isopropylbenzene	20.000	19.983	0.1	97	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	102	0.00
58	S	4-Bromofluorobenzene (S)	50.000	49.414	1.2	99	0.00
59		Bromobenzene	20.000	19.690	1.5	100	0.00
60		n-Propylbenzene	20.000	18.831	5.8	93	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	20.122	-0.6	102	0.00
62		2-Chlorotoluene	20.000	19.547	2.3	98	0.00
63		1,3,5-Trimethylbenzene	20.000	19.512	2.4	96	0.00
64		1,2,3-Trichloropropane	20.000	18.686	6.6	95	0.00
65		t-1,4-Dichloro-2-butene	20.000	18.012	9.9	94	0.00
66		4-Chlorotoluene	20.000	19.124	4.4	96	0.00
67		tert-Butylbenzene	20.000	19.806	1.0	95	0.00
68		1,2,4-Trimethylbenzene	20.000	19.048	4.8	96	0.00
69		sec-Butylbenzene	20.000	20.260	-1.3	97	0.00
70		4-Isopropyltoluene	20.000	19.642	1.8	95	0.00
71		1,3-Dichlorobenzene	20.000	18.530	7.3	97	0.00
72		1,4-Dichlorobenzene	20.000	18.288	8.6	96	0.00
73		n-Butylbenzene	20.000	19.005	5.0	97	0.00
74		1,2-Dichlorobenzene	20.000	19.323	3.4	98	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	17.702	11.5	103	0.00
76		Hexachlorobutadiene	20.000	20.171	-0.9	97	0.00
77		1,2,4-Trichlorobenzene	20.000	20.024	-0.1	94	0.00
78		Naphthalene	20.000	20.922	-4.6	99	0.00
79		1,2,3-Trichlorobenzene	20.000	20.126	-0.6	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

Analysis Included
8260C Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9F10052-TUN1	MS Tune	Soil		A19C135	6/10/2019	3:06:00PM
9F10052-ICB1	Initial Cal Blank	Soil		A19C135	6/10/2019	3:34:00PM
9F10052-CAL1	Cal Standard	Soil	A19F090	"	6/10/2019	4:02:00PM
9F10052-CAL2	Cal Standard	Soil	A19F091	"	6/10/2019	4:29:00PM
9F10052-CAL3	Cal Standard	Soil	A19F092	"	6/10/2019	4:57:00PM
9F10052-CAL4	Cal Standard	Soil	A19F093	"	6/10/2019	5:25:00PM
9F10052-CAL5	Cal Standard	Soil	A19F094	"	6/10/2019	5:52:00PM
9F10052-CAL6	Cal Standard	Soil	A19F095	"	6/10/2019	6:20:00PM
9F10052-CAL7	Cal Standard	Soil	A19F096	"	6/10/2019	6:48:00PM
9F10052-CAL8	Cal Standard	Soil	A19F097	"	6/10/2019	7:15:00PM
9F10052-CAL9	Cal Standard	Soil	A19F098	"	6/10/2019	7:43:00PM
9F10052-CALA	Cal Standard	Soil	A19F099	"	6/10/2019	8:38:00PM
9F10052-CALB	Cal Standard	Soil	A19F100	"	6/10/2019	9:34:00PM
9F10052-ICV1	Initial Cal Check	Soil	A19F101	"	6/10/2019	10:56:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9F1104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9F10052** Matrix: **Soil**

9F10052-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

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: **A9F1104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9F10052** Matrix: **Soil**

9F10052-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual
Chloroethane	10	20.0	**27.57**	138	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.

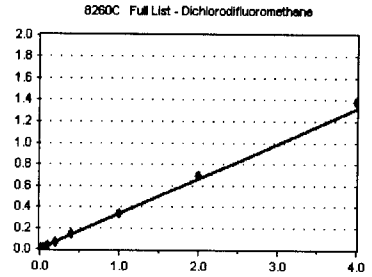
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

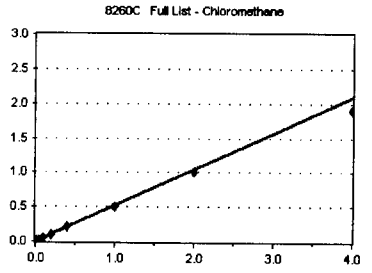


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	789	0.291	1.68
9F10052-CAL4	1	1969	0.297	1.66
9F10052-CAL5	2	4359	0.325	1.66
9F10052-CAL6	5	11543	0.350	1.67
9F10052-CAL7	10	22273	0.338	1.66
9F10052-CAL8	20	45425	0.339	1.66
9F10052-CAL9	50	115408	0.338	1.66
9F10052-CALA	100	230319	0.345	1.67
9F10052-CALB	200	477021	0.346	1.67

AVE RF **0.330** RF RSD **6.55** AVE RT **1.67**

Chloromethane

Curve Fit: **AVERAGE RF**

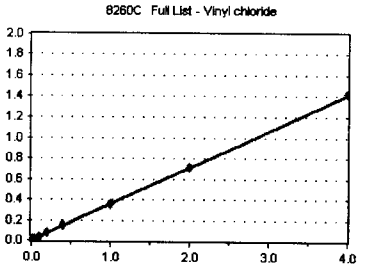


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~938~~	~~0.746~~	~~1.86~~
9F10052-CAL3	0.4	1696	0.625	1.86
9F10052-CAL4	1	3371	0.509	1.87
9F10052-CAL5	2	6993	0.521	1.86
9F10052-CAL6	5	17301	0.525	1.86
9F10052-CAL7	10	34272	0.520	1.86
9F10052-CAL8	20	69415	0.518	1.86
9F10052-CAL9	50	168897	0.495	1.86
9F10052-CALA	100	337482	0.506	1.87
9F10052-CALB	200	653270	0.474	1.87

AVE RF **0.521** RF RSD **8.08** AVE RT **1.86**

Vinyl chloride

Curve Fit: **AVERAGE RF**

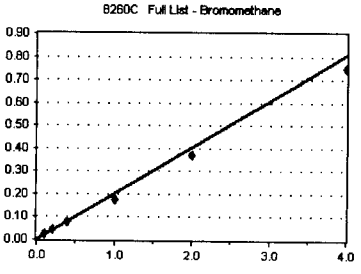


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~192~~	~~0.296~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	847	0.312	1.95
9F10052-CAL4	1	2234	0.337	1.97
9F10052-CAL5	2	4880	0.364	1.95
9F10052-CAL6	5	12095	0.367	1.95
9F10052-CAL7	10	24173	0.367	1.95
9F10052-CAL8	20	48944	0.365	1.95
9F10052-CAL9	50	120231	0.353	1.95
9F10052-CALA	100	239778	0.359	1.96
9F10052-CALB	200	491307	0.356	1.96

AVE RF **0.353** RF RSD **5.10** AVE RT **1.95**

Bromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1492~~	~~0.550~~	~~2.31~~
~~9F10052-CAL4~~	~~1~~	~~2566~~	~~0.387~~	~~2.31~~
~~9F10052-CAL5~~	~~2~~	~~4073~~	~~0.304~~	~~2.30~~
9F10052-CAL6	5	8017	0.243	2.30
9F10052-CAL7	10	14610	0.222	2.30
9F10052-CAL8	20	26631	0.199	2.30
9F10052-CAL9	50	60489	0.177	2.31
9F10052-CALA	100	123677	0.185	2.31
9F10052-CALB	200	259132	0.188	2.31

AVE RF **0.202** RF RSD **12.48** AVE RT **2.31**

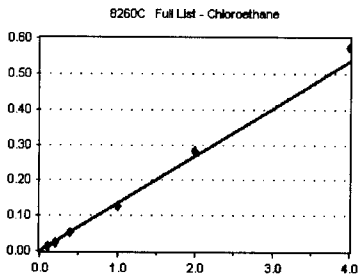
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Chloroethane

Curve Fit: **AVERAGE RF**

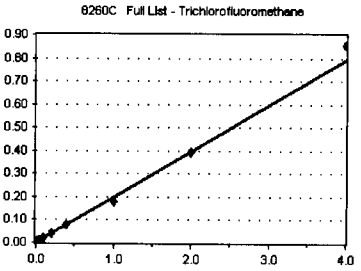


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL5~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL6	5	4635	0.141	2.44
9F10052-CAL7	10	7941	0.120	2.43
9F10052-CAL8	20	17906	0.134	2.44
9F10052-CAL9	50	42931	0.126	2.43
9F10052-CALA	100	93852	0.141	2.45
9F10052-CALB	200	197631	0.143	2.46

AVE RF **0.134** RF RSD **6.87** AVE RT **2.44**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

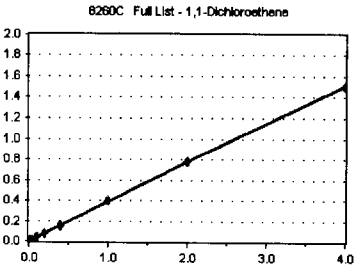


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	1210	0.183	2.56
9F10052-CAL5	2	2960	0.221	2.56
9F10052-CAL6	5	6899	0.209	2.56
9F10052-CAL7	10	12305	0.187	2.55
9F10052-CAL8	20	26493	0.198	2.56
9F10052-CAL9	50	62094	0.182	2.56
9F10052-CALA	100	131121	0.197	2.57
9F10052-CALB	200	294670	0.214	2.57

AVE RF **0.199** RF RSD **7.37** AVE RT **2.56**

1,1-Dichloroethene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

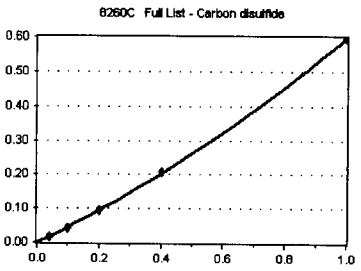


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	452	0.359	3.09
9F10052-CAL3	0.4	1080	0.398	3.09
9F10052-CAL4	1	2382	0.360	3.10
9F10052-CAL5	2	4926	0.367	3.09
9F10052-CAL6	5	12787	0.388	3.09
9F10052-CAL7	10	25019	0.380	3.09
9F10052-CAL8	20	52468	0.392	3.09
9F10052-CAL9	50	135099	0.396	3.08
9F10052-CALA	100	260644	0.391	3.10
9F10052-CALB	200	519340	0.377	3.10

AVE RF **0.381** RF RSD **3.84** AVE RT **3.09**

Carbon disulfide

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1266~~	~~0.467~~	~~3.11~~
~~9F10052-CAL4~~	~~1~~	~~2538~~	~~0.383~~	~~3.11~~
9F10052-CAL5	2	5848	0.436	3.10
9F10052-CAL6	5	14420	0.438	3.10
9F10052-CAL7	10	30776	0.467	3.09
9F10052-CAL8	20	68992	0.515	3.10
9F10052-CAL9	50	203715	0.597	3.10
~~9F10052-CALA~~	~~100~~	~~428101~~	~~0.642~~	~~3.11~~
~~9F10052-CALB~~	~~200~~	~~886498~~	~~0.643~~	~~3.11~~

AVE RF **0.491** RF RSD **13.81** AVE RT **3.10**

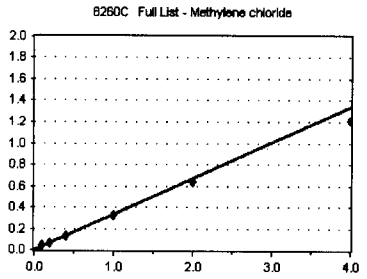
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Methylene chloride

Curve Fit: **AVERAGE RF**

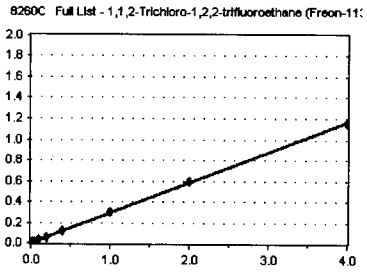


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1951~~	~~3.006~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~2127~~	~~1.692~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~2896~~	~~1.068~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~3900~~	~~0.589~~	~~0.00~~
~~9F10052-CAL5~~	~~2~~	~~6194~~	~~0.462~~	~~0.00~~
9F10052-CAL6	5	13102	0.398	0.00
9F10052-CAL7	10	22641	0.343	3.73
9F10052-CAL8	20	43676	0.326	3.72
9F10052-CAL9	50	110475	0.324	3.72
9F10052-CALA	100	213840	0.321	3.73
9F10052-CALB	200	417213	0.302	3.73

AVE RF **0.336** RF RSD **9.86** AVE RT **3.10**

1,1,2-Trichloro-1,2,2-trifluoroeth

Curve Fit: **AVERAGE RF**

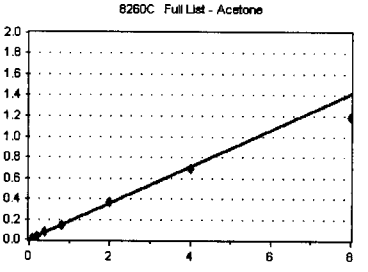


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	656	0.242	3.14
9F10052-CAL4	1	1821	0.275	3.14
9F10052-CAL5	2	4215	0.314	3.14
9F10052-CAL6	5	10227	0.310	3.14
9F10052-CAL7	10	19500	0.296	3.14
9F10052-CAL8	20	40482	0.302	3.14
9F10052-CAL9	50	102992	0.302	3.14
9F10052-CALA	100	198767	0.298	3.15
9F10052-CALB	200	399582	0.290	3.14

AVE RF **0.292** RF RSD **7.55** AVE RT **3.14**

Acetone

Curve Fit: **AVERAGE RF**

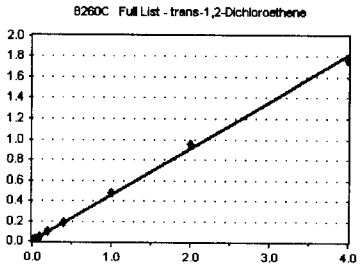


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	4	4932	0.184	3.83
9F10052-CAL6	10	12346	0.187	3.84
9F10052-CAL7	20	23789	0.180	3.83
9F10052-CAL8	40	47883	0.179	3.83
9F10052-CAL9	100	125112	0.183	3.83
9F10052-CALA	200	232154	0.174	3.83
9F10052-CALB	400	410227	0.149	3.83

AVE RF **0.177** RF RSD **7.38** AVE RT **3.83**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	572	0.455	3.88
9F10052-CAL3	0.4	1202	0.443	3.89
9F10052-CAL4	1	2807	0.424	3.89
9F10052-CAL5	2	6058	0.451	3.89
9F10052-CAL6	5	14689	0.446	3.88
9F10052-CAL7	10	30347	0.460	3.88
9F10052-CAL8	20	62991	0.470	3.88
9F10052-CAL9	50	161888	0.475	3.88
9F10052-CALA	100	316839	0.475	3.89
9F10052-CALB	200	607920	0.441	3.89

AVE RF **0.454** RF RSD **3.63** AVE RT **3.88**

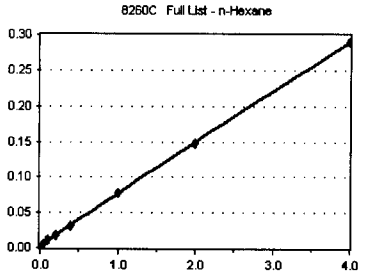
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

n-Hexane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

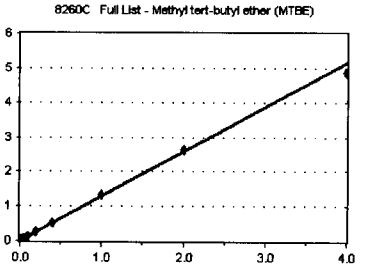


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1308~~	~~2.015~~	~~3.97~~
~~9F10052-CAL2~~	~~0.2~~	~~991~~	~~0.788~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1223~~	~~0.451~~	~~3.96~~
~~9F10052-CAL4~~	~~1~~	~~1406~~	~~0.212~~	~~3.98~~
9F10052-CAL5	2	1784	0.133	3.96
9F10052-CAL6	5	3541	0.108	3.96
9F10052-CAL7	10	5985	9.079	3.96
9F10052-CAL8	20	10548	7.872	3.96
9F10052-CAL9	50	26695	7.829	3.96
9F10052-CALA	100	49312	7.392	3.97
9F10052-CALB	200	100064	7.255	3.97

AVE RF **9.067** RF RSD **24.56** AVE RT **3.96**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

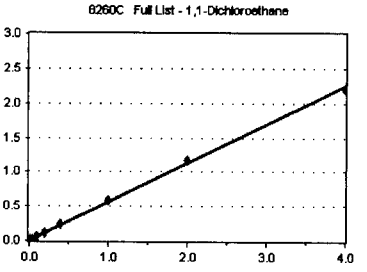


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1600	1.273	4.05
9F10052-CAL3	0.4	3427	1.264	4.04
9F10052-CAL4	1	8702	1.314	4.05
9F10052-CAL5	2	16867	1.257	4.04
9F10052-CAL6	5	44417	1.348	4.04
9F10052-CAL7	10	86627	1.314	4.04
9F10052-CAL8	20	175828	1.312	4.03
9F10052-CAL9	50	449396	1.318	4.03
9F10052-CALA	100	877597	1.315	4.04
9F10052-CALB	200	1672090	1.212	4.04

AVE RF **1.293** RF RSD **3.11** AVE RT **4.04**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

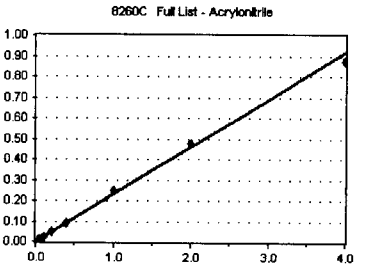


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	568	0.452	4.51
9F10052-CAL3	0.4	1584	0.584	4.52
9F10052-CAL4	1	3709	0.560	4.52
9F10052-CAL5	2	7412	0.552	4.52
9F10052-CAL6	5	19116	0.580	4.52
9F10052-CAL7	10	38779	0.588	4.52
9F10052-CAL8	20	79075	0.590	4.51
9F10052-CAL9	50	200646	0.588	4.51
9F10052-CALA	100	391554	0.587	4.52
9F10052-CALB	200	760512	0.551	4.52

AVE RF **0.563** RF RSD **7.48** AVE RT **4.52**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	2	2845	0.212	4.60
9F10052-CAL6	5	7555	0.229	4.60
9F10052-CAL7	10	15485	0.235	4.60
9F10052-CAL8	20	30348	0.226	4.59
9F10052-CAL9	50	84043	0.246	4.59
9F10052-CALA	100	159210	0.239	4.60
9F10052-CALB	200	302105	0.219	4.60

AVE RF **0.230** RF RSD **5.11** AVE RT **4.60**

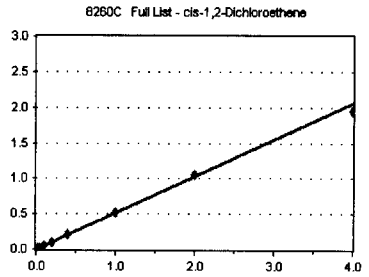
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

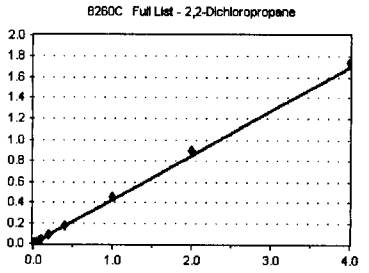


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	687	0.546	5.07
9F10052-CAL3	0.4	1392	0.513	5.08
9F10052-CAL4	1	3260	0.492	5.08
9F10052-CAL5	2	6543	0.488	5.07
9F10052-CAL6	5	17591	0.534	5.06
9F10052-CAL7	10	33904	0.514	5.06
9F10052-CAL8	20	71698	0.535	5.06
9F10052-CAL9	50	178655	0.524	5.06
9F10052-CALA	100	352045	0.528	5.07
9F10052-CALB	200	671582	0.487	5.07

AVE RF **0.516** RF RSD **4.11** AVE RT **5.07**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

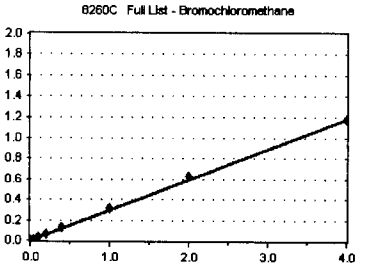


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	1016	0.375	5.17
9F10052-CAL4	1	2909	0.439	5.17
9F10052-CAL5	2	5330	0.397	5.18
9F10052-CAL6	5	14061	0.427	5.17
9F10052-CAL7	10	27557	0.418	5.17
9F10052-CAL8	20	59025	0.440	5.17
9F10052-CAL9	50	153062	0.449	5.17
9F10052-CALA	100	300552	0.451	5.17
9F10052-CALB	200	598853	0.434	5.17

AVE RF **0.426** RF RSD **5.93** AVE RT **5.17**

Bromochloromethane

Curve Fit: **AVERAGE RF**

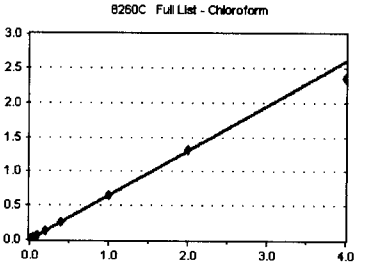


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	306	0.243	5.27
9F10052-CAL3	0.4	815	0.301	5.26
9F10052-CAL4	1	1743	0.263	5.27
9F10052-CAL5	2	3915	0.292	5.26
9F10052-CAL6	5	10253	0.311	5.27
9F10052-CAL7	10	19997	0.303	5.26
9F10052-CAL8	20	42462	0.317	5.26
9F10052-CAL9	50	106680	0.313	5.26
9F10052-CALA	100	209434	0.314	5.27
9F10052-CALB	200	404581	0.293	5.27

AVE RF **0.295** RF RSD **8.16** AVE RT **5.27**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	854	0.679	5.35
9F10052-CAL3	0.4	1876	0.692	5.36
9F10052-CAL4	1	4113	0.621	5.36
9F10052-CAL5	2	8361	0.623	5.35
9F10052-CAL6	5	22224	0.675	5.35
9F10052-CAL7	10	42547	0.645	5.35
9F10052-CAL8	20	88587	0.661	5.35
9F10052-CAL9	50	221584	0.650	5.35
9F10052-CALA	100	435898	0.653	5.35
9F10052-CALB	200	809559	0.587	5.35

AVE RF **0.649** RF RSD **4.85** AVE RT **5.35**

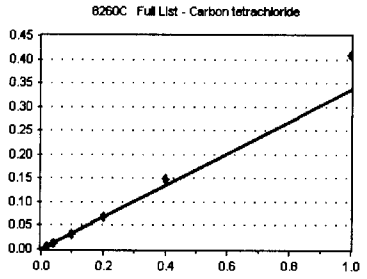
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

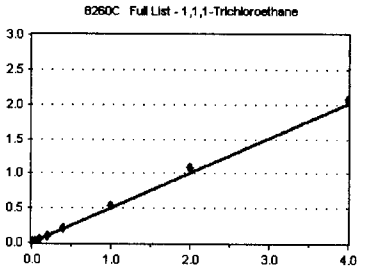


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~263~~	~~0.209~~	~~5.46~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	1829	0.276	5.47
9F10052-CAL5	2	3998	0.298	5.47
9F10052-CAL6	5	10579	0.321	5.47
9F10052-CAL7	10	22117	0.336	5.47
9F10052-CAL8	20	49520	0.370	5.47
9F10052-CAL9	50	139739	0.410	5.48
~~9F10052-CALA~~	~~100~~	~~289658~~	~~0.434~~	~~5.48~~
~~9F10052-CALB~~	~~200~~	~~595740~~	~~0.432~~	~~5.47~~

AVE RF **0.335** RF RSD **14.51** AVE RT **5.47**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

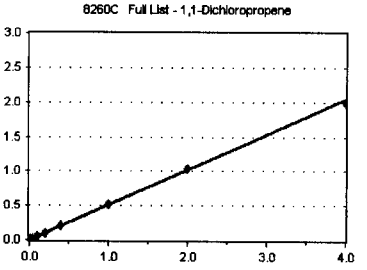


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	607	0.483	5.54
9F10052-CAL3	0.4	1321	0.487	5.54
9F10052-CAL4	1	3011	0.455	5.55
9F10052-CAL5	2	6419	0.478	5.55
9F10052-CAL6	5	16643	0.505	5.55
9F10052-CAL7	10	33312	0.505	5.54
9F10052-CAL8	20	69791	0.521	5.55
9F10052-CAL9	50	181053	0.531	5.55
9F10052-CALA	100	359788	0.539	5.55
9F10052-CALB	200	714533	0.518	5.55

AVE RF **0.502** RF RSD **5.25** AVE RT **5.55**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

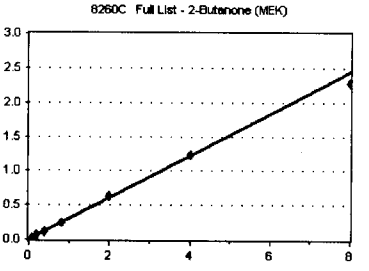


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	587	0.467	5.68
9F10052-CAL3	0.4	1401	0.517	5.68
9F10052-CAL4	1	3414	0.515	5.68
9F10052-CAL5	2	6644	0.495	5.68
9F10052-CAL6	5	17294	0.525	5.67
9F10052-CAL7	10	34244	0.519	5.67
9F10052-CAL8	20	70427	0.526	5.67
9F10052-CAL9	50	178184	0.523	5.68
9F10052-CALA	100	346592	0.520	5.68
9F10052-CALB	200	685872	0.497	5.68

AVE RF **0.510** RF RSD **3.65** AVE RT **5.68**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	4	8049	0.300	5.70
9F10052-CAL6	10	20846	0.316	5.70
9F10052-CAL7	20	39465	0.299	5.68
9F10052-CAL8	40	82387	0.307	5.68
9F10052-CAL9	100	218051	0.320	5.68
9F10052-CALA	200	413276	0.310	5.69
9F10052-CALB	400	786035	0.285	5.69

AVE RF **0.305** RF RSD **3.87** AVE RT **5.69**

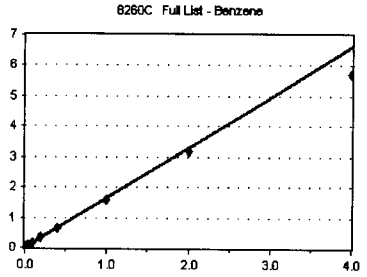
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Benzene

Curve Fit: **AVERAGE RF**

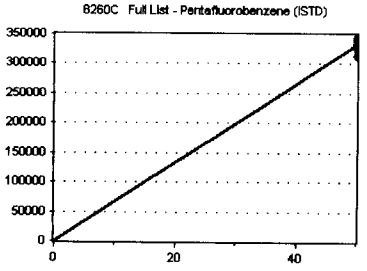


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1173	1.807	5.93
9F10052-CAL2	0.2	2187	1.739	5.93
9F10052-CAL3	0.4	4769	1.759	5.93
9F10052-CAL4	1	10807	1.632	5.94
9F10052-CAL5	2	21984	1.638	5.94
9F10052-CAL6	5	55659	1.690	5.93
9F10052-CAL7	10	109045	1.654	5.93
9F10052-CAL8	20	219207	1.636	5.93
9F10052-CAL9	50	547300	1.605	5.93
9F10052-CALA	100	1053944	1.580	5.93
9F10052-CALB	200	1972040	1.430	5.93

AVE RF **1.652** RF RSD **6.12** AVE RT **5.93**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

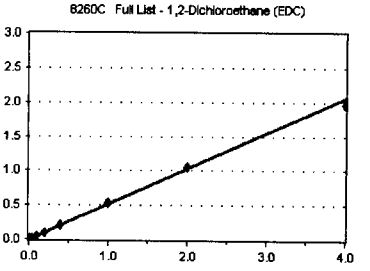


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	324487	6489.740	6.03
9F10052-CAL2	50	314337	6286.740	6.03
9F10052-CAL3	50	338968	6779.360	6.03
9F10052-CAL4	50	331196	6623.920	6.03
9F10052-CAL5	50	335493	6709.860	6.03
9F10052-CAL6	50	329388	6587.760	6.03
9F10052-CAL7	50	329608	6592.160	6.03
9F10052-CAL8	50	334993	6699.860	6.03
9F10052-CAL9	50	340992	6819.840	6.03
9F10052-CALA	50	333562	6671.240	6.04
9F10052-CALB	50	344824	6896.480	6.03

AVE RF **6650.633** RF RSD **2.51** AVE RT **6.03**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**

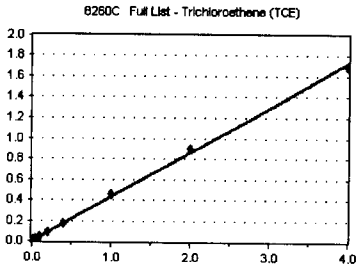


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	555	0.441	6.15
9F10052-CAL3	0.4	1368	0.504	6.15
9F10052-CAL4	1	3622	0.547	6.15
9F10052-CAL5	2	6931	0.516	6.15
9F10052-CAL6	5	18599	0.565	6.15
9F10052-CAL7	10	34341	0.521	6.15
9F10052-CAL8	20	70104	0.523	6.14
9F10052-CAL9	50	180444	0.529	6.14
9F10052-CALA	100	352666	0.529	6.15
9F10052-CALB	200	674961	0.489	6.15

AVE RF **0.517** RF RSD **6.50** AVE RT **6.15**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	436	0.347	6.55
9F10052-CAL3	0.4	1202	0.443	6.55
9F10052-CAL4	1	3058	0.462	6.55
9F10052-CAL5	2	5478	0.408	6.55
9F10052-CAL6	5	14731	0.447	6.54
9F10052-CAL7	10	29253	0.444	6.55
9F10052-CAL8	20	59701	0.446	6.55
9F10052-CAL9	50	153249	0.449	6.55
9F10052-CALA	100	298710	0.448	6.55
9F10052-CALB	200	579838	0.420	6.55

AVE RF **0.431** RF RSD **7.76** AVE RT **6.55**

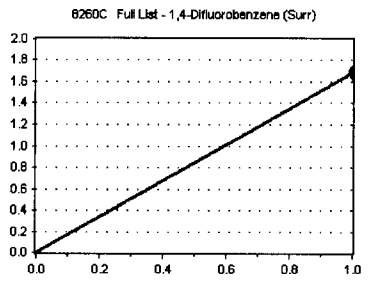
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

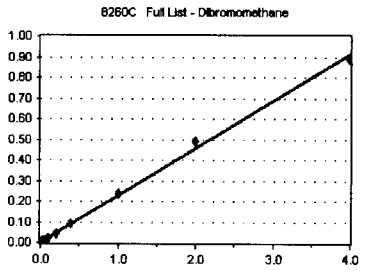


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	543971	1.676	6.59
9F10052-CAL2	50	532161	1.693	6.59
9F10052-CAL3	50	564630	1.666	6.59
9F10052-CAL4	50	554133	1.673	6.59
9F10052-CAL5	50	563668	1.680	6.59
9F10052-CAL6	50	557930	1.694	6.59
9F10052-CAL7	50	558931	1.696	6.58
9F10052-CAL8	50	563027	1.681	6.59
9F10052-CAL9	50	574444	1.685	6.59
9F10052-CALA	50	569175	1.706	6.59
9F10052-CALB	50	580421	1.683	6.59

AVE RF **1.685** RF RSD **0.69** AVE RT **6.59**

Dibromomethane

Curve Fit: **AVERAGE RF**

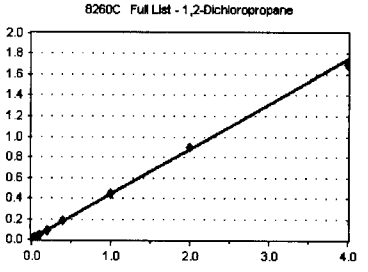


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	640	0.236	7.00
9F10052-CAL4	1	1314	0.198	7.00
9F10052-CAL5	2	2990	0.223	7.00
9F10052-CAL6	5	7543	0.229	7.00
9F10052-CAL7	10	15098	0.229	6.99
9F10052-CAL8	20	31366	0.234	7.00
9F10052-CAL9	50	81506	0.239	7.00
9F10052-CALA	100	163635	0.245	7.00
9F10052-CALB	200	305444	0.221	7.00

AVE RF **0.228** RF RSD **5.94** AVE RT **7.00**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

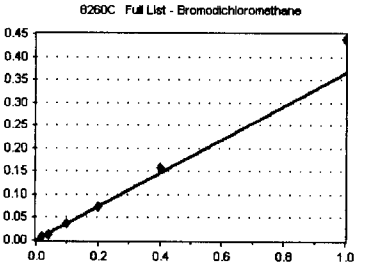


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	1230	0.454	7.11
9F10052-CAL4	1	2836	0.428	7.11
9F10052-CAL5	2	5456	0.407	7.11
9F10052-CAL6	5	14555	0.442	7.10
9F10052-CAL7	10	28990	0.440	7.10
9F10052-CAL8	20	59886	0.447	7.11
9F10052-CAL9	50	150914	0.443	7.11
9F10052-CALA	100	299052	0.448	7.11
9F10052-CALB	200	584540	0.424	7.10

AVE RF **0.437** RF RSD **3.38** AVE RT **7.11**

Bromodichloromethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	2123	0.321	7.18
9F10052-CAL5	2	4315	0.322	7.18
9F10052-CAL6	5	11721	0.356	7.18
9F10052-CAL7	10	23806	0.361	7.18
9F10052-CAL8	20	53066	0.396	7.18
9F10052-CAL9	50	148949	0.437	7.18
~~9F10052-CALA~~	~~100~~	~~313885~~	~~0.471~~	~~7.18~~
~~9F10052-CALB~~	~~200~~	~~641784~~	~~0.465~~	~~7.18~~

AVE RF **0.365** RF RSD **12.29** AVE RT **7.18**

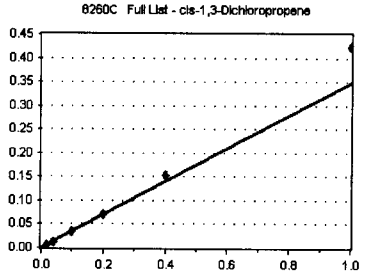
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

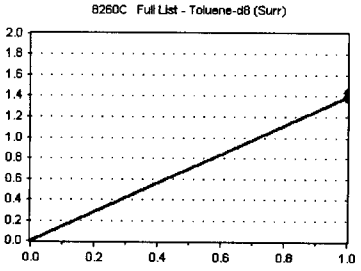


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1015~~	~~0.264~~	~~7.88~~
9F10052-CAL4	1	2811	0.298	7.89
9F10052-CAL5	2	5608	0.292	7.88
9F10052-CAL6	5	16676	0.350	7.89
9F10052-CAL7	10	33200	0.350	7.89
9F10052-CAL8	20	74628	0.381	7.88
9F10052-CAL9	50	209633	0.423	7.88
~~9F10052-CALA~~	~~100~~	~~423225~~	~~0.431~~	~~7.88~~
~~9F10052-CALB~~	~~200~~	~~840048~~	~~0.439~~	~~7.88~~

AVE RF **0.349** RF RSD **14.23** AVE RT **7.89**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

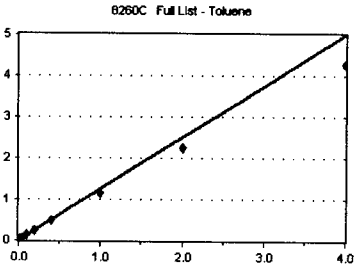


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	645647	1.407	8.10
9F10052-CAL2	50	631334	1.391	8.09
9F10052-CAL3	50	670320	1.393	8.09
9F10052-CAL4	50	658631	1.397	8.09
9F10052-CAL5	50	668731	1.391	8.09
9F10052-CAL6	50	670066	1.406	8.09
9F10052-CAL7	50	660993	1.396	8.09
9F10052-CAL8	50	675931	1.380	8.09
9F10052-CAL9	50	689152	1.389	8.09
9F10052-CALA	50	679105	1.382	8.10
9F10052-CALB	50	685539	1.433	8.10

AVE RF **1.397** RF RSD **1.04** AVE RT **8.09**

Toluene

Curve Fit: **AVERAGE RF**

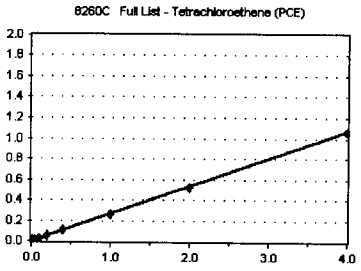


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	2884	1.588	8.16
9F10052-CAL3	0.4	5120	1.330	8.15
9F10052-CAL4	1	11998	1.272	8.15
9F10052-CAL5	2	23933	1.244	8.16
9F10052-CAL6	5	59886	1.257	8.15
9F10052-CAL7	10	117132	1.236	8.15
9F10052-CAL8	20	232708	1.188	8.15
9F10052-CAL9	50	575939	1.161	8.15
9F10052-CALA	100	1104782	1.124	8.15
9F10052-CALB	200	2041152	1.066	8.15

AVE RF **1.247** RF RSD **11.42** AVE RT **8.15**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	521	0.287	8.60
9F10052-CAL3	0.4	949	0.247	8.60
9F10052-CAL4	1	2790	0.296	8.60
9F10052-CAL5	2	4917	0.256	8.60
9F10052-CAL6	5	12789	0.268	8.60
9F10052-CAL7	10	25746	0.272	8.60
9F10052-CAL8	20	51183	0.261	8.60
9F10052-CAL9	50	131193	0.264	8.60
9F10052-CALA	100	256544	0.261	8.60
9F10052-CALB	200	509334	0.266	8.60

AVE RF **0.268** RF RSD **5.38** AVE RT **8.60**

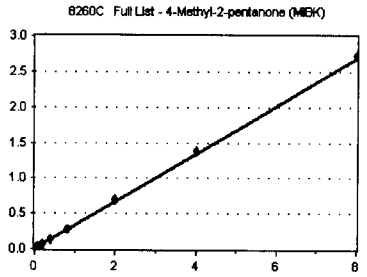
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

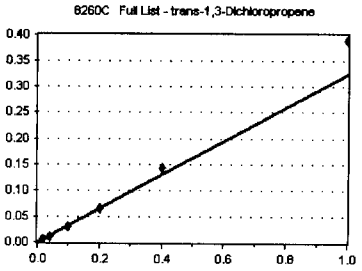


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	2	5904	0.313	8.62
9F10052-CAL5	4	11773	0.306	8.62
9F10052-CAL6	10	34047	0.357	8.62
9F10052-CAL7	20	64279	0.339	8.62
9F10052-CAL8	40	132655	0.339	8.61
9F10052-CAL9	100	345050	0.348	8.61
9F10052-CALA	200	679393	0.346	8.61
9F10052-CALB	400	1300156	0.340	8.61

AVE RF **0.336** RF RSD **5.21** AVE RT **8.62**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

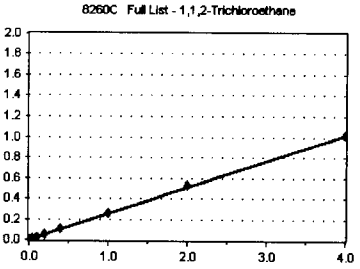


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~979~~	~~0.254~~	~~8.66~~
9F10052-CAL4	1	2629	0.279	8.65
9F10052-CAL5	2	5374	0.279	8.64
9F10052-CAL6	5	14894	0.313	8.64
9F10052-CAL7	10	30716	0.324	8.64
9F10052-CAL8	20	69703	0.356	8.64
9F10052-CAL9	50	193377	0.390	8.64
~~9F10052-CALA~~	~~100~~	~~400343~~	~~0.407~~	~~8.64~~
~~9F10052-CALB~~	~~200~~	~~778569~~	~~0.407~~	~~8.64~~

AVE RF **0.323** RF RSD **13.48** AVE RT **8.64**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

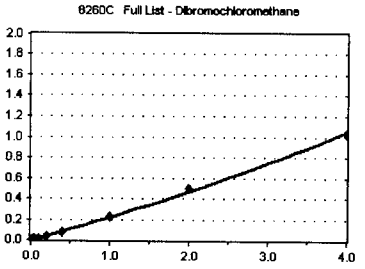


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	419	0.231	8.82
9F10052-CAL3	0.4	996	0.259	8.82
9F10052-CAL4	1	2471	0.262	8.82
9F10052-CAL5	2	4509	0.234	8.82
9F10052-CAL6	5	12789	0.268	8.82
9F10052-CAL7	10	24434	0.258	8.82
9F10052-CAL8	20	50621	0.258	8.82
9F10052-CAL9	50	128654	0.259	8.81
9F10052-CALA	100	260378	0.265	8.82
9F10052-CALB	200	487195	0.255	8.82

AVE RF **0.255** RF RSD **4.89** AVE RT **8.82**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	353	9.172	9.01
9F10052-CAL4	1	1295	0.137	9.01
9F10052-CAL5	2	2666	0.139	9.00
9F10052-CAL6	5	7499	0.157	9.01
9F10052-CAL7	10	15631	0.165	9.01
9F10052-CAL8	20	37386	0.191	9.00
9F10052-CAL9	50	110171	0.222	9.00
9F10052-CALA	100	242900	0.247	9.00
9F10052-CALB	200	493352	0.258	9.00

AVE RF **0.179** RF RSD **30.98** AVE RT **9.00**

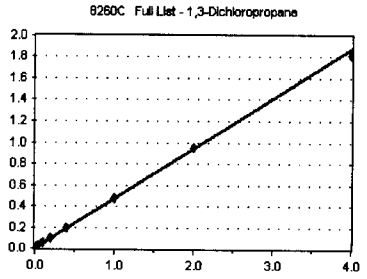
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

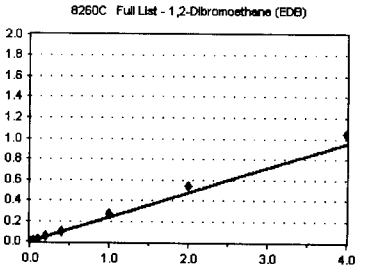


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	796	0.438	9.11
9F10052-CAL3	0.4	1733	0.450	9.12
9F10052-CAL4	1	4405	0.467	9.11
9F10052-CAL5	2	9053	0.471	9.11
9F10052-CAL6	5	23491	0.493	9.11
9F10052-CAL7	10	45222	0.477	9.11
9F10052-CAL8	20	94677	0.483	9.11
9F10052-CAL9	50	238356	0.480	9.11
9F10052-CALA	100	468590	0.477	9.11
9F10052-CALB	200	867404	0.453	9.11

AVE RF **0.469** RF RSD **3.62** AVE RT **9.11**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**

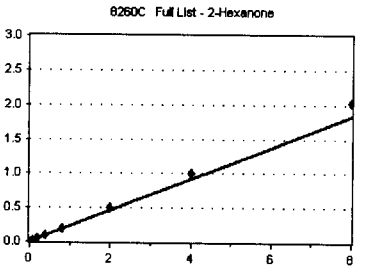


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	397	0.219	9.25
9F10052-CAL3	0.4	640	0.166	9.25
9F10052-CAL4	1	1954	0.207	9.24
9F10052-CAL5	2	4730	0.246	9.25
9F10052-CAL6	5	11473	0.241	9.24
9F10052-CAL7	10	23715	0.250	9.24
9F10052-CAL8	20	50007	0.255	9.24
9F10052-CAL9	50	133050	0.268	9.24
9F10052-CALA	100	265078	0.270	9.24
9F10052-CALB	200	502022	0.262	9.25

AVE RF **0.238** RF RSD **13.62** AVE RT **9.24**

2-Hexanone

Curve Fit: **AVERAGE RF**

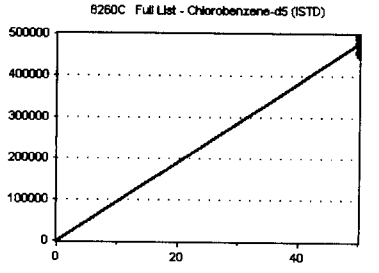


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.8	1455	0.189	9.50
9F10052-CAL4	2	3813	0.202	9.51
9F10052-CAL5	4	7699	0.200	9.50
9F10052-CAL6	10	22093	0.232	9.50
9F10052-CAL7	20	45451	0.240	9.50
9F10052-CAL8	40	93286	0.238	9.50
9F10052-CAL9	100	249448	0.251	9.50
9F10052-CALA	200	493611	0.251	9.50
9F10052-CALB	400	969053	0.253	9.50

AVE RF **0.229** RF RSD **10.87** AVE RT **9.50**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	458762	9175.240	9.75
9F10052-CAL2	50	454033	9080.660	9.75
9F10052-CAL3	50	481095	9621.900	9.75
9F10052-CAL4	50	471537	9430.740	9.75
9F10052-CAL5	50	480852	9617.040	9.75
9F10052-CAL6	50	476413	9528.260	9.75
9F10052-CAL7	50	473646	9472.920	9.75
9F10052-CAL8	50	489718	9794.360	9.75
9F10052-CAL9	50	496062	9921.240	9.75
9F10052-CALA	50	491250	9825.000	9.75
9F10052-CALB	50	478503	9570.060	9.75

AVE RF **9548.856** RF RSD **2.70** AVE RT **9.75**

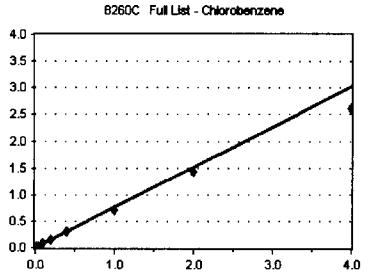
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Chlorobenzene

Curve Fit: **AVERAGE RF**

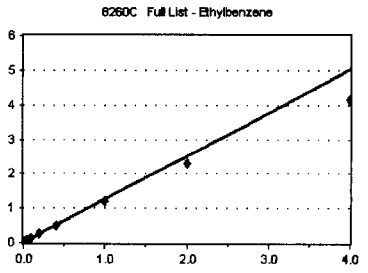


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1627	0.896	9.76
9F10052-CAL3	0.4	3185	0.828	9.77
9F10052-CAL4	1	6976	0.740	9.77
9F10052-CAL5	2	14413	0.749	9.76
9F10052-CAL6	5	37372	0.784	9.77
9F10052-CAL7	10	70101	0.740	9.77
9F10052-CAL8	20	143545	0.733	9.76
9F10052-CAL9	50	359063	0.724	9.76
9F10052-CALA	100	697876	0.710	9.76
9F10052-CALB	200	1256235	0.656	9.76

AVE RF **0.756** RF RSD **8.78** AVE RT **9.76**

Ethylbenzene

Curve Fit: **AVERAGE RF**

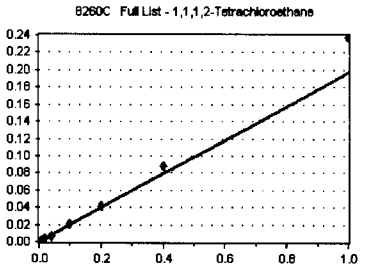


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1463	1.595	9.80
9F10052-CAL2	0.2	2439	1.343	9.79
9F10052-CAL3	0.4	4943	1.284	9.80
9F10052-CAL4	1	11564	1.226	9.80
9F10052-CAL5	2	23697	1.232	9.79
9F10052-CAL6	5	60136	1.262	9.80
9F10052-CAL7	10	119181	1.258	9.80
9F10052-CAL8	20	240939	1.230	9.79
9F10052-CAL9	50	598887	1.207	9.79
9F10052-CALA	100	1126383	1.146	9.79
9F10052-CALB	200	1989818	1.040	9.79

AVE RF **1.257** RF RSD **10.86** AVE RT **9.79**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

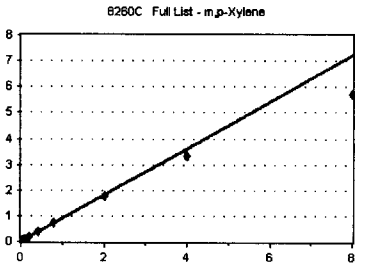


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	585	0.152	9.83
9F10052-CAL4	1	1727	0.183	9.83
9F10052-CAL5	2	3397	0.177	9.83
9F10052-CAL6	5	9683	0.203	9.83
9F10052-CAL7	10	19771	0.209	9.83
9F10052-CAL8	20	43293	0.221	9.83
9F10052-CAL9	50	117587	0.237	9.83
~~9F10052-CALA~~	~~100~~	~~241207~~	~~0.246~~	~~9.83~~
~~9F10052-CALB~~	~~200~~	~~471169~~	~~0.246~~	~~9.83~~

AVE RF **0.197** RF RSD **14.61** AVE RT **9.83**

m,p-Xylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~2386~~	~~1.300~~	~~9.94~~
9F10052-CAL2	0.4	3873	1.066	9.94
9F10052-CAL3	0.8	7211	0.937	9.94
9F10052-CAL4	2	17350	0.920	9.93
9F10052-CAL5	4	34482	0.896	9.93
9F10052-CAL6	10	89757	0.942	9.93
9F10052-CAL7	20	175549	0.927	9.93
9F10052-CAL8	40	355349	0.907	9.93
9F10052-CAL9	100	876496	0.883	9.93
9F10052-CALA	200	1626617	0.828	9.93
9F10052-CALB	400	2740385	0.716	9.93

AVE RF **0.902** RF RSD **9.86** AVE RT **9.93**

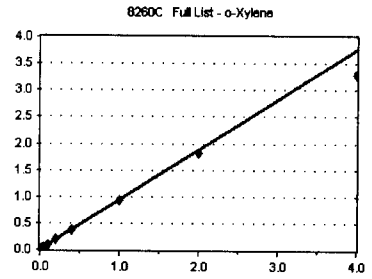
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

o-Xylene

Curve Fit: **AVERAGE RF**

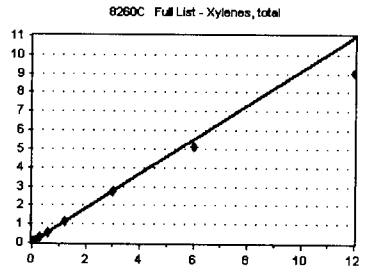


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1221~~	~~1.331~~	~~10.32~~
9F10052-CAL2	0.2	1836	1.011	10.32
9F10052-CAL3	0.4	3984	1.035	10.32
9F10052-CAL4	1	8595	0.911	10.32
9F10052-CAL5	2	17398	0.905	10.32
9F10052-CAL6	5	45974	0.965	10.32
9F10052-CAL7	10	89373	0.943	10.32
9F10052-CAL8	20	183627	0.937	10.32
9F10052-CAL9	50	465814	0.939	10.32
9F10052-CALA	100	895717	0.912	10.32
9F10052-CALB	200	1575234	0.823	10.32

AVE RF **0.938** RF RSD **6.28** AVE RT **10.32**

Xylenes, total

Curve Fit: **AVERAGE RF**

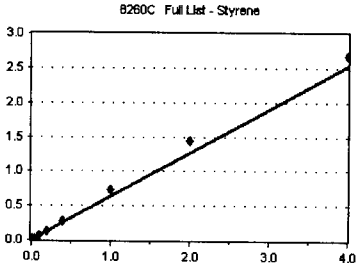


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.3~~	~~3607~~	~~1.310~~	~~10.32~~
9F10052-CAL2	0.6	5709	1.048	10.32
9F10052-CAL3	1.2	11195	0.970	10.32
9F10052-CAL4	3	25945	0.917	10.32
9F10052-CAL5	6	51880	0.899	10.32
9F10052-CAL6	15	135731	0.950	10.32
9F10052-CAL7	30	264922	0.932	10.32
9F10052-CAL8	60	538976	0.917	10.32
9F10052-CAL9	150	1342310	0.902	10.32
9F10052-CALA	300	2522334	0.856	10.32
9F10052-CALB	600	4315619	0.752	10.32

AVE RF **0.914** RF RSD **8.38** AVE RT **10.32**

Styrene

Curve Fit: **AVERAGE RF**

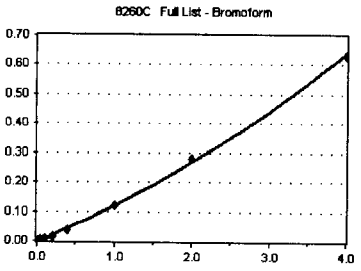


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1040	0.573	10.38
9F10052-CAL3	0.4	1992	0.518	10.37
9F10052-CAL4	1	5265	0.558	10.37
9F10052-CAL5	2	10700	0.556	10.37
9F10052-CAL6	5	31431	0.660	10.37
9F10052-CAL7	10	62780	0.663	10.37
9F10052-CAL8	20	136458	0.697	10.37
9F10052-CAL9	50	358493	0.723	10.37
9F10052-CALA	100	712544	0.725	10.37
9F10052-CALB	200	1276615	0.667	10.37

AVE RF **0.634** RF RSD **11.97** AVE RT **10.37**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	526	5.578	10.39
9F10052-CAL5	2	1352	0.070	10.39
9F10052-CAL6	5	3801	7.978	10.39
9F10052-CAL7	10	7848	8.285	10.39
9F10052-CAL8	20	19110	9.756	10.39
9F10052-CAL9	50	60779	0.123	10.39
9F10052-CALA	100	138378	0.141	10.39
9F10052-CALB	200	302514	0.158	10.39

AVE RF **0.101** RF RSD **35.68** AVE RT **10.39**

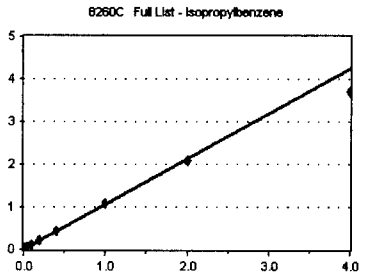
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

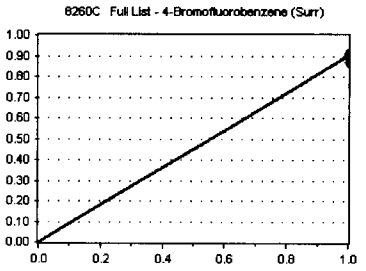


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1075	1.172	10.59
9F10052-CAL2	0.2	2121	1.168	10.60
9F10052-CAL3	0.4	4056	1.054	10.59
9F10052-CAL4	1	9239	0.980	10.59
9F10052-CAL5	2	19559	1.017	10.60
9F10052-CAL6	5	51415	1.079	10.59
9F10052-CAL7	10	102838	1.086	10.59
9F10052-CAL8	20	212362	1.084	10.59
9F10052-CAL9	50	538430	1.085	10.59
9F10052-CALA	100	1017284	1.035	10.59
9F10052-CALB	200	1773671	0.927	10.60

AVE RF **1.062** RF RSD **6.85** AVE RT **10.59**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

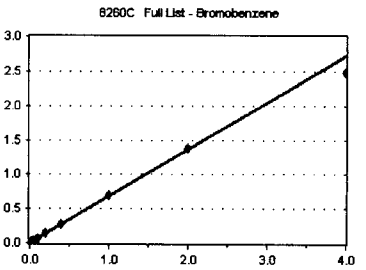


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	161208	0.888	10.84
9F10052-CAL2	50	161808	0.898	10.83
9F10052-CAL3	50	172543	0.911	10.84
9F10052-CAL4	50	165080	0.912	10.84
9F10052-CAL5	50	169618	0.904	10.83
9F10052-CAL6	50	168674	0.910	10.84
9F10052-CAL7	50	167038	0.912	10.84
9F10052-CAL8	50	173337	0.914	10.83
9F10052-CAL9	50	175325	0.908	10.83
9F10052-CALA	50	177460	0.907	10.83
9F10052-CALB	50	172230	0.868	10.83

AVE RF **0.903** RF RSD **1.52** AVE RT **10.84**

Bromobenzene

Curve Fit: **AVERAGE RF**

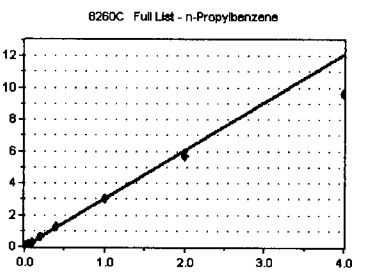


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	364	0.505	10.92
9F10052-CAL3	0.4	1135	0.749	10.92
9F10052-CAL4	1	2673	0.738	10.92
9F10052-CAL5	2	5274	0.702	10.92
9F10052-CAL6	5	13502	0.728	10.92
9F10052-CAL7	10	26030	0.711	10.92
9F10052-CAL8	20	51952	0.685	10.92
9F10052-CAL9	50	133614	0.692	10.92
9F10052-CALA	100	269310	0.688	10.92
9F10052-CALB	200	490693	0.618	10.92

AVE RF **0.682** RF RSD **10.55** AVE RT **10.92**

n-Propylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1339	3.688	10.95
9F10052-CAL2	0.2	2323	3.224	10.94
9F10052-CAL3	0.4	4427	2.922	10.95
9F10052-CAL4	1	10515	2.904	10.95
9F10052-CAL5	2	21958	2.925	10.94
9F10052-CAL6	5	57592	3.106	10.94
9F10052-CAL7	10	114970	3.139	10.94
9F10052-CAL8	20	236380	3.115	10.94
9F10052-CAL9	50	583140	3.021	10.94
9F10052-CALA	100	1111134	2.839	10.94
9F10052-CALB	200	1904210	2.400	10.94

AVE RF **3.026** RF RSD **10.28** AVE RT **10.94**

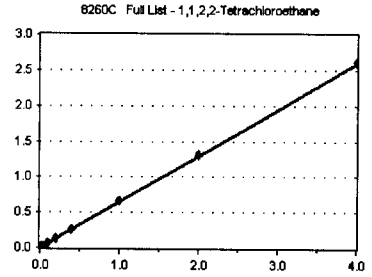
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

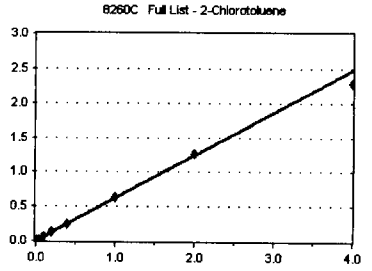


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	474	0.658	11.01
9F10052-CAL3	0.4	988	0.652	11.01
9F10052-CAL4	1	2310	0.638	11.01
9F10052-CAL5	2	4446	0.592	11.01
9F10052-CAL6	5	12600	0.680	11.01
9F10052-CAL7	10	23152	0.632	11.01
9F10052-CAL8	20	49418	0.651	11.01
9F10052-CAL9	50	127935	0.663	11.01
9F10052-CALA	100	255721	0.653	11.01
9F10052-CALB	200	516287	0.651	11.01

AVE RF **0.647** RF RSD **3.58** AVE RT **11.01**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**

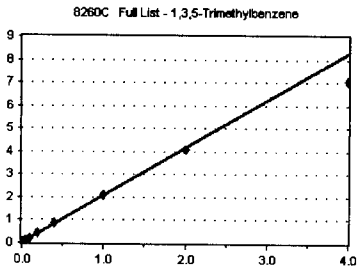


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	850	0.561	11.07
9F10052-CAL4	1	2437	0.673	11.07
9F10052-CAL5	2	4445	0.592	11.08
9F10052-CAL6	5	11951	0.645	11.07
9F10052-CAL7	10	23322	0.637	11.07
9F10052-CAL8	20	47655	0.628	11.07
9F10052-CAL9	50	122859	0.636	11.07
9F10052-CALA	100	248772	0.636	11.07
9F10052-CALB	200	452384	0.570	11.07

AVE RF **0.620** RF RSD **5.99** AVE RT **11.07**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

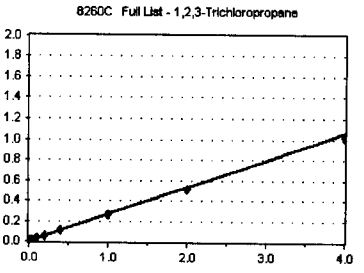


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	866	2.385	11.10
9F10052-CAL2	0.2	1575	2.186	11.10
9F10052-CAL3	0.4	3033	2.002	11.10
9F10052-CAL4	1	6953	1.920	11.11
9F10052-CAL5	2	14730	1.962	11.11
9F10052-CAL6	5	39518	2.131	11.11
9F10052-CAL7	10	78489	2.143	11.10
9F10052-CAL8	20	162341	2.140	11.10
9F10052-CAL9	50	408363	2.115	11.10
9F10052-CALA	100	797681	2.038	11.10
9F10052-CALB	200	1402428	1.768	11.10

AVE RF **2.072** RF RSD **7.78** AVE RT **11.10**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	346	0.228	11.12
9F10052-CAL4	1	1042	0.288	11.11
9F10052-CAL5	2	2033	0.271	11.11
9F10052-CAL6	5	5320	0.287	11.11
9F10052-CAL7	10	10018	0.274	11.12
9F10052-CAL8	20	20048	0.264	11.11
9F10052-CAL9	50	50346	0.261	11.11
9F10052-CALA	100	99067	0.253	11.11
9F10052-CALB	200	200838	0.253	11.11

AVE RF **0.264** RF RSD **7.01** AVE RT **11.11**

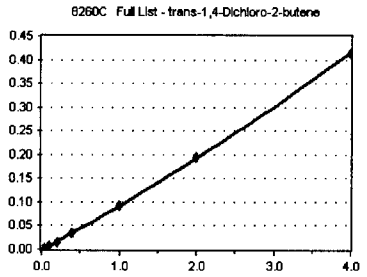
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

trans-1,4-Dichloro-2-butene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

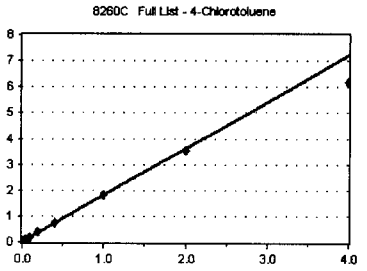


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	2	372	4.955	11.16
9F10052-CAL6	5	1243	0.067	11.15
9F10052-CAL7	10	2519	6.878	11.15
9F10052-CAL8	20	6259	8.249	11.15
9F10052-CAL9	50	17733	9.185	11.15
9F10052-CALA	100	38256	9.773	11.15
9F10052-CALB	200	82112	0.103	11.15

AVE RF **8.013** RF RSD **24.08** AVE RT **11.15**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**

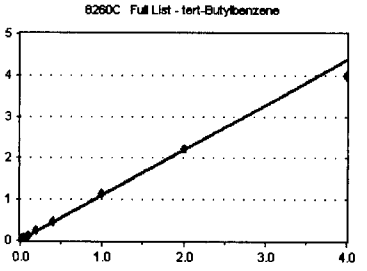


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	704	1.939	11.21
9F10052-CAL2	0.2	1298	1.801	11.21
9F10052-CAL3	0.4	2835	1.871	11.21
9F10052-CAL4	1	6474	1.788	11.21
9F10052-CAL5	2	12857	1.712	11.21
9F10052-CAL6	5	34745	1.874	11.20
9F10052-CAL7	10	69685	1.903	11.21
9F10052-CAL8	20	139523	1.839	11.21
9F10052-CAL9	50	350674	1.816	11.21
9F10052-CALA	100	691823	1.767	11.21
9F10052-CALB	200	1229826	1.550	11.21

AVE RF **1.806** RF RSD **5.89** AVE RT **11.21**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

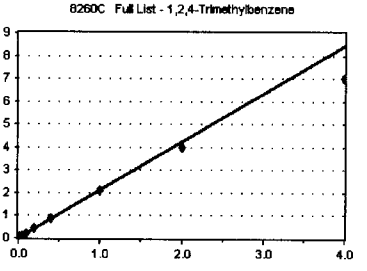


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	444	1.223	11.36
9F10052-CAL2	0.2	750	1.041	11.36
9F10052-CAL3	0.4	1354	0.894	11.36
9F10052-CAL4	1	3834	1.059	11.36
9F10052-CAL5	2	8109	1.080	11.36
9F10052-CAL6	5	21534	1.161	11.35
9F10052-CAL7	10	43541	1.189	11.35
9F10052-CAL8	20	88706	1.169	11.36
9F10052-CAL9	50	221609	1.148	11.36
9F10052-CALA	100	434353	1.110	11.36
9F10052-CALB	200	792365	0.999	11.36

AVE RF **1.097** RF RSD **8.75** AVE RT **11.36**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	993	2.735	11.41
9F10052-CAL2	0.2	1577	2.189	11.41
9F10052-CAL3	0.4	3070	2.026	11.41
9F10052-CAL4	1	7272	2.009	11.42
9F10052-CAL5	2	15002	1.998	11.41
9F10052-CAL6	5	39803	2.147	11.41
9F10052-CAL7	10	78079	2.132	11.42
9F10052-CAL8	20	162038	2.136	11.41
9F10052-CAL9	50	400165	2.073	11.41
9F10052-CALA	100	783712	2.002	11.41
9F10052-CALB	200	1386885	1.748	11.41

AVE RF **2.109** RF RSD **11.36** AVE RT **11.41**

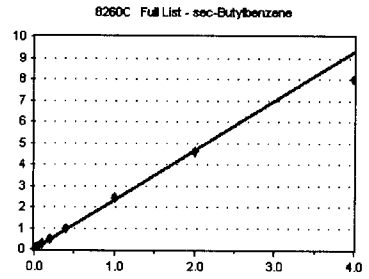
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

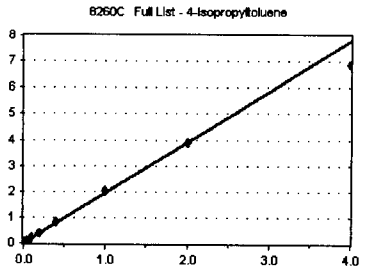


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	846	2.330	11.50
9F10052-CAL2	0.2	1569	2.177	11.50
9F10052-CAL3	0.4	3469	2.290	11.49
9F10052-CAL4	1	8415	2.324	11.50
9F10052-CAL5	2	17133	2.282	11.50
9F10052-CAL6	5	45578	2.458	11.49
9F10052-CAL7	10	92393	2.523	11.49
9F10052-CAL8	20	187287	2.468	11.50
9F10052-CAL9	50	474670	2.459	11.50
9F10052-CALA	100	901621	2.303	11.50
9F10052-CALB	200	1586657	2.000	11.50

AVE RF **2.329** RF RSD **6.46** AVE RT **11.50**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**

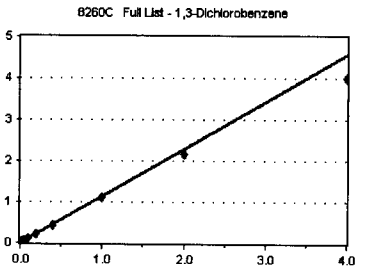


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	815	2.245	11.60
9F10052-CAL2	0.2	1419	1.969	11.61
9F10052-CAL3	0.4	2563	1.692	11.61
9F10052-CAL4	1	6765	1.869	11.61
9F10052-CAL5	2	13903	1.852	11.61
9F10052-CAL6	5	37133	2.003	11.60
9F10052-CAL7	10	74605	2.037	11.60
9F10052-CAL8	20	155362	2.048	11.61
9F10052-CAL9	50	392357	2.032	11.61
9F10052-CALA	100	759218	1.940	11.61
9F10052-CALB	200	1362331	1.717	11.61

AVE RF **1.946** RF RSD **8.15** AVE RT **11.61**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

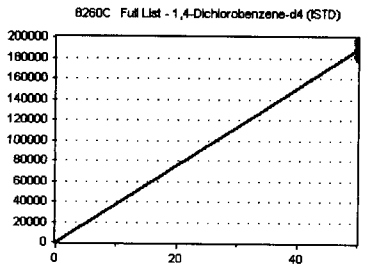


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	529	1.457	11.67
9F10052-CAL2	0.2	839	1.164	11.67
9F10052-CAL3	0.4	1776	1.172	11.67
9F10052-CAL4	1	3957	1.093	11.67
9F10052-CAL5	2	8151	1.086	11.67
9F10052-CAL6	5	22129	1.193	11.67
9F10052-CAL7	10	40813	1.114	11.67
9F10052-CAL8	20	84002	1.107	11.67
9F10052-CAL9	50	211770	1.097	11.67
9F10052-CALA	100	420999	1.076	11.67
9F10052-CALB	200	792131	0.998	11.67

AVE RF **1.142** RF RSD **10.29** AVE RT **11.67**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	181530	3630.600	11.72
9F10052-CAL2	50	180145	3602.900	11.73
9F10052-CAL3	50	189377	3787.540	11.72
9F10052-CAL4	50	181025	3620.500	11.73
9F10052-CAL5	50	187705	3754.100	11.73
9F10052-CAL6	50	185415	3708.300	11.73
9F10052-CAL7	50	183117	3662.340	11.73
9F10052-CAL8	50	189689	3793.780	11.73
9F10052-CAL9	50	193059	3861.180	11.73
9F10052-CALA	50	195717	3914.340	11.73
9F10052-CALB	50	198363	3967.260	11.73

AVE RF **3754.804** RF RSD **3.28** AVE RT **11.73**

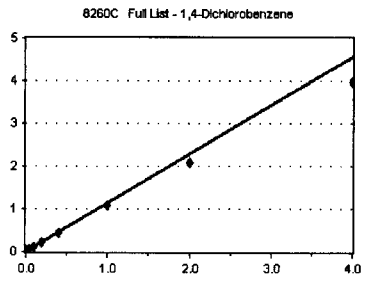
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

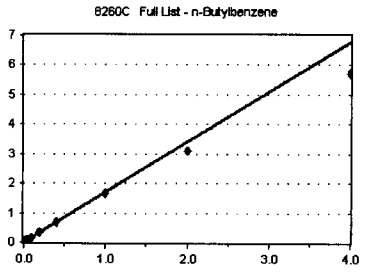


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	550	1.515	11.75
9F10052-CAL2	0.2	912	1.266	11.73
9F10052-CAL3	0.4	1676	1.106	11.74
9F10052-CAL4	1	3955	1.092	11.74
9F10052-CAL5	2	8328	1.109	11.73
9F10052-CAL6	5	21338	1.151	11.74
9F10052-CAL7	10	40761	1.113	11.74
9F10052-CAL8	20	83948	1.106	11.74
9F10052-CAL9	50	207796	1.076	11.73
9F10052-CALA	100	409291	1.046	11.74
9F10052-CALB	200	785942	0.991	11.74

AVE RF **1.143** RF RSD **12.31** AVE RT **11.74**

n-Butylbenzene

Curve Fit: **AVERAGE RF**

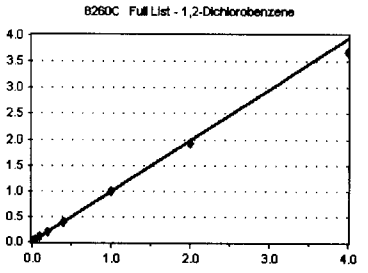


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	852	2.347	11.93
9F10052-CAL2	0.2	1340	1.860	11.94
9F10052-CAL3	0.4	2366	1.562	11.93
9F10052-CAL4	1	5676	1.568	11.93
9F10052-CAL5	2	12104	1.612	11.93
9F10052-CAL6	5	31460	1.697	11.93
9F10052-CAL7	10	61342	1.675	11.93
9F10052-CAL8	20	127870	1.685	11.93
9F10052-CAL9	50	322235	1.669	11.93
9F10052-CALA	100	610605	1.560	11.93
9F10052-CALB	200	1134212	1.429	11.93

AVE RF **1.697** RF RSD **14.23** AVE RT **11.93**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

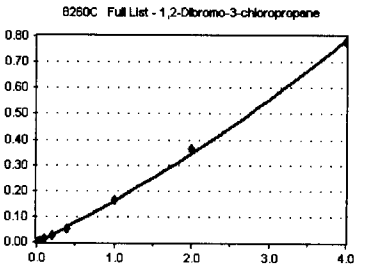


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	365	1.005	12.06
9F10052-CAL2	0.2	679	0.942	12.06
9F10052-CAL3	0.4	1494	0.986	12.07
9F10052-CAL4	1	3595	0.993	12.06
9F10052-CAL5	2	7400	0.986	12.06
9F10052-CAL6	5	19505	1.052	12.06
9F10052-CAL7	10	37337	1.019	12.06
9F10052-CAL8	20	75039	0.989	12.06
9F10052-CAL9	50	191185	0.990	12.06
9F10052-CALA	100	374906	0.958	12.06
9F10052-CALB	200	730354	0.920	12.06

AVE RF **0.986** RF RSD **3.65** AVE RT **12.06**

1,2-Dibromo-3-chloropropane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	369	0.102	12.67
9F10052-CAL5	2	632	8.417	12.67
9F10052-CAL6	5	2179	0.118	12.67
9F10052-CAL7	10	4525	0.124	12.67
9F10052-CAL8	20	9847	0.130	12.67
9F10052-CAL9	50	31470	0.163	12.67
9F10052-CALA	100	70725	0.181	12.67
9F10052-CALB	200	154313	0.194	12.67

AVE RF **0.137** RF RSD **28.32** AVE RT **12.67**

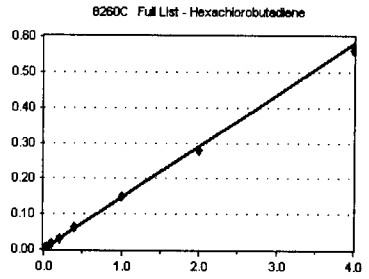
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

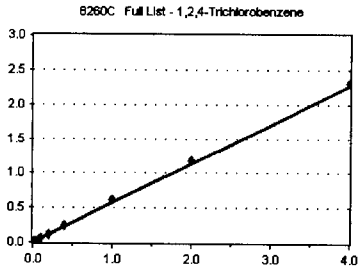


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	478	0.132	13.17
9F10052-CAL5	2	1057	0.141	13.18
9F10052-CAL6	5	2859	0.154	13.18
9F10052-CAL7	10	5620	0.153	13.19
9F10052-CAL8	20	11665	0.154	13.18
9F10052-CAL9	50	28665	0.148	13.18
9F10052-CALA	100	54668	0.140	13.18
9F10052-CALB	200	111313	0.140	13.18

AVE RF **0.145** RF RSD **5.70** AVE RT **13.18**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**

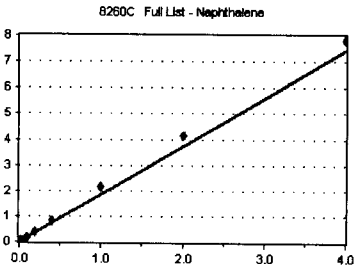


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	778	0.514	13.22
9F10052-CAL4	1	1853	0.512	13.22
9F10052-CAL5	2	3846	0.512	13.21
9F10052-CAL6	5	10845	0.585	13.21
9F10052-CAL7	10	21112	0.576	13.22
9F10052-CAL8	20	46747	0.616	13.21
9F10052-CAL9	50	118093	0.612	13.21
9F10052-CALA	100	230797	0.590	13.21
9F10052-CALB	200	458222	0.578	13.21

AVE RF **0.566** RF RSD **7.48** AVE RT **13.21**

Naphthalene

Curve Fit: **AVERAGE RF**

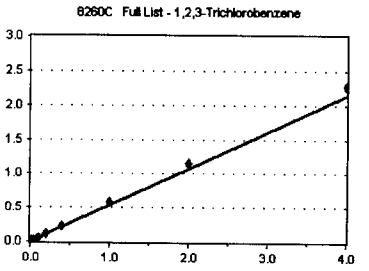


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~2231~~	~~1.473~~	~~13.49~~
9F10052-CAL4	1	5329	1.472	13.49
9F10052-CAL5	2	11080	1.476	13.49
9F10052-CAL6	5	34255	1.847	13.49
9F10052-CAL7	10	69695	1.903	13.49
9F10052-CAL8	20	152737	2.013	13.49
9F10052-CAL9	50	414906	2.149	13.49
9F10052-CALA	100	815647	2.084	13.49
9F10052-CALB	200	1554045	1.959	13.49

AVE RF **1.863** RF RSD **13.87** AVE RT **13.49**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	389	0.540	13.65
9F10052-CAL3	0.4	608	0.401	13.65
9F10052-CAL4	1	1791	0.495	13.65
9F10052-CAL5	2	3620	0.482	13.65
9F10052-CAL6	5	10203	0.550	13.65
9F10052-CAL7	10	20921	0.571	13.65
9F10052-CAL8	20	43652	0.575	13.65
9F10052-CAL9	50	114134	0.591	13.65
9F10052-CALA	100	225036	0.575	13.65
9F10052-CALB	200	450148	0.567	13.65

AVE RF **0.535** RF RSD **11.02** AVE RT **13.65**

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	50	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061024.D
2	2	100	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061025.D
3	3	250	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061026.D
4	4	500	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061027.D
5	5	1000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061028.D
6	6	2500	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061031.D
7	7	5000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061029.D
8	8	10000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061030.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 1:14 am
2	2	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 1:41 am
3	3	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 2:09 am
4	4	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 2:36 am
5	5	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 3:04 am
6	6	Jun 11 10:14 2019	Jun 11 10:13 2019	11 Jun 2019 4:27 am
7	7	Jun 11 10:14 2019	Jun 11 10:12 2019	11 Jun 2019 3:31 am
8	8	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 3:59 am

VC190611G.M Tue Jun 11 10:22:50 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19061024.D 2 =VC19061025.D 3 =VC19061026.D 4 =VC19061027.D 5 =VC19061028.D 6 =VC19061031.D
7 =VC19061029.D 8 =VC19061030.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD									
2)	S	1,4-Difluorobe...	3.917	3.880	3.985	4.010	4.001	4.037	4.241		4.010	2.89
3)	S	4-Bromofluorob...	2.789	2.856	2.847	2.837	2.894	2.777	2.895	2.717	2.827	2.17
4)	S	Chlorobenzene-...									0.000	-1.00
5)	H	CA-LUFT (C5-C12)	2.847	2.319	1.917	1.815	1.849	1.639	1.734	1.652	1.971	21.00
6)	H	TPHg (C5-C9)	2.651	2.138	1.702	1.574	1.573	1.349	1.441	1.359	1.723	26.23
7)	H	TPHg (C6-C10)	2.116	1.587	1.310	1.213	1.240	1.085	1.161	1.104	1.352	25.66
8)	H	NWTPH-Gx	0.518	0.747	0.927	0.991	1.104	1.064	1.144	1.042	0.942	22.43
9)		Benzene (NR)									0.000	-1.00
10)	S	Toluene-d8 (NR)									0.000	-1.00
11)	C	Toluene (NR)									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-GCMS3

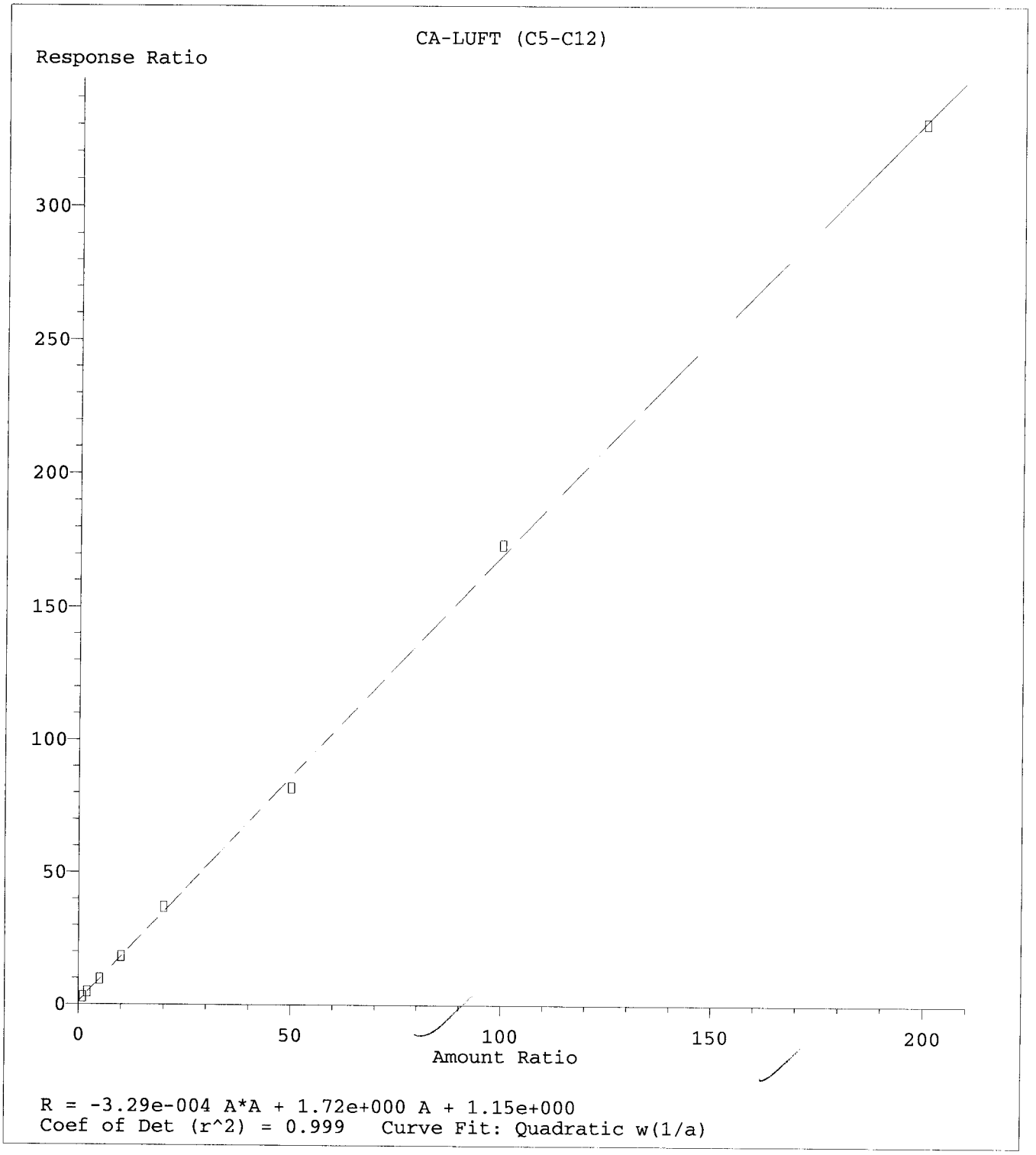
Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.028	1.000	A	2	A	A
2	S	1,4-Difluorobenzene (Sur)	TIC	6.582	1.092	A	2	A	A
3	S	4-Bromofluorobenzene (Sur)	TIC	10.834	1.797	A	2	A	A
4	S	Chlorobenzene-d5 (NR)	TIC	9.745	1.617	A	2	A	A
5	H	CA-LUFT (C5-C12)	TIC	9.906	1.643	Q	0	A	A
6	H	TPHg (C5-C9)	TIC	9.906	1.643	Q	0	A	A
7	H	TPHg (C6-C10)	TIC	9.906	1.643	Q	0	A	A
8	H	NWTPH-Gx	TIC	9.906	1.643	Q	0	A	A
9		Benzene (NR)	78	5.931	0.984	A	2	A	A
10	S	Toluene-d8 (NR)	TIC	8.091	1.342	A	2	A	A
11	C	Toluene (NR)	91	8.152	1.352	A	2	A	A
12	S	1,4-Dichlorobenzene-d4 (NR)	TIC	11.723	1.945	A	2	A	A
13		Naphthalene (NR)	128	13.493	2.238	A	2	A	A

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

VC190611G.M Tue Jun 11 10:22:46 2019

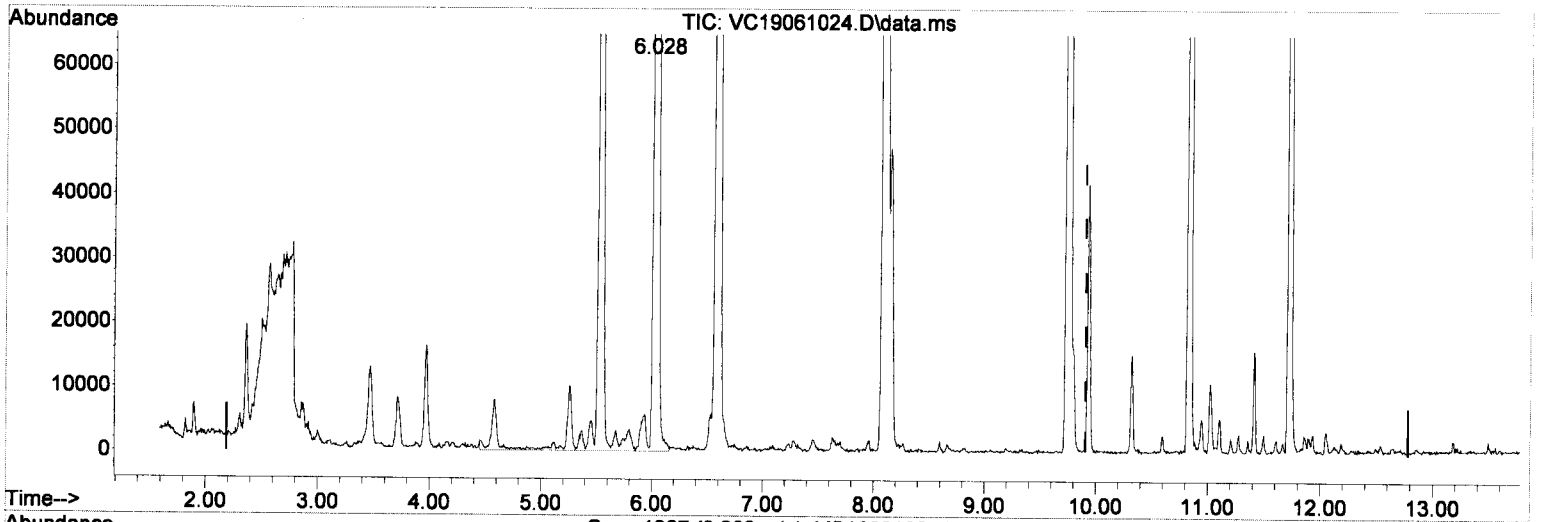


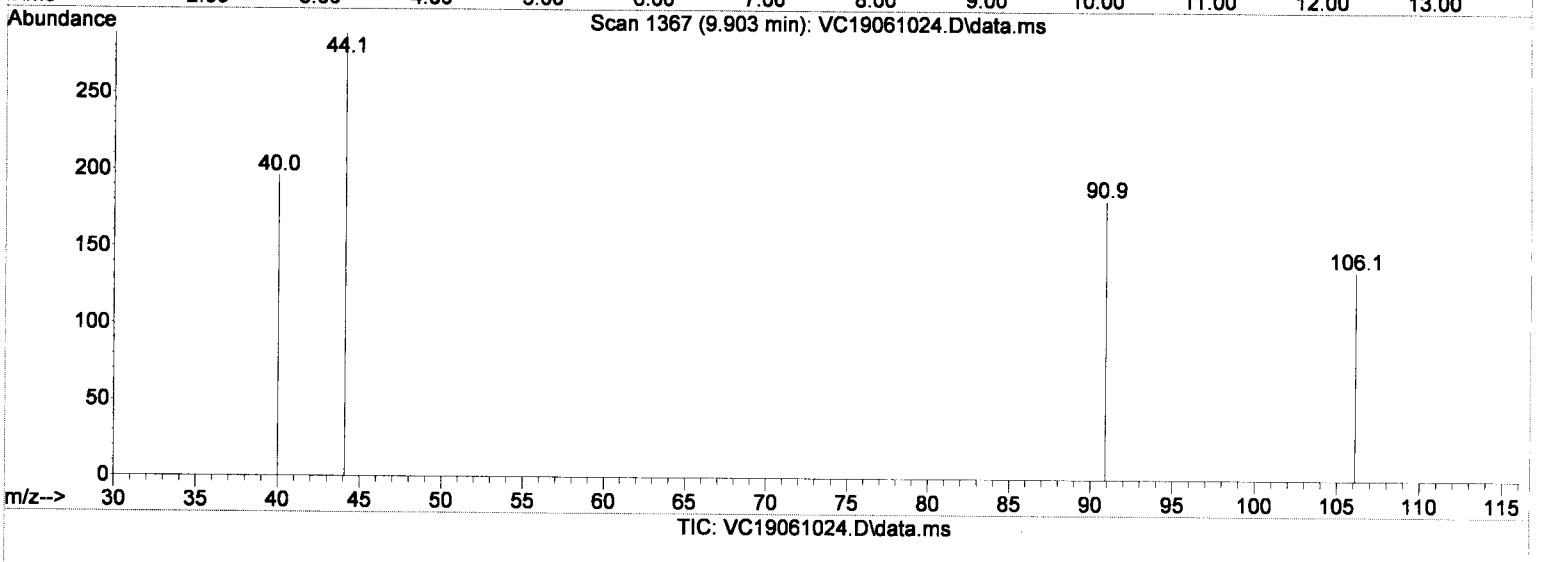
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:07 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





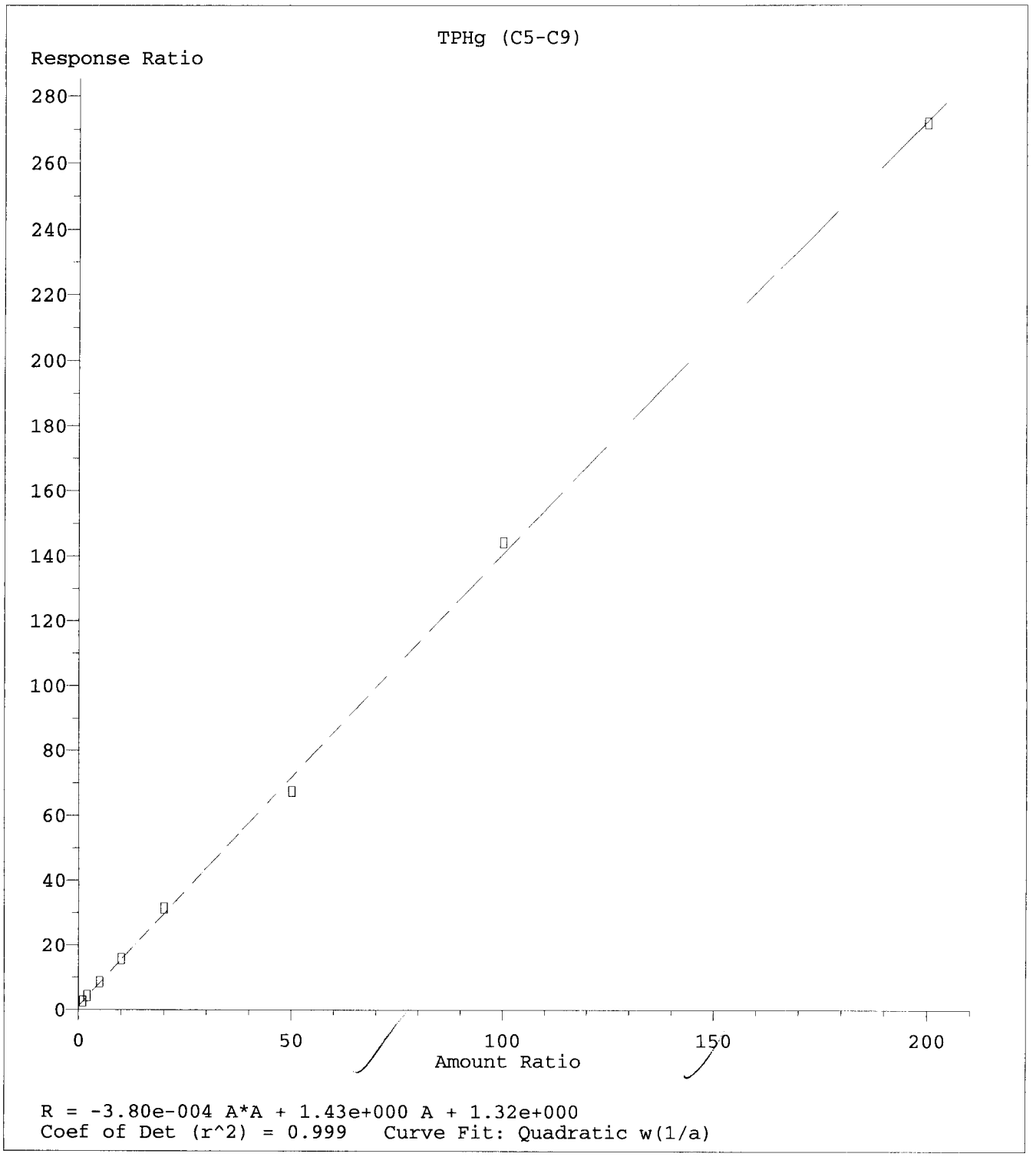
TIC: VC19061024.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 9.70 ug/L m

response 476827

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

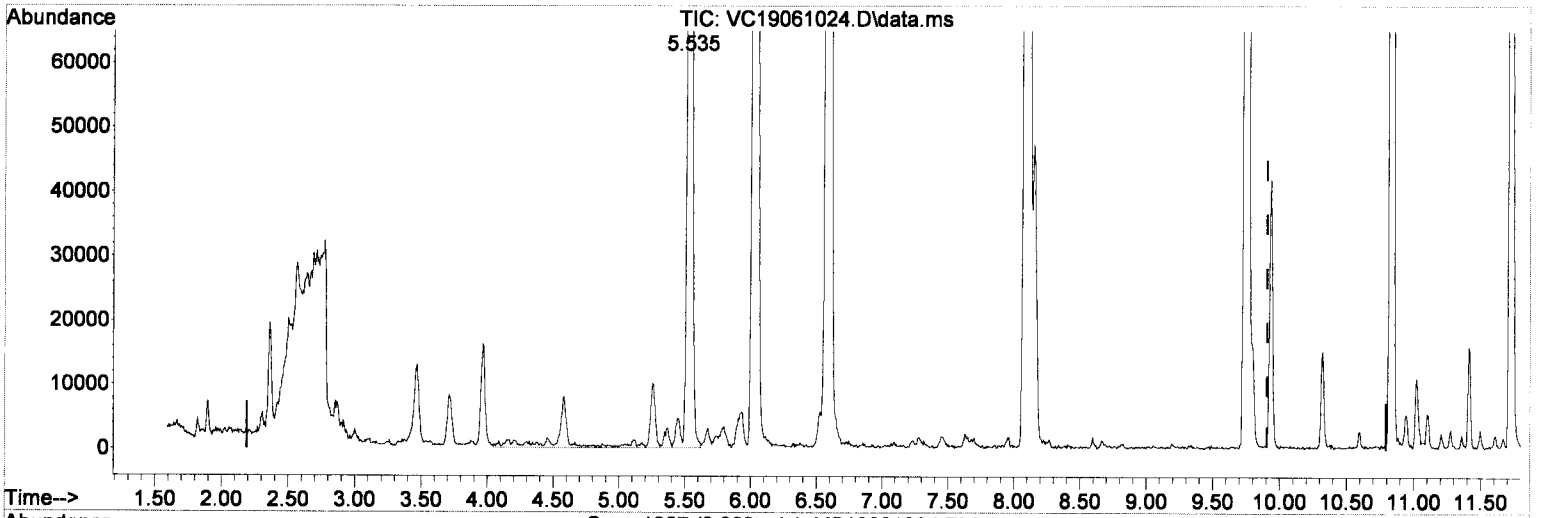


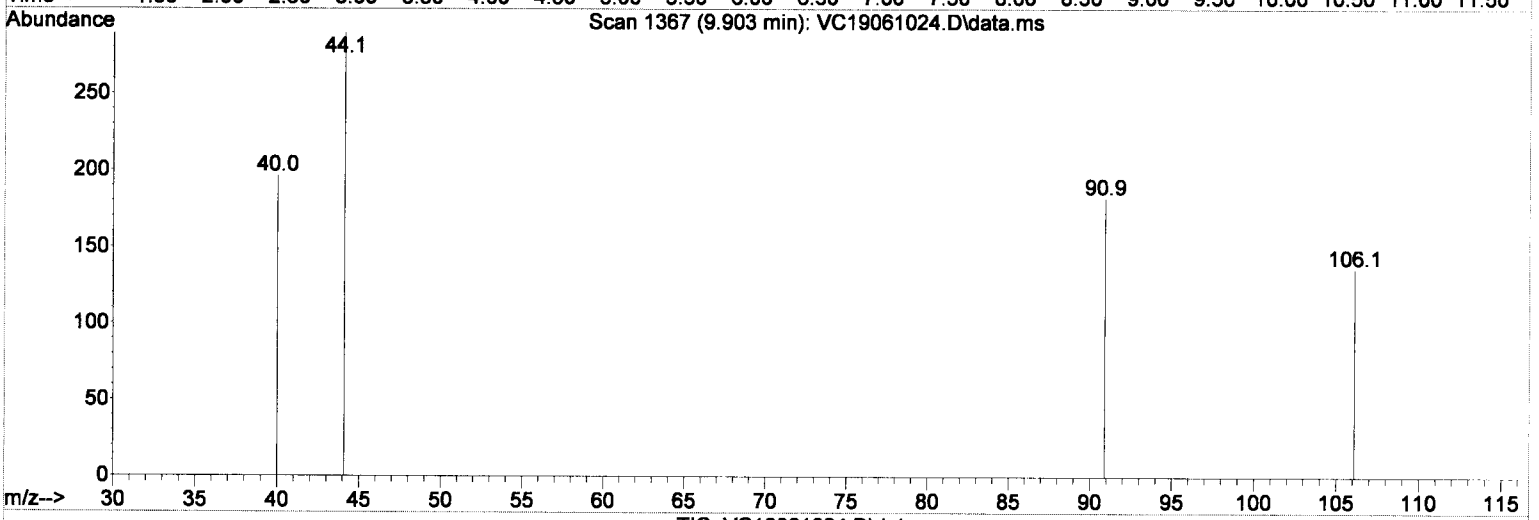
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:49 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





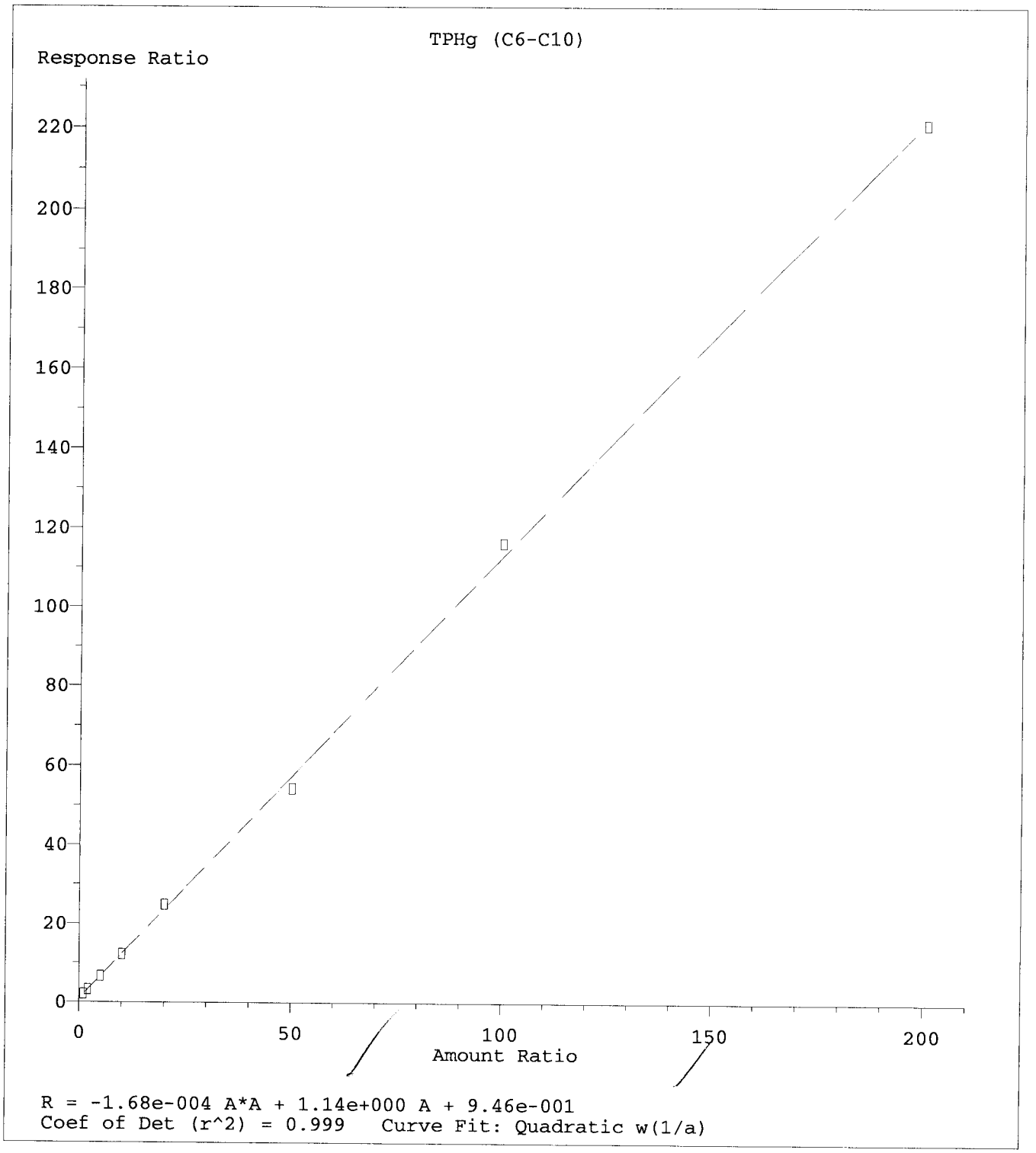
TIC: VC19061024.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 15.35 ug/L m

response 564830

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

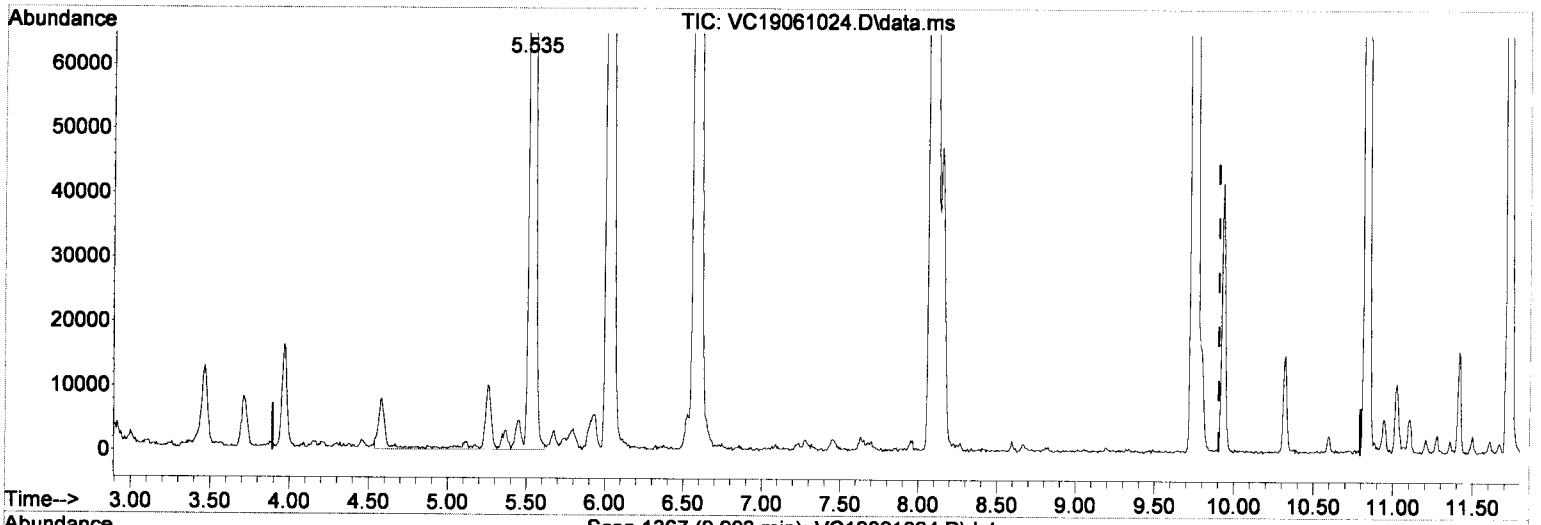


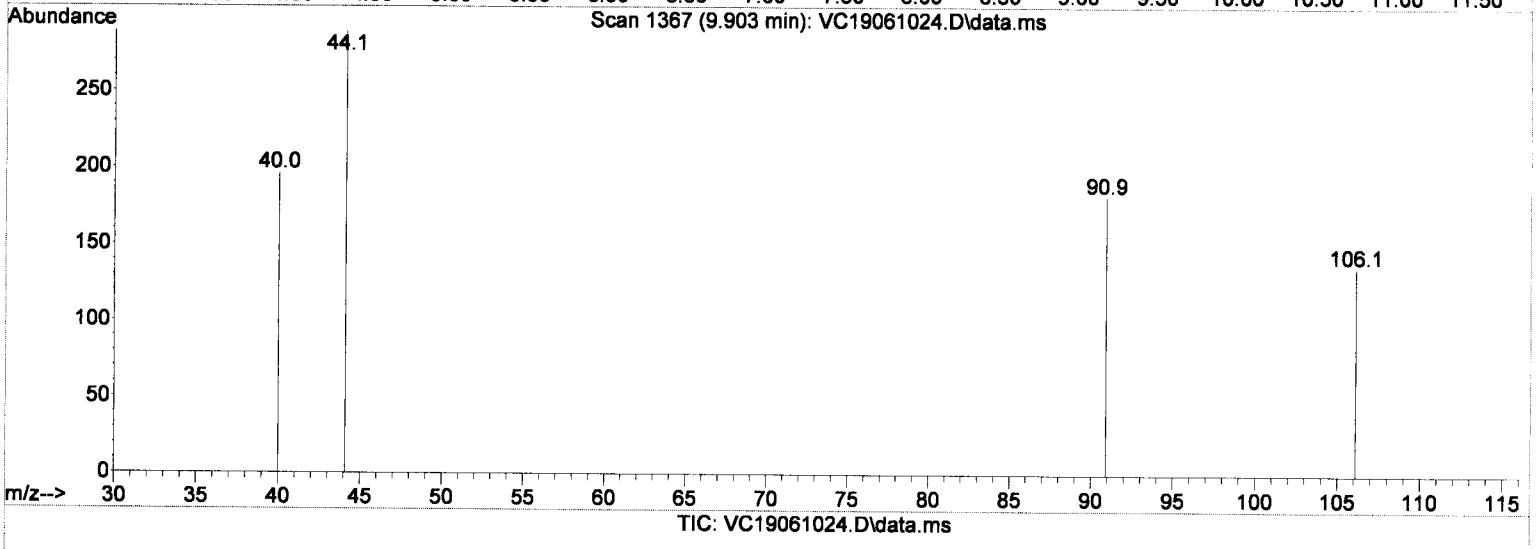
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:59 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





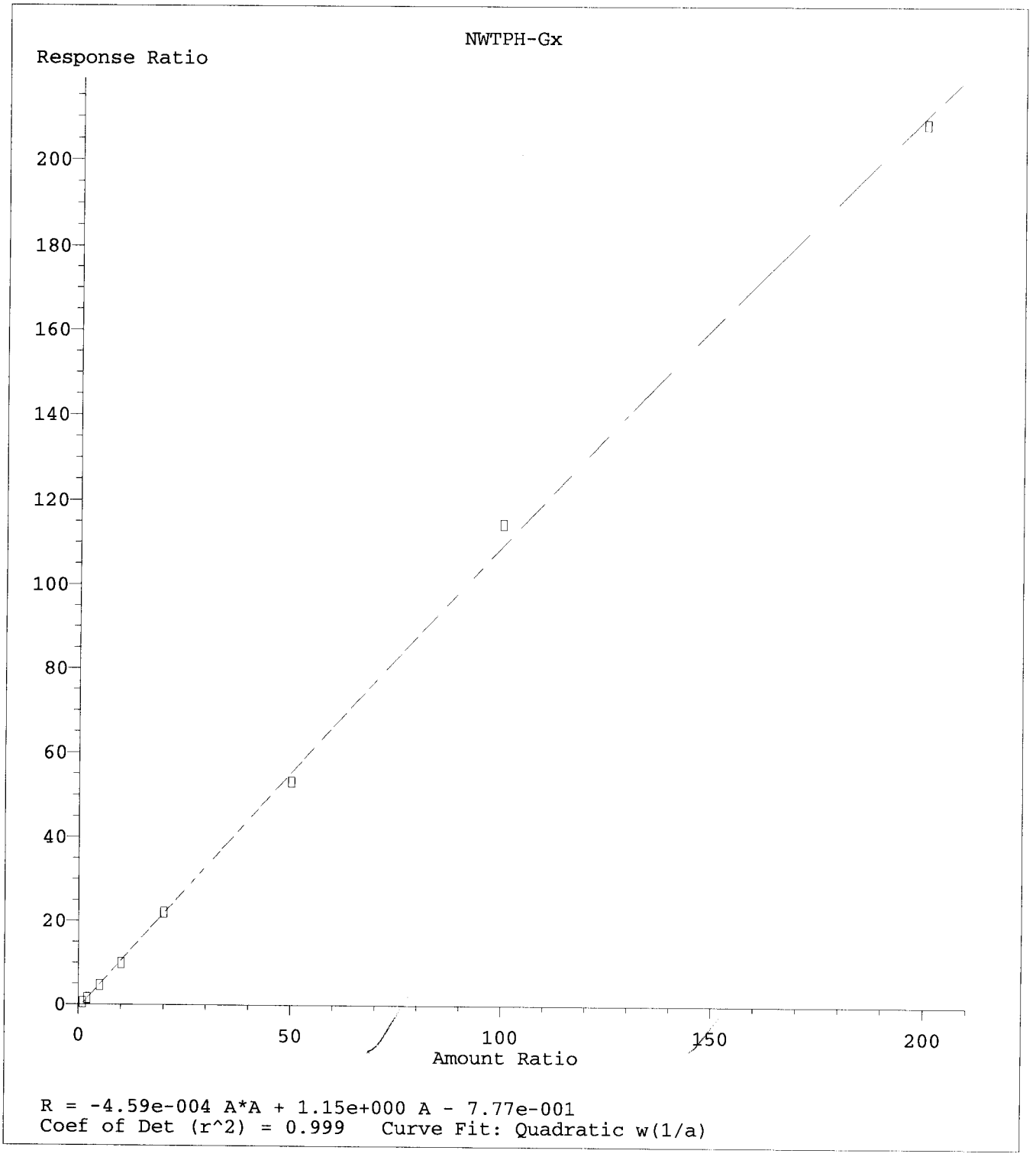
TIC: VC19061024.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 32.65 ug/L m

response 543699

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

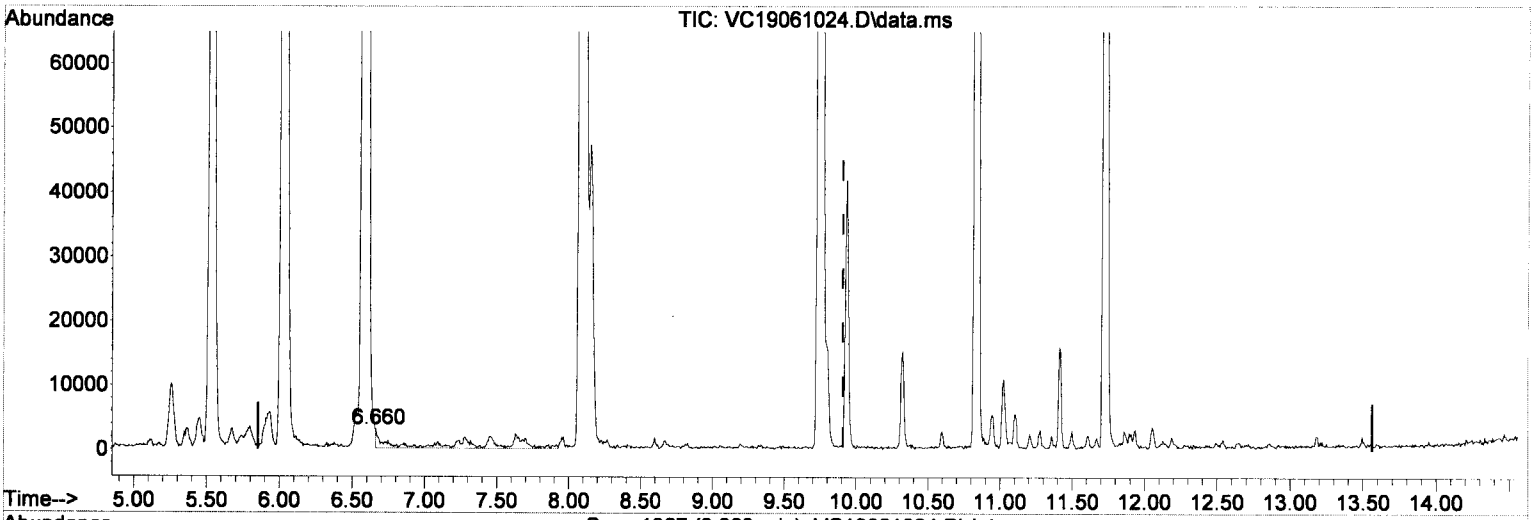


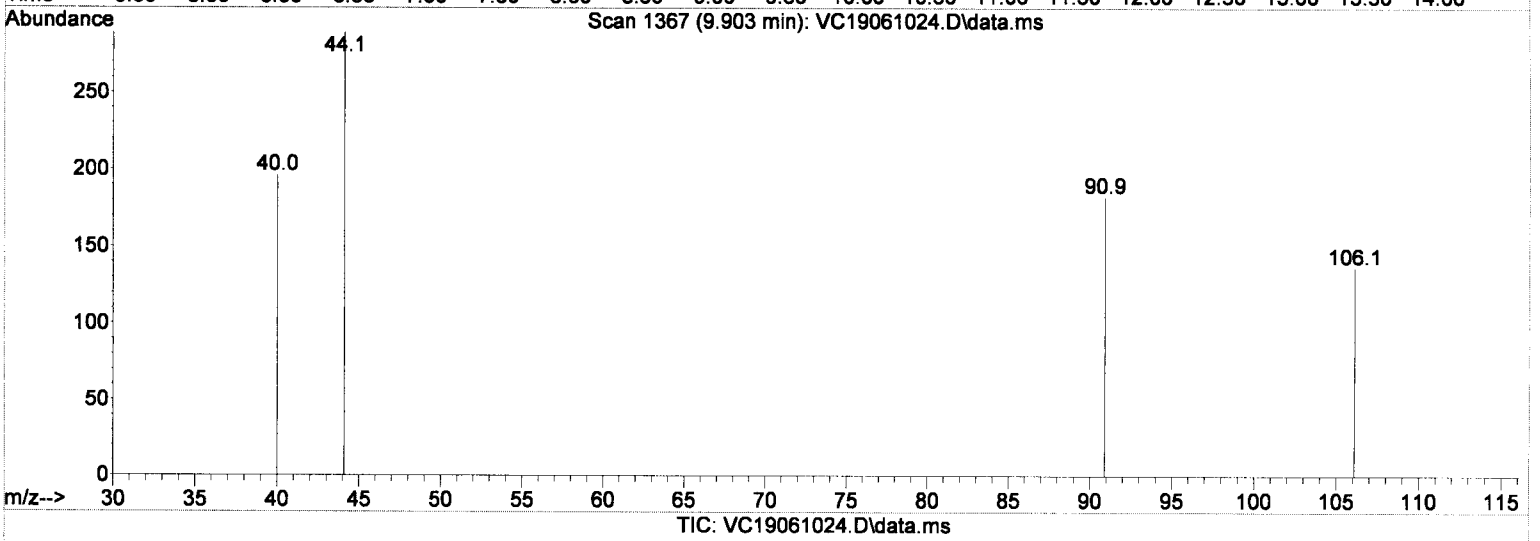
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:15:10 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





TIC: VC19061024.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 40.54 ug/L m

response 49234

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

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
9F10052-TUN2	MS Tune	Soil		A19C135	6/10/2019 11:52:00PM
9F10052-ICB2	Initial Cal Blank	Soil		A19C135	6/11/2019 12:46:00AM
9F10052-CALC	Cal Standard	Soil	A19E372	"	6/11/2019 1:14:00AM
9F10052-CALD	Cal Standard	Soil	A19E373	"	6/11/2019 1:41:00AM
9F10052-CALE	Cal Standard	Soil	A19E374	"	6/11/2019 2:09:00AM
9F10052-CALF	Cal Standard	Soil	A19E375	"	6/11/2019 2:36:00AM
9F10052-CALG	Cal Standard	Soil	A19E183	"	6/11/2019 3:04:00AM
9F10052-CALI	Cal Standard	Soil	A19E185	"	6/11/2019 3:31:00AM
9F10052-CALJ	Cal Standard	Soil	A19E186	"	6/11/2019 3:59:00AM
9F10052-CALH	Cal Standard	Soil	A19E184	"	6/11/2019 4:27:00AM
9F10052-ICV2	Initial Cal Check	Soil	A19B262	"	6/11/2019 5:49:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9F1104** Instrument: **VOA-GCMS3**

8015D-Mod Gasoline (C6-C10 Sequence: **9F10052** Matrix: **Soil**

9F10052-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-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: 9F10052

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: **A9F1104** Instrument: **VOA-GCMS3**

NWTPH-Gx Sequence: **9F10052** Matrix: **Soil**

9F10052-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\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 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 (IS)	50.000	50.000	0.0	109	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	47.972	4.1	104	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	48.228	3.5	104	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	104	0.00
5	H	CA-LUFT (C5-C12)	500.000	508.766	-1.8	111	0.00
6	H	TPHg (C5-C9)	500.000	511.032	-2.2	110	0.00
7	H	TPHg (C6-C10)	500.000	509.539	-1.9	112	0.00
8	H	NWTPH-Gx	500.000	493.147	1.4	115	0.00
9		Benzene (NR)	-1.000	0.000	0.0	108	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	105	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	113	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	124	0.00

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

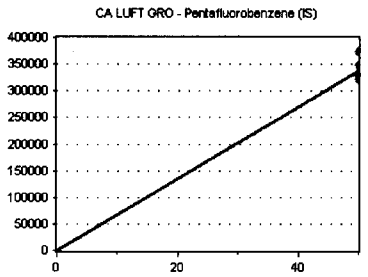
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

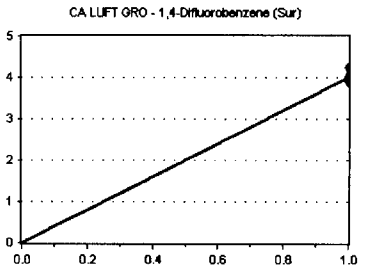


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

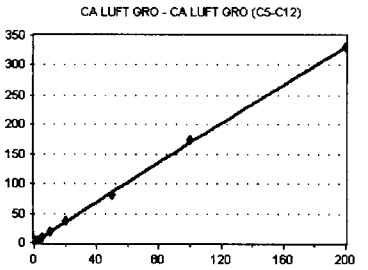


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

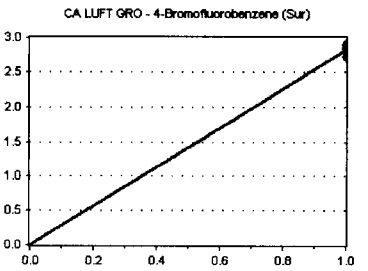


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	916566	2.847	9.91
9F10052-CALD	100	1526302	2.319	9.91
9F10052-CALE	250	3170233	1.917	9.91
9F10052-CALF	500	6025085	1.815	9.91
9F10052-CALG	1000	1.219036E+07	1.849	9.91
9F10052-CALH	2500	3.059738E+07	1.639	9.91
9F10052-CALI	5000	5.7283E+07	1.734	9.91
9F10052-CALJ	10000	1.153515E+08	1.652	9.91

AVE RF **1.971** RF RSD **21.00** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

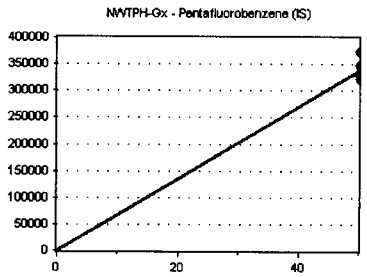
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

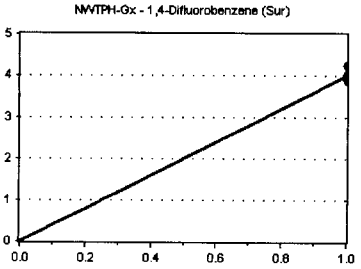


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

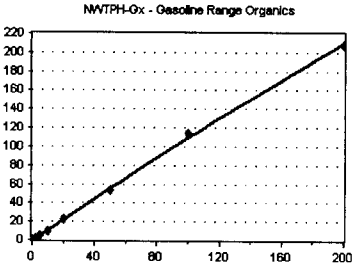


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

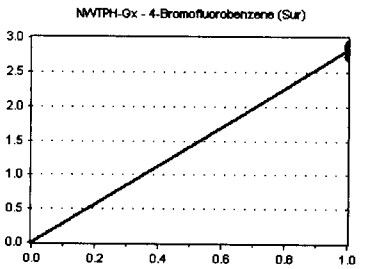


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	166635	0.518	9.91
9F10052-CALD	100	491579	0.747	9.91
9F10052-CALE	250	1533196	0.927	9.91
9F10052-CALF	500	3291113	0.991	9.91
9F10052-CALG	1000	7279463	1.104	9.91
9F10052-CALH	2500	1.985365E+07	1.064	9.91
9F10052-CALI	5000	3.778081E+07	1.144	9.91
9F10052-CALJ	10000	7.278519E+07	1.042	9.91

AVE RF **0.942** RF RSD **22.43** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

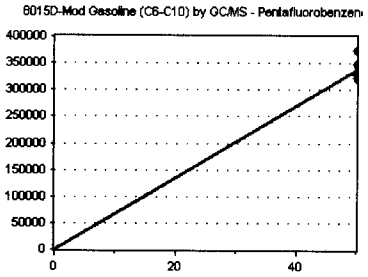
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

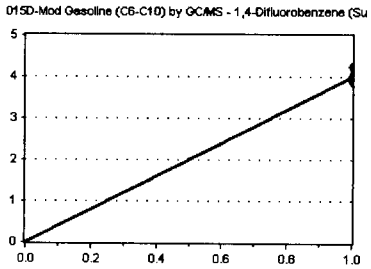


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

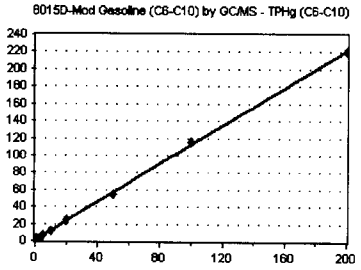


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

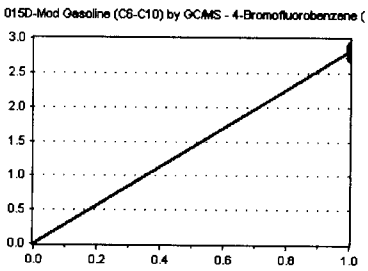


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	681199	2.116	9.91
9F10052-CALD	100	1044704	1.587	9.91
9F10052-CALE	250	2166456	1.310	9.91
9F10052-CALF	500	4027123	1.213	9.91
9F10052-CALG	1000	8174017	1.240	9.91
9F10052-CALH	2500	2.024435E+07	1.085	9.91
9F10052-CALI	5000	3.834621E+07	1.161	9.91
9F10052-CALJ	10000	7.708431E+07	1.104	9.91

AVE RF **1.352** RF RSD **25.66** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

Injection Log

Directory: j:\DATA\2019-06\9F10052

Line	Vial	FileName	Multiplier	SampleName			Misc Info	Injected
1	1	Vc19061001.d	1.	9F10052-IBL1			1X 5mL DI+MeOH	10 Jun 2019 14:39
2	2	Vc19061002.d	1.	9F10052-TUN1			A19C135 BFB (IS/...	10 Jun 2019 15:06
3	3	Vc19061003.d	1.	9F10052-ICB1			1X 5mL DI+MeOH	10 Jun 2019 15:34
4	4	Vc19061004.d	1.	9F10052-CAL1			1X 5mL 0.1ppb VO...	10 Jun 2019 16:02
5	5	Vc19061005.d	1.	9F10052-CAL2			1X 5mL 0.2ppb VO...	10 Jun 2019 16:29
6	6	Vc19061006.d	1.	9F10052-CAL3			1X 5mL 0.4ppb VO...	10 Jun 2019 16:57
7	7	Vc19061007.d	1.	9F10052-CAL4			1X 5mL 1ppb VOC ...	10 Jun 2019 17:25
8	8	Vc19061008.d	1.	9F10052-CAL5			1X 5mL 2ppb VOC ...	10 Jun 2019 17:52
9	9	Vc19061009.d	1.	9F10052-CAL6			1X 5mL 5ppb VOC ...	10 Jun 2019 18:20
10	10	Vc19061010.d	1.	9F10052-CAL7			1X 5mL 10ppb VOC...	10 Jun 2019 18:48
11	11	Vc19061011.d	1.	9F10052-CAL8			1X 5mL 20ppb VOC...	10 Jun 2019 19:15
12	12	Vc19061012.d	1.	9F10052-CAL9			1X 5mL 50ppb VOC...	10 Jun 2019 19:43
13	13	Vc19061013.d	1.	9F10052-IBL2			1X 5mL DI+MeOH	10 Jun 2019 20:11
14	14	Vc19061014.d	1.	9F10052-CALA			1X 5mL 100ppb VO...	10 Jun 2019 20:38
15	15	Vc19061015.d	1.	9F10052-IBL3			1X 5mL DI+MeOH	10 Jun 2019 21:06
16	16	Vc19061016.d	1.	9F10052-CALB			1X 5mL 200ppb VO...	10 Jun 2019 21:34
17	17	Vc19061017.d	1.	9F10052-IBL4			1X 5mL DI+MeOH	10 Jun 2019 22:01
18	18	Vc19061018.d	1.	9F10052-IBL5			1X 5mL DI+MeOH	10 Jun 2019 22:29
19	19	Vc19061019.d	1.	9F10052-ICV1			1X 5mL 20ppb VOC...	10 Jun 2019 22:56
20	20	Vc19061020.d	1.	9F10052-IBL6			1X 5mL DI+MeOH	10 Jun 2019 23:24
21	21	Vc19061021.d	1.	9F10052-TUN2	RT		A19C135 BFB (IS/...	10 Jun 2019 23:52
22	22	Vc19061022.d	1.	9F10052-IBL7			1X 5mL DI+MeOH	11 Jun 2019 00:19
23	23	Vc19061023.d	1.	9F10052-ICB2			1X 5mL DI+MeOH	11 Jun 2019 00:46
24	24	Vc19061024.d	1.	9F10052-CALC			1X 5mL 50ppb GX ...	11 Jun 2019 01:14
25	25	Vc19061025.d	1.	9F10052-CALD		100	1X 5mL 50ppb GX ...	11 Jun 2019 01:41
26	26	Vc19061026.d	1.	9F10052-CALE		250	1X 5mL 50ppb GX ...	11 Jun 2019 02:09
27	27	Vc19061027.d	1.	9F10052-CALF		500	1X 5mL 50ppb GX ...	11 Jun 2019 02:36
28	28	Vc19061028.d	1.	9F10052-CALG		1000	1X 5mL 50ppb GX ...	11 Jun 2019 03:04
29	29	Vc19061029.d	1.	9F10052-~~CALH~~ I		5000	1X 5mL 50ppb GX ...	11 Jun 2019 03:31
30	30	Vc19061030.d	1.	9F10052-~~CALI~~ CALJ		10000	1X 5mL 50ppb GX ...	11 Jun 2019 03:59
31	31	Vc19061031.d	1.	9F10052-~~CALJ~~ CALI H		2500	1X 5mL 50ppb GX ...	11 Jun 2019 04:27
32	32	Vc19061032.d	1.	9F10052-IBL8			1X 5mL DI+MeOH	11 Jun 2019 04:54
33	33	Vc19061033.d	1.	9F10052-IBL9			1X 5mL DI+MeOH	11 Jun 2019 05:22
34	34	Vc19061034.d	1.	9F10052-ICV2			1X 5mL 500ppb GX...	11 Jun 2019 05:49
35	35	Vc19061035.d	1.	9F10052-IBLA			1X 5mL DI+MeOH	11 Jun 2019 06:17

TB 6/11/19

TB 6/11/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061001.D
Acq On : 10 Jun 2019 2:39 pm
Operator : TB
Sample : 9F10052-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

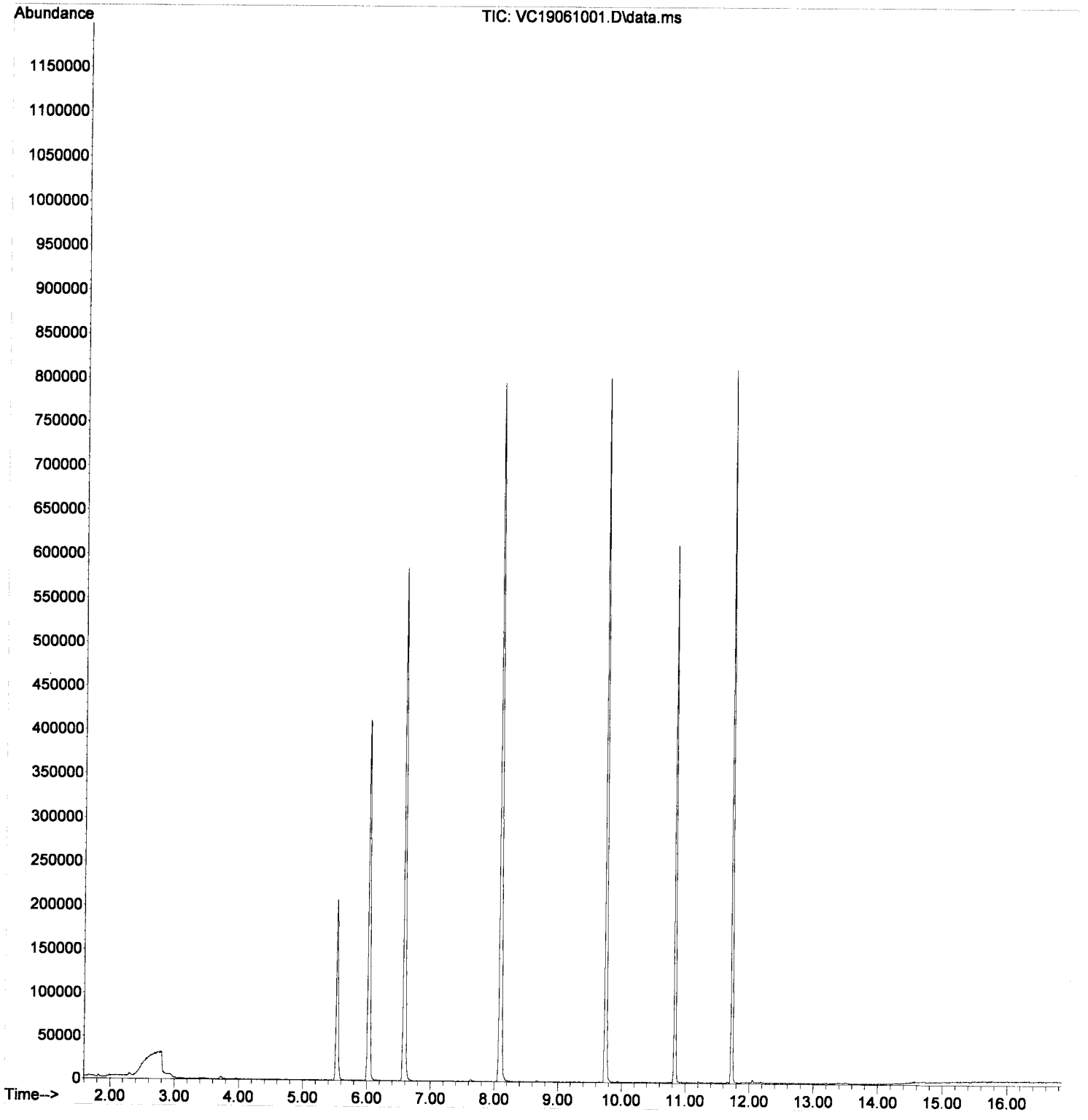
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	335189	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	457350	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	182378	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	141286	46.25	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	547296	48.46	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	642557	50.29	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	162915	49.47	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.864	50	648	0.19	ug/L	#	48
5) Bromomethane	2.308	96	1745	1.29	ug/L		88
6) Chloroethane	2.466	64	182	0.20	ug/L	#	1
11) Iodomethane	3.233	142	335	1.63	ug/L	#	47
12) Methylene Chloride	3.726	84	1753	0.78	ug/L		89
13) Acetone	3.841	43	324	0.27	ug/L	#	42
52) m,p-Xylenes (2)	9.937	91	731	0.09	ug/L		93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061001.D
Acq On : 10 Jun 2019 2:39 pm
Operator : TB
Sample : 9F10052-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

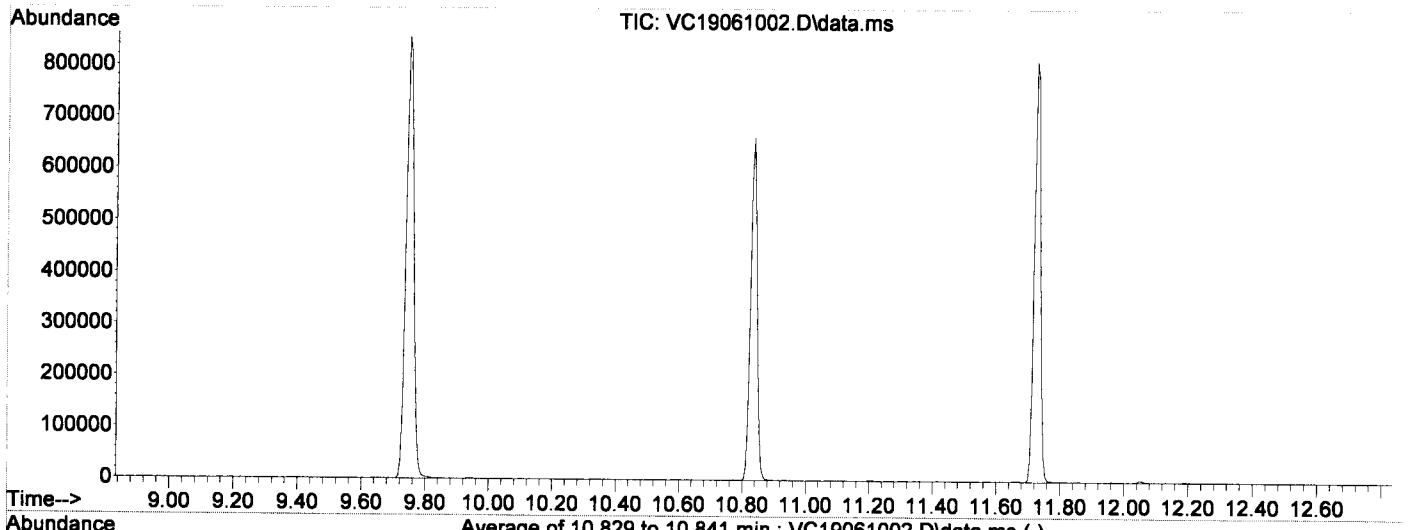
Quant Time: Jun 11 09:53:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

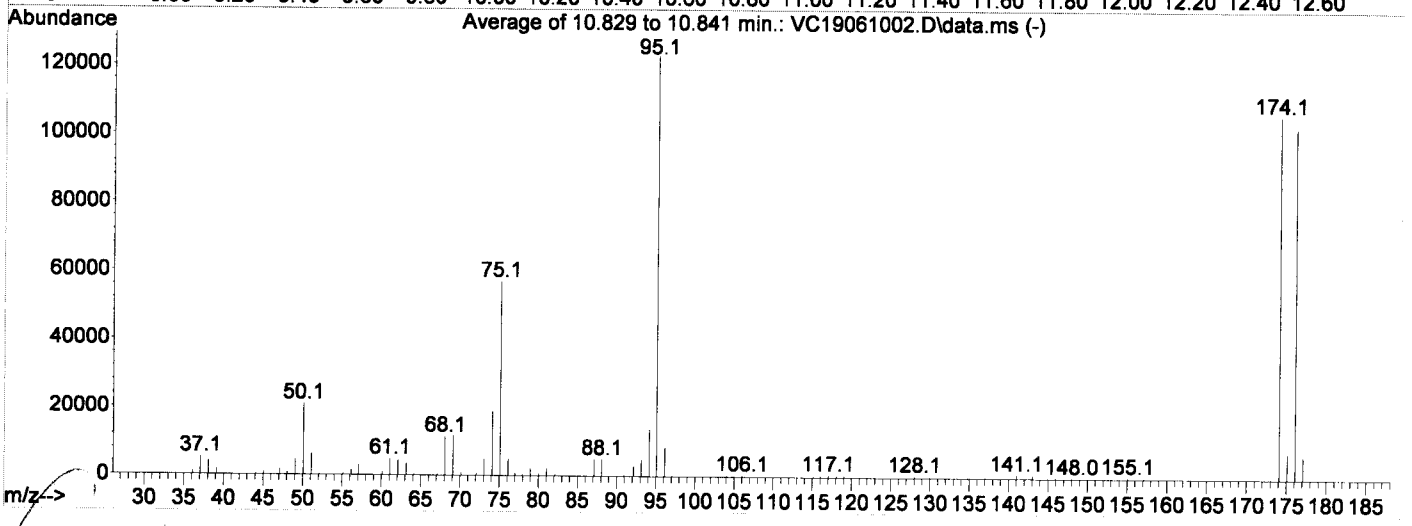


Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019





AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	16.9	20829	PASS
75	95	30	60	46.2	56824	PASS
95	95	100	100	100.0	123024	PASS
96	95	5	9	7.0	8583	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	86.2	105989	PASS
175	174	5	9	7.3	7718	PASS
176	174	95	101	96.7	102512	PASS
177	176	5	9	6.9	7076	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

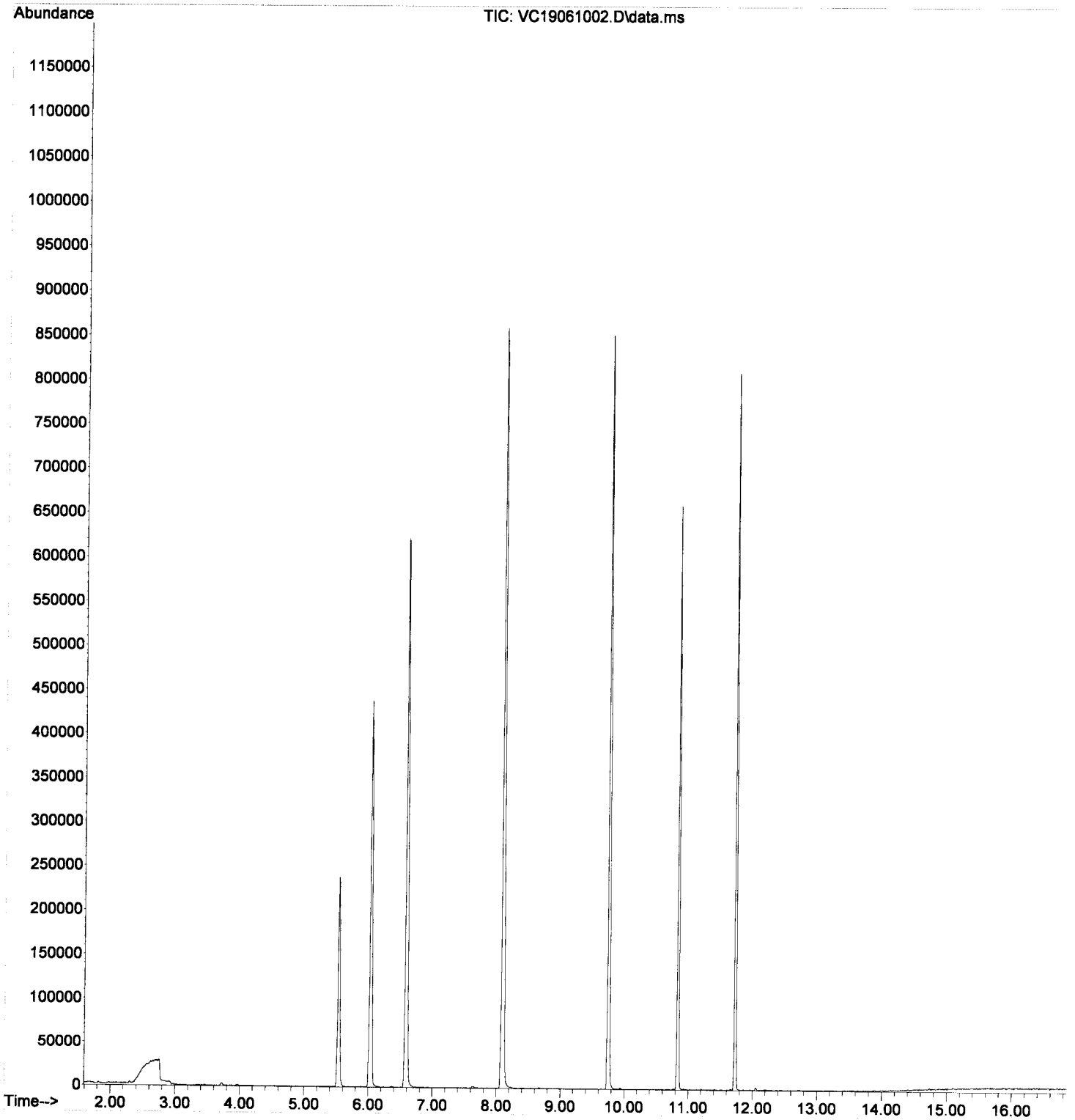
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	346224	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	484330	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191767	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	165479	52.44	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	593168	50.84	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	703807	52.02	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	171768	49.60	ug/L		0.00
Target Compounds							Qvalue
5) Bromomethane	2.306	96	743	0.53	ug/L		88
6) Chloroethane	2.525	64	398	0.43	ug/L	#	1
12) Methylene Chloride	3.717	84	1460	0.63	ug/L		90
13) Acetone	3.845	43	391	0.32	ug/L	#	42
27) 1,1-Dichloropropene	5.579	75	398	0.11	ug/L	#	41
52) m,p-Xylenes (2)	9.947	91	1077	0.12	ug/L	#	52

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061003.D
Acq On : 10 Jun 2019 3:34 pm
Operator : TB
Sample : 9F10052-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:15 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

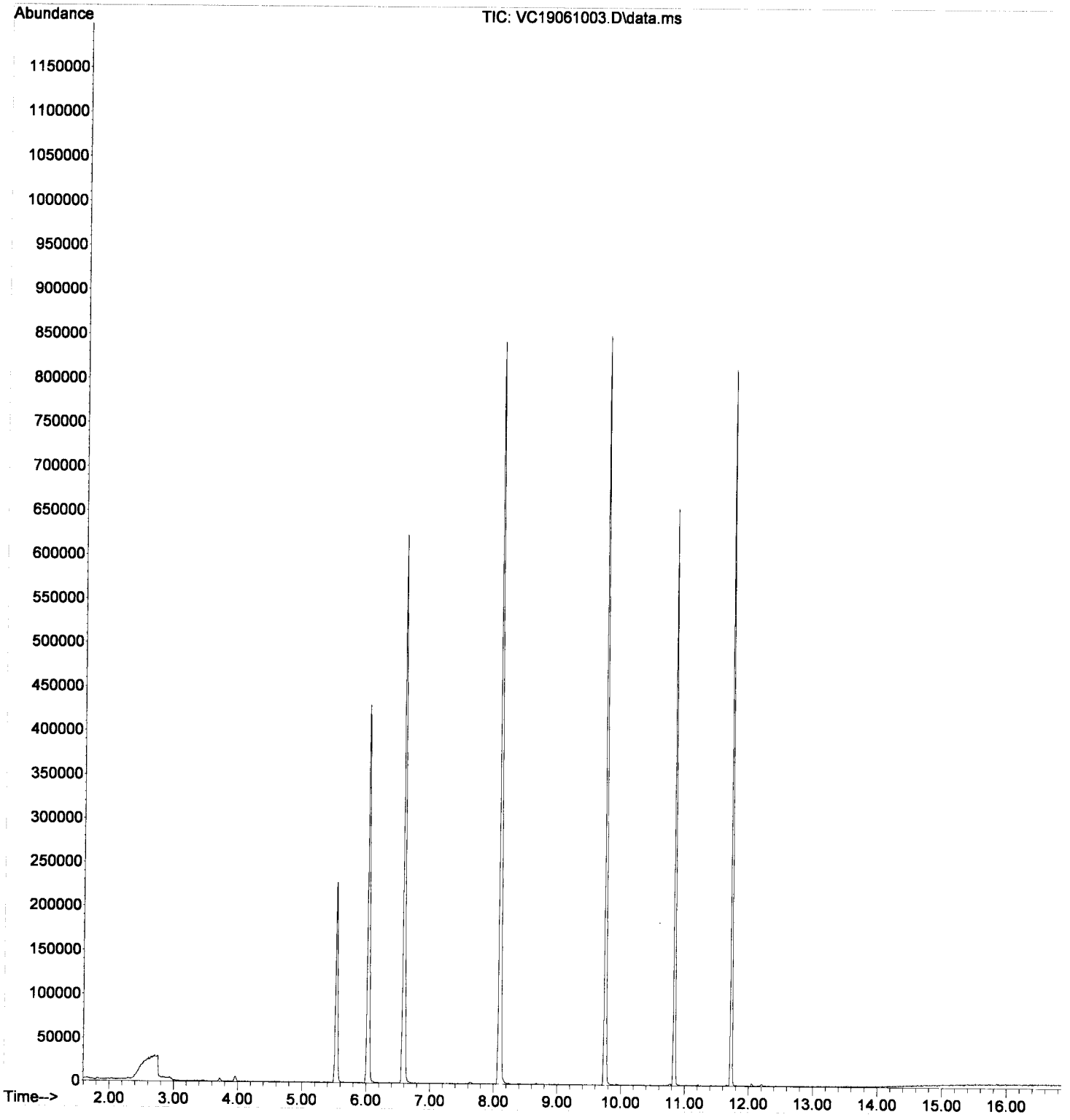
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.026	168	343579	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	484777	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188807	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.533	111	154915	49.47	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.586	114	568148	49.07	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	674639	49.81	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.832	174	170597	50.04	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.853	50	331	0.09	ug/L		84
5) Bromomethane	2.297	96	1264	0.91	ug/L		76
6) Chloroethane	2.510	64	121	0.13	ug/L	#	1
11) Iodomethane	3.246	142	244	1.55	ug/L	#	47
12) Methylene Chloride	3.726	84	1768	0.77	ug/L		81
13) Acetone	3.836	43	318	0.26	ug/L	#	42
15) n-Hexane	3.970	86	709	Below Cal		#	26
52) m,p-Xylenes (2)	9.938	91	817	0.09	ug/L		81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061003.D
Acq On : 10 Jun 2019 3:34 pm
Operator : TB
Sample : 9F10052-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:15 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:04:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	324487	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	458762	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	181530	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	141951	40.40	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	543971	43.58	ug/L	0.00
39) Toluene-d8 (S)	8.097	98	645647	52.02	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	161208	51.48	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.	d	
4) Vinyl Chloride	1.947	62	192	0.06	ug/L	58
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	0.000		0	N.D.		
8) 1,1-Dichloroethene	0.000		0	N.D.	d	
9) Carbon Disulfide	0.000		0	N.D.	d	
10) Freon 113	0.000		0	N.D.	d	
11) Iodomethane	0.000		0	N.D.		
12) Methylene Chloride	3.723	84	1951	Below Cal	#	73
13) Acetone	0.000		0	N.D.	d	
14) t-1,2-Dichloroethene	0.000		0	N.D.	d	
15) n-Hexane	3.967	86	1308	0.36	ug/L #	70
16) Methyl-tert-butyl-ether	0.000		0	N.D.	d	
17) 1,1-Dichloroethane	0.000		0	N.D.	d	
18) Acrylonitrile	0.000		0	N.D.		
19) c-1,2-Dichloroethene	0.000		0	N.D.	d	
20) 2,2-Dichloropropane	0.000		0	N.D.	d	
21) Bromochloromethane	0.000		0	N.D.		
22) Chloroform	0.000		0	N.D.	d	
23) Carbon Tetrachloride	0.000		0	N.D.	d	
24) Tetrahydrofuran	0.000		0	N.D.	d	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	d	
27) 1,1-Dichloropropene	0.000		0	N.D.	d	
28) 2-Butanone (MEK)	0.000		0	N.D.	d	
29) Benzene	5.932	78	1173	0.08	ug/L	80
30) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d	
31) iso-Butyl Alcohol	0.000		0	N.D.	d	
33) Trichloroethene (TCE)	0.000		0	N.D.	d	
34) Dibromomethane	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000		0	N.D.	d	
36) Bromodichloromethane	0.000		0	N.D.		
38) c-1,3-Dichloropropene	0.000		0	N.D.		
40) Toluene	0.000		0	N.D.	d	
41) Tetrachloroethene (PCE)	0.000		0	N.D.	d	
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d	
43) t-1,3-Dichloropropene	0.000		0	N.D.		
44) 1,1,2-Trichloroethane	0.000		0	N.D.	d	
45) Dibromochloromethane	0.000		0	N.D.		
46) 1,3-Dichloropropane	0.000		0	N.D.	d	
47) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	d	
48) 2-Hexanone	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:04:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	0.000		0	N.D. d		
50) Ethylbenzene	9.795	91	1463	0.12	ug/L	91
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.		
52) m,p-Xylenes (2)	9.935	91	2386	0.27	ug/L	88
53) o-Xylene	10.324	91	1221	0.13	ug/L	71
54) Styrene	0.000		0	N.D. d		
55) Bromoform	0.000		0	N.D.		
56) Isopropylbenzene	10.592	105	1075	0.10	ug/L	85
59) Bromobenzene	0.000		0	N.D. d		
60) n-Propylbenzene	10.951	91	1339	0.12	ug/L	92
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D. d		
62) 2-Chlorotoluene	0.000		0	N.D.		
63) 1,3,5-Trimethylbenzene	11.103	105	866	0.12	ug/L	68
64) 1,2,3-Trichloropropane	0.000		0	N.D.		
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.		
66) 4-Chlorotoluene	11.212	91	704	0.11	ug/L #	47
67) tert-Butylbenzene	11.358	91	444	0.11	ug/L #	57
68) 1,2,4-Trimethylbenzene	11.413	105	993	0.13	ug/L	69
69) sec-Butylbenzene	11.498	105	846	0.10	ug/L	82
70) 4-Isopropyltoluene	11.602	119	815	0.11	ug/L	95
71) 1,3-Dichlorobenzene	11.668	146	529	0.13	ug/L #	74
72) 1,4-Dichlorobenzene	11.748	146	550	0.13	ug/L	82
73) n-Butylbenzene	11.930	91	852	0.14	ug/L	91
74) 1,2-Dichlorobenzene	12.058	146	365	0.09	ug/L	68
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.		
76) Hexachlorobutadiene	0.000		0	N.D.		
77) 1,2,4-Trichlorobenzene	0.000		0	N.D. d		
78) Naphthalene	0.000		0	N.D. d		
79) 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\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	324487	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	458762	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	181530	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.530	111	141951	40.40 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	543971	43.58 ug/L	0.00
39) Toluene-d8 (S)	8.097	98	645647	52.02 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	161208	51.43 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	1.868	50	606	0.13 ug/L	90
4) Vinyl Chloride	1.947	62	192	0.06 ug/L	58
5) Bromomethane	2.306	96	992	0.53 ug/L #	72
6) Chloroethane	2.452	64	138	0.11 ug/L #	1
7) Trichlorofluoromethane	0.000		0	N.D.	
8) 1,1-Dichloroethene	3.097	61	297	0.09 ug/L #	58
9) Carbon Disulfide	3.103	76	338	0.06 ug/L	77
10) Freon 113	3.146	101	159	0.06 ug/L	77
11) Iodomethane	0.000		0	N.D.	
12) Methylene Chloride	3.723	84	1951	Below Cal #	73
13) Acetone	3.851	43	463	0.32 ug/L #	42
14) t-1,2-Dichloroethene	3.882	61	272	0.07 ug/L #	67
15) n-Hexane	3.967	86	1308	0.36 ug/L #	70
16) Methyl-tert-butyl-ether	4.046	73	991	0.09 ug/L	60
17) 1,1-Dichloroethane	4.514	63	363	0.08 ug/L #	49
18) Acrylonitrile	0.000		0	N.D.	
19) c-1,2-Dichloroethene	5.062	61	218	0.05 ug/L #	54
20) 2,2-Dichloropropane	5.184	77	118	0.03 ug/L #	27
21) Bromochloromethane	0.000		0	N.D.	
22) Chloroform	5.354	83	364	0.07 ug/L	85
23) Carbon Tetrachloride	5.536	117	212	0.07 ug/L #	1
24) Tetrahydrofuran	5.549	42	102	0.05 ug/L #	26
25) 1,1,1-Trichloroethane	5.542	97	230	0.05 ug/L #	63
27) 1,1-Dichloropropene	5.676	75	292	0.07 ug/L #	41
28) 2-Butanone (MEK)	5.725	43	385	0.15 ug/L	54
29) Benzene	5.932	78	1173	0.08 ug/L	80
30) 1,2-Dichloroethane (EDC)	6.139	62	293	0.07 ug/L #	50
31) iso-Butyl Alcohol	6.285	43	342	1.06 ug/L	95
33) Trichloroethene (TCE)	6.558	130	155	0.04 ug/L #	45
34) Dibromomethane	0.000		0	N.D.	
35) 1,2-Dichloropropane	7.106	63	170	0.05 ug/L #	37
36) Bromodichloromethane	0.000		0	N.D.	
38) c-1,3-Dichloropropene	0.000		0	N.D.	
40) Toluene	8.152	91	1880	0.15 ug/L	85
41) Tetrachloroethene (PCE)	8.602	166	233	0.08 ug/L #	71
42) 4-Methyl-2-Pentanone (...	8.633	43	471	0.13 ug/L #	41
43) t-1,3-Dichloropropene	0.000		0	N.D	
44) 1,1,2-Trichloroethane	8.828	97	135	0.05 ug/L #	45
45) Dibromochloromethane	0.000		0	N.D	
46) 1,3-Dichloropropane	9.113	76	374	0.08 ug/L #	27
47) 1,2-Dibromoethane (EDB)	9.253	107	110	0.05 ug/L #	7
48) 2-Hexanone	9.515	43	201	0.08 ug/L #	31

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

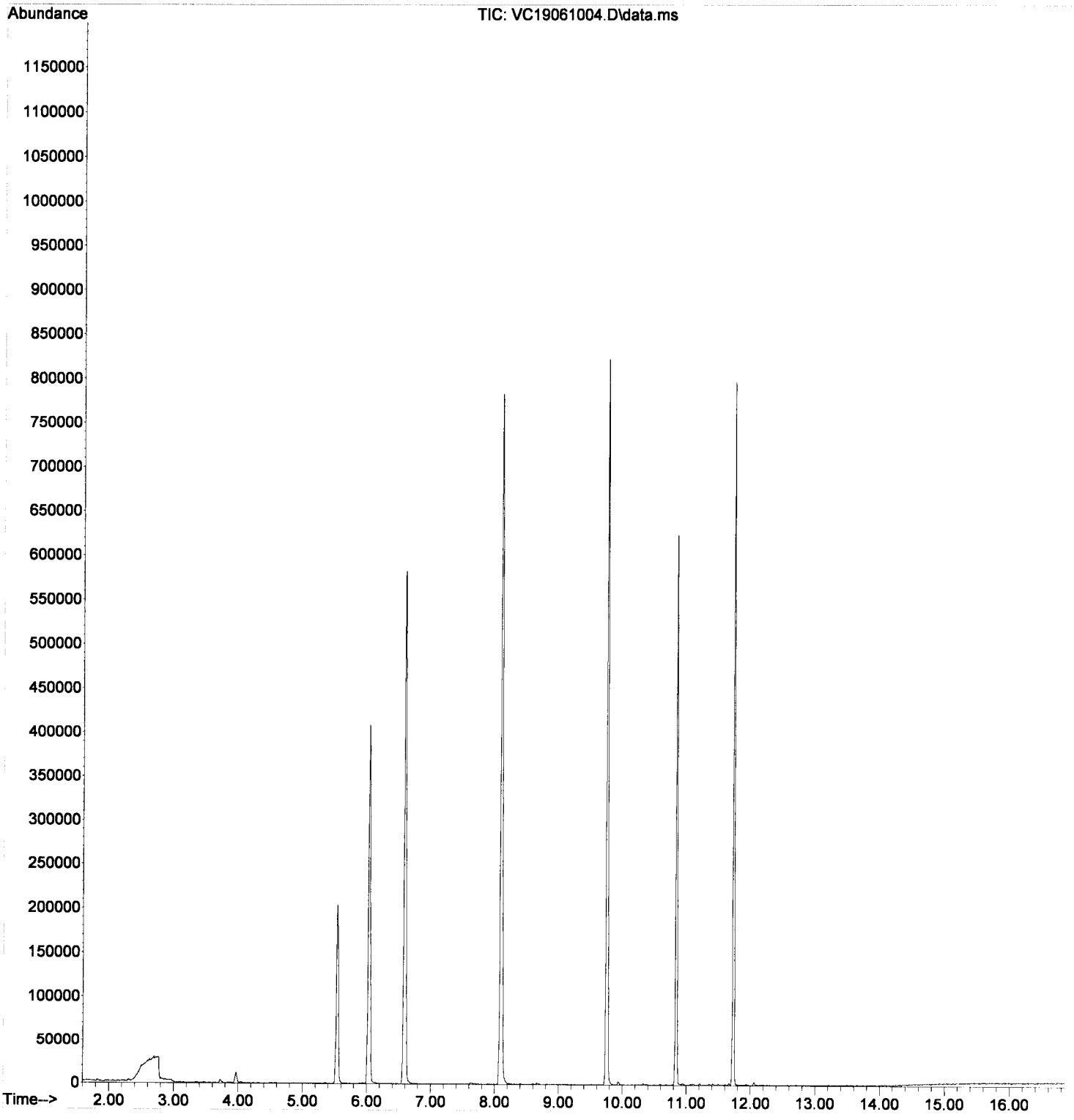
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.758	112	710	0.10	ug/L	#	1
50) Ethylbenzene	9.795	91	1463	0.12	ug/L		91
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.935	91	2386	0.27	ug/L		88
53) o-Xylene	10.324	91	1221	0.13	ug/L		71
54) Styrene	10.379	104	499	0.08	ug/L	#	52
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.592	105	1075	0.10	ug/L		85
59) Bromobenzene	10.920	156	284	0.12	ug/L		94
60) n-Propylbenzene	10.951	91	1339	0.12	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.005	83	103	0.04	ug/L	#	25
62) 2-Chlorotoluene	0.000		0	N.D.			
63) 1,3,5-Trimethylbenzene	11.103	105	866	0.12	ug/L		68
64) 1,2,3-Trichloropropane	0.000		0	N.D.			
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	704	0.11	ug/L	#	47
67) tert-Butylbenzene	11.358	91	444	0.11	ug/L	#	57
68) 1,2,4-Trimethylbenzene	11.413	105	993	0.13	ug/L		69
69) sec-Butylbenzene	11.498	105	846	0.10	ug/L		82
70) 4-Isopropyltoluene	11.602	119	815	0.11	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	529	0.13	ug/L	#	74
72) 1,4-Dichlorobenzene	11.748	146	550	0.13	ug/L		82
73) n-Butylbenzene	11.930	91	852	0.14	ug/L		91
74) 1,2-Dichlorobenzene	12.058	146	365	0.09	ug/L		68
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	13.214	180	220	0.10	ug/L	#	56
78) Naphthalene	13.494	128	577	0.08	ug/L		78
79) 1,2,3-Trichlorobenzene	13.652	180	222	0.10	ug/L	#	59

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:08:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	314337	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	454033	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	180145	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	143088	42.04	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	532161	44.01	ug/L		0.00
39) Toluene-d8 (S)	8.090	98	631334	51.40	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	161808	52.02	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d		
3) Chloromethane	1.861	50	938	0.20	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) 1,1-Dichloroethene	3.090	61	452	0.14	ug/L	#	52
9) Carbon Disulfide	0.000		0	N.D.	d		
10) Freon 113	0.000		0	N.D.	d		
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.716	84	2127	Below Cal			78
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.881	61	572	0.16	ug/L		72
15) n-Hexane	3.960	86	991	Below Cal		#	87
16) Methyl-tert-butyl-ether	4.045	73	1600	0.15	ug/L		96
17) 1,1-Dichloroethane	4.513	63	568	0.12	ug/L		72
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.073	61	687	0.17	ug/L	#	41
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	5.274	49	306	0.13	ug/L		99
22) Chloroform	5.347	83	854	0.16	ug/L		90
23) Carbon Tetrachloride	5.462	117	263	0.09	ug/L	#	56
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.535	97	607	0.15	ug/L	#	58
27) 1,1-Dichloropropene	5.681	75	587	0.14	ug/L	#	66
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.931	78	2187	0.16	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.150	62	555	0.14	ug/L		92
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.551	130	436	0.11	ug/L	#	72
34) Dibromomethane	0.000		0	N.D.	d		
35) 1,2-Dichloropropane	0.000		0	N.D.	d		
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	0.000		0	N.D.	d		
40) Toluene	8.157	91	2884	0.24	ug/L		82
41) Tetrachloroethene (PCE)	8.601	166	521	0.19	ug/L		90
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d		
43) t-1,3-Dichloropropene	0.000		0	N.D.	d		
44) 1,1,2-Trichloroethane	8.820	97	419	0.17	ug/L	#	59
45) Dibromochloromethane	0.000		0	N.D.	d		
46) 1,3-Dichloropropane	9.112	76	796	0.18	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.246	107	397	0.17	ug/L		70
48) 2-Hexanone	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:08:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1627	0.22	ug/L	#	29
50) Ethylbenzene	9.794	91	2439	0.20	ug/L		84
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	3873	0.44	ug/L		97
53) o-Xylene	10.317	91	1836	0.20	ug/L		86
54) Styrene	10.378	104	1040	0.16	ug/L		73
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	2121	0.20	ug/L		86
59) Bromobenzene	10.919	156	364	0.15	ug/L		83
60) n-Propylbenzene	10.944	91	2323	0.21	ug/L		93
61) 1,1,2,2-Tetrachloroethane	11.011	83	474	0.20	ug/L		76
62) 2-Chlorotoluene	0.000		0	N.D.	d		
63) 1,3,5-Trimethylbenzene	11.102	105	1575	0.21	ug/L		89
64) 1,2,3-Trichloropropane	0.000		0	N.D.	d		
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.205	91	1298	0.20	ug/L		78
67) tert-Butylbenzene	11.363	91	750	0.18	ug/L		91
68) 1,2,4-Trimethylbenzene	11.412	105	1577	0.21	ug/L		84
69) sec-Butylbenzene	11.497	105	1569	0.18	ug/L		84
70) 4-Isopropyltoluene	11.607	119	1419	0.20	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	839	0.20	ug/L		86
72) 1,4-Dichlorobenzene	11.734	146	912	0.22	ug/L	#	1
73) n-Butylbenzene	11.935	91	1340	0.22	ug/L		86
74) 1,2-Dichlorobenzene	12.057	146	679	0.18	ug/L		90
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d		
78) Naphthalene	0.000		0	N.D.	d		
79) 1,2,3-Trichlorobenzene	13.651	180	389	0.18	ug/L		83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC19061IS.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	314337	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	454033	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	180145	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	143088	42.04 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	532161	44.01 ug/L		0.00
39) Toluene-d8 (S)	8.090	98	631334	51.40 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	161808	52.02 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.672	85	265	0.09 ug/L	#	50
3) Chloromethane	1.861	50	938	0.20 ug/L		91
4) Vinyl Chloride	1.946	62	121	0.04 ug/L	#	48
5) Bromomethane	2.305	96	1262	0.70 ug/L		87
6) Chloroethane	2.427	64	312	0.26 ug/L	#	1
7) Trichlorofluoromethane	2.555	101	110	0.06 ug/L		84
8) 1,1-Dichloroethene	3.090	61	452	0.14 ug/L	#	52
9) Carbon Disulfide	3.102	76	667	0.13 ug/L		77
10) Freon 113	3.145	101	435	0.16 ug/L	#	80
11) Iodomethane	3.236	142	165	0.87 ug/L	#	47
12) Methylene Chloride	3.716	84	2127	Below Cal		78
13) Acetone	3.832	43	410	0.29 ug/L		95
14) t-1,2-Dichloroethene	3.881	61	572	0.16 ug/L		72
15) n-Hexane	3.960	86	991	Below Cal	#	87
16) Methyl-tert-butyl-ether	4.045	73	1600	0.15 ug/L		96
17) 1,1-Dichloroethane	4.513	63	568	0.12 ug/L		72
18) Acrylonitrile	4.599	53	114	0.06 ug/L	#	14
19) c-1,2-Dichloroethene	5.073	61	687	0.17 ug/L	#	41
20) 2,2-Dichloropropane	5.164	77	568	0.16 ug/L		68
21) Bromochloromethane	5.274	49	306	0.13 ug/L		99
22) Chloroform	5.347	83	854	0.16 ug/L		90
23) Carbon Tetrachloride	5.462	117	263	0.09 ug/L	#	56
24) Tetrahydrofuran	5.548	42	295	0.14 ug/L	#	64
25) 1,1,1-Trichloroethane	5.535	97	607	0.15 ug/L	#	58
27) 1,1-Dichloropropene	5.681	75	587	0.14 ug/L	#	66
28) 2-Butanone (MEK)	5.700	43	1073	0.42 ug/L		54
29) Benzene	5.931	78	2187	0.16 ug/L		97
30) 1,2-Dichloroethane (EDC)	6.150	62	555	0.14 ug/L		92
31) iso-Butyl Alcohol	6.271	43	832	2.66 ug/L	#	47
33) Trichloroethene (TCE)	6.551	130	436	0.11 ug/L	#	72
34) Dibromomethane	7.002	93	284	0.16 ug/L	#	32
35) 1,2-Dichloropropane	7.111	63	449	0.13 ug/L	#	1
36) Bromodichloromethane	7.190	83	276	0.12 ug/L		81
38) c-1,3-Dichloropropene	7.896	75	483	0.14 ug/L	#	74
40) Toluene	8.157	91	2884	0.24 ug/L		82
41) Tetrachloroethene (PCE)	8.601	166	521	0.19 ug/L		90
42) 4-Methyl-2-Pentanone (...	8.608	43	967	0.26 ug/L		81
43) t-1,3-Dichloropropene	8.638	75	508	0.15 ug/L		47
44) 1,1,2-Trichloroethane	8.820	97	419	0.17 ug/L	#	59
45) Dibromochloromethane	9.003	129	201	0.31 ug/L		90
46) 1,3-Dichloropropane	9.112	76	796	0.18 ug/L		90
47) 1,2-Dibromoethane (EDB)	9.246	107	397	0.17 ug/L		70
48) 2-Hexanone	9.502	43	608	0.24 ug/L		62

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

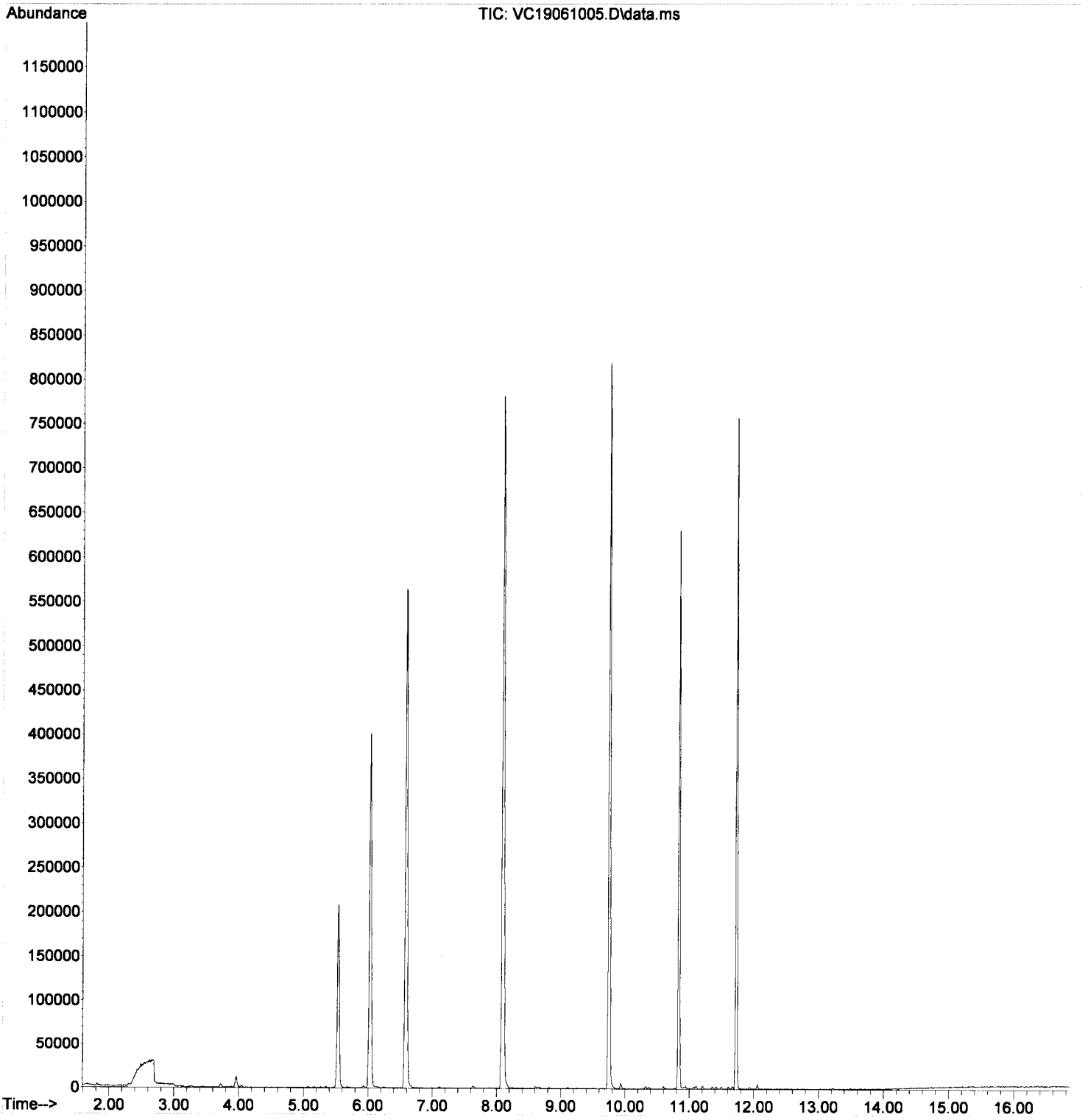
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1627	0.22	ug/L	#	29
50) Ethylbenzene	9.794	91	2439	0.20	ug/L		84
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	3873	0.44	ug/L		97
53) o-Xylene	10.317	91	1836	0.20	ug/L		86
54) Styrene	10.378	104	1040	0.16	ug/L		73
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	2121	0.20	ug/L		86
59) Bromobenzene	10.919	156	364	0.15	ug/L		83
60) n-Propylbenzene	10.944	91	2323	0.21	ug/L		93
61) 1,1,2,2-Tetrachloroethane	11.011	83	474	0.20	ug/L		76
62) 2-Chlorotoluene	11.071	126	363	0.16	ug/L	#	68
63) 1,3,5-Trimethylbenzene	11.102	105	1575	0.21	ug/L		89
64) 1,2,3-Trichloropropane	11.120	110	127	0.13	ug/L	#	71
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.205	91	1298	0.20	ug/L		78
67) tert-Butylbenzene	11.363	91	750	0.18	ug/L		91
68) 1,2,4-Trimethylbenzene	11.412	105	1577	0.21	ug/L		84
69) sec-Butylbenzene	11.497	105	1569	0.18	ug/L		84
70) 4-Isopropyltoluene	11.607	119	1419	0.20	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	839	0.20	ug/L		86
72) 1,4-Dichlorobenzene	11.734	146	912	0.22	ug/L	#	1
73) n-Butylbenzene	11.935	91	1340	0.22	ug/L		86
74) 1,2-Dichlorobenzene	12.057	146	679	0.18	ug/L		90
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	13.225	180	442	0.20	ug/L		87
78) Naphthalene	13.493	128	1144	0.15	ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	389	0.18	ug/L		83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:11:28 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	338968	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	481095	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	189377	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	152379	41.51	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	564630	43.31	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	670320	51.50	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172543	52.76	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.675	85	789	0.26	ug/L	#	50
3) Chloromethane	1.863	50	1696	0.34	ug/L		90
4) Vinyl Chloride	1.954	62	847	0.25	ug/L	#	51
5) Bromomethane	2.307	96	1492	0.77	ug/L		95
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.	d		
8) 1,1-Dichloroethene	3.086	61	1080	0.31	ug/L		73
9) Carbon Disulfide	3.110	76	1266	0.23	ug/L		68
10) Freon 113	3.141	101	656	0.23	ug/L		79
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.731	84	2896	Below Cal			93
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.889	61	1202	0.30	ug/L		82
15) n-Hexane	3.962	86	1223	0.14	ug/L	#	90
16) Methyl-tert-butyl-ether	4.041	73	3427	0.29	ug/L		96
17) 1,1-Dichloroethane	4.522	63	1584	0.32	ug/L		86
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.075	61	1392	0.31	ug/L		84
20) 2,2-Dichloropropane	5.173	77	1016	0.26	ug/L		85
21) Bromochloromethane	5.258	49	815	0.31	ug/L		76
22) Chloroform	5.361	83	1876	0.32	ug/L		92
23) Carbon Tetrachloride	0.000		0	N.D.	d		
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.544	97	1321	0.30	ug/L		96
27) 1,1-Dichloropropene	5.677	75	1401	0.31	ug/L		78
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.933	78	4769	0.32	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.146	62	1368	0.31	ug/L		92
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.553	130	1202	0.29	ug/L		86
34) Dibromomethane	6.998	93	640	0.32	ug/L	#	65
35) 1,2-Dichloropropane	7.107	63	1230	0.33	ug/L		78
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	7.880	75	1015	0.27	ug/L		95
40) Toluene	8.147	91	5120	0.40	ug/L		93
41) Tetrachloroethene (PCE)	8.604	166	949	0.32	ug/L		89
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d		
43) t-1,3-Dichloropropene	8.658	75	979	0.28	ug/L		47
44) 1,1,2-Trichloroethane	8.823	97	996	0.38	ug/L		91
45) Dibromochloromethane	9.011	129	353	0.37	ug/L		82
46) 1,3-Dichloropropane	9.115	76	1733	0.36	ug/L		91
47) 1,2-Dibromoethane (EDB)	9.248	107	640	0.25	ug/L	#	48
48) 2-Hexanone	9.504	43	1455	0.55	ug/L		84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:11:28 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.766	112	3185	0.41 ug/L #	70
50) Ethylbenzene	9.796	91	4943	0.38 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.832	131	585	0.27 ug/L	72
52) m,p-Xylenes (2)	9.936	91	7211	0.77 ug/L	95
53) o-Xylene	10.319	91	3984	0.41 ug/L	90
54) Styrene	10.368	104	1992	0.29 ug/L	89
55) Bromoform	0.000		0	N.D. d	
56) Isopropylbenzene	10.593	105	4056	0.36 ug/L	99
59) Bromobenzene	10.915	156	1135	0.45 ug/L	92
60) n-Propylbenzene	10.946	91	4427	0.39 ug/L	90
61) 1,1,2,2-Tetrachloroethane	11.007	83	988	0.40 ug/L	78
62) 2-Chlorotoluene	11.074	126	850	0.36 ug/L #	80
63) 1,3,5-Trimethylbenzene	11.104	105	3033	0.39 ug/L	94
64) 1,2,3-Trichloropropane	11.122	110	346	0.34 ug/L	86
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
66) 4-Chlorotoluene	11.207	91	2835	0.42 ug/L	97
67) tert-Butylbenzene	11.359	91	1354	0.31 ug/L	90
68) 1,2,4-Trimethylbenzene	11.414	105	3070	0.39 ug/L	93
69) sec-Butylbenzene	11.493	105	3469	0.38 ug/L	87
70) 4-Isopropyltoluene	11.609	119	2563	0.34 ug/L	97
71) 1,3-Dichlorobenzene	11.670	146	1776	0.40 ug/L	94
72) 1,4-Dichlorobenzene	11.743	146	1676	0.38 ug/L	92
73) n-Butylbenzene	11.931	91	2366	0.37 ug/L	89
74) 1,2-Dichlorobenzene	12.065	146	1494	0.37 ug/L	81
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
76) Hexachlorobutadiene	0.000		0	N.D. d	
77) 1,2,4-Trichlorobenzene	13.221	180	778	0.33 ug/L	95
78) Naphthalene	13.489	128	2231	0.28 ug/L	78
79) 1,2,3-Trichlorobenzene	13.653	180	608	0.27 ug/L	75

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	338968	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	481095	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	189377	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	152379	41.51	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	564630	43.31	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	670320	51.50	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172543	52.76	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.675	85	789	0.26	ug/L	#	50
3) Chloromethane	1.863	50	1696	0.34	ug/L		90
4) Vinyl Chloride	1.954	62	847	0.25	ug/L	#	51
5) Bromomethane	2.307	96	1492	0.77	ug/L		95
6) Chloroethane	2.441	64	659	0.51	ug/L	#	1
7) Trichlorofluoromethane	2.569	101	462	0.24	ug/L		96
8) 1,1-Dichloroethene	3.086	61	1080	0.31	ug/L		73
9) Carbon Disulfide	3.110	76	1266	0.23	ug/L		68
10) Freon 113	3.141	101	656	0.23	ug/L		79
11) Iodomethane	3.256	142	311	0.96	ug/L	#	47
12) Methylene Chloride	3.731	84	2896	Below Cal			93
13) Acetone	3.846	43	1477	0.97	ug/L		96
14) t-1,2-Dichloroethene	3.889	61	1202	0.30	ug/L		82
15) n-Hexane	3.962	86	1223	0.14	ug/L	#	90
16) Methyl-tert-butyl-ether	4.041	73	3427	0.29	ug/L		96
17) 1,1-Dichloroethane	4.522	63	1584	0.32	ug/L		86
18) Acrylonitrile	4.601	53	261	0.13	ug/L	#	66
19) c-1,2-Dichloroethene	5.075	61	1392	0.31	ug/L		84
20) 2,2-Dichloropropane	5.173	77	1016	0.26	ug/L		85
21) Bromochloromethane	5.258	49	815	0.31	ug/L		76
22) Chloroform	5.361	83	1876	0.32	ug/L		92
23) Carbon Tetrachloride	5.483	117	705	0.22	ug/L		88
24) Tetrahydrofuran	5.544	42	741	0.33	ug/L		91
25) 1,1,1-Trichloroethane	5.544	97	1321	0.30	ug/L		96
27) 1,1-Dichloropropene	5.677	75	1401	0.31	ug/L		78
28) 2-Butanone (MEK)	5.708	43	1566	0.57	ug/L		88
29) Benzene	5.933	78	4769	0.32	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.146	62	1368	0.31	ug/L		92
31) iso-Butyl Alcohol	6.261	43	1732	5.13	ug/L		65
33) Trichloroethene (TCE)	6.553	130	1202	0.29	ug/L		86
34) Dibromomethane	6.998	93	640	0.32	ug/L	#	65
35) 1,2-Dichloropropane	7.107	63	1230	0.33	ug/L		78
36) Bromodichloromethane	7.174	83	809	0.28	ug/L	#	26
38) c-1,3-Dichloropropene	7.880	75	1015	0.27	ug/L		95
40) Toluene	8.147	91	5120	0.40	ug/L		93
41) Tetrachloroethene (PCE)	8.604	166	949	0.32	ug/L		89
42) 4-Methyl-2-Pentanone (...	8.622	43	2124	0.54	ug/L		86
43) t-1,3-Dichloropropene	8.658	75	979	0.28	ug/L		47
44) 1,1,2-Trichloroethane	8.823	97	996	0.38	ug/L		91
45) Dibromochloromethane	9.011	129	353	0.37	ug/L		82
46) 1,3-Dichloropropane	9.115	76	1733	0.36	ug/L		91
47) 1,2-Dibromoethane (EDB)	9.248	107	640	0.25	ug/L	#	48
48) 2-Hexanone	9.504	43	1455	0.55	ug/L		84

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

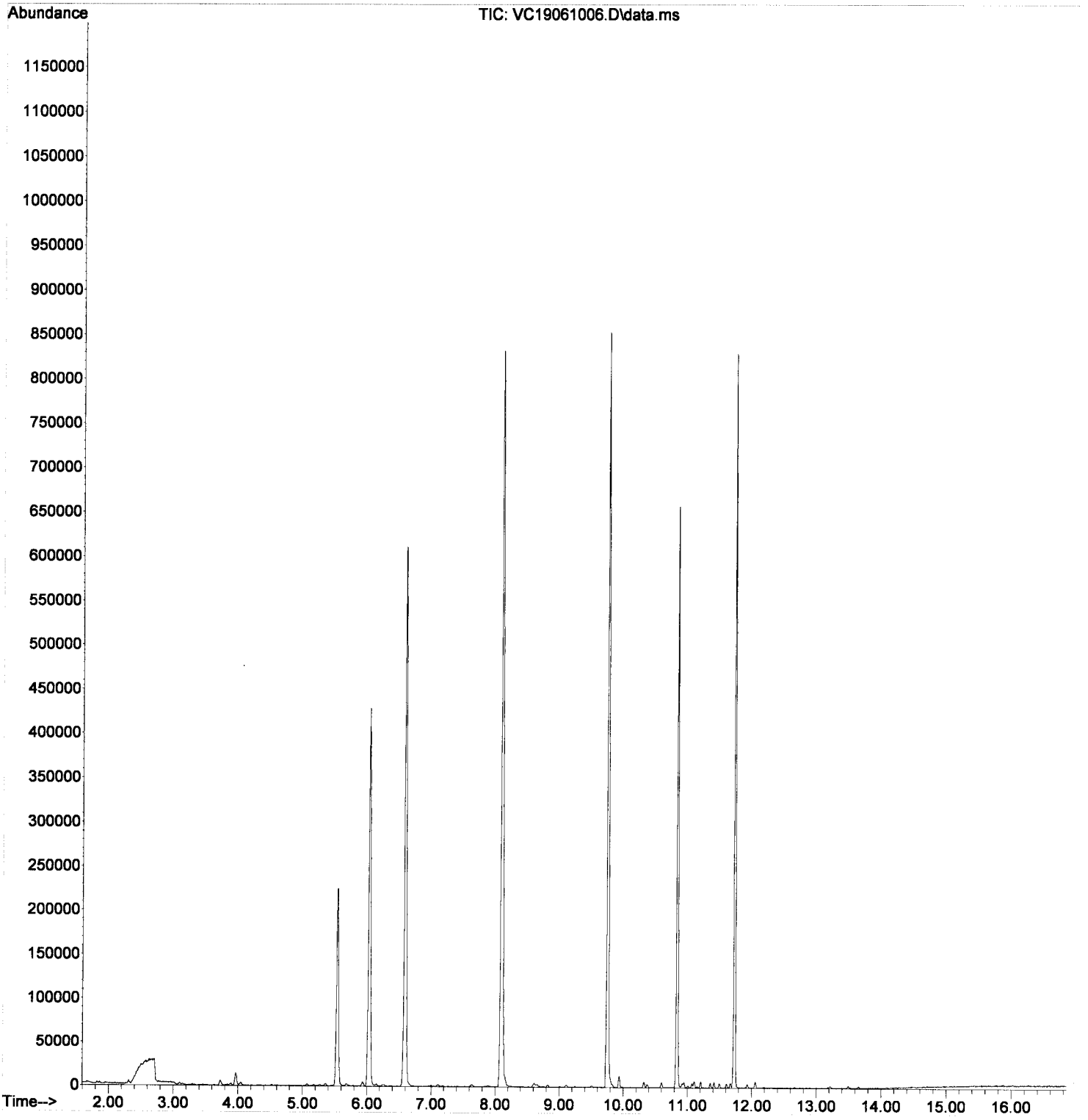
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.766	112	3185	0.41 ug/L #	70
50) Ethylbenzene	9.796	91	4943	0.38 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.832	131	585	0.27 ug/L	72
52) m,p-Xylenes (2)	9.936	91	7211	0.77 ug/L	95
53) o-Xylene	10.319	91	3984	0.41 ug/L	90
54) Styrene	10.368	104	1992	0.29 ug/L	89
55) Bromoform	10.386	173	160	0.60 ug/L #	36
56) Isopropylbenzene	10.593	105	4056	0.36 ug/L	99
59) Bromobenzene	10.915	156	1135	0.45 ug/L	92
60) n-Propylbenzene	10.946	91	4427	0.39 ug/L	90
61) 1,1,2,2-Tetrachloroethane	11.007	83	988	0.40 ug/L	78
62) 2-Chlorotoluene	11.074	126	850	0.36 ug/L #	80
63) 1,3,5-Trimethylbenzene	11.104	105	3033	0.39 ug/L	94
64) 1,2,3-Trichloropropane	11.122	110	346	0.34 ug/L	86
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
66) 4-Chlorotoluene	11.207	91	2835	0.42 ug/L	97
67) tert-Butylbenzene	11.359	91	1354	0.31 ug/L	90
68) 1,2,4-Trimethylbenzene	11.414	105	3070	0.39 ug/L	93
69) sec-Butylbenzene	11.493	105	3469	0.38 ug/L	87
70) 4-Isopropyltoluene	11.609	119	2563	0.34 ug/L	97
71) 1,3-Dichlorobenzene	11.670	146	1776	0.40 ug/L	94
72) 1,4-Dichlorobenzene	11.743	146	1676	0.38 ug/L	92
73) n-Butylbenzene	11.931	91	2366	0.37 ug/L	89
74) 1,2-Dichlorobenzene	12.065	146	1494	0.37 ug/L	81
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
76) Hexachlorobutadiene	13.178	223	130	0.22 ug/L #	46
77) 1,2,4-Trichlorobenzene	13.221	180	778	0.33 ug/L	95
78) Naphthalene	13.489	128	2231	0.28 ug/L	78
79) 1,2,3-Trichlorobenzene	13.653	180	608	0.27 ug/L	75

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:20:03 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	331196	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	471537	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	181025	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	146940	40.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	554133	43.50	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	658631	51.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165080	52.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	1969	0.66	ug/L		89
3) Chloromethane	1.870	50	3371	0.69	ug/L		91
4) Vinyl Chloride	1.967	62	2234	0.66	ug/L		90
5) Bromomethane	2.314	96	2566	1.35	ug/L	#	73
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.563	101	1210	0.64	ug/L		96
8) 1,1-Dichloroethene	3.099	61	2382	0.71	ug/L	#	65
9) Carbon Disulfide	3.105	76	2538	0.48	ug/L		89
10) Freon 113	3.141	101	1821	0.64	ug/L		82
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.725	84	3900	Below	Cal		97
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.890	61	2807	0.72	ug/L		93
15) n-Hexane	3.975	86	1406	0.47	ug/L	#	86
16) Methyl-tert-butyl-ether	4.048	73	8702	0.76	ug/L		98
17) 1,1-Dichloroethane	4.522	63	3709	0.77	ug/L		93
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.076	61	3260	0.75	ug/L		89
20) 2,2-Dichloropropane	5.173	77	2909	0.78	ug/L		78
21) Bromochloromethane	5.270	49	1743	0.68	ug/L		87
22) Chloroform	5.356	83	4113	0.72	ug/L		95
23) Carbon Tetrachloride	5.471	117	1829	0.60	ug/L		82
24) Tetrahydrofuran	5.538	42	1630	0.75	ug/L		90
25) 1,1,1-Trichloroethane	5.550	97	3011	0.69	ug/L		90
27) 1,1-Dichloropropene	5.684	75	3414	0.76	ug/L		89
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.940	78	10807	0.75	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.153	62	3622	0.84	ug/L		93
31) iso-Butyl Alcohol	6.256	43	4636	14.06	ug/L		85
33) Trichloroethene (TCE)	6.548	130	3058	0.76	ug/L		89
34) Dibromomethane	6.998	93	1314	0.68	ug/L	#	79
35) 1,2-Dichloropropane	7.108	63	2836	0.77	ug/L		86
36) Bromodichloromethane	7.181	83	2123	0.71	ug/L		96
38) c-1,3-Dichloropropene	7.892	75	2811	0.76	ug/L		87
40) Toluene	8.154	91	11998	0.96	ug/L		93
41) Tetrachloroethene (PCE)	8.598	166	2790	0.96	ug/L		87
42) 4-Methyl-2-Pentanone (...	8.622	43	5904	1.53	ug/L		91
43) t-1,3-Dichloropropene	8.647	75	2629	0.76	ug/L		91
44) 1,1,2-Trichloroethane	8.823	97	2471	0.97	ug/L		94
45) Dibromochloromethane	9.006	129	1295	0.82	ug/L		90
46) 1,3-Dichloropropane	9.109	76	4405	0.93	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.243	107	1954	0.78	ug/L		95
48) 2-Hexanone	9.505	43	3813	1.46	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:20:03 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	6976	0.92	ug/L		80
50) Ethylbenzene	9.797	91	11564	0.91	ug/L		97
51) 1,1,1,2-Tetrachloroethane	9.827	131	1727	0.81	ug/L		82
52) m,p-Xylenes (2)	9.930	91	17350	1.89	ug/L		89
53) o-Xylene	10.320	91	8595	0.89	ug/L		98
54) Styrene	10.374	104	5265	0.78	ug/L		94
55) Bromoform	10.387	173	526	0.91	ug/L		88
56) Isopropylbenzene	10.593	105	9239	0.84	ug/L		100
59) Bromobenzene	10.922	156	2673	1.12	ug/L	#	74
60) n-Propylbenzene	10.946	91	10515	0.96	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.007	83	2310	0.97	ug/L		90
62) 2-Chlorotoluene	11.068	126	2437	1.08	ug/L		90
63) 1,3,5-Trimethylbenzene	11.105	105	6953	0.94	ug/L		91
64) 1,2,3-Trichloropropane	11.111	110	1042	1.07	ug/L		88
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	d		
66) 4-Chlorotoluene	11.208	91	6474	0.99	ug/L		92
67) tert-Butylbenzene	11.360	91	3834	0.93	ug/L		98
68) 1,2,4-Trimethylbenzene	11.415	105	7272	0.96	ug/L		95
69) sec-Butylbenzene	11.500	105	8415	0.96	ug/L		92
70) 4-Isopropyltoluene	11.609	119	6765	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	3957	0.94	ug/L		89
72) 1,4-Dichlorobenzene	11.737	146	3955	0.94	ug/L		77
73) n-Butylbenzene	11.926	91	5676	0.94	ug/L		86
74) 1,2-Dichlorobenzene	12.060	146	3595	0.93	ug/L		71
75) 1,2-Dibromo-3-Chloropr...	12.674	157	369	1.08	ug/L		87
76) Hexachlorobutadiene	13.173	223	478	0.86	ug/L	#	55
77) 1,2,4-Trichlorobenzene	13.215	180	1853	0.83	ug/L		88
78) Naphthalene	13.489	128	5329	0.71	ug/L		91
79) 1,2,3-Trichlorobenzene	13.653	180	1791	0.84	ug/L		76

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	331196	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	471537	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	181025	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	146940	40.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	554133	43.50	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	658631	51.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165080	52.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	1969	0.66	ug/L		89
3) Chloromethane	1.870	50	3371	0.69	ug/L		91
4) Vinyl Chloride	1.967	62	2234	0.66	ug/L		90
5) Bromomethane	2.314	96	2566	1.35	ug/L	#	73
6) Chloroethane	2.454	64	1020	0.80	ug/L	#	1
7) Trichlorofluoromethane	2.563	101	1210	0.64	ug/L		96
8) 1,1-Dichloroethene	3.099	61	2382	0.71	ug/L	#	65
9) Carbon Disulfide	3.105	76	2538	0.48	ug/L		89
10) Freon 113	3.141	101	1821	0.64	ug/L		82
11) Iodomethane	3.245	142	635	1.20	ug/L	#	82
12) Methylene Chloride	3.725	84	3900	Below Cal			97
13) Acetone	3.835	43	2938	1.97	ug/L		89
14) t-1,2-Dichloroethene	3.890	61	2807	0.72	ug/L		93
15) n-Hexane	3.975	86	1406	0.47	ug/L	#	86
16) Methyl-tert-butyl-ether	4.048	73	8702	0.76	ug/L		98
17) 1,1-Dichloroethane	4.522	63	3709	0.77	ug/L		93
18) Acrylonitrile	4.613	53	1329	0.69	ug/L		73
19) c-1,2-Dichloroethene	5.076	61	3260	0.75	ug/L		89
20) 2,2-Dichloropropane	5.173	77	2909	0.78	ug/L		78
21) Bromochloromethane	5.270	49	1743	0.68	ug/L		87
22) Chloroform	5.356	83	4113	0.72	ug/L		95
23) Carbon Tetrachloride	5.471	117	1829	0.60	ug/L		82
24) Tetrahydrofuran	5.538	42	1630	0.75	ug/L		90
25) 1,1,1-Trichloroethane	5.550	97	3011	0.69	ug/L		90
27) 1,1-Dichloropropene	5.684	75	3414	0.76	ug/L		89
28) 2-Butanone (MEK)	5.702	43	3343	1.26	ug/L		92
29) Benzene	5.940	78	10807	0.75	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.153	62	3622	0.84	ug/L		93
31) iso-Butyl Alcohol	6.256	43	4636	14.06	ug/L		85
33) Trichloroethene (TCE)	6.548	130	3058	0.76	ug/L		89
34) Dibromomethane	6.998	93	1314	0.68	ug/L	#	79
35) 1,2-Dichloropropane	7.108	63	2836	0.77	ug/L		86
36) Bromodichloromethane	7.181	83	2123	0.71	ug/L		96
38) c-1,3-Dichloropropene	7.892	75	2811	0.76	ug/L		87
40) Toluene	8.154	91	11998	0.96	ug/L		93
41) Tetrachloroethene (PCE)	8.598	166	2790	0.96	ug/L		87
42) 4-Methyl-2-Pentanone (...	8.622	43	5904	1.53	ug/L		91
43) t-1,3-Dichloropropene	8.647	75	2629	0.76	ug/L		91
44) 1,1,2-Trichloroethane	8.823	97	2471	0.97	ug/L		94
45) Dibromochloromethane	9.006	129	1295	0.82	ug/L		90
46) 1,3-Dichloropropane	9.109	76	4405	0.93	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.243	107	1954	0.78	ug/L		95
48) 2-Hexanone	9.505	43	3813	1.46	ug/L		90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

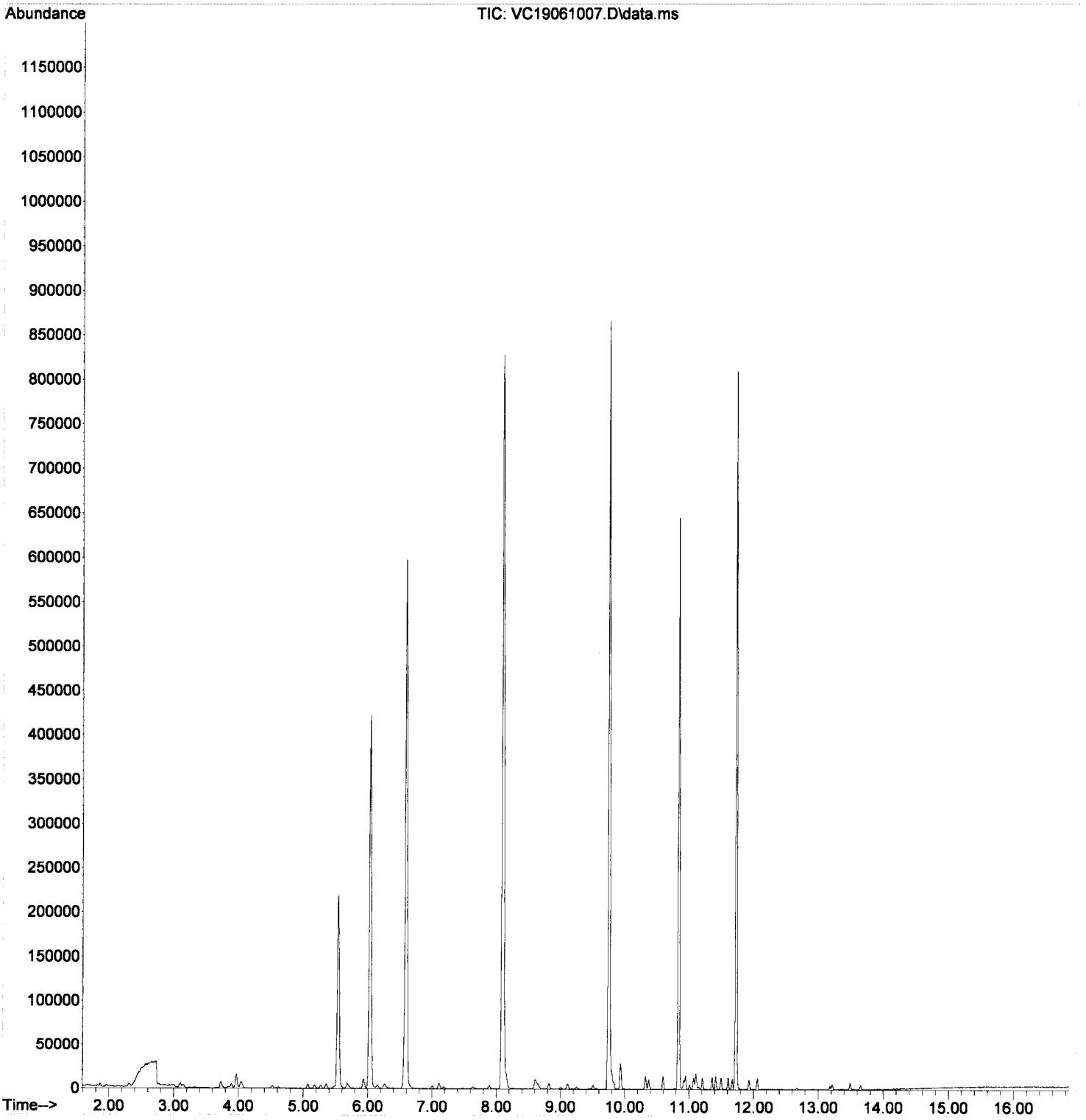
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	6976	0.92	ug/L		80
50) Ethylbenzene	9.797	91	11564	0.91	ug/L		97
51) 1,1,1,2-Tetrachloroethane	9.827	131	1727	0.81	ug/L		82
52) m,p-Xylenes (2)	9.930	91	17350	1.89	ug/L		89
53) o-Xylene	10.320	91	8595	0.89	ug/L		98
54) Styrene	10.374	104	5265	0.78	ug/L		94
55) Bromoform	10.387	173	526	0.91	ug/L		88
56) Isopropylbenzene	10.593	105	9239	0.84	ug/L		100
59) Bromobenzene	10.922	156	2673	1.12	ug/L	#	74
60) n-Propylbenzene	10.946	91	10515	0.96	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.007	83	2310	0.97	ug/L		90
62) 2-Chlorotoluene	11.068	126	2437	1.08	ug/L		90
63) 1,3,5-Trimethylbenzene	11.105	105	6953	0.94	ug/L		91
64) 1,2,3-Trichloropropane	11.111	110	1042	1.07	ug/L		88
65) t-1,4-Dichloro-2-butene	11.153	88	101	1.15	ug/L	#	84
66) 4-Chlorotoluene	11.208	91	6474	0.99	ug/L		92
67) tert-Butylbenzene	11.360	91	3834	0.93	ug/L		98
68) 1,2,4-Trimethylbenzene	11.415	105	7272	0.96	ug/L		95
69) sec-Butylbenzene	11.500	105	8415	0.96	ug/L		92
70) 4-Isopropyltoluene	11.609	119	6765	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	3957	0.94	ug/L		89
72) 1,4-Dichlorobenzene	11.737	146	3955	0.94	ug/L		77
73) n-Butylbenzene	11.926	91	5676	0.94	ug/L		86
74) 1,2-Dichlorobenzene	12.060	146	3595	0.93	ug/L		71
75) 1,2-Dibromo-3-Chloropr...	12.674	157	369	1.08	ug/L		87
76) Hexachlorobutadiene	13.173	223	478	0.86	ug/L	#	55
77) 1,2,4-Trichlorobenzene	13.215	180	1853	0.83	ug/L		88
78) Naphthalene	13.489	128	5329	0.71	ug/L		91
79) 1,2,3-Trichlorobenzene	13.653	180	1791	0.84	ug/L		76

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	335493	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	480852	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	187705	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	150389	41.40	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	563668	43.68	ug/L		0.00
39) Toluene-d8 (S)	8.090	98	668731	51.41	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	169618	52.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	4359	1.45	ug/L		93
3) Chloromethane	1.861	50	6993	1.41	ug/L		93
4) Vinyl Chloride	1.952	62	4880	1.43	ug/L		97
5) Bromomethane	2.299	96	4073	2.11	ug/L		95
6) Chloroethane	~~2.445~~	~~64~~	~~2084~~	1.62	ug/L	#	1
7) Trichlorofluoromethane	2.560	101	2960	1.55	ug/L		100
8) 1,1-Dichloroethene	3.090	61	4926	1.45	ug/L		93
9) Carbon Disulfide	3.102	76	5848	1.09	ug/L		92
10) Freon 113	3.138	101	4215	1.46	ug/L	#	74
11) Iodomethane	3.236	142	1387	1.72	ug/L	#	76
12) Methylene Chloride	3.722	84	6194	Below Cal			97
13) Acetone	3.832	43	4932	3.26	ug/L		84
14) t-1,2-Dichloroethene	3.887	61	6058	1.54	ug/L		95
15) n-Hexane	3.960	86	1784	1.04	ug/L	#	69
16) Methyl-tert-butyl-ether	4.039	73	16867	1.45	ug/L		96
17) 1,1-Dichloroethane	4.519	63	7412	1.53	ug/L		94
18) Acrylonitrile	4.598	53	2845	1.45	ug/L		93
19) c-1,2-Dichloroethene	5.067	61	6543	1.49	ug/L		90
20) 2,2-Dichloropropane	5.176	77	5330	1.40	ug/L		93
21) Bromochloromethane	5.261	49	3915	1.51	ug/L		82
22) Chloroform	5.347	83	8361	1.45	ug/L		96
23) Carbon Tetrachloride	5.474	117	3998	1.28	ug/L		92
24) Tetrahydrofuran	5.541	42	3053	1.39	ug/L		94
25) 1,1,1-Trichloroethane	5.547	97	6419	1.46	ug/L		97
27) 1,1-Dichloropropene	5.675	75	6644	1.47	ug/L		92
28) 2-Butanone (MEK)	5.699	43	8049	2.98	ug/L		95
29) Benzene	5.937	78	21984	1.51	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.150	62	6931	1.59	ug/L		93
31) iso-Butyl Alcohol	6.265	43	9109	27.27	ug/L		96
33) Trichloroethene (TCE)	6.551	130	5478	1.34	ug/L		94
34) Dibromomethane	7.001	93	2990	1.53	ug/L	#	82
35) 1,2-Dichloropropane	7.111	63	5456	1.46	ug/L		94
36) Bromodichloromethane	7.184	83	4315	1.39	ug/L		84
38) c-1,3-Dichloropropene	7.883	75	5608	1.48	ug/L		92
40) Toluene	8.157	91	23933	1.88	ug/L		96
41) Tetrachloroethene (PCE)	8.601	166	4917	1.67	ug/L		90
42) 4-Methyl-2-Pentanone (...	8.620	43	11773	3.00	ug/L		94
43) t-1,3-Dichloropropene	8.644	75	5374	1.53	ug/L		93
44) 1,1,2-Trichloroethane	8.820	97	4509	1.74	ug/L		95
45) Dibromochloromethane	8.997	129	2666	1.44	ug/L		89
46) 1,3-Dichloropropane	9.106	76	9053	1.88	ug/L		95
47) 1,2-Dibromoethane (EDB)	9.246	107	4730	1.86	ug/L		90
48) 2-Hexanone	9.502	43	7699	2.89	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

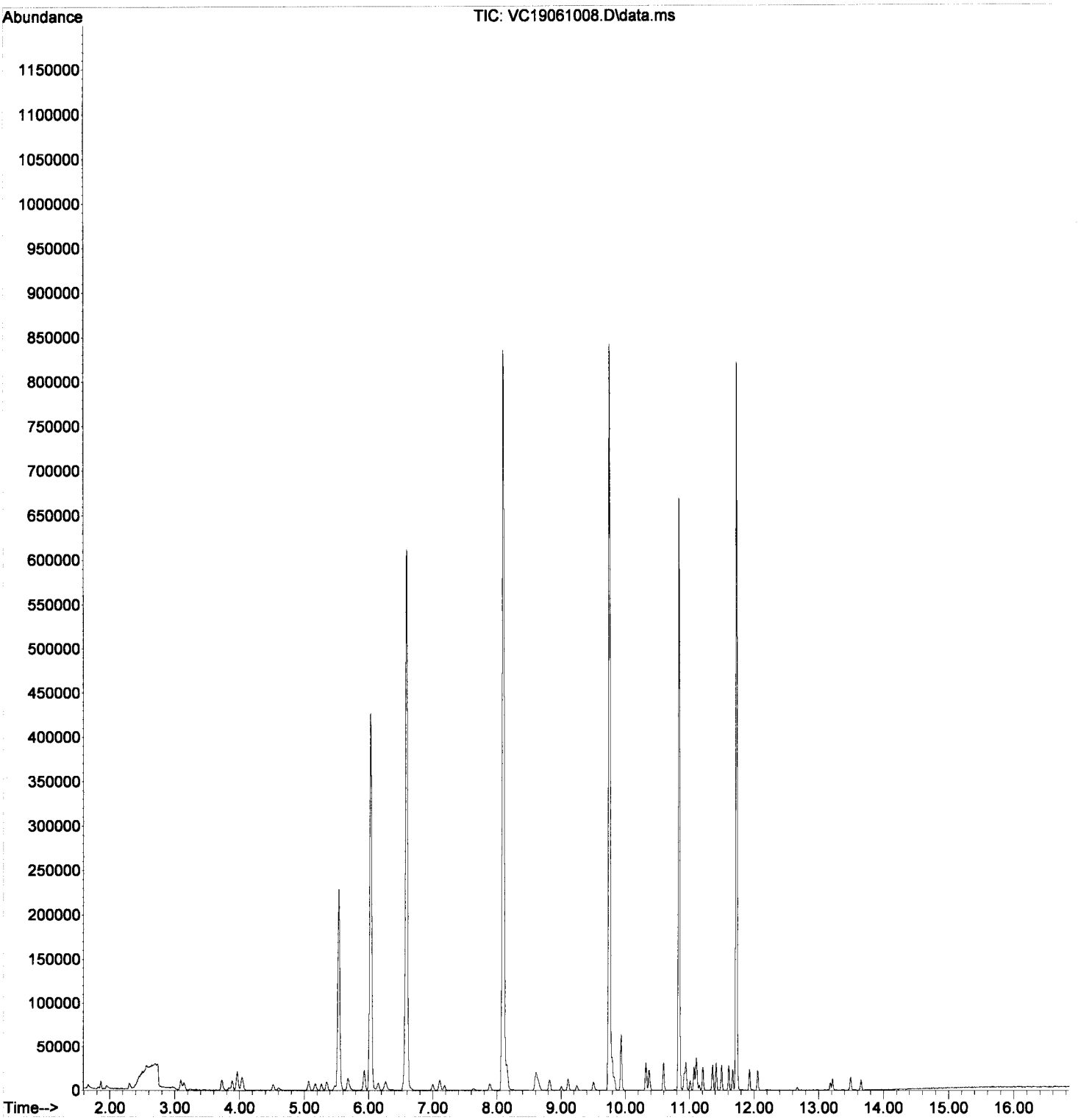
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	14413	1.87	ug/L		87
50) Ethylbenzene	9.794	91	23697	1.83	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.830	131	3397	1.56	ug/L		85
52) m,p-Xylenes (2)	9.934	91	34482	3.69	ug/L		98
53) o-Xylene	10.317	91	17398	1.77	ug/L		94
54) Styrene	10.372	104	10700	1.56	ug/L		98
55) Bromoform	10.390	173	1352	1.56	ug/L		92
56) Isopropylbenzene	10.597	105	19559	1.74	ug/L		99
59) Bromobenzene	10.919	156	5274	2.13	ug/L		94
60) n-Propylbenzene	10.943	91	21958	1.94	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.010	83	4446	1.81	ug/L		98
62) 2-Chlorotoluene	11.077	126	4445	1.90	ug/L		97
63) 1,3,5-Trimethylbenzene	11.108	105	14730	1.93	ug/L		96
64) 1,2,3-Trichloropropane	11.114	110	2033	2.00	ug/L		85
65) t-1,4-Dichloro-2-butene	11.162	88	372	1.90	ug/L	#	69
66) 4-Chlorotoluene	11.205	91	12857	1.90	ug/L		96
67) tert-Butylbenzene	11.357	91	8109	1.89	ug/L		95
68) 1,2,4-Trimethylbenzene	11.412	105	15002	1.92	ug/L		97
69) sec-Butylbenzene	11.497	105	17133	1.89	ug/L		98
70) 4-Isopropyltoluene	11.607	119	13903	1.89	ug/L		98
71) 1,3-Dichlorobenzene	11.673	146	8151	1.87	ug/L		96
72) 1,4-Dichlorobenzene	11.734	146	8328	1.92	ug/L		90
73) n-Butylbenzene	11.929	91	12104	1.93	ug/L		94
74) 1,2-Dichlorobenzene	12.057	146	7400	1.85	ug/L		96
75) 1,2-Dibromo-3-Chloropr...	12.671	157	632	1.51	ug/L	#	69
76) Hexachlorobutadiene	13.182	223	1057	1.83	ug/L		90
77) 1,2,4-Trichlorobenzene	13.213	180	3846	1.65	ug/L		87
78) Naphthalene	13.492	128	11080	1.41	ug/L		98
79) 1,2,3-Trichlorobenzene	13.651	180	3620	1.64	ug/L		91

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	329388	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	476413	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	185415	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	149687	41.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	557930	44.04	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	670066	51.99	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	168674	52.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.669	85	11543	3.90	ug/L		98
3) Chloromethane	1.858	50	17301	3.56	ug/L		95
4) Vinyl Chloride	1.949	62	12095	3.60	ug/L		94
5) Bromomethane	2.302	96	8017	4.23	ug/L		92
6) Chloroethane	2.436	64	4635	3.67	ug/L	#	6
7) Trichlorofluoromethane	2.558	101	6899	3.69	ug/L		90
8) 1,1-Dichloroethene	3.087	61	12787	3.84	ug/L		82
9) Carbon Disulfide	3.099	76	14420	2.73	ug/L		97
10) Freon 113	3.142	101	10227	3.61	ug/L		79
11) Iodomethane	3.233	142	3655	3.36	ug/L	#	97
12) Methylene Chloride	3.726	84	13102	Below Cal			89
13) Acetone	3.835	43	12346	8.32	ug/L		86
14) t-1,2-Dichloroethene	3.884	61	14689	3.80	ug/L		97
15) n-Hexane	3.963	86	3541	3.89	ug/L	#	75
16) Methyl-tert-butyl-ether	4.036	73	44417	3.88	ug/L		98
17) 1,1-Dichloroethane	4.516	63	19116	4.01	ug/L		97
18) Acrylonitrile	4.596	53	7555	3.92	ug/L		99
19) c-1,2-Dichloroethene	5.064	61	17591	4.08	ug/L		92
20) 2,2-Dichloropropane	5.167	77	14061	3.77	ug/L		95
21) Bromochloromethane	5.265	49	10253	4.02	ug/L		90
22) Chloroform	5.350	83	22224	3.93	ug/L		99
23) Carbon Tetrachloride	5.472	117	10579	3.46	ug/L		96
24) Tetrahydrofuran	5.539	42	8557	3.97	ug/L		92
25) 1,1,1-Trichloroethane	5.545	97	16643	3.85	ug/L		96
27) 1,1-Dichloropropene	5.672	75	17294	3.89	ug/L		98
28) 2-Butanone (MEK)	5.697	43	20846	7.87	ug/L		91
29) Benzene	5.928	78	55659	3.89	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.147	62	18599	4.36	ug/L		92
31) iso-Butyl Alcohol	6.256	43	26405	80.53	ug/L		87
33) Trichloroethene (TCE)	6.542	130	14731	3.67	ug/L		92
34) Dibromomethane	6.999	93	7543	3.94	ug/L		93
35) 1,2-Dichloropropane	7.102	63	14555	3.98	ug/L		81
36) Bromodichloromethane	7.181	83	11721	3.78	ug/L		92
38) c-1,3-Dichloropropene	7.887	75	16676	4.45	ug/L		97
40) Toluene	8.154	91	59886	4.75	ug/L		95
41) Tetrachloroethene (PCE)	8.598	166	12789	4.38	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.617	43	34047	8.75	ug/L		96
43) t-1,3-Dichloropropene	8.641	75	14894	4.28	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	12789	4.97	ug/L		95
45) Dibromochloromethane	9.006	129	7499	3.69	ug/L		93
46) 1,3-Dichloropropane	9.110	76	23491	4.93	ug/L		95
47) 1,2-Dibromoethane (EDB)	9.243	107	11473	4.56	ug/L		100
48) 2-Hexanone	9.499	43	22093	8.38	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

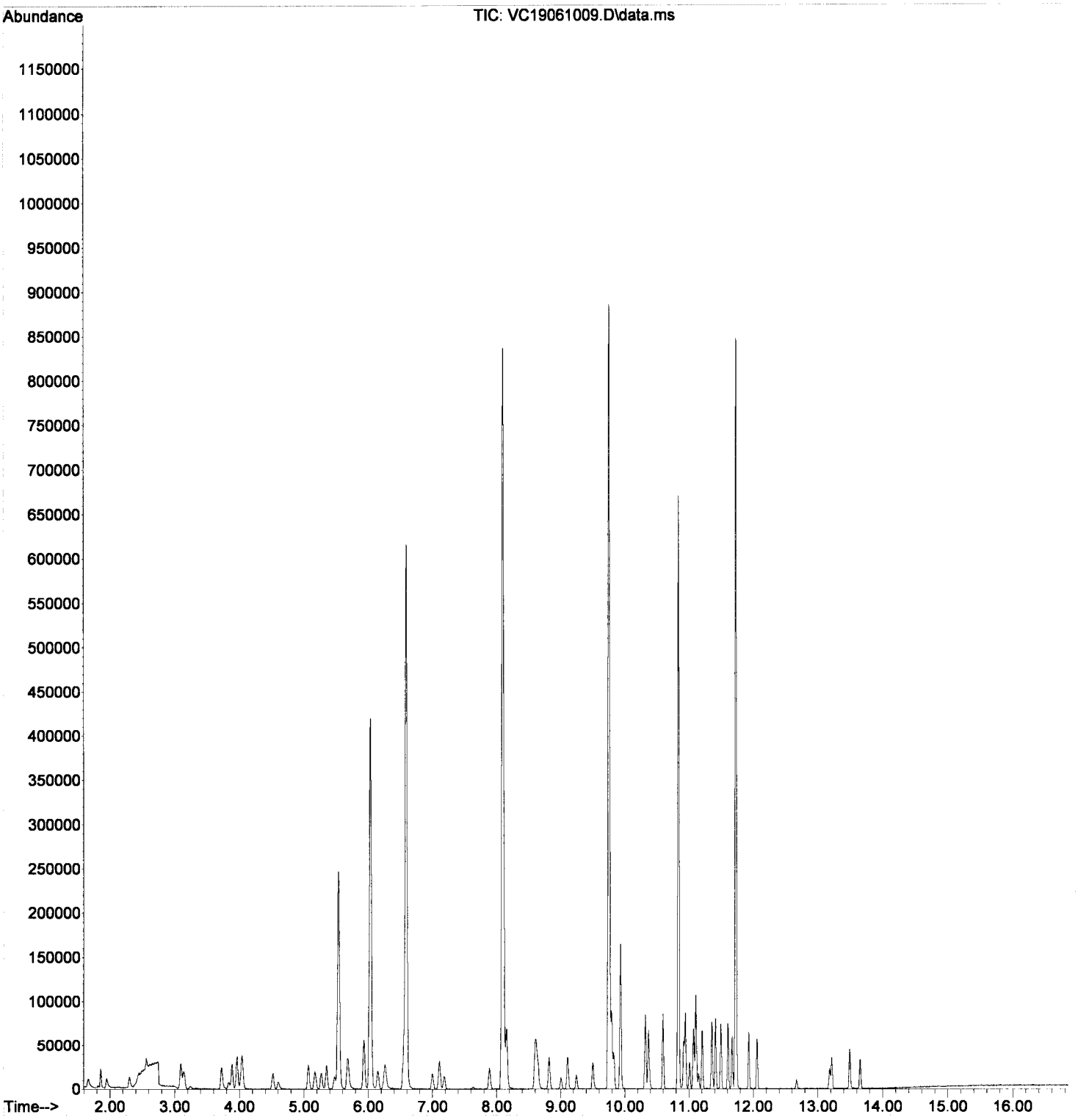
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	37372	4.89	ug/L		98
50) Ethylbenzene	9.797	91	60136	4.69	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	9683	4.49	ug/L		93
52) m,p-Xylenes (2)	9.931	91	89757	9.70	ug/L		98
53) o-Xylene	10.320	91	45974	4.73	ug/L		96
54) Styrene	10.369	104	31431	4.62	ug/L		98
55) Bromoform	10.387	173	3801	3.56	ug/L		96
56) Isopropylbenzene	10.594	105	51415	4.61	ug/L		98
59) Bromobenzene	10.916	156	13502	5.51	ug/L		89
60) n-Propylbenzene	10.941	91	57592	5.16	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.008	83	12600	5.19	ug/L		99
62) 2-Chlorotoluene	11.068	126	11951	5.17	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	39518	5.24	ug/L		93
64) 1,2,3-Trichloropropane	11.111	110	5320	5.31	ug/L		91
65) t-1,4-Dichloro-2-butene	11.154	88	1243	4.40	ug/L	#	67
66) 4-Chlorotoluene	11.202	91	34745	5.20	ug/L		93
67) tert-Butylbenzene	11.354	91	21534	5.09	ug/L		93
68) 1,2,4-Trimethylbenzene	11.409	105	39803	5.15	ug/L		96
69) sec-Butylbenzene	11.494	105	45578	5.10	ug/L		96
70) 4-Isopropyltoluene	11.604	119	37133	5.10	ug/L		98
71) 1,3-Dichlorobenzene	11.671	146	22129	5.15	ug/L		95
72) 1,4-Dichlorobenzene	11.738	146	21338	4.97	ug/L		93
73) n-Butylbenzene	11.926	91	31460	5.08	ug/L		96
74) 1,2-Dichlorobenzene	12.060	146	19505	4.94	ug/L		94
75) 1,2-Dibromo-3-Chloropr...	12.668	157	2179	4.24	ug/L		76
76) Hexachlorobutadiene	13.179	223	2859	5.00	ug/L		85
77) 1,2,4-Trichlorobenzene	13.210	180	10845	4.72	ug/L		92
78) Naphthalene	13.490	128	34255	4.43	ug/L		98
79) 1,2,3-Trichlorobenzene	13.654	180	10203	4.69	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	329608	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	473646	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	183117	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	150522	42.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	558931	44.09	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	660993	51.59	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	167038	52.83	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	22273	7.53	ug/L		94
3) Chloromethane	1.858	50	34272	7.05	ug/L		96
4) Vinyl Chloride	1.949	62	24173	7.19	ug/L		96
5) Bromomethane	2.302	96	14610	7.71	ug/L		95
6) Chloroethane	2.429	64	7941	6.29	ug/L	#	33
7) Trichlorofluoromethane	2.551	101	12305	6.57	ug/L		90
8) 1,1-Dichloroethene	3.086	61	25019	7.50	ug/L		84
9) Carbon Disulfide	3.092	76	30776	5.81	ug/L		98
10) Freon 113	3.141	101	19500	6.89	ug/L		88
11) Iodomethane	3.238	142	7826	6.30	ug/L		98
12) Methylene Chloride	3.725	84	22641	1.63	ug/L		94
13) Acetone	3.829	43	23789	16.01	ug/L		96
14) t-1,2-Dichloroethene	3.883	61	30347	7.85	ug/L		96
15) n-Hexane	3.962	86	5985	7.79	ug/L	#	86
16) Methyl-tert-butyl-ether	4.035	73	86627	7.56	ug/L		97
17) 1,1-Dichloroethane	4.516	63	38779	8.14	ug/L		98
18) Acrylonitrile	4.595	53	15485	8.03	ug/L		95
19) c-1,2-Dichloroethene	5.064	61	33904	7.86	ug/L		96
20) 2,2-Dichloropropane	5.167	77	27557	7.38	ug/L		96
21) Bromochloromethane	5.264	49	19997	7.84	ug/L		94
22) Chloroform	5.349	83	42547	7.51	ug/L		96
23) Carbon Tetrachloride	5.471	117	22117	7.23	ug/L		97
24) Tetrahydrofuran	5.532	42	16385	7.59	ug/L		93
25) 1,1,1-Trichloroethane	5.544	97	33312	7.70	ug/L		91
27) 1,1-Dichloropropene	5.672	75	34244	7.69	ug/L		97
28) 2-Butanone (MEK)	5.684	43	39465	14.89	ug/L		99
29) Benzene	5.927	78	109045	7.61	ug/L		99
30) 1,2-Dichloroethane (EDC)	6.146	62	34341	8.04	ug/L		94
31) iso-Butyl Alcohol	6.250	43	52494	159.99	ug/L		94
33) Trichloroethene (TCE)	6.548	130	29253	7.28	ug/L		95
34) Dibromomethane	6.992	93	15098	7.88	ug/L		90
35) 1,2-Dichloropropane	7.101	63	28990	7.92	ug/L		98
36) Bromodichloromethane	7.181	83	23806	7.59	ug/L		96
38) c-1,3-Dichloropropene	7.886	75	33200	8.90	ug/L		97
40) Toluene	8.154	91	117132	9.35	ug/L		99
41) Tetrachloroethene (PCE)	8.598	166	25746	8.86	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.616	43	64279	16.62	ug/L		98
43) t-1,3-Dichloropropene	8.641	75	30716	8.88	ug/L		93
44) 1,1,2-Trichloroethane	8.817	97	24434	9.55	ug/L		98
45) Dibromochloromethane	9.006	129	15631	7.49	ug/L		94
46) 1,3-Dichloropropane	9.109	76	45222	9.55	ug/L		98
47) 1,2-Dibromoethane (EDB)	9.243	107	23715	9.48	ug/L		93
48) 2-Hexanone	9.498	43	45451	17.33	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

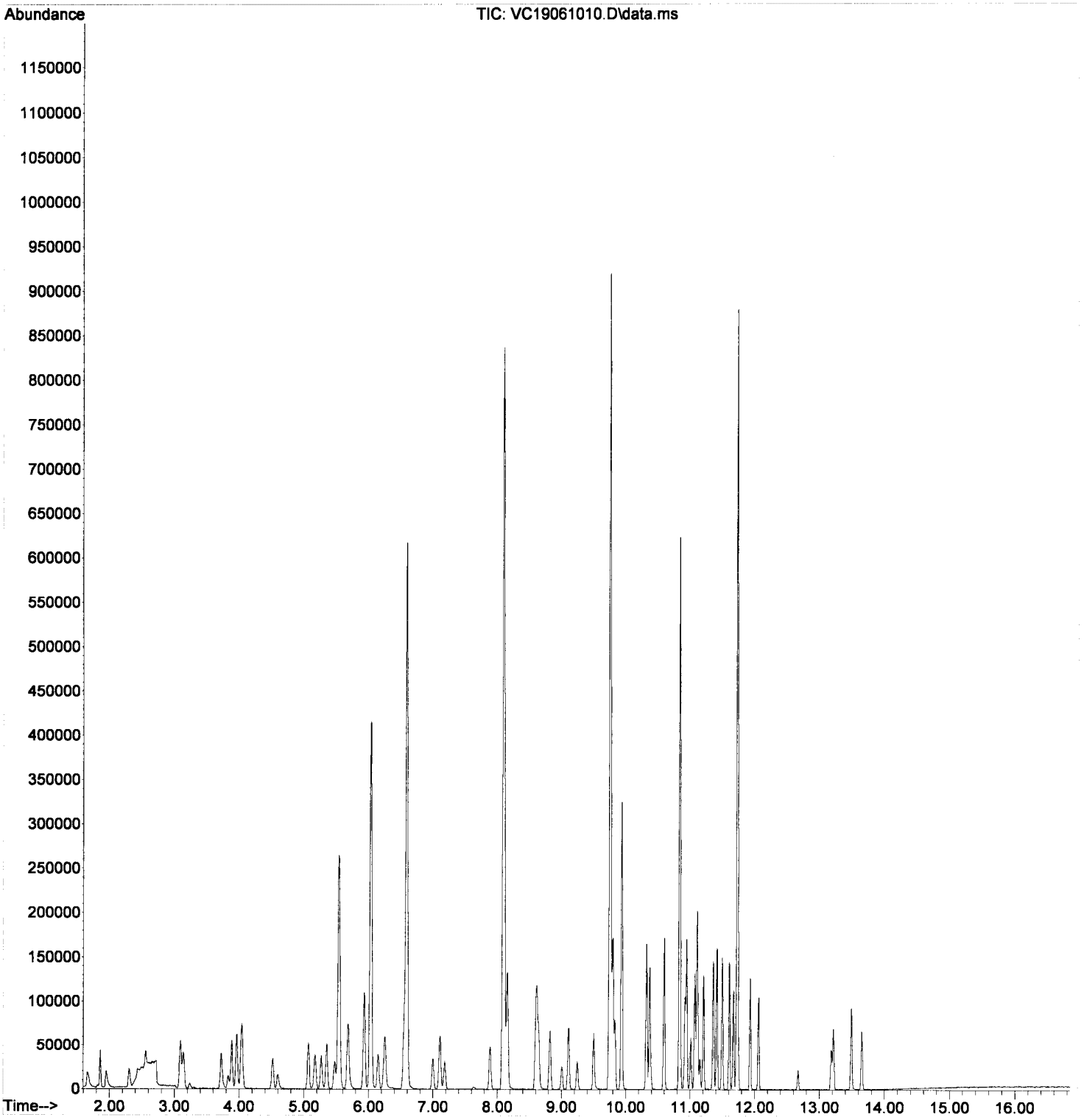
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	70101	9.22	ug/L		97
50) Ethylbenzene	9.796	91	119181	9.36	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.827	131	19771	9.22	ug/L		98
52) m,p-Xylenes (2)	9.930	91	175549	19.09	ug/L		98
53) o-Xylene	10.320	91	89373	9.25	ug/L		98
54) Styrene	10.368	104	62780	9.29	ug/L		98
55) Bromoform	10.387	173	7848	6.85	ug/L		94
56) Isopropylbenzene	10.593	105	102838	9.28	ug/L		97
59) Bromobenzene	10.922	156	26030	10.77	ug/L		91
60) n-Propylbenzene	10.940	91	114970	10.43	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	23152	9.65	ug/L		98
62) 2-Chlorotoluene	11.068	126	23322	10.22	ug/L		89
63) 1,3,5-Trimethylbenzene	11.104	105	78489	10.53	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	10018	10.13	ug/L	#	77
65) t-1,4-Dichloro-2-butene	11.147	88	2519	8.12	ug/L	#	89
66) 4-Chlorotoluene	11.208	91	69685	10.56	ug/L		97
67) tert-Butylbenzene	11.354	91	43541	10.42	ug/L		90
68) 1,2,4-Trimethylbenzene	11.415	105	78079	10.24	ug/L		98
69) sec-Butylbenzene	11.494	105	92393	10.46	ug/L		98
70) 4-Isopropyltoluene	11.603	119	74605	10.38	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	40813	9.62	ug/L		98
72) 1,4-Dichlorobenzene	11.737	146	40761	9.62	ug/L		94
73) n-Butylbenzene	11.926	91	61342	10.04	ug/L		96
74) 1,2-Dichlorobenzene	12.060	146	37337	9.58	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.668	157	4525	8.38	ug/L		85
76) Hexachlorobutadiene	13.185	223	5620	9.96	ug/L		97
77) 1,2,4-Trichlorobenzene	13.215	180	21112	9.30	ug/L		91
78) Naphthalene	13.489	128	69695	9.12	ug/L		100
79) 1,2,3-Trichlorobenzene	13.647	180	20921	9.73	ug/L		91

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	334993	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	489718	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	189689	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	157945	43.54	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	563027	43.70	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	675931	51.02	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	173337	52.92	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.661	85	45425	15.11	ug/L		98
3) Chloromethane	1.855	50	69415	14.05	ug/L		98
4) Vinyl Chloride	1.946	62	48944	14.33	ug/L		97
5) Bromomethane	2.299	96	26631	13.83	ug/L		98
6) Chloroethane	2.439	64	17906	13.96	ug/L		74
7) Trichlorofluoromethane	2.555	101	26493	13.92	ug/L		100
8) 1,1-Dichloroethene	3.090	61	52468	15.48	ug/L		84
9) Carbon Disulfide	3.096	76	68992	12.82	ug/L		97
10) Freon 113	3.139	101	40482	14.07	ug/L		86
11) Iodomethane	3.236	142	18906	13.77	ug/L		97
12) Methylene Chloride	3.723	84	43676	8.54	ug/L		94
13) Acetone	3.826	43	47883	31.71	ug/L		99
14) t-1,2-Dichloroethene	3.881	61	62991	16.03	ug/L		98
15) n-Hexane	3.960	86	10548	14.83	ug/L	#	74
16) Methyl-tert-butyl-ether	4.033	73	175828	15.10	ug/L		96
17) 1,1-Dichloroethane	4.514	63	79075	16.33	ug/L		97
18) Acrylonitrile	4.593	53	30348	15.49	ug/L		96
19) c-1,2-Dichloroethene	5.061	61	71698	16.35	ug/L		95
20) 2,2-Dichloropropane	5.171	77	59025	15.55	ug/L		90
21) Bromochloromethane	5.262	49	42462	16.39	ug/L		92
22) Chloroform	5.347	83	88587	15.39	ug/L		97
23) Carbon Tetrachloride	5.469	117	49520	15.93	ug/L		99
24) Tetrahydrofuran	5.530	42	32366	14.76	ug/L		95
25) 1,1,1-Trichloroethane	5.548	97	69791	15.88	ug/L		97
27) 1,1-Dichloropropene	5.670	75	70427	15.57	ug/L		96
28) 2-Butanone (MEK)	5.682	43	82387	30.59	ug/L		99
29) Benzene	5.925	78	219207	15.05	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.144	62	70104	16.15	ug/L		96
31) iso-Butyl Alcohol	6.247	43	106941	320.69	ug/L		89
33) Trichloroethene (TCE)	6.546	130	59701	14.62	ug/L		95
34) Dibromomethane	6.996	93	31366	16.12	ug/L		88
35) 1,2-Dichloropropane	7.105	63	59886	16.09	ug/L		95
36) Bromodichloromethane	7.178	83	53066	16.36	ug/L		96
38) c-1,3-Dichloropropene	7.884	75	74628	19.36	ug/L		97
40) Toluene	8.152	91	232708	17.96	ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	51183	17.04	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.614	43	132655	33.17	ug/L		98
43) t-1,3-Dichloropropene	8.638	75	69703	19.49	ug/L		95
44) 1,1,2-Trichloroethane	8.815	97	50621	19.13	ug/L		99
45) Dibromochloromethane	9.003	129	37386	16.89	ug/L		95
46) 1,3-Dichloropropane	9.107	76	94677	19.34	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.241	107	50007	19.33	ug/L		98
48) 2-Hexanone	9.496	43	93286	34.40	ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

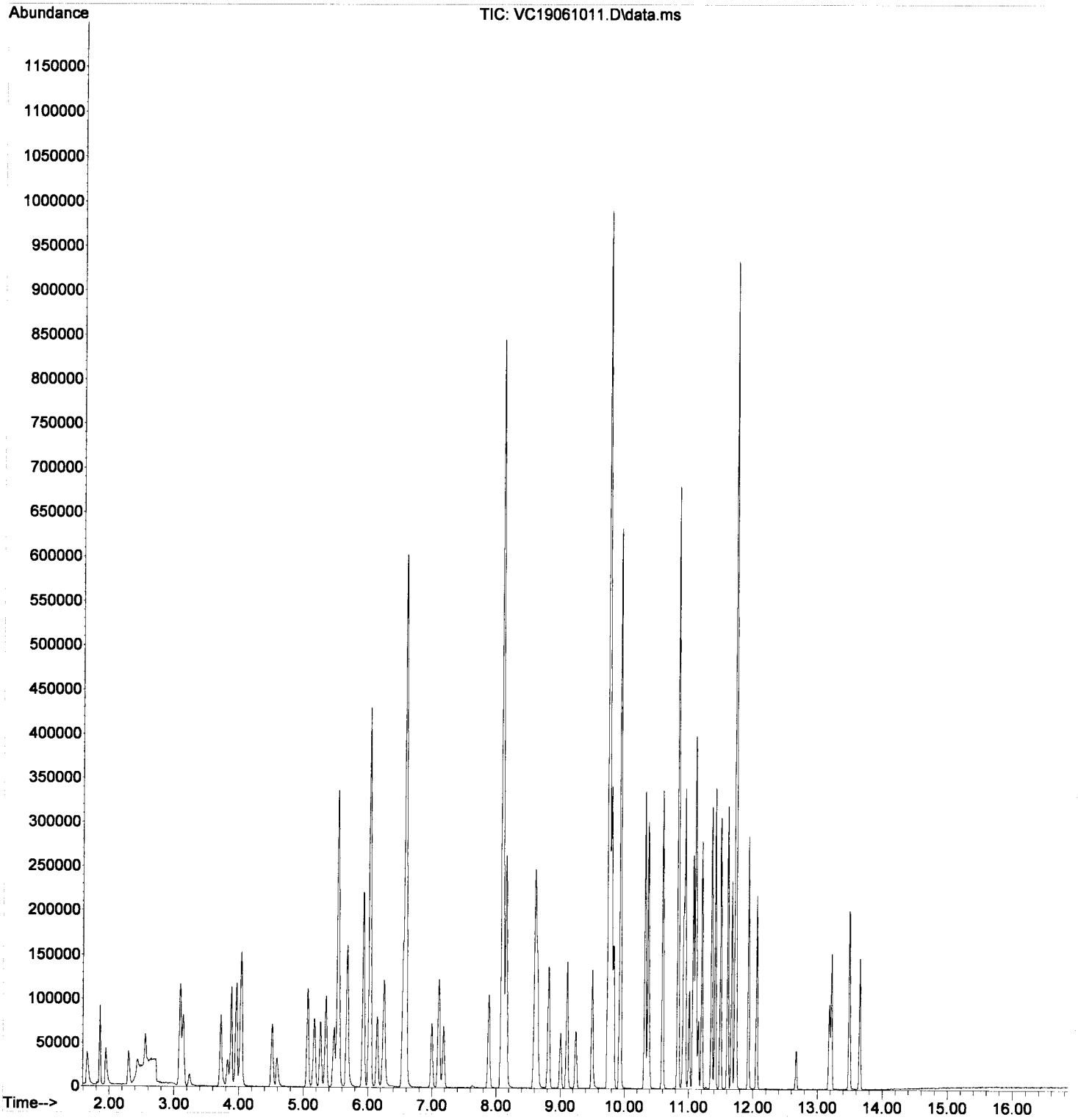
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	9.764	112	143545	18.27	ug/L	100
50) Ethylbenzene	9.794	91	240939	18.29	ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.831	131	43293	19.53	ug/L	96
52) m,p-Xylenes (2)	9.934	91	355349	37.37	ug/L	99
53) o-Xylene	10.317	91	183627	18.37	ug/L	99
54) Styrene	10.366	104	136458	19.53	ug/L	96
55) Bromoform	10.390	173	19110	15.29	ug/L	97
56) Isopropylbenzene	10.591	105	212362	18.53	ug/L	98
59) Bromobenzene	10.920	156	51952	20.74	ug/L	95
60) n-Propylbenzene	10.944	91	236380	20.70	ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.011	83	49418	19.88	ug/L	96
62) 2-Chlorotoluene	11.072	126	47655	20.16	ug/L	91
63) 1,3,5-Trimethylbenzene	11.102	105	162341	21.03	ug/L	99
64) 1,2,3-Trichloropropane	11.114	110	20048	19.56	ug/L #	78
65) t-1,4-Dichloro-2-butene	11.151	88	6259	18.17	ug/L #	87
66) 4-Chlorotoluene	11.205	91	139523	20.42	ug/L	99
67) tert-Butylbenzene	11.358	91	88706	20.50	ug/L	97
68) 1,2,4-Trimethylbenzene	11.412	105	162038	20.51	ug/L	99
69) sec-Butylbenzene	11.497	105	187287	20.47	ug/L	97
70) 4-Isopropyltoluene	11.607	119	155362	20.87	ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	84002	19.11	ug/L	98
72) 1,4-Dichlorobenzene	11.735	146	83948	19.12	ug/L	98
73) n-Butylbenzene	11.929	91	127870	20.20	ug/L	98
74) 1,2-Dichlorobenzene	12.057	146	75039	18.59	ug/L	98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	9847	16.83	ug/L	88
76) Hexachlorobutadiene	13.183	223	11665	19.96	ug/L	99
77) 1,2,4-Trichlorobenzene	13.213	180	46747	19.89	ug/L	97
78) Naphthalene	13.493	128	152737	19.30	ug/L	99
79) 1,2,3-Trichlorobenzene	13.651	180	43652	19.60	ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	340992	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.745	117	496062	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	193059	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.529	111	159154	43.10	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	574444	43.80	ug/L	0.00
39) Toluene-d8 (S)	8.090	98	689152	51.35	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	175325	52.59	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.660	85	115408	37.70	ug/L	99
3) Chloromethane	1.855	50	168897	33.59	ug/L	98
4) Vinyl Chloride	1.946	62	120231	34.59	ug/L	95
5) Bromomethane	2.305	96	60489	30.85	ug/L	97
6) Chloroethane	2.433	64	42931	32.87	ug/L	87
7) Trichlorofluoromethane	2.555	101	62094	32.05	ug/L	95
8) 1,1-Dichloroethene	3.084	61	135099	39.16	ug/L	81
9) Carbon Disulfide	3.096	76	203715	37.20	ug/L	98
10) Freon 113	3.139	101	102992	35.16	ug/L	86
11) Iodomethane	3.236	142	57973	38.25	ug/L	97
12) Methylene Chloride	3.723	84	110475	30.60	ug/L	91
13) Acetone	3.826	43	125112	81.40	ug/L	98
14) t-1,2-Dichloroethene	3.881	61	161888	40.47	ug/L	99
15) n-Hexane	3.960	86	26695	39.69	ug/L	97
16) Methyl-tert-butyl-ether	4.033	73	449396	37.92	ug/L	97
17) 1,1-Dichloroethane	4.513	63	200646	40.70	ug/L	98
18) Acrylonitrile	4.593	53	84043	42.15	ug/L	98
19) c-1,2-Dichloroethene	5.061	61	178655	40.02	ug/L	93
20) 2,2-Dichloropropane	5.170	77	153062	39.62	ug/L	89
21) Bromochloromethane	5.262	49	106680	40.45	ug/L	93
22) Chloroform	5.347	83	221584	37.82	ug/L	98
23) Carbon Tetrachloride	5.475	117	139739	44.16	ug/L	97
24) Tetrahydrofuran	5.529	42	84782	37.98	ug/L	95
25) 1,1,1-Trichloroethane	5.548	97	181053	40.47	ug/L	98
27) 1,1-Dichloropropene	5.675	75	178184	38.69	ug/L	99
28) 2-Butanone (MEK)	5.681	43	218051	79.55	ug/L	95
29) Benzene	5.931	78	547300	36.93	ug/L	98
30) 1,2-Dichloroethane (EDC)	6.144	62	180444	40.84	ug/L	100
31) iso-Butyl Alcohol	6.247	43	299039	880.96	ug/L	89
33) Trichloroethene (TCE)	6.545	130	153249	36.86	ug/L	97
34) Dibromomethane	6.995	93	81506	41.14	ug/L	91
35) 1,2-Dichloropropane	7.105	63	150914	39.83	ug/L	93
36) Bromodichloromethane	7.178	83	148949	43.02	ug/L	99
38) c-1,3-Dichloropropene	7.884	75	209633	53.68	ug/L	99
40) Toluene	8.151	91	575939	43.89	ug/L	99
41) Tetrachloroethene (PCE)	8.595	166	131193	43.12	ug/L	94
42) 4-Methyl-2-Pentanone (...	8.614	43	345050	85.17	ug/L	97
43) t-1,3-Dichloropropene	8.644	75	193377	53.37	ug/L	97
44) 1,1,2-Trichloroethane	8.814	97	128654	47.99	ug/L	98
45) Dibromochloromethane	9.003	129	110171	47.23	ug/L	96
46) 1,3-Dichloropropane	9.106	76	238356	48.07	ug/L	98
47) 1,2-Dibromoethane (EDB)	9.240	107	133050	50.77	ug/L	99
48) 2-Hexanone	9.496	43	249448	90.82	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

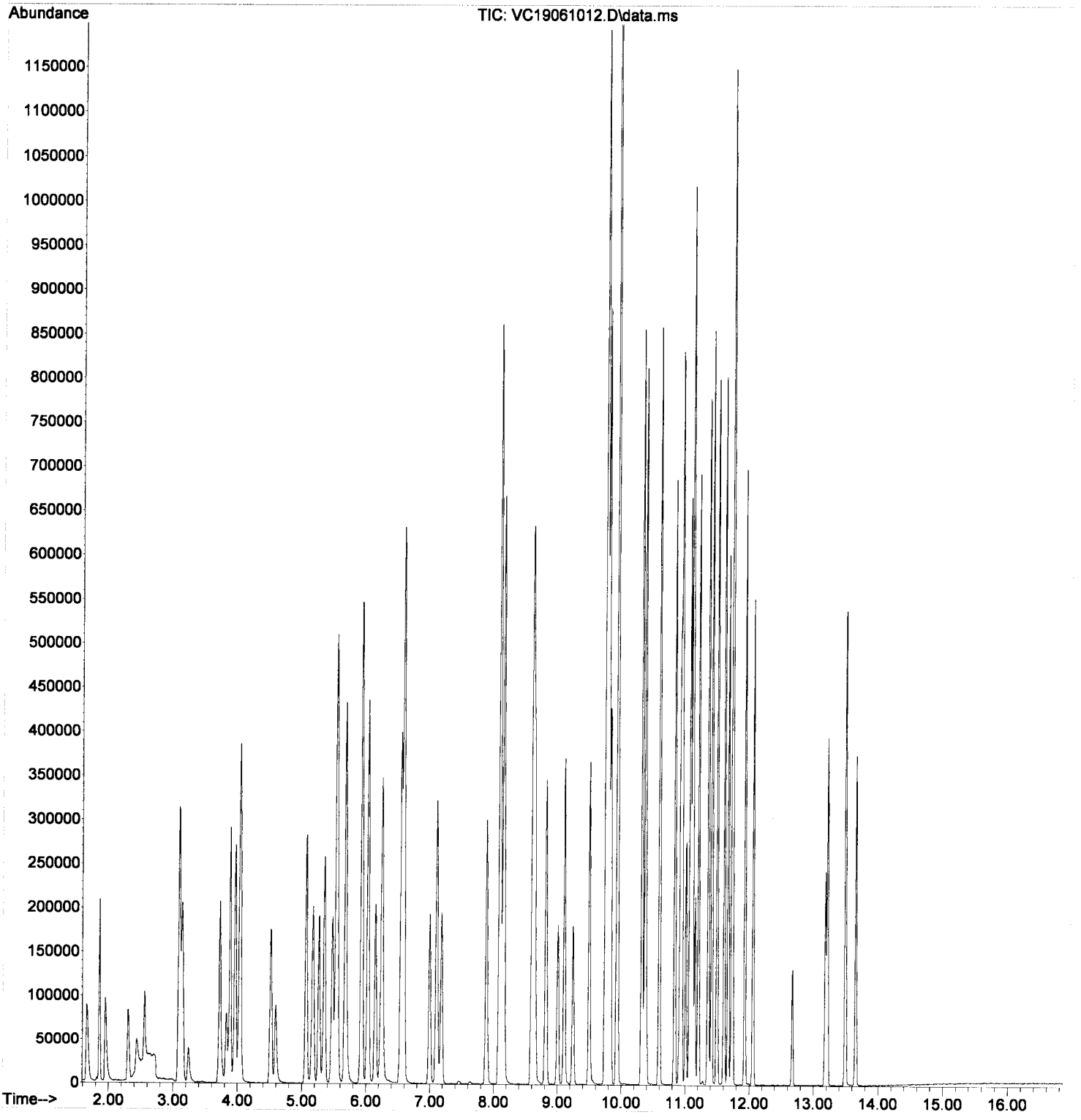
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	359063	45.11	ug/L		97
50) Ethylbenzene	9.794	91	598887	44.89	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.830	131	117587	52.37	ug/L		99
52) m,p-Xylenes (2)	9.934	91	876496	91.00	ug/L		98
53) o-Xylene	10.317	91	465814	46.01	ug/L		99
54) Styrene	10.366	104	358493	50.66	ug/L		96
55) Bromoform	10.390	173	60779	44.86	ug/L		98
56) Isopropylbenzene	10.591	105	538430	46.38	ug/L		99
59) Bromobenzene	10.919	156	133614	52.41	ug/L		98
60) n-Propylbenzene	10.944	91	583140	50.17	ug/L		100
61) 1,1,2,2-Tetrachloroethane	11.011	83	127935	50.58	ug/L		99
62) 2-Chlorotoluene	11.071	126	122859	51.06	ug/L		89
63) 1,3,5-Trimethylbenzene	11.102	105	408363	51.97	ug/L		99
64) 1,2,3-Trichloropropane	11.114	110	50346	48.27	ug/L		83
65) t-1,4-Dichloro-2-butene	11.150	88	17733	48.17	ug/L	#	83
66) 4-Chlorotoluene	11.205	91	350674	50.43	ug/L		99
67) tert-Butylbenzene	11.357	91	221609	50.32	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	400165	49.77	ug/L		99
69) sec-Butylbenzene	11.497	105	474670	50.98	ug/L		98
70) 4-Isopropyltoluene	11.607	119	392357	51.79	ug/L		97
71) 1,3-Dichlorobenzene	11.668	146	211770	47.34	ug/L		97
72) 1,4-Dichlorobenzene	11.734	146	207796	46.49	ug/L		98
73) n-Butylbenzene	11.929	91	322235	50.01	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	191185	46.53	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.671	157	31470	48.38	ug/L		95
76) Hexachlorobutadiene	13.182	223	28665	48.19	ug/L		98
77) 1,2,4-Trichlorobenzene	13.213	180	118093	49.37	ug/L		98
78) Naphthalene	13.493	128	414906	51.51	ug/L		100
79) 1,2,3-Trichlorobenzene	13.651	180	114134	50.36	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061013.D
Acq On : 10 Jun 2019 8:11 pm
Operator : TB
Sample : 9F10052-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

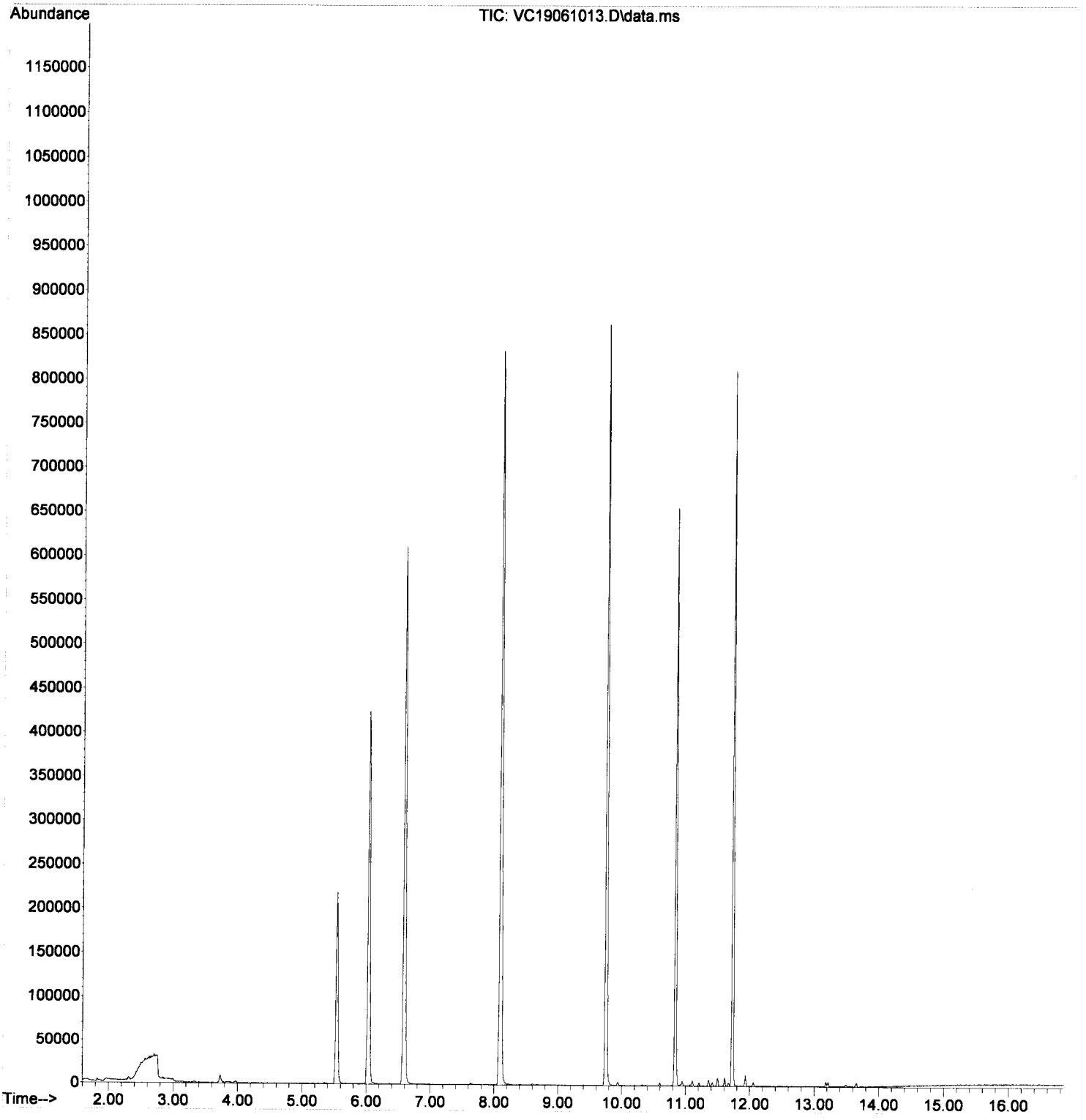
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	333883	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	477154	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	182401	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	148670	48.85	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	560414	49.81	ug/L		0.00
39) Toluene-d8 (S)	8.092	98	663402	49.77	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167639	50.90	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.674	85	220	0.10	ug/L	#	50
3) Chloromethane	1.868	50	856	0.25	ug/L		80
5) Bromomethane	2.306	96	2042	1.51	ug/L	#	72
6) Chloroethane	2.452	64	151	0.17	ug/L	#	1
7) Trichlorofluoromethane	2.568	101	183	0.14	ug/L		79
8) 1,1-Dichloroethene	3.085	61	158	0.09	ug/L	#	18
9) Carbon Disulfide	3.097	76	1062	0.51	ug/L		69
10) Freon 113	3.158	101	323	0.17	ug/L	#	50
11) Iodomethane	3.249	142	725	1.98	ug/L	#	84
12) Methylene Chloride	3.730	84	4453	1.99	ug/L		91
13) Acetone	3.858	43	1694	1.44	ug/L		85
14) t-1,2-Dichloroethene	3.894	61	423	0.14	ug/L	#	61
27) 1,1-Dichloropropene	5.670	75	424	0.12	ug/L	#	63
28) 2-Butanone (MEK)	5.725	43	227	0.11	ug/L		54
33) Trichloroethene (TCE)	6.540	130	355	0.12	ug/L	#	11
40) Toluene	8.165	91	1239	0.10	ug/L		66
41) Tetrachloroethene (PCE)	8.609	166	566	0.22	ug/L		77
49) Chlorobenzene	9.758	112	779	0.11	ug/L	#	1
50) Ethylbenzene	9.801	91	1394	0.12	ug/L		85
52) m,p-Xylenes (2)	9.941	91	2504	0.29	ug/L		82
53) o-Xylene	10.324	91	775	0.09	ug/L		90
56) Isopropylbenzene	10.592	105	2365	0.23	ug/L		82
59) Bromobenzene	10.920	156	241	0.10	ug/L	#	82
60) n-Propylbenzene	10.945	91	4342	0.39	ug/L		94
62) 2-Chlorotoluene	11.066	126	300	0.13	ug/L	#	68
63) 1,3,5-Trimethylbenzene	11.103	105	2694	0.36	ug/L		88
66) 4-Chlorotoluene	11.206	91	1515	0.23	ug/L		78
67) tert-Butylbenzene	11.358	91	2054	0.51	ug/L		90
68) 1,2,4-Trimethylbenzene	11.413	105	2311	0.30	ug/L		92
69) sec-Butylbenzene	11.498	105	6006	0.71	ug/L		96
70) 4-Isopropyltoluene	11.608	119	4823	0.68	ug/L		93
71) 1,3-Dichlorobenzene	11.675	146	1037	0.25	ug/L		88
72) 1,4-Dichlorobenzene	11.742	146	1306	0.31	ug/L		94
73) n-Butylbenzene	11.930	91	5936	0.96	ug/L		87
74) 1,2-Dichlorobenzene	12.058	146	598	0.17	ug/L		79
76) Hexachlorobutadiene	13.183	223	595	1.12	ug/L		84
77) 1,2,4-Trichlorobenzene	13.220	180	1841	0.89	ug/L		97
78) Naphthalene	13.494	128	2020	0.30	ug/L		94
79) 1,2,3-Trichlorobenzene	13.652	180	1416	0.73	ug/L		92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061013.D
Acq On : 10 Jun 2019 8:11 pm
Operator : TB
Sample : 9F10052-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	333562	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	491250	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	195717	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	159535	44.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	569175	44.36	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	679105	51.10	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	177460	52.51	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	230319	76.92	ug/L		99
3) Chloromethane	1.867	50	337482	68.61	ug/L		99
4) Vinyl Chloride	1.959	62	239778	70.52	ug/L		98
5) Bromomethane	2.311	96	123677	64.49	ug/L		97
6) Chloroethane	2.445	64	93852	73.47	ug/L		99
7) Trichlorofluoromethane	2.567	101	131121	69.18	ug/L		99
8) 1,1-Dichloroethene	3.096	61	260644	77.23	ug/L		86
9) Carbon Disulfide	3.108	76	428101	79.92	ug/L		98
10) Freon 113	3.145	101	198767	69.37	ug/L		84
11) Iodomethane	3.248	142	126394	78.63	ug/L		94
12) Methylene Chloride	3.729	84	213840	68.08	ug/L		94
13) Acetone	3.832	43	232154	154.41	ug/L		96
14) t-1,2-Dichloroethene	3.887	61	316839	80.97	ug/L		99
15) n-Hexane	3.966	86	49312	77.11	ug/L	#	87
16) Methyl-tert-butyl-ether	4.039	73	877597	75.71	ug/L		97
17) 1,1-Dichloroethane	4.520	63	391554	81.19	ug/L		99
18) Acrylonitrile	4.599	53	159210	81.62	ug/L		97
19) c-1,2-Dichloroethene	5.067	61	352045	80.61	ug/L		97
20) 2,2-Dichloropropane	5.171	77	300552	79.53	ug/L		89
21) Bromochloromethane	5.268	49	209434	81.17	ug/L		95
22) Chloroform	5.353	83	435898	76.06	ug/L		98
23) Carbon Tetrachloride	5.475	117	289658	93.58	ug/L		97
24) Tetrahydrofuran	5.530	42	159494	73.05	ug/L		93
25) 1,1,1-Trichloroethane	5.548	97	359788	82.21	ug/L		99
27) 1,1-Dichloropropene	5.676	75	346592	76.94	ug/L		99
28) 2-Butanone (MEK)	5.688	43	413276	154.13	ug/L		96
29) Benzene	5.931	78	1053944	72.69	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.150	62	352666	81.59	ug/L		98
31) iso-Butyl Alcohol	6.254	43	585201	1762.39	ug/L		89
33) Trichloroethene (TCE)	6.546	130	298710	73.45	ug/L		98
34) Dibromomethane	6.996	93	163635	84.44	ug/L		91
35) 1,2-Dichloropropane	7.105	63	299052	80.69	ug/L		95
36) Bromodichloromethane	7.178	83	313885	86.32	ug/L		99
38) c-1,3-Dichloropropene	7.884	75	423225	109.44	ug/L		98
40) Toluene	8.152	91	1104782	85.01	ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	256544	85.14	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.614	43	679393	169.34	ug/L		99
43) t-1,3-Dichloropropene	8.644	75	400343	111.58	ug/L		97
44) 1,1,2-Trichloroethane	8.815	97	260378	98.08	ug/L		98
45) Dibromochloromethane	9.003	129	242900	99.60	ug/L		96
46) 1,3-Dichloropropane	9.107	76	468590	95.42	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.241	107	265078	102.14	ug/L		99
48) 2-Hexanone	9.496	43	493611	181.48	ug/L		100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

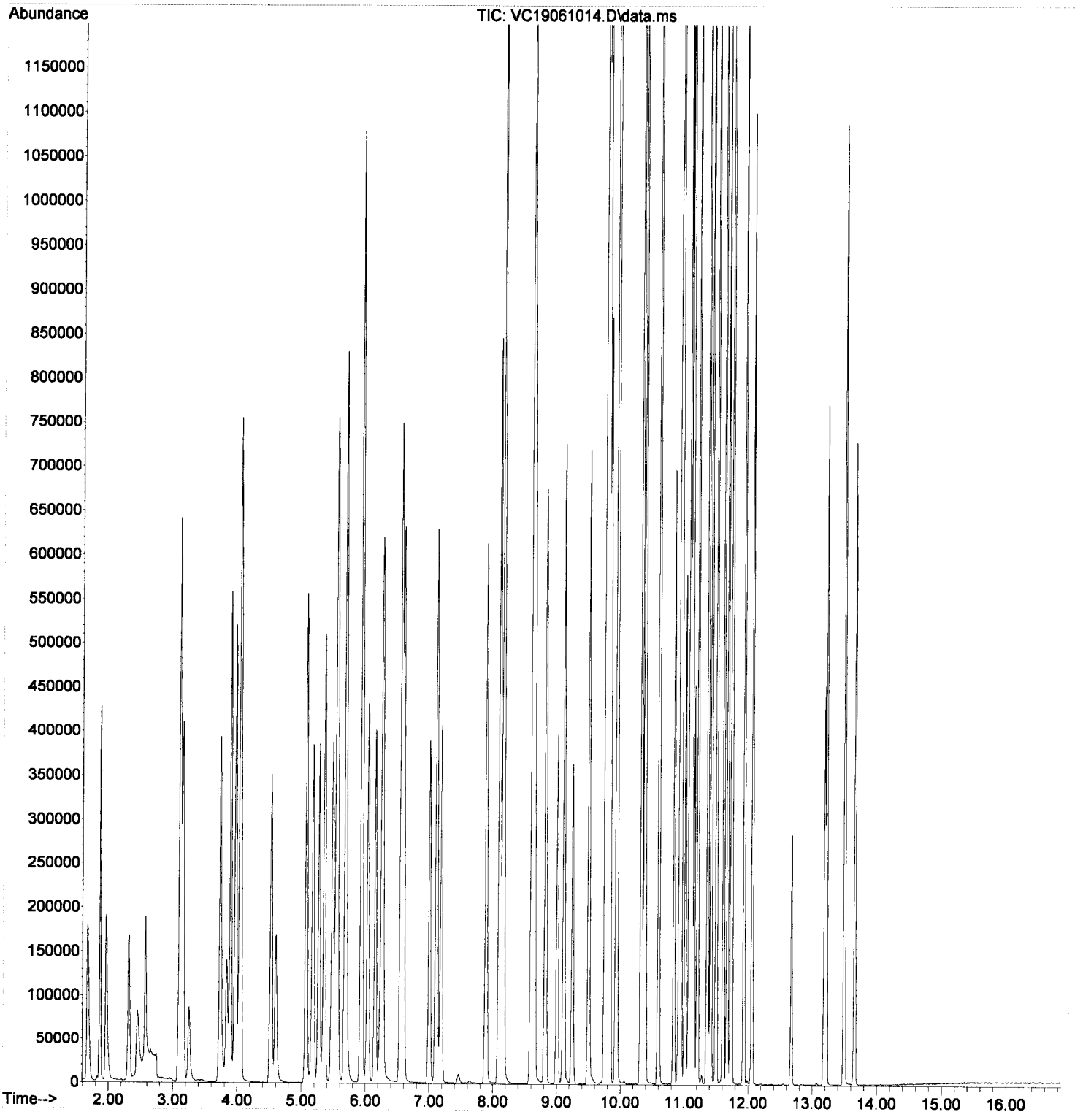
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	697876	88.54	ug/L		97
50) Ethylbenzene	9.794	91	1126383	85.25	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.831	131	241207	108.48	ug/L		99
52) m,p-Xylenes (2)	9.934	91	1626617	170.53	ug/L		95
53) o-Xylene	10.317	91	895717	89.34	ug/L		97
54) Styrene	10.366	104	712544	101.68	ug/L		93
55) Bromoform	10.390	173	138378	95.13	ug/L		99
56) Isopropylbenzene	10.591	105	1017284	88.49	ug/L		98
59) Bromobenzene	10.920	156	269310	104.21	ug/L		96
60) n-Propylbenzene	10.944	91	1111134	94.30	ug/L		96
61) 1,1,2,2-Tetrachloroethane	11.011	83	255721	99.73	ug/L		99
62) 2-Chlorotoluene	11.072	126	248772	101.98	ug/L		95
63) 1,3,5-Trimethylbenzene	11.102	105	797681	100.14	ug/L		98
64) 1,2,3-Trichloropropane	11.114	110	99067	93.69	ug/L	#	79
65) t-1,4-Dichloro-2-butene	11.151	88	38256	98.49	ug/L	#	79
66) 4-Chlorotoluene	11.206	91	691823	98.13	ug/L		97
67) tert-Butylbenzene	11.358	91	434353	97.29	ug/L		93
68) 1,2,4-Trimethylbenzene	11.412	105	783712	96.14	ug/L		96
69) sec-Butylbenzene	11.498	105	901621	95.51	ug/L		99
70) 4-Isopropyltoluene	11.607	119	759218	98.86	ug/L		99
71) 1,3-Dichlorobenzene	11.668	146	420999	92.83	ug/L		98
72) 1,4-Dichlorobenzene	11.735	146	409291	90.33	ug/L		97
73) n-Butylbenzene	11.929	91	610605	93.48	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	374906	90.00	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	70725	96.56	ug/L		93
76) Hexachlorobutadiene	13.183	223	54668	90.65	ug/L		99
77) 1,2,4-Trichlorobenzene	13.213	180	230797	95.17	ug/L		98
78) Naphthalene	13.487	128	815647	99.89	ug/L		98
79) 1,2,3-Trichlorobenzene	13.651	180	225036	97.94	ug/L		99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	337710	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	481116	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	184451	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	154694	50.26	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	568187	49.93	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	675644	50.27	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170369	51.15	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.666	85	563	0.25	ug/L		73
3) Chloromethane	1.867	50	1427	0.41	ug/L		90
4) Vinyl Chloride	1.964	62	381	0.16	ug/L	#	48
5) Bromomethane	2.311	96	2770	2.03	ug/L		94
6) Chloroethane	2.433	64	119	0.13	ug/L	#	1
7) Trichlorofluoromethane	2.567	101	217	0.16	ug/L		96
8) 1,1-Dichloroethene	3.090	61	449	0.20	ug/L	#	42
9) Carbon Disulfide	3.114	76	2046	0.83	ug/L		90
10) Freon 113	3.138	101	430	0.22	ug/L	#	46
11) Iodomethane	3.254	142	1290	2.48	ug/L		94
12) Methylene Chloride	3.735	84	4433	1.96	ug/L		94
13) Acetone	3.850	43	1665	1.40	ug/L		96
14) t-1,2-Dichloroethene	3.899	61	665	0.22	ug/L		78
27) 1,1-Dichloropropene	5.681	75	942	0.27	ug/L	#	62
28) 2-Butanone (MEK)	5.742	43	185	0.09	ug/L		54
33) Trichloroethene (TCE)	6.557	130	579	0.20	ug/L	#	75
40) Toluene	8.157	91	2035	0.17	ug/L		89
41) Tetrachloroethene (PCE)	8.589	166	1080	0.42	ug/L		81
49) Chlorobenzene	9.763	112	1305	0.18	ug/L	#	1
50) Ethylbenzene	9.794	91	2523	0.21	ug/L		80
52) m,p-Xylenes (2)	9.934	91	4323	0.50	ug/L		85
53) o-Xylene	10.323	91	1427	0.16	ug/L		95
54) Styrene	10.378	104	859	0.14	ug/L		87
56) Isopropylbenzene	10.597	105	4137	0.40	ug/L		97
59) Bromobenzene	10.919	156	582	0.23	ug/L	#	72
60) n-Propylbenzene	10.943	91	7797	0.70	ug/L		97
62) 2-Chlorotoluene	11.077	126	739	0.32	ug/L	#	76
63) 1,3,5-Trimethylbenzene	11.102	105	5313	0.70	ug/L		93
66) 4-Chlorotoluene	11.211	91	2891	0.43	ug/L		95
67) tert-Butylbenzene	11.357	91	3834	0.95	ug/L		95
68) 1,2,4-Trimethylbenzene	11.412	105	4664	0.60	ug/L		93
69) sec-Butylbenzene	11.497	105	11811	1.37	ug/L		96
70) 4-Isopropyltoluene	11.607	119	9477	1.32	ug/L		93
71) 1,3-Dichlorobenzene	11.667	146	2164	0.51	ug/L		97
72) 1,4-Dichlorobenzene	11.734	146	2325	0.55	ug/L	#	21
73) n-Butylbenzene	11.929	91	11040	1.76	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	1486	0.41	ug/L		98
76) Hexachlorobutadiene	13.176	223	1280	2.39	ug/L	#	73
77) 1,2,4-Trichlorobenzene	13.219	180	3447	1.65	ug/L		94
78) Naphthalene	13.499	128	3378	0.49	ug/L		96
79) 1,2,3-Trichlorobenzene	13.651	180	3174	1.61	ug/L		96

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

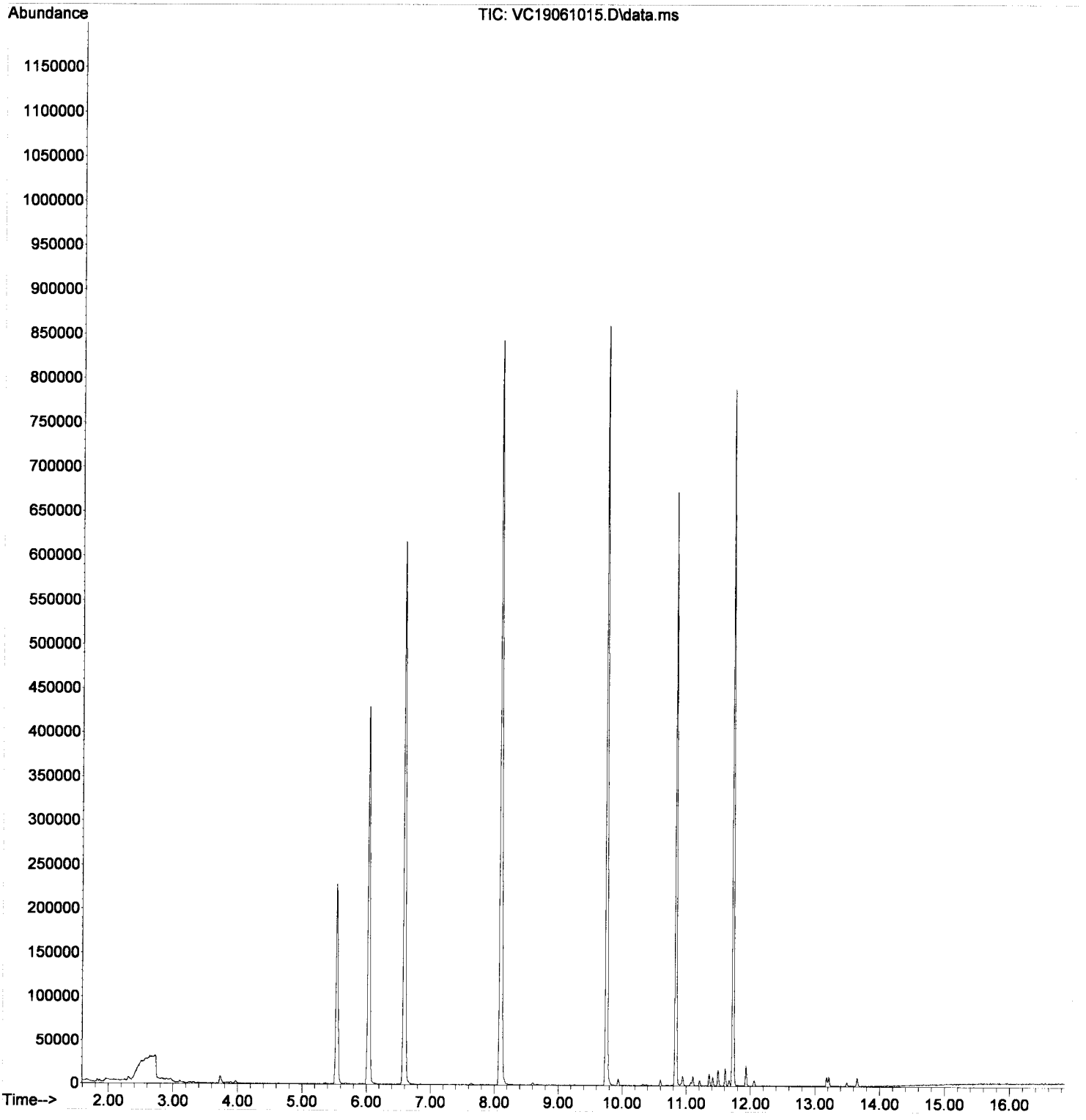
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.034	168	344824	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	478503	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	198363	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	155599	41.67	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.587	114	580421	43.76	ug/L	0.00
39) Toluene-d8 (S)	8.096	98	685539	52.96	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	172230	50.28	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.672	85	477021	154.10	ug/L	98
3) Chloromethane	1.867	50	653270	128.48	ug/L	98
4) Vinyl Chloride	1.958	62	491307	139.78	ug/L	96
5) Bromomethane	2.311	96	259132	130.70	ug/L	97
6) Chloroethane	2.457	64	197631	149.66	ug/L	95
7) Trichlorofluoromethane	2.572	101	294670	150.40	ug/L	99
8) 1,1-Dichloroethene	3.095	61	519340	148.86	ug/L	88
9) Carbon Disulfide	3.108	76	886498	160.08	ug/L	97
10) Freon 113	3.144	101	399582	134.90	ug/L	85
11) Iodomethane	3.248	142	265934	143.55	ug/L	94
12) Methylene Chloride	3.728	84	417213	140.28	ug/L	95
13) Acetone	3.832	43	410227	263.93	ug/L	98
14) t-1,2-Dichloroethene	3.886	61	607920	150.28	ug/L	99
15) n-Hexane	3.965	86	100064	155.62	ug/L	96
16) Methyl-tert-butyl-ether	4.038	73	1672090	139.54	ug/L	94
17) 1,1-Dichloroethane	4.519	63	760512	152.55	ug/L	99
18) Acrylonitrile	4.598	53	302105	149.81	ug/L	98
19) c-1,2-Dichloroethene	5.066	61	671582	148.75	ug/L	98
20) 2,2-Dichloropropane	5.170	77	598853	153.29	ug/L	90
21) Bromochloromethane	5.267	49	404581	151.69	ug/L	96
22) Chloroform	5.352	83	809559	136.65	ug/L	97
23) Carbon Tetrachloride	5.474	117	595740	186.17	ug/L	96
24) Tetrahydrofuran	5.529	42	298099	132.07	ug/L	95
25) 1,1,1-Trichloroethane	5.547	97	714533	157.94	ug/L	99
27) 1,1-Dichloropropene	5.675	75	685872	147.28	ug/L	99
28) 2-Butanone (MEK)	5.687	43	786035	283.57	ug/L	95
29) Benzene	5.930	78	1972040	131.57	ug/L	92
30) 1,2-Dichloroethane (EDC)	6.149	62	674961	151.06	ug/L	95
31) iso-Butyl Alcohol	6.265	43	1197112	3487.47	ug/L	90
33) Trichloroethene (TCE)	6.545	130	579838	137.93	ug/L	97
34) Dibromomethane	6.995	93	305444	152.47	ug/L	91
35) 1,2-Dichloropropane	7.104	63	584540	152.57	ug/L	95
36) Bromodichloromethane	7.184	83	641784	154.20	ug/L	97
38) c-1,3-Dichloropropene	7.883	75	840048	223.01	ug/L	99
40) Toluene	8.151	91	2041152	161.25	ug/L	94
41) Tetrachloroethene (PCE)	8.601	166	509334	173.54	ug/L	96
42) 4-Methyl-2-Pentanone (...	8.613	43	1300156	332.70	ug/L	98
43) t-1,3-Dichloropropene	8.644	75	778569	222.78	ug/L	95
44) 1,1,2-Trichloroethane	8.820	97	487195	188.40	ug/L	98
45) Dibromochloromethane	9.002	129	493352	190.71	ug/L	96
46) 1,3-Dichloropropane	9.106	76	867404	181.33	ug/L	96
47) 1,2-Dibromoethane (EDB)	9.246	107	502022	198.58	ug/L	99
48) 2-Hexanone	9.495	43	969053	365.77	ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

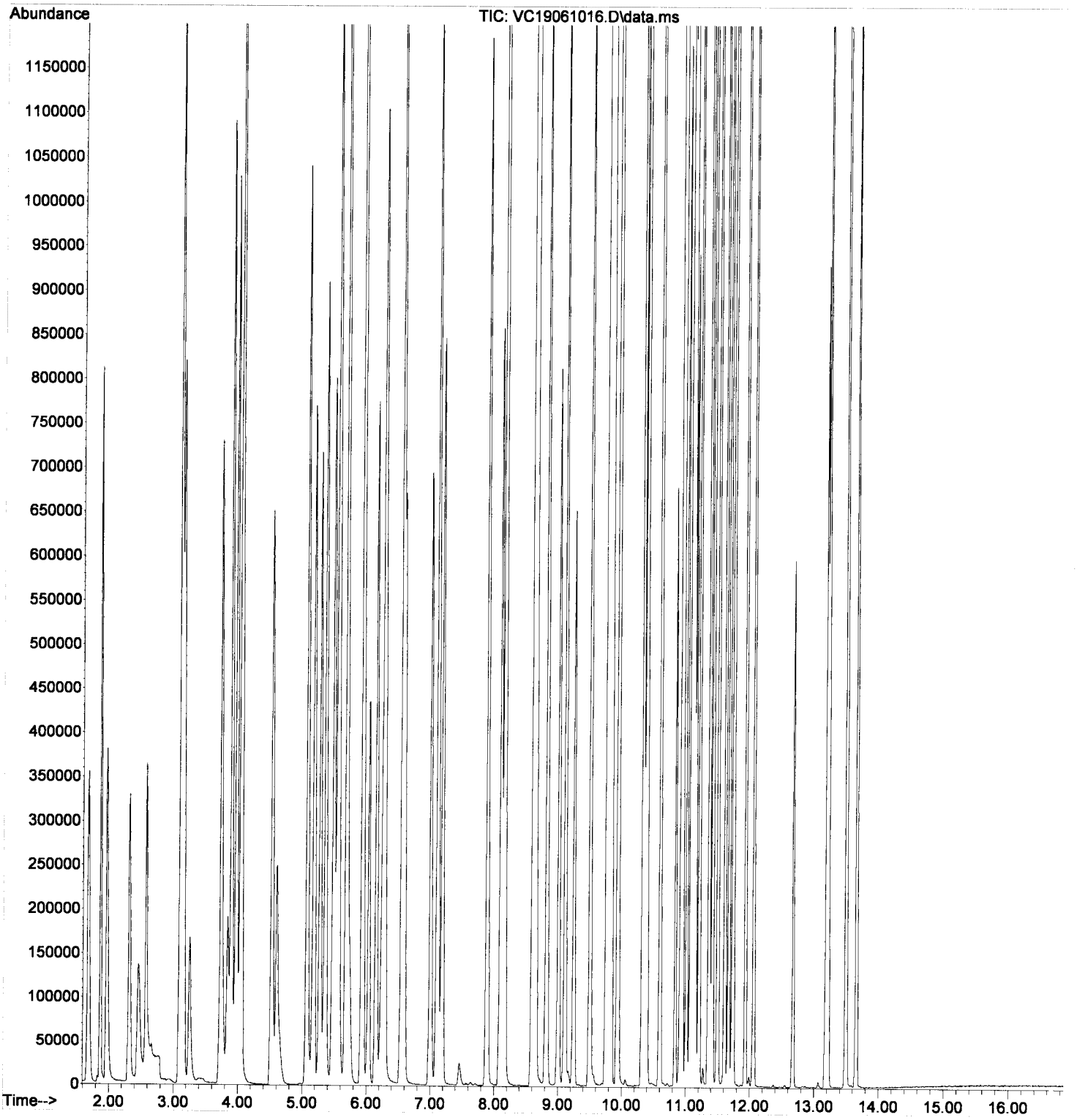
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1256235	163.62	ug/L		93
50) Ethylbenzene	9.793	91	1989818	154.61	ug/L		91
51) 1,1,1,2-Tetrachloroethane	9.830	131	471169	217.55	ug/L		99
52) m,p-Xylenes (2)	9.933	91	2740385	294.95	ug/L		88
53) o-Xylene	10.317	91	1575234	161.30	ug/L		94
54) Styrene	10.365	104	1276615	187.02	ug/L		91
55) Bromoform	10.390	173	302514	187.89	ug/L		99
56) Isopropylbenzene	10.596	105	1773671	158.39	ug/L		92
59) Bromobenzene	10.919	156	490693	187.34	ug/L		97
60) n-Propylbenzene	10.943	91	1904210	159.45	ug/L		91
61) 1,1,2,2-Tetrachloroethane	11.010	83	516287	198.66	ug/L		99
62) 2-Chlorotoluene	11.071	126	452384	182.98	ug/L		98
63) 1,3,5-Trimethylbenzene	11.101	105	1402428	173.71	ug/L		95
64) 1,2,3-Trichloropropane	11.113	110	200838	187.41	ug/L		89
65) t-1,4-Dichloro-2-butene	11.150	88	82112	196.16	ug/L	#	75
66) 4-Chlorotoluene	11.205	91	1229826	172.12	ug/L		95
67) tert-Butylbenzene	11.357	91	792365	175.11	ug/L		92
68) 1,2,4-Trimethylbenzene	11.412	105	1386885	167.87	ug/L		93
69) sec-Butylbenzene	11.497	105	1586657	165.84	ug/L		94
70) 4-Isopropyltoluene	11.606	119	1362331	175.03	ug/L		94
71) 1,3-Dichlorobenzene	11.667	146	792131	172.33	ug/L		97
72) 1,4-Dichlorobenzene	11.740	146	785942	171.15	ug/L		96
73) n-Butylbenzene	11.929	91	1134212	171.33	ug/L		95
74) 1,2-Dichlorobenzene	12.056	146	730354	172.99	ug/L		95
75) 1,2-Dibromo-3-Chloropr...	12.671	157	154313	178.41	ug/L		92
76) Hexachlorobutadiene	13.182	223	111313	182.12	ug/L		99
77) 1,2,4-Trichlorobenzene	13.212	180	458222	186.43	ug/L		97
78) Naphthalene	13.492	128	1554045	187.79	ug/L		97
79) 1,2,3-Trichlorobenzene	13.650	180	450148	193.31	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	357036	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	510891	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	198219	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	163836	50.35 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.583	114	594267	49.40 ug/L		0.00
39) Toluene-d8 (S)	8.091	98	709939	49.74 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	180239	50.35 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	1407	0.60 ug/L		87
3) Chloromethane	1.850	50	2140	0.57 ug/L		92
4) Vinyl Chloride	1.947	62	802	0.32 ug/L	#	48
5) Bromomethane	2.294	96	3442	2.38 ug/L		80
6) Chloroethane	2.428	64	102	0.11 ug/L	#	1
7) Trichlorofluoromethane	2.555	101	507	0.36 ug/L		76
8) 1,1-Dichloroethene	3.085	61	775	0.31 ug/L		88
9) Carbon Disulfide	3.097	76	4491	1.54 ug/L		93
10) Freon 113	3.139	101	1487	0.71 ug/L		79
11) Iodomethane	3.231	142	1801	2.84 ug/L	#	89
12) Methylene Chloride	3.723	84	4565	1.90 ug/L		90
13) Acetone	3.833	43	754	0.60 ug/L		94
14) t-1,2-Dichloroethene	3.888	61	1506	0.46 ug/L		89
15) n-Hexane	3.961	86	426	Below Cal	#	54
19) c-1,2-Dichloroethene	5.068	61	780	0.21 ug/L		96
21) Bromochloromethane	5.269	49	330	0.16 ug/L	#	76
22) Chloroform	5.348	83	468	0.10 ug/L	#	39
23) Carbon Tetrachloride	5.457	117	419	0.18 ug/L	#	1
24) Tetrahydrofuran	5.555	42	166	0.10 ug/L	#	71
25) 1,1,1-Trichloroethane	5.542	97	372	0.10 ug/L	#	24
27) 1,1-Dichloropropene	5.670	75	1701	0.47 ug/L		94
28) 2-Butanone (MEK)	5.707	43	653	0.30 ug/L		54
29) Benzene	5.926	78	1768	0.15 ug/L		94
30) 1,2-Dichloroethane (EDC)	6.157	62	377	0.10 ug/L	#	50
31) iso-Butyl Alcohol	6.278	43	125	0.55 ug/L	#	60
33) Trichloroethene (TCE)	6.546	130	1242	0.40 ug/L		85
34) Dibromomethane	6.996	93	146	0.09 ug/L	#	78
40) Toluene	8.158	91	3334	0.26 ug/L		81
41) Tetrachloroethene (PCE)	8.596	166	2192	0.80 ug/L		86
43) t-1,3-Dichloropropene	8.639	75	270	0.08 ug/L		47
47) 1,2-Dibromoethane (EDB)	9.235	107	286	0.12 ug/L	#	7
49) Chlorobenzene	9.770	112	2438	0.32 ug/L		84
50) Ethylbenzene	9.795	91	4679	0.36 ug/L		94
52) m,p-Xylenes (2)	9.935	91	8278	0.90 ug/L		94
53) o-Xylene	10.318	91	2849	0.30 ug/L		97
54) Styrene	10.373	104	1753	0.27 ug/L		91
56) Isopropylbenzene	10.592	105	8947	0.82 ug/L		89
59) Bromobenzene	10.920	156	892	0.33 ug/L		96
60) n-Propylbenzene	10.944	91	16762	1.40 ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.011	83	227	0.09 ug/L	#	25
62) 2-Chlorotoluene	11.072	126	1424	0.58 ug/L	#	62
63) 1,3,5-Trimethylbenzene	11.103	105	10429	1.27 ug/L		91
66) 4-Chlorotoluene	11.206	91	5160	0.72 ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

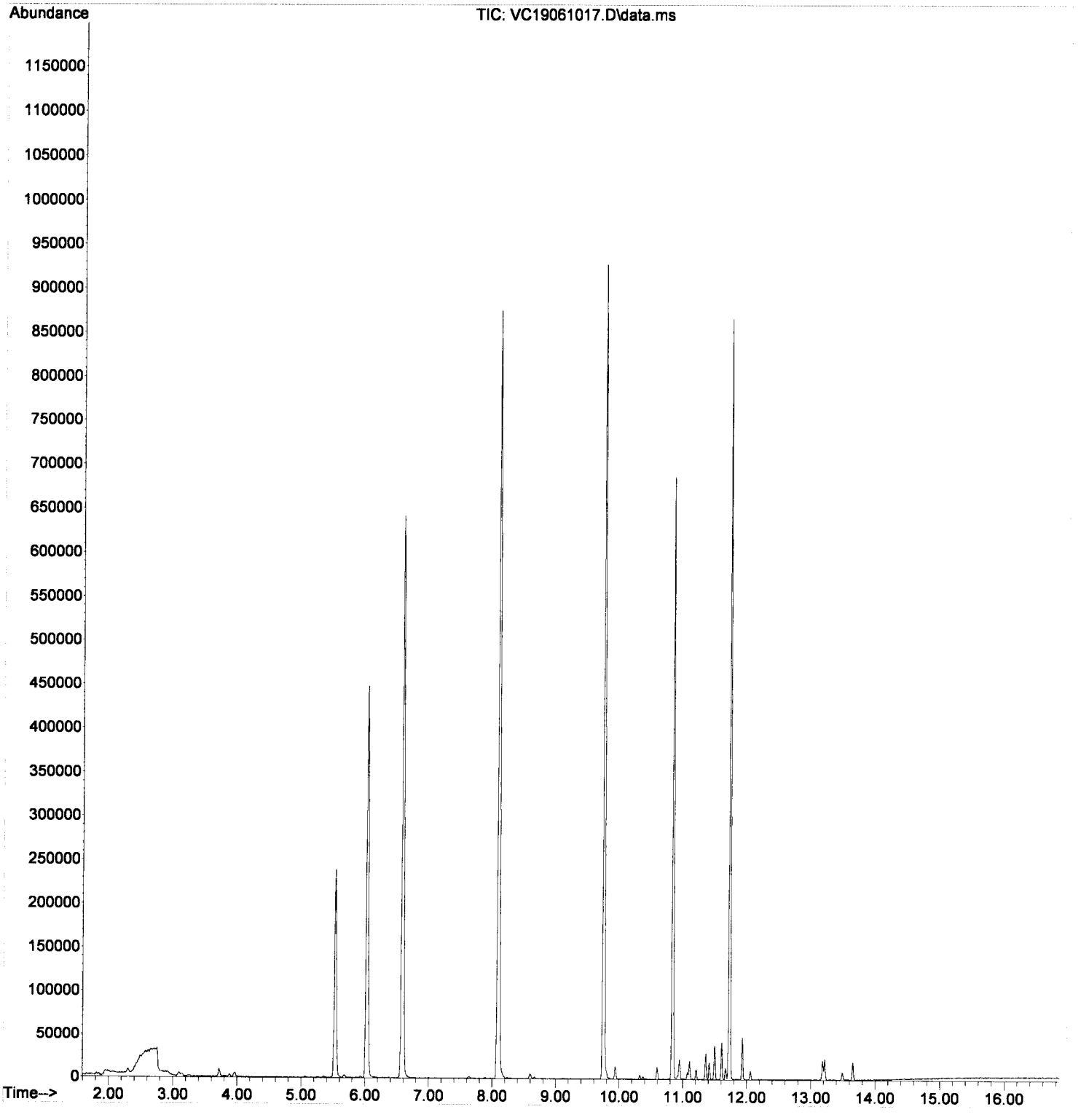
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
67) tert-Butylbenzene	11.358	91	8186	1.88	ug/L	91
68) 1,2,4-Trimethylbenzene	11.413	105	9183	1.10	ug/L	92
69) sec-Butylbenzene	11.498	105	24207	2.62	ug/L	94
70) 4-Isopropyltoluene	11.608	119	20352	2.64	ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	4461	0.99	ug/L	88
72) 1,4-Dichlorobenzene	11.735	146	4446	0.98	ug/L	80
73) n-Butylbenzene	11.930	91	22362	3.32	ug/L	98
74) 1,2-Dichlorobenzene	12.064	146	2587	0.66	ug/L	88
76) Hexachlorobutadiene	13.183	223	2515	4.37	ug/L	96
77) 1,2,4-Trichlorobenzene	13.214	180	7198	3.21	ug/L	99
78) Naphthalene	13.493	128	6360	0.86	ug/L	92
79) 1,2,3-Trichlorobenzene	13.652	180	6184	2.92	ug/L	95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061018.D
Acq On : 10 Jun 2019 10:29 pm
Operator : TB
Sample : 9F10052-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

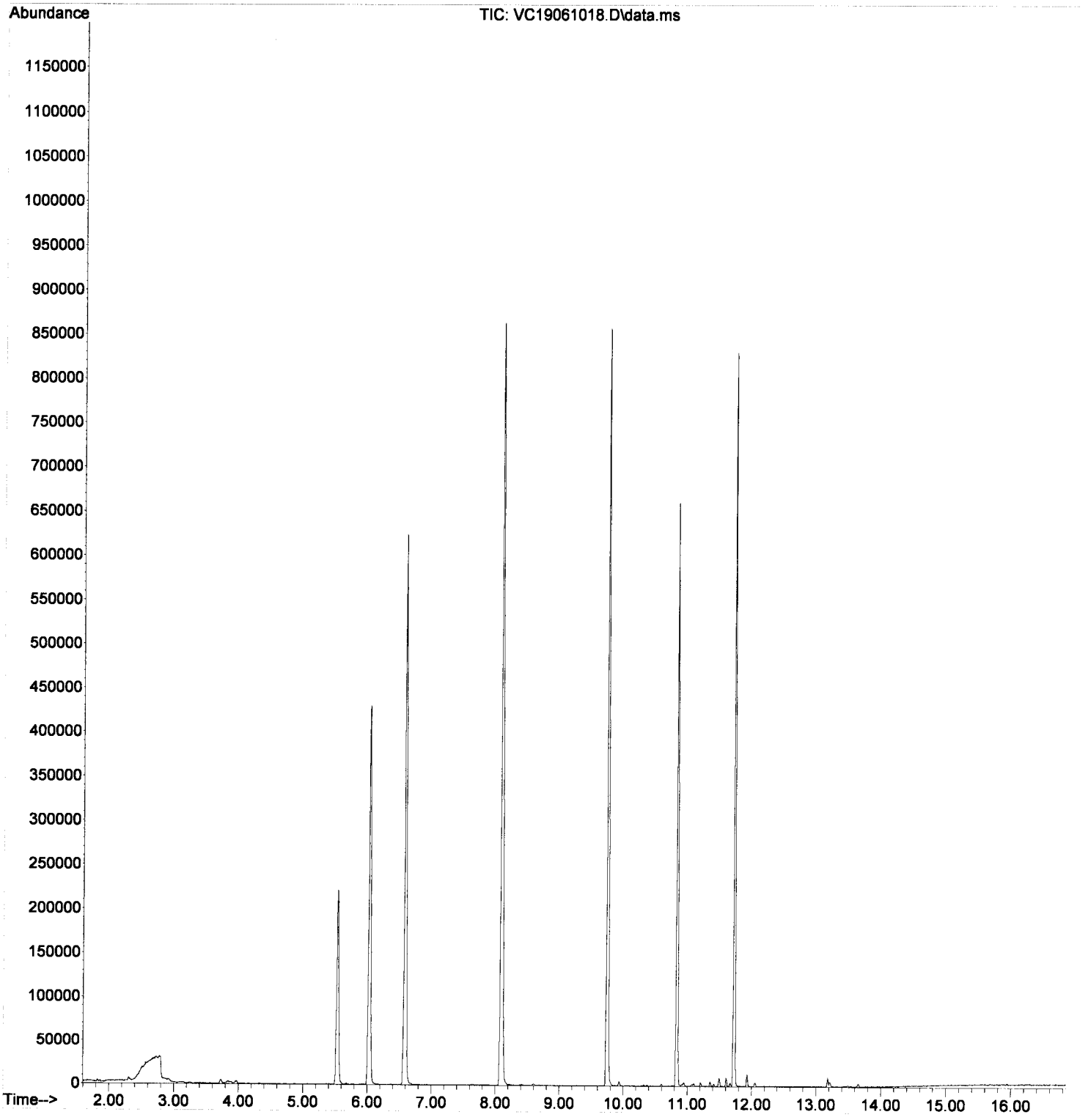
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	337813	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	487695	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	189476	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.533	111	150601	48.91	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	569848	50.06	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	680810	49.97	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.832	174	169965	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	713	0.32	ug/L		91
3) Chloromethane	1.859	50	1375	0.39	ug/L		91
5) Bromomethane	2.303	96	2495	1.82	ug/L		81
6) Chloroethane	2.528	64	139	0.15	ug/L	#	1
7) Trichlorofluoromethane	2.570	101	289	0.22	ug/L	#	67
8) 1,1-Dichloroethene	3.087	61	149	0.09	ug/L	#	62
9) Carbon Disulfide	3.112	76	1449	0.63	ug/L		92
10) Freon 113	3.148	101	557	0.28	ug/L	#	61
11) Iodomethane	3.252	142	1328	2.51	ug/L	#	89
12) Methylene Chloride	3.726	84	2527	1.11	ug/L		81
13) Acetone	3.842	43	4543	3.81	ug/L		96
14) t-1,2-Dichloroethene	3.884	61	637	0.21	ug/L		97
27) 1,1-Dichloropropene	5.673	75	884	0.26	ug/L	#	62
33) Trichloroethene (TCE)	6.555	130	549	0.19	ug/L	#	61
40) Toluene	8.155	91	1460	0.12	ug/L		85
41) Tetrachloroethene (PCE)	8.599	166	799	0.31	ug/L		95
49) Chlorobenzene	9.761	112	819	0.11	ug/L	#	1
50) Ethylbenzene	9.791	91	1710	0.14	ug/L		85
52) m,p-Xylenes (2)	9.937	91	3038	0.35	ug/L		97
53) o-Xylene	10.327	91	1049	0.11	ug/L		67
54) Styrene	10.375	104	552	0.09	ug/L	#	55
56) Isopropylbenzene	10.600	105	1578	0.15	ug/L		90
59) Bromobenzene	10.917	156	392	0.15	ug/L	#	68
60) n-Propylbenzene	10.941	91	3324	0.29	ug/L		80
62) 2-Chlorotoluene	11.075	126	455	0.19	ug/L		96
63) 1,3,5-Trimethylbenzene	11.105	105	1778	0.23	ug/L		91
66) 4-Chlorotoluene	11.209	91	1722	0.25	ug/L		95
67) tert-Butylbenzene	11.361	91	1636	0.39	ug/L		81
68) 1,2,4-Trimethylbenzene	11.416	105	1958	0.25	ug/L		81
69) sec-Butylbenzene	11.495	105	5920	0.67	ug/L		95
70) 4-Isopropyltoluene	11.604	119	4834	0.66	ug/L		92
71) 1,3-Dichlorobenzene	11.671	146	1271	0.29	ug/L		96
72) 1,4-Dichlorobenzene	11.738	146	1288	0.30	ug/L	#	66
73) n-Butylbenzene	11.933	91	6521	1.01	ug/L		93
74) 1,2-Dichlorobenzene	12.060	146	702	0.19	ug/L		85
76) Hexachlorobutadiene	13.180	223	971	1.76	ug/L		85
77) 1,2,4-Trichlorobenzene	13.210	180	1890	0.88	ug/L		98
78) Naphthalene	13.490	128	1207	0.17	ug/L		74
79) 1,2,3-Trichlorobenzene	13.654	180	1474	0.73	ug/L	#	65

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061018.D
Acq On : 10 Jun 2019 10:29 pm
Operator : TB
Sample : 9F10052-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	341619	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	483629	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	193113	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	164834	52.94	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.582	114	572292	49.72	ug/L	0.00
39) Toluene-d8 (S)	8.091	98	680254	50.35	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	172314	49.41	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	57570	25.53	ug/L	99
3) Chloromethane	1.856	50	83980	23.57	ug/L	99
4) Vinyl Chloride	1.947	62	53711	22.24	ug/L	99
5) Bromomethane	2.300	96	33550	24.26	ug/L	91
6) Chloroethane	2.440	64	25259	27.57	ug/L	86
7) Trichlorofluoromethane	2.567	101	32670	24.07	ug/L	97
8) 1,1-Dichloroethene	3.097	61	68720	25.48	ug/L	85
9) Carbon Disulfide	3.103	76	91821	25.62	ug/L	97
10) Freon 113	3.145	101	43629	21.86	ug/L	84
11) Iodomethane	3.243	142	23222	21.34	ug/L	95
12) Methylene Chloride	3.723	84	50448	22.00	ug/L	92
13) Acetone	3.833	43	47883	39.68	ug/L	95
14) t-1,2-Dichloroethene	3.888	61	74238	23.93	ug/L	98
15) n-Hexane	3.961	86	11831	21.39	ug/L	94
16) Methyl-tert-butyl-ether	4.034	73	181585	20.56	ug/L	99
17) 1,1-Dichloroethane	4.514	63	91485	23.77	ug/L	98
18) Acrylonitrile	4.593	53	30692	19.57	ug/L	99
19) c-1,2-Dichloroethene	5.062	61	73092	20.73	ug/L	94
20) 2,2-Dichloropropane	5.171	77	56332	19.37	ug/L	91
21) Bromochloromethane	5.262	49	42350	21.01	ug/L	91
22) Chloroform	5.348	83	90233	20.36	ug/L	99
23) Carbon Tetrachloride	5.475	117	52388	22.89	ug/L	99
24) Tetrahydrofuran	5.530	42	32307	19.63	ug/L	92
25) 1,1,1-Trichloroethane	5.548	97	75216	21.92	ug/L	99
27) 1,1-Dichloropropene	5.676	75	72056	20.67	ug/L	98
28) 2-Butanone (MEK)	5.688	43	82694	39.64	ug/L	99
29) Benzene	5.925	78	229142	20.30	ug/L	99
30) 1,2-Dichloroethane (EDC)	6.144	62	72880	20.65	ug/L	99
31) iso-Butyl Alcohol	6.266	43	112378	514.25	ug/L	84
33) Trichloroethene (TCE)	6.546	130	59419	20.16	ug/L	96
34) Dibromomethane	6.990	93	31103	19.94	ug/L	88
35) 1,2-Dichloropropane	7.106	63	59265	19.86	ug/L	94
36) Bromodichloromethane	7.179	83	52088	20.87	ug/L	98
38) c-1,3-Dichloropropene	7.884	75	74237	21.99	ug/L	98
40) Toluene	8.152	91	231399	19.19	ug/L	99
41) Tetrachloroethene (PCE)	8.596	166	51592	19.92	ug/L	96
42) 4-Methyl-2-Pentanone (...	8.614	43	133116	40.97	ug/L	98
43) t-1,3-Dichloropropene	8.645	75	66591	21.28	ug/L	99
44) 1,1,2-Trichloroethane	8.815	97	50183	20.35	ug/L	99
45) Dibromochloromethane	9.004	129	36259	18.11	ug/L	94
46) 1,3-Dichloropropane	9.107	76	92087	20.30	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	49980	21.67	ug/L	99
48) 2-Hexanone	9.496	43	96190	43.51	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

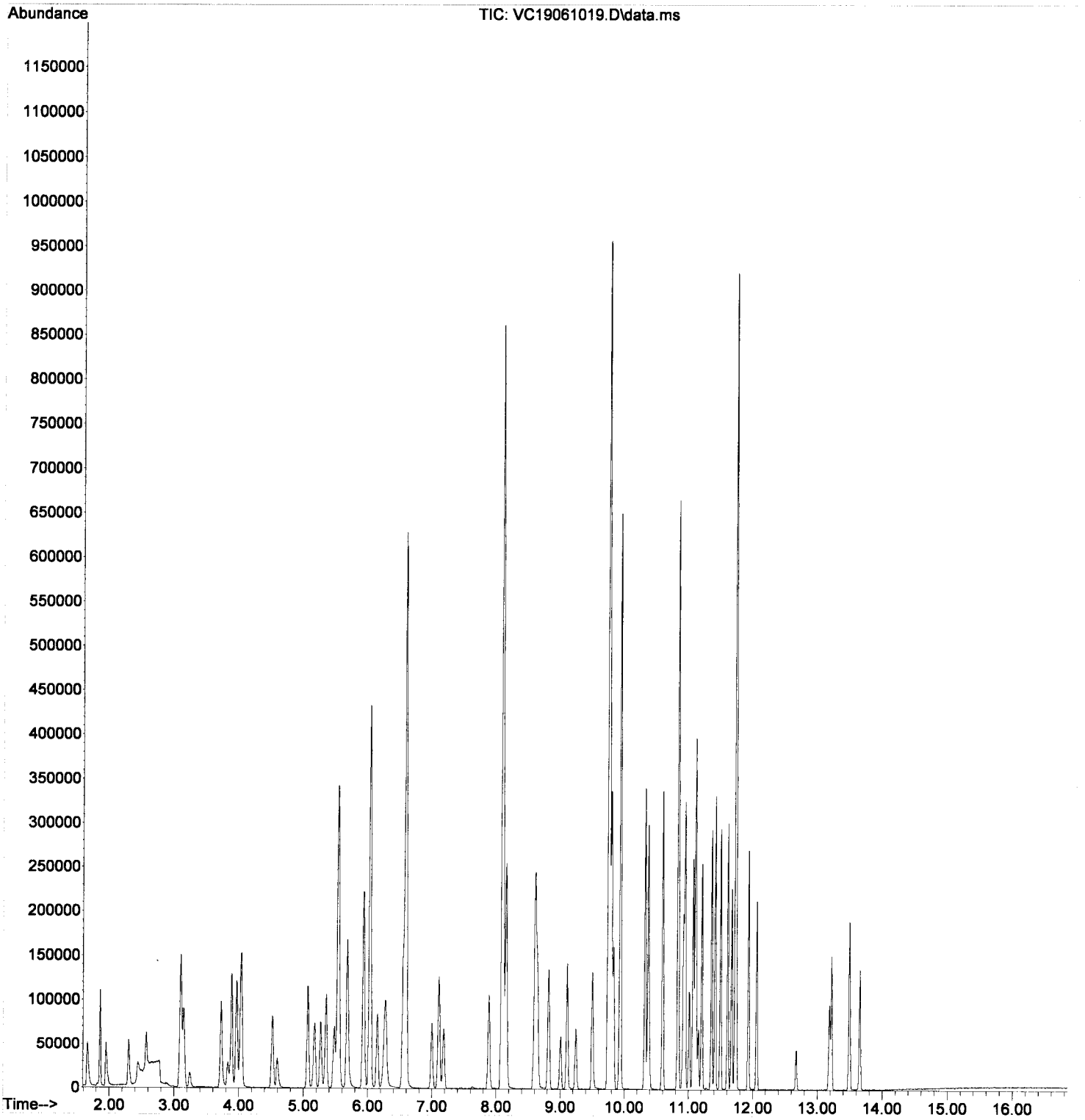
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	140507	19.21	ug/L		98
50) Ethylbenzene	9.795	91	239051	19.67	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.825	131	41584	21.78	ug/L		96
52) m,p-Xylenes (2)	9.928	91	349092	40.00	ug/L		99
53) o-Xylene	10.318	91	177808	19.59	ug/L		99
54) Styrene	10.366	104	132223	21.57	ug/L		96
55) Bromoform	10.385	173	18971	18.00	ug/L		96
56) Isopropylbenzene	10.591	105	205346	19.98	ug/L		99
59) Bromobenzene	10.914	156	51843	19.69	ug/L		90
60) n-Propylbenzene	10.938	91	220055	18.83	ug/L		96
61) 1,1,2,2-Tetrachloroethane	11.005	83	50282	20.12	ug/L		93
62) 2-Chlorotoluene	11.066	126	46788	19.55	ug/L		87
63) 1,3,5-Trimethylbenzene	11.102	105	156130	19.51	ug/L		98
64) 1,2,3-Trichloropropane	11.115	110	19074	18.69	ug/L	#	79
65) t-1,4-Dichloro-2-butene	11.151	88	5891	18.01	ug/L	#	88
66) 4-Chlorotoluene	11.206	91	133363	19.12	ug/L		98
67) tert-Butylbenzene	11.358	91	83952	19.81	ug/L		97
68) 1,2,4-Trimethylbenzene	11.413	105	155116	19.05	ug/L		99
69) sec-Butylbenzene	11.498	105	182212	20.26	ug/L		97
70) 4-Isopropyltoluene	11.607	119	147599	19.64	ug/L		99
71) 1,3-Dichlorobenzene	11.668	146	81703	18.53	ug/L		97
72) 1,4-Dichlorobenzene	11.735	146	80719	18.29	ug/L		99
73) n-Butylbenzene	11.930	91	124537	19.00	ug/L		97
74) 1,2-Dichlorobenzene	12.058	146	73553	19.32	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	10115	17.70	ug/L		88
76) Hexachlorobutadiene	13.183	223	11322	20.17	ug/L		91
77) 1,2,4-Trichlorobenzene	13.213	180	43772	20.02	ug/L		96
78) Naphthalene	13.493	128	150529	20.92	ug/L		99
79) 1,2,3-Trichlorobenzene	13.651	180	41572	20.13	ug/L		99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061020.D
Acq On : 10 Jun 2019 11:24 pm
Operator : TB
Sample : 9F10052-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

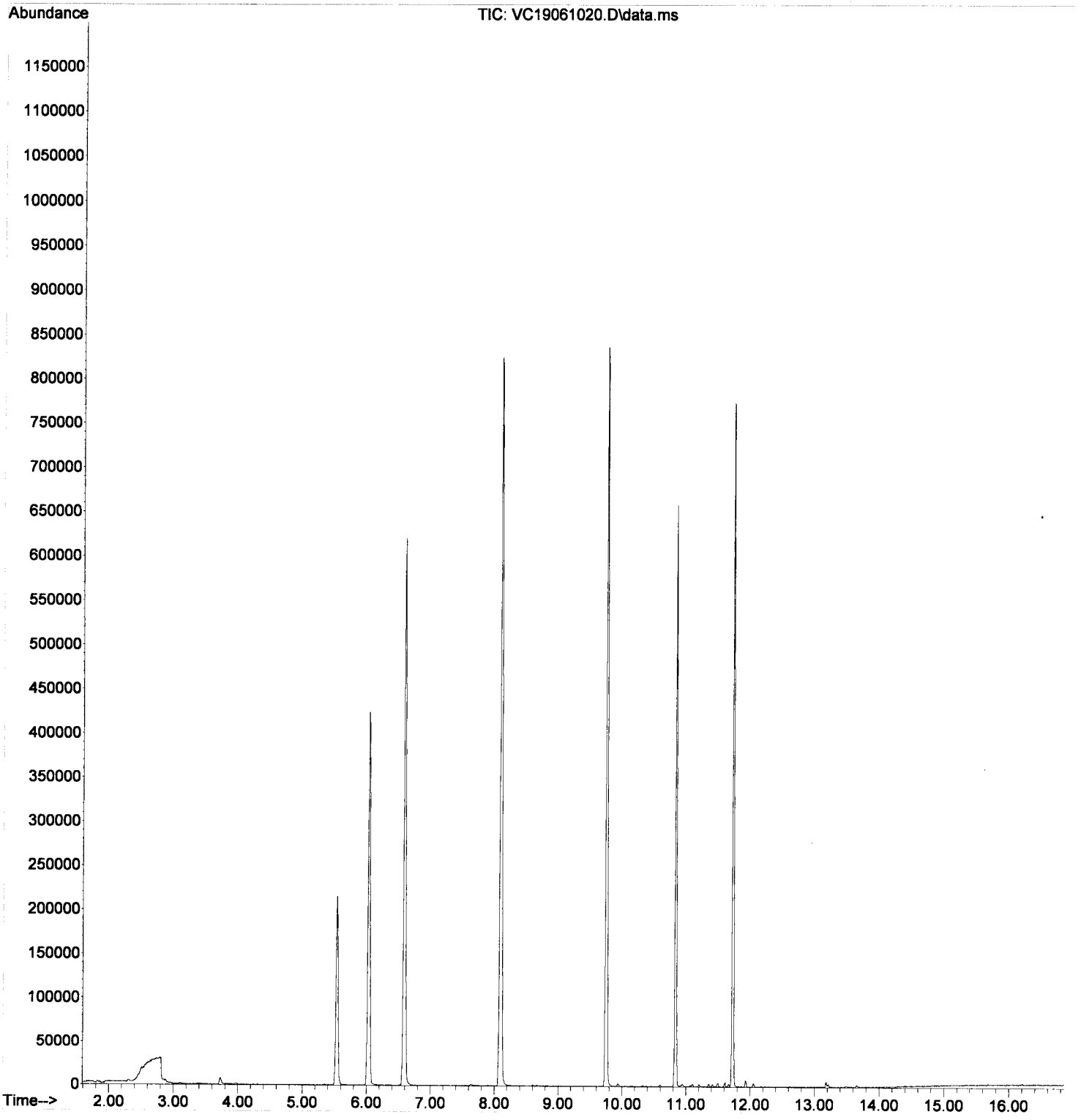
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	335442	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	476735	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	185456	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.529	111	149897	49.03	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	565029	49.99	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	670348	50.33	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	167144	49.91	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.666	85	200	0.09	ug/L	#	50
3) Chloromethane	1.861	50	988	0.28	ug/L		86
5) Bromomethane	2.305	96	1743	1.28	ug/L		93
6) Chloroethane	2.512	64	108	0.12	ug/L	#	1
9) Carbon Disulfide	3.108	76	1075	0.51	ug/L		79
10) Freon 113	3.151	101	230	0.12	ug/L	#	80
11) Iodomethane	3.254	142	635	1.90	ug/L	#	47
12) Methylene Chloride	3.735	84	4341	1.93	ug/L		94
13) Acetone	3.863	43	922	0.78	ug/L	#	42
14) t-1,2-Dichloroethene	3.899	61	367	0.12	ug/L		85
27) 1,1-Dichloropropene	5.682	75	519	0.15	ug/L	#	61
41) Tetrachloroethene (PCE)	8.608	166	475	0.19	ug/L	#	67
49) Chlorobenzene	9.764	112	737	0.10	ug/L	#	1
50) Ethylbenzene	9.800	91	1229	0.10	ug/L		74
52) m,p-Xylenes (2)	9.934	91	2038	0.24	ug/L		98
53) o-Xylene	10.323	91	742	0.08	ug/L		69
56) Isopropylbenzene	10.597	105	1561	0.15	ug/L		96
59) Bromobenzene	10.925	156	223	0.09	ug/L		84
60) n-Propylbenzene	10.944	91	2432	0.22	ug/L		90
62) 2-Chlorotoluene	11.078	126	231	0.10	ug/L	#	44
63) 1,3,5-Trimethylbenzene	11.102	105	1726	0.22	ug/L		95
66) 4-Chlorotoluene	11.205	91	1008	0.15	ug/L		89
67) tert-Butylbenzene	11.363	91	1007	0.25	ug/L	#	61
68) 1,2,4-Trimethylbenzene	11.418	105	1547	0.20	ug/L		85
69) sec-Butylbenzene	11.497	105	3272	0.38	ug/L		85
70) 4-Isopropyltoluene	11.607	119	2567	0.36	ug/L		94
71) 1,3-Dichlorobenzene	11.668	146	883	0.21	ug/L		78
72) 1,4-Dichlorobenzene	11.735	146	952	0.22	ug/L	#	1
73) n-Butylbenzene	11.929	91	3707	0.59	ug/L		91
74) 1,2-Dichlorobenzene	12.057	146	570	0.16	ug/L		74
76) Hexachlorobutadiene	13.182	223	765	1.42	ug/L	#	84
77) 1,2,4-Trichlorobenzene	13.213	180	1067	0.51	ug/L	#	65
78) Naphthalene	13.505	128	1314	0.19	ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	922	0.46	ug/L		78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061020.D
Acq On : 10 Jun 2019 11:24 pm
Operator : TB
Sample : 9F10052-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

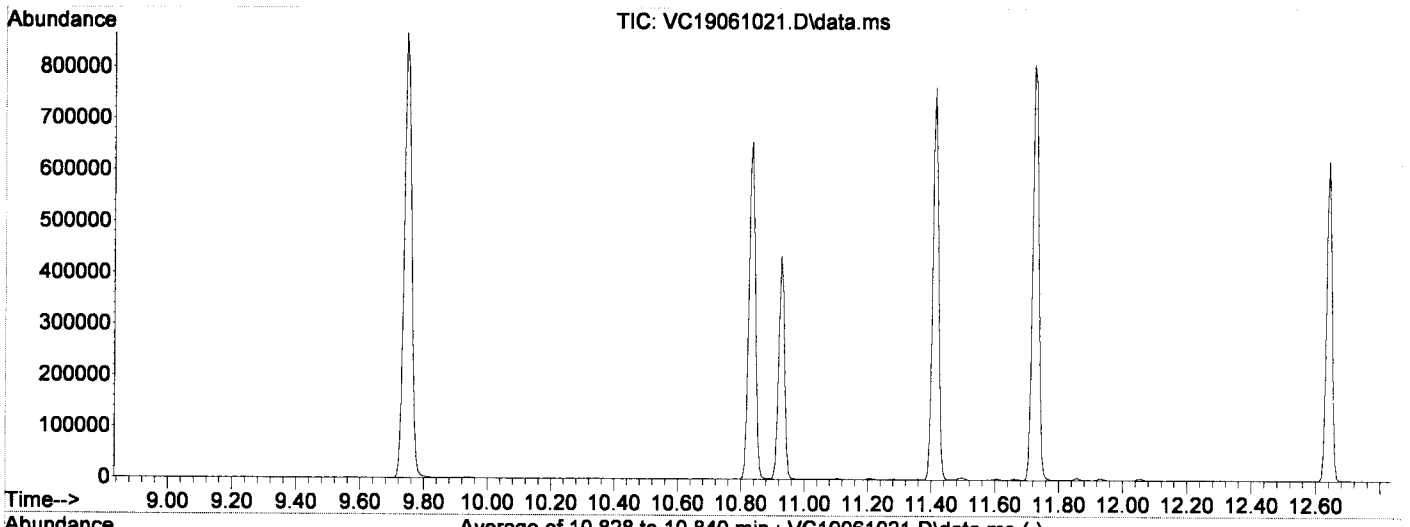
Quant Time: Jun 11 09:55:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

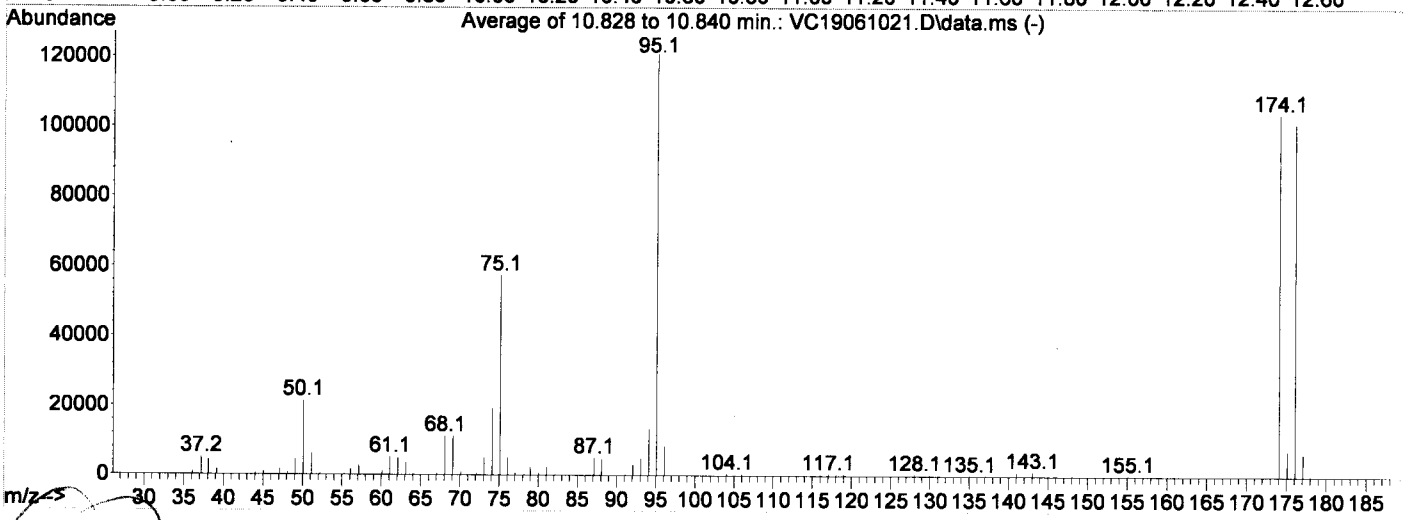


Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019





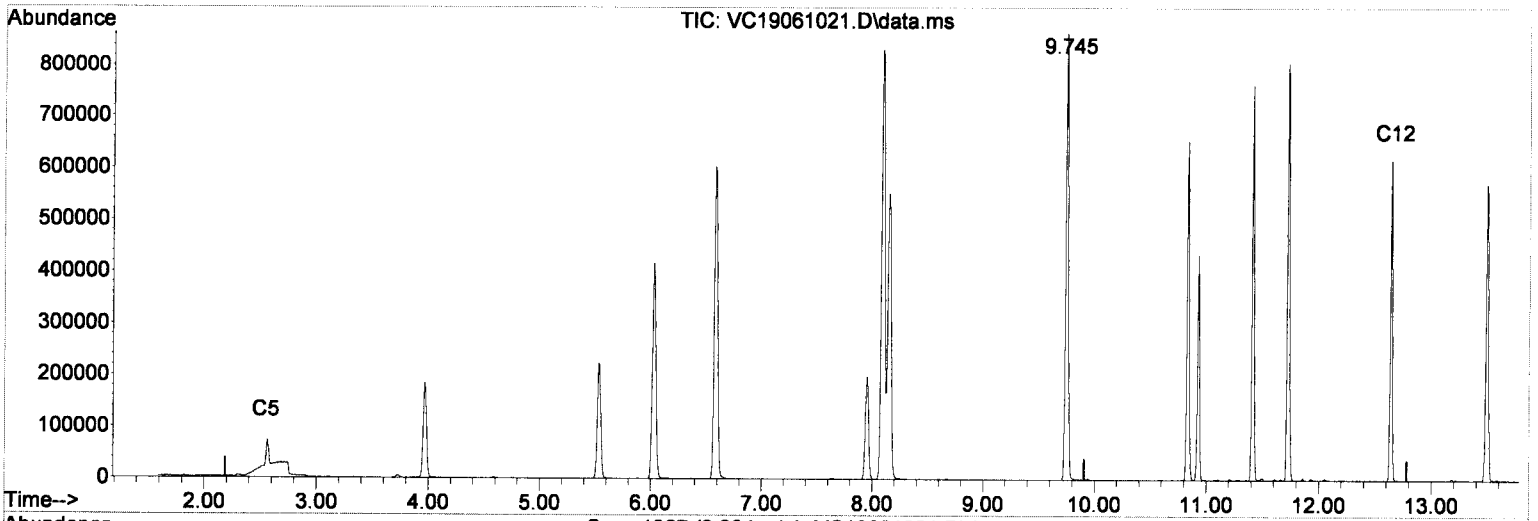
AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

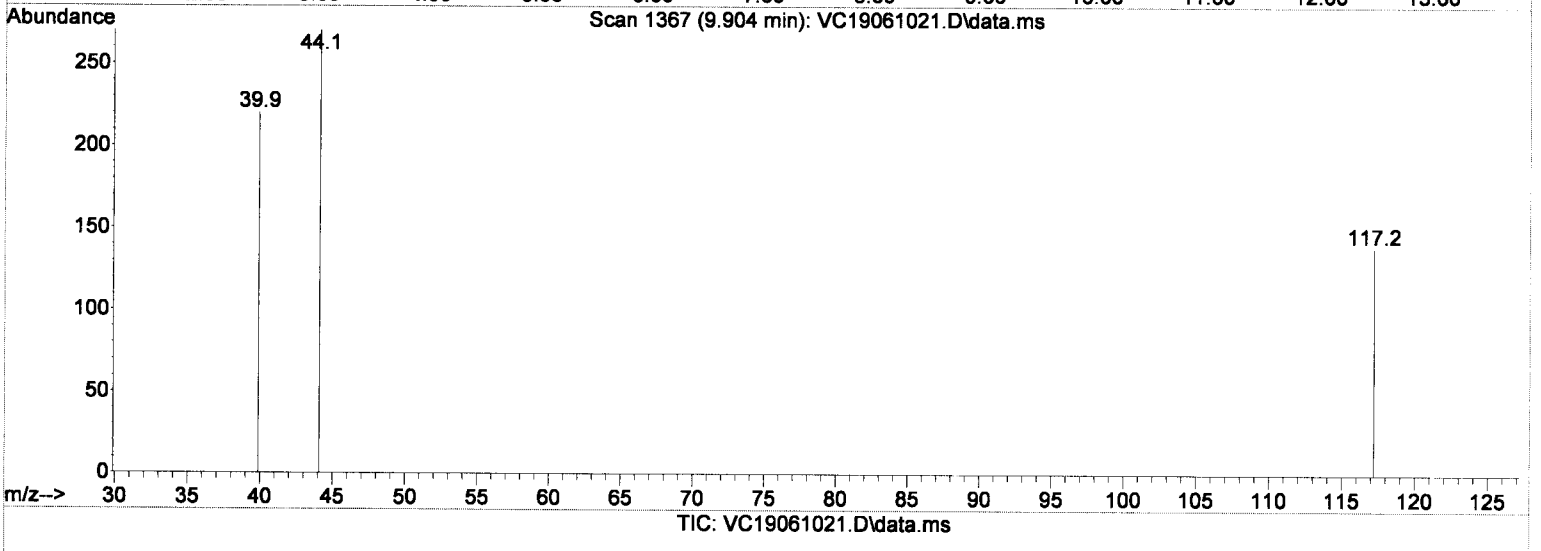
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.7	21363	PASS
75	95	30	60	47.5	57501	PASS
95	95	100	100	100.0	120962	PASS
96	95	5	9	6.9	8371	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	85.9	103960	PASS
175	174	5	9	7.1	7384	PASS
176	174	95	101	97.5	101341	PASS
177	176	5	9	6.6	6672	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 401.46 ug/L m

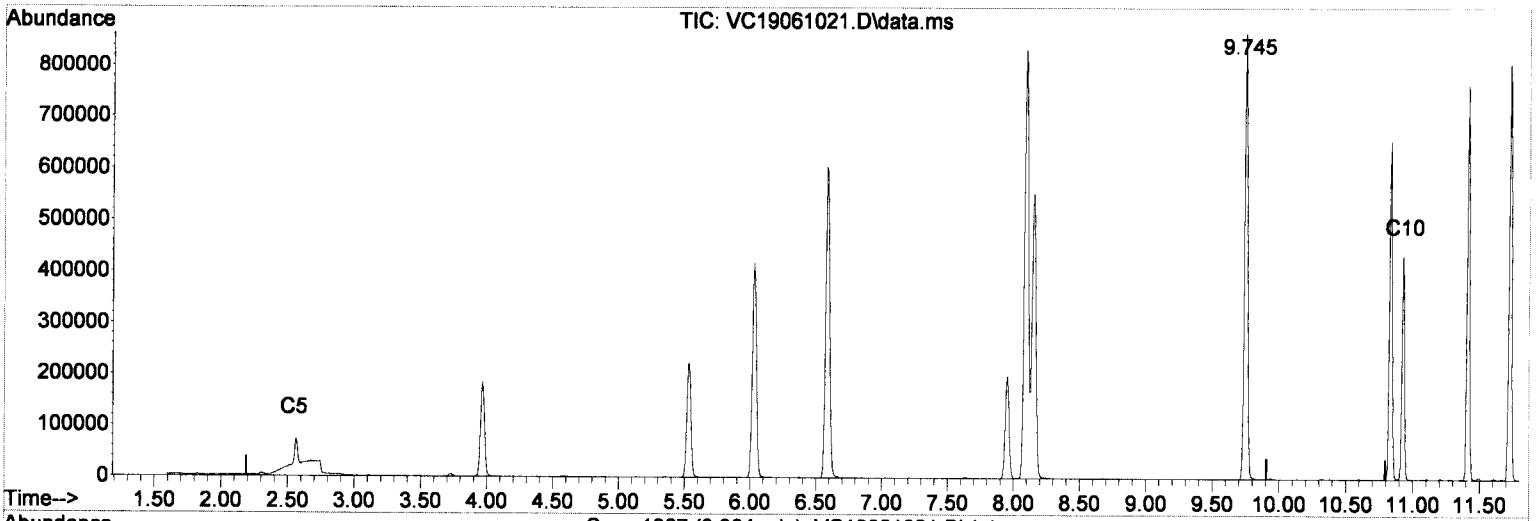
response 4921345

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.75#
0.00	0.00	0.56#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



(6) TPHg (C5-C9) (H)

9.906min (0.000) 231.50 ug/L m

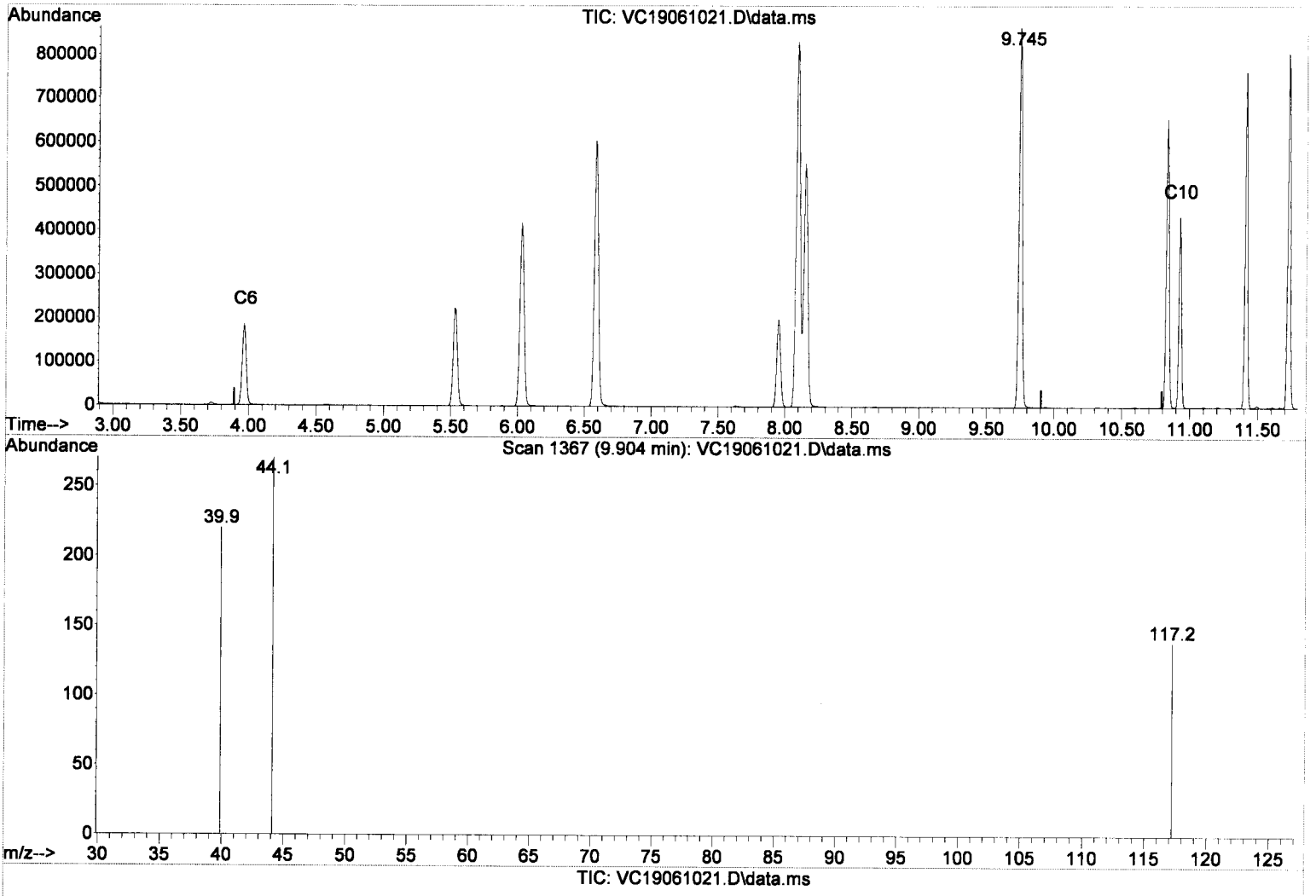
response 2619135

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.41#
0.00	0.00	1.05#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



(7) TPHg (C6-C10) (H)

9.906min (0.000) 282.35 ug/L m

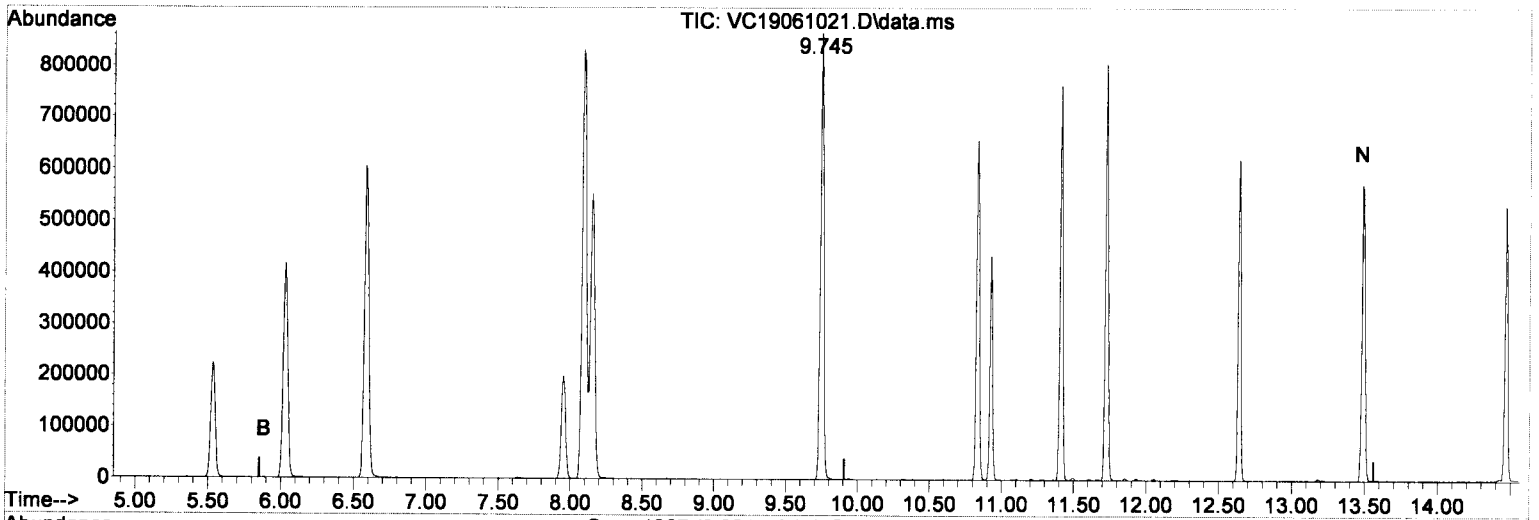
response 2429560

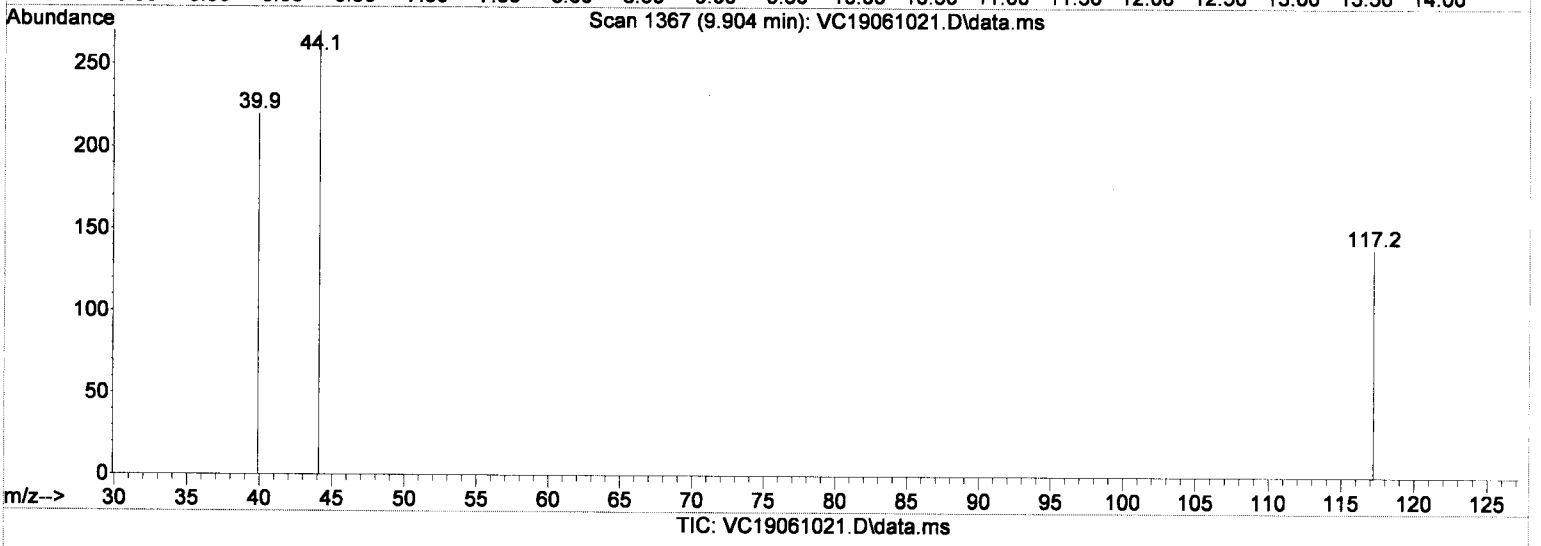
Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.52#
0.00	0.00	1.13#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





TIC: VC19061021.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 663.10 ug/L m

response 4738845

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.78#
0.00	0.00	0.58#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

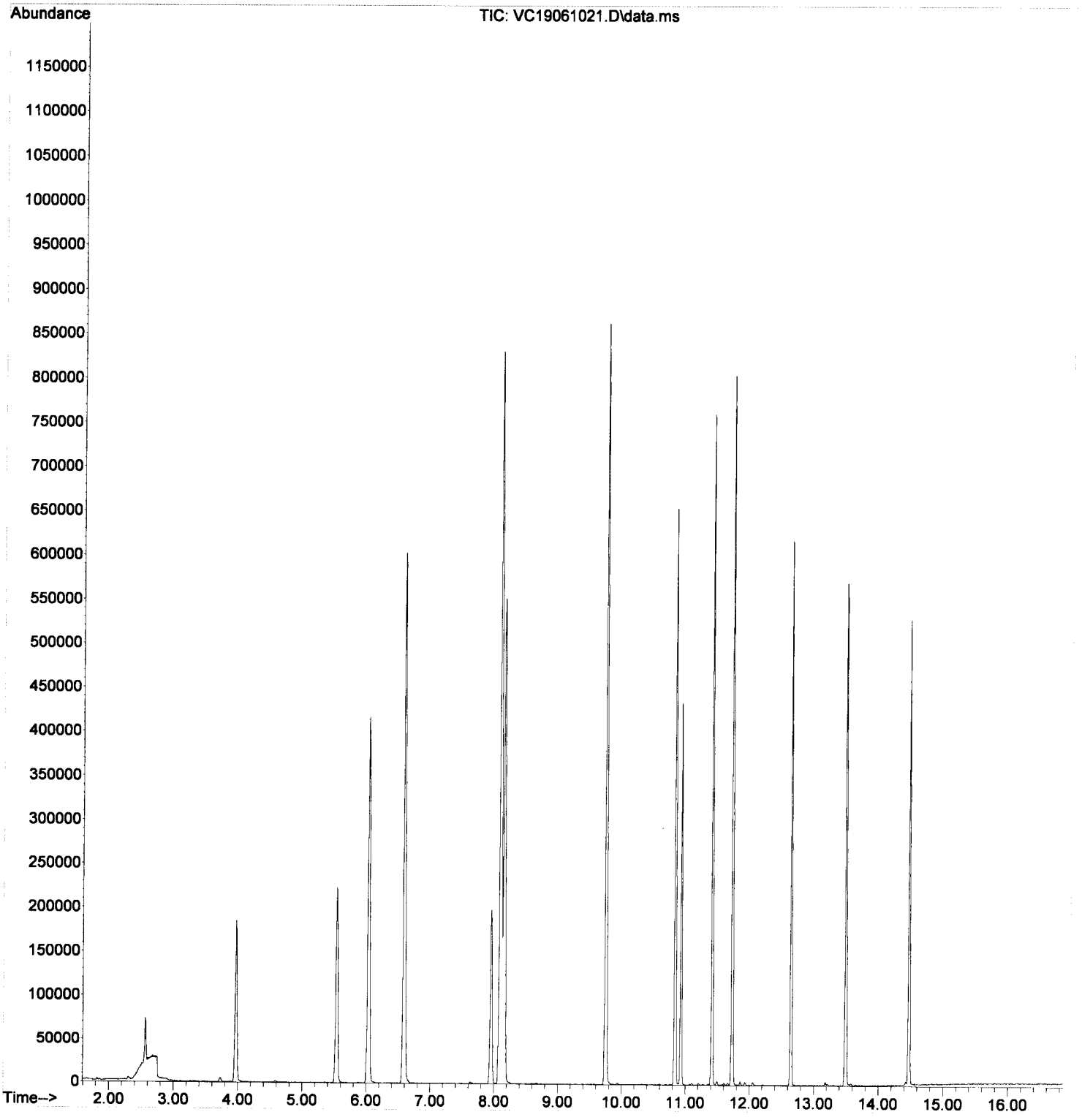
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	330024	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1283217	48.48	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	942984	50.54	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1423332	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1748163	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1106418	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	4921345m	401.46	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2619135m	231.50	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2429560m	282.35	ug/L	
8) NWTPH-Gx	9.906	TIC	4738845m	663.10	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061022.D
Acq On : 11 Jun 2019 12:19 am
Operator : TB
Sample : 9F10052-IBL7
Misc : 1X 5mL DI+MeOH
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

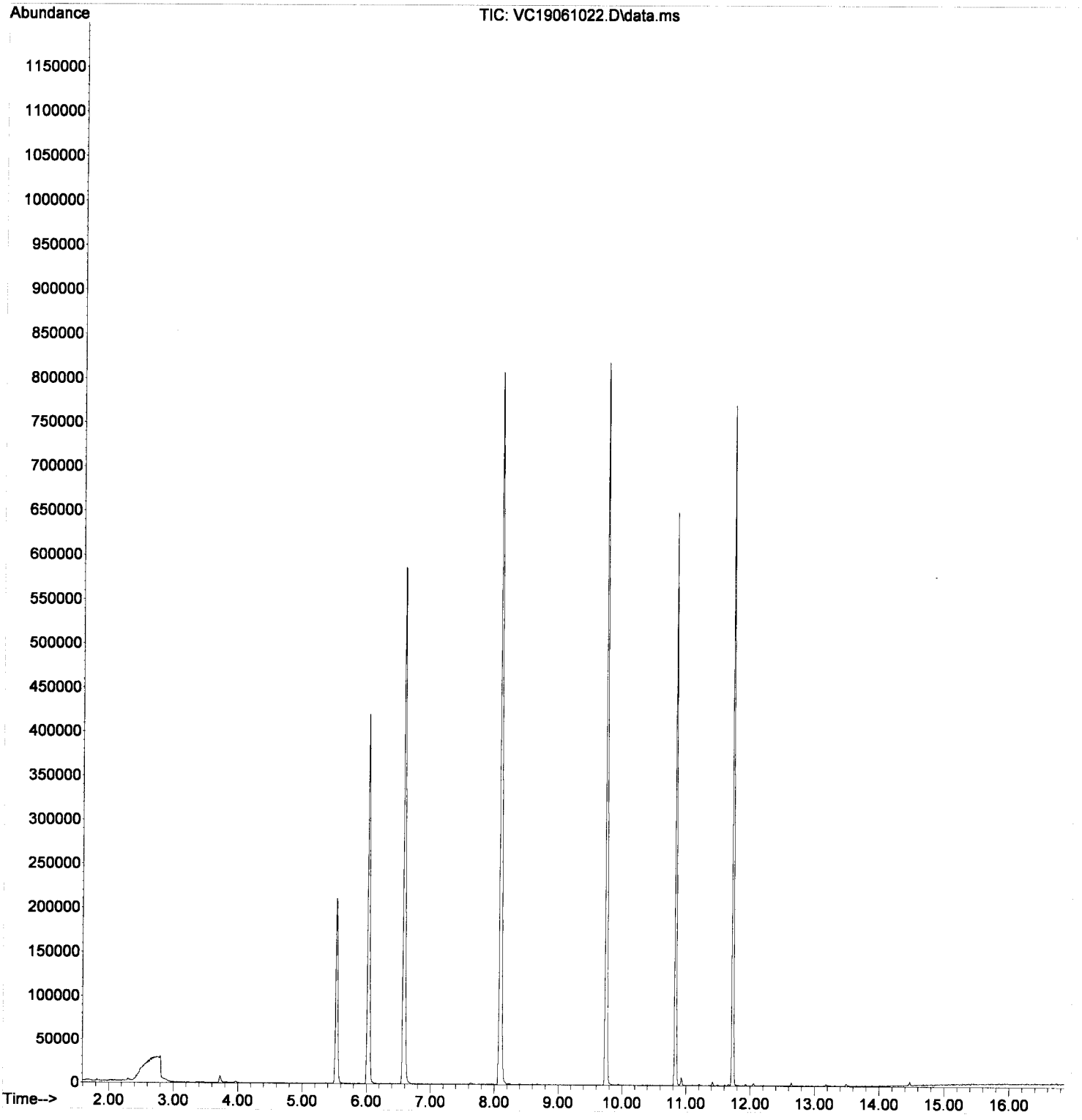
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	328097	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1267692	48.17	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	909878	49.06	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1392967	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1739319	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1073462	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	676552m	26.62	ug/L	
6) TPHg (C5-C9)	9.906	TIC	655004m	23.79	ug/L	
7) TPHg (C6-C10)	9.906	TIC	458821m	19.88	ug/L	
8) NWTPH-Gx	9.906	TIC	20460m	36.59	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061022.D
Acq On : 11 Jun 2019 12:19 am
Operator : TB
Sample : 9F10052-IBL7
Misc : 1X 5mL DI+MeOH
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061023.D
Acq On : 11 Jun 2019 12:46 am
Operator : TB
Sample : 9F10052-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

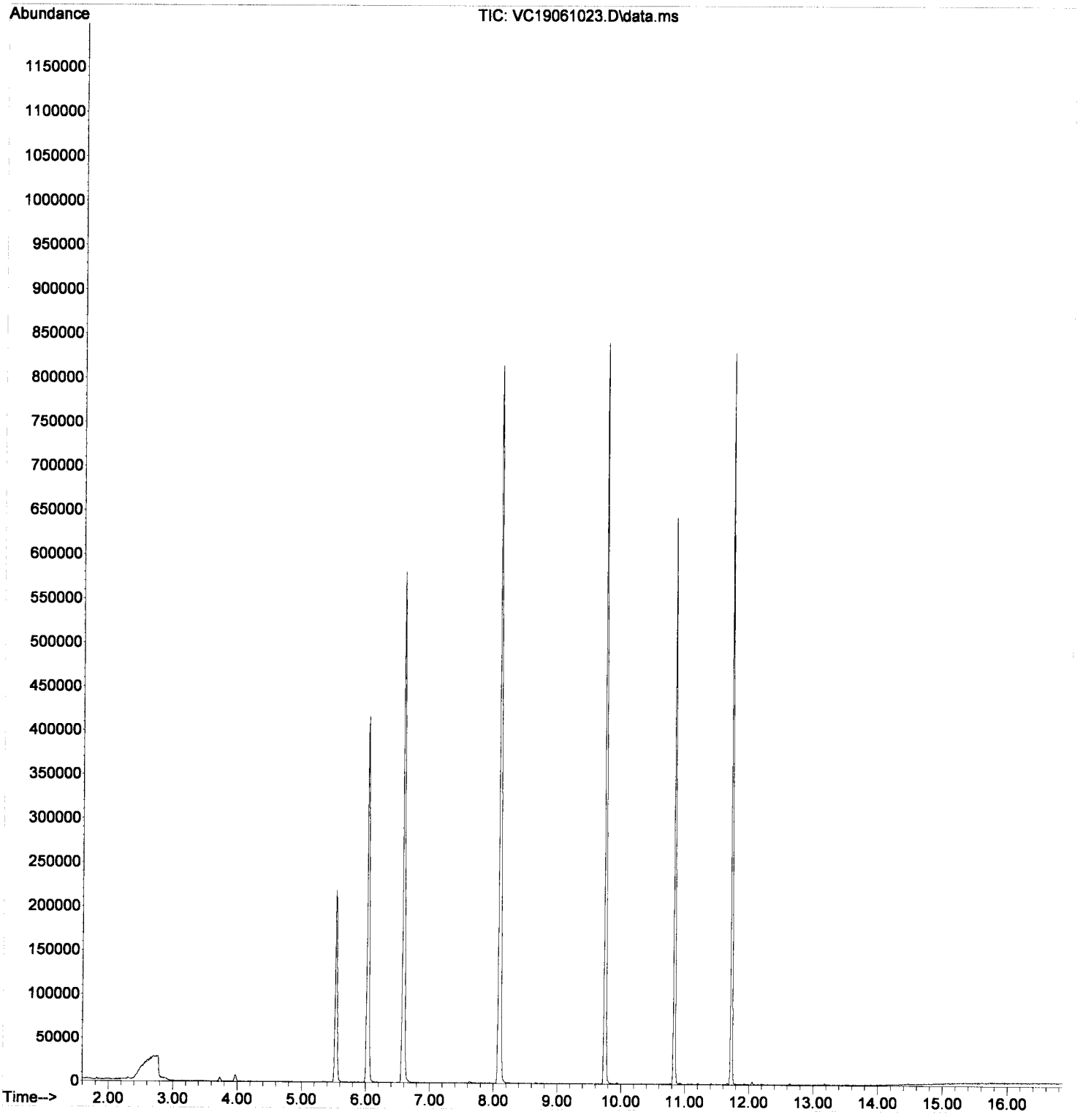
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	320770	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1239516	48.18	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	911769	50.28	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1371925	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1699518	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1073657	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	677291m	28.06	ug/L	
6) TPHg (C5-C9)	9.906	TIC	677291m	27.81	ug/L	
7) TPHg (C6-C10)	9.906	TIC	501867m	27.18	ug/L	
8) NWTPH-Gx	9.906	TIC	18473m	36.38	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061023.D
Acq On : 11 Jun 2019 12:46 am
Operator : TB
Sample : 9F10052-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

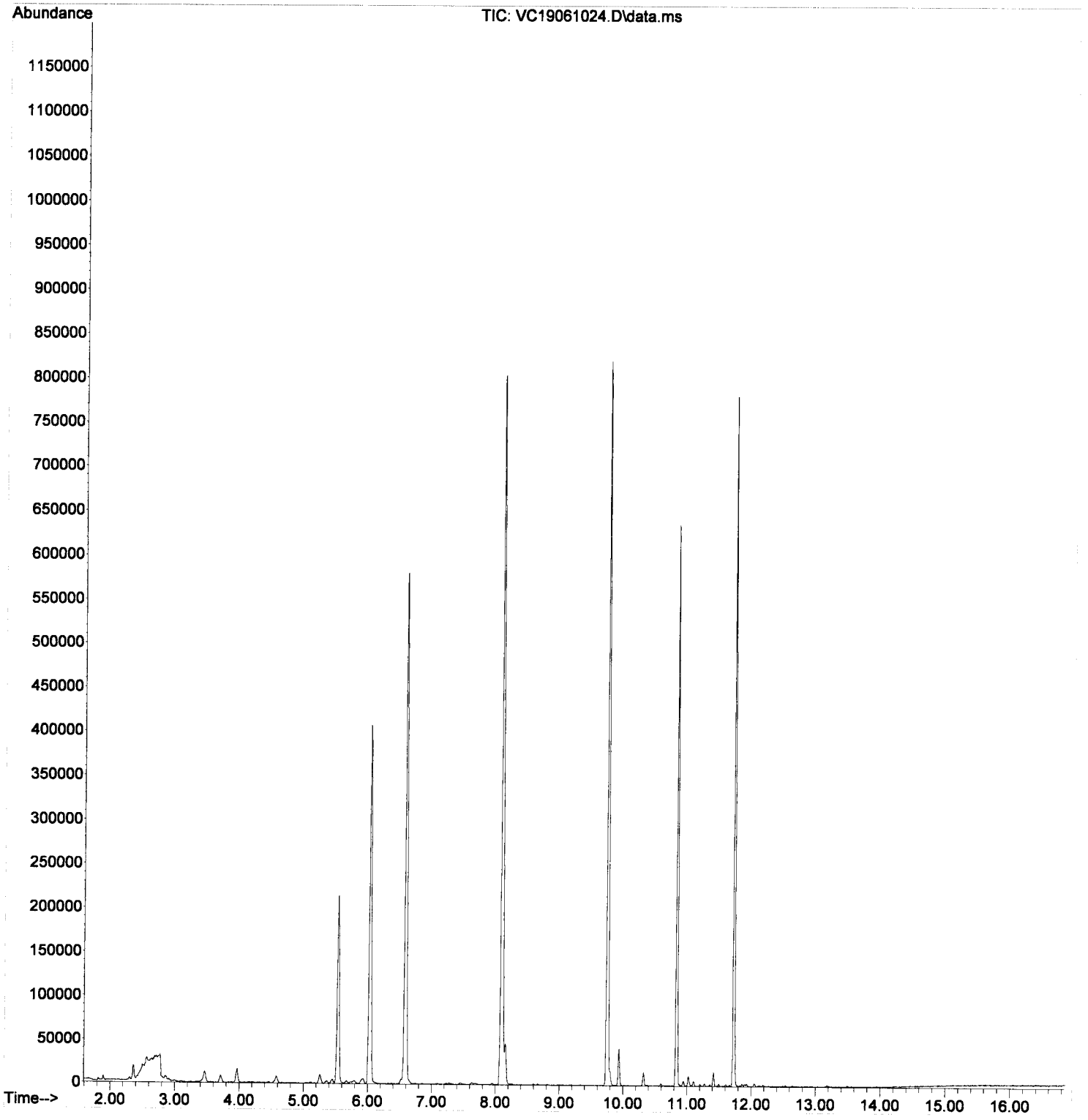
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	321925	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.587	TIC	1260925	42.03	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	897751	40.06	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1403305	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1722435	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1059712	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	916566m	17.31	ug/L	
6) TPHg (C5-C9)	9.906	TIC	853320m	18.92	ug/L	
7) TPHg (C6-C10)	9.906	TIC	681199m	25.47	ug/L	
8) NWTPH-Gx	9.906	TIC	166635m	30.36	ug/L	
9) Benzene (NR)	0.000		0	N.D.		
11) Toluene (NR)	8.151	91	38689	No Calib	#	
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061025.D
Acq On : 11 Jun 2019 1:41 am
Operator : TB
Sample : 9F10052-CALD
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

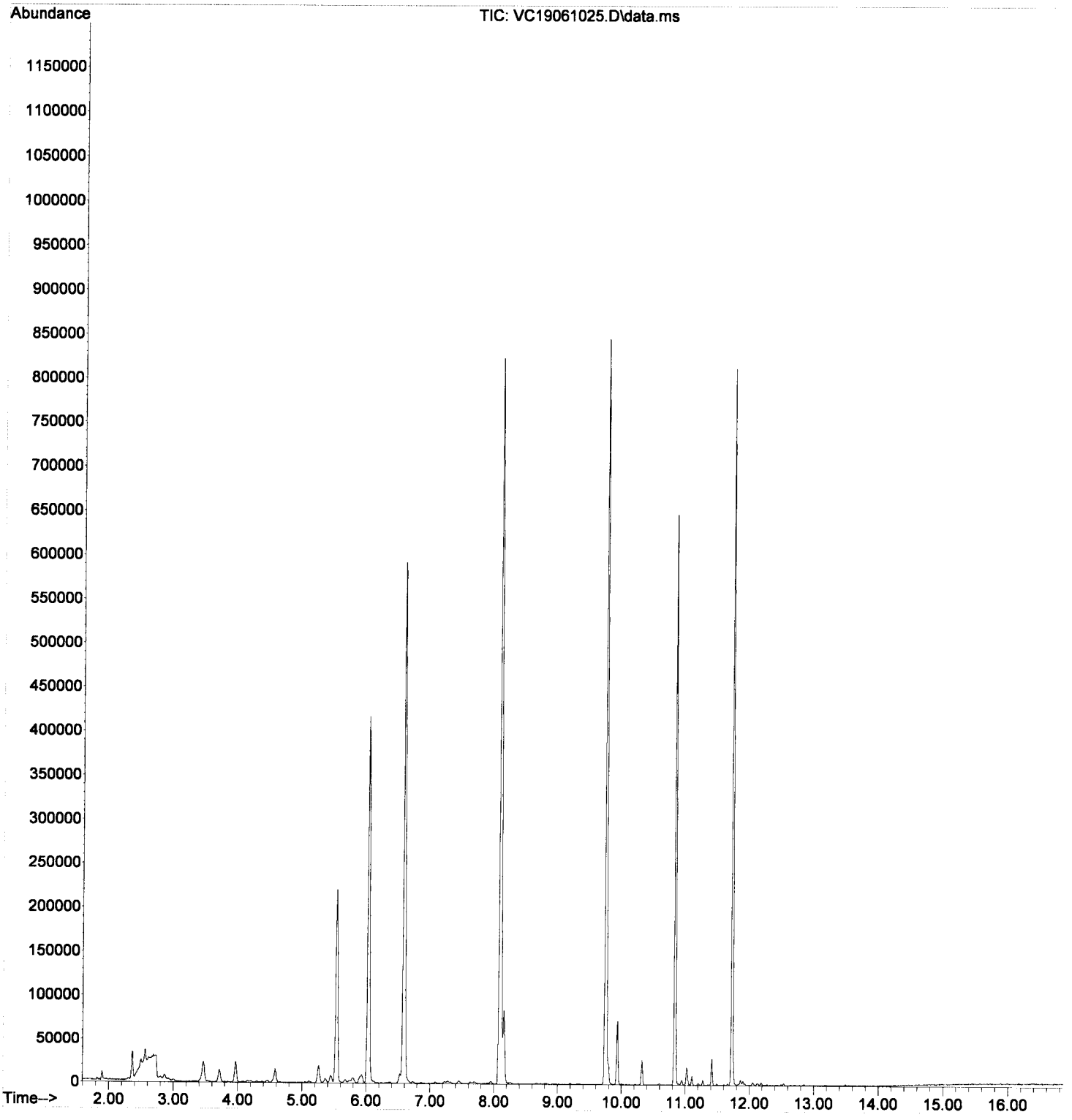
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	329041	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1276639	41.63	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	939798	41.03	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1453589	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1760697	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1100808	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1526302m	57.47	ug/L	
6) TPHg (C5-C9)	9.906	TIC	1406798m	61.81	ug/L	
7) TPHg (C6-C10)	9.906	TIC	1044704m	60.93	ug/L	
8) NWTPH-Gx	9.906	TIC	491579m	63.94	ug/L	
9) Benzene (NR)	5.932	78	8168	No Calib	#	
11) Toluene (NR)	8.153	91	71090	No Calib		
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061025.D
Acq On : 11 Jun 2019 1:41 am
Operator : TB
Sample : 9F10052-CALD
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061026.D
Acq On : 11 Jun 2019 2:09 am
Operator : TB
Sample : 9F10052-CALE
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:42 2019
Quant Method : C:\msdchem\1\METHODS\V~~C190611G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

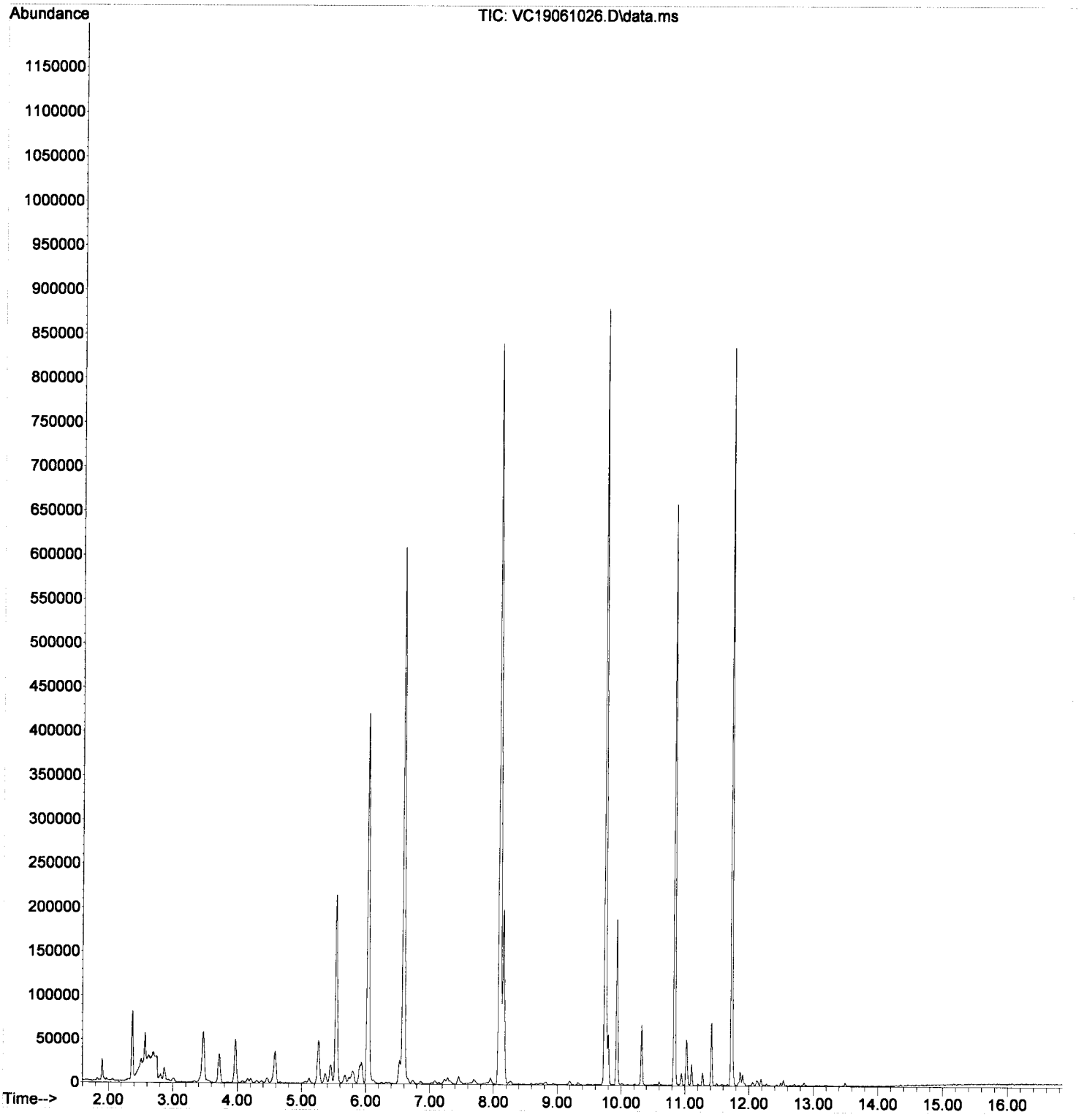
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	330828	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1318246	42.76	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	941925	40.90	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1458778	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1787721	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1113893	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	3170233m	168.32	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2815081m	173.67	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2166456m	173.95	ug/L	
8) NWTPH-Gx	9.906	TIC	1533196m	171.93	ug/L	
9) Benzene (NR)	5.934	78	20570	No Calib		#
11) Toluene (NR)	8.154	91	175866	No Calib		
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061026.D
Acq On : 11 Jun 2019 2:09 am
Operator : TB
Sample : 9F10052-CALE
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061027.D
Acq On : 11 Jun 2019 2:36 am
Operator : TB
Sample : 9F10052-CALF
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

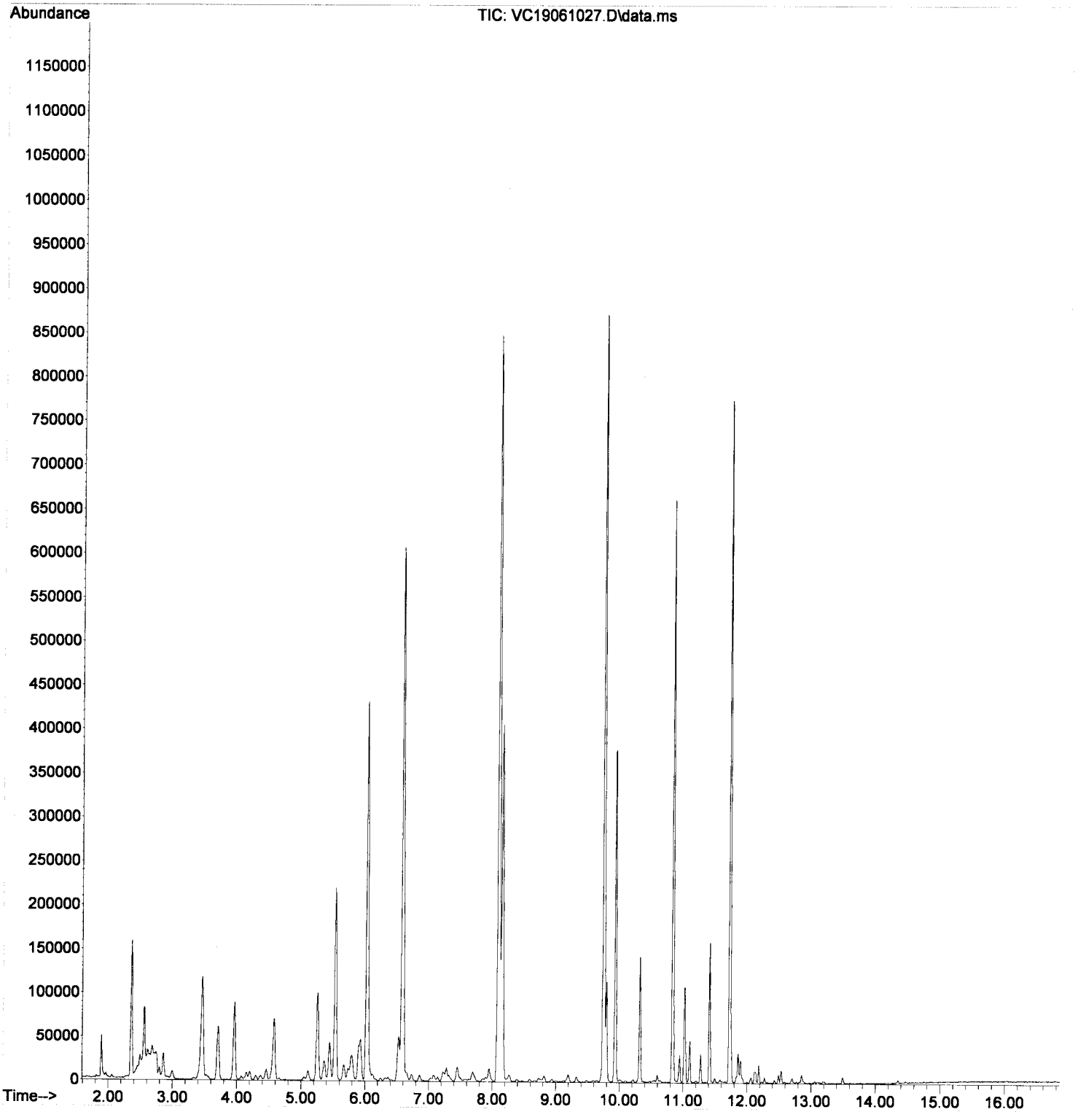
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	332005	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1331331	43.03	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	941979	40.75	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1457129	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1822057	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1132811	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6025085m	360.53	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5226519m	365.13	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4027123m	361.12	ug/L	
8) NWTPH-Gx	9.906	TIC	3291113m	353.32	ug/L	
9) Benzene (NR)	5.931	78	40295	No Calib		
11) Toluene (NR)	8.152	91	347613	No Calib		
13) Naphthalene (NR)	13.493	128	5707	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061027.D
Acq On : 11 Jun 2019 2:36 am
Operator : TB
Sample : 9F10052-CALF
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061028.D
Acq On : 11 Jun 2019 3:04 am
Operator : TB
Sample : 9F10052-CALG
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

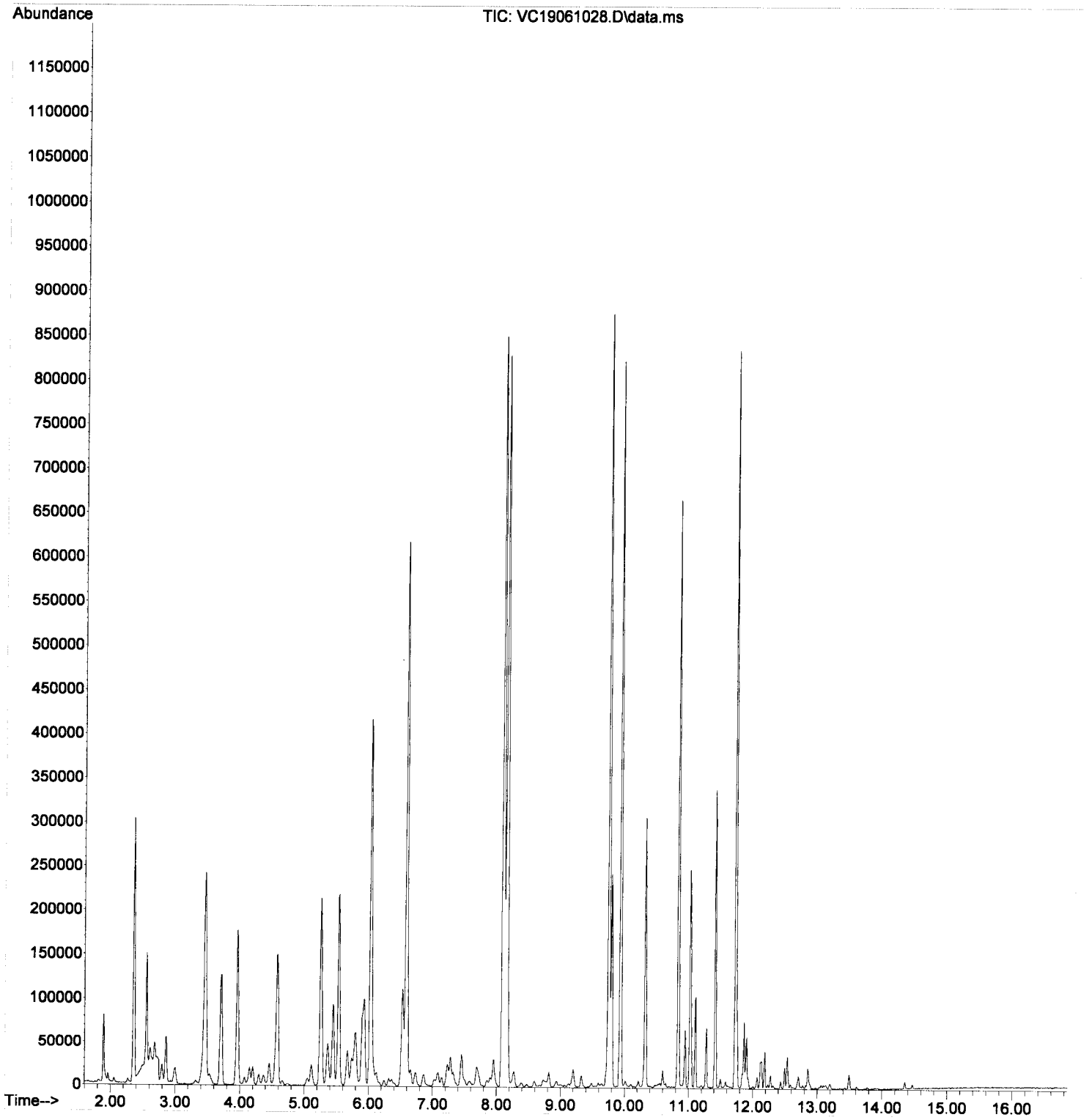
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.026	168	329683	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1319204	42.94	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.832	TIC	953942	41.56	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.749	TIC	1465931	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1839495	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1195649	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	12190355m	783.83	ug/L	
6) TPHg (C5-C9)	9.906	TIC	10370648m	782.57	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8174017m	786.66	ug/L	
8) NWTPH-Gx	9.906	TIC	7279463m	770.93	ug/L	
9) Benzene (NR)	5.928	78	86002	No Calib		
11) Toluene (NR)	8.149	91	719085	No Calib		
13) Naphthalene (NR)	13.490	128	12622	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061028.D
Acq On : 11 Jun 2019 3:04 am
Operator : TB
Sample : 9F10052-CALG
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:12:06 2019
Quant Method : C:\msdchem\1\METHODS\VC1906IIG.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	330361	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1401216	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	956477	41.59	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1476083m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1830588	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1186359m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	57282996m	3882.49	ug/L	
6) TPHg (C5-C9)	9.906	TIC	47604040m	3837.29	ug/L	
7) TPHg (C6-C10)	9.906	TIC	38346211m	3889.34	ug/L	
8) NWTPH-Gx	9.906	TIC	37780808m	3915.54	ug/L	
9) Benzene (NR)	5.925	78	392395	No Calib		
11) Toluene (NR)	8.152	91	2876625	No Calib		
13) Naphthalene (NR)	13.487	128	73674	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

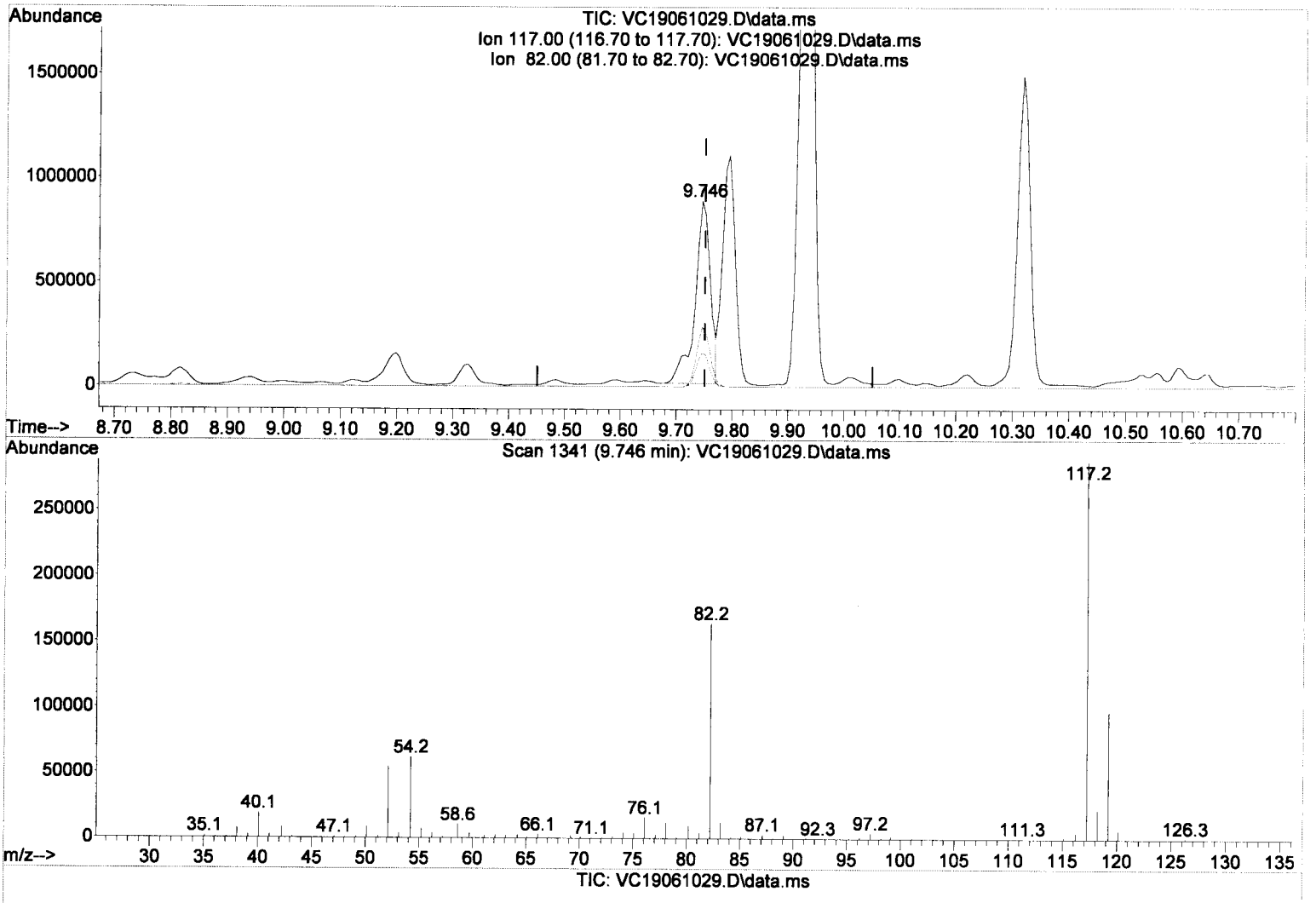
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	330361	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1401216	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	956477	41.59	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1682634	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1830588	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1573022	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	56689782m	3841.34	ug/L	
6) TPHg (C5-C9)	9.906	TIC	47397489m	3820.02	ug/L	
7) TPHg (C6-C10)	9.906	TIC	38139660m	3867.87	ug/L	
8) NWTPH-Gx	9.906	TIC	37187594m	3854.72	ug/L	
9) Benzene (NR)	5.925	78	392395	No Calib		
11) Toluene (NR)	8.152	91	2876625	No Calib		
13) Naphthalene (NR)	13.487	128	73674	No Calib	#	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L

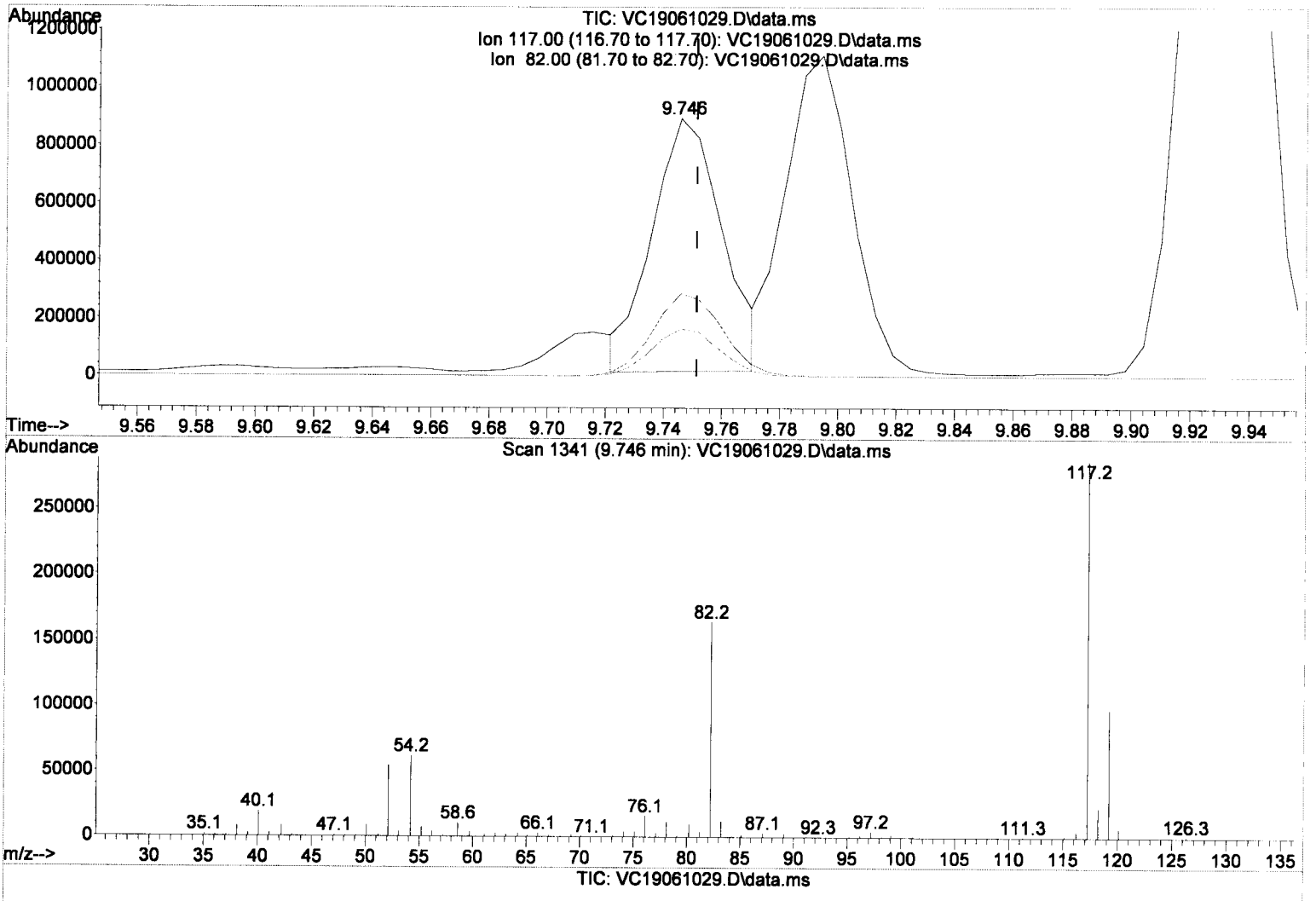
response 1682634

Signal	Exp%	Act%
TIC	100	100
117.00	32.40	28.73
82.00	18.10	16.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L m

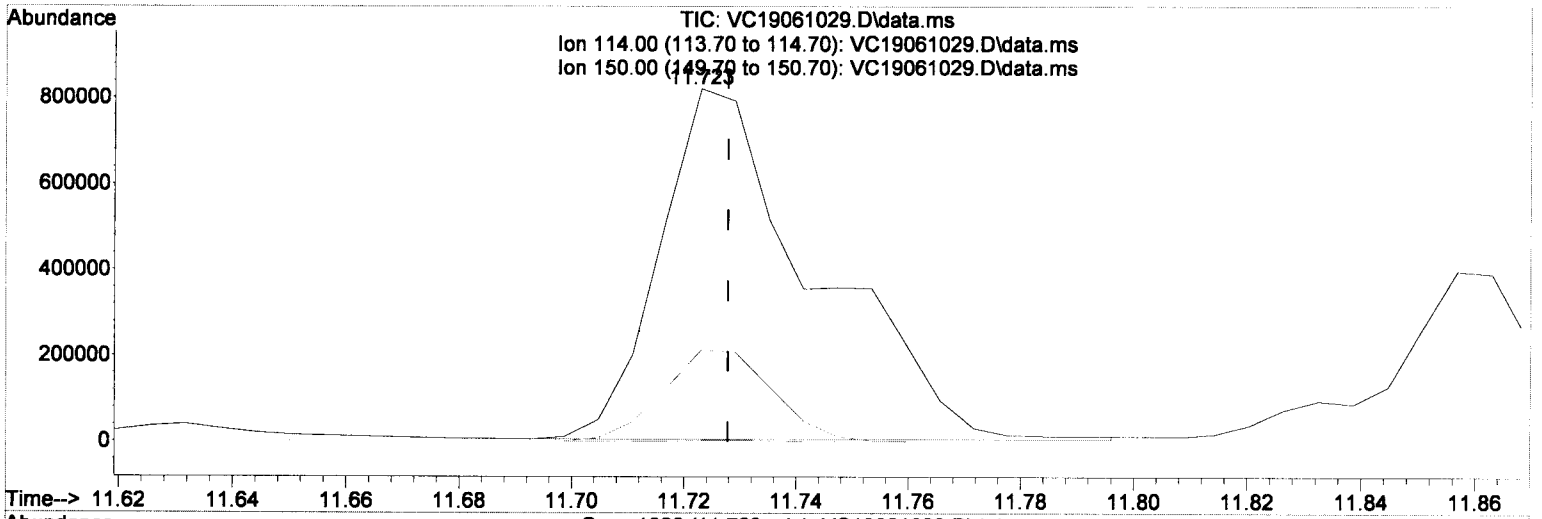
response 1476083

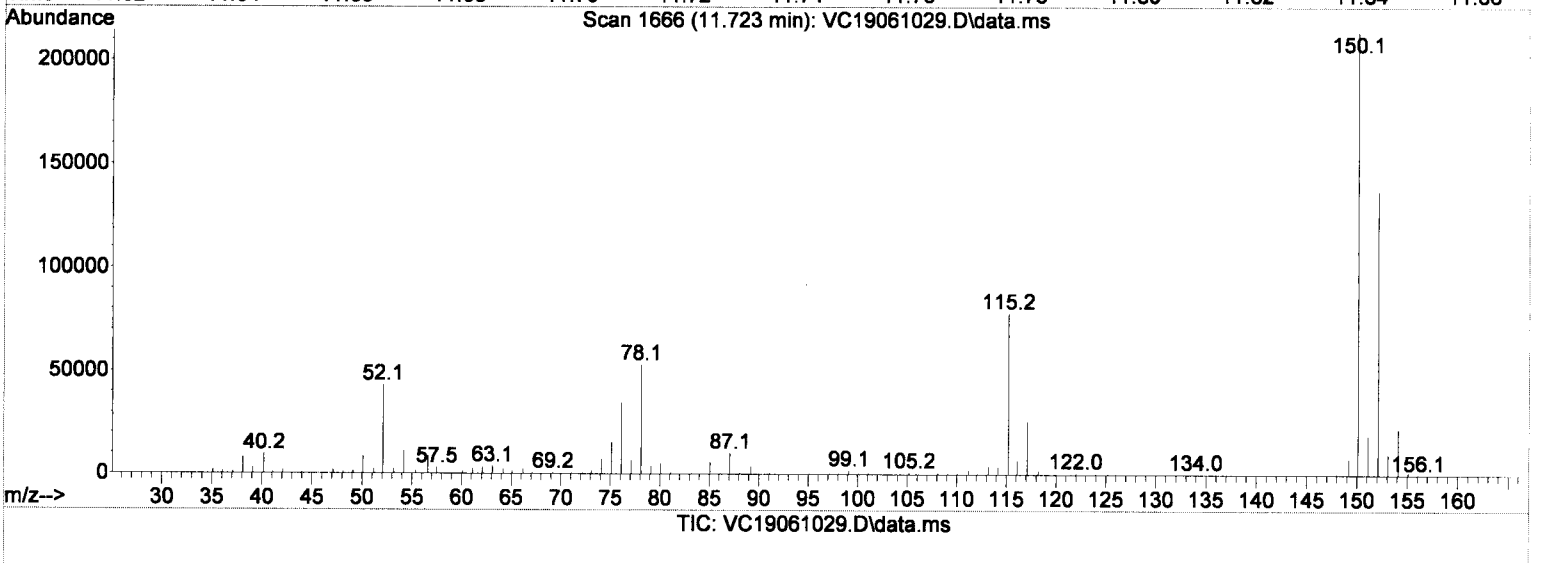
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	32.75
82.00	18.10	18.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061029.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L

response 1573022

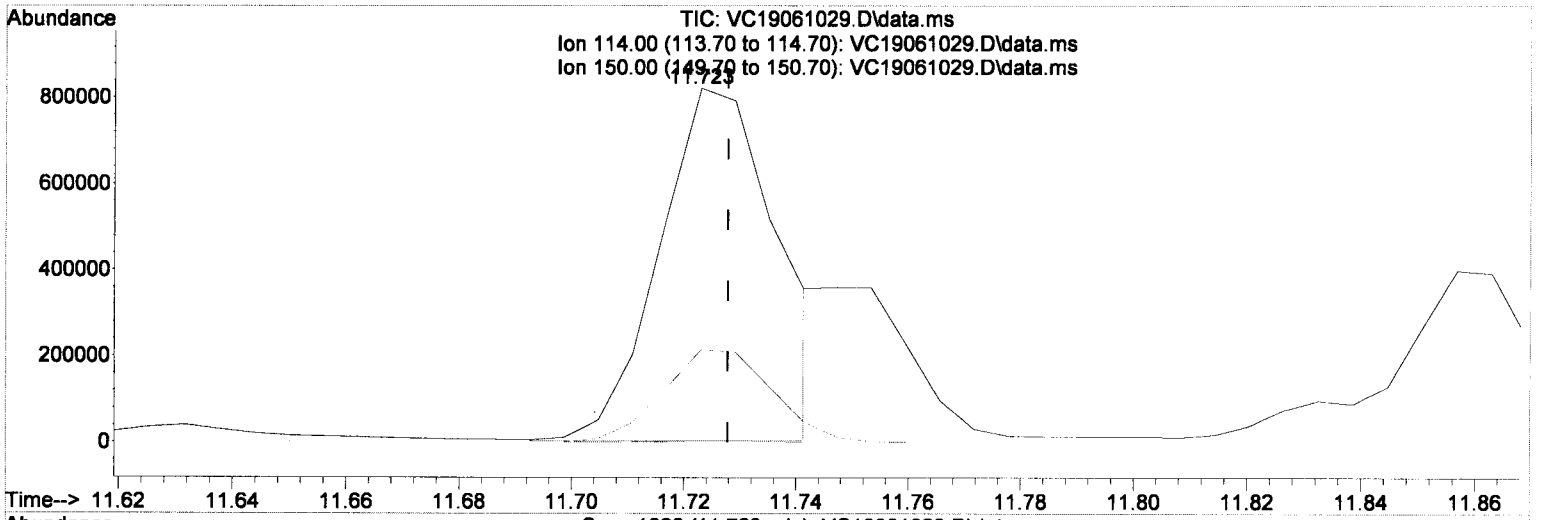
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	18.58
0.00	0.00	0.00

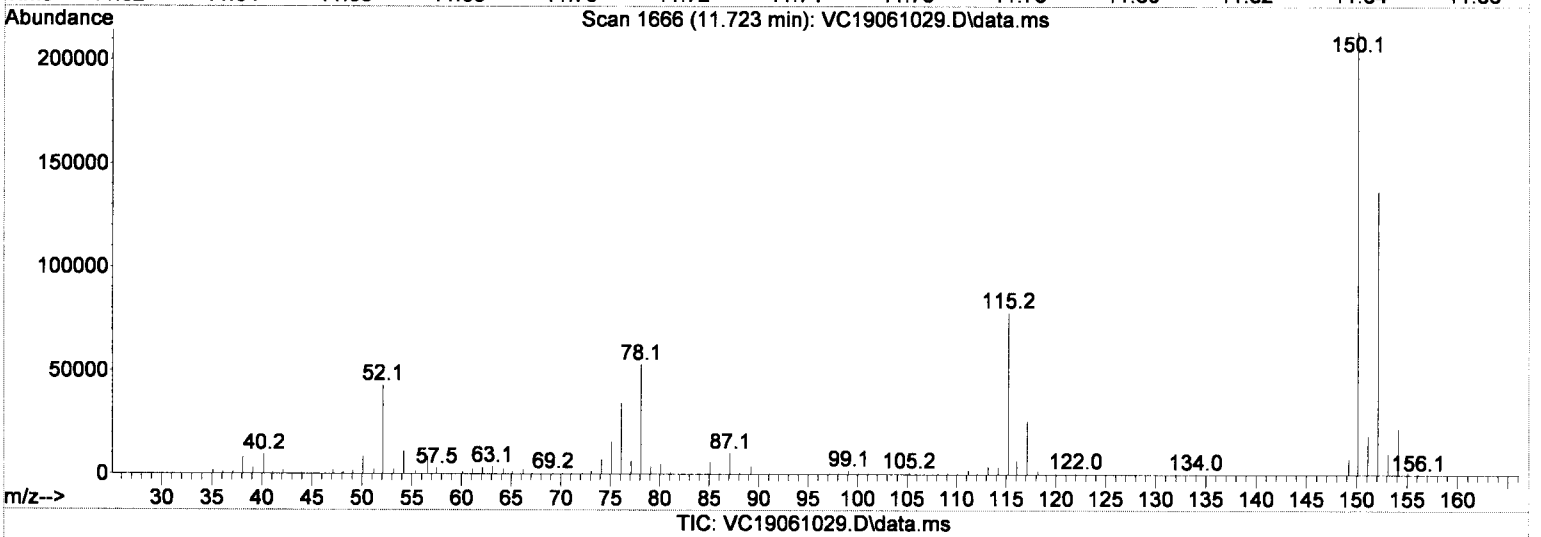
M.2.

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061029.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L m

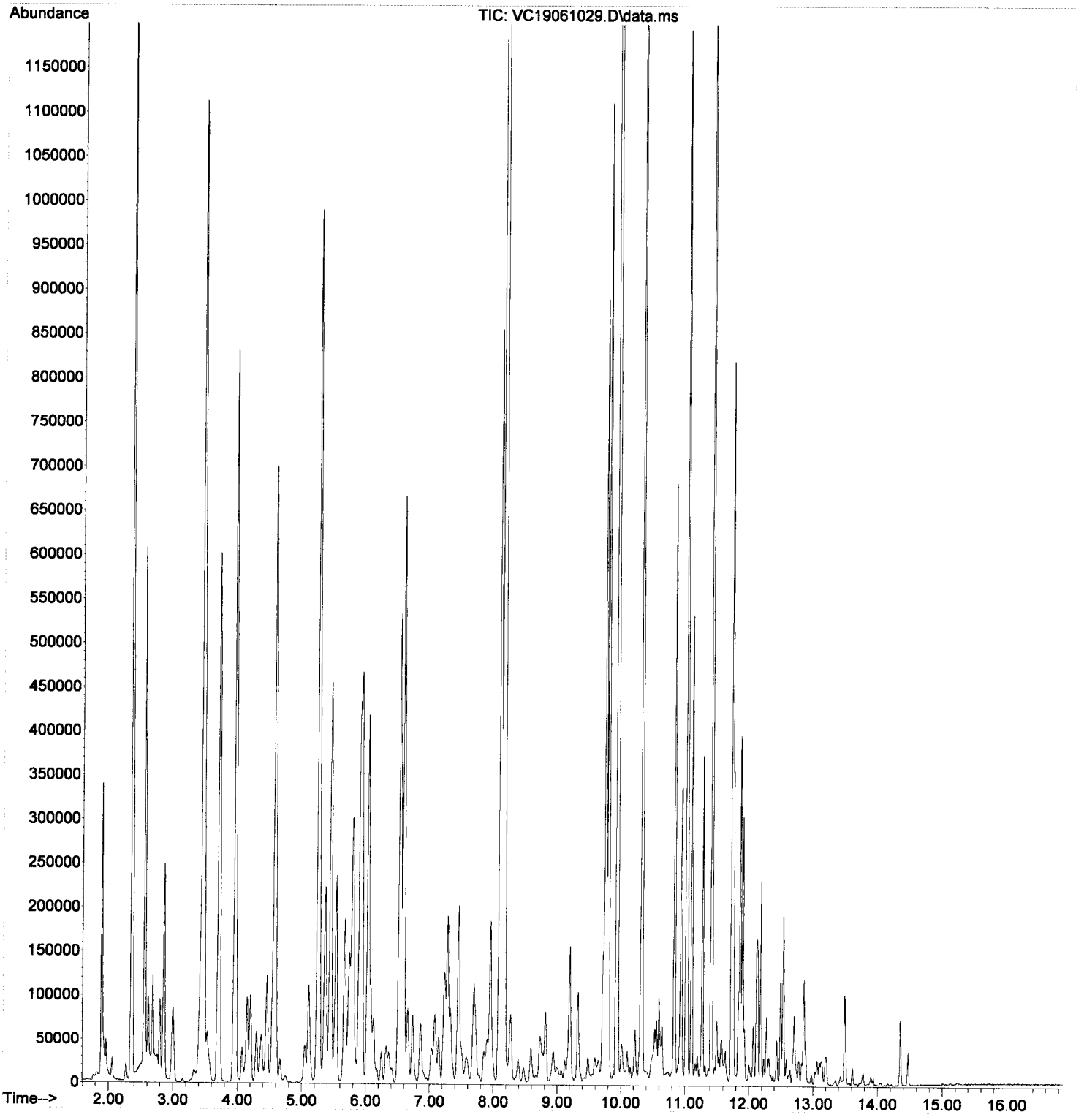
response 1186359

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	24.63
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061030.D
Acq On : 11 Jun 2019 3:59 am
Operator : TB
Sample : 9F10052-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

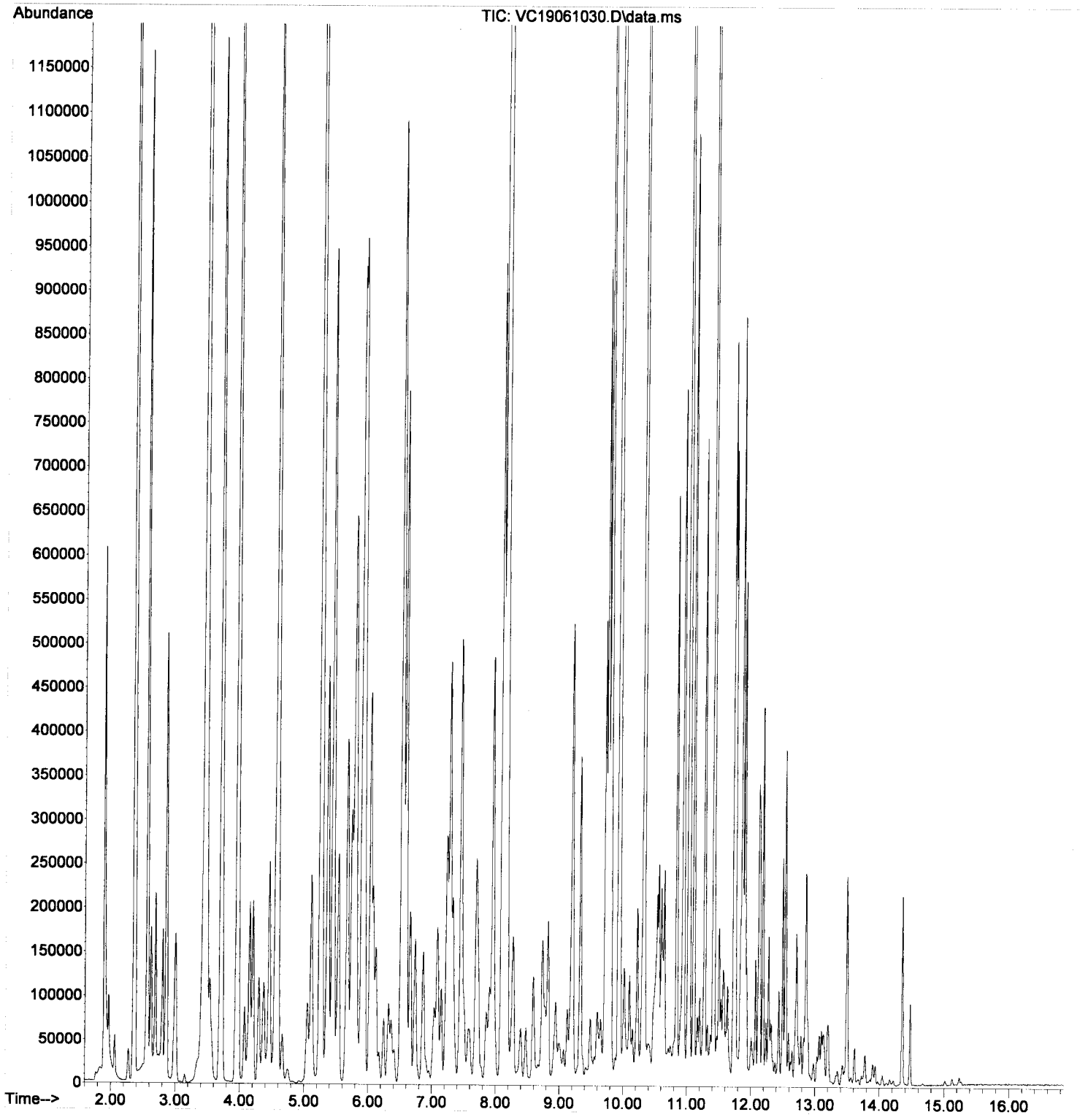
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	349167	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1654641	50.85	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	948813	39.03	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1329324	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1882532	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1120148	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	115351504m	7519.83	ug/L	
6) TPHg (C5-C9)	9.906	TIC	94872292m	7442.47	ug/L	
7) TPHg (C6-C10)	9.906	TIC	77084312m	7528.32	ug/L	
8) NWTPH-Gx	9.906	TIC	72785192m	7081.52	ug/L	
9) Benzene (NR)	5.928	78	802035	No Calib		
11) Toluene (NR)	8.154	91	4932714	No Calib		
13) Naphthalene (NR)	13.489	128	163670	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061030.D
Acq On : 11 Jun 2019 3:59 am
Operator : TB
Sample : 9F10052-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:13:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	373285	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1506914	43.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1036724	39.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1570935m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	2019971	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1316610m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	30597375m	1799.57	ug/L	
6) TPHg (C5-C9)	9.906	TIC	25176643m	1746.46	ug/L	
7) TPHg (C6-C10)	9.906	TIC	20244351m	1780.46	ug/L	
8) NWTPH-Gx	9.906	TIC	19853654m	1835.37	ug/L	
9) Benzene (NR)	5.932	78	215878	No Calib		
11) Toluene (NR)	8.152	91	1717437	No Calib		
13) Naphthalene (NR)	13.487	128	39599	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

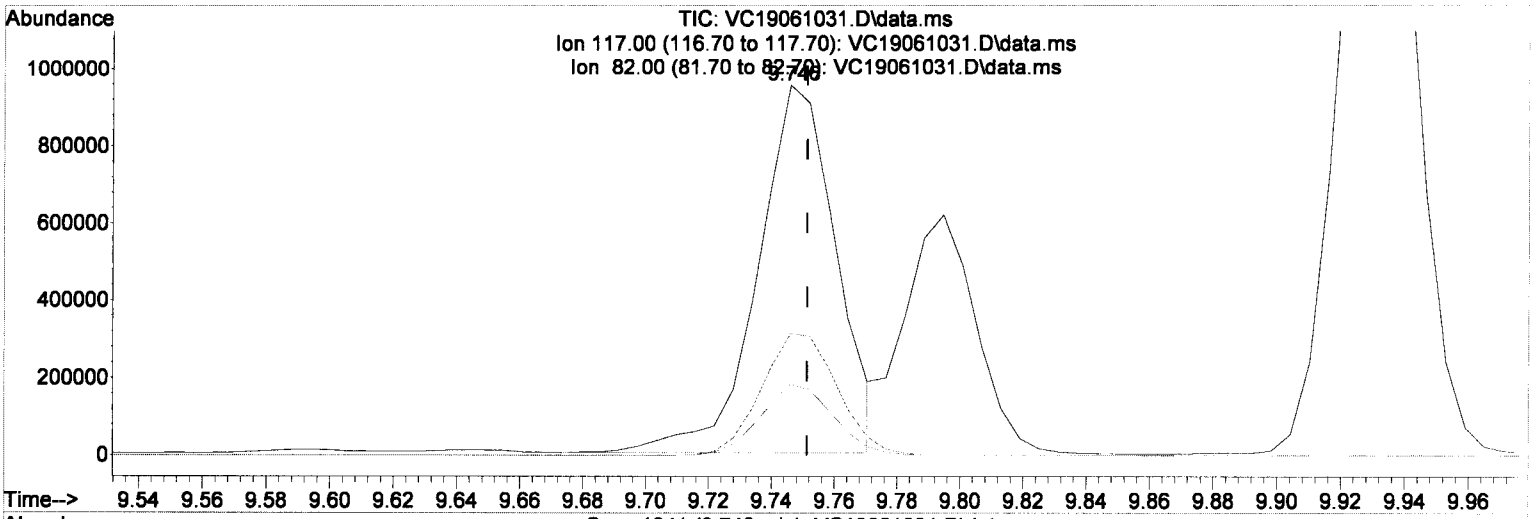
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	373285	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1506914	43.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1036724	39.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1638751	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	2019071	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1462867	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	30383302m	1786.59	ug/L	
6) TPHg (C5-C9)	9.906	TIC	25108827m	1741.57	ug/L	
7) TPHg (C6-C10)	9.906	TIC	20176535m	1774.30	ug/L	
8) NWTPH-Gx	9.906	TIC	19639581m	1815.79	ug/L	
9) Benzene (NR)	5.932	78	215878	No Calib		
11) Toluene (NR)	8.152	91	1717437	No Calib		
13) Naphthalene (NR)	13.487	128	39599	No Calib	#	

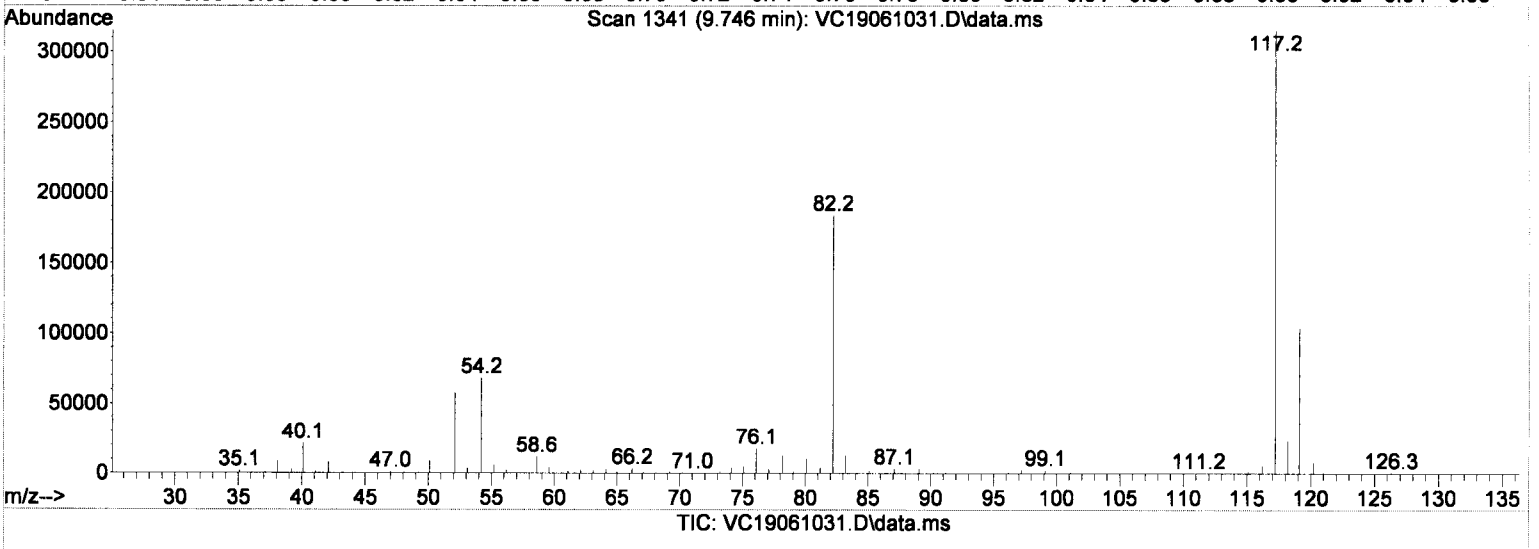
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L

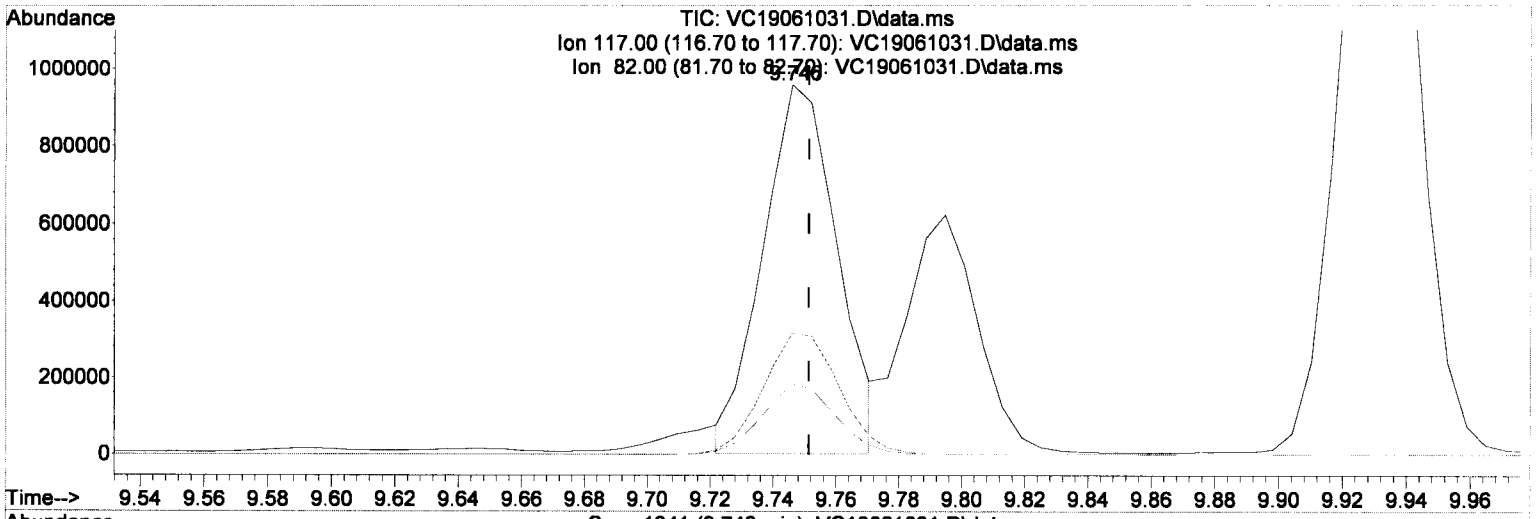
response 1638751

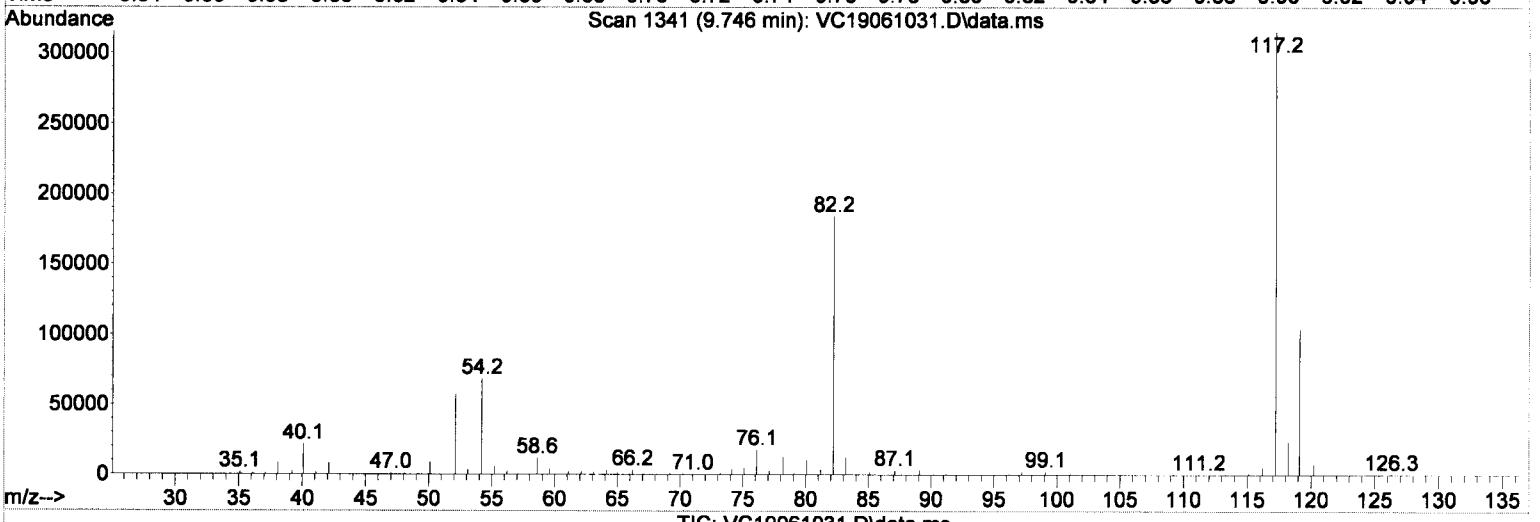
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	32.48
82.00	18.10	18.39
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L m

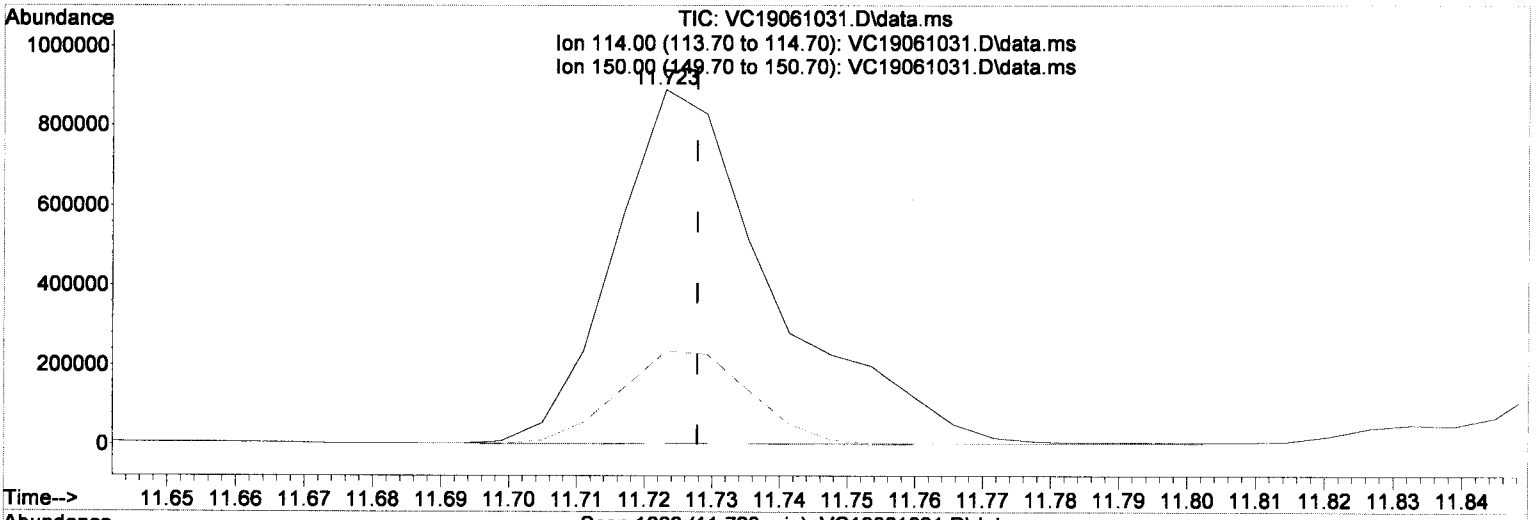
response 1570935

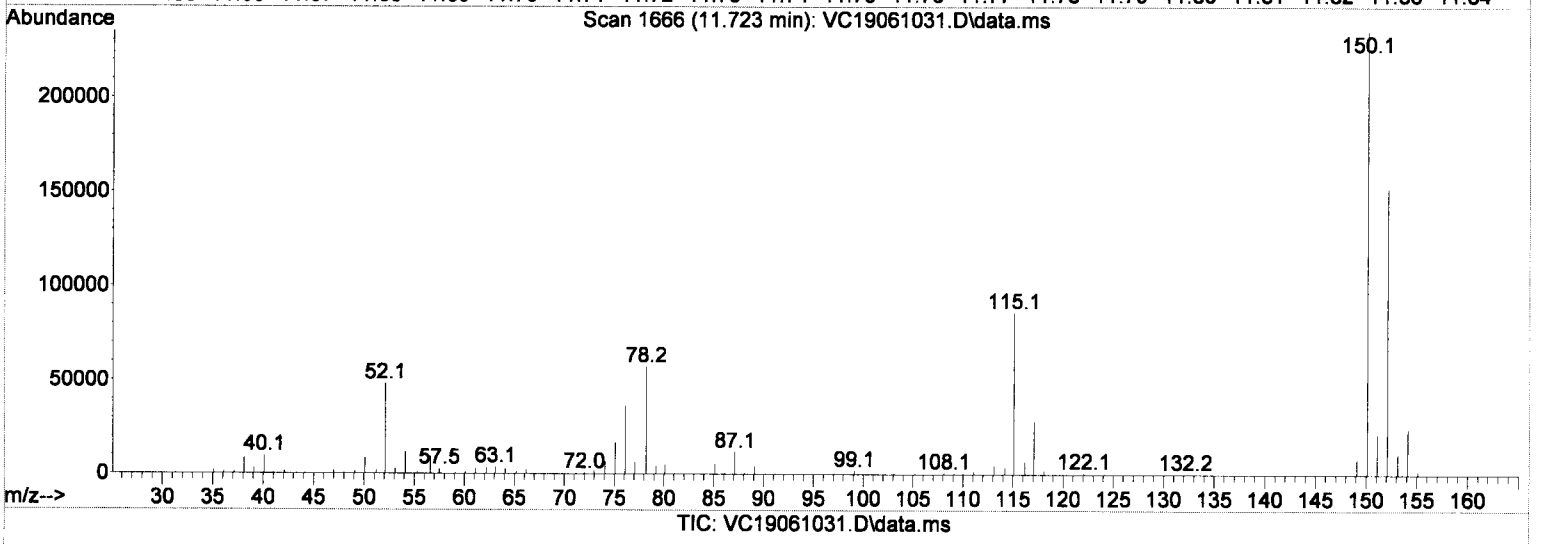
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	33.88
82.00	18.10	19.19
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L

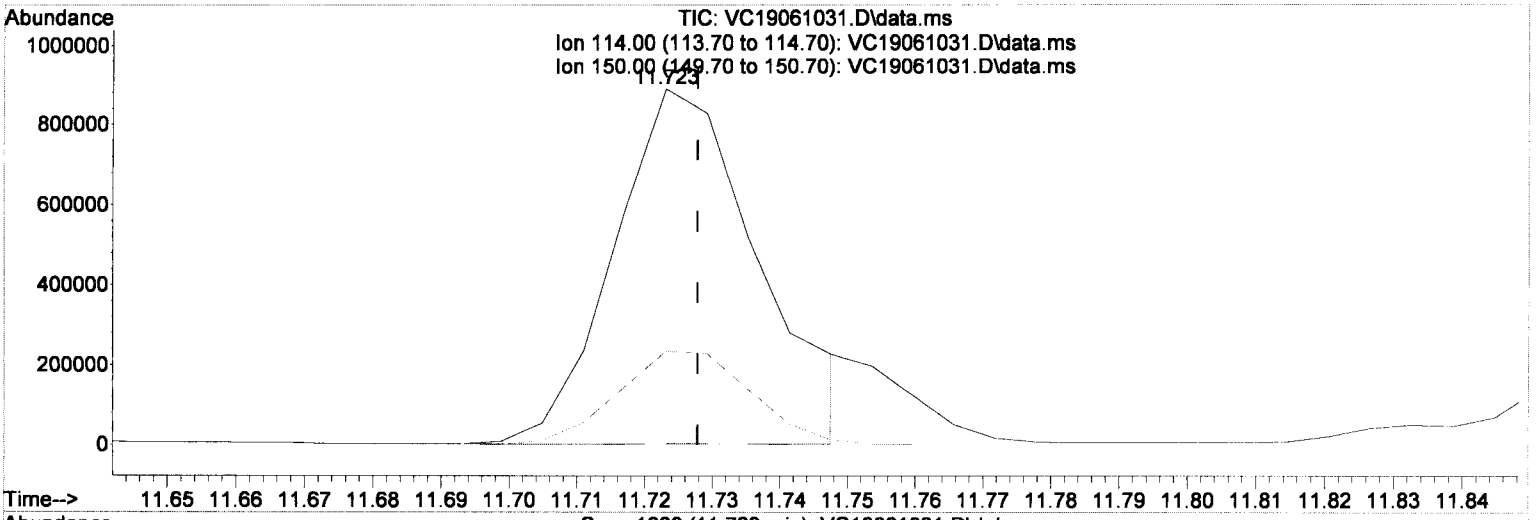
response 1462887

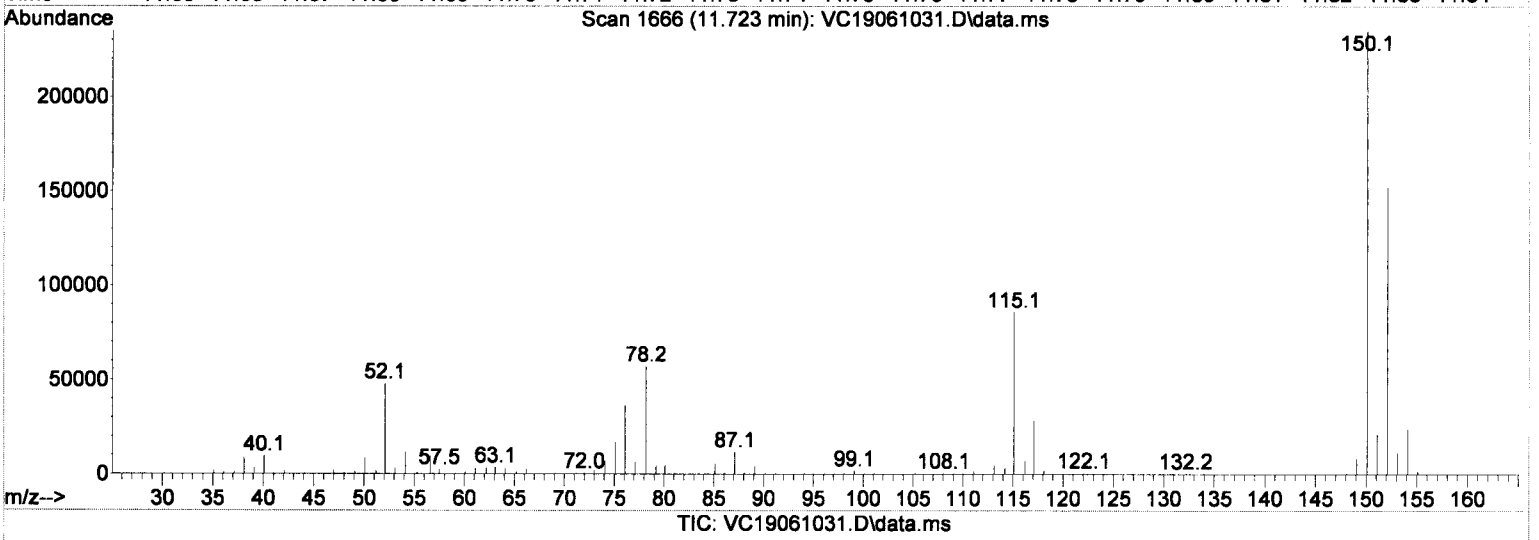
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.35
150.00	24.00	22.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L m

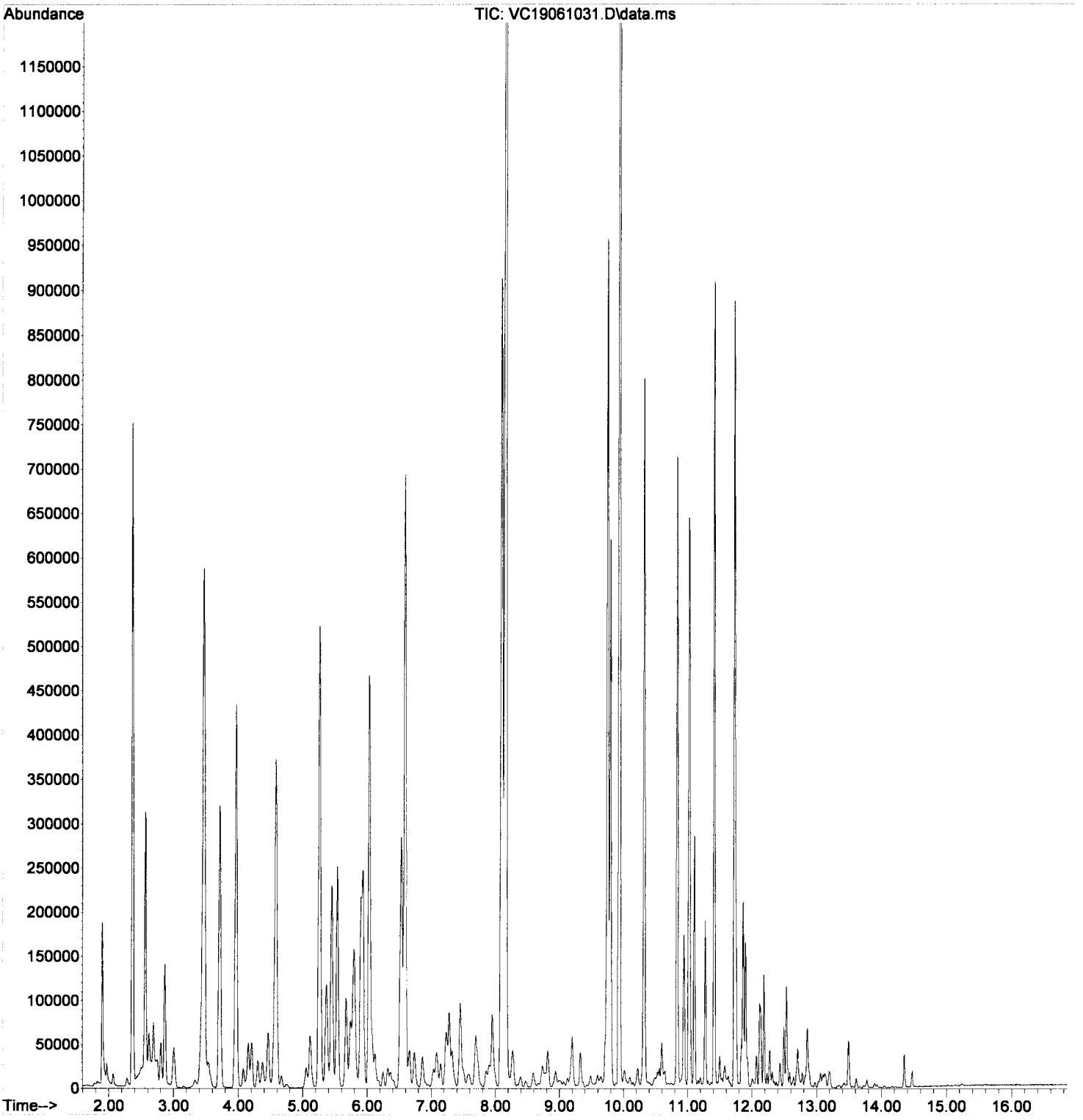
response 1316610

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.39
150.00	24.00	24.60
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061032.D
Acq On : 11 Jun 2019 4:54 am
Operator : TB
Sample : 9F10052-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

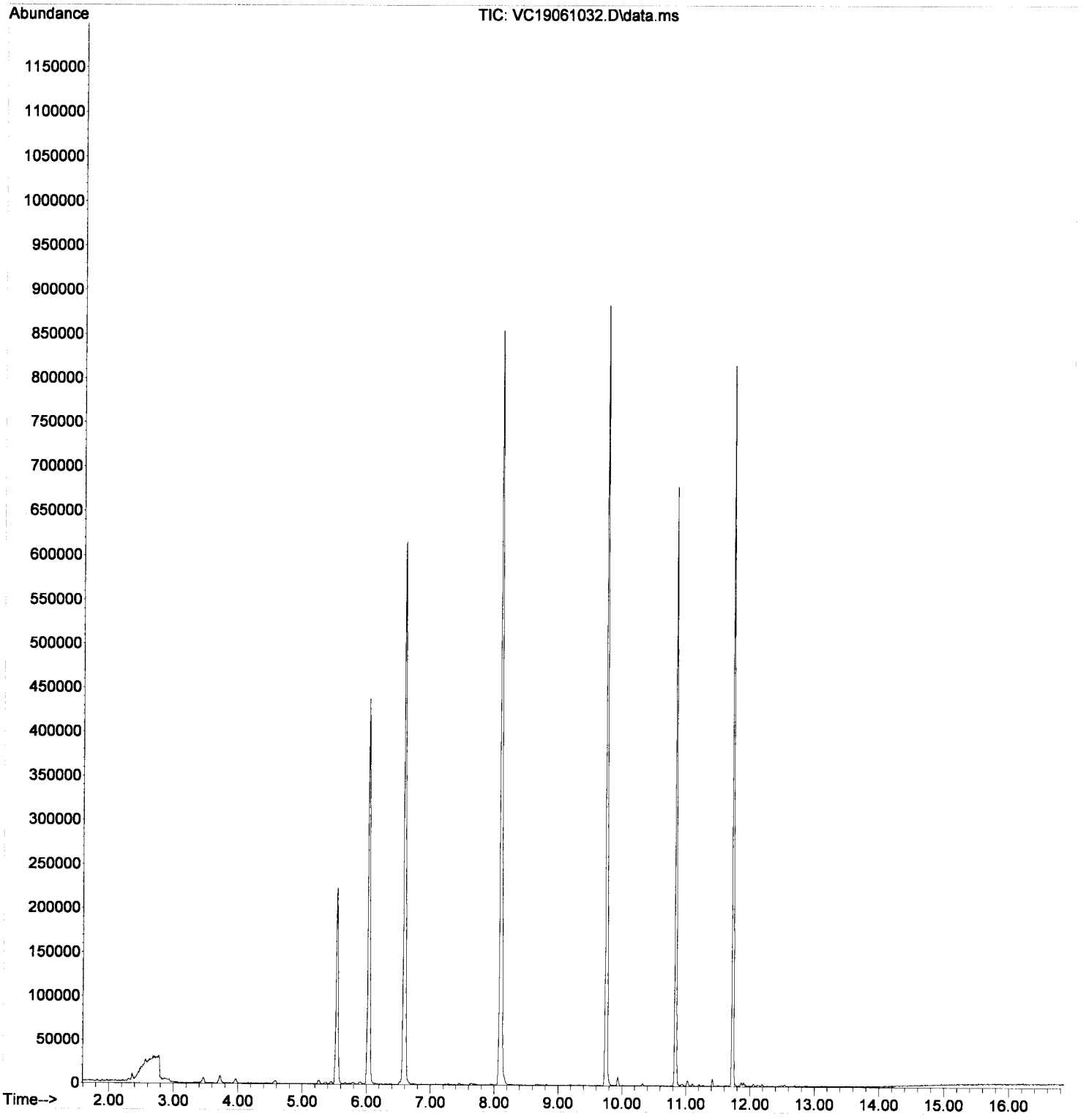
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	348623	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1331512	47.62	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	964156	48.92	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1461198	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1822093	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1121651	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	713165m	26.15	ug/L	
6) TPHg (C5-C9)	9.906	TIC	670254m	21.22	ug/L	
7) TPHg (C6-C10)	9.906	TIC	555451m	28.44	ug/L	
8) NWTPH-Gx	9.906	TIC	76439m	43.43	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061032.D
Acq On : 11 Jun 2019 4:54 am
Operator : TB
Sample : 9F10052-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061033.D
Acq On : 11 Jun 2019 5:22 am
Operator : TB
Sample : 9F10052-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

NR

Quant Time: Jun 11 10:21:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

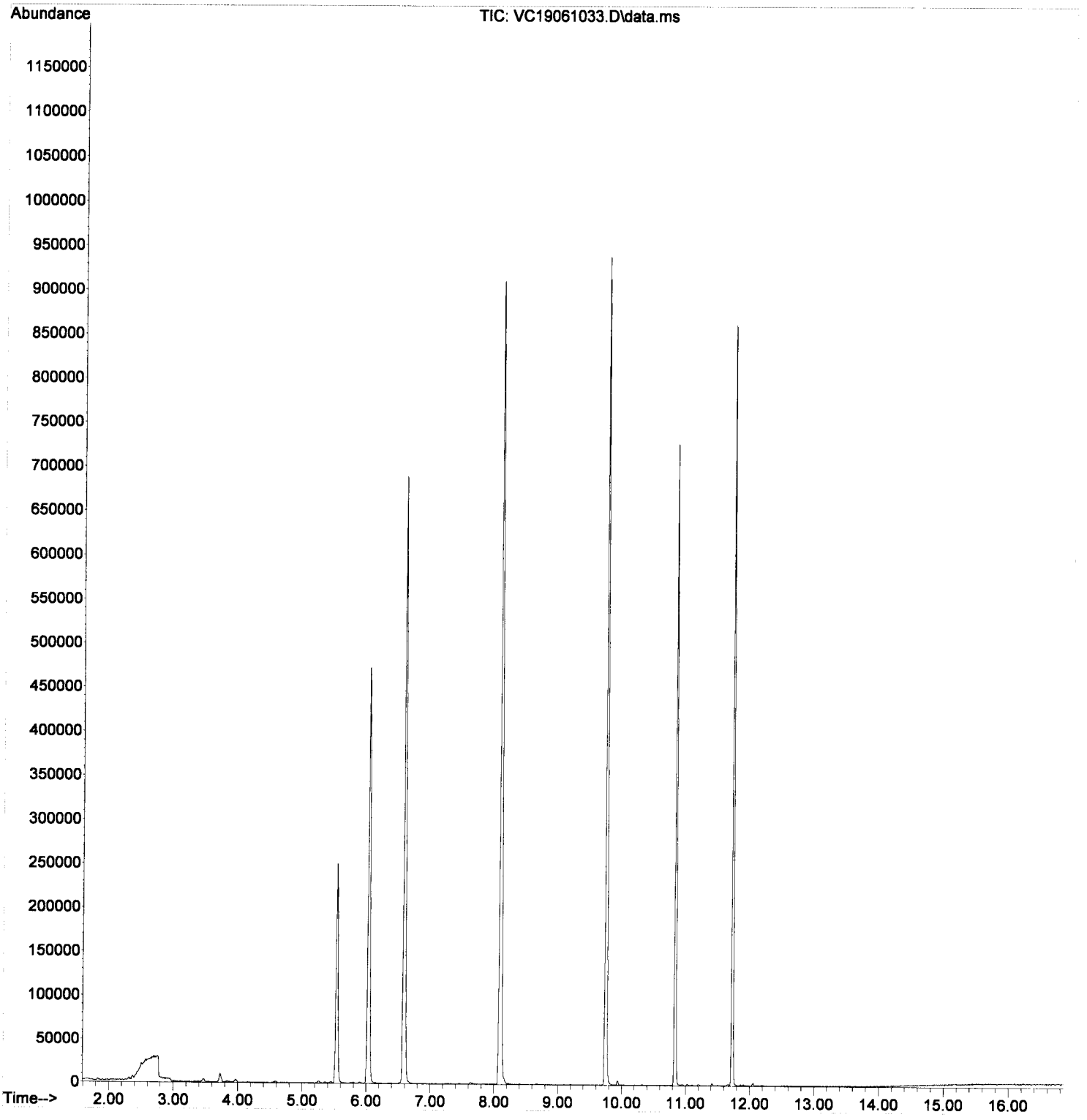
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	376429	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1421155	47.07	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	1039335	48.84	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1575085	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1960324	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1200209	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	653687m	17.14	ug/L	
6) TPHg (C5-C9)	9.906	TIC	652596m	14.62	ug/L	
7) TPHg (C6-C10)	9.906	TIC	534694m	20.84	ug/L	
8) NWTPH-Gx	9.906	TIC	584m	33.94	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061033.D
Acq On : 11 Jun 2019 5:22 am
Operator : TB
Sample : 9F10052-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

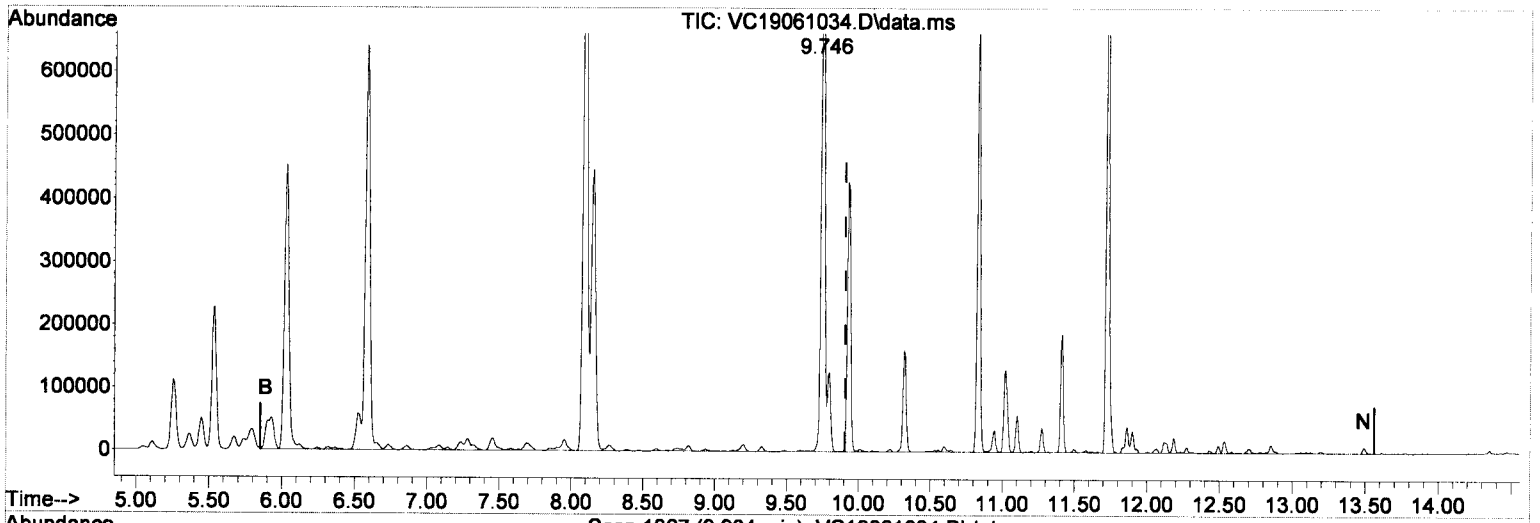
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	360795	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1388173	47.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	983679	48.23	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1514736	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1904413	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1194666	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6705031m	508.77	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5739937m	511.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4515728m	509.54	ug/L	
8) NWTPH-Gx	9.906	TIC	3786583m	493.15	ug/L	

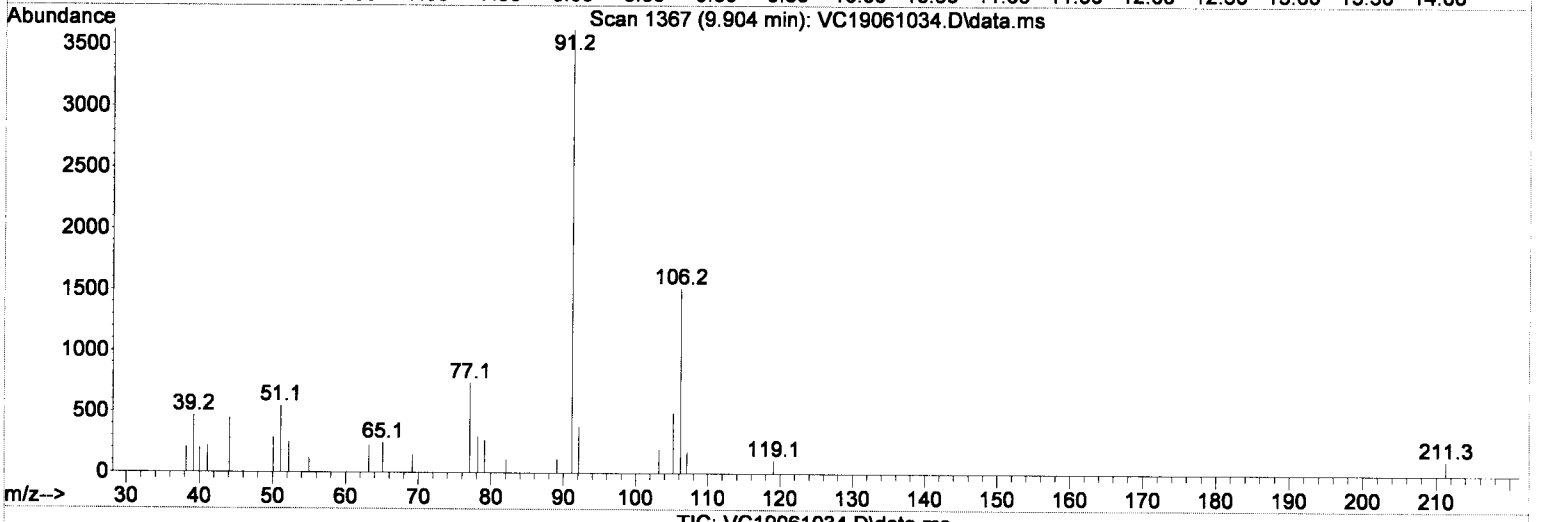
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





TIC: VC19061034.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 493.15 ug/L m

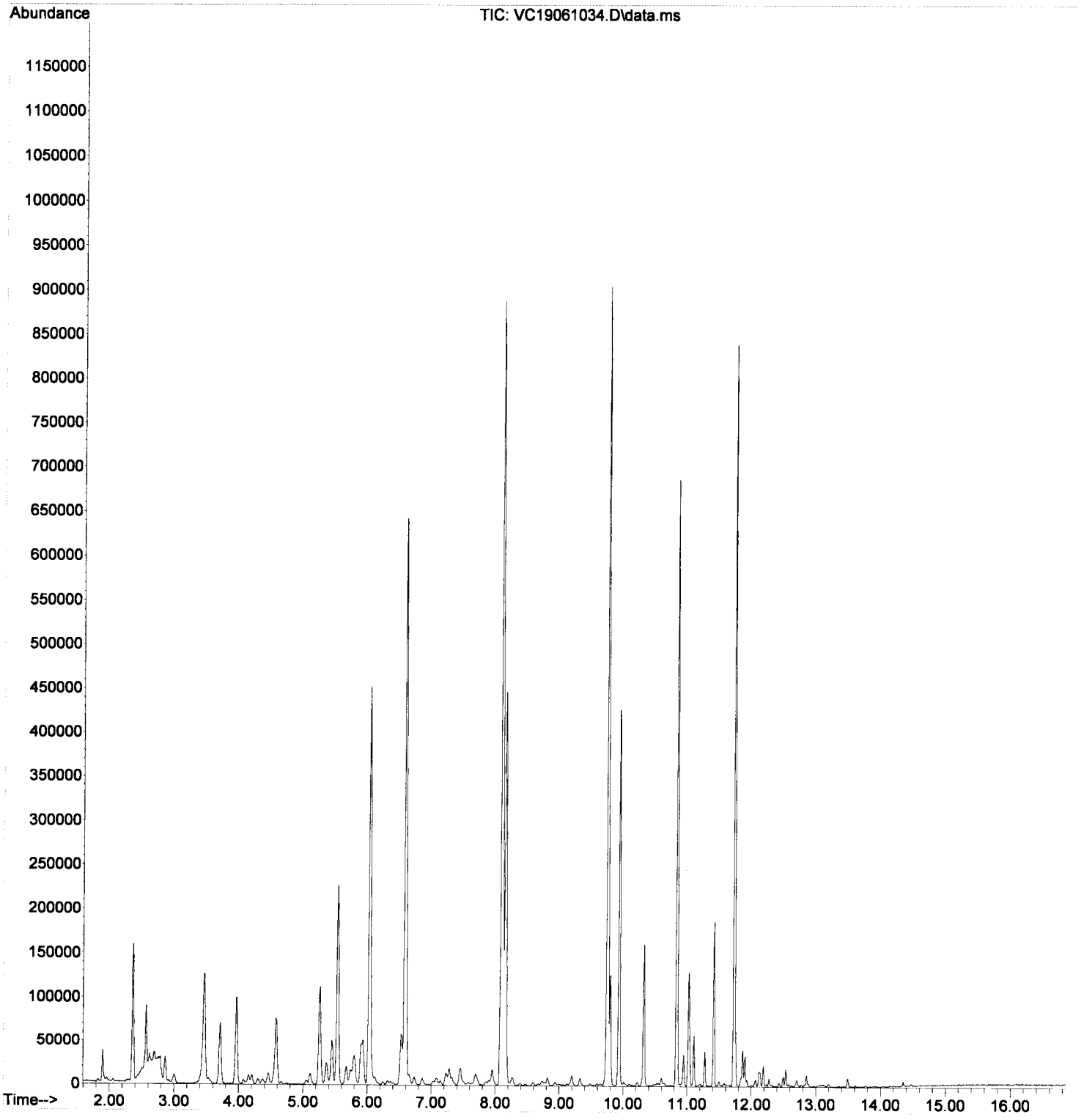
response 3786583

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061035.D
Acq On : 11 Jun 2019 6:17 am
Operator : TB
Sample : 9F10052-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

NR

Quant Time: Jun 11 10:21:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

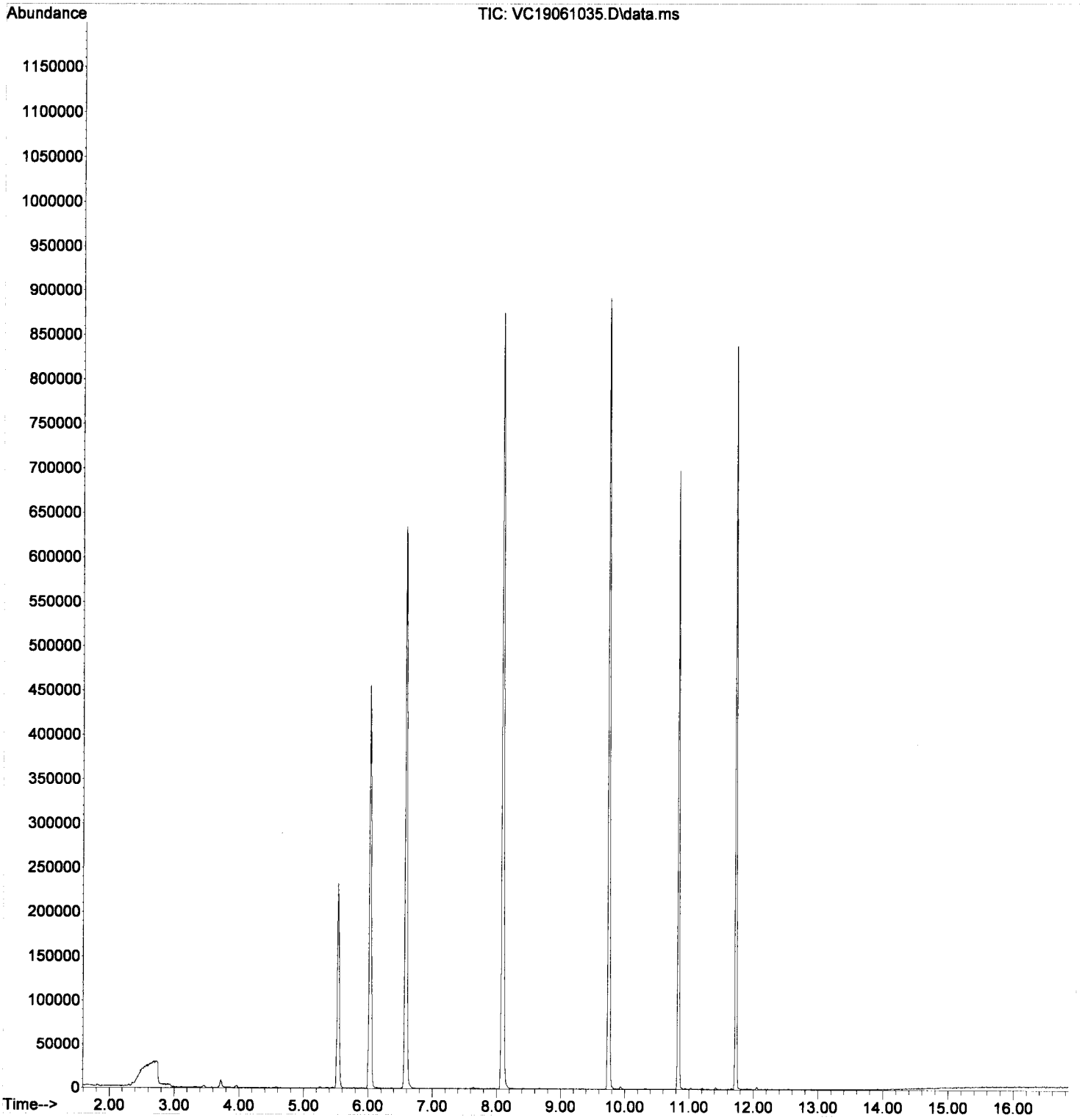
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.028	168	359762	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1357534	47.05 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	993594	48.85 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1505206	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1859961	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.722	TIC	1155147	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	617468m	16.55 ug/L	
6) TPHg (C5-C9)	9.906	TIC	617238m	13.99 ug/L	
7) TPHg (C6-C10)	9.906	TIC	501922m	19.73 ug/L	
8) NWTPH-Gx	9.906	TIC	5540m	34.54 ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061035.D
Acq On : 11 Jun 2019 6:17 am
Operator : TB
Sample : 9F10052-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



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

Batch 9061492

Sequence 9F28034 (A9F0684-01)

PREPARATION BENCH SHEET

BATCH #: 9061492 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9061492-BLK1		QC	06/28/19 09:35	7.5	5							
9061492-BS1		QC	06/28/19 09:35	5	5	A19F368		250				
9061492-BS2		QC	06/28/19 09:35	5	5	A19F151		250				
A9F0682-01	B	8260C BTEX+N	(Date Sampled)	6.59	5					14786 S@85"	FP	
A9F0684-01	B	8260C Full List	06/26/19 18:50	0.47	5					2708-190619-OIL	MOD	
A9F0684-01	B	NWTPH-Gx	06/26/19 18:50	0.47	5					2708-190619-OIL	MOD	
A9F0699-08RE1	B	8260C Full List	(Date Sampled)	6.37	5					HC04-12	FP, 500X NAP RR2	
A9F0756-02	B	8260C BTEX+N	(Date Sampled)	5.2	5					SPB@9'BGS	FP	
A9F0788-01	B	8260C BTEX+N	(Date Sampled)	6.14	5					14804 N@79"	FP	
A9F0843-05	B	8260C BTEX+N	(Date Sampled)	4.39	5					UG-E-SWI@15'BGS	FP	
A9F0843-07	B	8260C Full List	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
A9F0843-07	B	8260C BTEX	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
A9F0843-07	B	8260C BTEX+N	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP	
A9F0843-07	B	NWTPH-Gx	(Date Sampled)	5.39	5					DG-W-SWI@15'BGS	FP, Added for BatchQC in: 906149	
9061492-MS1		QC	06/28/19 13:20	5.39	5	A19F368	A9F0843-07	327			DW=71.4% @50X	
A9F0844-05RE1	B	8260C Full List	(Date Sampled)	5.6	5					B-4-13'	FP	
A9F0844-05RE1	B	NWTPH-Gx	(Date Sampled)	5.6	5					B-4-13'	FP	
A9F0844-07RE1	B	8260C Full List	(Date Sampled)	5.75	5					B-5-10.5'	FP	
A9F0844-07RE1	B	NWTPH-Gx	(Date Sampled)	5.75	5					B-5-10.5'	FP	
A9F0873-01	B	8260C Full List	(Date Sampled)	5.9	5					SP-1	FP, Added for BatchQC in: 906149	
A9F0873-01	B	8260C BTEX	(Date Sampled)	5.9	5					SP-1	FP	
A9F0873-01	B	8260C BTEX+N	(Date Sampled)	5.9	5					SP-1	FP, Added for BatchQC in: 906149	

Prepared By: _____ Date 7/1/19

Reviewed By: _____ Date 07/01/19

PREPARATION BENCH SHEET

BATCH #: 9061492 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9F0873-01	B	NWTPH-Gx	(Date Sampled)	5.9	5					SP-1	FP	
9061492-DUP1		QC	06/26/19 15:04	5.17	5		A9F0873-01					
A9F0878-01	B	8260C BTEX+N	06/27/19 17:40	5.98	5					19-25468 E(IT)-76"	MOD	

*pH <2 verified_____

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19D063	09/30/19	Methanol - Fisher (P/T) #185562
A19F143	12/09/19	Methanol - Fisher (P/T) #185042

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F151	12/10/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19F368	12/07/19	8260 Cal. Std. B VOC+OXY Spike (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

SOIL MS3

Prepared By: Date

Reviewed By: Date

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: ~~9061430~~ 9061492 MK 7/2/19

Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
5.390	5	50	71.4
			0.714

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1699.78	**327**

Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9F0843-07

7/1/19

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9F0682-01	B	39.85	33.26	6.59	
A9F0756-02	B	38.94	33.74	5.2	
A9F0788-01	B	39.75	33.61	6.14	
A9F0843-05	B	38.22	33.83	4.39	
A9F0843-07	B	38.97	33.58	5.39	
A9F0873-01	B	39.17	33.27	5.9	
A9F0873-01	C DUP	38.54	33.37	5.17	

7/1/19

A9F0684

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0684-01	2708-190619-OIL	Sampled: 06/19/19 14:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Oil	40 mL VOA - In House Prep - 5035 (MeOH)	A	0.47	(5) 10 15	OD	@ 6/20/19 1850	Y (N)	Mod.

8260C Full List Expires: 06/21/19 14:00 Due: 07/05/19 17:00
Comments: 1st priority Added 6/26/19

NWTPH-Gx Expires: 06/21/19 14:00 Due: 07/05/19 17:00 10000
Comments: 5th priority Added 6/26/19

A9F0878

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0878-01	19-25468 E(IT)-76'	Sampled: 06/27/19 13:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.98	(5) 10 15	TPM	@ 6/27/19 17:40	(Y) N	mod

BTEXN

Expires: Due:

A9F0878-02	19-25468 W(IT)-76'	Sampled: 06/27/19 13:00

		Container Used	Sample Weight (g)	Volume MeOH (mL)	Prepared By:	Prepared date/time	Within 48 hours?	Notes:
B Soil	40 mL VOA - In House Prep - 5035 (MeOH)	A	5.71	(5) 10 15	TPM	@ 6/27/19 17:40	(Y) N	mod

Expires: Due:

500X

A9F0682

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0682-01	14786 S@85'	Sampled: 06/20/19 00:00

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.85	33.26	5 10 15 Other	DX - 28900

BTEXN

Due: TAT:

500X

Weighed by: TAM @ 6/20/19

A9F0756

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0756-01 **SPW@7'BGS** Sampled: **06/24/19 10:00**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.18	33.59	(5) 10 15 Other	

Due: TAT:

A9F0756-02 **SPB@9'BGS** Sampled: **06/24/19 11:05**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.94	33.74	(5) 10 15 Other	DX=62600

BTEXN Due: TAT:

A9F0756-03 **NPB@10'BGS** Sampled: **06/24/19 11:05**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		39.85	33.94	(5) 10 15 Other	

Due: TAT:

1000X

Weighed by: TAM @ 6/24/19 18:33

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9F0788

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0788-01		14804 N@79"			Sampled: 06/25/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.75	Tare Weight (g): 33.61	Volume MeOH (mL): (5) 10 15 Other	Notes: DX=27200
BTEXN		Due:	TAT:		

A9F0788-02		14804 S@79"			Sampled: 06/25/19 00:00
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 40.31	Tare Weight (g): 33.70	Volume MeOH (mL): (5) 10 15 Other	Notes:
		Due:	TAT:		

500P

Weighed by: AHK @ 1742 6/25/19

Methanol Reagent ID: A19E143~ Balance ID: A18J327~

A9F0843

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0843-01	SRC-NTE-SWI@15'	Sampled: 06/25/19 12:30

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.74	33.75	5 10 15 Other	
BTEXN		Due:	TAT:		

A9F0843-03	CG-N-SWI@15'BGS	Sampled: 06/25/19 11:00

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		40.58	33.89	5 10 15 Other	
		Due:	TAT:		

A9F0843-05	UG-E-SWI@15'BGS	Sampled: 06/25/19 13:45

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
		38.22	33.83	5 10 15 Other	
		Due:	TAT:		

A9F0843-07	DG-W-SWI@15'BGS	Sampled: 06/25/19 13:20

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
NS		38.97	33.58	5 10 15 Other	DW = 71.4%
		Due:	TAT:		

Weighed by: TAH @ 6/26/19 18:45

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9F0873

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0873-01		SP-1			Sampled: 06/26/19 15:04
B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.17	Tare Weight (g): 33.27	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.54	Tare Weight (g): 33.37	Volume MeOH (mL): 5 10 15 Other	Notes:

DUP

8260C BTEX Due: 07/01/19 17:00 TAT: 2

Comments: soil ppm water ppb

NWTPH-Gx Due: 07/01/19 17:00 TAT: 2

50X

Weighed by: WS @ 6/27/19 06:16

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9F28034**	Instrument:	**VOA-GCMS3**
Date:	**06/28/19 10:52**	Calibration:	**A9F1104**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F28034-TUN1	Soil	QC	QC			A19C135	
2	9F28034-CCV1	Soil	QC	QC			A19C135	
3	9061492-BS1	Soil	QC	QC		9061492	A19C135	
4	9F28034-CCV2	Soil	QC	QC			A19C135	
5	9061492-BS2	Soil	QC	QC		9061492	A19C135	
6	9061492-BLK1	Soil	QC	QC		9061492	A19C135	
7	A9F0844-07RE1	Soil	8260C Full List		07/08/19	9061492	A19C135	
8	"	Soil	NWTPH-Gx	"	07/08/19	9061492	A19C135	
9	A9F0844-05RE1	Soil	8260C Full List		07/08/19	9061492	A19C135	
10	"	Soil	NWTPH-Gx	"	07/08/19	9061492	A19C135	
11	9F28034-IBL1	Soil	QC	QC			A19C135	
12	A9F0843-05	Soil	8260C BTEX+N		06/28/19	9061492	A19C135	
13	A9F0843-07	Soil	8260C BTEX+N		06/28/19	9061492	A19C135	
14	"	Soil	8260C Full List	(QC Source)		9061492	A19C135	
15	"	Soil	8260C BTEX	(QC Source)		9061492	A19C135	
16	"	Soil	NWTPH-Gx	(QC Source)		9061492	A19C135	
17	9061492-MS1	Soil	QC	QC		9061492	A19C135	
18	9F28034-IBL2	Soil	QC	QC			A19C135	
19	A9F0873-01	Soil	8260C BTEX		07/01/19	9061492	A19C135	
20	"	Soil	NWTPH-Gx	"	07/01/19	9061492	A19C135	
21	"	Soil	8260C Full List	(QC Source)		9061492	A19C135	
22	"	Soil	8260C BTEX+N	(QC Source)		9061492	A19C135	
23	9061492-DUP1	Soil	QC	QC		9061492	A19C135	
24	A9F0756-02	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
25	A9F0788-01	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
26	A9F0682-01	Soil	8260C BTEX+N		07/01/19	9061492	A19C135	
27	9F28034-IBL3	Soil	QC	QC			A19C135	
28	A9F0699-08RE1	Soil	8260C Full List		07/01/19	9061492	A19C135	
29	A9F0684-01	Soil	8260C Full List		07/05/19	9061492	A19C135	
30	"	Soil	NWTPH-Gx	"	07/05/19	9061492	A19C135	
31	9F28034-IBL4	Soil	QC	QC			A19C135	
32	A9F0878-01	Soil	8260C BTEX+N		07/02/19	9061492	A19C135	
33	9F28034-IBL5	Soil	QC	QC			A19C135	
34	9F28034-IBL6	Soil	QC	QC			A19C135	

Data Entered By: 7/1/19

Data Reviewed By: 7/1/19

Comments: chloroethane EOS

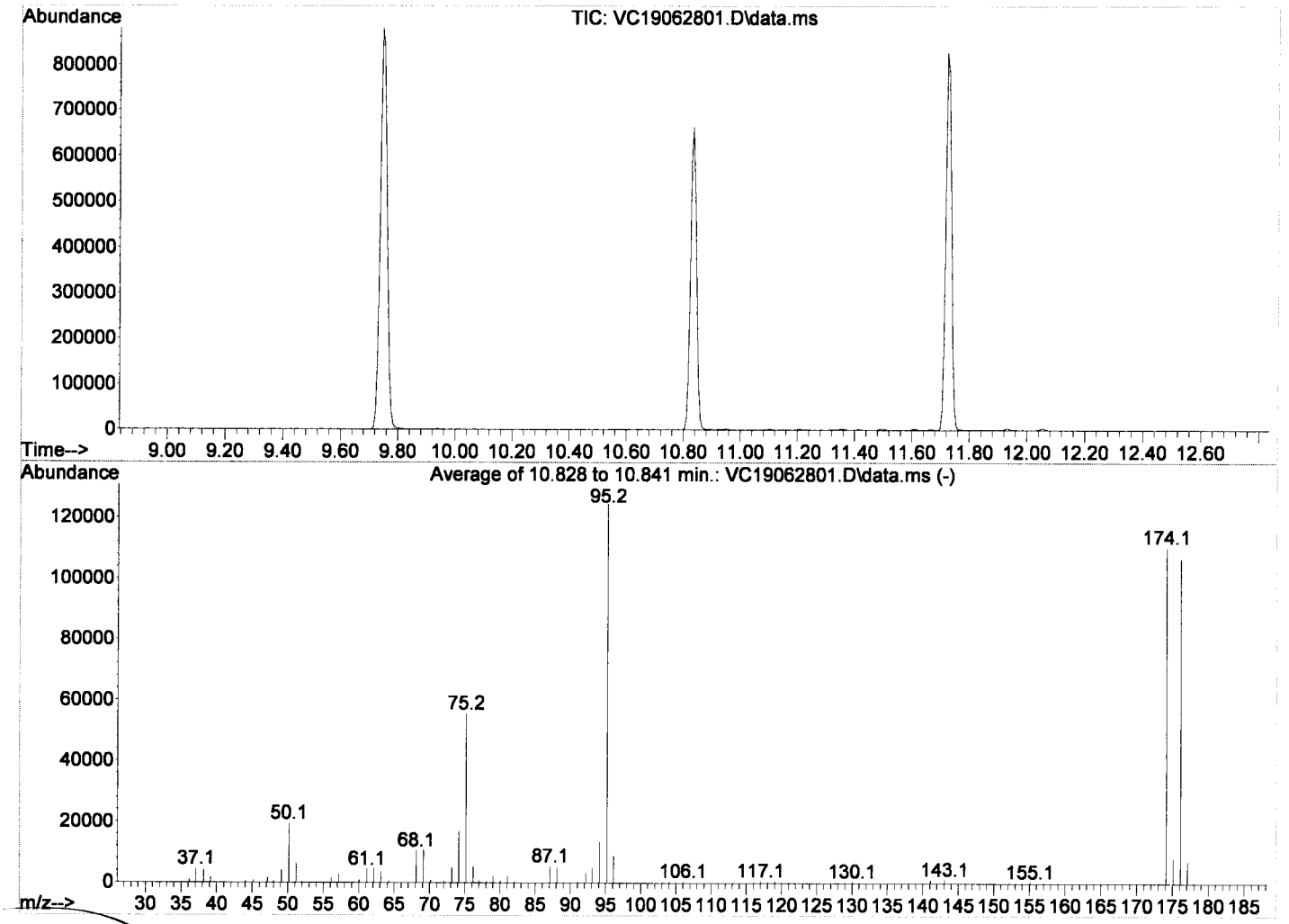
BFB

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019

6/28/19



AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	15.5	19350	PASS
75	95	30	60	44.6	55594	PASS
95	95	100	100	100.0	124541	PASS
96	95	5	9	7.0	8763	PASS
173	174	0.00	2	0.2	249	PASS
174	95	50	200	88.7	110440	PASS
175	174	5	9	7.4	8145	PASS
176	174	95	101	96.6	106725	PASS
177	176	5	9	6.7	7155	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:27:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

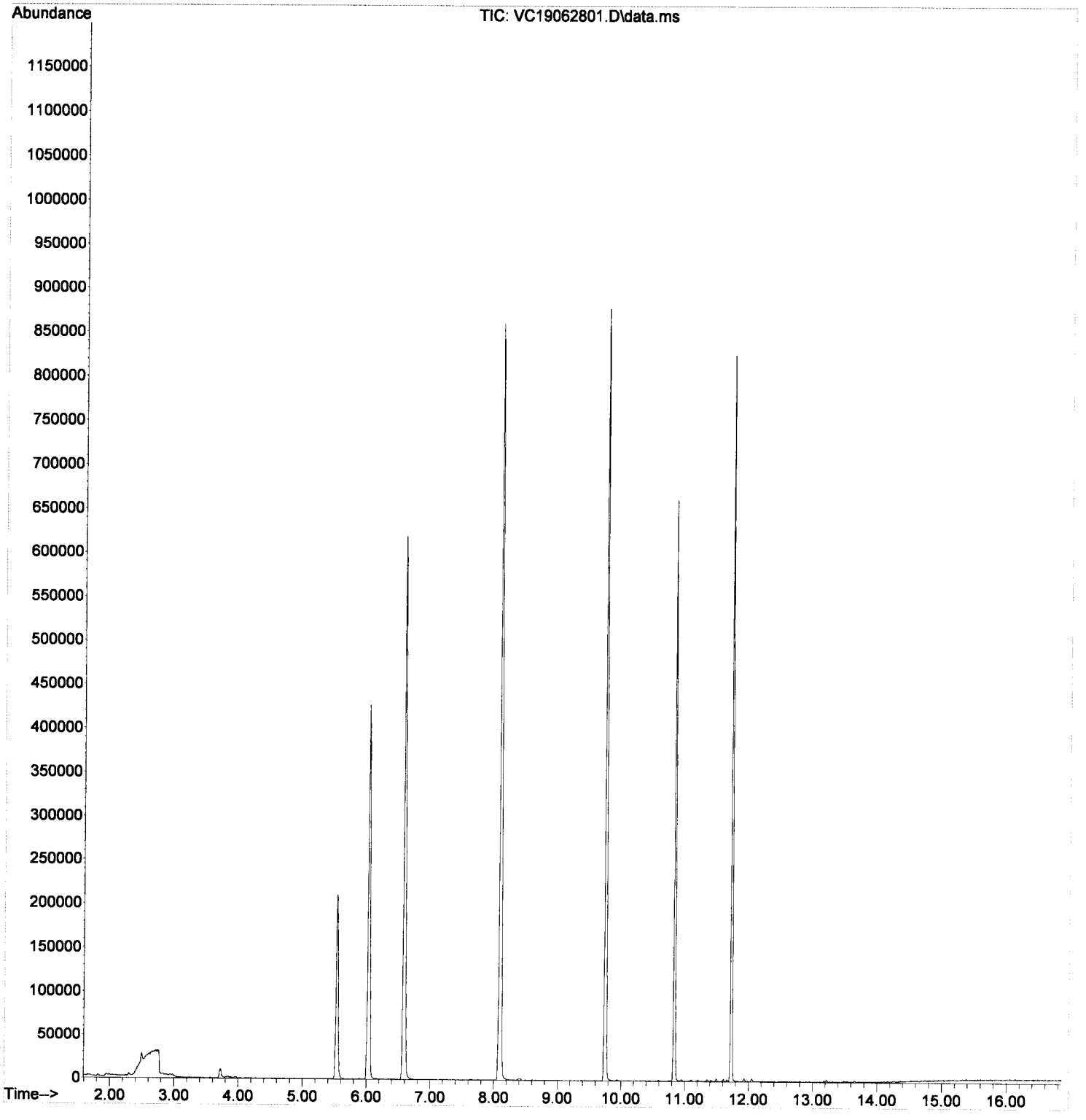
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	346970	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	519330	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	200430	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	149070	47.14	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	597773	51.13	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	703133	48.46	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	178501	49.32	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	563	0.16	ug/L		79
5) Bromomethane	2.293	96	1655	1.18	ug/L		99
6) Chloroethane	2.433	64	227	0.24	ug/L	#	1
9) Carbon Disulfide	3.102	76	435	0.30	ug/L		77
11) Iodomethane	3.236	142	416	1.69	ug/L	#	56
12) Methylene Chloride	3.723	84	6478	2.78	ug/L		91
13) Acetone	3.838	43	2317	1.89	ug/L		94
52) m,p-Xylenes (2)	9.940	91	769	0.08	ug/L		86
60) n-Propylbenzene	10.950	91	1717	0.14	ug/L		93
63) 1,3,5-Trimethylbenzene	11.102	105	981	0.12	ug/L		94
67) tert-Butylbenzene	11.364	91	834	0.19	ug/L	#	77
68) 1,2,4-Trimethylbenzene	11.412	105	977	0.12	ug/L		96
69) sec-Butylbenzene	11.498	105	2146	0.23	ug/L		97
70) 4-Isopropyltoluene	11.613	119	1670	0.21	ug/L		90
71) 1,3-Dichlorobenzene	11.668	146	421	0.09	ug/L	#	27
72) 1,4-Dichlorobenzene	11.735	146	632	0.14	ug/L	#	1
73) n-Butylbenzene	11.929	91	1994	0.29	ug/L		94
74) 1,2-Dichlorobenzene	12.063	146	356	0.09	ug/L	#	55
76) Hexachlorobutadiene	13.177	223	242	0.42	ug/L	#	66
77) 1,2,4-Trichlorobenzene	13.219	180	814	0.36	ug/L		96
78) Naphthalene	13.499	128	827	0.11	ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	573	0.27	ug/L		70

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062801.D
Acq On : 28 Jun 2019 11:02 am
Operator : TB
Sample : 9F28034-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:27:06 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/29/19

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	98	0.00	
2		Dichlorodifluoromethane	20.000	18.715	6.4	89	0.00	
3	P	Chloromethane	20.000	17.968	10.2	89	0.00	
4	C	Vinyl Chloride	20.000	19.870	0.6	94	0.00	
5		Bromomethane	20.000	22.269	-11.3	111	0.00	
6		Chloroethane	20.000	20.194	-1.0	99	0.00	← EOS ✓
7		Trichlorofluoromethane	20.000	21.083	-5.4	104	0.01	
8	C	1,1-Dichloroethene	20.000	25.652	-28.3#	127	0.00	-QS6 ✓
9		Carbon Disulfide	20.000	25.378	-26.9#	127	0.01	✓
10		Freon 113	20.000	24.787	-23.9#	118	0.00	NR ↓
11		Iodomethane	20.000	18.964	5.2	104	0.00	
12		Methylene Chloride	20.000	24.106	-20.5#	122	0.00	-QSL ✓
13		Acetone	40.000	36.061	9.8	88	0.00	
14		t-1,2-Dichloroethene	20.000	23.004	-15.0	109	0.00	
15		n-Hexane	20.000	22.503	-12.5	113	0.00	
16		Methyl-tert-butyl-ether	20.000	21.511	-7.6	104	0.00	
17	P	1,1-Dichloroethane	20.000	21.718	-8.6	102	0.00	
18		Acrylonitrile	20.000	20.470	-2.3	102	0.00	
19		c-1,2-Dichloroethene	20.000	20.232	-1.2	96	0.00	
20		2,2-Dichloropropane	20.000	25.398	-27.0#	120	0.00	-QSL ✓
21		Bromochloromethane	20.000	20.744	-3.7	95	0.00	
22	C	Chloroform	20.000	20.900	-4.5	101	0.00	
23		Carbon Tetrachloride	20.000	25.099	-25.5#	112	0.00	-QSL ✓
24		Tetrahydrofuran	20.000	18.617	6.9	91	0.00	
25		1,1,1-Trichloroethane	20.000	22.731	-13.7	108	0.00	
26	S	Dibromofluoromethane (S)	50.000	49.408	1.2	94	0.00	
27		1,1-Dichloropropene	20.000	21.667	-8.3	103	0.00	
28		2-Butanone (MEK)	40.000	38.767	3.1	95	0.00	
29		Benzene	20.000	21.979	-9.9	109	0.00	
30		1,2-Dichloroethane (EDC)	20.000	20.710	-3.6	100	0.00	
31		iso-Butyl Alcohol	500.000	478.032	4.4	94	0.01	
32	S	1,4-Difluorobenzene (S)	50.000	51.127	-2.3	101	0.00	
33		Trichloroethene (TCE)	20.000	22.928	-14.6	109	0.00	
34		Dibromomethane	20.000	21.932	-9.7	105	0.00	
35	C	1,2-Dichloropropane	20.000	20.342	-1.7	98	0.00	
36		Bromodichloromethane	20.000	23.228	-16.1	105	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	100	0.00	
38		c-1,3-Dichloropropene	20.000	22.537	-12.7	103	0.00	
39	S	Toluene-d8 (S)	50.000	48.059	3.9	97	0.00	
40	C	Toluene	20.000	20.458	-2.3	107	0.00	
41		Tetrachloroethene (PCE)	20.000	21.657	-8.3	111	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	38.241	4.4	95	0.00	
43		t-1,3-Dichloropropene	20.000	22.089	-10.4	100	0.00	
44		1,1,2-Trichloroethane	20.000	21.165	-5.8	104	0.00	
45		Dibromochloromethane	20.000	19.452	2.7	106	0.00	
46		1,3-Dichloropropane	20.000	20.508	-2.5	99	0.00	
47		1,2-Dibromoethane (EDB)	20.000	22.524	-12.6	105	0.00	
48		2-Hexanone	40.000	39.198	2.0	94	0.00	
49	P	Chlorobenzene	20.000	20.366	-1.8	105	0.00	
50	C	Ethylbenzene	20.000	20.461	-2.3	104	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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		1,1,1,2-Tetrachloroethane	20.000	24.166	-20.8#	108	0.00 — Q5L -
52		m,p-Xylenes (2)	40.000	41.831	-4.6	104	0.00
53		o-Xylene	20.000	20.105	-0.5	101	0.00
54		Styrene	20.000	22.439	-12.2	102	0.00
55	P	Bromoform	20.000	19.814	0.9	111	0.00
56		Isopropylbenzene	20.000	21.403	-7.0	105	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	101	0.00
58	S	4-Bromofluorobenzene (S)	50.000	49.121	1.8	98	0.00
59		Bromobenzene	20.000	20.954	-4.8	106	0.00
60		n-Propylbenzene	20.000	20.703	-3.5	102	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	19.832	0.8	100	0.00
62		2-Chlorotoluene	20.000	21.351	-6.8	107	0.00
63		1,3,5-Trimethylbenzene	20.000	20.874	-4.4	102	0.00
64		1,2,3-Trichloropropane	20.000	20.890	-4.5	106	0.00
65		t-1,4-Dichloro-2-butene	20.000	20.730	-3.7	109	0.00
66		4-Chlorotoluene	20.000	20.300	-1.5	101	0.00
67		tert-Butylbenzene	20.000	20.780	-3.9	99	0.00
68		1,2,4-Trimethylbenzene	20.000	20.456	-2.3	102	0.00
69		sec-Butylbenzene	20.000	21.766	-8.8	104	0.00
70		4-Isopropyltoluene	20.000	21.505	-7.5	104	0.00
71		1,3-Dichlorobenzene	20.000	20.022	-0.1	105	0.00
72		1,4-Dichlorobenzene	20.000	20.358	-1.8	107	0.00
73		n-Butylbenzene	20.000	20.131	-0.7	103	0.00
74		1,2-Dichlorobenzene	20.000	20.903	-4.5	106	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	19.937	0.3	116	0.00
76		Hexachlorobutadiene	20.000	21.839	-9.2	105	0.00
77		1,2,4-Trichlorobenzene	20.000	22.462	-12.3	105	0.00
78		Naphthalene	20.000	22.337	-11.7	105	0.00
79		1,2,3-Trichlorobenzene	20.000	22.730	-13.7	107	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	328903	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	489277	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	192230	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.536	111	148115	49.41 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	566627	51.13 ug/L	0.00
39) Toluene-d8 (S)	8.091	98	656908	48.06 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	170511	49.12 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.667	85	40623	18.71 ug/L	97
3) Chloromethane	1.862	50	61636	17.97 ug/L	98
4) Vinyl Chloride	1.953	62	46191	19.87 ug/L	99
5) Bromomethane	2.306	96	29649	22.27 ug/L	99
6) Chloroethane	2.440	64	17815	20.19 ug/L	83
7) Trichlorofluoromethane	2.567	101	27552	21.08 ug/L	94
8) 1,1-Dichloroethene	3.091	61	66602	25.65 ug/L	93
9) Carbon Disulfide	3.109	76	87452	25.38 ug/L	98
10) Freon 113	3.145	101	47628	24.79 ug/L	87
11) Iodomethane	3.243	142	19665	18.96 ug/L	96
12) Methylene Chloride	3.723	84	53232	24.11 ug/L	94
13) Acetone	3.833	43	41899	36.06 ug/L	91
14) t-1,2-Dichloroethene	3.888	61	68704	23.00 ug/L	88
15) n-Hexane	3.967	86	11935	22.50 ug/L	97
16) Methyl-tert-butyl-ether	4.034	73	182924	21.51 ug/L	98
17) 1,1-Dichloroethane	4.520	63	80481	21.72 ug/L	96
18) Acrylonitrile	4.593	53	30910	20.47 ug/L	94
19) c-1,2-Dichloroethene	5.068	61	68691	20.23 ug/L	96
20) 2,2-Dichloropropane	5.171	77	71097	25.40 ug/L	91
21) Bromochloromethane	5.269	49	40259	20.74 ug/L	95
22) Chloroform	5.354	83	89177	20.90 ug/L	98
23) Carbon Tetrachloride	5.475	117	55312	25.10 ug/L	94
24) Tetrahydrofuran	5.536	42	29503	18.62 ug/L	92
25) 1,1,1-Trichloroethane	5.548	97	75100	22.73 ug/L	97
27) 1,1-Dichloropropene	5.676	75	72738	21.67 ug/L	95
28) 2-Butanone (MEK)	5.688	43	77869	38.77 ug/L	95
29) Benzene	5.932	78	238811	21.98 ug/L	98
30) 1,2-Dichloroethane (EDC)	6.151	62	70365	20.71 ug/L	99
31) iso-Butyl Alcohol	6.260	43	100574	478.03 ug/L	92
33) Trichloroethene (TCE)	6.546	130	65065	22.93 ug/L	97
34) Dibromomethane	6.996	93	32942	21.93 ug/L	92
35) 1,2-Dichloropropane	7.106	63	58452	20.34 ug/L	94
36) Bromodichloromethane	7.179	83	55817	23.23 ug/L	99
38) c-1,3-Dichloropropene	7.884	75	76956	22.54 ug/L	95
40) Toluene	8.152	91	249606	20.46 ug/L	98
41) Tetrachloroethene (PCE)	8.596	166	56756	21.66 ug/L	97
42) 4-Methyl-2-Pentanone (...	8.614	43	125707	38.24 ug/L	100
43) t-1,3-Dichloropropene	8.645	75	69916	22.09 ug/L	95
44) 1,1,2-Trichloroethane	8.821	97	52805	21.16 ug/L	93
45) Dibromochloromethane	9.004	129	39539	19.45 ug/L	90
46) 1,3-Dichloropropane	9.107	76	94134	20.51 ug/L	95
47) 1,2-Dibromoethane (EDB)	9.247	107	52562	22.52 ug/L	93
48) 2-Hexanone	9.497	43	87666	39.20 ug/L	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

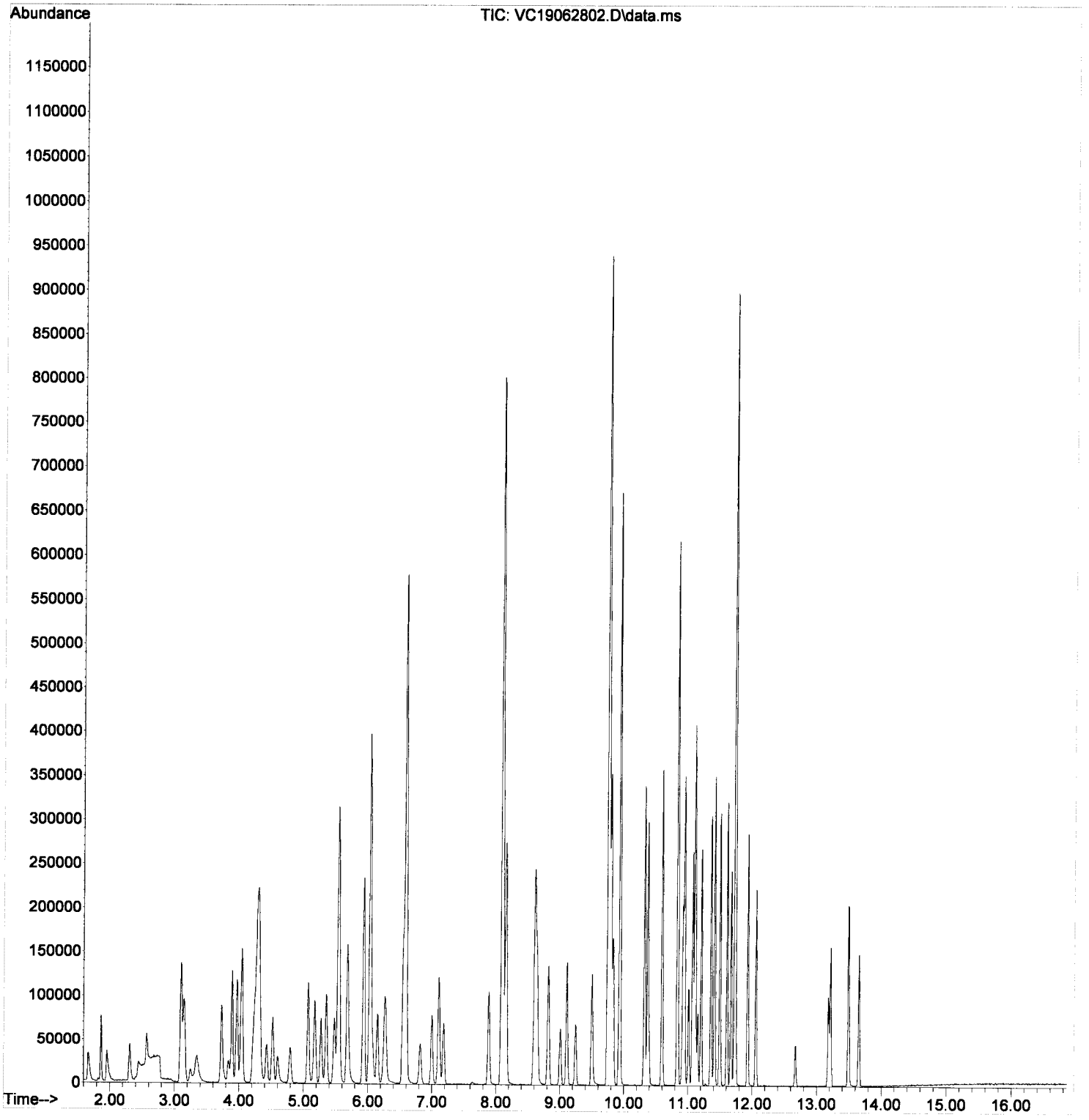
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	150668	20.37 ug/L	99
50) Ethylbenzene	9.795	91	251616	20.46 ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.831	131	46679	24.17 ug/L	99
52) m,p-Xylenes (2)	9.928	91	369312	41.83 ug/L	100
53) o-Xylene	10.318	91	184571	20.10 ug/L	99
54) Styrene	10.367	104	139183	22.44 ug/L	99
55) Bromoform	10.391	173	21300	19.81 ug/L	98
56) Isopropylbenzene	10.592	105	222512	21.40 ug/L	96
59) Bromobenzene	10.920	156	54920	20.95 ug/L	92
60) n-Propylbenzene	10.938	91	240827	20.70 ug/L	97
61) 1,1,2,2-Tetrachloroethane	11.011	83	49329	19.83 ug/L	100
62) 2-Chlorotoluene	11.072	126	50872	21.35 ug/L	97
63) 1,3,5-Trimethylbenzene	11.103	105	166268	20.87 ug/L	99
64) 1,2,3-Trichloropropane	11.115	110	21226	20.89 ug/L	93
65) t-1,4-Dichloro-2-butene	11.151	88	6826	20.73 ug/L #	84
66) 4-Chlorotoluene	11.206	91	140915	20.30 ug/L	97
67) tert-Butylbenzene	11.358	91	87678	20.78 ug/L	98
68) 1,2,4-Trimethylbenzene	11.413	105	165822	20.46 ug/L	97
69) sec-Butylbenzene	11.498	105	194857	21.77 ug/L	98
70) 4-Isopropyltoluene	11.608	119	160866	21.51 ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	87880	20.02 ug/L	99
72) 1,4-Dichlorobenzene	11.735	146	89448	20.36 ug/L	98
73) n-Butylbenzene	11.930	91	131312	20.13 ug/L	100
74) 1,2-Dichlorobenzene	12.058	146	79205	20.90 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	11430	19.94 ug/L	96
76) Hexachlorobutadiene	13.177	223	12202	21.84 ug/L	96
77) 1,2,4-Trichlorobenzene	13.214	180	48876	22.46 ug/L	98
78) Naphthalene	13.493	128	159974	22.34 ug/L	97
79) 1,2,3-Trichlorobenzene	13.652	180	46738	22.73 ug/L	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062802.D
Acq On : 28 Jun 2019 11:30 am
Operator : TB
Sample : 9061492-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 11:47:24 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19

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 (IS)	50.000	50.000	0.0	101	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	47.652	4.7	96	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	47.306	5.4	95	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	97	0.00
5	H	CA-LUFT (C5-C12)	500.000	556.001	-11.2	112	0.00
6	H	TPHg (C5-C9)	500.000	571.665	-14.3	113	0.00
7	H	TPHg (C6-C10)	500.000	558.782	-11.8	113	0.00
8	H	NWTPH-Gx	500.000	512.342	-2.5	111	0.00
9		Benzene (NR)	-1.000	0.000	0.0	115	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	97	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	116	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	98	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	121	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19 6/28/19 6/28/19

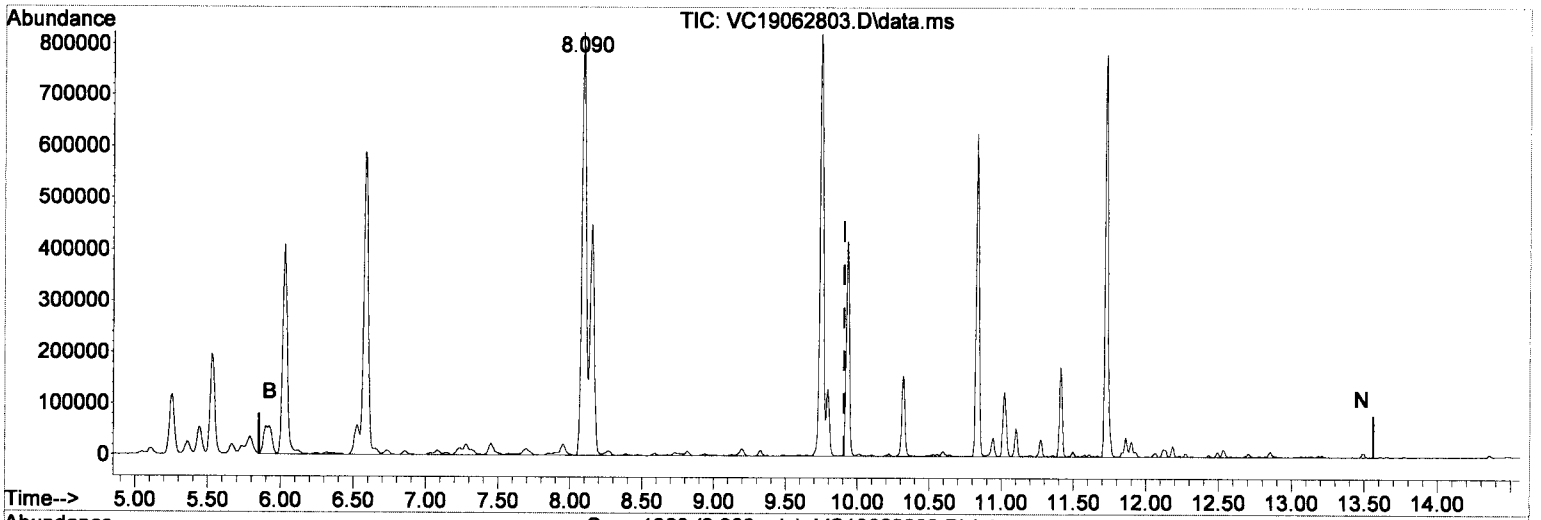
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	334072	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1276778	47.65	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	893413	47.31	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1406698	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1766378	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1115295	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6748046m	556.00	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5891497m	571.66	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4554175m	558.78	ug/L	
8) NWTPH-Gx	9.906	TIC	3652095m	512.34	ug/L	

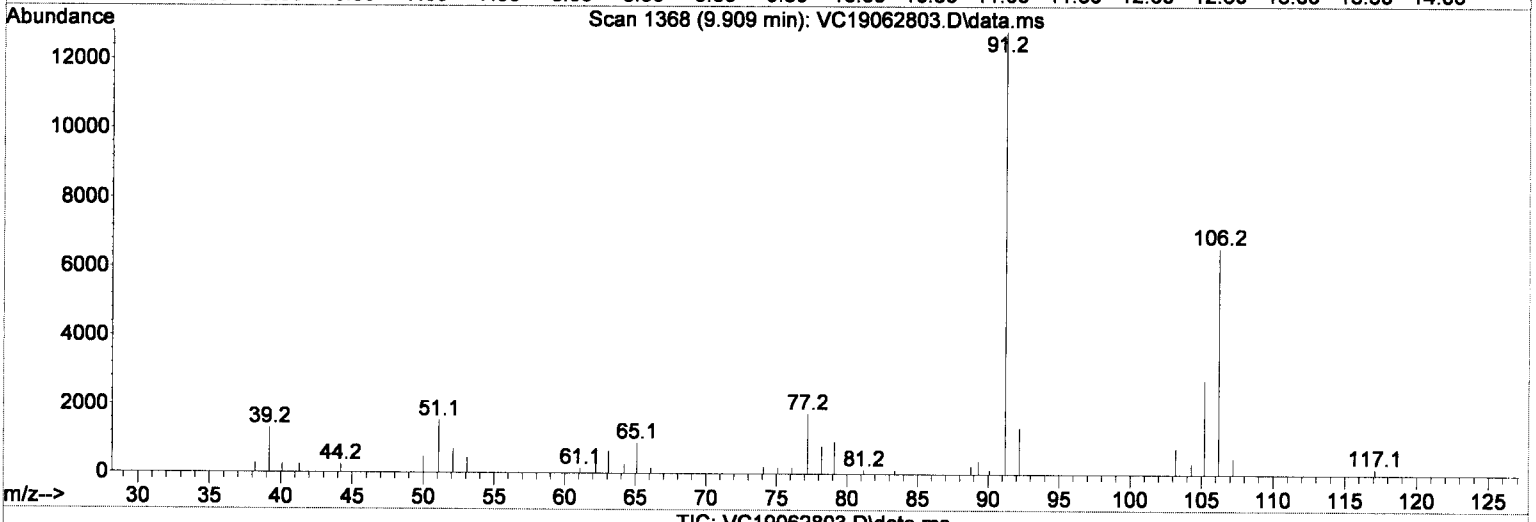
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062803.D
Acq On : 28 Jun 2019 11:57 am
Operator : TB
Sample : 9061492-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 12:15:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





TIC: VC19062803.D\data.ms

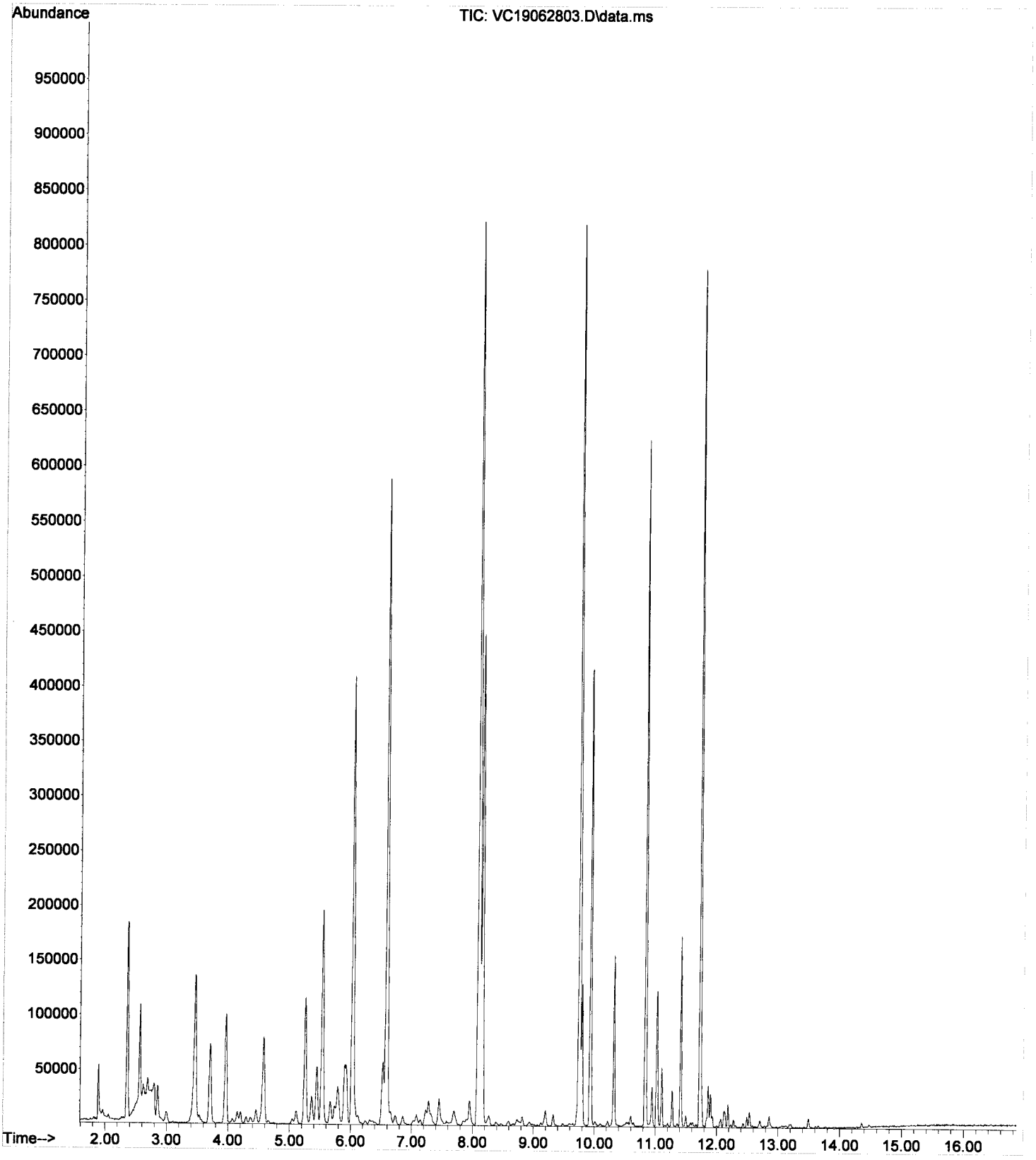
(8) NWTPH-Gx (H)

9.906min (0.000) 512.34 ug/L m

response 3652095

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.01#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-06\9F28034\VC19062803.D
Operator : TB
Acquired : 28 Jun 2019 11:57 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9061492-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
Vial Number: 3



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:11 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.034	168	350970	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1322693	46.99	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	947924	47.78	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1471392	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1818302	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1126652	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	544921m	11.78	ug/L	
6) TPHg (C5-C9)	9.906	TIC	544609m	8.26	ug/L	
7) TPHg (C6-C10)	9.906	TIC	467447m	16.95	ug/L	
8) NWTPH-Gx	9.906	TIC	4019m	34.37	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:19 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.034	168	350970	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	518347	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	198565	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.535	111	148612	46.46 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	604079	51.08 ug/L	0.00
39) Toluene-d8 (S)	8.097	98	704161	48.63 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	178421	49.76 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.861	50	565	0.15 ug/L	77
5) Bromomethane	2.311	96	1771	1.25 ug/L	80
6) Chloroethane	2.488	64	260	0.28 ug/L #	1
9) Carbon Disulfide	3.108	76	147	0.21 ug/L	77
11) Iodomethane	3.254	142	495	1.76 ug/L #	83
12) Methylene Chloride	3.729	84	3058	1.30 ug/L	92
13) Acetone	3.862	43	336	0.27 ug/L #	42
27) 1,1-Dichloropropene	5.608	75	329	0.09 ug/L #	41
52) m,p-Xylenes (2)	9.940	91	855	0.09 ug/L	83
68) 1,2,4-Trimethylbenzene	11.418	105	682	0.08 ug/L	89
73) n-Butylbenzene	11.935	91	812	0.12 ug/L	67

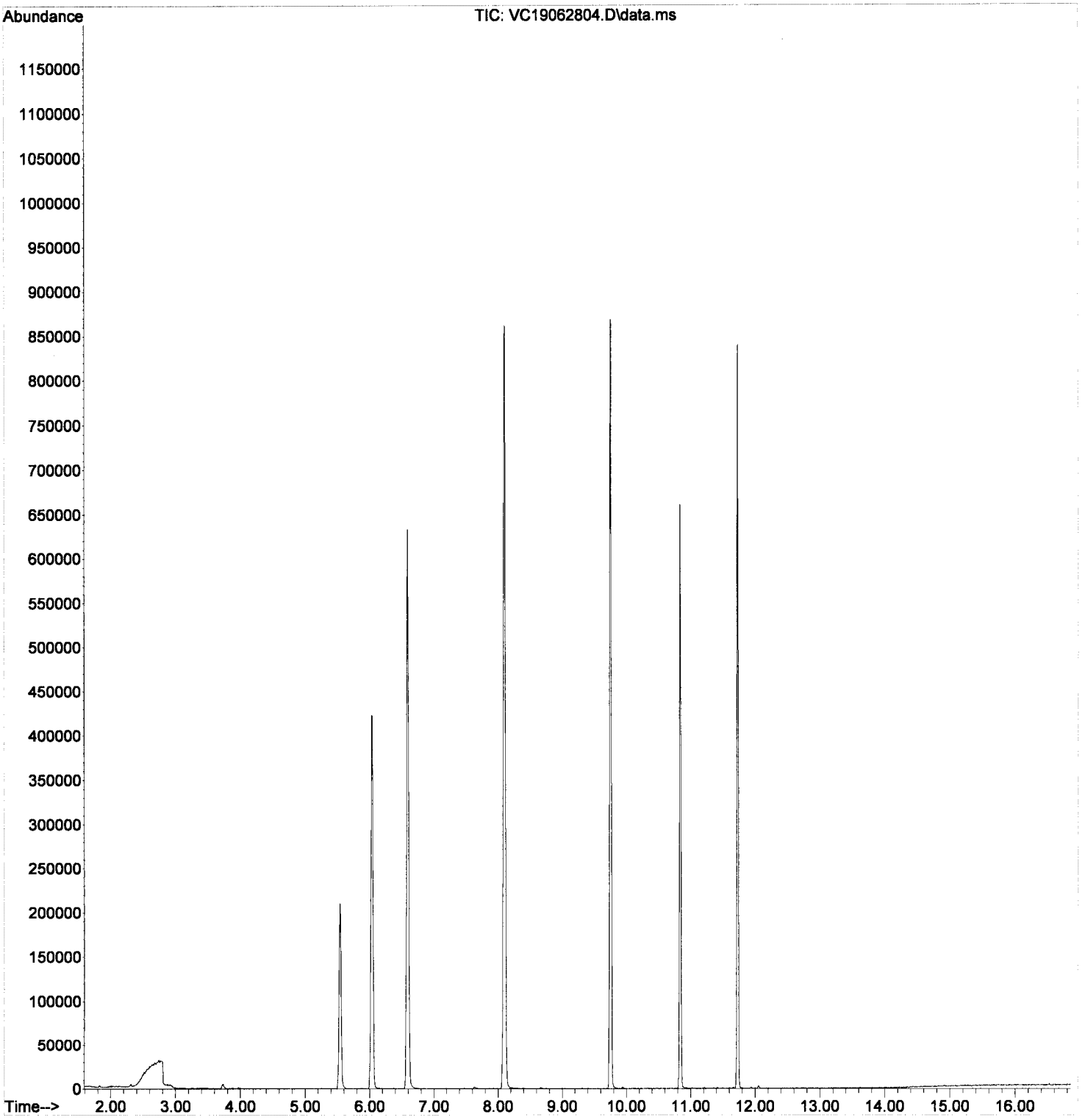
<LMDL

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062804.D
Acq On : 28 Jun 2019 12:25 pm
Operator : TB
Sample : 9061492-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:28:19 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

6/28/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	332559	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	516646	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	215484	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.530	111	165510	54.60 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	577696	51.55 ug/L	0.00
39) Toluene-d8 (S)	8.091	98	677305	46.93 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	190198	48.88 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	1.661	85	42568	19.39 ug/L	99
3) Chloromethane	1.862	50	60297	17.38 ug/L	98
4) Vinyl Chloride	1.947	62	47544	20.23 ug/L	94
5) Bromomethane	2.300	96	29729	22.08 ug/L	98
6) Chloroethane	2.434	64	20265	22.72 ug/L	91
7) Trichlorofluoromethane	2.568	101	33102	25.05 ug/L	97
8) 1,1-Dichloroethene	3.103	61	65903	25.10 ug/L	91
9) Carbon Disulfide	3.115	76	84396	24.37 ug/L	98
10) Freon 113	3.152	101	46390	23.88 ug/L	88
11) Iodomethane	3.249	142	20541	19.54 ug/L	100
12) Methylene Chloride	3.730	84	52544	23.53 ug/L	96
13) Acetone	3.833	43	41416	35.25 ug/L	86
14) t-1,2-Dichloroethene	3.888	61	67242	22.27 ug/L	91
15) n-Hexane	3.973	86	10668	19.68 ug/L	95
16) Methyl-tert-butyl-ether	4.034	73	174441	20.29 ug/L	98
17) 1,1-Dichloroethane	4.520	63	85183	22.73 ug/L	99
18) Acrylonitrile	4.593	53	30057	19.69 ug/L	99
19) c-1,2-Dichloroethene	5.068	61	71594	20.86 ug/L	94
20) 2,2-Dichloropropane	5.171	77	64626	22.83 ug/L	85
21) Bromochloromethane	5.263	49	39179	19.97 ug/L	98
22) Chloroform	5.348	83	90957	21.08 ug/L	97
23) Carbon Tetrachloride	5.476	117	54214	24.33 ug/L	99
24) Tetrahydrofuran	5.530	42	27837	17.37 ug/L	92
25) 1,1,1-Trichloroethane	5.549	97	73864	22.11 ug/L	95
27) 1,1-Dichloropropene	5.676	75	71042	20.93 ug/L	98
28) 2-Butanone (MEK)	5.682	43	76609	37.72 ug/L	95
29) Benzene	5.932	78	231640	21.08 ug/L	97
30) 1,2-Dichloroethane (EDC)	6.145	62	66574	19.38 ug/L	100
31) iso-Butyl Alcohol	6.260	43	99657	468.47 ug/L	94
33) Trichloroethene (TCE)	6.546	130	62874	21.91 ug/L	94
34) Dibromomethane	6.996	93	31824	20.95 ug/L	96
35) 1,2-Dichloropropane	7.106	63	56383	19.41 ug/L	99
36) Bromodichloromethane	7.185	83	52554	21.63 ug/L	100
38) c-1,3-Dichloropropene	7.891	75	70978	19.69 ug/L	97
40) Toluene	8.152	91	242337	18.81 ug/L	97
41) Tetrachloroethene (PCE)	8.602	166	53416	19.30 ug/L	98
42) 4-Methyl-2-Pentanone (...	8.615	43	127550	36.75 ug/L	98
43) t-1,3-Dichloropropene	8.645	75	67535	20.21 ug/L	97
44) 1,1,2-Trichloroethane	8.815	97	50903	19.32 ug/L	98
45) Dibromochloromethane	9.004	129	38433	17.97 ug/L	98
46) 1,3-Dichloropropane	9.107	76	90432	18.66 ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	50683	20.57 ug/L	100
48) 2-Hexanone	9.497	43	87039	36.86 ug/L	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

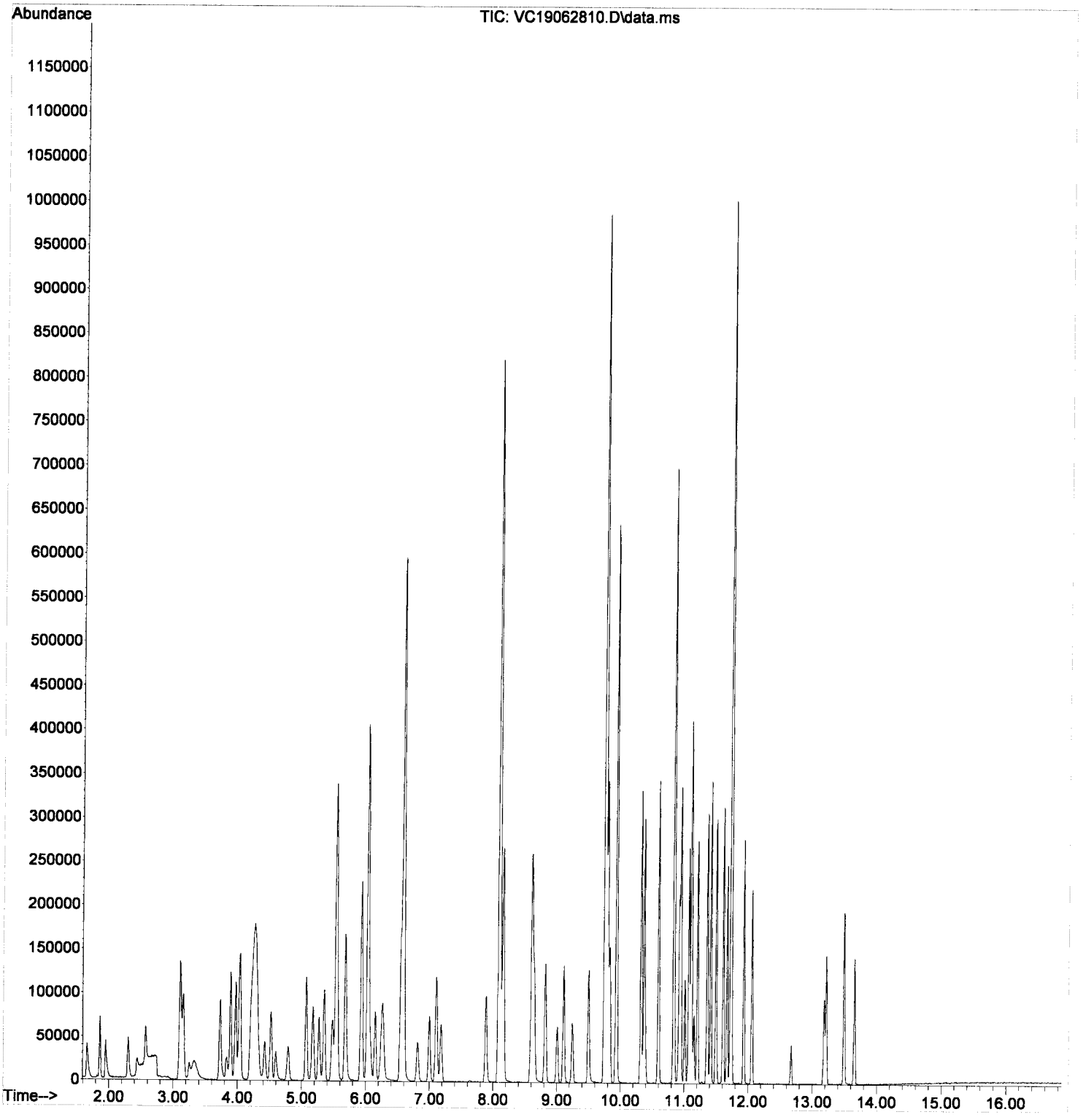
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	145675	18.65 ug/L	99
50) Ethylbenzene	9.795	91	241128	18.57 ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.825	131	44394	21.77 ug/L	97
52) m,p-Xylenes (2)	9.929	91	355097	38.09 ug/L	99
53) o-Xylene	10.318	91	179011	18.47 ug/L	99
54) Styrene	10.367	104	139469	21.29 ug/L	97
55) Bromoform	10.385	173	22477	19.80 ug/L	98
56) Isopropylbenzene	10.592	105	209671	19.10 ug/L	97
59) Bromobenzene	10.920	156	57214	19.47 ug/L	99
60) n-Propylbenzene	10.938	91	234361	17.97 ug/L	97
61) 1,1,2,2-Tetrachloroethane	11.005	83	53059	19.03 ug/L	97
62) 2-Chlorotoluene	11.066	126	51090	19.13 ug/L	94
63) 1,3,5-Trimethylbenzene	11.103	105	163873	18.35 ug/L	97
64) 1,2,3-Trichloropropane	11.115	110	20597	18.08 ug/L	87
65) t-1,4-Dichloro-2-butene	11.151	88	6299	17.32 ug/L #	88
66) 4-Chlorotoluene	11.206	91	142276	18.28 ug/L	94
67) tert-Butylbenzene	11.358	91	84842	17.94 ug/L	96
68) 1,2,4-Trimethylbenzene	11.413	105	164176	18.07 ug/L	98
69) sec-Butylbenzene	11.498	105	189116	18.84 ug/L	99
70) 4-Isopropyltoluene	11.608	119	155421	18.54 ug/L	98
71) 1,3-Dichlorobenzene	11.669	146	91227	18.54 ug/L	99
72) 1,4-Dichlorobenzene	11.742	146	89702	18.21 ug/L	98
73) n-Butylbenzene	11.930	91	126222	17.26 ug/L	99
74) 1,2-Dichlorobenzene	12.058	146	80648	18.99 ug/L	99
75) 1,2-Dibromo-3-Chloropr...	12.672	157	10980	17.25 ug/L	90
76) Hexachlorobutadiene	13.177	223	11499	18.36 ug/L	91
77) 1,2,4-Trichlorobenzene	13.214	180	46099	18.90 ug/L	91
78) Naphthalene	13.494	128	154315	19.22 ug/L	98
79) 1,2,3-Trichlorobenzene	13.652	180	44089	19.13 ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062810.D
Acq On : 28 Jun 2019 3:10 pm
Operator : TB
Sample : 9061492-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0843-07
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 28 16:29:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:59:14 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

7/1/19

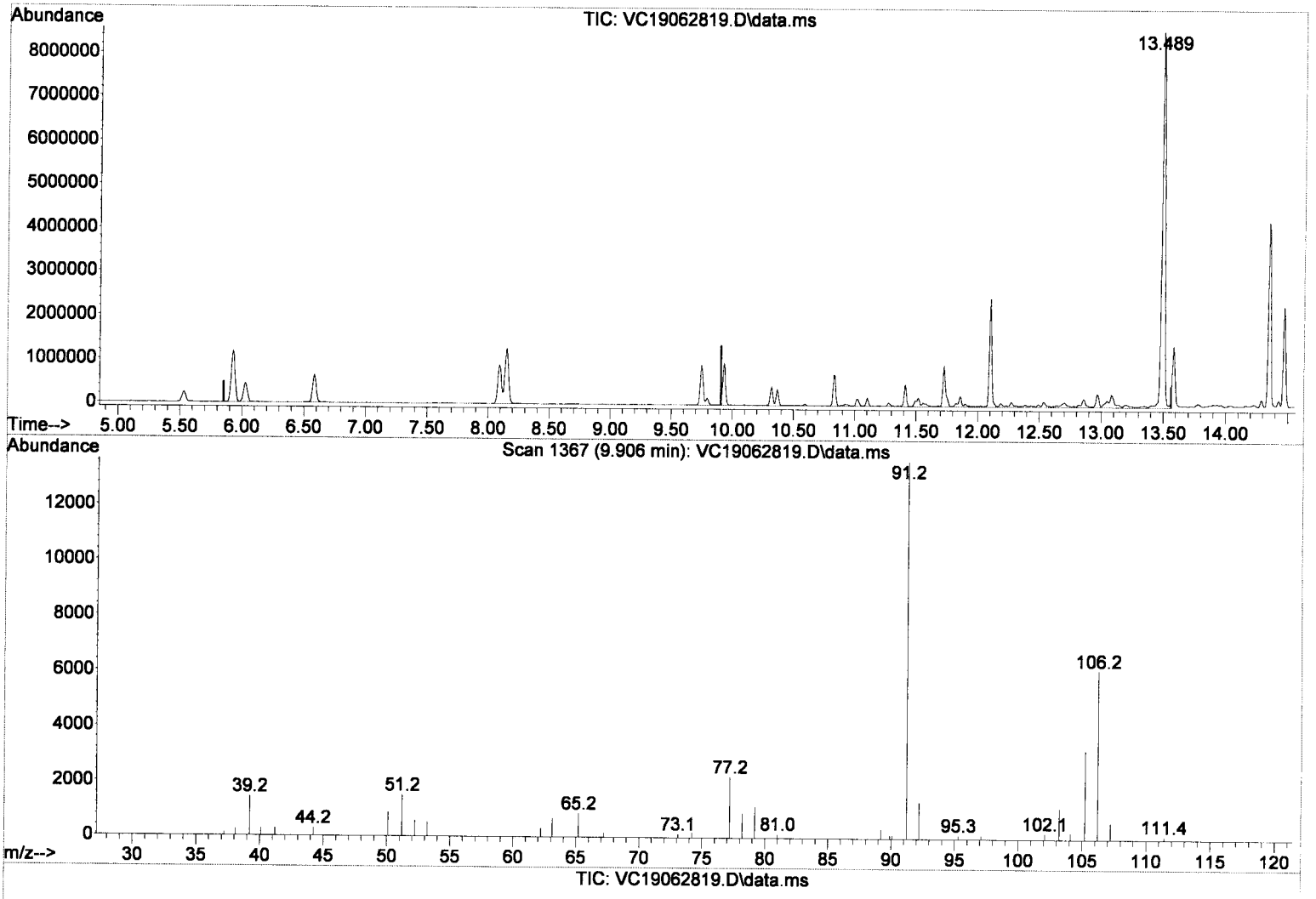
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.030	168	365157	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.584	TIC	1354940	46.26	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.830	TIC	1040226	50.39	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.747	TIC	1560923	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1831516	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1469302	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	15596023m	1216.05	ug/L	
6) TPHg (C5-C9)	9.906	TIC	8920757m	810.69	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8846319m	1026.83	ug/L	
8) NWTPH-Gx	9.906	TIC	31173433m	3874.03	ug/L	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:59:14 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 3874.03 ug/L m

response 31173433

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	2.54#
0.00	0.00	1.83#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

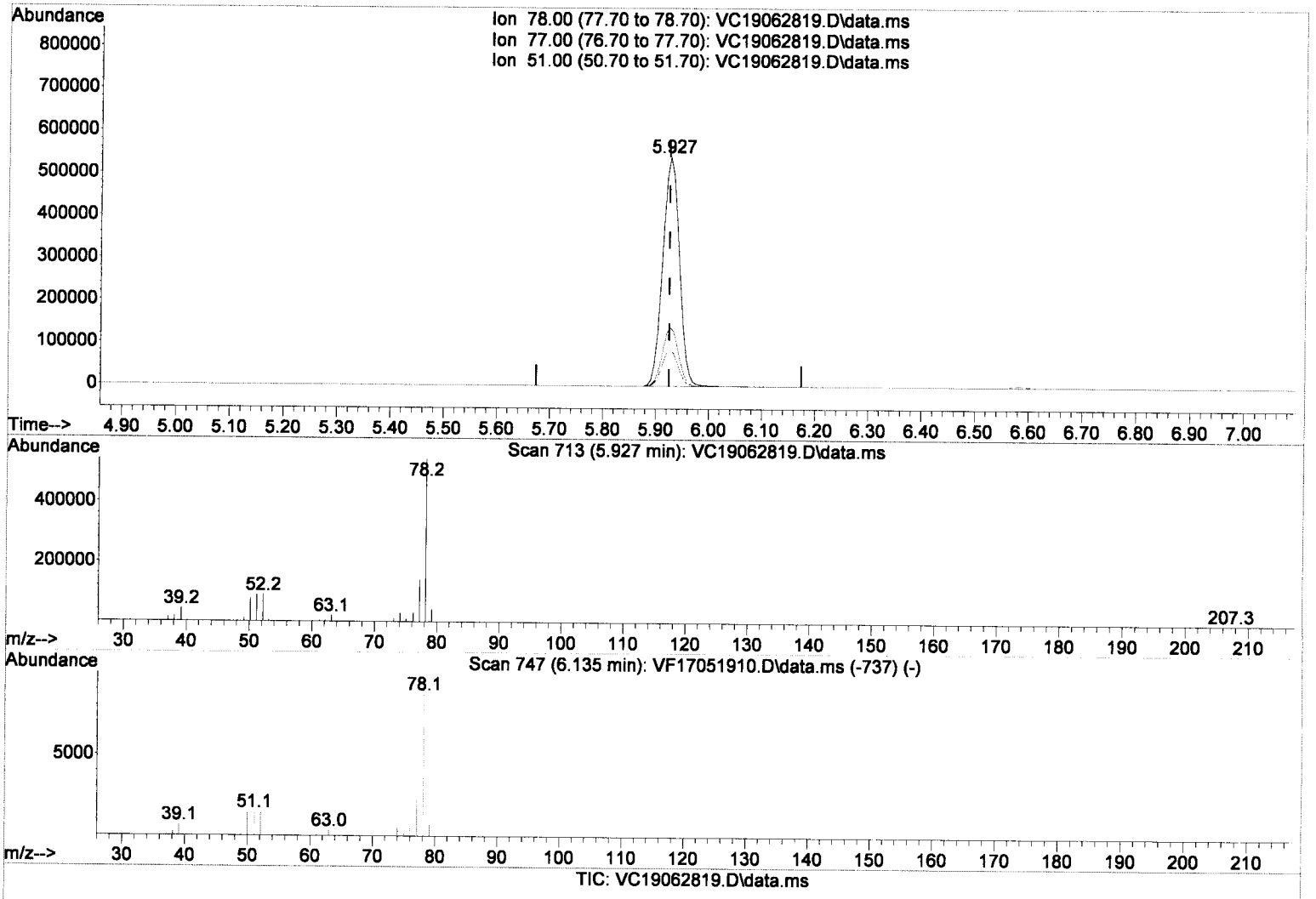
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.030	168	365157	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.747	117	539064	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	217408	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.532	111	161090	48.40 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.584	114	619478	50.35 ug/L	0.00
39) Toluene-d8 (S)	8.093	98	724674	48.12 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.836	174	194450	49.53 ug/L	0.00
Target Compounds					Qvalue
3) Chloromethane	1.851	50	404	0.11 ug/L	92 CMOL
5) Bromomethane	2.295	96	1394	0.94 ug/L	93
6) Chloroethane	2.435	64	132	0.13 ug/L #	1
9) Carbon Disulfide	3.110	76	882	0.43 ug/L	77
11) Iodomethane	3.250	142	179	1.48 ug/L #	47
12) Methylene Chloride	3.719	84	4487	1.83 ug/L	96
13) Acetone	3.840	43	298	0.23 ug/L #	42
15) n-Hexane	3.962	86	583	Below Cal #	41
29) Benzene	5.927	78	1187495	98.44 ug/L	96
40) Toluene	8.154	91	1140346	84.83 ug/L	98
42) 4-Methyl-2-Pentanone (...	8.585	43	385	0.11 ug/L #	41
50) Ethylbenzene	9.796	91	113528	8.38 ug/L	99
52) m,p-Xylenes (2)	9.930	91	523154	53.78 ug/L	99
53) o-Xylene	10.319	91	235897	23.32 ug/L	98
54) Styrene	10.368	104	174031	25.47 ug/L	99
56) Isopropylbenzene	10.593	105	19476	1.70 ug/L	95
60) n-Propylbenzene	10.946	91	17368	1.32 ug/L	98
62) 2-Chlorotoluene	~~11.013~~	~~126~~	~~1384~~	~~0.51 ug/L #~~	~~1~~ MI CMOL
63) 1,3,5-Trimethylbenzene	11.104	105	87018	9.66 ug/L	98
67) tert-Butylbenzene	11.360	91	1951	0.41 ug/L	89 CMOL
68) 1,2,4-Trimethylbenzene	11.414	105	236420	25.79 ug/L	97
69) sec-Butylbenzene	11.493	105	58425	5.77 ug/L	96
70) 4-Isopropyltoluene	11.609	119	5491	0.65 ug/L	90
73) n-Butylbenzene	11.931	91	4148	0.56 ug/L	91
77) 1,2,4-Trichlorobenzene	13.258	180	213	0.09 ug/L #	1 CMOL
78) Naphthalene	13.495	128	~~5126879~~	~~632.96 ug/L~~	73 RR2
79) 1,2,3-Trichlorobenzene	13.641	180	~~799~~	~~0.34 ug/L #~~	1 CMOL

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(29) Benzene

5.927min (+0.002) 98.44 ug/L

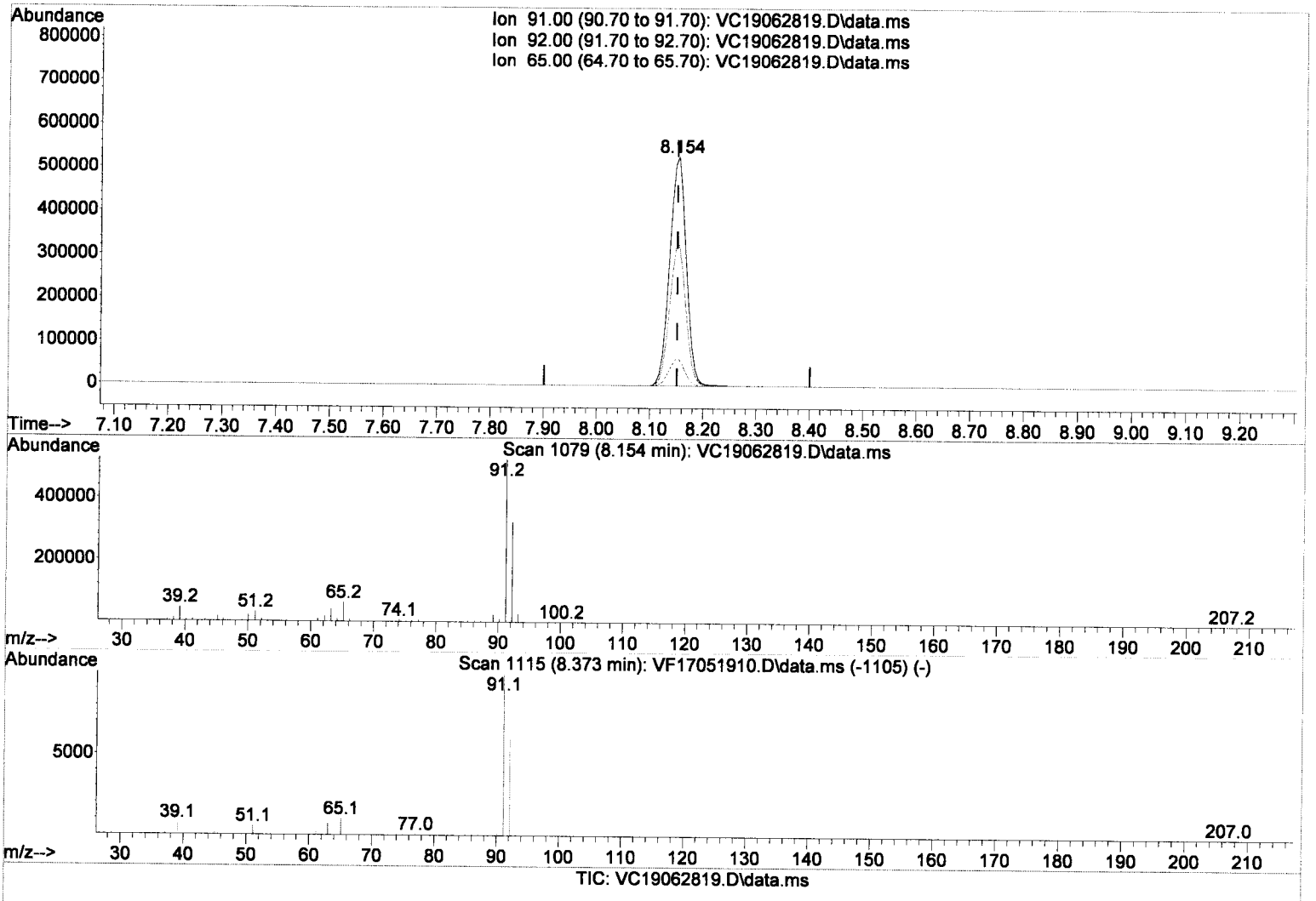
response 1187495

Ion	Exp%	Act%
78.00	100	100
77.00	23.20	25.73
51.00	15.50	16.19
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(40) Toluene (C)

8.154min (+0.003) 84.83 ug/L

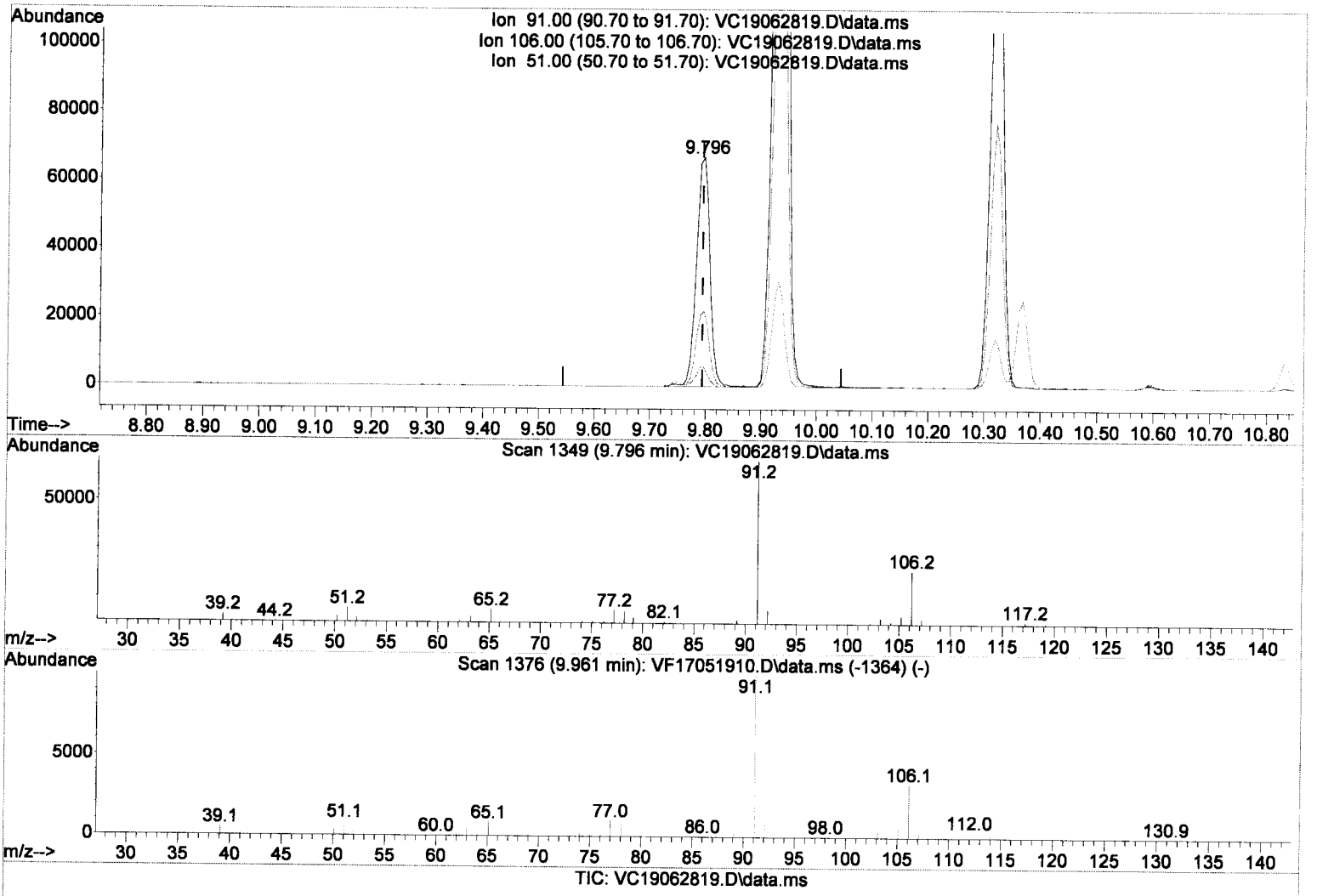
response 1140346

Ion	Exp%	Act%
91.00	100	100
92.00	60.20	61.57
65.00	11.90	11.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(50) Ethylbenzene (C)

9.796min (+0.002) 8.38 ug/L

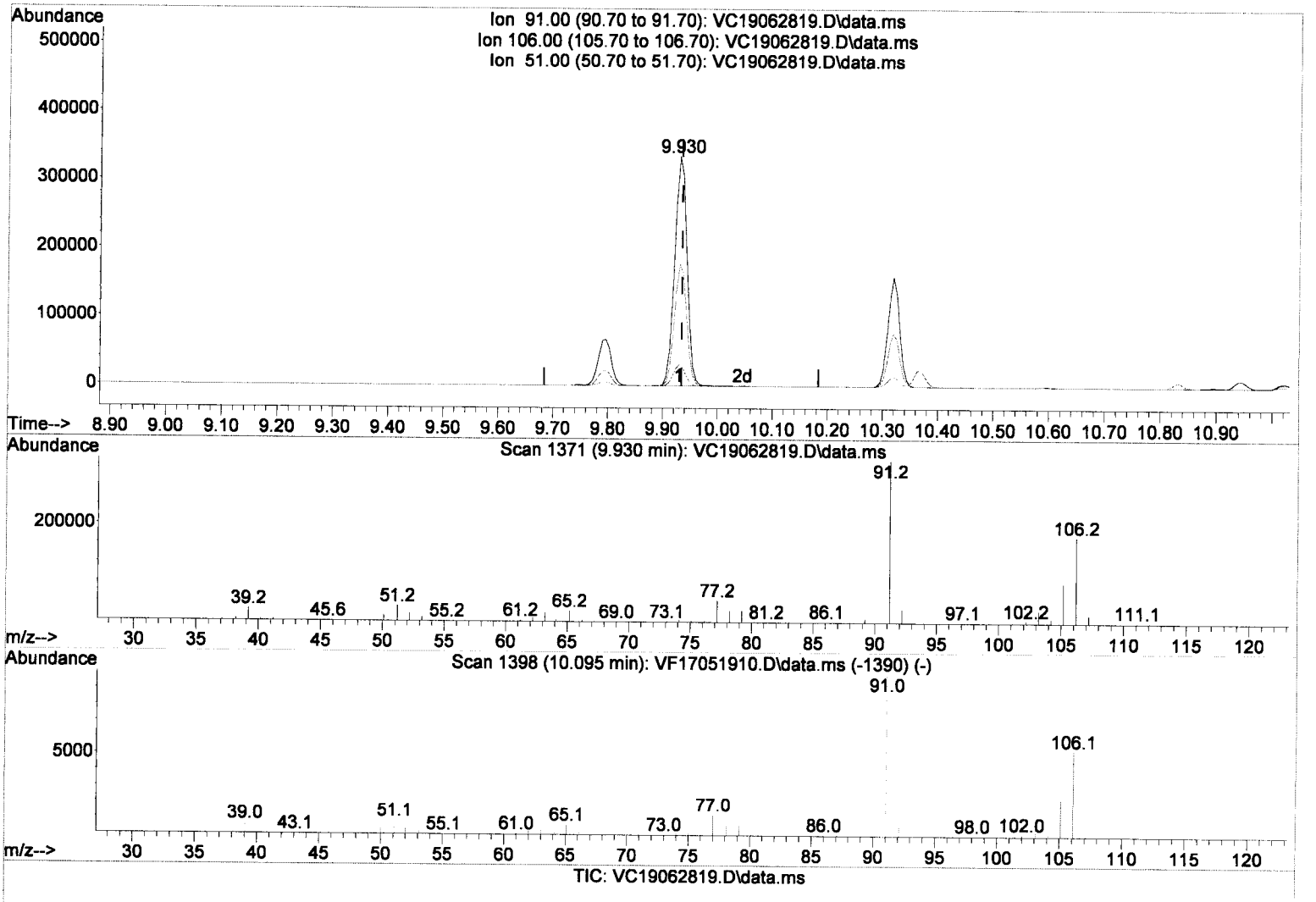
response 113528

Ion	Exp%	Act%
91.00	100	100
106.00	33.20	32.88
51.00	9.50	8.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(52) m,p-Xylenes (2)

9.930min (-0.004) 53.78 ug/L

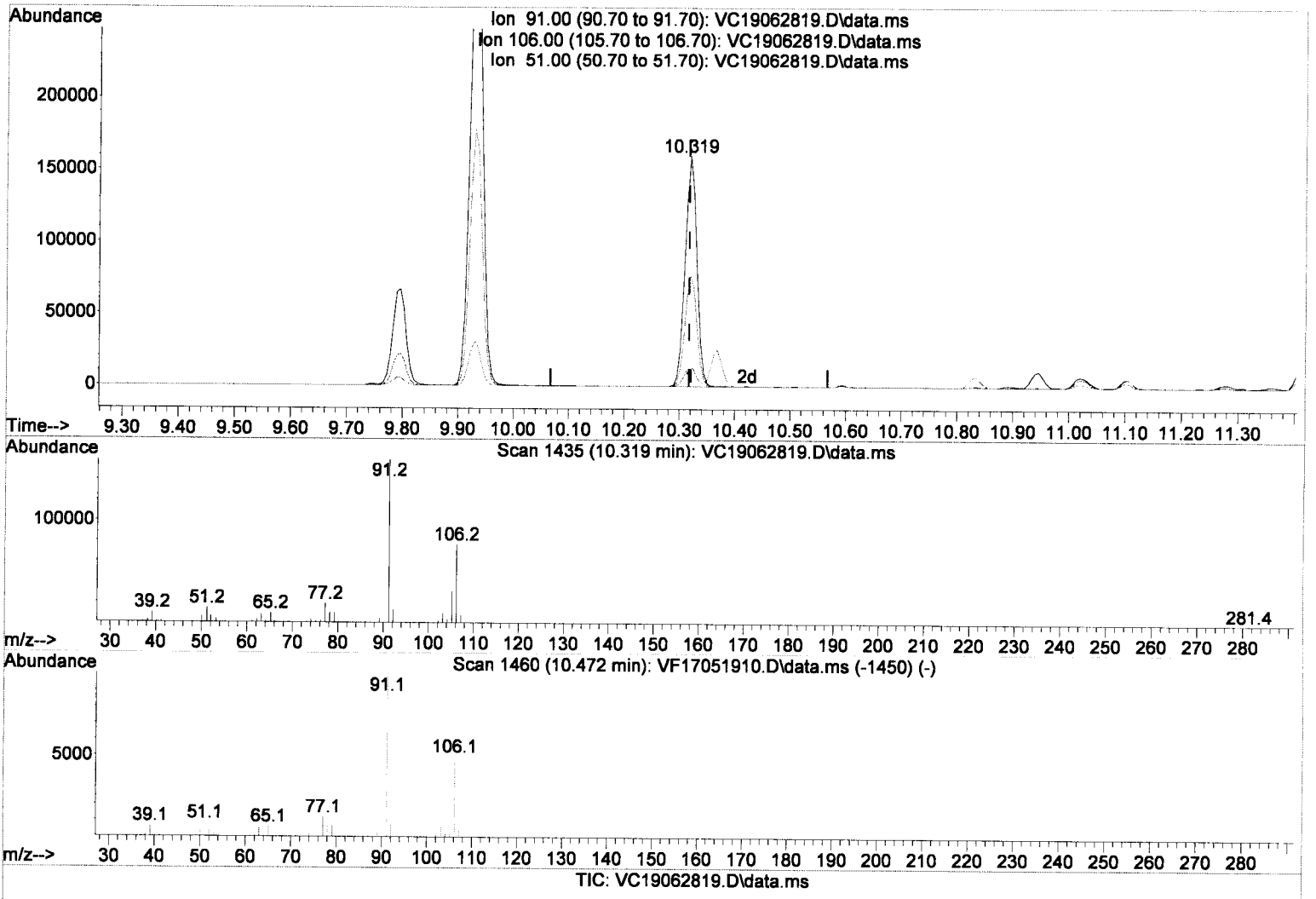
response 523154

Ion	Exp%	Act%
91.00	100	100
106.00	52.70	53.10
51.00	10.10	9.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(53) o-Xylene

10.319min (+0.002) 23.32 ug/L

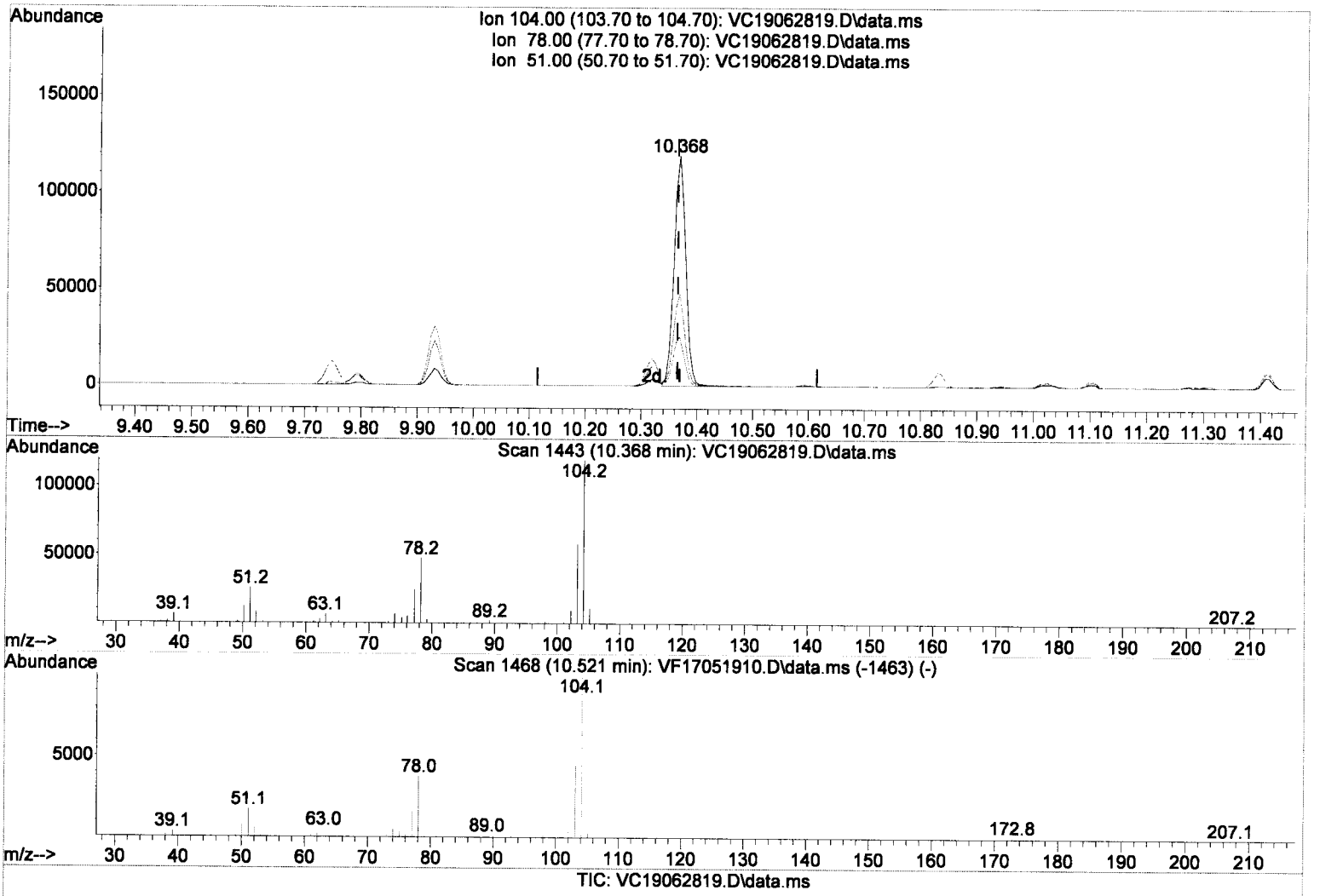
response 235897

Ion	Exp%	Act%
91.00	100	100
106.00	49.40	48.15
51.00	10.00	8.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(54) Styrene

10.368min (+0.003) 25.47 ug/L

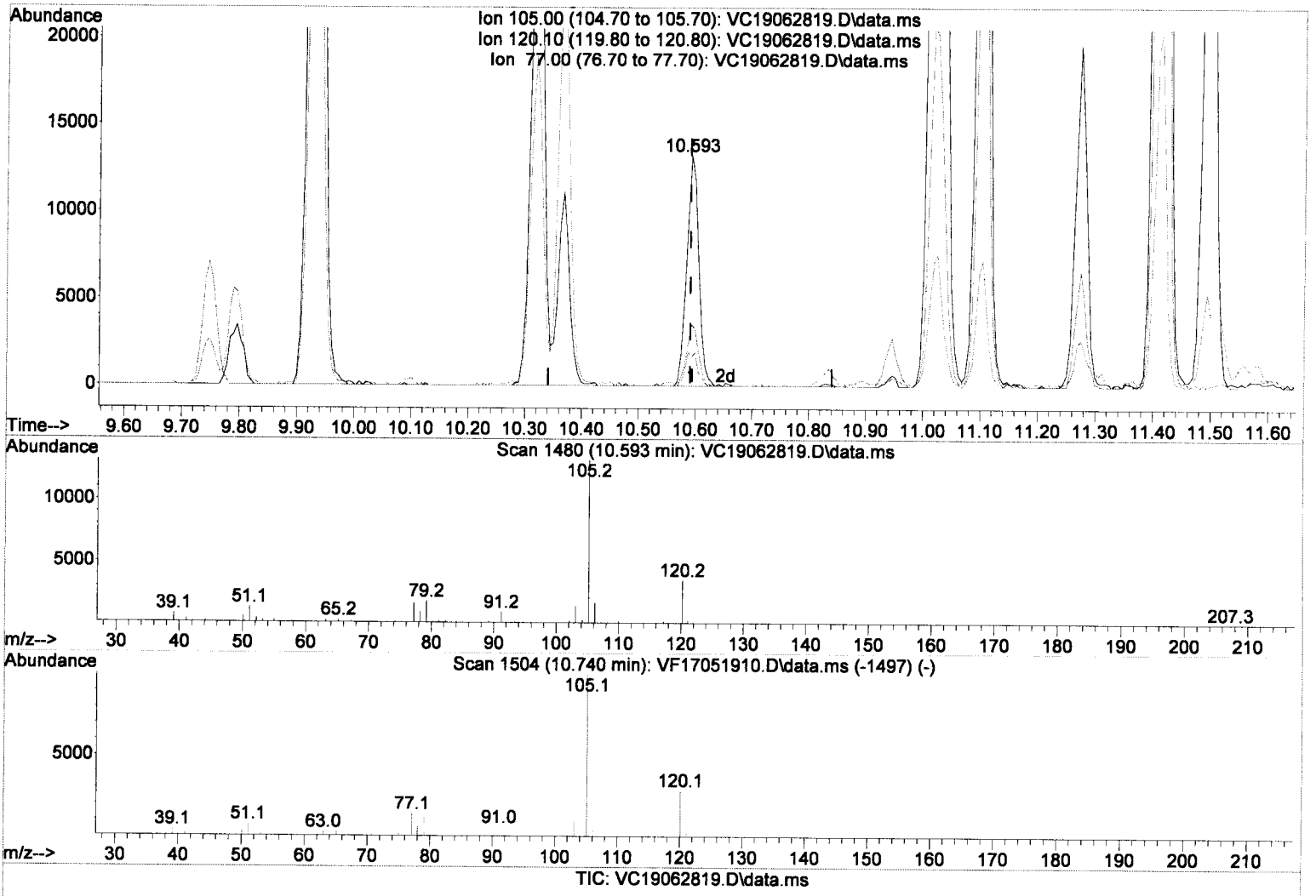
response 174031

Ion	Exp%	Act%
104.00	100	100
78.00	40.60	39.91
51.00	21.90	21.36
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(56) Isopropylbenzene

10.593min (+0.002) 1.70 ug/L

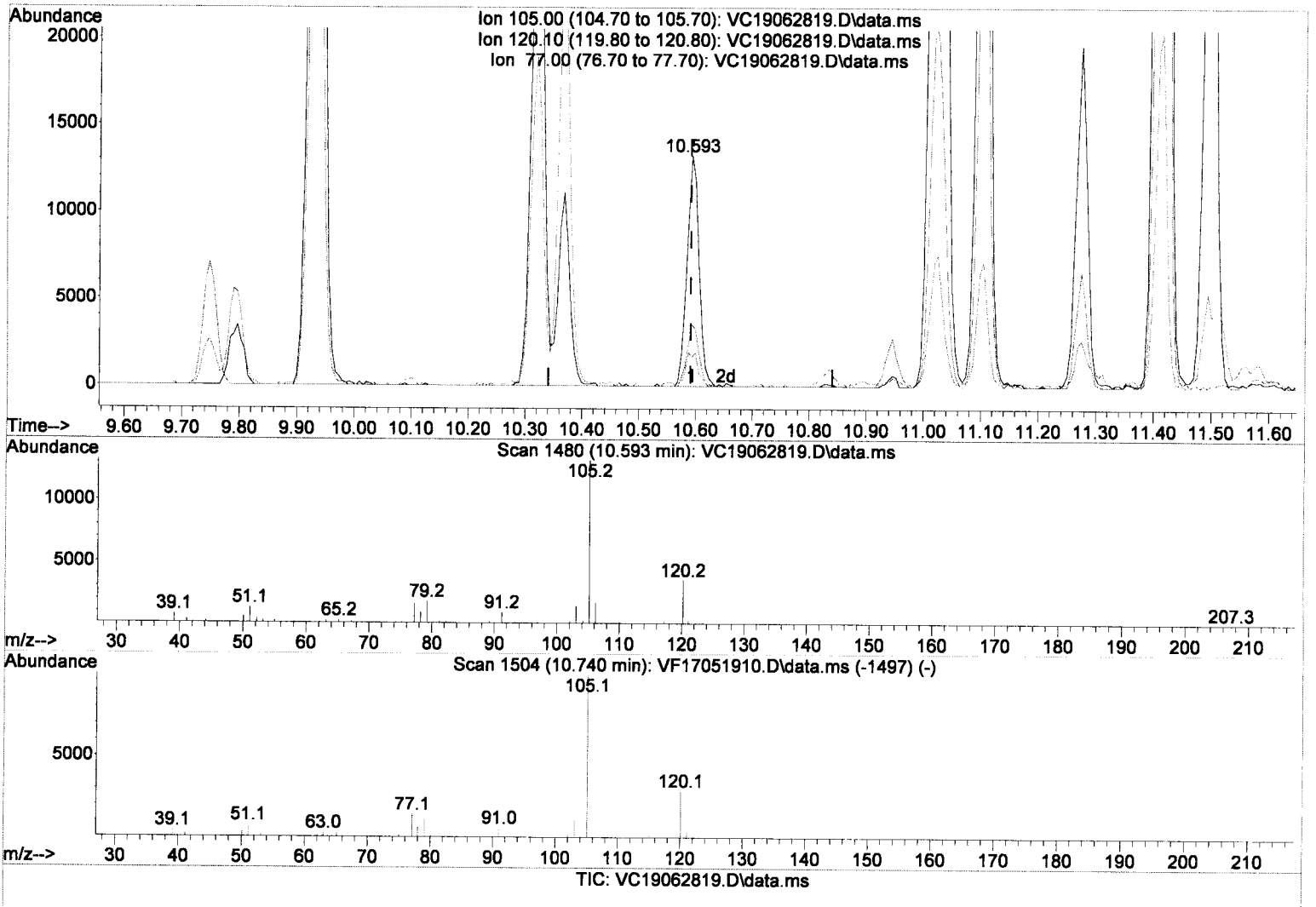
response 19476

Ion	Exp%	Act%
105.00	100	100
120.10	28.60	26.91
77.00	15.60	12.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(56) Isopropylbenzene

10.593min (+0.002) 1.70 ug/L

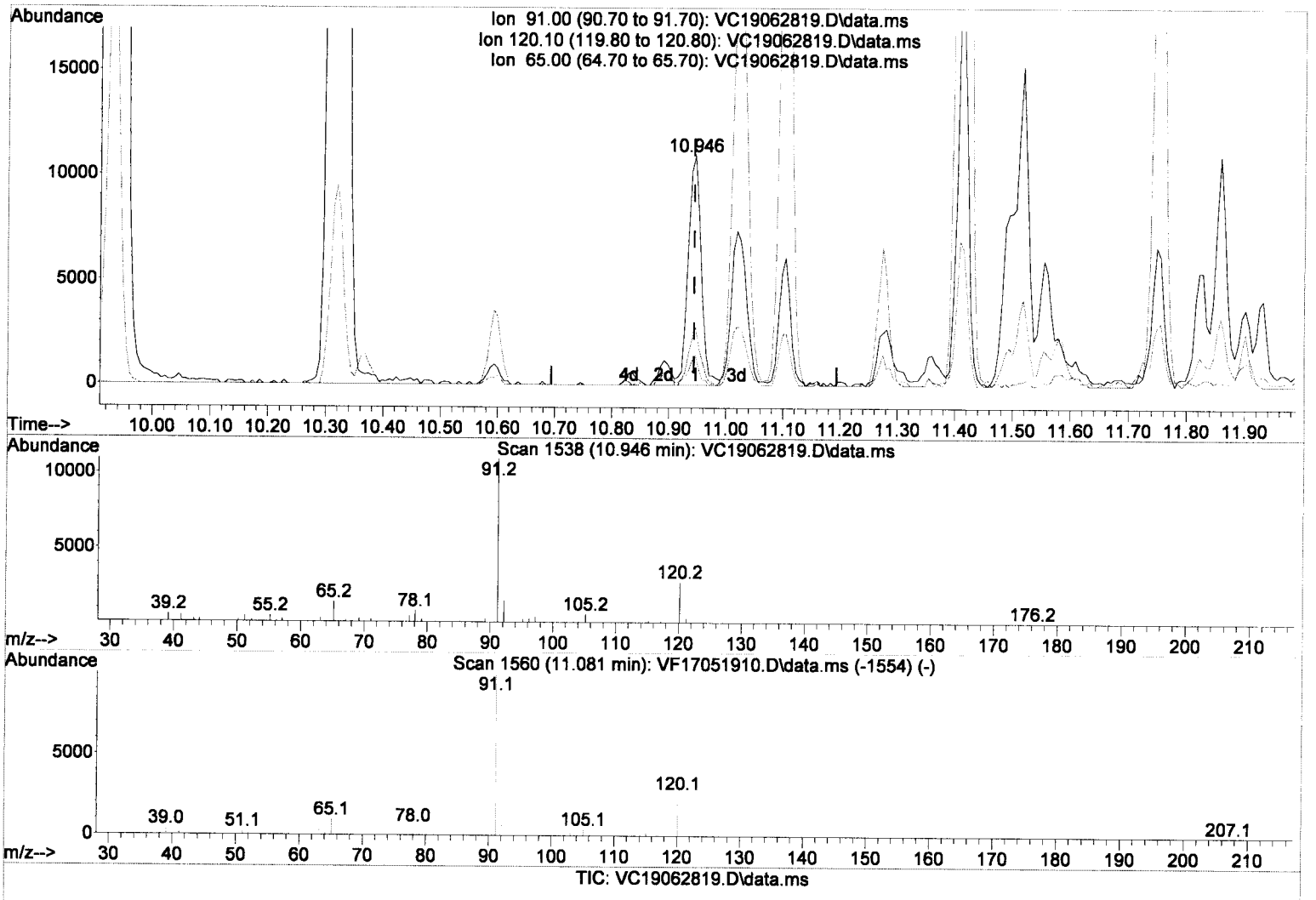
response 19476

Ion	Exp%	Act%
105.00	100	100
120.10	28.60	26.91
77.00	15.60	12.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(60) n-Propylbenzene

10.946min (+0.002) 1.32 ug/L

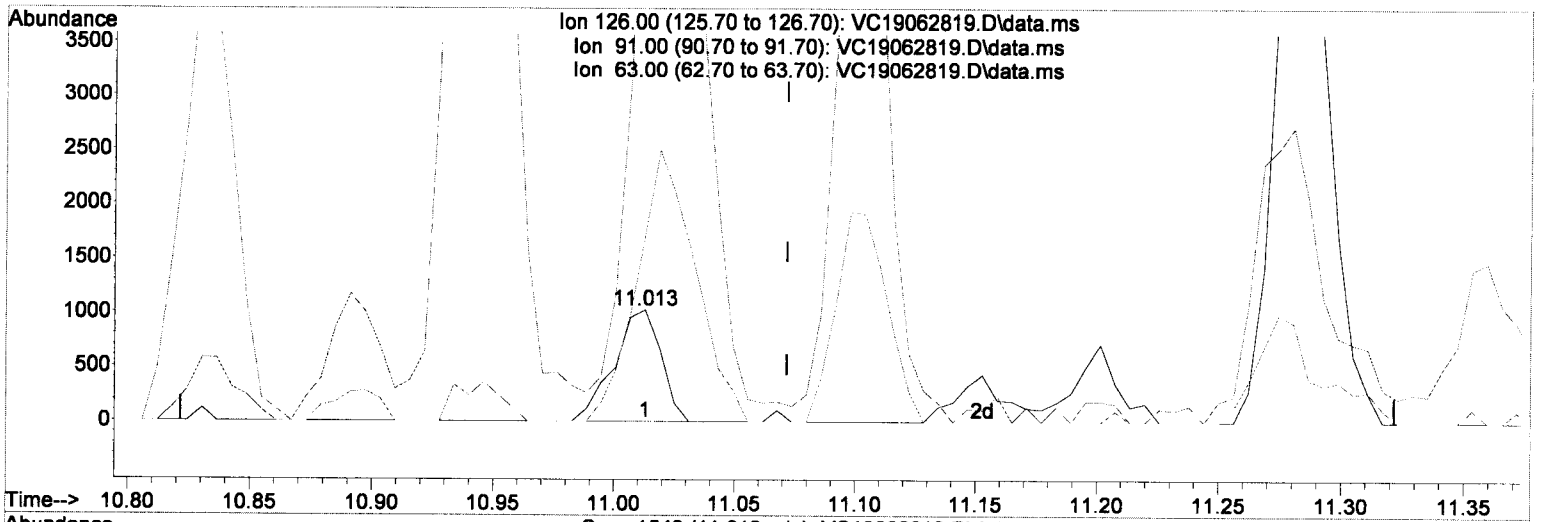
response 17368

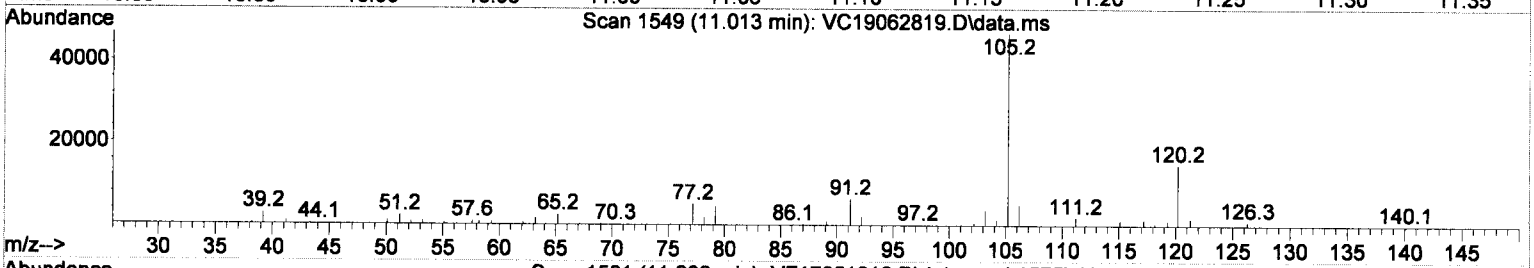
Ion	Exp%	Act%
91.00	100	100
120.10	25.40	25.46
65.00	10.50	13.16
0.00	0.00	0.00

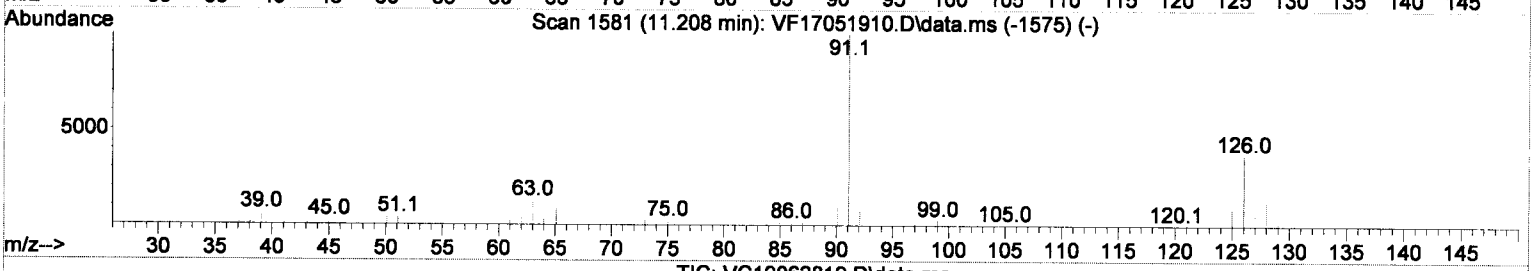
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(62) 2-Chlorotoluene

11.013min (-0.059) 0.51 ug/L

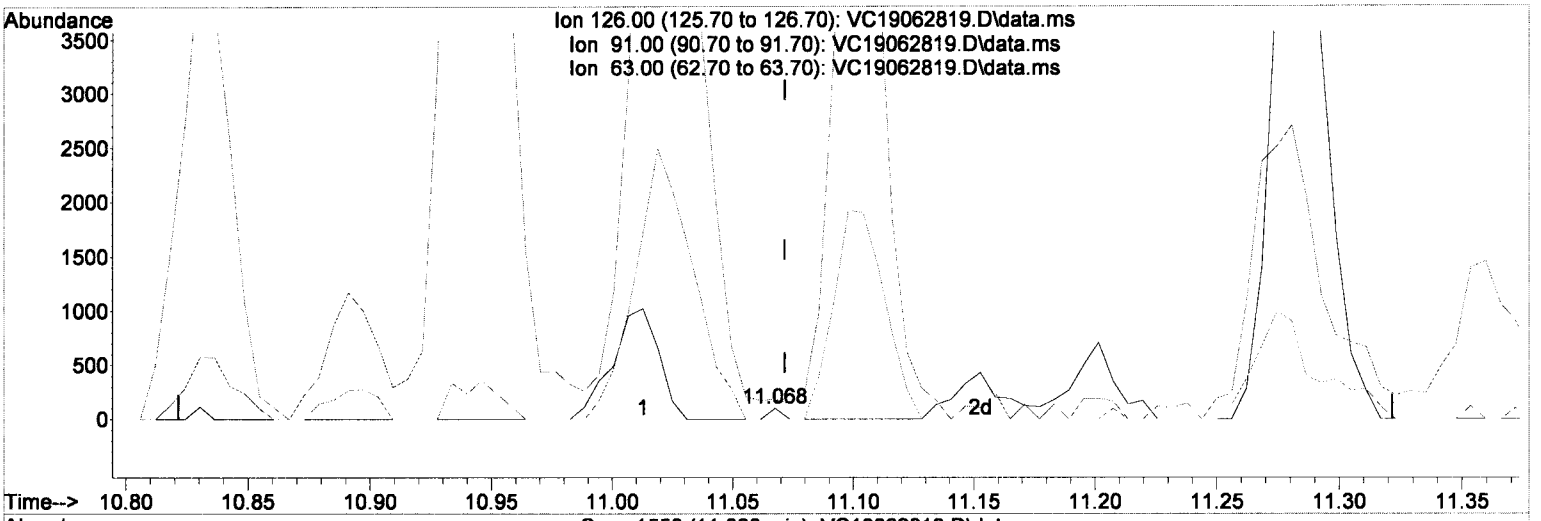
response 1384

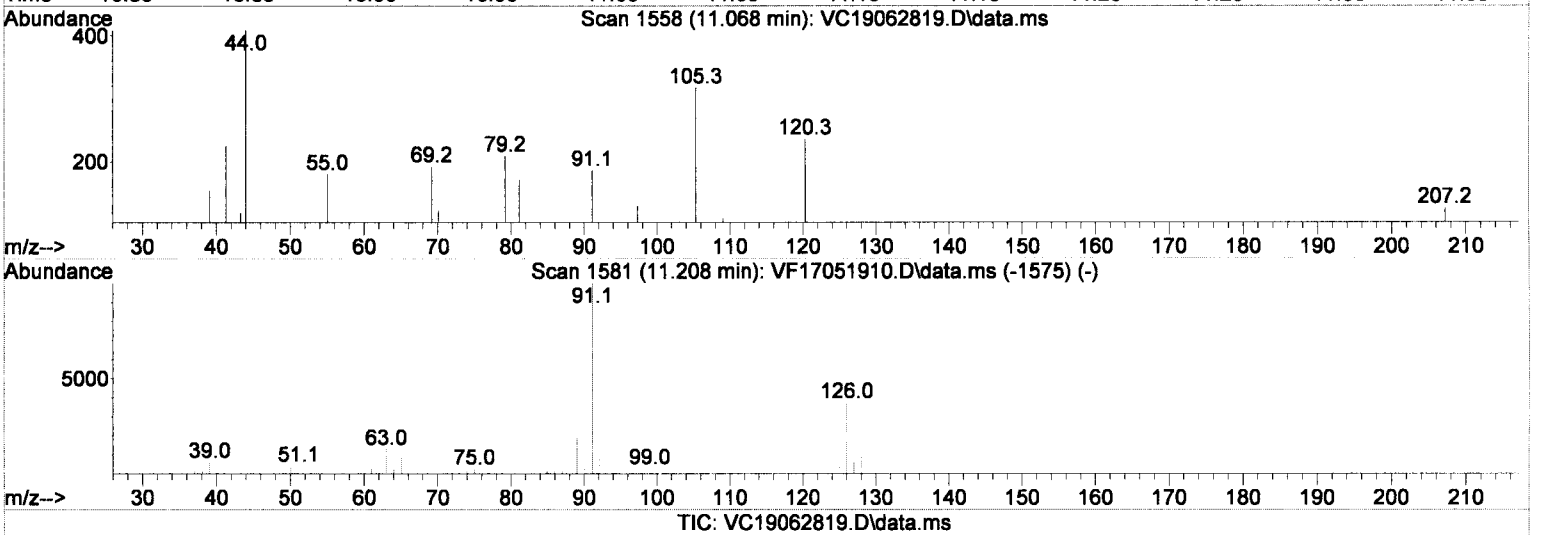
Ion	Exp%	Act%
126.00	100	100
91.00	264.00	630.01#
63.00	35.40	168.13#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration





TIC: VC19062819.D\data.ms

(62) 2-Chlorotoluene

11.068min (-0.004) 0.01 ug/L (m)

response 38

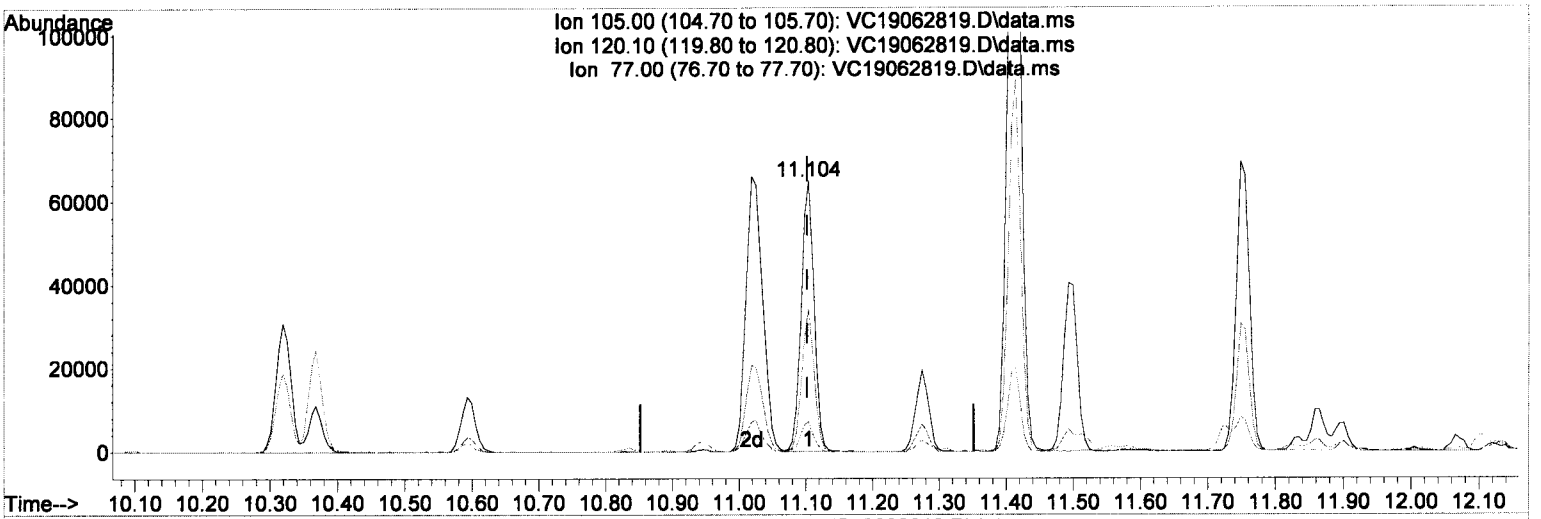
Ion	Exp%	Act%
126.00	100	100
91.00	264.00	178.85#
63.00	35.40	0.00#
0.00	0.00	0.00

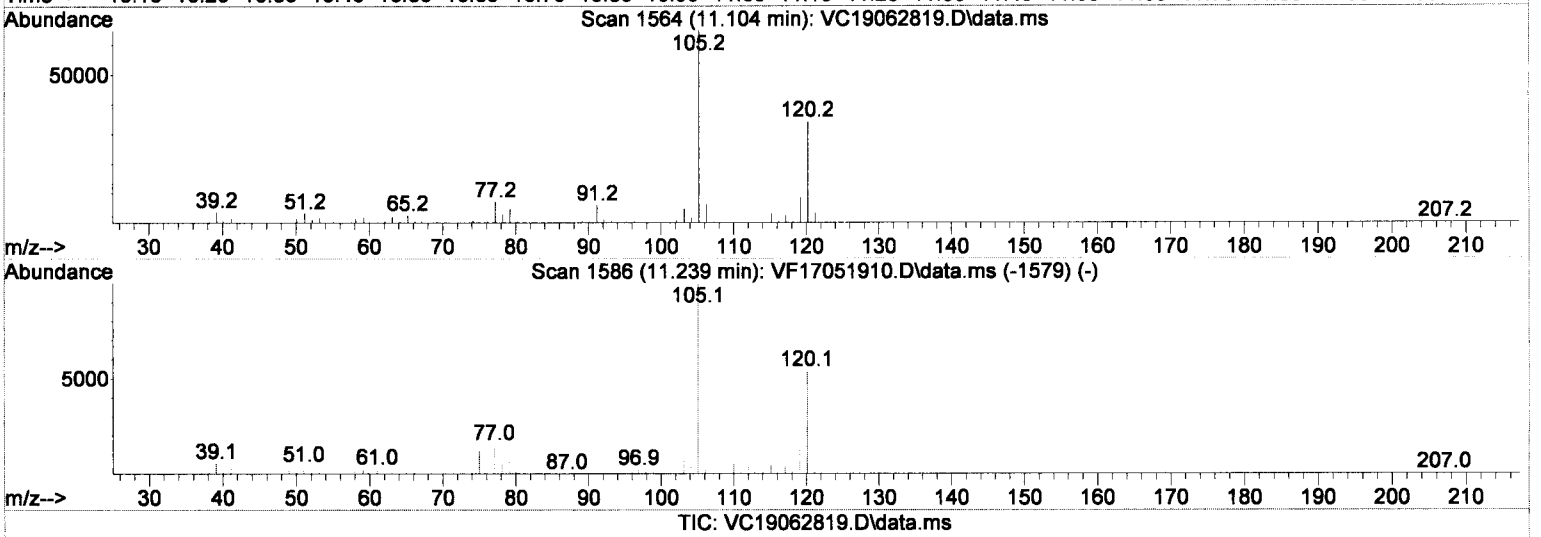
7/1/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration





TIC: VC19062819.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.104min (+0.002) 9.66 ug/L

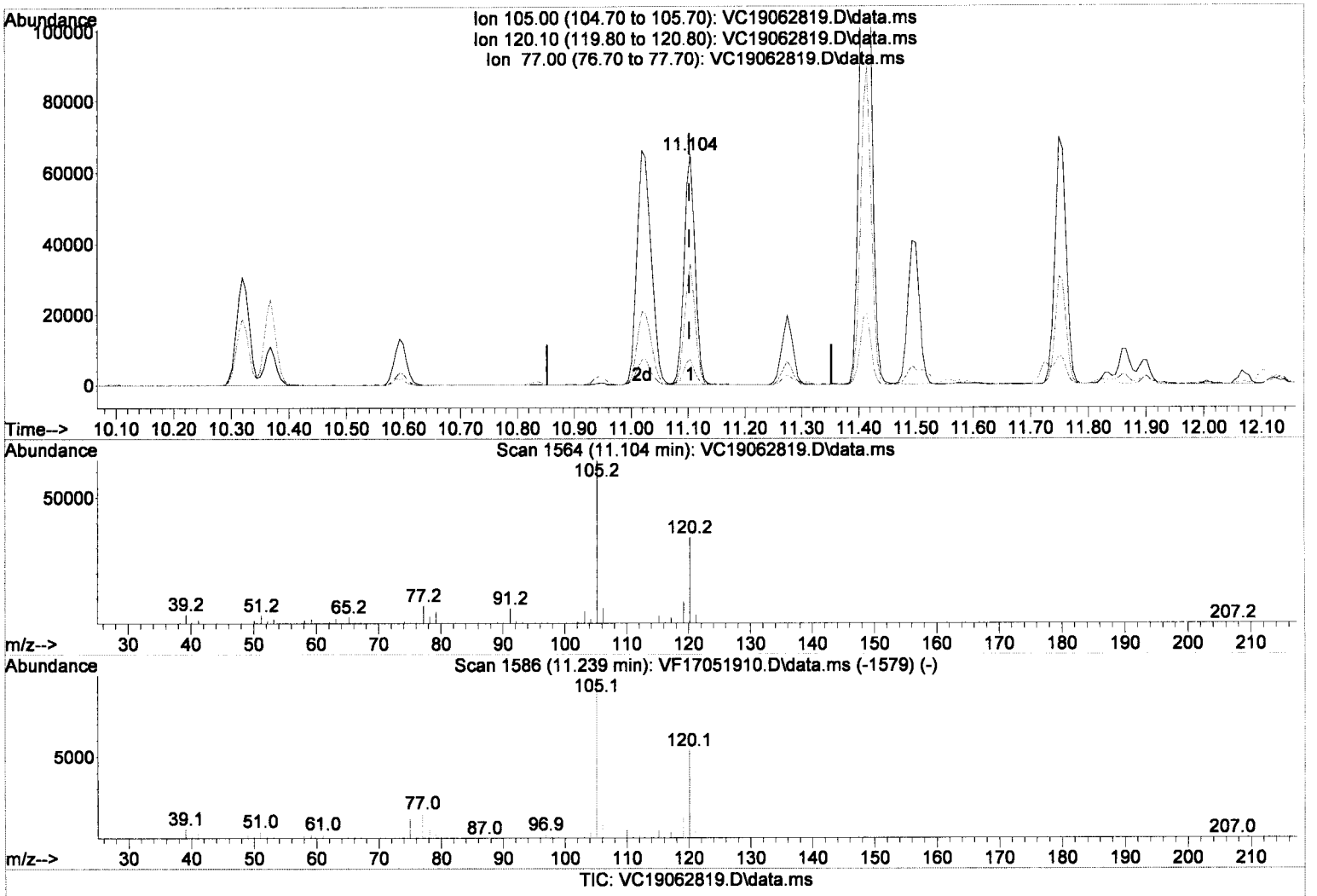
response 87018

Ion	Exp%	Act%
105.00	100	100
120.10	52.70	52.67
77.00	15.40	11.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(63) 1,3,5-Trimethylbenzene

11.104min (+0.002) 9.66 ug/L

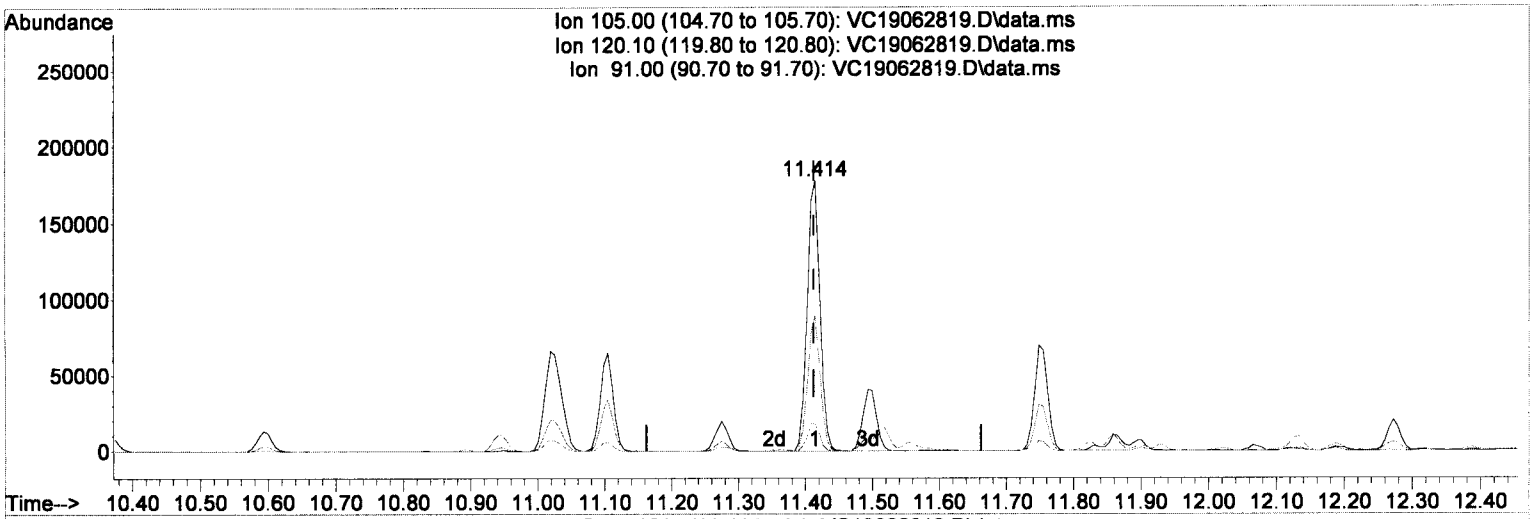
response 87018

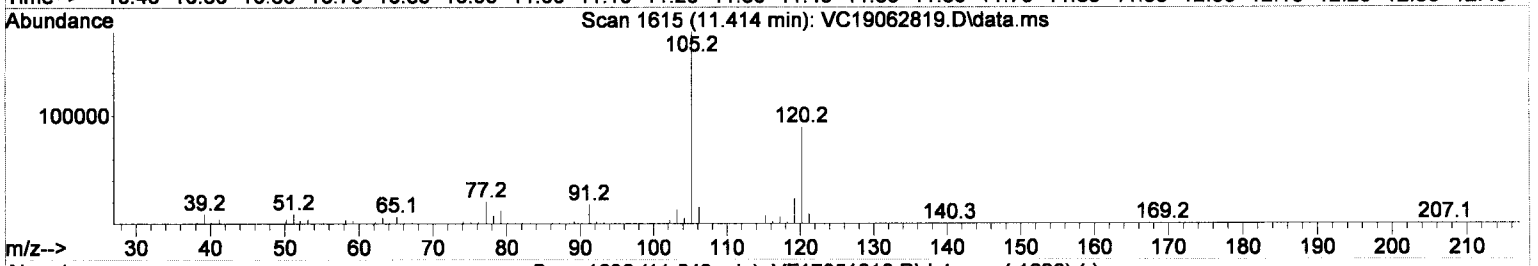
Ion	Exp%	Act%
105.00	100	100
120.10	52.70	52.67
77.00	15.40	11.14
0.00	0.00	0.00

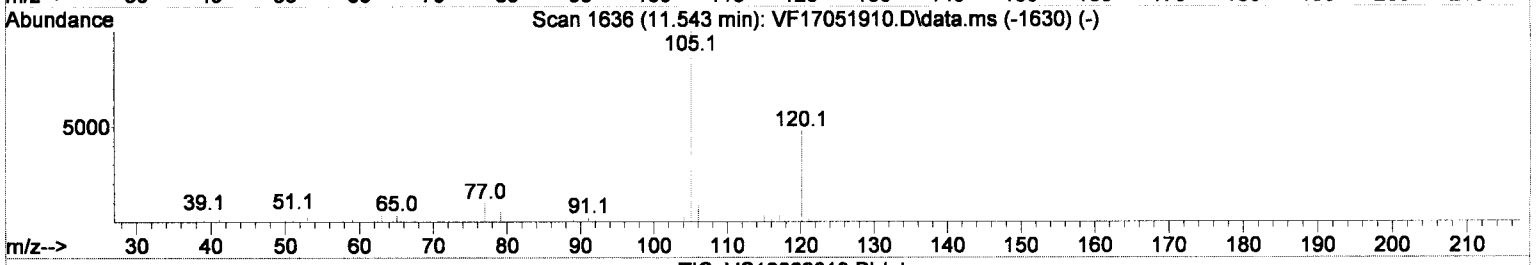
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(68) 1,2,4-Trimethylbenzene

11.414min (+0.002) 25.79 ug/L

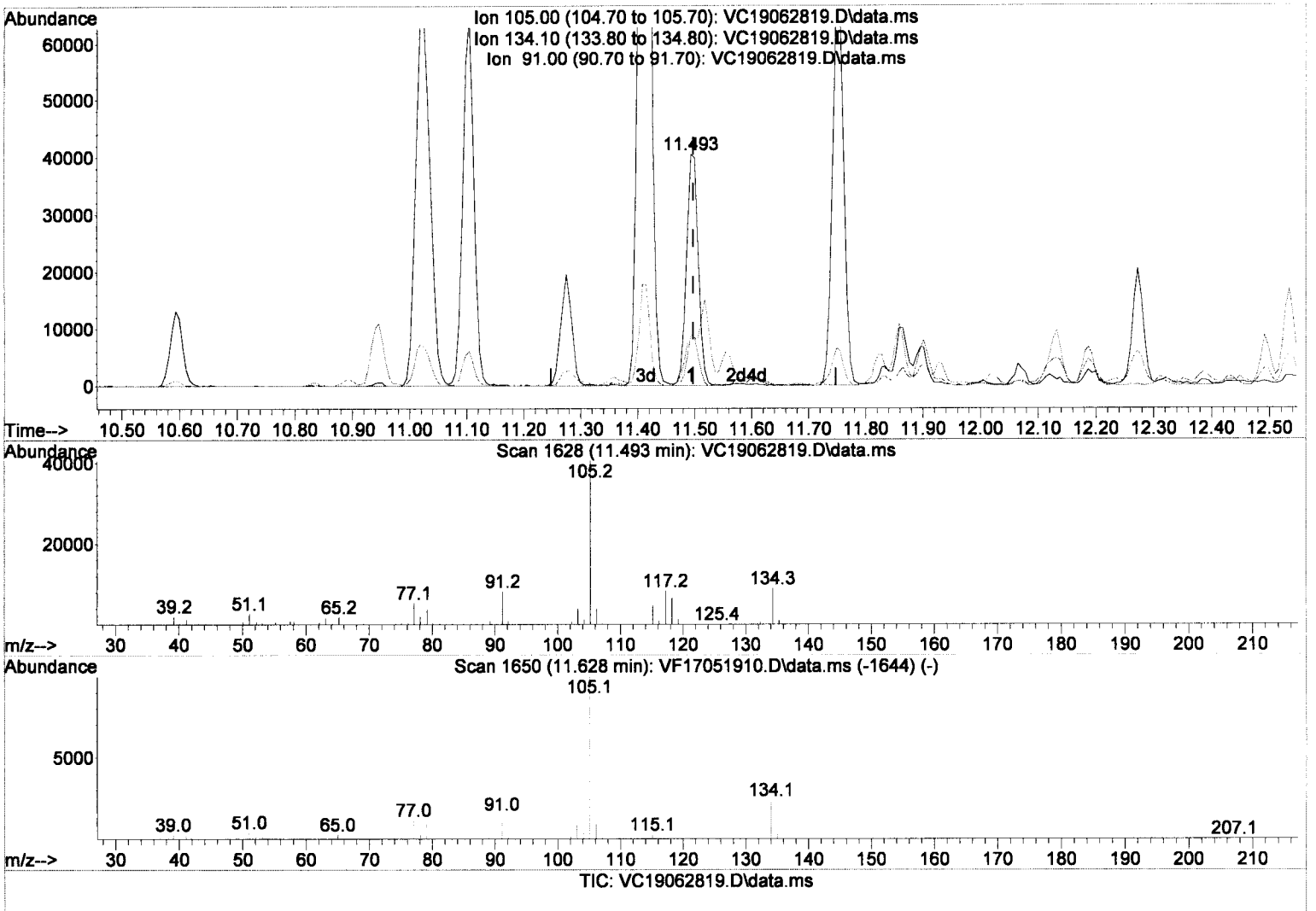
response 236420

Ion	Exp%	Act%
105.00	100	100
120.10	48.00	50.33
91.00	10.60	9.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19062819.D\data.ms

(69) sec-Butylbenzene

11.493min (-0.004) 5.77 ug/L

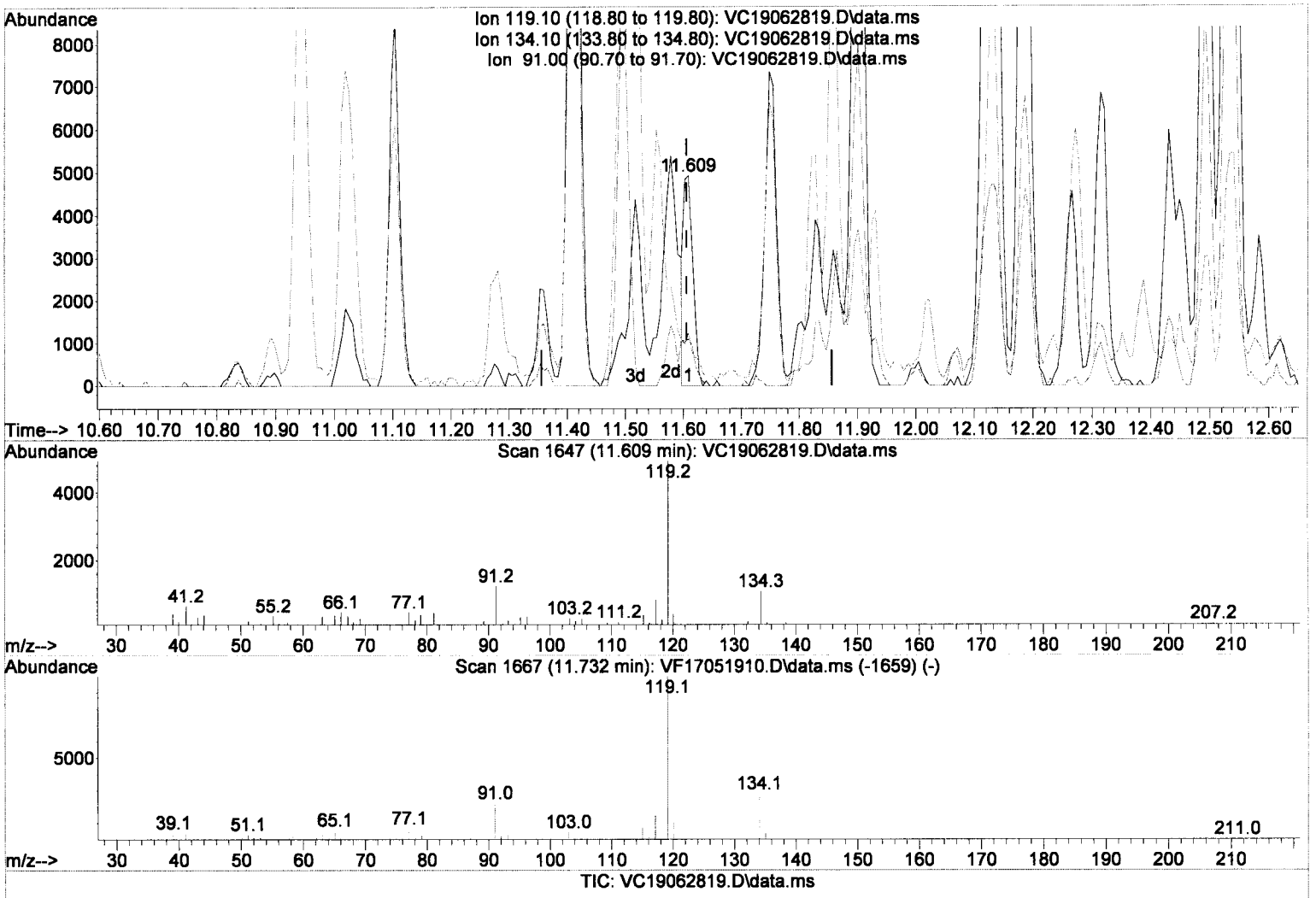
response 58425

Ion	Exp%	Act%
105.00	100	100
134.10	22.70	22.03
91.00	16.40	20.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(70) 4-Isopropyltoluene

11.609min (+0.003) 0.65 ug/L

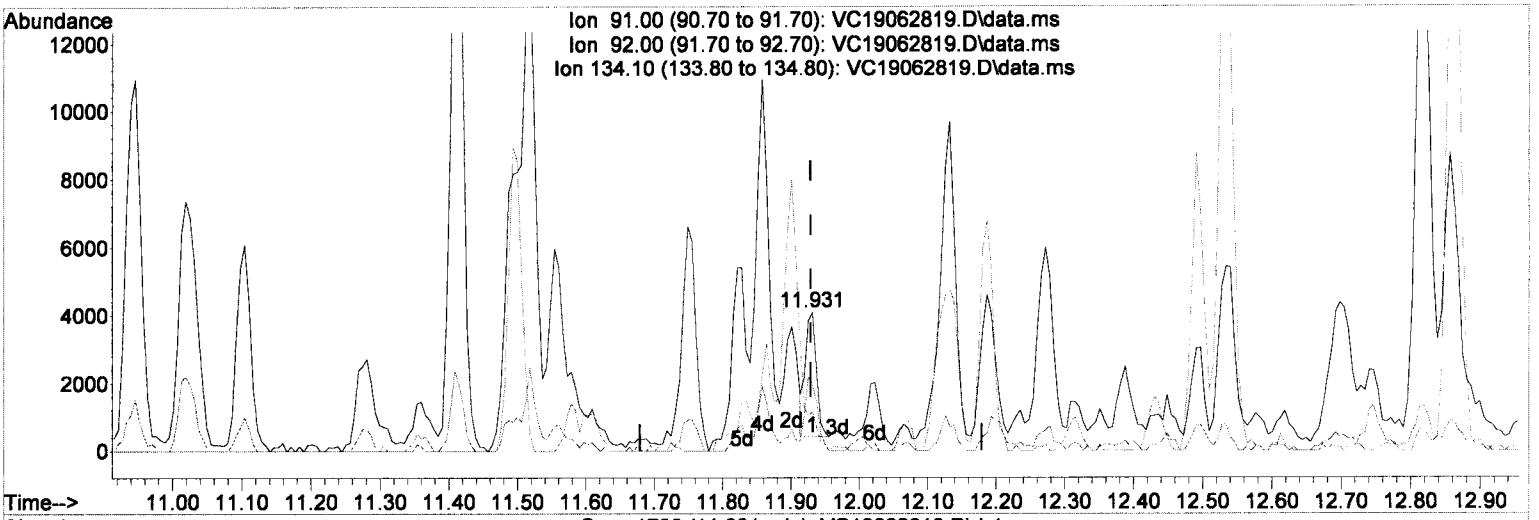
response 5491

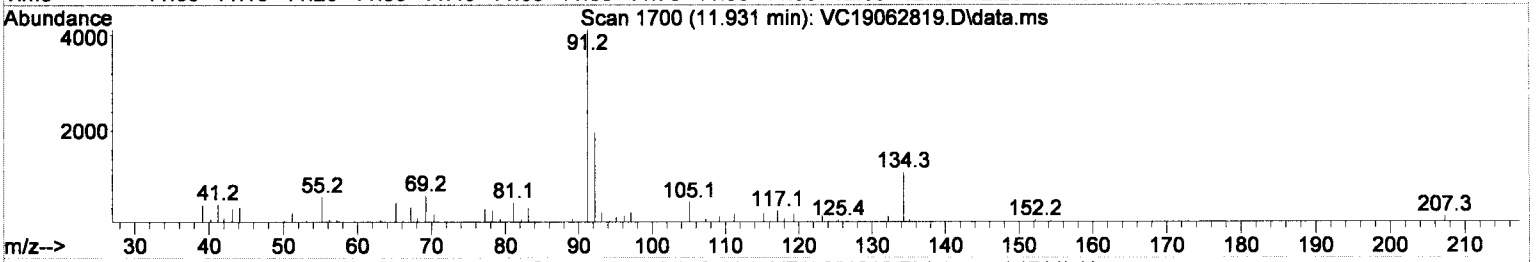
Ion	Exp%	Act%
119.10	100	100
134.10	29.30	22.16
91.00	22.50	25.29
0.00	0.00	0.00

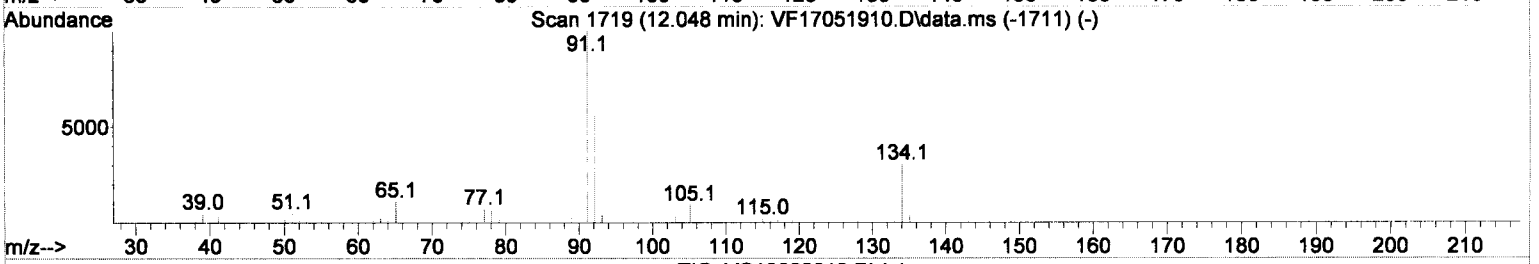
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(73) n-Butylbenzene

11.931min (+0.002) 0.56 ug/L

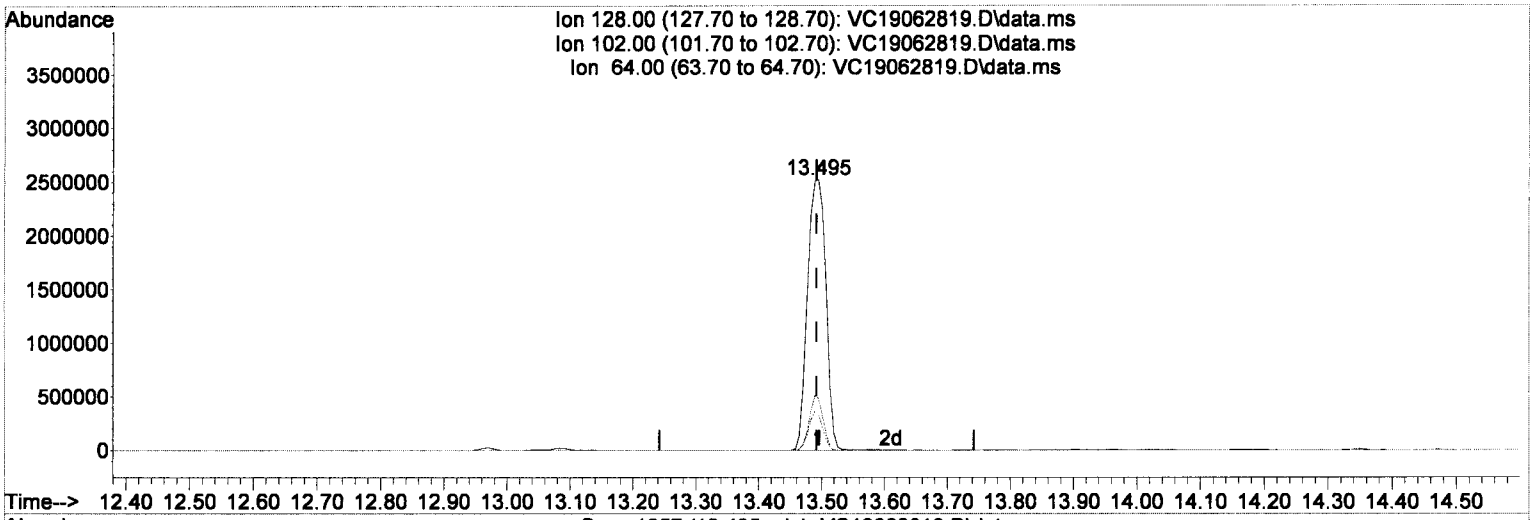
response 4148

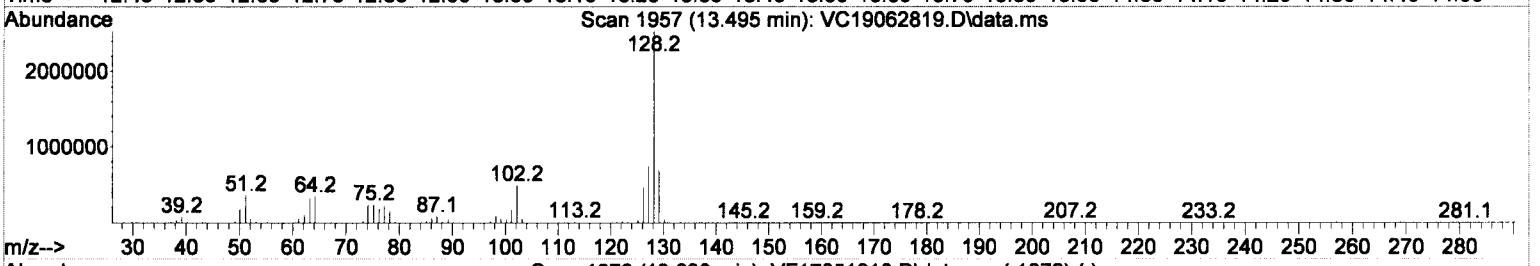
Ion	Exp%	Act%
91.00	100	100
92.00	56.60	48.10
134.10	30.00	27.82
0.00	0.00	0.00

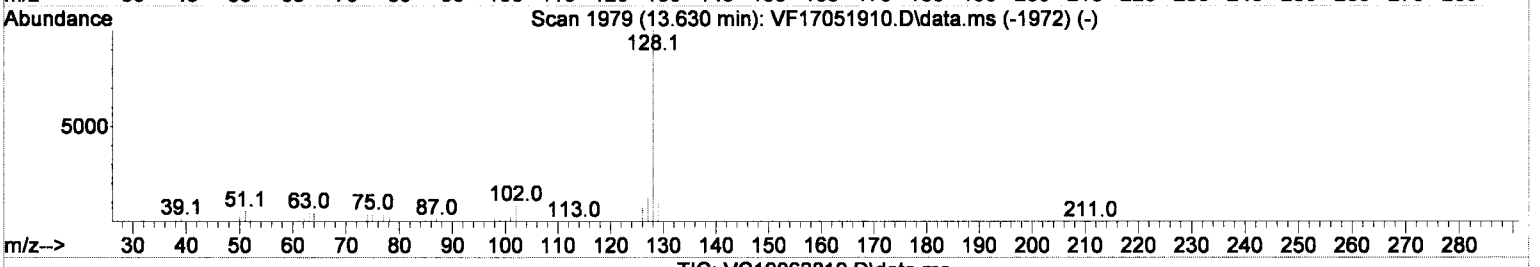
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19062819.D\data.ms

(78) Naphthalene

13.495min (+0.003) 632.96 ug/L

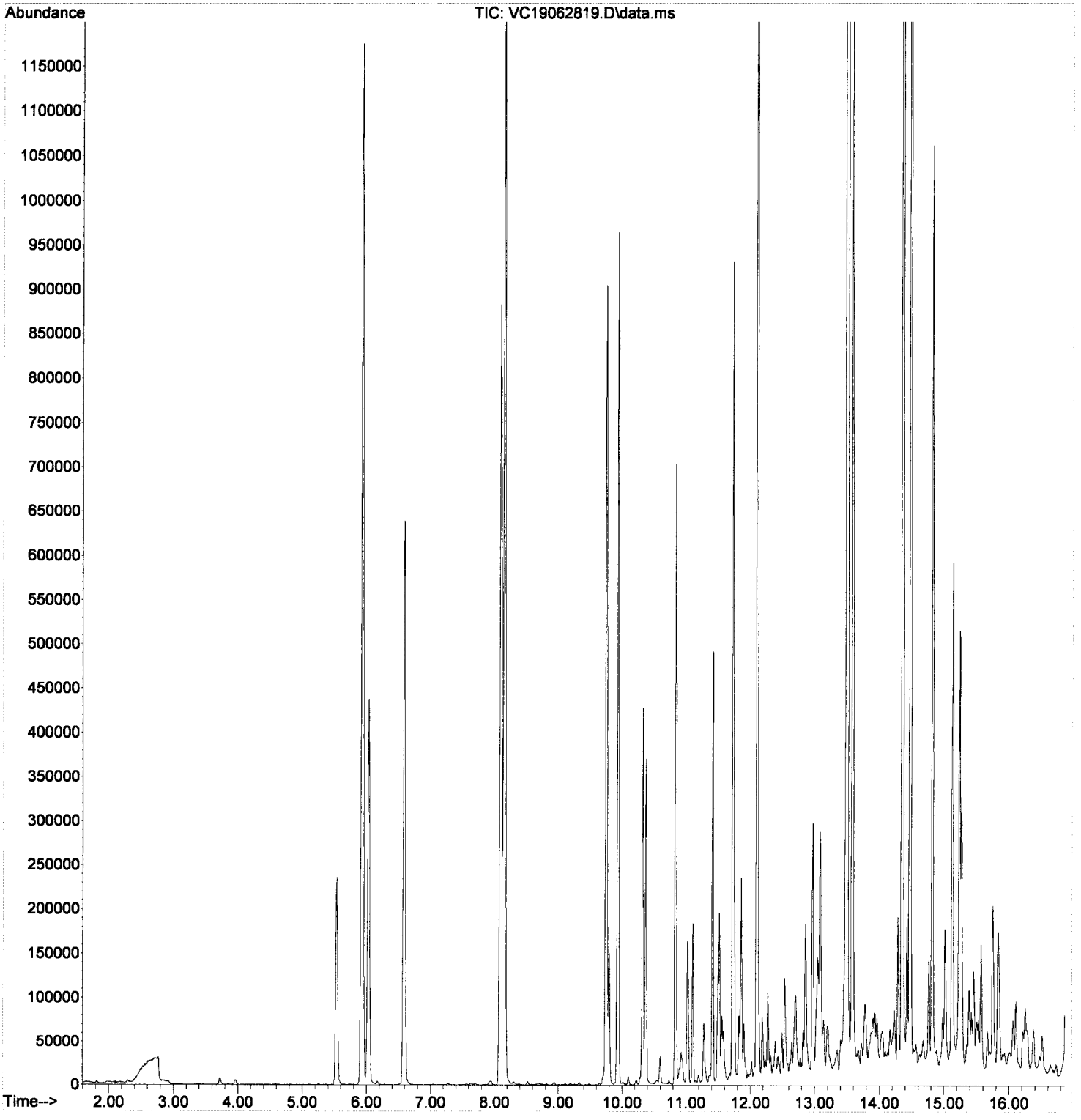
response 5126879

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	19.47
64.00	6.40	13.58
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F28034\
Data File : VC19062819.D
Acq On : 28 Jun 2019 7:17 pm
Operator : TB
Sample : A9F0684-01@10000
Misc : 10000X ~5g/5mLx5uL/50mL GX/8260
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 10:15:09 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



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

Batch 9070494

Sequence 9G01037 (A9F0684-01RE1)

PREPARATION BENCH SHEET

BATCH #: 9070494 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
9070494-BLK1		QC	07/01/19 09:30	7.5	5							
9070494-BS1		QC	07/01/19 09:30	5	5	A19F368		250				
9070494-BS2		QC	07/01/19 09:30	5	5	A19F151		250				
A9F0684-01RE1	B	8260C Full List	06/26/19 18:50	0.47	5					2708-190619-OIL	MOD 200,000X NAP RR2	
A9F0878-01RE1	B	8260C BTEX+N	06/27/19 17:40	5.98	5					19-25468 E(IT)-76"	MOD 50X RR3	
A9F0922-01	C	8260C Full List	06/28/19 17:43	5.26	5					VI Soil Sample	MOD	
A9F0922-01	C	8260C BTEX+N	06/28/19 17:43	5.26	5					VI Soil Sample	MOD, Added for BatchQC in: 907(	
A9F0922-01	C	NWTPH-Gx	06/28/19 17:43	5.26	5					VI Soil Sample	MOD, Added for BatchQC in: 907(	
A9F0922-01	C	8260C BTEX	06/28/19 17:43	5.26	5					VI Soil Sample	MOD, Added for BatchQC in: 907(	
9070494-DUP1		QC	06/28/19 17:43	5.26	5		A9F0922-01					
A9F0923-01	B	8260C Full List	(Date Sampled)	3.82	5					19-26974 S(PF) 111"	FP, Added for BatchQC in: 907049	
A9F0923-01	B	8260C BTEX+N	(Date Sampled)	3.82	5					19-26974 S(PF) 111"	FP	
A9F0923-01	B	8260C BTEX	(Date Sampled)	3.82	5					19-26974 S(PF) 111"	FP, Added for BatchQC in: 907049	
A9F0923-01	B	NWTPH-Gx	(Date Sampled)	3.82	5					19-26974 S(PF) 111"	FP, Added for BatchQC in: 907049	
9070494-MS1		QC	06/27/19 16:45	3.82	5	A19F368	A9F0923-01	271			DW=88.9% @50X	
A9G0010-01	C	8260C Full List	(Date Sampled)	5.01	5					Soil-Comp-Profile	FP	
A9G0019-01	B	8260C BTEX	(Date Sampled)	5.4	5					COM01	FP	
A9G0019-01	B	NWTPH-Gx	(Date Sampled)	5.4	5					COM01	FP	
A9G0019-01	B	8260C BTEX+N	(Date Sampled)	5.4	5					COM01	FP, Added for BatchQC in: 907049	
A9G0019-01	B	8260C Full List	(Date Sampled)	5.4	5					COM01	FP, Added for BatchQC in: 907049	
9070494-DUP2		QC	07/01/19 10:45	5.18	5		A9G0019-01					
A9G0019-02	B	NWTPH-Gx	(Date Sampled)	5.58	5					COM02	FP	

Prepared By: _____ 7/2/19 Date

Reviewed By: 7/2/19 Date

PREPARATION BENCH SHEET

BATCH #: 9070494 (Soil)

Apex Laboratories

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
A9G0019-02	B	8260C BTEX	(Date Sampled)	5.58	5					COM02	FP	
A9G0019-03	B	8260C BTEX	(Date Sampled)	5.14	5					COM03	FP	
A9G0019-03	B	NWTPH-Gx	(Date Sampled)	5.14	5					COM03	FP	
A9G0019-04	B	NWTPH-Gx	(Date Sampled)	5.5	5					COM04	FP	
A9G0019-04	B	8260C BTEX	(Date Sampled)	5.5	5					COM04	FP	
A9G0019-05	B	NWTPH-Gx	(Date Sampled)	5.63	5					COM05	FP	
A9G0019-05	B	8260C BTEX	(Date Sampled)	5.63	5					COM05	FP	
A9G0019-06	B	8260C BTEX	(Date Sampled)	5.37	5					COM06	FP	
A9G0019-06	B	NWTPH-Gx	(Date Sampled)	5.37	5					COM06	FP	
A9G0019-07	B	NWTPH-Gx	(Date Sampled)	5.49	5					COM07	FP	
A9G0019-07	B	8260C BTEX	(Date Sampled)	5.49	5					COM07	FP	
A9G0019-08	B	NWTPH-Gx	(Date Sampled)	5.73	5					COM08	FP	
A9G0019-08	B	8260C BTEX	(Date Sampled)	5.73	5					COM08	FP	
A9G0019-09	B	NWTPH-Gx	(Date Sampled)	5.94	5					COM09	FP	
A9G0019-09	B	8260C BTEX	(Date Sampled)	5.94	5					COM09	FP	
A9G0019-10	B	NWTPH-Gx	(Date Sampled)	5.51	5					COM10	FP	
A9G0019-10	B	8260C BTEX	(Date Sampled)	5.51	5					COM10	FP	

*pH <2 verified _____

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A16L123	11/30/23	Sample Prep Bal 3
A19D063	09/30/19	Methanol - Fisher (P/T) #185562
A19F143	12/09/19	Methanol - Fisher (P/T) #185042

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F151	12/10/19	Prim NWTPH-Gx Spike (500 ug/mL)
A19F368	12/07/19	8260 Cal. Std. B VOC+OXY Spike (20-40ug/ml

Surrogate(s)

Std ID	Exp. Date	Description

Prepared By: _____ Date _____

Reviewed By: _____ Date _____

PREPARATION BENCH SHEET

Apex Laboratories

BATCH #: 9070494 (Soil)

Prep Method: EPA 5035A

Lab Number	Cont.	Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	ClientID / Sample	Extraction Comments	pH*
SOIL MS3												

Prepared By: Date

Reviewed By: Date

Volatile Soils Matrix Spike Volume Calculation (Validated 5/3/2013)

Enter the Spike Amount value into the Bench Sheet to ensure correct MS/MSD recoveries.

Batch: 9070494

Matrix Spike

Sample Weight	Final Volume	Dilution	Dry Weight
g	mL		%
3.820	5	50	88.9
			0.889

Final Spike Level	**Spike Amount**
ug/kg	**ul**
1597.19	**271**

Assumptions:
Spiking Solution = 20ug/mL
Spike Amount into 50mL = 50ul
Dilution = 1mL of MeOH to 50mL of water
Initial Spike Concentration = 20ug/L

A9F0923-01

7/2/19

Worksheet

5035 Field Prep Worksheet (Validated 7/11/16)

Sample ID	Container	Container Weight (g)	Tare Weight (g)	Net Sample Weight (g)	Formula Check
A9F0923-01	B	37.68	33.86	3.82	
A9G0010-01	Container	38.93	33.92	5.01	
A9G0019-01	B	39.38	33.98	5.4	
A9G0019-01	C DUP	38.67	33.49	5.18	
A9G0019-02	B	39.08	33.5	5.58	
A9G0019-03	B	39.62	34.48	5.14	
A9G0019-04	B	38.57	33.07	5.5	
A9G0019-05	B	39.39	33.76	5.63	
A9G0019-06	B	38.88	33.51	5.37	
A9G0019-07	B	39.2	33.71	5.49	
A9G0019-08	B	39.33	33.6	5.73	
A9G0019-09	B	39.64	33.7	5.94	
A9G0019-10	B	38.92	33.41	5.51	

7/2/19

A9F0922

5035 Container Prep Worksheet
~Soil Jar Extraction~

A9F0922-01	VI Soil Sample							Sampled: 06/28/19 13:15
C Soil	40 mL VOA - In House Prep - 5035 (MeOH)	Container Used: A	Sample Weight (g): 5.26	Volume MeOH (mL): (5) 10 15	Prepared By: [illegible]	Prepared date/time: @ 6/28/19 17:45	Within 48 hours? (Y) N	Notes: VMeOD
8260C Full List		Expires: 06/30/19 13:15		Due: 07/05/19 17:00				

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9F0923

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9F0923-01	19-26974 S(PF) 111"	Sampled: 06/27/19 16:45

MS

B	40 mL VOA - 5035 (MeOH)	Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
Soil		37.68	33.86	5 10 15 Other	DW= 88.9%

BTEXN

Due: TAT:

AKK

Weighed by: _____ @ 6/28/19 1830

AKK 6/28/19

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9G0010

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9G0010-01		Soil-Comp-Profile			Sampled:	06/27/19 15:00
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.93	Tare Weight (g): 33.92	Volume MeOH (mL): (5) 10 15 Other	Notes:	
D Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.38	Tare Weight (g): 33.70	Volume MeOH (mL): (5) 10 15 Other	Notes:	
8260		Due:	TAT:			

Weighed by: AKK @ 1230 7/1/19

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9G0019

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9G0019-01 — **COM01** — Sampled: **07/01/19 10:45**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.38	Tare Weight (g): 33.98	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.67	Tare Weight (g): 33.49	Volume MeOH (mL): (5) 10 15 Other	Notes:

DUP

8260C BTEX	Due: 07/03/19 17:00	TAT: 2	
NWTPH-Gx	Due: 07/03/19 17:00	TAT: 2	

A9G0019-02 — **COM02** — Sampled: **07/01/19 10:50**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.08	Tare Weight (g): 33.50	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.96	Tare Weight (g): 33.49	Volume MeOH (mL): (5) 10 15 Other	Notes:

8260C BTEX	Due: 07/03/19 17:00	TAT: 2	
NWTPH-Gx	Due: 07/03/19 17:00	TAT: 2	

A9G0019-03 — **COM03** — Sampled: **07/01/19 10:55**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.62	Tare Weight (g): 34.48	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.69	Tare Weight (g): 33.63	Volume MeOH (mL): (5) 10 15 Other	Notes:

8260C BTEX	Due: 07/03/19 17:00	TAT: 2	
NWTPH-Gx	Due: 07/03/19 17:00	TAT: 2	

A9G0019-04 — **COM04** — Sampled: **07/01/19 11:00**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 38.57	Tare Weight (g): 33.07	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.77	Tare Weight (g): 34.40	Volume MeOH (mL): (5) 10 15 Other	Notes:

8260C BTEX	Due: 07/03/19 17:00	TAT: 2	
NWTPH-Gx	Due: 07/03/19 17:00	TAT: 2	

A9G0019-05 — **COM05** — Sampled: **07/01/19 11:05**

B Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.39	Tare Weight (g): 33.76	Volume MeOH (mL): (5) 10 15 Other	Notes:
C Soil	40 mL VOA - 5035 (MeOH)	Container Weight (g): 39.18	Tare Weight (g): 33.71	Volume MeOH (mL): (5) 10 15 Other	Notes:

8260C BTEX	Due: 07/03/19 17:00	TAT: 2	
NWTPH-Gx	Due: 07/03/19 17:00	TAT: 2	

Weighed by: OB @ 7/1/19 1455

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

A9G0019

5035 Container Prep Worksheet
~Field MeOH Preserved~

(Prepared = Sampled Date/Time)

A9G0019-06 — **COM06** — Sampled: **07/01/19 11:10**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	38.88	33.51	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.52	33.37	(5) 10 15 Other	

8260C BTEX	Due: 07/03/19 17:00	TAT:	2
NWTPH-Gx	Due: 07/03/19 17:00	TAT:	2

A9G0019-07 — **COM07** — Sampled: **07/01/19 11:15**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.20	33.71	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	38.77	33.26	(5) 10 15 Other	

8260C BTEX	Due: 07/03/19 17:00	TAT:	2
NWTPH-Gx	Due: 07/03/19 17:00	TAT:	2

A9G0019-08 — **COM08** — Sampled: **07/01/19 12:05**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.33	33.60	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.82	33.77	(5) 10 15 Other	

8260C BTEX	Due: 07/03/19 17:00	TAT:	2
NWTPH-Gx	Due: 07/03/19 17:00	TAT:	2

A9G0019-09 — **COM09** — Sampled: **07/01/19 12:10**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	39.64	33.70	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.29	33.38	(5) 10 15 Other	

8260C BTEX	Due: 07/03/19 17:00	TAT:	2
NWTPH-Gx	Due: 07/03/19 17:00	TAT:	2

A9G0019-10 — **COM10** — Sampled: **07/01/19 12:15**

			Container Weight (g)	Tare Weight (g)	Volume MeOH (mL)	Notes:
B	Soil	40 mL VOA - 5035 (MeOH)	38.92	33.41	(5) 10 15 Other	
C	Soil	40 mL VOA - 5035 (MeOH)	39.48	34.40	(5) 10 15 Other	

8260C BTEX	Due: 07/03/19 17:00	TAT:	2
NWTPH-Gx	Due: 07/03/19 17:00	TAT:	2

Weighed by: AB @ 7/1/19 1455

Methanol Reagent ID: A19F143~ Balance ID: A18J327~

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9G01037	Instrument:	VOA-GCMS3
Date:	07/01/19 10:11	Calibration:	A9F1104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G01037-IBL1	Soil	QC	QC			A19C135	
2	9G01037-TUN1	Soil	QC	QC			A19C135	
3	9G01037-CCV1	Soil	QC	QC			A19C135	
4	9070494-BS1	Soil	QC	QC		9070494	A19C135	
5	9G01037-CCV2	Soil	QC	QC			A19C135	
6	9070494-BS2	Soil	QC	QC		9070494	A19C135	
7	9070494-BLK1	Soil	QC	QC		9070494	A19C135	
8	A9F0878-01RE1	Soil	8260C BTEX+N		07/02/19	9070494	A19C135	
9	A9F0684-01RE1	Soil	8260C Full List	Hahn and Associates	07/05/19	9070494	A19C135	
10	9G01037-IBL2	Soil	QC	QC			A19C135	
11	A9F0922-01	Soil	8260C Full List		07/05/19	9070494	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9070494	A19C135	
"	"	Soil	8260C BTEX+N	(QC Source)		9070494	A19C135	
"	"	Soil	NWTPH-Gx	(QC Source)		9070494	A19C135	
12	9070494-DUP1	Soil	QC	QC		9070494	A19C135	
13	A9F0923-01	Soil	8260C BTEX+N		07/02/19	9070494	A19C135	
"	"	Soil	8260C Full List	(QC Source)		9070494	A19C135	
"	"	Soil	8260C BTEX	(QC Source)		9070494	A19C135	
"	"	Soil	NWTPH-Gx	(QC Source)		9070494	A19C135	
14	9070494-MS1	Soil	QC	QC		9070494	A19C135	
15	9G01037-IBL3	Soil	QC	QC			A19C135	
16	A9G0010-01	Soil	8260C Full List		07/12/19	9070494	A19C135	
17	9G01037-IBL4	Soil	QC	QC			A19C135	
18	A9G0019-01	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
"	"	Soil	8260C Full List	(QC Source)		9070494	A19C135	
"	"	Soil	8260C BTEX+N	(QC Source)		9070494	A19C135	
19	9070494-DUP2	Soil	QC	QC		9070494	A19C135	
20	A9G0019-02	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
21	A9G0019-03	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
22	A9G0019-04	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
23	A9G0019-05	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
24	A9G0019-06	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
25	A9G0019-07	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
26	A9G0019-08	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
27	A9G0019-09	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
28	A9G0019-10	Soil	8260C BTEX		07/03/19	9070494	A19C135	
"	"	Soil	NWTPH-Gx	"	07/03/19	9070494	A19C135	
29	9G01037-IBL5	Soil	QC	QC			A19C135	
30	A9F0122-03	Soil	8260C Full List		07/08/19	9070528	A19C135	
31	A9F0122-04	Soil	8260C Full List		07/08/19	9070528	A19C135	
32	A9F0122-05	Soil	8260C Full List		07/08/19	9070528	A19C135	
33	A9F0122-06	Soil	8260C Full List		07/08/19	9070528	A19C135	

Sequence:	9G01037	Instrument:	VOA-GCMS3
Date:	07/01/19 10:11	Calibration:	A9F1104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
34	A9F0122-08	Soil	8260C Full List		07/08/19	9070528	A19C135	

Data Entered By: 7/2/19

Data Reviewed By: 7/2/19

Comments: ✓ B - for DCM
chloroethane EOS ✓
↑ MDL = MRL for Acetone Q55

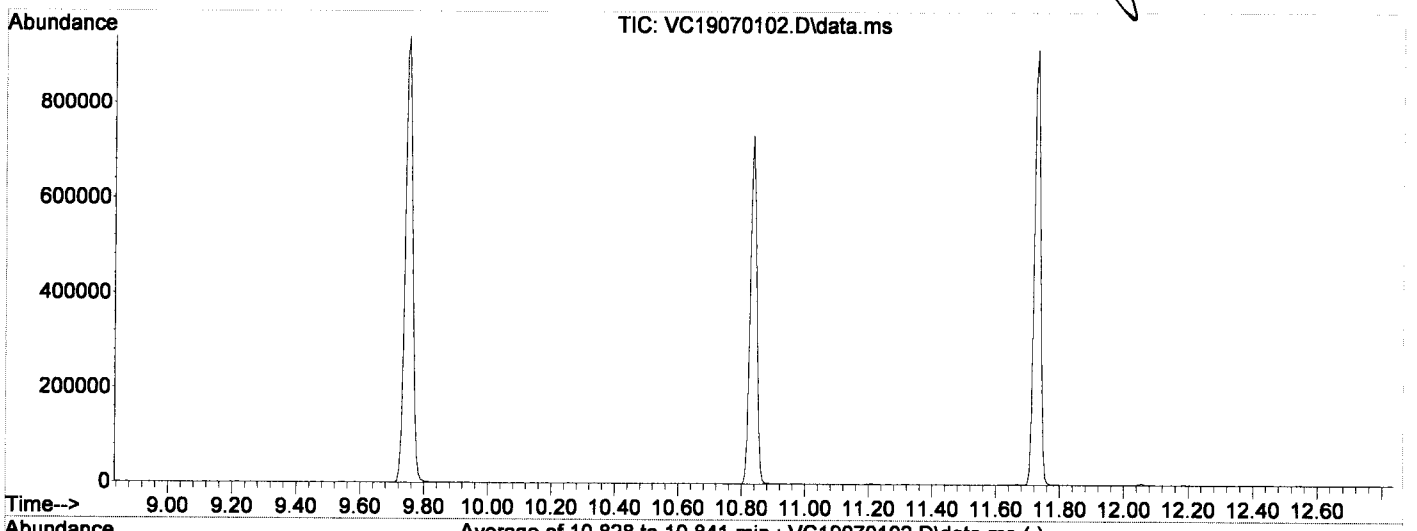
BFB

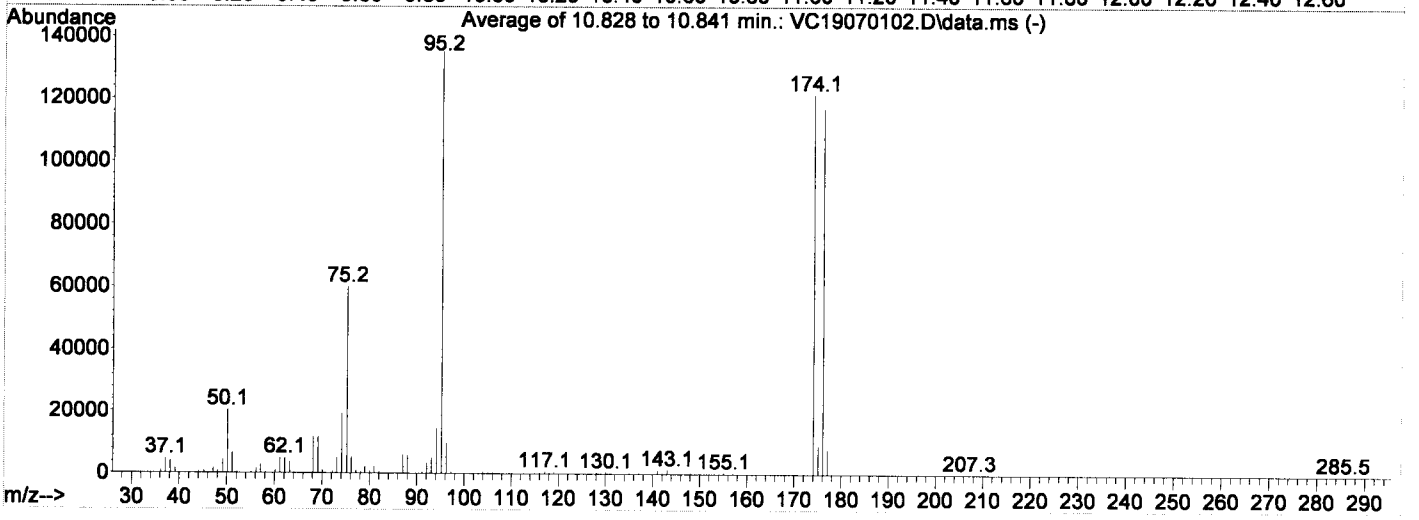
Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070102.D
Acq On : 1 Jul 2019 10:51 am
Operator : TB
Sample : 9G01037-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019

7/1/19





AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	15.1	20381	PASS
75	95	30	60	44.4	59872	PASS
95	95	100	100	100.0	134952	PASS
96	95	5	9	7.4	9945	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	90.1	121530	PASS
175	174	5	9	7.4	8970	PASS
176	174	95	101	96.1	116840	PASS
177	176	5	9	6.7	7836	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070102.D
Acq On : 1 Jul 2019 10:51 am
Operator : TB
Sample : 9G01037-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:55:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

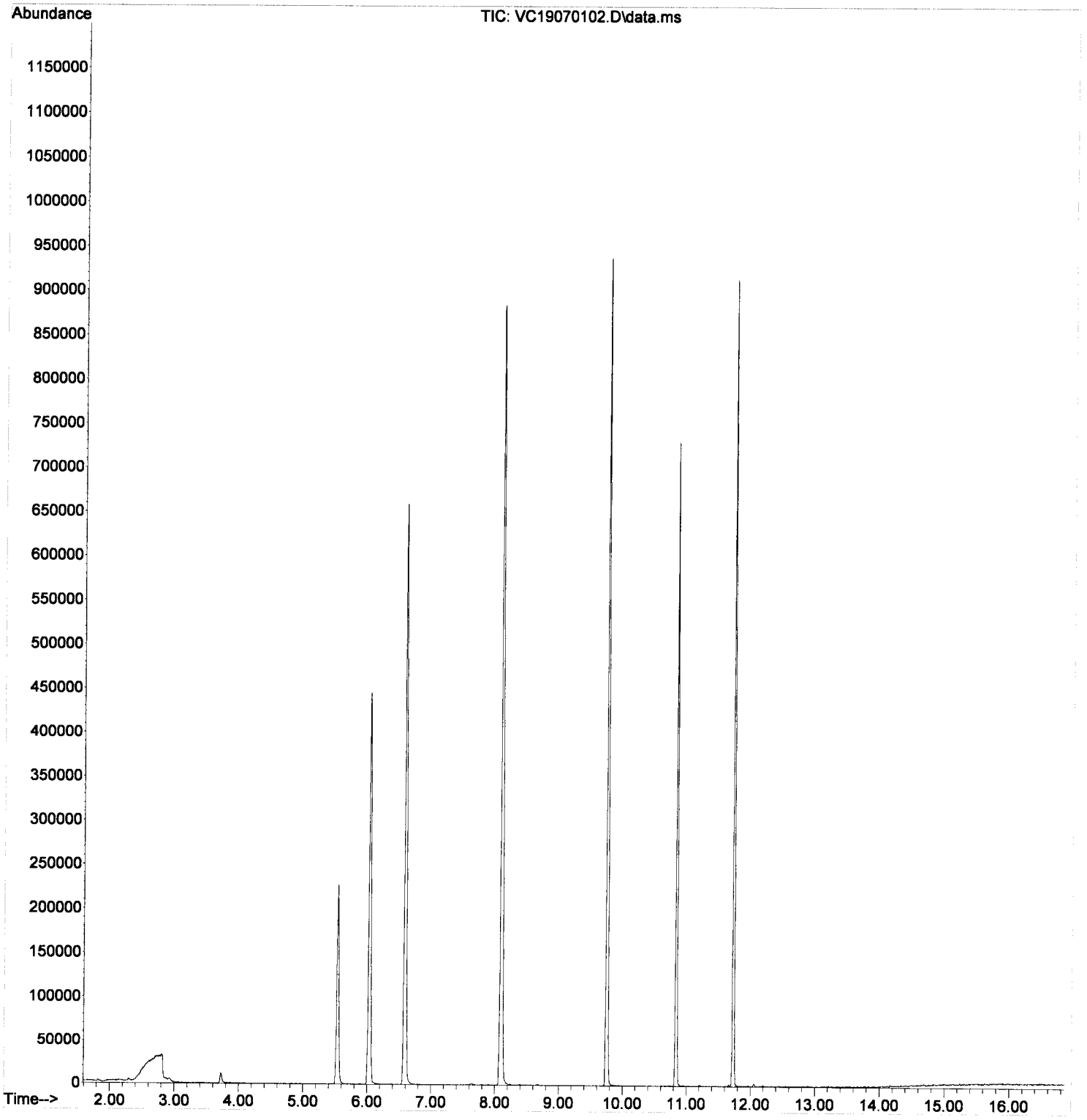
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	376084	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	550253	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	219555	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	157235	45.87	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	640444	50.54	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	745745	48.51	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	196789	49.64	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.855	50	654	0.17	ug/L		78
5) Bromomethane	2.293	96	1338	0.88	ug/L	#	50
6) Chloroethane	2.488	64	105	0.10	ug/L	#	1
12) Methylene Chloride	3.729	84	7105	2.81	ug/L		92
13) Acetone	3.851	43	1053	0.79	ug/L		80
23) Carbon Tetrachloride	5.542	117	217	0.09	ug/L	#	1

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070102.D
Acq On : 1 Jul 2019 10:51 am
Operator : TB
Sample : 9G01037-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:55:56 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070103.D
Acq On : 1 Jul 2019 11:18 am
Operator : TB
Sample : 9070494-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

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	107	0.00	
2		Dichlorodifluoromethane	20.000	16.876	15.6	88	0.00	
3	P	Chloromethane	20.000	16.785	16.1	90	0.00	
4	C	Vinyl Chloride	20.000	18.816	5.9	97	0.00	
5		Bromomethane	20.000	20.943	-4.7	114	0.00	
6		Chloroethane	20.000	18.031	9.8	97	0.00	-E05 ✓
7		Trichlorofluoromethane	20.000	19.023	4.9	102	0.00	
8	C	1,1-Dichloroethene	20.000	24.200	-21.0#	131	0.00	-Q56 ✓
9		Carbon Disulfide	20.000	25.084	-25.4#	136	0.00	-Q56 ✓
10		Freon 113	20.000	23.513	-17.6	122	0.00	
11		Iodomethane	20.000	17.182	14.1	102	0.00	
12		Methylene Chloride	20.000	29.713	-48.6#	164	0.00	-Q56 ✓
13		Acetone	40.000	31.753	20.6#	84	0.00	-Q55 ✓
14		t-1,2-Dichloroethene	20.000	21.814	-9.1	113	0.00	
15		n-Hexane	20.000	21.148	-5.7	116	0.00	
16		Methyl-tert-butyl-ether	20.000	20.422	-2.1	108	0.00	
17	P	1,1-Dichloroethane	20.000	20.166	-0.8	103	0.00	
18		Acrylonitrile	20.000	18.638	6.8	101	0.00	
19		c-1,2-Dichloroethene	20.000	19.207	4.0	99	0.00	
20		2,2-Dichloropropane	20.000	24.720	-23.6#	128	0.00	-Q56 ✓
21		Bromochloromethane	20.000	19.091	4.5	95	0.00	
22	C	Chloroform	20.000	19.839	0.8	104	0.00	
23		Carbon Tetrachloride	20.000	25.143	-25.7#	122	0.00	-Q56 ✓
24		Tetrahydrofuran	20.000	17.463	12.7	93	0.00	
25		1,1,1-Trichloroethane	20.000	21.682	-8.4	112	0.00	
26	S	Dibromofluoromethane (S)	50.000	47.952	4.1	99	0.00	
27		1,1-Dichloropropene	20.000	21.233	-6.2	110	0.00	
28		2-Butanone (MEK)	40.000	35.119	12.2	93	0.00	
29		Benzene	20.000	21.164	-5.8	114	0.00	
30		1,2-Dichloroethane (EDC)	20.000	19.187	4.1	101	0.00	
31		iso-Butyl Alcohol	500.000	446.732	10.7	96	0.02	
32	S	1,4-Difluorobenzene (S)	50.000	50.761	-1.5	109	0.00	
33		Trichloroethene (TCE)	20.000	22.262	-11.3	115	0.00	
34		Dibromomethane	20.000	20.430	-2.1	107	0.00	
35	C	1,2-Dichloropropane	20.000	19.546	2.3	102	0.00	
36		Bromodichloromethane	20.000	21.848	-9.2	108	0.00	
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	108	0.00	
38		c-1,3-Dichloropropene	20.000	22.472	-12.4	111	0.00	
39	S	Toluene-d8 (S)	50.000	47.896	4.2	105	0.00	
40	C	Toluene	20.000	19.745	1.3	112	0.00	
41		Tetrachloroethene (PCE)	20.000	20.664	-3.3	114	0.00	
42		4-Methyl-2-Pentanone (MIBK)	40.000	35.097	12.3	94	0.00	
43		t-1,3-Dichloropropene	20.000	21.798	-9.0	107	0.00	
44		1,1,2-Trichloroethane	20.000	20.490	-2.4	109	0.00	
45		Dibromochloromethane	20.000	19.258	3.7	113	0.00	
46		1,3-Dichloropropane	20.000	19.296	3.5	101	0.00	
47		1,2-Dibromoethane (EDB)	20.000	21.627	-8.1	109	0.00	
48		2-Hexanone	40.000	35.582	11.0	92	0.00	
49	P	Chlorobenzene	20.000	19.364	3.2	108	0.00	
50	C	Ethylbenzene	20.000	19.352	3.2	107	0.00	

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070103.D
Acq On : 1 Jul 2019 11:18 am
Operator : TB
Sample : 9070494-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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		1,1,1,2-Tetrachloroethane	20.000	23.737	-18.7	114	0.00
52		m,p-Xylenes (2)	40.000	39.973	0.1	107	0.00
53		o-Xylene	20.000	19.447	2.8	105	0.00
54		Styrene	20.000	21.549	-7.7	106	0.00
55	P	Bromoform	20.000	19.594	2.0	119	0.00
56		Isopropylbenzene	20.000	20.065	-0.3	106	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	110	0.00
58	S	4-Bromofluorobenzene (S)	50.000	49.990	0.0	109	0.00
59		Bromobenzene	20.000	19.982	0.1	109	0.00
60		n-Propylbenzene	20.000	19.514	2.4	104	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	19.180	4.1	105	0.00
62		2-Chlorotoluene	20.000	20.178	-0.9	109	0.00
63		1,3,5-Trimethylbenzene	20.000	20.006	-0.0	106	0.00
64		1,2,3-Trichloropropane	20.000	19.685	1.6	108	0.00
65		t-1,4-Dichloro-2-butene	20.000	20.627	-3.1	118	0.00
66		4-Chlorotoluene	20.000	19.041	4.8	103	0.00
67		tert-Butylbenzene	20.000	19.646	1.8	101	0.00
68		1,2,4-Trimethylbenzene	20.000	19.452	2.7	105	0.00
69		sec-Butylbenzene	20.000	20.654	-3.3	107	0.00
70		4-Isopropyltoluene	20.000	20.792	-4.0	109	0.00
71		1,3-Dichlorobenzene	20.000	19.264	3.7	109	0.00
72		1,4-Dichlorobenzene	20.000	19.019	4.9	108	0.00
73		n-Butylbenzene	20.000	19.718	1.4	109	0.00
74		1,2-Dichlorobenzene	20.000	20.250	-1.3	111	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	19.773	1.1	125	0.00
76		Hexachlorobutadiene	20.000	21.157	-5.8	110	0.00
77		1,2,4-Trichlorobenzene	20.000	22.027	-10.1	111	0.00
78		Naphthalene	20.000	22.113	-10.6	112	0.00
79		1,2,3-Trichlorobenzene	20.000	21.909	-9.5	112	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070103.D
Acq On : 1 Jul 2019 11:18 am
Operator : TB
Sample : 9070494-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	358431	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	528045	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	208380	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.529	111	156655	47.95 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	613075	50.76 ug/L		0.00
39) Toluene-d8 (S)	8.097	98	706563	47.90 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	188104	49.99 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.654	85	39920	16.88 ug/L		94
3) Chloromethane	1.855	50	62747	16.78 ug/L		99
4) Vinyl Chloride	1.940	62	47668	18.82 ug/L		98
5) Bromomethane	2.299	96	30387	20.94 ug/L		99
6) Chloroethane	2.439	64	17335	18.03 ug/L	#	67
7) Trichlorofluoromethane	2.561	101	27092	19.02 ug/L		95
8) 1,1-Dichloroethene	3.084	61	68492	24.20 ug/L		93
9) Carbon Disulfide	3.096	76	94037	25.08 ug/L		99
10) Freon 113	3.139	101	49237	23.51 ug/L		89
11) Iodomethane	3.236	142	19234	17.18 ug/L		93
12) Methylene Chloride	3.723	84	71504	29.71 ug/L		95
13) Acetone	3.826	43	40206	31.75 ug/L		93
14) t-1,2-Dichloroethene	3.881	61	70998	21.81 ug/L		90
15) n-Hexane	3.960	86	12283	21.15 ug/L		96
16) Methyl-tert-butyl-ether	4.033	73	189251	20.42 ug/L		99
17) 1,1-Dichloroethane	4.513	63	81441	20.17 ug/L		100
18) Acrylonitrile	4.593	53	30670	18.64 ug/L		97
19) c-1,2-Dichloroethene	5.067	61	71067	19.21 ug/L		92
20) 2,2-Dichloropropane	5.170	77	75413	24.72 ug/L		80
21) Bromochloromethane	5.262	49	40378	19.09 ug/L		99
22) Chloroform	5.347	83	92249	19.84 ug/L		95
23) Carbon Tetrachloride	5.475	117	60383	25.14 ug/L		98
24) Tetrahydrofuran	5.529	42	30158	17.46 ug/L		92
25) 1,1,1-Trichloroethane	5.548	97	78065	21.68 ug/L		97
27) 1,1-Dichloropropene	5.675	75	77678	21.23 ug/L		97
28) 2-Butanone (MEK)	5.688	43	76874	35.12 ug/L		97
29) Benzene	5.931	78	250601	21.16 ug/L		97
30) 1,2-Dichloroethane (EDC)	6.144	62	71043	19.19 ug/L		98
31) iso-Butyl Alcohol	6.265	43	102427	446.73 ug/L		88
33) Trichloroethene (TCE)	6.545	130	68845	22.26 ug/L		96
34) Dibromomethane	6.995	93	33441	20.43 ug/L		96
35) 1,2-Dichloropropane	7.105	63	61207	19.55 ug/L		94
36) Bromodichloromethane	7.184	83	57215	21.85 ug/L		98
38) c-1,3-Dichloropropene	7.890	75	82814	22.47 ug/L		90
40) Toluene	8.151	91	259991	19.74 ug/L		99
41) Tetrachloroethene (PCE)	8.602	166	58445	20.66 ug/L		98
42) 4-Methyl-2-Pentanone (...	8.620	43	124516	35.10 ug/L		99
43) t-1,3-Dichloropropene	8.644	75	74461	21.80 ug/L		98
44) 1,1,2-Trichloroethane	8.814	97	55173	20.49 ug/L		91
45) Dibromochloromethane	9.003	129	42228	19.26 ug/L		90
46) 1,3-Dichloropropane	9.106	76	95589	19.30 ug/L		94
47) 1,2-Dibromoethane (EDB)	9.240	107	54469	21.63 ug/L		94
48) 2-Hexanone	9.502	43	85886	35.58 ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070103.D
Acq On : 1 Jul 2019 11:18 am
Operator : TB
Sample : 9070494-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

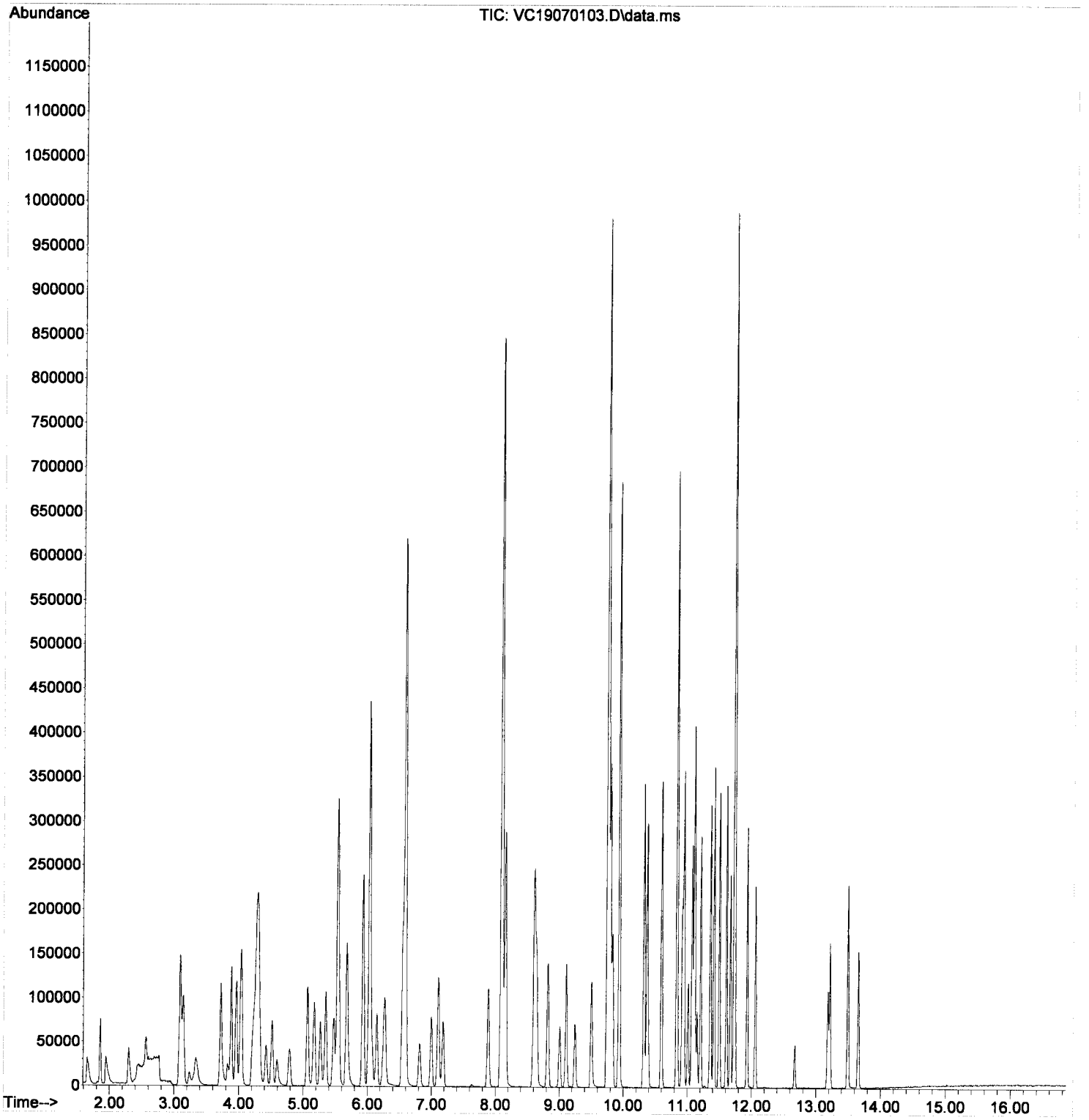
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	154610	19.36	ug/L		96
50) Ethylbenzene	9.794	91	256837	19.35	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.830	131	49483	23.74	ug/L		96
52) m,p-Xylenes (2)	9.934	91	380865	39.97	ug/L		98
53) o-Xylene	10.317	91	192674	19.45	ug/L		100
54) Styrene	10.372	104	144259	21.55	ug/L		98
55) Bromoform	10.390	173	22710	19.59	ug/L		99
56) Isopropylbenzene	10.597	105	225129	20.07	ug/L		97
59) Bromobenzene	10.919	156	56771	19.98	ug/L		97
60) n-Propylbenzene	10.944	91	246066	19.51	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.011	83	51716	19.18	ug/L		96
62) 2-Chlorotoluene	11.071	126	52116	20.18	ug/L		92
63) 1,3,5-Trimethylbenzene	11.102	105	172742	20.01	ug/L		98
64) 1,2,3-Trichloropropane	11.114	110	21682	19.68	ug/L		87
65) t-1,4-Dichloro-2-butene	11.150	88	7360	20.63	ug/L	#	81
66) 4-Chlorotoluene	11.205	91	143285	19.04	ug/L		95
67) tert-Butylbenzene	11.357	91	89856	19.65	ug/L		99
68) 1,2,4-Trimethylbenzene	11.412	105	170937	19.45	ug/L		99
69) sec-Butylbenzene	11.497	105	200443	20.65	ug/L		97
70) 4-Isopropyltoluene	11.607	119	168597	20.79	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	91654	19.26	ug/L		97
72) 1,4-Dichlorobenzene	11.741	146	90586	19.02	ug/L		100
73) n-Butylbenzene	11.929	91	139425	19.72	ug/L		99
74) 1,2-Dichlorobenzene	12.057	146	83176	20.25	ug/L		99
75) 1,2-Dibromo-3-Chloropr...	12.671	157	12282	19.77	ug/L		96
76) Hexachlorobutadiene	13.182	223	12814	21.16	ug/L		96
77) 1,2,4-Trichlorobenzene	13.213	180	51958	22.03	ug/L		97
78) Naphthalene	13.493	128	171677	22.11	ug/L		98
79) 1,2,3-Trichlorobenzene	13.651	180	48833	21.91	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070103.D
Acq On : 1 Jul 2019 11:18 am
Operator : TB
Sample : 9070494-BS1
Misc : 50X 5g/5mLx1000uL/50mL VOCO+MeOH A19F368
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070104.D
Acq On : 1 Jul 2019 11:45 am
Operator : TB
Sample : 9070494-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

7/11/19

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 (IS)	50.000	50.000	0.0	110	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	47.569	4.9	104	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	47.155	5.7	103	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	106	0.00
5	H	CA-LUFT (C5-C12)	500.000	540.535	-8.1	119	0.00
6	H	TPHg (C5-C9)	500.000	555.114	-11.0	119	0.00
7	H	TPHg (C6-C10)	500.000	539.053	-7.8	119	0.00
8	H	NWTPH-Gx	500.000	500.903	-0.2	118	0.00
9		Benzene (NR)	-1.000	0.000	0.0	120	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	103	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	120	0.00
12	S	1,4-Dichlorobenzene-d4 (NR)	-1.000	0.000	0.0	107	0.00
13		Naphthalene (NR)	-1.000	0.000	0.0	143	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\9G01037\
Data File : VC19070104.D
Acq On : 1 Jul 2019 11:45 am
Operator : TB
Sample : 9070494-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

7/1/19

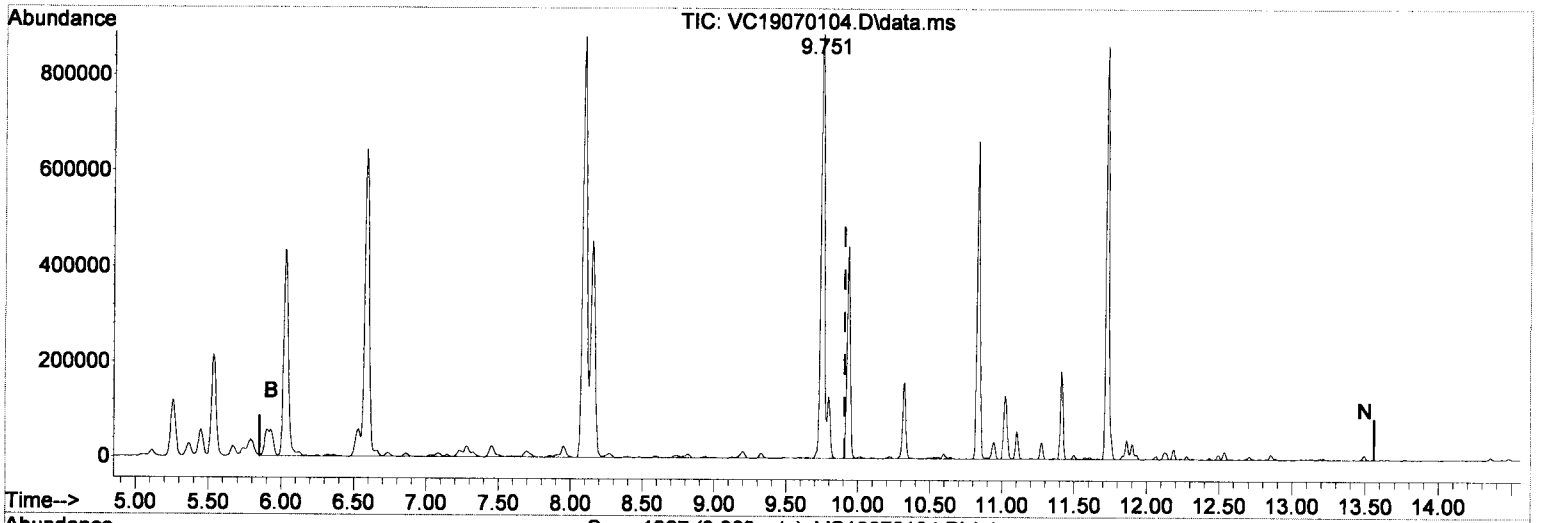
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.034	168	363606	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1387223	47.57	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	969275	47.15	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.751	TIC	1546067	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1869469	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1212310	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	7152325m	540.53	ug/L	
6) TPHg (C5-C9)	9.906	TIC	6241040m	555.11	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4794191m	539.05	ug/L	
8) NWTPH-Gx	9.906	TIC	3880285m	500.90	ug/L	

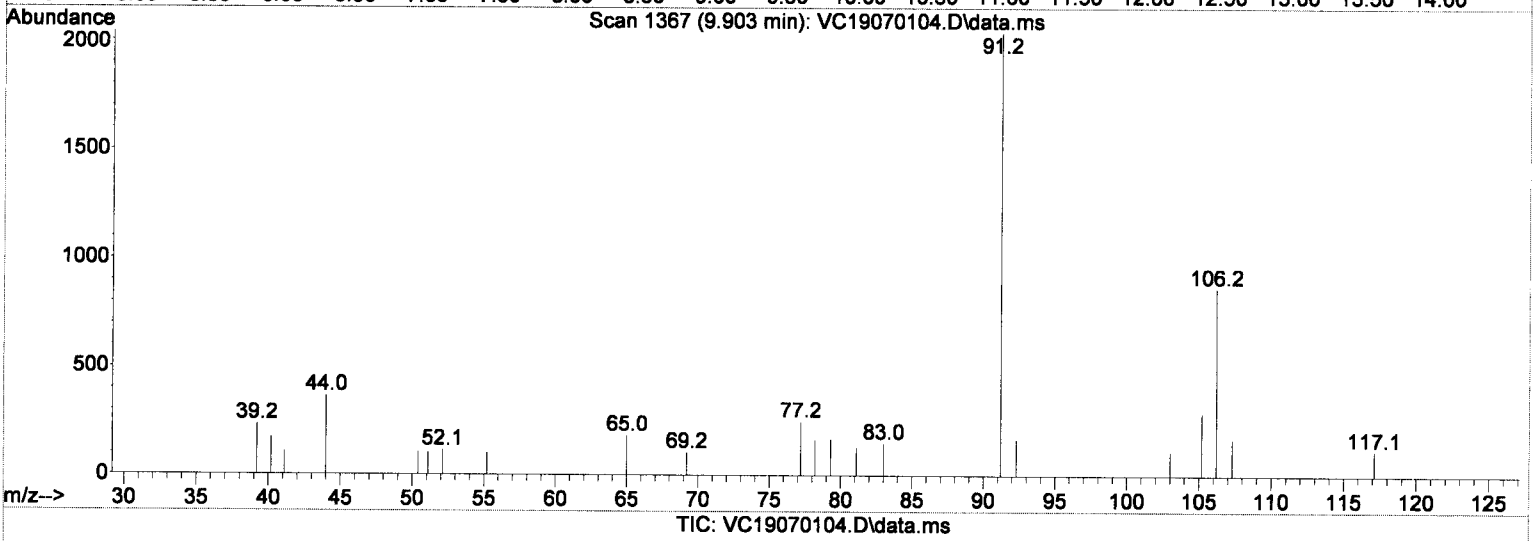
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070104.D
Acq On : 1 Jul 2019 11:45 am
Operator : TB
Sample : 9070494-BS2
Misc : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 12:03:12 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





TIC: VC19070104.D\data.ms

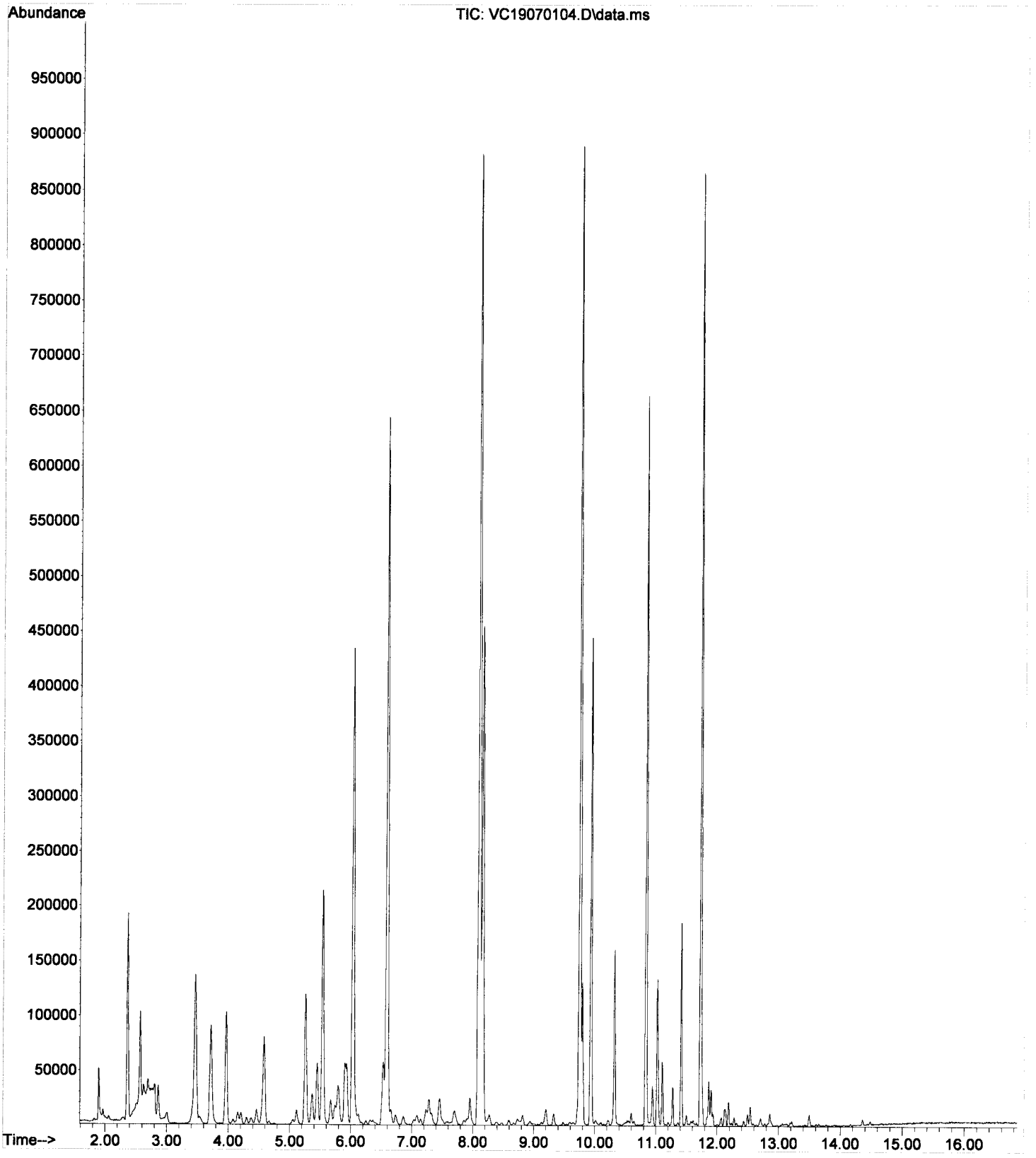
(8) NWTPH-Gx (H)

9.906min (0.000) 500.90 ug/L m

response 3880285

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.02#
0.00	0.00	0.01#
0.00	0.00	0.00

File :C:\msdchem\1\DATA\2019-07\9G01037\VC19070104.D
Operator : TB
Acquired : 1 Jul 2019 11:45 am using AcqMethod VC1612RUN.M
Instrument : VOA-GCMS3
Sample Name: 9070494-BS2
Misc Info : 50X 5g/5mLx1000uL/50mL GX+MeOH A19F151
Vial Number: 4



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070105.D
Acq On : 1 Jul 2019 12:13 pm
Operator : TB
Sample : 9070494-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:07 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

7/1/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	358316	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.590	TIC	1330231	46.29	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.837	TIC	966300	47.70	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1478996	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1819136	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1161938	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	674666m	21.40	ug/L	
6) TPHg (C5-C9)	9.906	TIC	673611m	19.73	ug/L	
7) TPHg (C6-C10)	9.906	TIC	492317m	18.80	ug/L	
8) NWTPH-Gx	9.906	TIC	6954m	34.72	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070105.D
Acq On : 1 Jul 2019 12:13 pm
Operator : TB
Sample : 9070494-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

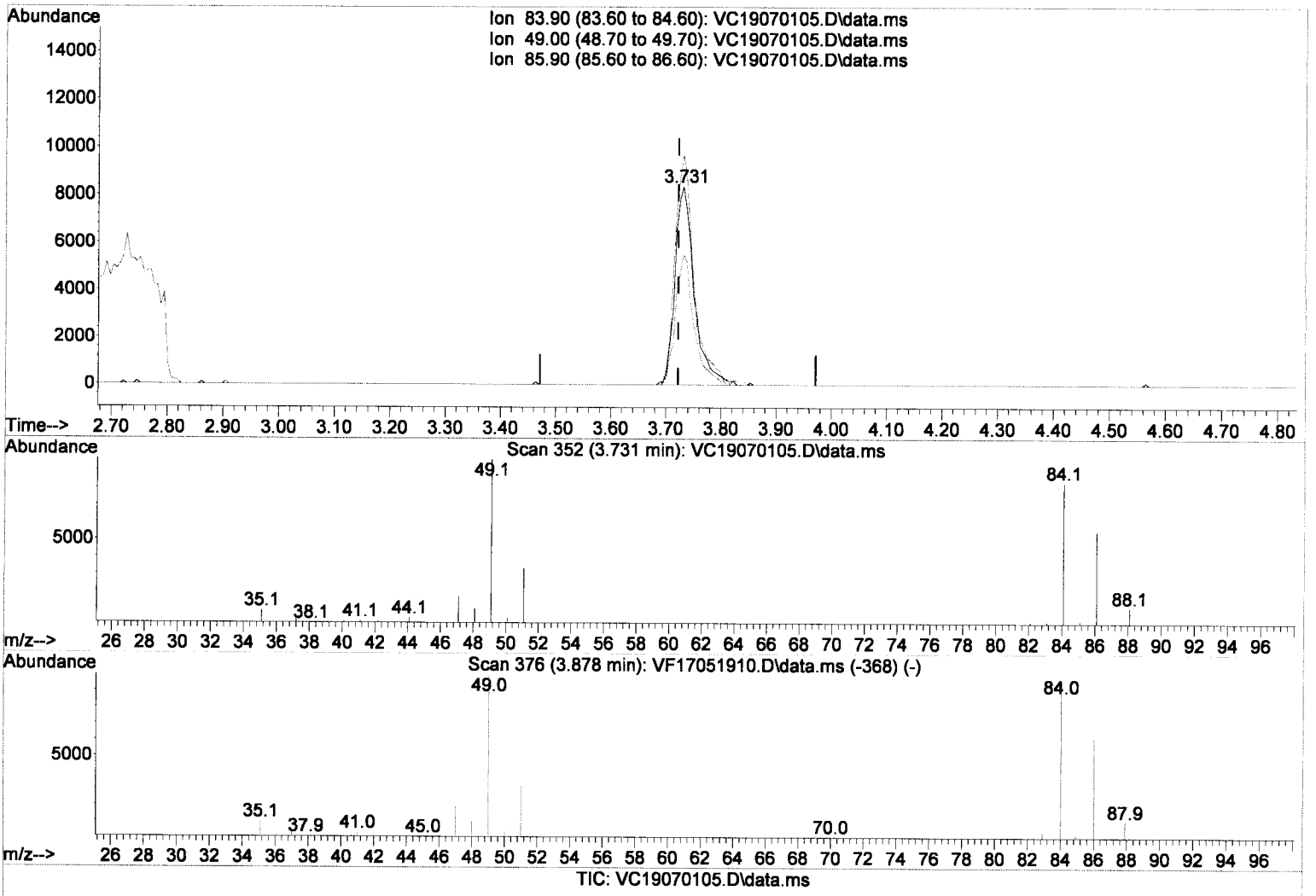
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	358316	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	527657	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	205279	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.538	111	155115	47.50	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	608025	50.36	ug/L		0.00
39) Toluene-d8 (S)	8.099	98	705374	47.85	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	183057	49.38	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.870	50	598	0.16	ug/L		84
5) Bromomethane	2.308	96	1563	1.08	ug/L		87
6) Chloroethane	2.478	64	187	0.19	ug/L	#	1
9) Carbon Disulfide	3.105	76	221	0.23	ug/L		77
11) Iodomethane	3.257	142	280	1.57	ug/L	#	47
12) Methylene Chloride	3.731	84	20363	8.46	ug/L		94
13) Acetone	3.847	43	392	0.31	ug/L		93
40) Toluene	8.154	91	3912	0.30	ug/L		96
50) Ethylbenzene	9.809	91	1272	0.10	ug/L		85
52) m,p-Xylenes (2)	9.936	91	2459	0.26	ug/L		82
53) o-Xylene	10.326	91	1205	0.12	ug/L		84
68) 1,2,4-Trimethylbenzene	11.415	105	1252	0.14	ug/L		73
73) n-Butylbenzene	11.932	91	800	0.11	ug/L		75

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070105.D
Acq On : 1 Jul 2019 12:13 pm
Operator : TB
Sample : 9070494-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19070105.D\data.ms

(12) Methylene Chloride

3.731min (+0.009) 8.46 ug/L

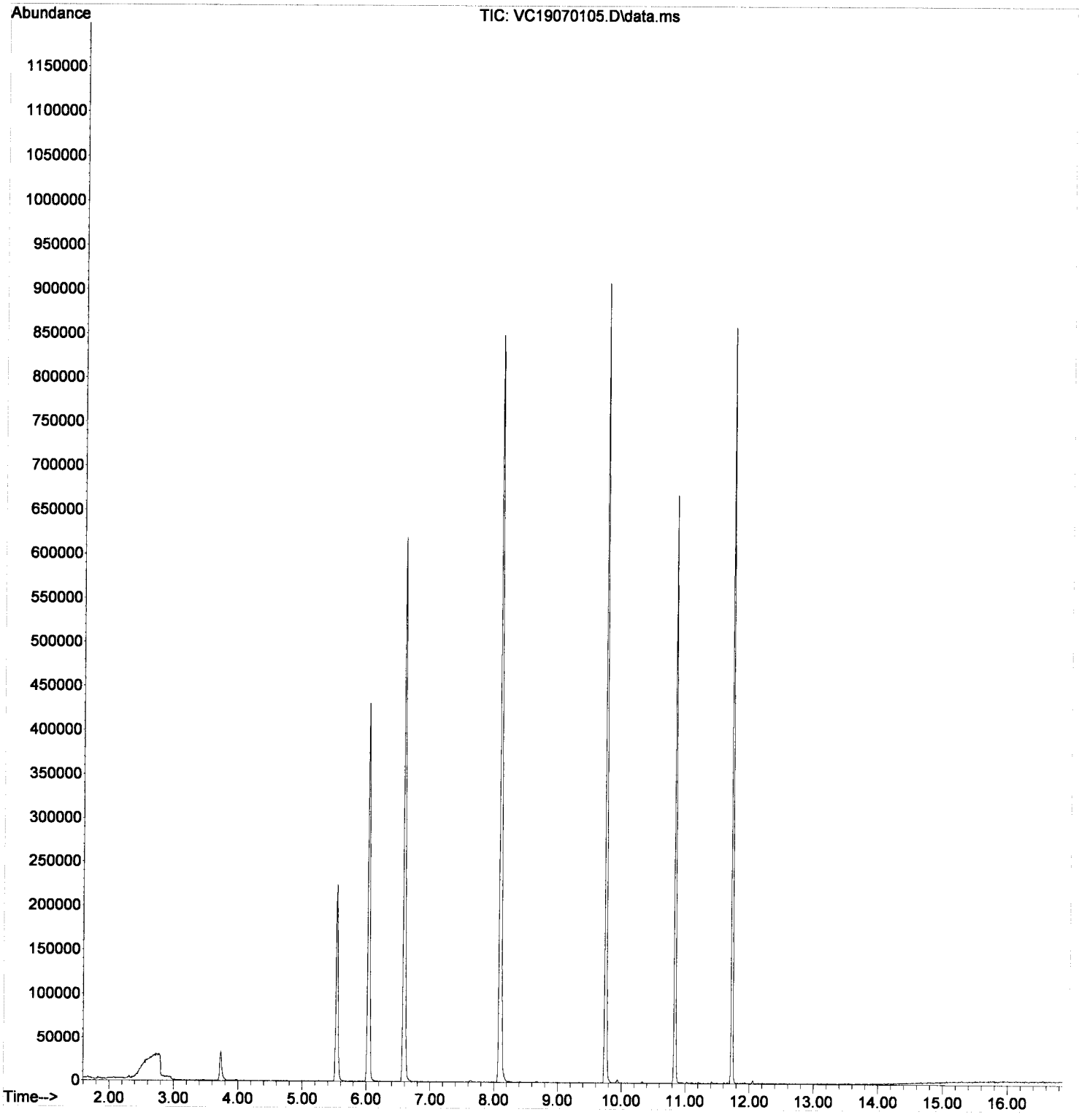
response 20363

Ion	Exp%	Act%
83.90	100	100
49.00	121.90	115.73
85.90	60.10	66.16
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070105.D
Acq On : 1 Jul 2019 12:13 pm
Operator : TB
Sample : 9070494-BLK1
Misc : 50X 7.5g/5mLx1000uL/50mL DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070107.D
Acq On : 1 Jul 2019 1:08 pm
Operator : TB
Sample : A9F0684-01RE1@200000
Misc : 200000X ~1g/5mLx250uL/50mL of 1000X Nap only
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

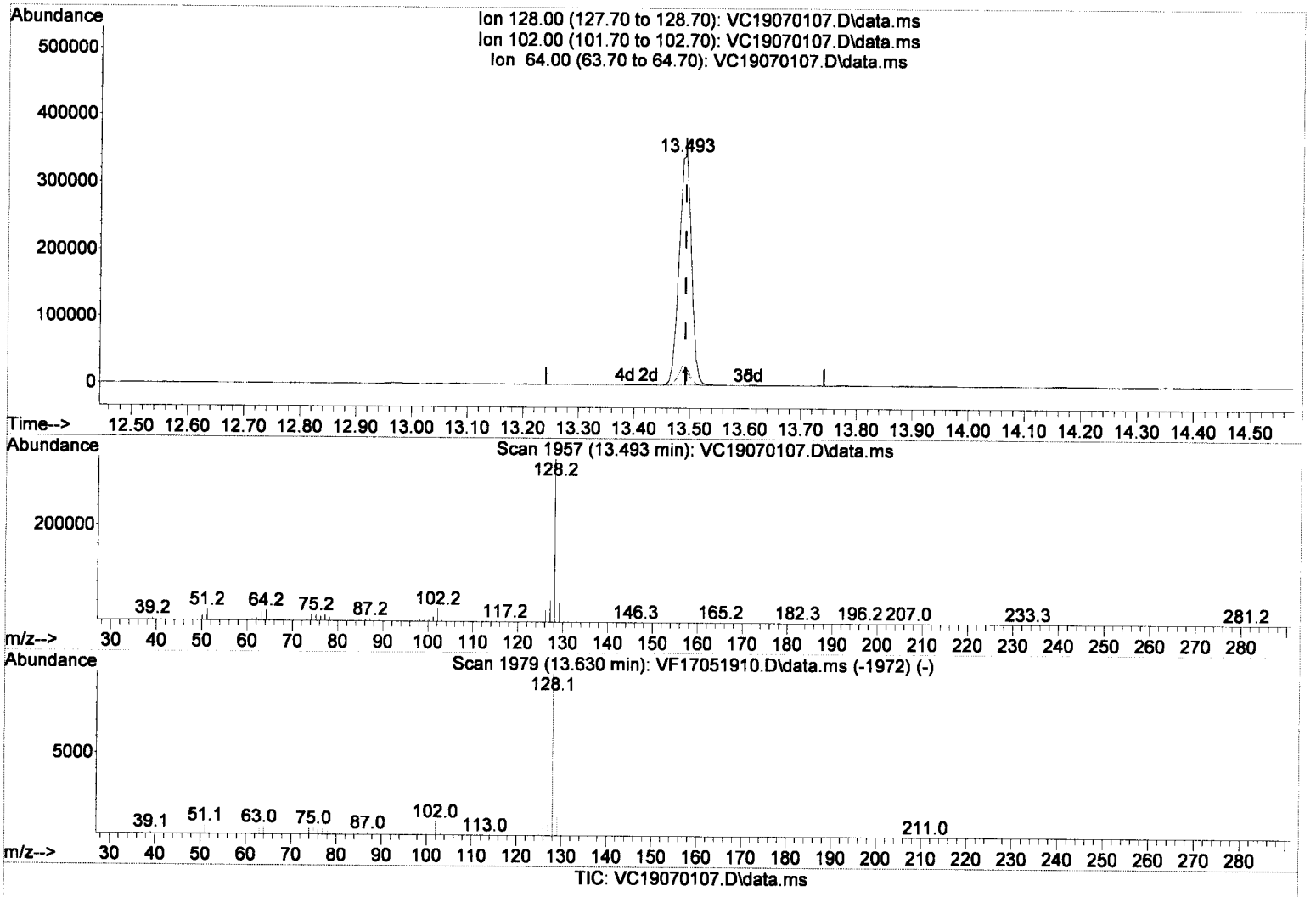
Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	358397	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	529439	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	218980	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	156270	47.84 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.582	114	609344	50.46 ug/L		0.00
39) Toluene-d8 (S)	8.091	98	712623	48.18 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	193238	48.87 ug/L		0.00
Target Compounds						Qvalue
3) Chloromethane	1.849	50	380	0.10 ug/L	#	48
5) Bromomethane	2.293	96	983	0.68 ug/L		77
6) Chloroethane	2.476	64	277	0.29 ug/L	#	1
12) Methylene Chloride	3.729	84	9359	3.89 ug/L		83
13) Acetone	3.838	43	590	0.47 ug/L	#	42
15) n-Hexane	3.960	86	752	Below Cal	#	81
29) Benzene	5.931	78	68148	5.76 ug/L		97
40) Toluene	8.152	91	67972	5.15 ug/L		96
50) Ethylbenzene	9.794	91	6619	0.50 ug/L		91
52) m,p-Xylenes (2)	9.934	91	28311	2.96 ug/L		95
53) o-Xylene	10.317	91	12765	1.28 ug/L		100
54) Styrene	10.372	104	8330	1.24 ug/L		96
56) Isopropylbenzene	10.597	105	1138	0.10 ug/L		83
60) n-Propylbenzene	10.944	91	1466	0.11 ug/L		84
61) 1,1,2,2-Tetrachloroethane	10.993	83	351	0.12 ug/L	#	25
63) 1,3,5-Trimethylbenzene	11.102	105	5454	0.60 ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	13932	1.51 ug/L		96
69) sec-Butylbenzene	11.497	105	3451	0.34 ug/L		93
70) 4-Isopropyltoluene	11.583	119	2221	0.26 ug/L		86
73) n-Butylbenzene	11.935	91	787	0.11 ug/L		72
75) 1,2-Dibromo-3-Chloropr...	12.641	157	101	0.84 ug/L	#	38
77) 1,2,4-Trichlorobenzene	13.195	180	737	0.30 ug/L	#	10
78) Naphthalene	13.493	128	536595	65.77 ug/L		99
79) 1,2,3-Trichlorobenzene	13.663	180	2625	1.12 ug/L		91

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070107.D
Acq On : 1 Jul 2019 1:08 pm
Operator : TB
Sample : A9F0684-01RE1@200000
Misc : 200000X ~1g/5mLx250uL/50mL of 1000X Nap only
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(78) Naphthalene

13.493min (+0.001) 65.77 ug/L

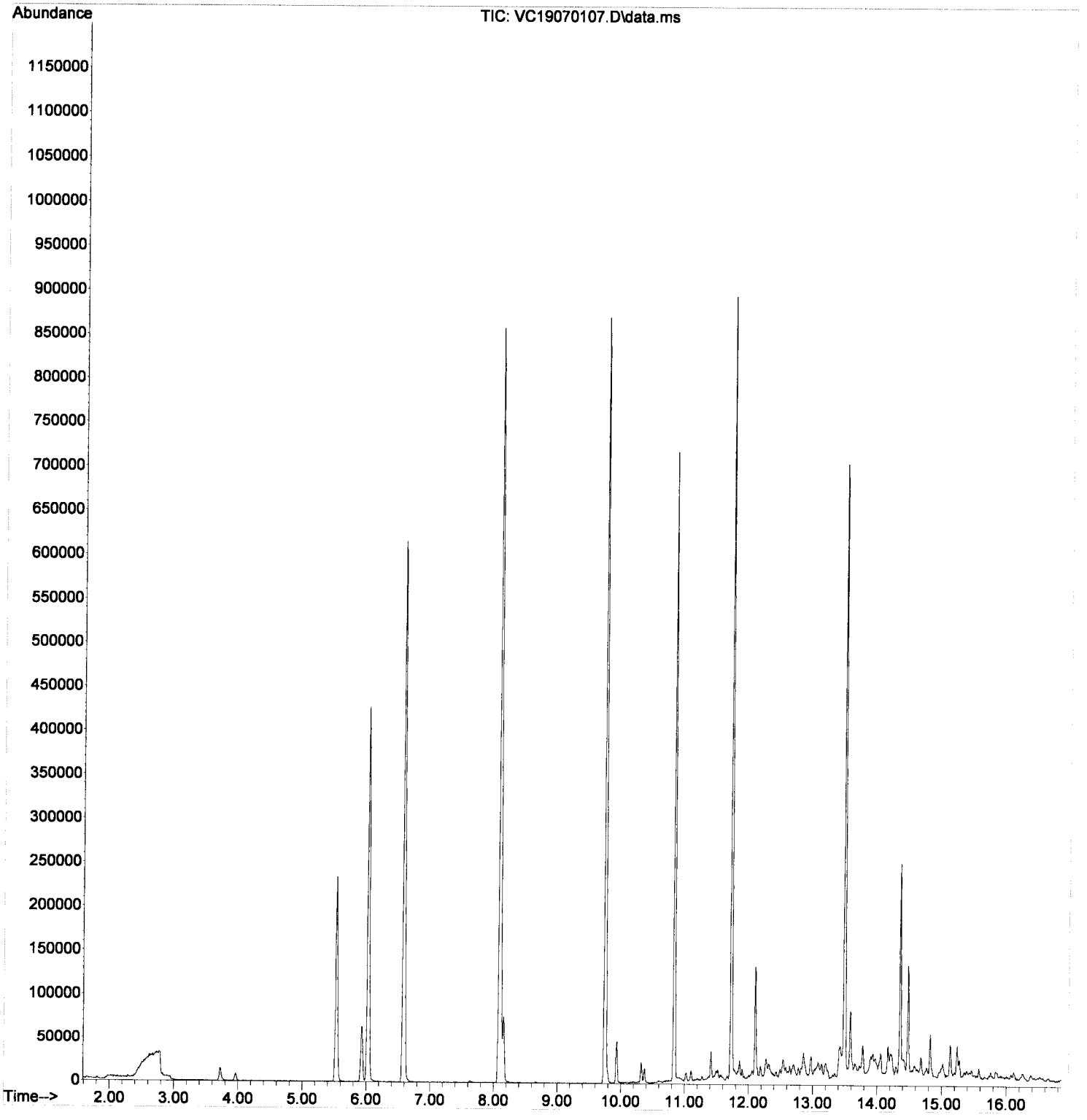
response 536595

Ion	Exp%	Act%
128.00	100	100
102.00	8.50	8.03
64.00	6.40	6.49
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070107.D
Acq On : 1 Jul 2019 1:08 pm
Operator : TB
Sample : A9F0684-01RE1@200000
Misc : 200000X ~1g/5mLx250uL/50mL of 1000X Nap only
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 13:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070112.D
Acq On : 1 Jul 2019 3:25 pm
Operator : TB
Sample : 9070494-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0923-01
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 16:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

7/1/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	352100	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	531905	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	212695	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	165817	51.67	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	600998	50.66	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	702847	47.30	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	191626	49.89	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.661	85	41979	18.07	ug/L		95
3) Chloromethane	1.861	50	63017	17.16	ug/L		99
4) Vinyl Chloride	1.946	62	50778	20.40	ug/L		94
5) Bromomethane	2.299	96	33565	23.55	ug/L		90
6) Chloroethane	2.439	64	19021	20.14	ug/L		77
7) Trichlorofluoromethane	2.561	101	29680	21.21	ug/L		95
8) 1,1-Dichloroethene	3.090	61	70112	25.22	ug/L		89
9) Carbon Disulfide	3.108	76	94174	25.51	ug/L		98
10) Freon 113	3.151	101	52015	25.29	ug/L		86
11) Iodomethane	3.242	142	20835	18.79	ug/L		97
12) Methylene Chloride	3.723	84	61221	25.90	ug/L		96
13) Acetone	3.826	43	41791	33.60	ug/L		89
14) t-1,2-Dichloroethene	3.887	61	74940	23.44	ug/L		91
15) n-Hexane	3.966	86	16954	30.48	ug/L		94
16) Methyl-tert-butyl-ether	4.033	73	192951	21.20	ug/L		99
17) 1,1-Dichloroethane	4.520	63	88575	22.33	ug/L		97
18) Acrylonitrile	4.593	53	31402	19.43	ug/L		90
19) c-1,2-Dichloroethene	5.067	61	75465	20.76	ug/L		97
20) 2,2-Dichloropropane	5.171	77	74864	24.98	ug/L		81
21) Bromochloromethane	5.262	49	40402	19.45	ug/L		95
22) Chloroform	5.347	83	99357	21.75	ug/L		97
23) Carbon Tetrachloride	5.475	117	60474	25.63	ug/L		94
24) Tetrahydrofuran	5.530	42	32267	19.02	ug/L		89
25) 1,1,1-Trichloroethane	5.548	97	81365	23.00	ug/L		99
27) 1,1-Dichloropropene	5.676	75	80966	22.53	ug/L		97
28) 2-Butanone (MEK)	5.688	43	80864	37.61	ug/L		92
29) Benzene	5.931	78	260330	22.38	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.144	62	71672	19.70	ug/L		99
31) iso-Butyl Alcohol	6.260	43	104674	464.74	ug/L		85
33) Trichloroethene (TCE)	6.552	130	72151	23.75	ug/L		92
34) Dibromomethane	6.996	93	35019	21.78	ug/L		95
35) 1,2-Dichloropropane	7.105	63	63919	20.78	ug/L		93
36) Bromodichloromethane	7.184	83	58656	22.80	ug/L		97
38) c-1,3-Dichloropropene	7.884	75	85402	23.01	ug/L		95
40) Toluene	8.152	91	269169	20.29	ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	64070	22.49	ug/L		98
42) 4-Methyl-2-Pentanone (...	8.614	43	144002	40.30	ug/L		99
43) t-1,3-Dichloropropene	8.644	75	76983	22.37	ug/L		96
44) 1,1,2-Trichloroethane	8.821	97	62306	22.97	ug/L	#	51
45) Dibromochloromethane	9.003	129	45366	20.48	ug/L		92
46) 1,3-Dichloropropane	9.107	76	100745	20.19	ug/L		96
47) 1,2-Dibromoethane (EDB)	9.247	107	57654	22.73	ug/L		100
48) 2-Hexanone	9.496	43	97438	40.08	ug/L		96

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070112.D
Acq On : 1 Jul 2019 3:25 pm
Operator : TB
Sample : 9070494-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0923-01
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 16:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

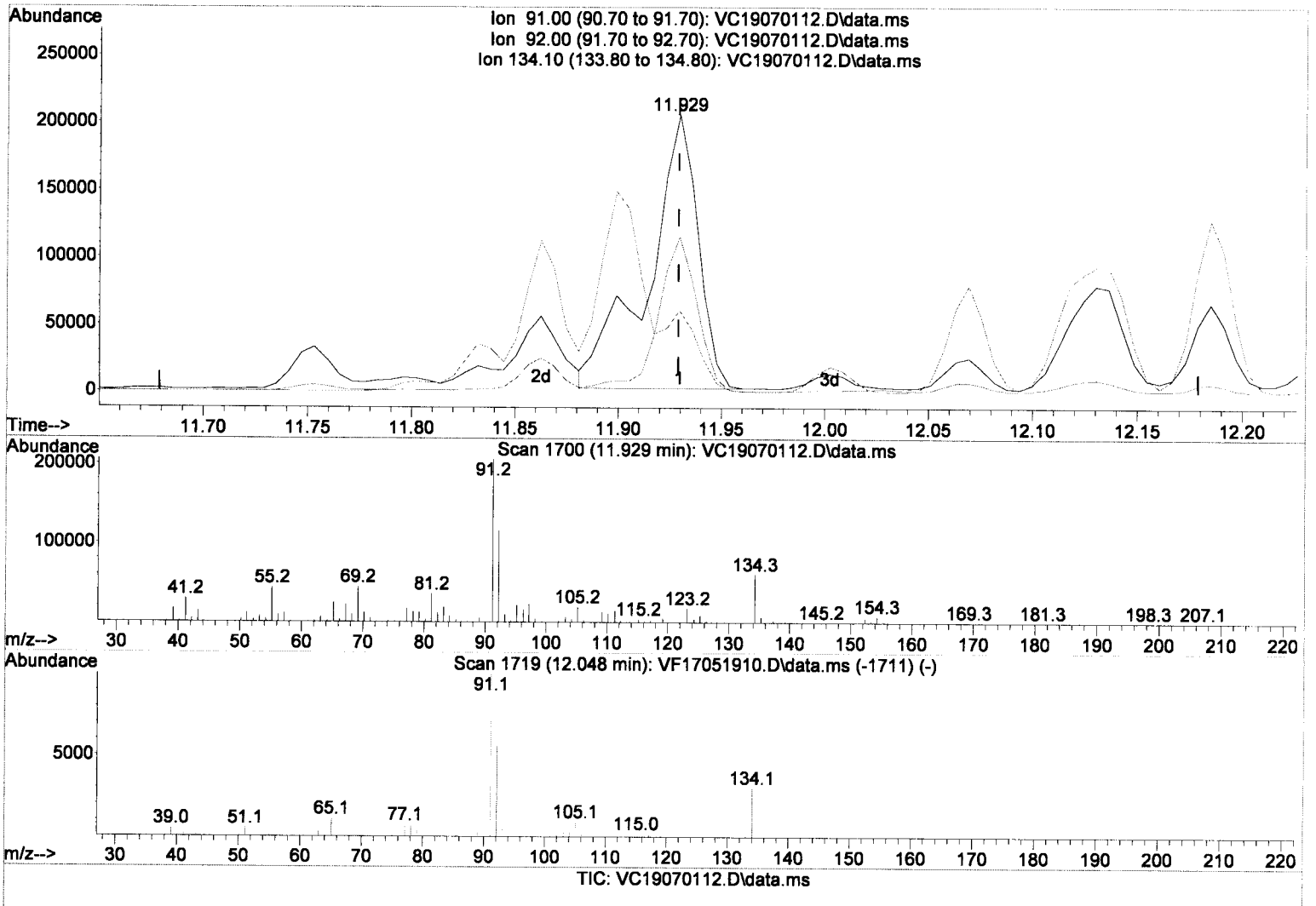
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	162999	20.27 ug/L	98
50) Ethylbenzene	9.794	91	274541	20.54 ug/L	98
51) 1,1,1,2-Tetrachloroethane	9.831	131	50516	24.06 ug/L	95
52) m,p-Xylenes (2)	9.934	91	545629	56.85 ug/L	98
53) o-Xylene	10.317	91	313680	31.43 ug/L	98
54) Styrene	10.366	104	159029	23.58 ug/L	99
55) Bromoform	10.390	173	22943	19.65 ug/L	96
56) Isopropylbenzene	10.597	105	265383	23.48 ug/L	98
59) Bromobenzene	10.920	156	60622	20.90 ug/L	96
60) n-Propylbenzene	10.944	91	291398	22.64 ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.005	83	57322	20.83 ug/L	86
62) 2-Chlorotoluene	11.072	126	60848	23.08 ug/L	95
63) 1,3,5-Trimethylbenzene	11.102	105	441926	50.14 ug/L	99
64) 1,2,3-Trichloropropane	11.114	110	26938	23.96 ug/L	92
65) t-1,4-Dichloro-2-butene	11.151	88	6450	17.91 ug/L	95
66) 4-Chlorotoluene	11.206	91	158384	20.62 ug/L	98
67) tert-Butylbenzene	11.358	91	112796	24.16 ug/L	95
68) 1,2,4-Trimethylbenzene	11.412	105	849090	94.67 ug/L	96
69) sec-Butylbenzene	11.498	105	383872	38.75 ug/L	91
70) 4-Isopropyltoluene	11.607	119	220802	26.68 ug/L	98
71) 1,3-Dichlorobenzene	11.668	146	97008	19.98 ug/L #	80
72) 1,4-Dichlorobenzene	11.741	146	96628	19.88 ug/L	90
73) n-Butylbenzene	11.929	91	~~341056~~	~~47.25 ug/L~~	~~99~~ MI
74) 1,2-Dichlorobenzene	12.057	146	86973	20.74 ug/L	90
75) 1,2-Dibromo-3-Chloropr...	12.672	157	12796	20.16 ug/L #	17
76) Hexachlorobutadiene	13.183	223	17380	28.11 ug/L	97
77) 1,2,4-Trichlorobenzene	13.213	180	59879	24.87 ug/L	89
78) Naphthalene	13.493	128	377682	47.66 ug/L	99
79) 1,2,3-Trichlorobenzene	13.657	180	60025	26.38 ug/L	84

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070112.D
Acq On : 1 Jul 2019 3:25 pm
Operator : TB
Sample : 9070494-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0923-01
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 16:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



TIC: VC19070112.D\data.ms

(73) n-Butylbenzene

11.929min (+0.000) 47.25 ug/L

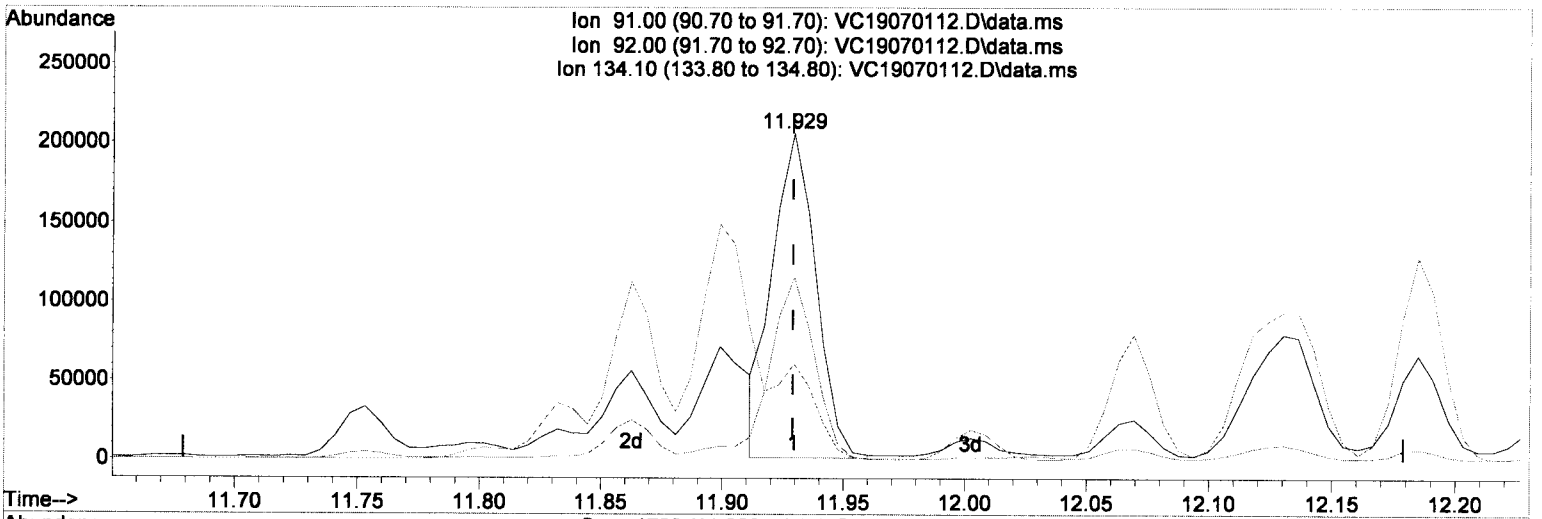
response 341056

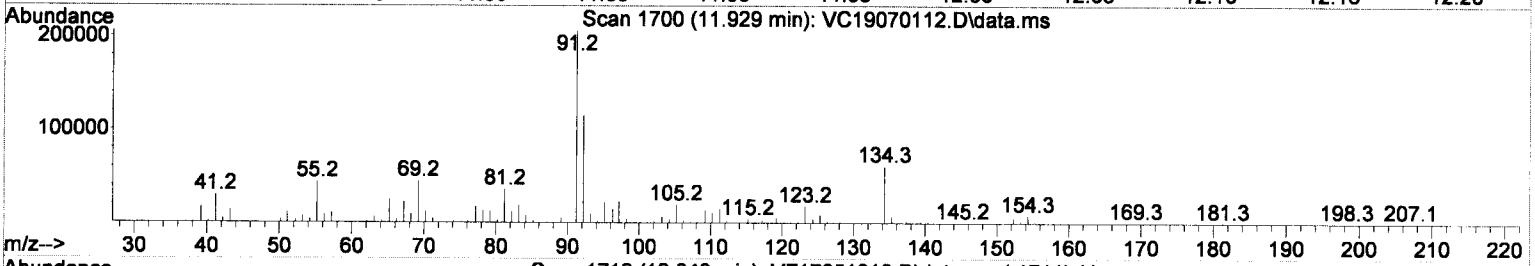
Ion	Exp%	Act%
91.00	100	100
92.00	56.60	56.11
134.10	30.00	29.48
0.00	0.00	0.00

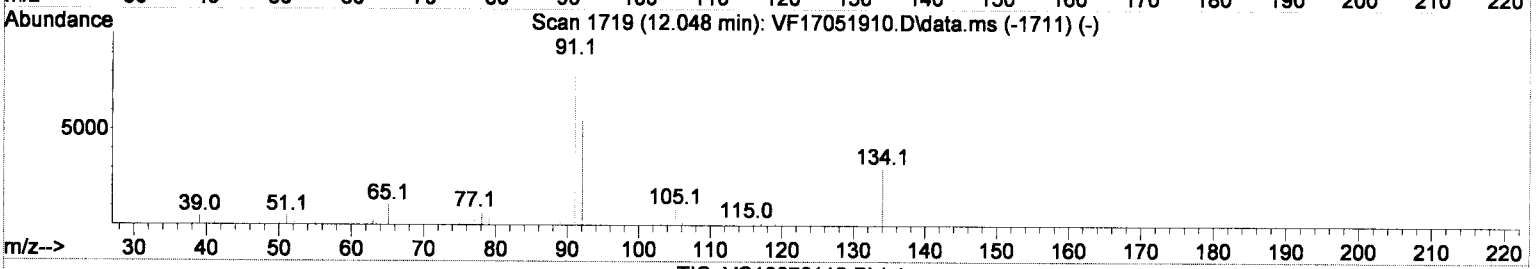
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070112.D
Acq On : 1 Jul 2019 3:25 pm
Operator : TB
Sample : 9070494-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0923-01
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 16:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







TIC: VC19070112.D\data.ms

(73) n-Butylbenzene

11.929min (+0.000) 35.32 ug/L

response 254930

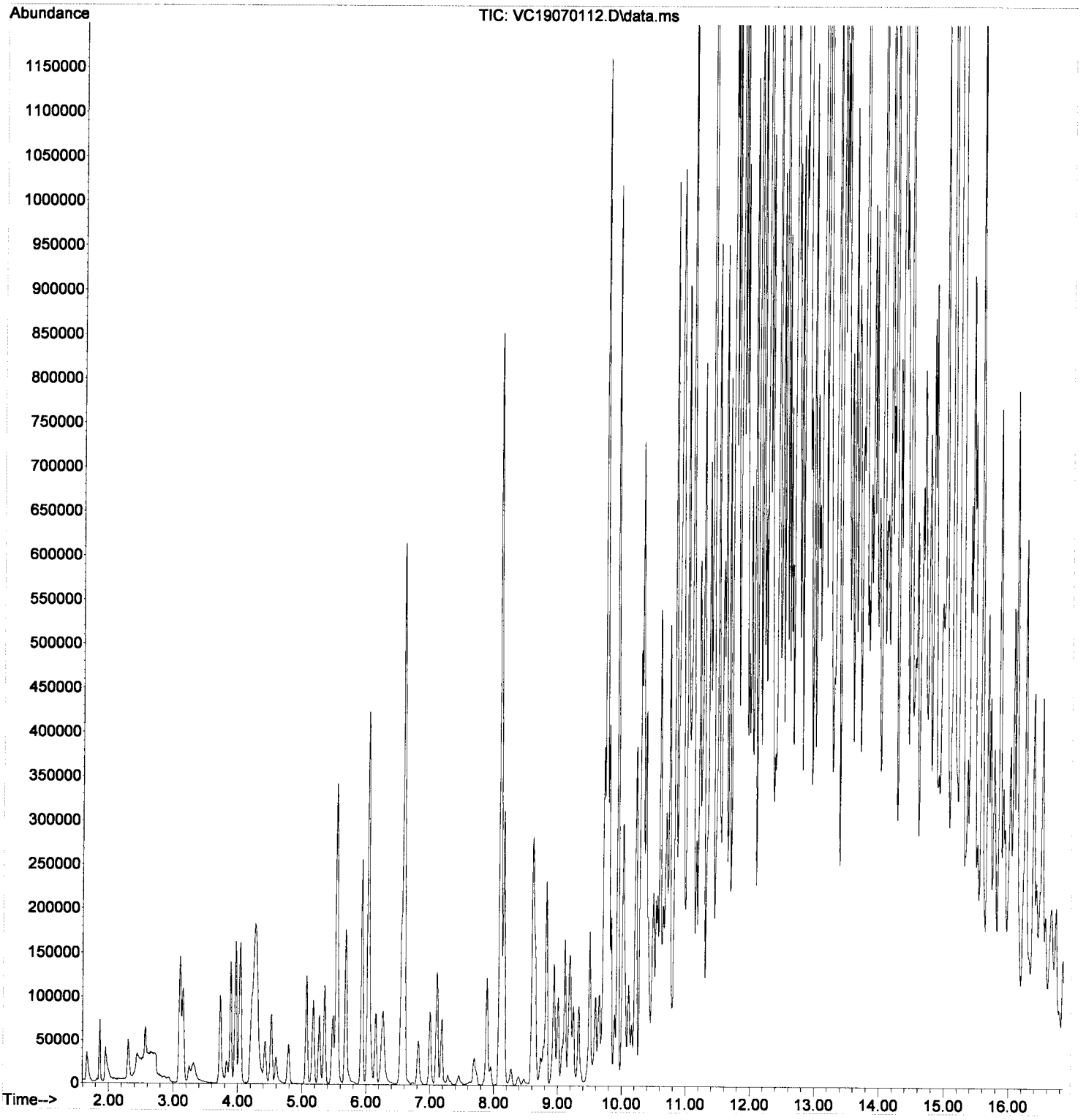
Ion	Exp%	Act%
91.00	100	100
92.00	56.60	56.11
134.10	30.00	29.48
0.00	0.00	0.00

7/1/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-07\9G01037\
Data File : VC19070112.D
Acq On : 1 Jul 2019 3:25 pm
Operator : TB
Sample : 9070494-MS1
Misc : 50X ~5g/5mLx1000uL/50mL F0923-01
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jul 01 16:03:01 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Volatile Organic Compounds by EPA 8260C
Calibration Data

Sequence 9F10052 (Cal ID A9F1104) VOA-GCMS3

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9F10052	Instrument:	VOA-GCMS3
Date:	06/10/19 12:46	Calibration:	A9F1104

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F10052-IBL1	Soil	QC	QC			A19C135	
2	9F10052-TUN1	Soil	QC	QC			A19C135	
3	9F10052-ICB1	Soil	QC	QC			A19C135	
4	9F10052-CAL1	Soil	QC	QC			A19C135	A19F090
5	9F10052-CAL2	Soil	QC	QC			A19C135	A19F091
6	9F10052-CAL3	Soil	QC	QC			A19C135	A19F092
7	9F10052-CAL4	Soil	QC	QC			A19C135	A19F093
8	9F10052-CAL5	Soil	QC	QC			A19C135	A19F094
9	9F10052-CAL6	Soil	QC	QC			A19C135	A19F095
10	9F10052-CAL7	Soil	QC	QC			A19C135	A19F096
11	9F10052-CAL8	Soil	QC	QC			A19C135	A19F097
12	9F10052-CAL9	Soil	QC	QC			A19C135	A19F098
13	9F10052-IBL2	Soil	QC	QC			A19C135	
14	9F10052-CALA	Soil	QC	QC			A19C135	A19F099
15	9F10052-IBL3	Soil	QC	QC			A19C135	
16	9F10052-CALB	Soil	QC	QC			A19C135	A19F100
17	9F10052-IBL4	Soil	QC	QC			A19C135	
18	9F10052-IBL5	Soil	QC	QC			A19C135	
19	9F10052-ICV1	Soil	QC	QC			A19C135	A19F101
20	9F10052-IBL6	Soil	QC	QC			A19C135	
21	9F10052-TUN2	Soil	QC	QC			A19C135	
22	9F10052-IBL7	Soil	QC	QC			A19C135	
23	9F10052-ICB2	Soil	QC	QC			A19C135	
24	9F10052-CALC	Soil	QC	QC			A19C135	A19E372
25	9F10052-CALD	Soil	QC	QC			A19C135	A19E373
26	9F10052-CALE	Soil	QC	QC			A19C135	A19E374
27	9F10052-CALF	Soil	QC	QC			A19C135	A19E375
28	9F10052-CALG	Soil	QC	QC			A19C135	A19E183
29	9F10052-CALI	Soil	QC	QC			A19C135	A19E185
30	9F10052-CALJ	Soil	QC	QC			A19C135	A19E186
31	9F10052-CALH	Soil	QC	QC			A19C135	A19E184
32	9F10052-IBL8	Soil	QC	QC			A19C135	
33	9F10052-IBL9	Soil	QC	QC			A19C135	
34	9F10052-ICV2	Soil	QC	QC			A19C135	A19B262
35	9F10052-IBLA	Soil	QC	QC			A19C135	

Chlorobenzene E-05

Comments:

Data Entered By: MH 6/11/19

Data Reviewed By: MH 6/13/19

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	-1	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061004.D
2	2	0	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061005.D
3	3	0	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061006.D
4	4	1	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061007.D
5	5	2	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061008.D
6	6	5	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061009.D
7	7	10	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061010.D
8	8	20	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061011.D
9	9	50	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061012.D
10	10	100	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061014.D
11	11	200	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061016.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jun 11 09:27 2019	Jun 11 09:04 2019	10 Jun 2019 4:02 pm
2	2	Jun 11 09:27 2019	Jun 11 09:08 2019	10 Jun 2019 4:29 pm
3	3	Jun 11 09:27 2019	Jun 11 09:11 2019	10 Jun 2019 4:57 pm
4	4	Jun 11 09:27 2019	Jun 11 09:20 2019	10 Jun 2019 5:25 pm
5	5	Jun 11 09:27 2019	Jun 11 09:20 2019	10 Jun 2019 5:52 pm
6	6	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 6:20 pm
7	7	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 6:48 pm
8	8	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 7:15 pm
9	9	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 7:43 pm
10	10	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 8:38 pm
11	11	Jun 11 09:27 2019	Jun 11 08:58 2019	10 Jun 2019 9:34 pm

VC190611S.M Tue Jun 11 09:55:45 2019

Compound List Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

Total Cpnds : 79

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (I)	168	6.028	1.000	A	2	A	R
2		Dichlorodifluoromethane	85	1.661	0.275	A	2	A	R
3	P	Chloromethane	50	1.855	0.308	A	2	A	R
4	C	Vinyl Chloride	62	1.946	0.323	A	2	A	R
5		Bromomethane	96	2.299	0.381	A	2	A	R
6		Chloroethane	64	2.439	0.405	A	2	A	R
7		Trichlorofluoromethane	101	2.555	0.424	A	2	A	R
8	C	1,1-Dichloroethene	61	3.090	0.513	Q	2	A	R
9		Carbon Disulfide	76	3.096	0.514	Q	2	A	R
10		Freon 113	101	3.139	0.521	A	2	A	R
11		Iodomethane	142	3.236	0.537	Q	2	A	R
12		Methylene Chloride	84	3.722	0.617	A	2	A	R
13		Acetone	43	3.826	0.635	A	1	A	R
14		t-1,2-Dichloroethene	61	3.881	0.644	A	2	A	R
15		n-Hexane	86	3.960	0.657	Q	3	A	R
16		Methyl-tert-butyl-ether	73	4.033	0.669	A	3	A	R
17	P	1,1-Dichloroethane	63	4.514	0.749	A	2	A	R
18		Acrylonitrile	53	4.593	0.762	A	2	A	R
19		c-1,2-Dichloroethene	61	5.061	0.840	A	2	A	R
20		2,2-Dichloropropane	77	5.171	0.858	A	2	A	R
21		Bromochloromethane	49	5.262	0.873	A	2	A	R
22	C	Chloroform	83	5.347	0.887	A	2	A	R
23		Carbon Tetrachloride	117	5.468	0.907	A	2	A	R
24		Tetrahydrofuran	42	5.530	0.917	A	2	A	R
25		1,1,1-Trichloroethane	97	5.548	0.920	A	2	A	R
26	S	Dibromofluoromethane (S)	111	5.530	0.917	A	2	A	R
27		1,1-Dichloropropene	75	5.670	0.940	A	2	A	R
28		2-Butanone (MEK)	43	5.682	0.942	A	2	A	R
29		Benzene	78	5.925	0.983	A	2	A	R
30		1,2-Dichloroethane (EDC)	62	6.144	1.019	A	2	A	R
31		iso-Butyl Alcohol	43	6.247	1.036	A	2	A	R
32	S	1,4-Difluorobenzene (S)	114	6.588	1.093	A	2	A	R
33		Trichloroethene (TCE)	130	6.546	1.086	A	2	A	R
34		Dibromomethane	93	6.996	1.160	A	2	A	R
35	C	1,2-Dichloropropane	63	7.105	1.179	A	2	A	R
36		Bromodichloromethane	83	7.178	1.191	A	2	A	R
37	I	Chlorobenzene-d5 (I)	117	9.752	1.000	A	2	A	R
38		c-1,3-Dichloropropene	75	7.883	0.808	A	2	A	R
39	S	Toluene-d8 (S)	98	8.091	0.830	A	2	A	R
40	C	Toluene	91	8.151	0.836	A	2	A	R
41		Tetrachloroethene (PCE)	166	8.596	0.881	A	2	A	R
42		4-Methyl-2-Pentanone (MIBK)	43	8.614	0.883	A	2	A	R
43		t-1,3-Dichloropropene	75	8.638	0.886	A	2	A	R
44		1,1,2-Trichloroethane	97	8.815	0.904	A	2	A	R
45		Dibromochloromethane	129	9.003	0.923	Q	2	A	R
46		1,3-Dichloropropane	76	9.107	0.934	A	2	A	R
47		1,2-Dibromoethane (EDB)	107	9.240	0.948	A	2	A	R
48		2-Hexanone	43	9.496	0.974	A	2	A	R
49	P	Chlorobenzene	112	9.764	1.001	A	2	A	R
50	C	Ethylbenzene	91	9.794	1.004	A	2	A	R
51		1,1,1,2-Tetrachloroethane	131	9.830	1.008	A	2	A	R
52		m,p-Xylenes (2)	91	9.934	1.019	A	2	A	R
53		o-Xylene	91	10.317	1.058	A	2	A	R
54		Styrene	104	10.365	1.063	A	2	A	R
55	P	Bromoform	173	10.390	1.065	Q	2	A	R

56	Isopropylbenzene	105	10.591	1.086	A	2	A	R
57 I	1,4-Dichlorobenzene-d4 (I)	152	11.729	1.000	A	2	A	R
58 S	4-Bromofluorobenzene (S)	174	10.834	0.924	A	2	A	R
59	Bromobenzene	156	10.920	0.931	A	2	A	R
60	n-Propylbenzene	91	10.944	0.933	A	2	A	R
61 P	1,1,2,2-Tetrachloroethane	83	11.011	0.939	A	2	A	R
62	2-Chlorotoluene	126	11.072	0.944	A	2	A	R
63	1,3,5-Trimethylbenzene	105	11.102	0.947	A	2	A	R
64	1,2,3-Trichloropropane	110	11.114	0.948	A	2	A	R
65	t-1,4-Dichloro-2-butene	88	11.150	0.951	Q	3	A	R
66	4-Chlorotoluene	91	11.205	0.955	A	2	A	R
67	tert-Butylbenzene	91	11.358	0.968	A	2	A	R
68	1,2,4-Trimethylbenzene	105	11.412	0.973	A	2	A	R
69	sec-Butylbenzene	105	11.497	0.980	A	2	A	R
70	4-Isopropyltoluene	119	11.606	0.990	A	2	A	R
71	1,3-Dichlorobenzene	146	11.668	0.995	A	2	A	R
72	1,4-Dichlorobenzene	146	11.734	1.000	A	2	A	R
73	n-Butylbenzene	91	11.929	1.017	A	2	A	R
74	1,2-Dichlorobenzene	146	12.057	1.028	A	2	A	R
75	1,2-Dibromo-3-Chloropropane	157	12.671	1.080	Q	2	A	R
76	Hexachlorobutadiene	223	13.183	1.124	A	3	A	R
77	1,2,4-Trichlorobenzene	180	13.213	1.127	A	2	A	R
78	Naphthalene	128	13.492	1.150	A	2	A	R
79	1,2,3-Trichlorobenzene	180	13.651	1.164	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

VC190611S.M Tue Jun 11 09:55:40 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019
Response Via : Initial Calibration

Calibration Files
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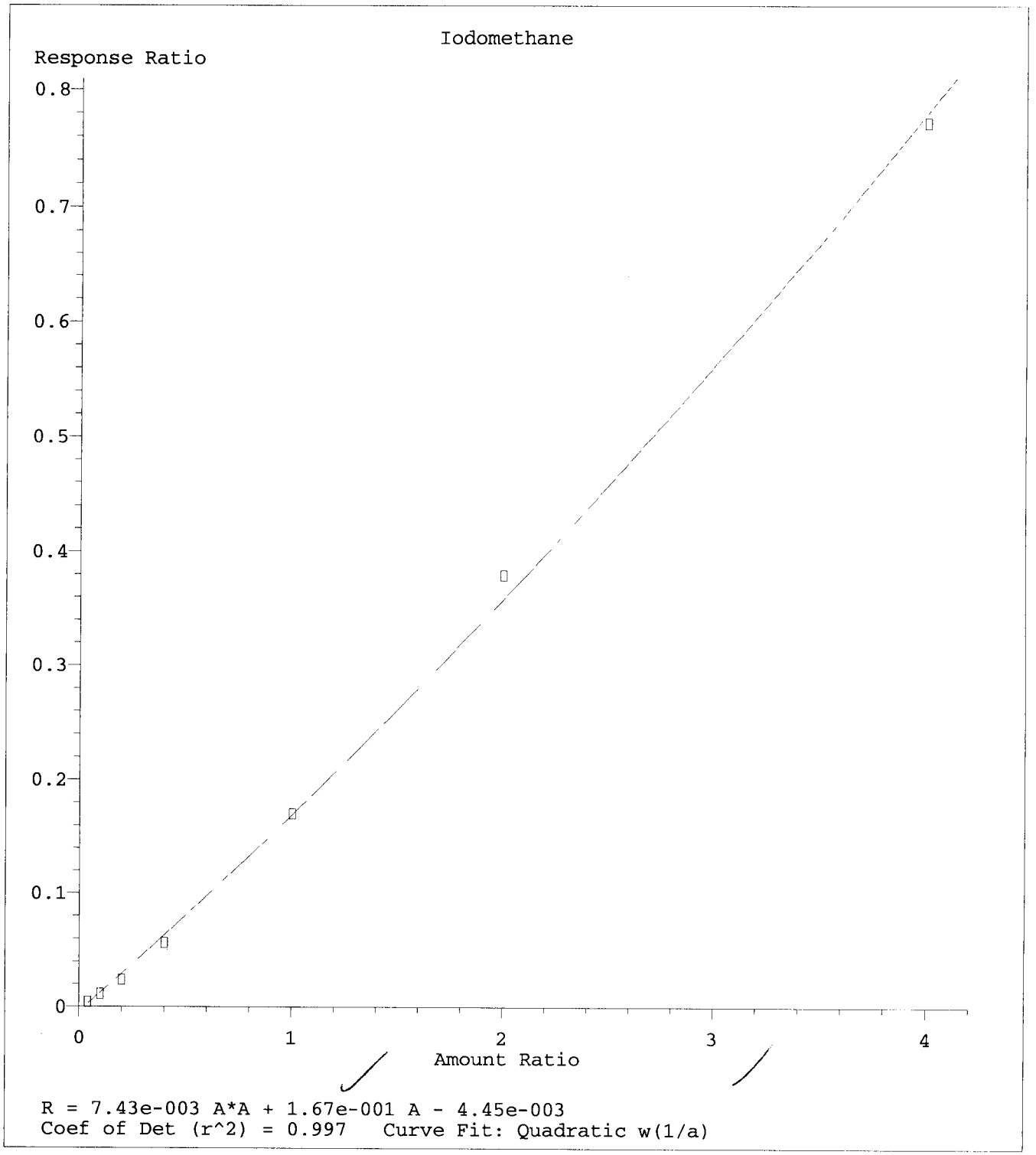
7 =VC19061010.D 8 =VC19061011.D 9 =VC19061012.D 10 =VC19061014.D 11 =VC19061016.D

		Compound	1	2	3	4	5	6	7	8	9	10	11	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD												
2)		Dichlorodifluo...		0.291	0.297	0.325	0.350	0.338	0.339	0.338	0.345	0.346	0.330		6.55
3)	P	Chloromethane		0.625	0.509	0.521	0.525	0.520	0.518	0.495	0.506	0.474	0.521		8.08
4)	C	Vinyl Chloride		0.312	0.337	0.364	0.367	0.367	0.365	0.353	0.359	0.356	0.353		5.10
5)		Bromomethane					0.243	0.222	0.199	0.177	0.185	0.188	0.202		12.48
6)		Chloroethane					0.141	0.120	0.134	0.126	0.141	0.143	0.134		6.87
7)		Trichlorofluor...			0.183	0.221	0.209	0.187	0.198	0.182	0.197	0.214	0.199		7.37
8)	C	1,1-Dichloroet...	0.359	0.398	0.360	0.367	0.388	0.380	0.392	0.396	0.391	0.377	0.381		3.84
9)		Carbon Disulfide				0.436	0.438	0.467	0.515	0.597			0.491		13.81
10)		Freon 113		0.242	0.275	0.314	0.310	0.296	0.302	0.302	0.298	0.290	0.292		7.55
11)		Iodomethane				0.103	0.111	0.119	0.141	0.170	0.189	0.193	0.147		25.62
12)		Methylene Chlo...					0.398	0.343	0.326	0.324	0.321	0.302	0.336		9.86
13)		Acetone				0.184	0.187	0.180	0.179	0.183	0.174	0.149	0.177		7.38
14)		t-1,2-Dichloro...	0.455	0.443	0.424	0.451	0.446	0.460	0.470	0.475	0.475	0.441	0.454		3.63
15)		n-Hexane				0.133	0.108	0.091	0.079	0.078	0.074	0.073	0.091		24.56
16)		Methyl-tert-bu...	1.273	1.264	1.314	1.257	1.348	1.314	1.312	1.318	1.315	1.212	1.293		3.11
17)	P	1,1-Dichloroet...	0.452	0.584	0.560	0.552	0.580	0.588	0.590	0.588	0.587	0.551	0.563		7.48
18)		Acrylonitrile				0.212	0.229	0.235	0.226	0.246	0.239	0.219	0.230		5.11
19)		c-1,2-Dichloro...	0.546	0.513	0.492	0.488	0.534	0.514	0.535	0.524	0.528	0.487	0.516		4.11
20)		2,2-Dichloropr...		0.375	0.439	0.397	0.427	0.418	0.440	0.449	0.451	0.434	0.426		5.93
21)		Bromochloromet...	0.243	0.301	0.263	0.292	0.311	0.303	0.317	0.313	0.314	0.293	0.295		8.16
22)	C	Chloroform	0.679	0.692	0.621	0.623	0.675	0.645	0.661	0.650	0.653	0.587	0.649		4.85
23)		Carbon Tetrach...			0.276	0.298	0.321	0.336	0.370	0.410			0.335		14.51
24)		Tetrahydrofuran			0.246	0.228	0.260	0.249	0.242	0.249	0.239	0.216	0.241		5.65
25)		1,1,1-Trichlor...	0.483	0.487	0.455	0.478	0.505	0.505	0.521	0.531	0.539	0.518	0.502		5.25
26)	S	Dibromofluorom...	0.437	0.455	0.450	0.444	0.448	0.454	0.457	0.471	0.467	0.478	0.451	0.456	2.66
27)		1,1-Dichloropr...	0.467	0.517	0.515	0.495	0.525	0.519	0.526	0.523	0.520	0.497	0.510		3.65
28)		2-Butanone (MEK)				0.300	0.316	0.299	0.307	0.320	0.310	0.285	0.305		3.87
29)		Benzene	1.807	1.739	1.759	1.632	1.638	1.690	1.654	1.636	1.605	1.580	1.430	1.652	6.12
30)		1,2-Dichloroet...	0.441	0.504	0.547	0.516	0.565	0.521	0.523	0.529	0.529	0.489	0.517		6.50
31)		iso-Butyl Alcohol			0.028	0.027	0.032	0.032	0.032	0.035	0.035	0.035	0.032		9.60
32)	S	1,4-Difluorobe...	1.676	1.693	1.666	1.673	1.680	1.694	1.696	1.681	1.685	1.706	1.683	1.685	0.69
33)		Trichloroethen...	0.347	0.443	0.462	0.408	0.447	0.444	0.446	0.449	0.448	0.420	0.431		7.76
34)		Dibromomethane		0.236	0.198	0.223	0.229	0.229	0.234	0.239	0.245	0.221	0.228		5.94
35)	C	1,2-Dichloropr...		0.454	0.428	0.407	0.442	0.440	0.447	0.443	0.448	0.424	0.437		3.38
36)		Bromodichlorom...			0.321	0.322	0.356	0.361	0.396	0.437			0.365		12.29
37)		Chlorobenzene-d5 (I)	ISTD												
38)		c-1,3-Dichloro...			0.298	0.292	0.350	0.350	0.381	0.423			0.349		14.23
39)	S	Toluene-d8 (S)	1.407	1.391	1.393	1.397	1.391	1.406	1.396	1.380	1.389	1.382	1.433	1.397	1.04
40)	C	Toluene	1.588	1.330	1.272	1.244	1.257	1.236	1.188	1.161	1.124	1.066	1.247		11.42

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611S.M
Title : EPA 8260: Volatile Organic Compounds

41)		Tetrachloroeth...		0.287	0.247	0.296	0.256	0.268	0.272	0.261	0.264	0.261	0.266	0.268	5.38
42)		4-Methyl-2-Pen...				0.313	0.306	0.357	0.339	0.339	0.348	0.346	0.340	0.336	5.21
43)		t-1,3-Dichloro...				0.279	0.279	0.313	0.324	0.356	0.390			0.323	13.48
44)		1,1,2-Trichlor...		0.231	0.259	0.262	0.234	0.268	0.258	0.258	0.259	0.265	0.255	0.255	4.89
45)		Dibromochlorom...			0.092	0.137	0.139	0.157	0.165	0.191	0.222	0.247	0.258	0.179	30.98
46)		1,3-Dichloropr...		0.438	0.450	0.467	0.471	0.493	0.477	0.483	0.480	0.477	0.453	0.469	3.62
47)		1,2-Dibromoeth...		0.219	0.166	0.207	0.246	0.241	0.250	0.255	0.268	0.270	0.262	0.238	13.62
48)		2-Hexanone			0.189	0.202	0.200	0.232	0.240	0.238	0.251	0.251	0.253	0.229	10.87
49)	P	Chlorobenzene		0.896	0.828	0.740	0.749	0.784	0.740	0.733	0.724	0.710	0.656	0.756	8.78
50)	C	Ethylbenzene	1.595	1.343	1.284	1.226	1.232	1.262	1.258	1.230	1.207	1.146	1.040	1.257	10.86
51)		1,1,1,2-Tetrac...			0.152	0.183	0.177	0.203	0.209	0.221	0.237			0.197	14.61
52)		m,p-Xylenes (2)		1.066	0.937	0.920	0.896	0.942	0.927	0.907	0.883	0.828	0.716	0.902	9.86
53)		o-Xylene		1.011	1.035	0.911	0.905	0.965	0.943	0.937	0.939	0.912	0.823	0.938	6.28
54)		Styrene		0.573	0.518	0.558	0.556	0.660	0.663	0.697	0.723	0.725	0.667	0.634	11.97
55)	P	Bromoform				0.056	0.070	0.080	0.083	0.098	0.123	0.141	0.158	0.101	35.68
56)		Isopropylbenzene	1.172	1.168	1.054	0.980	1.017	1.079	1.086	1.084	1.085	1.035	0.927	1.062	6.85
57)	I	1,4-Dichlorobenzen...	----------	ISTD	----------										
58)	S	4-Bromofluorob...	0.888	0.898	0.911	0.912	0.904	0.910	0.912	0.914	0.908	0.907	0.868	0.903	1.52
59)		Bromobenzene		0.505	0.749	0.738	0.702	0.728	0.711	0.685	0.692	0.688	0.618	0.682	10.55
60)		n-Propylbenzene	3.688	3.224	2.922	2.904	2.925	3.106	3.139	3.115	3.021	2.839	2.400	3.026	10.28
61)	P	1,1,2,2-Tetrac...		0.658	0.652	0.638	0.592	0.680	0.632	0.651	0.663	0.653	0.651	0.647	3.58
62)		2-Chlorotoluene			0.561	0.673	0.592	0.645	0.637	0.628	0.636	0.636	0.570	0.620	5.99
63)		1,3,5-Trimethy...	2.385	2.186	2.002	1.920	1.962	2.131	2.143	2.140	2.115	2.038	1.768	2.072	7.78
64)		1,2,3-Trichlor...			0.228	0.288	0.271	0.287	0.274	0.264	0.261	0.253	0.253	0.264	7.01
65)		t-1,4-Dichloro...					0.050	0.067	0.069	0.082	0.092	0.098	0.103	0.080	24.08
66)		4-Chlorotoluene	1.939	1.801	1.871	1.788	1.712	1.874	1.903	1.839	1.816	1.767	1.550	1.806	5.89
67)		tert-Butylbenzene	1.223	1.041	0.894	1.059	1.080	1.161	1.189	1.169	1.148	1.110	0.999	1.097	8.75
68)		1,2,4-Trimethy...	2.735	2.189	2.026	2.009	1.998	2.147	2.132	2.136	2.073	2.002	1.748	2.109	11.36
69)		sec-Butylbenzene	2.330	2.177	2.290	2.324	2.282	2.458	2.523	2.468	2.459	2.303	2.000	2.329	6.46
70)		4-Isopropyltol...	2.245	1.969	1.692	1.869	1.852	2.003	2.037	2.048	2.032	1.940	1.717	1.946	8.15
71)		1,3-Dichlorobe...	1.457	1.164	1.172	1.093	1.086	1.193	1.114	1.107	1.097	1.076	0.998	1.142	10.29
72)		1,4-Dichlorobe...	1.515	1.266	1.106	1.092	1.109	1.151	1.113	1.106	1.076	1.046	0.991	1.143	12.31
73)		n-Butylbenzene	2.347	1.860	1.562	1.568	1.612	1.697	1.675	1.685	1.669	1.560	1.429	1.697	14.23
74)		1,2-Dichlorobe...	1.005	0.942	0.986	0.993	0.986	1.052	1.019	0.989	0.990	0.958	0.920	0.986	3.65
75)		1,2-Dibromo-3-...				0.102	0.084	0.118	0.124	0.130	0.163	0.181	0.194	0.137	28.32
76)		Hexachlorobuta...				0.132	0.141	0.154	0.153	0.154	0.148	0.140	0.140	0.145	5.70
77)		1,2,4-Trichlor...			0.514	0.512	0.512	0.585	0.576	0.616	0.612	0.590	0.578	0.566	7.48
78)		Naphthalene				1.472	1.476	1.847	1.903	2.013	2.149	2.084	1.959	1.863	13.87
79)		1,2,3-Trichlor...		0.540	0.401	0.495	0.482	0.550	0.571	0.575	0.591	0.575	0.567	0.535	11.02

(#) = Out of Range

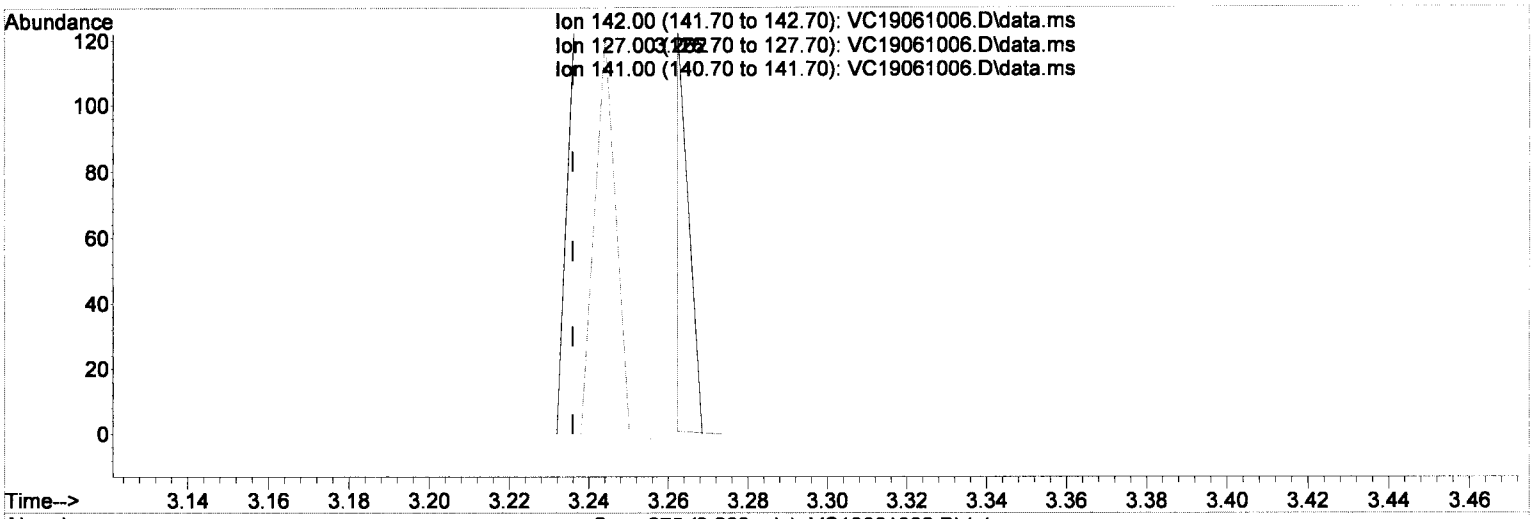


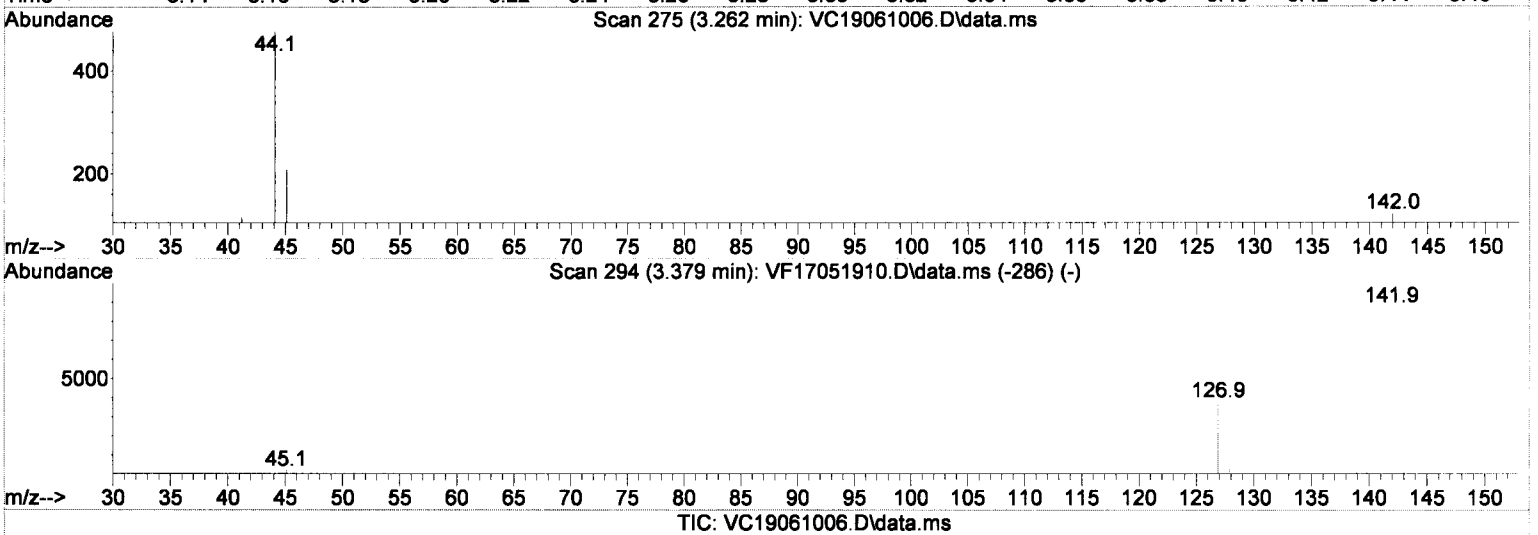
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:30:03 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration





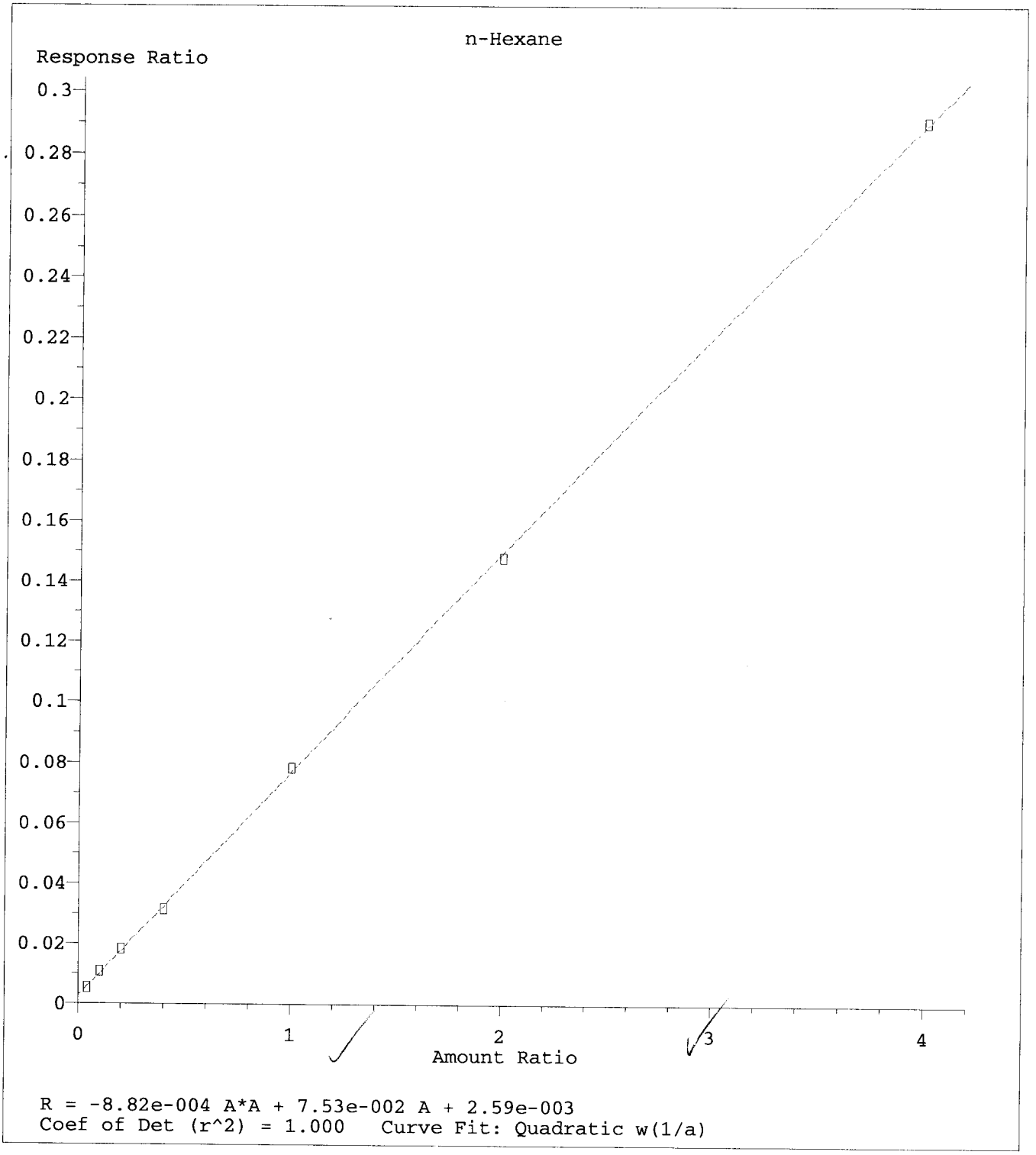
TIC: VC19061006.D\data.ms

(11) Iodomethane

3.262min (+0.026) 1.33 ug/L m

response 0

Ion	Exp%	Act%
142.00	100	0.00
127.00	35.00	0.00#
141.00	15.00	0.00#
0.00	0.00	0.00



Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:31:46 2019

Quantitation Report (Qedit)

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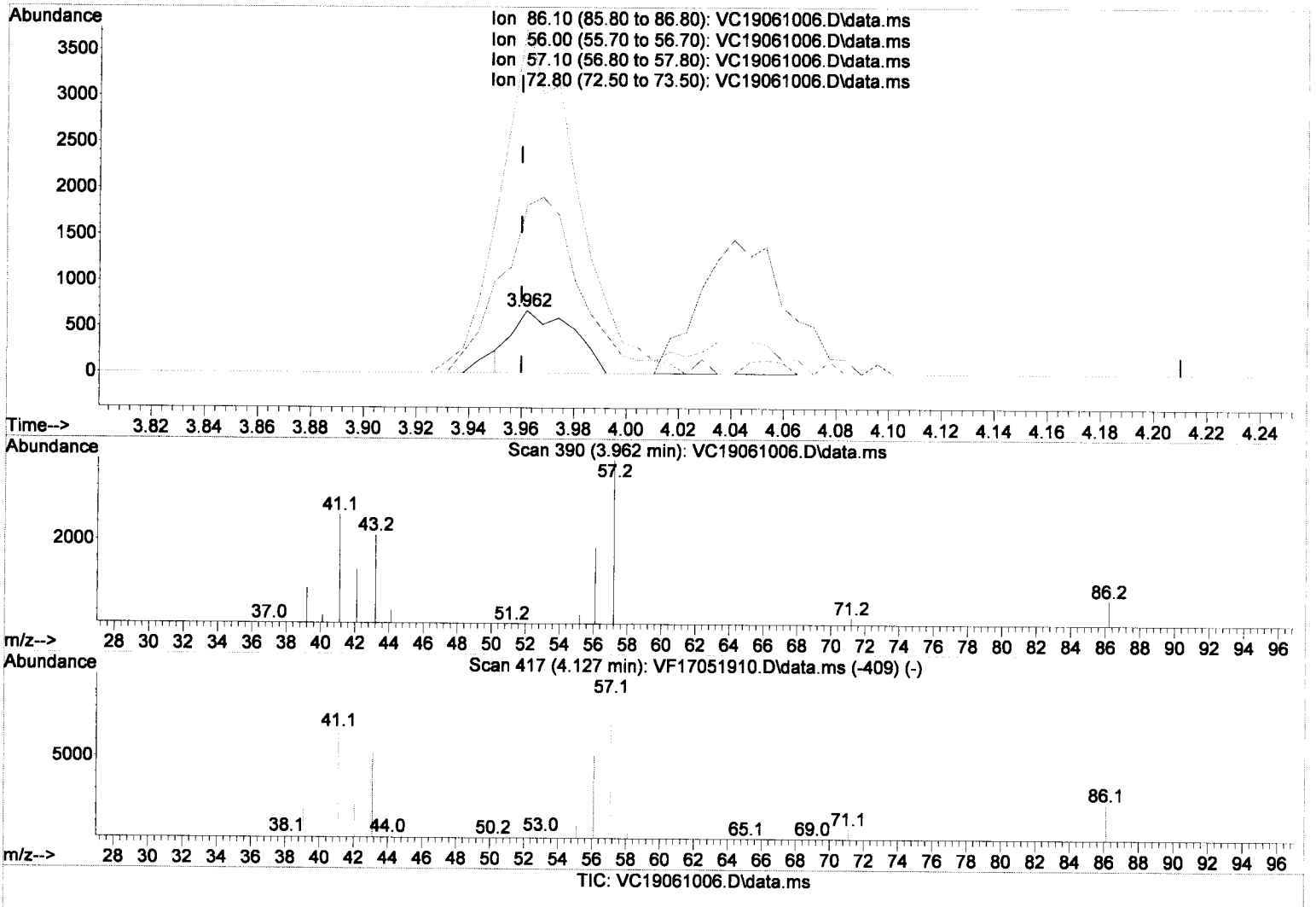
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



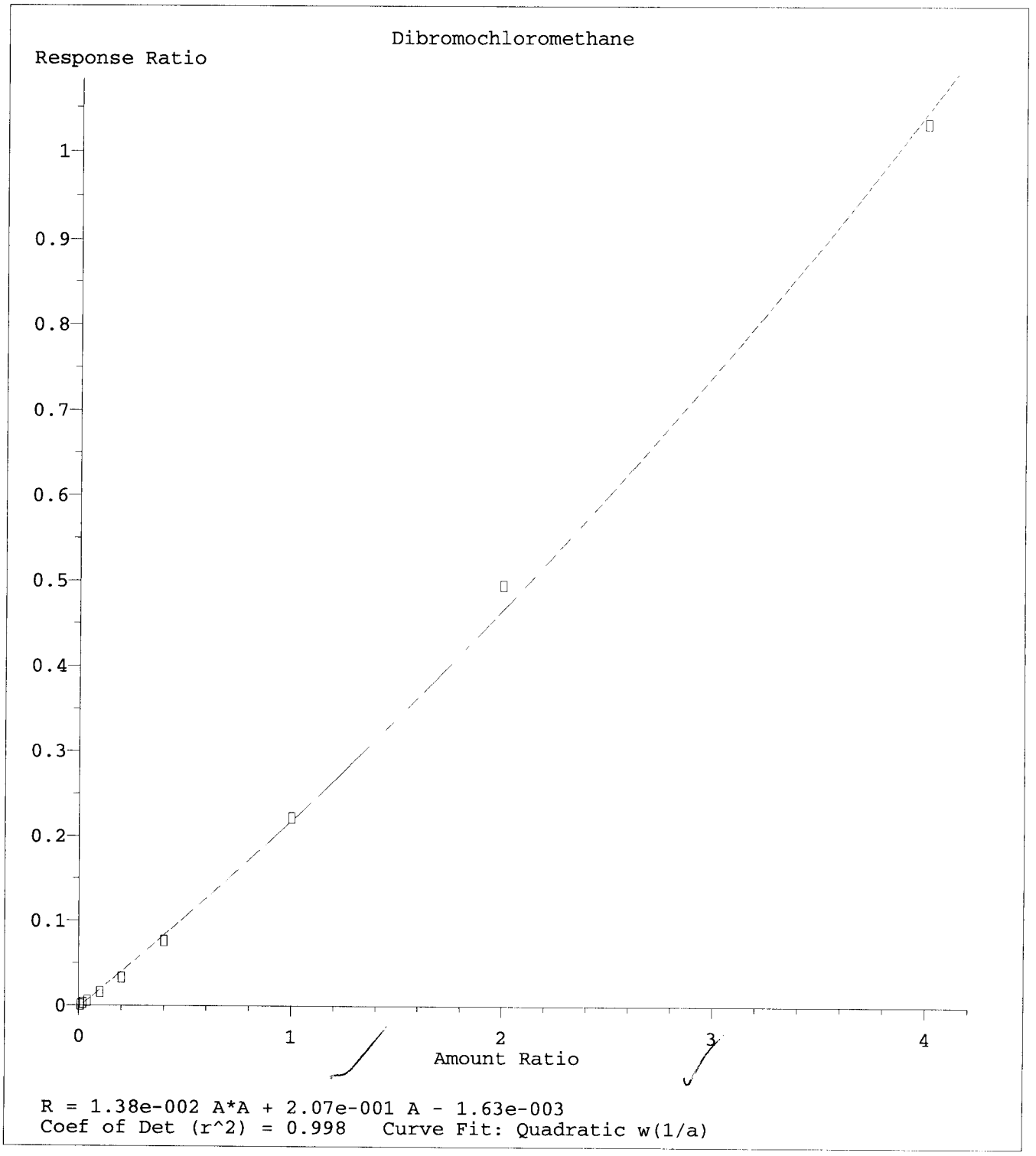
TIC: VC19061006.D\data.ms

(15) n-Hexane

3.962min (+0.002) 0.40 ug/L m

response 1084

Ion	Exp%	Act%
86.10	100	100
56.00	275.70	267.89
57.10	523.30	558.76#
72.80	1.70	0.00



Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:35:42 2019

Quantitation Report (Qedit)

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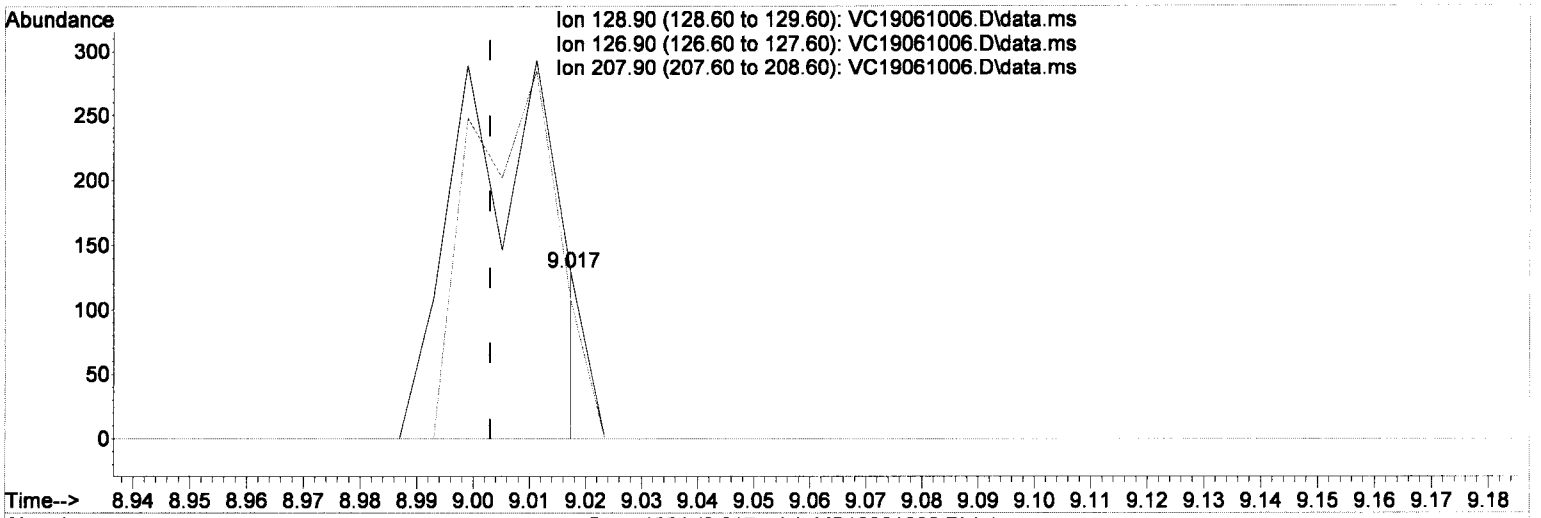
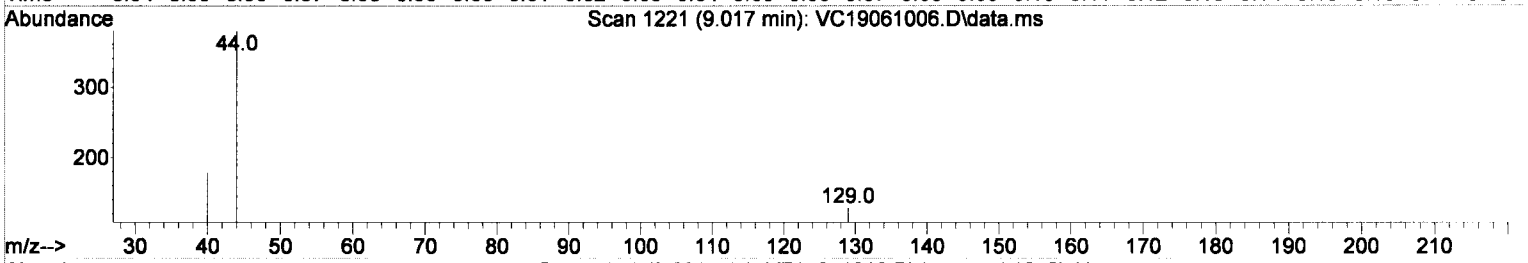
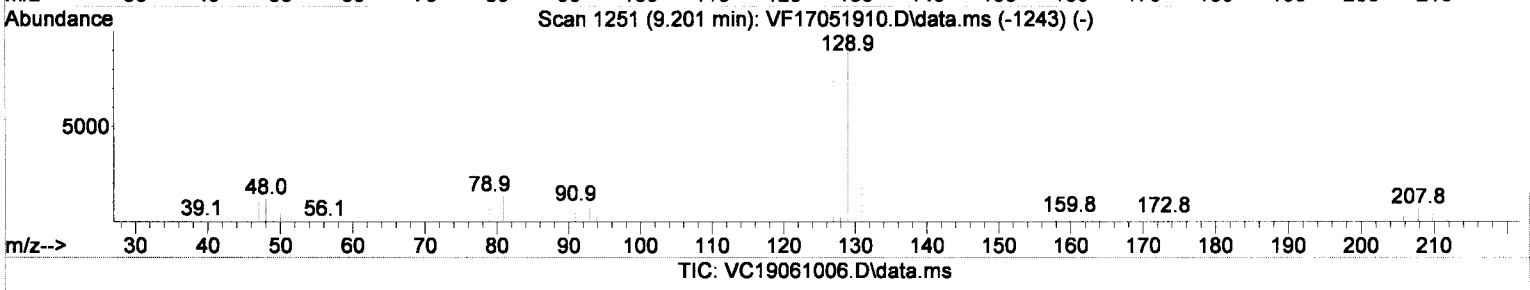
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







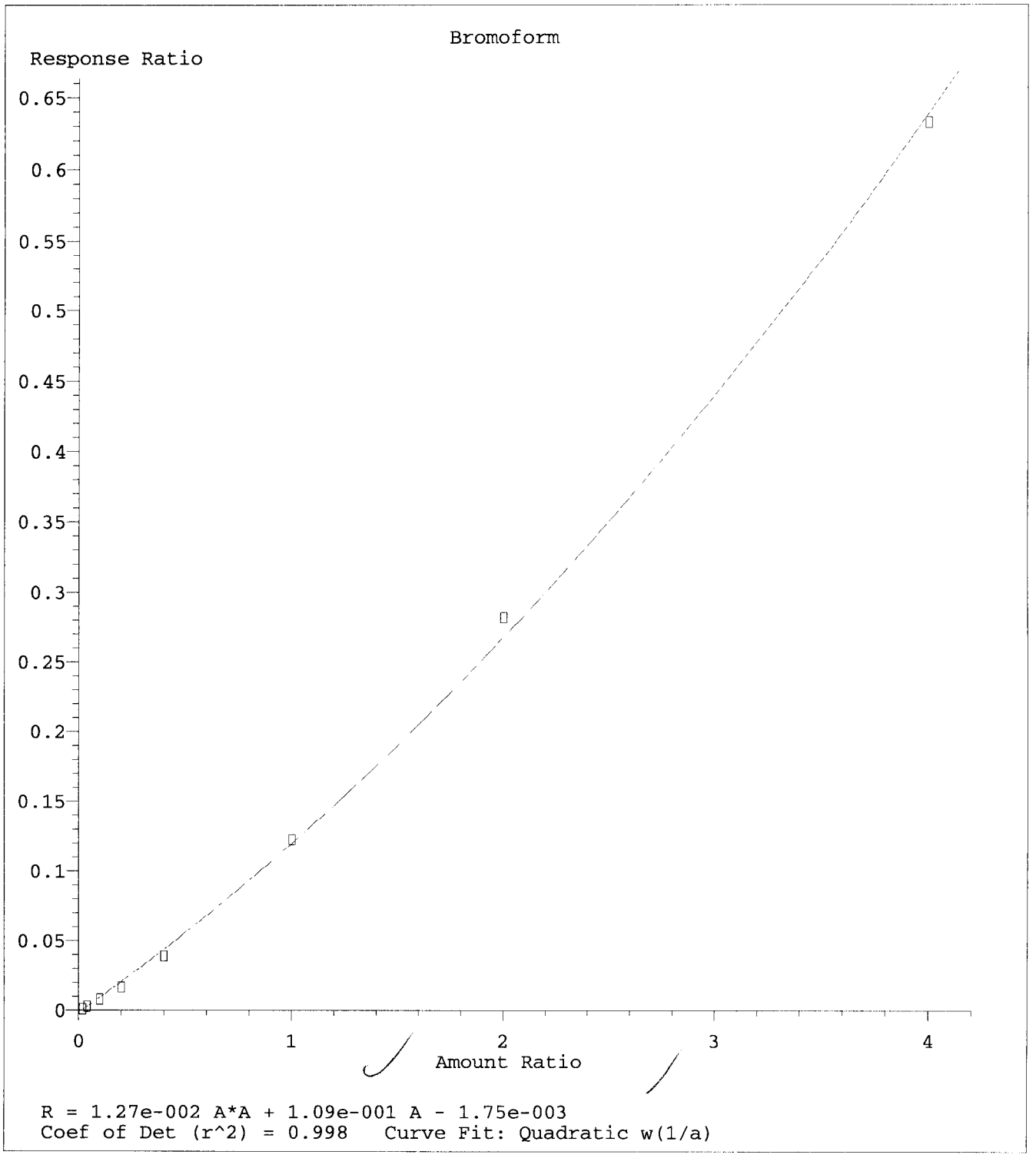
TIC: VC19061006.D\data.ms

(45) Dibromochloromethane

9.017min (+0.014) 0.39 ug/L m

response 0

Ion	Exp%	Act%
128.90	100	0.00
126.90	81.20	0.00#
207.90	7.40	0.00
0.00	0.00	0.00

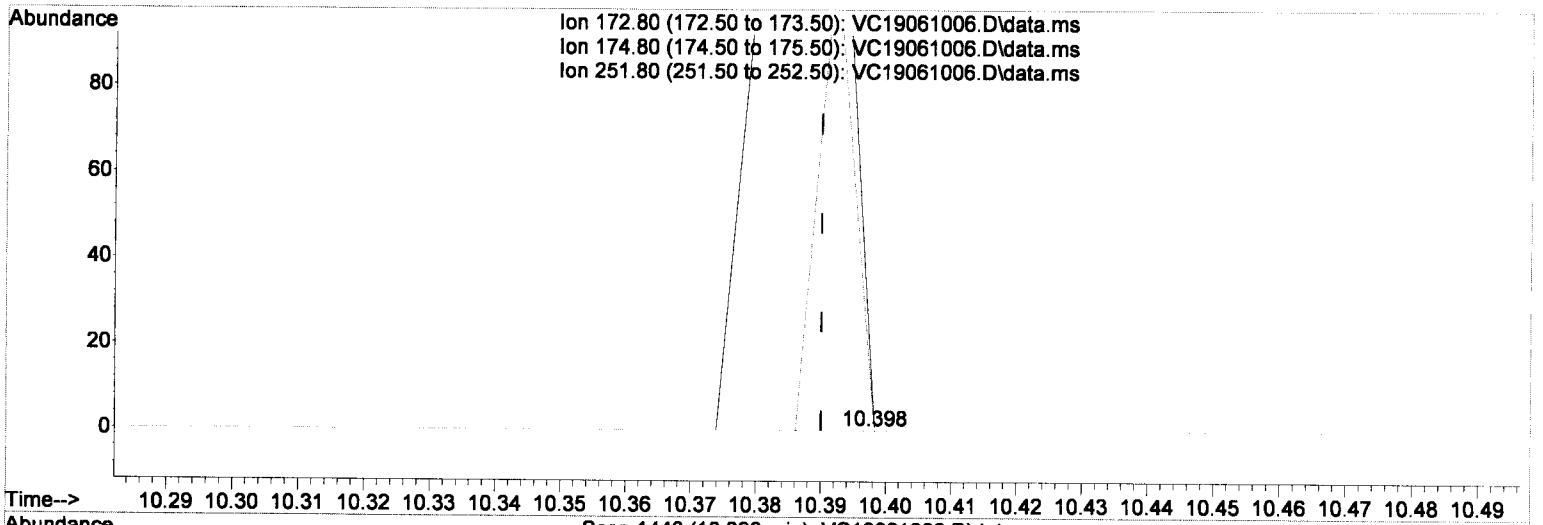


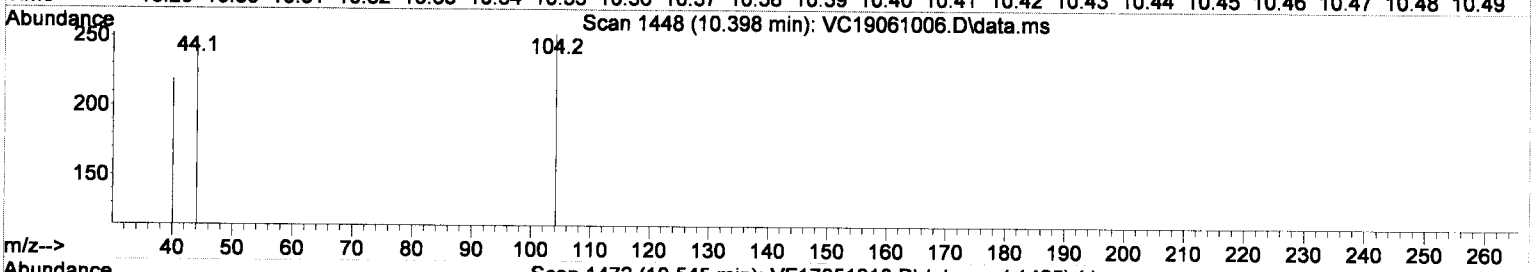
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:37:16 2019

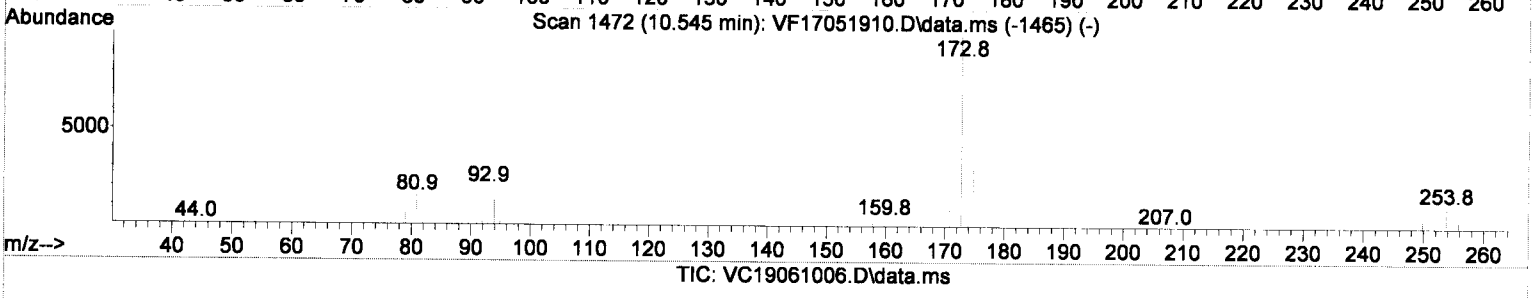
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:00 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







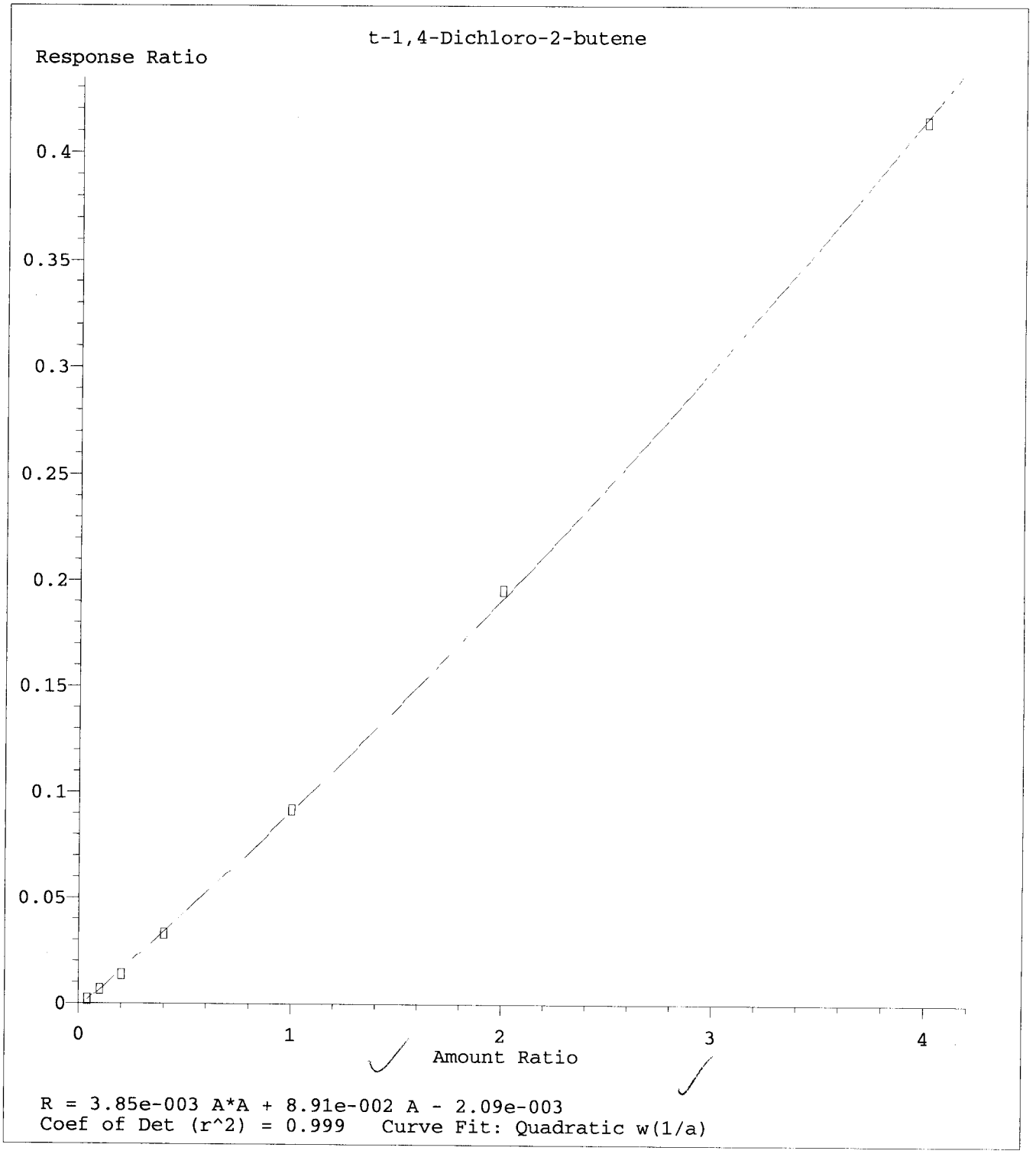
TIC: VC19061006.D\data.ms

(55) Bromoform (P)

10.398min (+0.008) 0.80 ug/L m

response 0

Ion	Exp%	Act%
172.80	100	0.00
174.80	49.10	0.00#
251.80	12.50	0.00
0.00	0.00	0.00

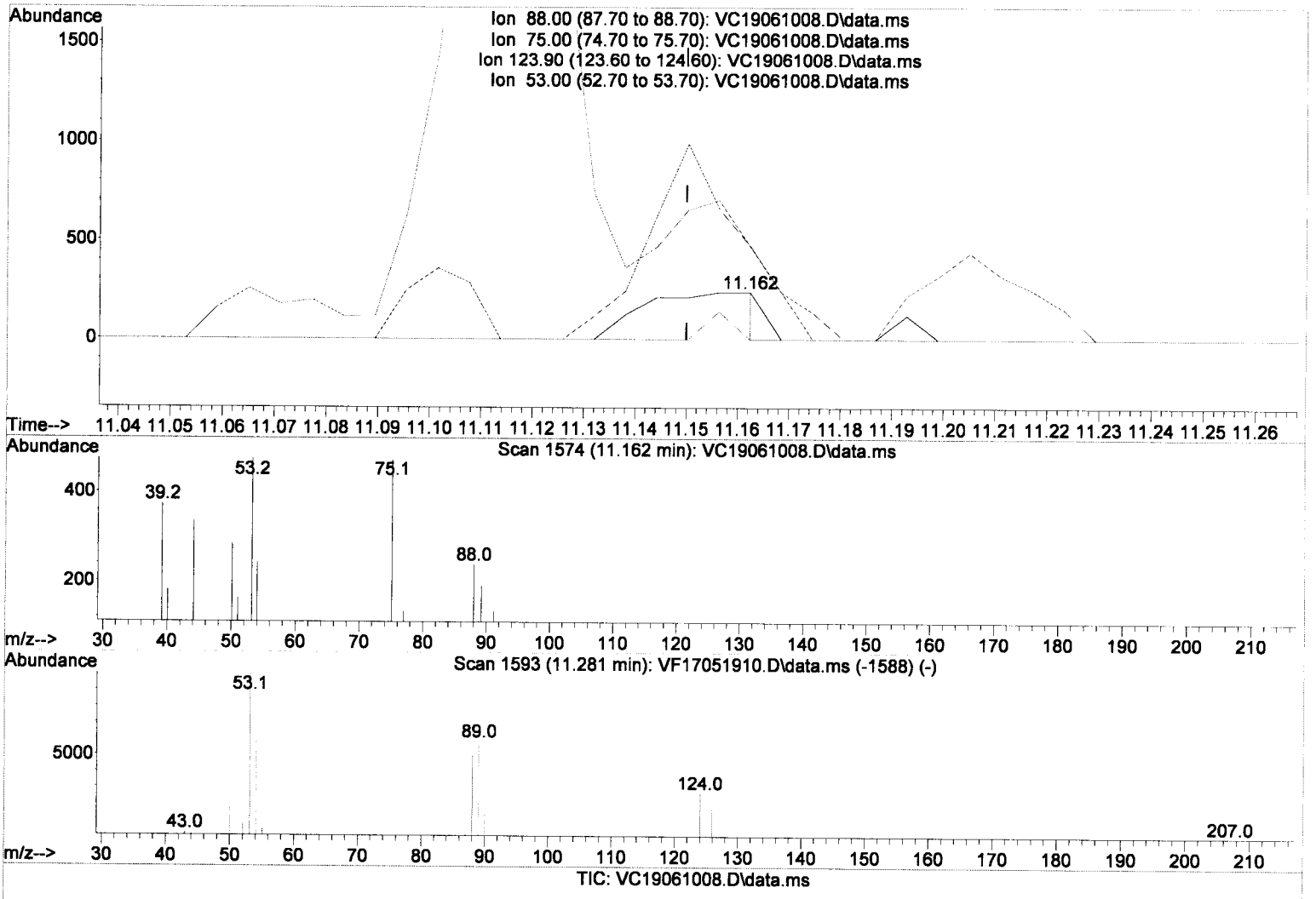


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:38:16 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

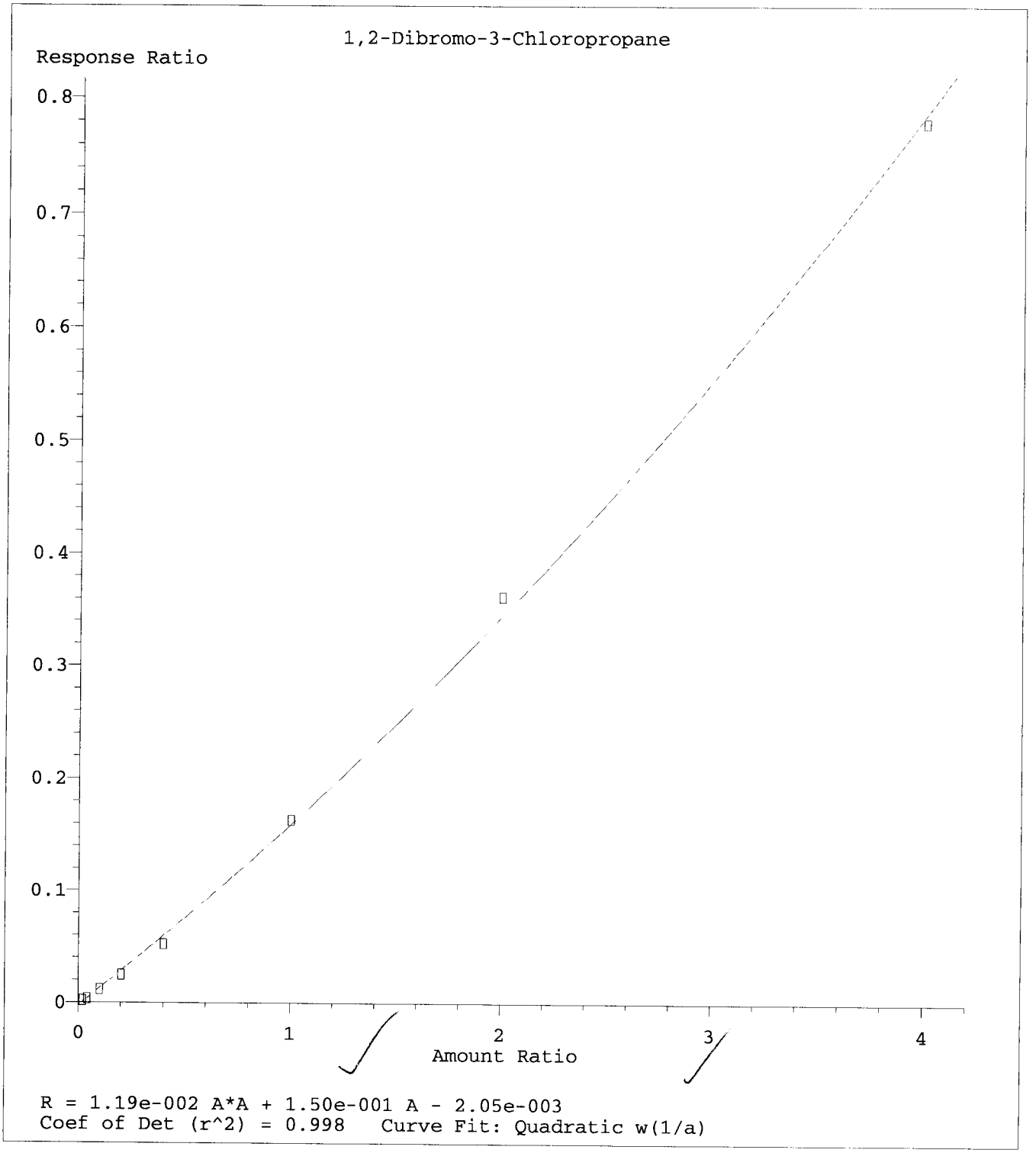


(65) t-1,4-Dichloro-2-butene

11.162min (+0.012) 1.17 ug/L m

response 0

Ion	Exp%	Act%
88.00	100	0.00
75.00	240.20	0.00#
123.90	48.30	0.00#
53.00	249.20	0.00#

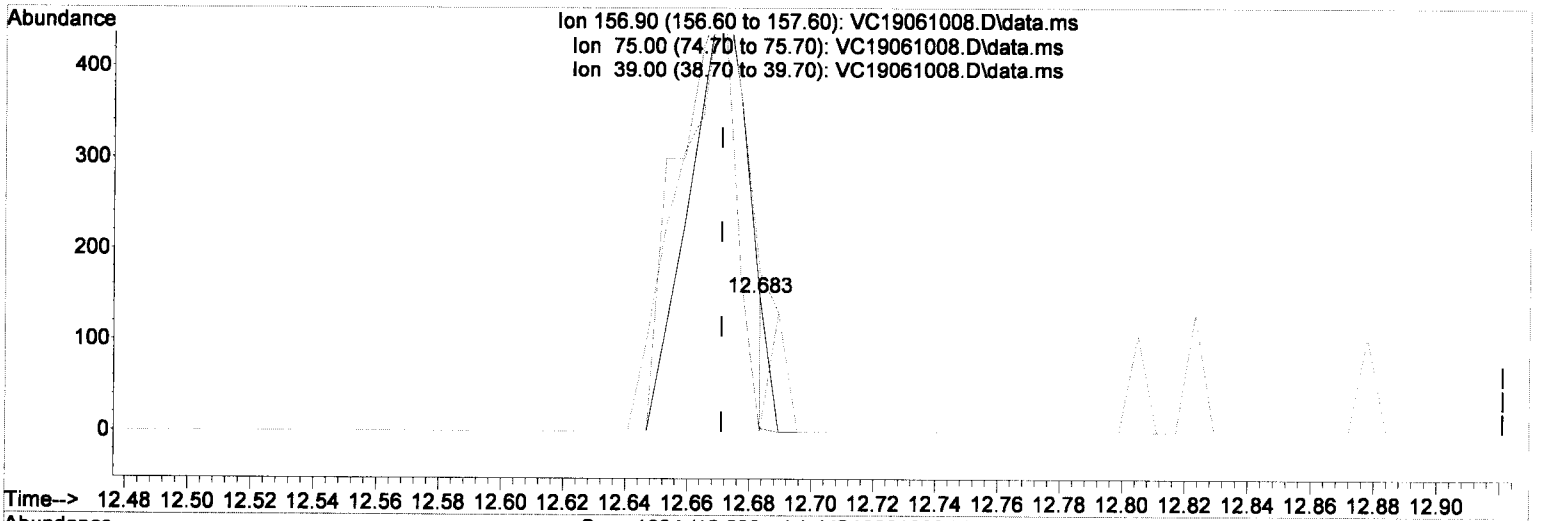


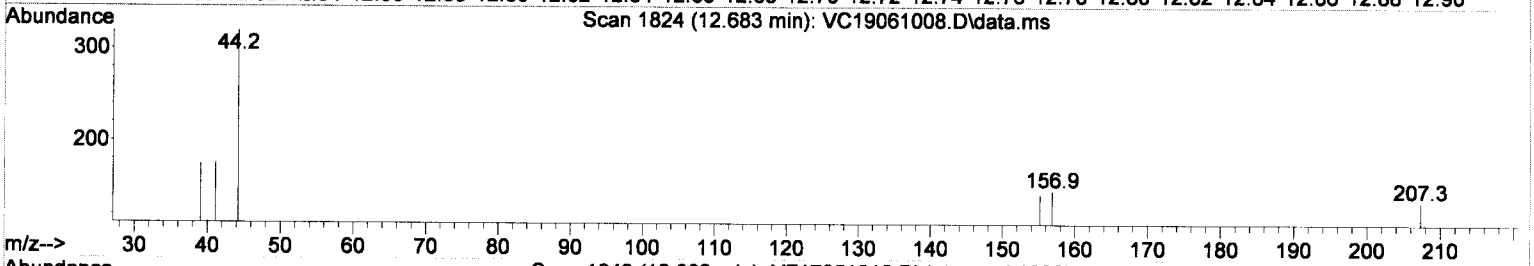
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:39:22 2019

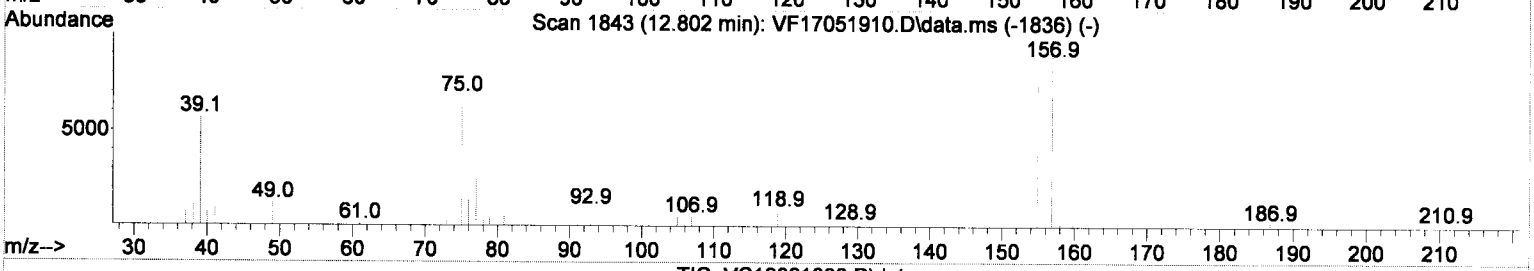
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:47:04 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







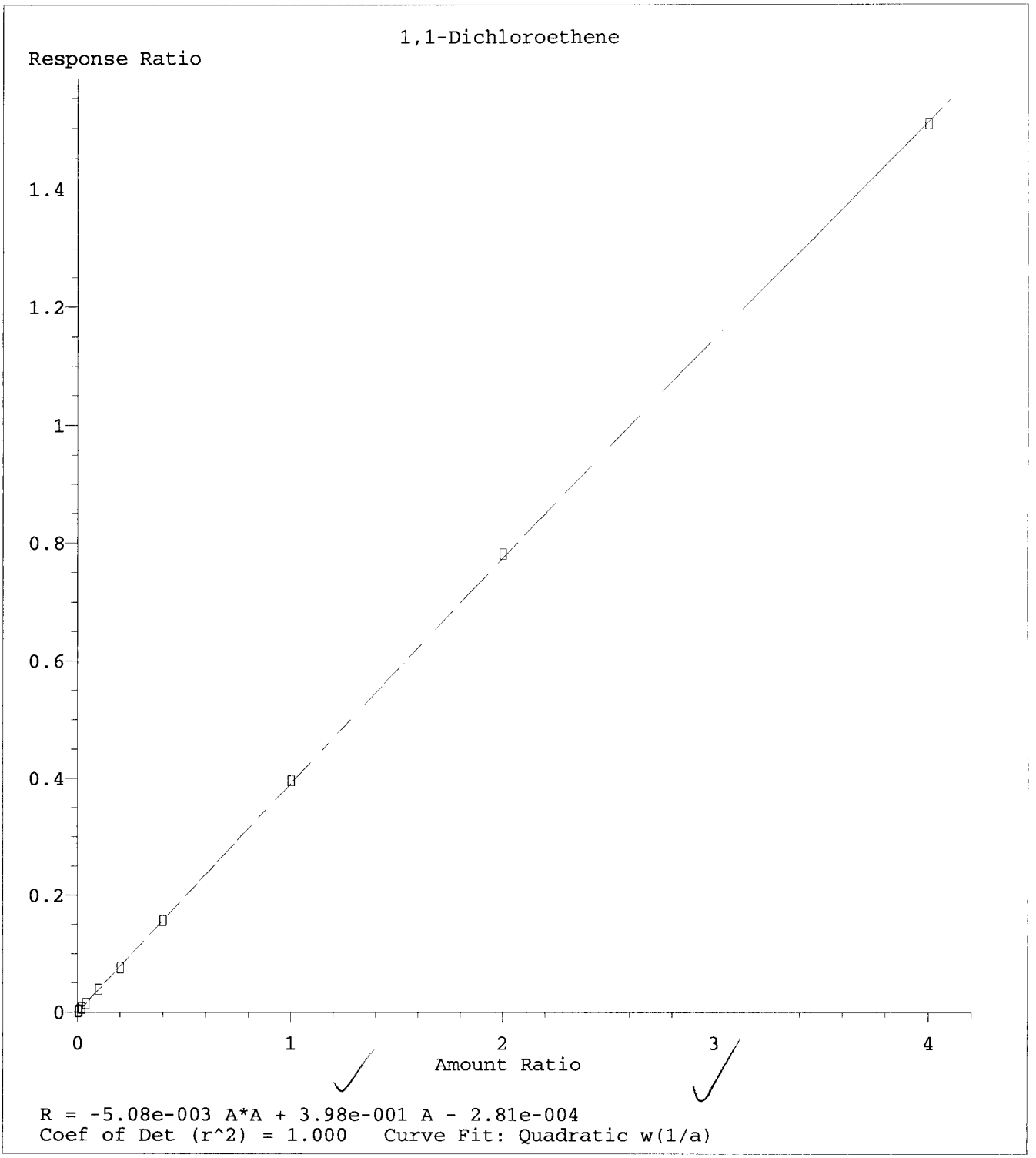
TIC: VC19061008.D\data.ms

(75) 1,2-Dibromo-3-Chloropropane

12.683min (+0.012) 0.68 ug/L m

response -1

Ion	Exp%	Act%
156.90	100	100
75.00	79.00	0.00#
39.00	63.10	119.05#
0.00	0.00	-0.00

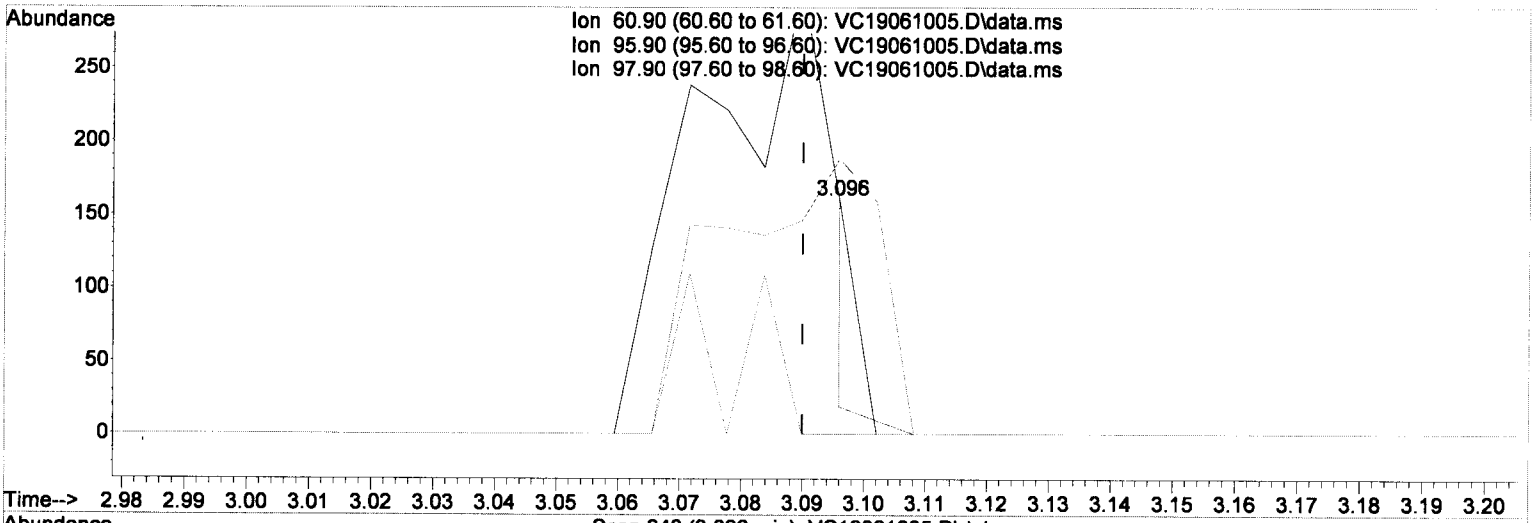


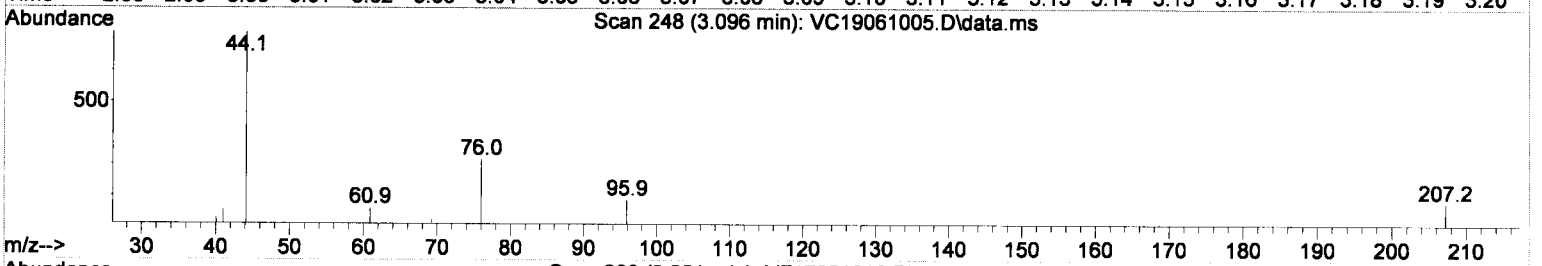
Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:42:50 2019

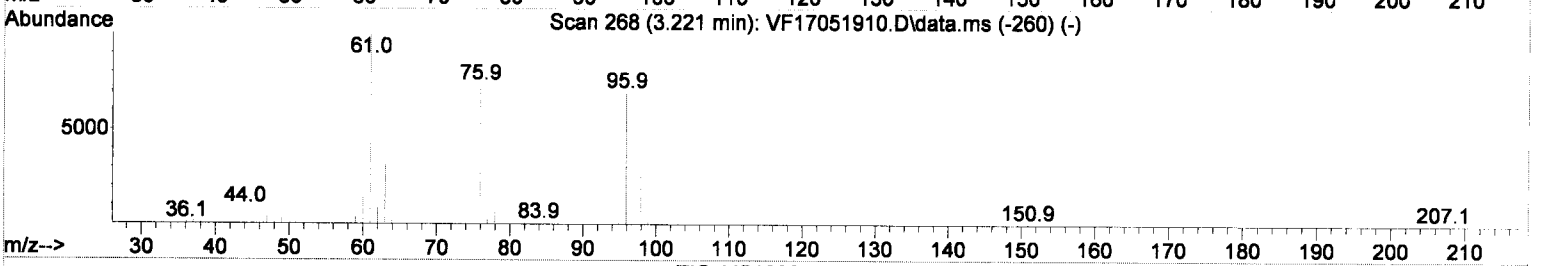
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:46:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration







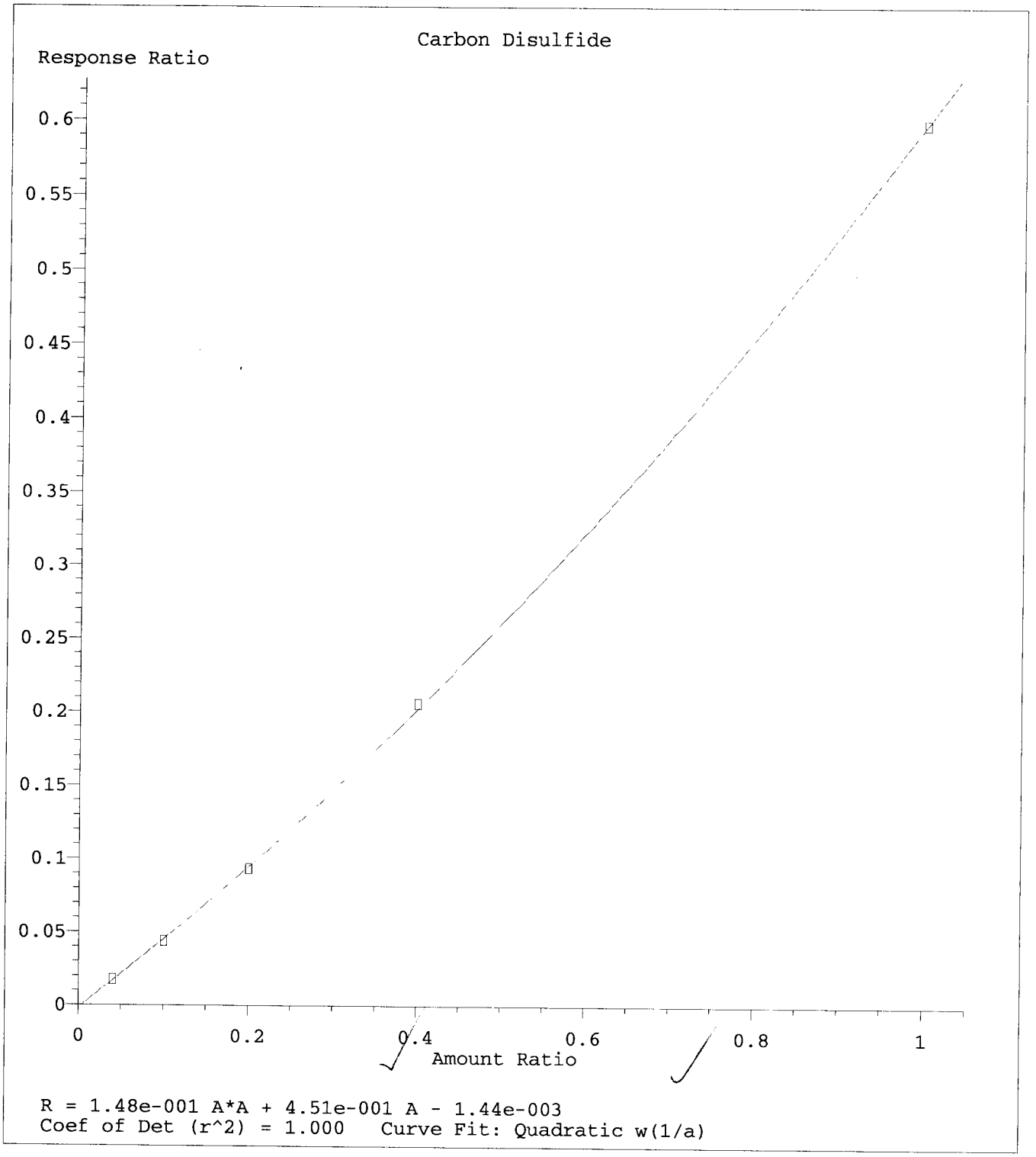
TIC: VC19061005.D\data.ms

(8) 1,1-Dichloroethene (C)

3.096min (+0.006) 0.03 ug/L m

response -7

Ion	Exp%	Act%
60.90	100	100
95.90	75.30	117.50#
97.90	48.50	0.00#
0.00	0.00	-0.00

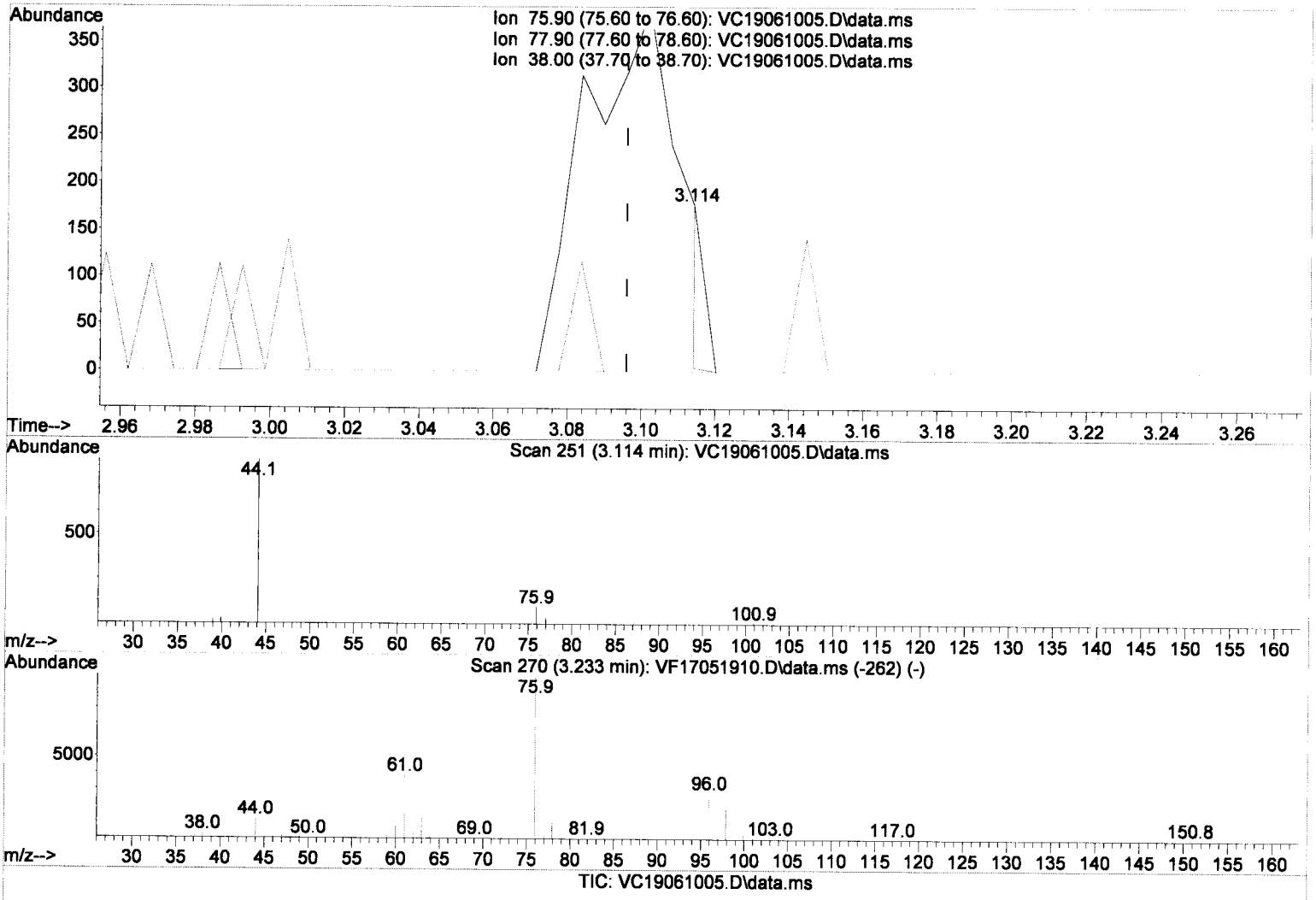


Method Name: C:\msdchem\1\METHODS\VC190611S.M
Calibration Table Last Updated: Tue Jun 11 09:42:50 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:46:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



(9) Carbon Disulfide

3.114min (+0.018) 0.16 ug/L m

response -1

Ion	Exp%	Act%
75.90	100	100
77.90	9.50	0.00
38.00	1.60	0.00
0.00	0.00	-0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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	102	0.00
2		Dichlorodifluoromethane	20.000	25.535	-27.7#	127	0.00
3	P	Chloromethane	20.000	23.570	-17.9	121	0.00
4	C	Vinyl Chloride	20.000	22.244	-11.2	110	0.00
5		Bromomethane	20.000	24.261	~~-21.3#~~	126	0.00
6		Chloroethane	20.000	27.566	~~-37.8#~~	141	0.00
7		Trichlorofluoromethane	20.000	24.068	~~-20.3#~~	123	0.01
8	C	1,1-Dichloroethene	20.000	25.482	-27.4#	131	0.00
9		Carbon Disulfide	20.000	25.618	-28.1#	133	0.00
10		Freon 113	20.000	21.860	-9.3	108	0.00
11		Iodomethane	20.000	21.337	-6.7	123	0.00
12		Methylene Chloride	20.000	21.995	-10.0	116	0.00
13		Acetone	40.000	39.677	0.8	100	0.00
14		t-1,2-Dichloroethene	20.000	23.932	-19.7	118	0.00
15		n-Hexane	20.000	21.392	-7.0	112	0.00
16		Methyl-tert-butyl-ether	20.000	20.559	-2.8	103	0.00
17	P	1,1-Dichloroethane	20.000	23.768	-18.8	116	0.00
18		Acrylonitrile	20.000	19.569	2.2	101	0.00
19		c-1,2-Dichloroethene	20.000	20.727	-3.6	102	0.00
20		2,2-Dichloropropane	20.000	19.374	3.1	95	0.00
21		Bromochloromethane	20.000	21.009	-5.0	100	0.00
22	C	Chloroform	20.000	20.361	-1.8	102	0.00
23		Carbon Tetrachloride	20.000	22.887	-14.4	106	0.00
24		Tetrahydrofuran	20.000	19.628	1.9	100	0.00
25		1,1,1-Trichloroethane	20.000	21.919	-9.6	108	0.00
26	S	Dibromofluoromethane (S)	50.000	52.938	-5.9	104	0.00
27		1,1-Dichloropropene	20.000	20.665	-3.3	102	0.00
28		2-Butanone (MEK)	40.000	39.636	0.9	100	0.00
29		Benzene	20.000	20.304	-1.5	105	0.00
30		1,2-Dichloroethane (EDC)	20.000	20.652	-3.3	104	0.00
31		iso-Butyl Alcohol	500.000	514.254	-2.9	105	0.02
32	S	1,4-Difluorobenzene (S)	50.000	49.716	0.6	102	0.00
33		Trichloroethene (TCE)	20.000	20.159	-0.8	100	0.00
34		Dibromomethane	20.000	19.936	0.3	99	0.00
35	C	1,2-Dichloropropane	20.000	19.857	0.7	99	0.00
36		Bromodichloromethane	20.000	20.869	-4.3	98	0.00
37		Chlorobenzene-d5 (I)	50.000	50.000	0.0	99	0.00
38		c-1,3-Dichloropropene	20.000	21.994	-10.0	99	0.00
39	S	Toluene-d8 (S)	50.000	50.348	-0.7	101	0.00
40	C	Toluene	20.000	19.187	4.1	99	0.00
41		Tetrachloroethene (PCE)	20.000	19.916	0.4	101	0.00
42		4-Methyl-2-Pentanone (MIBK)	40.000	40.967	-2.4	100	0.00
43		t-1,3-Dichloropropene	20.000	21.285	-6.4	96	0.00
44		1,1,2-Trichloroethane	20.000	20.349	-1.7	99	0.00
45		Dibromochloromethane	20.000	18.106	9.5	97	0.00
46		1,3-Dichloropropane	20.000	20.296	-1.5	97	0.00
47		1,2-Dibromoethane (EDB)	20.000	21.668	-8.3	100	0.00
48		2-Hexanone	40.000	43.511	-8.8	103	0.00
49	P	Chlorobenzene	20.000	19.214	3.9	98	0.00
50	C	Ethylbenzene	20.000	19.666	1.7	99	0.00

EOS

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 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		1,1,1,2-Tetrachloroethane	20.000	21.780	-8.9	96	0.00
52		m,p-Xylenes (2)	40.000	40.003	-0.0	98	0.00
53		o-Xylene	20.000	19.594	2.0	97	0.00
54		Styrene	20.000	21.565	-7.8	97	0.00
55	P	Bromoform	20.000	18.002	10.0	99	0.00
56		Isopropylbenzene	20.000	19.983	0.1	97	0.00
57	I	1,4-Dichlorobenzene-d4 (I)	50.000	50.000	0.0	102	0.00
58	S	4-Bromofluorobenzene (S)	50.000	49.414	1.2	99	0.00
59		Bromobenzene	20.000	19.690	1.5	100	0.00
60		n-Propylbenzene	20.000	18.831	5.8	93	0.00
61	P	1,1,2,2-Tetrachloroethane	20.000	20.122	-0.6	102	0.00
62		2-Chlorotoluene	20.000	19.547	2.3	98	0.00
63		1,3,5-Trimethylbenzene	20.000	19.512	2.4	96	0.00
64		1,2,3-Trichloropropane	20.000	18.686	6.6	95	0.00
65		t-1,4-Dichloro-2-butene	20.000	18.012	9.9	94	0.00
66		4-Chlorotoluene	20.000	19.124	4.4	96	0.00
67		tert-Butylbenzene	20.000	19.806	1.0	95	0.00
68		1,2,4-Trimethylbenzene	20.000	19.048	4.8	96	0.00
69		sec-Butylbenzene	20.000	20.260	-1.3	97	0.00
70		4-Isopropyltoluene	20.000	19.642	1.8	95	0.00
71		1,3-Dichlorobenzene	20.000	18.530	7.3	97	0.00
72		1,4-Dichlorobenzene	20.000	18.288	8.6	96	0.00
73		n-Butylbenzene	20.000	19.005	5.0	97	0.00
74		1,2-Dichlorobenzene	20.000	19.323	3.4	98	0.00
75		1,2-Dibromo-3-Chloropropane	20.000	17.702	11.5	103	0.00
76		Hexachlorobutadiene	20.000	20.171	-0.9	97	0.00
77		1,2,4-Trichlorobenzene	20.000	20.024	-0.1	94	0.00
78		Naphthalene	20.000	20.922	-4.6	99	0.00
79		1,2,3-Trichlorobenzene	20.000	20.126	-0.6	95	0.00

(#) = Out of Range SPCC's out = 0 CCC's out = 1

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

Analysis Included
8260C Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9F10052-TUN1	MS Tune	Soil		A19C135	6/10/2019	3:06:00PM
9F10052-ICB1	Initial Cal Blank	Soil		A19C135	6/10/2019	3:34:00PM
9F10052-CAL1	Cal Standard	Soil	A19F090	"	6/10/2019	4:02:00PM
9F10052-CAL2	Cal Standard	Soil	A19F091	"	6/10/2019	4:29:00PM
9F10052-CAL3	Cal Standard	Soil	A19F092	"	6/10/2019	4:57:00PM
9F10052-CAL4	Cal Standard	Soil	A19F093	"	6/10/2019	5:25:00PM
9F10052-CAL5	Cal Standard	Soil	A19F094	"	6/10/2019	5:52:00PM
9F10052-CAL6	Cal Standard	Soil	A19F095	"	6/10/2019	6:20:00PM
9F10052-CAL7	Cal Standard	Soil	A19F096	"	6/10/2019	6:48:00PM
9F10052-CAL8	Cal Standard	Soil	A19F097	"	6/10/2019	7:15:00PM
9F10052-CAL9	Cal Standard	Soil	A19F098	"	6/10/2019	7:43:00PM
9F10052-CALA	Cal Standard	Soil	A19F099	"	6/10/2019	8:38:00PM
9F10052-CALB	Cal Standard	Soil	A19F100	"	6/10/2019	9:34:00PM
9F10052-ICV1	Initial Cal Check	Soil	A19F101	"	6/10/2019	10:56:00PM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9F1104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9F10052** Matrix: **Soil**

9F10052-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CALA	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9F10052-CALB	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

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: **A9F1104** Instrument: **VOA-GCMS3**

8260C Full List Sequence: **9F10052** Matrix: **Soil**

9F10052-ICV1	Inst. MRL	ICV Level	Result	%Rec.	Qual
Chloroethane	10	20.0	**27.57**	138	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.

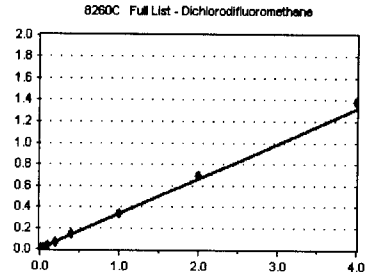
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Dichlorodifluoromethane

Curve Fit: **AVERAGE RF**

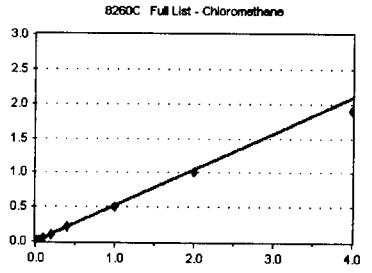


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	789	0.291	1.68
9F10052-CAL4	1	1969	0.297	1.66
9F10052-CAL5	2	4359	0.325	1.66
9F10052-CAL6	5	11543	0.350	1.67
9F10052-CAL7	10	22273	0.338	1.66
9F10052-CAL8	20	45425	0.339	1.66
9F10052-CAL9	50	115408	0.338	1.66
9F10052-CALA	100	230319	0.345	1.67
9F10052-CALB	200	477021	0.346	1.67

AVE RF **0.330** RF RSD **6.55** AVE RT **1.67**

Chloromethane

Curve Fit: **AVERAGE RF**

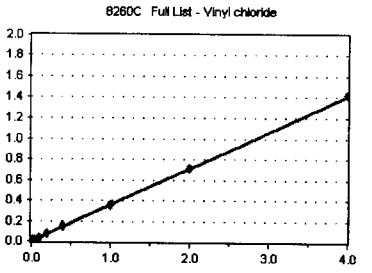


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~938~~	~~0.746~~	~~1.86~~
9F10052-CAL3	0.4	1696	0.625	1.86
9F10052-CAL4	1	3371	0.509	1.87
9F10052-CAL5	2	6993	0.521	1.86
9F10052-CAL6	5	17301	0.525	1.86
9F10052-CAL7	10	34272	0.520	1.86
9F10052-CAL8	20	69415	0.518	1.86
9F10052-CAL9	50	168897	0.495	1.86
9F10052-CALA	100	337482	0.506	1.87
9F10052-CALB	200	653270	0.474	1.87

AVE RF **0.521** RF RSD **8.08** AVE RT **1.86**

Vinyl chloride

Curve Fit: **AVERAGE RF**

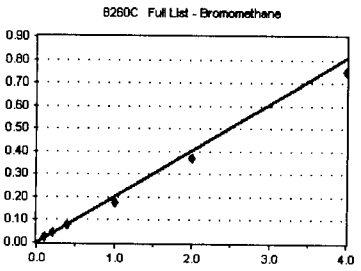


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~192~~	~~0.296~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	847	0.312	1.95
9F10052-CAL4	1	2234	0.337	1.97
9F10052-CAL5	2	4880	0.364	1.95
9F10052-CAL6	5	12095	0.367	1.95
9F10052-CAL7	10	24173	0.367	1.95
9F10052-CAL8	20	48944	0.365	1.95
9F10052-CAL9	50	120231	0.353	1.95
9F10052-CALA	100	239778	0.359	1.96
9F10052-CALB	200	491307	0.356	1.96

AVE RF **0.353** RF RSD **5.10** AVE RT **1.95**

Bromomethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1492~~	~~0.550~~	~~2.31~~
~~9F10052-CAL4~~	~~1~~	~~2566~~	~~0.387~~	~~2.31~~
~~9F10052-CAL5~~	~~2~~	~~4073~~	~~0.304~~	~~2.30~~
9F10052-CAL6	5	8017	0.243	2.30
9F10052-CAL7	10	14610	0.222	2.30
9F10052-CAL8	20	26631	0.199	2.30
9F10052-CAL9	50	60489	0.177	2.31
9F10052-CALA	100	123677	0.185	2.31
9F10052-CALB	200	259132	0.188	2.31

AVE RF **0.202** RF RSD **12.48** AVE RT **2.31**

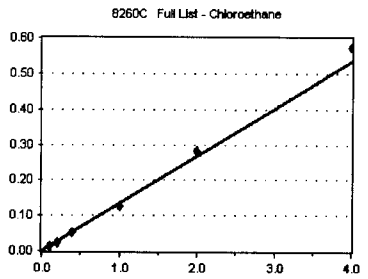
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Chloroethane

Curve Fit: **AVERAGE RF**

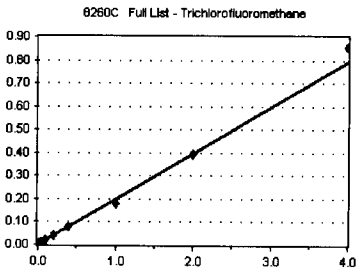


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL5~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL6	5	4635	0.141	2.44
9F10052-CAL7	10	7941	0.120	2.43
9F10052-CAL8	20	17906	0.134	2.44
9F10052-CAL9	50	42931	0.126	2.43
9F10052-CALA	100	93852	0.141	2.45
9F10052-CALB	200	197631	0.143	2.46

AVE RF **0.134** RF RSD **6.87** AVE RT **2.44**

Trichlorofluoromethane

Curve Fit: **AVERAGE RF**

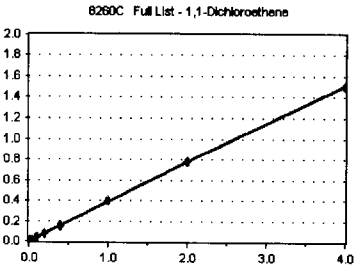


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	1210	0.183	2.56
9F10052-CAL5	2	2960	0.221	2.56
9F10052-CAL6	5	6899	0.209	2.56
9F10052-CAL7	10	12305	0.187	2.55
9F10052-CAL8	20	26493	0.198	2.56
9F10052-CAL9	50	62094	0.182	2.56
9F10052-CALA	100	131121	0.197	2.57
9F10052-CALB	200	294670	0.214	2.57

AVE RF **0.199** RF RSD **7.37** AVE RT **2.56**

1,1-Dichloroethene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

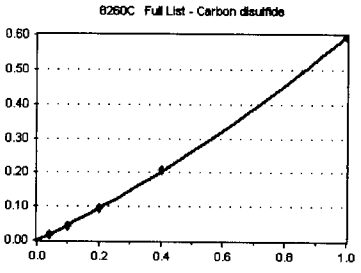


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	452	0.359	3.09
9F10052-CAL3	0.4	1080	0.398	3.09
9F10052-CAL4	1	2382	0.360	3.10
9F10052-CAL5	2	4926	0.367	3.09
9F10052-CAL6	5	12787	0.388	3.09
9F10052-CAL7	10	25019	0.380	3.09
9F10052-CAL8	20	52468	0.392	3.09
9F10052-CAL9	50	135099	0.396	3.08
9F10052-CALA	100	260644	0.391	3.10
9F10052-CALB	200	519340	0.377	3.10

AVE RF **0.381** RF RSD **3.84** AVE RT **3.09**

Carbon disulfide

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1266~~	~~0.467~~	~~3.11~~
~~9F10052-CAL4~~	~~1~~	~~2538~~	~~0.383~~	~~3.11~~
9F10052-CAL5	2	5848	0.436	3.10
9F10052-CAL6	5	14420	0.438	3.10
9F10052-CAL7	10	30776	0.467	3.09
9F10052-CAL8	20	68992	0.515	3.10
9F10052-CAL9	50	203715	0.597	3.10
~~9F10052-CALA~~	~~100~~	~~428101~~	~~0.642~~	~~3.11~~
~~9F10052-CALB~~	~~200~~	~~886498~~	~~0.643~~	~~3.11~~

AVE RF **0.491** RF RSD **13.81** AVE RT **3.10**

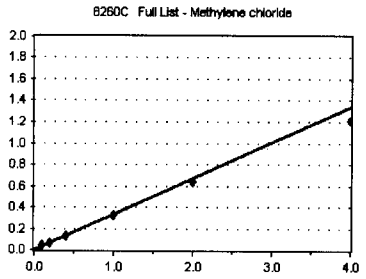
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Methylene chloride

Curve Fit: **AVERAGE RF**

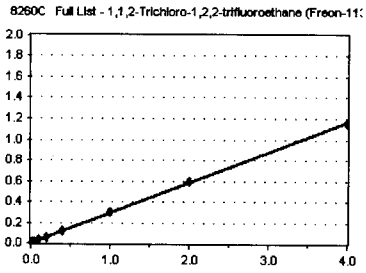


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1951~~	~~3.006~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~2127~~	~~1.692~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~2896~~	~~1.068~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~3900~~	~~0.589~~	~~0.00~~
~~9F10052-CAL5~~	~~2~~	~~6194~~	~~0.462~~	~~0.00~~
9F10052-CAL6	5	13102	0.398	0.00
9F10052-CAL7	10	22641	0.343	3.73
9F10052-CAL8	20	43676	0.326	3.72
9F10052-CAL9	50	110475	0.324	3.72
9F10052-CALA	100	213840	0.321	3.73
9F10052-CALB	200	417213	0.302	3.73

AVE RF **0.336** RF RSD **9.86** AVE RT **3.10**

1,1,2-Trichloro-1,2,2-trifluoroeth

Curve Fit: **AVERAGE RF**

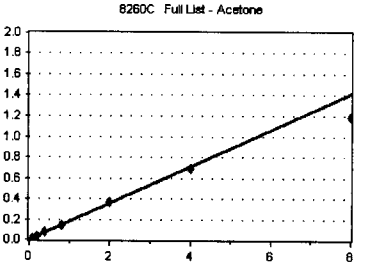


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	656	0.242	3.14
9F10052-CAL4	1	1821	0.275	3.14
9F10052-CAL5	2	4215	0.314	3.14
9F10052-CAL6	5	10227	0.310	3.14
9F10052-CAL7	10	19500	0.296	3.14
9F10052-CAL8	20	40482	0.302	3.14
9F10052-CAL9	50	102992	0.302	3.14
9F10052-CALA	100	198767	0.298	3.15
9F10052-CALB	200	399582	0.290	3.14

AVE RF **0.292** RF RSD **7.55** AVE RT **3.14**

Acetone

Curve Fit: **AVERAGE RF**

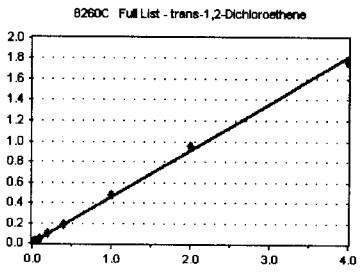


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	4	4932	0.184	3.83
9F10052-CAL6	10	12346	0.187	3.84
9F10052-CAL7	20	23789	0.180	3.83
9F10052-CAL8	40	47883	0.179	3.83
9F10052-CAL9	100	125112	0.183	3.83
9F10052-CALA	200	232154	0.174	3.83
9F10052-CALB	400	410227	0.149	3.83

AVE RF **0.177** RF RSD **7.38** AVE RT **3.83**

trans-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	572	0.455	3.88
9F10052-CAL3	0.4	1202	0.443	3.89
9F10052-CAL4	1	2807	0.424	3.89
9F10052-CAL5	2	6058	0.451	3.89
9F10052-CAL6	5	14689	0.446	3.88
9F10052-CAL7	10	30347	0.460	3.88
9F10052-CAL8	20	62991	0.470	3.88
9F10052-CAL9	50	161888	0.475	3.88
9F10052-CALA	100	316839	0.475	3.89
9F10052-CALB	200	607920	0.441	3.89

AVE RF **0.454** RF RSD **3.63** AVE RT **3.88**

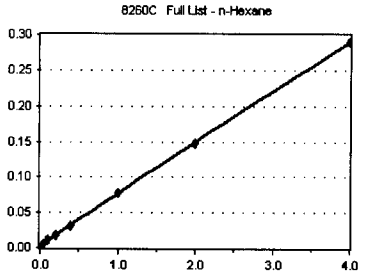
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

n-Hexane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

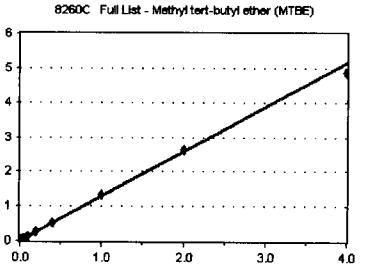


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1308~~	~~2.015~~	~~3.97~~
~~9F10052-CAL2~~	~~0.2~~	~~991~~	~~0.788~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1223~~	~~0.451~~	~~3.96~~
~~9F10052-CAL4~~	~~1~~	~~1406~~	~~0.212~~	~~3.98~~
9F10052-CAL5	2	1784	0.133	3.96
9F10052-CAL6	5	3541	0.108	3.96
9F10052-CAL7	10	5985	9.079	3.96
9F10052-CAL8	20	10548	7.872	3.96
9F10052-CAL9	50	26695	7.829	3.96
9F10052-CALA	100	49312	7.392	3.97
9F10052-CALB	200	100064	7.255	3.97

AVE RF **9.067** RF RSD **24.56** AVE RT **3.96**

Methyl tert-butyl ether (MTBE)

Curve Fit: **AVERAGE RF**

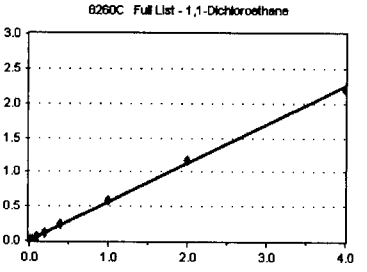


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1600	1.273	4.05
9F10052-CAL3	0.4	3427	1.264	4.04
9F10052-CAL4	1	8702	1.314	4.05
9F10052-CAL5	2	16867	1.257	4.04
9F10052-CAL6	5	44417	1.348	4.04
9F10052-CAL7	10	86627	1.314	4.04
9F10052-CAL8	20	175828	1.312	4.03
9F10052-CAL9	50	449396	1.318	4.03
9F10052-CALA	100	877597	1.315	4.04
9F10052-CALB	200	1672090	1.212	4.04

AVE RF **1.293** RF RSD **3.11** AVE RT **4.04**

1,1-Dichloroethane

Curve Fit: **AVERAGE RF**

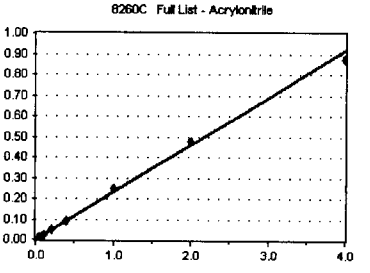


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	568	0.452	4.51
9F10052-CAL3	0.4	1584	0.584	4.52
9F10052-CAL4	1	3709	0.560	4.52
9F10052-CAL5	2	7412	0.552	4.52
9F10052-CAL6	5	19116	0.580	4.52
9F10052-CAL7	10	38779	0.588	4.52
9F10052-CAL8	20	79075	0.590	4.51
9F10052-CAL9	50	200646	0.588	4.51
9F10052-CALA	100	391554	0.587	4.52
9F10052-CALB	200	760512	0.551	4.52

AVE RF **0.563** RF RSD **7.48** AVE RT **4.52**

Acrylonitrile

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	2	2845	0.212	4.60
9F10052-CAL6	5	7555	0.229	4.60
9F10052-CAL7	10	15485	0.235	4.60
9F10052-CAL8	20	30348	0.226	4.59
9F10052-CAL9	50	84043	0.246	4.59
9F10052-CALA	100	159210	0.239	4.60
9F10052-CALB	200	302105	0.219	4.60

AVE RF **0.230** RF RSD **5.11** AVE RT **4.60**

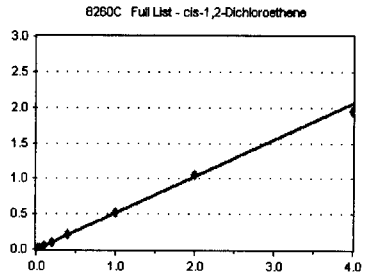
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

cis-1,2-Dichloroethene

Curve Fit: **AVERAGE RF**

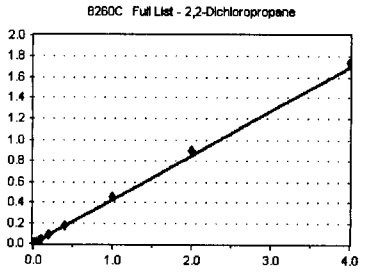


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	687	0.546	5.07
9F10052-CAL3	0.4	1392	0.513	5.08
9F10052-CAL4	1	3260	0.492	5.08
9F10052-CAL5	2	6543	0.488	5.07
9F10052-CAL6	5	17591	0.534	5.06
9F10052-CAL7	10	33904	0.514	5.06
9F10052-CAL8	20	71698	0.535	5.06
9F10052-CAL9	50	178655	0.524	5.06
9F10052-CALA	100	352045	0.528	5.07
9F10052-CALB	200	671582	0.487	5.07

AVE RF **0.516** RF RSD **4.11** AVE RT **5.07**

2,2-Dichloropropane

Curve Fit: **AVERAGE RF**

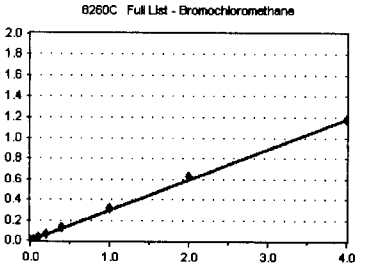


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	1016	0.375	5.17
9F10052-CAL4	1	2909	0.439	5.17
9F10052-CAL5	2	5330	0.397	5.18
9F10052-CAL6	5	14061	0.427	5.17
9F10052-CAL7	10	27557	0.418	5.17
9F10052-CAL8	20	59025	0.440	5.17
9F10052-CAL9	50	153062	0.449	5.17
9F10052-CALA	100	300552	0.451	5.17
9F10052-CALB	200	598853	0.434	5.17

AVE RF **0.426** RF RSD **5.93** AVE RT **5.17**

Bromochloromethane

Curve Fit: **AVERAGE RF**

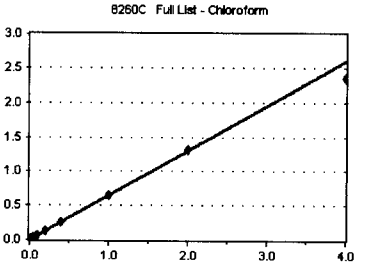


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	306	0.243	5.27
9F10052-CAL3	0.4	815	0.301	5.26
9F10052-CAL4	1	1743	0.263	5.27
9F10052-CAL5	2	3915	0.292	5.26
9F10052-CAL6	5	10253	0.311	5.27
9F10052-CAL7	10	19997	0.303	5.26
9F10052-CAL8	20	42462	0.317	5.26
9F10052-CAL9	50	106680	0.313	5.26
9F10052-CALA	100	209434	0.314	5.27
9F10052-CALB	200	404581	0.293	5.27

AVE RF **0.295** RF RSD **8.16** AVE RT **5.27**

Chloroform

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	854	0.679	5.35
9F10052-CAL3	0.4	1876	0.692	5.36
9F10052-CAL4	1	4113	0.621	5.36
9F10052-CAL5	2	8361	0.623	5.35
9F10052-CAL6	5	22224	0.675	5.35
9F10052-CAL7	10	42547	0.645	5.35
9F10052-CAL8	20	88587	0.661	5.35
9F10052-CAL9	50	221584	0.650	5.35
9F10052-CALA	100	435898	0.653	5.35
9F10052-CALB	200	809559	0.587	5.35

AVE RF **0.649** RF RSD **4.85** AVE RT **5.35**

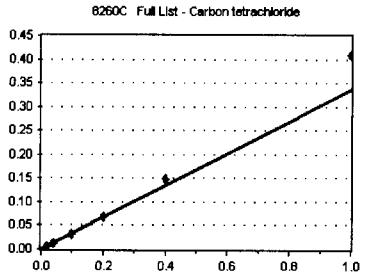
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Carbon tetrachloride

Curve Fit: **AVERAGE RF**

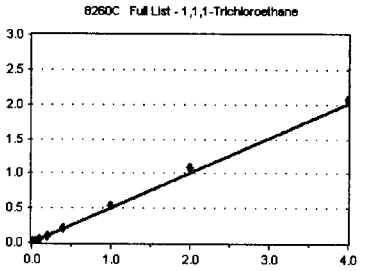


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~263~~	~~0.209~~	~~5.46~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	1829	0.276	5.47
9F10052-CAL5	2	3998	0.298	5.47
9F10052-CAL6	5	10579	0.321	5.47
9F10052-CAL7	10	22117	0.336	5.47
9F10052-CAL8	20	49520	0.370	5.47
9F10052-CAL9	50	139739	0.410	5.48
~~9F10052-CALA~~	~~100~~	~~289658~~	~~0.434~~	~~5.48~~
~~9F10052-CALB~~	~~200~~	~~595740~~	~~0.432~~	~~5.47~~

AVE RF **0.335** RF RSD **14.51** AVE RT **5.47**

1,1,1-Trichloroethane

Curve Fit: **AVERAGE RF**

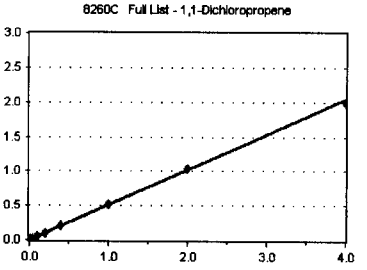


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	607	0.483	5.54
9F10052-CAL3	0.4	1321	0.487	5.54
9F10052-CAL4	1	3011	0.455	5.55
9F10052-CAL5	2	6419	0.478	5.55
9F10052-CAL6	5	16643	0.505	5.55
9F10052-CAL7	10	33312	0.505	5.54
9F10052-CAL8	20	69791	0.521	5.55
9F10052-CAL9	50	181053	0.531	5.55
9F10052-CALA	100	359788	0.539	5.55
9F10052-CALB	200	714533	0.518	5.55

AVE RF **0.502** RF RSD **5.25** AVE RT **5.55**

1,1-Dichloropropene

Curve Fit: **AVERAGE RF**

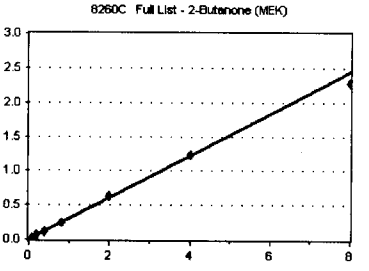


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	587	0.467	5.68
9F10052-CAL3	0.4	1401	0.517	5.68
9F10052-CAL4	1	3414	0.515	5.68
9F10052-CAL5	2	6644	0.495	5.68
9F10052-CAL6	5	17294	0.525	5.67
9F10052-CAL7	10	34244	0.519	5.67
9F10052-CAL8	20	70427	0.526	5.67
9F10052-CAL9	50	178184	0.523	5.68
9F10052-CALA	100	346592	0.520	5.68
9F10052-CALB	200	685872	0.497	5.68

AVE RF **0.510** RF RSD **3.65** AVE RT **5.68**

2-Butanone (MEK)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	4	8049	0.300	5.70
9F10052-CAL6	10	20846	0.316	5.70
9F10052-CAL7	20	39465	0.299	5.68
9F10052-CAL8	40	82387	0.307	5.68
9F10052-CAL9	100	218051	0.320	5.68
9F10052-CALA	200	413276	0.310	5.69
9F10052-CALB	400	786035	0.285	5.69

AVE RF **0.305** RF RSD **3.87** AVE RT **5.69**

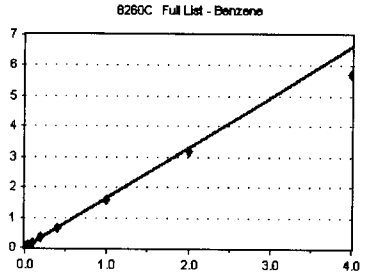
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Benzene

Curve Fit: **AVERAGE RF**

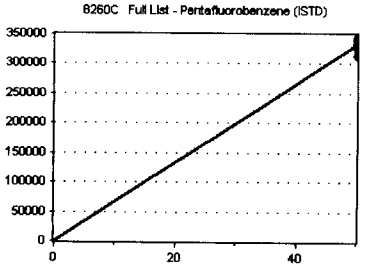


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1173	1.807	5.93
9F10052-CAL2	0.2	2187	1.739	5.93
9F10052-CAL3	0.4	4769	1.759	5.93
9F10052-CAL4	1	10807	1.632	5.94
9F10052-CAL5	2	21984	1.638	5.94
9F10052-CAL6	5	55659	1.690	5.93
9F10052-CAL7	10	109045	1.654	5.93
9F10052-CAL8	20	219207	1.636	5.93
9F10052-CAL9	50	547300	1.605	5.93
9F10052-CALA	100	1053944	1.580	5.93
9F10052-CALB	200	1972040	1.430	5.93

AVE RF **1.652** RF RSD **6.12** AVE RT **5.93**

Pentafluorobenzene (ISTD)

Curve Fit: **AVERAGE RF**

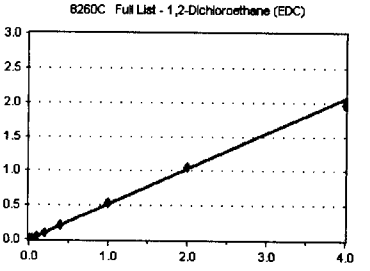


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	324487	6489.740	6.03
9F10052-CAL2	50	314337	6286.740	6.03
9F10052-CAL3	50	338968	6779.360	6.03
9F10052-CAL4	50	331196	6623.920	6.03
9F10052-CAL5	50	335493	6709.860	6.03
9F10052-CAL6	50	329388	6587.760	6.03
9F10052-CAL7	50	329608	6592.160	6.03
9F10052-CAL8	50	334993	6699.860	6.03
9F10052-CAL9	50	340992	6819.840	6.03
9F10052-CALA	50	333562	6671.240	6.04
9F10052-CALB	50	344824	6896.480	6.03

AVE RF **6650.633** RF RSD **2.51** AVE RT **6.03**

1,2-Dichloroethane (EDC)

Curve Fit: **AVERAGE RF**

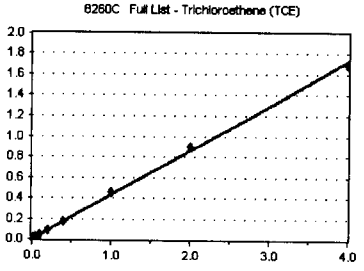


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	555	0.441	6.15
9F10052-CAL3	0.4	1368	0.504	6.15
9F10052-CAL4	1	3622	0.547	6.15
9F10052-CAL5	2	6931	0.516	6.15
9F10052-CAL6	5	18599	0.565	6.15
9F10052-CAL7	10	34341	0.521	6.15
9F10052-CAL8	20	70104	0.523	6.14
9F10052-CAL9	50	180444	0.529	6.14
9F10052-CALA	100	352666	0.529	6.15
9F10052-CALB	200	674961	0.489	6.15

AVE RF **0.517** RF RSD **6.50** AVE RT **6.15**

Trichloroethene (TCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	436	0.347	6.55
9F10052-CAL3	0.4	1202	0.443	6.55
9F10052-CAL4	1	3058	0.462	6.55
9F10052-CAL5	2	5478	0.408	6.55
9F10052-CAL6	5	14731	0.447	6.54
9F10052-CAL7	10	29253	0.444	6.55
9F10052-CAL8	20	59701	0.446	6.55
9F10052-CAL9	50	153249	0.449	6.55
9F10052-CALA	100	298710	0.448	6.55
9F10052-CALB	200	579838	0.420	6.55

AVE RF **0.431** RF RSD **7.76** AVE RT **6.55**

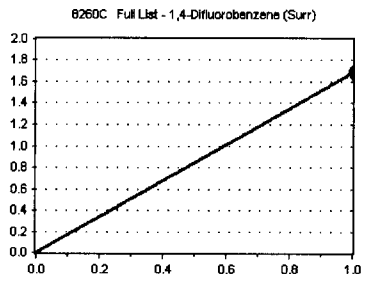
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,4-Difluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

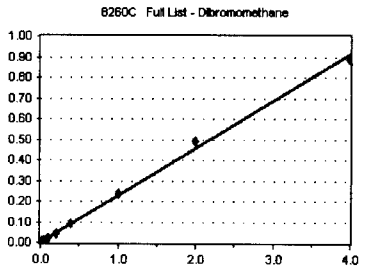


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	543971	1.676	6.59
9F10052-CAL2	50	532161	1.693	6.59
9F10052-CAL3	50	564630	1.666	6.59
9F10052-CAL4	50	554133	1.673	6.59
9F10052-CAL5	50	563668	1.680	6.59
9F10052-CAL6	50	557930	1.694	6.59
9F10052-CAL7	50	558931	1.696	6.58
9F10052-CAL8	50	563027	1.681	6.59
9F10052-CAL9	50	574444	1.685	6.59
9F10052-CALA	50	569175	1.706	6.59
9F10052-CALB	50	580421	1.683	6.59

AVE RF **1.685** RF RSD **0.69** AVE RT **6.59**

Dibromomethane

Curve Fit: **AVERAGE RF**

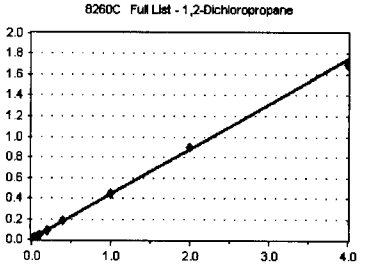


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	640	0.236	7.00
9F10052-CAL4	1	1314	0.198	7.00
9F10052-CAL5	2	2990	0.223	7.00
9F10052-CAL6	5	7543	0.229	7.00
9F10052-CAL7	10	15098	0.229	6.99
9F10052-CAL8	20	31366	0.234	7.00
9F10052-CAL9	50	81506	0.239	7.00
9F10052-CALA	100	163635	0.245	7.00
9F10052-CALB	200	305444	0.221	7.00

AVE RF **0.228** RF RSD **5.94** AVE RT **7.00**

1,2-Dichloropropane

Curve Fit: **AVERAGE RF**

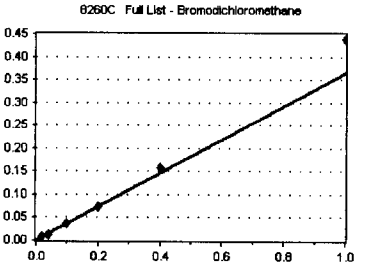


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	1230	0.454	7.11
9F10052-CAL4	1	2836	0.428	7.11
9F10052-CAL5	2	5456	0.407	7.11
9F10052-CAL6	5	14555	0.442	7.10
9F10052-CAL7	10	28990	0.440	7.10
9F10052-CAL8	20	59886	0.447	7.11
9F10052-CAL9	50	150914	0.443	7.11
9F10052-CALA	100	299052	0.448	7.11
9F10052-CALB	200	584540	0.424	7.10

AVE RF **0.437** RF RSD **3.38** AVE RT **7.11**

Bromodichloromethane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	2123	0.321	7.18
9F10052-CAL5	2	4315	0.322	7.18
9F10052-CAL6	5	11721	0.356	7.18
9F10052-CAL7	10	23806	0.361	7.18
9F10052-CAL8	20	53066	0.396	7.18
9F10052-CAL9	50	148949	0.437	7.18
~~9F10052-CALA~~	~~100~~	~~313885~~	~~0.471~~	~~7.18~~
~~9F10052-CALB~~	~~200~~	~~641784~~	~~0.465~~	~~7.18~~

AVE RF **0.365** RF RSD **12.29** AVE RT **7.18**

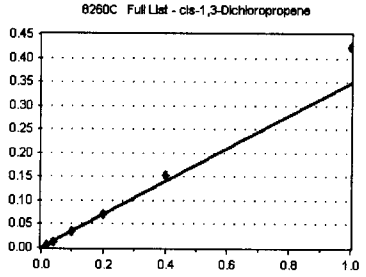
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

cis-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

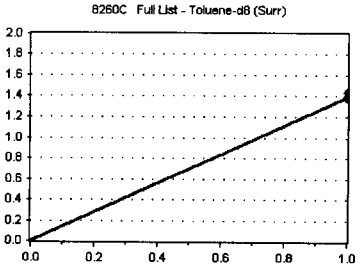


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~1015~~	~~0.264~~	~~7.88~~
9F10052-CAL4	1	2811	0.298	7.89
9F10052-CAL5	2	5608	0.292	7.88
9F10052-CAL6	5	16676	0.350	7.89
9F10052-CAL7	10	33200	0.350	7.89
9F10052-CAL8	20	74628	0.381	7.88
9F10052-CAL9	50	209633	0.423	7.88
~~9F10052-CALA~~	~~100~~	~~423225~~	~~0.431~~	~~7.88~~
~~9F10052-CALB~~	~~200~~	~~840048~~	~~0.439~~	~~7.88~~

AVE RF **0.349** RF RSD **14.23** AVE RT **7.89**

Toluene-d8 (Surr)

Curve Fit: **AVERAGE RF**

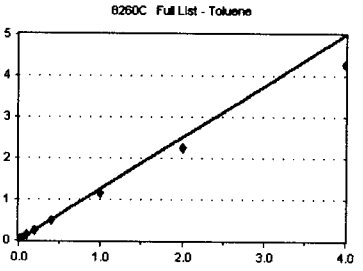


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	645647	1.407	8.10
9F10052-CAL2	50	631334	1.391	8.09
9F10052-CAL3	50	670320	1.393	8.09
9F10052-CAL4	50	658631	1.397	8.09
9F10052-CAL5	50	668731	1.391	8.09
9F10052-CAL6	50	670066	1.406	8.09
9F10052-CAL7	50	660993	1.396	8.09
9F10052-CAL8	50	675931	1.380	8.09
9F10052-CAL9	50	689152	1.389	8.09
9F10052-CALA	50	679105	1.382	8.10
9F10052-CALB	50	685539	1.433	8.10

AVE RF **1.397** RF RSD **1.04** AVE RT **8.09**

Toluene

Curve Fit: **AVERAGE RF**

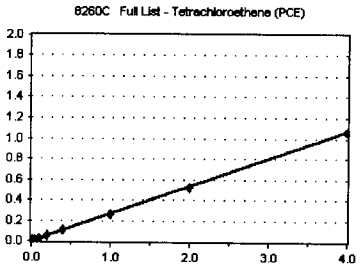


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	2884	1.588	8.16
9F10052-CAL3	0.4	5120	1.330	8.15
9F10052-CAL4	1	11998	1.272	8.15
9F10052-CAL5	2	23933	1.244	8.16
9F10052-CAL6	5	59886	1.257	8.15
9F10052-CAL7	10	117132	1.236	8.15
9F10052-CAL8	20	232708	1.188	8.15
9F10052-CAL9	50	575939	1.161	8.15
9F10052-CALA	100	1104782	1.124	8.15
9F10052-CALB	200	2041152	1.066	8.15

AVE RF **1.247** RF RSD **11.42** AVE RT **8.15**

Tetrachloroethene (PCE)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	521	0.287	8.60
9F10052-CAL3	0.4	949	0.247	8.60
9F10052-CAL4	1	2790	0.296	8.60
9F10052-CAL5	2	4917	0.256	8.60
9F10052-CAL6	5	12789	0.268	8.60
9F10052-CAL7	10	25746	0.272	8.60
9F10052-CAL8	20	51183	0.261	8.60
9F10052-CAL9	50	131193	0.264	8.60
9F10052-CALA	100	256544	0.261	8.60
9F10052-CALB	200	509334	0.266	8.60

AVE RF **0.268** RF RSD **5.38** AVE RT **8.60**

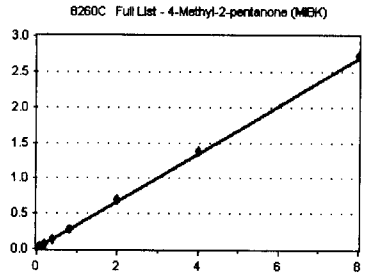
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

4-Methyl-2-pentanone (MiBK)

Curve Fit: **AVERAGE RF**

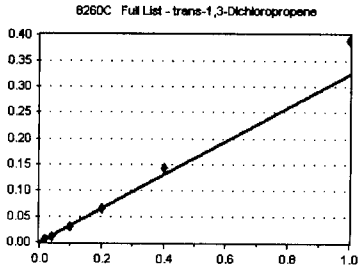


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.8~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	2	5904	0.313	8.62
9F10052-CAL5	4	11773	0.306	8.62
9F10052-CAL6	10	34047	0.357	8.62
9F10052-CAL7	20	64279	0.339	8.62
9F10052-CAL8	40	132655	0.339	8.61
9F10052-CAL9	100	345050	0.348	8.61
9F10052-CALA	200	679393	0.346	8.61
9F10052-CALB	400	1300156	0.340	8.61

AVE RF **0.336** RF RSD **5.21** AVE RT **8.62**

trans-1,3-Dichloropropene

Curve Fit: **AVERAGE RF**

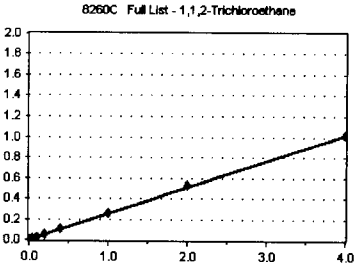


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~979~~	~~0.254~~	~~8.66~~
9F10052-CAL4	1	2629	0.279	8.65
9F10052-CAL5	2	5374	0.279	8.64
9F10052-CAL6	5	14894	0.313	8.64
9F10052-CAL7	10	30716	0.324	8.64
9F10052-CAL8	20	69703	0.356	8.64
9F10052-CAL9	50	193377	0.390	8.64
~~9F10052-CALA~~	~~100~~	~~400343~~	~~0.407~~	~~8.64~~
~~9F10052-CALB~~	~~200~~	~~778569~~	~~0.407~~	~~8.64~~

AVE RF **0.323** RF RSD **13.48** AVE RT **8.64**

1,1,2-Trichloroethane

Curve Fit: **AVERAGE RF**

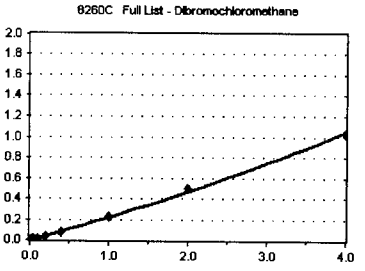


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	419	0.231	8.82
9F10052-CAL3	0.4	996	0.259	8.82
9F10052-CAL4	1	2471	0.262	8.82
9F10052-CAL5	2	4509	0.234	8.82
9F10052-CAL6	5	12789	0.268	8.82
9F10052-CAL7	10	24434	0.258	8.82
9F10052-CAL8	20	50621	0.258	8.82
9F10052-CAL9	50	128654	0.259	8.81
9F10052-CALA	100	260378	0.265	8.82
9F10052-CALB	200	487195	0.255	8.82

AVE RF **0.255** RF RSD **4.89** AVE RT **8.82**

Dibromochloromethane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	353	9.172	9.01
9F10052-CAL4	1	1295	0.137	9.01
9F10052-CAL5	2	2666	0.139	9.00
9F10052-CAL6	5	7499	0.157	9.01
9F10052-CAL7	10	15631	0.165	9.01
9F10052-CAL8	20	37386	0.191	9.00
9F10052-CAL9	50	110171	0.222	9.00
9F10052-CALA	100	242900	0.247	9.00
9F10052-CALB	200	493352	0.258	9.00

AVE RF **0.179** RF RSD **30.98** AVE RT **9.00**

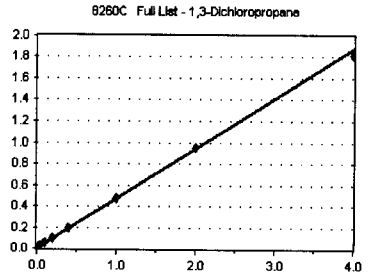
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,3-Dichloropropane

Curve Fit: **AVERAGE RF**

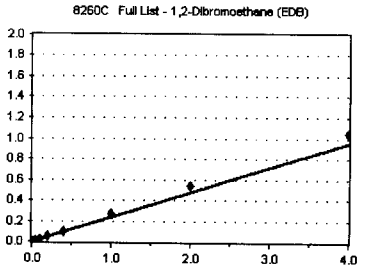


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	796	0.438	9.11
9F10052-CAL3	0.4	1733	0.450	9.12
9F10052-CAL4	1	4405	0.467	9.11
9F10052-CAL5	2	9053	0.471	9.11
9F10052-CAL6	5	23491	0.493	9.11
9F10052-CAL7	10	45222	0.477	9.11
9F10052-CAL8	20	94677	0.483	9.11
9F10052-CAL9	50	238356	0.480	9.11
9F10052-CALA	100	468590	0.477	9.11
9F10052-CALB	200	867404	0.453	9.11

AVE RF **0.469** RF RSD **3.62** AVE RT **9.11**

1,2-Dibromoethane (EDB)

Curve Fit: **AVERAGE RF**

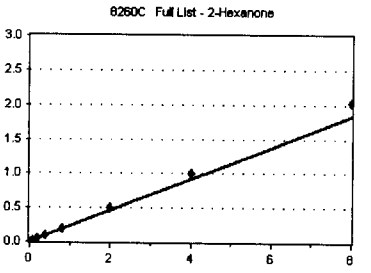


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	397	0.219	9.25
9F10052-CAL3	0.4	640	0.166	9.25
9F10052-CAL4	1	1954	0.207	9.24
9F10052-CAL5	2	4730	0.246	9.25
9F10052-CAL6	5	11473	0.241	9.24
9F10052-CAL7	10	23715	0.250	9.24
9F10052-CAL8	20	50007	0.255	9.24
9F10052-CAL9	50	133050	0.268	9.24
9F10052-CALA	100	265078	0.270	9.24
9F10052-CALB	200	502022	0.262	9.25

AVE RF **0.238** RF RSD **13.62** AVE RT **9.24**

2-Hexanone

Curve Fit: **AVERAGE RF**

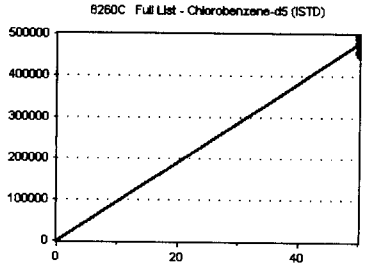


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.8	1455	0.189	9.50
9F10052-CAL4	2	3813	0.202	9.51
9F10052-CAL5	4	7699	0.200	9.50
9F10052-CAL6	10	22093	0.232	9.50
9F10052-CAL7	20	45451	0.240	9.50
9F10052-CAL8	40	93286	0.238	9.50
9F10052-CAL9	100	249448	0.251	9.50
9F10052-CALA	200	493611	0.251	9.50
9F10052-CALB	400	969053	0.253	9.50

AVE RF **0.229** RF RSD **10.87** AVE RT **9.50**

Chlorobenzene-d5 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	458762	9175.240	9.75
9F10052-CAL2	50	454033	9080.660	9.75
9F10052-CAL3	50	481095	9621.900	9.75
9F10052-CAL4	50	471537	9430.740	9.75
9F10052-CAL5	50	480852	9617.040	9.75
9F10052-CAL6	50	476413	9528.260	9.75
9F10052-CAL7	50	473646	9472.920	9.75
9F10052-CAL8	50	489718	9794.360	9.75
9F10052-CAL9	50	496062	9921.240	9.75
9F10052-CALA	50	491250	9825.000	9.75
9F10052-CALB	50	478503	9570.060	9.75

AVE RF **9548.856** RF RSD **2.70** AVE RT **9.75**

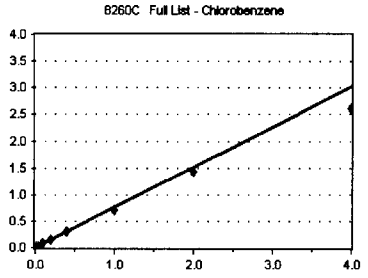
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Chlorobenzene

Curve Fit: **AVERAGE RF**

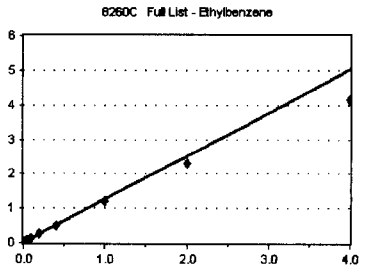


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1627	0.896	9.76
9F10052-CAL3	0.4	3185	0.828	9.77
9F10052-CAL4	1	6976	0.740	9.77
9F10052-CAL5	2	14413	0.749	9.76
9F10052-CAL6	5	37372	0.784	9.77
9F10052-CAL7	10	70101	0.740	9.77
9F10052-CAL8	20	143545	0.733	9.76
9F10052-CAL9	50	359063	0.724	9.76
9F10052-CALA	100	697876	0.710	9.76
9F10052-CALB	200	1256235	0.656	9.76

AVE RF **0.756** RF RSD **8.78** AVE RT **9.76**

Ethylbenzene

Curve Fit: **AVERAGE RF**

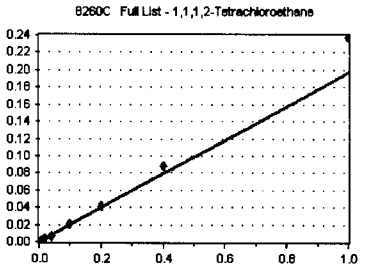


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1463	1.595	9.80
9F10052-CAL2	0.2	2439	1.343	9.79
9F10052-CAL3	0.4	4943	1.284	9.80
9F10052-CAL4	1	11564	1.226	9.80
9F10052-CAL5	2	23697	1.232	9.79
9F10052-CAL6	5	60136	1.262	9.80
9F10052-CAL7	10	119181	1.258	9.80
9F10052-CAL8	20	240939	1.230	9.79
9F10052-CAL9	50	598887	1.207	9.79
9F10052-CALA	100	1126383	1.146	9.79
9F10052-CALB	200	1989818	1.040	9.79

AVE RF **1.257** RF RSD **10.86** AVE RT **9.79**

1,1,1,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

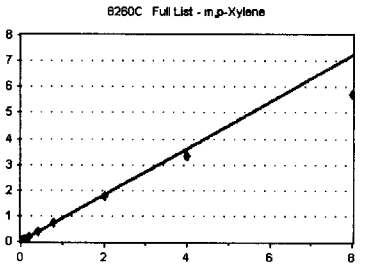


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	585	0.152	9.83
9F10052-CAL4	1	1727	0.183	9.83
9F10052-CAL5	2	3397	0.177	9.83
9F10052-CAL6	5	9683	0.203	9.83
9F10052-CAL7	10	19771	0.209	9.83
9F10052-CAL8	20	43293	0.221	9.83
9F10052-CAL9	50	117587	0.237	9.83
~~9F10052-CALA~~	~~100~~	~~241207~~	~~0.246~~	~~9.83~~
~~9F10052-CALB~~	~~200~~	~~471169~~	~~0.246~~	~~9.83~~

AVE RF **0.197** RF RSD **14.61** AVE RT **9.83**

m,p-Xylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.2~~	~~2386~~	~~1.300~~	~~9.94~~
9F10052-CAL2	0.4	3873	1.066	9.94
9F10052-CAL3	0.8	7211	0.937	9.94
9F10052-CAL4	2	17350	0.920	9.93
9F10052-CAL5	4	34482	0.896	9.93
9F10052-CAL6	10	89757	0.942	9.93
9F10052-CAL7	20	175549	0.927	9.93
9F10052-CAL8	40	355349	0.907	9.93
9F10052-CAL9	100	876496	0.883	9.93
9F10052-CALA	200	1626617	0.828	9.93
9F10052-CALB	400	2740385	0.716	9.93

AVE RF **0.902** RF RSD **9.86** AVE RT **9.93**

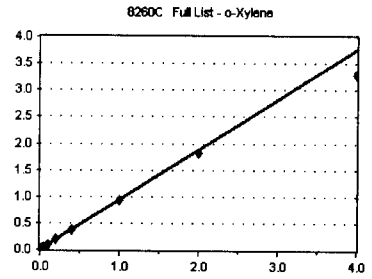
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

o-Xylene

Curve Fit: **AVERAGE RF**

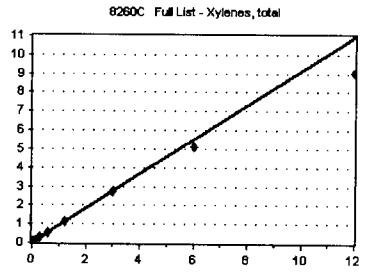


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~1221~~	~~1.331~~	~~10.32~~
9F10052-CAL2	0.2	1836	1.011	10.32
9F10052-CAL3	0.4	3984	1.035	10.32
9F10052-CAL4	1	8595	0.911	10.32
9F10052-CAL5	2	17398	0.905	10.32
9F10052-CAL6	5	45974	0.965	10.32
9F10052-CAL7	10	89373	0.943	10.32
9F10052-CAL8	20	183627	0.937	10.32
9F10052-CAL9	50	465814	0.939	10.32
9F10052-CALA	100	895717	0.912	10.32
9F10052-CALB	200	1575234	0.823	10.32

AVE RF **0.938** RF RSD **6.28** AVE RT **10.32**

Xylenes, total

Curve Fit: **AVERAGE RF**

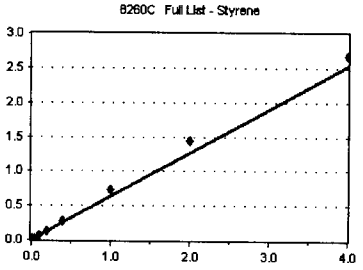


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.3~~	~~3607~~	~~1.310~~	~~10.32~~
9F10052-CAL2	0.6	5709	1.048	10.32
9F10052-CAL3	1.2	11195	0.970	10.32
9F10052-CAL4	3	25945	0.917	10.32
9F10052-CAL5	6	51880	0.899	10.32
9F10052-CAL6	15	135731	0.950	10.32
9F10052-CAL7	30	264922	0.932	10.32
9F10052-CAL8	60	538976	0.917	10.32
9F10052-CAL9	150	1342310	0.902	10.32
9F10052-CALA	300	2522334	0.856	10.32
9F10052-CALB	600	4315619	0.752	10.32

AVE RF **0.914** RF RSD **8.38** AVE RT **10.32**

Styrene

Curve Fit: **AVERAGE RF**

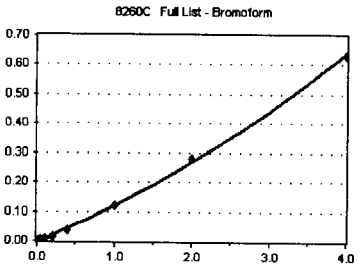


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	1040	0.573	10.38
9F10052-CAL3	0.4	1992	0.518	10.37
9F10052-CAL4	1	5265	0.558	10.37
9F10052-CAL5	2	10700	0.556	10.37
9F10052-CAL6	5	31431	0.660	10.37
9F10052-CAL7	10	62780	0.663	10.37
9F10052-CAL8	20	136458	0.697	10.37
9F10052-CAL9	50	358493	0.723	10.37
9F10052-CALA	100	712544	0.725	10.37
9F10052-CALB	200	1276615	0.667	10.37

AVE RF **0.634** RF RSD **11.97** AVE RT **10.37**

Bromoform

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	526	5.578	10.39
9F10052-CAL5	2	1352	0.070	10.39
9F10052-CAL6	5	3801	7.978	10.39
9F10052-CAL7	10	7848	8.285	10.39
9F10052-CAL8	20	19110	9.756	10.39
9F10052-CAL9	50	60779	0.123	10.39
9F10052-CALA	100	138378	0.141	10.39
9F10052-CALB	200	302514	0.158	10.39

AVE RF **0.101** RF RSD **35.68** AVE RT **10.39**

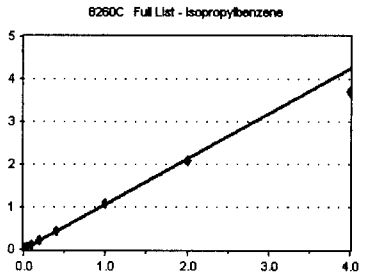
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Isopropylbenzene

Curve Fit: **AVERAGE RF**

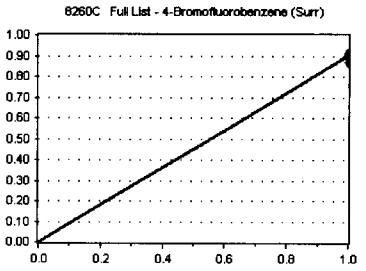


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1075	1.172	10.59
9F10052-CAL2	0.2	2121	1.168	10.60
9F10052-CAL3	0.4	4056	1.054	10.59
9F10052-CAL4	1	9239	0.980	10.59
9F10052-CAL5	2	19559	1.017	10.60
9F10052-CAL6	5	51415	1.079	10.59
9F10052-CAL7	10	102838	1.086	10.59
9F10052-CAL8	20	212362	1.084	10.59
9F10052-CAL9	50	538430	1.085	10.59
9F10052-CALA	100	1017284	1.035	10.59
9F10052-CALB	200	1773671	0.927	10.60

AVE RF **1.062** RF RSD **6.85** AVE RT **10.59**

4-Bromofluorobenzene (Surr)

Curve Fit: **AVERAGE RF**

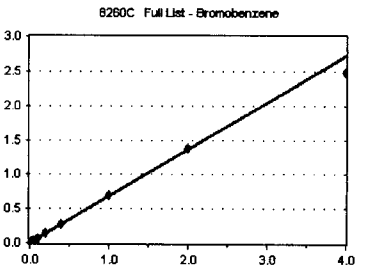


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	161208	0.888	10.84
9F10052-CAL2	50	161808	0.898	10.83
9F10052-CAL3	50	172543	0.911	10.84
9F10052-CAL4	50	165080	0.912	10.84
9F10052-CAL5	50	169618	0.904	10.83
9F10052-CAL6	50	168674	0.910	10.84
9F10052-CAL7	50	167038	0.912	10.84
9F10052-CAL8	50	173337	0.914	10.83
9F10052-CAL9	50	175325	0.908	10.83
9F10052-CALA	50	177460	0.907	10.83
9F10052-CALB	50	172230	0.868	10.83

AVE RF **0.903** RF RSD **1.52** AVE RT **10.84**

Bromobenzene

Curve Fit: **AVERAGE RF**

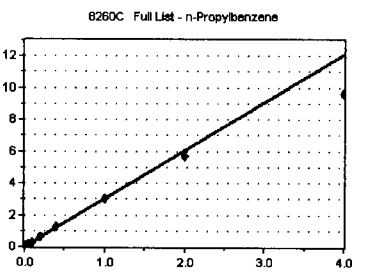


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	364	0.505	10.92
9F10052-CAL3	0.4	1135	0.749	10.92
9F10052-CAL4	1	2673	0.738	10.92
9F10052-CAL5	2	5274	0.702	10.92
9F10052-CAL6	5	13502	0.728	10.92
9F10052-CAL7	10	26030	0.711	10.92
9F10052-CAL8	20	51952	0.685	10.92
9F10052-CAL9	50	133614	0.692	10.92
9F10052-CALA	100	269310	0.688	10.92
9F10052-CALB	200	490693	0.618	10.92

AVE RF **0.682** RF RSD **10.55** AVE RT **10.92**

n-Propylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	1339	3.688	10.95
9F10052-CAL2	0.2	2323	3.224	10.94
9F10052-CAL3	0.4	4427	2.922	10.95
9F10052-CAL4	1	10515	2.904	10.95
9F10052-CAL5	2	21958	2.925	10.94
9F10052-CAL6	5	57592	3.106	10.94
9F10052-CAL7	10	114970	3.139	10.94
9F10052-CAL8	20	236380	3.115	10.94
9F10052-CAL9	50	583140	3.021	10.94
9F10052-CALA	100	1111134	2.839	10.94
9F10052-CALB	200	1904210	2.400	10.94

AVE RF **3.026** RF RSD **10.28** AVE RT **10.94**

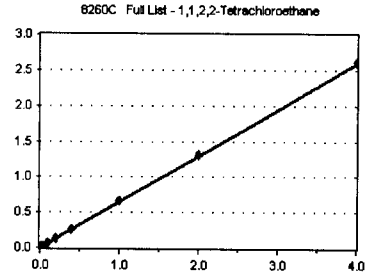
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,1,2,2-Tetrachloroethane

Curve Fit: **AVERAGE RF**

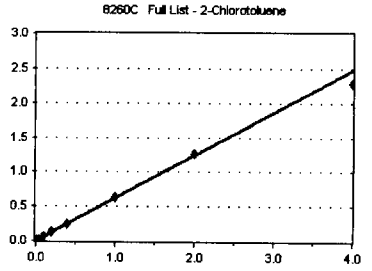


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	474	0.658	11.01
9F10052-CAL3	0.4	988	0.652	11.01
9F10052-CAL4	1	2310	0.638	11.01
9F10052-CAL5	2	4446	0.592	11.01
9F10052-CAL6	5	12600	0.680	11.01
9F10052-CAL7	10	23152	0.632	11.01
9F10052-CAL8	20	49418	0.651	11.01
9F10052-CAL9	50	127935	0.663	11.01
9F10052-CALA	100	255721	0.653	11.01
9F10052-CALB	200	516287	0.651	11.01

AVE RF **0.647** RF RSD **3.58** AVE RT **11.01**

2-Chlorotoluene

Curve Fit: **AVERAGE RF**

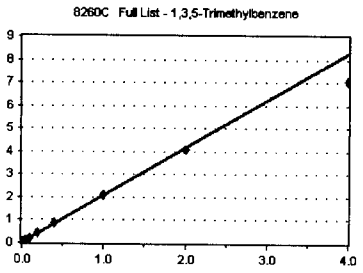


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	850	0.561	11.07
9F10052-CAL4	1	2437	0.673	11.07
9F10052-CAL5	2	4445	0.592	11.08
9F10052-CAL6	5	11951	0.645	11.07
9F10052-CAL7	10	23322	0.637	11.07
9F10052-CAL8	20	47655	0.628	11.07
9F10052-CAL9	50	122859	0.636	11.07
9F10052-CALA	100	248772	0.636	11.07
9F10052-CALB	200	452384	0.570	11.07

AVE RF **0.620** RF RSD **5.99** AVE RT **11.07**

1,3,5-Trimethylbenzene

Curve Fit: **AVERAGE RF**

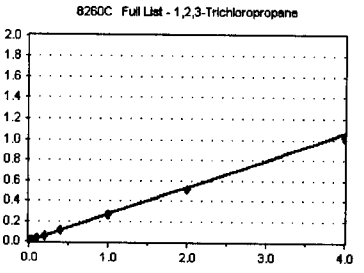


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	866	2.385	11.10
9F10052-CAL2	0.2	1575	2.186	11.10
9F10052-CAL3	0.4	3033	2.002	11.10
9F10052-CAL4	1	6953	1.920	11.11
9F10052-CAL5	2	14730	1.962	11.11
9F10052-CAL6	5	39518	2.131	11.11
9F10052-CAL7	10	78489	2.143	11.10
9F10052-CAL8	20	162341	2.140	11.10
9F10052-CAL9	50	408363	2.115	11.10
9F10052-CALA	100	797681	2.038	11.10
9F10052-CALB	200	1402428	1.768	11.10

AVE RF **2.072** RF RSD **7.78** AVE RT **11.10**

1,2,3-Trichloropropane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	346	0.228	11.12
9F10052-CAL4	1	1042	0.288	11.11
9F10052-CAL5	2	2033	0.271	11.11
9F10052-CAL6	5	5320	0.287	11.11
9F10052-CAL7	10	10018	0.274	11.12
9F10052-CAL8	20	20048	0.264	11.11
9F10052-CAL9	50	50346	0.261	11.11
9F10052-CALA	100	99067	0.253	11.11
9F10052-CALB	200	200838	0.253	11.11

AVE RF **0.264** RF RSD **7.01** AVE RT **11.11**

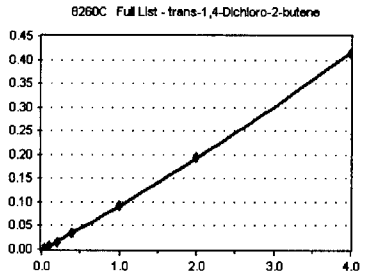
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

trans-1,4-Dichloro-2-butene

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

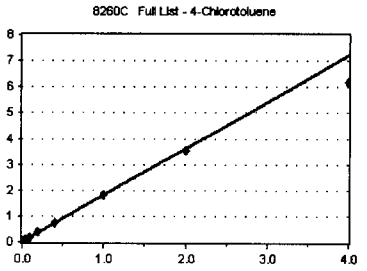


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL4~~	~~1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL5	2	372	4.955	11.16
9F10052-CAL6	5	1243	0.067	11.15
9F10052-CAL7	10	2519	6.878	11.15
9F10052-CAL8	20	6259	8.249	11.15
9F10052-CAL9	50	17733	9.185	11.15
9F10052-CALA	100	38256	9.773	11.15
9F10052-CALB	200	82112	0.103	11.15

AVE RF **8.013** RF RSD **24.08** AVE RT **11.15**

4-Chlorotoluene

Curve Fit: **AVERAGE RF**

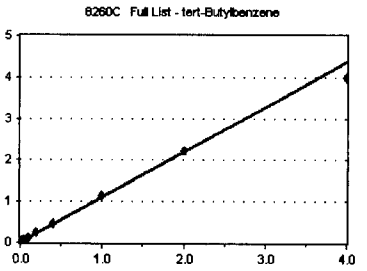


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	704	1.939	11.21
9F10052-CAL2	0.2	1298	1.801	11.21
9F10052-CAL3	0.4	2835	1.871	11.21
9F10052-CAL4	1	6474	1.788	11.21
9F10052-CAL5	2	12857	1.712	11.21
9F10052-CAL6	5	34745	1.874	11.20
9F10052-CAL7	10	69685	1.903	11.21
9F10052-CAL8	20	139523	1.839	11.21
9F10052-CAL9	50	350674	1.816	11.21
9F10052-CALA	100	691823	1.767	11.21
9F10052-CALB	200	1229826	1.550	11.21

AVE RF **1.806** RF RSD **5.89** AVE RT **11.21**

tert-Butylbenzene

Curve Fit: **AVERAGE RF**

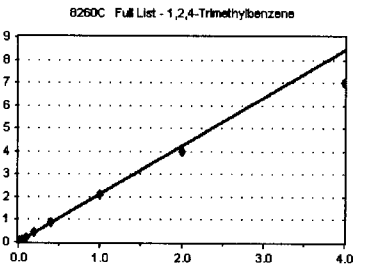


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	444	1.223	11.36
9F10052-CAL2	0.2	750	1.041	11.36
9F10052-CAL3	0.4	1354	0.894	11.36
9F10052-CAL4	1	3834	1.059	11.36
9F10052-CAL5	2	8109	1.080	11.36
9F10052-CAL6	5	21534	1.161	11.35
9F10052-CAL7	10	43541	1.189	11.35
9F10052-CAL8	20	88706	1.169	11.36
9F10052-CAL9	50	221609	1.148	11.36
9F10052-CALA	100	434353	1.110	11.36
9F10052-CALB	200	792365	0.999	11.36

AVE RF **1.097** RF RSD **8.75** AVE RT **11.36**

1,2,4-Trimethylbenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	993	2.735	11.41
9F10052-CAL2	0.2	1577	2.189	11.41
9F10052-CAL3	0.4	3070	2.026	11.41
9F10052-CAL4	1	7272	2.009	11.42
9F10052-CAL5	2	15002	1.998	11.41
9F10052-CAL6	5	39803	2.147	11.41
9F10052-CAL7	10	78079	2.132	11.42
9F10052-CAL8	20	162038	2.136	11.41
9F10052-CAL9	50	400165	2.073	11.41
9F10052-CALA	100	783712	2.002	11.41
9F10052-CALB	200	1386885	1.748	11.41

AVE RF **2.109** RF RSD **11.36** AVE RT **11.41**

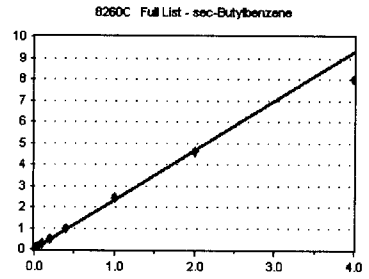
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

sec-Butylbenzene

Curve Fit: **AVERAGE RF**

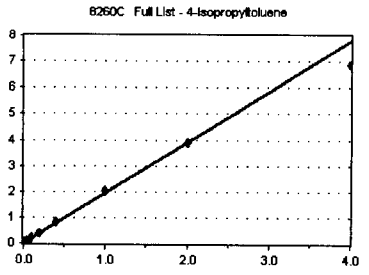


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	846	2.330	11.50
9F10052-CAL2	0.2	1569	2.177	11.50
9F10052-CAL3	0.4	3469	2.290	11.49
9F10052-CAL4	1	8415	2.324	11.50
9F10052-CAL5	2	17133	2.282	11.50
9F10052-CAL6	5	45578	2.458	11.49
9F10052-CAL7	10	92393	2.523	11.49
9F10052-CAL8	20	187287	2.468	11.50
9F10052-CAL9	50	474670	2.459	11.50
9F10052-CALA	100	901621	2.303	11.50
9F10052-CALB	200	1586657	2.000	11.50

AVE RF **2.329** RF RSD **6.46** AVE RT **11.50**

4-Isopropyltoluene

Curve Fit: **AVERAGE RF**

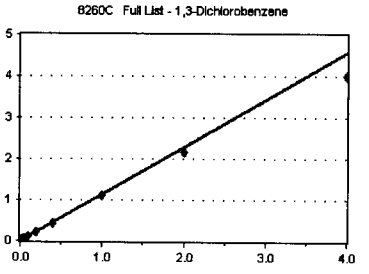


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	815	2.245	11.60
9F10052-CAL2	0.2	1419	1.969	11.61
9F10052-CAL3	0.4	2563	1.692	11.61
9F10052-CAL4	1	6765	1.869	11.61
9F10052-CAL5	2	13903	1.852	11.61
9F10052-CAL6	5	37133	2.003	11.60
9F10052-CAL7	10	74605	2.037	11.60
9F10052-CAL8	20	155362	2.048	11.61
9F10052-CAL9	50	392357	2.032	11.61
9F10052-CALA	100	759218	1.940	11.61
9F10052-CALB	200	1362331	1.717	11.61

AVE RF **1.946** RF RSD **8.15** AVE RT **11.61**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

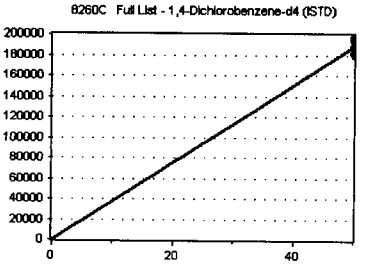


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	529	1.457	11.67
9F10052-CAL2	0.2	839	1.164	11.67
9F10052-CAL3	0.4	1776	1.172	11.67
9F10052-CAL4	1	3957	1.093	11.67
9F10052-CAL5	2	8151	1.086	11.67
9F10052-CAL6	5	22129	1.193	11.67
9F10052-CAL7	10	40813	1.114	11.67
9F10052-CAL8	20	84002	1.107	11.67
9F10052-CAL9	50	211770	1.097	11.67
9F10052-CALA	100	420999	1.076	11.67
9F10052-CALB	200	792131	0.998	11.67

AVE RF **1.142** RF RSD **10.29** AVE RT **11.67**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	50	181530	3630.600	11.72
9F10052-CAL2	50	180145	3602.900	11.73
9F10052-CAL3	50	189377	3787.540	11.72
9F10052-CAL4	50	181025	3620.500	11.73
9F10052-CAL5	50	187705	3754.100	11.73
9F10052-CAL6	50	185415	3708.300	11.73
9F10052-CAL7	50	183117	3662.340	11.73
9F10052-CAL8	50	189689	3793.780	11.73
9F10052-CAL9	50	193059	3861.180	11.73
9F10052-CALA	50	195717	3914.340	11.73
9F10052-CALB	50	198363	3967.260	11.73

AVE RF **3754.804** RF RSD **3.28** AVE RT **11.73**

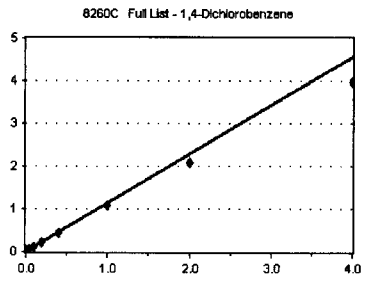
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

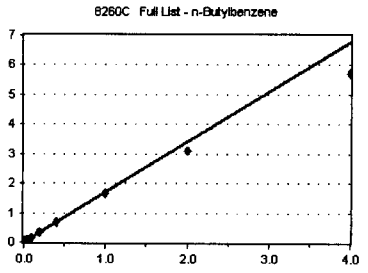


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	550	1.515	11.75
9F10052-CAL2	0.2	912	1.266	11.73
9F10052-CAL3	0.4	1676	1.106	11.74
9F10052-CAL4	1	3955	1.092	11.74
9F10052-CAL5	2	8328	1.109	11.73
9F10052-CAL6	5	21338	1.151	11.74
9F10052-CAL7	10	40761	1.113	11.74
9F10052-CAL8	20	83948	1.106	11.74
9F10052-CAL9	50	207796	1.076	11.73
9F10052-CALA	100	409291	1.046	11.74
9F10052-CALB	200	785942	0.991	11.74

AVE RF **1.143** RF RSD **12.31** AVE RT **11.74**

n-Butylbenzene

Curve Fit: **AVERAGE RF**

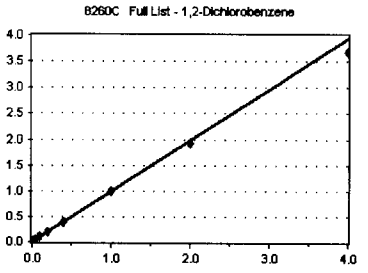


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	852	2.347	11.93
9F10052-CAL2	0.2	1340	1.860	11.94
9F10052-CAL3	0.4	2366	1.562	11.93
9F10052-CAL4	1	5676	1.568	11.93
9F10052-CAL5	2	12104	1.612	11.93
9F10052-CAL6	5	31460	1.697	11.93
9F10052-CAL7	10	61342	1.675	11.93
9F10052-CAL8	20	127870	1.685	11.93
9F10052-CAL9	50	322235	1.669	11.93
9F10052-CALA	100	610605	1.560	11.93
9F10052-CALB	200	1134212	1.429	11.93

AVE RF **1.697** RF RSD **14.23** AVE RT **11.93**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

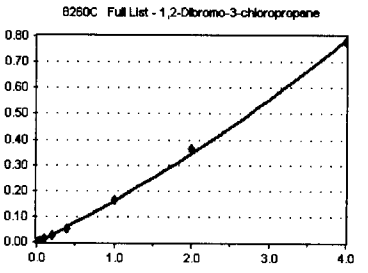


Standard	Concentration	Response	Response Factor	RT
9F10052-CAL1	0.1	365	1.005	12.06
9F10052-CAL2	0.2	679	0.942	12.06
9F10052-CAL3	0.4	1494	0.986	12.07
9F10052-CAL4	1	3595	0.993	12.06
9F10052-CAL5	2	7400	0.986	12.06
9F10052-CAL6	5	19505	1.052	12.06
9F10052-CAL7	10	37337	1.019	12.06
9F10052-CAL8	20	75039	0.989	12.06
9F10052-CAL9	50	191185	0.990	12.06
9F10052-CALA	100	374906	0.958	12.06
9F10052-CALB	200	730354	0.920	12.06

AVE RF **0.986** RF RSD **3.65** AVE RT **12.06**

1,2-Dibromo-3-chloropropane

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	369	0.102	12.67
9F10052-CAL5	2	632	8.417	12.67
9F10052-CAL6	5	2179	0.118	12.67
9F10052-CAL7	10	4525	0.124	12.67
9F10052-CAL8	20	9847	0.130	12.67
9F10052-CAL9	50	31470	0.163	12.67
9F10052-CALA	100	70725	0.181	12.67
9F10052-CALB	200	154313	0.194	12.67

AVE RF **0.137** RF RSD **28.32** AVE RT **12.67**

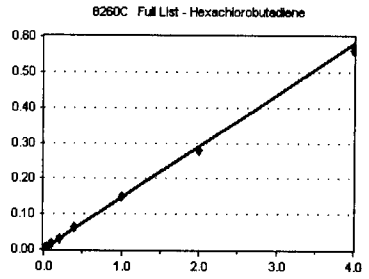
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8260C Full List** Instrument Cal ID: **VC190611S.M VC190611G.I**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

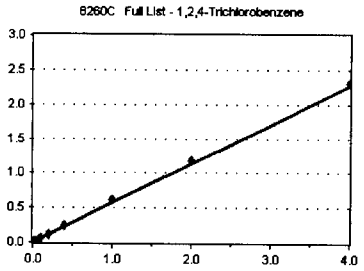


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL4	1	478	0.132	13.17
9F10052-CAL5	2	1057	0.141	13.18
9F10052-CAL6	5	2859	0.154	13.18
9F10052-CAL7	10	5620	0.153	13.19
9F10052-CAL8	20	11665	0.154	13.18
9F10052-CAL9	50	28665	0.148	13.18
9F10052-CALA	100	54668	0.140	13.18
9F10052-CALB	200	111313	0.140	13.18

AVE RF **0.145** RF RSD **5.70** AVE RT **13.18**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**

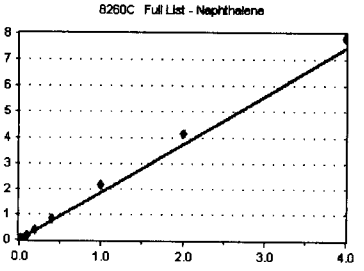


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL3	0.4	778	0.514	13.22
9F10052-CAL4	1	1853	0.512	13.22
9F10052-CAL5	2	3846	0.512	13.21
9F10052-CAL6	5	10845	0.585	13.21
9F10052-CAL7	10	21112	0.576	13.22
9F10052-CAL8	20	46747	0.616	13.21
9F10052-CAL9	50	118093	0.612	13.21
9F10052-CALA	100	230797	0.590	13.21
9F10052-CALB	200	458222	0.578	13.21

AVE RF **0.566** RF RSD **7.48** AVE RT **13.21**

Naphthalene

Curve Fit: **AVERAGE RF**

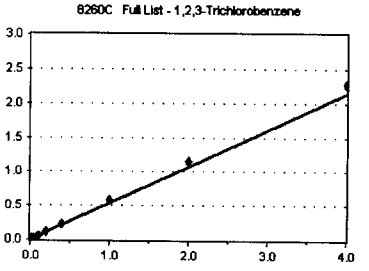


Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL2~~	~~0.2~~	~~0~~	~~0.000~~	~~0.00~~
~~9F10052-CAL3~~	~~0.4~~	~~2231~~	~~1.473~~	~~13.49~~
9F10052-CAL4	1	5329	1.472	13.49
9F10052-CAL5	2	11080	1.476	13.49
9F10052-CAL6	5	34255	1.847	13.49
9F10052-CAL7	10	69695	1.903	13.49
9F10052-CAL8	20	152737	2.013	13.49
9F10052-CAL9	50	414906	2.149	13.49
9F10052-CALA	100	815647	2.084	13.49
9F10052-CALB	200	1554045	1.959	13.49

AVE RF **1.863** RF RSD **13.87** AVE RT **13.49**

1,2,3-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9F10052-CAL1~~	~~0.1~~	~~0~~	~~0.000~~	~~0.00~~
9F10052-CAL2	0.2	389	0.540	13.65
9F10052-CAL3	0.4	608	0.401	13.65
9F10052-CAL4	1	1791	0.495	13.65
9F10052-CAL5	2	3620	0.482	13.65
9F10052-CAL6	5	10203	0.550	13.65
9F10052-CAL7	10	20921	0.571	13.65
9F10052-CAL8	20	43652	0.575	13.65
9F10052-CAL9	50	114134	0.591	13.65
9F10052-CALA	100	225036	0.575	13.65
9F10052-CALB	200	450148	0.567	13.65

AVE RF **0.535** RF RSD **11.02** AVE RT **13.65**

Calibration Status Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

#	ID	Conc	ISTD Conc	Path\File
1	1	50	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061024.D
2	2	100	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061025.D
3	3	250	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061026.D
4	4	500	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061027.D
5	5	1000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061028.D
6	6	2500	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061031.D
7	7	5000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061029.D
8	8	10000	50	C:\msdchem\1\DATA\2019-06\9F10052\VC19061030.D

#	ID	Update Time	Quant Time	Acquisition Time
1	1	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 1:14 am
2	2	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 1:41 am
3	3	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 2:09 am
4	4	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 2:36 am
5	5	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 3:04 am
6	6	Jun 11 10:14 2019	Jun 11 10:13 2019	11 Jun 2019 4:27 am
7	7	Jun 11 10:14 2019	Jun 11 10:12 2019	11 Jun 2019 3:31 am
8	8	Jun 11 10:14 2019	Jun 11 09:57 2019	11 Jun 2019 3:59 am

VC190611G.M Tue Jun 11 10:22:50 2019

Response Factor Report VOA-GCMS3

Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

Calibration Files
1 =VC19061024.D 2 =VC19061025.D 3 =VC19061026.D 4 =VC19061027.D 5 =VC19061028.D 6 =VC19061031.D
7 =VC19061029.D 8 =VC19061030.D

		Compound	1	2	3	4	5	6	7	8	Avg	%RSD
1)	I	Pentafluorobenzene...	ISTD									
2)	S	1,4-Difluorobe...	3.917	3.880	3.985	4.010	4.001	4.037	4.241		4.010	2.89
3)	S	4-Bromofluorob...	2.789	2.856	2.847	2.837	2.894	2.777	2.895	2.717	2.827	2.17
4)	S	Chlorobenzene-...									0.000	-1.00
5)	H	CA-LUFT (C5-C12)	2.847	2.319	1.917	1.815	1.849	1.639	1.734	1.652	1.971	21.00
6)	H	TPHg (C5-C9)	2.651	2.138	1.702	1.574	1.573	1.349	1.441	1.359	1.723	26.23
7)	H	TPHg (C6-C10)	2.116	1.587	1.310	1.213	1.240	1.085	1.161	1.104	1.352	25.66
8)	H	NWTPH-Gx	0.518	0.747	0.927	0.991	1.104	1.064	1.144	1.042	0.942	22.43
9)		Benzene (NR)									0.000	-1.00
10)	S	Toluene-d8 (NR)									0.000	-1.00
11)	C	Toluene (NR)									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-GCMS3

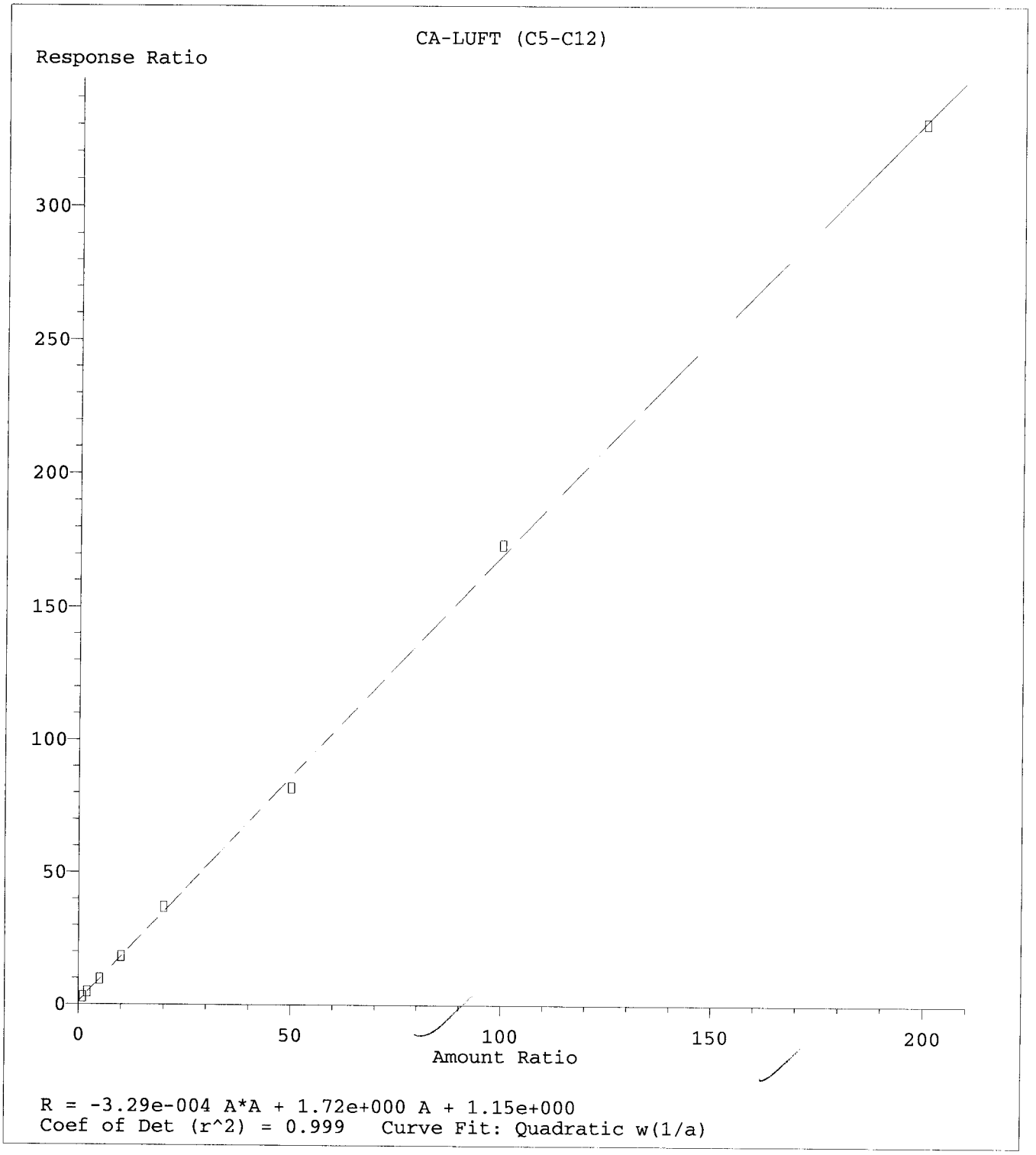
Method Path : C:\msdchem\1\METHODS\
Method File : VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019
Response Via : Initial Calibration

Total Cpnds : 13

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	Pentafluorobenzene (IS)	168	6.028	1.000	A	2	A	A
2	S	1,4-Difluorobenzene (Sur)	TIC	6.582	1.092	A	2	A	A
3	S	4-Bromofluorobenzene (Sur)	TIC	10.834	1.797	A	2	A	A
4	S	Chlorobenzene-d5 (NR)	TIC	9.745	1.617	A	2	A	A
5	H	CA-LUFT (C5-C12)	TIC	9.906	1.643	Q	0	A	A
6	H	TPHg (C5-C9)	TIC	9.906	1.643	Q	0	A	A
7	H	TPHg (C6-C10)	TIC	9.906	1.643	Q	0	A	A
8	H	NWTPH-Gx	TIC	9.906	1.643	Q	0	A	A
9		Benzene (NR)	78	5.931	0.984	A	2	A	A
10	S	Toluene-d8 (NR)	TIC	8.091	1.342	A	2	A	A
11	C	Toluene (NR)	91	8.152	1.352	A	2	A	A
12	S	1,4-Dichlorobenzene-d4 (NR)	TIC	11.723	1.945	A	2	A	A
13		Naphthalene (NR)	128	13.493	2.238	A	2	A	A

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

VC190611G.M Tue Jun 11 10:22:46 2019

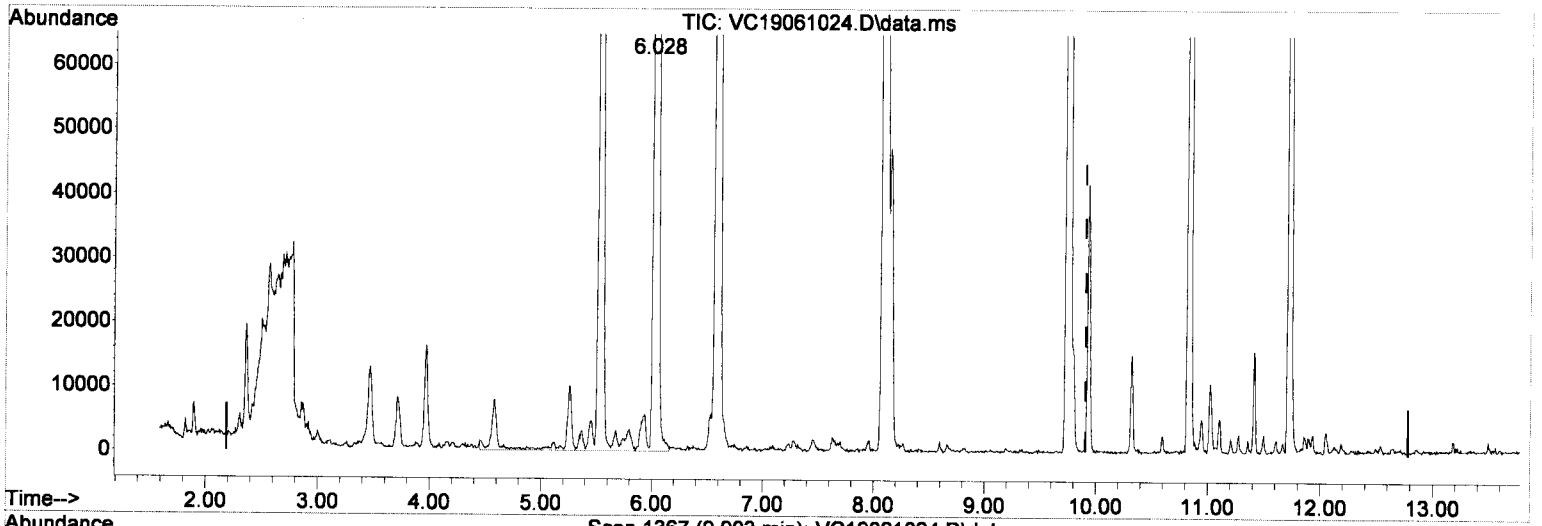


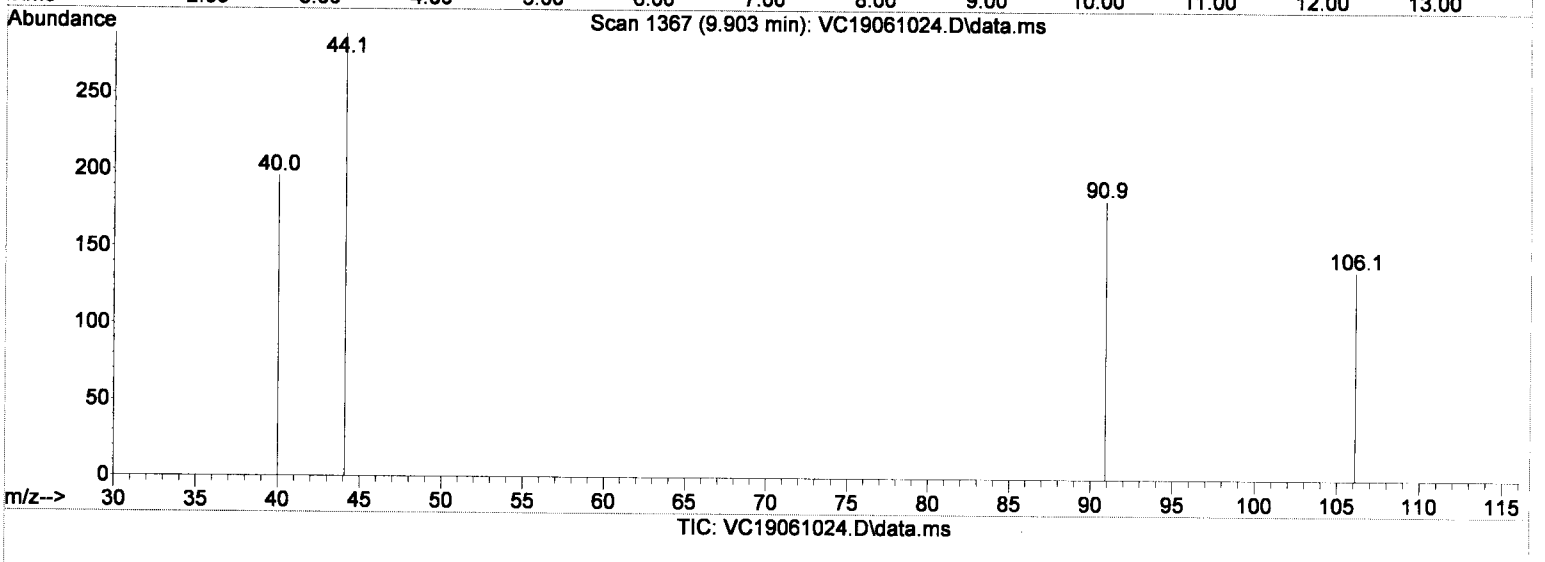
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:07 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





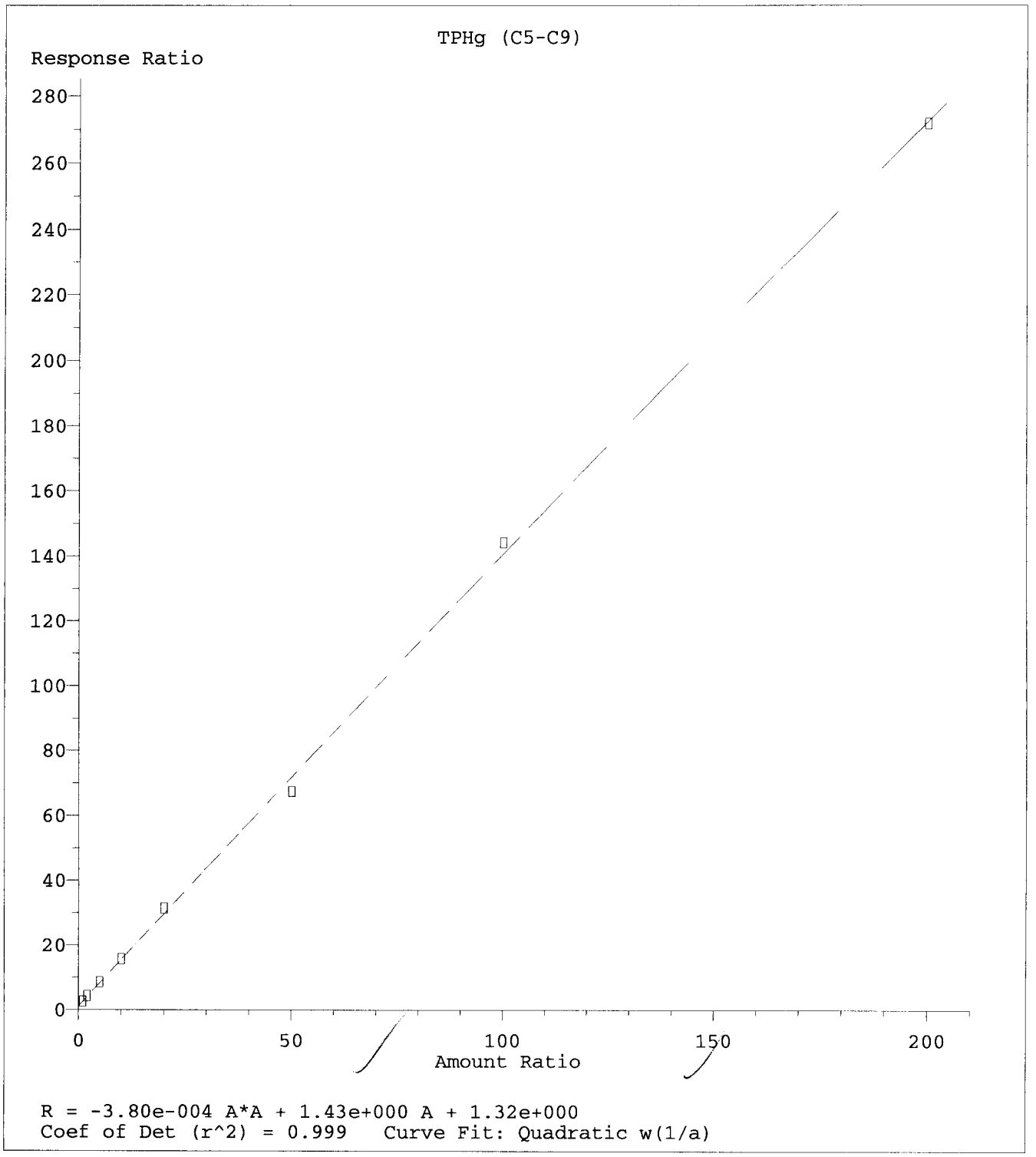
TIC: VC19061024.D\data.ms

(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 9.70 ug/L m

response 476827

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

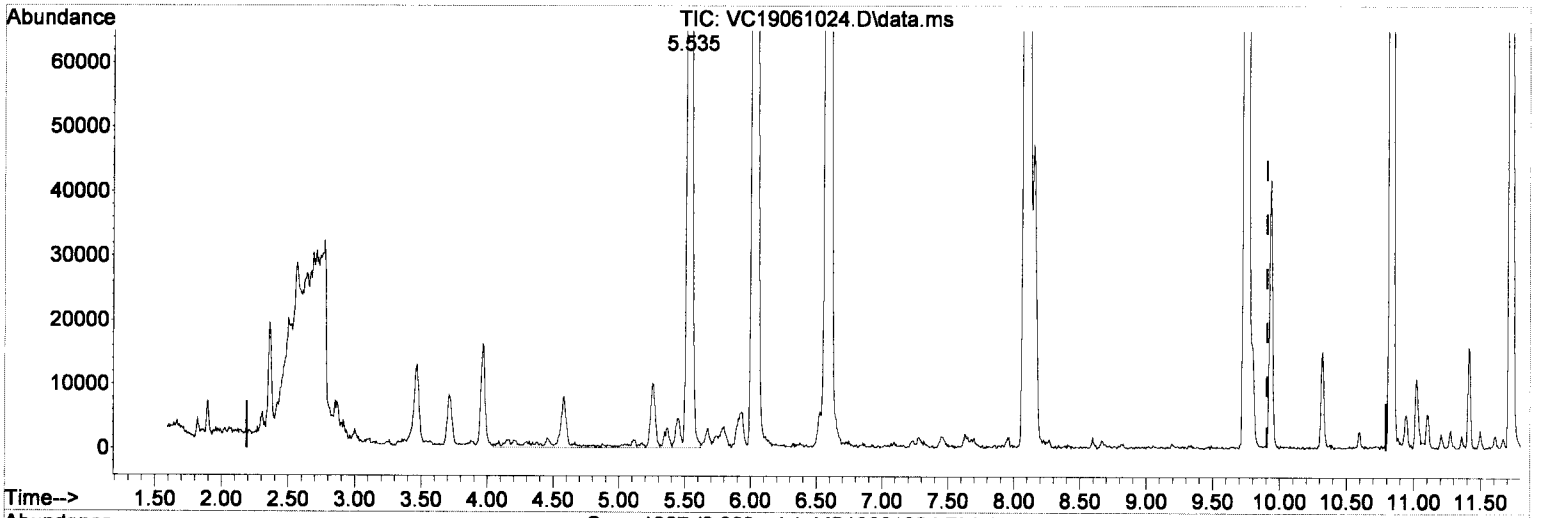


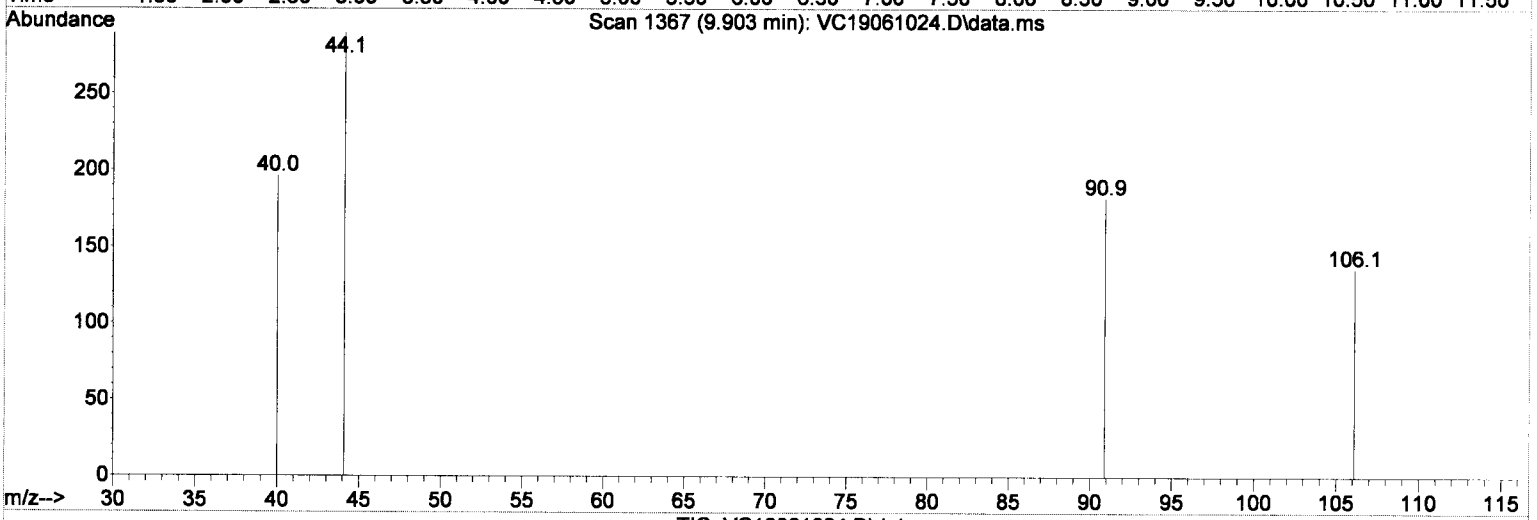
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:49 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





TIC: VC19061024.D\data.ms

(6) TPHg (C5-C9) (H)

9.906min (0.000) 15.35 ug/L m

response 564830

Signal	Exp%	Act%
TIC	100	100
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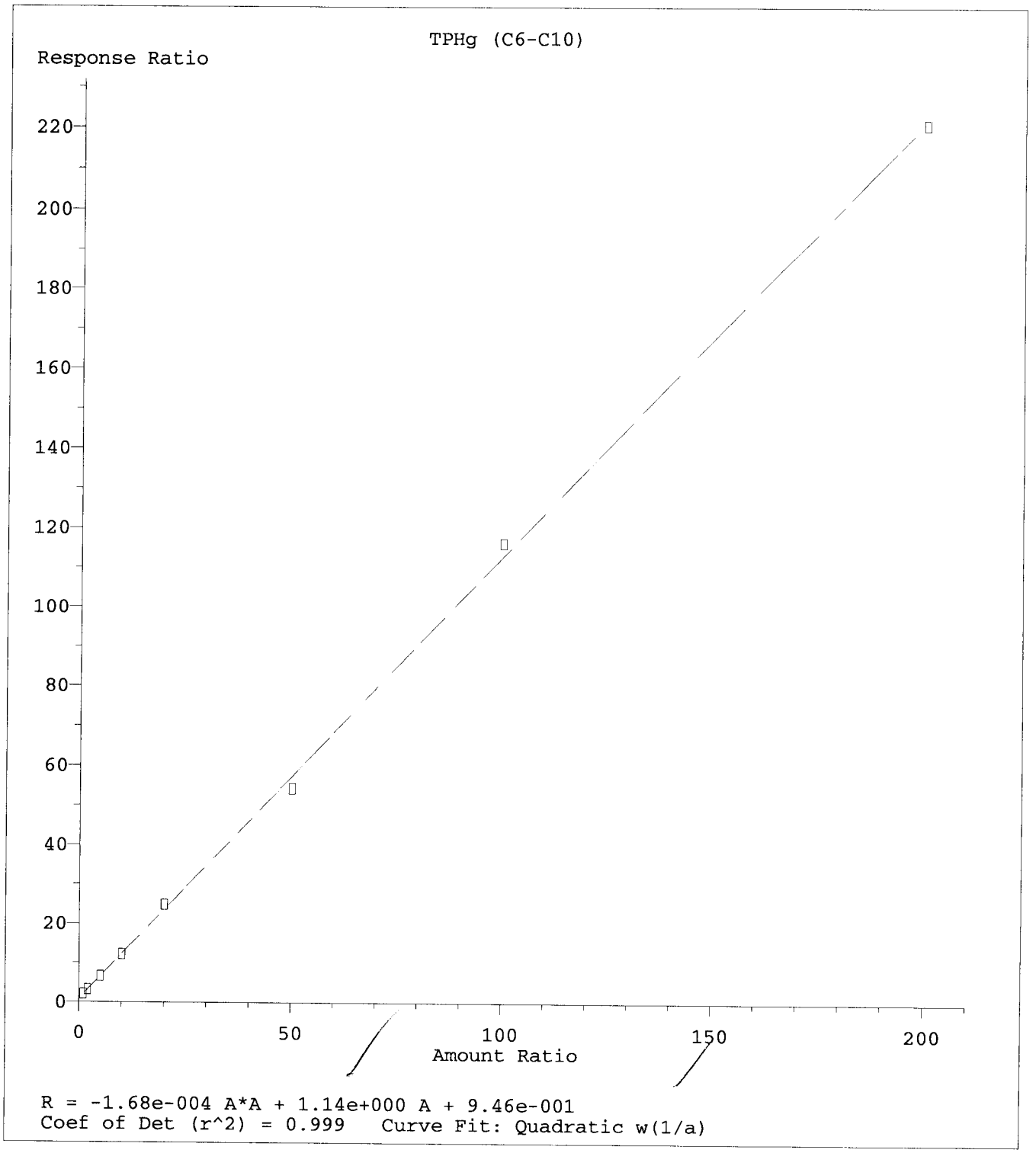
0.00	0.00	0.00
0.00	0.00	0.00

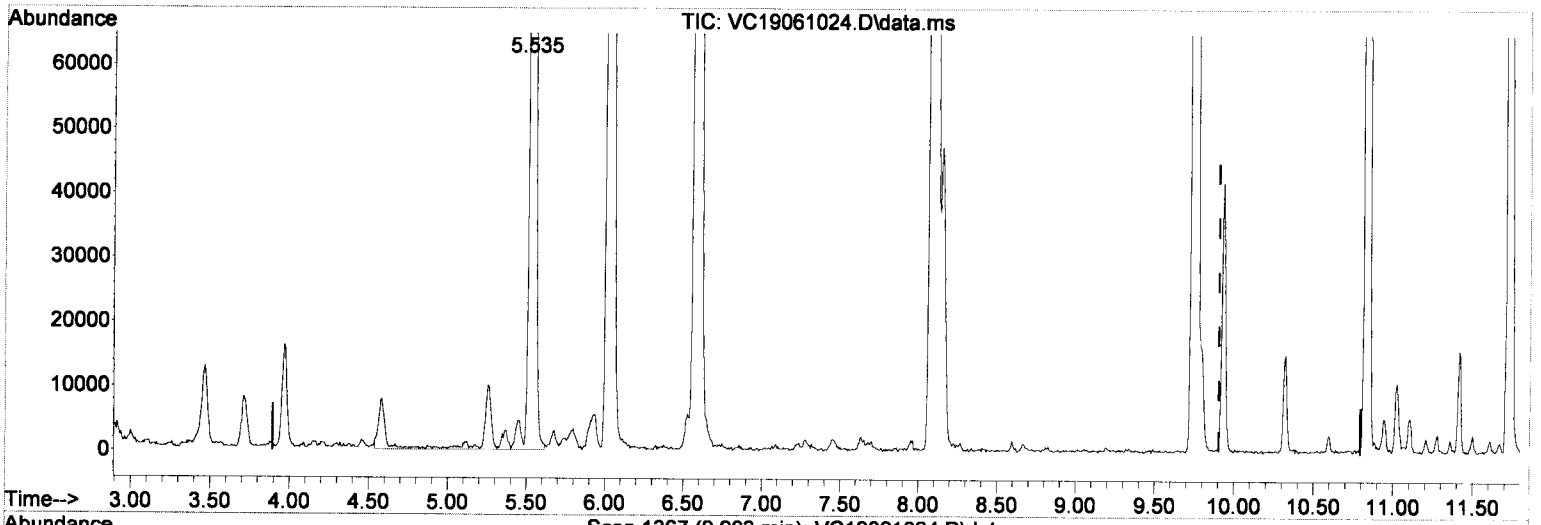


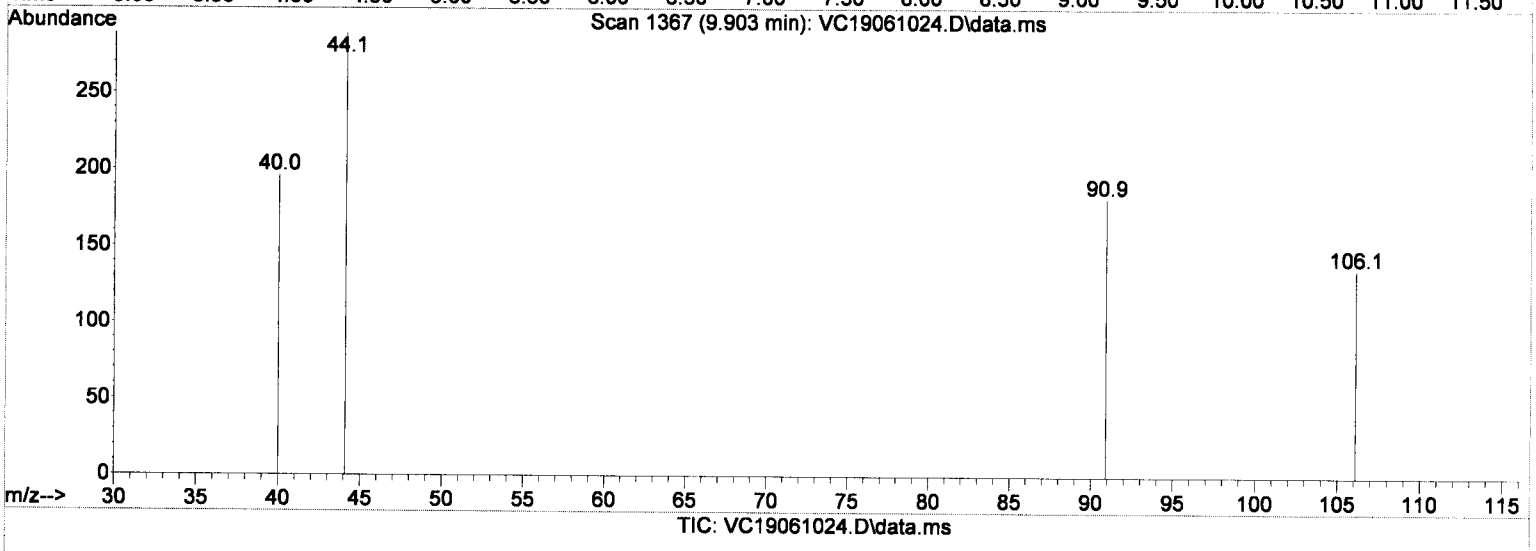
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:14:59 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration



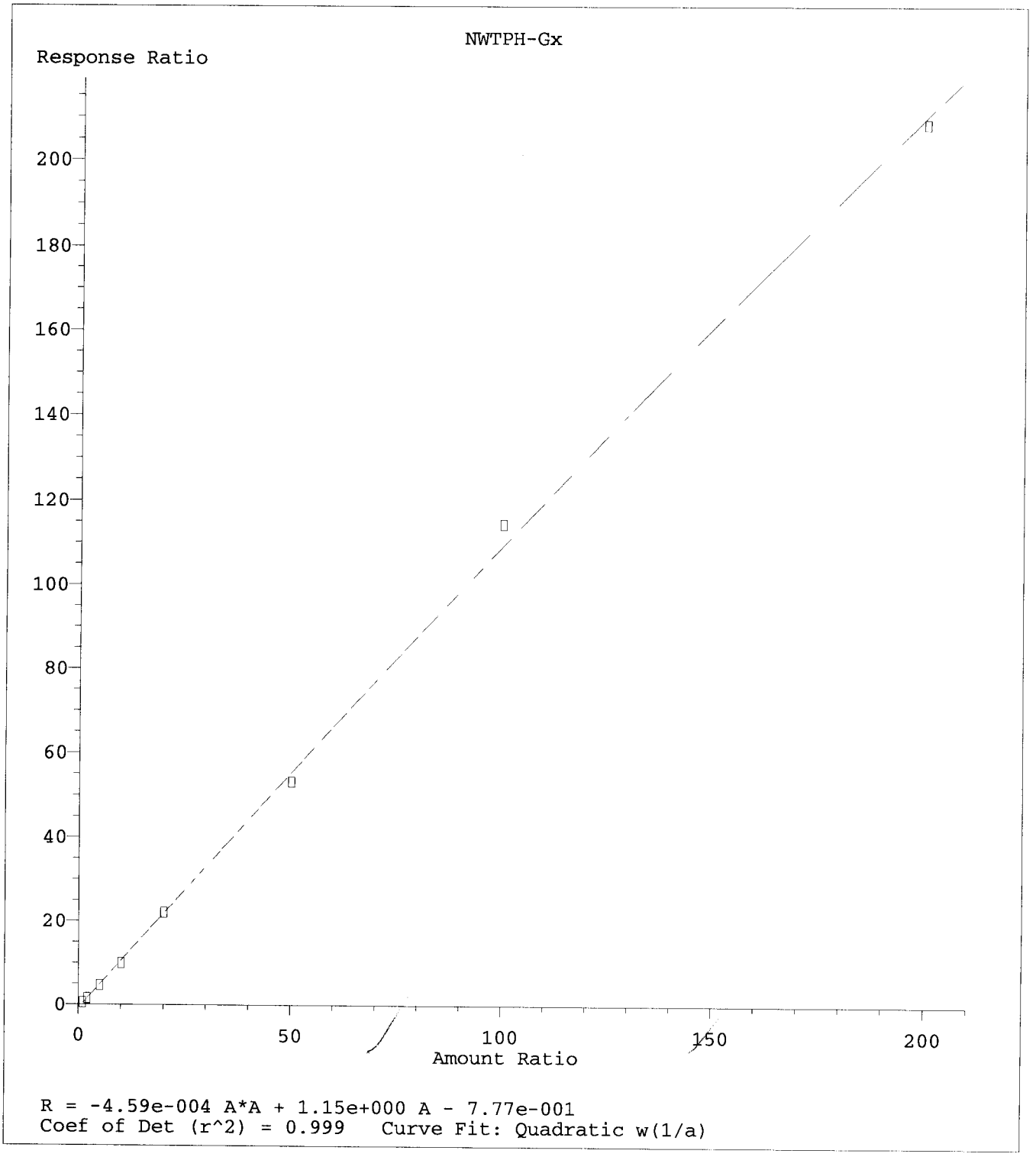


(7) TPHg (C6-C10) (H)

9.906min (0.000) 32.65 ug/L m

response 543699

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

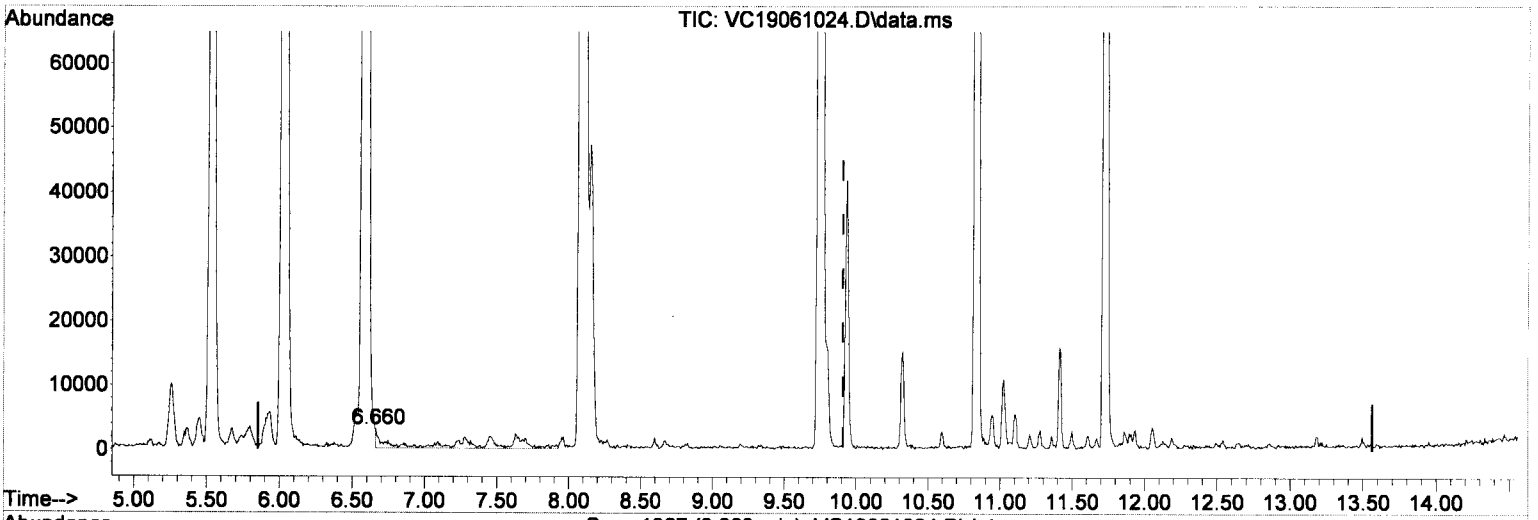


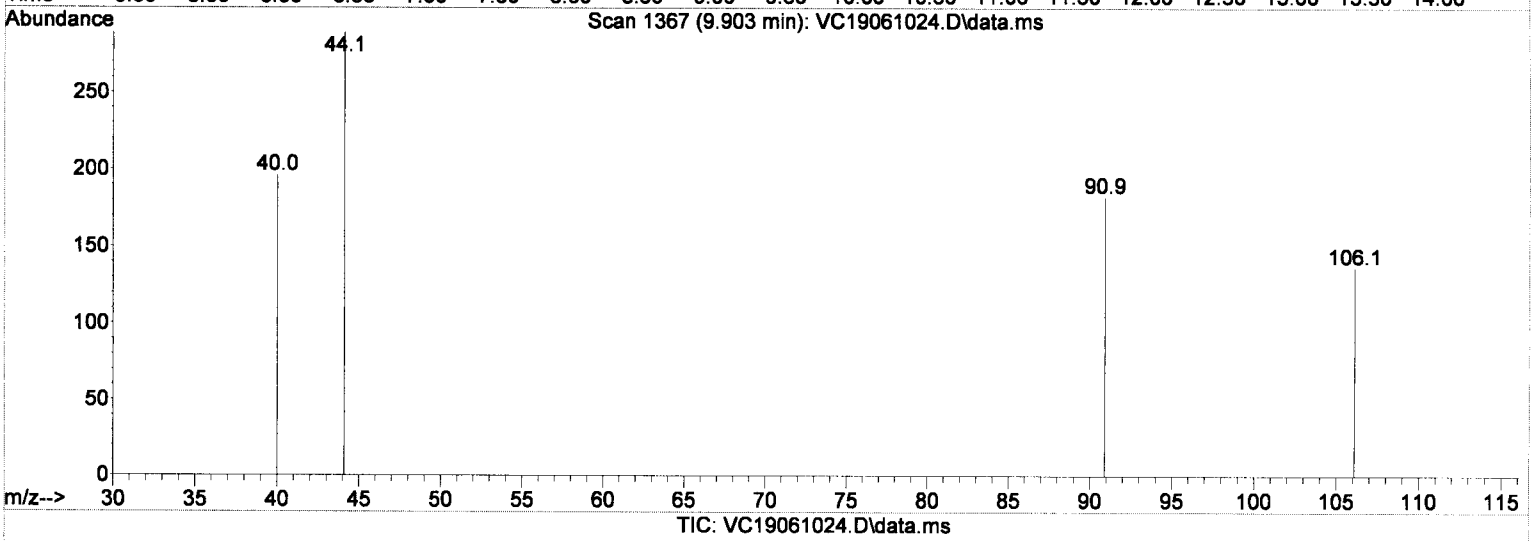
Method Name: C:\msdchem\1\METHODS\VC190611G.M
Calibration Table Last Updated: Tue Jun 11 10:15:10 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\REQUANT\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:16:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:15:20 2019
Response via : Initial Calibration





TIC: VC19061024.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 40.54 ug/L m

response 49234

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9F10052

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
9F10052-TUN2	MS Tune	Soil		A19C135	6/10/2019 11:52:00PM
9F10052-ICB2	Initial Cal Blank	Soil		A19C135	6/11/2019 12:46:00AM
9F10052-CALC	Cal Standard	Soil	A19E372	"	6/11/2019 1:14:00AM
9F10052-CALD	Cal Standard	Soil	A19E373	"	6/11/2019 1:41:00AM
9F10052-CALE	Cal Standard	Soil	A19E374	"	6/11/2019 2:09:00AM
9F10052-CALF	Cal Standard	Soil	A19E375	"	6/11/2019 2:36:00AM
9F10052-CALG	Cal Standard	Soil	A19E183	"	6/11/2019 3:04:00AM
9F10052-CALI	Cal Standard	Soil	A19E185	"	6/11/2019 3:31:00AM
9F10052-CALJ	Cal Standard	Soil	A19E186	"	6/11/2019 3:59:00AM
9F10052-CALH	Cal Standard	Soil	A19E184	"	6/11/2019 4:27:00AM
9F10052-ICV2	Initial Cal Check	Soil	A19B262	"	6/11/2019 5:49:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9F1104** Instrument: **VOA-GCMS3**

8015D-Mod Gasoline (C6-C10 Sequence: **9F10052** Matrix: **Soil**

9F10052-CALC	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALD	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALE	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALF	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALG	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALH	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-CALI	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9F10052-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: 9F10052

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: **A9F1104** Instrument: **VOA-GCMS3**

NWTPH-Gx Sequence: **9F10052** Matrix: **Soil**

9F10052-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\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 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 (IS)	50.000	50.000	0.0	109	0.00
2	S	1,4-Difluorobenzene (Sur)	50.000	47.972	4.1	104	0.00
3	S	4-Bromofluorobenzene (Sur)	50.000	48.228	3.5	104	0.00
4	S	Chlorobenzene-d5 (NR)	-1.000	0.000	0.0	104	0.00
5	H	CA-LUFT (C5-C12)	500.000	508.766	-1.8	111	0.00
6	H	TPHg (C5-C9)	500.000	511.032	-2.2	110	0.00
7	H	TPHg (C6-C10)	500.000	509.539	-1.9	112	0.00
8	H	NWTPH-Gx	500.000	493.147	1.4	115	0.00
9		Benzene (NR)	-1.000	0.000	0.0	108	0.00
10	S	Toluene-d8 (NR)	-1.000	0.000	0.0	105	0.00
11	C	Toluene (NR)	-1.000	0.000	0.0	113	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	124	0.00

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

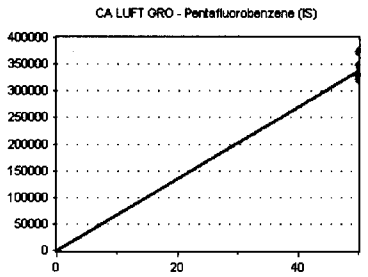
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **CA LUFT GRO** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

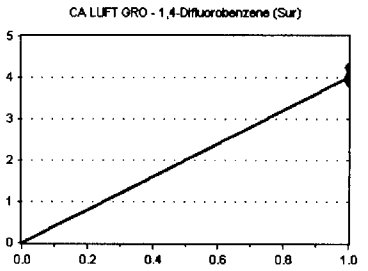


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

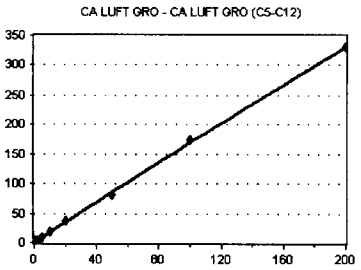


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

CA LUFT GRO (C5-C12)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

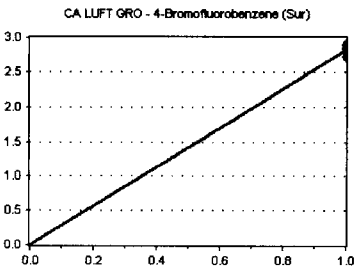


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	916566	2.847	9.91
9F10052-CALD	100	1526302	2.319	9.91
9F10052-CALE	250	3170233	1.917	9.91
9F10052-CALF	500	6025085	1.815	9.91
9F10052-CALG	1000	1.219036E+07	1.849	9.91
9F10052-CALH	2500	3.059738E+07	1.639	9.91
9F10052-CALI	5000	5.7283E+07	1.734	9.91
9F10052-CALJ	10000	1.153515E+08	1.652	9.91

AVE RF **1.971** RF RSD **21.00** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

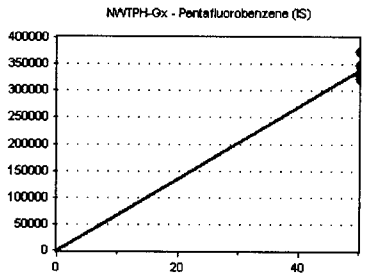
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **NWTPH-Gx** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

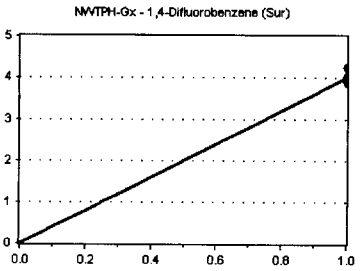


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

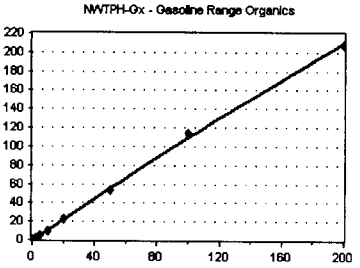


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

Gasoline Range Organics

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

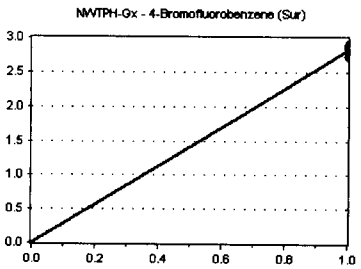


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	166635	0.518	9.91
9F10052-CALD	100	491579	0.747	9.91
9F10052-CALE	250	1533196	0.927	9.91
9F10052-CALF	500	3291113	0.991	9.91
9F10052-CALG	1000	7279463	1.104	9.91
9F10052-CALH	2500	1.985365E+07	1.064	9.91
9F10052-CALI	5000	3.778081E+07	1.144	9.91
9F10052-CALJ	10000	7.278519E+07	1.042	9.91

AVE RF **0.942** RF RSD **22.43** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

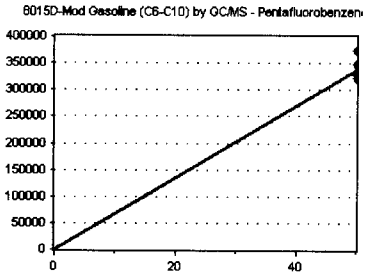
Element Calibration Review Sheet

Calibration ID: **A9F1104** Instrument: **VOA-GCMS3** Calibration Date: **06/11/2019**

Analysis: **8015D-Mod Gasoline (C6-C1** Instrument Cal ID: **VC190611S.M VC190611G.I**

Pentafluorobenzene (IS)

Curve Fit: **AVERAGE RF**

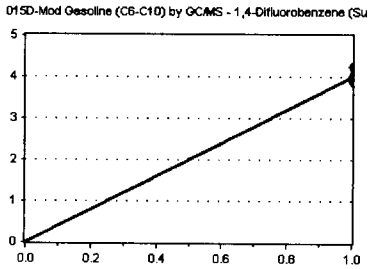


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	321925	6438.500	6.03
9F10052-CALD	50	329041	6580.820	6.03
9F10052-CALE	50	330828	6616.560	6.03
9F10052-CALF	50	332005	6640.100	6.03
9F10052-CALG	50	329683	6593.660	6.03
9F10052-CALH	50	373285	7465.700	6.03
9F10052-CALI	50	330361	6607.220	6.03
9F10052-CALJ	50	349167	6983.340	6.03

AVE RF **6740.738** RF RSD **4.91** AVE RT **6.03**

1,4-Difluorobenzene (Sur)

Curve Fit: **AVERAGE RF**

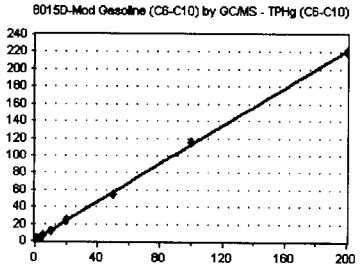


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	1260925	3.917	6.59
9F10052-CALD	50	1276639	3.880	6.58
9F10052-CALE	50	1318246	3.985	6.59
9F10052-CALF	50	1331331	4.010	6.58
9F10052-CALG	50	1319204	4.001	6.59
9F10052-CALH	50	1506914	4.037	6.59
9F10052-CALI	50	1401216	4.241	6.58
~~9F10052-CALJ~~	~~50~~	~~1654641~~	~~4.739~~	~~6.59~~

AVE RF **4.010** RF RSD **2.89** AVE RT **6.58**

TPHg (C6-C10)

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

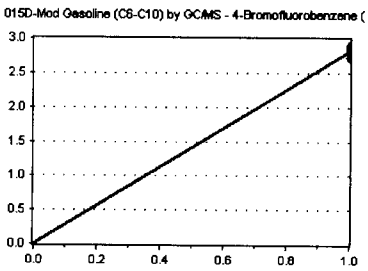


Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	681199	2.116	9.91
9F10052-CALD	100	1044704	1.587	9.91
9F10052-CALE	250	2166456	1.310	9.91
9F10052-CALF	500	4027123	1.213	9.91
9F10052-CALG	1000	8174017	1.240	9.91
9F10052-CALH	2500	2.024435E+07	1.085	9.91
9F10052-CALI	5000	3.834621E+07	1.161	9.91
9F10052-CALJ	10000	7.708431E+07	1.104	9.91

AVE RF **1.352** RF RSD **25.66** AVE RT **9.91**

4-Bromofluorobenzene (Sur)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9F10052-CALC	50	897751	2.789	10.83
9F10052-CALD	50	939798	2.856	10.84
9F10052-CALE	50	941925	2.847	10.83
9F10052-CALF	50	941979	2.837	10.83
9F10052-CALG	50	953942	2.894	10.83
9F10052-CALH	50	1036724	2.777	10.84
9F10052-CALI	50	956477	2.895	10.84
9F10052-CALJ	50	948813	2.717	10.83

AVE RF **2.827** RF RSD **2.17** AVE RT **10.83**

Injection Log

Directory: j:\DATA\2019-06\9F10052

Line	Vial	FileName	Multiplier	SampleName			Misc Info	Injected
1	1	Vc19061001.d	1.	9F10052-IBL1			1X 5mL DI+MeOH	10 Jun 2019 14:39
2	2	Vc19061002.d	1.	9F10052-TUN1			A19C135 BFB (IS/...	10 Jun 2019 15:06
3	3	Vc19061003.d	1.	9F10052-ICB1			1X 5mL DI+MeOH	10 Jun 2019 15:34
4	4	Vc19061004.d	1.	9F10052-CAL1			1X 5mL 0.1ppb VO...	10 Jun 2019 16:02
5	5	Vc19061005.d	1.	9F10052-CAL2			1X 5mL 0.2ppb VO...	10 Jun 2019 16:29
6	6	Vc19061006.d	1.	9F10052-CAL3			1X 5mL 0.4ppb VO...	10 Jun 2019 16:57
7	7	Vc19061007.d	1.	9F10052-CAL4			1X 5mL 1ppb VOC ...	10 Jun 2019 17:25
8	8	Vc19061008.d	1.	9F10052-CAL5			1X 5mL 2ppb VOC ...	10 Jun 2019 17:52
9	9	Vc19061009.d	1.	9F10052-CAL6			1X 5mL 5ppb VOC ...	10 Jun 2019 18:20
10	10	Vc19061010.d	1.	9F10052-CAL7			1X 5mL 10ppb VOC...	10 Jun 2019 18:48
11	11	Vc19061011.d	1.	9F10052-CAL8			1X 5mL 20ppb VOC...	10 Jun 2019 19:15
12	12	Vc19061012.d	1.	9F10052-CAL9			1X 5mL 50ppb VOC...	10 Jun 2019 19:43
13	13	Vc19061013.d	1.	9F10052-IBL2			1X 5mL DI+MeOH	10 Jun 2019 20:11
14	14	Vc19061014.d	1.	9F10052-CALA			1X 5mL 100ppb VO...	10 Jun 2019 20:38
15	15	Vc19061015.d	1.	9F10052-IBL3			1X 5mL DI+MeOH	10 Jun 2019 21:06
16	16	Vc19061016.d	1.	9F10052-CALB			1X 5mL 200ppb VO...	10 Jun 2019 21:34
17	17	Vc19061017.d	1.	9F10052-IBL4			1X 5mL DI+MeOH	10 Jun 2019 22:01
18	18	Vc19061018.d	1.	9F10052-IBL5			1X 5mL DI+MeOH	10 Jun 2019 22:29
19	19	Vc19061019.d	1.	9F10052-ICV1			1X 5mL 20ppb VOC...	10 Jun 2019 22:56
20	20	Vc19061020.d	1.	9F10052-IBL6			1X 5mL DI+MeOH	10 Jun 2019 23:24
21	21	Vc19061021.d	1.	9F10052-TUN2	RT		A19C135 BFB (IS/...	10 Jun 2019 23:52
22	22	Vc19061022.d	1.	9F10052-IBL7			1X 5mL DI+MeOH	11 Jun 2019 00:19
23	23	Vc19061023.d	1.	9F10052-ICB2			1X 5mL DI+MeOH	11 Jun 2019 00:46
24	24	Vc19061024.d	1.	9F10052-CALC			1X 5mL 50ppb GX ...	11 Jun 2019 01:14
25	25	Vc19061025.d	1.	9F10052-CALD		100	1X 5mL 50ppb GX ...	11 Jun 2019 01:41
26	26	Vc19061026.d	1.	9F10052-CALE		250	1X 5mL 50ppb GX ...	11 Jun 2019 02:09
27	27	Vc19061027.d	1.	9F10052-CALF		500	1X 5mL 50ppb GX ...	11 Jun 2019 02:36
28	28	Vc19061028.d	1.	9F10052-CALG		1000	1X 5mL 50ppb GX ...	11 Jun 2019 03:04
29	29	Vc19061029.d	1.	9F10052-~~CALH~~ I		5000	1X 5mL 50ppb GX ...	11 Jun 2019 03:31
30	30	Vc19061030.d	1.	9F10052-~~CALI~~ CALJ		10000	1X 5mL 50ppb GX ...	11 Jun 2019 03:59
31	31	Vc19061031.d	1.	9F10052-~~CALJ~~ CALI H		2500	1X 5mL 50ppb GX ...	11 Jun 2019 04:27
32	32	Vc19061032.d	1.	9F10052-IBL8			1X 5mL DI+MeOH	11 Jun 2019 04:54
33	33	Vc19061033.d	1.	9F10052-IBL9			1X 5mL DI+MeOH	11 Jun 2019 05:22
34	34	Vc19061034.d	1.	9F10052-ICV2			1X 5mL 500ppb GX...	11 Jun 2019 05:49
35	35	Vc19061035.d	1.	9F10052-IBLA			1X 5mL DI+MeOH	11 Jun 2019 06:17

TB 6/11/19

TB 6/11/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061001.D
Acq On : 10 Jun 2019 2:39 pm
Operator : TB
Sample : 9F10052-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

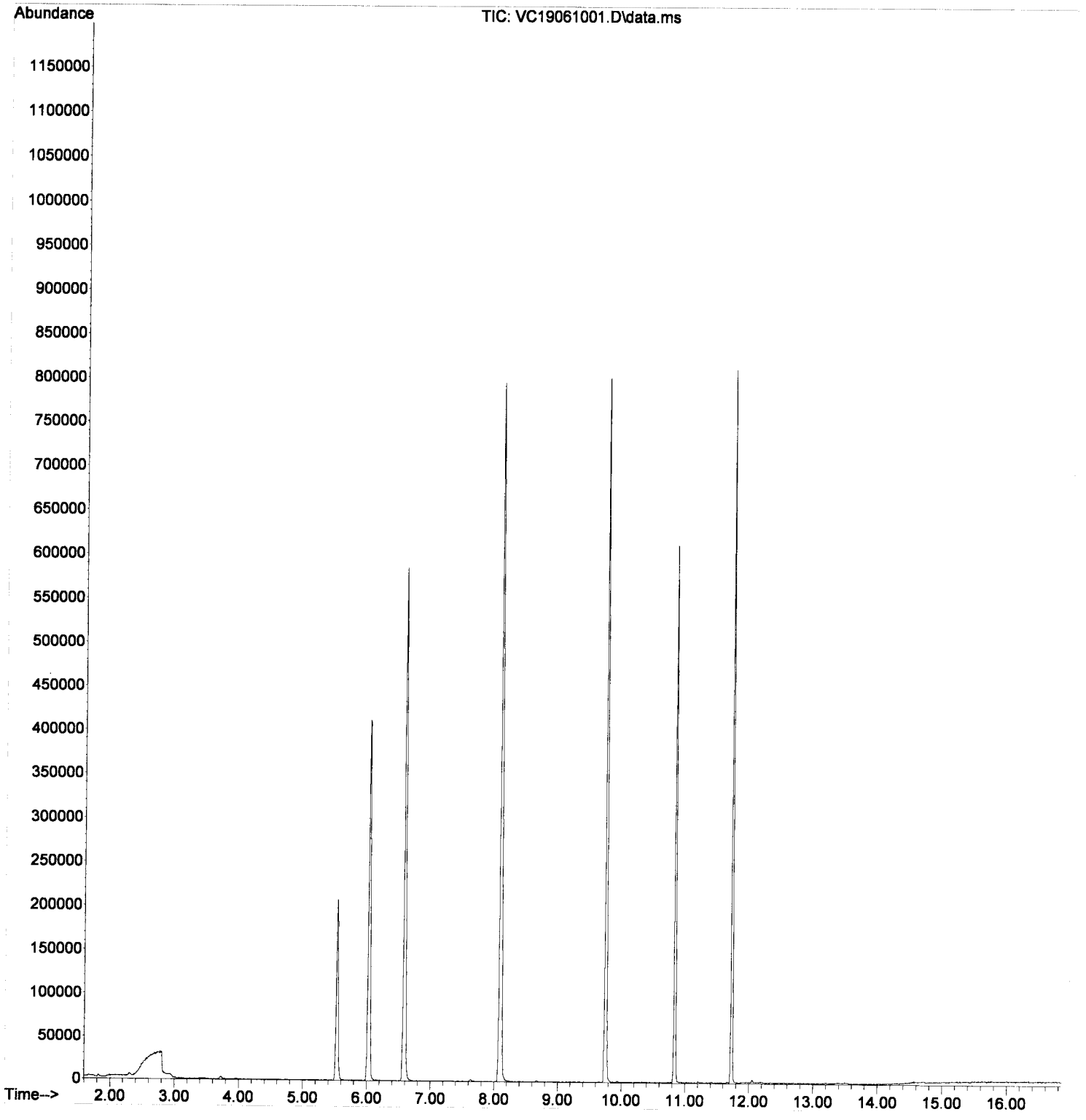
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	335189	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	457350	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	182378	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	141286	46.25	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	547296	48.46	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	642557	50.29	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	162915	49.47	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.864	50	648	0.19	ug/L	#	48
5) Bromomethane	2.308	96	1745	1.29	ug/L		88
6) Chloroethane	2.466	64	182	0.20	ug/L	#	1
11) Iodomethane	3.233	142	335	1.63	ug/L	#	47
12) Methylene Chloride	3.726	84	1753	0.78	ug/L		89
13) Acetone	3.841	43	324	0.27	ug/L	#	42
52) m,p-Xylenes (2)	9.937	91	731	0.09	ug/L		93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061001.D
Acq On : 10 Jun 2019 2:39 pm
Operator : TB
Sample : 9F10052-IBL1
Misc : 1X 5mL DI+MeOH
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

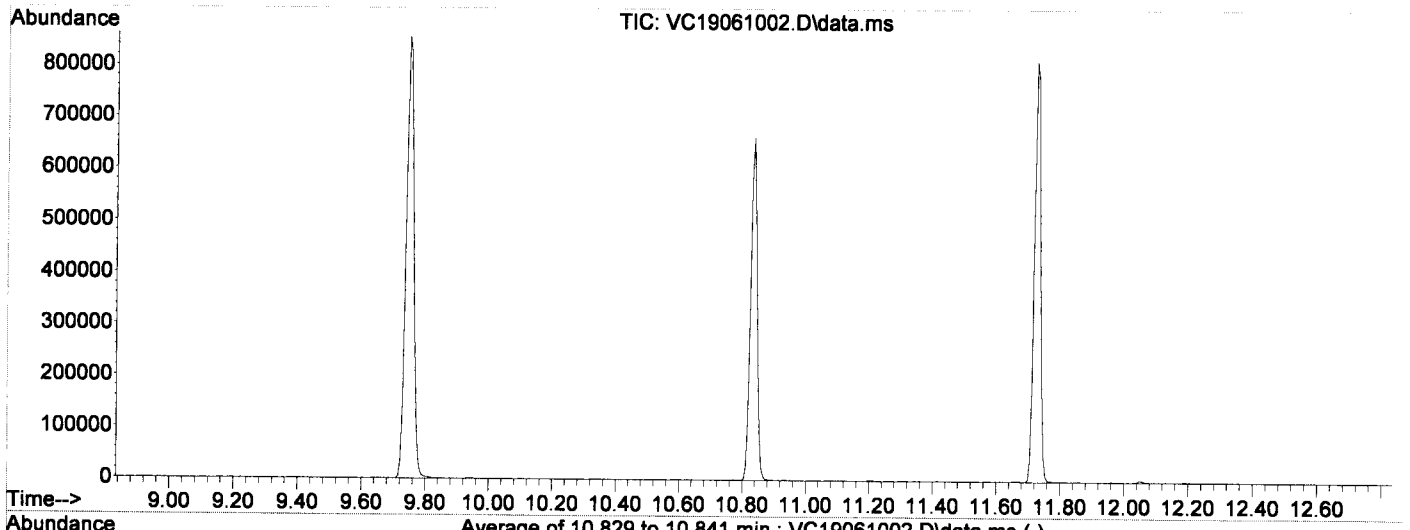
Quant Time: Jun 11 09:53:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

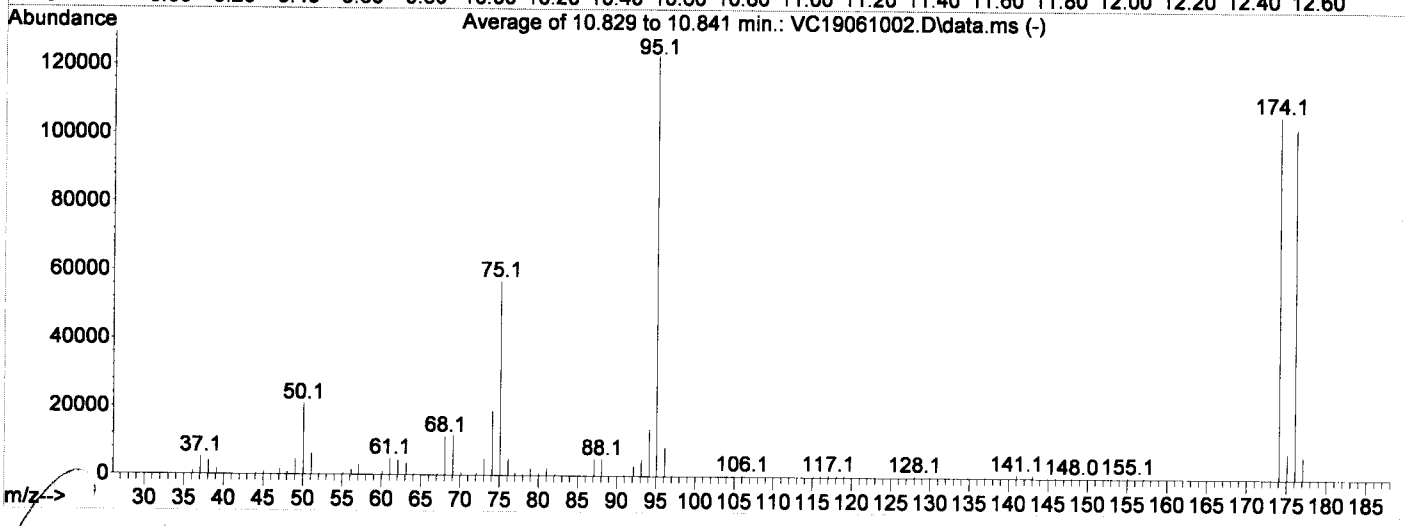


Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611S.M
Title : EPA 8260: Volatile Organic Compounds
Last Update : Tue Jun 11 09:42:50 2019





AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	16.9	20829	PASS
75	95	30	60	46.2	56824	PASS
95	95	100	100	100.0	123024	PASS
96	95	5	9	7.0	8583	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	86.2	105989	PASS
175	174	5	9	7.3	7718	PASS
176	174	95	101	96.7	102512	PASS
177	176	5	9	6.9	7076	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

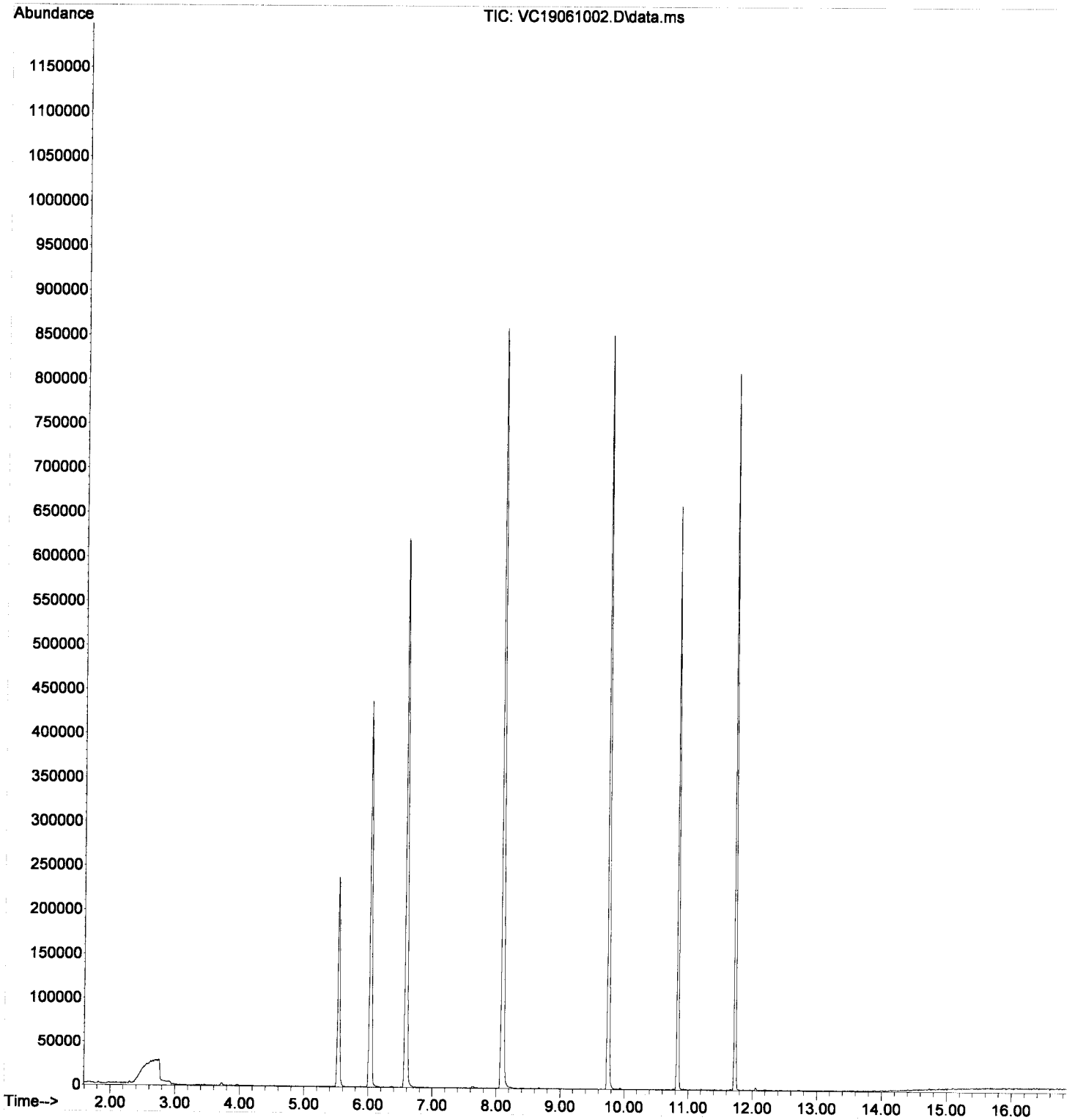
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	346224	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	484330	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	191767	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	165479	52.44	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	593168	50.84	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	703807	52.02	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	171768	49.60	ug/L		0.00
Target Compounds							Qvalue
5) Bromomethane	2.306	96	743	0.53	ug/L		88
6) Chloroethane	2.525	64	398	0.43	ug/L	#	1
12) Methylene Chloride	3.717	84	1460	0.63	ug/L		90
13) Acetone	3.845	43	391	0.32	ug/L	#	42
27) 1,1-Dichloropropene	5.579	75	398	0.11	ug/L	#	41
52) m,p-Xylenes (2)	9.947	91	1077	0.12	ug/L	#	52

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061002.D
Acq On : 10 Jun 2019 3:06 pm
Operator : TB
Sample : 9F10052-TUN1
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:53:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061003.D
Acq On : 10 Jun 2019 3:34 pm
Operator : TB
Sample : 9F10052-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:15 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

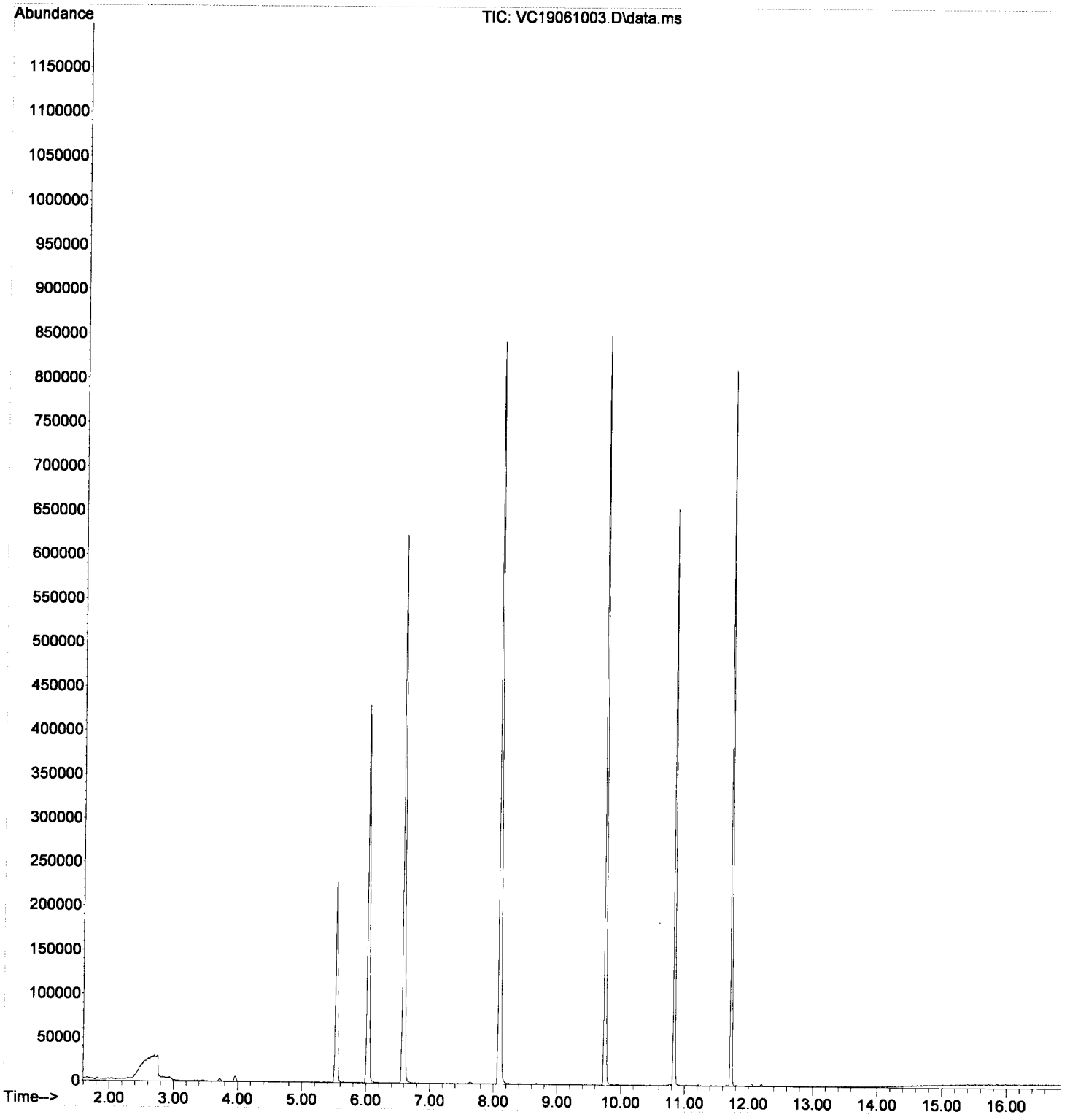
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.026	168	343579	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	484777	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	188807	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.533	111	154915	49.47	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.586	114	568148	49.07	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	674639	49.81	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.832	174	170597	50.04	ug/L		0.00
Target Compounds							Qvalue
3) Chloromethane	1.853	50	331	0.09	ug/L		84
5) Bromomethane	2.297	96	1264	0.91	ug/L		76
6) Chloroethane	2.510	64	121	0.13	ug/L	#	1
11) Iodomethane	3.246	142	244	1.55	ug/L	#	47
12) Methylene Chloride	3.726	84	1768	0.77	ug/L		81
13) Acetone	3.836	43	318	0.26	ug/L	#	42
15) n-Hexane	3.970	86	709	Below Cal		#	26
52) m,p-Xylenes (2)	9.938	91	817	0.09	ug/L		81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061003.D
Acq On : 10 Jun 2019 3:34 pm
Operator : TB
Sample : 9F10052-ICB1
Misc : 1X 5mL DI+MeOH
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:15 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:04:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	324487	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	458762	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	181530	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	141951	40.40	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	543971	43.58	ug/L	0.00
39) Toluene-d8 (S)	8.097	98	645647	52.02	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	161208	51.48	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.		
3) Chloromethane	0.000		0	N.D.	d	
4) Vinyl Chloride	1.947	62	192	0.06	ug/L	58
5) Bromomethane	0.000		0	N.D.	d	
6) Chloroethane	0.000		0	N.D.	d	
7) Trichlorofluoromethane	0.000		0	N.D.		
8) 1,1-Dichloroethene	0.000		0	N.D.	d	
9) Carbon Disulfide	0.000		0	N.D.	d	
10) Freon 113	0.000		0	N.D.	d	
11) Iodomethane	0.000		0	N.D.		
12) Methylene Chloride	3.723	84	1951	Below Cal	#	73
13) Acetone	0.000		0	N.D.	d	
14) t-1,2-Dichloroethene	0.000		0	N.D.	d	
15) n-Hexane	3.967	86	1308	0.36	ug/L #	70
16) Methyl-tert-butyl-ether	0.000		0	N.D.	d	
17) 1,1-Dichloroethane	0.000		0	N.D.	d	
18) Acrylonitrile	0.000		0	N.D.		
19) c-1,2-Dichloroethene	0.000		0	N.D.	d	
20) 2,2-Dichloropropane	0.000		0	N.D.	d	
21) Bromochloromethane	0.000		0	N.D.		
22) Chloroform	0.000		0	N.D.	d	
23) Carbon Tetrachloride	0.000		0	N.D.	d	
24) Tetrahydrofuran	0.000		0	N.D.	d	
25) 1,1,1-Trichloroethane	0.000		0	N.D.	d	
27) 1,1-Dichloropropene	0.000		0	N.D.	d	
28) 2-Butanone (MEK)	0.000		0	N.D.	d	
29) Benzene	5.932	78	1173	0.08	ug/L	80
30) 1,2-Dichloroethane (EDC)	0.000		0	N.D.	d	
31) iso-Butyl Alcohol	0.000		0	N.D.	d	
33) Trichloroethene (TCE)	0.000		0	N.D.	d	
34) Dibromomethane	0.000		0	N.D.		
35) 1,2-Dichloropropane	0.000		0	N.D.	d	
36) Bromodichloromethane	0.000		0	N.D.		
38) c-1,3-Dichloropropene	0.000		0	N.D.		
40) Toluene	0.000		0	N.D.	d	
41) Tetrachloroethene (PCE)	0.000		0	N.D.	d	
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d	
43) t-1,3-Dichloropropene	0.000		0	N.D.		
44) 1,1,2-Trichloroethane	0.000		0	N.D.	d	
45) Dibromochloromethane	0.000		0	N.D.		
46) 1,3-Dichloropropane	0.000		0	N.D.	d	
47) 1,2-Dibromoethane (EDB)	0.000		0	N.D.	d	
48) 2-Hexanone	0.000		0	N.D.	d	

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:04:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	0.000		0	N.D.	d		
50) Ethylbenzene	9.795	91	1463	0.12	ug/L		91
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.935	91	2386	0.27	ug/L		88
53) o-Xylene	10.324	91	1221	0.13	ug/L		71
54) Styrene	0.000		0	N.D.	d		
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.592	105	1075	0.10	ug/L		85
59) Bromobenzene	0.000		0	N.D.	d		
60) n-Propylbenzene	10.951	91	1339	0.12	ug/L		92
61) 1,1,2,2-Tetrachloroethane	0.000		0	N.D.	d		
62) 2-Chlorotoluene	0.000		0	N.D.			
63) 1,3,5-Trimethylbenzene	11.103	105	866	0.12	ug/L		68
64) 1,2,3-Trichloropropane	0.000		0	N.D.			
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	704	0.11	ug/L	#	47
67) tert-Butylbenzene	11.358	91	444	0.11	ug/L	#	57
68) 1,2,4-Trimethylbenzene	11.413	105	993	0.13	ug/L		69
69) sec-Butylbenzene	11.498	105	846	0.10	ug/L		82
70) 4-Isopropyltoluene	11.602	119	815	0.11	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	529	0.13	ug/L	#	74
72) 1,4-Dichlorobenzene	11.748	146	550	0.13	ug/L		82
73) n-Butylbenzene	11.930	91	852	0.14	ug/L		91
74) 1,2-Dichlorobenzene	12.058	146	365	0.09	ug/L		68
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d		
78) Naphthalene	0.000		0	N.D.	d		
79) 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\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (I)	6.029	168	324487	50.00 ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	458762	50.00 ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	181530	50.00 ug/L	0.00
System Monitoring Compounds					
26) Dibromofluoromethane (S)	5.530	111	141951	40.40 ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.589	114	543971	43.58 ug/L	0.00
39) Toluene-d8 (S)	8.097	98	645647	52.02 ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	161208	51.43 ug/L	0.00
Target Compounds					Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	
3) Chloromethane	1.868	50	606	0.13 ug/L	90
4) Vinyl Chloride	1.947	62	192	0.06 ug/L	58
5) Bromomethane	2.306	96	992	0.53 ug/L #	72
6) Chloroethane	2.452	64	138	0.11 ug/L #	1
7) Trichlorofluoromethane	0.000		0	N.D.	
8) 1,1-Dichloroethene	3.097	61	297	0.09 ug/L #	58
9) Carbon Disulfide	3.103	76	338	0.06 ug/L	77
10) Freon 113	3.146	101	159	0.06 ug/L	77
11) Iodomethane	0.000		0	N.D.	
12) Methylene Chloride	3.723	84	1951	Below Cal #	73
13) Acetone	3.851	43	463	0.32 ug/L #	42
14) t-1,2-Dichloroethene	3.882	61	272	0.07 ug/L #	67
15) n-Hexane	3.967	86	1308	0.36 ug/L #	70
16) Methyl-tert-butyl-ether	4.046	73	991	0.09 ug/L	60
17) 1,1-Dichloroethane	4.514	63	363	0.08 ug/L #	49
18) Acrylonitrile	0.000		0	N.D.	
19) c-1,2-Dichloroethene	5.062	61	218	0.05 ug/L #	54
20) 2,2-Dichloropropane	5.184	77	118	0.03 ug/L #	27
21) Bromochloromethane	0.000		0	N.D.	
22) Chloroform	5.354	83	364	0.07 ug/L	85
23) Carbon Tetrachloride	5.536	117	212	0.07 ug/L #	1
24) Tetrahydrofuran	5.549	42	102	0.05 ug/L #	26
25) 1,1,1-Trichloroethane	5.542	97	230	0.05 ug/L #	63
27) 1,1-Dichloropropene	5.676	75	292	0.07 ug/L #	41
28) 2-Butanone (MEK)	5.725	43	385	0.15 ug/L	54
29) Benzene	5.932	78	1173	0.08 ug/L	80
30) 1,2-Dichloroethane (EDC)	6.139	62	293	0.07 ug/L #	50
31) iso-Butyl Alcohol	6.285	43	342	1.06 ug/L	95
33) Trichloroethene (TCE)	6.558	130	155	0.04 ug/L #	45
34) Dibromomethane	0.000		0	N.D.	
35) 1,2-Dichloropropane	7.106	63	170	0.05 ug/L #	37
36) Bromodichloromethane	0.000		0	N.D.	
38) c-1,3-Dichloropropene	0.000		0	N.D.	
40) Toluene	8.152	91	1880	0.15 ug/L	85
41) Tetrachloroethene (PCE)	8.602	166	233	0.08 ug/L #	71
42) 4-Methyl-2-Pentanone (...	8.633	43	471	0.13 ug/L #	41
43) t-1,3-Dichloropropene	0.000		0	N.D	
44) 1,1,2-Trichloroethane	8.828	97	135	0.05 ug/L #	45
45) Dibromochloromethane	0.000		0	N.D	
46) 1,3-Dichloropropane	9.113	76	374	0.08 ug/L #	27
47) 1,2-Dibromoethane (EDB)	9.253	107	110	0.05 ug/L #	7
48) 2-Hexanone	9.515	43	201	0.08 ug/L #	31

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

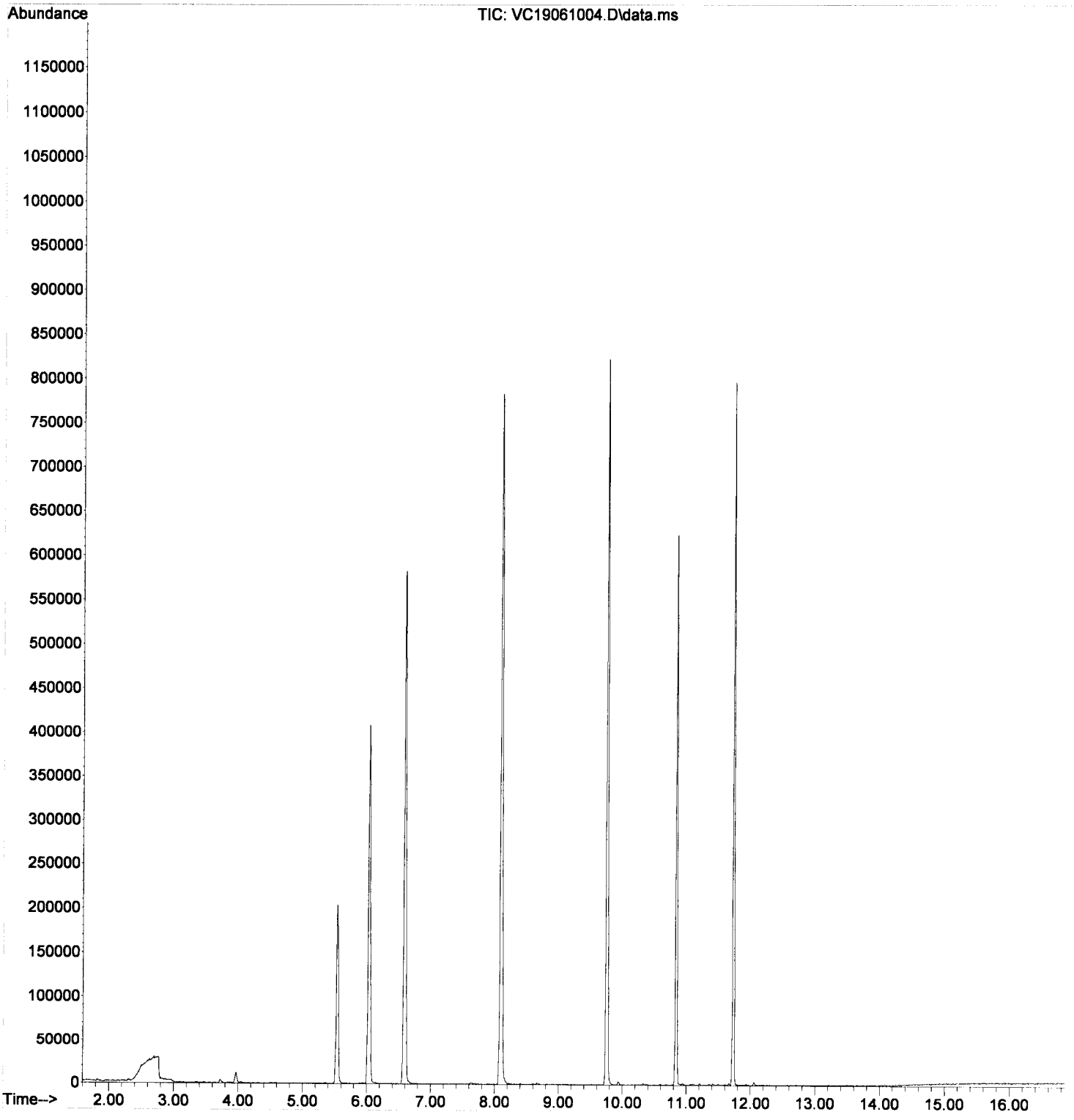
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.758	112	710	0.10	ug/L	#	1
50) Ethylbenzene	9.795	91	1463	0.12	ug/L		91
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.935	91	2386	0.27	ug/L		88
53) o-Xylene	10.324	91	1221	0.13	ug/L		71
54) Styrene	10.379	104	499	0.08	ug/L	#	52
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.592	105	1075	0.10	ug/L		85
59) Bromobenzene	10.920	156	284	0.12	ug/L		94
60) n-Propylbenzene	10.951	91	1339	0.12	ug/L		92
61) 1,1,2,2-Tetrachloroethane	11.005	83	103	0.04	ug/L	#	25
62) 2-Chlorotoluene	0.000		0	N.D.			
63) 1,3,5-Trimethylbenzene	11.103	105	866	0.12	ug/L		68
64) 1,2,3-Trichloropropane	0.000		0	N.D.			
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.212	91	704	0.11	ug/L	#	47
67) tert-Butylbenzene	11.358	91	444	0.11	ug/L	#	57
68) 1,2,4-Trimethylbenzene	11.413	105	993	0.13	ug/L		69
69) sec-Butylbenzene	11.498	105	846	0.10	ug/L		82
70) 4-Isopropyltoluene	11.602	119	815	0.11	ug/L		95
71) 1,3-Dichlorobenzene	11.668	146	529	0.13	ug/L	#	74
72) 1,4-Dichlorobenzene	11.748	146	550	0.13	ug/L		82
73) n-Butylbenzene	11.930	91	852	0.14	ug/L		91
74) 1,2-Dichlorobenzene	12.058	146	365	0.09	ug/L		68
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	13.214	180	220	0.10	ug/L	#	56
78) Naphthalene	13.494	128	577	0.08	ug/L		78
79) 1,2,3-Trichlorobenzene	13.652	180	222	0.10	ug/L	#	59

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061004.D
Acq On : 10 Jun 2019 4:02 pm
Operator : TB
Sample : 9F10052-CAL1
Misc : 1X 5mL 0.1ppb VOC DI+MeOH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:36 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:08:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	314337	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	454033	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	180145	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	143088	42.04	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	532161	44.01	ug/L		0.00
39) Toluene-d8 (S)	8.090	98	631334	51.40	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	161808	52.02	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	0.000		0	N.D.	d		
3) Chloromethane	1.861	50	938	0.20	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) 1,1-Dichloroethene	3.090	61	452	0.14	ug/L	#	52
9) Carbon Disulfide	0.000		0	N.D.	d		
10) Freon 113	0.000		0	N.D.	d		
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.716	84	2127	Below Cal			78
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.881	61	572	0.16	ug/L		72
15) n-Hexane	3.960	86	991	Below Cal		#	87
16) Methyl-tert-butyl-ether	4.045	73	1600	0.15	ug/L		96
17) 1,1-Dichloroethane	4.513	63	568	0.12	ug/L		72
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.073	61	687	0.17	ug/L	#	41
20) 2,2-Dichloropropane	0.000		0	N.D.	d		
21) Bromochloromethane	5.274	49	306	0.13	ug/L		99
22) Chloroform	5.347	83	854	0.16	ug/L		90
23) Carbon Tetrachloride	5.462	117	263	0.09	ug/L	#	56
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.535	97	607	0.15	ug/L	#	58
27) 1,1-Dichloropropene	5.681	75	587	0.14	ug/L	#	66
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.931	78	2187	0.16	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.150	62	555	0.14	ug/L		92
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.551	130	436	0.11	ug/L	#	72
34) Dibromomethane	0.000		0	N.D.	d		
35) 1,2-Dichloropropane	0.000		0	N.D.	d		
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	0.000		0	N.D.	d		
40) Toluene	8.157	91	2884	0.24	ug/L		82
41) Tetrachloroethene (PCE)	8.601	166	521	0.19	ug/L		90
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d		
43) t-1,3-Dichloropropene	0.000		0	N.D.	d		
44) 1,1,2-Trichloroethane	8.820	97	419	0.17	ug/L	#	59
45) Dibromochloromethane	0.000		0	N.D.	d		
46) 1,3-Dichloropropane	9.112	76	796	0.18	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.246	107	397	0.17	ug/L		70
48) 2-Hexanone	0.000		0	N.D.	d		

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:08:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1627	0.22	ug/L	#	29
50) Ethylbenzene	9.794	91	2439	0.20	ug/L		84
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	3873	0.44	ug/L		97
53) o-Xylene	10.317	91	1836	0.20	ug/L		86
54) Styrene	10.378	104	1040	0.16	ug/L		73
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	2121	0.20	ug/L		86
59) Bromobenzene	10.919	156	364	0.15	ug/L		83
60) n-Propylbenzene	10.944	91	2323	0.21	ug/L		93
61) 1,1,2,2-Tetrachloroethane	11.011	83	474	0.20	ug/L		76
62) 2-Chlorotoluene	0.000		0	N.D.	d		
63) 1,3,5-Trimethylbenzene	11.102	105	1575	0.21	ug/L		89
64) 1,2,3-Trichloropropane	0.000		0	N.D.	d		
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.205	91	1298	0.20	ug/L		78
67) tert-Butylbenzene	11.363	91	750	0.18	ug/L		91
68) 1,2,4-Trimethylbenzene	11.412	105	1577	0.21	ug/L		84
69) sec-Butylbenzene	11.497	105	1569	0.18	ug/L		84
70) 4-Isopropyltoluene	11.607	119	1419	0.20	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	839	0.20	ug/L		86
72) 1,4-Dichlorobenzene	11.734	146	912	0.22	ug/L	#	1
73) n-Butylbenzene	11.935	91	1340	0.22	ug/L		86
74) 1,2-Dichlorobenzene	12.057	146	679	0.18	ug/L		90
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	0.000		0	N.D.	d		
78) Naphthalene	0.000		0	N.D.	d		
79) 1,2,3-Trichlorobenzene	13.651	180	389	0.18	ug/L		83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC19061IS.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	314337	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	454033	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	180145	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	143088	42.04 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	532161	44.01 ug/L		0.00
39) Toluene-d8 (S)	8.090	98	631334	51.40 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	161808	52.02 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.672	85	265	0.09 ug/L	#	50
3) Chloromethane	1.861	50	938	0.20 ug/L		91
4) Vinyl Chloride	1.946	62	121	0.04 ug/L	#	48
5) Bromomethane	2.305	96	1262	0.70 ug/L		87
6) Chloroethane	2.427	64	312	0.26 ug/L	#	1
7) Trichlorofluoromethane	2.555	101	110	0.06 ug/L		84
8) 1,1-Dichloroethene	3.090	61	452	0.14 ug/L	#	52
9) Carbon Disulfide	3.102	76	667	0.13 ug/L		77
10) Freon 113	3.145	101	435	0.16 ug/L	#	80
11) Iodomethane	3.236	142	165	0.87 ug/L	#	47
12) Methylene Chloride	3.716	84	2127	Below Cal		78
13) Acetone	3.832	43	410	0.29 ug/L		95
14) t-1,2-Dichloroethene	3.881	61	572	0.16 ug/L		72
15) n-Hexane	3.960	86	991	Below Cal	#	87
16) Methyl-tert-butyl-ether	4.045	73	1600	0.15 ug/L		96
17) 1,1-Dichloroethane	4.513	63	568	0.12 ug/L		72
18) Acrylonitrile	4.599	53	114	0.06 ug/L	#	14
19) c-1,2-Dichloroethene	5.073	61	687	0.17 ug/L	#	41
20) 2,2-Dichloropropane	5.164	77	568	0.16 ug/L		68
21) Bromochloromethane	5.274	49	306	0.13 ug/L		99
22) Chloroform	5.347	83	854	0.16 ug/L		90
23) Carbon Tetrachloride	5.462	117	263	0.09 ug/L	#	56
24) Tetrahydrofuran	5.548	42	295	0.14 ug/L	#	64
25) 1,1,1-Trichloroethane	5.535	97	607	0.15 ug/L	#	58
27) 1,1-Dichloropropene	5.681	75	587	0.14 ug/L	#	66
28) 2-Butanone (MEK)	5.700	43	1073	0.42 ug/L		54
29) Benzene	5.931	78	2187	0.16 ug/L		97
30) 1,2-Dichloroethane (EDC)	6.150	62	555	0.14 ug/L		92
31) iso-Butyl Alcohol	6.271	43	832	2.66 ug/L	#	47
33) Trichloroethene (TCE)	6.551	130	436	0.11 ug/L	#	72
34) Dibromomethane	7.002	93	284	0.16 ug/L	#	32
35) 1,2-Dichloropropane	7.111	63	449	0.13 ug/L	#	1
36) Bromodichloromethane	7.190	83	276	0.12 ug/L		81
38) c-1,3-Dichloropropene	7.896	75	483	0.14 ug/L	#	74
40) Toluene	8.157	91	2884	0.24 ug/L		82
41) Tetrachloroethene (PCE)	8.601	166	521	0.19 ug/L		90
42) 4-Methyl-2-Pentanone (...	8.608	43	967	0.26 ug/L		81
43) t-1,3-Dichloropropene	8.638	75	508	0.15 ug/L		47
44) 1,1,2-Trichloroethane	8.820	97	419	0.17 ug/L	#	59
45) Dibromochloromethane	9.003	129	201	0.31 ug/L		90
46) 1,3-Dichloropropane	9.112	76	796	0.18 ug/L		90
47) 1,2-Dibromoethane (EDB)	9.246	107	397	0.17 ug/L		70
48) 2-Hexanone	9.502	43	608	0.24 ug/L		62

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

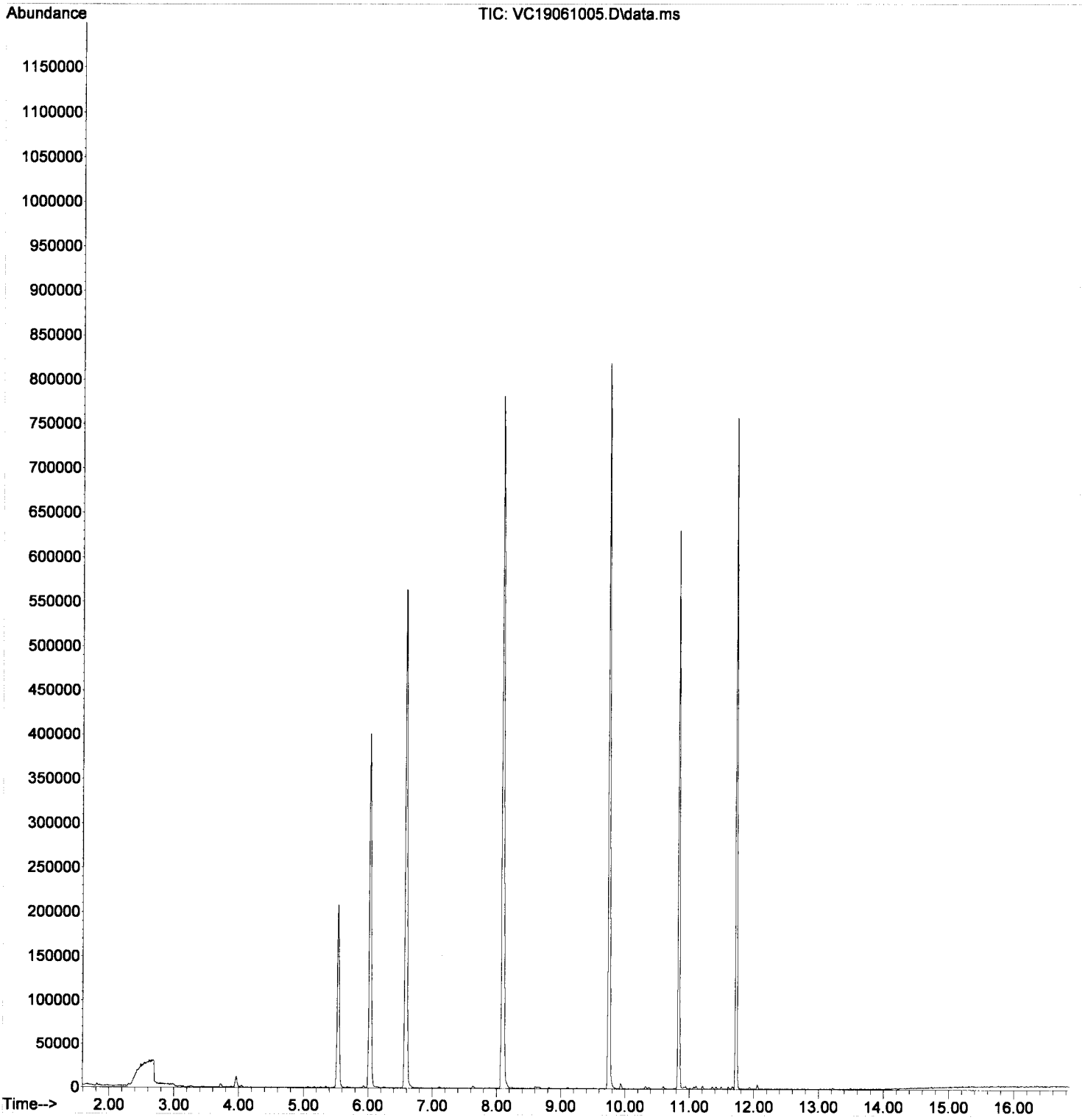
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1627	0.22	ug/L	#	29
50) Ethylbenzene	9.794	91	2439	0.20	ug/L		84
51) 1,1,1,2-Tetrachloroethane	0.000		0	N.D.			
52) m,p-Xylenes (2)	9.940	91	3873	0.44	ug/L		97
53) o-Xylene	10.317	91	1836	0.20	ug/L		86
54) Styrene	10.378	104	1040	0.16	ug/L		73
55) Bromoform	0.000		0	N.D.			
56) Isopropylbenzene	10.597	105	2121	0.20	ug/L		86
59) Bromobenzene	10.919	156	364	0.15	ug/L		83
60) n-Propylbenzene	10.944	91	2323	0.21	ug/L		93
61) 1,1,2,2-Tetrachloroethane	11.011	83	474	0.20	ug/L		76
62) 2-Chlorotoluene	11.071	126	363	0.16	ug/L	#	68
63) 1,3,5-Trimethylbenzene	11.102	105	1575	0.21	ug/L		89
64) 1,2,3-Trichloropropane	11.120	110	127	0.13	ug/L	#	71
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.			
66) 4-Chlorotoluene	11.205	91	1298	0.20	ug/L		78
67) tert-Butylbenzene	11.363	91	750	0.18	ug/L		91
68) 1,2,4-Trimethylbenzene	11.412	105	1577	0.21	ug/L		84
69) sec-Butylbenzene	11.497	105	1569	0.18	ug/L		84
70) 4-Isopropyltoluene	11.607	119	1419	0.20	ug/L		93
71) 1,3-Dichlorobenzene	11.674	146	839	0.20	ug/L		86
72) 1,4-Dichlorobenzene	11.734	146	912	0.22	ug/L	#	1
73) n-Butylbenzene	11.935	91	1340	0.22	ug/L		86
74) 1,2-Dichlorobenzene	12.057	146	679	0.18	ug/L		90
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.			
76) Hexachlorobutadiene	0.000		0	N.D.			
77) 1,2,4-Trichlorobenzene	13.225	180	442	0.20	ug/L		87
78) Naphthalene	13.493	128	1144	0.15	ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	389	0.18	ug/L		83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061005.D
Acq On : 10 Jun 2019 4:29 pm
Operator : TB
Sample : 9F10052-CAL2
Misc : 1X 5mL 0.2ppb VOC DI+MeOH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:38 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:11:28 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	338968	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	481095	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	189377	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	152379	41.51	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	564630	43.31	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	670320	51.50	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172543	52.76	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.675	85	789	0.26	ug/L	#	50
3) Chloromethane	1.863	50	1696	0.34	ug/L		90
4) Vinyl Chloride	1.954	62	847	0.25	ug/L	#	51
5) Bromomethane	2.307	96	1492	0.77	ug/L		95
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	0.000		0	N.D.	d		
8) 1,1-Dichloroethene	3.086	61	1080	0.31	ug/L		73
9) Carbon Disulfide	3.110	76	1266	0.23	ug/L		68
10) Freon 113	3.141	101	656	0.23	ug/L		79
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.731	84	2896	Below Cal			93
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.889	61	1202	0.30	ug/L		82
15) n-Hexane	3.962	86	1223	0.14	ug/L	#	90
16) Methyl-tert-butyl-ether	4.041	73	3427	0.29	ug/L		96
17) 1,1-Dichloroethane	4.522	63	1584	0.32	ug/L		86
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.075	61	1392	0.31	ug/L		84
20) 2,2-Dichloropropane	5.173	77	1016	0.26	ug/L		85
21) Bromochloromethane	5.258	49	815	0.31	ug/L		76
22) Chloroform	5.361	83	1876	0.32	ug/L		92
23) Carbon Tetrachloride	0.000		0	N.D.	d		
24) Tetrahydrofuran	0.000		0	N.D.	d		
25) 1,1,1-Trichloroethane	5.544	97	1321	0.30	ug/L		96
27) 1,1-Dichloropropene	5.677	75	1401	0.31	ug/L		78
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.933	78	4769	0.32	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.146	62	1368	0.31	ug/L		92
31) iso-Butyl Alcohol	0.000		0	N.D.	d		
33) Trichloroethene (TCE)	6.553	130	1202	0.29	ug/L		86
34) Dibromomethane	6.998	93	640	0.32	ug/L	#	65
35) 1,2-Dichloropropane	7.107	63	1230	0.33	ug/L		78
36) Bromodichloromethane	0.000		0	N.D.	d		
38) c-1,3-Dichloropropene	7.880	75	1015	0.27	ug/L		95
40) Toluene	8.147	91	5120	0.40	ug/L		93
41) Tetrachloroethene (PCE)	8.604	166	949	0.32	ug/L		89
42) 4-Methyl-2-Pentanone (...	0.000		0	N.D.	d		
43) t-1,3-Dichloropropene	8.658	75	979	0.28	ug/L		47
44) 1,1,2-Trichloroethane	8.823	97	996	0.38	ug/L		91
45) Dibromochloromethane	9.011	129	353	0.37	ug/L		82
46) 1,3-Dichloropropane	9.115	76	1733	0.36	ug/L		91
47) 1,2-Dibromoethane (EDB)	9.248	107	640	0.25	ug/L	#	48
48) 2-Hexanone	9.504	43	1455	0.55	ug/L		84

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:11:28 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.766	112	3185	0.41 ug/L #	70
50) Ethylbenzene	9.796	91	4943	0.38 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.832	131	585	0.27 ug/L	72
52) m,p-Xylenes (2)	9.936	91	7211	0.77 ug/L	95
53) o-Xylene	10.319	91	3984	0.41 ug/L	90
54) Styrene	10.368	104	1992	0.29 ug/L	89
55) Bromoform	0.000		0	N.D. d	
56) Isopropylbenzene	10.593	105	4056	0.36 ug/L	99
59) Bromobenzene	10.915	156	1135	0.45 ug/L	92
60) n-Propylbenzene	10.946	91	4427	0.39 ug/L	90
61) 1,1,2,2-Tetrachloroethane	11.007	83	988	0.40 ug/L	78
62) 2-Chlorotoluene	11.074	126	850	0.36 ug/L #	80
63) 1,3,5-Trimethylbenzene	11.104	105	3033	0.39 ug/L	94
64) 1,2,3-Trichloropropane	11.122	110	346	0.34 ug/L	86
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
66) 4-Chlorotoluene	11.207	91	2835	0.42 ug/L	97
67) tert-Butylbenzene	11.359	91	1354	0.31 ug/L	90
68) 1,2,4-Trimethylbenzene	11.414	105	3070	0.39 ug/L	93
69) sec-Butylbenzene	11.493	105	3469	0.38 ug/L	87
70) 4-Isopropyltoluene	11.609	119	2563	0.34 ug/L	97
71) 1,3-Dichlorobenzene	11.670	146	1776	0.40 ug/L	94
72) 1,4-Dichlorobenzene	11.743	146	1676	0.38 ug/L	92
73) n-Butylbenzene	11.931	91	2366	0.37 ug/L	89
74) 1,2-Dichlorobenzene	12.065	146	1494	0.37 ug/L	81
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
76) Hexachlorobutadiene	0.000		0	N.D. d	
77) 1,2,4-Trichlorobenzene	13.221	180	778	0.33 ug/L	95
78) Naphthalene	13.489	128	2231	0.28 ug/L	78
79) 1,2,3-Trichlorobenzene	13.653	180	608	0.27 ug/L	75

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.030	168	338968	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.747	117	481095	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.724	152	189377	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.531	111	152379	41.51	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.590	114	564630	43.31	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	670320	51.50	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.836	174	172543	52.76	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.675	85	789	0.26	ug/L	#	50
3) Chloromethane	1.863	50	1696	0.34	ug/L		90
4) Vinyl Chloride	1.954	62	847	0.25	ug/L	#	51
5) Bromomethane	2.307	96	1492	0.77	ug/L		95
6) Chloroethane	2.441	64	659	0.51	ug/L	#	1
7) Trichlorofluoromethane	2.569	101	462	0.24	ug/L		96
8) 1,1-Dichloroethene	3.086	61	1080	0.31	ug/L		73
9) Carbon Disulfide	3.110	76	1266	0.23	ug/L		68
10) Freon 113	3.141	101	656	0.23	ug/L		79
11) Iodomethane	3.256	142	311	0.96	ug/L	#	47
12) Methylene Chloride	3.731	84	2896	Below Cal			93
13) Acetone	3.846	43	1477	0.97	ug/L		96
14) t-1,2-Dichloroethene	3.889	61	1202	0.30	ug/L		82
15) n-Hexane	3.962	86	1223	0.14	ug/L	#	90
16) Methyl-tert-butyl-ether	4.041	73	3427	0.29	ug/L		96
17) 1,1-Dichloroethane	4.522	63	1584	0.32	ug/L		86
18) Acrylonitrile	4.601	53	261	0.13	ug/L	#	66
19) c-1,2-Dichloroethene	5.075	61	1392	0.31	ug/L		84
20) 2,2-Dichloropropane	5.173	77	1016	0.26	ug/L		85
21) Bromochloromethane	5.258	49	815	0.31	ug/L		76
22) Chloroform	5.361	83	1876	0.32	ug/L		92
23) Carbon Tetrachloride	5.483	117	705	0.22	ug/L		88
24) Tetrahydrofuran	5.544	42	741	0.33	ug/L		91
25) 1,1,1-Trichloroethane	5.544	97	1321	0.30	ug/L		96
27) 1,1-Dichloropropene	5.677	75	1401	0.31	ug/L		78
28) 2-Butanone (MEK)	5.708	43	1566	0.57	ug/L		88
29) Benzene	5.933	78	4769	0.32	ug/L		97
30) 1,2-Dichloroethane (EDC)	6.146	62	1368	0.31	ug/L		92
31) iso-Butyl Alcohol	6.261	43	1732	5.13	ug/L		65
33) Trichloroethene (TCE)	6.553	130	1202	0.29	ug/L		86
34) Dibromomethane	6.998	93	640	0.32	ug/L	#	65
35) 1,2-Dichloropropane	7.107	63	1230	0.33	ug/L		78
36) Bromodichloromethane	7.174	83	809	0.28	ug/L	#	26
38) c-1,3-Dichloropropene	7.880	75	1015	0.27	ug/L		95
40) Toluene	8.147	91	5120	0.40	ug/L		93
41) Tetrachloroethene (PCE)	8.604	166	949	0.32	ug/L		89
42) 4-Methyl-2-Pentanone (...	8.622	43	2124	0.54	ug/L		86
43) t-1,3-Dichloropropene	8.658	75	979	0.28	ug/L		47
44) 1,1,2-Trichloroethane	8.823	97	996	0.38	ug/L		91
45) Dibromochloromethane	9.011	129	353	0.37	ug/L		82
46) 1,3-Dichloropropane	9.115	76	1733	0.36	ug/L		91
47) 1,2-Dibromoethane (EDB)	9.248	107	640	0.25	ug/L	#	48
48) 2-Hexanone	9.504	43	1455	0.55	ug/L		84

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

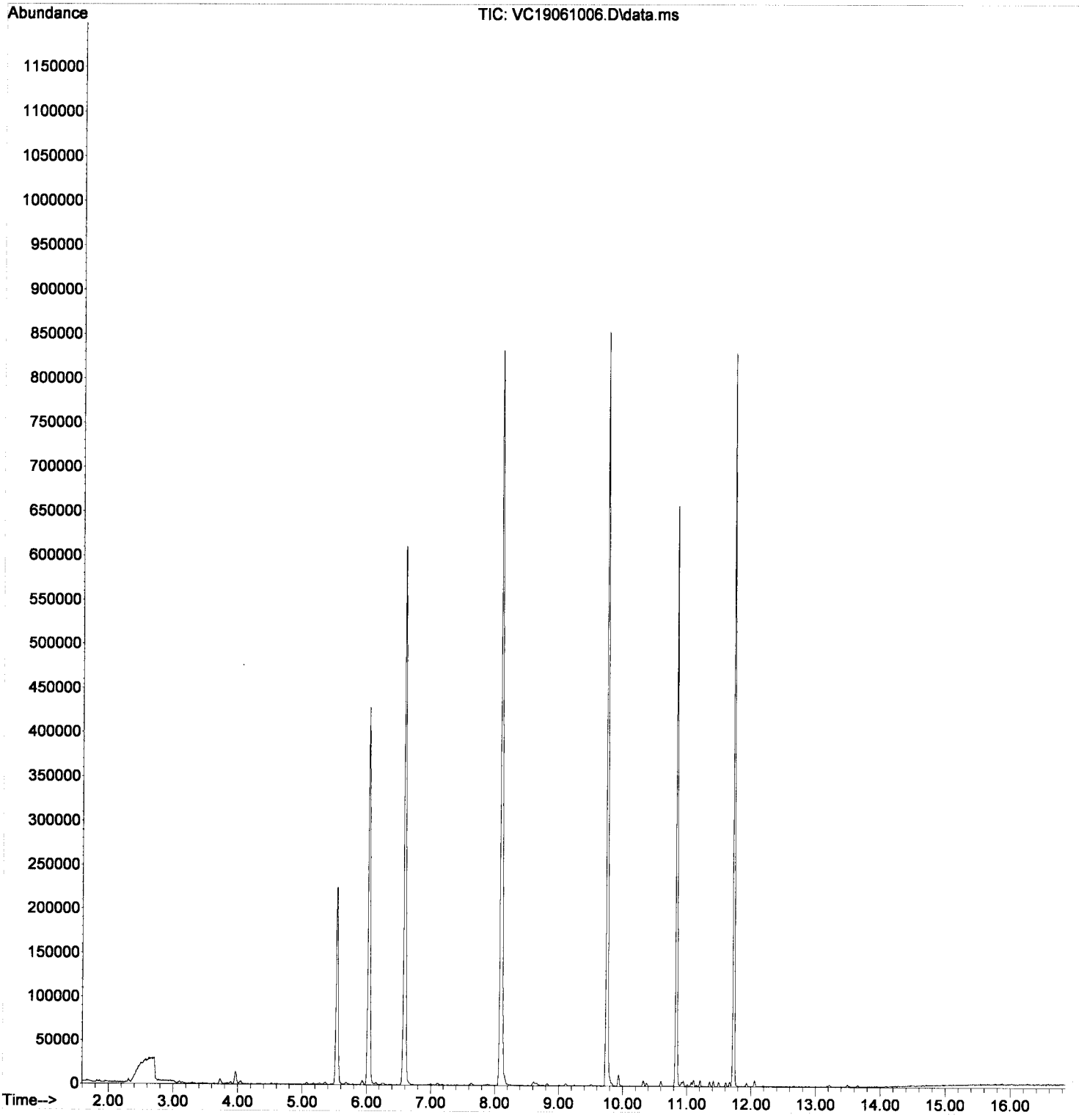
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.766	112	3185	0.41 ug/L #	70
50) Ethylbenzene	9.796	91	4943	0.38 ug/L	97
51) 1,1,1,2-Tetrachloroethane	9.832	131	585	0.27 ug/L	72
52) m,p-Xylenes (2)	9.936	91	7211	0.77 ug/L	95
53) o-Xylene	10.319	91	3984	0.41 ug/L	90
54) Styrene	10.368	104	1992	0.29 ug/L	89
55) Bromoform	10.386	173	160	0.60 ug/L #	36
56) Isopropylbenzene	10.593	105	4056	0.36 ug/L	99
59) Bromobenzene	10.915	156	1135	0.45 ug/L	92
60) n-Propylbenzene	10.946	91	4427	0.39 ug/L	90
61) 1,1,2,2-Tetrachloroethane	11.007	83	988	0.40 ug/L	78
62) 2-Chlorotoluene	11.074	126	850	0.36 ug/L #	80
63) 1,3,5-Trimethylbenzene	11.104	105	3033	0.39 ug/L	94
64) 1,2,3-Trichloropropane	11.122	110	346	0.34 ug/L	86
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	
66) 4-Chlorotoluene	11.207	91	2835	0.42 ug/L	97
67) tert-Butylbenzene	11.359	91	1354	0.31 ug/L	90
68) 1,2,4-Trimethylbenzene	11.414	105	3070	0.39 ug/L	93
69) sec-Butylbenzene	11.493	105	3469	0.38 ug/L	87
70) 4-Isopropyltoluene	11.609	119	2563	0.34 ug/L	97
71) 1,3-Dichlorobenzene	11.670	146	1776	0.40 ug/L	94
72) 1,4-Dichlorobenzene	11.743	146	1676	0.38 ug/L	92
73) n-Butylbenzene	11.931	91	2366	0.37 ug/L	89
74) 1,2-Dichlorobenzene	12.065	146	1494	0.37 ug/L	81
75) 1,2-Dibromo-3-Chloropr...	0.000		0	N.D.	
76) Hexachlorobutadiene	13.178	223	130	0.22 ug/L #	46
77) 1,2,4-Trichlorobenzene	13.221	180	778	0.33 ug/L	95
78) Naphthalene	13.489	128	2231	0.28 ug/L	78
79) 1,2,3-Trichlorobenzene	13.653	180	608	0.27 ug/L	75

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061006.D
Acq On : 10 Jun 2019 4:57 pm
Operator : TB
Sample : 9F10052-CAL3
Misc : 1X 5mL 0.4ppb VOC DI+MeOH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:40 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:20:03 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	331196	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	471537	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	181025	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	146940	40.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	554133	43.50	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	658631	51.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165080	52.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	1969	0.66	ug/L		89
3) Chloromethane	1.870	50	3371	0.69	ug/L		91
4) Vinyl Chloride	1.967	62	2234	0.66	ug/L		90
5) Bromomethane	2.314	96	2566	1.35	ug/L	#	73
6) Chloroethane	0.000		0	N.D.	d		
7) Trichlorofluoromethane	2.563	101	1210	0.64	ug/L		96
8) 1,1-Dichloroethene	3.099	61	2382	0.71	ug/L	#	65
9) Carbon Disulfide	3.105	76	2538	0.48	ug/L		89
10) Freon 113	3.141	101	1821	0.64	ug/L		82
11) Iodomethane	0.000		0	N.D.	d		
12) Methylene Chloride	3.725	84	3900	Below	Cal		97
13) Acetone	0.000		0	N.D.	d		
14) t-1,2-Dichloroethene	3.890	61	2807	0.72	ug/L		93
15) n-Hexane	3.975	86	1406	0.47	ug/L	#	86
16) Methyl-tert-butyl-ether	4.048	73	8702	0.76	ug/L		98
17) 1,1-Dichloroethane	4.522	63	3709	0.77	ug/L		93
18) Acrylonitrile	0.000		0	N.D.	d		
19) c-1,2-Dichloroethene	5.076	61	3260	0.75	ug/L		89
20) 2,2-Dichloropropane	5.173	77	2909	0.78	ug/L		78
21) Bromochloromethane	5.270	49	1743	0.68	ug/L		87
22) Chloroform	5.356	83	4113	0.72	ug/L		95
23) Carbon Tetrachloride	5.471	117	1829	0.60	ug/L		82
24) Tetrahydrofuran	5.538	42	1630	0.75	ug/L		90
25) 1,1,1-Trichloroethane	5.550	97	3011	0.69	ug/L		90
27) 1,1-Dichloropropene	5.684	75	3414	0.76	ug/L		89
28) 2-Butanone (MEK)	0.000		0	N.D.	d		
29) Benzene	5.940	78	10807	0.75	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.153	62	3622	0.84	ug/L		93
31) iso-Butyl Alcohol	6.256	43	4636	14.06	ug/L		85
33) Trichloroethene (TCE)	6.548	130	3058	0.76	ug/L		89
34) Dibromomethane	6.998	93	1314	0.68	ug/L	#	79
35) 1,2-Dichloropropane	7.108	63	2836	0.77	ug/L		86
36) Bromodichloromethane	7.181	83	2123	0.71	ug/L		96
38) c-1,3-Dichloropropene	7.892	75	2811	0.76	ug/L		87
40) Toluene	8.154	91	11998	0.96	ug/L		93
41) Tetrachloroethene (PCE)	8.598	166	2790	0.96	ug/L		87
42) 4-Methyl-2-Pentanone (...	8.622	43	5904	1.53	ug/L		91
43) t-1,3-Dichloropropene	8.647	75	2629	0.76	ug/L		91
44) 1,1,2-Trichloroethane	8.823	97	2471	0.97	ug/L		94
45) Dibromochloromethane	9.006	129	1295	0.82	ug/L		90
46) 1,3-Dichloropropane	9.109	76	4405	0.93	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.243	107	1954	0.78	ug/L		95
48) 2-Hexanone	9.505	43	3813	1.46	ug/L		90

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:20:03 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	6976	0.92	ug/L		80
50) Ethylbenzene	9.797	91	11564	0.91	ug/L		97
51) 1,1,1,2-Tetrachloroethane	9.827	131	1727	0.81	ug/L		82
52) m,p-Xylenes (2)	9.930	91	17350	1.89	ug/L		89
53) o-Xylene	10.320	91	8595	0.89	ug/L		98
54) Styrene	10.374	104	5265	0.78	ug/L		94
55) Bromoform	10.387	173	526	0.91	ug/L		88
56) Isopropylbenzene	10.593	105	9239	0.84	ug/L		100
59) Bromobenzene	10.922	156	2673	1.12	ug/L	#	74
60) n-Propylbenzene	10.946	91	10515	0.96	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.007	83	2310	0.97	ug/L		90
62) 2-Chlorotoluene	11.068	126	2437	1.08	ug/L		90
63) 1,3,5-Trimethylbenzene	11.105	105	6953	0.94	ug/L		91
64) 1,2,3-Trichloropropane	11.111	110	1042	1.07	ug/L		88
65) t-1,4-Dichloro-2-butene	0.000		0	N.D.	d		
66) 4-Chlorotoluene	11.208	91	6474	0.99	ug/L		92
67) tert-Butylbenzene	11.360	91	3834	0.93	ug/L		98
68) 1,2,4-Trimethylbenzene	11.415	105	7272	0.96	ug/L		95
69) sec-Butylbenzene	11.500	105	8415	0.96	ug/L		92
70) 4-Isopropyltoluene	11.609	119	6765	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	3957	0.94	ug/L		89
72) 1,4-Dichlorobenzene	11.737	146	3955	0.94	ug/L		77
73) n-Butylbenzene	11.926	91	5676	0.94	ug/L		86
74) 1,2-Dichlorobenzene	12.060	146	3595	0.93	ug/L		71
75) 1,2-Dibromo-3-Chloropr...	12.674	157	369	1.08	ug/L		87
76) Hexachlorobutadiene	13.173	223	478	0.86	ug/L	#	55
77) 1,2,4-Trichlorobenzene	13.215	180	1853	0.83	ug/L		88
78) Naphthalene	13.489	128	5329	0.71	ug/L		91
79) 1,2,3-Trichlorobenzene	13.653	180	1791	0.84	ug/L		76

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	331196	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	471537	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	181025	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	146940	40.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.591	114	554133	43.50	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	658631	51.63	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	165080	52.81	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	1969	0.66	ug/L		89
3) Chloromethane	1.870	50	3371	0.69	ug/L		91
4) Vinyl Chloride	1.967	62	2234	0.66	ug/L		90
5) Bromomethane	2.314	96	2566	1.35	ug/L	#	73
6) Chloroethane	2.454	64	1020	0.80	ug/L	#	1
7) Trichlorofluoromethane	2.563	101	1210	0.64	ug/L		96
8) 1,1-Dichloroethene	3.099	61	2382	0.71	ug/L	#	65
9) Carbon Disulfide	3.105	76	2538	0.48	ug/L		89
10) Freon 113	3.141	101	1821	0.64	ug/L		82
11) Iodomethane	3.245	142	635	1.20	ug/L	#	82
12) Methylene Chloride	3.725	84	3900	Below Cal			97
13) Acetone	3.835	43	2938	1.97	ug/L		89
14) t-1,2-Dichloroethene	3.890	61	2807	0.72	ug/L		93
15) n-Hexane	3.975	86	1406	0.47	ug/L	#	86
16) Methyl-tert-butyl-ether	4.048	73	8702	0.76	ug/L		98
17) 1,1-Dichloroethane	4.522	63	3709	0.77	ug/L		93
18) Acrylonitrile	4.613	53	1329	0.69	ug/L		73
19) c-1,2-Dichloroethene	5.076	61	3260	0.75	ug/L		89
20) 2,2-Dichloropropane	5.173	77	2909	0.78	ug/L		78
21) Bromochloromethane	5.270	49	1743	0.68	ug/L		87
22) Chloroform	5.356	83	4113	0.72	ug/L		95
23) Carbon Tetrachloride	5.471	117	1829	0.60	ug/L		82
24) Tetrahydrofuran	5.538	42	1630	0.75	ug/L		90
25) 1,1,1-Trichloroethane	5.550	97	3011	0.69	ug/L		90
27) 1,1-Dichloropropene	5.684	75	3414	0.76	ug/L		89
28) 2-Butanone (MEK)	5.702	43	3343	1.26	ug/L		92
29) Benzene	5.940	78	10807	0.75	ug/L		91
30) 1,2-Dichloroethane (EDC)	6.153	62	3622	0.84	ug/L		93
31) iso-Butyl Alcohol	6.256	43	4636	14.06	ug/L		85
33) Trichloroethene (TCE)	6.548	130	3058	0.76	ug/L		89
34) Dibromomethane	6.998	93	1314	0.68	ug/L	#	79
35) 1,2-Dichloropropane	7.108	63	2836	0.77	ug/L		86
36) Bromodichloromethane	7.181	83	2123	0.71	ug/L		96
38) c-1,3-Dichloropropene	7.892	75	2811	0.76	ug/L		87
40) Toluene	8.154	91	11998	0.96	ug/L		93
41) Tetrachloroethene (PCE)	8.598	166	2790	0.96	ug/L		87
42) 4-Methyl-2-Pentanone (...	8.622	43	5904	1.53	ug/L		91
43) t-1,3-Dichloropropene	8.647	75	2629	0.76	ug/L		91
44) 1,1,2-Trichloroethane	8.823	97	2471	0.97	ug/L		94
45) Dibromochloromethane	9.006	129	1295	0.82	ug/L		90
46) 1,3-Dichloropropane	9.109	76	4405	0.93	ug/L		90
47) 1,2-Dibromoethane (EDB)	9.243	107	1954	0.78	ug/L		95
48) 2-Hexanone	9.505	43	3813	1.46	ug/L		90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

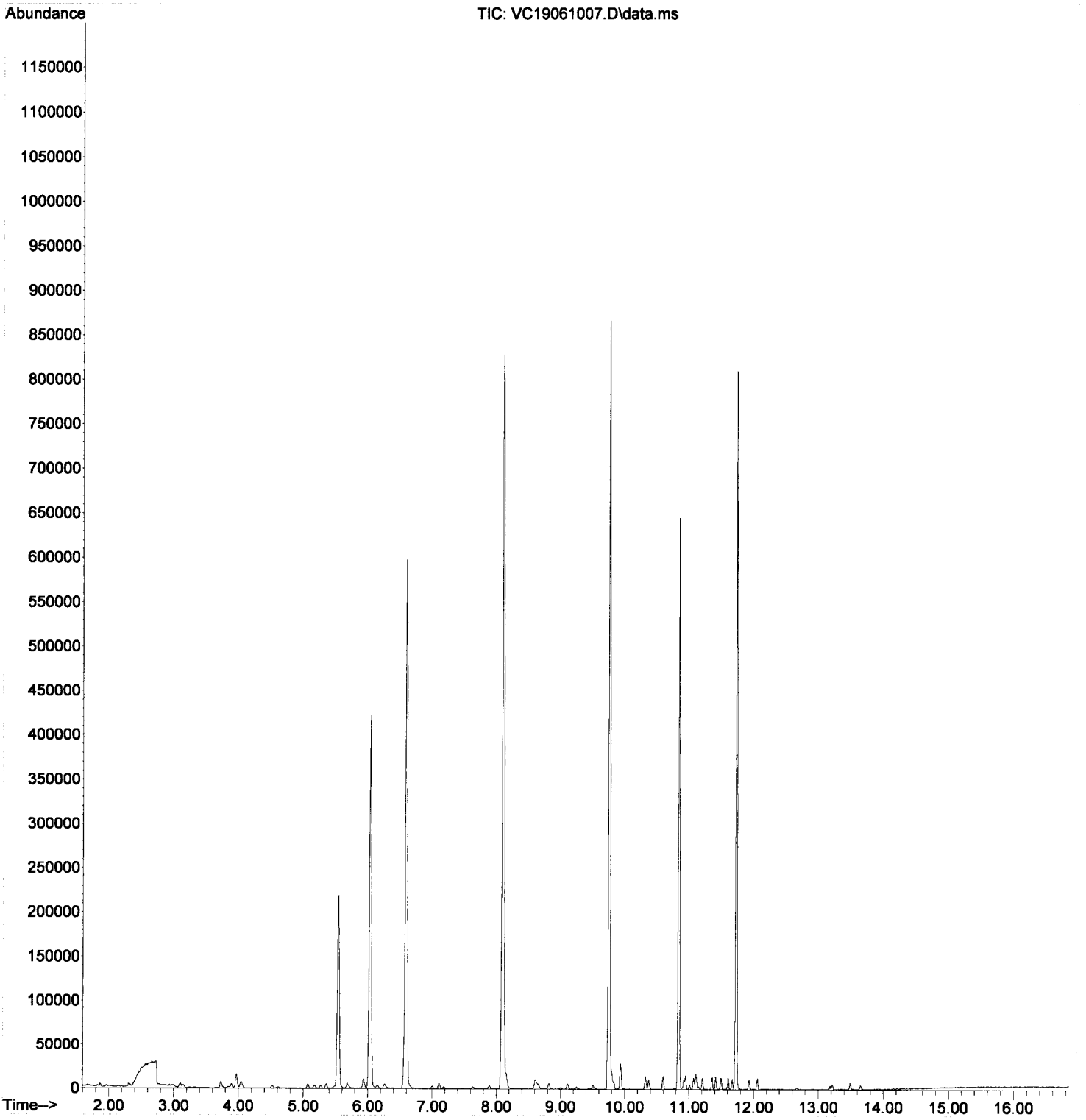
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	6976	0.92	ug/L		80
50) Ethylbenzene	9.797	91	11564	0.91	ug/L		97
51) 1,1,1,2-Tetrachloroethane	9.827	131	1727	0.81	ug/L		82
52) m,p-Xylenes (2)	9.930	91	17350	1.89	ug/L		89
53) o-Xylene	10.320	91	8595	0.89	ug/L		98
54) Styrene	10.374	104	5265	0.78	ug/L		94
55) Bromoform	10.387	173	526	0.91	ug/L		88
56) Isopropylbenzene	10.593	105	9239	0.84	ug/L		100
59) Bromobenzene	10.922	156	2673	1.12	ug/L	#	74
60) n-Propylbenzene	10.946	91	10515	0.96	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.007	83	2310	0.97	ug/L		90
62) 2-Chlorotoluene	11.068	126	2437	1.08	ug/L		90
63) 1,3,5-Trimethylbenzene	11.105	105	6953	0.94	ug/L		91
64) 1,2,3-Trichloropropane	11.111	110	1042	1.07	ug/L		88
65) t-1,4-Dichloro-2-butene	11.153	88	101	1.15	ug/L	#	84
66) 4-Chlorotoluene	11.208	91	6474	0.99	ug/L		92
67) tert-Butylbenzene	11.360	91	3834	0.93	ug/L		98
68) 1,2,4-Trimethylbenzene	11.415	105	7272	0.96	ug/L		95
69) sec-Butylbenzene	11.500	105	8415	0.96	ug/L		92
70) 4-Isopropyltoluene	11.609	119	6765	0.95	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	3957	0.94	ug/L		89
72) 1,4-Dichlorobenzene	11.737	146	3955	0.94	ug/L		77
73) n-Butylbenzene	11.926	91	5676	0.94	ug/L		86
74) 1,2-Dichlorobenzene	12.060	146	3595	0.93	ug/L		71
75) 1,2-Dibromo-3-Chloropr...	12.674	157	369	1.08	ug/L		87
76) Hexachlorobutadiene	13.173	223	478	0.86	ug/L	#	55
77) 1,2,4-Trichlorobenzene	13.215	180	1853	0.83	ug/L		88
78) Naphthalene	13.489	128	5329	0.71	ug/L		91
79) 1,2,3-Trichlorobenzene	13.653	180	1791	0.84	ug/L		76

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061007.D
Acq On : 10 Jun 2019 5:25 pm
Operator : TB
Sample : 9F10052-CAL4
Misc : 1X 5mL 1ppb VOC DI+MeOH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:43 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	335493	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	480852	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	187705	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	150389	41.40	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	563668	43.68	ug/L		0.00
39) Toluene-d8 (S)	8.090	98	668731	51.41	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	169618	52.33	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.660	85	4359	1.45	ug/L		93
3) Chloromethane	1.861	50	6993	1.41	ug/L		93
4) Vinyl Chloride	1.952	62	4880	1.43	ug/L		97
5) Bromomethane	2.299	96	4073	2.11	ug/L		95
6) Chloroethane	~~2.445~~	~~64~~	~~2084~~	1.62	ug/L	#	1
7) Trichlorofluoromethane	2.560	101	2960	1.55	ug/L		100
8) 1,1-Dichloroethene	3.090	61	4926	1.45	ug/L		93
9) Carbon Disulfide	3.102	76	5848	1.09	ug/L		92
10) Freon 113	3.138	101	4215	1.46	ug/L	#	74
11) Iodomethane	3.236	142	1387	1.72	ug/L	#	76
12) Methylene Chloride	3.722	84	6194	Below Cal			97
13) Acetone	3.832	43	4932	3.26	ug/L		84
14) t-1,2-Dichloroethene	3.887	61	6058	1.54	ug/L		95
15) n-Hexane	3.960	86	1784	1.04	ug/L	#	69
16) Methyl-tert-butyl-ether	4.039	73	16867	1.45	ug/L		96
17) 1,1-Dichloroethane	4.519	63	7412	1.53	ug/L		94
18) Acrylonitrile	4.598	53	2845	1.45	ug/L		93
19) c-1,2-Dichloroethene	5.067	61	6543	1.49	ug/L		90
20) 2,2-Dichloropropane	5.176	77	5330	1.40	ug/L		93
21) Bromochloromethane	5.261	49	3915	1.51	ug/L		82
22) Chloroform	5.347	83	8361	1.45	ug/L		96
23) Carbon Tetrachloride	5.474	117	3998	1.28	ug/L		92
24) Tetrahydrofuran	5.541	42	3053	1.39	ug/L		94
25) 1,1,1-Trichloroethane	5.547	97	6419	1.46	ug/L		97
27) 1,1-Dichloropropene	5.675	75	6644	1.47	ug/L		92
28) 2-Butanone (MEK)	5.699	43	8049	2.98	ug/L		95
29) Benzene	5.937	78	21984	1.51	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.150	62	6931	1.59	ug/L		93
31) iso-Butyl Alcohol	6.265	43	9109	27.27	ug/L		96
33) Trichloroethene (TCE)	6.551	130	5478	1.34	ug/L		94
34) Dibromomethane	7.001	93	2990	1.53	ug/L	#	82
35) 1,2-Dichloropropane	7.111	63	5456	1.46	ug/L		94
36) Bromodichloromethane	7.184	83	4315	1.39	ug/L		84
38) c-1,3-Dichloropropene	7.883	75	5608	1.48	ug/L		92
40) Toluene	8.157	91	23933	1.88	ug/L		96
41) Tetrachloroethene (PCE)	8.601	166	4917	1.67	ug/L		90
42) 4-Methyl-2-Pentanone (...	8.620	43	11773	3.00	ug/L		94
43) t-1,3-Dichloropropene	8.644	75	5374	1.53	ug/L		93
44) 1,1,2-Trichloroethane	8.820	97	4509	1.74	ug/L		95
45) Dibromochloromethane	8.997	129	2666	1.44	ug/L		89
46) 1,3-Dichloropropane	9.106	76	9053	1.88	ug/L		95
47) 1,2-Dibromoethane (EDB)	9.246	107	4730	1.86	ug/L		90
48) 2-Hexanone	9.502	43	7699	2.89	ug/L		91

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

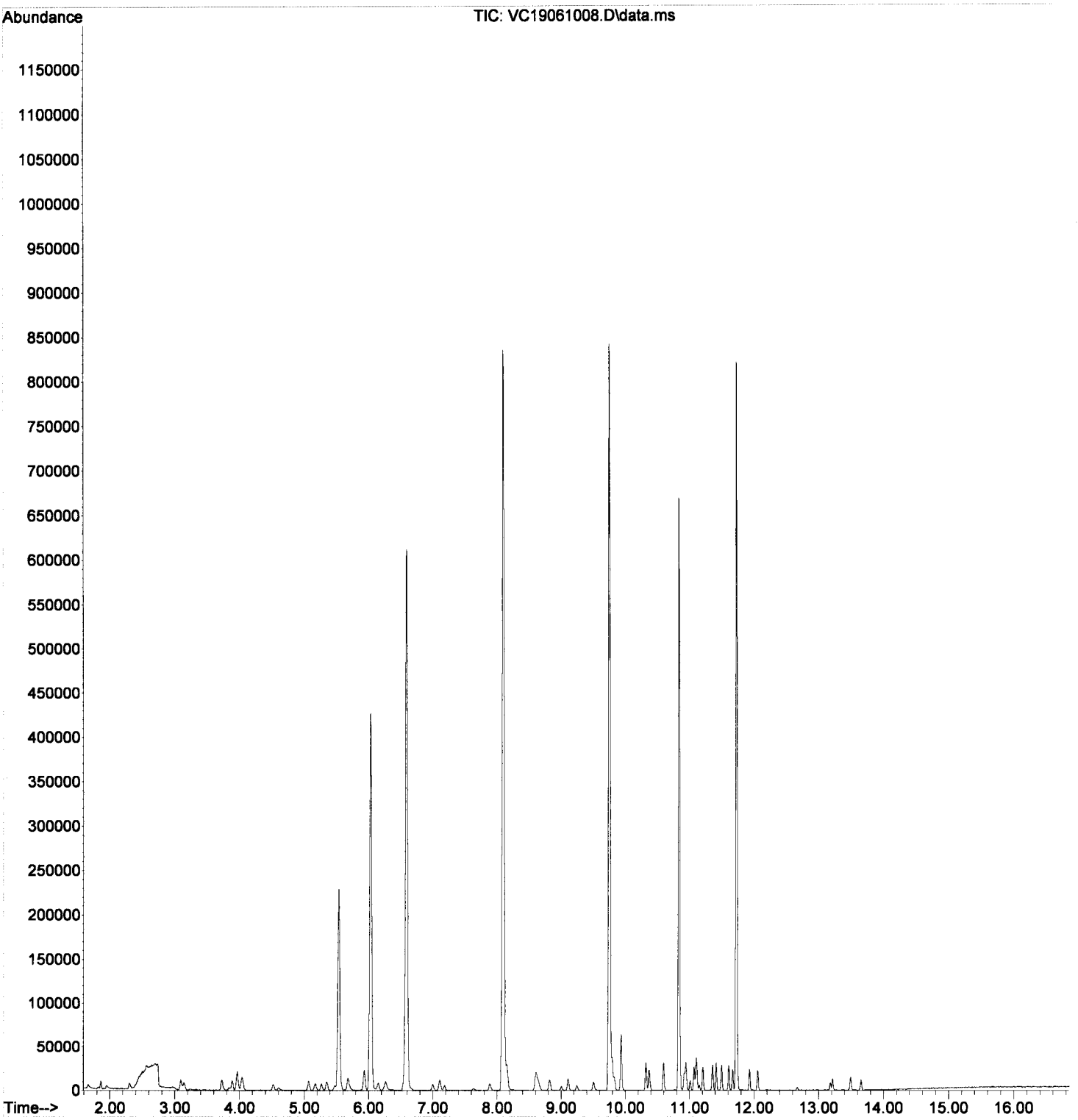
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	14413	1.87	ug/L		87
50) Ethylbenzene	9.794	91	23697	1.83	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.830	131	3397	1.56	ug/L		85
52) m,p-Xylenes (2)	9.934	91	34482	3.69	ug/L		98
53) o-Xylene	10.317	91	17398	1.77	ug/L		94
54) Styrene	10.372	104	10700	1.56	ug/L		98
55) Bromoform	10.390	173	1352	1.56	ug/L		92
56) Isopropylbenzene	10.597	105	19559	1.74	ug/L		99
59) Bromobenzene	10.919	156	5274	2.13	ug/L		94
60) n-Propylbenzene	10.943	91	21958	1.94	ug/L		97
61) 1,1,2,2-Tetrachloroethane	11.010	83	4446	1.81	ug/L		98
62) 2-Chlorotoluene	11.077	126	4445	1.90	ug/L		97
63) 1,3,5-Trimethylbenzene	11.108	105	14730	1.93	ug/L		96
64) 1,2,3-Trichloropropane	11.114	110	2033	2.00	ug/L		85
65) t-1,4-Dichloro-2-butene	11.162	88	372	1.90	ug/L	#	69
66) 4-Chlorotoluene	11.205	91	12857	1.90	ug/L		96
67) tert-Butylbenzene	11.357	91	8109	1.89	ug/L		95
68) 1,2,4-Trimethylbenzene	11.412	105	15002	1.92	ug/L		97
69) sec-Butylbenzene	11.497	105	17133	1.89	ug/L		98
70) 4-Isopropyltoluene	11.607	119	13903	1.89	ug/L		98
71) 1,3-Dichlorobenzene	11.673	146	8151	1.87	ug/L		96
72) 1,4-Dichlorobenzene	11.734	146	8328	1.92	ug/L		90
73) n-Butylbenzene	11.929	91	12104	1.93	ug/L		94
74) 1,2-Dichlorobenzene	12.057	146	7400	1.85	ug/L		96
75) 1,2-Dibromo-3-Chloropr...	12.671	157	632	1.51	ug/L	#	69
76) Hexachlorobutadiene	13.182	223	1057	1.83	ug/L		90
77) 1,2,4-Trichlorobenzene	13.213	180	3846	1.65	ug/L		87
78) Naphthalene	13.492	128	11080	1.41	ug/L		98
79) 1,2,3-Trichlorobenzene	13.651	180	3620	1.64	ug/L		91

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061008.D
Acq On : 10 Jun 2019 5:52 pm
Operator : TB
Sample : 9F10052-CAL5
Misc : 1X 5mL 2ppb VOC DI+MeOH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:45 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	329388	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	476413	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	185415	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	149687	41.97	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	557930	44.04	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	670066	51.99	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	168674	52.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.669	85	11543	3.90	ug/L		98
3) Chloromethane	1.858	50	17301	3.56	ug/L		95
4) Vinyl Chloride	1.949	62	12095	3.60	ug/L		94
5) Bromomethane	2.302	96	8017	4.23	ug/L		92
6) Chloroethane	2.436	64	4635	3.67	ug/L	#	6
7) Trichlorofluoromethane	2.558	101	6899	3.69	ug/L		90
8) 1,1-Dichloroethene	3.087	61	12787	3.84	ug/L		82
9) Carbon Disulfide	3.099	76	14420	2.73	ug/L		97
10) Freon 113	3.142	101	10227	3.61	ug/L		79
11) Iodomethane	3.233	142	3655	3.36	ug/L	#	97
12) Methylene Chloride	3.726	84	13102	Below	Cal		89
13) Acetone	3.835	43	12346	8.32	ug/L		86
14) t-1,2-Dichloroethene	3.884	61	14689	3.80	ug/L		97
15) n-Hexane	3.963	86	3541	3.89	ug/L	#	75
16) Methyl-tert-butyl-ether	4.036	73	44417	3.88	ug/L		98
17) 1,1-Dichloroethane	4.516	63	19116	4.01	ug/L		97
18) Acrylonitrile	4.596	53	7555	3.92	ug/L		99
19) c-1,2-Dichloroethene	5.064	61	17591	4.08	ug/L		92
20) 2,2-Dichloropropane	5.167	77	14061	3.77	ug/L		95
21) Bromochloromethane	5.265	49	10253	4.02	ug/L		90
22) Chloroform	5.350	83	22224	3.93	ug/L		99
23) Carbon Tetrachloride	5.472	117	10579	3.46	ug/L		96
24) Tetrahydrofuran	5.539	42	8557	3.97	ug/L		92
25) 1,1,1-Trichloroethane	5.545	97	16643	3.85	ug/L		96
27) 1,1-Dichloropropene	5.672	75	17294	3.89	ug/L		98
28) 2-Butanone (MEK)	5.697	43	20846	7.87	ug/L		91
29) Benzene	5.928	78	55659	3.89	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.147	62	18599	4.36	ug/L		92
31) iso-Butyl Alcohol	6.256	43	26405	80.53	ug/L		87
33) Trichloroethene (TCE)	6.542	130	14731	3.67	ug/L		92
34) Dibromomethane	6.999	93	7543	3.94	ug/L		93
35) 1,2-Dichloropropane	7.102	63	14555	3.98	ug/L		81
36) Bromodichloromethane	7.181	83	11721	3.78	ug/L		92
38) c-1,3-Dichloropropene	7.887	75	16676	4.45	ug/L		97
40) Toluene	8.154	91	59886	4.75	ug/L		95
41) Tetrachloroethene (PCE)	8.598	166	12789	4.38	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.617	43	34047	8.75	ug/L		96
43) t-1,3-Dichloropropene	8.641	75	14894	4.28	ug/L		95
44) 1,1,2-Trichloroethane	8.818	97	12789	4.97	ug/L		95
45) Dibromochloromethane	9.006	129	7499	3.69	ug/L		93
46) 1,3-Dichloropropane	9.110	76	23491	4.93	ug/L		95
47) 1,2-Dibromoethane (EDB)	9.243	107	11473	4.56	ug/L		100
48) 2-Hexanone	9.499	43	22093	8.38	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

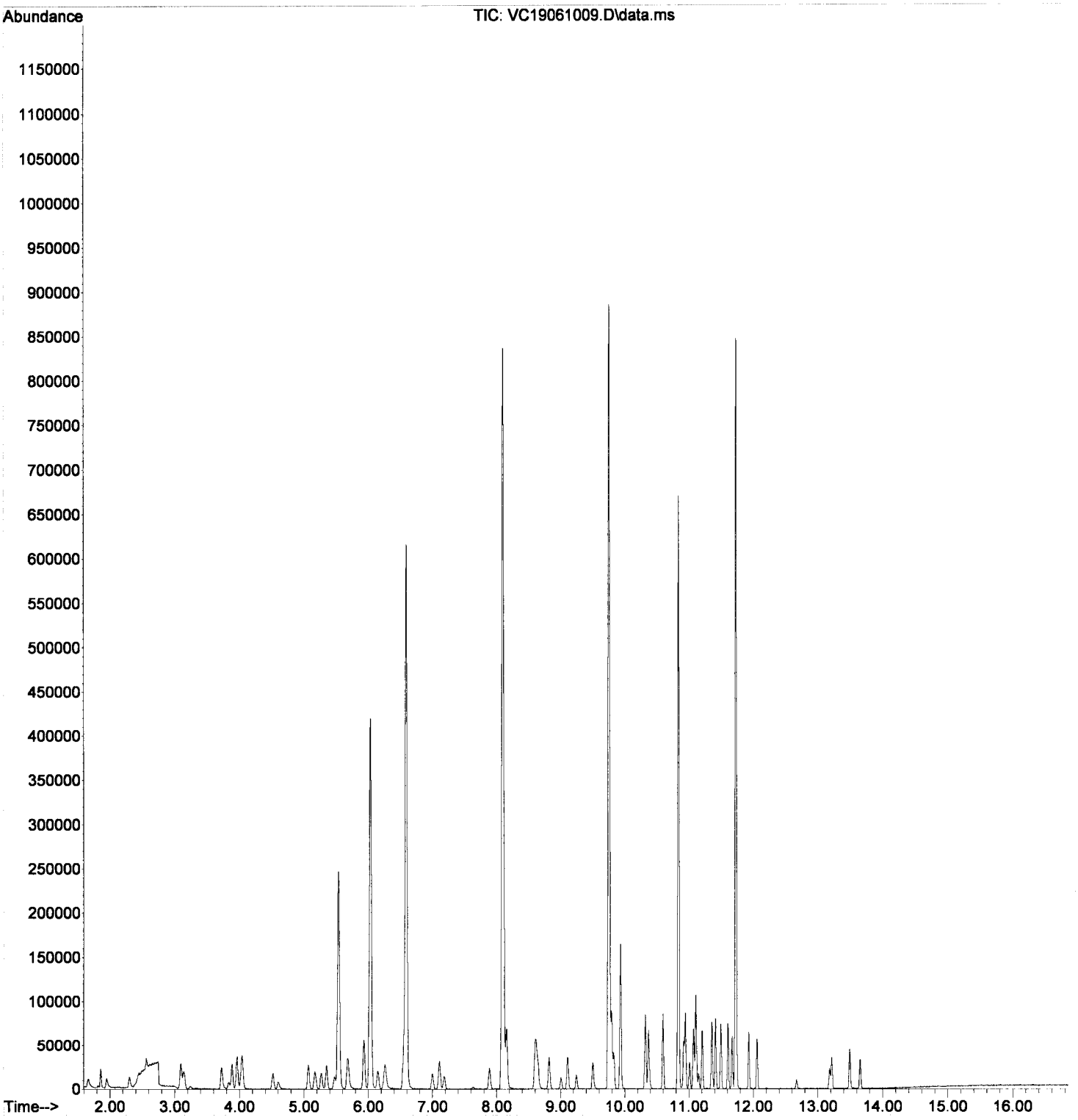
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.767	112	37372	4.89	ug/L		98
50) Ethylbenzene	9.797	91	60136	4.69	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.827	131	9683	4.49	ug/L		93
52) m,p-Xylenes (2)	9.931	91	89757	9.70	ug/L		98
53) o-Xylene	10.320	91	45974	4.73	ug/L		96
54) Styrene	10.369	104	31431	4.62	ug/L		98
55) Bromoform	10.387	173	3801	3.56	ug/L		96
56) Isopropylbenzene	10.594	105	51415	4.61	ug/L		98
59) Bromobenzene	10.916	156	13502	5.51	ug/L		89
60) n-Propylbenzene	10.941	91	57592	5.16	ug/L		95
61) 1,1,2,2-Tetrachloroethane	11.008	83	12600	5.19	ug/L		99
62) 2-Chlorotoluene	11.068	126	11951	5.17	ug/L	#	77
63) 1,3,5-Trimethylbenzene	11.105	105	39518	5.24	ug/L		93
64) 1,2,3-Trichloropropane	11.111	110	5320	5.31	ug/L		91
65) t-1,4-Dichloro-2-butene	11.154	88	1243	4.40	ug/L	#	67
66) 4-Chlorotoluene	11.202	91	34745	5.20	ug/L		93
67) tert-Butylbenzene	11.354	91	21534	5.09	ug/L		93
68) 1,2,4-Trimethylbenzene	11.409	105	39803	5.15	ug/L		96
69) sec-Butylbenzene	11.494	105	45578	5.10	ug/L		96
70) 4-Isopropyltoluene	11.604	119	37133	5.10	ug/L		98
71) 1,3-Dichlorobenzene	11.671	146	22129	5.15	ug/L		95
72) 1,4-Dichlorobenzene	11.738	146	21338	4.97	ug/L		93
73) n-Butylbenzene	11.926	91	31460	5.08	ug/L		96
74) 1,2-Dichlorobenzene	12.060	146	19505	4.94	ug/L		94
75) 1,2-Dibromo-3-Chloropr...	12.668	157	2179	4.24	ug/L		76
76) Hexachlorobutadiene	13.179	223	2859	5.00	ug/L		85
77) 1,2,4-Trichlorobenzene	13.210	180	10845	4.72	ug/L		92
78) Naphthalene	13.490	128	34255	4.43	ug/L		98
79) 1,2,3-Trichlorobenzene	13.654	180	10203	4.69	ug/L		96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061009.D
Acq On : 10 Jun 2019 6:20 pm
Operator : TB
Sample : 9F10052-CAL6
Misc : 1X 5mL 5ppb VOC DI+MeOH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:47 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.031	168	329608	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.748	117	473646	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.725	152	183117	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.532	111	150522	42.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.584	114	558931	44.09	ug/L		0.00
39) Toluene-d8 (S)	8.093	98	660993	51.59	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.837	174	167038	52.83	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.663	85	22273	7.53	ug/L		94
3) Chloromethane	1.858	50	34272	7.05	ug/L		96
4) Vinyl Chloride	1.949	62	24173	7.19	ug/L		96
5) Bromomethane	2.302	96	14610	7.71	ug/L		95
6) Chloroethane	2.429	64	7941	6.29	ug/L	#	33
7) Trichlorofluoromethane	2.551	101	12305	6.57	ug/L		90
8) 1,1-Dichloroethene	3.086	61	25019	7.50	ug/L		84
9) Carbon Disulfide	3.092	76	30776	5.81	ug/L		98
10) Freon 113	3.141	101	19500	6.89	ug/L		88
11) Iodomethane	3.238	142	7826	6.30	ug/L		98
12) Methylene Chloride	3.725	84	22641	1.63	ug/L		94
13) Acetone	3.829	43	23789	16.01	ug/L		96
14) t-1,2-Dichloroethene	3.883	61	30347	7.85	ug/L		96
15) n-Hexane	3.962	86	5985	7.79	ug/L	#	86
16) Methyl-tert-butyl-ether	4.035	73	86627	7.56	ug/L		97
17) 1,1-Dichloroethane	4.516	63	38779	8.14	ug/L		98
18) Acrylonitrile	4.595	53	15485	8.03	ug/L		95
19) c-1,2-Dichloroethene	5.064	61	33904	7.86	ug/L		96
20) 2,2-Dichloropropane	5.167	77	27557	7.38	ug/L		96
21) Bromochloromethane	5.264	49	19997	7.84	ug/L		94
22) Chloroform	5.349	83	42547	7.51	ug/L		96
23) Carbon Tetrachloride	5.471	117	22117	7.23	ug/L		97
24) Tetrahydrofuran	5.532	42	16385	7.59	ug/L		93
25) 1,1,1-Trichloroethane	5.544	97	33312	7.70	ug/L		91
27) 1,1-Dichloropropene	5.672	75	34244	7.69	ug/L		97
28) 2-Butanone (MEK)	5.684	43	39465	14.89	ug/L		99
29) Benzene	5.927	78	109045	7.61	ug/L		99
30) 1,2-Dichloroethane (EDC)	6.146	62	34341	8.04	ug/L		94
31) iso-Butyl Alcohol	6.250	43	52494	159.99	ug/L		94
33) Trichloroethene (TCE)	6.548	130	29253	7.28	ug/L		95
34) Dibromomethane	6.992	93	15098	7.88	ug/L		90
35) 1,2-Dichloropropane	7.101	63	28990	7.92	ug/L		98
36) Bromodichloromethane	7.181	83	23806	7.59	ug/L		96
38) c-1,3-Dichloropropene	7.886	75	33200	8.90	ug/L		97
40) Toluene	8.154	91	117132	9.35	ug/L		99
41) Tetrachloroethene (PCE)	8.598	166	25746	8.86	ug/L		97
42) 4-Methyl-2-Pentanone (...	8.616	43	64279	16.62	ug/L		98
43) t-1,3-Dichloropropene	8.641	75	30716	8.88	ug/L		93
44) 1,1,2-Trichloroethane	8.817	97	24434	9.55	ug/L		98
45) Dibromochloromethane	9.006	129	15631	7.49	ug/L		94
46) 1,3-Dichloropropane	9.109	76	45222	9.55	ug/L		98
47) 1,2-Dibromoethane (EDB)	9.243	107	23715	9.48	ug/L		93
48) 2-Hexanone	9.498	43	45451	17.33	ug/L		97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

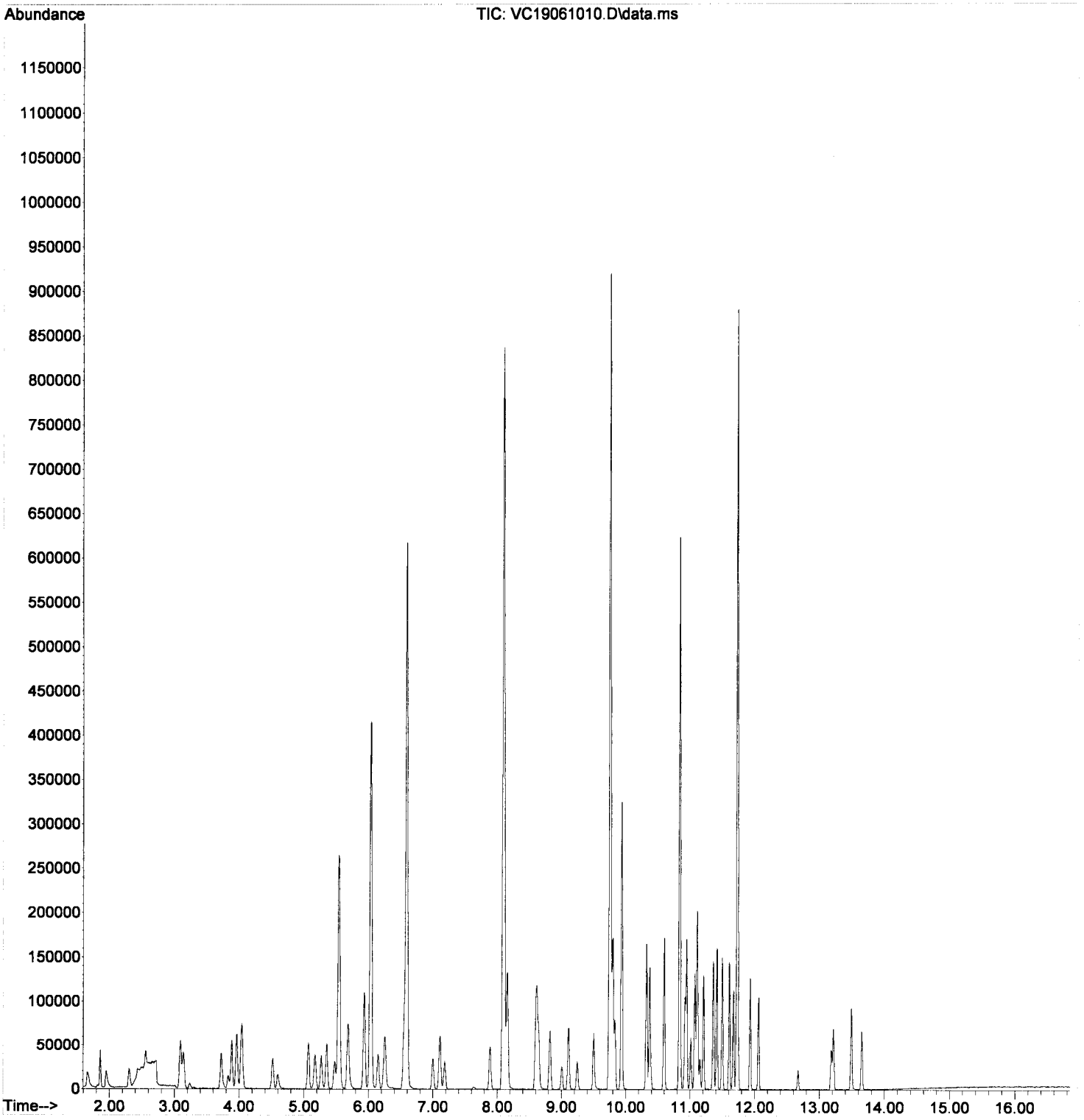
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.766	112	70101	9.22	ug/L		97
50) Ethylbenzene	9.796	91	119181	9.36	ug/L		98
51) 1,1,1,2-Tetrachloroethane	9.827	131	19771	9.22	ug/L		98
52) m,p-Xylenes (2)	9.930	91	175549	19.09	ug/L		98
53) o-Xylene	10.320	91	89373	9.25	ug/L		98
54) Styrene	10.368	104	62780	9.29	ug/L		98
55) Bromoform	10.387	173	7848	6.85	ug/L		94
56) Isopropylbenzene	10.593	105	102838	9.28	ug/L		97
59) Bromobenzene	10.922	156	26030	10.77	ug/L		91
60) n-Propylbenzene	10.940	91	114970	10.43	ug/L		98
61) 1,1,2,2-Tetrachloroethane	11.007	83	23152	9.65	ug/L		98
62) 2-Chlorotoluene	11.068	126	23322	10.22	ug/L		89
63) 1,3,5-Trimethylbenzene	11.104	105	78489	10.53	ug/L		98
64) 1,2,3-Trichloropropane	11.117	110	10018	10.13	ug/L	#	77
65) t-1,4-Dichloro-2-butene	11.147	88	2519	8.12	ug/L	#	89
66) 4-Chlorotoluene	11.208	91	69685	10.56	ug/L		97
67) tert-Butylbenzene	11.354	91	43541	10.42	ug/L		90
68) 1,2,4-Trimethylbenzene	11.415	105	78079	10.24	ug/L		98
69) sec-Butylbenzene	11.494	105	92393	10.46	ug/L		98
70) 4-Isopropyltoluene	11.603	119	74605	10.38	ug/L		96
71) 1,3-Dichlorobenzene	11.670	146	40813	9.62	ug/L		98
72) 1,4-Dichlorobenzene	11.737	146	40761	9.62	ug/L		94
73) n-Butylbenzene	11.926	91	61342	10.04	ug/L		96
74) 1,2-Dichlorobenzene	12.060	146	37337	9.58	ug/L		97
75) 1,2-Dibromo-3-Chloropr...	12.668	157	4525	8.38	ug/L		85
76) Hexachlorobutadiene	13.185	223	5620	9.96	ug/L		97
77) 1,2,4-Trichlorobenzene	13.215	180	21112	9.30	ug/L		91
78) Naphthalene	13.489	128	69695	9.12	ug/L		100
79) 1,2,3-Trichlorobenzene	13.647	180	20921	9.73	ug/L		91

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061010.D
Acq On : 10 Jun 2019 6:48 pm
Operator : TB
Sample : 9F10052-CAL7
Misc : 1X 5mL 10ppb VOC DI+MeOH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:49 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	334993	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.752	117	489718	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	189689	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.530	111	157945	43.54	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	563027	43.70	ug/L		0.00
39) Toluene-d8 (S)	8.091	98	675931	51.02	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	173337	52.92	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.661	85	45425	15.11	ug/L		98
3) Chloromethane	1.855	50	69415	14.05	ug/L		98
4) Vinyl Chloride	1.946	62	48944	14.33	ug/L		97
5) Bromomethane	2.299	96	26631	13.83	ug/L		98
6) Chloroethane	2.439	64	17906	13.96	ug/L		74
7) Trichlorofluoromethane	2.555	101	26493	13.92	ug/L		100
8) 1,1-Dichloroethene	3.090	61	52468	15.48	ug/L		84
9) Carbon Disulfide	3.096	76	68992	12.82	ug/L		97
10) Freon 113	3.139	101	40482	14.07	ug/L		86
11) Iodomethane	3.236	142	18906	13.77	ug/L		97
12) Methylene Chloride	3.723	84	43676	8.54	ug/L		94
13) Acetone	3.826	43	47883	31.71	ug/L		99
14) t-1,2-Dichloroethene	3.881	61	62991	16.03	ug/L		98
15) n-Hexane	3.960	86	10548	14.83	ug/L	#	74
16) Methyl-tert-butyl-ether	4.033	73	175828	15.10	ug/L		96
17) 1,1-Dichloroethane	4.514	63	79075	16.33	ug/L		97
18) Acrylonitrile	4.593	53	30348	15.49	ug/L		96
19) c-1,2-Dichloroethene	5.061	61	71698	16.35	ug/L		95
20) 2,2-Dichloropropane	5.171	77	59025	15.55	ug/L		90
21) Bromochloromethane	5.262	49	42462	16.39	ug/L		92
22) Chloroform	5.347	83	88587	15.39	ug/L		97
23) Carbon Tetrachloride	5.469	117	49520	15.93	ug/L		99
24) Tetrahydrofuran	5.530	42	32366	14.76	ug/L		95
25) 1,1,1-Trichloroethane	5.548	97	69791	15.88	ug/L		97
27) 1,1-Dichloropropene	5.670	75	70427	15.57	ug/L		96
28) 2-Butanone (MEK)	5.682	43	82387	30.59	ug/L		99
29) Benzene	5.925	78	219207	15.05	ug/L		98
30) 1,2-Dichloroethane (EDC)	6.144	62	70104	16.15	ug/L		96
31) iso-Butyl Alcohol	6.247	43	106941	320.69	ug/L		89
33) Trichloroethene (TCE)	6.546	130	59701	14.62	ug/L		95
34) Dibromomethane	6.996	93	31366	16.12	ug/L		88
35) 1,2-Dichloropropane	7.105	63	59886	16.09	ug/L		95
36) Bromodichloromethane	7.178	83	53066	16.36	ug/L		96
38) c-1,3-Dichloropropene	7.884	75	74628	19.36	ug/L		97
40) Toluene	8.152	91	232708	17.96	ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	51183	17.04	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.614	43	132655	33.17	ug/L		98
43) t-1,3-Dichloropropene	8.638	75	69703	19.49	ug/L		95
44) 1,1,2-Trichloroethane	8.815	97	50621	19.13	ug/L		99
45) Dibromochloromethane	9.003	129	37386	16.89	ug/L		95
46) 1,3-Dichloropropane	9.107	76	94677	19.34	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.241	107	50007	19.33	ug/L		98
48) 2-Hexanone	9.496	43	93286	34.40	ug/L		99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

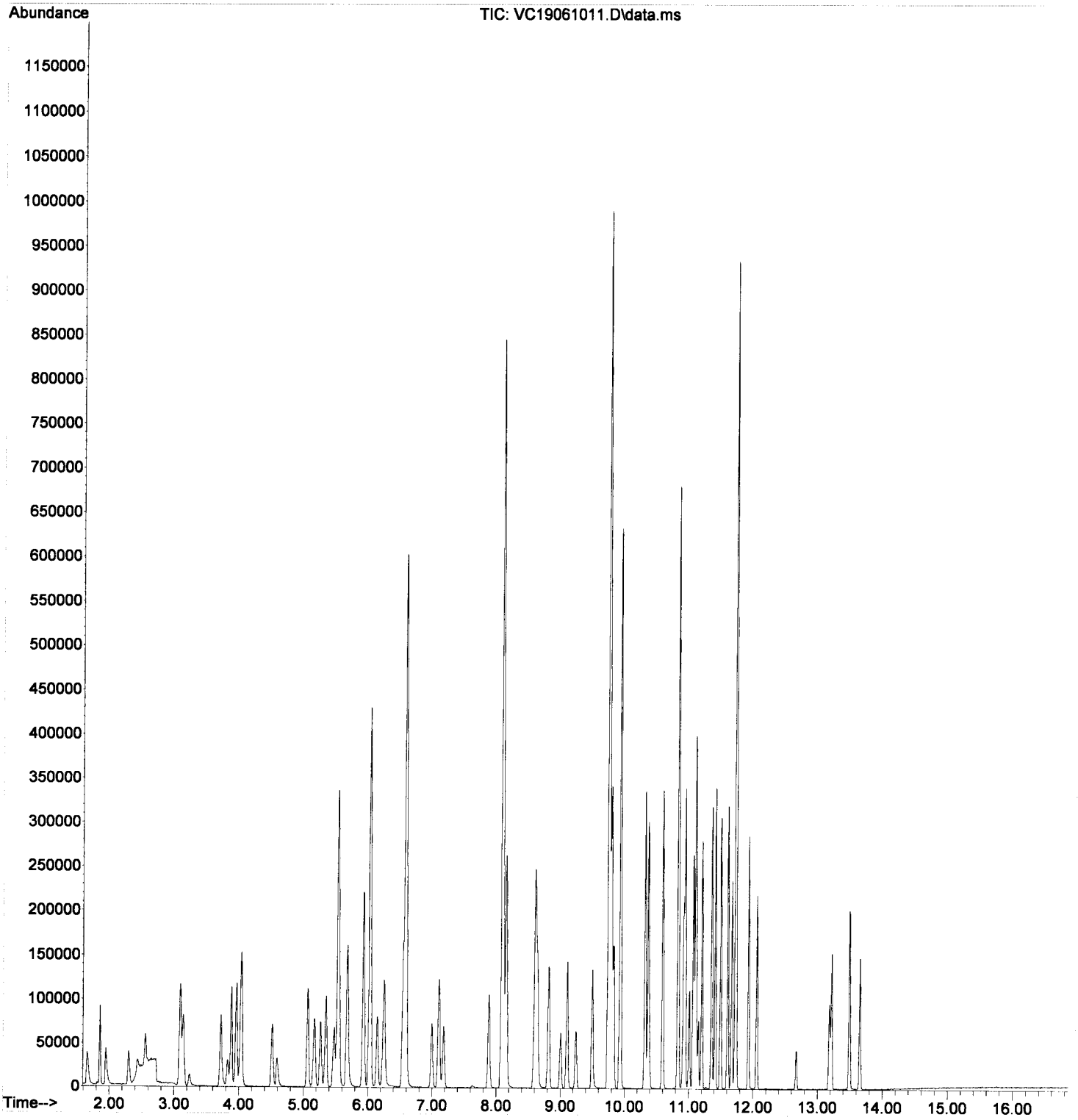
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
49) Chlorobenzene	9.764	112	143545	18.27	ug/L	100
50) Ethylbenzene	9.794	91	240939	18.29	ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.831	131	43293	19.53	ug/L	96
52) m,p-Xylenes (2)	9.934	91	355349	37.37	ug/L	99
53) o-Xylene	10.317	91	183627	18.37	ug/L	99
54) Styrene	10.366	104	136458	19.53	ug/L	96
55) Bromoform	10.390	173	19110	15.29	ug/L	97
56) Isopropylbenzene	10.591	105	212362	18.53	ug/L	98
59) Bromobenzene	10.920	156	51952	20.74	ug/L	95
60) n-Propylbenzene	10.944	91	236380	20.70	ug/L	99
61) 1,1,2,2-Tetrachloroethane	11.011	83	49418	19.88	ug/L	96
62) 2-Chlorotoluene	11.072	126	47655	20.16	ug/L	91
63) 1,3,5-Trimethylbenzene	11.102	105	162341	21.03	ug/L	99
64) 1,2,3-Trichloropropane	11.114	110	20048	19.56	ug/L #	78
65) t-1,4-Dichloro-2-butene	11.151	88	6259	18.17	ug/L #	87
66) 4-Chlorotoluene	11.205	91	139523	20.42	ug/L	99
67) tert-Butylbenzene	11.358	91	88706	20.50	ug/L	97
68) 1,2,4-Trimethylbenzene	11.412	105	162038	20.51	ug/L	99
69) sec-Butylbenzene	11.497	105	187287	20.47	ug/L	97
70) 4-Isopropyltoluene	11.607	119	155362	20.87	ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	84002	19.11	ug/L	98
72) 1,4-Dichlorobenzene	11.735	146	83948	19.12	ug/L	98
73) n-Butylbenzene	11.929	91	127870	20.20	ug/L	98
74) 1,2-Dichlorobenzene	12.057	146	75039	18.59	ug/L	98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	9847	16.83	ug/L	88
76) Hexachlorobutadiene	13.183	223	11665	19.96	ug/L	99
77) 1,2,4-Trichlorobenzene	13.213	180	46747	19.89	ug/L	97
78) Naphthalene	13.493	128	152737	19.30	ug/L	99
79) 1,2,3-Trichlorobenzene	13.651	180	43652	19.60	ug/L	97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061011.D
Acq On : 10 Jun 2019 7:15 pm
Operator : TB
Sample : 9F10052-CAL8
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:51 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.028	168	340992	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.745	117	496062	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	193059	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.529	111	159154	43.10	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.588	114	574444	43.80	ug/L	0.00
39) Toluene-d8 (S)	8.090	98	689152	51.35	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	175325	52.59	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.660	85	115408	37.70	ug/L	99
3) Chloromethane	1.855	50	168897	33.59	ug/L	98
4) Vinyl Chloride	1.946	62	120231	34.59	ug/L	95
5) Bromomethane	2.305	96	60489	30.85	ug/L	97
6) Chloroethane	2.433	64	42931	32.87	ug/L	87
7) Trichlorofluoromethane	2.555	101	62094	32.05	ug/L	95
8) 1,1-Dichloroethene	3.084	61	135099	39.16	ug/L	81
9) Carbon Disulfide	3.096	76	203715	37.20	ug/L	98
10) Freon 113	3.139	101	102992	35.16	ug/L	86
11) Iodomethane	3.236	142	57973	38.25	ug/L	97
12) Methylene Chloride	3.723	84	110475	30.60	ug/L	91
13) Acetone	3.826	43	125112	81.40	ug/L	98
14) t-1,2-Dichloroethene	3.881	61	161888	40.47	ug/L	99
15) n-Hexane	3.960	86	26695	39.69	ug/L	97
16) Methyl-tert-butyl-ether	4.033	73	449396	37.92	ug/L	97
17) 1,1-Dichloroethane	4.513	63	200646	40.70	ug/L	98
18) Acrylonitrile	4.593	53	84043	42.15	ug/L	98
19) c-1,2-Dichloroethene	5.061	61	178655	40.02	ug/L	93
20) 2,2-Dichloropropane	5.170	77	153062	39.62	ug/L	89
21) Bromochloromethane	5.262	49	106680	40.45	ug/L	93
22) Chloroform	5.347	83	221584	37.82	ug/L	98
23) Carbon Tetrachloride	5.475	117	139739	44.16	ug/L	97
24) Tetrahydrofuran	5.529	42	84782	37.98	ug/L	95
25) 1,1,1-Trichloroethane	5.548	97	181053	40.47	ug/L	98
27) 1,1-Dichloropropene	5.675	75	178184	38.69	ug/L	99
28) 2-Butanone (MEK)	5.681	43	218051	79.55	ug/L	95
29) Benzene	5.931	78	547300	36.93	ug/L	98
30) 1,2-Dichloroethane (EDC)	6.144	62	180444	40.84	ug/L	100
31) iso-Butyl Alcohol	6.247	43	299039	880.96	ug/L	89
33) Trichloroethene (TCE)	6.545	130	153249	36.86	ug/L	97
34) Dibromomethane	6.995	93	81506	41.14	ug/L	91
35) 1,2-Dichloropropane	7.105	63	150914	39.83	ug/L	93
36) Bromodichloromethane	7.178	83	148949	43.02	ug/L	99
38) c-1,3-Dichloropropene	7.884	75	209633	53.68	ug/L	99
40) Toluene	8.151	91	575939	43.89	ug/L	99
41) Tetrachloroethene (PCE)	8.595	166	131193	43.12	ug/L	94
42) 4-Methyl-2-Pentanone (...	8.614	43	345050	85.17	ug/L	97
43) t-1,3-Dichloropropene	8.644	75	193377	53.37	ug/L	97
44) 1,1,2-Trichloroethane	8.814	97	128654	47.99	ug/L	98
45) Dibromochloromethane	9.003	129	110171	47.23	ug/L	96
46) 1,3-Dichloropropane	9.106	76	238356	48.07	ug/L	98
47) 1,2-Dibromoethane (EDB)	9.240	107	133050	50.77	ug/L	99
48) 2-Hexanone	9.496	43	249448	90.82	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

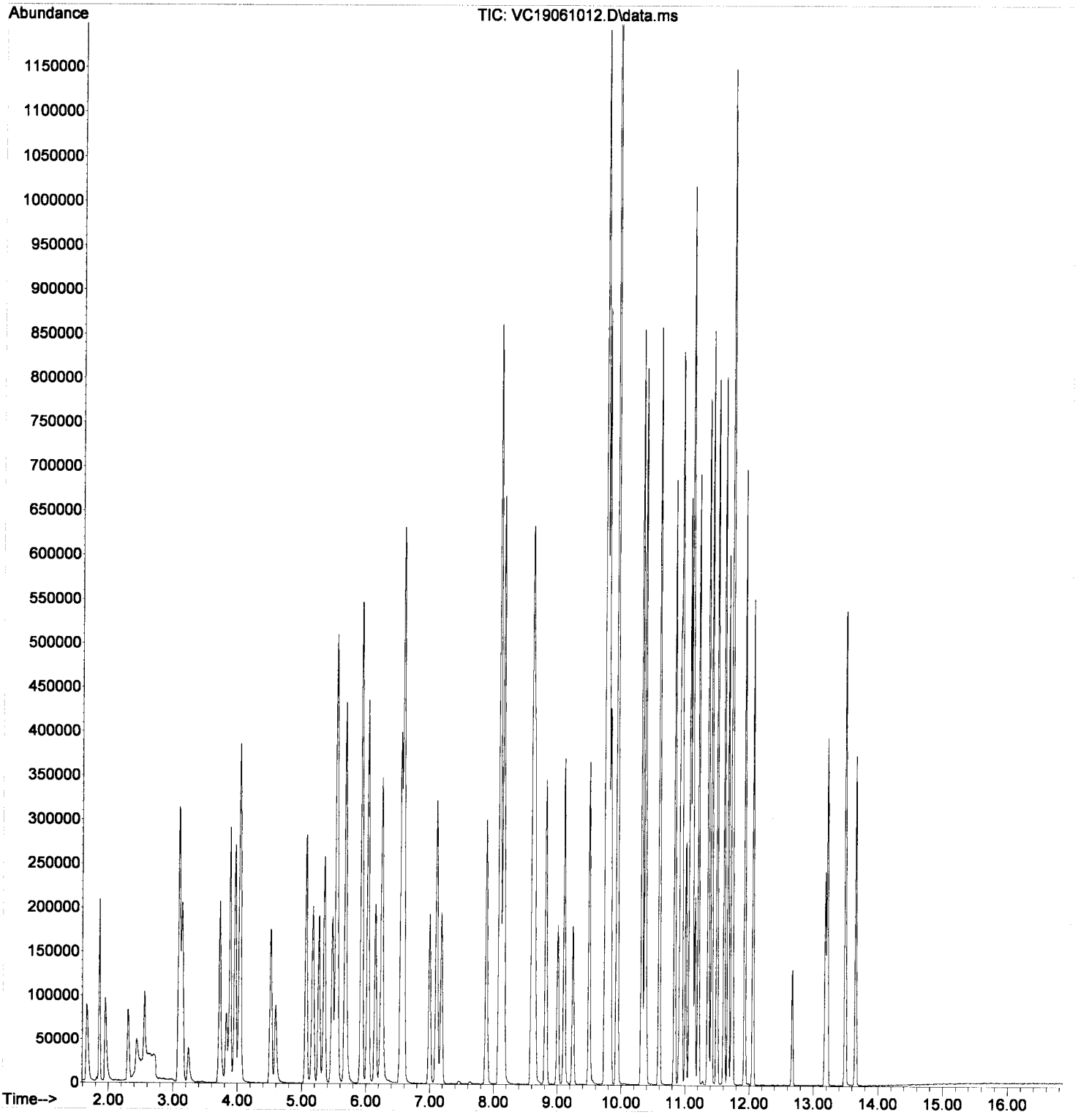
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	359063	45.11	ug/L		97
50) Ethylbenzene	9.794	91	598887	44.89	ug/L		99
51) 1,1,1,2-Tetrachloroethane	9.830	131	117587	52.37	ug/L		99
52) m,p-Xylenes (2)	9.934	91	876496	91.00	ug/L		98
53) o-Xylene	10.317	91	465814	46.01	ug/L		99
54) Styrene	10.366	104	358493	50.66	ug/L		96
55) Bromoform	10.390	173	60779	44.86	ug/L		98
56) Isopropylbenzene	10.591	105	538430	46.38	ug/L		99
59) Bromobenzene	10.919	156	133614	52.41	ug/L		98
60) n-Propylbenzene	10.944	91	583140	50.17	ug/L		100
61) 1,1,2,2-Tetrachloroethane	11.011	83	127935	50.58	ug/L		99
62) 2-Chlorotoluene	11.071	126	122859	51.06	ug/L		89
63) 1,3,5-Trimethylbenzene	11.102	105	408363	51.97	ug/L		99
64) 1,2,3-Trichloropropane	11.114	110	50346	48.27	ug/L		83
65) t-1,4-Dichloro-2-butene	11.150	88	17733	48.17	ug/L	#	83
66) 4-Chlorotoluene	11.205	91	350674	50.43	ug/L		99
67) tert-Butylbenzene	11.357	91	221609	50.32	ug/L		94
68) 1,2,4-Trimethylbenzene	11.412	105	400165	49.77	ug/L		99
69) sec-Butylbenzene	11.497	105	474670	50.98	ug/L		98
70) 4-Isopropyltoluene	11.607	119	392357	51.79	ug/L		97
71) 1,3-Dichlorobenzene	11.668	146	211770	47.34	ug/L		97
72) 1,4-Dichlorobenzene	11.734	146	207796	46.49	ug/L		98
73) n-Butylbenzene	11.929	91	322235	50.01	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	191185	46.53	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.671	157	31470	48.38	ug/L		95
76) Hexachlorobutadiene	13.182	223	28665	48.19	ug/L		98
77) 1,2,4-Trichlorobenzene	13.213	180	118093	49.37	ug/L		98
78) Naphthalene	13.493	128	414906	51.51	ug/L		100
79) 1,2,3-Trichlorobenzene	13.651	180	114134	50.36	ug/L		98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061012.D
Acq On : 10 Jun 2019 7:43 pm
Operator : TB
Sample : 9F10052-CAL9
Misc : 1X 5mL 50ppb VOC DI+MeOH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:53 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061013.D
Acq On : 10 Jun 2019 8:11 pm
Operator : TB
Sample : 9F10052-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

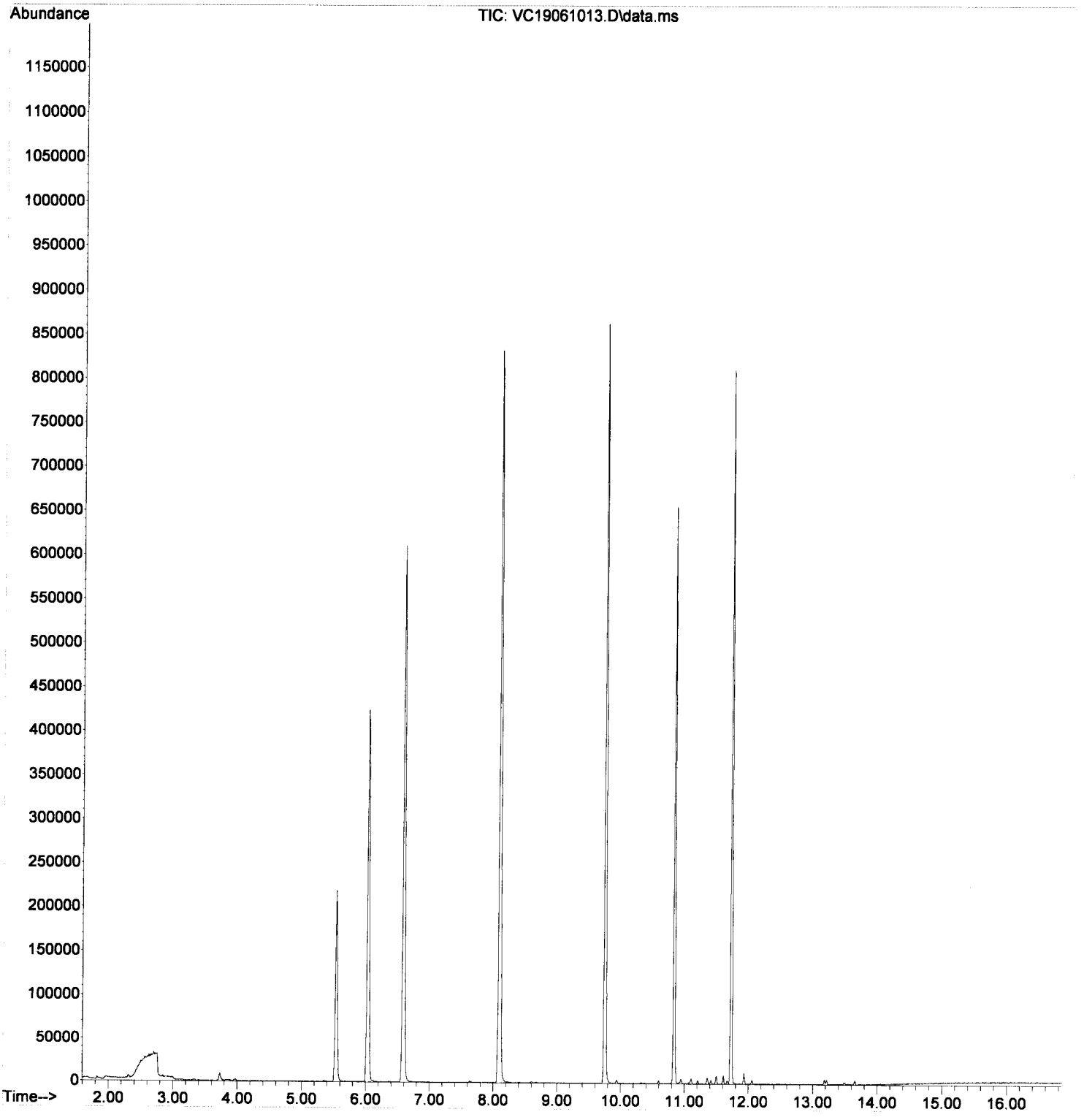
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.029	168	333883	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	477154	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	182401	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.537	111	148670	48.85	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.589	114	560414	49.81	ug/L		0.00
39) Toluene-d8 (S)	8.092	98	663402	49.77	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	167639	50.90	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.674	85	220	0.10	ug/L	#	50
3) Chloromethane	1.868	50	856	0.25	ug/L		80
5) Bromomethane	2.306	96	2042	1.51	ug/L	#	72
6) Chloroethane	2.452	64	151	0.17	ug/L	#	1
7) Trichlorofluoromethane	2.568	101	183	0.14	ug/L		79
8) 1,1-Dichloroethene	3.085	61	158	0.09	ug/L	#	18
9) Carbon Disulfide	3.097	76	1062	0.51	ug/L		69
10) Freon 113	3.158	101	323	0.17	ug/L	#	50
11) Iodomethane	3.249	142	725	1.98	ug/L	#	84
12) Methylene Chloride	3.730	84	4453	1.99	ug/L		91
13) Acetone	3.858	43	1694	1.44	ug/L		85
14) t-1,2-Dichloroethene	3.894	61	423	0.14	ug/L	#	61
27) 1,1-Dichloropropene	5.670	75	424	0.12	ug/L	#	63
28) 2-Butanone (MEK)	5.725	43	227	0.11	ug/L		54
33) Trichloroethene (TCE)	6.540	130	355	0.12	ug/L	#	11
40) Toluene	8.165	91	1239	0.10	ug/L		66
41) Tetrachloroethene (PCE)	8.609	166	566	0.22	ug/L		77
49) Chlorobenzene	9.758	112	779	0.11	ug/L	#	1
50) Ethylbenzene	9.801	91	1394	0.12	ug/L		85
52) m,p-Xylenes (2)	9.941	91	2504	0.29	ug/L		82
53) o-Xylene	10.324	91	775	0.09	ug/L		90
56) Isopropylbenzene	10.592	105	2365	0.23	ug/L		82
59) Bromobenzene	10.920	156	241	0.10	ug/L	#	82
60) n-Propylbenzene	10.945	91	4342	0.39	ug/L		94
62) 2-Chlorotoluene	11.066	126	300	0.13	ug/L	#	68
63) 1,3,5-Trimethylbenzene	11.103	105	2694	0.36	ug/L		88
66) 4-Chlorotoluene	11.206	91	1515	0.23	ug/L		78
67) tert-Butylbenzene	11.358	91	2054	0.51	ug/L		90
68) 1,2,4-Trimethylbenzene	11.413	105	2311	0.30	ug/L		92
69) sec-Butylbenzene	11.498	105	6006	0.71	ug/L		96
70) 4-Isopropyltoluene	11.608	119	4823	0.68	ug/L		93
71) 1,3-Dichlorobenzene	11.675	146	1037	0.25	ug/L		88
72) 1,4-Dichlorobenzene	11.742	146	1306	0.31	ug/L		94
73) n-Butylbenzene	11.930	91	5936	0.96	ug/L		87
74) 1,2-Dichlorobenzene	12.058	146	598	0.17	ug/L		79
76) Hexachlorobutadiene	13.183	223	595	1.12	ug/L		84
77) 1,2,4-Trichlorobenzene	13.220	180	1841	0.89	ug/L		97
78) Naphthalene	13.494	128	2020	0.30	ug/L		94
79) 1,2,3-Trichlorobenzene	13.652	180	1416	0.73	ug/L		92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061013.D
Acq On : 10 Jun 2019 8:11 pm
Operator : TB
Sample : 9F10052-IBL2
Misc : 1X 5mL DI+MeOH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.035	168	333562	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.745	117	491250	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	195717	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.536	111	159535	44.17	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	569175	44.36	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	679105	51.10	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	177460	52.51	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.667	85	230319	76.92	ug/L		99
3) Chloromethane	1.867	50	337482	68.61	ug/L		99
4) Vinyl Chloride	1.959	62	239778	70.52	ug/L		98
5) Bromomethane	2.311	96	123677	64.49	ug/L		97
6) Chloroethane	2.445	64	93852	73.47	ug/L		99
7) Trichlorofluoromethane	2.567	101	131121	69.18	ug/L		99
8) 1,1-Dichloroethene	3.096	61	260644	77.23	ug/L		86
9) Carbon Disulfide	3.108	76	428101	79.92	ug/L		98
10) Freon 113	3.145	101	198767	69.37	ug/L		84
11) Iodomethane	3.248	142	126394	78.63	ug/L		94
12) Methylene Chloride	3.729	84	213840	68.08	ug/L		94
13) Acetone	3.832	43	232154	154.41	ug/L		96
14) t-1,2-Dichloroethene	3.887	61	316839	80.97	ug/L		99
15) n-Hexane	3.966	86	49312	77.11	ug/L	#	87
16) Methyl-tert-butyl-ether	4.039	73	877597	75.71	ug/L		97
17) 1,1-Dichloroethane	4.520	63	391554	81.19	ug/L		99
18) Acrylonitrile	4.599	53	159210	81.62	ug/L		97
19) c-1,2-Dichloroethene	5.067	61	352045	80.61	ug/L		97
20) 2,2-Dichloropropane	5.171	77	300552	79.53	ug/L		89
21) Bromochloromethane	5.268	49	209434	81.17	ug/L		95
22) Chloroform	5.353	83	435898	76.06	ug/L		98
23) Carbon Tetrachloride	5.475	117	289658	93.58	ug/L		97
24) Tetrahydrofuran	5.530	42	159494	73.05	ug/L		93
25) 1,1,1-Trichloroethane	5.548	97	359788	82.21	ug/L		99
27) 1,1-Dichloropropene	5.676	75	346592	76.94	ug/L		99
28) 2-Butanone (MEK)	5.688	43	413276	154.13	ug/L		96
29) Benzene	5.931	78	1053944	72.69	ug/L		96
30) 1,2-Dichloroethane (EDC)	6.150	62	352666	81.59	ug/L		98
31) iso-Butyl Alcohol	6.254	43	585201	1762.39	ug/L		89
33) Trichloroethene (TCE)	6.546	130	298710	73.45	ug/L		98
34) Dibromomethane	6.996	93	163635	84.44	ug/L		91
35) 1,2-Dichloropropane	7.105	63	299052	80.69	ug/L		95
36) Bromodichloromethane	7.178	83	313885	86.32	ug/L		99
38) c-1,3-Dichloropropene	7.884	75	423225	109.44	ug/L		98
40) Toluene	8.152	91	1104782	85.01	ug/L		98
41) Tetrachloroethene (PCE)	8.596	166	256544	85.14	ug/L		94
42) 4-Methyl-2-Pentanone (...	8.614	43	679393	169.34	ug/L		99
43) t-1,3-Dichloropropene	8.644	75	400343	111.58	ug/L		97
44) 1,1,2-Trichloroethane	8.815	97	260378	98.08	ug/L		98
45) Dibromochloromethane	9.003	129	242900	99.60	ug/L		96
46) 1,3-Dichloropropane	9.107	76	468590	95.42	ug/L		100
47) 1,2-Dibromoethane (EDB)	9.241	107	265078	102.14	ug/L		99
48) 2-Hexanone	9.496	43	493611	181.48	ug/L		100

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S.M~~
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

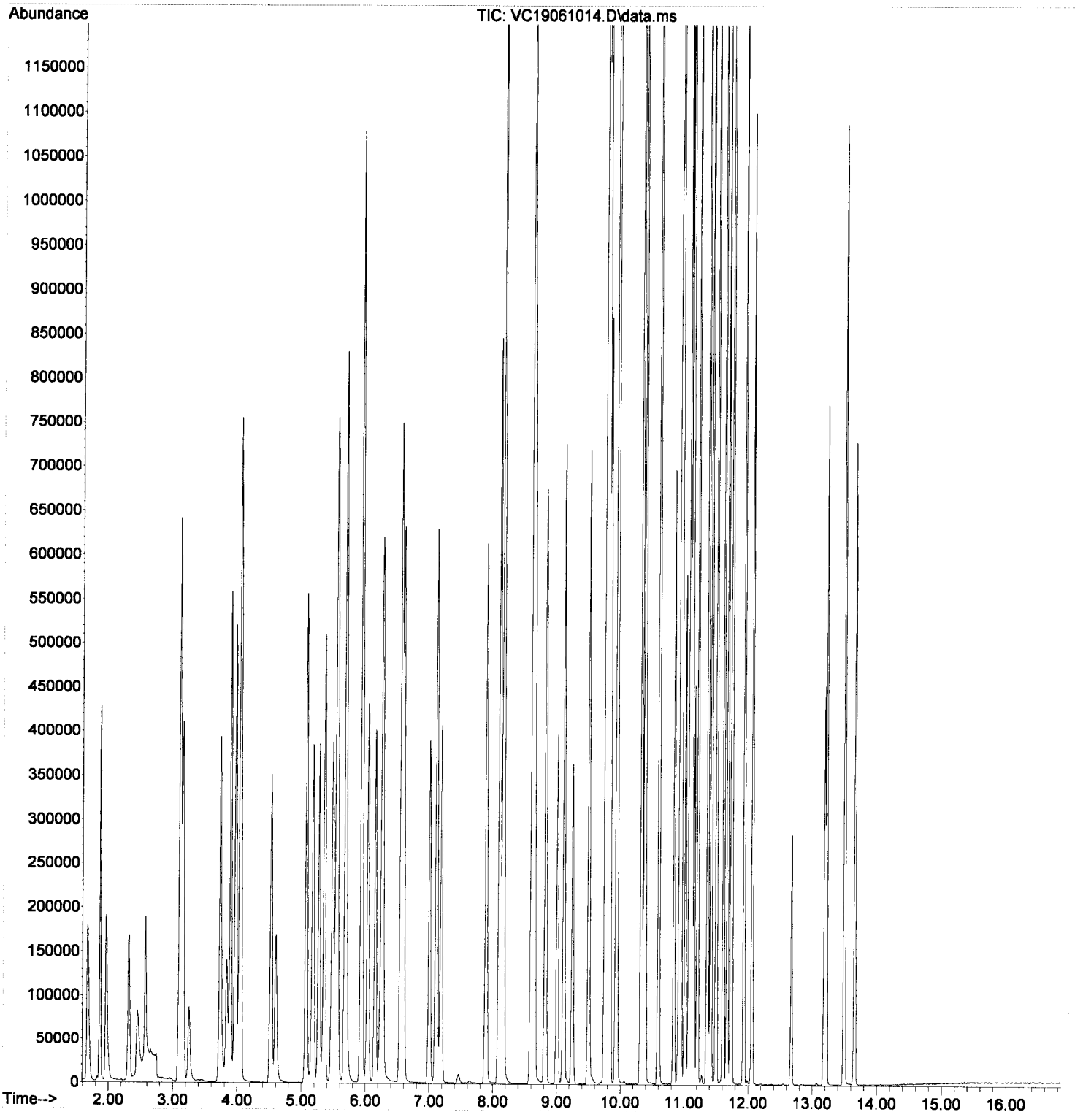
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.764	112	697876	88.54	ug/L		97
50) Ethylbenzene	9.794	91	1126383	85.25	ug/L		95
51) 1,1,1,2-Tetrachloroethane	9.831	131	241207	108.48	ug/L		99
52) m,p-Xylenes (2)	9.934	91	1626617	170.53	ug/L		95
53) o-Xylene	10.317	91	895717	89.34	ug/L		97
54) Styrene	10.366	104	712544	101.68	ug/L		93
55) Bromoform	10.390	173	138378	95.13	ug/L		99
56) Isopropylbenzene	10.591	105	1017284	88.49	ug/L		98
59) Bromobenzene	10.920	156	269310	104.21	ug/L		96
60) n-Propylbenzene	10.944	91	1111134	94.30	ug/L		96
61) 1,1,2,2-Tetrachloroethane	11.011	83	255721	99.73	ug/L		99
62) 2-Chlorotoluene	11.072	126	248772	101.98	ug/L		95
63) 1,3,5-Trimethylbenzene	11.102	105	797681	100.14	ug/L		98
64) 1,2,3-Trichloropropane	11.114	110	99067	93.69	ug/L	#	79
65) t-1,4-Dichloro-2-butene	11.151	88	38256	98.49	ug/L	#	79
66) 4-Chlorotoluene	11.206	91	691823	98.13	ug/L		97
67) tert-Butylbenzene	11.358	91	434353	97.29	ug/L		93
68) 1,2,4-Trimethylbenzene	11.412	105	783712	96.14	ug/L		96
69) sec-Butylbenzene	11.498	105	901621	95.51	ug/L		99
70) 4-Isopropyltoluene	11.607	119	759218	98.86	ug/L		99
71) 1,3-Dichlorobenzene	11.668	146	420999	92.83	ug/L		98
72) 1,4-Dichlorobenzene	11.735	146	409291	90.33	ug/L		97
73) n-Butylbenzene	11.929	91	610605	93.48	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	374906	90.00	ug/L		98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	70725	96.56	ug/L		93
76) Hexachlorobutadiene	13.183	223	54668	90.65	ug/L		99
77) 1,2,4-Trichlorobenzene	13.213	180	230797	95.17	ug/L		98
78) Naphthalene	13.487	128	815647	99.89	ug/L		98
79) 1,2,3-Trichlorobenzene	13.651	180	225036	97.94	ug/L		99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061014.D
Acq On : 10 Jun 2019 8:38 pm
Operator : TB
Sample : 9F10052-CALA
Misc : 1X 5mL 100ppb VOC DI+MeOH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:55 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.034	168	337710	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	481116	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	184451	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.535	111	154694	50.26	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	568187	49.93	ug/L		0.00
39) Toluene-d8 (S)	8.096	98	675644	50.27	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	170369	51.15	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.666	85	563	0.25	ug/L		73
3) Chloromethane	1.867	50	1427	0.41	ug/L		90
4) Vinyl Chloride	1.964	62	381	0.16	ug/L	#	48
5) Bromomethane	2.311	96	2770	2.03	ug/L		94
6) Chloroethane	2.433	64	119	0.13	ug/L	#	1
7) Trichlorofluoromethane	2.567	101	217	0.16	ug/L		96
8) 1,1-Dichloroethene	3.090	61	449	0.20	ug/L	#	42
9) Carbon Disulfide	3.114	76	2046	0.83	ug/L		90
10) Freon 113	3.138	101	430	0.22	ug/L	#	46
11) Iodomethane	3.254	142	1290	2.48	ug/L		94
12) Methylene Chloride	3.735	84	4433	1.96	ug/L		94
13) Acetone	3.850	43	1665	1.40	ug/L		96
14) t-1,2-Dichloroethene	3.899	61	665	0.22	ug/L		78
27) 1,1-Dichloropropene	5.681	75	942	0.27	ug/L	#	62
28) 2-Butanone (MEK)	5.742	43	185	0.09	ug/L		54
33) Trichloroethene (TCE)	6.557	130	579	0.20	ug/L	#	75
40) Toluene	8.157	91	2035	0.17	ug/L		89
41) Tetrachloroethene (PCE)	8.589	166	1080	0.42	ug/L		81
49) Chlorobenzene	9.763	112	1305	0.18	ug/L	#	1
50) Ethylbenzene	9.794	91	2523	0.21	ug/L		80
52) m,p-Xylenes (2)	9.934	91	4323	0.50	ug/L		85
53) o-Xylene	10.323	91	1427	0.16	ug/L		95
54) Styrene	10.378	104	859	0.14	ug/L		87
56) Isopropylbenzene	10.597	105	4137	0.40	ug/L		97
59) Bromobenzene	10.919	156	582	0.23	ug/L	#	72
60) n-Propylbenzene	10.943	91	7797	0.70	ug/L		97
62) 2-Chlorotoluene	11.077	126	739	0.32	ug/L	#	76
63) 1,3,5-Trimethylbenzene	11.102	105	5313	0.70	ug/L		93
66) 4-Chlorotoluene	11.211	91	2891	0.43	ug/L		95
67) tert-Butylbenzene	11.357	91	3834	0.95	ug/L		95
68) 1,2,4-Trimethylbenzene	11.412	105	4664	0.60	ug/L		93
69) sec-Butylbenzene	11.497	105	11811	1.37	ug/L		96
70) 4-Isopropyltoluene	11.607	119	9477	1.32	ug/L		93
71) 1,3-Dichlorobenzene	11.667	146	2164	0.51	ug/L		97
72) 1,4-Dichlorobenzene	11.734	146	2325	0.55	ug/L	#	21
73) n-Butylbenzene	11.929	91	11040	1.76	ug/L		98
74) 1,2-Dichlorobenzene	12.057	146	1486	0.41	ug/L		98
76) Hexachlorobutadiene	13.176	223	1280	2.39	ug/L	#	73
77) 1,2,4-Trichlorobenzene	13.219	180	3447	1.65	ug/L		94
78) Naphthalene	13.499	128	3378	0.49	ug/L		96
79) 1,2,3-Trichlorobenzene	13.651	180	3174	1.61	ug/L		96

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

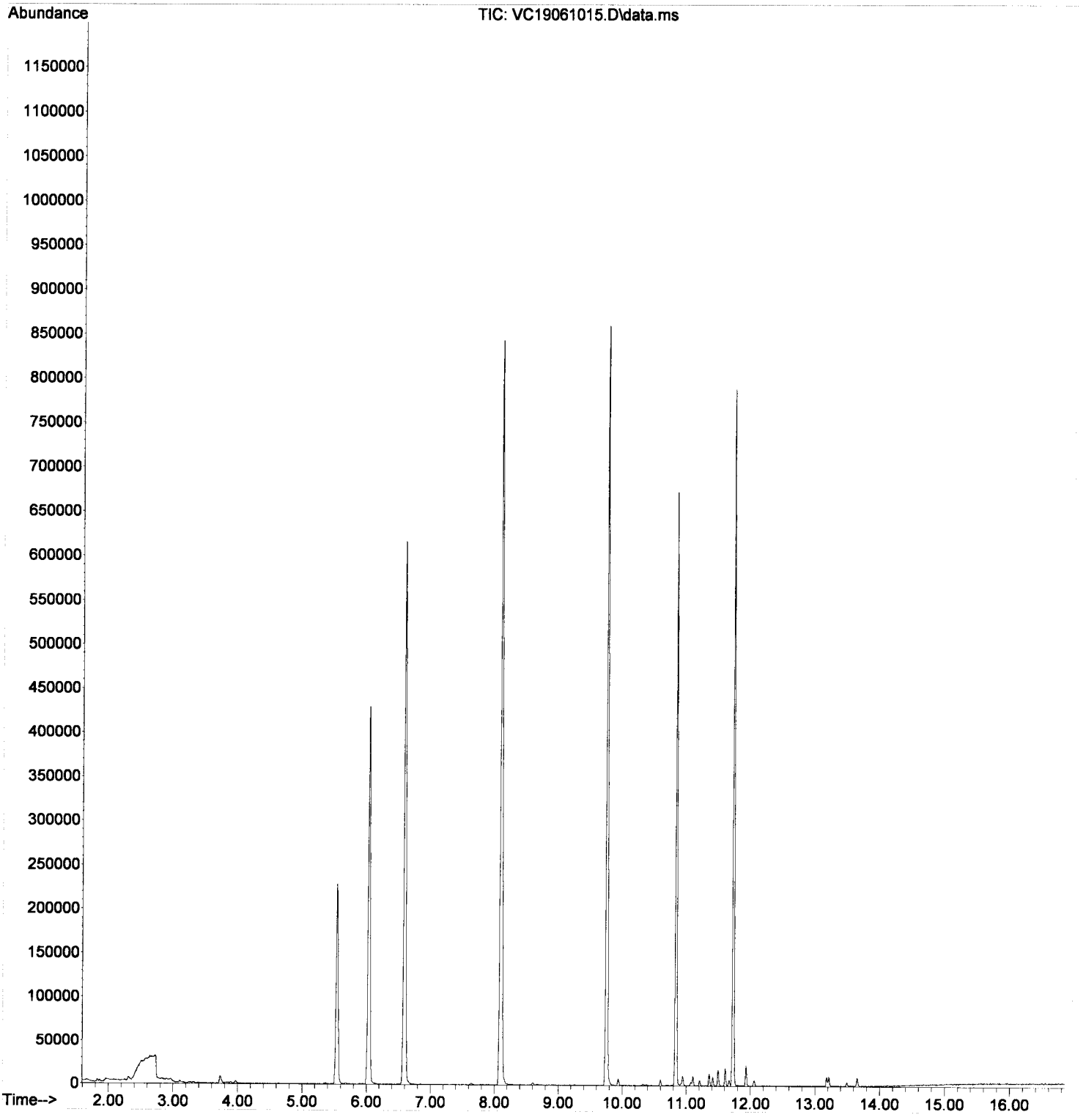
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061015.D
Acq On : 10 Jun 2019 9:06 pm
Operator : TB
Sample : 9F10052-IBL3
Misc : 1X 5mL DI+MeOH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:21 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.034	168	344824	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.751	117	478503	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.728	152	198363	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.535	111	155599	41.67	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.587	114	580421	43.76	ug/L	0.00
39) Toluene-d8 (S)	8.096	98	685539	52.96	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.834	174	172230	50.28	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.672	85	477021	154.10	ug/L	98
3) Chloromethane	1.867	50	653270	128.48	ug/L	98
4) Vinyl Chloride	1.958	62	491307	139.78	ug/L	96
5) Bromomethane	2.311	96	259132	130.70	ug/L	97
6) Chloroethane	2.457	64	197631	149.66	ug/L	95
7) Trichlorofluoromethane	2.572	101	294670	150.40	ug/L	99
8) 1,1-Dichloroethene	3.095	61	519340	148.86	ug/L	88
9) Carbon Disulfide	3.108	76	886498	160.08	ug/L	97
10) Freon 113	3.144	101	399582	134.90	ug/L	85
11) Iodomethane	3.248	142	265934	143.55	ug/L	94
12) Methylene Chloride	3.728	84	417213	140.28	ug/L	95
13) Acetone	3.832	43	410227	263.93	ug/L	98
14) t-1,2-Dichloroethene	3.886	61	607920	150.28	ug/L	99
15) n-Hexane	3.965	86	100064	155.62	ug/L	96
16) Methyl-tert-butyl-ether	4.038	73	1672090	139.54	ug/L	94
17) 1,1-Dichloroethane	4.519	63	760512	152.55	ug/L	99
18) Acrylonitrile	4.598	53	302105	149.81	ug/L	98
19) c-1,2-Dichloroethene	5.066	61	671582	148.75	ug/L	98
20) 2,2-Dichloropropane	5.170	77	598853	153.29	ug/L	90
21) Bromochloromethane	5.267	49	404581	151.69	ug/L	96
22) Chloroform	5.352	83	809559	136.65	ug/L	97
23) Carbon Tetrachloride	5.474	117	595740	186.17	ug/L	96
24) Tetrahydrofuran	5.529	42	298099	132.07	ug/L	95
25) 1,1,1-Trichloroethane	5.547	97	714533	157.94	ug/L	99
27) 1,1-Dichloropropene	5.675	75	685872	147.28	ug/L	99
28) 2-Butanone (MEK)	5.687	43	786035	283.57	ug/L	95
29) Benzene	5.930	78	1972040	131.57	ug/L	92
30) 1,2-Dichloroethane (EDC)	6.149	62	674961	151.06	ug/L	95
31) iso-Butyl Alcohol	6.265	43	1197112	3487.47	ug/L	90
33) Trichloroethene (TCE)	6.545	130	579838	137.93	ug/L	97
34) Dibromomethane	6.995	93	305444	152.47	ug/L	91
35) 1,2-Dichloropropane	7.104	63	584540	152.57	ug/L	95
36) Bromodichloromethane	7.184	83	641784	154.20	ug/L	97
38) c-1,3-Dichloropropene	7.883	75	840048	223.01	ug/L	99
40) Toluene	8.151	91	2041152	161.25	ug/L	94
41) Tetrachloroethene (PCE)	8.601	166	509334	173.54	ug/L	96
42) 4-Methyl-2-Pentanone (...	8.613	43	1300156	332.70	ug/L	98
43) t-1,3-Dichloropropene	8.644	75	778569	222.78	ug/L	95
44) 1,1,2-Trichloroethane	8.820	97	487195	188.40	ug/L	98
45) Dibromochloromethane	9.002	129	493352	190.71	ug/L	96
46) 1,3-Dichloropropane	9.106	76	867404	181.33	ug/L	96
47) 1,2-Dibromoethane (EDB)	9.246	107	502022	198.58	ug/L	99
48) 2-Hexanone	9.495	43	969053	365.77	ug/L	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\~~VC190611S~~.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration

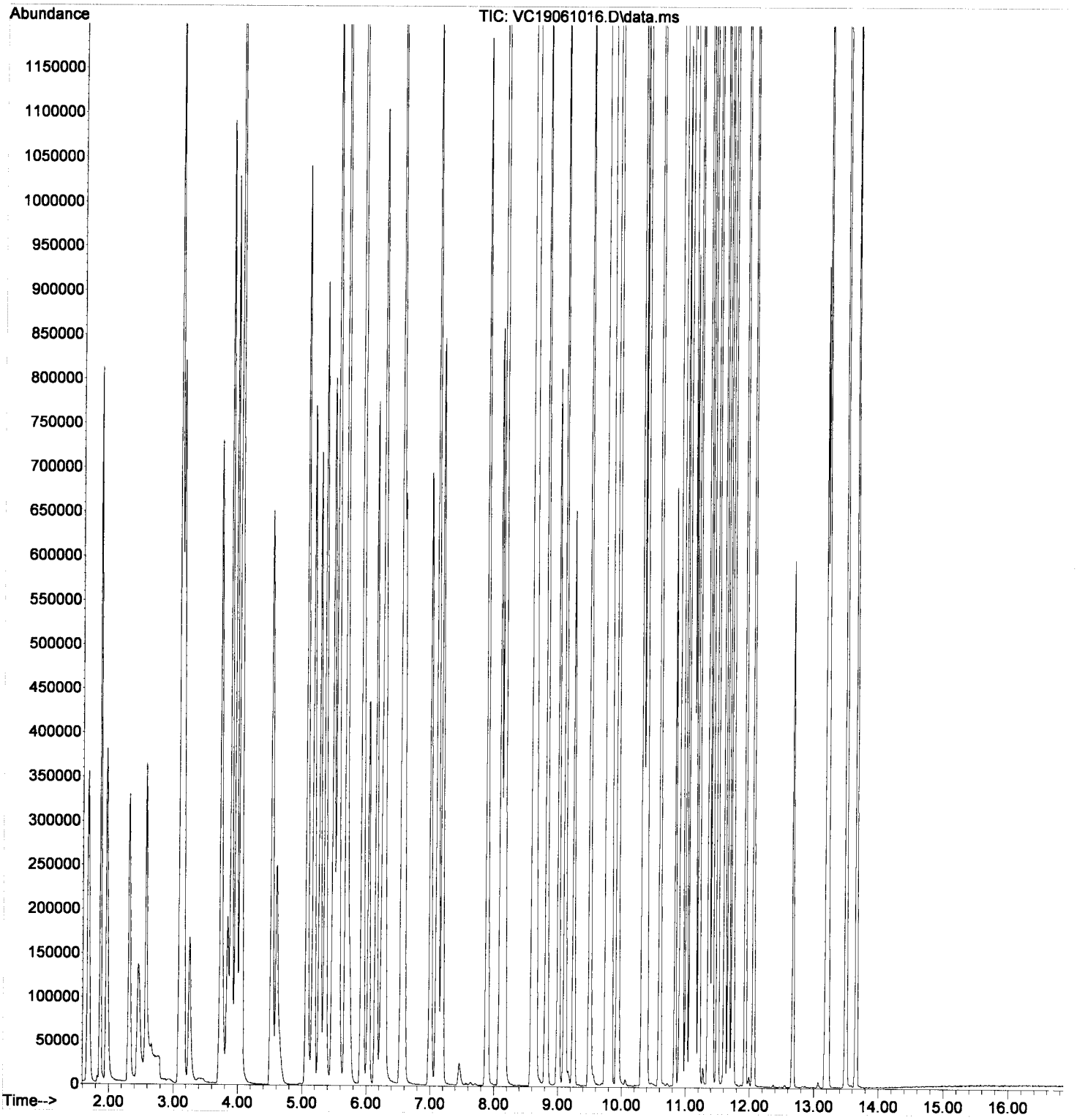
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
49) Chlorobenzene	9.763	112	1256235	163.62	ug/L		93
50) Ethylbenzene	9.793	91	1989818	154.61	ug/L		91
51) 1,1,1,2-Tetrachloroethane	9.830	131	471169	217.55	ug/L		99
52) m,p-Xylenes (2)	9.933	91	2740385	294.95	ug/L		88
53) o-Xylene	10.317	91	1575234	161.30	ug/L		94
54) Styrene	10.365	104	1276615	187.02	ug/L		91
55) Bromoform	10.390	173	302514	187.89	ug/L		99
56) Isopropylbenzene	10.596	105	1773671	158.39	ug/L		92
59) Bromobenzene	10.919	156	490693	187.34	ug/L		97
60) n-Propylbenzene	10.943	91	1904210	159.45	ug/L		91
61) 1,1,2,2-Tetrachloroethane	11.010	83	516287	198.66	ug/L		99
62) 2-Chlorotoluene	11.071	126	452384	182.98	ug/L		98
63) 1,3,5-Trimethylbenzene	11.101	105	1402428	173.71	ug/L		95
64) 1,2,3-Trichloropropane	11.113	110	200838	187.41	ug/L		89
65) t-1,4-Dichloro-2-butene	11.150	88	82112	196.16	ug/L	#	75
66) 4-Chlorotoluene	11.205	91	1229826	172.12	ug/L		95
67) tert-Butylbenzene	11.357	91	792365	175.11	ug/L		92
68) 1,2,4-Trimethylbenzene	11.412	105	1386885	167.87	ug/L		93
69) sec-Butylbenzene	11.497	105	1586657	165.84	ug/L		94
70) 4-Isopropyltoluene	11.606	119	1362331	175.03	ug/L		94
71) 1,3-Dichlorobenzene	11.667	146	792131	172.33	ug/L		97
72) 1,4-Dichlorobenzene	11.740	146	785942	171.15	ug/L		96
73) n-Butylbenzene	11.929	91	1134212	171.33	ug/L		95
74) 1,2-Dichlorobenzene	12.056	146	730354	172.99	ug/L		95
75) 1,2-Dibromo-3-Chloropr...	12.671	157	154313	178.41	ug/L		92
76) Hexachlorobutadiene	13.182	223	111313	182.12	ug/L		99
77) 1,2,4-Trichlorobenzene	13.212	180	458222	186.43	ug/L		97
78) Naphthalene	13.492	128	1554045	187.79	ug/L		97
79) 1,2,3-Trichlorobenzene	13.650	180	450148	193.31	ug/L		97

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061016.D
Acq On : 10 Jun 2019 9:34 pm
Operator : TB
Sample : 9F10052-CALB
Misc : 1X 5mL 200ppb VOC DI+MeOH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 08:58:58 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 08:58:16 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units		Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	357036	50.00 ug/L		0.00
37) Chlorobenzene-d5 (I)	9.746	117	510891	50.00 ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	198219	50.00 ug/L		0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	163836	50.35 ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.583	114	594267	49.40 ug/L		0.00
39) Toluene-d8 (S)	8.091	98	709939	49.74 ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.835	174	180239	50.35 ug/L		0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	1407	0.60 ug/L		87
3) Chloromethane	1.850	50	2140	0.57 ug/L		92
4) Vinyl Chloride	1.947	62	802	0.32 ug/L	#	48
5) Bromomethane	2.294	96	3442	2.38 ug/L		80
6) Chloroethane	2.428	64	102	0.11 ug/L	#	1
7) Trichlorofluoromethane	2.555	101	507	0.36 ug/L		76
8) 1,1-Dichloroethene	3.085	61	775	0.31 ug/L		88
9) Carbon Disulfide	3.097	76	4491	1.54 ug/L		93
10) Freon 113	3.139	101	1487	0.71 ug/L		79
11) Iodomethane	3.231	142	1801	2.84 ug/L	#	89
12) Methylene Chloride	3.723	84	4565	1.90 ug/L		90
13) Acetone	3.833	43	754	0.60 ug/L		94
14) t-1,2-Dichloroethene	3.888	61	1506	0.46 ug/L		89
15) n-Hexane	3.961	86	426	Below Cal	#	54
19) c-1,2-Dichloroethene	5.068	61	780	0.21 ug/L		96
21) Bromochloromethane	5.269	49	330	0.16 ug/L	#	76
22) Chloroform	5.348	83	468	0.10 ug/L	#	39
23) Carbon Tetrachloride	5.457	117	419	0.18 ug/L	#	1
24) Tetrahydrofuran	5.555	42	166	0.10 ug/L	#	71
25) 1,1,1-Trichloroethane	5.542	97	372	0.10 ug/L	#	24
27) 1,1-Dichloropropene	5.670	75	1701	0.47 ug/L		94
28) 2-Butanone (MEK)	5.707	43	653	0.30 ug/L		54
29) Benzene	5.926	78	1768	0.15 ug/L		94
30) 1,2-Dichloroethane (EDC)	6.157	62	377	0.10 ug/L	#	50
31) iso-Butyl Alcohol	6.278	43	125	0.55 ug/L	#	60
33) Trichloroethene (TCE)	6.546	130	1242	0.40 ug/L		85
34) Dibromomethane	6.996	93	146	0.09 ug/L	#	78
40) Toluene	8.158	91	3334	0.26 ug/L		81
41) Tetrachloroethene (PCE)	8.596	166	2192	0.80 ug/L		86
43) t-1,3-Dichloropropene	8.639	75	270	0.08 ug/L		47
47) 1,2-Dibromoethane (EDB)	9.235	107	286	0.12 ug/L	#	7
49) Chlorobenzene	9.770	112	2438	0.32 ug/L		84
50) Ethylbenzene	9.795	91	4679	0.36 ug/L		94
52) m,p-Xylenes (2)	9.935	91	8278	0.90 ug/L		94
53) o-Xylene	10.318	91	2849	0.30 ug/L		97
54) Styrene	10.373	104	1753	0.27 ug/L		91
56) Isopropylbenzene	10.592	105	8947	0.82 ug/L		89
59) Bromobenzene	10.920	156	892	0.33 ug/L		96
60) n-Propylbenzene	10.944	91	16762	1.40 ug/L		99
61) 1,1,2,2-Tetrachloroethane	11.011	83	227	0.09 ug/L	#	25
62) 2-Chlorotoluene	11.072	126	1424	0.58 ug/L	#	62
63) 1,3,5-Trimethylbenzene	11.103	105	10429	1.27 ug/L		91
66) 4-Chlorotoluene	11.206	91	5160	0.72 ug/L		94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

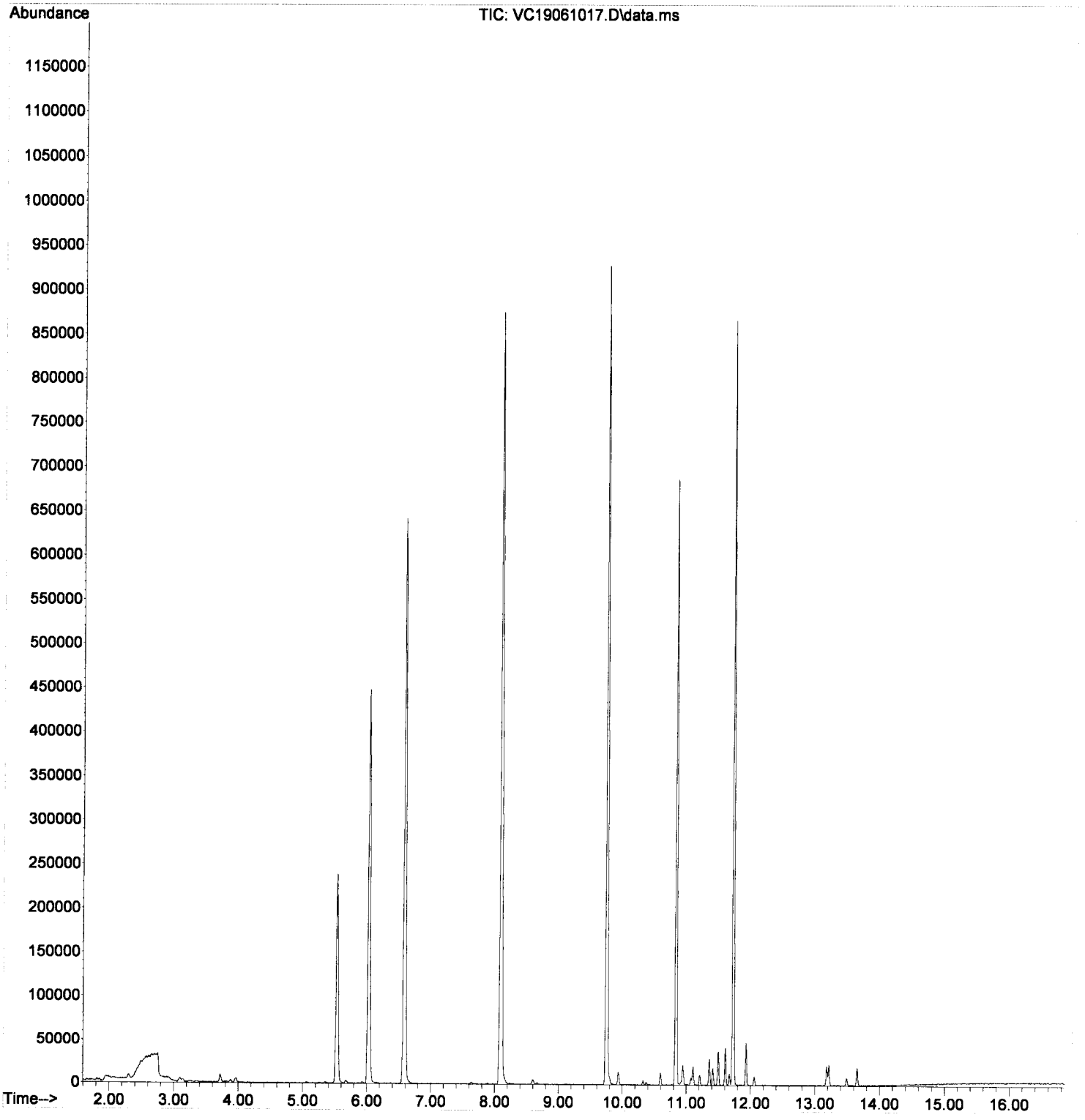
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
67) tert-Butylbenzene	11.358	91	8186	1.88	ug/L	91
68) 1,2,4-Trimethylbenzene	11.413	105	9183	1.10	ug/L	92
69) sec-Butylbenzene	11.498	105	24207	2.62	ug/L	94
70) 4-Isopropyltoluene	11.608	119	20352	2.64	ug/L	97
71) 1,3-Dichlorobenzene	11.668	146	4461	0.99	ug/L	88
72) 1,4-Dichlorobenzene	11.735	146	4446	0.98	ug/L	80
73) n-Butylbenzene	11.930	91	22362	3.32	ug/L	98
74) 1,2-Dichlorobenzene	12.064	146	2587	0.66	ug/L	88
76) Hexachlorobutadiene	13.183	223	2515	4.37	ug/L	96
77) 1,2,4-Trichlorobenzene	13.214	180	7198	3.21	ug/L	99
78) Naphthalene	13.493	128	6360	0.86	ug/L	92
79) 1,2,3-Trichlorobenzene	13.652	180	6184	2.92	ug/L	95

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061017.D
Acq On : 10 Jun 2019 10:01 pm
Operator : TB
Sample : 9F10052-IBL4
Misc : 1X 5mL DI+MeOH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:23 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061018.D
Acq On : 10 Jun 2019 10:29 pm
Operator : TB
Sample : 9F10052-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

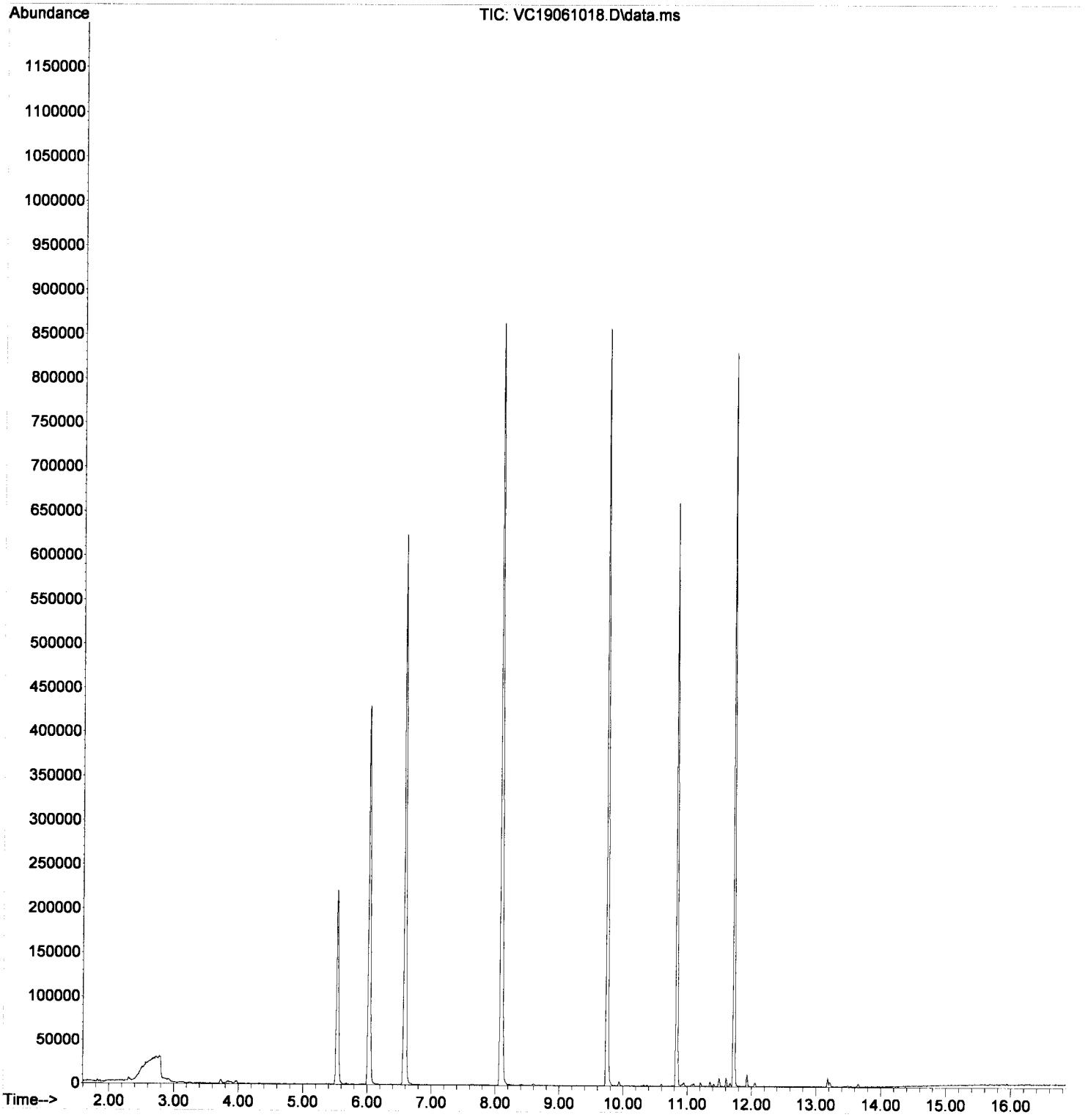
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.032	168	337813	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.749	117	487695	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.726	152	189476	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.533	111	150601	48.91	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.585	114	569848	50.06	ug/L		0.00
39) Toluene-d8 (S)	8.094	98	680810	49.97	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.832	174	169965	49.68	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.664	85	713	0.32	ug/L		91
3) Chloromethane	1.859	50	1375	0.39	ug/L		91
5) Bromomethane	2.303	96	2495	1.82	ug/L		81
6) Chloroethane	2.528	64	139	0.15	ug/L	#	1
7) Trichlorofluoromethane	2.570	101	289	0.22	ug/L	#	67
8) 1,1-Dichloroethene	3.087	61	149	0.09	ug/L	#	62
9) Carbon Disulfide	3.112	76	1449	0.63	ug/L		92
10) Freon 113	3.148	101	557	0.28	ug/L	#	61
11) Iodomethane	3.252	142	1328	2.51	ug/L	#	89
12) Methylene Chloride	3.726	84	2527	1.11	ug/L		81
13) Acetone	3.842	43	4543	3.81	ug/L		96
14) t-1,2-Dichloroethene	3.884	61	637	0.21	ug/L		97
27) 1,1-Dichloropropene	5.673	75	884	0.26	ug/L	#	62
33) Trichloroethene (TCE)	6.555	130	549	0.19	ug/L	#	61
40) Toluene	8.155	91	1460	0.12	ug/L		85
41) Tetrachloroethene (PCE)	8.599	166	799	0.31	ug/L		95
49) Chlorobenzene	9.761	112	819	0.11	ug/L	#	1
50) Ethylbenzene	9.791	91	1710	0.14	ug/L		85
52) m,p-Xylenes (2)	9.937	91	3038	0.35	ug/L		97
53) o-Xylene	10.327	91	1049	0.11	ug/L		67
54) Styrene	10.375	104	552	0.09	ug/L	#	55
56) Isopropylbenzene	10.600	105	1578	0.15	ug/L		90
59) Bromobenzene	10.917	156	392	0.15	ug/L	#	68
60) n-Propylbenzene	10.941	91	3324	0.29	ug/L		80
62) 2-Chlorotoluene	11.075	126	455	0.19	ug/L		96
63) 1,3,5-Trimethylbenzene	11.105	105	1778	0.23	ug/L		91
66) 4-Chlorotoluene	11.209	91	1722	0.25	ug/L		95
67) tert-Butylbenzene	11.361	91	1636	0.39	ug/L		81
68) 1,2,4-Trimethylbenzene	11.416	105	1958	0.25	ug/L		81
69) sec-Butylbenzene	11.495	105	5920	0.67	ug/L		95
70) 4-Isopropyltoluene	11.604	119	4834	0.66	ug/L		92
71) 1,3-Dichlorobenzene	11.671	146	1271	0.29	ug/L		96
72) 1,4-Dichlorobenzene	11.738	146	1288	0.30	ug/L	#	66
73) n-Butylbenzene	11.933	91	6521	1.01	ug/L		93
74) 1,2-Dichlorobenzene	12.060	146	702	0.19	ug/L		85
76) Hexachlorobutadiene	13.180	223	971	1.76	ug/L		85
77) 1,2,4-Trichlorobenzene	13.210	180	1890	0.88	ug/L		98
78) Naphthalene	13.490	128	1207	0.17	ug/L		74
79) 1,2,3-Trichlorobenzene	13.654	180	1474	0.73	ug/L	#	65

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061018.D
Acq On : 10 Jun 2019 10:29 pm
Operator : TB
Sample : 9F10052-IBL5
Misc : 1X 5mL DI+MeOH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (I)	6.029	168	341619	50.00	ug/L	0.00
37) Chlorobenzene-d5 (I)	9.746	117	483629	50.00	ug/L	0.00
57) 1,4-Dichlorobenzene-d4...	11.723	152	193113	50.00	ug/L	0.00
System Monitoring Compounds						
26) Dibromofluoromethane (S)	5.530	111	164834	52.94	ug/L	0.00
32) 1,4-Difluorobenzene (S)	6.582	114	572292	49.72	ug/L	0.00
39) Toluene-d8 (S)	8.091	98	680254	50.35	ug/L	0.00
58) 4-Bromofluorobenzene (S)	10.835	174	172314	49.41	ug/L	0.00
Target Compounds						Qvalue
2) Dichlorodifluoromethane	1.661	85	57570	25.53	ug/L	99
3) Chloromethane	1.856	50	83980	23.57	ug/L	99
4) Vinyl Chloride	1.947	62	53711	22.24	ug/L	99
5) Bromomethane	2.300	96	33550	24.26	ug/L	91
6) Chloroethane	2.440	64	25259	27.57	ug/L	86
7) Trichlorofluoromethane	2.567	101	32670	24.07	ug/L	97
8) 1,1-Dichloroethene	3.097	61	68720	25.48	ug/L	85
9) Carbon Disulfide	3.103	76	91821	25.62	ug/L	97
10) Freon 113	3.145	101	43629	21.86	ug/L	84
11) Iodomethane	3.243	142	23222	21.34	ug/L	95
12) Methylene Chloride	3.723	84	50448	22.00	ug/L	92
13) Acetone	3.833	43	47883	39.68	ug/L	95
14) t-1,2-Dichloroethene	3.888	61	74238	23.93	ug/L	98
15) n-Hexane	3.961	86	11831	21.39	ug/L	94
16) Methyl-tert-butyl-ether	4.034	73	181585	20.56	ug/L	99
17) 1,1-Dichloroethane	4.514	63	91485	23.77	ug/L	98
18) Acrylonitrile	4.593	53	30692	19.57	ug/L	99
19) c-1,2-Dichloroethene	5.062	61	73092	20.73	ug/L	94
20) 2,2-Dichloropropane	5.171	77	56332	19.37	ug/L	91
21) Bromochloromethane	5.262	49	42350	21.01	ug/L	91
22) Chloroform	5.348	83	90233	20.36	ug/L	99
23) Carbon Tetrachloride	5.475	117	52388	22.89	ug/L	99
24) Tetrahydrofuran	5.530	42	32307	19.63	ug/L	92
25) 1,1,1-Trichloroethane	5.548	97	75216	21.92	ug/L	99
27) 1,1-Dichloropropene	5.676	75	72056	20.67	ug/L	98
28) 2-Butanone (MEK)	5.688	43	82694	39.64	ug/L	99
29) Benzene	5.925	78	229142	20.30	ug/L	99
30) 1,2-Dichloroethane (EDC)	6.144	62	72880	20.65	ug/L	99
31) iso-Butyl Alcohol	6.266	43	112378	514.25	ug/L	84
33) Trichloroethene (TCE)	6.546	130	59419	20.16	ug/L	96
34) Dibromomethane	6.990	93	31103	19.94	ug/L	88
35) 1,2-Dichloropropane	7.106	63	59265	19.86	ug/L	94
36) Bromodichloromethane	7.179	83	52088	20.87	ug/L	98
38) c-1,3-Dichloropropene	7.884	75	74237	21.99	ug/L	98
40) Toluene	8.152	91	231399	19.19	ug/L	99
41) Tetrachloroethene (PCE)	8.596	166	51592	19.92	ug/L	96
42) 4-Methyl-2-Pentanone (...	8.614	43	133116	40.97	ug/L	98
43) t-1,3-Dichloropropene	8.645	75	66591	21.28	ug/L	99
44) 1,1,2-Trichloroethane	8.815	97	50183	20.35	ug/L	99
45) Dibromochloromethane	9.004	129	36259	18.11	ug/L	94
46) 1,3-Dichloropropane	9.107	76	92087	20.30	ug/L	99
47) 1,2-Dibromoethane (EDB)	9.241	107	49980	21.67	ug/L	99
48) 2-Hexanone	9.496	43	96190	43.51	ug/L	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

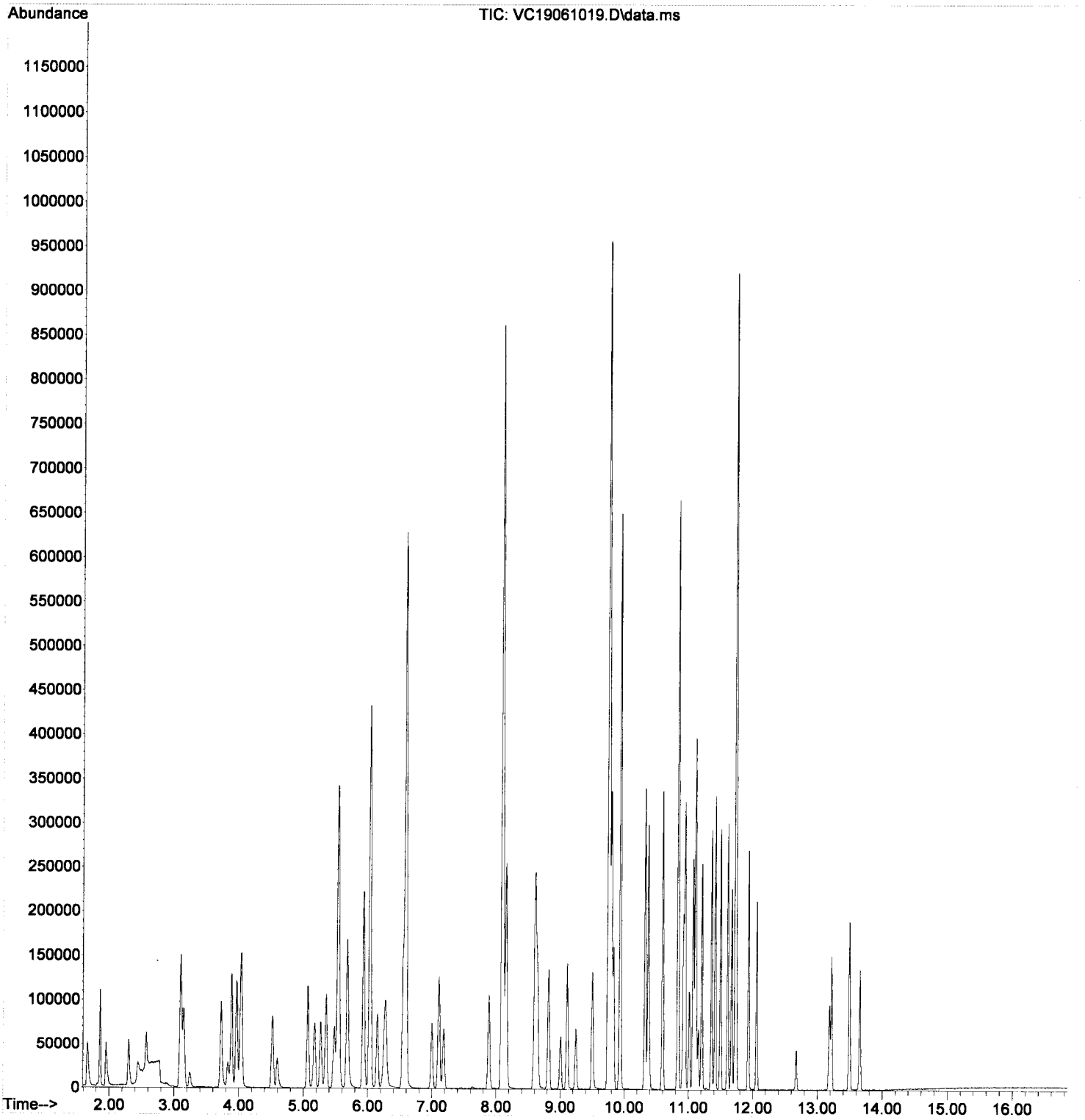
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
49) Chlorobenzene	9.764	112	140507	19.21 ug/L	98
50) Ethylbenzene	9.795	91	239051	19.67 ug/L	99
51) 1,1,1,2-Tetrachloroethane	9.825	131	41584	21.78 ug/L	96
52) m,p-Xylenes (2)	9.928	91	349092	40.00 ug/L	99
53) o-Xylene	10.318	91	177808	19.59 ug/L	99
54) Styrene	10.366	104	132223	21.57 ug/L	96
55) Bromoform	10.385	173	18971	18.00 ug/L	96
56) Isopropylbenzene	10.591	105	205346	19.98 ug/L	99
59) Bromobenzene	10.914	156	51843	19.69 ug/L	90
60) n-Propylbenzene	10.938	91	220055	18.83 ug/L	96
61) 1,1,2,2-Tetrachloroethane	11.005	83	50282	20.12 ug/L	93
62) 2-Chlorotoluene	11.066	126	46788	19.55 ug/L	87
63) 1,3,5-Trimethylbenzene	11.102	105	156130	19.51 ug/L	98
64) 1,2,3-Trichloropropane	11.115	110	19074	18.69 ug/L #	79
65) t-1,4-Dichloro-2-butene	11.151	88	5891	18.01 ug/L #	88
66) 4-Chlorotoluene	11.206	91	133363	19.12 ug/L	98
67) tert-Butylbenzene	11.358	91	83952	19.81 ug/L	97
68) 1,2,4-Trimethylbenzene	11.413	105	155116	19.05 ug/L	99
69) sec-Butylbenzene	11.498	105	182212	20.26 ug/L	97
70) 4-Isopropyltoluene	11.607	119	147599	19.64 ug/L	99
71) 1,3-Dichlorobenzene	11.668	146	81703	18.53 ug/L	97
72) 1,4-Dichlorobenzene	11.735	146	80719	18.29 ug/L	99
73) n-Butylbenzene	11.930	91	124537	19.00 ug/L	97
74) 1,2-Dichlorobenzene	12.058	146	73553	19.32 ug/L	98
75) 1,2-Dibromo-3-Chloropr...	12.672	157	10115	17.70 ug/L	88
76) Hexachlorobutadiene	13.183	223	11322	20.17 ug/L	91
77) 1,2,4-Trichlorobenzene	13.213	180	43772	20.02 ug/L	96
78) Naphthalene	13.493	128	150529	20.92 ug/L	99
79) 1,2,3-Trichlorobenzene	13.651	180	41572	20.13 ug/L	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061019.D
Acq On : 10 Jun 2019 10:56 pm
Operator : TB
Sample : 9F10052-ICV1
Misc : 1X 5mL 20ppb VOC DI+MeOH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:27 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061020.D
Acq On : 10 Jun 2019 11:24 pm
Operator : TB
Sample : 9F10052-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:55:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

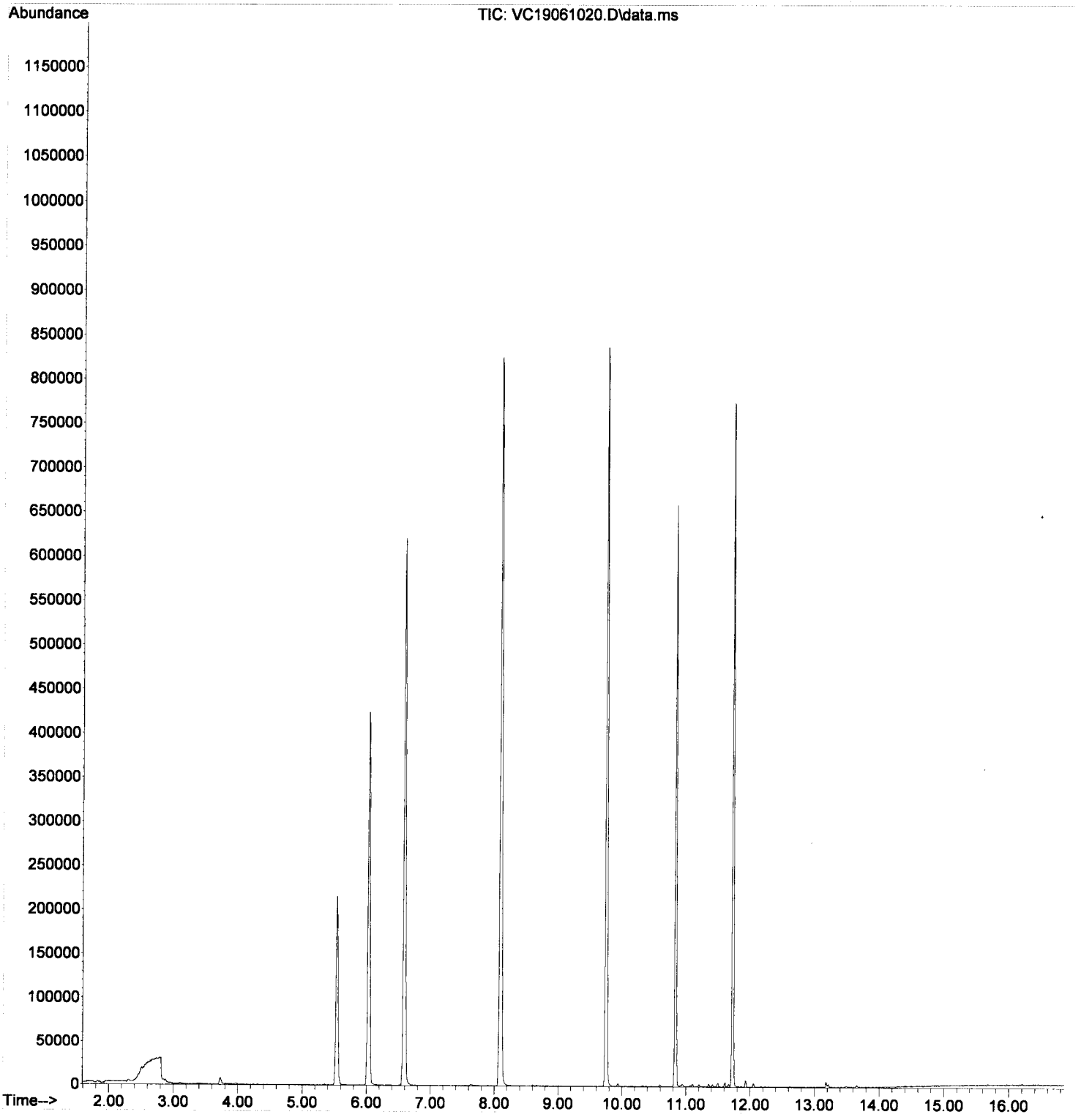
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) Pentafluorobenzene (I)	6.028	168	335442	50.00	ug/L		0.00
37) Chlorobenzene-d5 (I)	9.751	117	476735	50.00	ug/L		0.00
57) 1,4-Dichlorobenzene-d4...	11.729	152	185456	50.00	ug/L		0.00
System Monitoring Compounds							
26) Dibromofluoromethane (S)	5.529	111	149897	49.03	ug/L		0.00
32) 1,4-Difluorobenzene (S)	6.588	114	565029	49.99	ug/L		0.00
39) Toluene-d8 (S)	8.097	98	670348	50.33	ug/L		0.00
58) 4-Bromofluorobenzene (S)	10.834	174	167144	49.91	ug/L		0.00
Target Compounds							Qvalue
2) Dichlorodifluoromethane	1.666	85	200	0.09	ug/L	#	50
3) Chloromethane	1.861	50	988	0.28	ug/L		86
5) Bromomethane	2.305	96	1743	1.28	ug/L		93
6) Chloroethane	2.512	64	108	0.12	ug/L	#	1
9) Carbon Disulfide	3.108	76	1075	0.51	ug/L		79
10) Freon 113	3.151	101	230	0.12	ug/L	#	80
11) Iodomethane	3.254	142	635	1.90	ug/L	#	47
12) Methylene Chloride	3.735	84	4341	1.93	ug/L		94
13) Acetone	3.863	43	922	0.78	ug/L	#	42
14) t-1,2-Dichloroethene	3.899	61	367	0.12	ug/L		85
27) 1,1-Dichloropropene	5.682	75	519	0.15	ug/L	#	61
41) Tetrachloroethene (PCE)	8.608	166	475	0.19	ug/L	#	67
49) Chlorobenzene	9.764	112	737	0.10	ug/L	#	1
50) Ethylbenzene	9.800	91	1229	0.10	ug/L		74
52) m,p-Xylenes (2)	9.934	91	2038	0.24	ug/L		98
53) o-Xylene	10.323	91	742	0.08	ug/L		69
56) Isopropylbenzene	10.597	105	1561	0.15	ug/L		96
59) Bromobenzene	10.925	156	223	0.09	ug/L		84
60) n-Propylbenzene	10.944	91	2432	0.22	ug/L		90
62) 2-Chlorotoluene	11.078	126	231	0.10	ug/L	#	44
63) 1,3,5-Trimethylbenzene	11.102	105	1726	0.22	ug/L		95
66) 4-Chlorotoluene	11.205	91	1008	0.15	ug/L		89
67) tert-Butylbenzene	11.363	91	1007	0.25	ug/L	#	61
68) 1,2,4-Trimethylbenzene	11.418	105	1547	0.20	ug/L		85
69) sec-Butylbenzene	11.497	105	3272	0.38	ug/L		85
70) 4-Isopropyltoluene	11.607	119	2567	0.36	ug/L		94
71) 1,3-Dichlorobenzene	11.668	146	883	0.21	ug/L		78
72) 1,4-Dichlorobenzene	11.735	146	952	0.22	ug/L	#	1
73) n-Butylbenzene	11.929	91	3707	0.59	ug/L		91
74) 1,2-Dichlorobenzene	12.057	146	570	0.16	ug/L		74
76) Hexachlorobutadiene	13.182	223	765	1.42	ug/L	#	84
77) 1,2,4-Trichlorobenzene	13.213	180	1067	0.51	ug/L	#	65
78) Naphthalene	13.505	128	1314	0.19	ug/L		78
79) 1,2,3-Trichlorobenzene	13.651	180	922	0.46	ug/L		78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061020.D
Acq On : 10 Jun 2019 11:24 pm
Operator : TB
Sample : 9F10052-IBL6
Misc : 1X 5mL DI+MeOH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

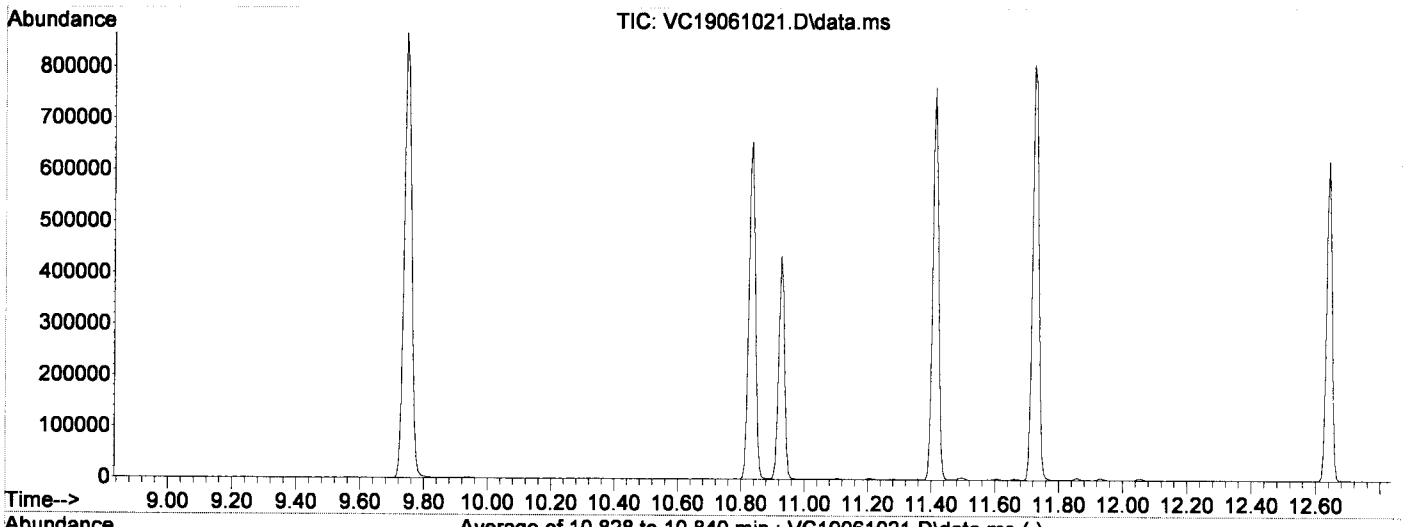
Quant Time: Jun 11 09:55:29 2019
Quant Method : C:\msdchem\1\METHODS\VC190611S.M
Quant Title : EPA 8260: Volatile Organic Compounds
QLast Update : Tue Jun 11 09:42:50 2019
Response via : Initial Calibration

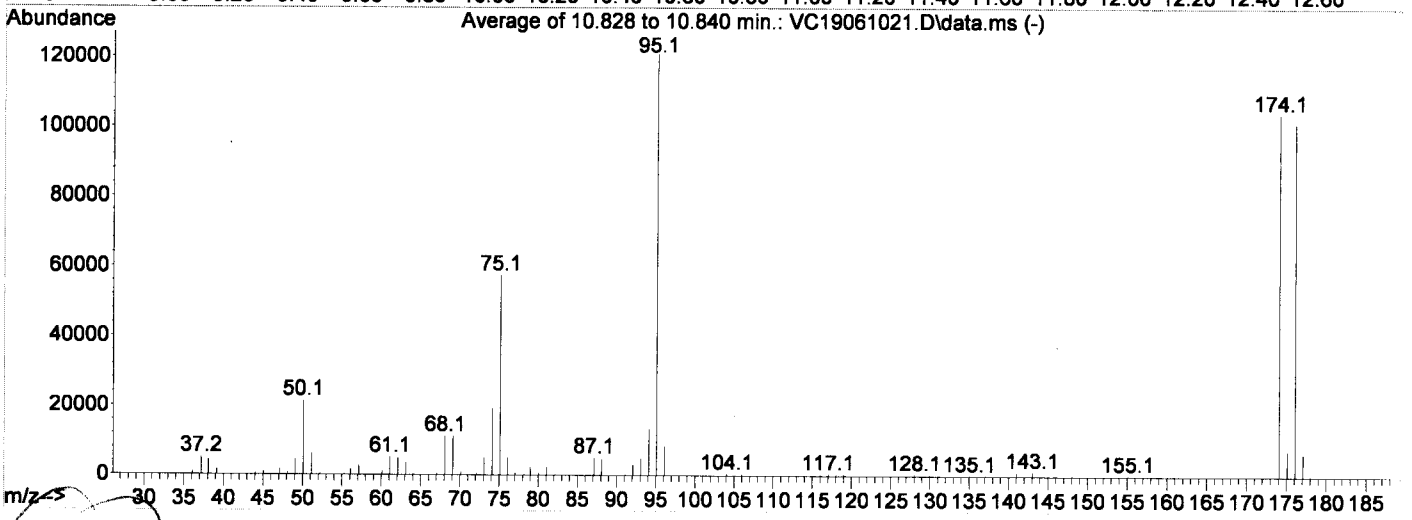


Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1

Integration File: RTEINT.P

Method : C:\msdchem\1\METHODS\VC190611G.M
Title : NWTPH-Gx by GC/MS
Last Update : Tue Jun 11 10:19:37 2019





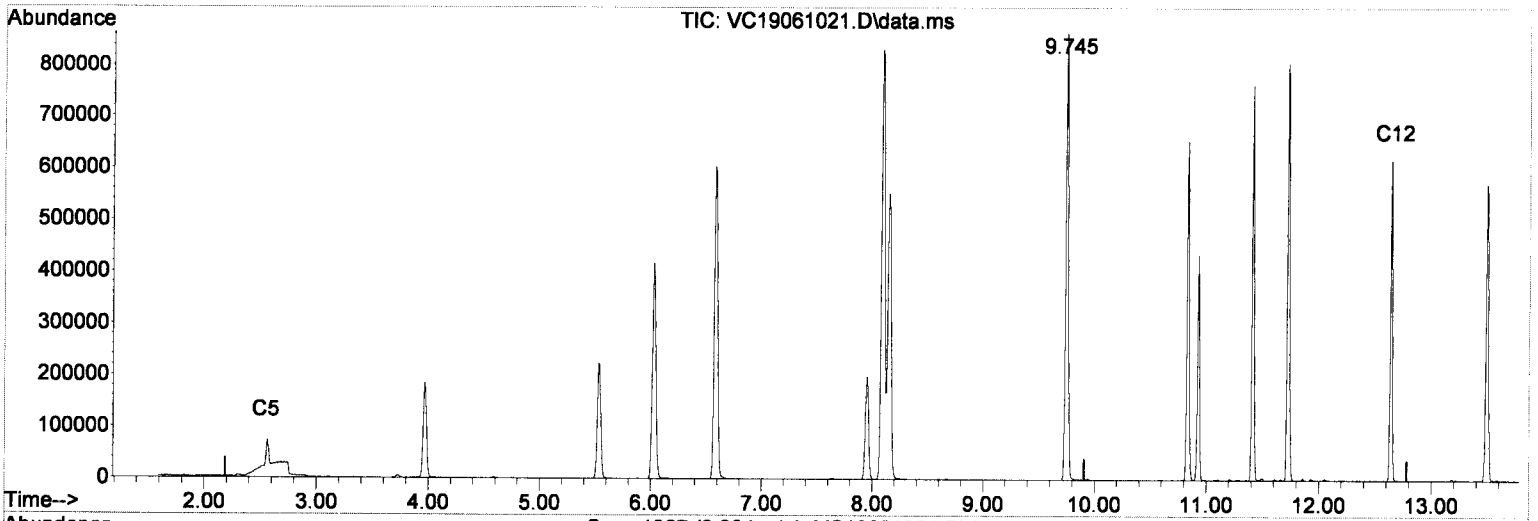
AutoFind: Scans 1519, 1520, 1521; Background Corrected with Scan 1512

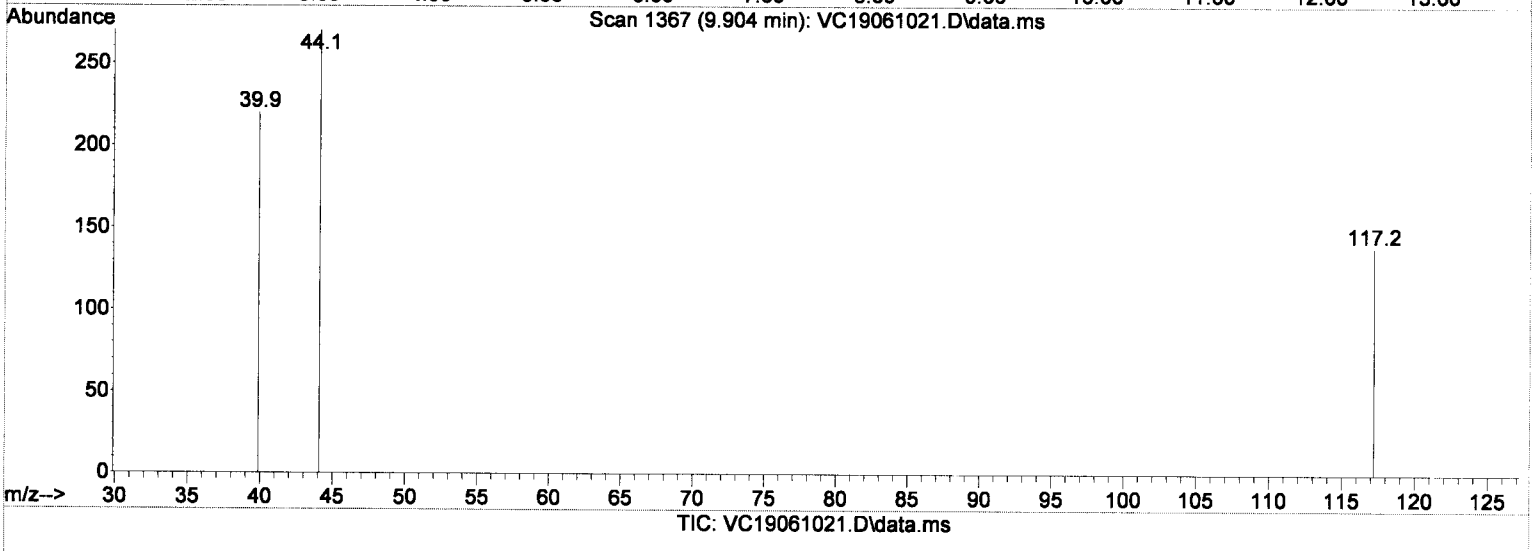
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
50	95	12	40	17.7	21363	PASS
75	95	30	60	47.5	57501	PASS
95	95	100	100	100.0	120962	PASS
96	95	5	9	6.9	8371	PASS
173	174	0.00	2	0.0	0	PASS
174	95	50	200	85.9	103960	PASS
175	174	5	9	7.1	7384	PASS
176	174	95	101	97.5	101341	PASS
177	176	5	9	6.6	6672	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration





(5) CA-LUFT (C5-C12) (H)

9.906min (0.000) 401.46 ug/L m

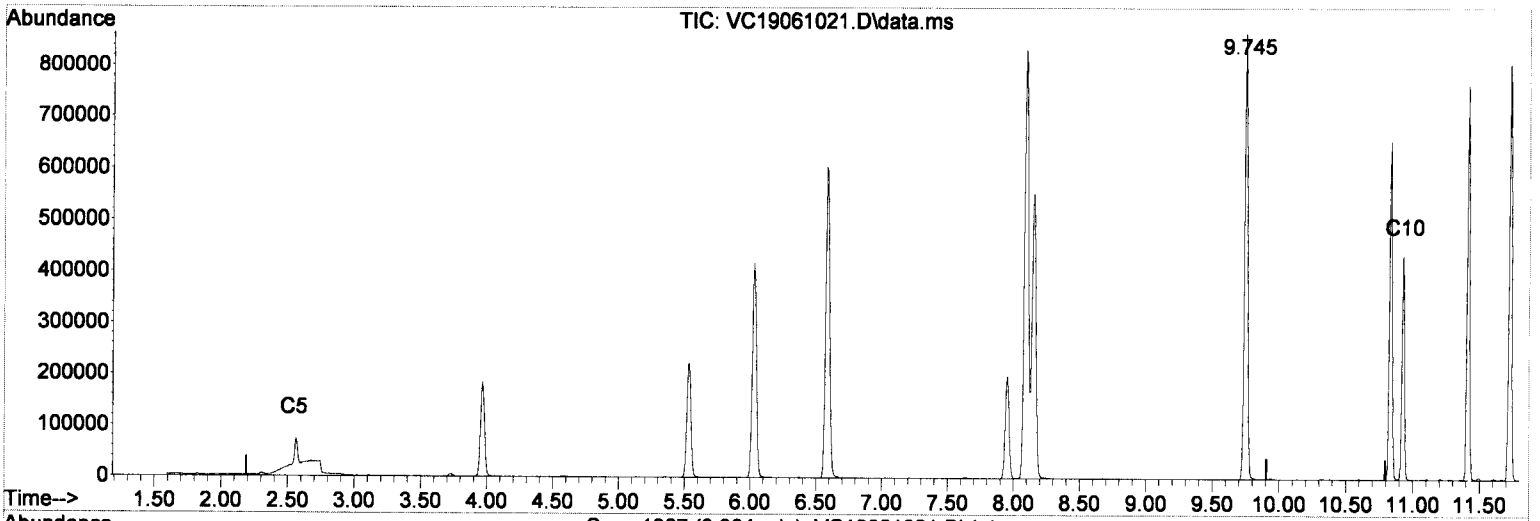
response 4921345

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.75#
0.00	0.00	0.56#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



(6) TPHg (C5-C9) (H)

9.906min (0.000) 231.50 ug/L m

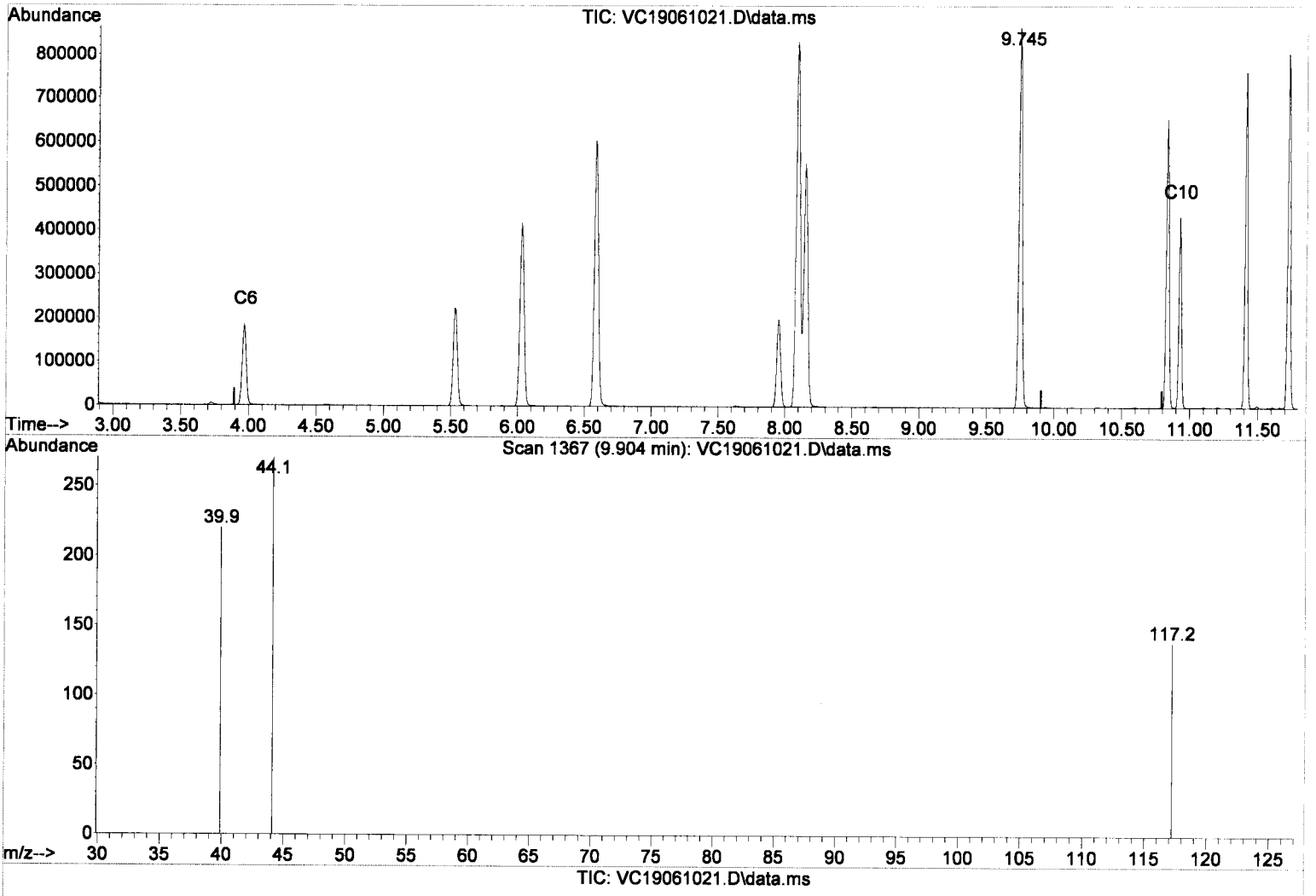
response 2619135

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.41#
0.00	0.00	1.05#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



TIC: VC19061021.D\data.ms

(7) TPHg (C6-C10) (H)

9.906min (0.000) 282.35 ug/L m

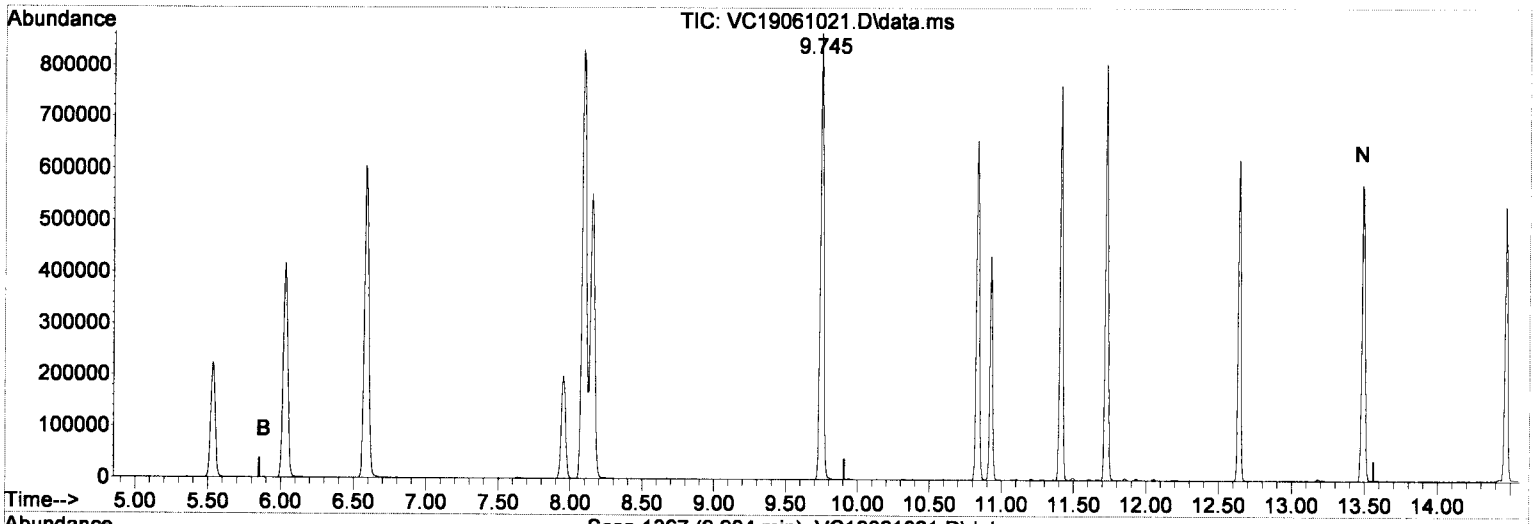
response 2429560

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	1.52#
0.00	0.00	1.13#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



TIC: VC19061021.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 663.10 ug/L m

response 4738845

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.78#
0.00	0.00	0.58#
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

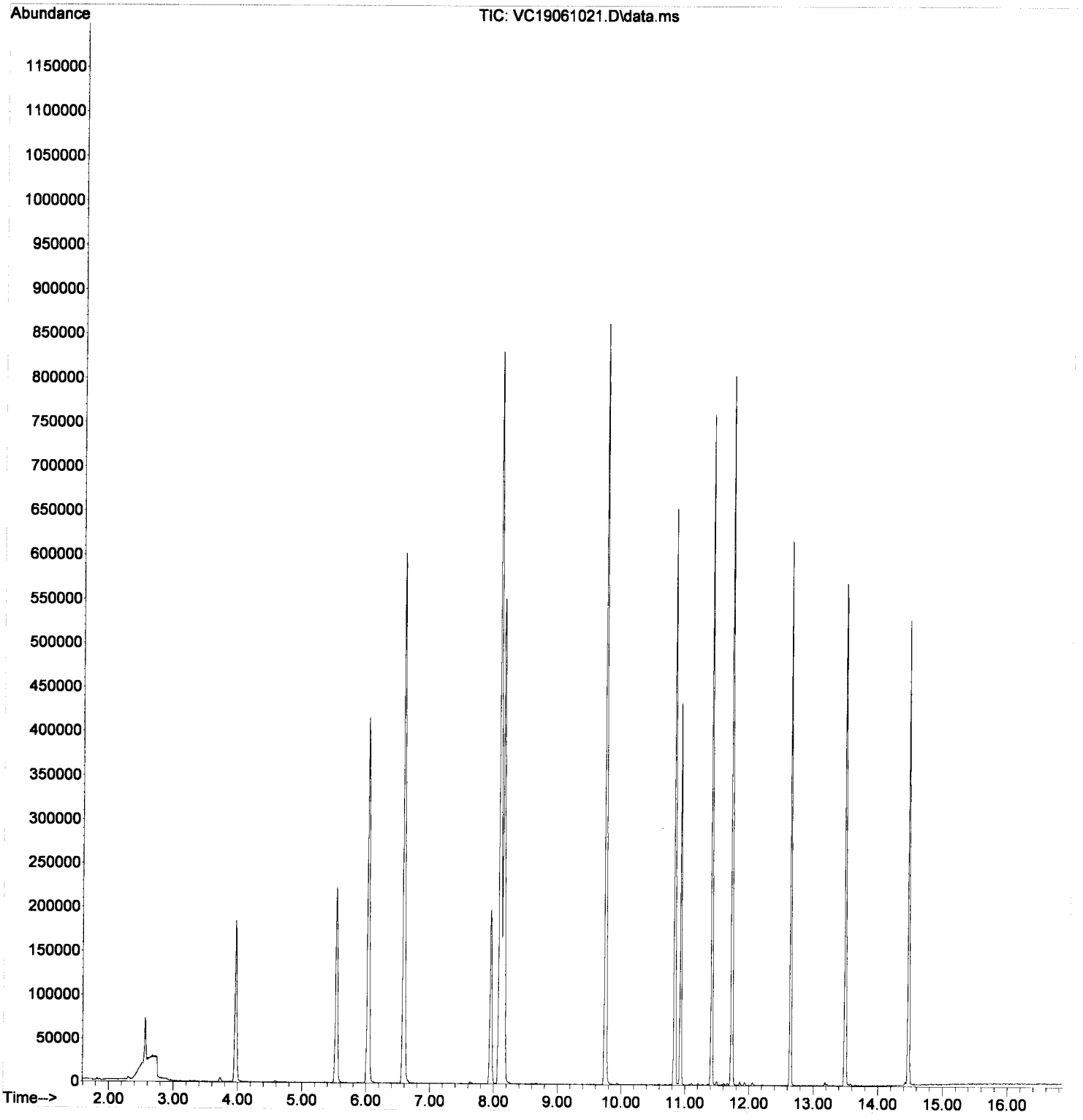
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	330024	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1283217	48.48	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	942984	50.54	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1423332	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1748163	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1106418	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	4921345m	401.46	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2619135m	231.50	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2429560m	282.35	ug/L	
8) NWTPH-Gx	9.906	TIC	4738845m	663.10	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061021.D
Acq On : 10 Jun 2019 11:52 pm
Operator : TB
Sample : 9F10052-TUN2 RT
Misc : A19C135 BFB (IS/SURR)
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:20:25 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061022.D
Acq On : 11 Jun 2019 12:19 am
Operator : TB
Sample : 9F10052-IBL7
Misc : 1X 5mL DI+MeOH
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

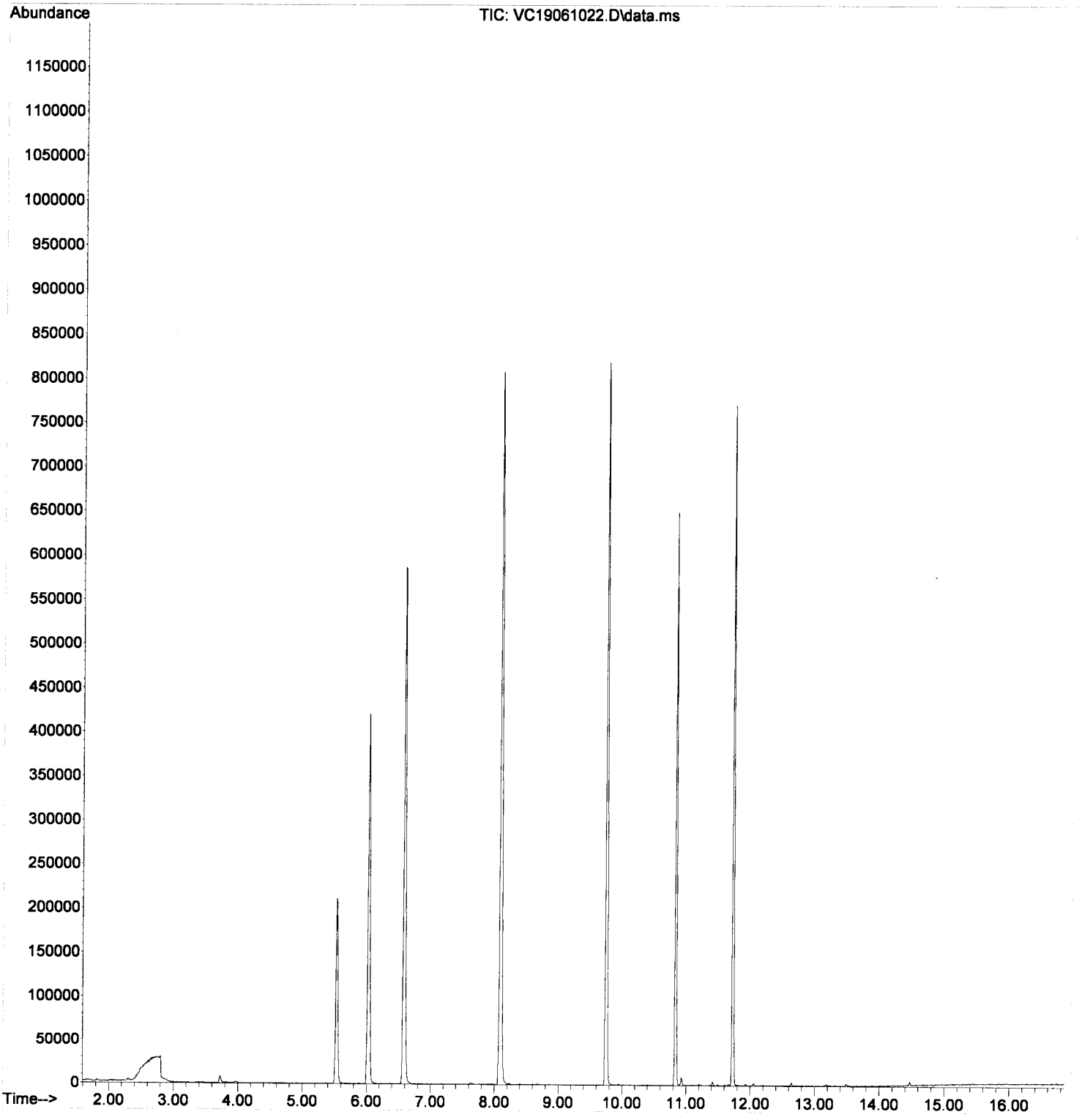
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	328097	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1267692	48.17	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	909878	49.06	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1392967	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1739319	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1073462	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	676552m	26.62	ug/L	
6) TPHg (C5-C9)	9.906	TIC	655004m	23.79	ug/L	
7) TPHg (C6-C10)	9.906	TIC	458821m	19.88	ug/L	
8) NWTPH-Gx	9.906	TIC	20460m	36.59	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061022.D
Acq On : 11 Jun 2019 12:19 am
Operator : TB
Sample : 9F10052-IBL7
Misc : 1X 5mL DI+MeOH
ALS Vial : 22 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061023.D
Acq On : 11 Jun 2019 12:46 am
Operator : TB
Sample : 9F10052-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

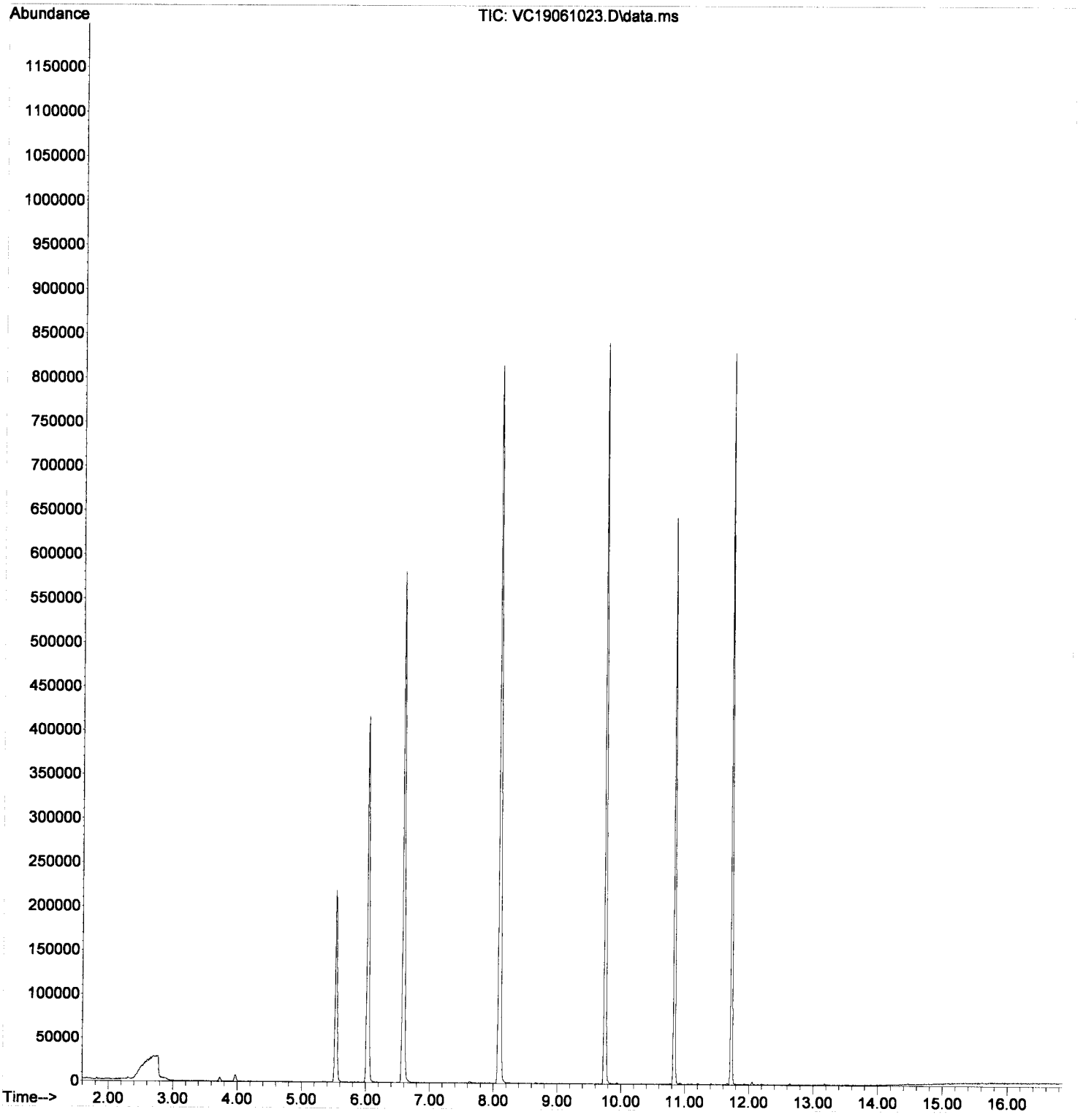
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	320770	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1239516	48.18	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	911769	50.28	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1371925	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1699518	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1073657	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	677291m	28.06	ug/L	
6) TPHg (C5-C9)	9.906	TIC	677291m	27.81	ug/L	
7) TPHg (C6-C10)	9.906	TIC	501867m	27.18	ug/L	
8) NWTPH-Gx	9.906	TIC	18473m	36.38	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061023.D
Acq On : 11 Jun 2019 12:46 am
Operator : TB
Sample : 9F10052-ICB2
Misc : 1X 5mL DI+MeOH
ALS Vial : 23 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

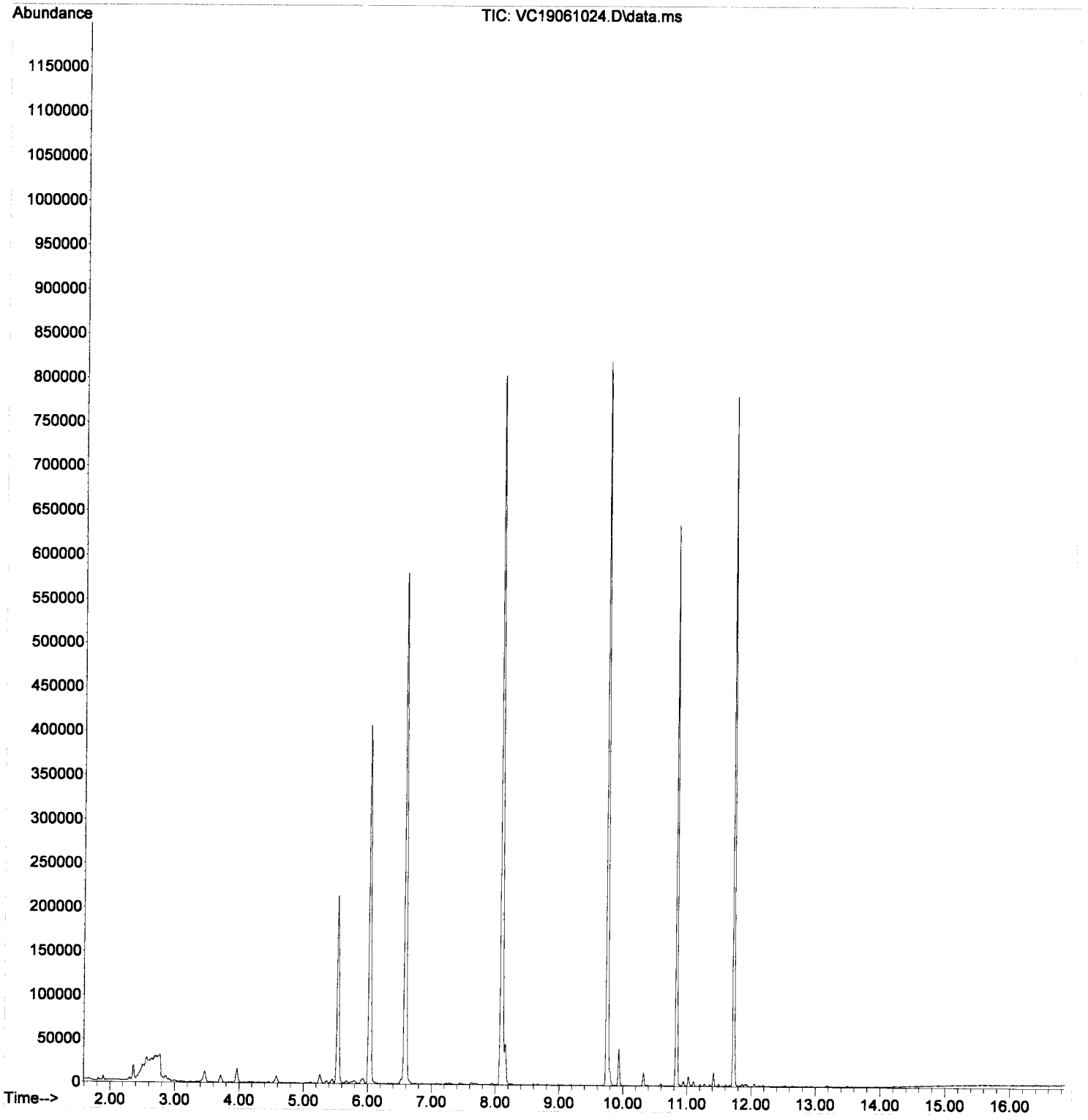
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	321925	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.587	TIC	1260925	42.03	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	897751	40.06	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1403305	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.096	TIC	1722435	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.728	TIC	1059712	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	916566m	17.31	ug/L	
6) TPHg (C5-C9)	9.906	TIC	853320m	18.92	ug/L	
7) TPHg (C6-C10)	9.906	TIC	681199m	25.47	ug/L	
8) NWTPH-Gx	9.906	TIC	166635m	30.36	ug/L	
9) Benzene (NR)	0.000		0	N.D.		
11) Toluene (NR)	8.151	91	38689	No Calib	#	
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061024.D
Acq On : 11 Jun 2019 1:14 am
Operator : TB
Sample : 9F10052-CALC
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 24 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:37 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061025.D
Acq On : 11 Jun 2019 1:41 am
Operator : TB
Sample : 9F10052-CALD
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

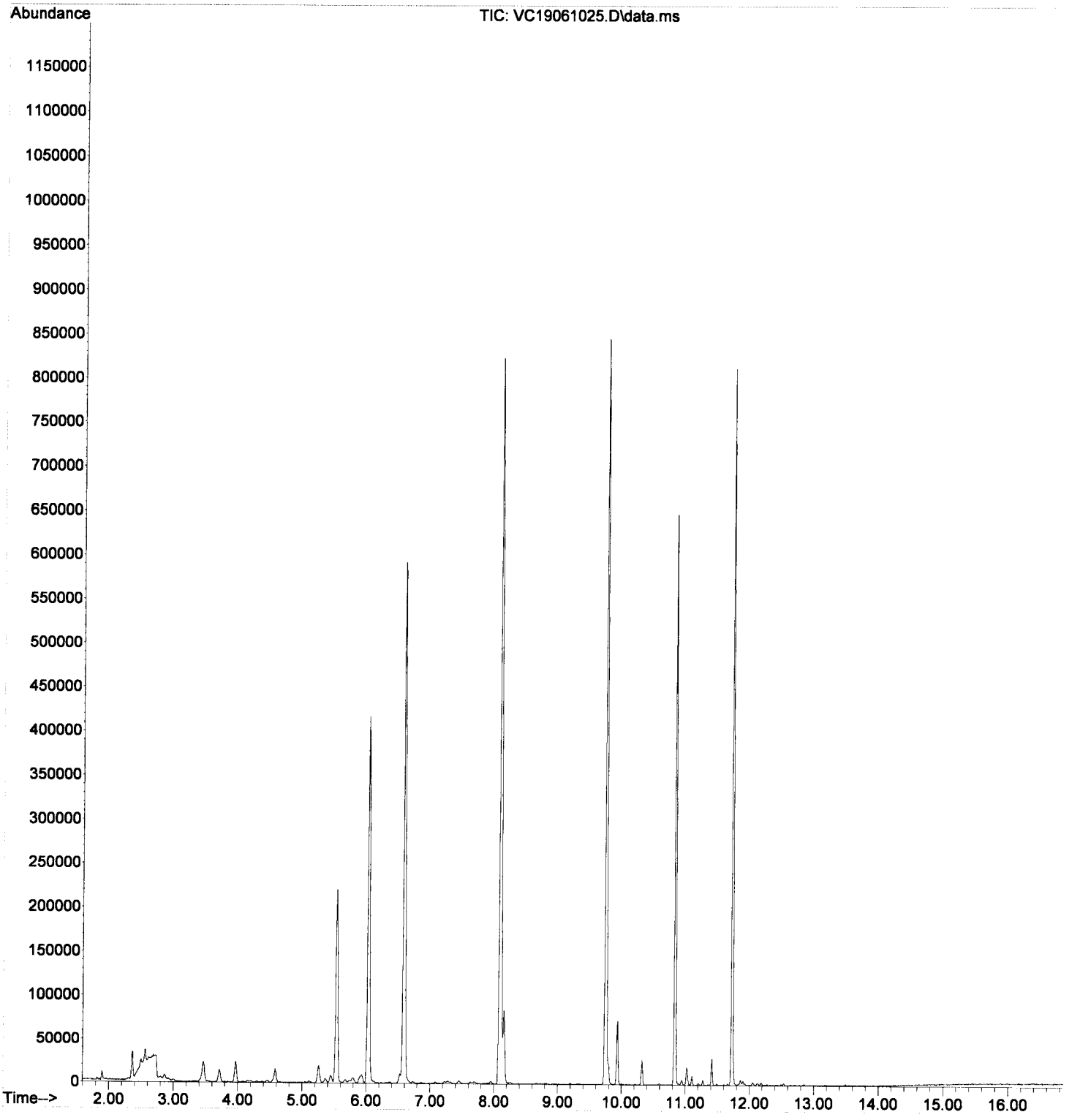
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	329041	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1276639	41.63	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	939798	41.03	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1453589	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.092	TIC	1760697	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.724	TIC	1100808	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	1526302m	57.47	ug/L	
6) TPHg (C5-C9)	9.906	TIC	1406798m	61.81	ug/L	
7) TPHg (C6-C10)	9.906	TIC	1044704m	60.93	ug/L	
8) NWTPH-Gx	9.906	TIC	491579m	63.94	ug/L	
9) Benzene (NR)	5.932	78	8168	No Calib	#	
11) Toluene (NR)	8.153	91	71090	No Calib		
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061025.D
Acq On : 11 Jun 2019 1:41 am
Operator : TB
Sample : 9F10052-CALD
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 25 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:40 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061026.D
Acq On : 11 Jun 2019 2:09 am
Operator : TB
Sample : 9F10052-CALE
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:42 2019
Quant Method : C:\msdchem\1\METHODS\V~~C190611G.M~~
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

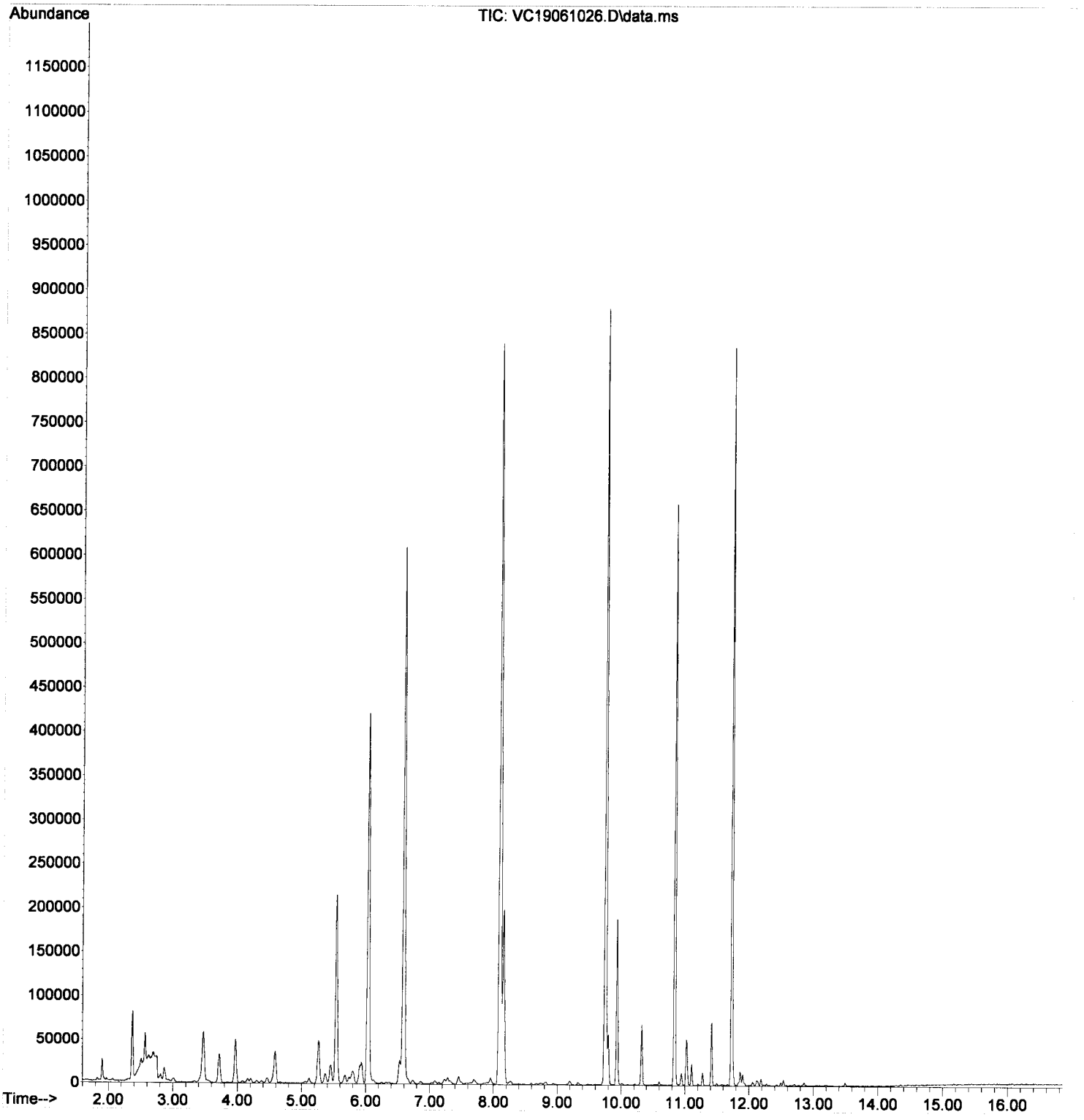
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	330828	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1318246	42.76	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	941925	40.90	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1458778	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1787721	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1113893	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	3170233m	168.32	ug/L	
6) TPHg (C5-C9)	9.906	TIC	2815081m	173.67	ug/L	
7) TPHg (C6-C10)	9.906	TIC	2166456m	173.95	ug/L	
8) NWTPH-Gx	9.906	TIC	1533196m	171.93	ug/L	
9) Benzene (NR)	5.934	78	20570	No Calib		#
11) Toluene (NR)	8.154	91	175866	No Calib		
13) Naphthalene (NR)	0.000		0	N.D.		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061026.D
Acq On : 11 Jun 2019 2:09 am
Operator : TB
Sample : 9F10052-CALE
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 26 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061027.D
Acq On : 11 Jun 2019 2:36 am
Operator : TB
Sample : 9F10052-CALF
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

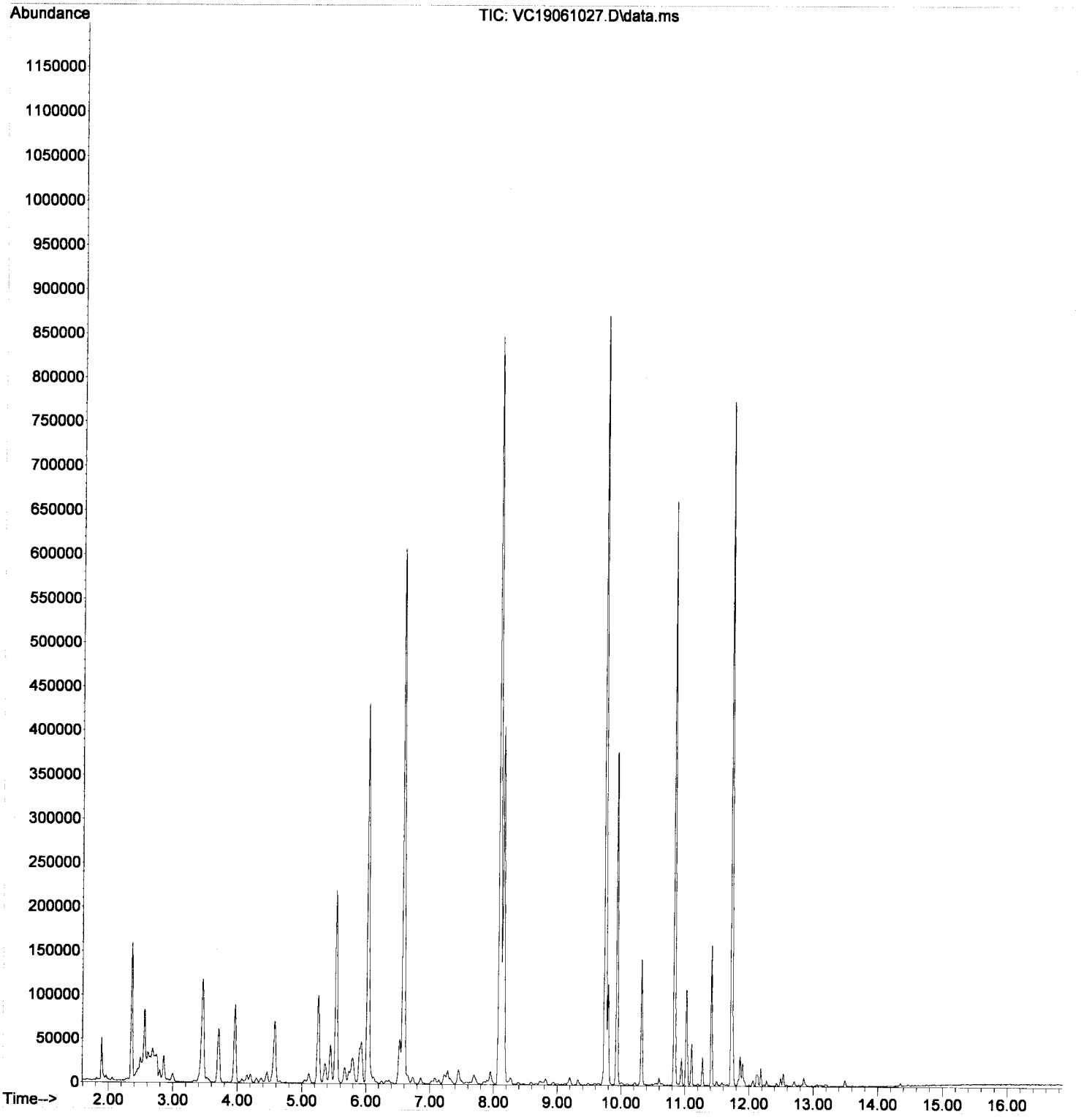
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	332005	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1331331	43.03	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	941979	40.75	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1457129	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1822057	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1132811	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6025085m	360.53	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5226519m	365.13	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4027123m	361.12	ug/L	
8) NWTPH-Gx	9.906	TIC	3291113m	353.32	ug/L	
9) Benzene (NR)	5.931	78	40295	No Calib		
11) Toluene (NR)	8.152	91	347613	No Calib		
13) Naphthalene (NR)	13.493	128	5707	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061027.D
Acq On : 11 Jun 2019 2:36 am
Operator : TB
Sample : 9F10052-CALF
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 27 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061028.D
Acq On : 11 Jun 2019 3:04 am
Operator : TB
Sample : 9F10052-CALG
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

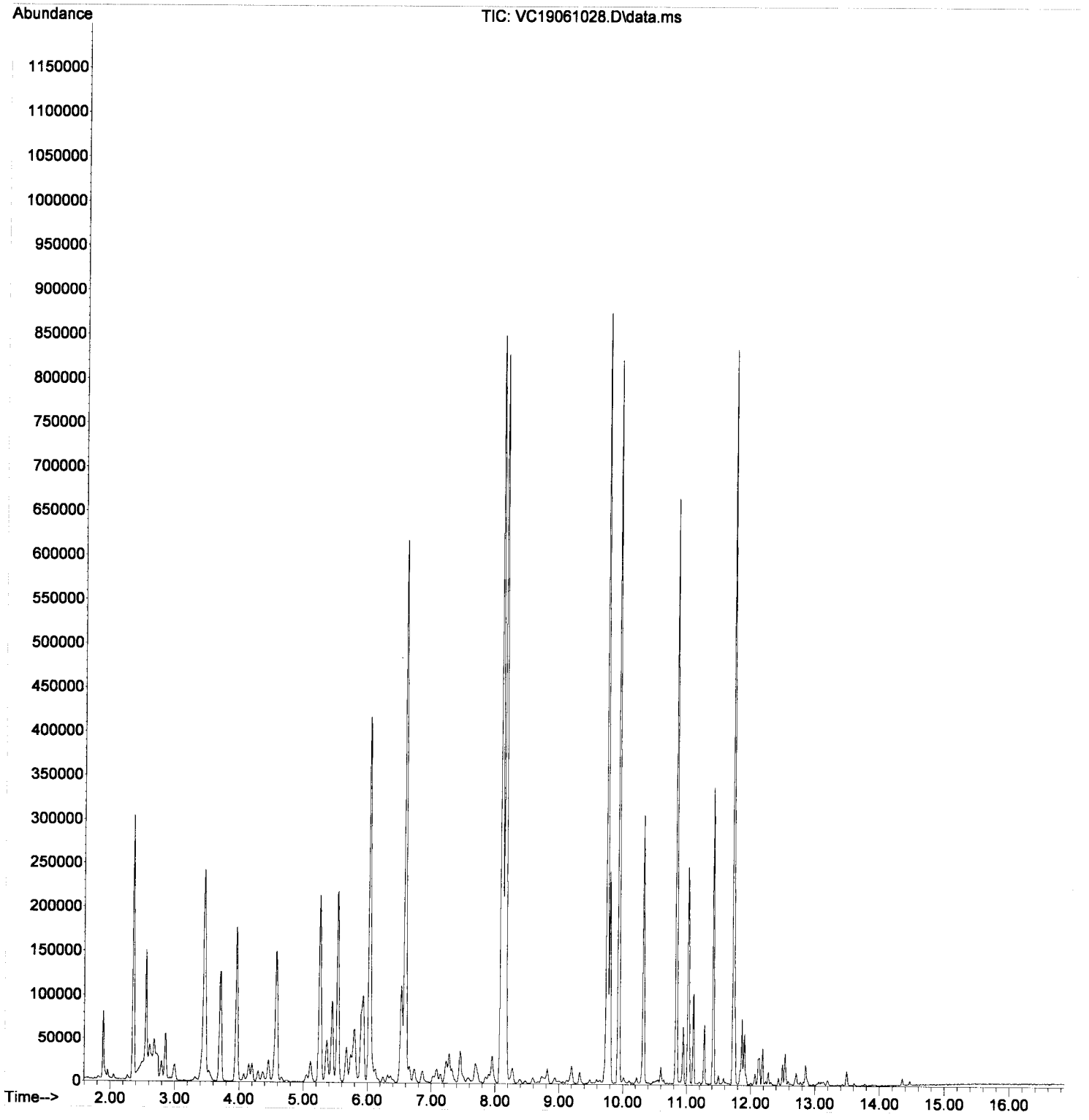
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.026	168	329683	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1319204	42.94	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.832	TIC	953942	41.56	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.749	TIC	1465931	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.094	TIC	1839495	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.726	TIC	1195649	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	12190355m	783.83	ug/L	
6) TPHg (C5-C9)	9.906	TIC	10370648m	782.57	ug/L	
7) TPHg (C6-C10)	9.906	TIC	8174017m	786.66	ug/L	
8) NWTPH-Gx	9.906	TIC	7279463m	770.93	ug/L	
9) Benzene (NR)	5.928	78	86002	No Calib		
11) Toluene (NR)	8.149	91	719085	No Calib		
13) Naphthalene (NR)	13.490	128	12622	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061028.D
Acq On : 11 Jun 2019 3:04 am
Operator : TB
Sample : 9F10052-CALG
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 28 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:12:06 2019
Quant Method : C:\msdchem\1\METHODS\VC1906IIG.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	330361	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1401216	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	956477	41.59	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1476083m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1830588	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1186359m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	57282996m	3882.49	ug/L	
6) TPHg (C5-C9)	9.906	TIC	47604040m	3837.29	ug/L	
7) TPHg (C6-C10)	9.906	TIC	38346211m	3889.34	ug/L	
8) NWTPH-Gx	9.906	TIC	37780808m	3915.54	ug/L	
9) Benzene (NR)	5.925	78	392395	No Calib		
11) Toluene (NR)	8.152	91	2876625	No Calib		
13) Naphthalene (NR)	13.487	128	73674	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

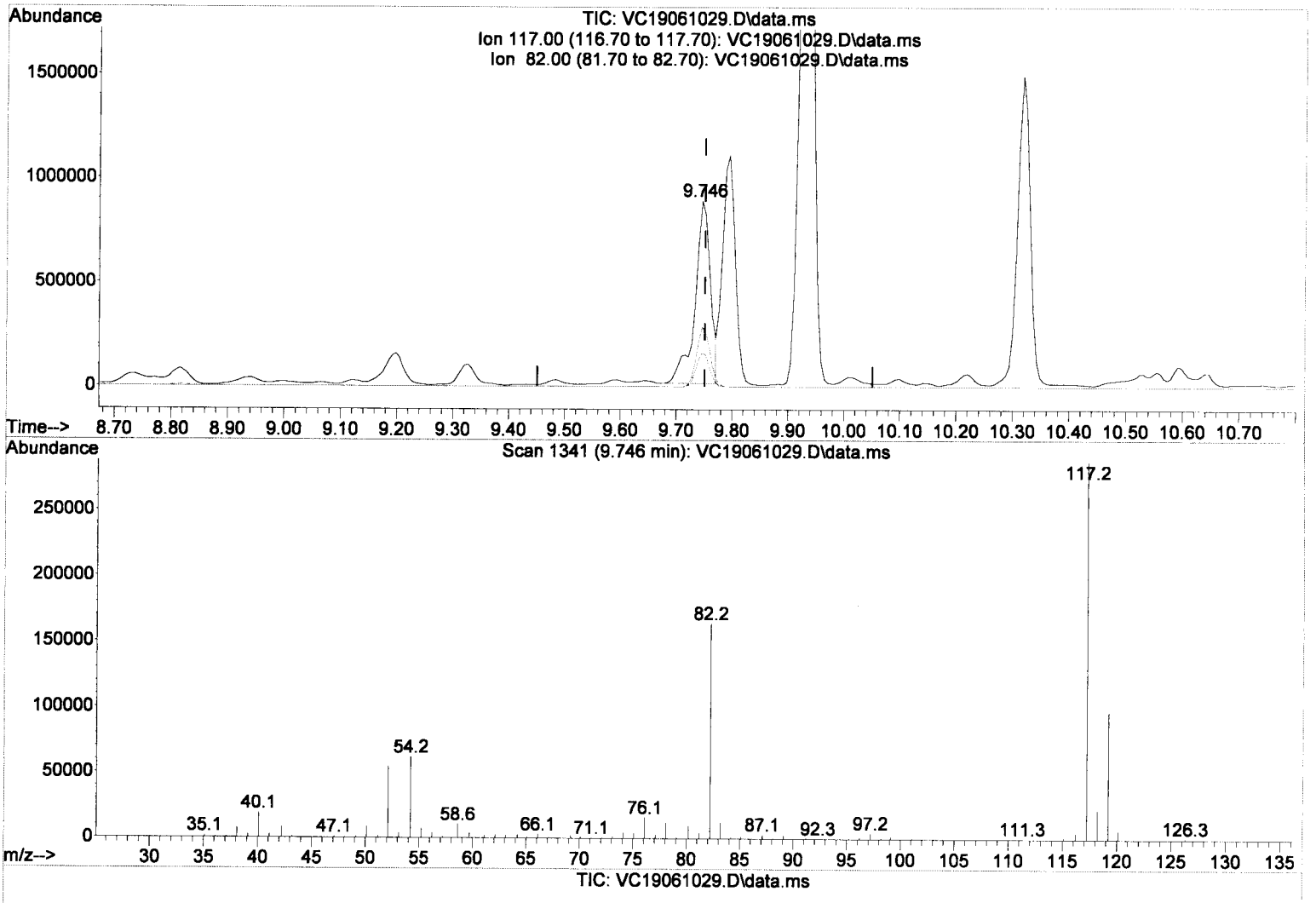
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	330361	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.582	TIC	1401216	45.51	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	956477	41.59	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1682634	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1830588	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1573022	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	56689782m	3841.34	ug/L	
6) TPHg (C5-C9)	9.906	TIC	47397489m	3820.02	ug/L	
7) TPHg (C6-C10)	9.906	TIC	38139660m	3867.87	ug/L	
8) NWTPH-Gx	9.906	TIC	37187594m	3854.72	ug/L	
9) Benzene (NR)	5.925	78	392395	No Calib		
11) Toluene (NR)	8.152	91	2876625	No Calib		
13) Naphthalene (NR)	13.487	128	73674	No Calib	#	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L

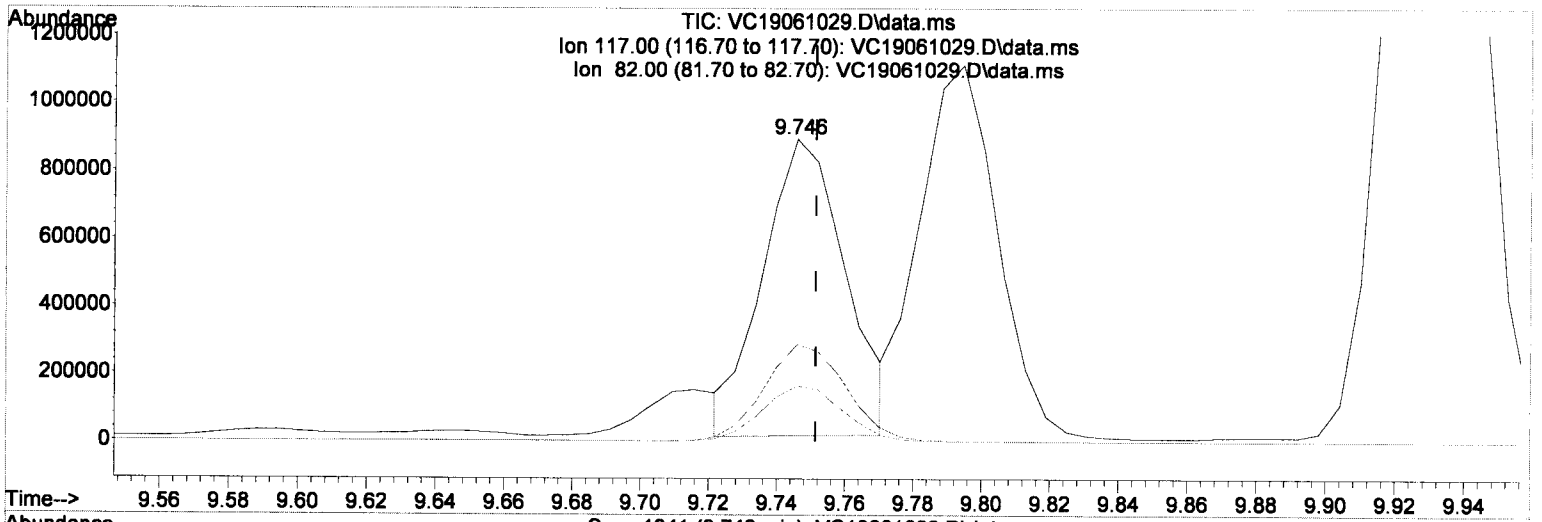
response 1682634

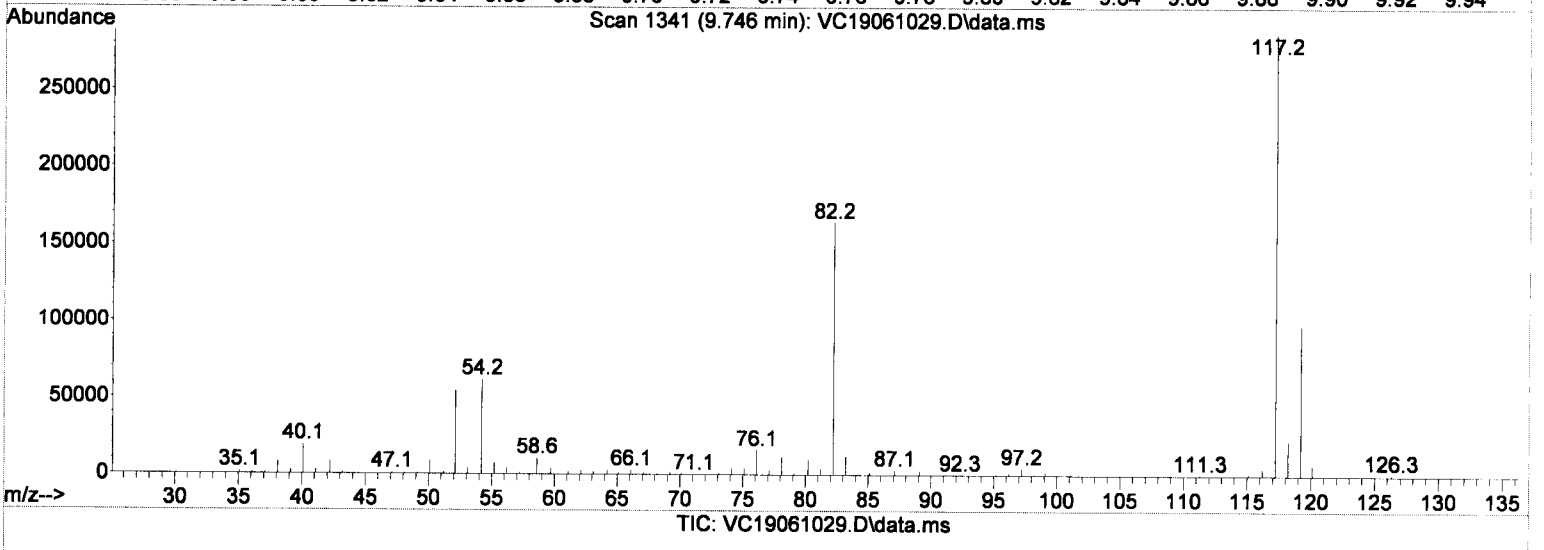
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	28.73
82.00	18.10	16.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061029.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L m

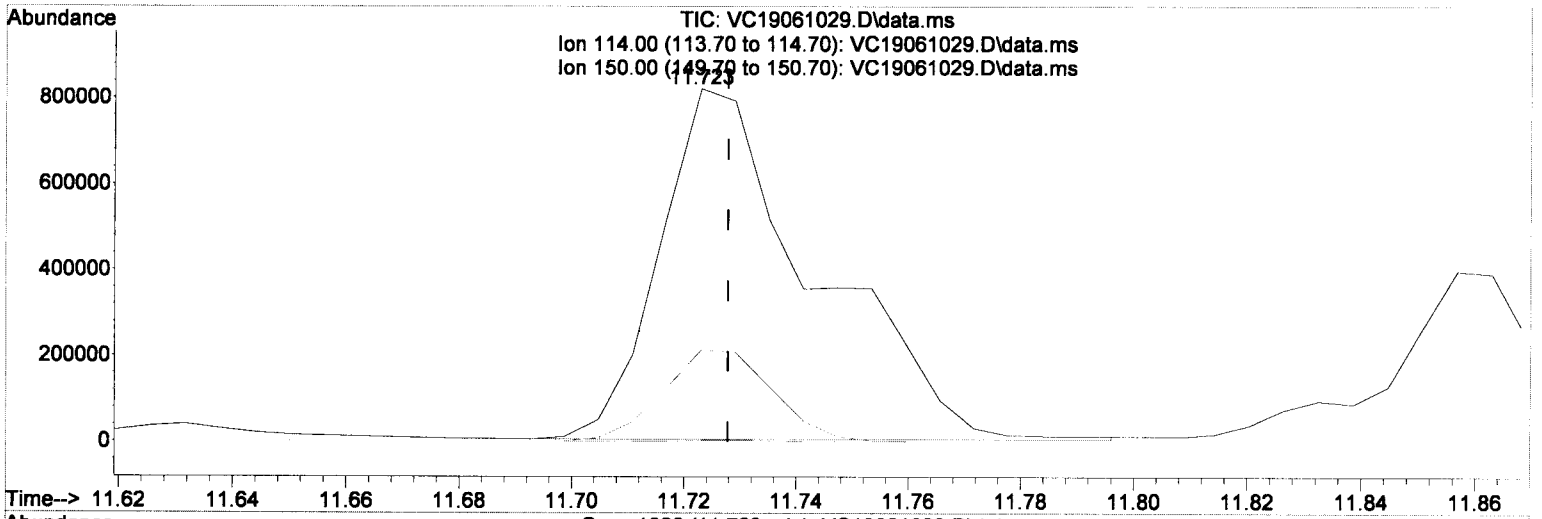
response 1476083

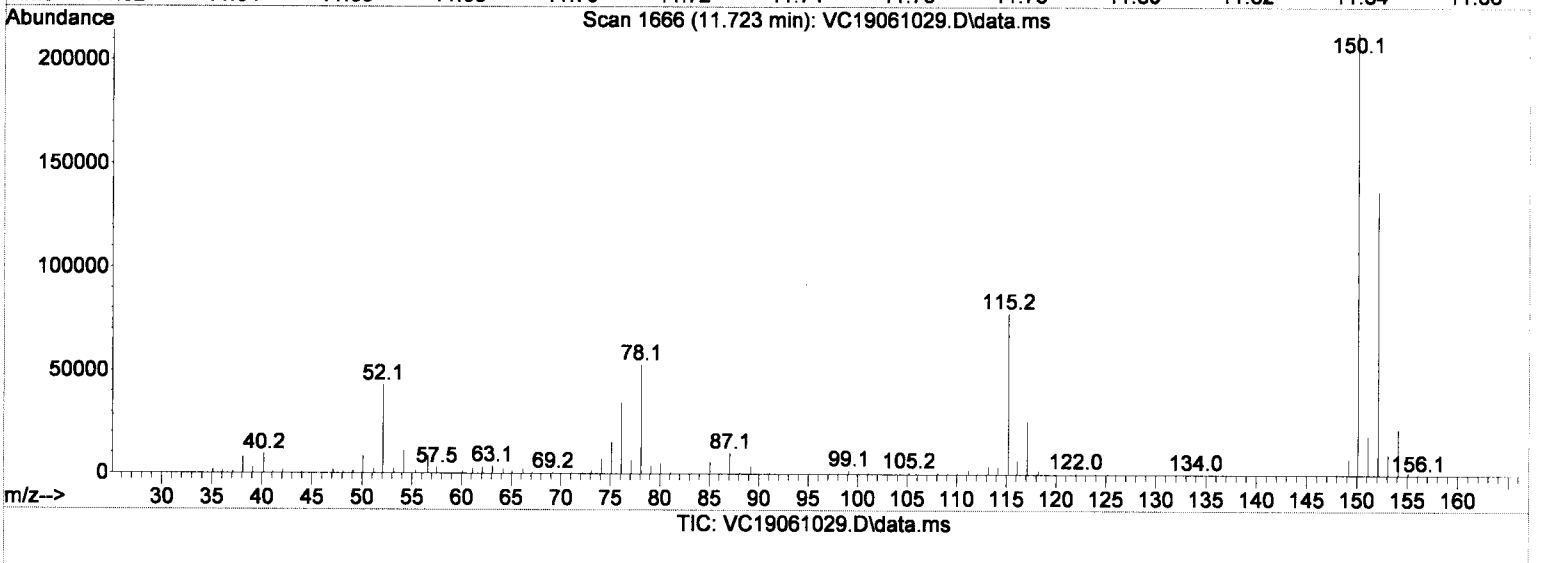
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	32.75
82.00	18.10	18.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061029.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L

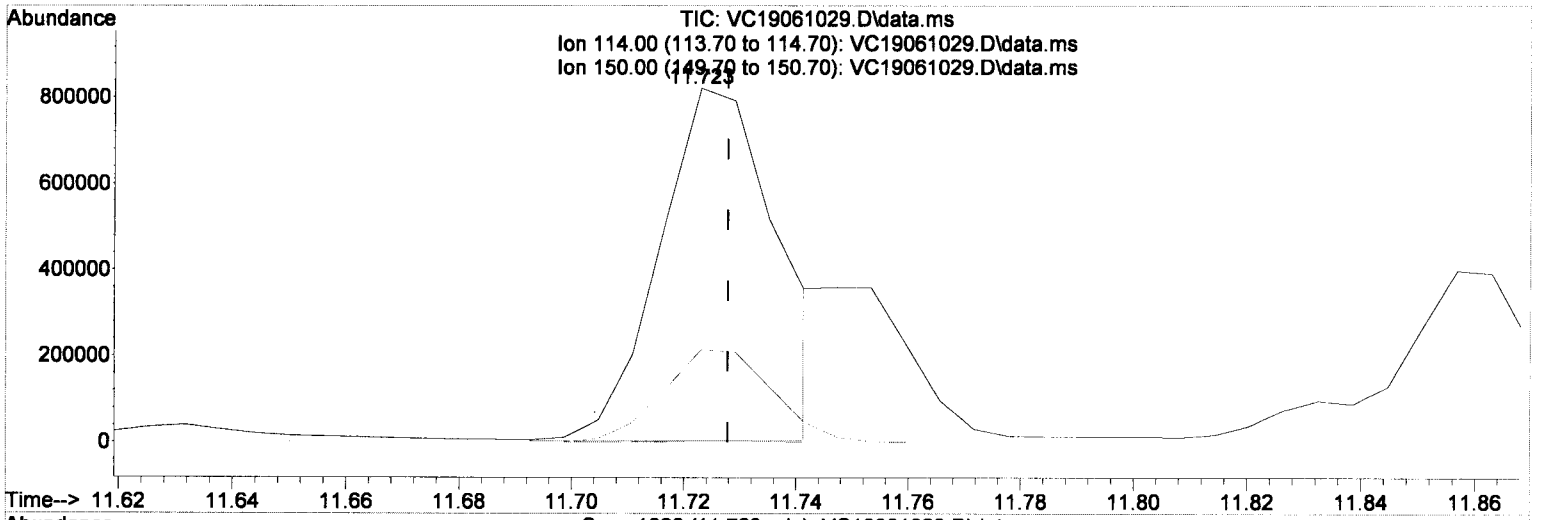
response 1573022

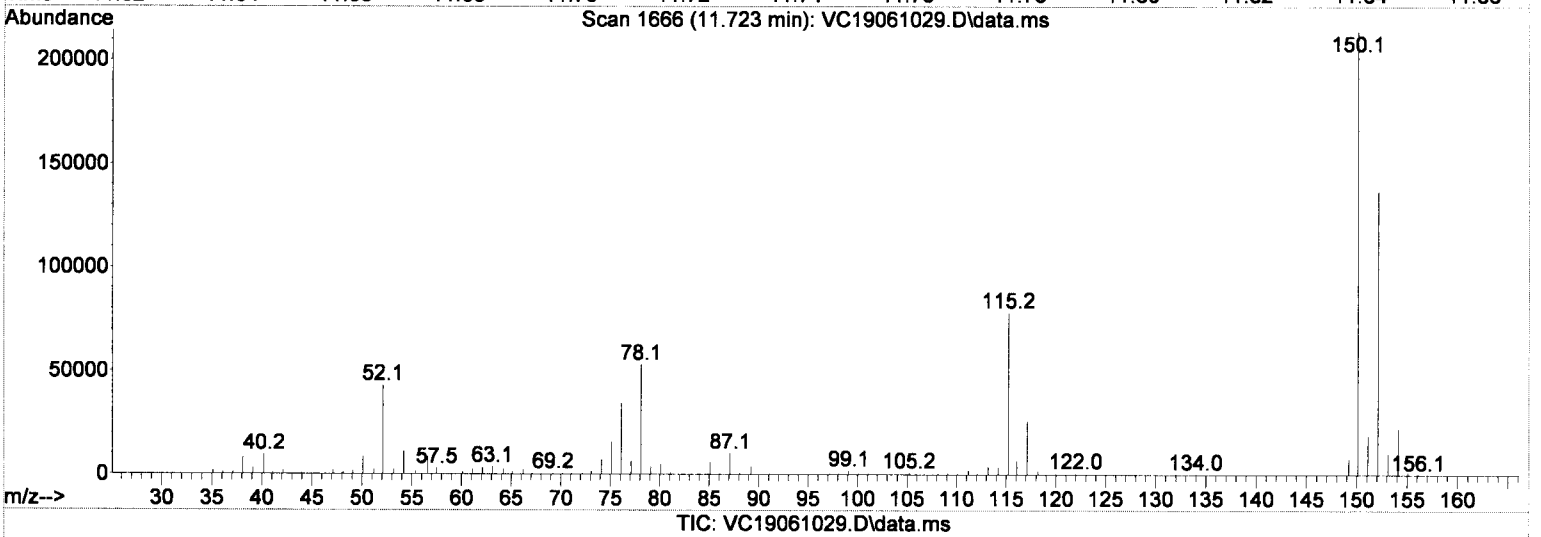
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	18.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061029.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L m

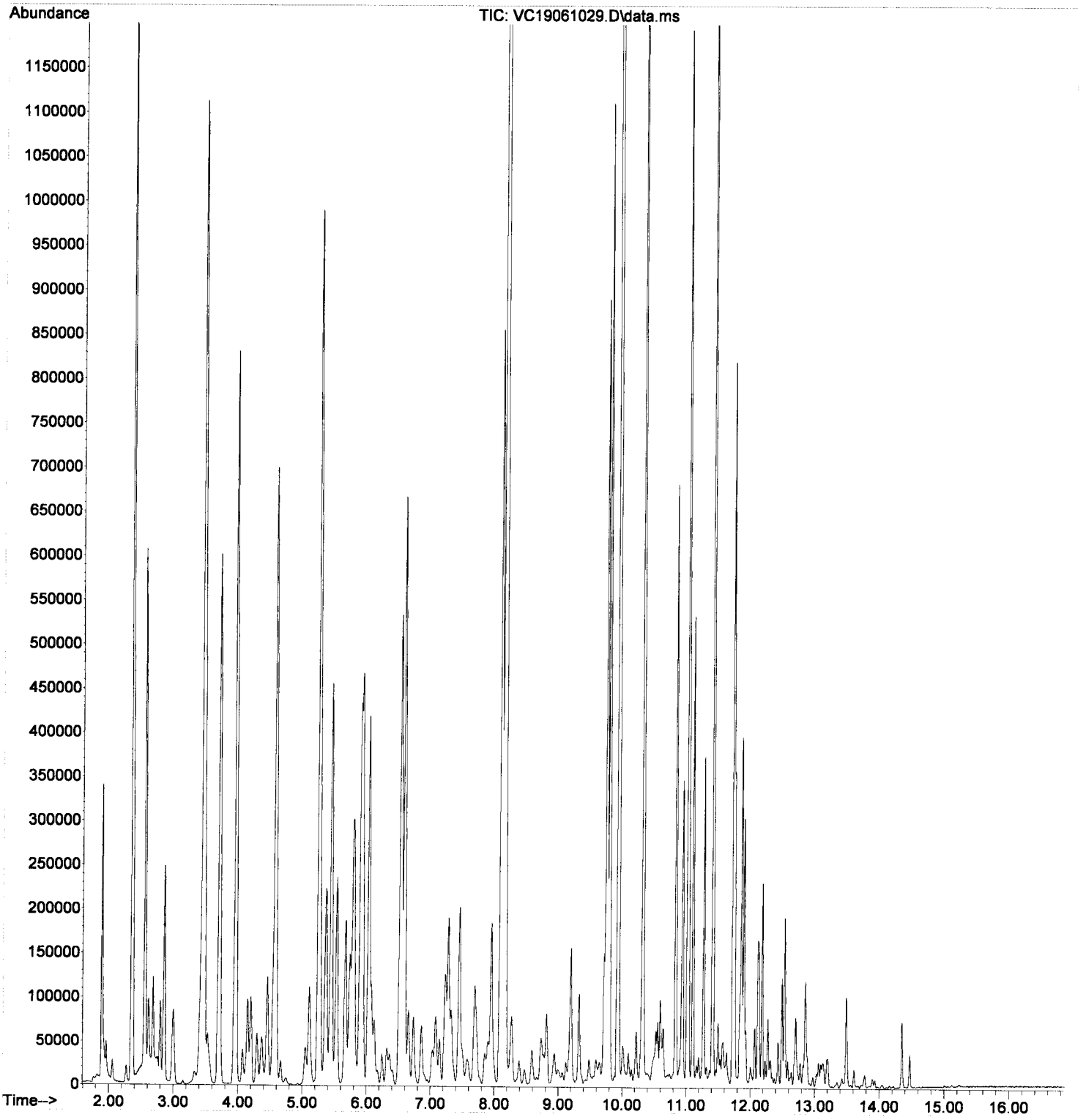
response 1186359

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.00
150.00	24.00	24.63
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061029.D
Acq On : 11 Jun 2019 3:31 am
Operator : TB
Sample : 9F10052-CALI
Misc : 1X 5mL 50ppb GX DI+MeOH
ALS Vial : 29 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061030.D
Acq On : 11 Jun 2019 3:59 am
Operator : TB
Sample : 9F10052-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

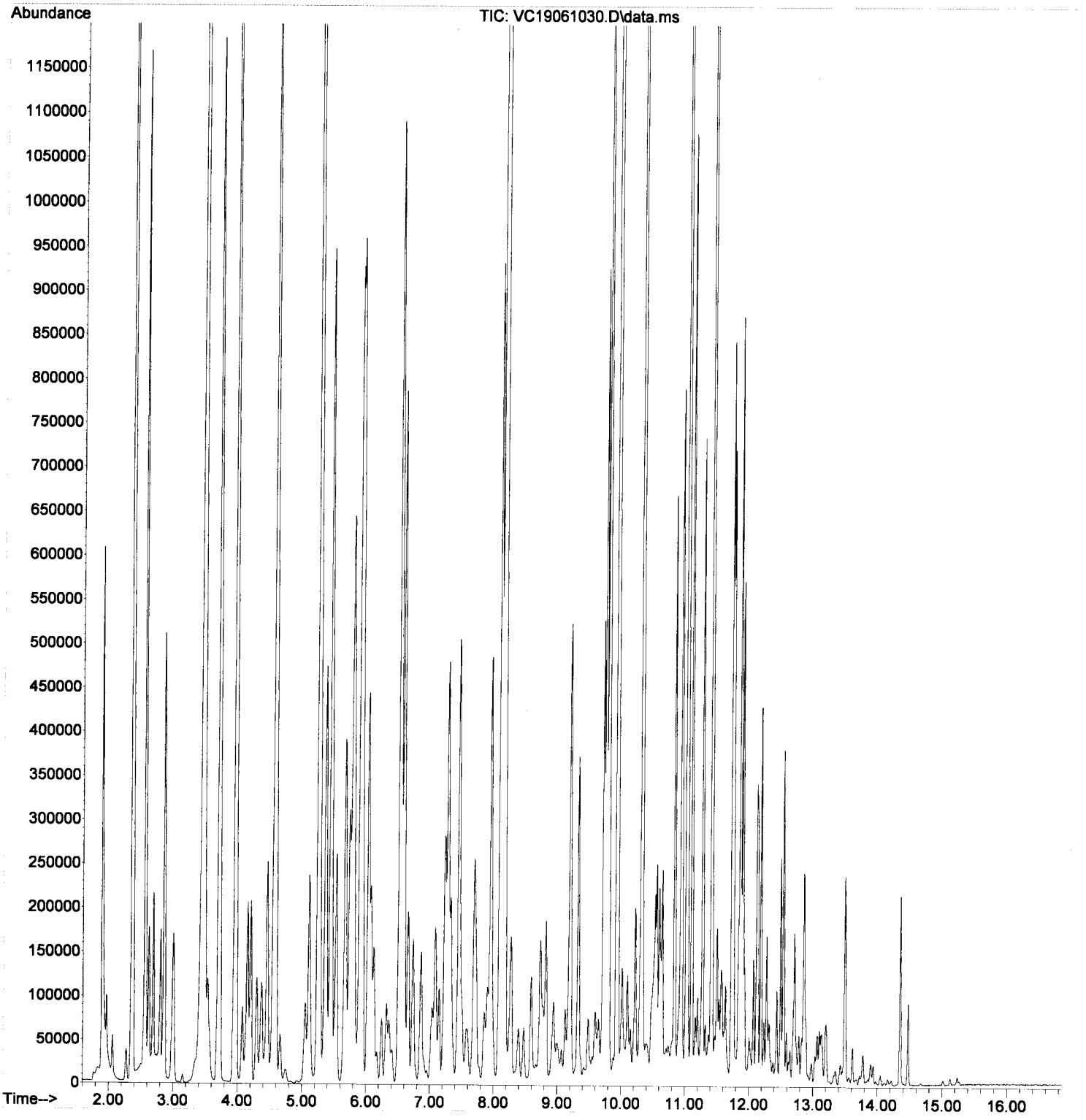
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.031	168	349167	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.585	TIC	1654641	50.85	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.831	TIC	948813	39.03	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.748	TIC	1329324	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.093	TIC	1882532	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.725	TIC	1120148	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	115351504m	7519.83	ug/L	
6) TPHg (C5-C9)	9.906	TIC	94872292m	7442.47	ug/L	
7) TPHg (C6-C10)	9.906	TIC	77084312m	7528.32	ug/L	
8) NWTPH-Gx	9.906	TIC	72785192m	7081.52	ug/L	
9) Benzene (NR)	5.928	78	802035	No Calib		
11) Toluene (NR)	8.154	91	4932714	No Calib		
13) Naphthalene (NR)	13.489	128	163670	No Calib		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061030.D
Acq On : 11 Jun 2019 3:59 am
Operator : TB
Sample : 9F10052-CALJ
Misc : 1X 5mL 10000ppb GX DI+MeOH
ALS Vial : 30 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:50 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:13:18 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	373285	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1506914	43.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1036724	39.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1570935m	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	2019971	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1316610m	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	30597375m	1799.57	ug/L	
6) TPHg (C5-C9)	9.906	TIC	25176643m	1746.46	ug/L	
7) TPHg (C6-C10)	9.906	TIC	20244351m	1780.46	ug/L	
8) NWTPH-Gx	9.906	TIC	19853654m	1835.37	ug/L	
9) Benzene (NR)	5.932	78	215878	No Calib		
11) Toluene (NR)	8.152	91	1717437	No Calib		
13) Naphthalene (NR)	13.487	128	39599	No Calib	#	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration

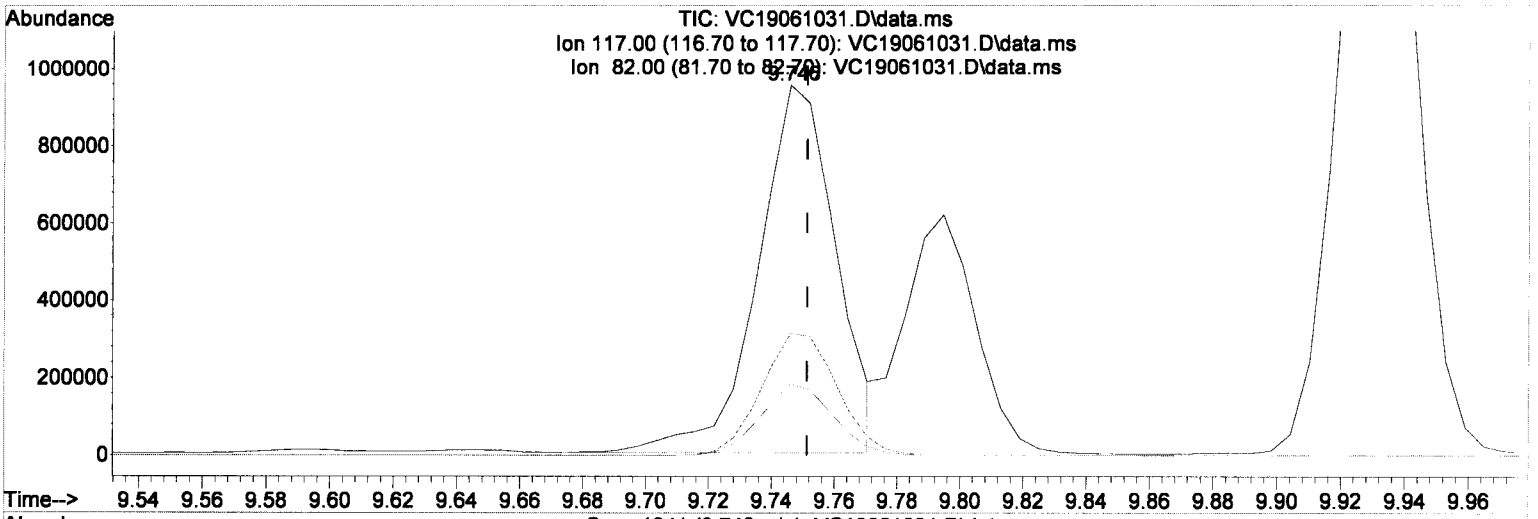
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	373285	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.589	TIC	1506914	43.32	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	1036724	39.89	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1638751	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	2019071	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1462867	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	30383302m	1786.59	ug/L	
6) TPHg (C5-C9)	9.906	TIC	25108827m	1741.57	ug/L	
7) TPHg (C6-C10)	9.906	TIC	20176535m	1774.30	ug/L	
8) NWTPH-Gx	9.906	TIC	19639581m	1815.79	ug/L	
9) Benzene (NR)	5.932	78	215878	No Calib		
11) Toluene (NR)	8.152	91	1717437	No Calib		
13) Naphthalene (NR)	13.487	128	39599	No Calib	#	

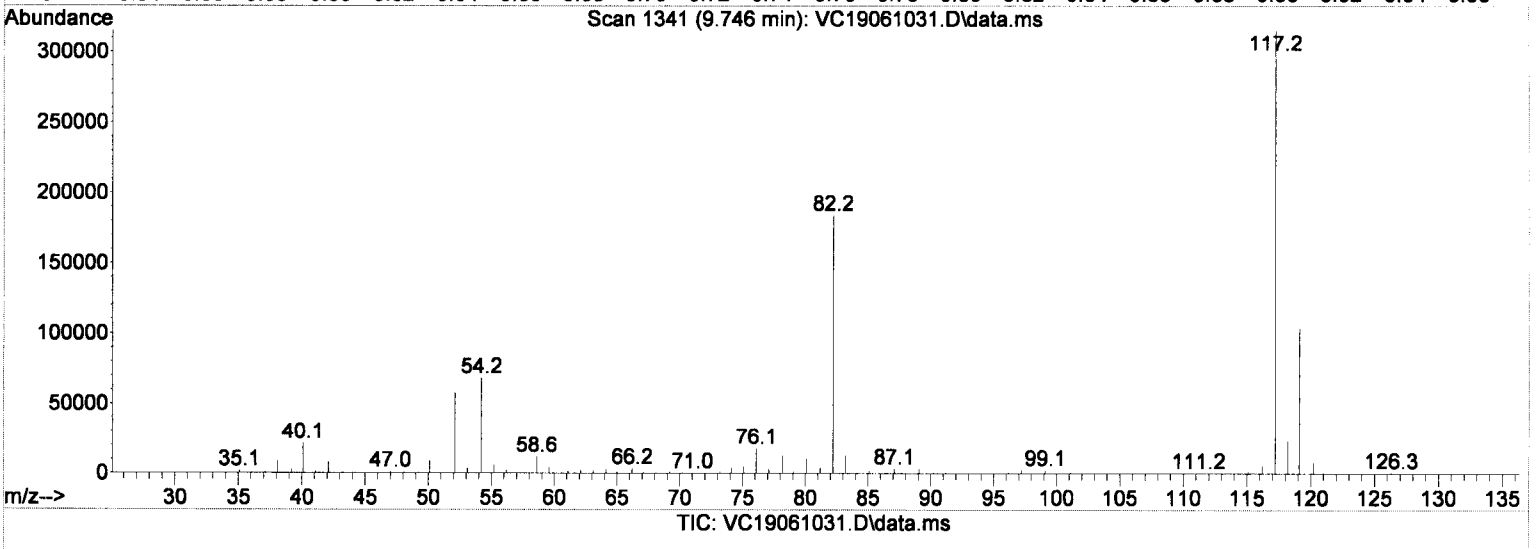
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L

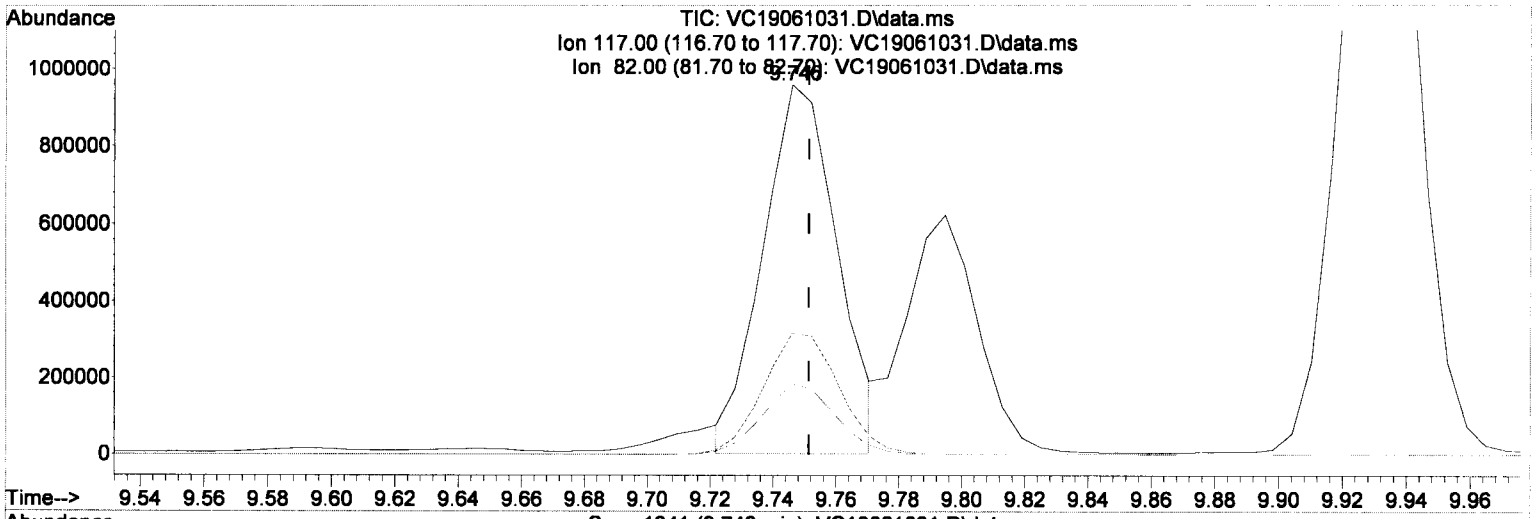
response 1638751

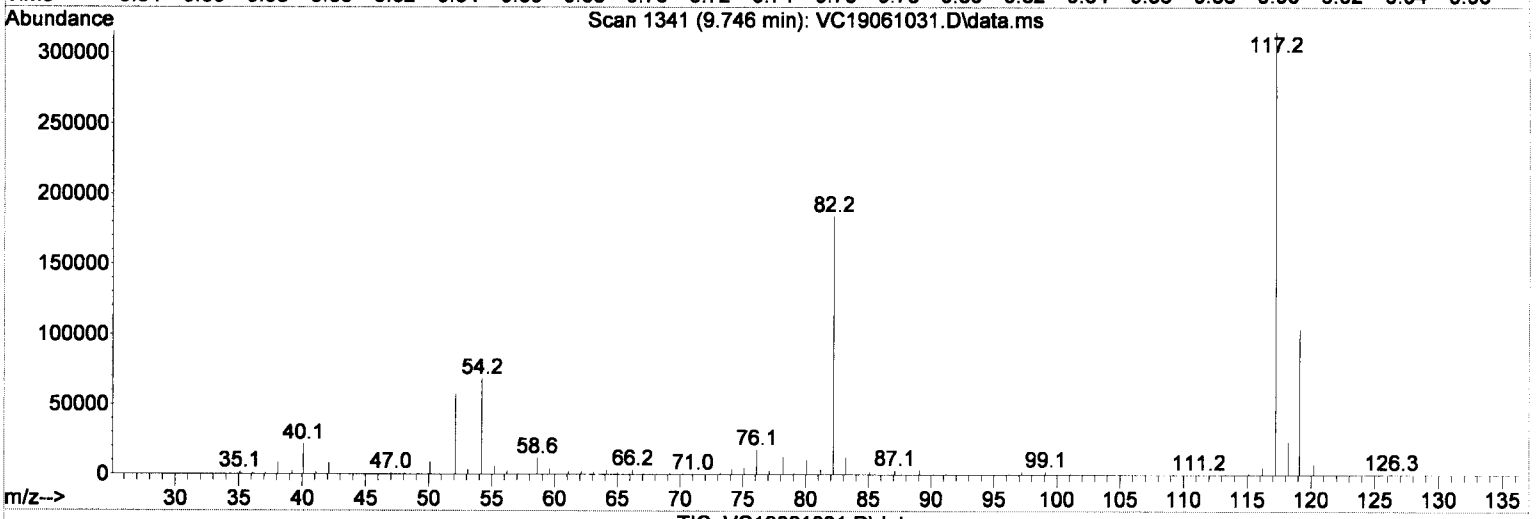
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	32.48
82.00	18.10	18.39
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(4) Chlorobenzene-d5 (NR) (S)

9.746min (-0.005) 0.00 ug/L m

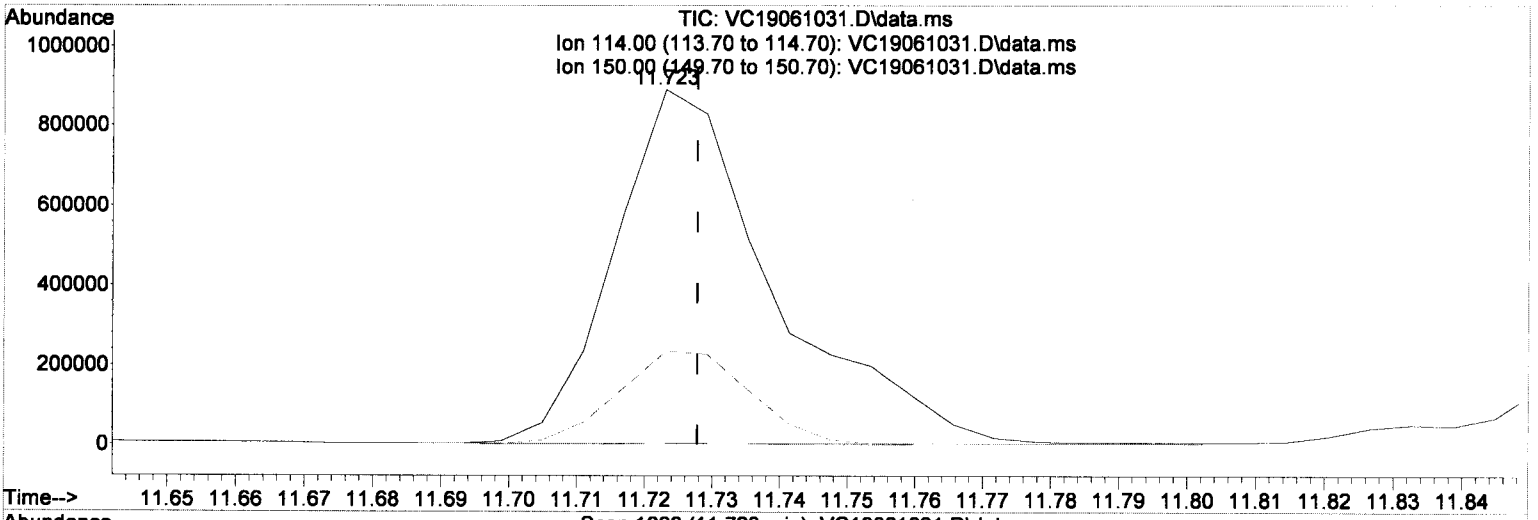
response 1570935

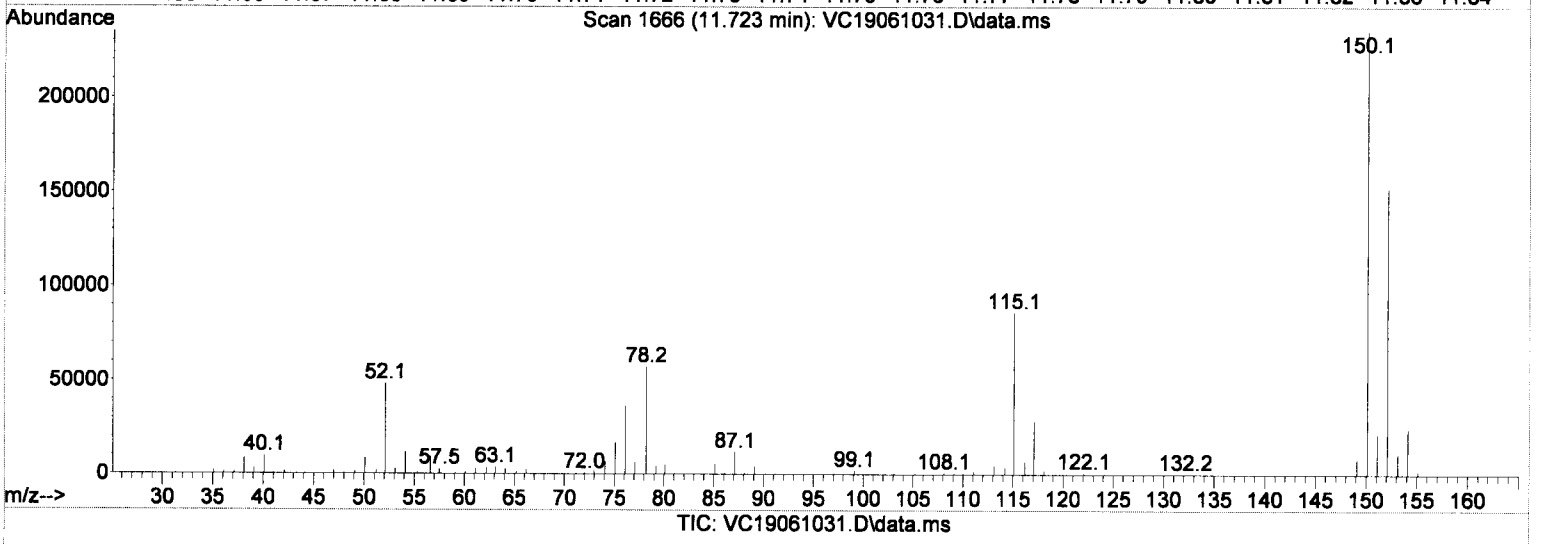
Signal	Exp%	Act%
TIC	100	100
117.00	32.40	33.88
82.00	18.10	19.19
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L

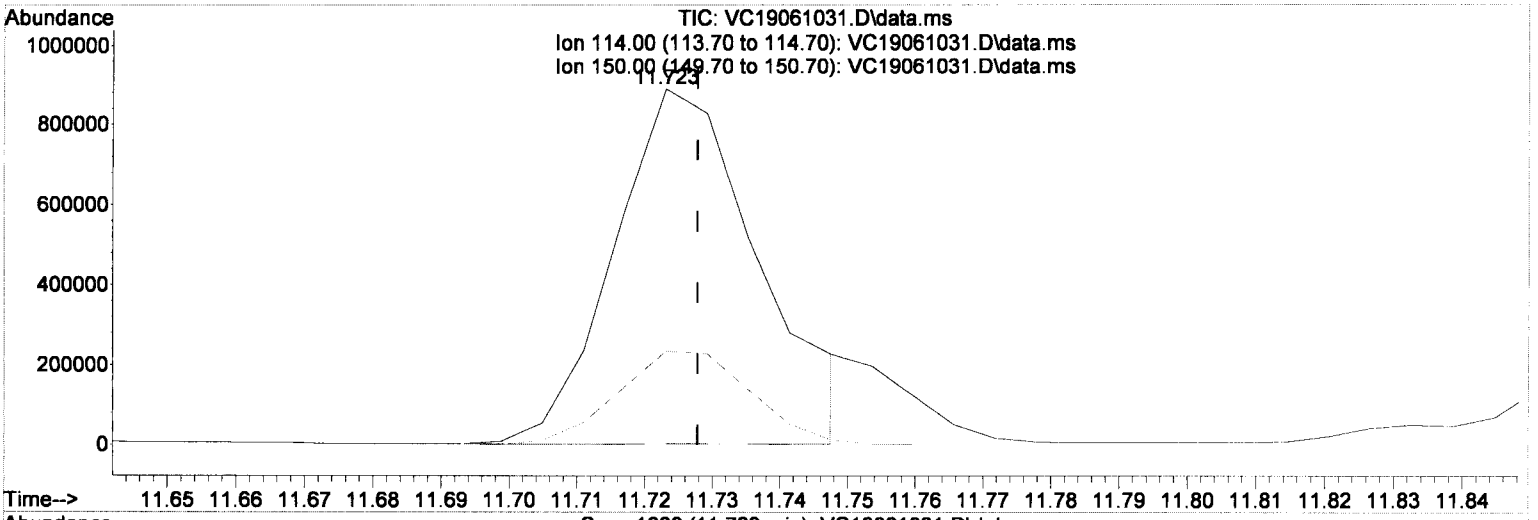
response 1462887

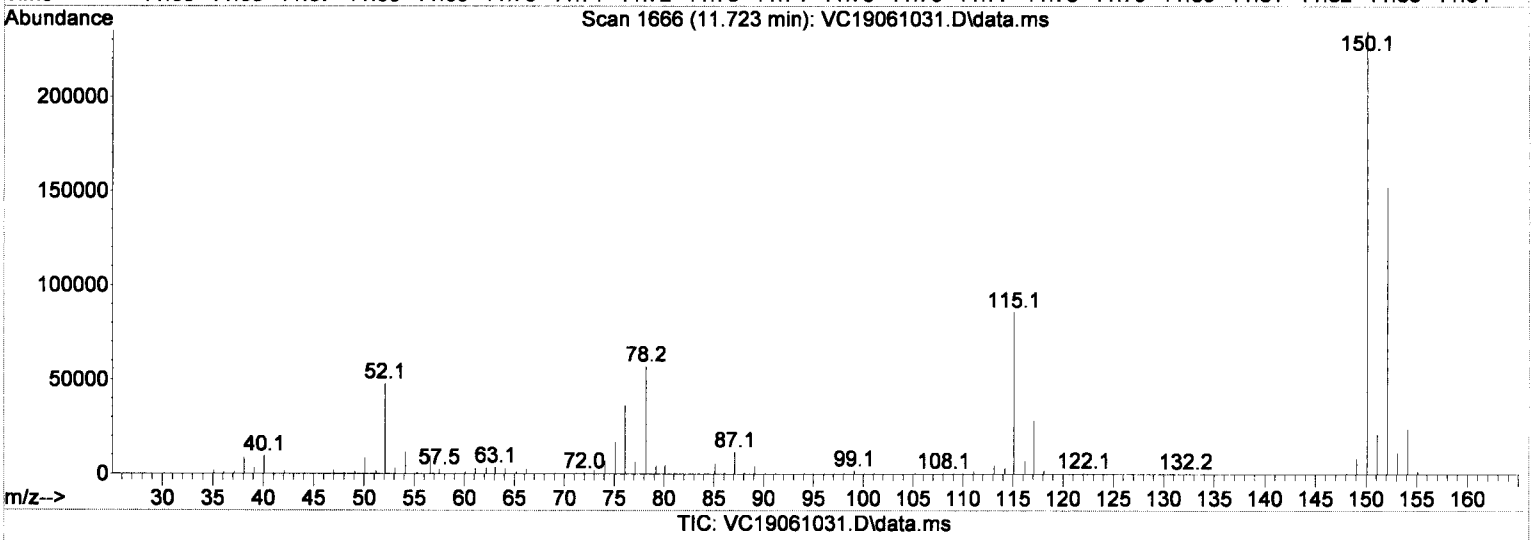
Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.35
150.00	24.00	22.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration





TIC: VC19061031.D\data.ms

(12) 1,4-Dichlorobenzene-d4 (NR) (S)

11.723min (-0.005) 0.00 ug/L m

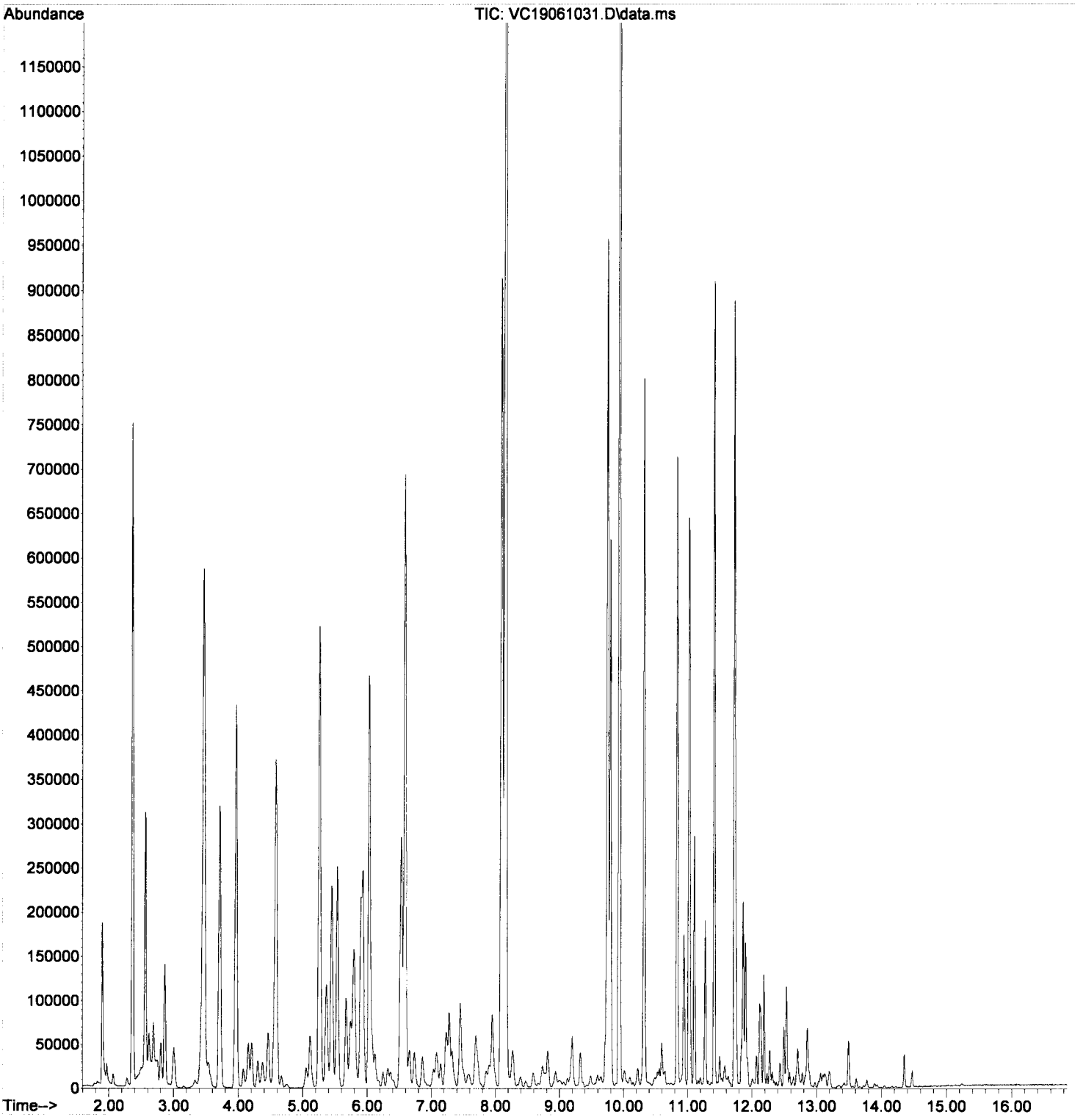
response 1316610

Signal	Exp%	Act%
TIC	100	100
114.00	0.20	0.39
150.00	24.00	24.60
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061031.D
Acq On : 11 Jun 2019 4:27 am
Operator : TB
Sample : 9F10052-CALH
Misc : 1X 5mL 2500ppb GX DI+MeOH
ALS Vial : 31 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 09:57:52 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Thu May 30 15:52:54 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061032.D
Acq On : 11 Jun 2019 4:54 am
Operator : TB
Sample : 9F10052-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

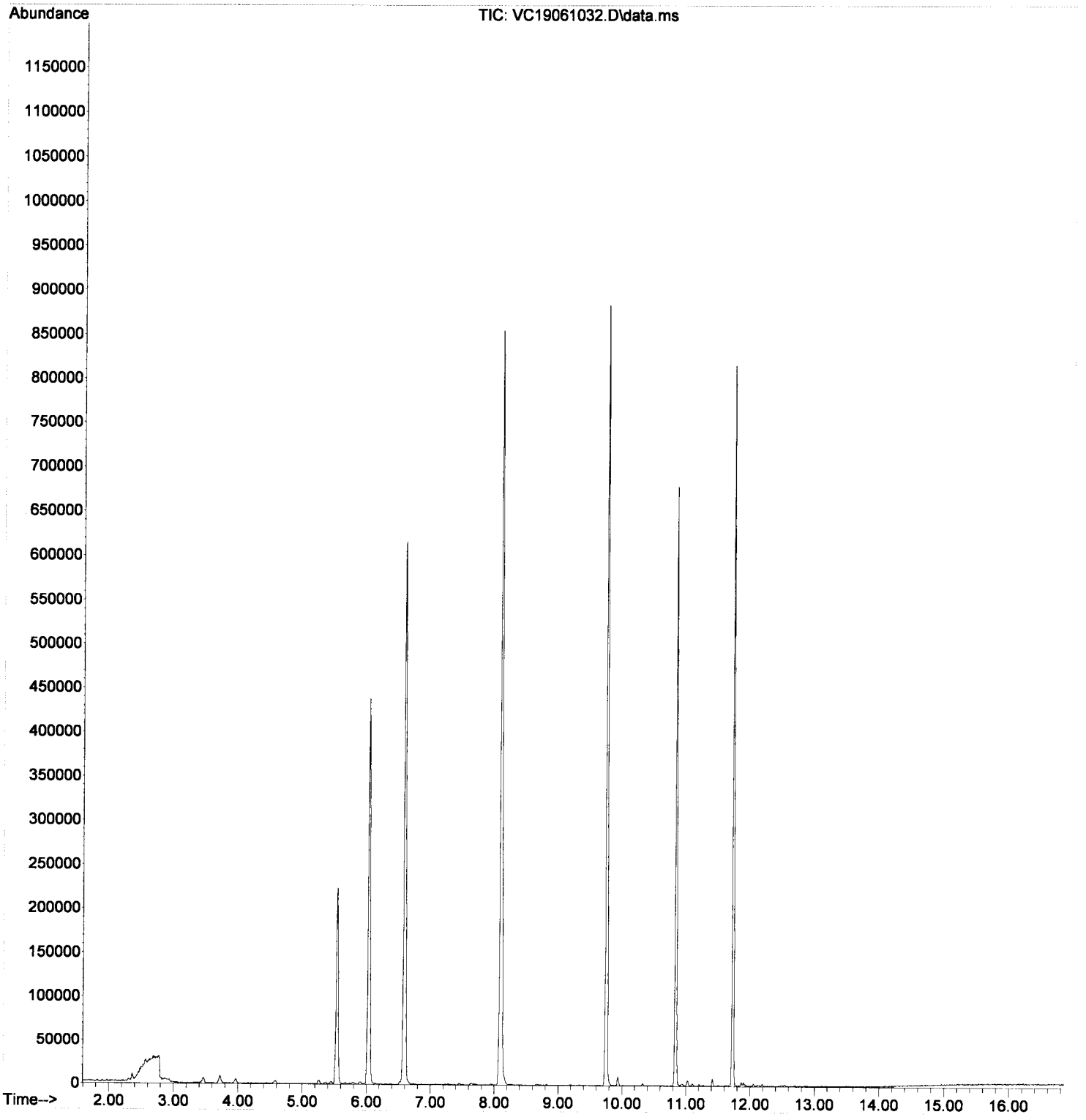
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	348623	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1331512	47.62	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	964156	48.92	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1461198	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1822093	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1121651	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	713165m	26.15	ug/L	
6) TPHg (C5-C9)	9.906	TIC	670254m	21.22	ug/L	
7) TPHg (C6-C10)	9.906	TIC	555451m	28.44	ug/L	
8) NWTPH-Gx	9.906	TIC	76439m	43.43	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061032.D
Acq On : 11 Jun 2019 4:54 am
Operator : TB
Sample : 9F10052-IBL8
Misc : 1X 5mL DI+MeOH
ALS Vial : 32 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:42 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061033.D
Acq On : 11 Jun 2019 5:22 am
Operator : TB
Sample : 9F10052-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

NR

Quant Time: Jun 11 10:21:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

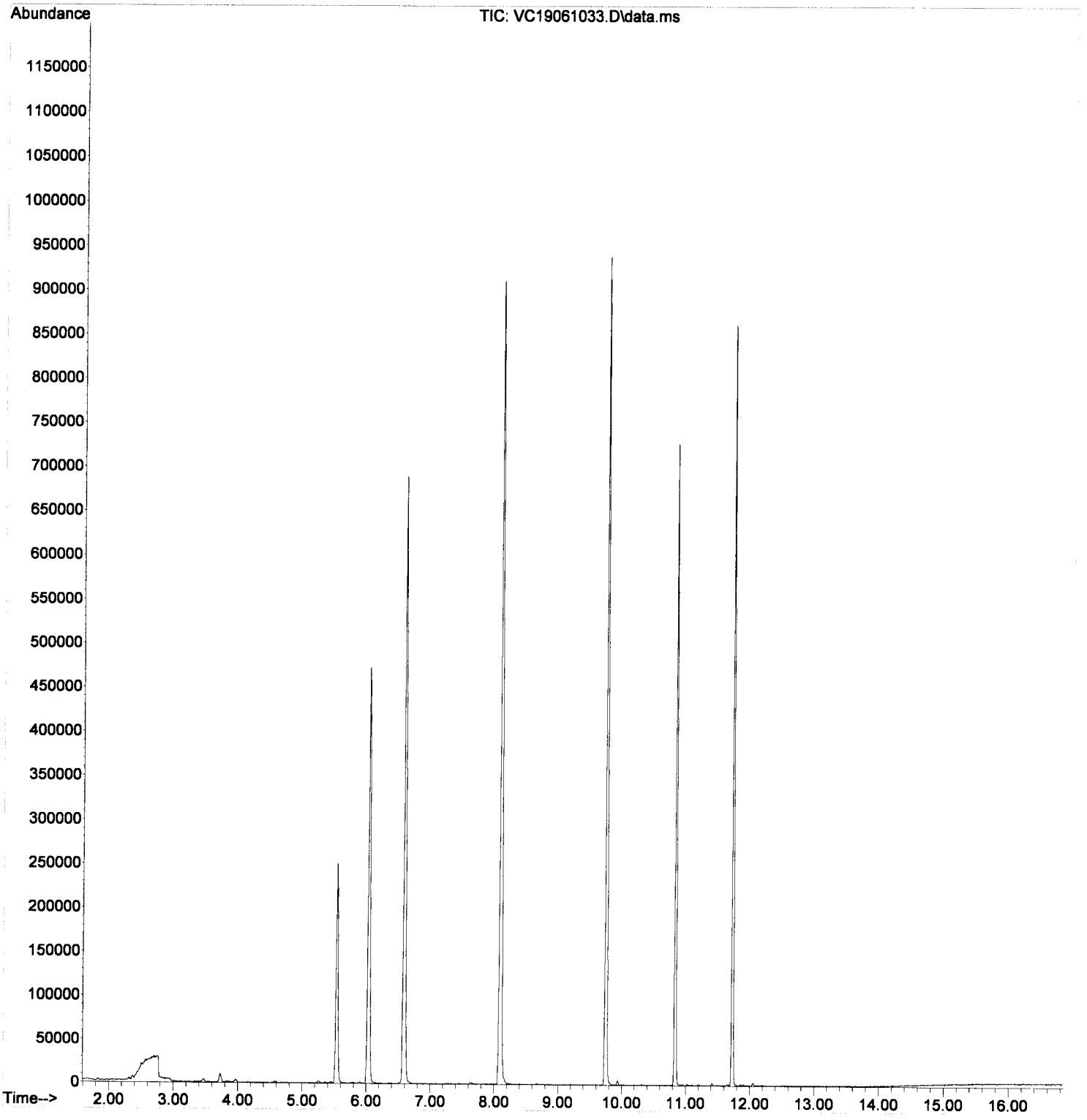
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.028	168	376429	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.588	TIC	1421155	47.07	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	1039335	48.84	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1575085	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.097	TIC	1960324	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.729	TIC	1200209	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	653687m	17.14	ug/L	
6) TPHg (C5-C9)	9.906	TIC	652596m	14.62	ug/L	
7) TPHg (C6-C10)	9.906	TIC	534694m	20.84	ug/L	
8) NWTPH-Gx	9.906	TIC	584m	33.94	ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061033.D
Acq On : 11 Jun 2019 5:22 am
Operator : TB
Sample : 9F10052-IBL9
Misc : 1X 5mL DI+MeOH
ALS Vial : 33 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:44 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

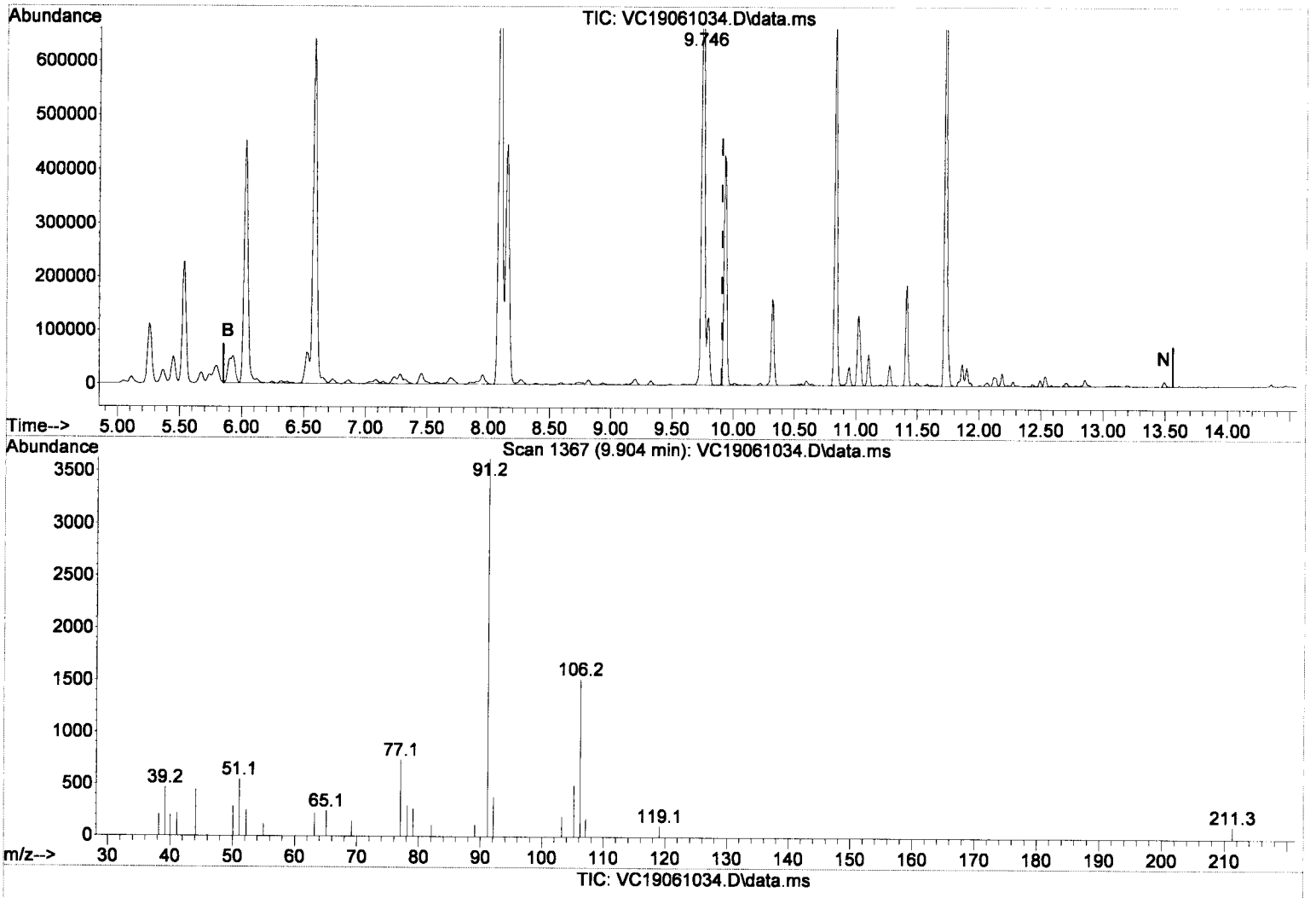
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Pentafluorobenzene (IS)	6.029	168	360795	50.00	ug/L	0.00
System Monitoring Compounds						
2) 1,4-Difluorobenzene (Sur)	6.583	TIC	1388173	47.97	ug/L	0.00
3) 4-Bromofluorobenzene (...	10.835	TIC	983679	48.23	ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.746	TIC	1514736	0.00	ug/L	0.00
10) Toluene-d8 (NR)	8.091	TIC	1904413	0.00	ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.723	TIC	1194666	0.00	ug/L	0.00
Target Compounds						Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	6705031m	508.77	ug/L	
6) TPHg (C5-C9)	9.906	TIC	5739937m	511.03	ug/L	
7) TPHg (C6-C10)	9.906	TIC	4515728m	509.54	ug/L	
8) NWTPH-Gx	9.906	TIC	3786583m	493.15	ug/L	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



TIC: VC19061034.D\data.ms

(8) NWTPH-Gx (H)

9.906min (0.000) 493.15 ug/L m

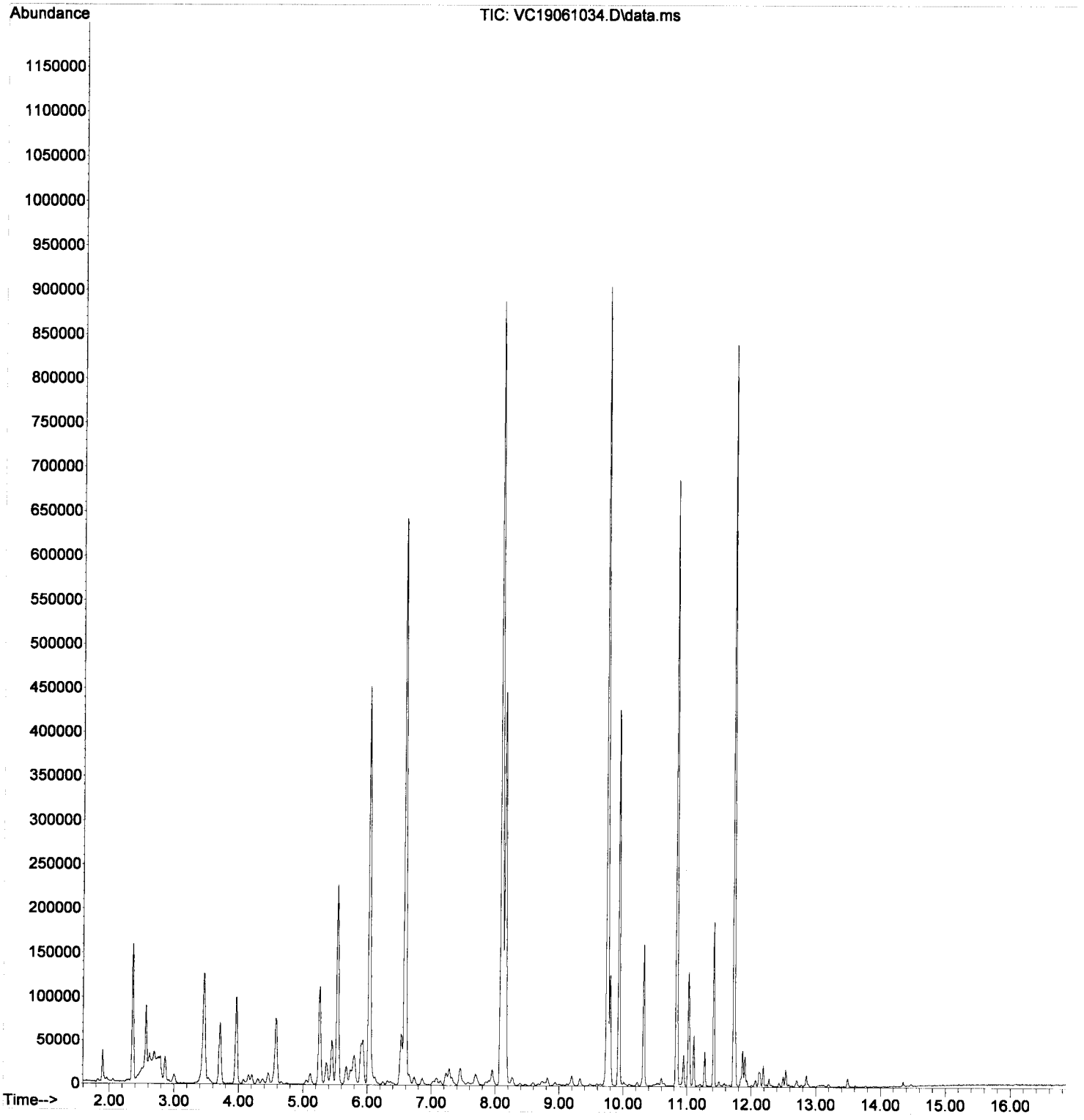
response 3786583

Signal	Exp%	Act%
TIC	100	100
0.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061034.D
Acq On : 11 Jun 2019 5:49 am
Operator : TB
Sample : 9F10052-ICV2
Misc : 1X 5mL 500ppb GX DI+MeOH
ALS Vial : 34 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:46 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061035.D
Acq On : 11 Jun 2019 6:17 am
Operator : TB
Sample : 9F10052-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

NR

Quant Time: Jun 11 10:21:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration

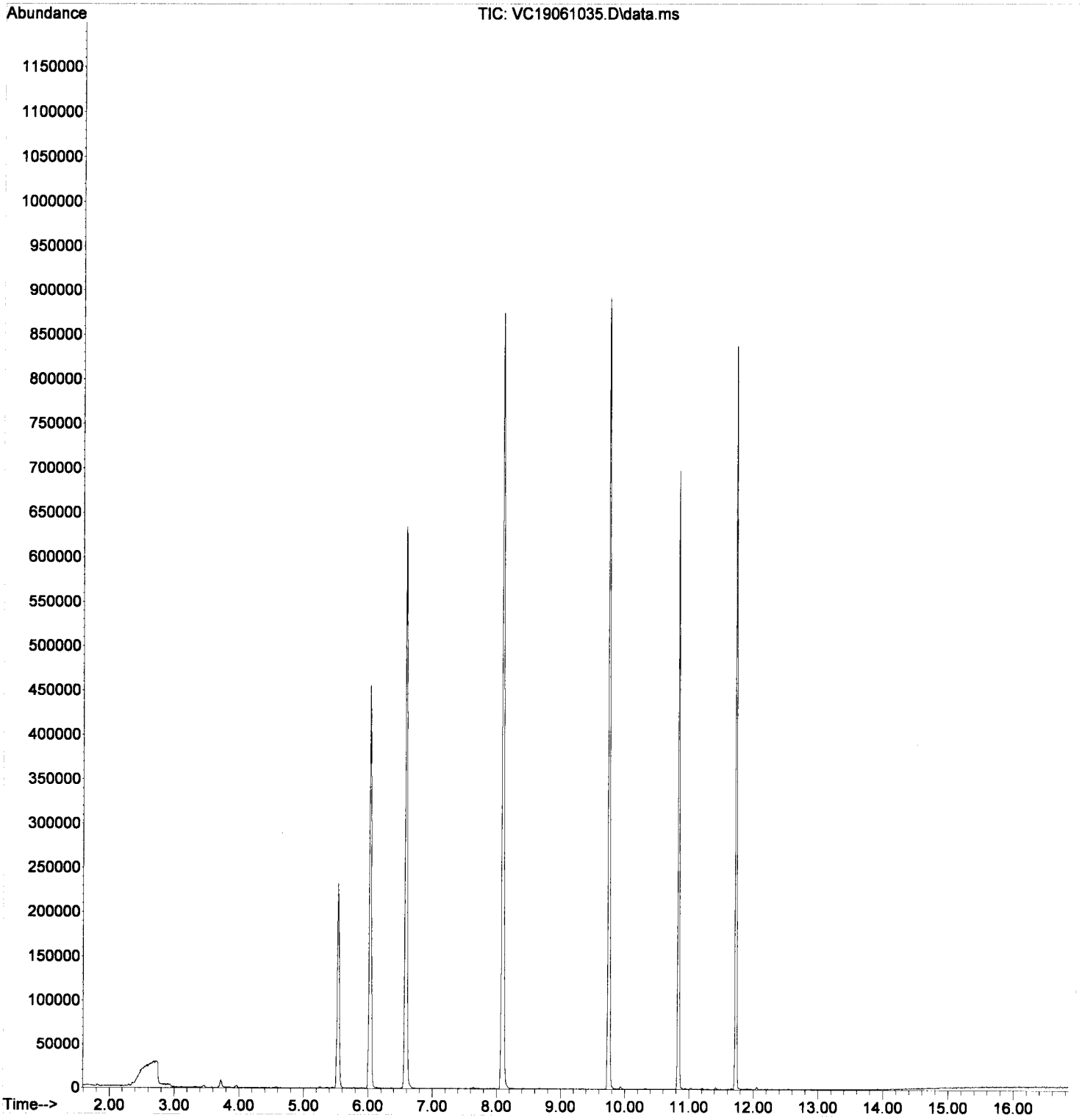
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) Pentafluorobenzene (IS)	6.028	168	359762	50.00 ug/L	0.00
System Monitoring Compounds					
2) 1,4-Difluorobenzene (Sur)	6.581	TIC	1357534	47.05 ug/L	0.00
3) 4-Bromofluorobenzene (...	10.834	TIC	993594	48.85 ug/L	0.00
4) Chlorobenzene-d5 (NR)	9.745	TIC	1505206	0.00 ug/L	0.00
10) Toluene-d8 (NR)	8.090	TIC	1859961	0.00 ug/L	0.00
12) 1,4-Dichlorobenzene-d4...	11.722	TIC	1155147	0.00 ug/L	0.00
Target Compounds					Qvalue
5) CA-LUFT (C5-C12)	9.906	TIC	617468m	16.55 ug/L	
6) TPHg (C5-C9)	9.906	TIC	617238m	13.99 ug/L	
7) TPHg (C6-C10)	9.906	TIC	501922m	19.73 ug/L	
8) NWTPH-Gx	9.906	TIC	5540m	34.54 ug/L	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-06\9F10052\
Data File : VC19061035.D
Acq On : 11 Jun 2019 6:17 am
Operator : TB
Sample : 9F10052-IBLA
Misc : 1X 5mL DI+MeOH
ALS Vial : 35 Sample Multiplier: 1
DataAcq Meth:VC1612RUN.M

Quant Time: Jun 11 10:21:48 2019
Quant Method : C:\msdchem\1\METHODS\VC190611G.M
Quant Title : NWTPH-Gx by GC/MS
QLast Update : Tue Jun 11 10:19:37 2019
Response via : Initial Calibration



Semivolatile Organic Compounds By EPA 8270D
Benchsheet & Analysis Sequence Data

Batch 9061508

Sequence 9G01054 (A9F0684-01)

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9061508 (Oil)

Prep Method: EPA 3580A

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9061508-BLK1		QC	06/28/19 14:11	1	5				100					
	9061508-BS1		QC	06/28/19 14:11	1	5	A19F255		100	100					
	A9F0684-01	A	8270D LL Full List	06/28/19 14:11	0.11	5				100	2708-190619-OIL	2nd priority Added 6/26/19			
	9061508-DUP1		QC	06/28/19 14:11	0.1	5		A9F0684-01		100					
	9061508-MS1		QC	06/28/19 14:11	0.12	5	A19F255	A9F0684-01	100	100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A19D007	09/30/20	DCM CHEM PROD. 186806

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F255	12/16/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19F152	12/10/19	PAH Soil and Water Surr. (50ppm)

Witness:_____

Prepared By: _____ Date _____

Reviewed By: AMS Date 7/2/19

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9061508 (Oil)

Prep Method: EPA 3580A

Cmlt 6/28/19

#	Lab Number		Analysis	Prepared	Initial (g)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9061508-BLK1		QC	06/28/19 14:11	1	5				100					
	9061508-BS1		QC	06/28/19 14:11	1	5	A19F255		100	100					
	A9F0684-01	A	8270D LL Full List	06/28/19 14:11	0.11	5				100	2708-190619-OIL	2nd priority Added 6/26/19 black Oil Odor			
	9061508-DUP1		QC	06/28/19 14:11	0.10	5		A9F0684-01		100					
	9061508-MS1		QC	06/28/19 14:11	0.12	5	A19F255	A9F0684-01	100	100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A19D007	09/30/20	DCM CHEM PROD. 186806

Analyte Spike(s)

Std ID	Exp. Date	Description
A19F255	12/16/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Cmlt

Surrogate(s)

Std ID	Exp. Date	Description
A19F152	12/10/19	PAH Soil and Water Surr. (50ppm)

Cmlt

~~Method 3546 digestion time and temperture achieved. Initial:~~ Cmlt 6/28/19

Witness: JRA 06/28/19

Cmlt 6/28/19
Prepared By: Date

JRA 06/28/19
Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9G01054	Instrument:	SV-GCMS9
Date:	07/01/19 15:23	Calibration:	A9E1009

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G01054-TUN1	Oil	QC	QC			A19D031	A19F170
2	9G01054-CCV1	Oil	QC	QC			A19D031	A19D058
3	9G01054-IBL1	Oil	QC	QC			A19D031	
4	9G01054-TUN2	Oil	QC	QC			A19D031	A19F170
5	9G01054-CCV2	Oil	QC	QC			A19D031	A19D058
6	9G01054-CCB1	Oil	QC	QC			A19D031	
7	9061508-BLK1	Oil	QC	QC		9061508	A19D031	
8	9061508-BS1	Oil	QC	QC		9061508	A19D031	
9	A9F0684-01	Oil	8270D LL Full List	Hahn and Associates	07/05/19	9061508	A19D031	
10	9061508-DUP1	Oil	QC	QC		9061508	A19D031	
11	9070529-BLK2	Soil	QC	QC		9070529	A19D031	
12	9070529-BS2	Soil	QC	QC		9070529	A19D031	
13	A9F0911-01	Soil	8270D LL PAH/PHTH/Phenols		07/05/19	9070529	A19D031	
14	9070529-DUP2	Soil	QC	QC		9070529	A19D031	
15	A9F0911-02	Soil	8270D LL PAH/PHTH/Phenols		07/05/19	9070529	A19D031	
16	9G01054-IBL2	Oil	QC	QC			A19D031	

Comments: Reprint of original data. Data not found in warehouse. original signed data not available

Data Entered By: _____

Data Reviewed By: _____ WK7 10/4/19

10/4/2019 11:32:22AM

No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

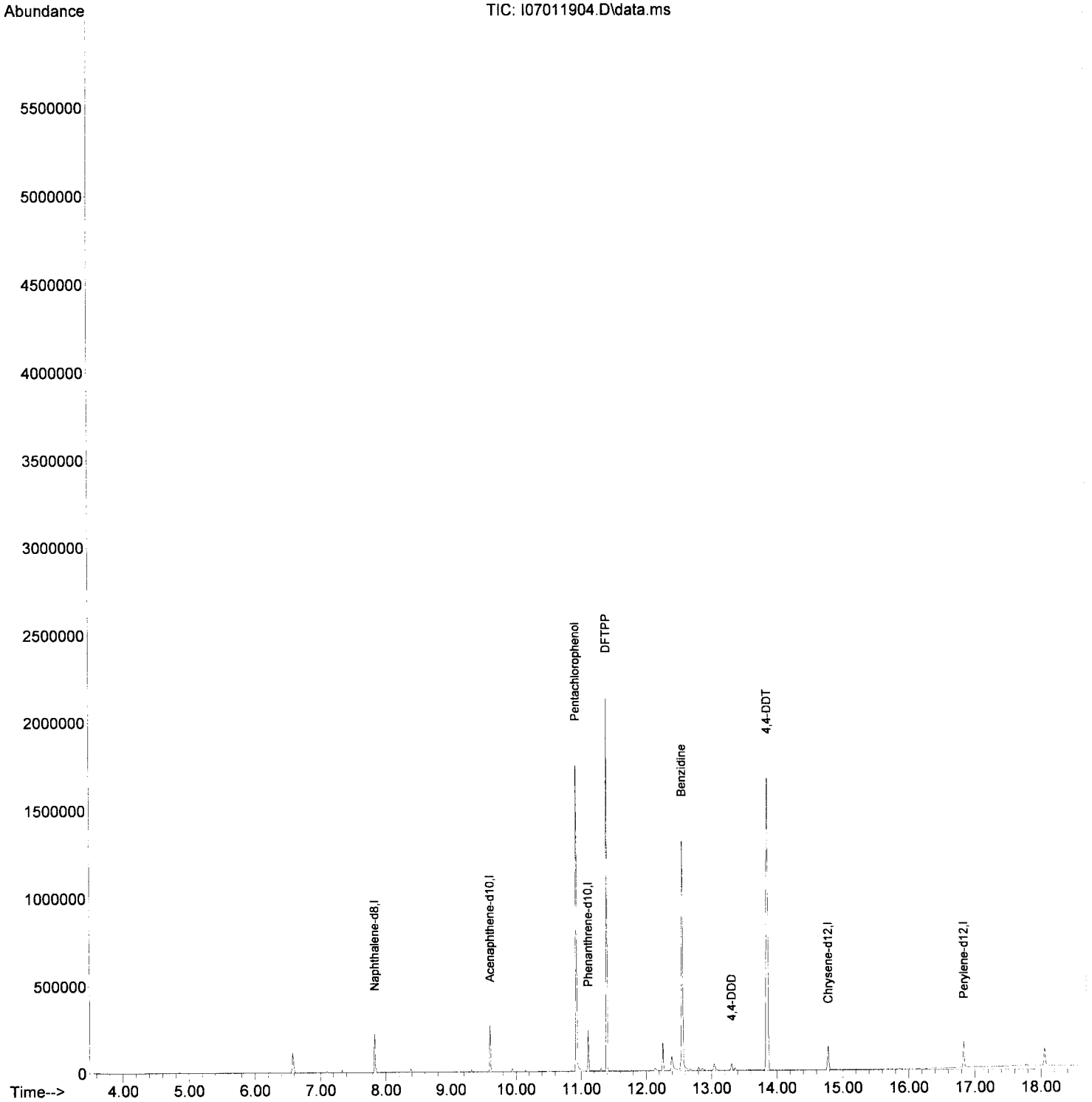
Quant Time: Jul 01 17:11:13 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Jun 13 15:30:01 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.830	136	113406	2.00	ug/mL	0.00
2) Acenaphthene-d10	9.600	162	57178	2.00	ug/mL	0.00
4) Phenanthrene-d10	11.109	188	84728	2.00	ug/mL	0.00
10) Chrysene-d12	14.778	240	71755	2.00	ug/mL	0.00
11) Perylene-d12	16.832	264	62036	2.00	ug/mL	-0.05
Target Compounds						Qvalue
3) Pentachlorophenol	10.927	266	232611	36.26	ug/mL	92
5) DFTPP	11.397	442	220088	30.90	ug/mL	95
6) Benzidine	12.553	184	723014	28.34	ug/mL	89
7) 4,4-DDE	12.804	TIC	19780	No Calib	#	
8) 4,4-DDD	13.307	TIC	51421	14.65	ug/mL#	1
9) 4,4-DDT	13.858	TIC	2929952	41.03	ug/mL#	1

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

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 17:11:13 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Jun 13 15:30:01 2019
Response via : Initial Calibration
InstName : SV-GCMS9

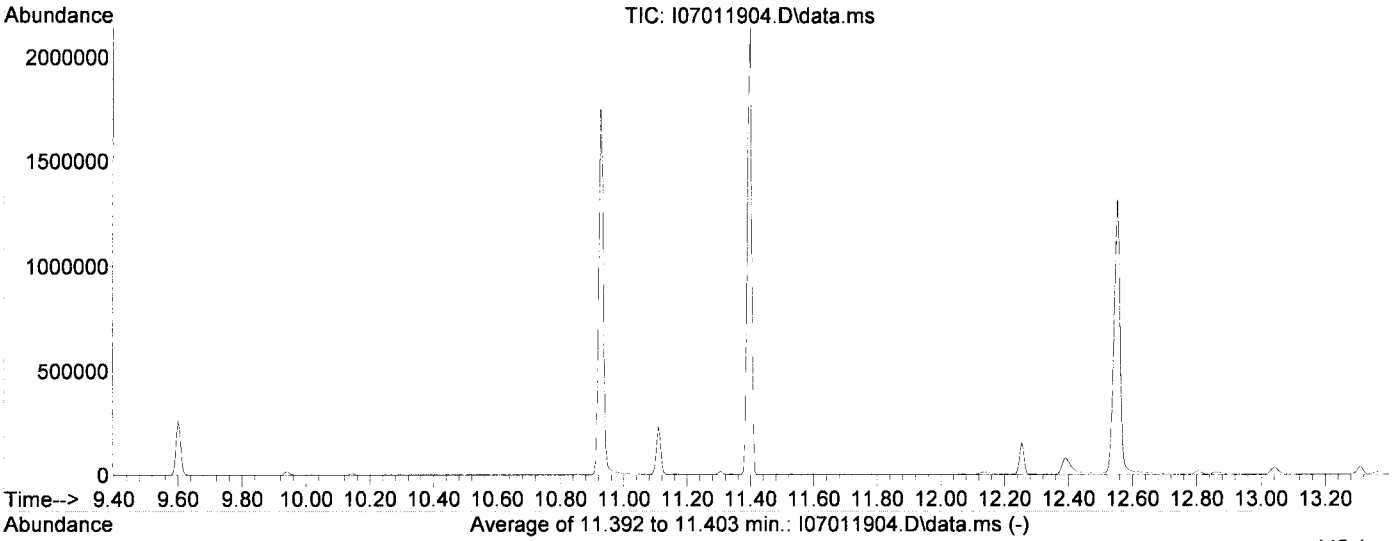


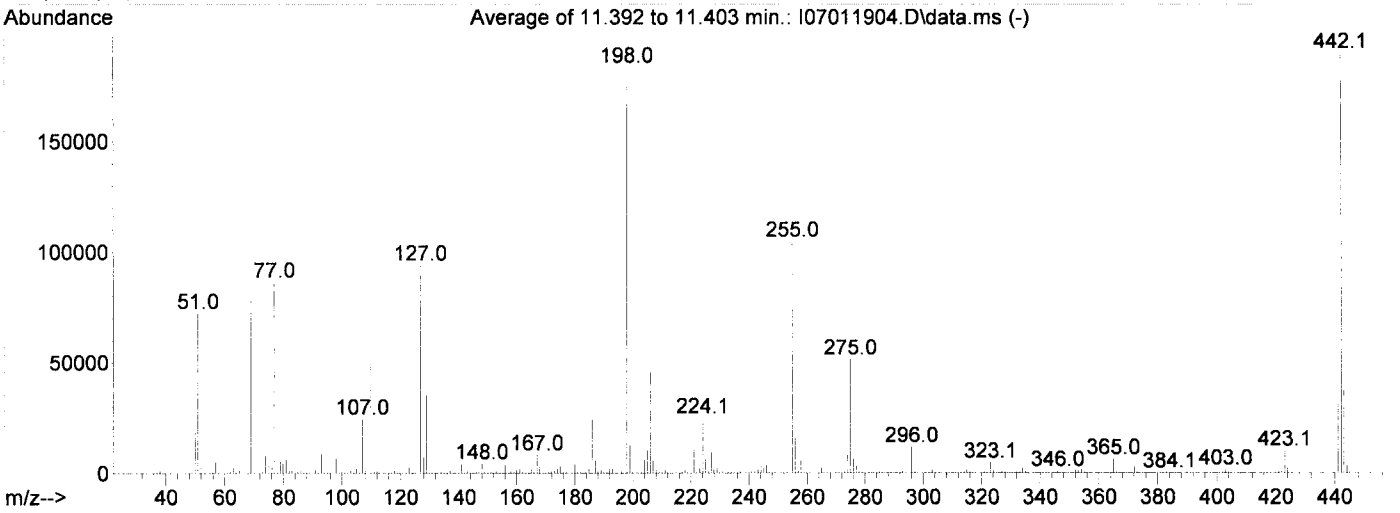
DFTPP

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu Oct 03 11:34:01 2019





AutoFind: Scans 1478, 1479, 1480; Background Corrected with Scan 1472

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	81064	PASS
70	69	0.00	2	0.3	214	PASS
197	198	0.00	2	0.2	350	PASS
198	198	100	100	100.0	182848	PASS
199	198	5	9	7.0	12758	PASS
365	198	1	100	3.4	6268	PASS
441	443	0.01	150	82.3	31480	PASS
442	198	0.10	200	104.1	190379	PASS
443	442	15	24	20.1	38272	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	102870	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	396793	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	191412	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	345240	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	296134	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.308	264	250301	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	20.694	292	221254	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.354	112	69664	1036.36	ng/ml	-0.01
5) Phenol-d6 (Surr)	6.242	99	91119	1041.70	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.125	82	73318	1007.92	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	153184	1067.35	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	17796	1120.10	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.880	244	154582	1065.21	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.028	74	44137	858.58	ng/ml	88
3) Pyridine	4.044	79	73034	930.75	ng/ml	98
6) Phenol	6.253	94	96594	1038.33	ng/ml	100
7) Aniline	6.274	93	38082	481.07	ng/ml	77
8) Bis(2-chloroethyl) ether	6.328	93	78418	1001.60	ng/ml	99
9) 2-Chlorophenol	6.392	128	75053	1068.35	ng/ml	93
10) 1,3-Dichlorobenzene	6.531	146	79193	985.59	ng/ml	97
11) 1,4-Dichlorobenzene	6.600	146	75585	1007.09	ng/ml	97
12) Benzyl alcohol	6.723	108	38412	979.18	ng/ml	92
13) 1,2-Dichlorobenzene	6.755	146	74711	1031.72	ng/ml	97
14) 2-Methylphenol	6.830	107	55443	1040.47	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.846	45	97523	1022.72	ng/ml	94
16) N-Nitrosodi-n-propylamine	6.975	70	52929	991.05	ng/ml	92
17) 3+4-Methylphenol	6.980	107	69903	1055.04	ng/ml	98
18) Hexachloroethane	7.087	201	22574	933.58	ng/ml	82
20) Nitrobenzene	7.146	77	71604	1000.72	ng/ml	91
22) Isophorone	7.376	82	138319	941.34	ng/ml	95
23) 2-Nitrophenol	7.461	139	49682	1324.16	ng/ml	94
24) 2,4-Dimethylphenol	7.499	122	56178	997.93	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.584	93	81709	947.43	ng/ml	98
26) Benzoic acid	7.601	105	39539	1732.29	ng/ml	93
27) 2,4-Dichlorophenol	7.702	162	52700	1007.82	ng/ml	99
28) 1,2,4-Trichlorobenzene	7.782	180	63551	1001.84	ng/ml	97
29) Naphthalene	7.863	128	200990	1015.56	ng/ml	98
30) 4-Chloroaniline	7.921	127	30007	591.66	ng/ml	96
31) Hexachlorobutadiene	7.991	225	32349	982.14	ng/ml	97
32) 4-Chloro-3-methylphenol	8.397	107	55259	932.96	ng/ml	97
33) 2-Methylnaphthalene	8.553	142	151606	1015.38	ng/ml	95
34) 1-Methylnaphthalene	8.654	142	141636	1007.19	ng/ml	96
36) Hexachlorocyclopentadiene	8.718	237	24752	893.34	ng/ml	96
37) 2,4,6-Trichlorophenol	8.841	196	36764	1032.21	ng/ml	99
38) 2,4,5-Trichlorophenol	8.879	198	35559	1063.09	ng/ml	96
39) 1,1'-Biphenyl	9.018	154	168790	1055.29	ng/ml	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 2-Chloronaphthalene	9.045	162	120393	1044.65 ng/ml	96
42) 2-Nitroaniline	9.146	138	40162	1038.59 ng/ml	91
43) 2,6-Dimethylnaphthalene	9.178	156	124445	1055.90 ng/ml	98
44) 1,4-Dinitrobenzene	9.275	168	18123	967.60 ng/ml	81
45) Dimethyl phthalate	9.323	163	137738	1028.59 ng/ml	98
46) 1,3-Dinitrobenzene	9.355	168	20800	967.25 ng/ml	93
47) 2,6-Dinitrotoluene	9.387	165	32515	1085.89 ng/ml	82
48) 1,2-Dinitrobenzene	9.440	168	14799	996.49 ng/ml	88
49) Acenaphthylene	9.467	152	196736	1039.01 ng/ml	100
50) 3-Nitroaniline	9.563	138	19596	805.17 ng/ml	88
51) Acenaphthene	9.644	153	123042	1031.50 ng/ml	98
52) 2,4-Dinitrophenol	9.665	184	6173	683.49 ng/ml	93
53) 4-Nitrophenol	9.740	139	17476	826.69 ng/ml	87
54) 2,4-Dinitrotoluene	9.793	165	38980	943.67 ng/ml	89
55) Dibenzofuran	9.815	168	168479	1037.90 ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	9.900	232	25490	898.01 ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	9.943	232	28722	961.78 ng/ml	86
58) Diethyl phthalate	10.034	149	127405	981.88 ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.023	170	113527	976.95 ng/ml	100
60) Fluorene	10.163	166	135405	967.91 ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.157	204	64003	979.27 ng/ml	85
62) 4-Nitroaniline	10.179	138	23162	808.05 ng/ml	97
63) 4,6-Dinitro-2-methylph...	10.211	198	12233	741.84 ng/ml	86
65) N-Nitrosodiphenylamine	10.275	169	109287	1024.88 ng/ml	98
66) Azobenzene (1,2-DPH)	10.312	77	126421	1056.33 ng/ml	94
68) 4-Bromophenyl phenyl e...	10.649	248	38749	1020.84 ng/ml	88
69) Hexachlorobenzene	10.735	284	43391	1029.10 ng/ml	91
70) Pentachlorophenol (PCP)	10.933	266	12018	674.38 ng/ml	100
71) Phenanthrene	11.136	178	184874	1002.45 ng/ml	97
72) Anthracene	11.189	178	184136	998.56 ng/ml	99
73) Carbazole	11.350	167	146050	903.73 ng/ml	96
74) Di-n-butyl phthalate	11.692	149	217306	1037.75 ng/ml	98
75) Fluoranthene	12.398	202	205708	954.56 ng/ml	96
76) Benzidine	12.548	184	29179	349.88 ng/ml	93
77) Pyrene	12.682	202	202088	921.47 ng/ml	99
80) Butyl benzyl phthalate	13.671	149	89166	1087.22 ng/ml	92
81) Bis(2-ethylhexyl) adipate	13.832	129	79523	1018.69 ng/ml	98
82) 3,3-Dichlorobenzidine	14.800	252	45799	2292.74 ng/ml	98
83) Benz(a)anthracene	14.821	228	170300	990.07 ng/ml	98
84) Chrysene	14.907	228	157511	992.60 ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.976	149	113440	1086.51 ng/ml	97
87) Di-n-octyl phthalate	16.629	149	191496	1099.62 ng/ml	99
88) Benzo(b)fluoranthene	17.399	252	161488	1021.83 ng/ml	93
89) Benzo(k)fluoranthene	17.458	252	161464	1032.01 ng/ml	95
90) Benzo(b+k)fluoranthene	17.458	252	330884	2041.37 ng/ml	95
91) Benzo(e)pyrene	18.046	252	156873	1048.22 ng/ml	98
92) Benzo(a)pyrene	18.164	252	144769	1010.42 ng/ml	98
93) Perylene	18.367	252	126529	998.51 ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.694	276	118578	975.99 ng/ml	93
96) Dibenz(a,h)anthracene	20.758	278	108955	1015.79 ng/ml	92
97) Benzo(g,h,i)perylene	21.224	276	120064	1010.64 ng/ml	87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

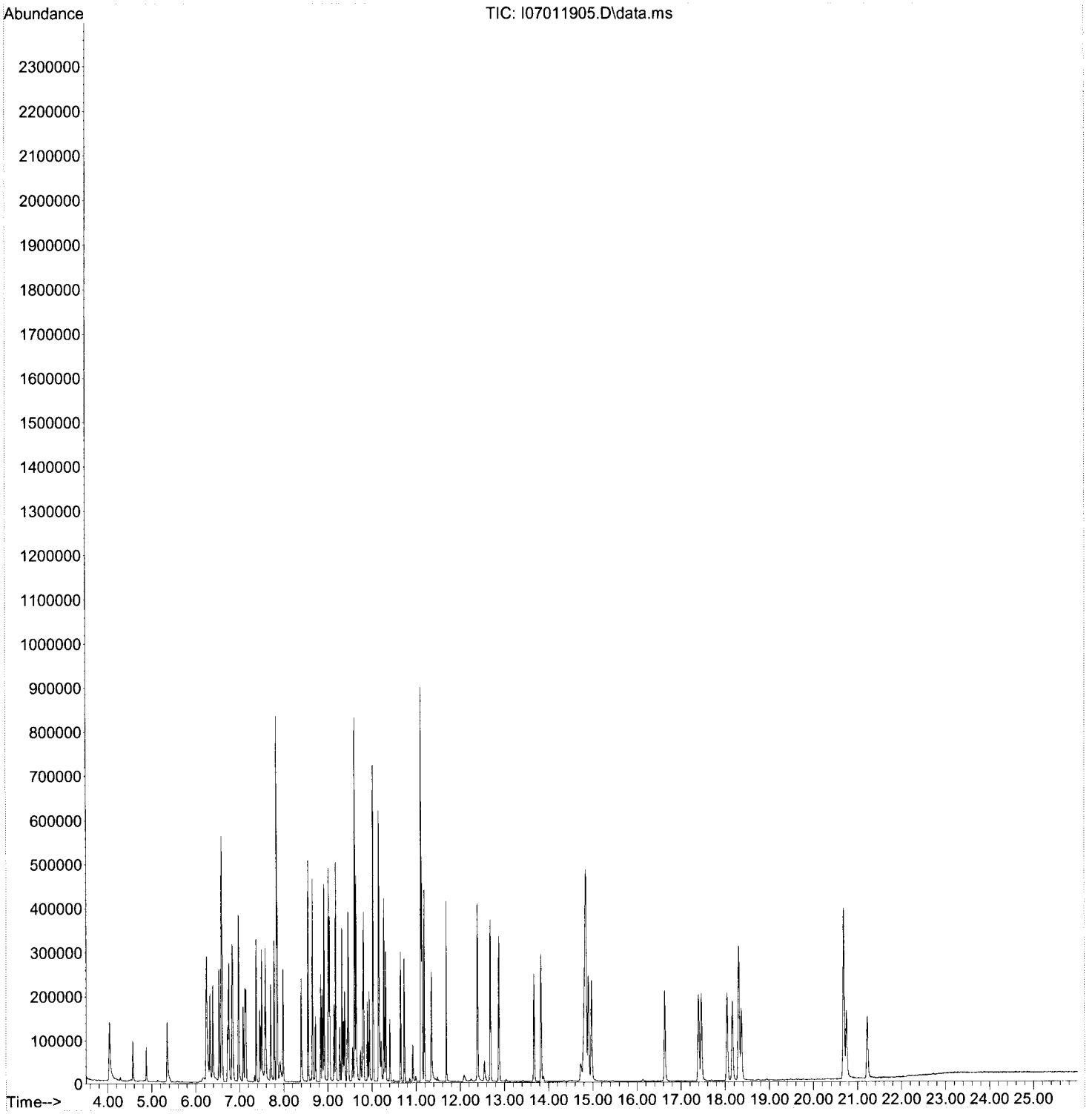
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

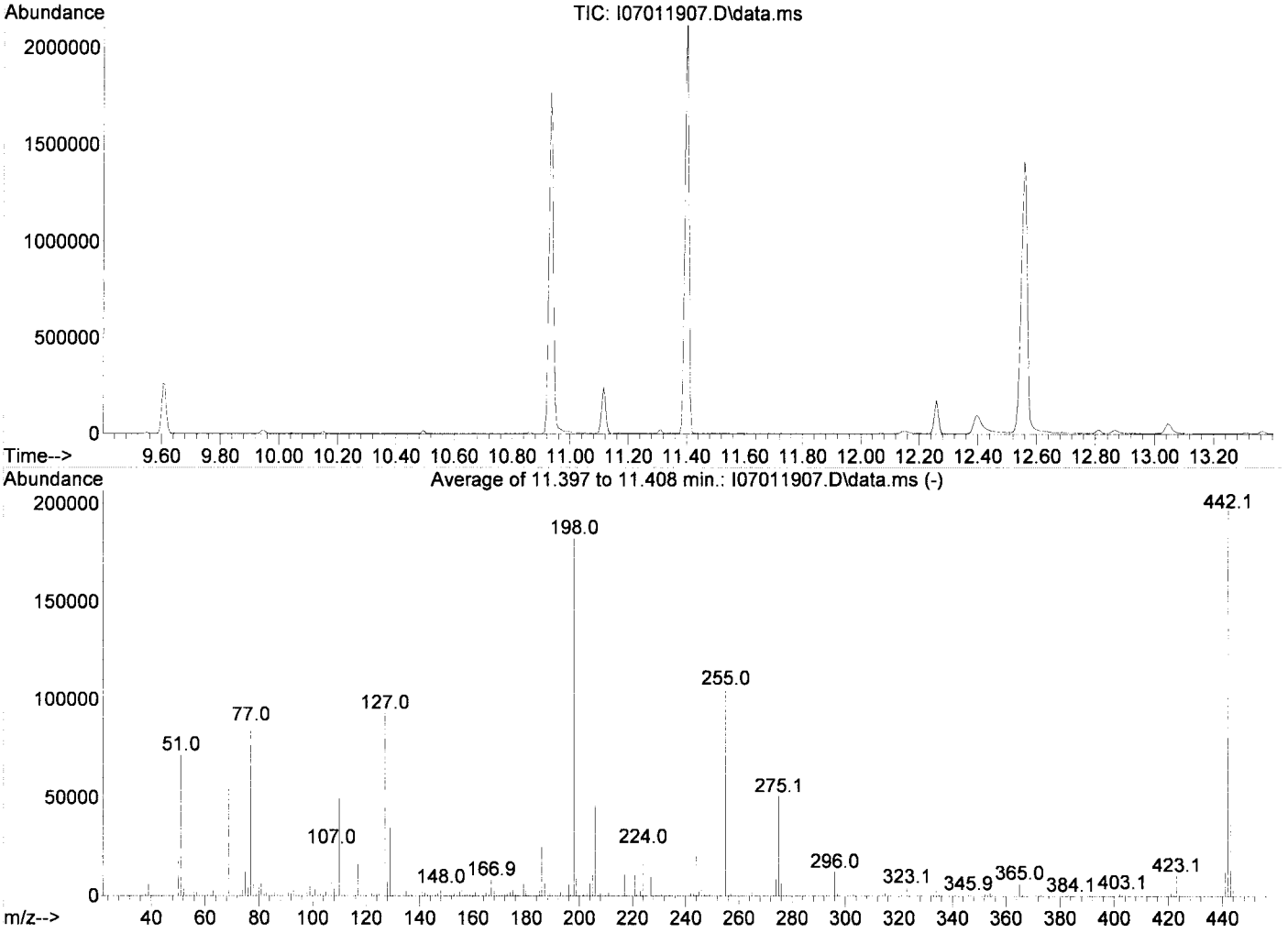
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.841	136	122228	2.00	ug/mL	0.00
2) Acenaphthene-d10	9.606	162	61150	2.00	ug/mL	0.00
4) Phenanthrene-d10	11.114	188	92812	2.00	ug/mL	0.00
10) Chrysene-d12	14.783	240	82959	2.00	ug/mL	0.00
11) Perylene-d12	16.810	264	73278	2.00	ug/mL	0.00
Target Compounds						Qvalue
3) Pentachlorophenol	10.932	266	247884	36.13	ug/mL	93
5) DFTPP	11.403	442	229699	29.44	ug/mL	97
6) Benzidine	12.558	184	835060	29.88	ug/mL	89
7) 4,4-DDE	12.810	TIC	20842	No Calib	#	
8) 4,4-DDD	13.312	TIC	6359	1.65	ug/mL#	1
9) 4,4-DDT	13.863	TIC	3309845	42.32	ug/mL#	1

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

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu Oct 03 11:34:01 2019



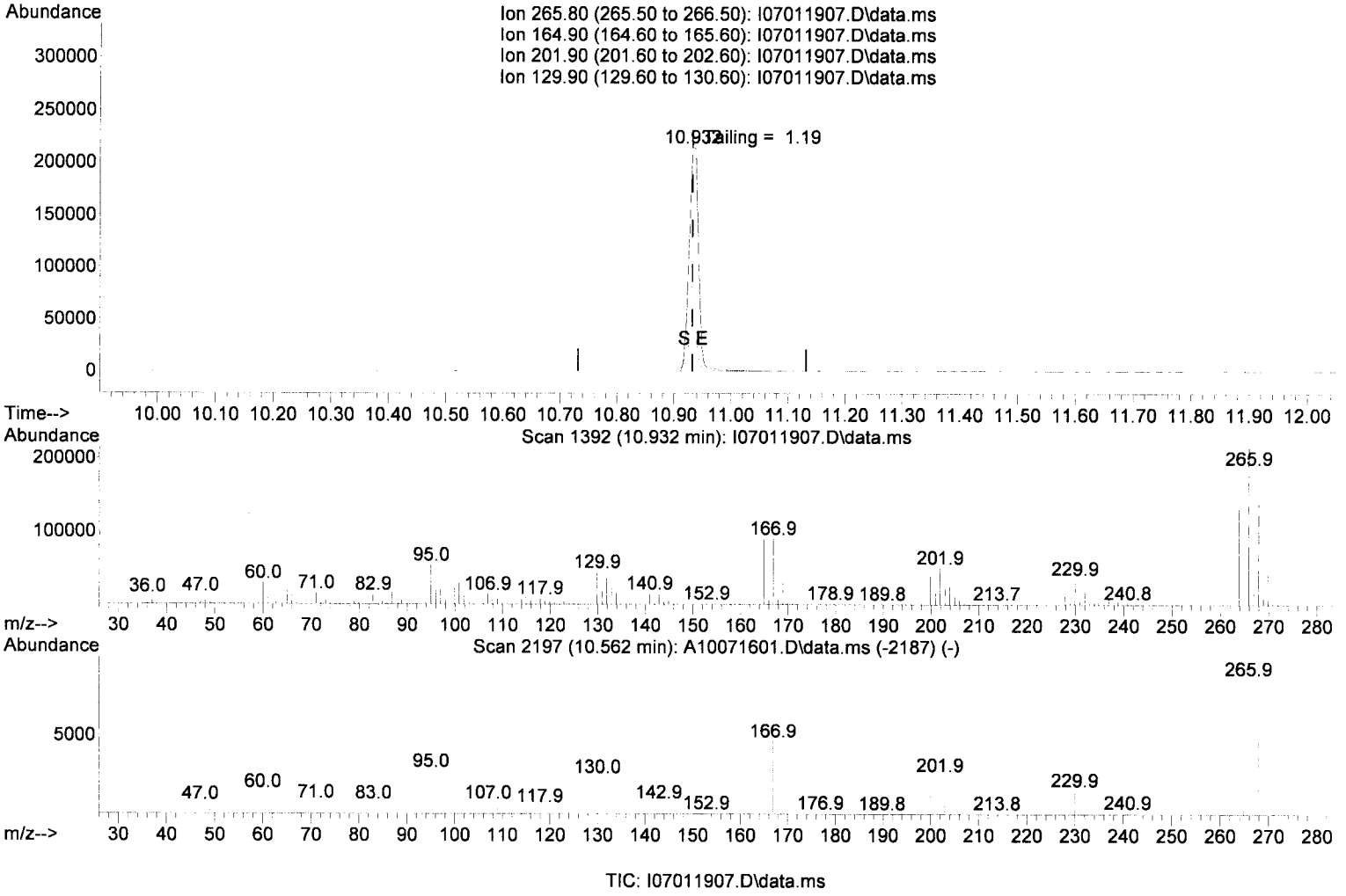
AutoFind: Scans 1479, 1480, 1481; Background Corrected with Scan 1472

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	78570	PASS
70	69	0.00	2	0.4	298	PASS
197	198	0.00	2	0.5	926	PASS
198	198	100	100	100.0	182488	PASS
199	198	5	9	6.7	12198	PASS
365	198	1	100	3.4	6269	PASS
441	443	0.01	150	55.2	21285	PASS
442	198	0.10	200	107.9	196971	PASS
443	442	15	24	19.6	38552	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I07011907.D\data.ms

(3) Pentachlorophenol

10.932min (0.000) 36.13 ug/mL

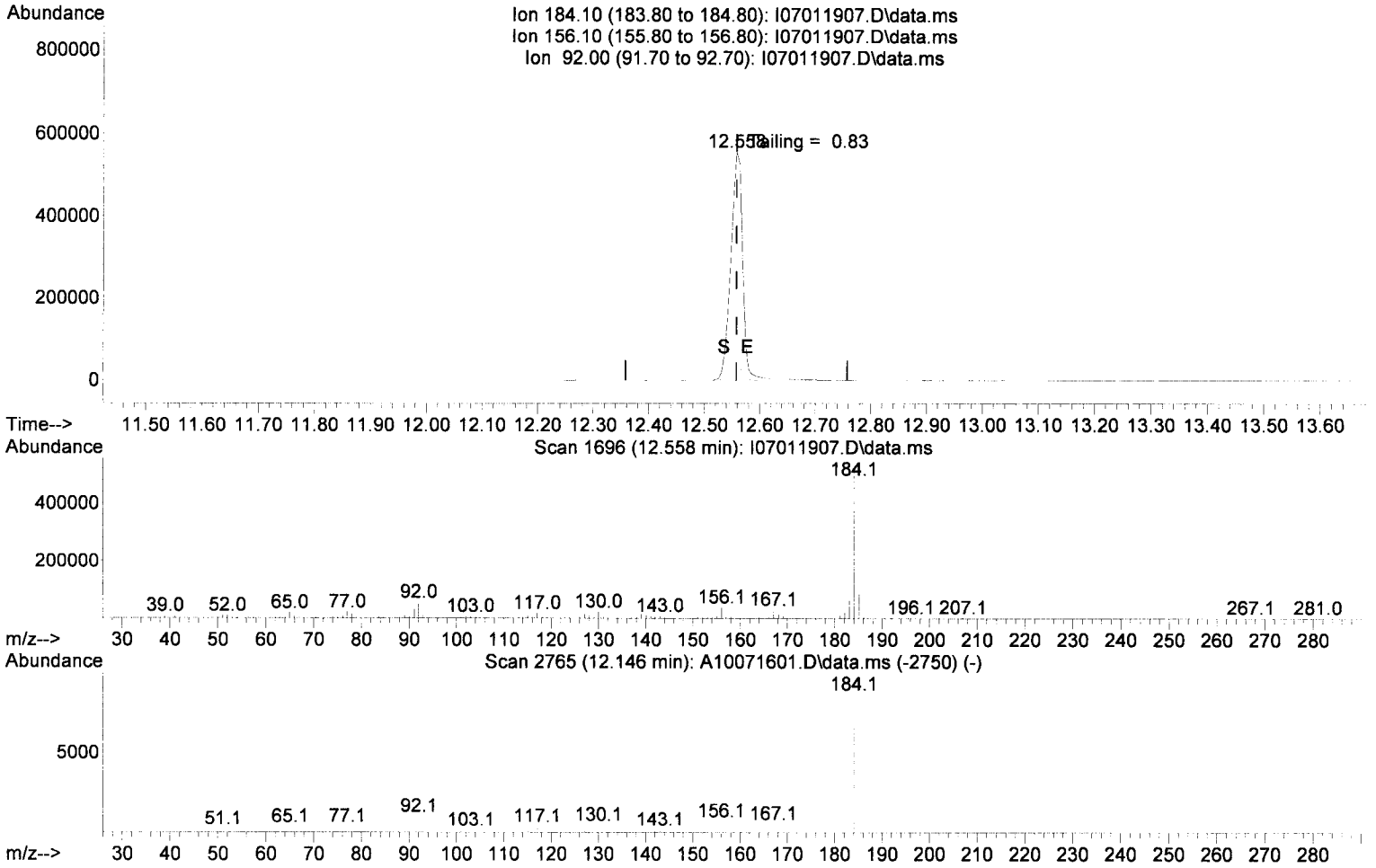
response 247884

Ion	Exp%	Act%
265.80	100.00	100.00
164.90	47.40	41.61
201.90	26.10	23.15
129.90	22.80	20.38

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I07011907.D\data.ms

(6) Benzidine

12.558min (0.000) 29.88 ug/mL

response 835060

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	9.40	6.83
92.00	15.50	10.05
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9G01054-TUN2
SV-GCMS9

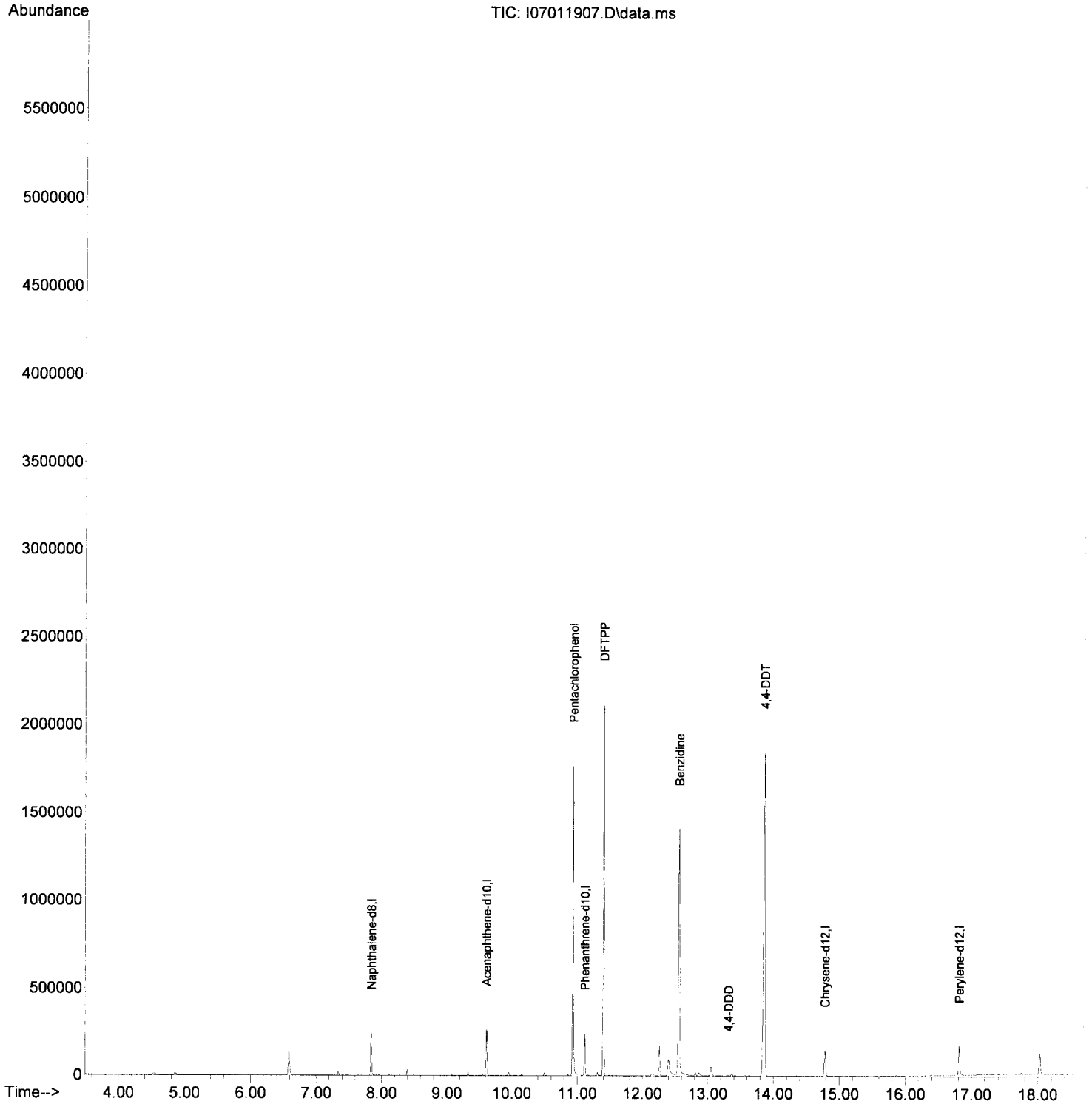
First Column	Area Counts	Percent Breakdown	
DDE	20842		
DDD	6359		
DDT	3309845	**0.82**	**PASS**

Breakdown must be less than 20% to accept sample data.

No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	108363	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	411652	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	197429	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	374232	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.853	240	356296	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	334168	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.700	292	329125	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.349	112	74873	1057.39	ng/ml	-0.02
5) Phenol-d6 (Surr)	6.242	99	93447	1014.16	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.130	82	76105	993.19	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	158472	1070.54	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	20162	1170.71	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.880	244	180038	1031.14	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.017	74	49553	915.08	ng/ml	88
3) Pyridine	4.028	79	79323	959.65	ng/ml	98
6) Phenol	6.253	94	98969	1009.93	ng/ml	99
7) Aniline	6.274	93	52113	624.94	ng/ml	84
8) Bis(2-chloroethyl) ether	6.328	93	84503	1024.61	ng/ml	97
9) 2-Chlorophenol	6.392	128	77424	1046.24	ng/ml	93
10) 1,3-Dichlorobenzene	6.536	146	84362	996.70	ng/ml	97
11) 1,4-Dichlorobenzene	6.606	146	80077	1012.85	ng/ml	96
12) Benzyl alcohol	6.724	108	41931	1012.72	ng/ml	98
13) 1,2-Dichlorobenzene	6.756	146	78631	1030.81	ng/ml	96
14) 2-Methylphenol	6.831	107	56660	1009.41	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.847	45	99238	987.95	ng/ml	95
16) N-Nitrosodi-n-propylamine	6.975	70	55528	987.01	ng/ml	94
17) 3+4-Methylphenol	6.980	107	73661	1055.41	ng/ml	97
18) Hexachloroethane	7.087	201	25386	996.66	ng/ml	88
20) Nitrobenzene	7.146	77	73382	973.59	ng/ml	92
22) Isophorone	7.376	82	144060	945.02	ng/ml	95
23) 2-Nitrophenol	7.462	139	43853	1126.61	ng/ml	98
24) 2,4-Dimethylphenol	7.504	122	59005	1010.32	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.585	93	85331	953.71	ng/ml	99
26) Benzoic acid	7.606	105	55546	2085.53	ng/ml	95
27) 2,4-Dichlorophenol	7.708	162	54153	998.36	ng/ml	97
28) 1,2,4-Trichlorobenzene	7.783	180	65004	987.75	ng/ml	98
29) Naphthalene	7.863	128	207707	1011.62	ng/ml	99
30) 4-Chloroaniline	7.927	127	37590	714.42	ng/ml	93
31) Hexachlorobutadiene	7.991	225	34962	1023.15	ng/ml	99
32) 4-Chloro-3-methylphenol	8.403	107	60285	977.62	ng/ml	99
33) 2-Methylnaphthalene	8.553	142	154358	996.50	ng/ml	96
34) 1-Methylnaphthalene	8.654	142	145194	995.22	ng/ml	98
36) Hexachlorocyclopentadiene	8.724	237	33189	1148.73	ng/ml	97
37) 2,4,6-Trichlorophenol	8.842	196	39018	1061.35	ng/ml	97
38) 2,4,5-Trichlorophenol	8.884	198	38423	1112.52	ng/ml	99
39) 1,1'-Biphenyl	9.023	154	176656	1070.81	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 2-Chloronaphthalene	9.045	162	126626	1065.25 ng/ml	96
42) 2-Nitroaniline	9.146	138	44060	1104.67 ng/ml	95
43) 2,6-Dimethylnaphthalene	9.184	156	130476	1073.33 ng/ml	94
44) 1,4-Dinitrobenzene	9.275	168	21360	1094.82 ng/ml	85
45) Dimethyl phthalate	9.328	163	145747	1055.23 ng/ml	100
46) 1,3-Dinitrobenzene	9.355	168	24288	1095.03 ng/ml	94
47) 2,6-Dinitrotoluene	9.387	165	33561	1086.67 ng/ml	84
48) 1,2-Dinitrobenzene	9.446	168	16750	1093.48 ng/ml	83
49) Acenaphthylene	9.467	152	207090	1060.36 ng/ml	100
50) 3-Nitroaniline	9.564	138	23030	927.93 ng/ml	90
51) Acenaphthene	9.644	153	126961	1031.92 ng/ml	97
52) 2,4-Dinitrophenol	9.665	184	11499	1077.50 ng/ml	94
53) 4-Nitrophenol	9.740	139	21056	952.74 ng/ml	95
54) 2,4-Dinitrotoluene	9.799	165	43327	1016.04 ng/ml	82
55) Dibenzofuran	9.815	168	176892	1056.52 ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	9.901	232	28635	975.17 ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	9.949	232	32965	1069.44 ng/ml	87
58) Diethyl phthalate	10.034	149	139674	1043.63 ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.029	170	117975	984.28 ng/ml	100
60) Fluorene	10.163	166	142840	989.94 ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.157	204	68281	1012.89 ng/ml	88
62) 4-Nitroaniline	10.184	138	29578	1000.43 ng/ml	98
63) 4,6-Dinitro-2-methylph...	10.216	198	17915	1017.06 ng/ml	76
65) N-Nitrosodiphenylamine	10.275	169	119882	1037.14 ng/ml	97
66) Azobenzene (1,2-DPH)	10.318	77	135843	1047.12 ng/ml	89
68) 4-Bromophenyl phenyl e...	10.655	248	42837	1041.11 ng/ml	85
69) Hexachlorobenzene	10.735	284	45260	990.27 ng/ml	90
70) Pentachlorophenol (PCP)	10.933	266	16130	819.38 ng/ml	95
71) Phenanthrene	11.142	178	199430	997.60 ng/ml	98
72) Anthracene	11.190	178	204369	1022.42 ng/ml	98
73) Carbazole	11.355	167	172145	982.68 ng/ml	99
74) Di-n-butyl phthalate	11.692	149	248397	1094.33 ng/ml	99
75) Fluoranthene	12.398	202	239311	1024.46 ng/ml	95
76) Benzidine	12.548	184	74763	1460.93 ng/ml	99
77) Pyrene	12.682	202	238595	1003.65 ng/ml	98
80) Butyl benzyl phthalate	13.671	149	111057	1123.44 ng/ml	91
81) Bis(2-ethylhexyl) adipate	13.837	129	113575	1209.23 ng/ml	100
82) 3,3-Dichlorobenzidine	14.795	252	59004	2522.58 ng/ml	98
83) Benz(a)anthracene	14.827	228	208396	1006.97 ng/ml	96
84) Chrysene	14.907	228	191268	1001.80 ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.982	149	140167	1115.81 ng/ml	97
87) Di-n-octyl phthalate	16.635	149	243800	1051.38 ng/ml	98
88) Benzo(b)fluoranthene	17.399	252	214189	1015.20 ng/ml	97
89) Benzo(k)fluoranthene	17.464	252	208188	995.38 ng/ml	95
90) Benzo(b+k)fluoranthene	17.464	252	433915	2004.56 ng/ml	95
91) Benzo(e)pyrene	18.052	252	210124	1051.66 ng/ml	97
92) Benzo(a)pyrene	18.170	252	194689	1017.92 ng/ml	97
93) Perylene	18.373	252	171161	1011.73 ng/ml	98
95) Indeno(1,2,3-cd)pyrene	20.694	276	176895	978.78 ng/ml	91
96) Dibenz(a,h)anthracene	20.758	278	162716	1019.81 ng/ml	95
97) Benzo(g,h,i)perylene	21.234	276	187575	1061.42 ng/ml	85

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

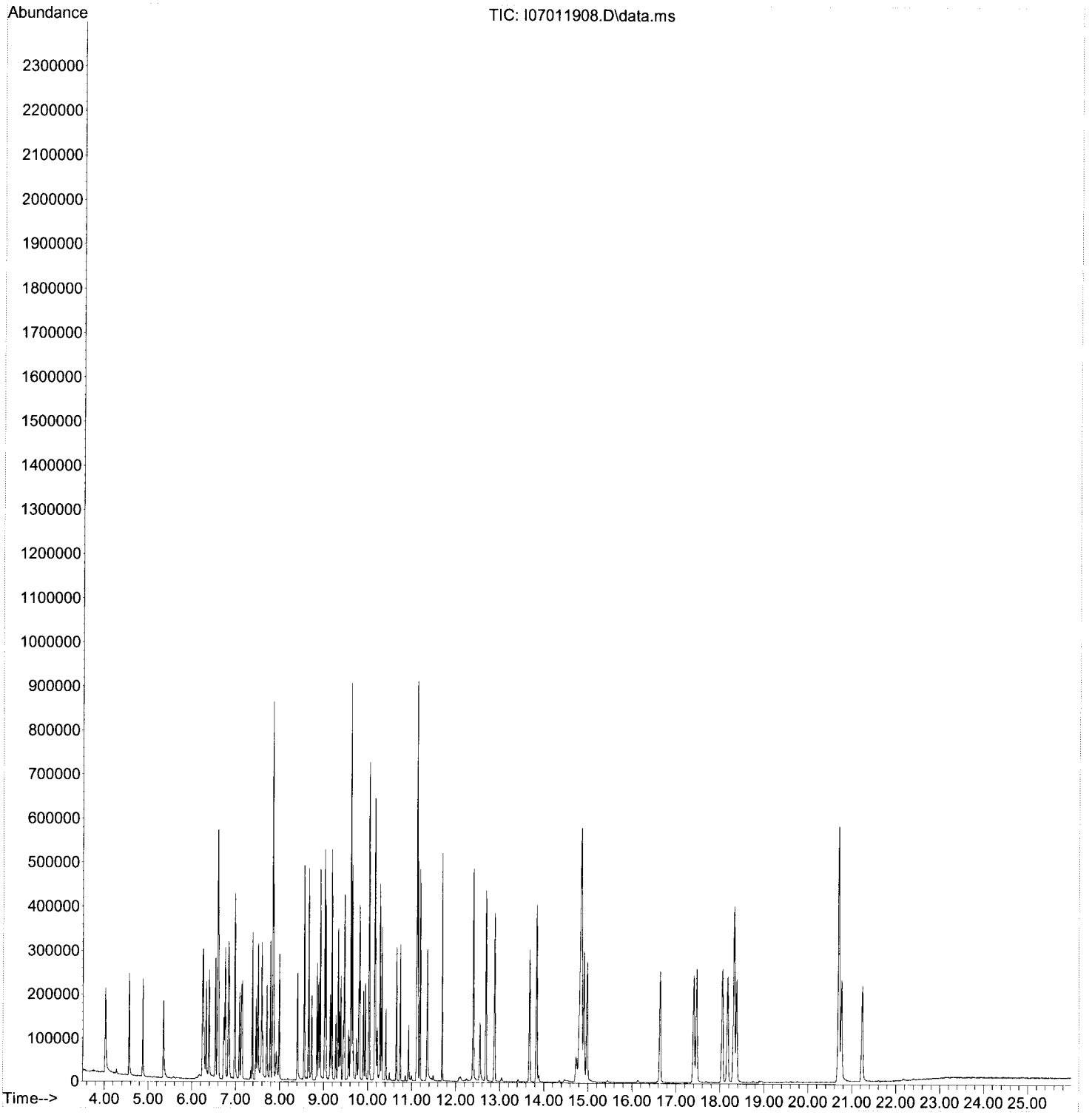
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011909.D
Acq On : 1 Jul 2019 6:35 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 01 19:04:38 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

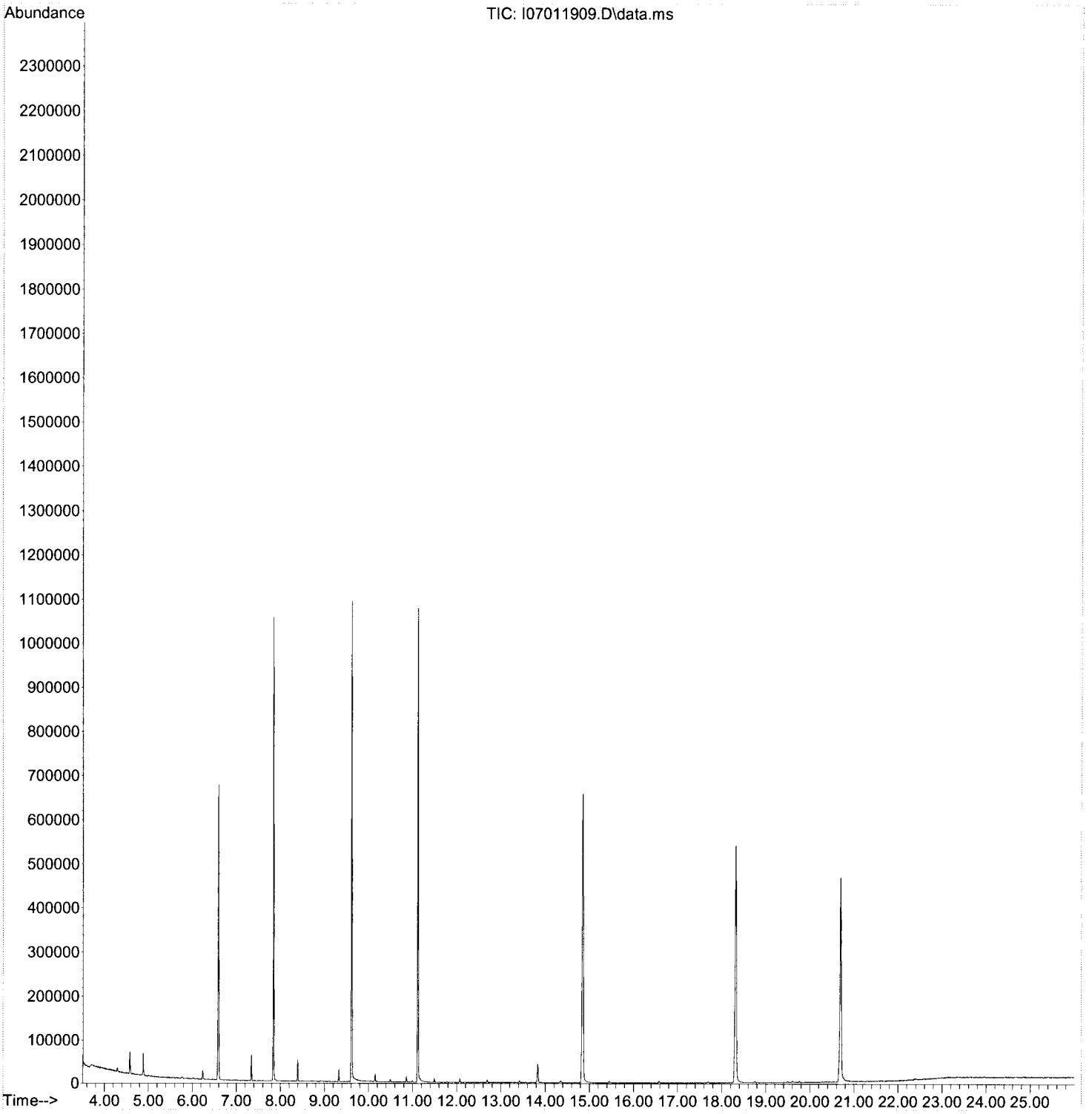
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.590	152	129884	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	510661	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	242857	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	454000	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.853	240	461266	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	428580	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	400276	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	0.000	112	0	0.00	ng/ml	
5) Phenol-d6 (Surr)	0.000	99	0	0.00	ng/ml	
19) Nitrobenzene-d5 (Surr)	0.000	82	0	0.00	ng/ml	
40) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
54) 2,4-Dinitrotoluene	9.799	165	116	34.85	ng/ml#	17
59) 2,3,5-Trimethylnaphtha...	10.141	170	50	0.34	ng/ml#	4
71) Phenanthrene	11.120	178	115	0.47	ng/ml#	1
72) Anthracene	11.120	178	115	0.47	ng/ml#	1
81) Bis(2-ethylhexyl) adipate	13.832	129	11664	95.93	ng/ml	91
83) Benz(a)anthracene	14.848	228	1011	3.77	ng/ml	78
84) Chrysene	14.848	228	976	3.95	ng/ml	75
93) Perylene	18.303	252	1219	5.62	ng/ml#	58
95) Indeno(1,2,3-cd)pyrene	20.689	276	193	0.88	ng/ml#	44

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011909.D
Acq On : 1 Jul 2019 6:35 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 01 19:04:38 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011910.D
Acq On : 1 Jul 2019 7:11 pm
Operator : JK /AMS /DTH
Sample : 9061508-BLK1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 02 07:31:03 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

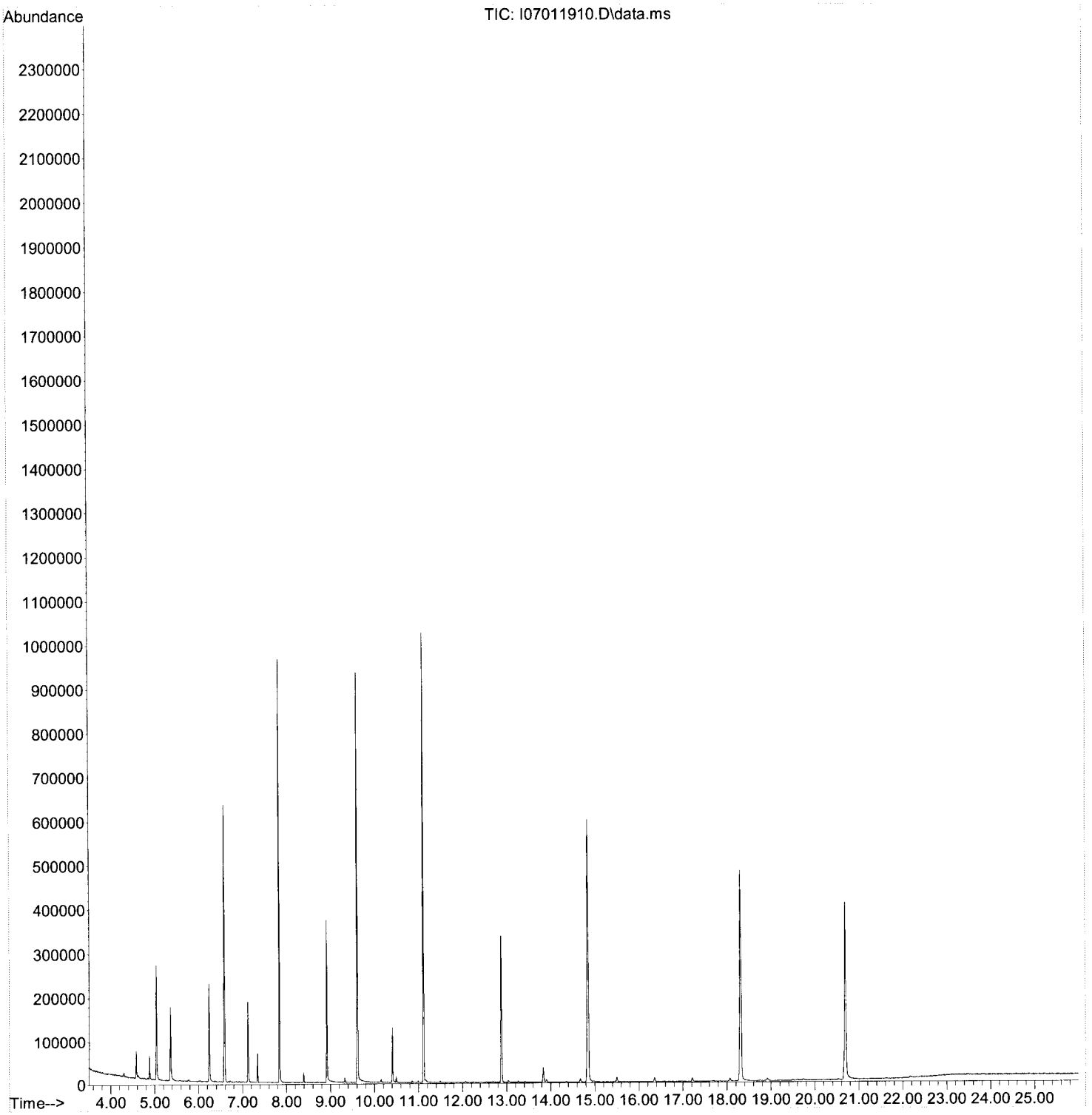
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	120657	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	463135	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	214779	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	401451	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	399515	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	371048	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	344390	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.359	112	62558	793.45	ng/ml	0.00
5) Phenol-d6 (Surr)	6.242	99	76296	743.65	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.125	82	69755	817.57	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	130720	811.73	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	16073	870.00	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.885	244	163101	833.08	ng/ml	0.00
Target Compounds						Qvalue
6) Phenol	6.247	94	96	0.88	ng/ml#	1
16) N-Nitrosodi-n-propylamine	6.948	70	52	0.83	ng/ml	59
20) Nitrobenzene	7.130	77	335	3.99	ng/ml#	40
22) Isophorone	7.360	82	108	0.63	ng/ml	66
29) Naphthalene	7.852	128	140	0.61	ng/ml	68
33) 2-Methylnaphthalene	8.558	142	83	0.48	ng/ml#	21
39) 1,1'-Biphenyl	9.029	154	459	2.56	ng/ml	70
49) Acenaphthylene	9.467	152	167	0.79	ng/ml	61
51) Acenaphthene	9.638	153	170	1.27	ng/ml#	65
54) 2,4-Dinitrotoluene	9.793	165	142	35.66	ng/ml#	17
55) Dibenzofuran	9.820	168	152	0.83	ng/ml#	1
58) Diethyl phthalate	10.034	149	109	0.75	ng/ml	64
59) 2,3,5-Trimethylnaphtha...	10.034	170	225	1.73	ng/ml	74
60) Fluorene	10.163	166	119	0.76	ng/ml#	65
71) Phenanthrene	11.141	178	398	1.86	ng/ml	69
72) Anthracene	11.189	178	236	1.10	ng/ml	62
73) Carbazole	11.361	167	103	0.55	ng/ml	59
74) Di-n-butyl phthalate	11.698	149	179	0.74	ng/ml	78
75) Fluoranthene	12.404	202	162	0.65	ng/ml#	46
77) Pyrene	12.687	202	166	0.65	ng/ml	58
81) Bis(2-ethylhexyl) adipate	13.837	129	9128	86.67	ng/ml	96
83) Benz(a)anthracene	14.848	228	1126	4.85	ng/ml	58
84) Chrysene	14.901	228	56	0.26	ng/ml	50
85) Bis(2-ethylhexyl) phth...	14.976	149	345	2.45	ng/ml	52
88) Benzo(b)fluoranthene	17.394	252	55	4.63	ng/ml#	1
89) Benzo(k)fluoranthene	17.394	252	55	5.27	ng/ml#	1
90) Benzo(b+k)fluoranthene	17.394	252	55	10.46	ng/ml#	1
93) Perylene	18.319	252	1214	6.46	ng/ml#	70
95) Indeno(1,2,3-cd)pyrene	20.694	276	134	0.71	ng/ml#	1

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011910.D
Acq On : 1 Jul 2019 7:11 pm
Operator : JK /AMS /DTH
Sample : 9061508-BLK1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 02 07:31:03 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.590	152	103191	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.847	136	387480	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.617	162	192368	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.120	188	367679	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.859	240	340877	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.319	264	328423	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.705	292	326359	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.365	112	70046	1038.80	ng/ml	0.00
5) Phenol-d6 (Surr)	6.247	99	86852	989.83	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.130	82	68537	939.26	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	143344	993.82	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.414	330	17741	1048.49	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.885	244	163323	977.72	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.028	74	73966	1434.36	ng/ml	87
3) Pyridine	4.044	79	96741	1229.03	ng/ml	98
6) Phenol	6.263	94	150591	1613.73	ng/ml	99
7) Aniline	6.279	93	69508	875.32	ng/ml	91
8) Bis(2-chloroethyl) ether	6.328	93	117438	1495.32	ng/ml	99
9) 2-Chlorophenol	6.397	128	114915	1630.69	ng/ml	94
10) 1,3-Dichlorobenzene	6.536	146	121907	1512.46	ng/ml	97
11) 1,4-Dichlorobenzene	6.606	146	116985	1553.85	ng/ml	96
12) Benzyl alcohol	6.729	108	66101	1628.59	ng/ml	93
13) 1,2-Dichlorobenzene	6.761	146	111719	1537.98	ng/ml	97
14) 2-Methylphenol	6.836	107	86920	1626.11	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	6.852	45	140216	1465.87	ng/ml	94
16) N-Nitrosodi-n-propylamine	6.980	70	82099	1532.45	ng/ml	94
17) 3+4-Methylphenol	6.991	107	111054	1670.92	ng/ml	97
18) Hexachloroethane	7.087	201	37389	1541.47	ng/ml	91
20) Nitrobenzene	7.151	77	110470	1539.10	ng/ml	94
22) Isophorone	7.381	82	216161	1506.46	ng/ml	94
23) 2-Nitrophenol	7.467	139	64628	1763.91	ng/ml	98
24) 2,4-Dimethylphenol	7.504	122	94119	1712.09	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.590	93	128829	1529.69	ng/ml	97
26) Benzoic acid	7.627	105	86219	2940.22	ng/ml	98
27) 2,4-Dichlorophenol	7.708	162	85110	1661.79	ng/ml	98
28) 1,2,4-Trichlorobenzene	7.788	180	93537	1509.98	ng/ml	98
29) Naphthalene	7.868	128	299910	1551.81	ng/ml	99
30) 4-Chloroaniline	7.932	127	28997	585.48	ng/ml	92
31) Hexachlorobutadiene	7.996	225	50316	1564.34	ng/ml	98
32) 4-Chloro-3-methylphenol	8.403	107	93928	1573.26	ng/ml	99
33) 2-Methylnaphthalene	8.558	142	225755	1548.34	ng/ml	98
34) 1-Methylnaphthalene	8.660	142	211662	1541.33	ng/ml	98
36) Hexachlorocyclopentadiene	8.724	237	52102	1822.00	ng/ml	97
37) 2,4,6-Trichlorophenol	8.847	196	60109	1665.11	ng/ml	99
38) 2,4,5-Trichlorophenol	8.884	198	56634	1671.26	ng/ml	94
39) 1,1'-Biphenyl	9.023	154	259729	1615.78	ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 2-Chloronaphthalene	9.050	162	185866	1604.74	ng/ml	95
42) 2-Nitroaniline	9.152	138	66788	1718.56	ng/ml	88
43) 2,6-Dimethylnaphthalene	9.184	156	189664	1601.28	ng/ml	97
44) 1,4-Dinitrobenzene	9.280	168	32018	1639.10	ng/ml	82
45) Dimethyl phthalate	9.334	163	215563	1601.77	ng/ml	99
46) 1,3-Dinitrobenzene	9.366	168	35842	1658.46	ng/ml	87
47) 2,6-Dinitrotoluene	9.392	165	51347	1706.30	ng/ml	82
48) 1,2-Dinitrobenzene	9.451	168	24210	1622.07	ng/ml	88
49) Acenaphthylene	9.473	152	304884	1602.16	ng/ml	99
50) 3-Nitroaniline	9.569	138	36165	1561.85	ng/ml	94
51) Acenaphthene	9.649	153	193146	1611.16	ng/ml	98
52) 2,4-Dinitrophenol	9.671	184	17280	1528.60	ng/ml	88
53) 4-Nitrophenol	9.745	139	33111	1480.77	ng/ml	89
54) 2,4-Dinitrotoluene	9.804	165	66115	1593.51	ng/ml	84
55) Dibenzofuran	9.820	168	260835	1598.87	ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	9.906	232	45503	1570.65	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	9.949	232	48385	1609.31	ng/ml	88
58) Diethyl phthalate	10.040	149	198981	1525.88	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.029	170	173540	1485.96	ng/ml	97
60) Fluorene	10.168	166	209357	1489.10	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.157	204	100501	1530.06	ng/ml	91
62) 4-Nitroaniline	10.189	138	47079	1634.27	ng/ml	92
63) 4,6-Dinitro-2-methylph...	10.216	198	29916	1667.25	ng/ml	82
65) N-Nitrosodiphenylamine	10.280	169	180131	1586.16	ng/ml	96
66) Azobenzene (1,2-DPH)	10.323	77	199724	1566.98	ng/ml	86
68) 4-Bromophenyl phenyl e...	10.655	248	64665	1599.63	ng/ml	89
69) Hexachlorobenzene	10.740	284	68428	1523.86	ng/ml	92
70) Pentachlorophenol (PCP)	10.933	266	29088	1439.71	ng/ml	95
71) Phenanthrene	11.141	178	301540	1535.26	ng/ml	98
72) Anthracene	11.195	178	300585	1530.58	ng/ml	99
73) Carbazole	11.355	167	257112	1493.87	ng/ml	98
74) Di-n-butyl phthalate	11.692	149	364849	1636.02	ng/ml	99
75) Fluoranthene	12.404	202	353135	1538.66	ng/ml	96
76) Benzidine	12.553	184	82905	1691.75	ng/ml	95
77) Pyrene	12.687	202	354830	1519.19	ng/ml	99
80) Butyl benzyl phthalate	13.677	149	166025	1707.83	ng/ml	92
81) Bis(2-ethylhexyl) adipate	13.842	129	155386	1729.23	ng/ml	98
82) 3,3-Dichlorobenzidine	14.800	252	165671	9118.28	ng/ml	98
83) Benz(a)anthracene	14.832	228	312679	1579.21	ng/ml	98
84) Chrysene	14.918	228	278970	1527.25	ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.987	149	206146	1715.27	ng/ml	95
87) Di-n-octyl phthalate	16.640	149	387638	1663.26	ng/ml	99
88) Benzo(b)fluoranthene	17.410	252	332306	1597.65	ng/ml	96
89) Benzo(k)fluoranthene	17.480	252	310185	1540.57	ng/ml	95
90) Benzo(b+k)fluoranthene	17.480	252	658831	3128.45	ng/ml	95
91) Benzo(e)pyrene	18.063	252	313896	1598.52	ng/ml	98
92) Benzo(a)pyrene	18.180	252	299145	1608.79	ng/ml	97
93) Perylene	18.383	252	295936	1779.88	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.705	276	273621	1526.81	ng/ml	95
96) Dibenz(a,h)anthracene	20.769	278	247603	1564.98	ng/ml	94
97) Benzo(g,h,i)perylene	21.245	276	286731	1636.27	ng/ml	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 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 (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
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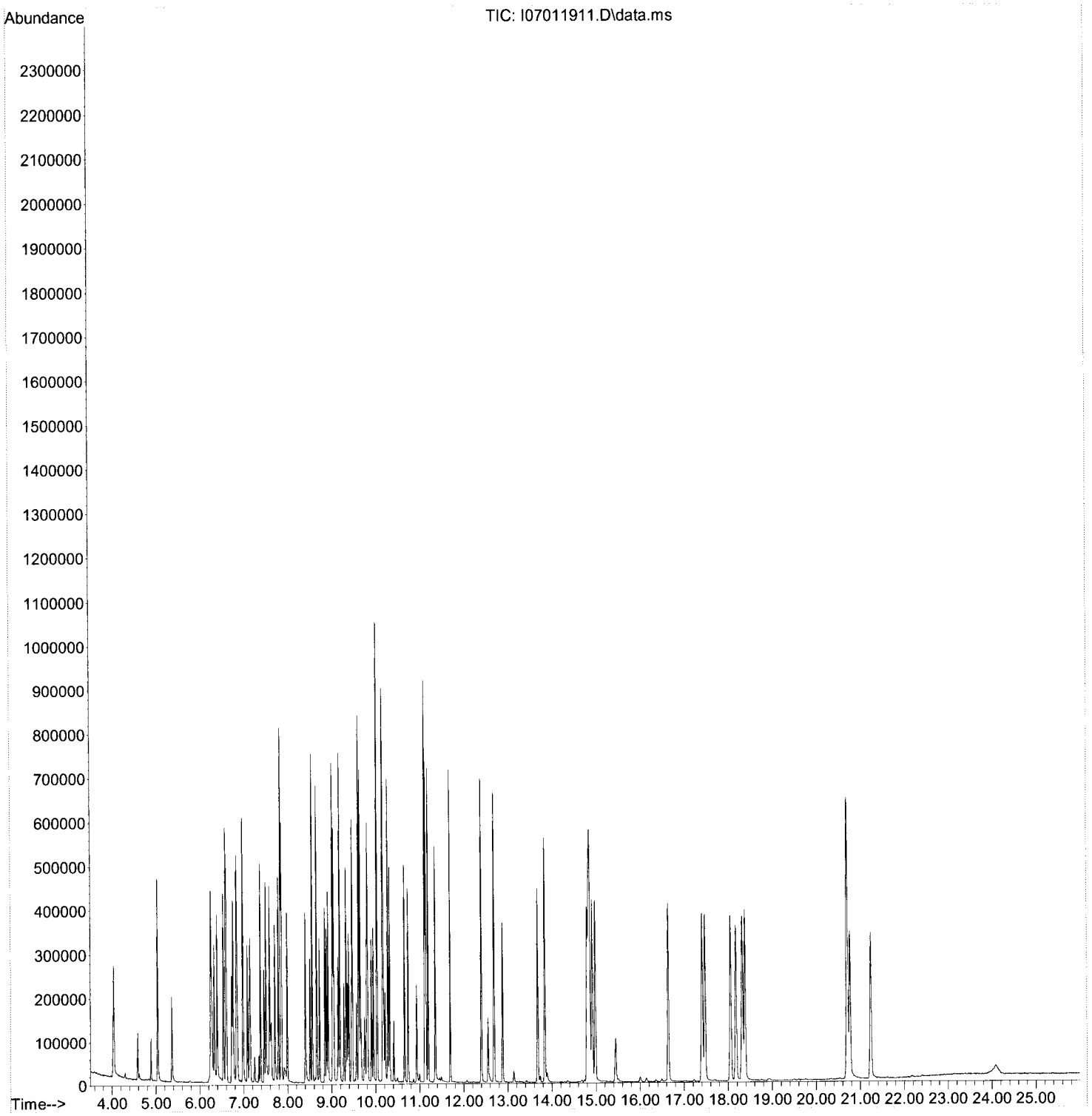
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	115476	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	440735	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	200689	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	373678	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	380732	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	349379	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	332293	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.327	112	58	0.77	ng/ml	-0.04
5) Phenol-d6 (Surr)	0.000	99	0	0.00	ng/ml	
19) Nitrobenzene-d5 (Surr)	7.103	82	159	1.95	ng/ml	-0.03
40) 2-Fluorobiphenyl (Surr)	8.927	172	159	1.06	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	12.890	244	220	1.18	ng/ml	0.00
Target Compounds						Qvalue
20) Nitrobenzene	7.151	77	163	2.03	ng/ml#	42
22) Isophorone	7.365	82	209	1.28	ng/ml	51
23) 2-Nitrophenol	7.403	139	96	2.30	ng/ml	79
25) Bis(2-chloroethoxy) me...	7.585	93	127	1.33	ng/ml	88
26) Benzoic acid	7.585	105	256	710.75	ng/ml#	1
27) 2,4-Dichlorophenol	7.691	162	383	30.42	ng/ml#	26
29) Naphthalene	7.863	128	635208	2889.58	ng/ml	97
30) 4-Chloroaniline	7.932	127	181	3.21	ng/ml	80
32) 4-Chloro-3-methylphenol	8.419	107	176	67.21	ng/ml#	1
33) 2-Methylnaphthalene	8.553	142	160089	965.30	ng/ml	99
34) 1-Methylnaphthalene	8.654	142	74815	478.97	ng/ml	96
39) 1,1'-Biphenyl	9.023	154	49077	292.65	ng/ml	98
41) 2-Chloronaphthalene	9.098	162	1733	14.34	ng/ml	56
42) 2-Nitroaniline	9.141	138	73	1.80	ng/ml#	48
43) 2,6-Dimethylnaphthalene	9.189	156	20955	169.58	ng/ml	99
44) 1,4-Dinitrobenzene	9.296	168	427	85.80	ng/ml#	47
45) Dimethyl phthalate	9.301	163	220	1.57	ng/ml#	30
46) 1,3-Dinitrobenzene	9.355	168	126	5.59	ng/ml#	1
47) 2,6-Dinitrotoluene	9.403	165	244	7.77	ng/ml	74
49) Acenaphthylene	9.467	152	28464	143.38	ng/ml	96
50) 3-Nitroaniline	9.596	138	235	Below Cal	#	1
51) Acenaphthene	9.644	153	9557	76.42	ng/ml	98
53) 4-Nitrophenol	9.719	139	489	78.90	ng/ml#	14
54) 2,4-Dinitrotoluene	9.799	165	71	34.31	ng/ml#	47
55) Dibenzofuran	9.815	168	7493	44.03	ng/ml	89
58) Diethyl phthalate	10.034	149	165	1.21	ng/ml	86
59) 2,3,5-Trimethylnaphtha...	10.024	170	4455	36.56	ng/ml	85
60) Fluorene	10.163	166	21599	147.26	ng/ml	98
62) 4-Nitroaniline	10.163	138	467	15.54	ng/ml#	40
65) N-Nitrosodiphenylamine	10.280	169	1453	12.59	ng/ml#	54
66) Azobenzene (1,2-DPH)	10.334	77	236	1.82	ng/ml#	1
71) Phenanthrene	11.141	178	112091	561.54	ng/ml	99
72) Anthracene	11.190	178	14402	72.16	ng/ml	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) Carbazole	11.350	167	4136	23.65	ng/ml	97
74) Di-n-butyl phthalate	11.687	149	105	0.46	ng/ml	78
75) Fluoranthene	12.398	202	37066	158.91	ng/ml	93
77) Pyrene	12.682	202	45469	191.55	ng/ml	96
81) Bis(2-ethylhexyl) adipate	13.837	129	7468	74.41	ng/ml	99
83) Benz(a)anthracene	14.827	228	9096	41.13	ng/ml	88
84) Chrysene	14.901	228	10396	50.96	ng/ml	98
85) Bis(2-ethylhexyl) phth...	14.982	149	773	5.76	ng/ml	94
87) Di-n-octyl phthalate	16.592	149	257	58.04	ng/ml	73
88) Benzo(b)fluoranthene	17.394	252	6928	35.74	ng/ml	94
89) Benzo(k)fluoranthene	17.453	252	2900m	17.73	ng/ml	
90) Benzo(b+k)fluoranthene	17.394	252	9828	52.56	ng/ml	93
91) Benzo(e)pyrene	18.036	252	5344	25.58	ng/ml	97
92) Benzo(a)pyrene	18.164	252	7429	42.77	ng/ml	99
93) Perylene	18.367	252	2091	11.82	ng/ml	88
95) Indeno(1,2,3-cd)pyrene	20.683	276	4658	25.53	ng/ml	90
96) Dibenz(a,h)anthracene	20.748	278	945	5.87	ng/ml	86
97) Benzo(g,h,i)perylene	21.218	276	5557	31.15	ng/ml	86

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
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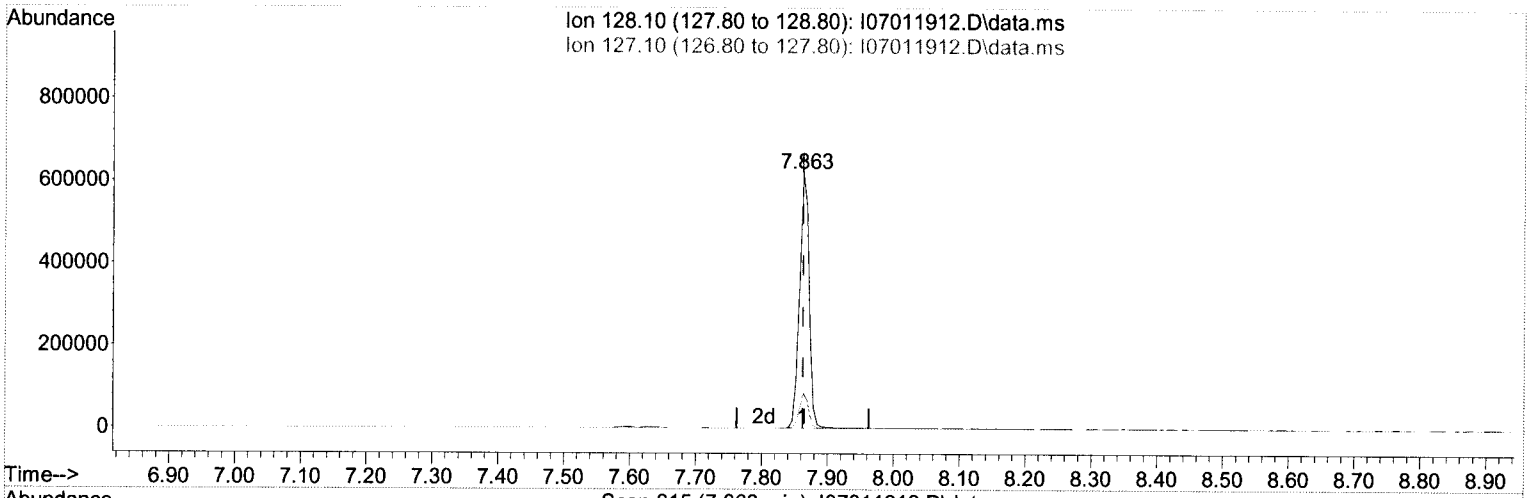
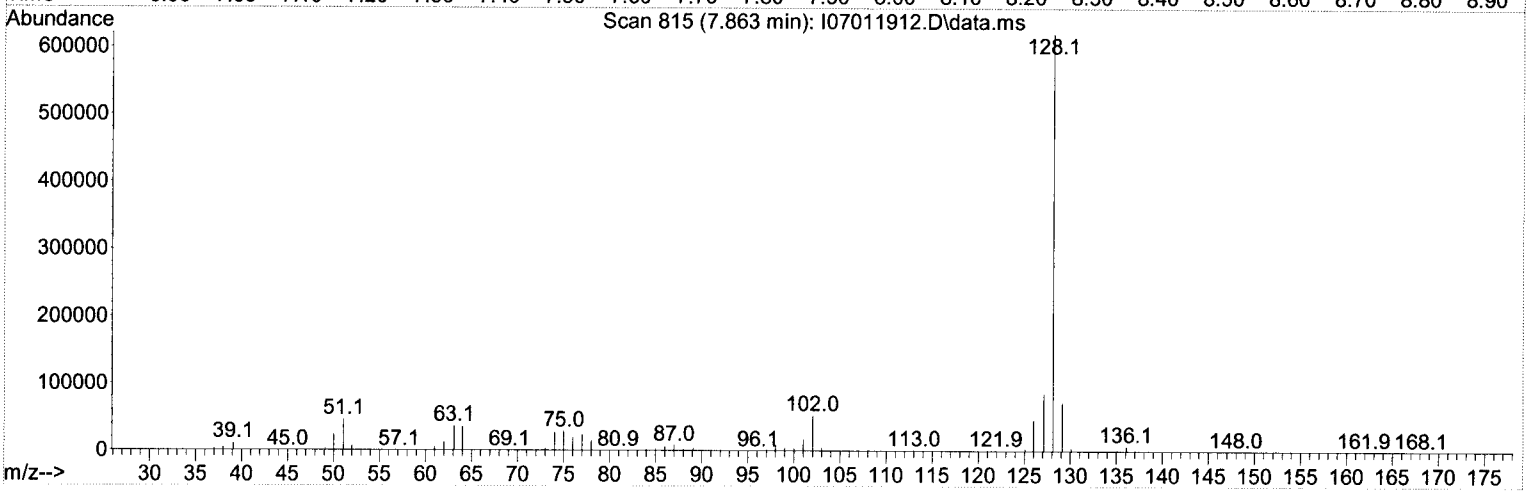
Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(29) Naphthalene (T)

7.863min (-0.000) 2889.58 ng/ml

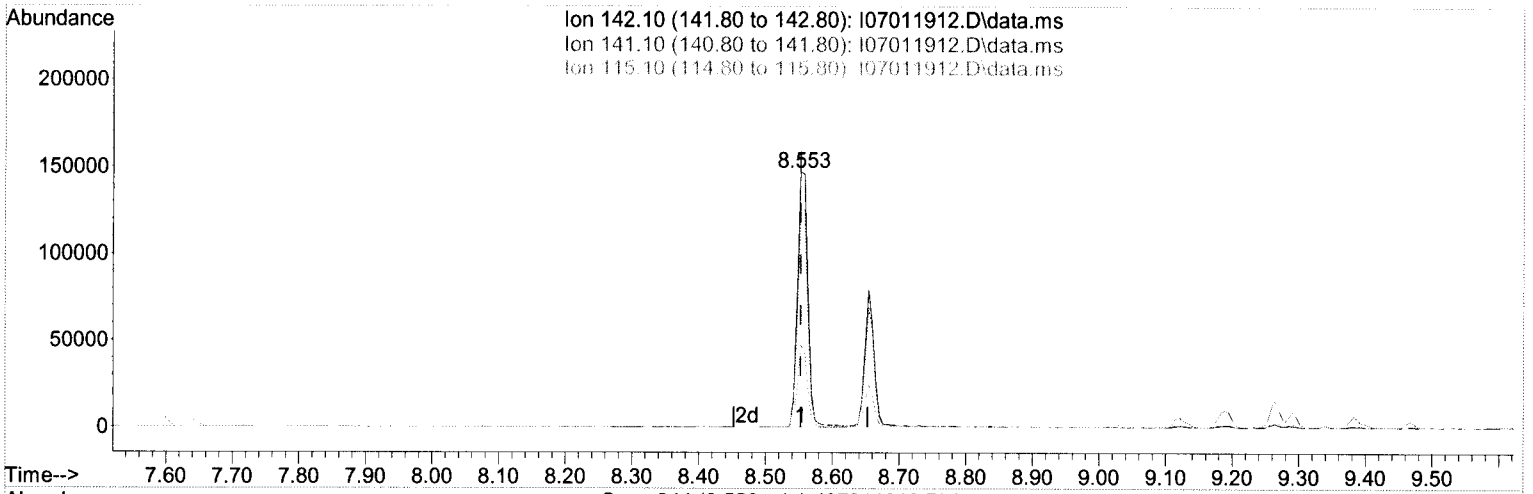
response 635208

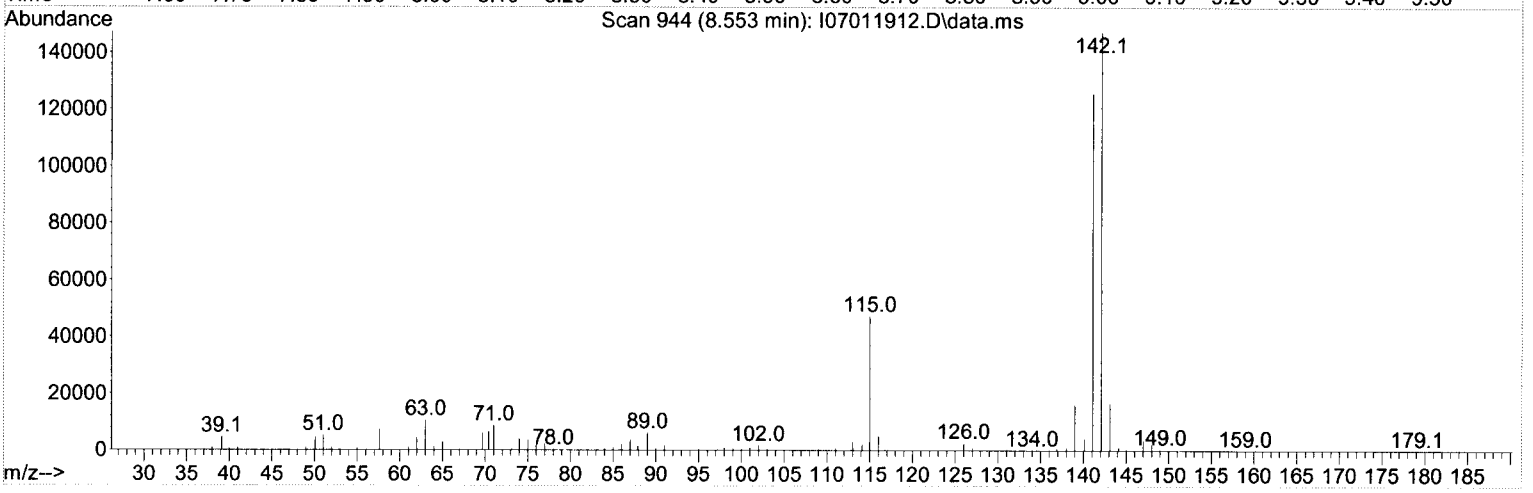
Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	13.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(33) 2-Methylnaphthalene (T)

8.553min (-0.000) 965.30 ng/ml

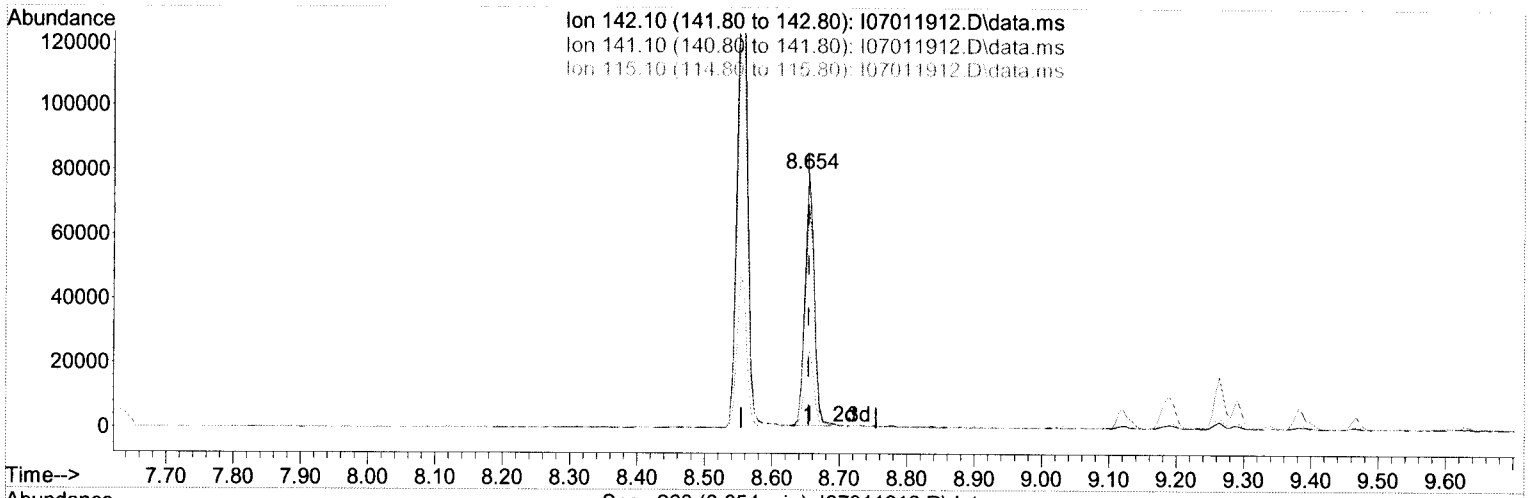
response 160089

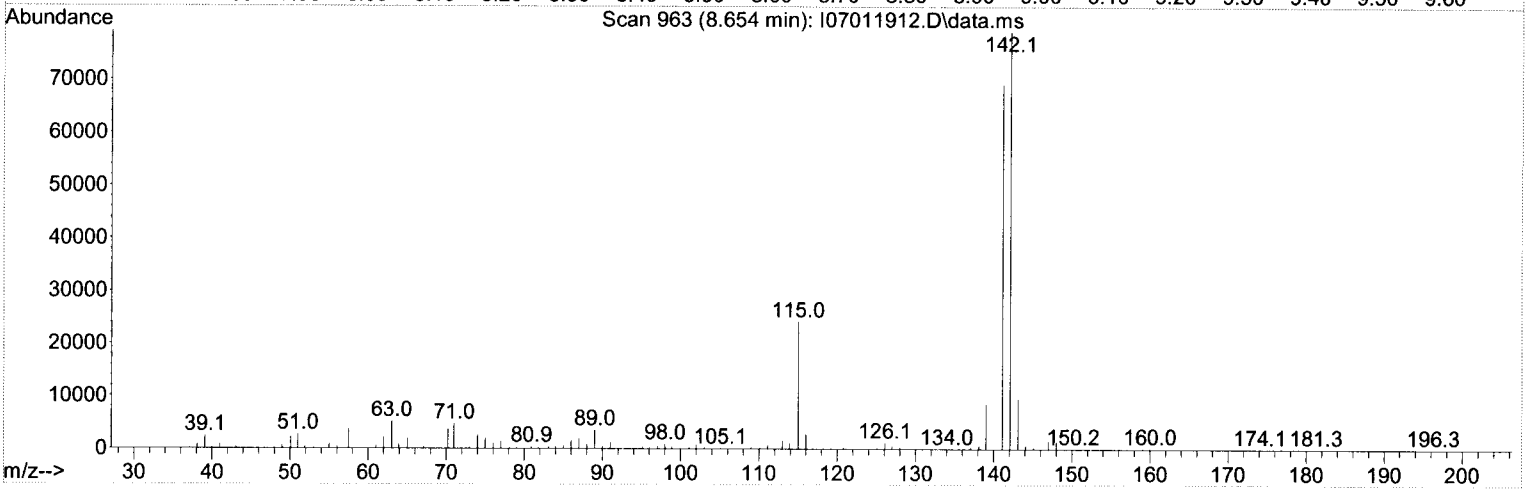
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	85.42
115.10	33.70	32.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(34) 1-Methylnaphthalene (T)

8.654min (-0.000) 478.97 ng/ml

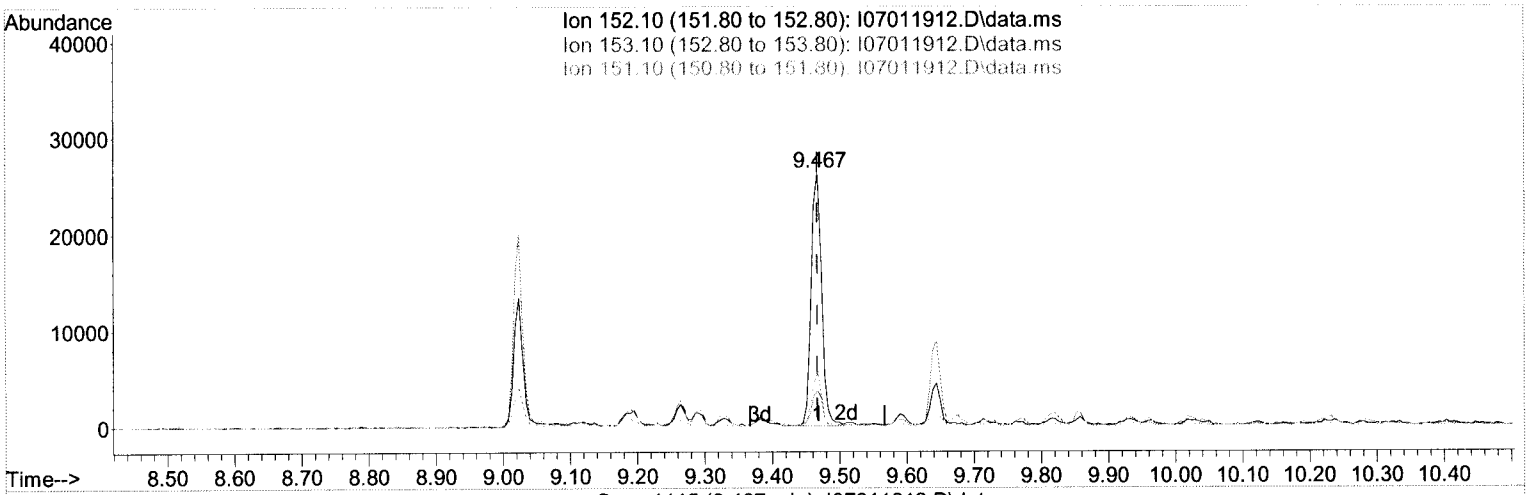
response 74815

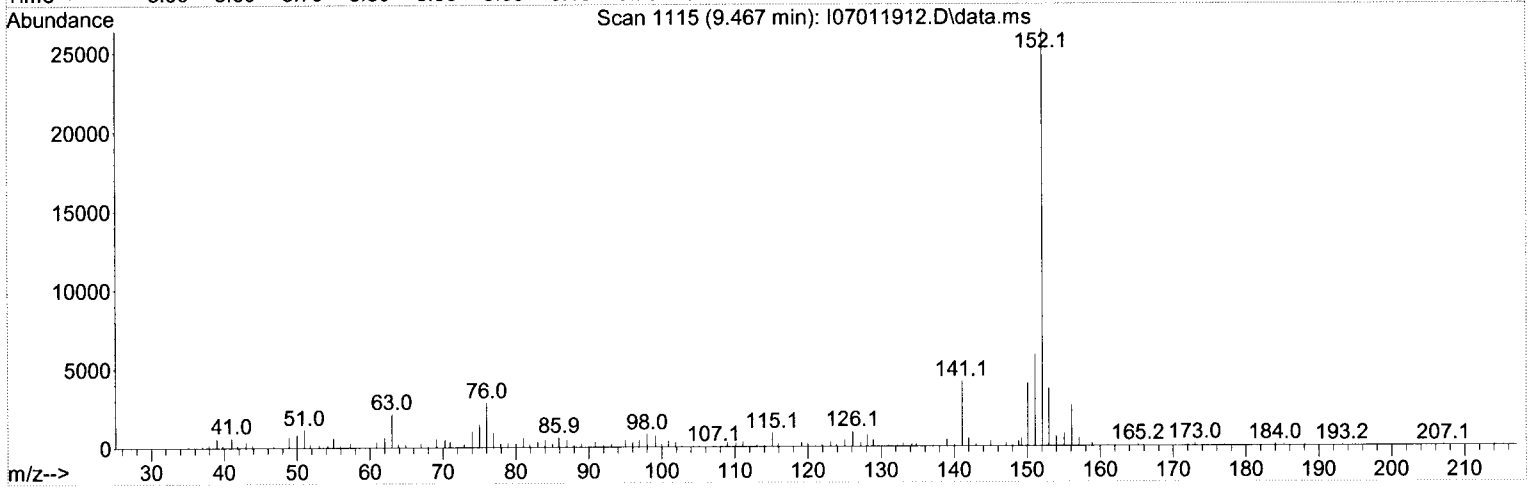
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	89.20	87.33
115.10	34.90	30.60
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(49) Acenaphthylene (T)

9.467min (-0.000) 143.38 ng/ml

response 28464

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	14.03
151.10	20.00	22.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
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Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
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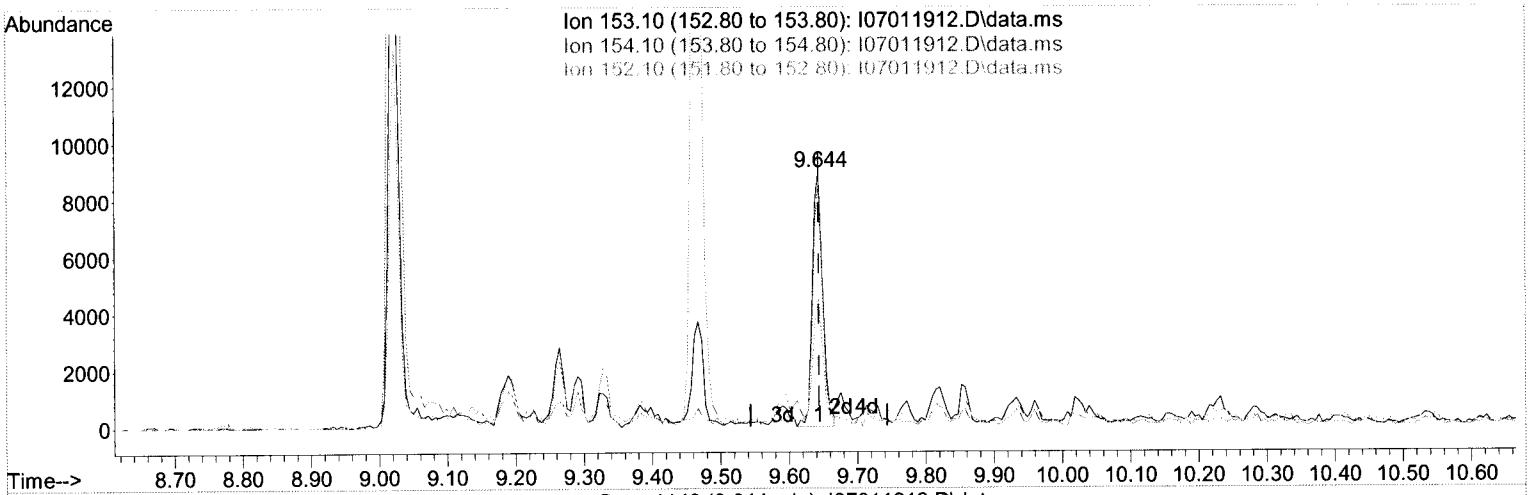
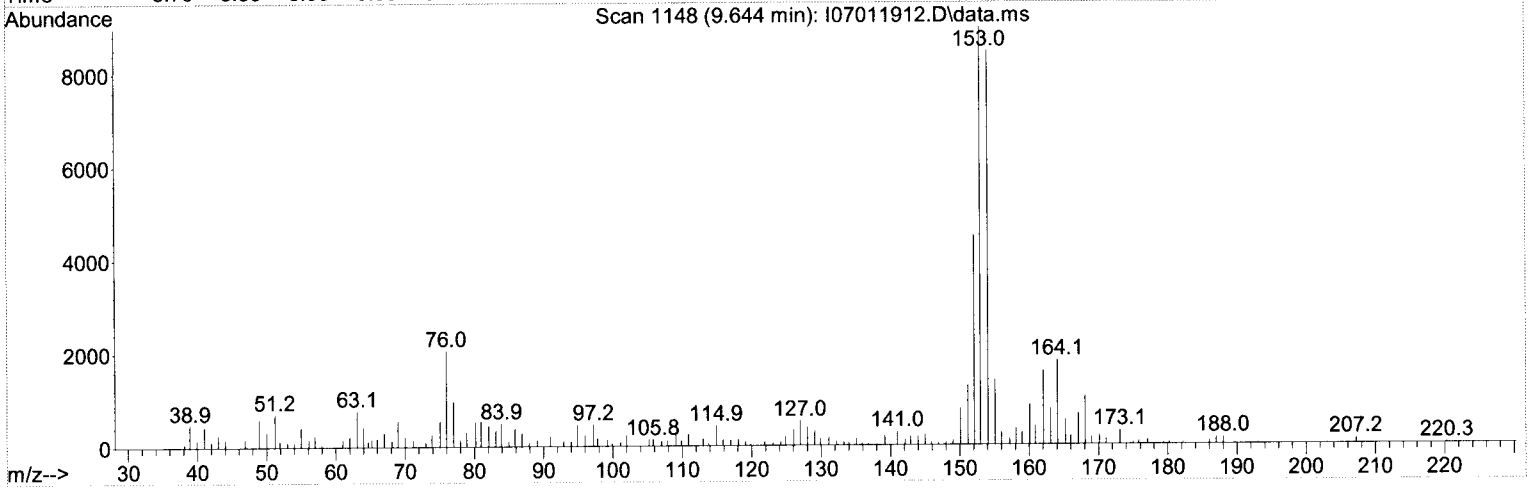




TIC: I07011912.D\data.ms

(51) Acenaphthene (T)

9.644min (-0.000) 76.42 ng/ml

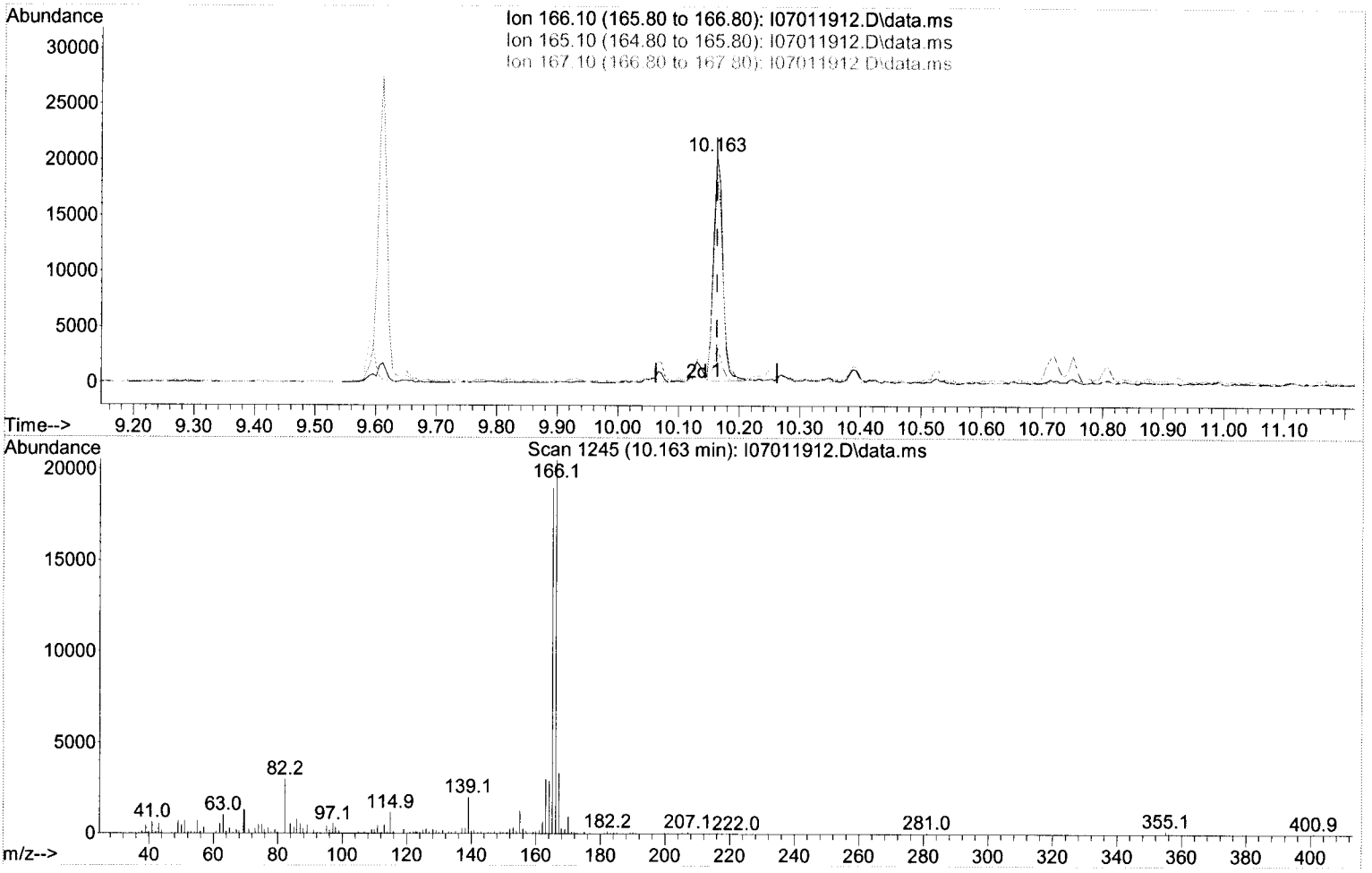
response 9557

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	94.41
152.10	47.70	50.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011912.D\data.ms

(60) Fluorene (T)

10.163min (-0.000) 147.26 ng/ml

response 21599

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	92.47
167.10	13.50	16.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
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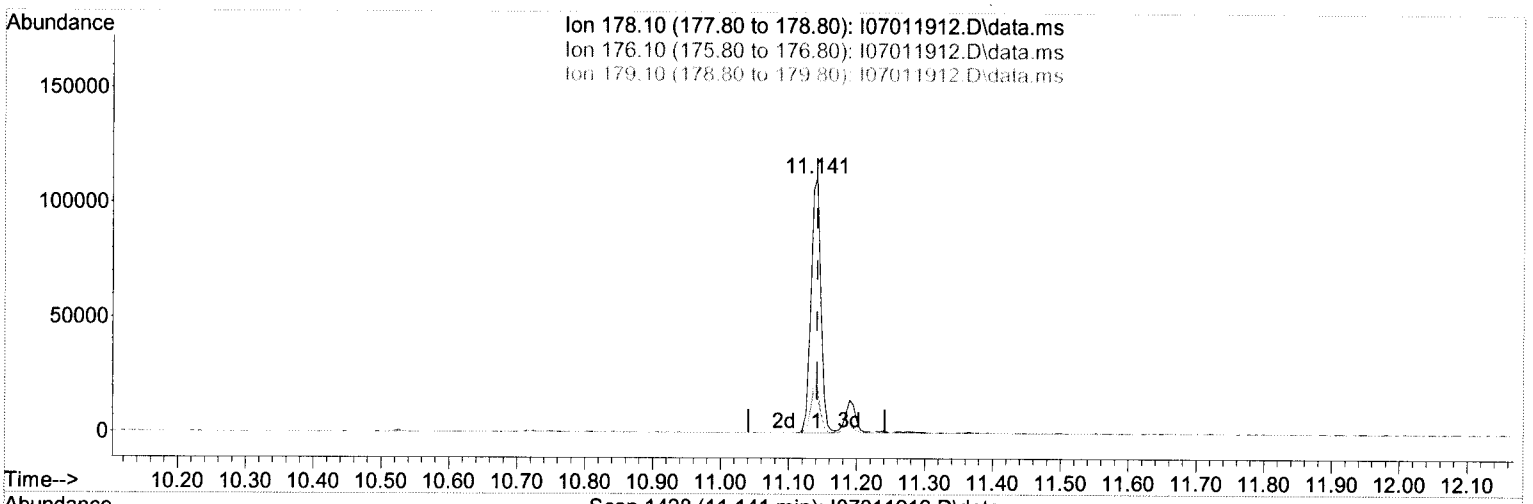
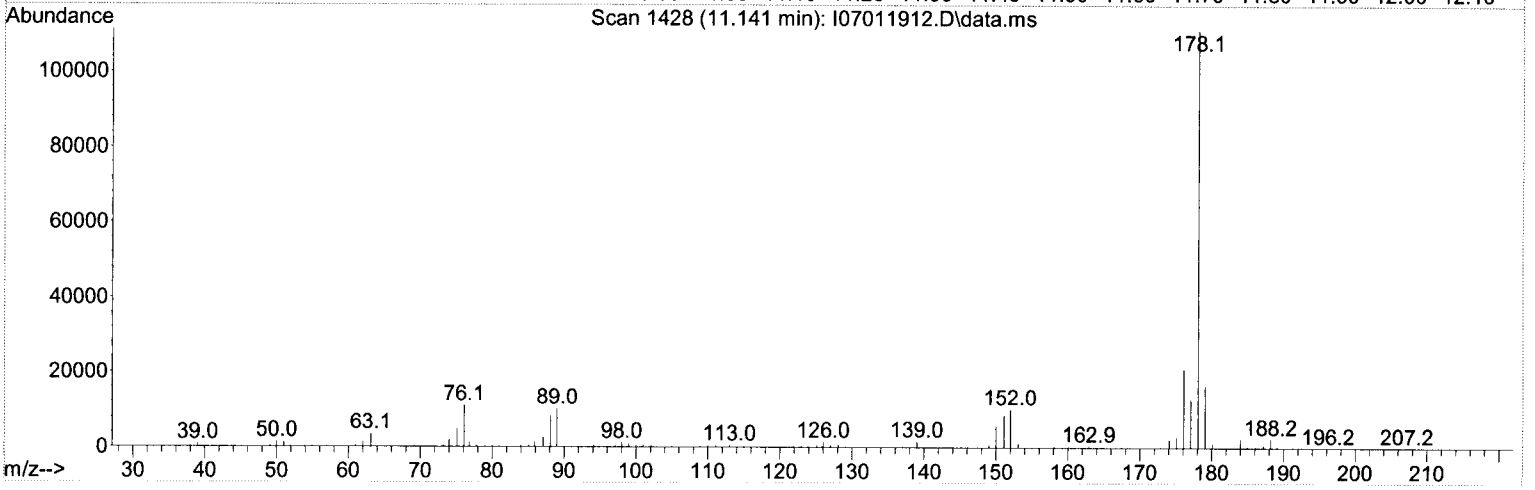




TIC: I07011912.D\data.ms

(71) Phenanthrene (T)

11.141min (-0.000) 561.54 ng/ml

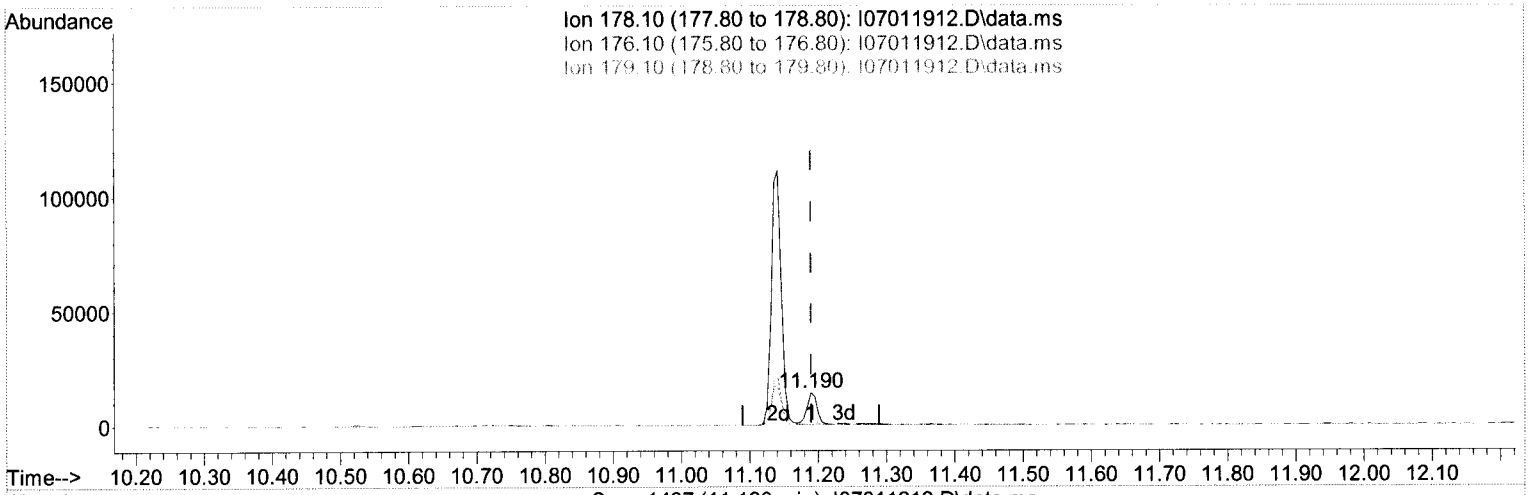
response 112091

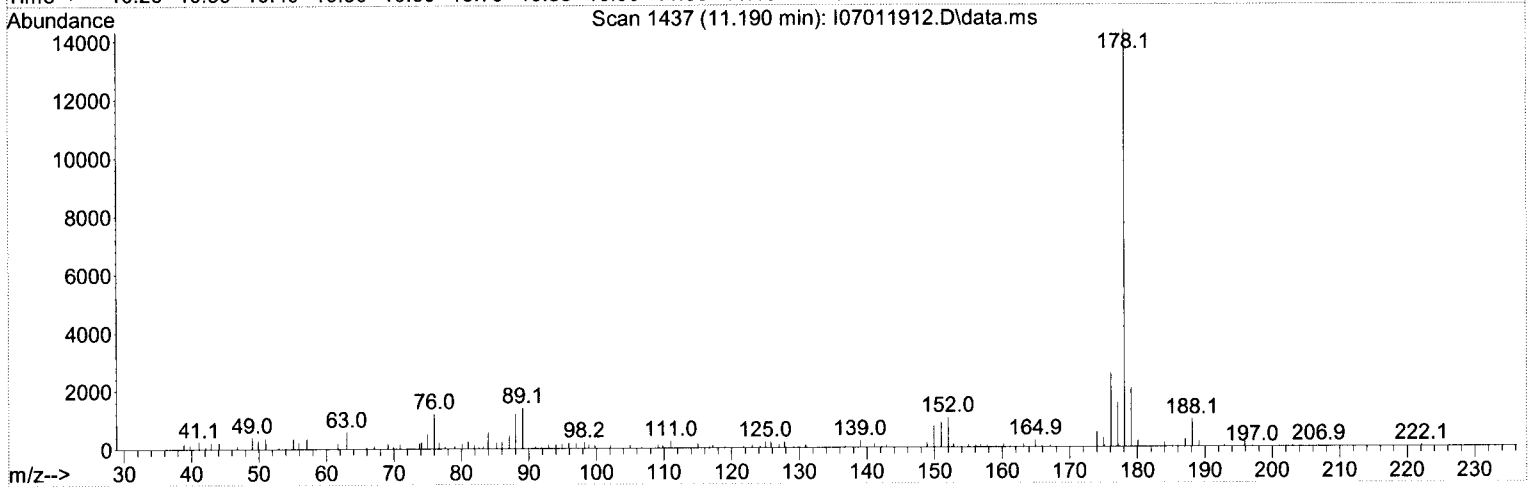
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	18.87
179.10	15.20	14.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(72) Anthracene (T)

11.190min (-0.000) 72.16 ng/ml

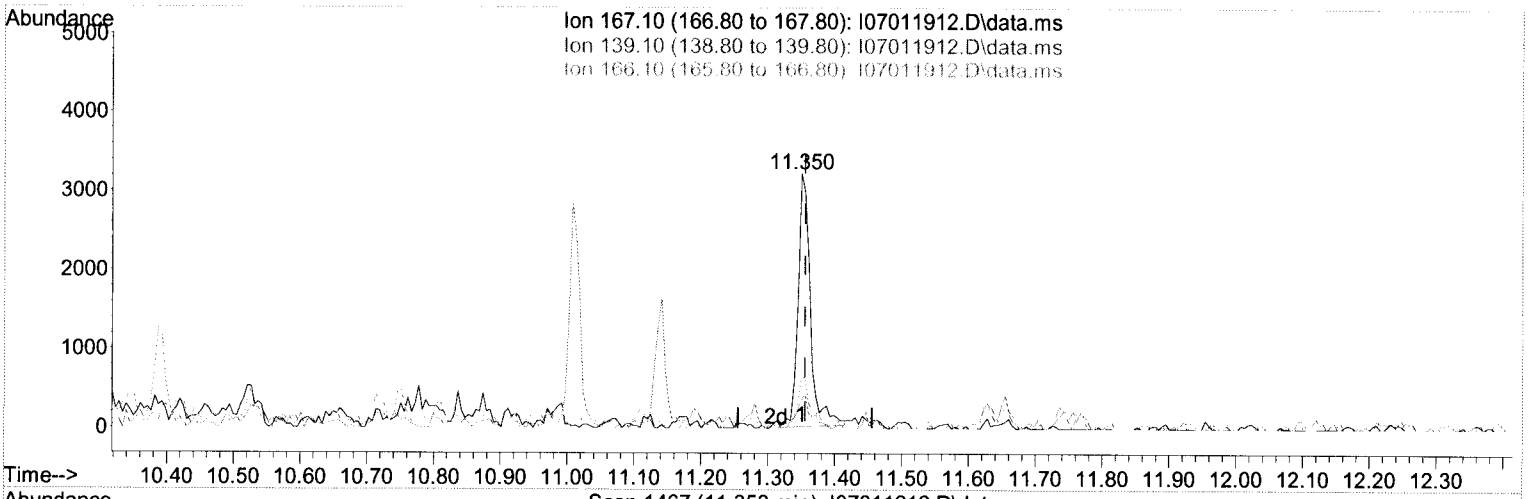
response 14402

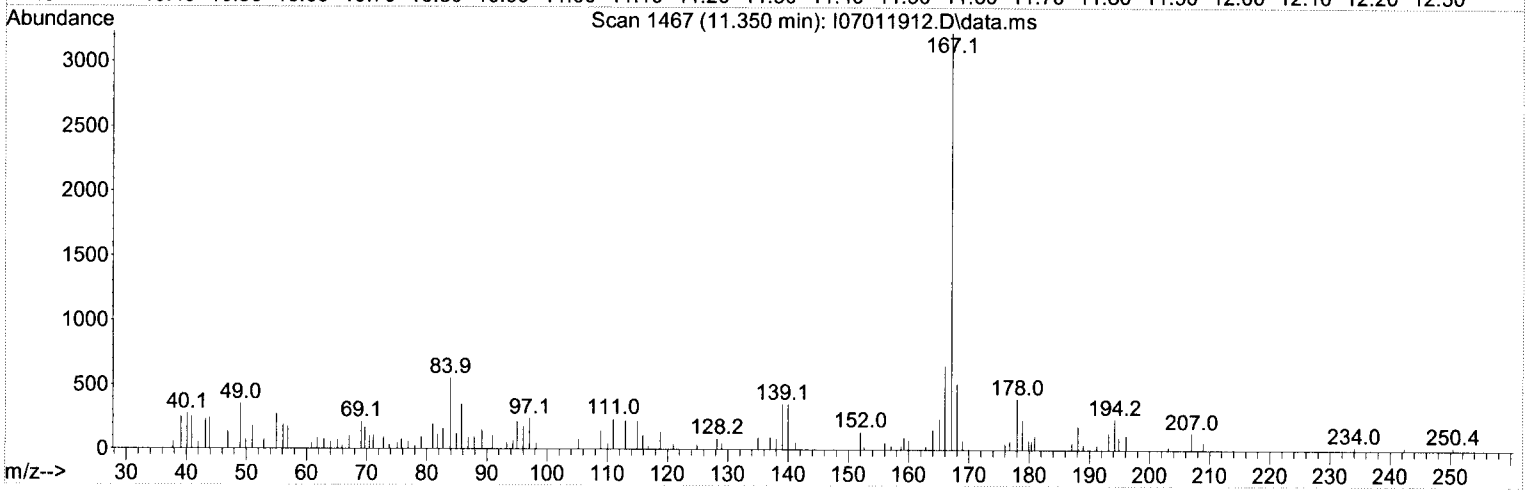
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	17.63
179.10	15.90	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(73) Carbazole (T)

11.350min (-0.005) 23.65 ng/ml

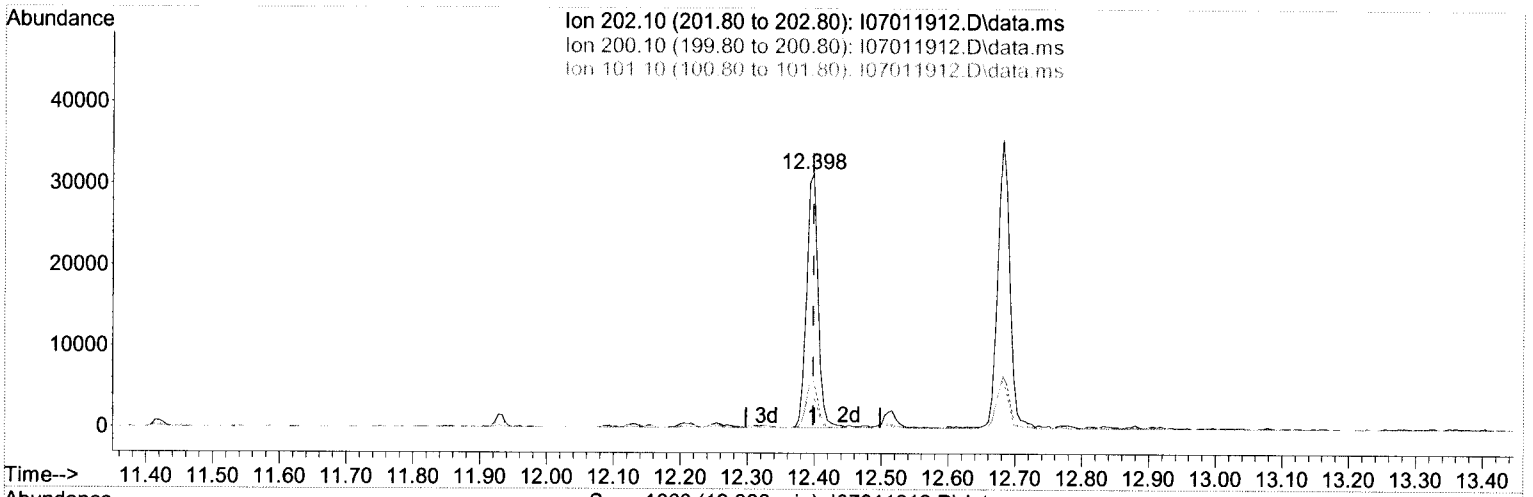
response 4136

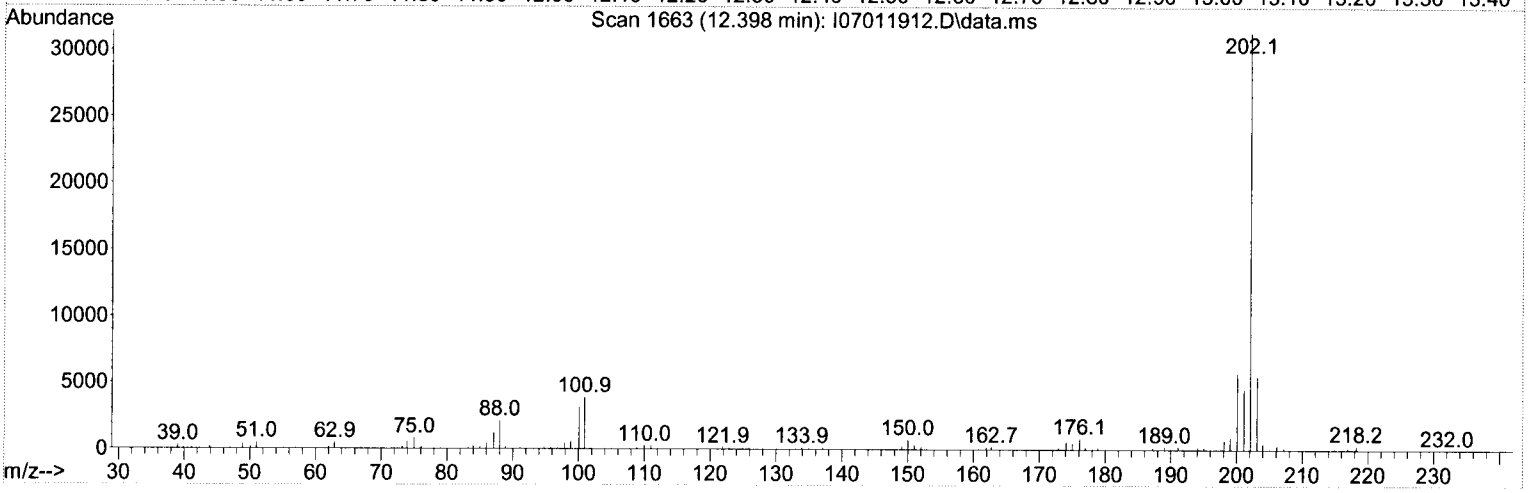
Ion	Exp%	Act%
167.10	100.00	100.00
139.10	13.50	11.07
166.10	21.10	20.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(75) Fluoranthene (T)

12.398min (-0.000) 158.91 ng/ml

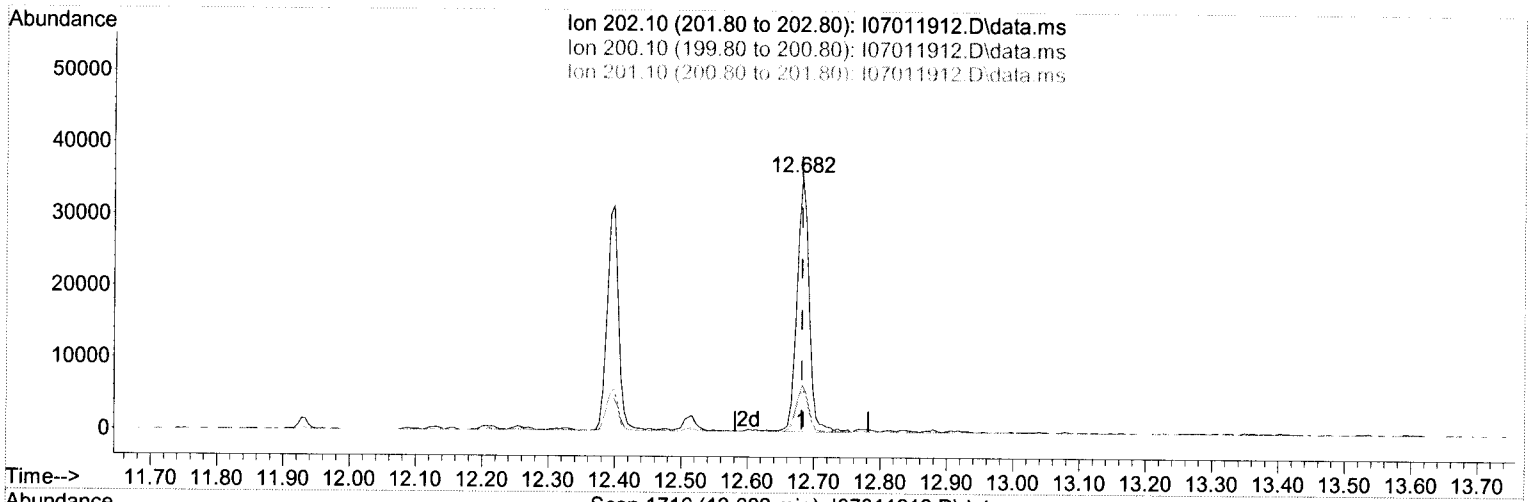
response 37066

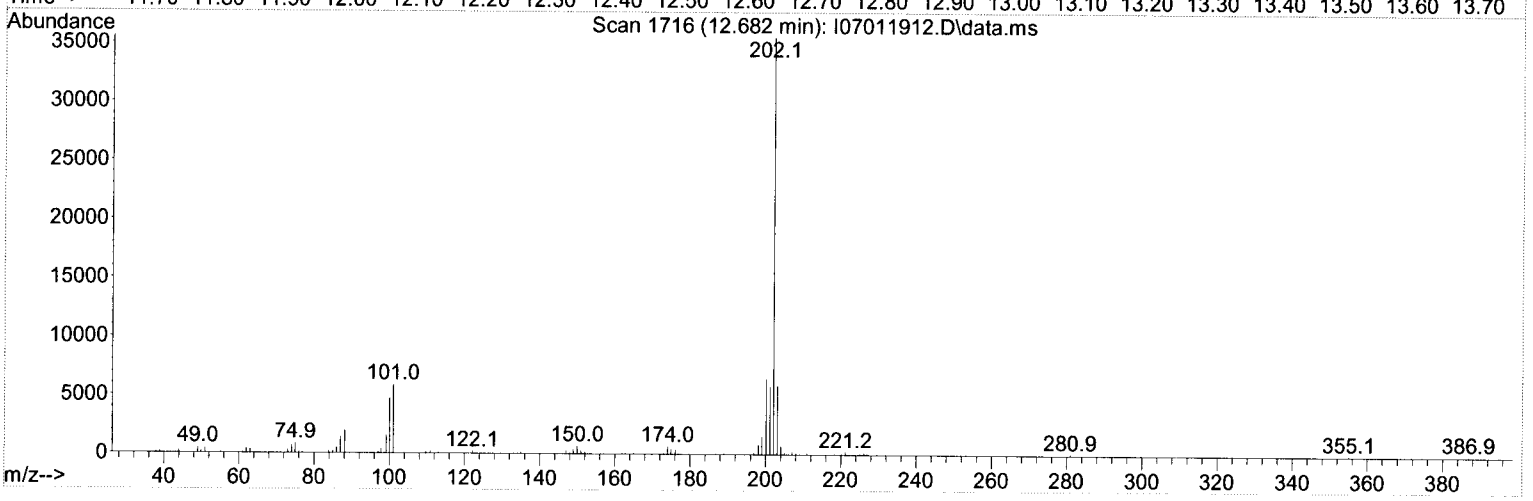
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	18.30
101.10	17.00	12.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(77) Pyrene (T)

12.682min (-0.000) 191.55 ng/ml

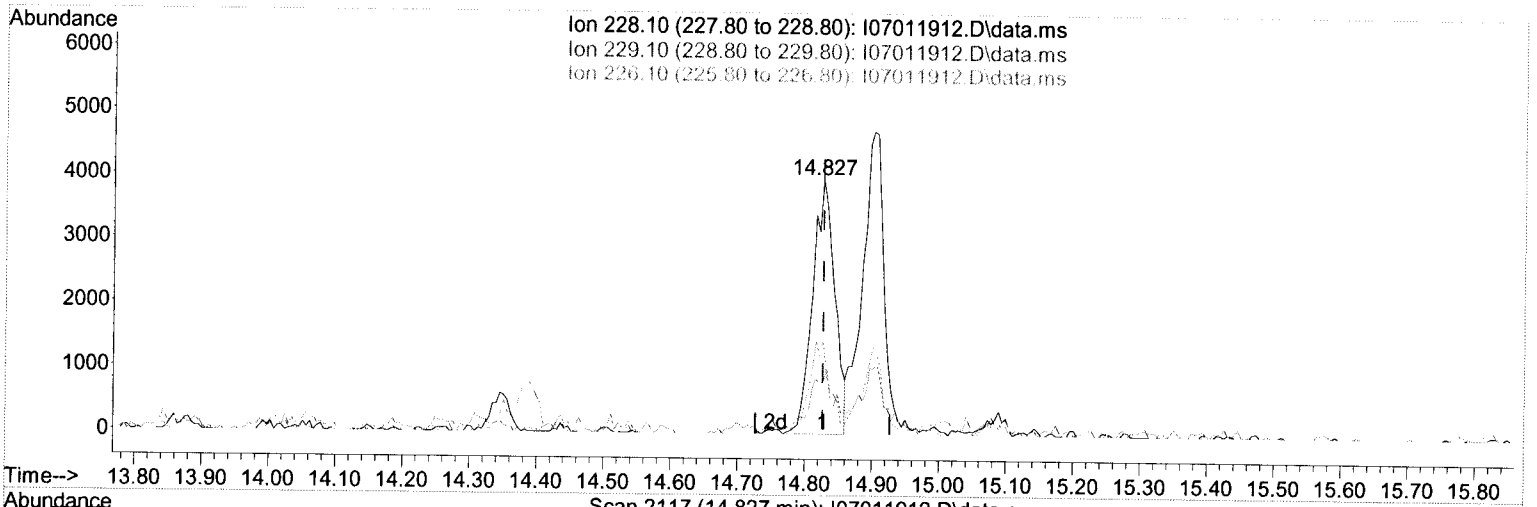
response 45469

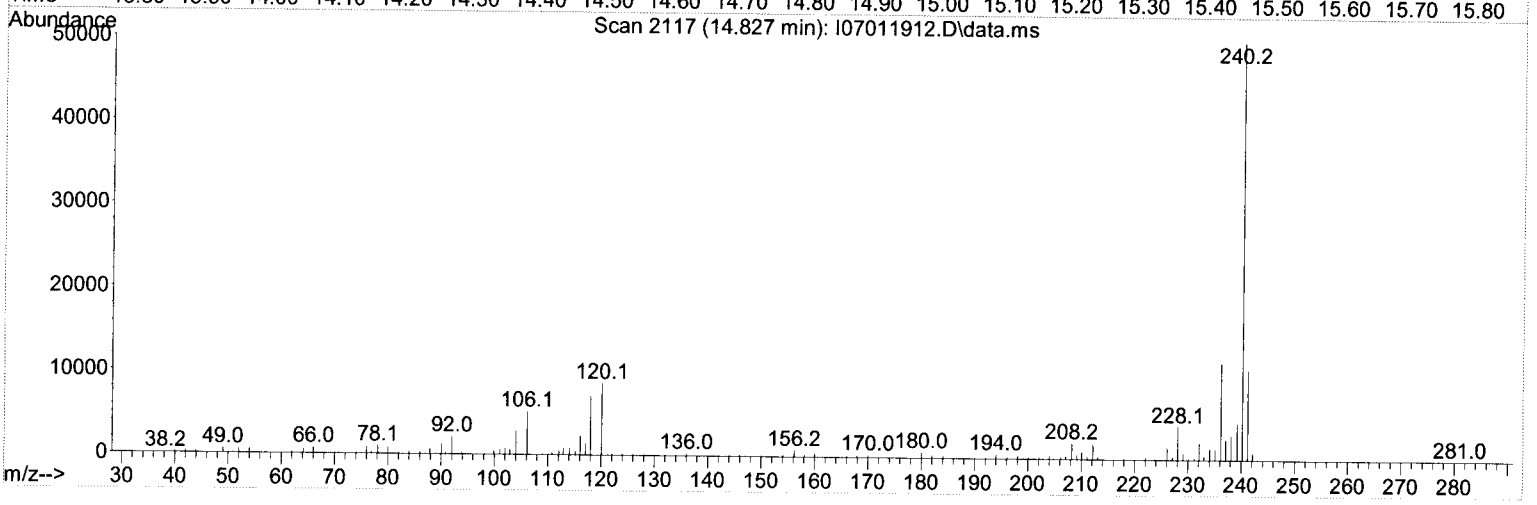
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	18.13
201.10	17.30	16.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(83) Benz(a)anthracene (T)

14.827min (-0.000) 41.13 ng/ml

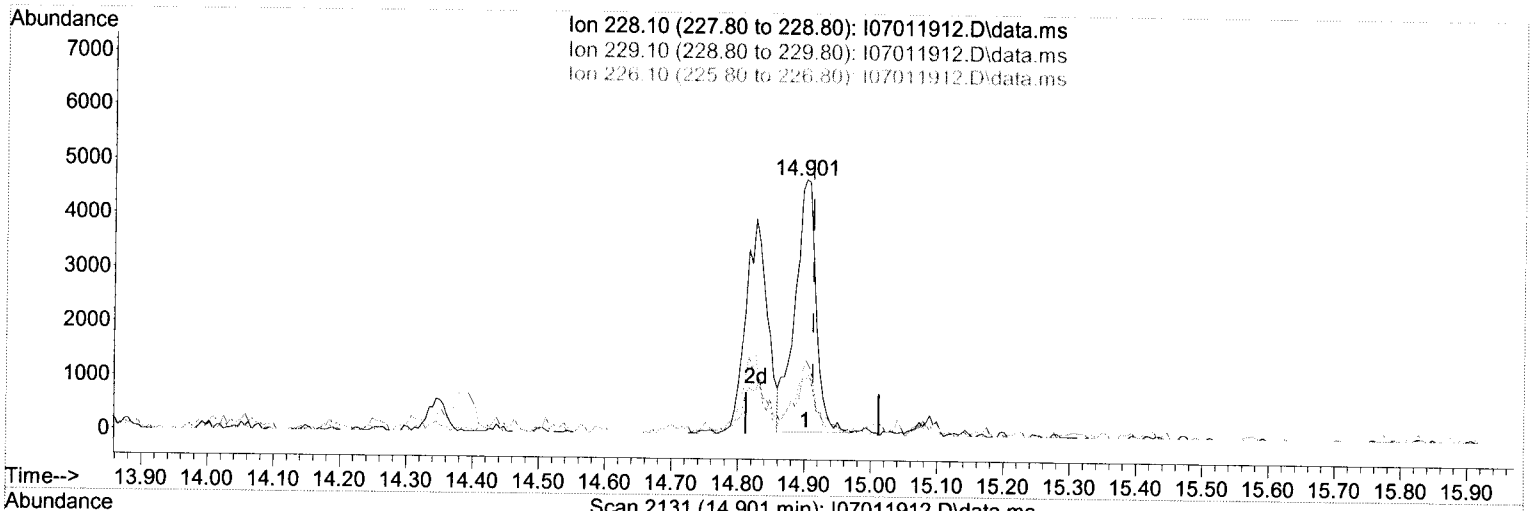
response 9096

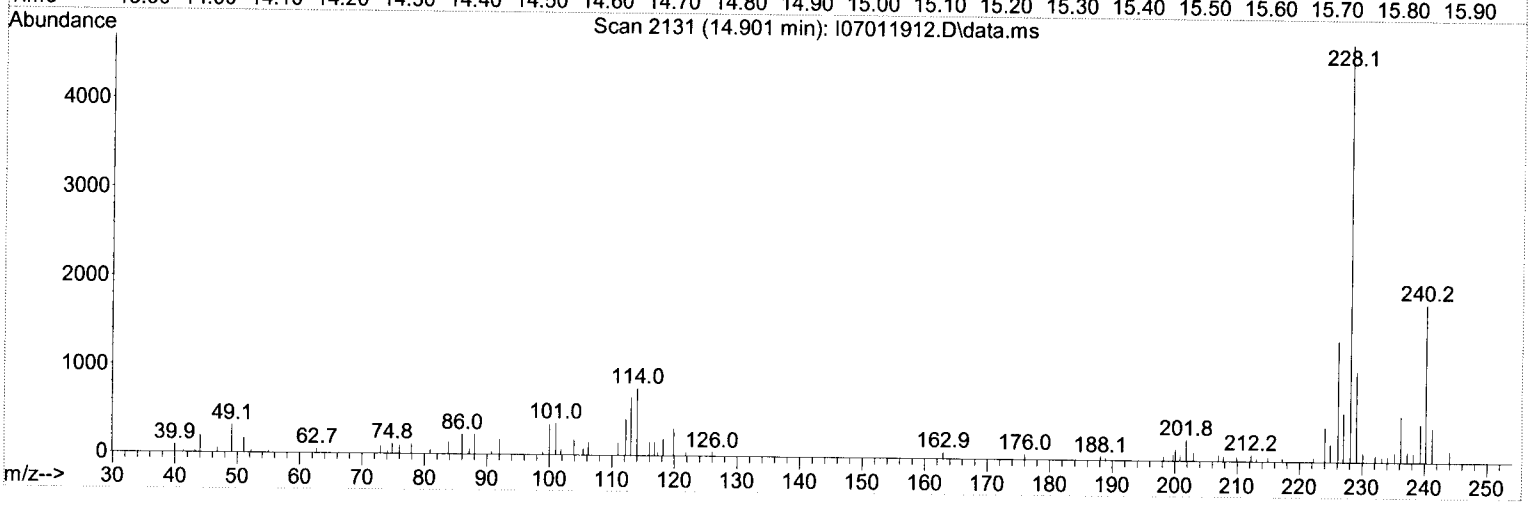
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	20.17
226.10	26.50	36.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(84) Chrysene (T)

14.901min (-0.011) 50.96 ng/ml

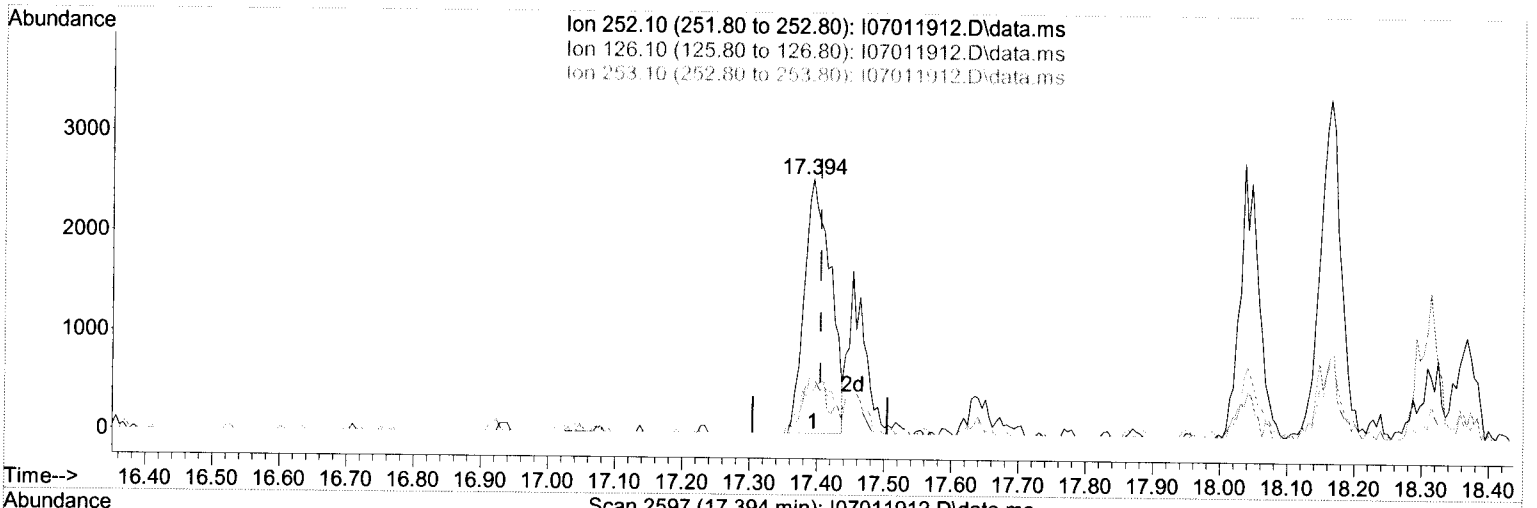
response 10396

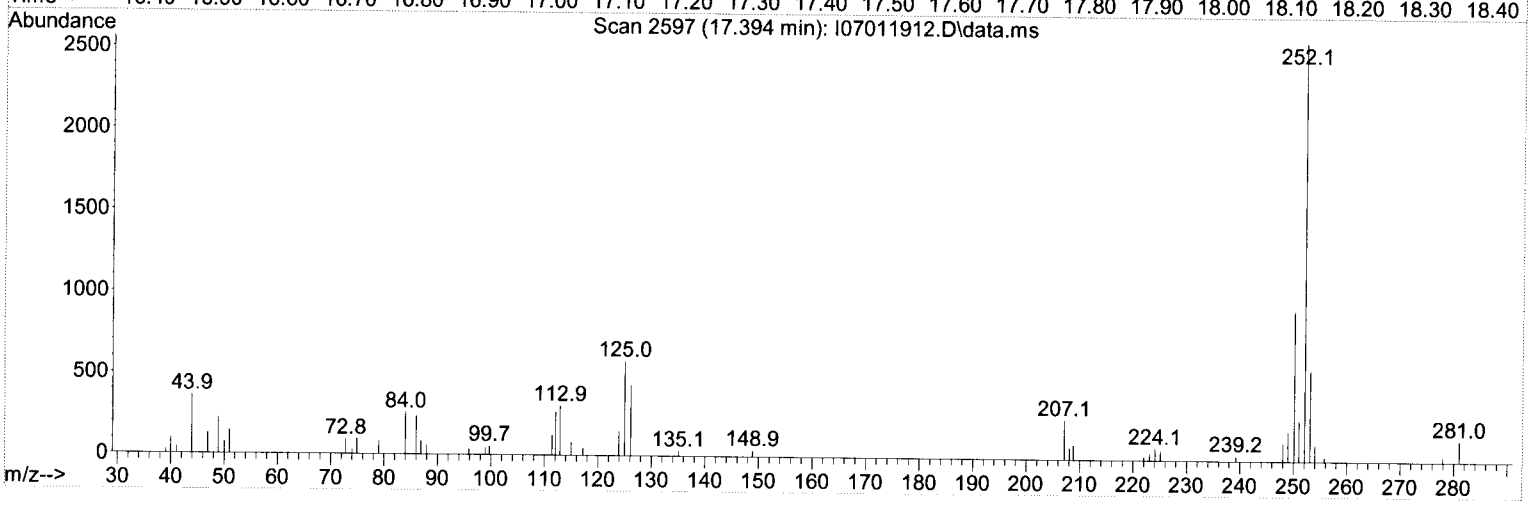
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	21.71
226.10	29.30	29.07
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.394min (-0.011) 35.74 ng/ml

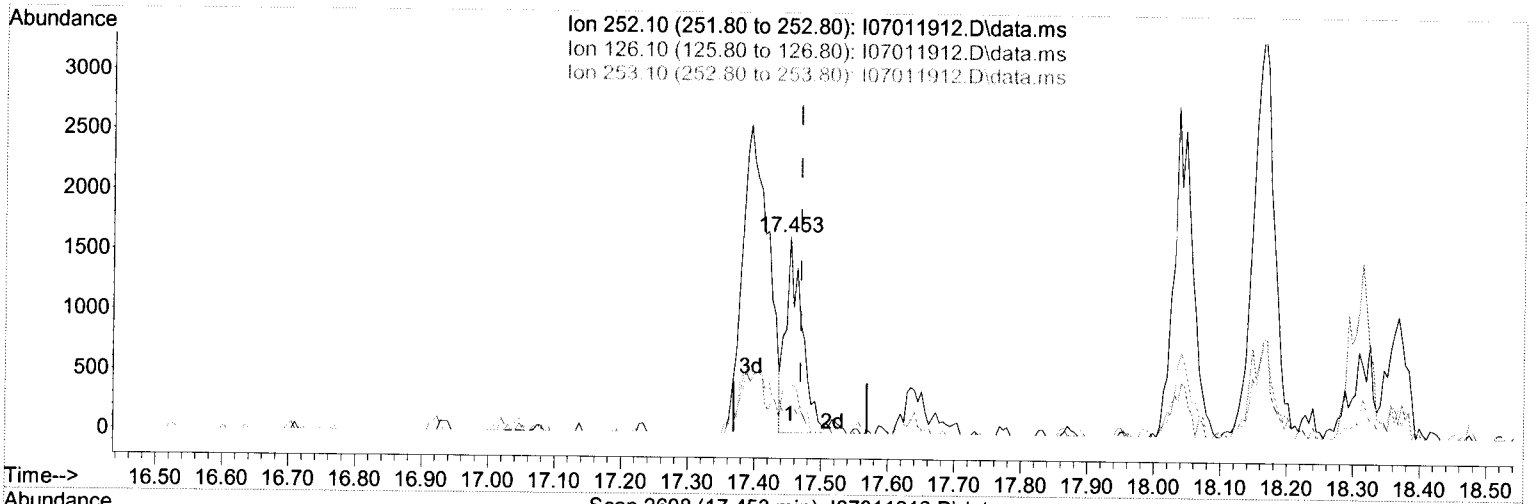
response 6928

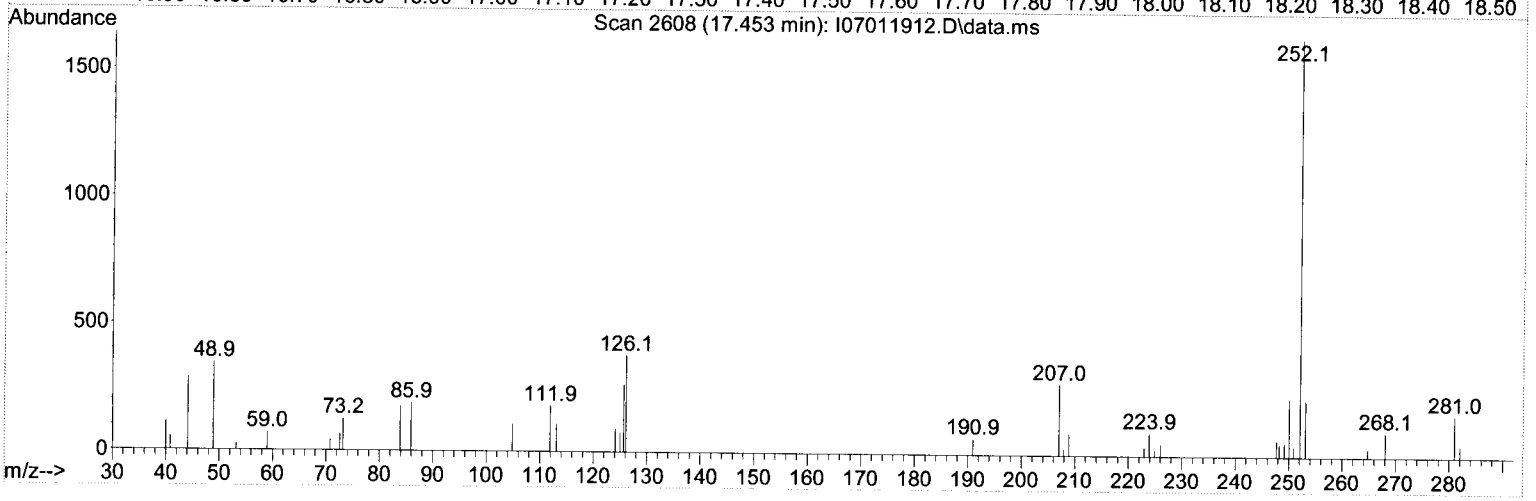
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	16.89
253.10	22.00	21.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.453min (-0.016) 17.73 ng/ml m

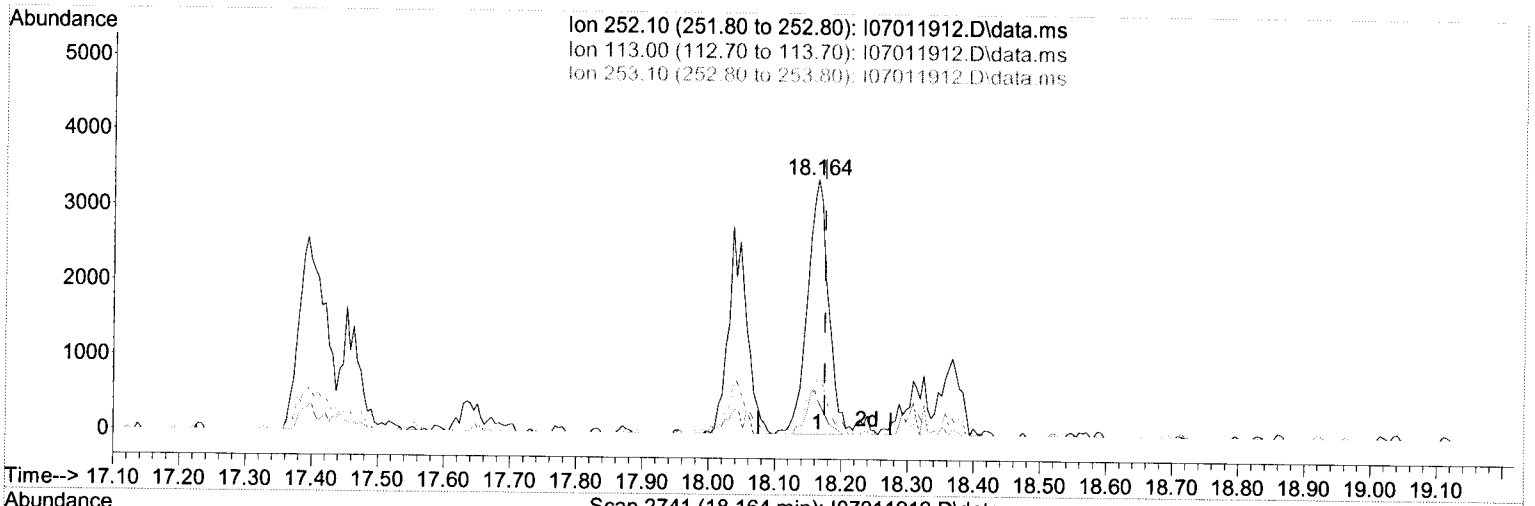
response 2900

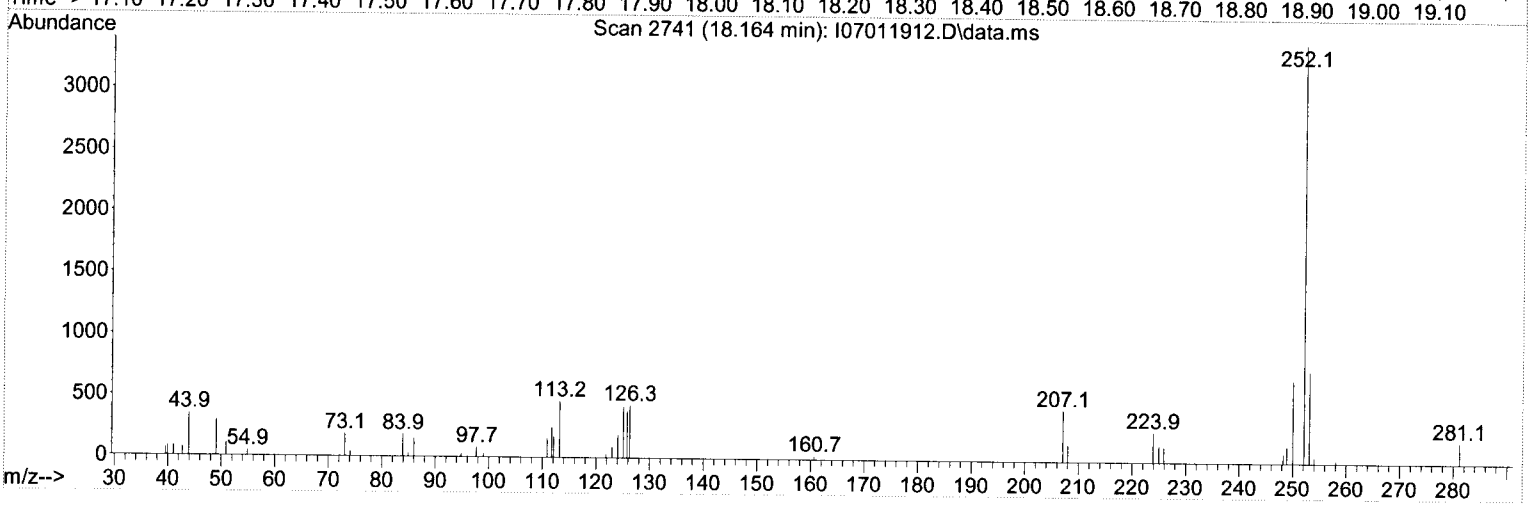
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	23.26
253.10	21.70	13.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(92) Benzo(a)pyrene (T)

18.164min (-0.011) 42.77 ng/ml

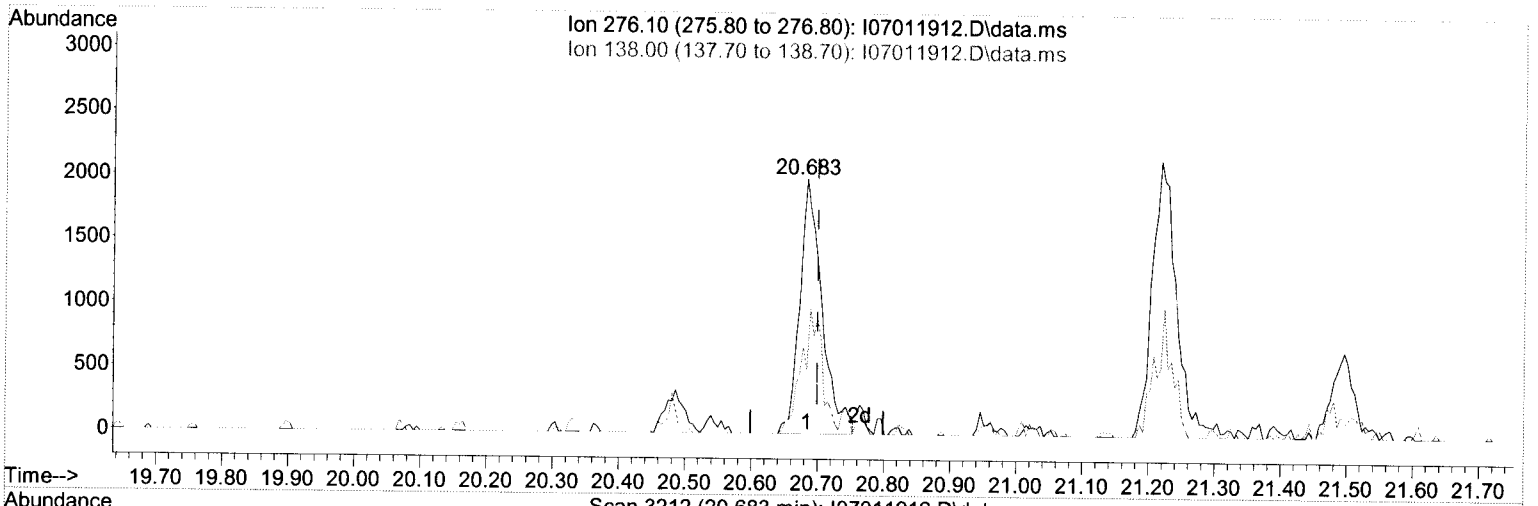
response 7429

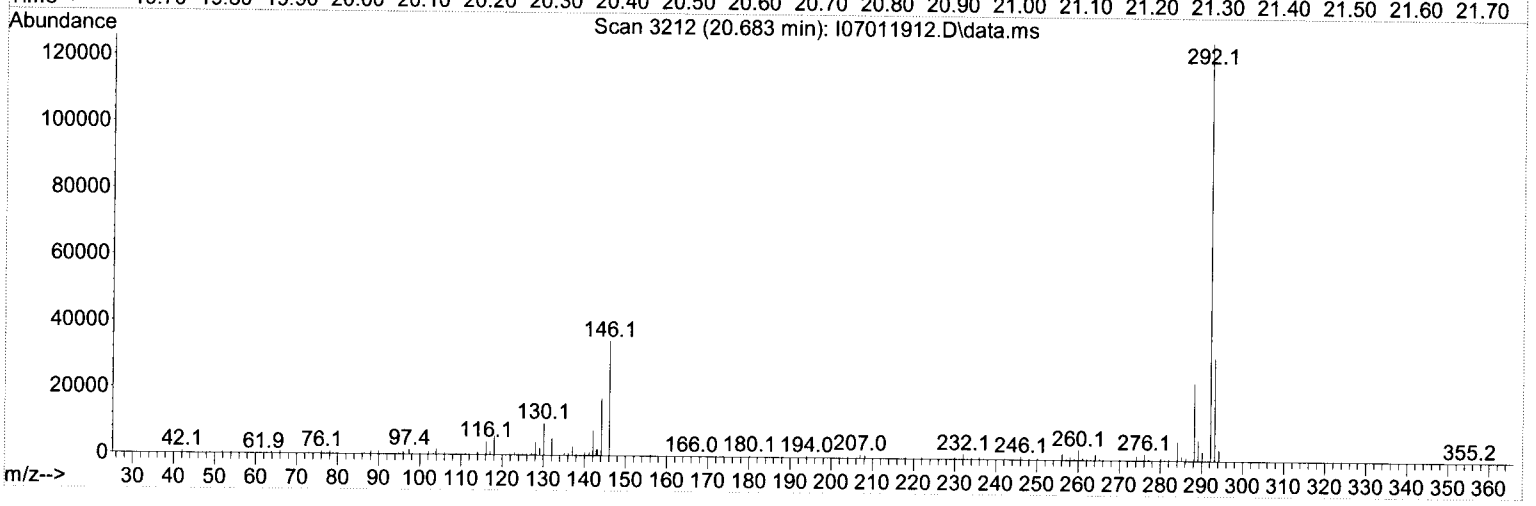
Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	13.55
253.10	21.60	21.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

20.683min (-0.016) 25.53 ng/ml

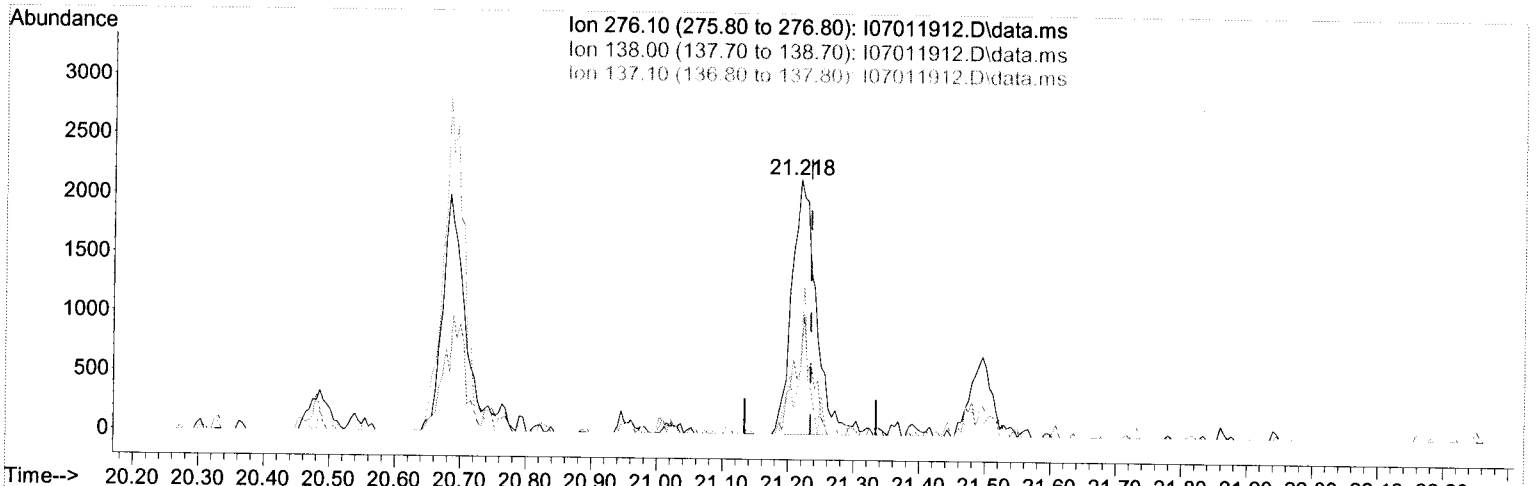
response 4658

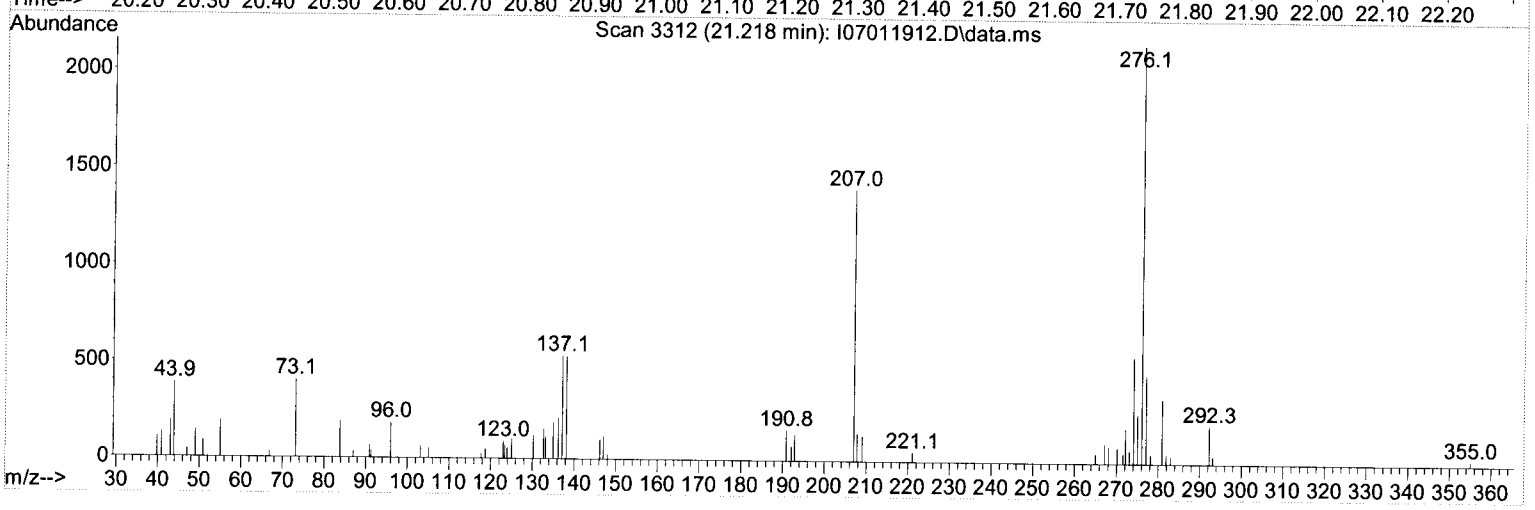
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	25.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.218min (-0.016) 31.15 ng/ml

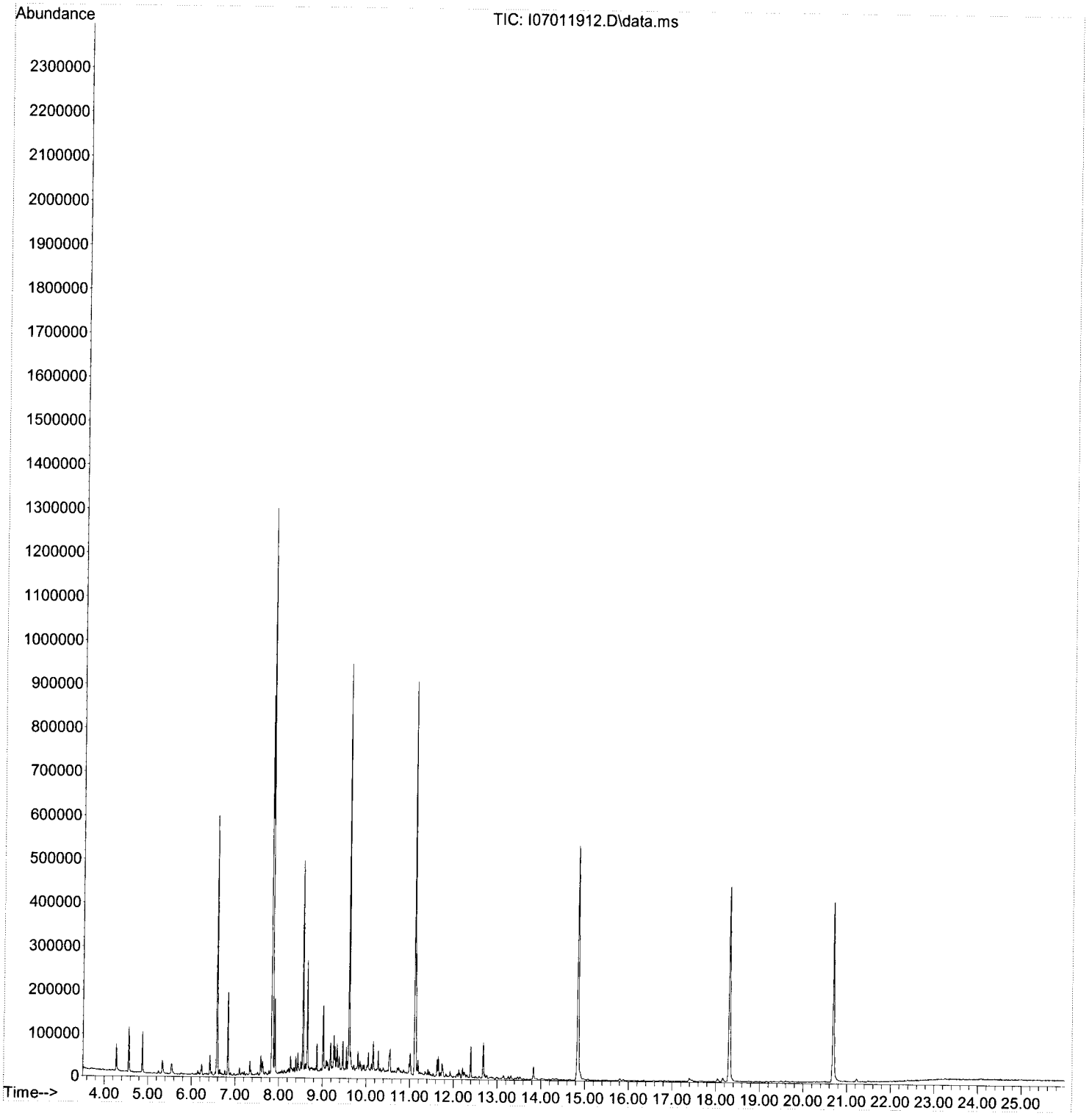
response 5557

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	36.60	24.69
137.10	27.90	24.78
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.584	152	118737	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.836	136	460025	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.606	162	208384	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	399790	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.843	240	420103	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.309	264	391111	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	20.689	292	366244	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.354	112	50	0.64 ng/ml	-0.01
5) Phenol-d6 (Surr)	0.000	99	0	0.00 ng/ml	
19) Nitrobenzene-d5 (Surr)	7.135	82	72	0.86 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.916	172	213	1.36 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00 ng/ml	
79) Terphenyl-d14 (Surr)	12.885	244	277	1.35 ng/ml	0.00
Target Compounds					Qvalue
16) N-Nitrosodi-n-propylamine	6.975	70	52	0.84 ng/ml	59
20) Nitrobenzene	7.141	77	122	1.48 ng/ml#	5
22) Isophorone	7.387	82	119	0.70 ng/ml#	41
23) 2-Nitrophenol	7.392	139	56	1.29 ng/ml#	12
25) Bis(2-chloroethoxy) me...	7.585	93	105	1.05 ng/ml#	37
26) Benzoic acid	7.585	105	325	712.07 ng/ml#	1
27) 2,4-Dichlorophenol	7.691	162	273	28.40 ng/ml#	26
29) Naphthalene	7.863	128	592329	2581.54 ng/ml	98
30) 4-Chloroaniline	7.932	127	72	1.22 ng/ml#	1
32) 4-Chloro-3-methylphenol	8.403	107	134	66.54 ng/ml#	1
33) 2-Methylnaphthalene	8.553	142	150974	872.17 ng/ml	95
34) 1-Methylnaphthalene	8.649	142	72546	444.97 ng/ml	98
39) 1,1'-Biphenyl	9.018	154	46458	266.80 ng/ml	99
41) 2-Chloronaphthalene	9.093	162	1426	11.37 ng/ml	59
42) 2-Nitroaniline	9.136	138	123	2.92 ng/ml#	67
43) 2,6-Dimethylnaphthalene	9.189	156	19415	151.32 ng/ml	89
44) 1,4-Dinitrobenzene	9.296	168	439	85.60 ng/ml#	20
45) Dimethyl phthalate	9.291	163	370	2.54 ng/ml#	1
46) 1,3-Dinitrobenzene	9.323	168	69	2.95 ng/ml#	1
47) 2,6-Dinitrotoluene	9.360	165	134	4.11 ng/ml	91
49) Acenaphthylene	9.462	152	26620	129.14 ng/ml	98
50) 3-Nitroaniline	9.606	138	108	Below Cal #	1
51) Acenaphthene	9.638	153	8787	67.66 ng/ml	98
53) 4-Nitrophenol	9.740	139	82	61.32 ng/ml#	1
54) 2,4-Dinitrotoluene	9.777	165	136	35.62 ng/ml#	36
55) Dibenzofuran	9.815	168	7089	40.11 ng/ml	79
58) Diethyl phthalate	10.034	149	84	0.59 ng/ml#	1
59) 2,3,5-Trimethylnaphtha...	10.018	170	4446	35.14 ng/ml	84
60) Fluorene	10.157	166	20321	133.43 ng/ml	96
62) 4-Nitroaniline	10.157	138	418	13.39 ng/ml#	41
65) N-Nitrosodiphenylamine	10.275	169	1734	14.04 ng/ml	82
66) Azobenzene (1,2-DPH)	10.328	77	345	2.49 ng/ml#	1
71) Phenanthrene	11.136	178	108773	509.33 ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) Anthracene	11.189	178	14141	66.22	ng/ml	98
73) Carbazole	11.350	167	4263	22.78	ng/ml	92
74) Di-n-butyl phthalate	11.682	149	113	0.47	ng/ml	78
75) Fluoranthene	12.393	202	36974	148.16	ng/ml	97
77) Pyrene	12.676	202	43417	170.96	ng/ml	99
81) Bis(2-ethylhexyl) adipate	13.826	129	4742	42.82	ng/ml	91
83) Benz(a)anthracene	14.816	228	10136	41.54	ng/ml	96
84) Chrysene	14.896	228	9641	42.83	ng/ml	86
85) Bis(2-ethylhexyl) phth...	14.971	149	555	3.75	ng/ml	77
87) Di-n-octyl phthalate	16.624	149	128	57.48	ng/ml#	1
88) Benzo(b)fluoranthene	17.383	252	7250	33.70	ng/ml	87
89) Benzo(k)fluoranthene	17.458	252	2984m	16.71	ng/ml	
90) Benzo(b+k)fluoranthene	17.533	252	130	10.73	ng/ml	69
91) Benzo(e)pyrene	18.036	252	5240	22.41	ng/ml	92
92) Benzo(a)pyrene	18.153	252	6940	36.78	ng/ml	91
93) Perylene	18.362	252	2003	10.12	ng/ml	96
95) Indeno(1,2,3-cd)pyrene	20.678	276	4912	24.42	ng/ml	50
96) Dibenz(a,h)anthracene	20.731	278	717	4.04	ng/ml	58
97) Benzo(g,h,i)perylene	21.218	276	5342	27.16	ng/ml	77

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

Quantitation Report (QT Reviewed)

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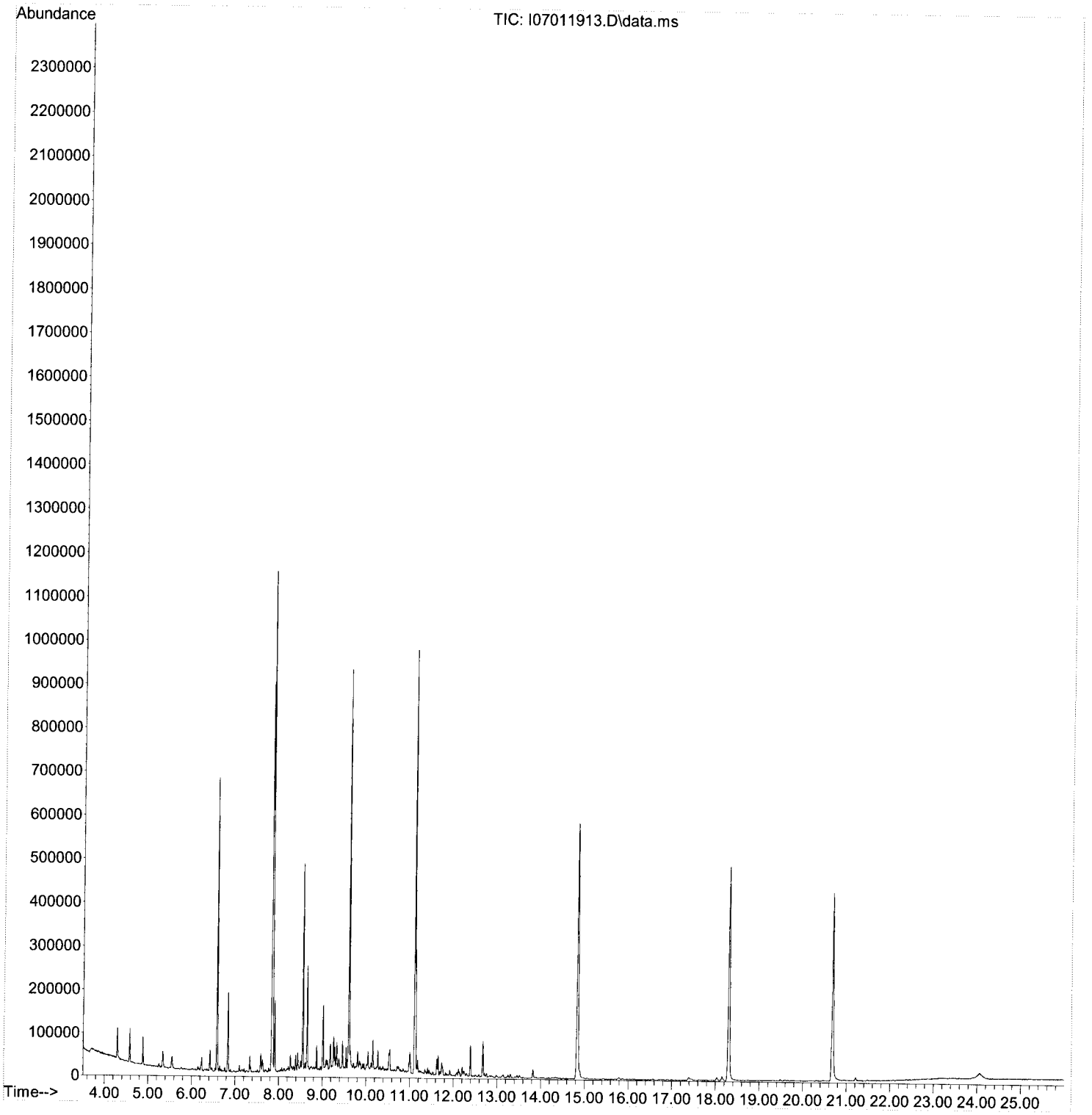

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
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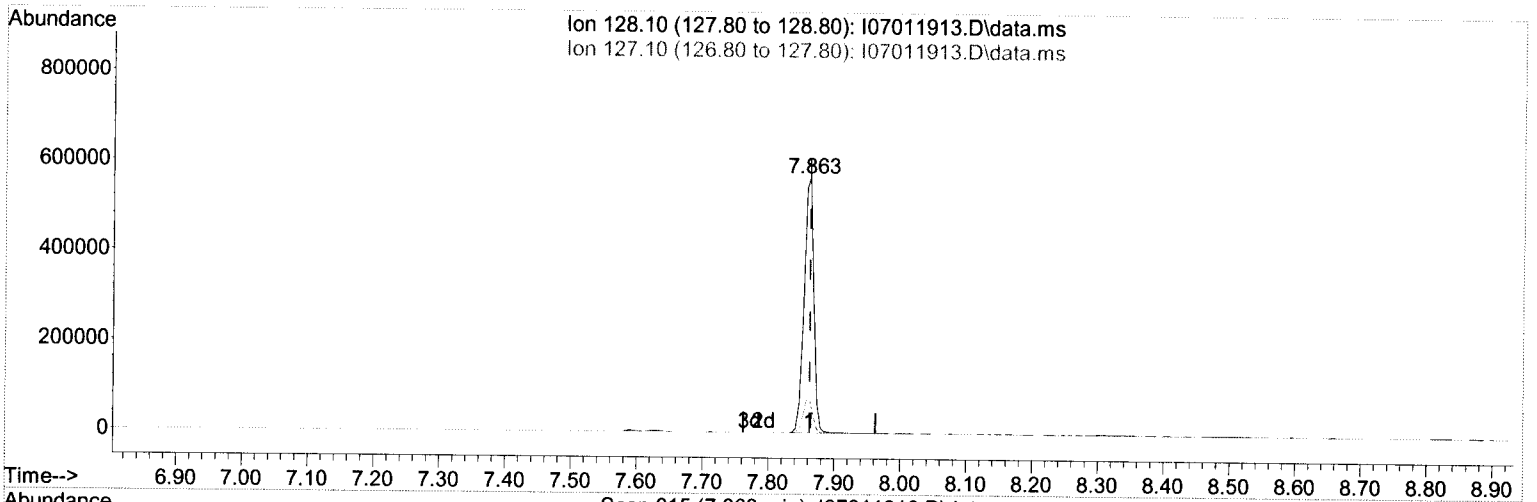

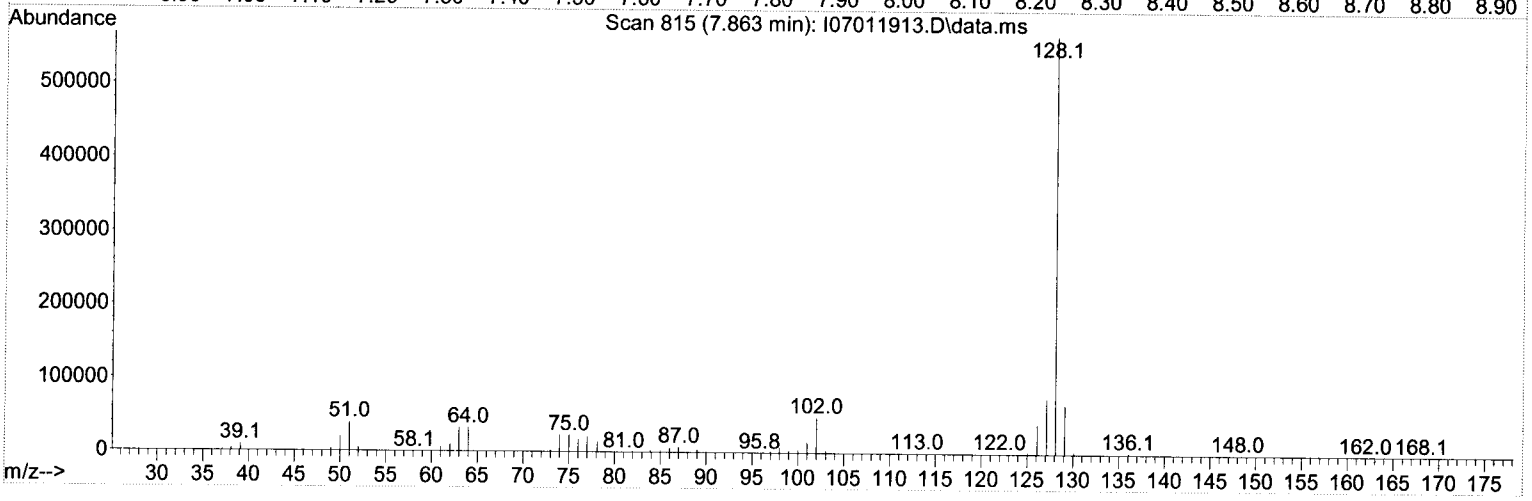

TIC: I07011913.D\data.ms

(29) Naphthalene (T)

7.863min (-0.000) 2581.54 ng/ml

response 592329

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	13.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
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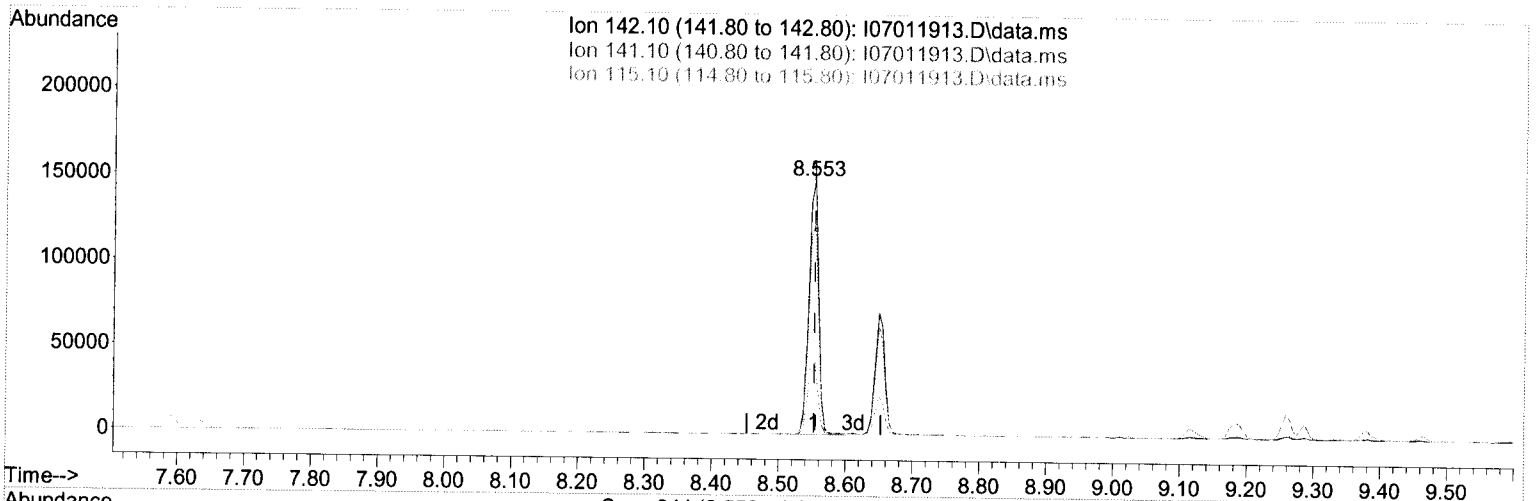
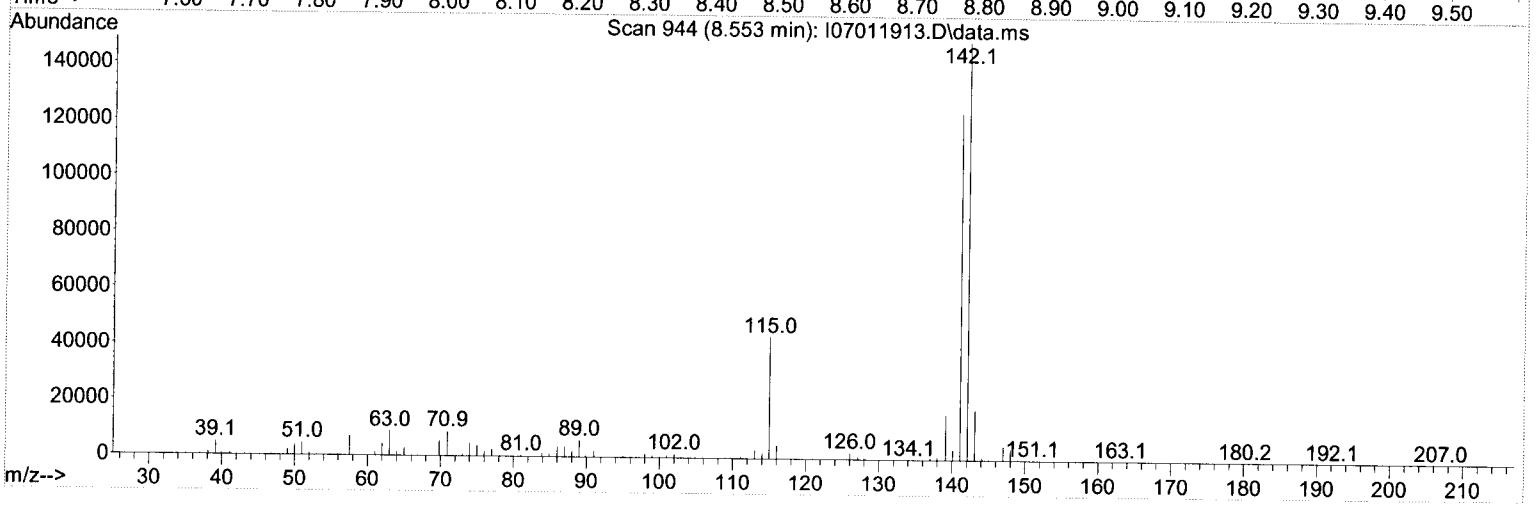




TIC: I07011913.D\data.ms

(33) 2-Methylnaphthalene (T)

8.553min (-0.000) 872.17 ng/ml

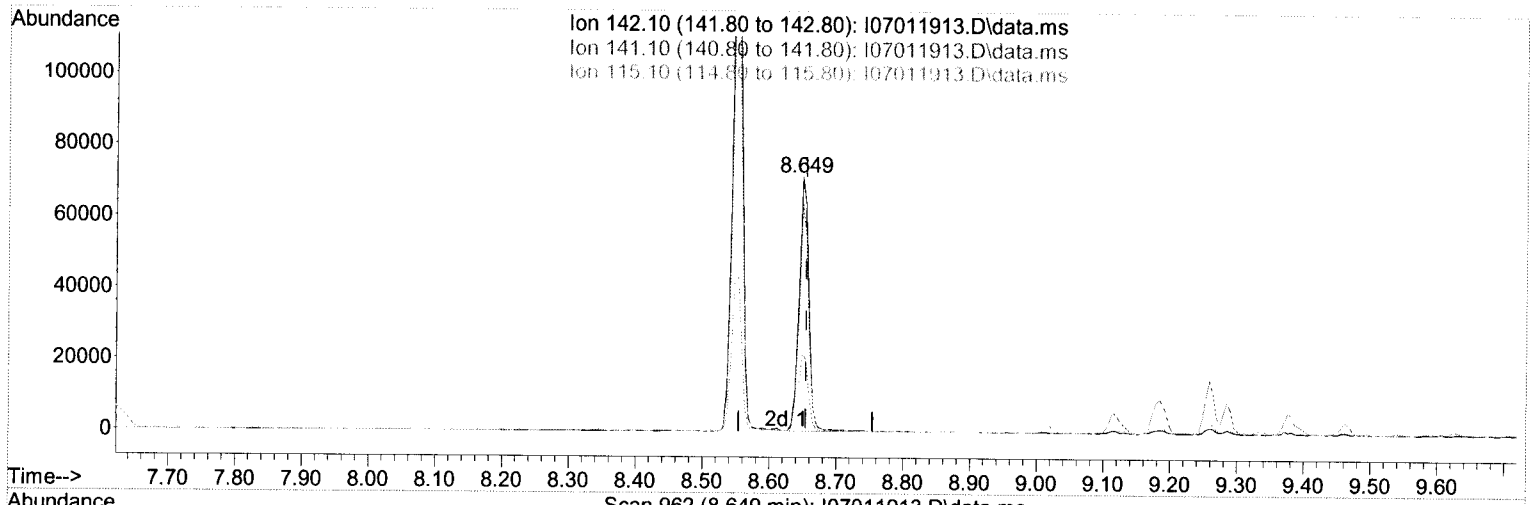
response 150974

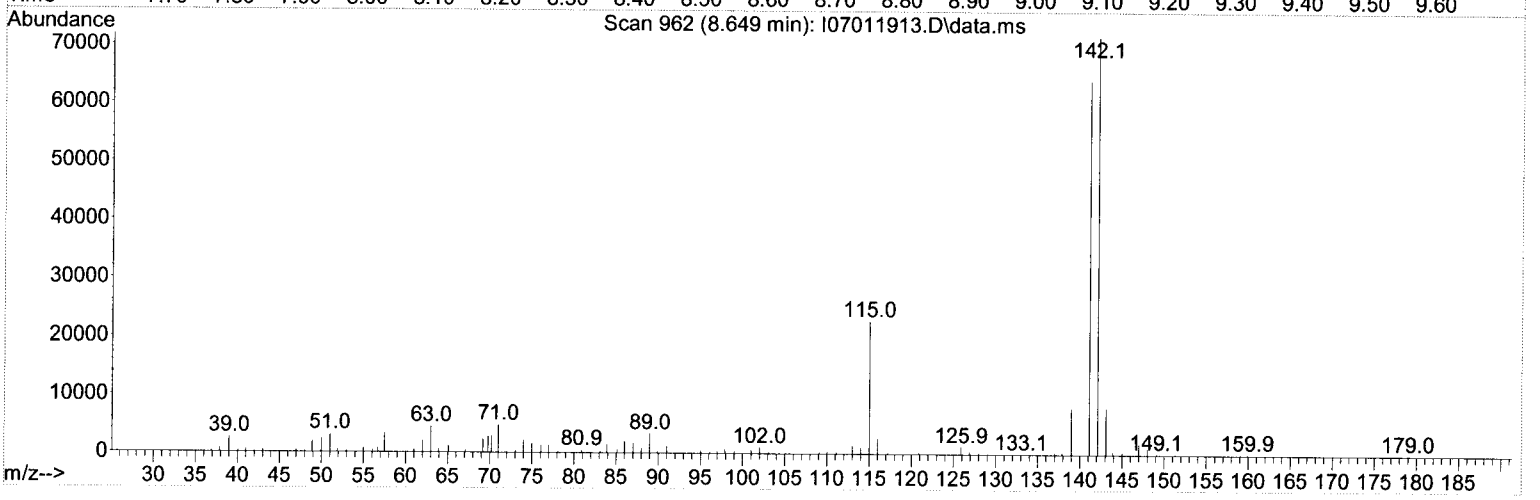
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	83.12
115.10	33.70	29.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(34) 1-Methylnaphthalene (T)

8.649min (-0.005) 444.97 ng/ml

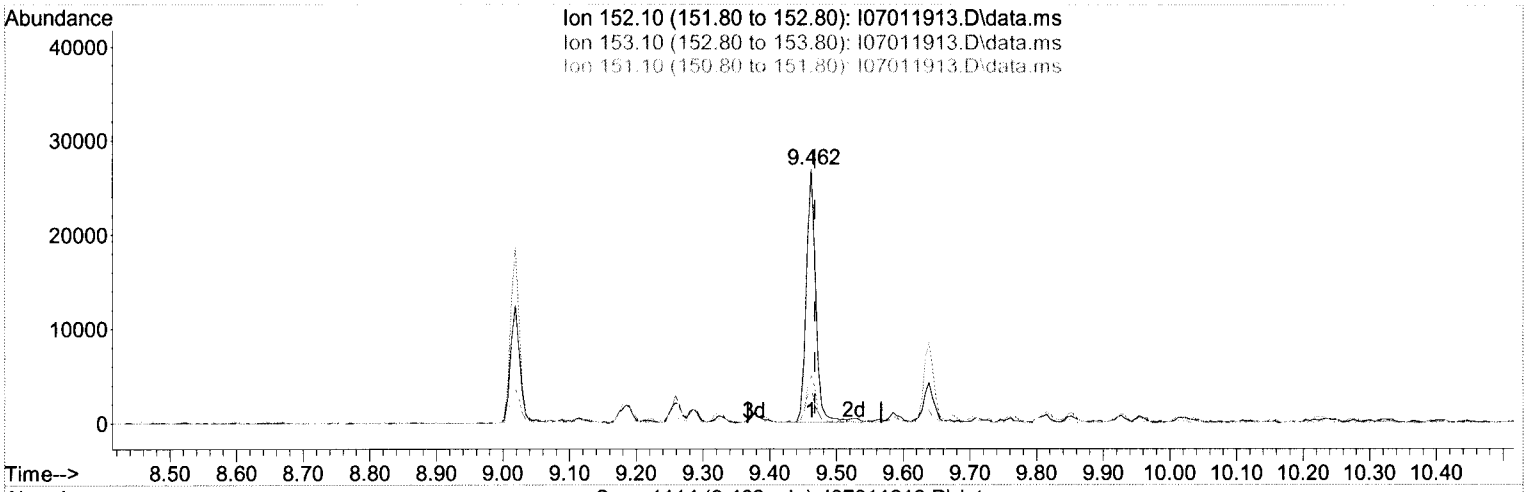
response 72546

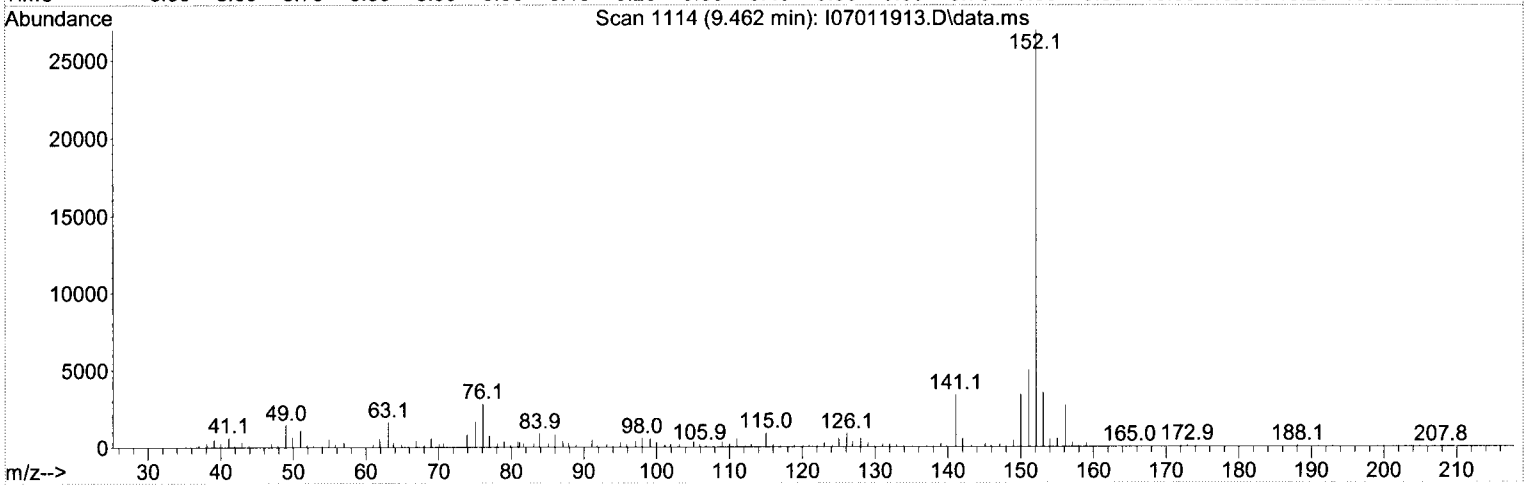
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	89.20	89.35
115.10	34.90	31.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(49) Acenaphthylene (T)

9.462min (-0.005) 129.14 ng/ml

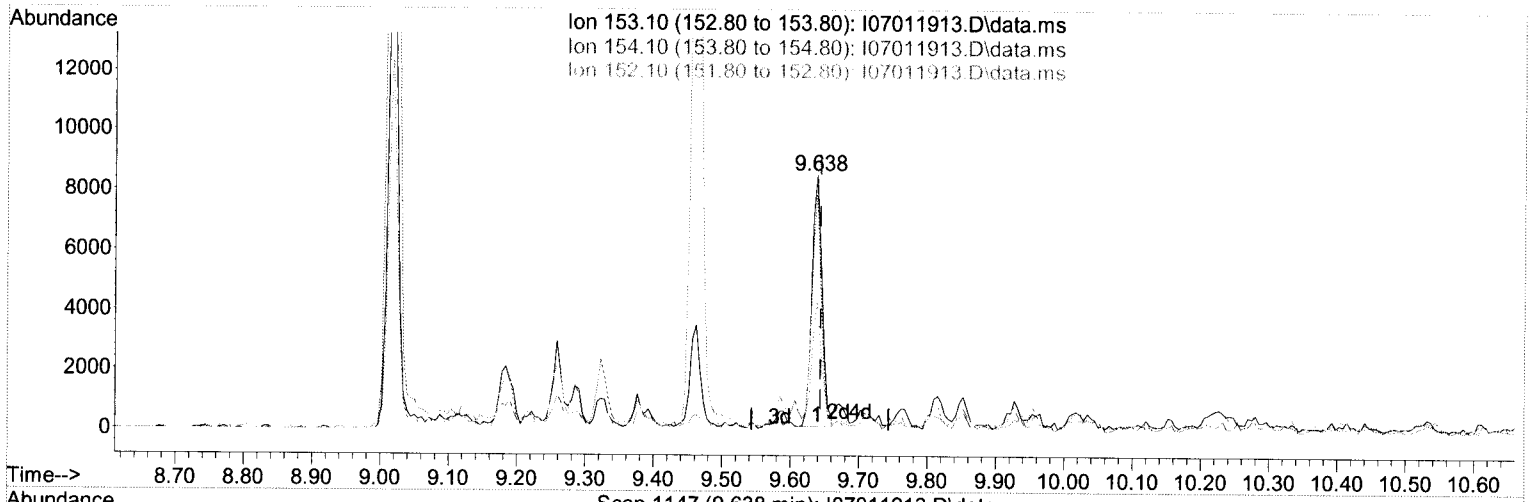
response 26620

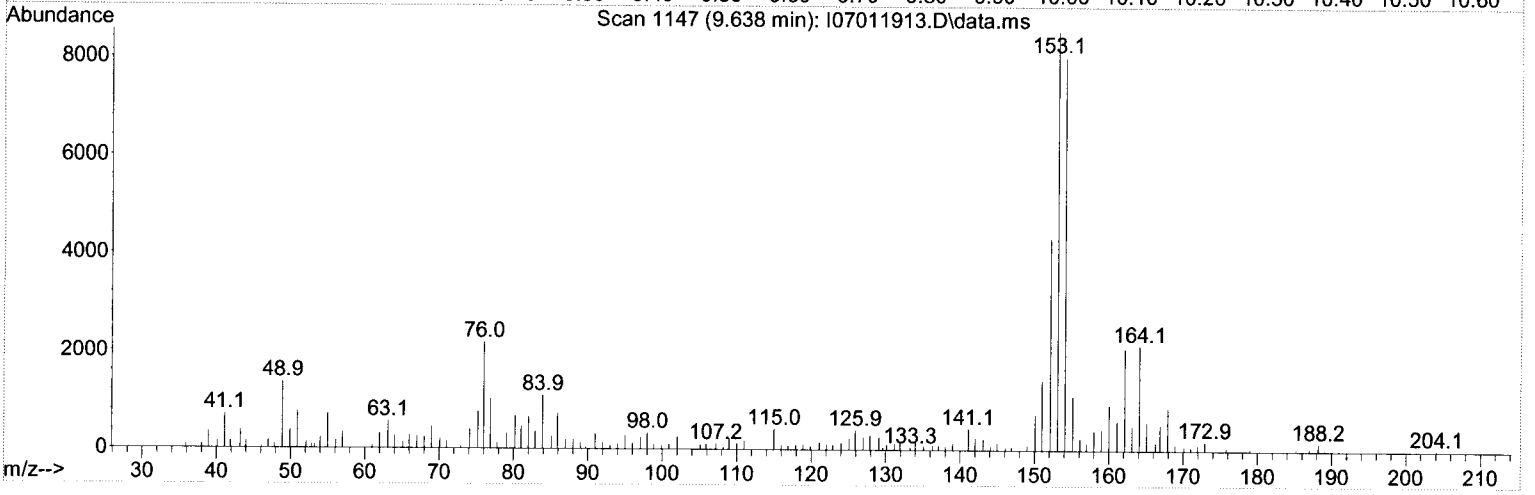
Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	13.06
151.10	20.00	18.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(51) Acenaphthene (T)

9.638min (-0.005) 67.66 ng/ml

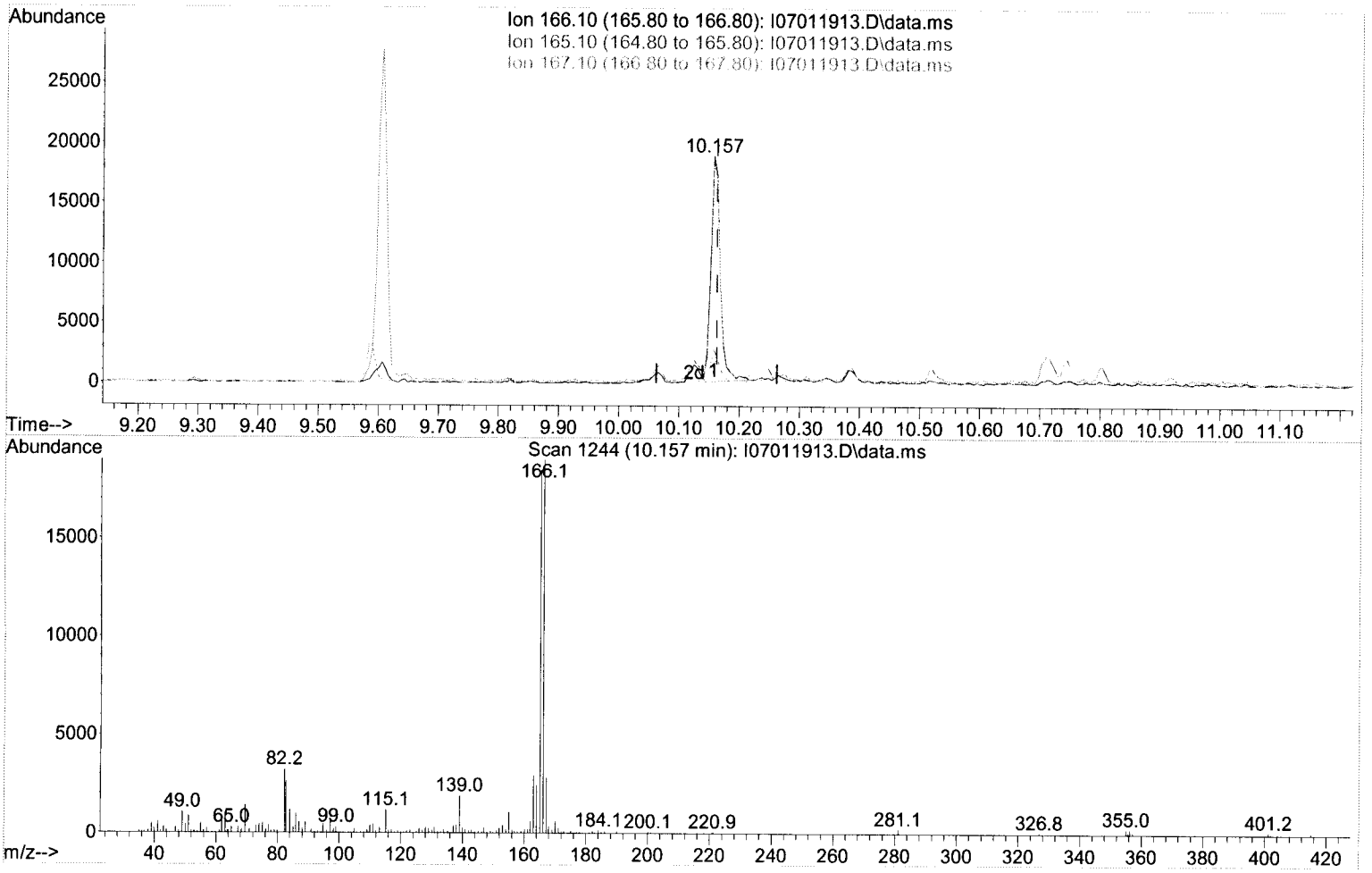
response 8787

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	93.86
152.10	47.70	50.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011913.D\data.ms

(60) Fluorene (T)

10.157min (-0.005) 133.43 ng/ml

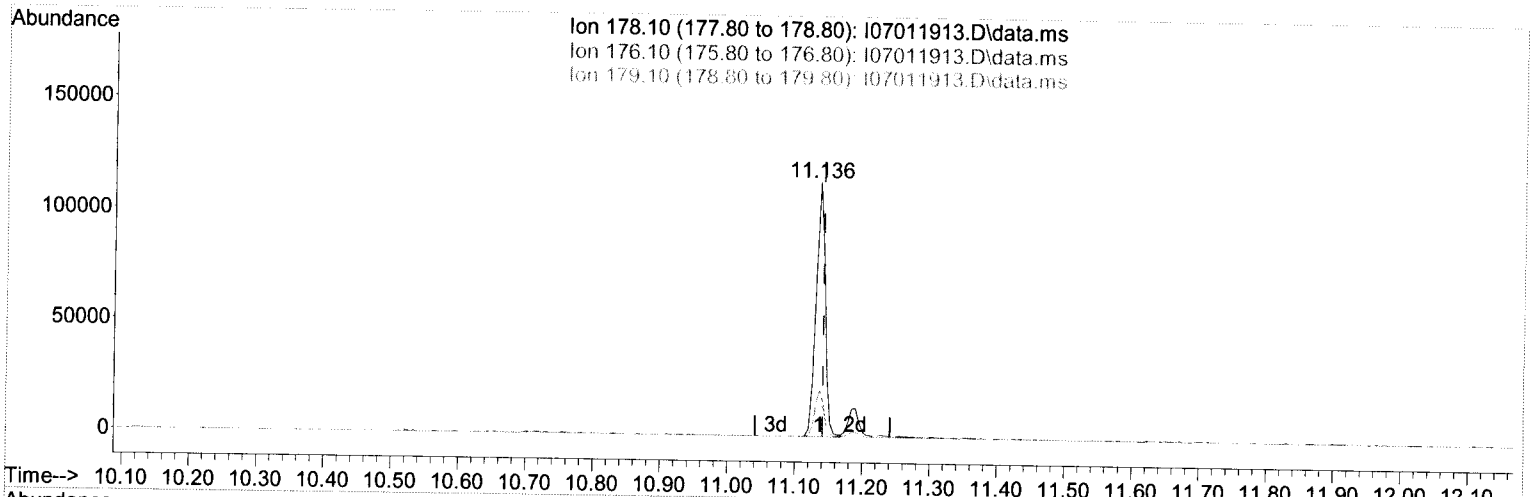
response 20321

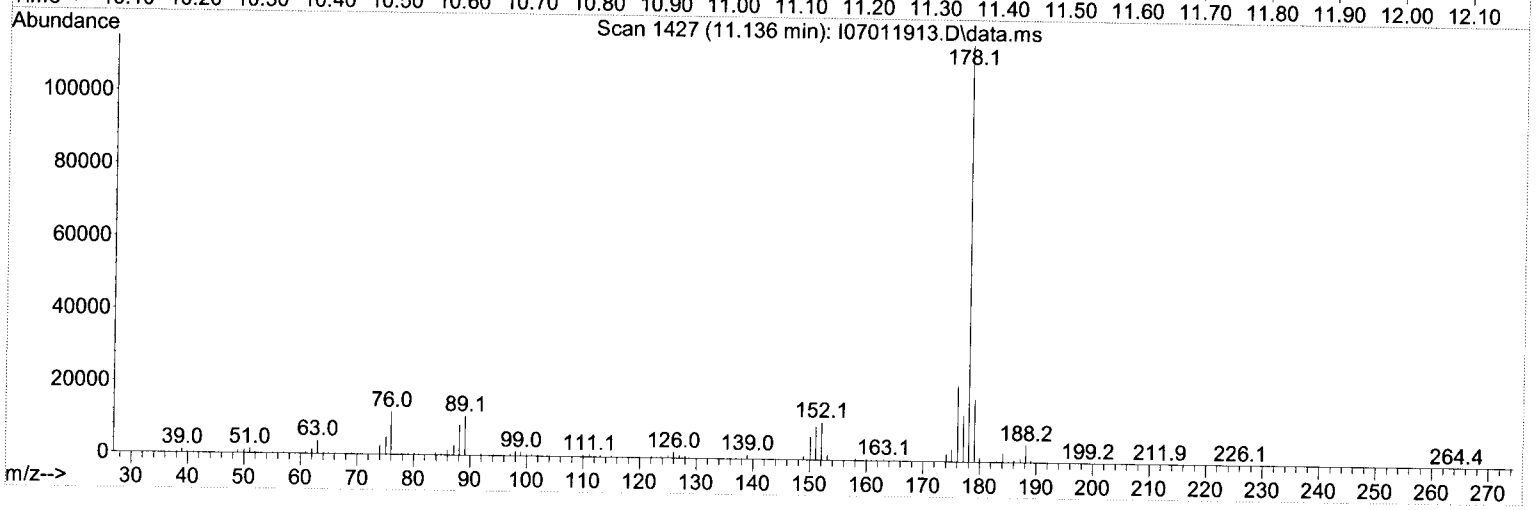
Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	97.39
167.10	13.50	15.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(71) Phenanthrene (T)

11.136min (-0.006) 509.33 ng/ml

response 108773

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	18.20
179.10	15.20	15.07
0.00	0.00	0.00

Quantitation Report (Qedit)

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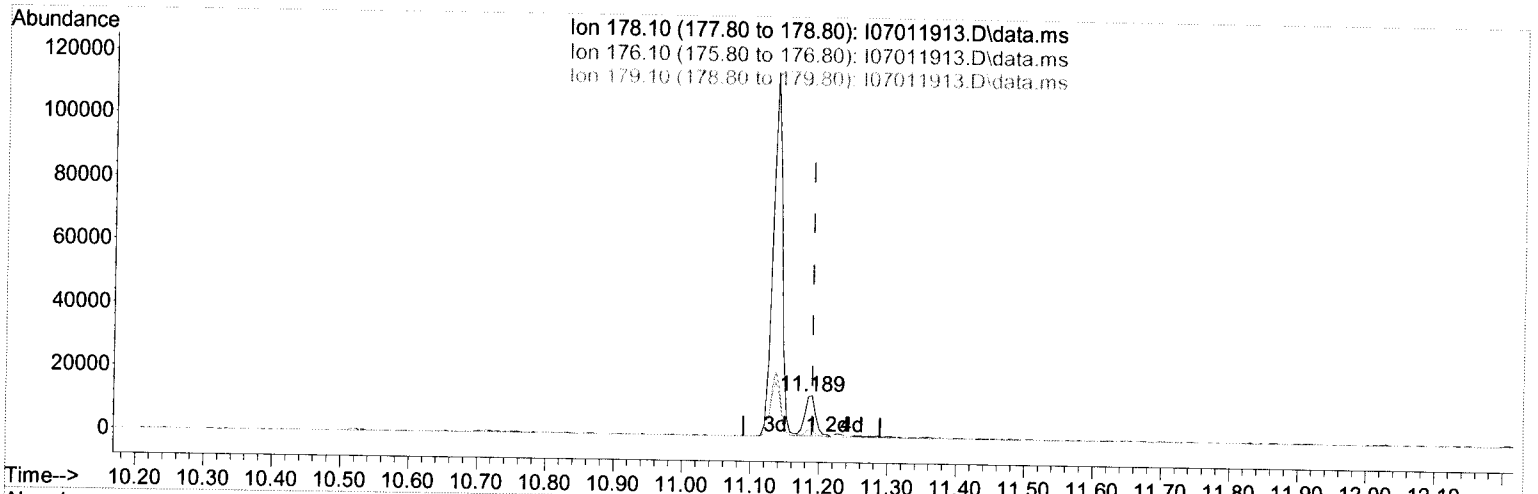

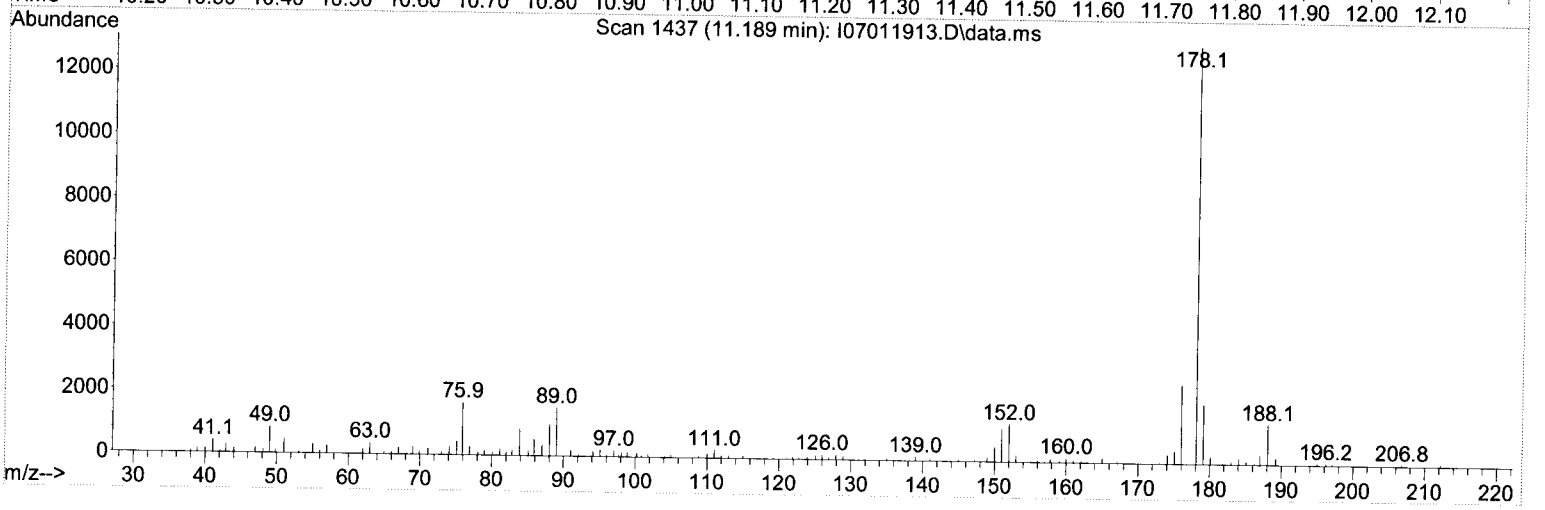

TIC: I07011913.D\data.ms

(72) Anthracene (T)

11.189min (-0.000) 66.22 ng/ml

response 14141

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	19.00
179.10	15.90	14.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
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Misc : 1000x, 8270D LL FULL LIST
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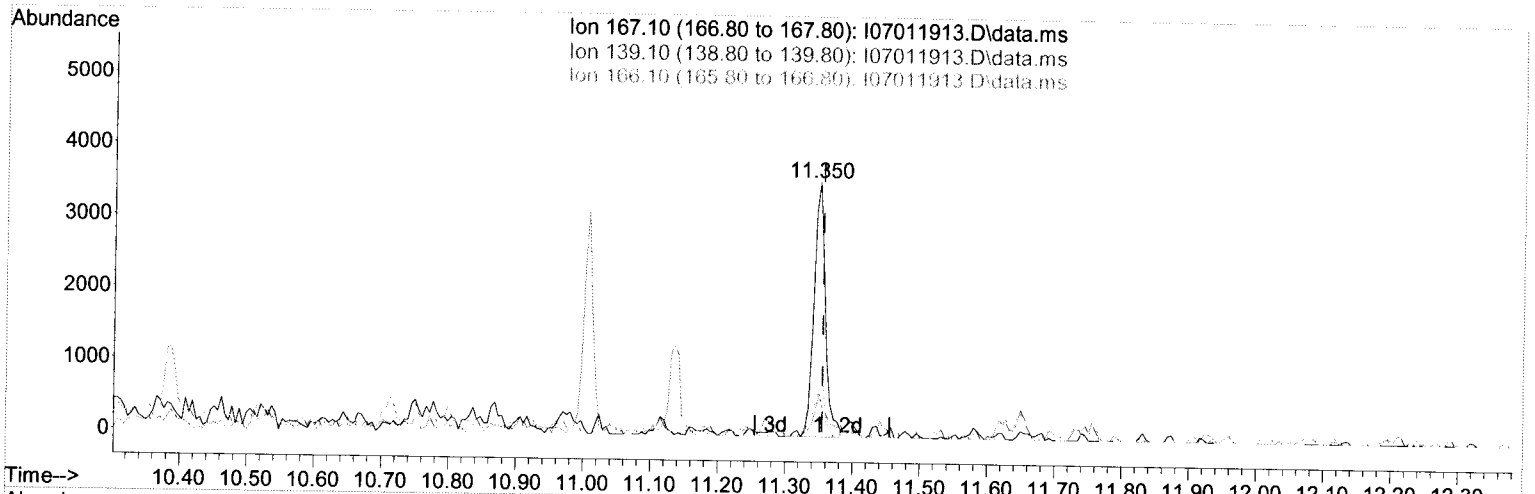

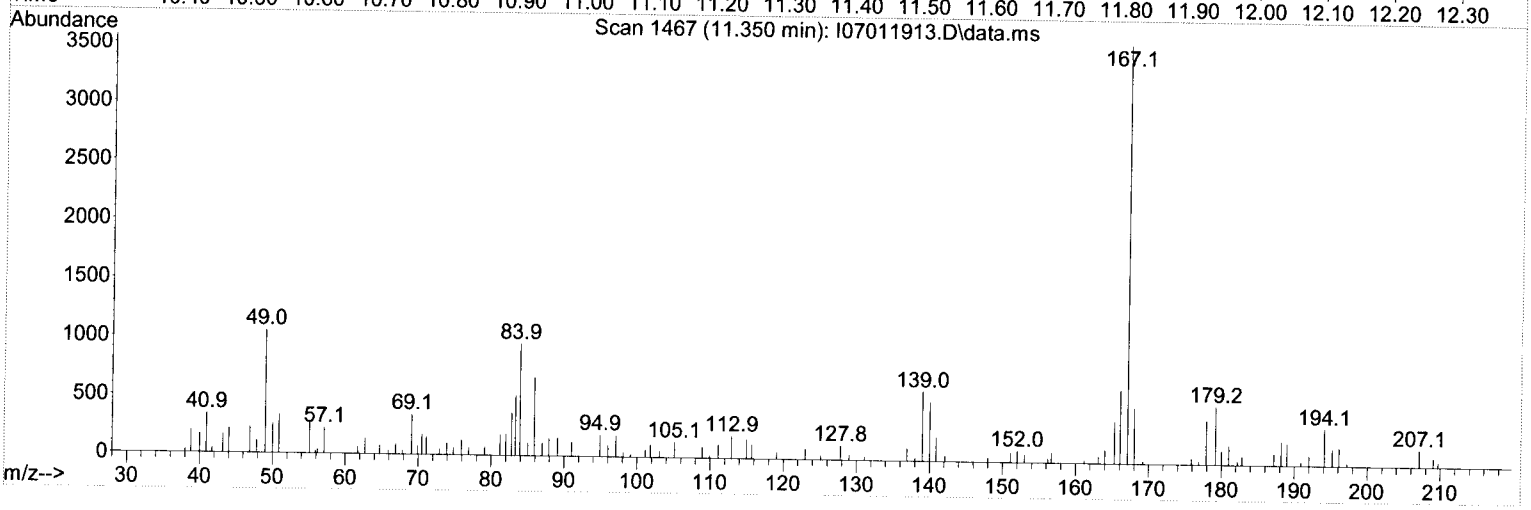

TIC: I07011913.D\data.ms

(73) Carbazole (T)

11.350min (-0.005) 22.78 ng/ml

response 4263

Ion	Exp%	Act%
167.10	100.00	100.00
139.10	13.50	16.75
166.10	21.10	17.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
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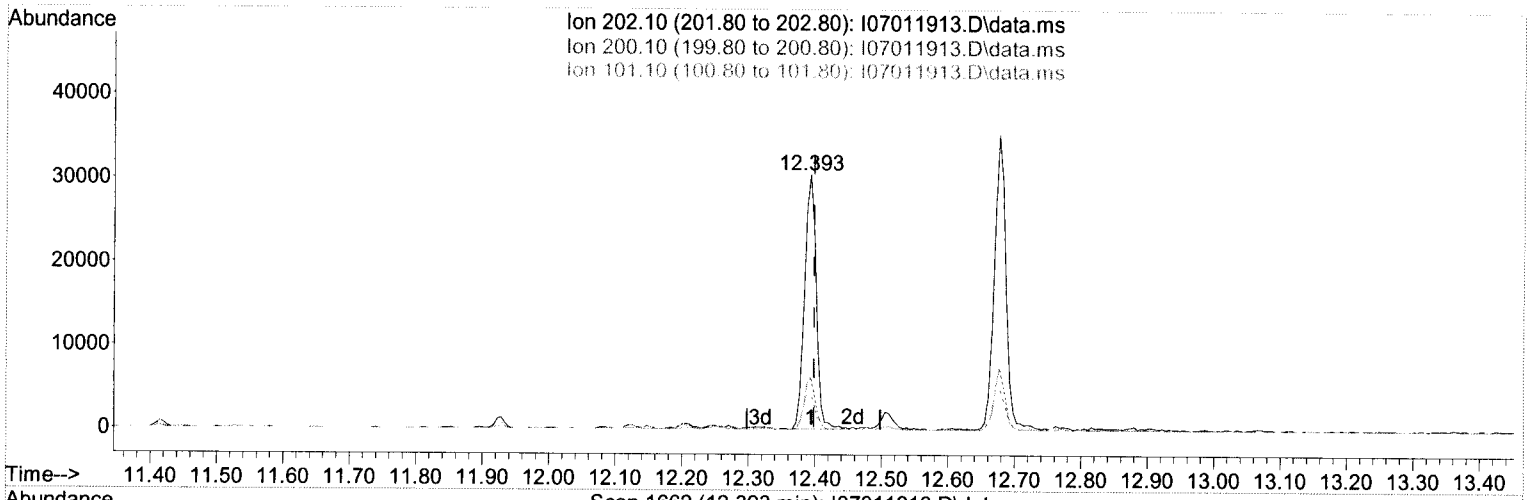
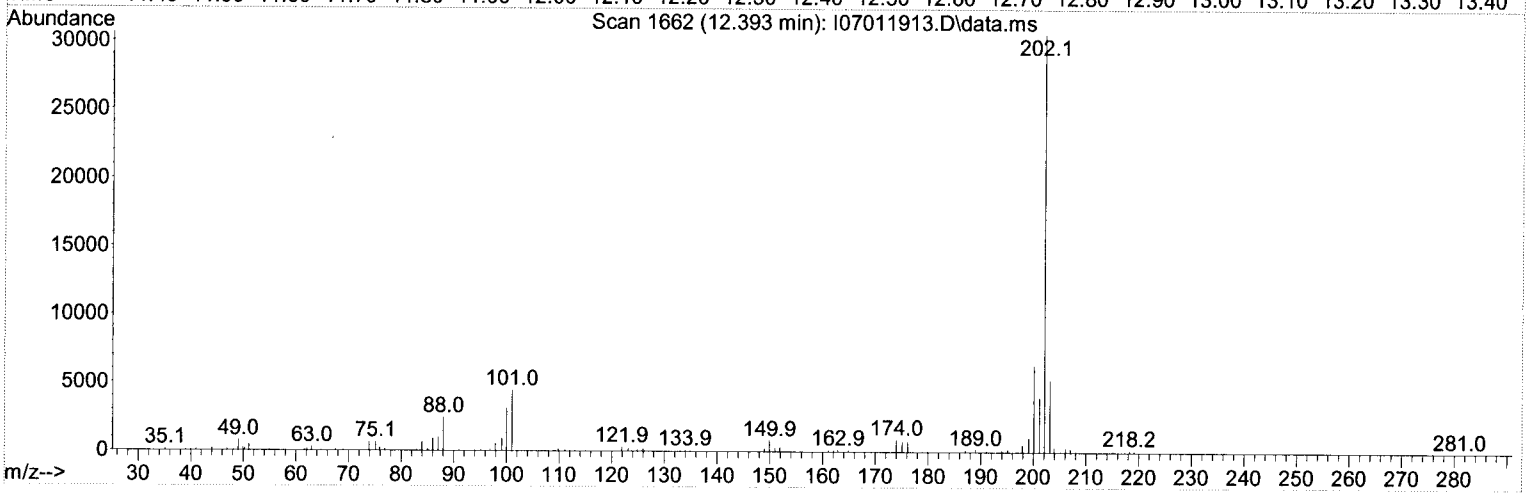
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(75) Fluoranthene (T)

12.393min (-0.005) 148.16 ng/ml

response 36974

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	20.78
101.10	17.00	14.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
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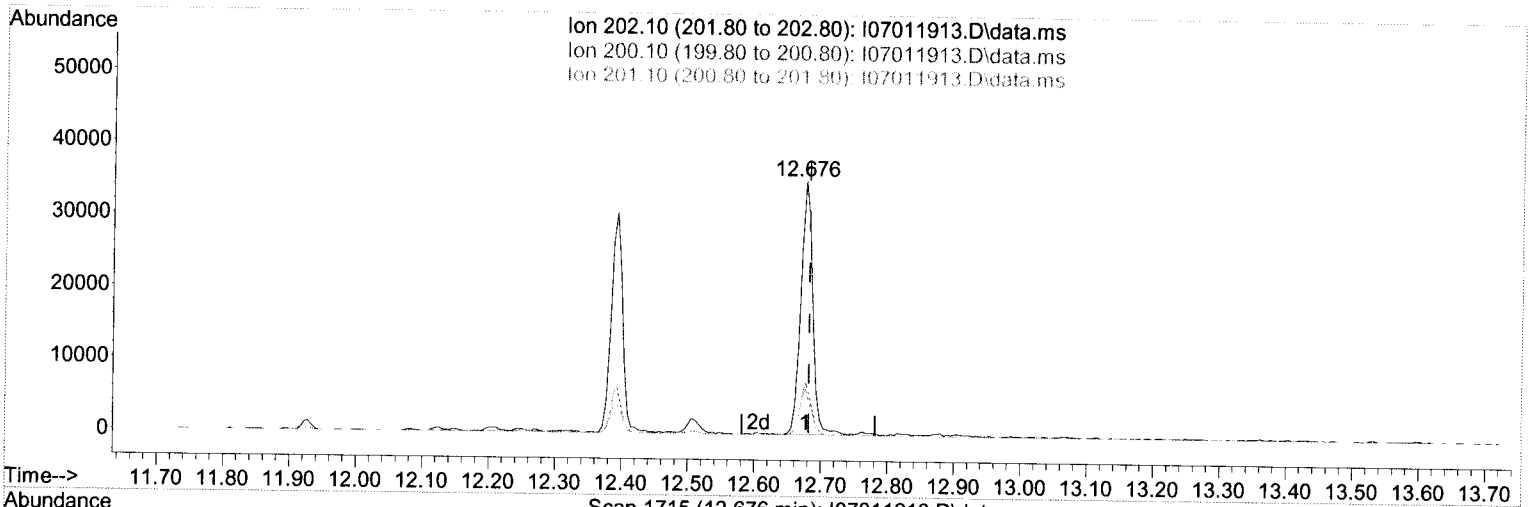
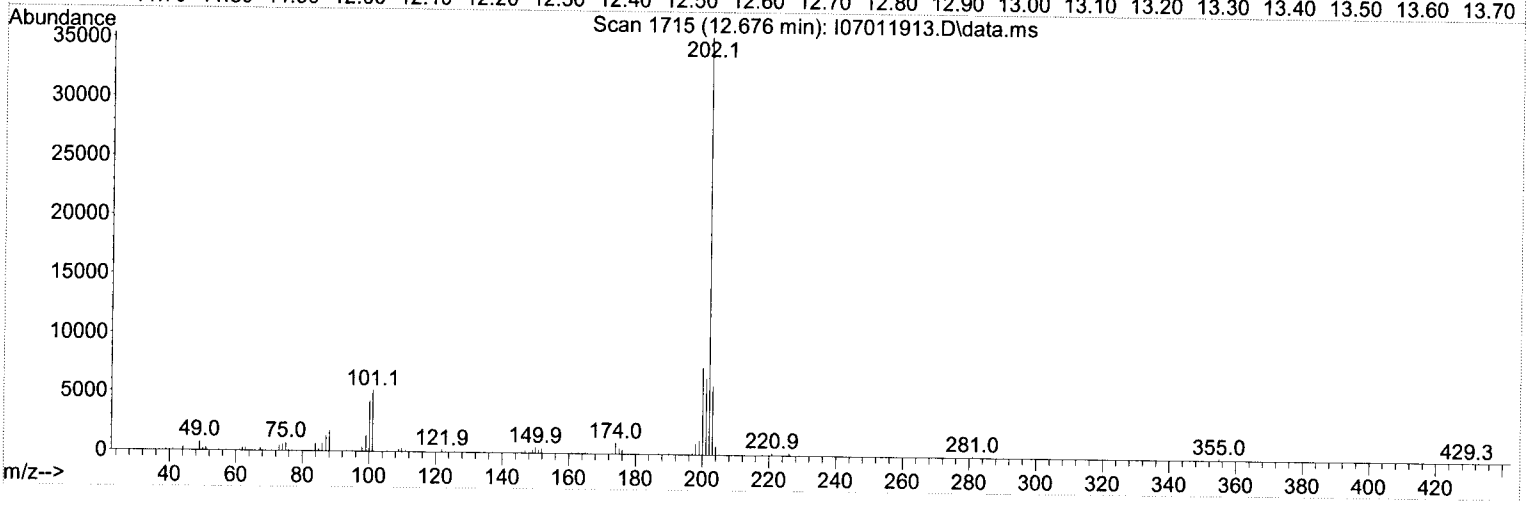
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(77) Pyrene (T)

12.676min (-0.005) 170.96 ng/ml

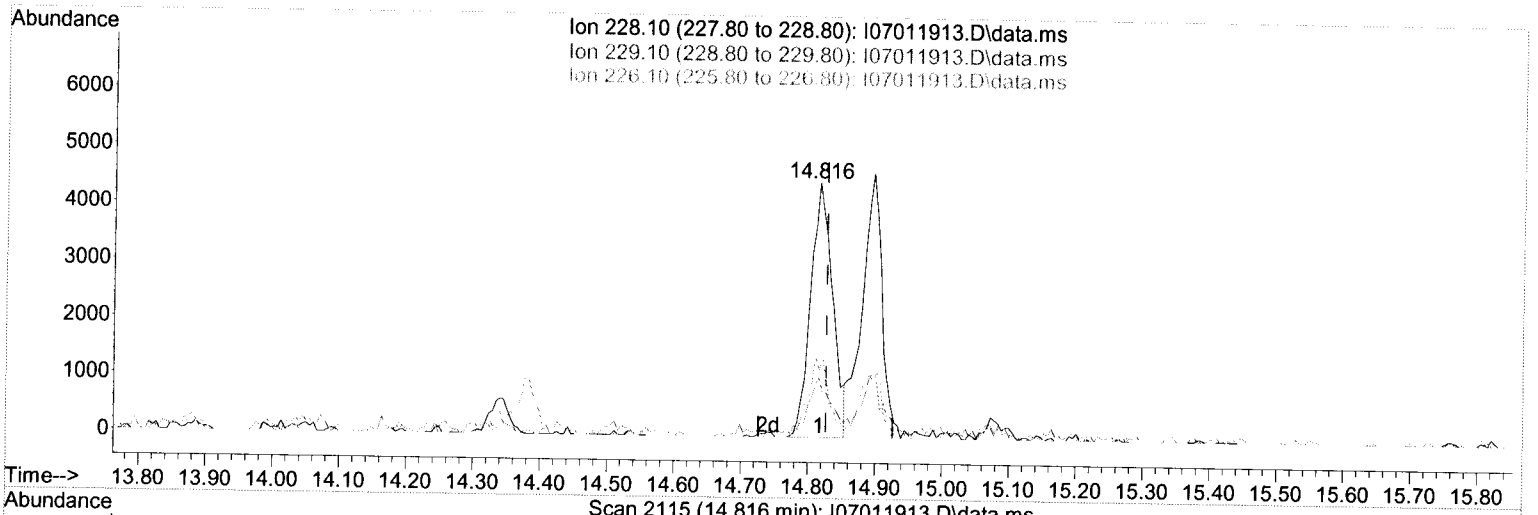
response 43417

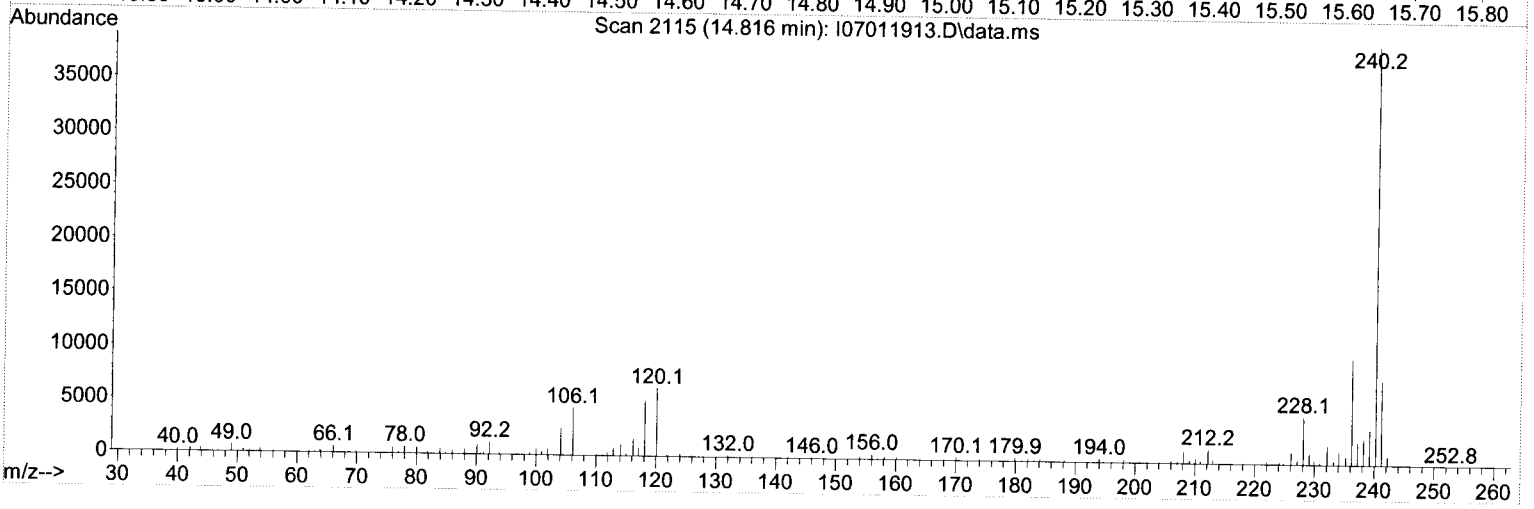
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	20.92
201.10	17.30	18.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(83) Benz(a)anthracene (T)

14.816min (-0.011) 41.54 ng/ml

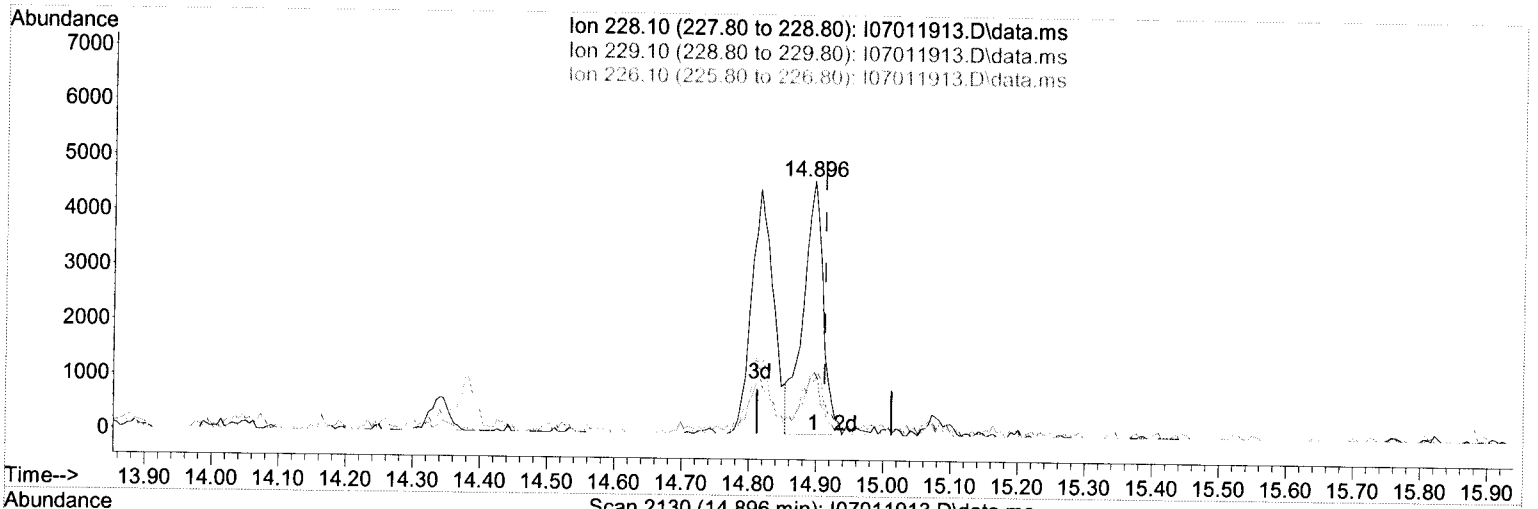
response 10136

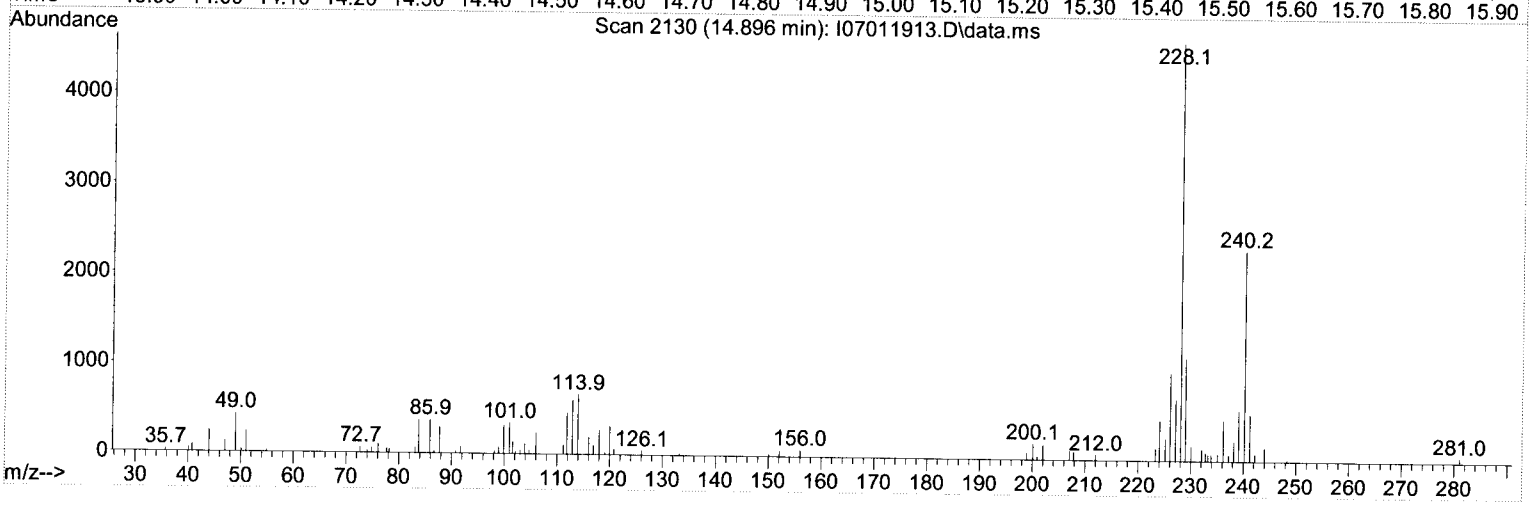
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	23.34
226.10	26.50	26.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(84) Chrysene (T)

14.896min (-0.016) 42.83 ng/ml

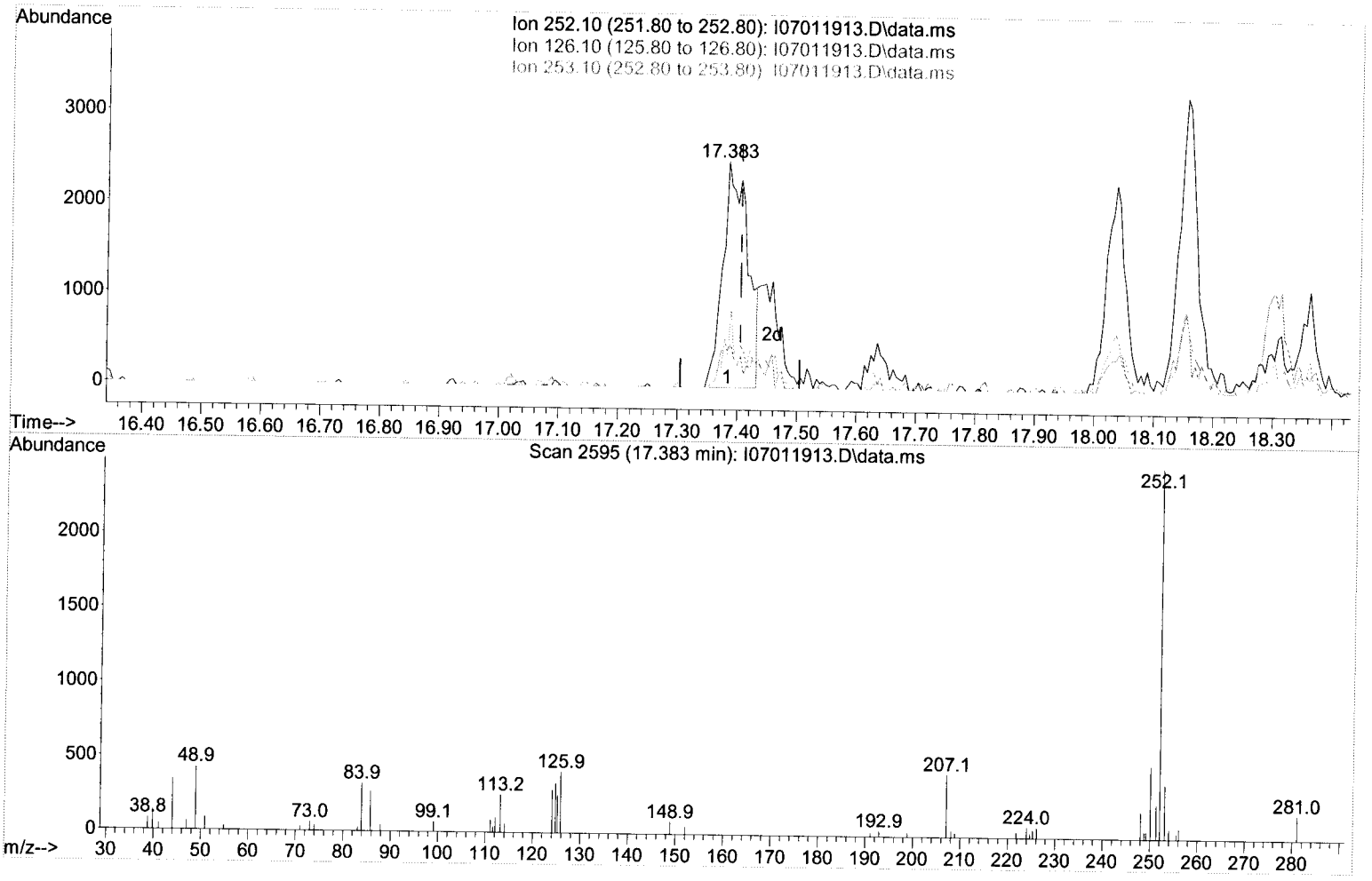
response 9641

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	24.50
226.10	29.30	20.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011913.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.383min (-0.022) 33.70 ng/ml

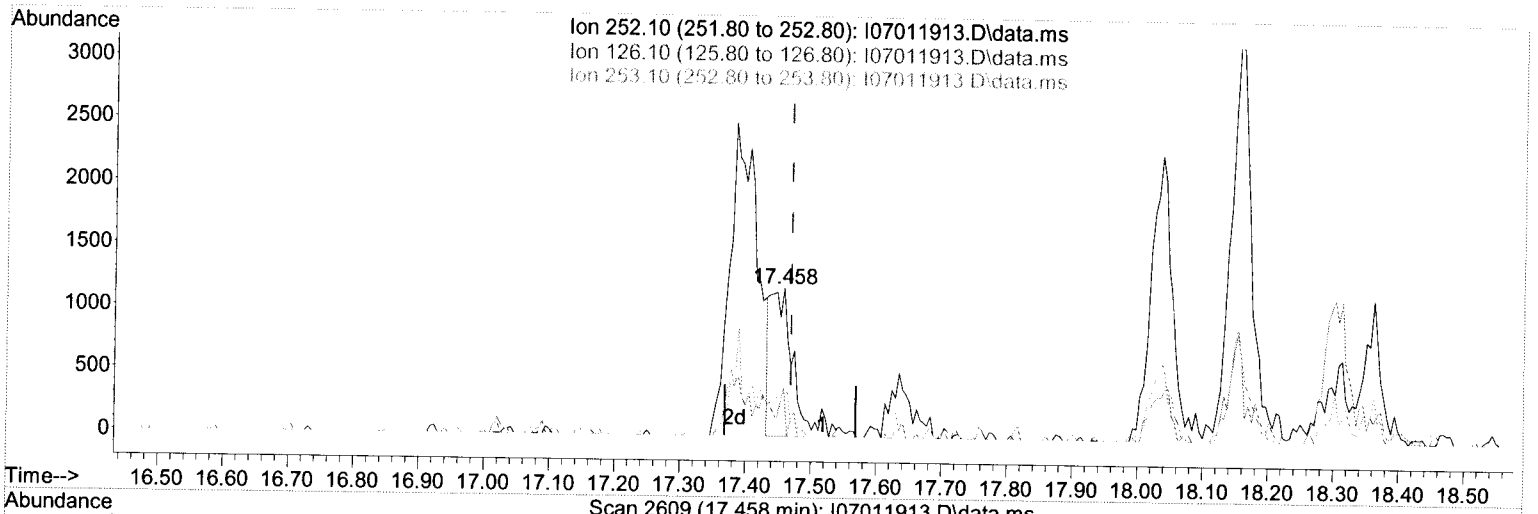
response 7250

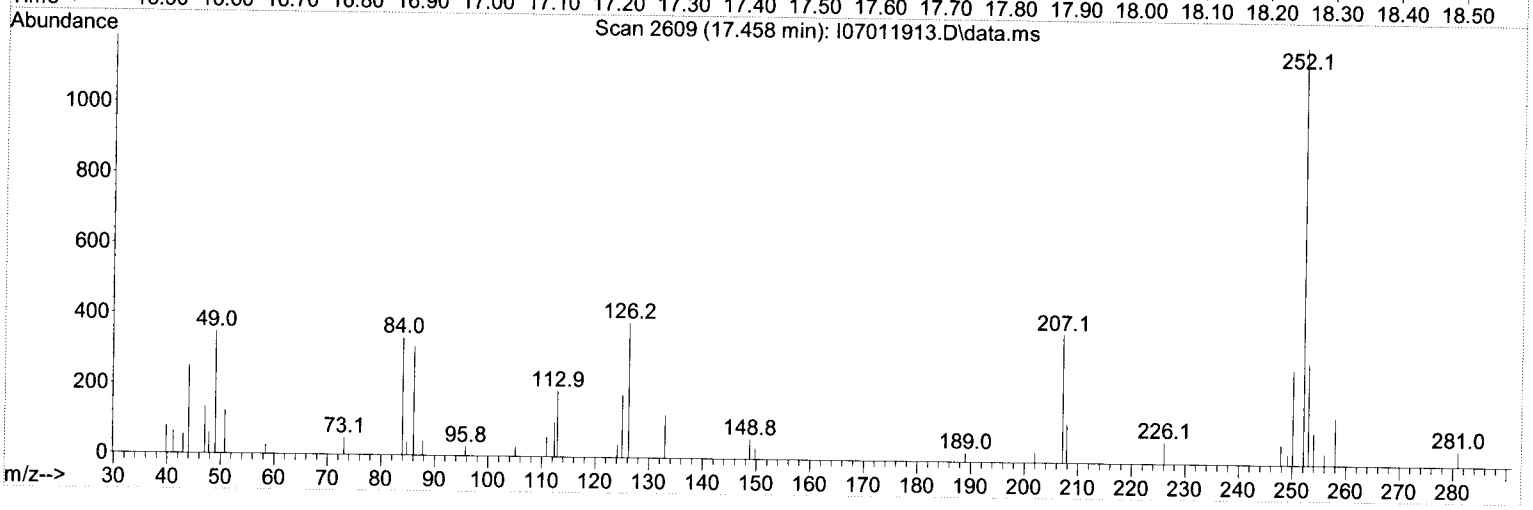
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	16.53
253.10	22.00	14.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.458min (-0.011) 16.71 ng/ml m

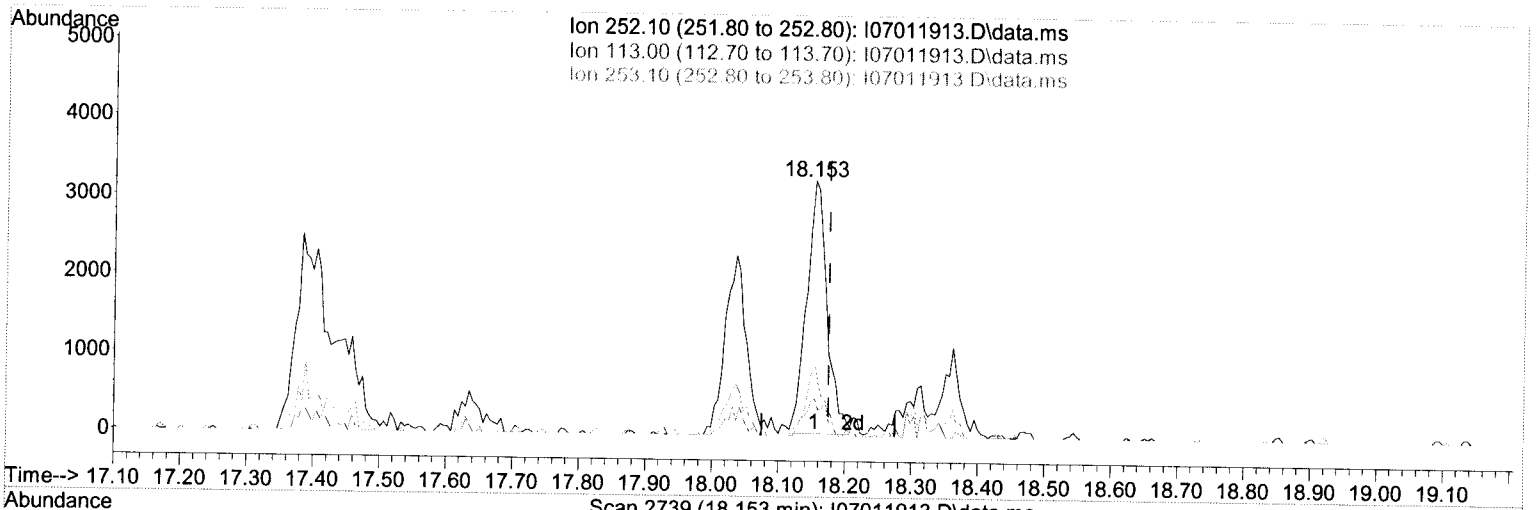
response 2984

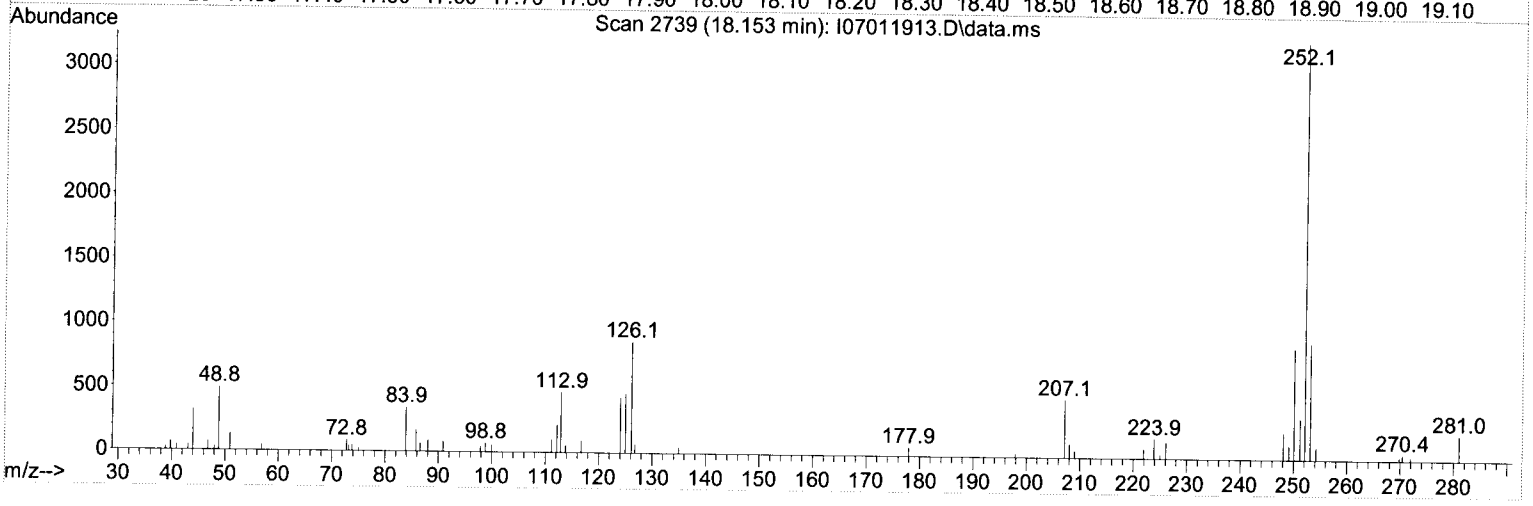
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	32.35
253.10	21.70	24.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(92) Benzo(a)pyrene (T)

18.153min (-0.022) 36.78 ng/ml

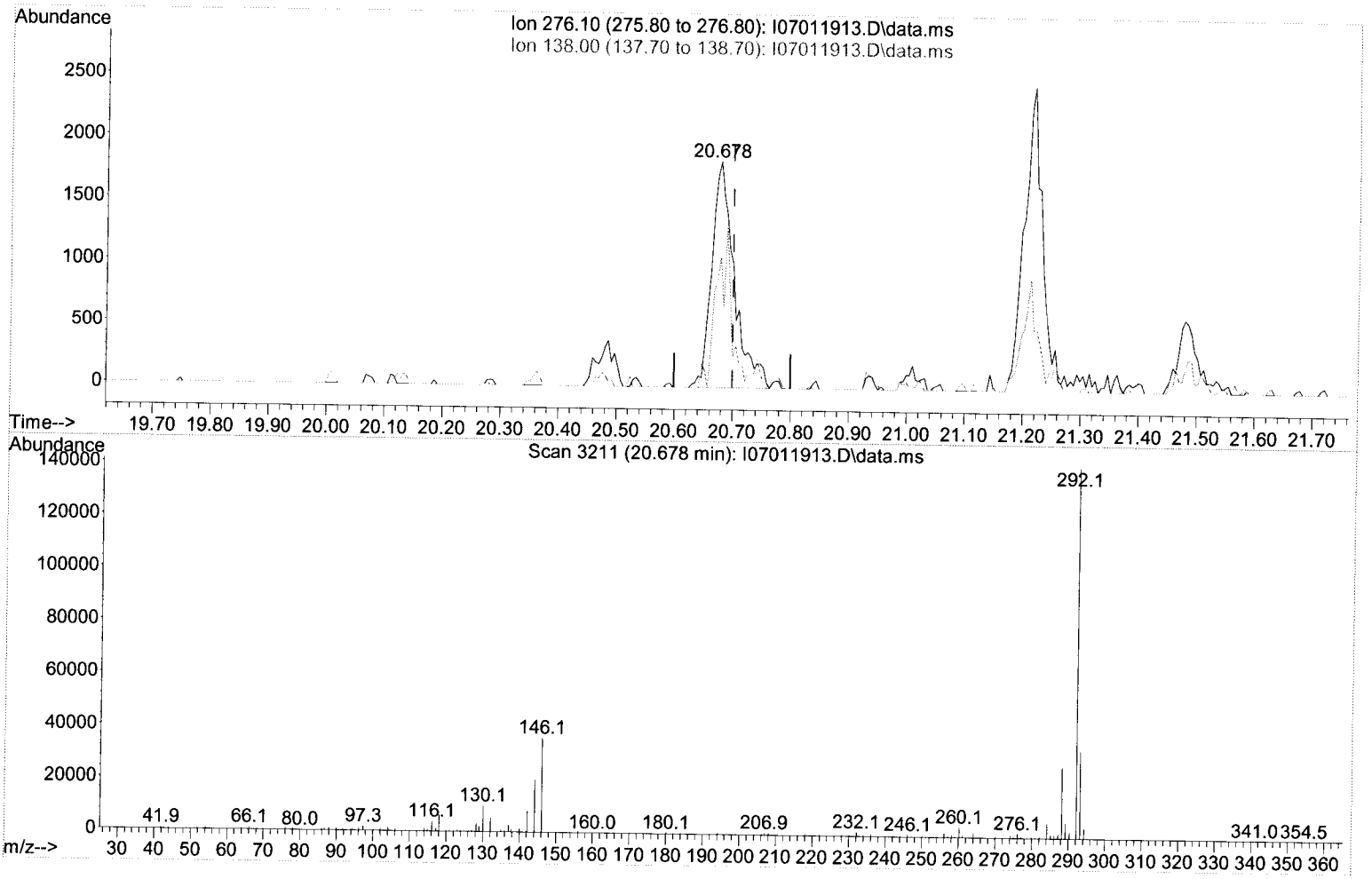
response 6940

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	14.48
253.10	21.60	28.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011913.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

20.678min (-0.022) 24.42 ng/ml

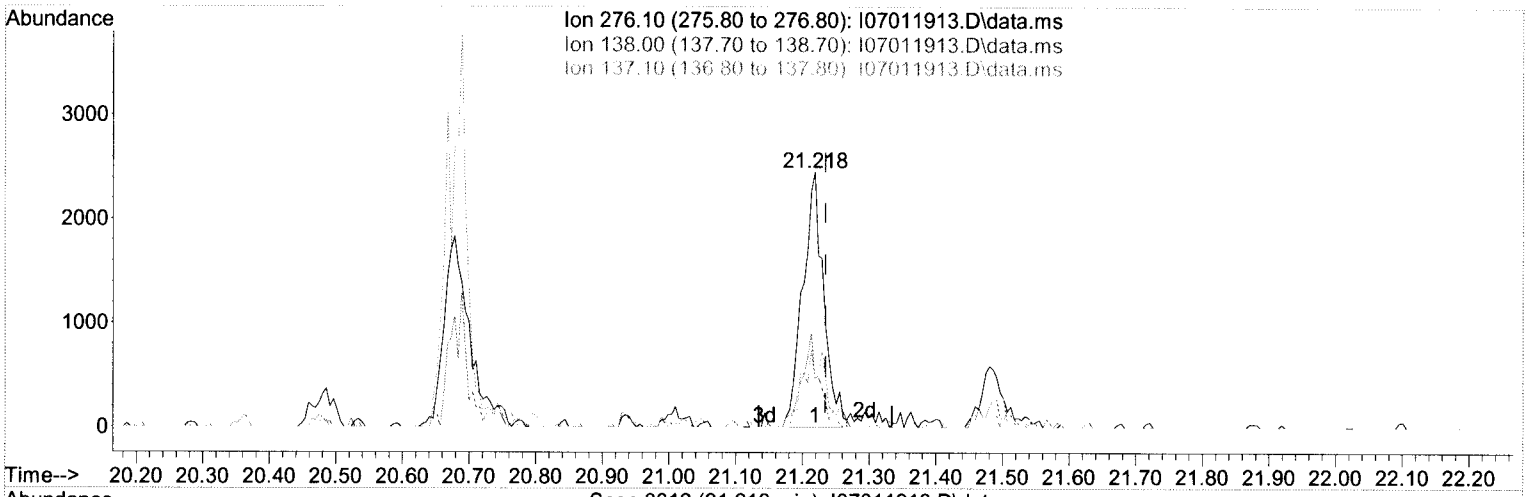
response 4912

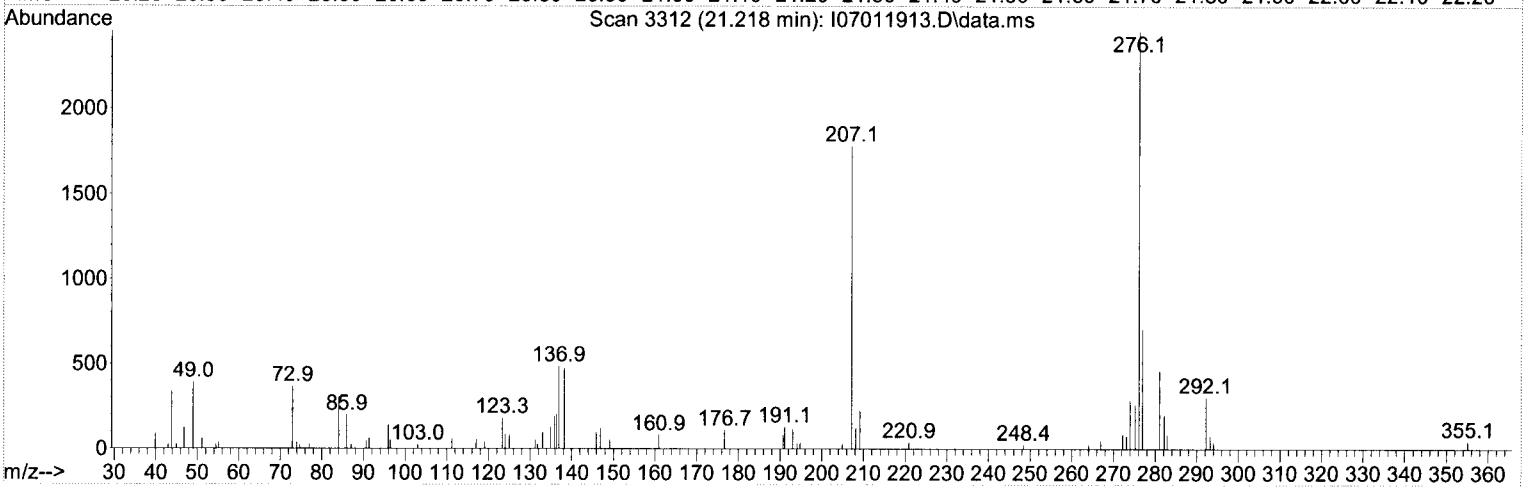
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	58.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.218min (-0.016) 27.16 ng/ml

response 5342

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	36.60	19.35
137.10	27.90	19.88
0.00	0.00	0.00

Semivolatile Organic Compunds By EPA 8270D
Calibration Data

Sequence 9E08056 (Cal ID A9E1009) SV-GCMS9

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E08056**	Instrument:	**SV-GCMS9**
Date:	**05/08/19 18:26**	Calibration:	**A9E1009**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E08056-TUN1	Water	QC	QC			A19D031	A19D323
2	9E08056-ICB1	Water	QC	QC			A19D031	
3	9E08056-CAL1	Water	QC	QC			A19D031	A19D053
4	9E08056-CAL2	Water	QC	QC			A19D031	A19D054
5	9E08056-CAL3	Water	QC	QC			A19D031	A19D055
6	9E08056-CAL4	Water	QC	QC			A19D031	A19D056
7	9E08056-CAL5	Water	QC	QC			A19D031	A19D057
8	9E08056-CAL6	Water	QC	QC			A19D031	A19D058
9	9E08056-CAL7	Water	QC	QC			A19D031	A19D059
10	9E08056-CAL8	Water	QC	QC			A19D031	A19D060
11	9E08056-CAL9	Water	QC	QC			A19D031	A19D061
12	9E08056-CALA	Water	QC	QC			A19D031	A19D062
13	9E08056-IBL1	Water	QC	QC			A19D031	
14	9E08056-ICV1	Water	QC	QC			A19D031	A19C239
15	9E08056-IBL2	Water	QC	QC			A19D031	

Data Entered By: [signature] 5/10/19

Data Reviewed By: [signature] 5/14/19

Comments: Raise 3,3-Dichlorobenzidine to 200/400 for soils

Calibration Status Report SV-GCMS9

Method Path : T:\methods\
Method File : SV9_050819.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu May 09 12:25:58 2019
Response Via : Initial Calibration

A9E1009

5/9/19

#	ID	Conc	ISTD Conc	Path\File
1	20	20	2000	T:\data\2019-05\9E08056\I05081919.D
2	50	50	2000	T:\data\2019-05\9E08056\I05081920.D
3	100	100	2000	T:\data\2019-05\9E08056\I05081921.D
4	200	200	2000	T:\data\2019-05\9E08056\I05081922.D
5	500	500	2000	T:\data\2019-05\9E08056\I05081923.D
6	1000	1000	2000	T:\data\2019-05\9E08056\I05081924.D
7	2000	2000	2000	T:\data\2019-05\9E08056\I05081925.D
8	4000	4000	2000	T:\data\2019-05\9E08056\I05081926.D
9	6000	6000	2000	T:\data\2019-05\9E08056\I05081927.D
10	8000	8000	2000	T:\data\2019-05\9E08056\I05081928.D

#	ID	Update Time	Quant Time	Acquisition Time
1	20	May 09 12:25 2019	May 09 11:27 2019	8 May 2019 8:12 pm
2	50	May 09 12:25 2019	May 09 11:31 2019	8 May 2019 8:48 pm
3	100	May 09 12:25 2019	May 09 11:34 2019	8 May 2019 9:25 pm
4	200	May 09 12:25 2019	May 09 11:48 2019	8 May 2019 10:01 pm
5	500	May 09 12:25 2019	May 09 11:02 2019	8 May 2019 10:38 pm
6	1000	May 09 12:25 2019	May 09 11:02 2019	8 May 2019 11:14 pm
7	2000	May 09 12:25 2019	May 09 11:03 2019	8 May 2019 11:50 pm
8	4000	May 09 12:25 2019	May 09 11:03 2019	9 May 2019 12:26 am
9	6000	May 09 12:25 2019	May 09 11:53 2019	9 May 2019 1:01 am
10	8000	May 09 12:25 2019	May 09 11:55 2019	9 May 2019 1:37 am

SV9_050819.M Thu May 09 17:08:41 2019

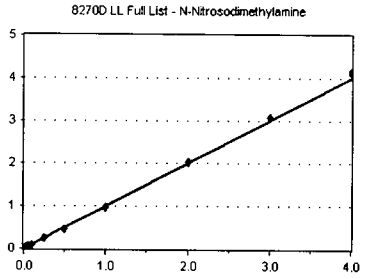
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

N-Nitrosodimethylamine

Curve Fit: **AVERAGE RF**

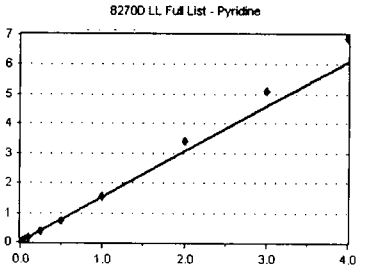


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1386	1.211	4.19
9E08056-CAL2	50	2851	0.973	4.18
9E08056-CAL3	100	5631	0.975	4.19
9E08056-CAL4	200	11200	0.931	4.17
9E08056-CAL5	500	27689	0.938	4.18
9E08056-CAL6	1000	53609	0.919	4.17
9E08056-CAL7	2000	104473	0.976	4.17
9E08056-CAL8	4000	199054	1.007	4.17
9E08056-CAL9	6000	300039	1.030	4.17
9E08056-CALA	8000	396249	1.035	4.16

AVE RF **0.999** RF RSD **8.42** AVE RT **4.17**

Pyridine

Curve Fit: **AVERAGE RF**

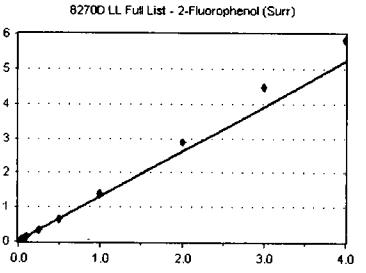


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1594	1.392	4.24
9E08056-CAL2	50	4118	1.406	4.22
9E08056-CAL3	100	7898	1.367	4.22
9E08056-CAL4	200	17242	1.433	4.19
9E08056-CAL5	500	44836	1.518	4.20
9E08056-CAL6	1000	85720	1.469	4.18
9E08056-CAL7	2000	164460	1.537	4.18
9E08056-CAL8	4000	337112	1.706	4.17
9E08056-CAL9	6000	496772	1.705	4.18
9E08056-CALA	8000	659225	1.722	4.16

AVE RF **1.526** RF RSD **9.08** AVE RT **4.19**

2-Fluorophenol (Surr)

Curve Fit: **AVERAGE RF**

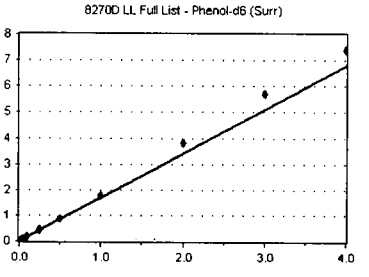


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1296	1.132	5.47
9E08056-CAL2	50	3106	1.060	5.47
9E08056-CAL3	100	7013	1.214	5.47
9E08056-CAL4	200	14997	1.247	5.47
9E08056-CAL5	500	39110	1.324	5.47
9E08056-CAL6	1000	76115	1.305	5.47
9E08056-CAL7	2000	148818	1.391	5.47
9E08056-CAL8	4000	284613	1.440	5.47
9E08056-CAL9	6000	435036	1.493	5.47
9E08056-CALA	8000	560056	1.463	5.47

AVE RF **1.307** RF RSD **11.06** AVE RT **5.47**

Phenol-d6 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1675	1.463	6.35
9E08056-CAL2	50	4324	1.476	6.34
9E08056-CAL3	100	9148	1.583	6.34
9E08056-CAL4	200	19650	1.634	6.34
9E08056-CAL5	500	50799	1.720	6.34
9E08056-CAL6	1000	98894	1.695	6.34
9E08056-CAL7	2000	191806	1.792	6.34
9E08056-CAL8	4000	374178	1.894	6.35
9E08056-CAL9	6000	554225	1.902	6.35
9E08056-CALA	8000	706999	1.847	6.36

AVE RF **1.701** RF RSD **9.47** AVE RT **6.34**

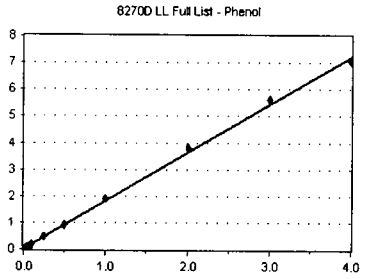
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Phenol

Curve Fit: **AVERAGE RF**

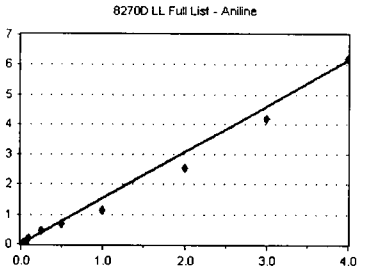


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1840	1.607	6.35
9E08056-CAL2	50	4928	1.682	6.35
9E08056-CAL3	100	10314	1.785	6.35
9E08056-CAL4	200	21991	1.828	6.35
9E08056-CAL5	500	56392	1.909	6.35
9E08056-CAL6	1000	107531	1.843	6.35
9E08056-CAL7	2000	203006	1.897	6.35
9E08056-CAL8	4000	375248	1.899	6.36
9E08056-CAL9	6000	546989	1.877	6.37
9E08056-CALA	8000	672921	1.758	6.38

AVE RF **1.809** RF RSD **5.59** AVE RT **6.36**

Aniline

Curve Fit: **AVERAGE RF**

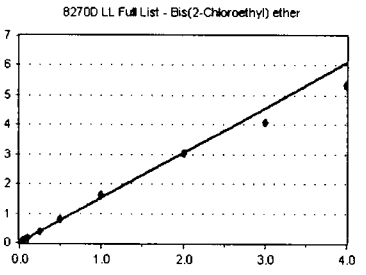


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~2217~~	~~1.936~~	~~6.39~~
9E08056-CAL2	50	5080	1.734	6.38
9E08056-CAL3	100	10637	1.841	6.38
9E08056-CAL4	200	21214	1.764	6.38
9E08056-CAL5	500	52964	1.793	6.38
9E08056-CAL6	1000	81018	1.389	6.38
9E08056-CAL7	2000	119883	1.120	6.38
9E08056-CAL8	4000	249012	1.260	6.39
9E08056-CAL9	6000	406652	1.396	6.39
9E08056-CALA	8000	595081	1.555	6.39

AVE RF **1.539** RF RSD **16.90** AVE RT **6.38**

Bis(2-Chloroethyl) ether

Curve Fit: **AVERAGE RF**

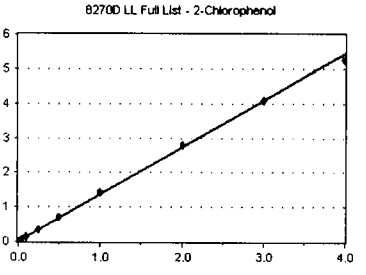


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1922	1.679	6.43
9E08056-CAL2	50	4474	1.527	6.43
9E08056-CAL3	100	8939	1.547	6.43
9E08056-CAL4	200	18736	1.558	6.43
9E08056-CAL5	500	45269	1.533	6.43
9E08056-CAL6	1000	91455	1.567	6.44
9E08056-CAL7	2000	172619	1.613	6.44
9E08056-CAL8	4000	297917	1.508	6.44
9E08056-CAL9	6000	395115	1.356	6.45
9E08056-CALA	8000	510517	1.334	6.45

AVE RF **1.522** RF RSD **6.93** AVE RT **6.44**

2-Chlorophenol

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1505	1.315	6.50
9E08056-CAL2	50	3771	1.287	6.50
9E08056-CAL3	100	7863	1.361	6.50
9E08056-CAL4	200	16450	1.368	6.50
9E08056-CAL5	500	42307	1.433	6.50
9E08056-CAL6	1000	81650	1.399	6.50
9E08056-CAL7	2000	152301	1.423	6.50
9E08056-CAL8	4000	275296	1.393	6.50
9E08056-CAL9	6000	397555	1.364	6.50
9E08056-CALA	8000	503387	1.315	6.50

AVE RF **1.366** RF RSD **3.54** AVE RT **6.50**

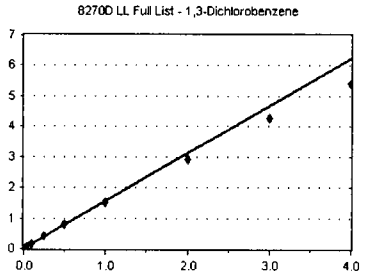
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

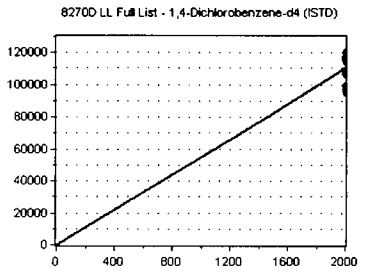


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2020	1.764	6.64
9E08056-CAL2	50	4617	1.576	6.64
9E08056-CAL3	100	9757	1.689	6.64
9E08056-CAL4	200	19525	1.623	6.64
9E08056-CAL5	500	48498	1.642	6.64
9E08056-CAL6	1000	91509	1.568	6.64
9E08056-CAL7	2000	163909	1.532	6.64
9E08056-CAL8	4000	287179	1.453	6.65
9E08056-CAL9	6000	414202	1.421	6.65
9E08056-CALA	8000	517626	1.352	6.65

AVE RF **1.562** RF RSD **8.09** AVE RT **6.64**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

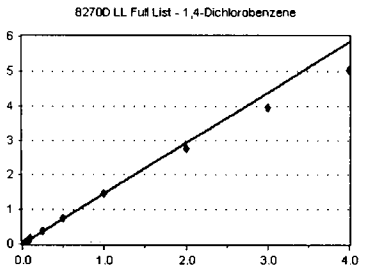


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	114486	57.243	6.70
9E08056-CAL2	2000	117186	58.593	6.69
9E08056-CAL3	2000	115550	57.775	6.69
9E08056-CAL4	2000	120284	60.142	6.69
9E08056-CAL5	2000	118130	59.065	6.70
9E08056-CAL6	2000	116694	58.347	6.70
9E08056-CAL7	2000	107016	53.508	6.70
9E08056-CAL8	2000	98792	49.396	6.70
9E08056-CAL9	2000	97132	48.566	6.70
9E08056-CALA	2000	95689	47.844	6.70

AVE RF **55.048** RF RSD **8.69** AVE RT **6.70**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

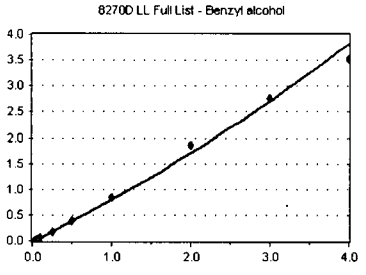


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1733	1.514	6.71
9E08056-CAL2	50	4532	1.547	6.71
9E08056-CAL3	100	8776	1.519	6.71
9E08056-CAL4	200	18751	1.559	6.71
9E08056-CAL5	500	45970	1.557	6.71
9E08056-CAL6	1000	87432	1.498	6.71
9E08056-CAL7	2000	154653	1.445	6.71
9E08056-CAL8	4000	272704	1.380	6.72
9E08056-CAL9	6000	384033	1.318	6.72
9E08056-CALA	8000	480345	1.255	6.72

AVE RF **1.459** RF RSD **7.34** AVE RT **6.71**

Benzyl alcohol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~394~~	~~0.344~~	~~6.83~~
9E08056-CAL2	50	1234	0.421	6.83
9E08056-CAL3	100	2898	0.502	6.83
9E08056-CAL4	200	6970	0.579	6.82
9E08056-CAL5	500	21295	0.721	6.83
9E08056-CAL6	1000	45805	0.785	6.83
9E08056-CAL7	2000	91265	0.853	6.83
9E08056-CAL8	4000	184713	0.935	6.84
9E08056-CAL9	6000	269444	0.925	6.84
9E08056-CALA	8000	337977	0.883	6.85

AVE RF **0.734** RF RSD **26.02** AVE RT **6.83**

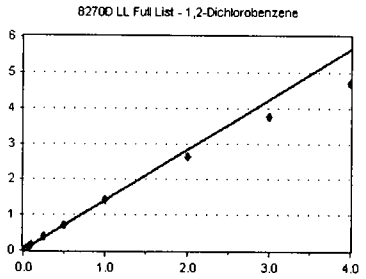
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

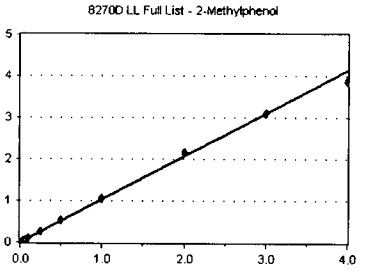


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1593	1.391	6.86
9E08056-CAL2	50	4338	1.481	6.86
9E08056-CAL3	100	8854	1.532	6.86
9E08056-CAL4	200	18424	1.532	6.86
9E08056-CAL5	500	45584	1.544	6.86
9E08056-CAL6	1000	84135	1.442	6.86
9E08056-CAL7	2000	151209	1.413	6.86
9E08056-CAL8	4000	259626	1.314	6.87
9E08056-CAL9	6000	366398	1.257	6.87
9E08056-CALA	8000	448803	1.173	6.87

AVE RF **1.408** RF RSD **8.95** AVE RT **6.86**

2-Methylphenol

Curve Fit: **AVERAGE RF**

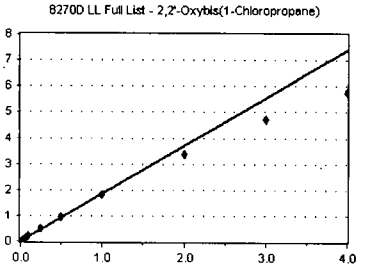


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1153	1.007	6.94
9E08056-CAL2	50	2679	0.914	6.93
9E08056-CAL3	100	6386	1.105	6.93
9E08056-CAL4	200	12165	1.011	6.93
9E08056-CAL5	500	33013	1.118	6.93
9E08056-CAL6	1000	61935	1.061	6.93
9E08056-CAL7	2000	113843	1.064	6.93
9E08056-CAL8	4000	213032	1.078	6.94
9E08056-CAL9	6000	301798	1.036	6.94
9E08056-CALA	8000	369236	0.965	6.94

AVE RF **1.036** RF RSD **6.11** AVE RT **6.93**

2,2'-Oxybis(1-Chloropropane)

Curve Fit: **AVERAGE RF**

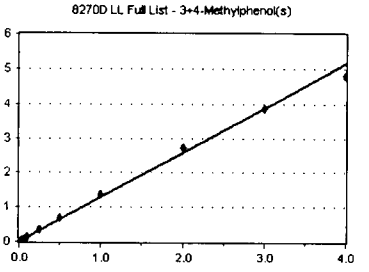


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2282	1.993	6.95
9E08056-CAL2	50	5842	1.994	6.95
9E08056-CAL3	100	12268	2.123	6.95
9E08056-CAL4	200	24389	2.028	6.95
9E08056-CAL5	500	59332	2.009	6.95
9E08056-CAL6	1000	109743	1.881	6.95
9E08056-CAL7	2000	195754	1.829	6.95
9E08056-CAL8	4000	331551	1.678	6.96
9E08056-CAL9	6000	456599	1.567	6.96
9E08056-CALA	8000	549922	1.437	6.96

AVE RF **1.854** RF RSD **12.12** AVE RT **6.95**

3+4-Methylphenol(s)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1360	1.188	7.08
9E08056-CAL2	50	3346	1.142	7.08
9E08056-CAL3	100	7451	1.290	7.08
9E08056-CAL4	200	15823	1.315	7.08
9E08056-CAL5	500	41496	1.405	7.08
9E08056-CAL6	1000	78741	1.350	7.08
9E08056-CAL7	2000	144919	1.354	7.08
9E08056-CAL8	4000	268146	1.357	7.09
9E08056-CAL9	6000	373641	1.282	7.10
9E08056-CALA	8000	458606	1.198	7.10

AVE RF **1.288** RF RSD **6.69** AVE RT **7.08**

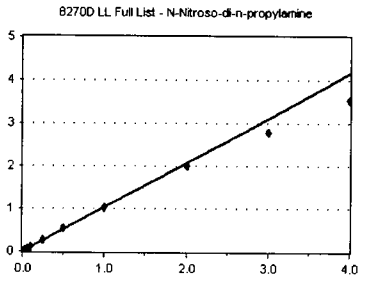
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

N-Nitroso-di-n-propylamine

Curve Fit: **AVERAGE RF**

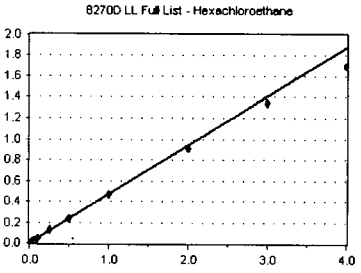


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1232	1.076	7.08
9E08056-CAL2	50	3144	1.073	7.08
9E08056-CAL3	100	6313	1.093	7.08
9E08056-CAL4	200	13250	1.102	7.08
9E08056-CAL5	500	33065	1.120	7.08
9E08056-CAL6	1000	62234	1.067	7.08
9E08056-CAL7	2000	111051	1.038	7.08
9E08056-CAL8	4000	197390	0.999	7.09
9E08056-CAL9	6000	270883	0.930	7.10
9E08056-CALA	8000	339637	0.887	7.11

AVE RF **1.038** RF RSD **7.40** AVE RT **7.09**

Hexachloroethane

Curve Fit: **AVERAGE RF**

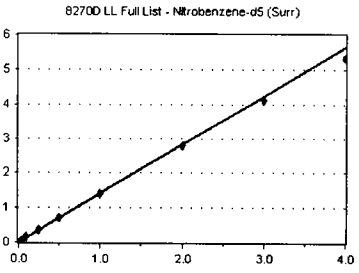


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	565	0.494	7.19
9E08056-CAL2	50	1408	0.481	7.19
9E08056-CAL3	100	2779	0.481	7.19
9E08056-CAL4	200	5764	0.479	7.19
9E08056-CAL5	500	14906	0.505	7.19
9E08056-CAL6	1000	27533	0.472	7.19
9E08056-CAL7	2000	49920	0.466	7.19
9E08056-CAL8	4000	89376	0.452	7.20
9E08056-CAL9	6000	130625	0.448	7.20
9E08056-CALA	8000	161926	0.423	7.20

AVE RF **0.470** RF RSD **5.05** AVE RT **7.20**

Nitrobenzene-d5 (Surr)

Curve Fit: **AVERAGE RF**

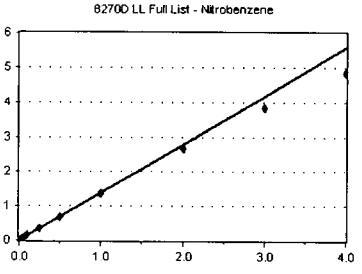


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1778	1.553	7.23
9E08056-CAL2	50	4032	1.376	7.23
9E08056-CAL3	100	8175	1.415	7.23
9E08056-CAL4	200	17627	1.465	7.23
9E08056-CAL5	500	42745	1.447	7.23
9E08056-CAL6	1000	81436	1.396	7.23
9E08056-CAL7	2000	149113	1.393	7.23
9E08056-CAL8	4000	275454	1.394	7.24
9E08056-CAL9	6000	400998	1.376	7.24
9E08056-CALA	8000	507577	1.326	7.25

AVE RF **1.414** RF RSD **4.40** AVE RT **7.23**

Nitrobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1693	1.479	7.25
9E08056-CAL2	50	4129	1.409	7.25
9E08056-CAL3	100	8591	1.487	7.25
9E08056-CAL4	200	18273	1.519	7.25
9E08056-CAL5	500	43153	1.461	7.25
9E08056-CAL6	1000	81129	1.390	7.25
9E08056-CAL7	2000	144892	1.354	7.25
9E08056-CAL8	4000	262312	1.328	7.26
9E08056-CAL9	6000	371635	1.275	7.26
9E08056-CALA	8000	462505	1.208	7.27

AVE RF **1.391** RF RSD **7.22** AVE RT **7.25**

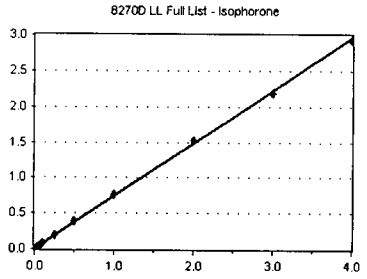
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Isophorone

Curve Fit: **AVERAGE RF**

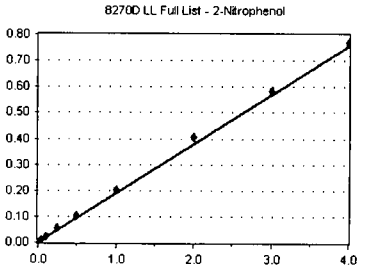


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3108	0.673	7.48
9E08056-CAL2	50	8299	0.711	7.48
9E08056-CAL3	100	16536	0.716	7.48
9E08056-CAL4	200	35486	0.756	7.48
9E08056-CAL5	500	89488	0.796	7.48
9E08056-CAL6	1000	169224	0.778	7.48
9E08056-CAL7	2000	306230	0.757	7.48
9E08056-CAL8	4000	573921	0.759	7.49
9E08056-CAL9	6000	838709	0.728	7.50
9E08056-CALA	8000	1078748	0.732	7.51

AVE RF **0.741** RF RSD **4.84** AVE RT **7.49**

2-Nitrophenol

Curve Fit: **AVERAGE RF**

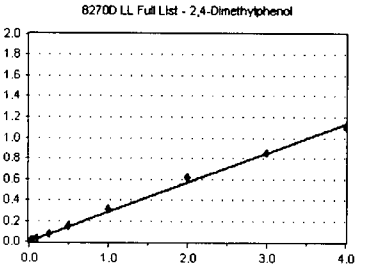


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	652	0.141	7.56
9E08056-CAL2	50	1851	0.159	7.56
9E08056-CAL3	100	3972	0.172	7.56
9E08056-CAL4	200	9275	0.198	7.56
9E08056-CAL5	500	25491	0.227	7.56
9E08056-CAL6	1000	44264	0.203	7.56
9E08056-CAL7	2000	81543	0.201	7.56
9E08056-CAL8	4000	153577	0.203	7.57
9E08056-CAL9	6000	224039	0.195	7.57
9E08056-CALA	8000	283482	0.192	7.57

AVE RF **0.189** RF RSD **13.19** AVE RT **7.57**

2,4-Dimethylphenol

Curve Fit: **AVERAGE RF**

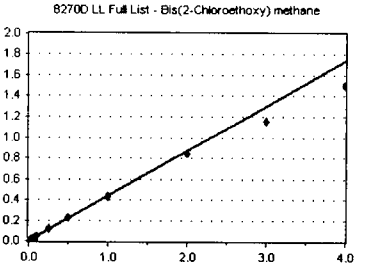


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~1035~~	~~0.224~~	~~7.60~~
9E08056-CAL2	50	2552	0.219	7.60
9E08056-CAL3	100	6013	0.260	7.60
9E08056-CAL4	200	13165	0.280	7.60
9E08056-CAL5	500	33821	0.301	7.60
9E08056-CAL6	1000	67530	0.310	7.60
9E08056-CAL7	2000	125958	0.311	7.60
9E08056-CAL8	4000	231859	0.307	7.61
9E08056-CAL9	6000	328729	0.286	7.62
9E08056-CALA	8000	412108	0.280	7.62

AVE RF **0.284** RF RSD **10.49** AVE RT **7.60**

Bis(2-Chloroethoxy) methane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1890	0.409	7.69
9E08056-CAL2	50	5405	0.463	7.68
9E08056-CAL3	100	11079	0.480	7.69
9E08056-CAL4	200	21622	0.460	7.68
9E08056-CAL5	500	53158	0.473	7.69
9E08056-CAL6	1000	98157	0.451	7.69
9E08056-CAL7	2000	173377	0.428	7.69
9E08056-CAL8	4000	317226	0.419	7.70
9E08056-CAL9	6000	444685	0.386	7.70
9E08056-CALA	8000	553975	0.376	7.70

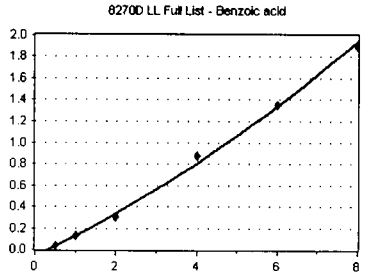
AVE RF **0.435** RF RSD **8.40** AVE RT **7.69**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Benzoic acid

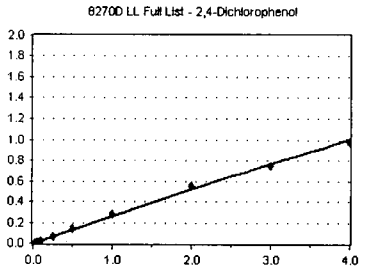


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~40~~	~~0~~	~~0.000~~	~~0.00~~
~~9E08056-CAL2~~	~~100~~	~~157~~	~~6.729~~	~~7.68~~
~~9E08056-CAL3~~	~~200~~	~~570~~	~~1.234~~	~~7.65~~
~~9E08056-CAL4~~	~~400~~	~~1808~~	~~1.925~~	~~7.65~~
9E08056-CAL5	1000	12609	5.611	7.67
9E08056-CAL6	2000	57591	0.132	7.70
9E08056-CAL7	4000	120684	0.149	7.72
9E08056-CAL8	8000	329662	0.218	7.78
9E08056-CAL9	12000	520098	0.226	7.80
9E08056-CALA	16000	699436	0.237	7.85

AVE RF **0.170** RF RSD **41.46** AVE RT **7.76**

2,4-Dichlorophenol

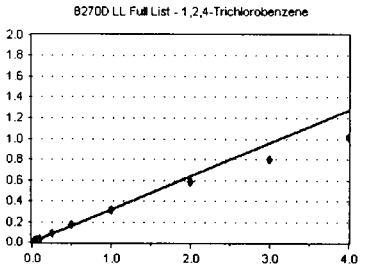


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~685~~	~~0.148~~	~~7.81~~
9E08056-CAL2	50	1767	0.151	7.80
9E08056-CAL3	100	4504	0.195	7.80
9E08056-CAL4	200	10432	0.222	7.80
9E08056-CAL5	500	28435	0.253	7.80
9E08056-CAL6	1000	59077	0.272	7.80
9E08056-CAL7	2000	112156	0.277	7.81
9E08056-CAL8	4000	210069	0.278	7.82
9E08056-CAL9	6000	285851	0.248	7.82
9E08056-CALA	8000	358983	0.244	7.83

AVE RF **0.238** RF RSD **17.71** AVE RT **7.81**

1,2,4-Trichlorobenzene

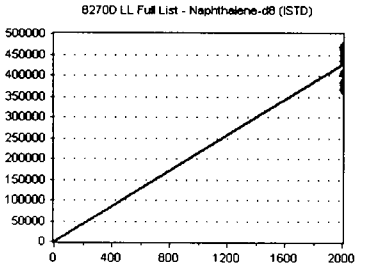


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1529	0.331	7.89
9E08056-CAL2	50	3994	0.342	7.89
9E08056-CAL3	100	8177	0.354	7.89
9E08056-CAL4	200	16423	0.350	7.89
9E08056-CAL5	500	39463	0.351	7.89
9E08056-CAL6	1000	73101	0.336	7.89
9E08056-CAL7	2000	127703	0.315	7.89
9E08056-CAL8	4000	222596	0.294	7.90
9E08056-CAL9	6000	308537	0.268	7.90
9E08056-CALA	8000	375837	0.255	7.90

AVE RF **0.320** RF RSD **11.19** AVE RT **7.89**

Naphthalene-d8 (ISTD)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	461650	230.825	7.95
9E08056-CAL2	2000	466642	233.321	7.94
9E08056-CAL3	2000	461862	230.931	7.94
9E08056-CAL4	2000	469577	234.788	7.94
9E08056-CAL5	2000	449407	224.703	7.95
9E08056-CAL6	2000	435111	217.555	7.95
9E08056-CAL7	2000	404790	202.395	7.95
9E08056-CAL8	2000	378186	189.093	7.95
9E08056-CAL9	2000	383773	191.887	7.95
9E08056-CALA	2000	368532	184.266	7.95

AVE RF **213.977** RF RSD **9.39** AVE RT **7.95**

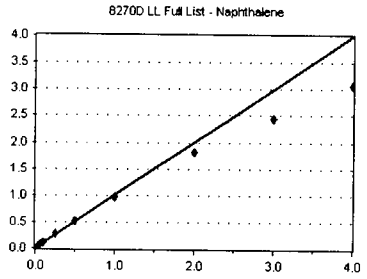
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Naphthalene

Curve Fit: **AVERAGE RF**

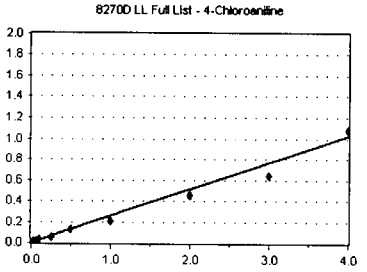


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4931	1.068	7.97
9E08056-CAL2	50	12776	1.095	7.96
9E08056-CAL3	100	25557	1.107	7.96
9E08056-CAL4	200	51599	1.099	7.96
9E08056-CAL5	500	121753	1.084	7.96
9E08056-CAL6	1000	228023	1.048	7.97
9E08056-CAL7	2000	397624	0.982	7.97
9E08056-CAL8	4000	687088	0.908	7.98
9E08056-CAL9	6000	939298	0.816	7.98
9E08056-CALA	8000	1132611	0.768	7.98

AVE RF **0.998** RF RSD **12.52** AVE RT **7.97**

4-Chloroaniline

Curve Fit: **AVERAGE RF**

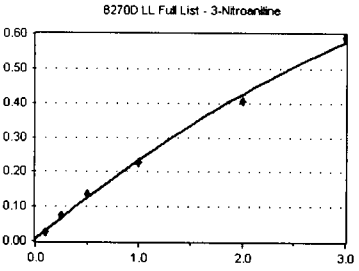


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1367	0.296	8.01
9E08056-CAL2	50	3426	0.294	8.01
9E08056-CAL3	100	6574	0.285	8.01
9E08056-CAL4	200	12811	0.273	8.01
9E08056-CAL5	500	25718	0.229	8.02
9E08056-CAL6	1000	57359	0.264	8.02
9E08056-CAL7	2000	84586	0.209	8.03
9E08056-CAL8	4000	170567	0.226	8.05
9E08056-CAL9	6000	243860	0.212	8.05
9E08056-CALA	8000	398347	0.270	8.04

AVE RF **0.256** RF RSD **13.18** AVE RT **8.03**

3-Nitroaniline

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

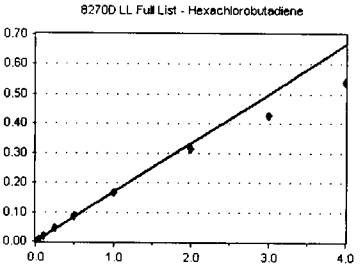


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~279~~	~~0.121~~	~~9.67~~
~~9E08056-CAL2~~	~~50~~	~~912~~	~~0.155~~	~~9.66~~
~~9E08056-CAL3~~	~~100~~	~~2267~~	~~0.190~~	~~9.65~~
9E08056-CAL4	200	6297	0.257	9.66
9E08056-CAL5	500	17372	0.298	9.66
9E08056-CAL6	1000	30789	0.274	9.67
9E08056-CAL7	2000	46893	0.225	9.67
9E08056-CAL8	4000	82018	0.202	9.68
9E08056-CAL9	6000	118898	0.197	0.00
~~9E08056-CALA~~	~~8000~~	~~173485~~	~~0.223~~	~~0.00~~

AVE RF **0.242** RF RSD **16.76** AVE RT **8.05**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	856	0.185	8.09
9E08056-CAL2	50	2007	0.172	8.09
9E08056-CAL3	100	4053	0.176	8.09
9E08056-CAL4	200	8220	0.175	8.09
9E08056-CAL5	500	20186	0.180	8.09
9E08056-CAL6	1000	37131	0.171	8.10
9E08056-CAL7	2000	67587	0.167	8.10
9E08056-CAL8	4000	118434	0.157	8.10
9E08056-CAL9	6000	164363	0.143	8.10
9E08056-CALA	8000	199760	0.136	8.10

AVE RF **0.166** RF RSD **9.74** AVE RT **8.10**

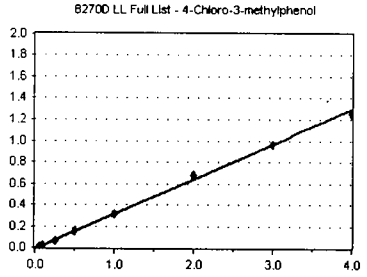
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

4-Chloro-3-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

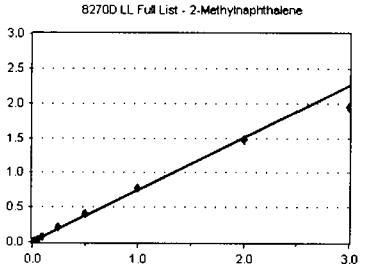


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~518~~	~~0.112~~	~~8.50~~
~~9E08056-CAL2~~	~~50~~	~~1435~~	~~0.123~~	~~8.50~~
9E08056-CAL3	100	2916	0.126	8.50
9E08056-CAL4	200	9012	0.192	8.49
9E08056-CAL5	500	29879	0.266	8.49
9E08056-CAL6	1000	67094	0.308	8.49
9E08056-CAL7	2000	128769	0.318	8.50
9E08056-CAL8	4000	257664	0.341	8.51
9E08056-CAL9	6000	368355	0.320	8.51
9E08056-CALA	8000	462055	0.313	8.51

AVE RF **0.273** RF RSD **27.63** AVE RT **8.50**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

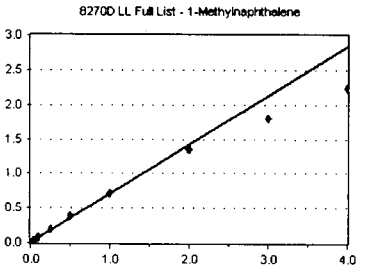


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3206	0.694	8.66
9E08056-CAL2	50	8403	0.720	8.66
9E08056-CAL3	100	17636	0.764	8.66
9E08056-CAL4	200	36961	0.787	8.66
9E08056-CAL5	500	94207	0.839	8.66
9E08056-CAL6	1000	177224	0.815	8.66
9E08056-CAL7	2000	312815	0.773	8.66
9E08056-CAL8	4000	555825	0.735	8.67
9E08056-CAL9	6000	744774	0.647	8.67
~~9E08056-CALA~~	~~8000~~	~~907754~~	~~0.616~~	~~8.67~~

AVE RF **0.753** RF RSD **7.98** AVE RT **8.66**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**

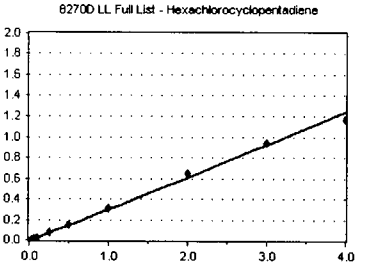


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3306	0.716	8.76
9E08056-CAL2	50	8435	0.723	8.76
9E08056-CAL3	100	17565	0.761	8.76
9E08056-CAL4	200	36346	0.774	8.76
9E08056-CAL5	500	90038	0.801	8.76
9E08056-CAL6	1000	166590	0.766	8.76
9E08056-CAL7	2000	290157	0.717	8.76
9E08056-CAL8	4000	506152	0.669	8.77
9E08056-CAL9	6000	691750	0.601	8.77
9E08056-CALA	8000	826000	0.560	8.77

AVE RF **0.709** RF RSD **10.96** AVE RT **8.76**

Hexachlorocyclopentadiene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~56~~	~~2.429~~	~~8.83~~
9E08056-CAL2	50	592	0.101	8.83
9E08056-CAL3	100	1795	0.150	8.83
9E08056-CAL4	200	5324	0.217	8.83
9E08056-CAL5	500	16399	0.281	8.83
9E08056-CAL6	1000	34750	0.309	8.83
9E08056-CAL7	2000	65488	0.315	8.83
9E08056-CAL8	4000	130554	0.322	8.83
9E08056-CAL9	6000	188663	0.313	8.83
9E08056-CALA	8000	228123	0.293	8.83

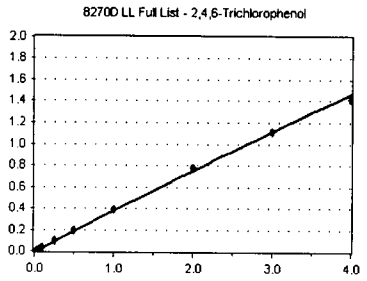
AVE RF **0.256** RF RSD **31.74** AVE RT **8.83**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

2,4,6-Trichlorophenol

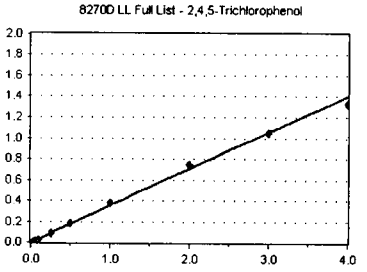


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~344~~	~~0.149~~	~~8.95~~
9E08056-CAL2	50	987	0.168	8.94
9E08056-CAL3	100	2595	0.217	8.94
9E08056-CAL4	200	7125	0.291	8.94
9E08056-CAL5	500	21591	0.370	8.94
9E08056-CAL6	1000	44351	0.395	8.94
9E08056-CAL7	2000	81849	0.393	8.94
9E08056-CAL8	4000	157742	0.389	8.95
9E08056-CAL9	6000	223754	0.371	8.95
9E08056-CALA	8000	275262	0.354	8.95

AVE RF **0.327** RF RSD **25.56** AVE RT **8.95**

2,4,5-Trichlorophenol

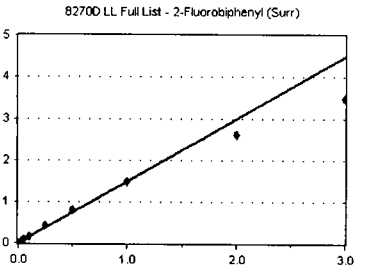


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~415~~	~~0.180~~	~~8.99~~
9E08056-CAL2	50	1083	0.184	8.99
9E08056-CAL3	100	2692	0.225	8.99
9E08056-CAL4	200	6364	0.260	8.99
9E08056-CAL5	500	19810	0.340	8.98
9E08056-CAL6	1000	42377	0.377	8.98
9E08056-CAL7	2000	78891	0.379	8.98
9E08056-CAL8	4000	152327	0.375	8.99
9E08056-CAL9	6000	209851	0.348	8.99
9E08056-CALA	8000	259729	0.334	9.00

AVE RF **0.314** RF RSD **23.08** AVE RT **8.99**

2-Fluorobiphenyl (Surr)

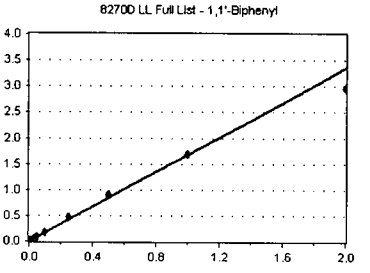


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3096	1.343	9.02
9E08056-CAL2	50	8836	1.502	9.02
9E08056-CAL3	100	19505	1.633	9.02
9E08056-CAL4	200	41740	1.702	9.02
9E08056-CAL5	500	100779	1.729	9.02
9E08056-CAL6	1000	182200	1.621	9.02
9E08056-CAL7	2000	311047	1.495	9.02
9E08056-CAL8	4000	532909	1.313	9.03
9E08056-CAL9	6000	698194	1.158	9.03
~~9E08056-CALA~~	~~8000~~	~~835510~~	~~1.073~~	~~9.03~~

AVE RF **1.500** RF RSD **12.96** AVE RT **9.02**

1,1'-Biphenyl



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3301	1.432	9.13
9E08056-CAL2	50	9087	1.545	9.13
9E08056-CAL3	100	20138	1.686	9.13
9E08056-CAL4	200	44415	1.812	9.13
9E08056-CAL5	500	111947	1.920	9.13
9E08056-CAL6	1000	204461	1.819	9.13
9E08056-CAL7	2000	349335	1.679	9.13
9E08056-CAL8	4000	599715	1.478	9.14
~~9E08056-CAL9~~	~~6000~~	~~789288~~	~~1.309~~	~~9.14~~
~~9E08056-CALA~~	~~8000~~	~~939145~~	~~1.207~~	~~9.14~~

AVE RF **1.671** RF RSD **10.48** AVE RT **9.13**

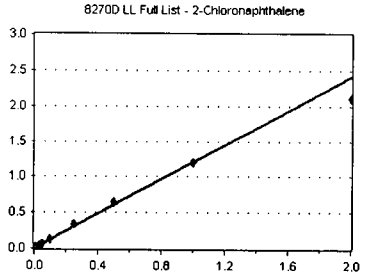
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

2-Chloronaphthalene

Curve Fit: **AVERAGE RF**

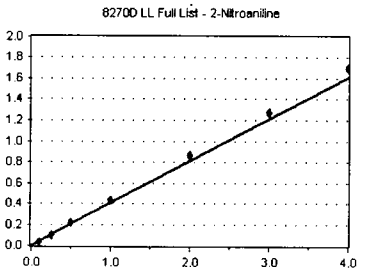


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2457	1.066	9.15
9E08056-CAL2	50	6592	1.120	9.15
9E08056-CAL3	100	14570	1.220	9.15
9E08056-CAL4	200	32196	1.313	9.15
9E08056-CAL5	500	80038	1.373	9.15
9E08056-CAL6	1000	145871	1.298	9.15
9E08056-CAL7	2000	248276	1.193	9.15
9E08056-CAL8	4000	426263	1.050	9.16
~~9E08056-CAL9~~	~~6000~~	~~576153~~	~~0.956~~	~~9.16~~
~~9E08056-CALA~~	~~8000~~	~~683312~~	~~0.878~~	~~9.16~~

AVE RF **1.204** RF RSD **9.89** AVE RT **9.15**

2-Nitroaniline

Curve Fit: **AVERAGE RF**

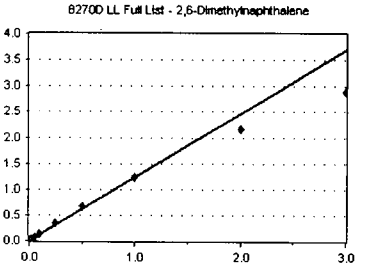


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~198~~	~~8.587~~	~~9.25~~
~~9E08056-CAL2~~	~~50~~	~~759~~	~~0.129~~	~~9.25~~
~~9E08056-CAL3~~	~~100~~	~~1934~~	~~0.162~~	~~9.25~~
9E08056-CAL4	200	7039	0.287	9.25
9E08056-CAL5	500	22855	0.392	9.24
9E08056-CAL6	1000	48960	0.436	9.25
9E08056-CAL7	2000	89274	0.429	9.25
9E08056-CAL8	4000	175844	0.433	9.26
9E08056-CAL9	6000	257132	0.427	9.26
9E08056-CALA	8000	330555	0.425	9.27

AVE RF **0.404** RF RSD **13.26** AVE RT **9.25**

2,6-Dimethylnaphthalene

Curve Fit: **AVERAGE RF**

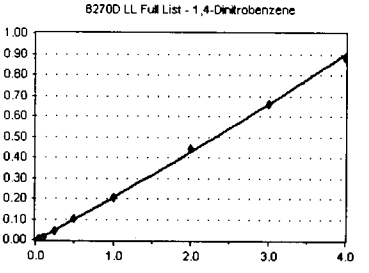


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2570	1.115	9.29
9E08056-CAL2	50	7150	1.215	9.29
9E08056-CAL3	100	15688	1.314	9.29
9E08056-CAL4	200	34391	1.403	9.29
9E08056-CAL5	500	82179	1.410	9.29
9E08056-CAL6	1000	150715	1.341	9.29
9E08056-CAL7	2000	257201	1.236	9.29
9E08056-CAL8	4000	440208	1.085	9.30
9E08056-CAL9	6000	582020	0.966	9.30
~~9E08056-CALA~~	~~8000~~	~~693134~~	~~0.890~~	~~9.30~~

AVE RF **1.231** RF RSD **12.38** AVE RT **9.29**

1,4-Dinitrobenzene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~116~~	~~5.031~~	~~9.38~~
~~9E08056-CAL2~~	~~50~~	~~303~~	~~5.150~~	~~9.38~~
9E08056-CAL3	100	955	7.996	9.37
9E08056-CAL4	200	3037	0.124	9.37
9E08056-CAL5	500	10337	0.177	9.37
9E08056-CAL6	1000	23019	0.205	9.38
9E08056-CAL7	2000	42957	0.206	9.38
9E08056-CAL8	4000	89593	0.221	9.39
9E08056-CAL9	6000	132868	0.220	9.39
9E08056-CALA	8000	171694	0.221	9.40

AVE RF **0.182** RF RSD **28.96** AVE RT **9.38**

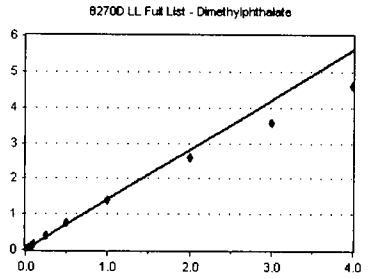
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Dimethylphthalate

Curve Fit: **AVERAGE RF**

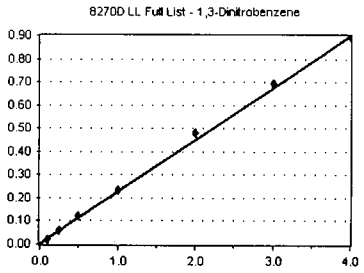


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3008	1.305	9.42
9E08056-CAL2	50	8669	1.473	9.42
9E08056-CAL3	100	18418	1.542	9.42
9E08056-CAL4	200	38348	1.564	9.42
9E08056-CAL5	500	91807	1.575	9.42
9E08056-CAL6	1000	167550	1.490	9.43
9E08056-CAL7	2000	291628	1.402	9.43
9E08056-CAL8	4000	526270	1.297	9.44
9E08056-CAL9	6000	719060	1.193	9.45
9E08056-CALA	8000	895747	1.151	9.46

AVE RF **1.399** RF RSD **11.07** AVE RT **9.43**

1,3-Dinitrobenzene

Curve Fit: **AVERAGE RF**

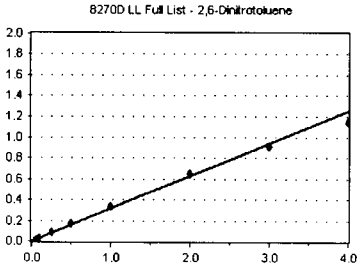


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~110~~	~~0.048~~	~~9.46~~
~~9E08056-CAL2~~	~~50~~	~~617~~	~~0.105~~	~~9.45~~
~~9E08056-CAL3~~	~~100~~	~~1664~~	~~0.139~~	~~9.45~~
9E08056-CAL4	200	4229	0.172	9.45
9E08056-CAL5	500	13273	0.228	9.45
9E08056-CAL6	1000	27406	0.244	9.46
9E08056-CAL7	2000	48772	0.234	9.46
9E08056-CAL8	4000	97308	0.240	9.47
9E08056-CAL9	6000	139435	0.231	9.48
9E08056-CALA	8000	173847	0.223	9.49

AVE RF **0.225** RF RSD **10.70** AVE RT **9.47**

2,6-Dinitrotoluene

Curve Fit: **AVERAGE RF**

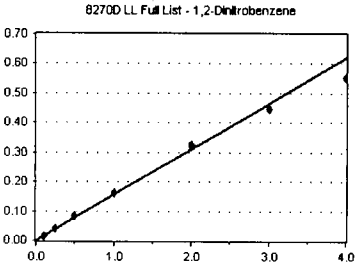


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~309~~	~~0.134~~	~~9.48~~
~~9E08056-CAL2~~	~~50~~	~~1045~~	~~0.178~~	~~9.48~~
9E08056-CAL3	100	2837	0.238	9.48
9E08056-CAL4	200	7570	0.309	9.48
9E08056-CAL5	500	20865	0.358	9.48
9E08056-CAL6	1000	39367	0.350	9.49
9E08056-CAL7	2000	70090	0.337	9.49
9E08056-CAL8	4000	131486	0.324	9.50
9E08056-CAL9	6000	182024	0.302	9.51
9E08056-CALA	8000	222349	0.286	9.51

AVE RF **0.313** RF RSD **12.48** AVE RT **9.49**

1,2-Dinitrobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~108~~	~~4.684~~	~~9.54~~
~~9E08056-CAL2~~	~~50~~	~~519~~	~~0.088~~	~~9.54~~
~~9E08056-CAL3~~	~~100~~	~~1261~~	~~0.106~~	~~9.54~~
9E08056-CAL4	200	3477	0.142	9.54
9E08056-CAL5	500	9375	0.161	9.54
9E08056-CAL6	1000	19142	0.170	9.55
9E08056-CAL7	2000	34100	0.164	9.55
9E08056-CAL8	4000	65816	0.162	9.56
9E08056-CAL9	6000	89987	0.149	9.57
9E08056-CALA	8000	107372	0.138	9.58

AVE RF **0.155** RF RSD **7.87** AVE RT **9.56**

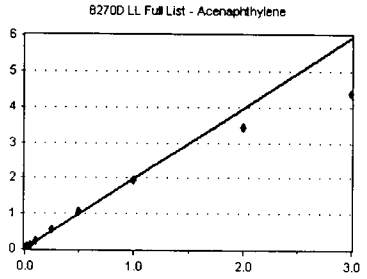
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Acenaphthylene

Curve Fit: **AVERAGE RF**

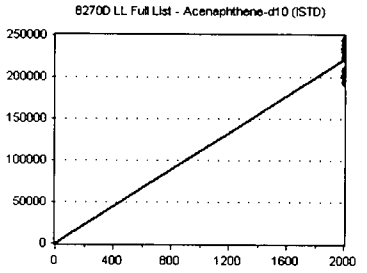


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4296	1.863	9.57
9E08056-CAL2	50	11830	2.011	9.57
9E08056-CAL3	100	26148	2.189	9.57
9E08056-CAL4	200	54704	2.231	9.57
9E08056-CAL5	500	129518	2.222	9.57
9E08056-CAL6	1000	242796	2.160	9.57
9E08056-CAL7	2000	407881	1.961	9.57
9E08056-CAL8	4000	694303	1.711	9.58
9E08056-CAL9	6000	879320	1.459	9.59
~~9E08056-CALA~~	~~8000~~	~~984732~~	~~1.265~~	~~9.59~~

AVE RF **1.978** RF RSD **13.33** AVE RT **9.57**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

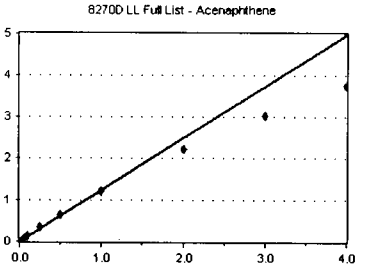


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	230578	115.289	9.71
9E08056-CAL2	2000	235336	117.668	9.71
9E08056-CAL3	2000	238866	119.433	9.71
9E08056-CAL4	2000	245169	122.585	9.71
9E08056-CAL5	2000	233204	116.602	9.71
9E08056-CAL6	2000	224844	112.422	9.72
9E08056-CAL7	2000	208028	104.014	9.72
9E08056-CAL8	2000	202901	101.450	9.72
9E08056-CAL9	2000	200935	100.468	9.72
9E08056-CALA	2000	194593	97.296	9.72

AVE RF **110.723** RF RSD **8.19** AVE RT **9.72**

Acenaphthene

Curve Fit: **AVERAGE RF**

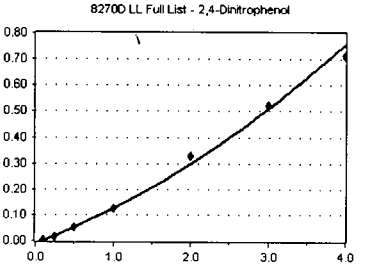


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2971	1.289	9.75
9E08056-CAL2	50	8352	1.420	9.75
9E08056-CAL3	100	16799	1.407	9.75
9E08056-CAL4	200	34142	1.393	9.75
9E08056-CAL5	500	79978	1.372	9.75
9E08056-CAL6	1000	146889	1.307	9.75
9E08056-CAL7	2000	254388	1.223	9.75
9E08056-CAL8	4000	449192	1.107	9.76
9E08056-CAL9	6000	608926	1.010	9.76
9E08056-CALA	8000	730149	0.938	9.76

AVE RF **1.246** RF RSD **13.87** AVE RT **9.75**

2,4-Dinitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
~~9E08056-CAL2~~	~~50~~	~~0~~	~~0.000~~	~~0.00~~
~~9E08056-CAL3~~	~~100~~	~~124~~	~~1.038~~	~~9.77~~
9E08056-CAL4	200	725	2.957	9.77
9E08056-CAL5	500	3835	6.578	9.76
9E08056-CAL6	1000	12133	0.108	9.77
9E08056-CAL7	2000	25811	0.124	9.77
9E08056-CAL8	4000	66685	0.164	9.78
9E08056-CAL9	6000	105311	0.175	9.78
9E08056-CALA	8000	138854	0.178	9.79

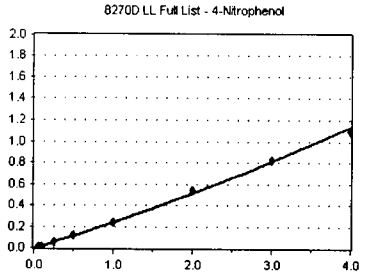
AVE RF **0.121** RF RSD **47.41** AVE RT **9.77**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

4-Nitrophenol

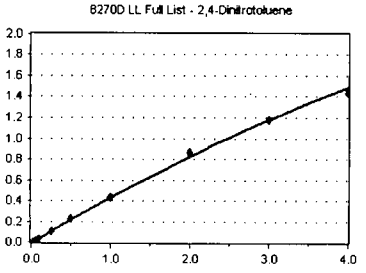


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~173~~	~~7.503~~	~~9.85~~
~~9E08056-CAL2~~	~~50~~	~~405~~	~~6.884~~	~~9.84~~
9E08056-CAL3	100	1299	0.109	9.84
9E08056-CAL4	200	3537	0.144	9.84
9E08056-CAL5	500	11649	0.200	9.83
9E08056-CAL6	1000	26763	0.238	9.83
9E08056-CAL7	2000	48681	0.234	9.84
9E08056-CAL8	4000	110480	0.272	9.85
9E08056-CAL9	6000	165172	0.274	9.85
9E08056-CALA	8000	212171	0.273	9.86

AVE RF **0.218** RF RSD **28.71** AVE RT **9.84**

2,4-Dinitrotoluene

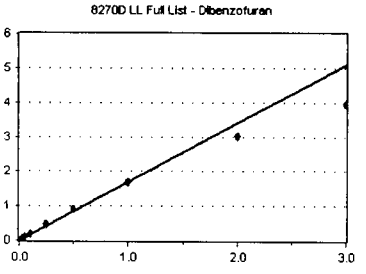


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~414~~	~~0.180~~	~~9.90~~
9E08056-CAL2	50	1084	0.184	9.89
9E08056-CAL3	100	3069	0.257	9.89
9E08056-CAL4	200	8883	0.362	9.90
9E08056-CAL5	500	25345	0.435	9.90
9E08056-CAL6	1000	50363	0.448	9.90
9E08056-CAL7	2000	90563	0.435	9.90
9E08056-CAL8	4000	174398	0.430	9.91
9E08056-CAL9	6000	237610	0.394	9.92
9E08056-CALA	8000	279820	0.359	9.93

AVE RF **0.367** RF RSD **24.75** AVE RT **9.90**

Dibenzofuran

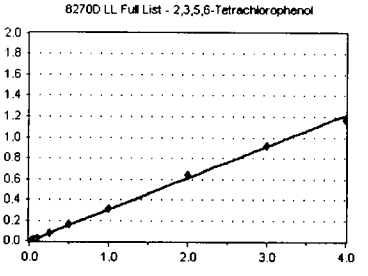


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3412	1.480	9.92
9E08056-CAL2	50	10231	1.739	9.92
9E08056-CAL3	100	21911	1.835	9.92
9E08056-CAL4	200	47089	1.921	9.92
9E08056-CAL5	500	113330	1.944	9.92
9E08056-CAL6	1000	206307	1.835	9.92
9E08056-CAL7	2000	351544	1.690	9.92
9E08056-CAL8	4000	609207	1.501	9.93
9E08056-CAL9	6000	796168	1.321	9.93
~~9E08056-CALA~~	~~8000~~	~~933154~~	~~1.199~~	~~9.94~~

AVE RF **1.696** RF RSD **12.81** AVE RT **9.92**

2,3,5,6-Tetrachlorophenol



Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~213~~	~~9.238~~	~~10.01~~
9E08056-CAL2	50	720	0.122	10.01
9E08056-CAL3	100	1956	0.164	10.00
9E08056-CAL4	200	5912	0.241	10.00
9E08056-CAL5	500	17017	0.292	10.00
9E08056-CAL6	1000	35452	0.315	10.01
9E08056-CAL7	2000	64681	0.311	10.01
9E08056-CAL8	4000	128540	0.317	10.01
9E08056-CAL9	6000	183781	0.305	10.02
9E08056-CALA	8000	227276	0.292	10.02

AVE RF **0.262** RF RSD **27.46** AVE RT **10.01**

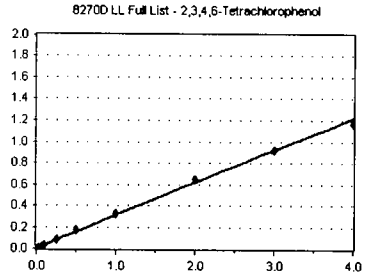
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

2,3,4,6-Tetrachlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

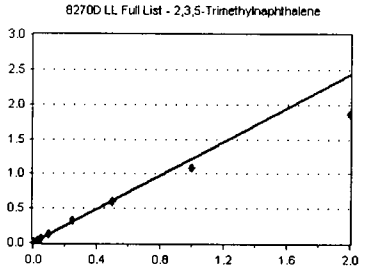


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	352	0.153	10.05
9E08056-CAL2	50	1085	0.184	10.05
9E08056-CAL3	100	3032	0.254	10.05
9E08056-CAL4	200	7180	0.293	10.05
9E08056-CAL5	500	19079	0.327	10.05
9E08056-CAL6	1000	38150	0.339	10.05
9E08056-CAL7	2000	68233	0.328	10.05
9E08056-CAL8	4000	131983	0.325	10.06
9E08056-CAL9	6000	183789	0.305	10.06
9E08056-CALA	8000	226177	0.291	10.07

AVE RF **0.280** RF RSD **22.92** AVE RT **10.05**

2,3,5-Trimethylnaphthalene

Curve Fit: **AVERAGE RF**

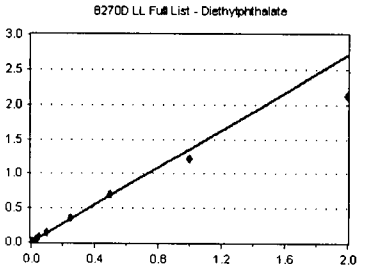


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2925	1.269	10.13
9E08056-CAL2	50	7475	1.271	10.13
9E08056-CAL3	100	15984	1.338	10.13
9E08056-CAL4	200	31957	1.303	10.13
9E08056-CAL5	500	76253	1.308	10.13
9E08056-CAL6	1000	135724	1.207	10.13
9E08056-CAL7	2000	226222	1.087	10.14
9E08056-CAL8	4000	377414	0.930	10.14
~~9E08056-CAL9~~	~~6000~~	~~492303~~	~~0.817~~	~~10.15~~
~~9E08056-CALA~~	~~8000~~	~~595050~~	~~0.764~~	~~10.15~~

AVE RF **1.214** RF RSD **11.44** AVE RT **10.13**

Diethylphthalate

Curve Fit: **AVERAGE RF**

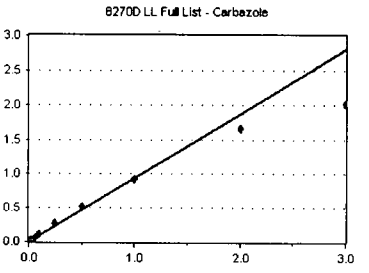


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3091	1.341	10.13
9E08056-CAL2	50	8249	1.402	10.13
9E08056-CAL3	100	17729	1.484	10.13
9E08056-CAL4	200	36994	1.509	10.13
9E08056-CAL5	500	84929	1.457	10.14
9E08056-CAL6	1000	154986	1.379	10.14
9E08056-CAL7	2000	252775	1.215	10.14
9E08056-CAL8	4000	430062	1.060	10.15
~~9E08056-CAL9~~	~~6000~~	~~560826~~	~~0.930~~	~~10.16~~
~~9E08056-CALA~~	~~8000~~	~~666758~~	~~0.857~~	~~10.16~~

AVE RF **1.356** RF RSD **11.17** AVE RT **10.14**

Carbazole

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3928	0.881	11.46
9E08056-CAL2	50	10615	0.949	11.45
9E08056-CAL3	100	22432	1.015	11.45
9E08056-CAL4	200	48320	1.061	11.45
9E08056-CAL5	500	116650	1.074	11.45
9E08056-CAL6	1000	218760	1.029	11.46
9E08056-CAL7	2000	364563	0.920	11.46
9E08056-CAL8	4000	666936	0.824	11.46
9E08056-CAL9	6000	822554	0.671	0.00
~~9E08056-CALA~~	~~8000~~	~~892838~~	~~0.563~~	~~0.00~~

AVE RF **0.936** RF RSD **13.91** AVE RT **10.18**

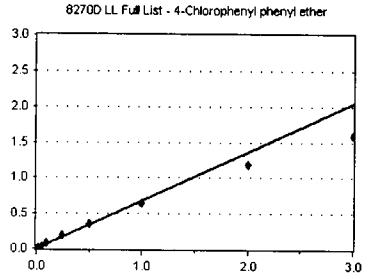
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

4-Chlorophenyl phenyl ether

Curve Fit: **AVERAGE RF**

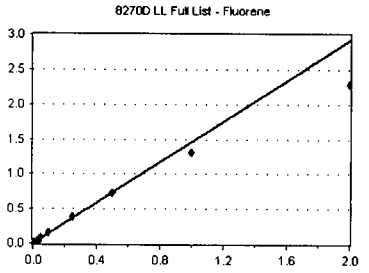


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1452	0.630	10.26
9E08056-CAL2	50	4291	0.729	10.26
9E08056-CAL3	100	9040	0.757	10.26
9E08056-CAL4	200	19218	0.784	10.26
9E08056-CAL5	500	44439	0.762	10.26
9E08056-CAL6	1000	79614	0.708	10.26
9E08056-CAL7	2000	136404	0.656	10.26
9E08056-CAL8	4000	239379	0.590	10.27
9E08056-CAL9	6000	319658	0.530	10.27
~~9E08056-CALA~~	~~8000~~	~~378804~~	~~0.487~~	~~10.28~~

AVE RF **0.683** RF RSD **12.71** AVE RT **10.26**

Fluorene

Curve Fit: **AVERAGE RF**

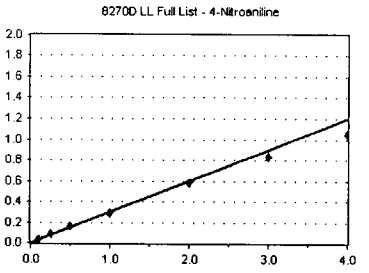


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3504	1.520	10.27
9E08056-CAL2	50	8897	1.512	10.26
9E08056-CAL3	100	19156	1.604	10.26
9E08056-CAL4	200	38831	1.584	10.27
9E08056-CAL5	500	91858	1.576	10.27
9E08056-CAL6	1000	163031	1.450	10.27
9E08056-CAL7	2000	271787	1.306	10.28
9E08056-CAL8	4000	463326	1.142	10.28
~~9E08056-CAL9~~	~~6000~~	~~605832~~	~~1.005~~	~~10.29~~
~~9E08056-CALA~~	~~8000~~	~~722035~~	~~0.928~~	~~10.29~~

AVE RF **1.462** RF RSD **10.99** AVE RT **10.27**

4-Nitroaniline

Curve Fit: **AVERAGE RF**

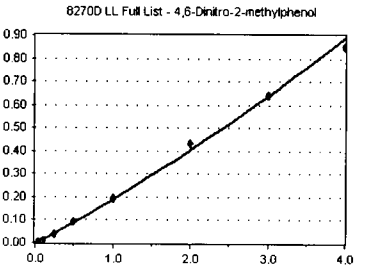


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~396~~	~~0.172~~	~~10.28~~
~~9E08056-CAL2~~	~~50~~	~~1270~~	~~0.216~~	~~10.28~~
~~9E08056-CAL3~~	~~100~~	~~2732~~	~~0.229~~	~~10.28~~
9E08056-CAL4	200	7673	0.313	10.28
9E08056-CAL5	500	19675	0.337	10.28
9E08056-CAL6	1000	36743	0.327	10.28
9E08056-CAL7	2000	59807	0.287	10.29
9E08056-CAL8	4000	119176	0.294	10.30
9E08056-CAL9	6000	166859	0.277	10.31
9E08056-CALA	8000	203360	0.261	10.32

AVE RF **0.300** RF RSD **9.17** AVE RT **10.29**

4,6-Dinitro-2-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
~~9E08056-CAL2~~	~~50~~	~~217~~	~~3.688~~	~~10.31~~
9E08056-CAL3	100	760	0.064	10.31
9E08056-CAL4	200	2514	0.103	10.31
9E08056-CAL5	500	8901	0.153	10.31
9E08056-CAL6	1000	21051	0.187	10.31
9E08056-CAL7	2000	40019	0.192	10.32
9E08056-CAL8	4000	87463	0.216	10.33
9E08056-CAL9	6000	129071	0.214	10.34
9E08056-CALA	8000	165731	0.213	10.35

AVE RF **0.168** RF RSD **34.03** AVE RT **10.32**

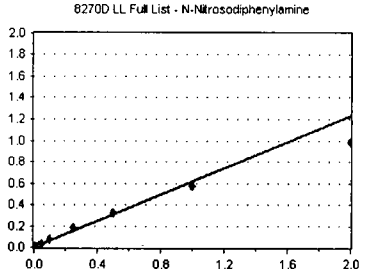
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

N-Nitrosodiphenylamine

Curve Fit: **AVERAGE RF**

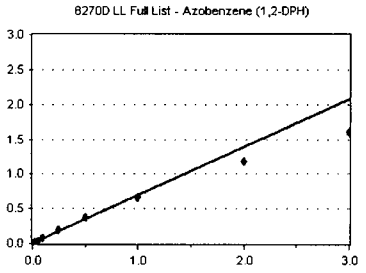


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2436	0.546	10.38
9E08056-CAL2	50	6367	0.569	10.38
9E08056-CAL3	100	14816	0.671	10.38
9E08056-CAL4	200	32443	0.713	10.38
9E08056-CAL5	500	78301	0.721	10.38
9E08056-CAL6	1000	139124	0.654	10.38
9E08056-CAL7	2000	227824	0.575	10.38
9E08056-CAL8	4000	398485	0.493	10.39
~~9E08056-CAL9~~	~~6000~~	~~527740~~	~~0.431~~	~~10.40~~
~~9E08056-CALA~~	~~8000~~	~~645120~~	~~0.407~~	~~10.40~~

AVE RF **0.618** RF RSD **13.51** AVE RT **10.38**

Azobenzene (1,2-DPH)

Curve Fit: **AVERAGE RF**

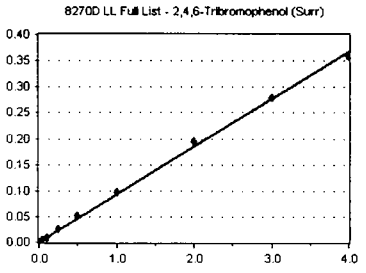


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2808	0.630	10.42
9E08056-CAL2	50	7675	0.686	10.42
9E08056-CAL3	100	17330	0.784	10.42
9E08056-CAL4	200	36434	0.800	10.42
9E08056-CAL5	500	87002	0.801	10.42
9E08056-CAL6	1000	156991	0.738	10.42
9E08056-CAL7	2000	264872	0.668	10.43
9E08056-CAL8	4000	481159	0.595	10.43
9E08056-CAL9	6000	656969	0.536	10.44
~~9E08056-CALA~~	~~8000~~	~~801688~~	~~0.506~~	~~10.44~~

AVE RF **0.693** RF RSD **13.73** AVE RT **10.42**

2,4,6-Tribromophenol (Surr)

Curve Fit: **AVERAGE RF**

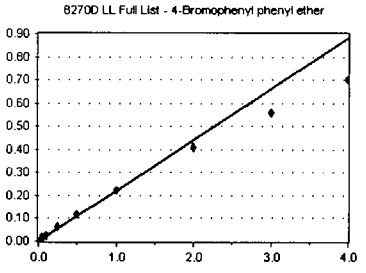


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~296~~	~~6.639~~	~~10.52~~
9E08056-CAL2	50	790	7.066	10.52
9E08056-CAL3	100	1794	8.120	10.51
9E08056-CAL4	200	4189	9.201	10.51
9E08056-CAL5	500	11050	0.102	10.52
9E08056-CAL6	1000	22087	0.104	10.52
9E08056-CAL7	2000	38932	9.822	10.52
9E08056-CAL8	4000	78802	9.740	10.52
9E08056-CAL9	6000	114295	9.328	10.53
9E08056-CALA	8000	142560	8.992	10.53

AVE RF **9.204** RF RSD **11.41** AVE RT **10.52**

4-Bromophenyl phenyl ether

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	976	0.219	10.76
9E08056-CAL2	50	2481	0.222	10.76
9E08056-CAL3	100	5435	0.246	10.76
9E08056-CAL4	200	10934	0.240	10.76
9E08056-CAL5	500	27078	0.249	10.76
9E08056-CAL6	1000	49801	0.234	10.76
9E08056-CAL7	2000	88111	0.222	10.76
9E08056-CAL8	4000	164575	0.203	10.77
9E08056-CAL9	6000	229006	0.187	10.77
9E08056-CALA	8000	278562	0.176	10.77

AVE RF **0.220** RF RSD **11.23** AVE RT **10.76**

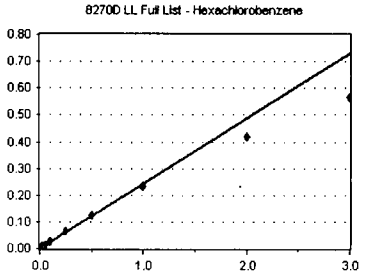
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Hexachlorobenzene

Curve Fit: **AVERAGE RF**

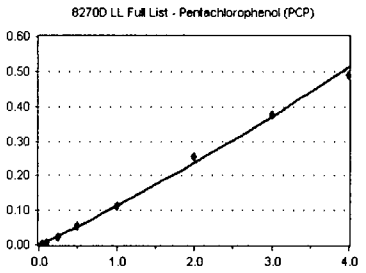


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1039	0.233	10.84
9E08056-CAL2	50	3112	0.278	10.84
9E08056-CAL3	100	6195	0.280	10.84
9E08056-CAL4	200	11859	0.260	10.84
9E08056-CAL5	500	28884	0.266	10.84
9E08056-CAL6	1000	52902	0.249	10.84
9E08056-CAL7	2000	92531	0.233	10.84
9E08056-CAL8	4000	169055	0.209	10.85
9E08056-CAL9	6000	231353	0.189	10.85
~~9E08056-CALA~~	~~8000~~	~~281208~~	~~0.177~~	~~10.85~~

AVE RF **0.244** RF RSD **12.77** AVE RT **10.84**

Pentachlorophenol (PCP)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

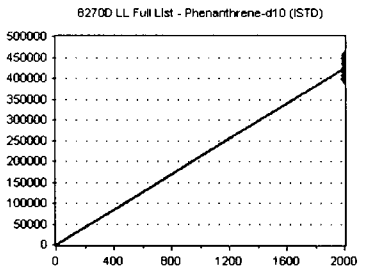


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~515~~	~~0.116~~	~~11.03~~
~~9E08056-CAL2~~	~~50~~	~~782~~	~~6.994~~	~~11.04~~
9E08056-CAL3	100	1222	5.531	11.03
9E08056-CAL4	200	3055	6.710	11.04
9E08056-CAL5	500	10538	9.704	11.03
9E08056-CAL6	1000	23287	0.110	11.04
9E08056-CAL7	2000	45320	0.114	11.03
9E08056-CAL8	4000	103356	0.128	11.04
9E08056-CAL9	6000	153485	0.125	11.05
9E08056-CALA	8000	193595	0.122	11.05

AVE RF **0.102** RF RSD **26.74** AVE RT **11.04**

Phenanthrene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

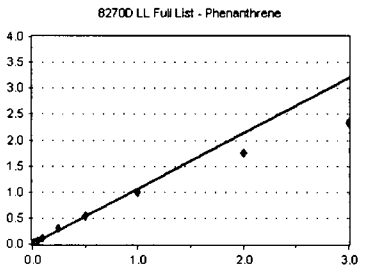


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	445843	222.922	11.22
9E08056-CAL2	2000	447217	223.608	11.22
9E08056-CAL3	2000	441856	220.928	11.22
9E08056-CAL4	2000	455298	227.649	11.22
9E08056-CAL5	2000	434358	217.179	11.22
9E08056-CAL6	2000	425173	212.587	11.22
9E08056-CAL7	2000	396363	198.182	11.22
9E08056-CAL8	2000	404511	202.255	11.23
9E08056-CAL9	2000	408419	204.210	11.23
9E08056-CALA	2000	396349	198.175	11.23

AVE RF **212.769** RF RSD **5.28** AVE RT **11.22**

Phenanthrene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5060	1.135	11.25
9E08056-CAL2	50	13230	1.183	11.24
9E08056-CAL3	100	26210	1.186	11.24
9E08056-CAL4	200	53865	1.183	11.24
9E08056-CAL5	500	127029	1.170	11.24
9E08056-CAL6	1000	232143	1.092	11.25
9E08056-CAL7	2000	398028	1.004	11.25
9E08056-CAL8	4000	712691	0.881	11.25
9E08056-CAL9	6000	956642	0.781	11.26
~~9E08056-CALA~~	~~8000~~	~~1153195~~	~~0.727~~	~~11.26~~

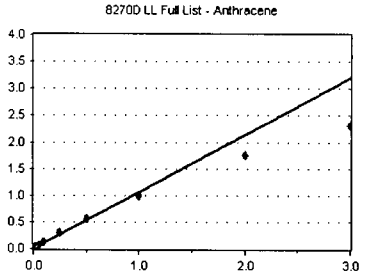
AVE RF **1.068** RF RSD **13.94** AVE RT **11.25**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Anthracene

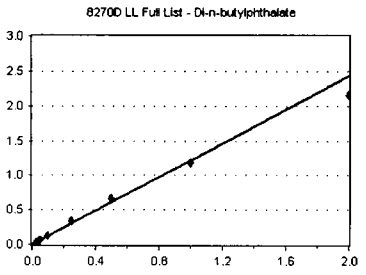


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5028	1.128	11.30
9E08056-CAL2	50	12760	1.141	11.30
9E08056-CAL3	100	26491	1.199	11.30
9E08056-CAL4	200	54658	1.200	11.30
9E08056-CAL5	500	128961	1.188	11.30
9E08056-CAL6	1000	235356	1.107	11.30
9E08056-CAL7	2000	397681	1.003	11.30
9E08056-CAL8	4000	710857	0.879	11.31
9E08056-CAL9	6000	942171	0.769	11.31
~~9E08056-CALA~~	~~8000~~	~~1111218~~	~~0.701~~	~~11.31~~

AVE RF **1.068** RF RSD **14.39** AVE RT **11.30**

Di-n-butylphthalate

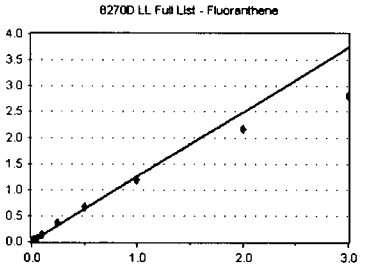


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~4702~~	~~1.055~~	~~11.79~~
9E08056-CAL2	50	11962	1.070	11.79
9E08056-CAL3	100	26562	1.202	11.79
9E08056-CAL4	200	58030	1.275	11.79
9E08056-CAL5	500	147202	1.356	11.79
9E08056-CAL6	1000	281730	1.325	11.79
9E08056-CAL7	2000	471443	1.189	11.79
9E08056-CAL8	4000	869303	1.075	11.80
~~9E08056-CAL9~~	~~6000~~	~~1162762~~	~~0.949~~	~~11.80~~
~~9E08056-CALA~~	~~8000~~	~~1386560~~	~~0.875~~	~~11.80~~

AVE RF **1.213** RF RSD **9.34** AVE RT **11.79**

Fluoranthene

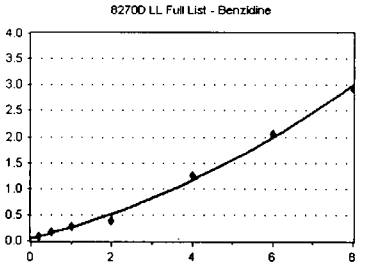


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5484	1.230	12.52
9E08056-CAL2	50	14115	1.262	12.52
9E08056-CAL3	100	29669	1.343	12.52
9E08056-CAL4	200	63551	1.396	12.52
9E08056-CAL5	500	155537	1.432	12.52
9E08056-CAL6	1000	287574	1.353	12.53
9E08056-CAL7	2000	475094	1.199	12.53
9E08056-CAL8	4000	874011	1.080	12.53
9E08056-CAL9	6000	1152260	0.940	12.54
~~9E08056-CALA~~	~~8000~~	~~1406107~~	~~0.887~~	~~12.54~~

AVE RF **1.248** RF RSD **12.71** AVE RT **12.53**

Benzidine



Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~40~~	~~5337~~	~~0.599~~	~~12.68~~
~~9E08056-CAL2~~	~~100~~	~~6670~~	~~0.298~~	~~12.68~~
~~9E08056-CAL3~~	~~200~~	~~14400~~	~~0.326~~	~~12.68~~
9E08056-CAL4	400	37553	0.412	12.68
9E08056-CAL5	1000	76984	0.354	12.68
9E08056-CAL6	2000	119397	0.281	12.68
9E08056-CAL7	4000	153390	0.193	12.68
9E08056-CAL8	8000	507935	0.314	12.69
9E08056-CAL9	12000	835608	0.341	12.70
9E08056-CALA	16000	1165482	0.368	12.70

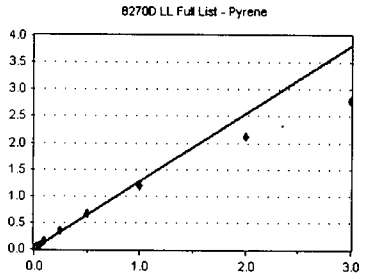
AVE RF **0.323** RF RSD **21.84** AVE RT **12.69**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Pyrene

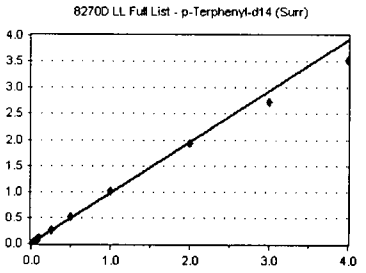


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5874	1.318	12.82
9E08056-CAL2	50	14957	1.338	12.82
9E08056-CAL3	100	31027	1.404	12.82
9E08056-CAL4	200	65571	1.440	12.82
9E08056-CAL5	500	154311	1.421	12.82
9E08056-CAL6	1000	286850	1.349	12.82
9E08056-CAL7	2000	468721	1.183	12.82
9E08056-CAL8	4000	853568	1.055	12.83
9E08056-CAL9	6000	1135183	0.926	12.84
~~9E08056-CALA~~	~~8000~~	~~1376701~~	~~0.868~~	~~12.84~~

AVE RF **1.270** RF RSD **14.05** AVE RT **12.82**

p-Terphenyl-d14 (Surr)

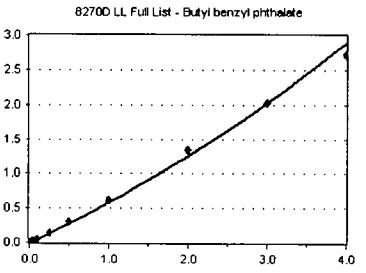


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4571	0.975	13.02
9E08056-CAL2	50	10935	0.930	13.02
9E08056-CAL3	100	23610	1.015	13.02
9E08056-CAL4	200	49759	1.037	13.02
9E08056-CAL5	500	118955	1.060	13.02
9E08056-CAL6	1000	219562	1.024	13.02
9E08056-CAL7	2000	356113	1.008	13.02
9E08056-CAL8	4000	667601	0.965	13.03
9E08056-CAL9	6000	884802	0.906	13.04
9E08056-CALA	8000	1074072	0.880	13.04

AVE RF **0.980** RF RSD **6.07** AVE RT **13.03**

Butyl benzyl phthalate

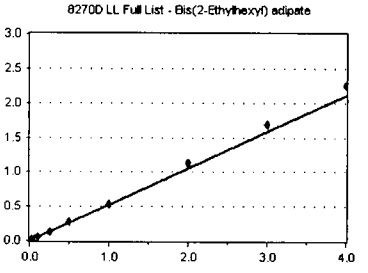


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	1472	0.314	13.84
9E08056-CAL2	50	4377	0.372	13.84
9E08056-CAL3	100	9184	0.395	13.84
9E08056-CAL4	200	23562	0.491	13.84
9E08056-CAL5	500	63002	0.562	13.84
9E08056-CAL6	1000	128733	0.600	13.84
9E08056-CAL7	2000	219372	0.621	13.85
9E08056-CAL8	4000	466198	0.674	13.85
9E08056-CAL9	6000	660330	0.676	13.86
9E08056-CALA	8000	830873	0.681	13.86

AVE RF **0.539** RF RSD **25.48** AVE RT **13.85**

Bis(2-Ethylhexyl) adipate



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	2977	0.635	14.01
9E08056-CAL2	50	5191	0.442	14.01
9E08056-CAL3	100	10197	0.439	14.01
9E08056-CAL4	200	22694	0.473	14.01
9E08056-CAL5	500	56949	0.508	14.01
9E08056-CAL6	1000	114896	0.536	14.01
9E08056-CAL7	2000	191848	0.543	14.01
9E08056-CAL8	4000	395039	0.571	14.02
9E08056-CAL9	6000	550853	0.564	14.03
9E08056-CALA	8000	686647	0.563	14.03

AVE RF **0.527** RF RSD **11.82** AVE RT **14.02**

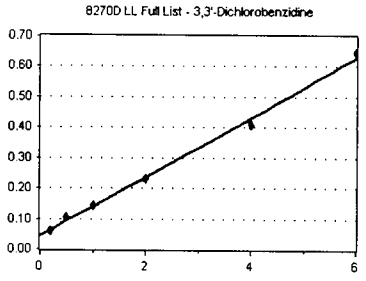
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

3,3'-Dichlorobenzidine

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

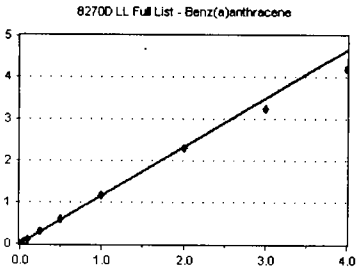


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~40~~	~~2583~~	~~0.275~~	~~0.00~~
~~9E08056-CAL2~~	~~100~~	~~6262~~	~~0.266~~	~~0.00~~
~~9E08056-CAL3~~	~~200~~	~~13834~~	~~0.298~~	~~14.98~~
9E08056-CAL4	400	28902	0.301	14.99
9E08056-CAL5	1000	47477	0.212	14.99
9E08056-CAL6	2000	62412	0.145	14.99
9E08056-CAL7	4000	81995	0.116	15.00
9E08056-CAL8	8000	140872	0.102	15.01
9E08056-CAL9	12000	210131	0.108	15.02
~~9E08056-CALA~~	~~16000~~	~~287387~~	~~0.118~~	~~15.03~~

AVE RF **0.164** RF RSD **47.85** AVE RT **15.00**

Benz(a)anthracene

Curve Fit: **AVERAGE RF**

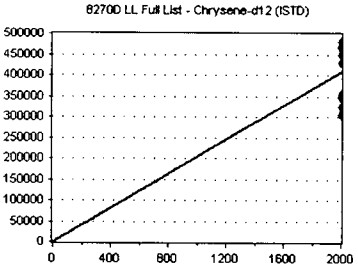


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5805	1.238	15.03
9E08056-CAL2	50	13479	1.147	15.03
9E08056-CAL3	100	26892	1.157	15.02
9E08056-CAL4	200	58075	1.210	15.03
9E08056-CAL5	500	138304	1.233	15.02
9E08056-CAL6	1000	257723	1.202	15.03
9E08056-CAL7	2000	409861	1.161	15.03
9E08056-CAL8	4000	790890	1.143	15.05
9E08056-CAL9	6000	1056377	1.081	15.06
9E08056-CALA	8000	1276068	1.046	15.06

AVE RF **1.162** RF RSD **5.39** AVE RT **15.04**

Chrysene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

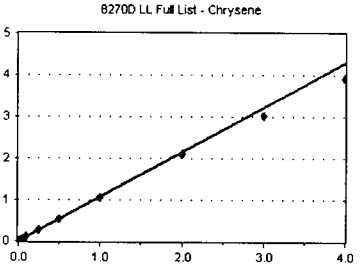


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	468796	234.398	15.05
9E08056-CAL2	2000	470097	235.048	15.05
9E08056-CAL3	2000	464995	232.498	15.05
9E08056-CAL4	2000	479919	239.960	15.05
9E08056-CAL5	2000	448745	224.373	15.05
9E08056-CAL6	2000	428978	214.489	15.06
9E08056-CAL7	2000	353171	176.585	15.06
9E08056-CAL8	2000	346046	173.023	15.07
9E08056-CAL9	2000	325607	162.804	15.08
9E08056-CALA	2000	305019	152.510	15.09

AVE RF **204.569** RF RSD **16.76** AVE RT **15.06**

Chrysene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	5174	1.104	15.11
9E08056-CAL2	50	12647	1.076	15.11
9E08056-CAL3	100	25625	1.102	15.11
9E08056-CAL4	200	53969	1.125	15.11
9E08056-CAL5	500	126427	1.127	15.11
9E08056-CAL6	1000	231498	1.079	15.12
9E08056-CAL7	2000	375111	1.062	15.12
9E08056-CAL8	4000	726806	1.050	15.13
9E08056-CAL9	6000	987765	1.011	15.15
9E08056-CALA	8000	1196829	0.981	15.16

AVE RF **1.072** RF RSD **4.43** AVE RT **15.12**

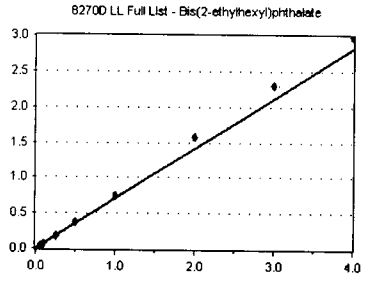
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Bis(2-ethylhexyl)phthalate

Curve Fit: **AVERAGE RF**

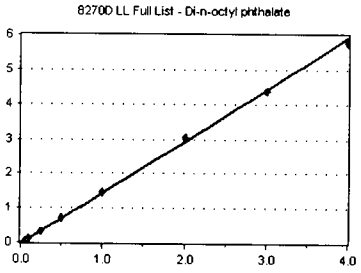


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~1776~~	~~0.379~~	~~15.18~~
~~9E08056-CAL2~~	~~50~~	~~5059~~	~~0.430~~	~~15.18~~
9E08056-CAL3	100	11680	0.502	15.18
9E08056-CAL4	200	29512	0.615	15.18
9E08056-CAL5	500	81848	0.730	15.18
9E08056-CAL6	1000	159937	0.746	15.18
9E08056-CAL7	2000	265428	0.752	15.19
9E08056-CAL8	4000	541901	0.783	15.19
9E08056-CAL9	6000	749108	0.767	15.20
9E08056-CALA	8000	911551	0.747	15.20

AVE RF **0.705** RF RSD **13.70** AVE RT **15.19**

Di-n-octyl phthalate

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

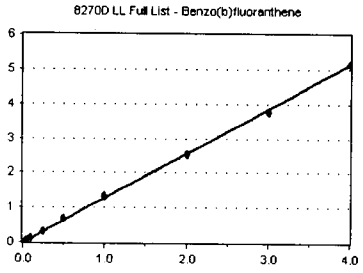


Standard	Concentration	Response	Response Factor	RT
~~9E08056-CAL1~~	~~20~~	~~2233~~	~~0.516~~	~~16.84~~
~~9E08056-CAL2~~	~~50~~	~~6475~~	~~0.593~~	~~16.84~~
9E08056-CAL3	100	14915	0.686	16.84
9E08056-CAL4	200	42140	0.939	16.84
9E08056-CAL5	500	132449	1.250	16.84
9E08056-CAL6	1000	284170	1.419	16.84
9E08056-CAL7	2000	490249	1.468	16.85
9E08056-CAL8	4000	1106017	1.530	16.86
9E08056-CAL9	6000	1544982	1.462	16.87
9E08056-CALA	8000	1949268	1.443	16.88

AVE RF **1.275** RF RSD **23.85** AVE RT **16.85**

Benzo(b)fluoranthene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

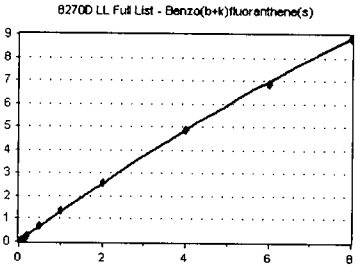


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4502	1.041	17.61
9E08056-CAL2	50	11686	1.070	17.61
9E08056-CAL3	100	23806	1.095	17.61
9E08056-CAL4	200	54791	1.221	17.61
9E08056-CAL5	500	139653	1.318	17.61
9E08056-CAL6	1000	268390	1.340	17.62
9E08056-CAL7	2000	444019	1.330	17.62
9E08056-CAL8	4000	916793	1.268	17.65
9E08056-CAL9	6000	1322262	1.251	17.67
9E08056-CALA	8000	1745814	1.292	17.67

AVE RF **1.223** RF RSD **9.23** AVE RT **17.63**

Benzo(b+k)fluoranthene(s)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	40	8905	1.029	17.61
9E08056-CAL2	100	24677	1.130	17.68
9E08056-CAL3	200	50907	1.171	17.61
9E08056-CAL4	400	114689	1.278	17.61
9E08056-CAL5	1000	289741	1.367	17.68
9E08056-CAL6	2000	543058	1.356	17.69
9E08056-CAL7	4000	864585	1.294	17.69
9E08056-CAL8	8000	1749715	1.210	17.72
9E08056-CAL9	12000	2421312	1.146	17.74
9E08056-CALA	16000	2997124	1.109	17.75

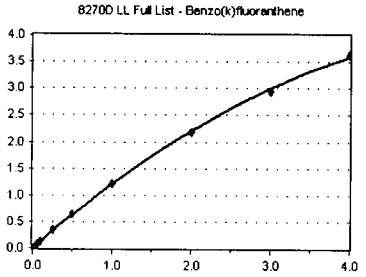
AVE RF **1.209** RF RSD **9.25** AVE RT **17.68**

Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Benzo(k)fluoranthene

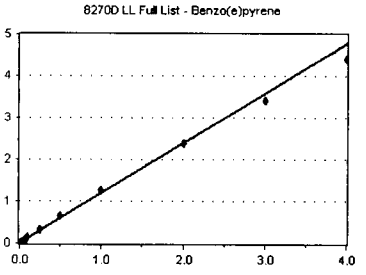


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4403	1.018	17.68
9E08056-CAL2	50	12101	1.108	17.68
9E08056-CAL3	100	25069	1.153	17.68
9E08056-CAL4	200	56932	1.268	17.68
9E08056-CAL5	500	142423	1.344	17.68
9E08056-CAL6	1000	262537	1.311	17.69
9E08056-CAL7	2000	401664	1.203	17.69
9E08056-CAL8	4000	788525	1.091	17.72
9E08056-CAL9	6000	1035740	0.980	17.74
9E08056-CALA	8000	1226693	0.908	17.75

AVE RF **1.138** RF RSD **12.73** AVE RT **17.70**

Benzo(e)pyrene

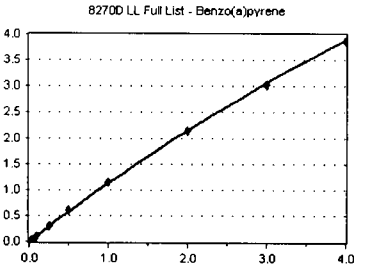


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4695	1.085	18.27
9E08056-CAL2	50	12373	1.133	18.27
9E08056-CAL3	100	25730	1.184	18.27
9E08056-CAL4	200	55890	1.245	18.27
9E08056-CAL5	500	140018	1.321	18.27
9E08056-CAL6	1000	259798	1.297	18.28
9E08056-CAL7	2000	421328	1.262	18.28
9E08056-CAL8	4000	863719	1.195	18.30
9E08056-CAL9	6000	1199867	1.135	18.32
9E08056-CALA	8000	1487060	1.101	18.34

AVE RF **1.196** RF RSD **6.93** AVE RT **18.29**

Benzo(a)pyrene

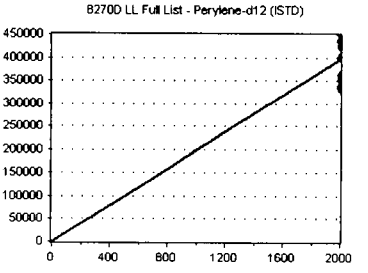


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3596	0.831	18.38
9E08056-CAL2	50	10371	0.950	18.39
9E08056-CAL3	100	21986	1.011	18.38
9E08056-CAL4	200	49339	1.099	18.38
9E08056-CAL5	500	129040	1.218	18.39
9E08056-CAL6	1000	245703	1.227	18.39
9E08056-CAL7	2000	383125	1.147	18.41
9E08056-CAL8	4000	770441	1.066	18.43
9E08056-CAL9	6000	1066798	1.009	18.45
9E08056-CALA	8000	1307681	0.968	18.46

AVE RF **1.053** RF RSD **11.81** AVE RT **18.41**

Perylene-d12 (ISTD)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	432537	216.268	18.54
9E08056-CAL2	2000	436889	218.445	18.54
9E08056-CAL3	2000	434795	217.398	18.53
9E08056-CAL4	2000	448879	224.440	18.54
9E08056-CAL5	2000	423882	211.941	18.54
9E08056-CAL6	2000	400554	200.277	18.54
9E08056-CAL7	2000	333963	166.982	18.54
9E08056-CAL8	2000	361418	180.709	18.56
9E08056-CAL9	2000	352282	176.141	18.57
9E08056-CALA	2000	337687	168.843	18.57

AVE RF **198.144** RF RSD **11.43** AVE RT **18.55**

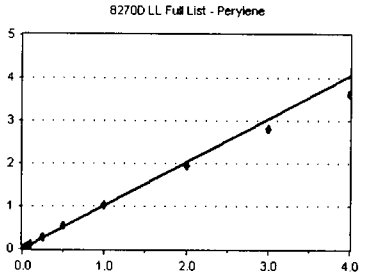
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Perylene

Curve Fit: **AVERAGE RF**

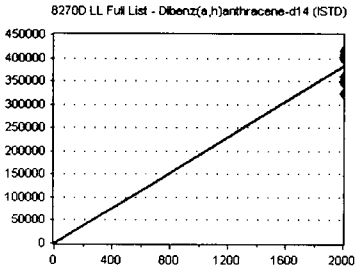


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4452	1.029	18.59
9E08056-CAL2	50	10773	0.986	18.59
9E08056-CAL3	100	22641	1.041	18.59
9E08056-CAL4	200	46507	1.036	18.59
9E08056-CAL5	500	116376	1.098	18.59
9E08056-CAL6	1000	216265	1.080	18.60
9E08056-CAL7	2000	344990	1.033	18.61
9E08056-CAL8	4000	705720	0.976	18.63
9E08056-CAL9	6000	989986	0.937	18.65
9E08056-CALA	8000	1226461	0.908	18.66

AVE RF **1.013** RF RSD **5.95** AVE RT **18.61**

Dibenz(a,h)anthracene-d14 (ISTD

Curve Fit: **AVERAGE RF**

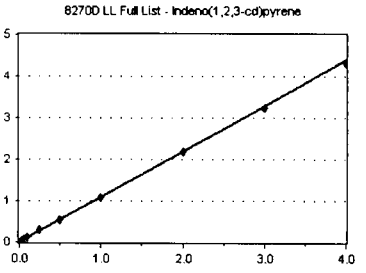


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	2000	400350	200.175	20.92
9E08056-CAL2	2000	403848	201.924	20.92
9E08056-CAL3	2000	409849	204.925	20.92
9E08056-CAL4	2000	416516	208.258	20.92
9E08056-CAL5	2000	408680	204.340	20.92
9E08056-CAL6	2000	399119	199.560	20.92
9E08056-CAL7	2000	322705	161.353	20.93
9E08056-CAL8	2000	360190	180.095	20.95
9E08056-CAL9	2000	359354	179.677	20.96
9E08056-CALA	2000	348077	174.038	20.96

AVE RF **191.434** RF RSD **8.46** AVE RT **20.93**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**

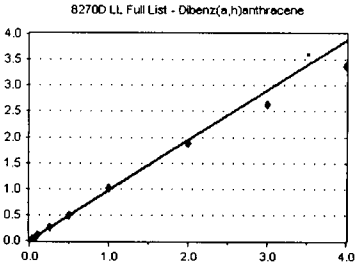


Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4515	1.128	20.91
9E08056-CAL2	50	10988	1.088	20.91
9E08056-CAL3	100	22712	1.108	20.91
9E08056-CAL4	200	45199	1.085	20.91
9E08056-CAL5	500	116104	1.136	20.92
9E08056-CAL6	1000	217807	1.091	20.92
9E08056-CAL7	2000	348943	1.081	20.94
9E08056-CAL8	4000	792468	1.100	20.96
9E08056-CAL9	6000	1164266	1.080	20.98
9E08056-CALA	8000	1508870	1.084	21.00

AVE RF **1.098** RF RSD **1.82** AVE RT **20.94**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	3890	0.972	20.97
9E08056-CAL2	50	9885	0.979	20.99
9E08056-CAL3	100	20562	1.003	20.98
9E08056-CAL4	200	43093	1.035	20.98
9E08056-CAL5	500	106785	1.045	20.98
9E08056-CAL6	1000	199329	0.999	20.99
9E08056-CAL7	2000	325096	1.007	20.99
9E08056-CAL8	4000	675316	0.937	21.02
9E08056-CAL9	6000	945959	0.877	21.04
9E08056-CALA	8000	1170463	0.841	21.06

AVE RF **0.970** RF RSD **6.84** AVE RT **21.00**

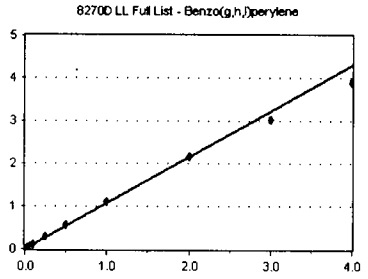
Element Calibration Review Sheet

Calibration ID: **A9E1009** Instrument: **SV-GCMS9** Calibration Date: **05/10/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9E1009**

Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9E08056-CAL1	20	4035	1.008	21.45
9E08056-CAL2	50	10510	1.041	21.45
9E08056-CAL3	100	22018	1.074	21.45
9E08056-CAL4	200	46913	1.126	21.45
9E08056-CAL5	500	120043	1.175	21.45
9E08056-CAL6	1000	226164	1.133	21.46
9E08056-CAL7	2000	360991	1.119	21.47
9E08056-CAL8	4000	777615	1.079	21.50
9E08056-CAL9	6000	1089470	1.011	21.52
9E08056-CALA	8000	1353653	0.972	21.53

AVE RF **1.074** RF RSD **6.08** AVE RT **21.47**

Compound List Report SV-GCMS9

Method Path : T:\methods\
Method File : SV9_050819.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu May 09 12:25:58 2019
Response Via : Initial Calibration

JR 5/9/19

Total Cpnds : 97

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4 (ISTD)	152	6.697	1.000	A	2	A	R
2	T	N-Nitrosodimethylamine	74	4.172	0.623	A	2	A	R
3	T	Pyridine	79	4.183	0.625	A	2	A	R
4	S	2-Fluorophenol (Surr)	112	5.467	0.816	A	1	A	R
5	S	Phenol-d6 (Surr)	99	6.338	0.946	A	2	A	R
6	T	Phenol	94	6.354	0.949	A	2	A	R
7	T	Aniline	93	6.381	0.953	A	2	A	R
8	T	Bis(2-chloroethyl) ether	93	6.435	0.961	A	2	A	R
9	T	2-Chlorophenol	128	6.499	0.970	A	2	A	R
10	T	1,3-Dichlorobenzene	146	6.643	0.992	A	2	A	R
11	T	1,4-Dichlorobenzene	146	6.713	1.002	A	2	A	R
12	T	Benzyl alcohol	108	6.825	1.019	Q	2	A	R
13	T	1,2-Dichlorobenzene	146	6.863	1.025	A	2	A	R
14	T	2-Methylphenol	107	6.932	1.035	A	2	A	R
15	T	2,2'-Oxybis(1-Chloropropane)	45	6.954	1.038	A	2	A	R
16	T	N-Nitrosodi-n-propylamine	70	7.077	1.057	A	2	A	R
17	T	3+4-Methylphenol	107	7.077	1.057	A	3	A	R
18	T	Hexachloroethane	201	7.194	1.074	A	2	A	R
19	S	Nitrobenzene-d5 (Surr)	82	7.232	1.080	A	2	A	R
20	T	Nitrobenzene	77	7.248	1.082	A	2	A	R
21	I	Naphthalene-d8 (ISTD)	136	7.948	1.000	A	1	A	R
22	T	Isophorone	82	7.483	0.941	A	2	A	R
23	T	2-Nitrophenol	139	7.563	0.952	A	2	A	R
24	T	2,4-Dimethylphenol	122	7.600	0.956	A	2	A	R
25	T	Bis(2-chloroethoxy) methane	93	7.686	0.967	A	2	A	R
26	T	Benzoic acid	105	7.696	0.968	Q	2	A	R
27	T	2,4-Dichlorophenol	162	7.803	0.982	Q	2	A	R
28	T	1,2,4-Trichlorobenzene	180	7.890	0.993	A	2	A	R
29	T	Naphthalene	128	7.970	1.003	A	1	A	R
30	T	4-Chloroaniline	127	8.023	1.009	A	2	A	R
31	T	Hexachlorobutadiene	225	8.098	1.019	A	2	A	R
32	T	4-Chloro-3-methylphenol	107	8.493	1.069	Q	2	A	R
33	T	2-Methylnaphthalene	142	8.659	1.089	A	2	A	R
34	T	1-Methylnaphthalene	142	8.761	1.102	A	2	A	R
35	I	Acenaphthene-d10 (ISTD)	162	9.719	1.000	A	2	A	R
36	T	Hexachlorocyclopentadiene	237	8.825	0.908	Q	2	A	R
37	T	2,4,6-Trichlorophenol	196	8.943	0.920	Q	2	A	R
38	T	2,4,5-Trichlorophenol	198	8.980	0.924	Q	2	A	R
39	T	1,1'-Biphenyl	154	9.125	0.939	A	2	A	R
40	S	2-Fluorobiphenyl (Surr)	172	9.023	0.928	A	2	A	R
41	T	2-Chloronaphthalene	162	9.151	0.942	A	2	A	R
42	T	2-Nitroaniline	138	9.248	0.952	A	2	A	R
43	T	2,6-Dimethylnaphthalene	156	9.285	0.955	A	2	A	R
44	T	1,4-Dinitrobenzene	168	9.376	0.965	Q	2	A	R
45	T	Dimethyl phthalate	163	9.425	0.970	A	2	A	R
46	T	1,3-Dinitrobenzene	168	9.456	0.973	A	2	A	R
47	T	2,6-Dinitrotoluene	165	9.488	0.976	A	2	A	R
48	T	1,2-Dinitrobenzene	168	9.547	0.982	A	2	A	R
49	T	Acenaphthylene	152	9.574	0.985	A	2	A	R
50	T	3-Nitroaniline	138	9.665	0.994	Q	2	A	R
51	T	Acenaphthene	153	9.751	1.003	A	2	A	R
52	T	2,4-Dinitrophenol	184	9.766	1.005	Q	2	A	R
53	T	4-Nitrophenol	139	9.831	1.012	Q	2	A	R
54	T	2,4-Dinitrotoluene	165	9.895	1.018	Q	2	A	R

55	T	Dibenzofuran	168	9.921	1.021	A	2	A	R
56	T	2,3,5,6-Tetrachlorophenol	232	10.007	1.030	Q	2	A	R
57	T	2,3,4,6-Tetrachlorophenol	232	10.050	1.034	Q	2	A	R
58	T	Diethyl phthalate	149	10.135	1.043	A	2	A	R
59	T	2,3,5-Trimethylnaphthalene	170	10.130	1.042	A	2	A	R
60	T	Fluorene	166	10.269	1.057	A	2	A	R
61	T	4-Chlorophenyl phenyl ether	204	10.258	1.055	A	2	A	R
62	T	4-Nitroaniline	138	10.280	1.058	A	2	A	R
63	T	4,6-Dinitro-2-methylphenol	198	10.312	1.061	Q	2	A	R
64	I	Phenanthrene-d10 (ISTD)	188	11.222	1.000	A	2	A	R
65	T	N-Nitrosodiphenylamine	169	10.376	0.925	A	2	A	R
66	T	Azobenzene (1,2-DPH)	77	10.419	0.928	A	2	A	R
67	S	2,4,6-Tribromophenol (Surr)	330	10.515	0.937	A	2	A	R
68	T	4-Bromophenyl phenyl ether	248	10.756	0.959	A	2	A	R
69	T	Hexachlorobenzene	284	10.841	0.966	A	2	A	R
70	T	Pentachlorophenol (PCP)	266	11.034	0.983	Q	2	A	R
71	T	Phenanthrene	178	11.248	1.002	A	2	A	R
72	T	Anthracene	178	11.296	1.007	A	2	A	R
73	T	Carbazole	167	11.457	1.021	A	2	A	R
74	T	Di-n-butyl phthalate	149	11.794	1.051	A	2	A	R
75	T	Fluoranthene	202	12.526	1.116	A	2	A	R
76	T	Benzidine	184	12.676	1.130	Q	2	A	R
77	T	Pyrene	202	12.820	1.142	A	2	A	R
78	I	Chrysene-d12 (ISTD)	240	15.057	1.000	A	2	A	R
79	S	Terphenyl-d14 (Surr)	244	13.024	0.865	A	2	A	R
80	T	Butyl benzyl phthalate	149	13.842	0.919	Q	2	A	R
81	T	Bis(2-ethylhexyl) adipate	129	14.014	0.931	A	2	A	R
82	T	3,3-Dichlorobenzidine	252	14.992	0.996	Q	2	A	R
83	T	Benz(a)anthracene	228	15.030	0.998	A	2	A	R
84	T	Chrysene	228	15.116	1.004	A	2	A	R
85	T	Bis(2-ethylhexyl) phthalate	149	15.179	1.008	A	2	A	R
86	I	Perylene-d12 (ISTD)	264	18.539	1.000	A	2	A	R
87	T	Di-n-octyl phthalate	149	16.843	0.909	Q	2	A	R
88	T	Benzo(b)fluoranthene	252	17.618	0.950	Q	2	A	R
89	T	Benzo(k)fluoranthene	252	17.688	0.954	Q	2	A	R
90	T	Benzo(b+k)fluoranthene	252	17.688	0.954	Q	2	A	R
91	T	Benzo(e)pyrene	252	18.277	0.986	A	2	A	R
92	T	Benzo(a)pyrene	252	18.394	0.992	Q	2	A	R
93	T	Perylene	252	18.597	1.003	A	2	A	B
94	I	Dibenz(a,h)Anthrcene-d14 (I...	292	20.924	1.000	A	1	A	B
95	T	Indeno(1,2,3-cd)pyrene	276	20.924	1.000	A	1	A	R
96	T	Dibenz(a,h)anthracene	278	20.988	1.003	A	2	A	R
97	T	Benzo(g,h,i)perylene	276	21.464	1.026	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

SV9_050819.M Thu May 09 13:09:14 2019

Response Factor Report SV-GCMS9

Method Path : T:\methods\
Method File : SV9_050819.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu May 09 12:25:58 2019
Response Via : Initial Calibration

5/9/19

Calibration Files
20 =I05081919.D 50 =I05081920.D 100 =I05081921.D 200 =I05081922.D 500 =I05081923.D 1000=I05081924.D 2000=I05081925.D
4000=I05081926.D 6000=I05081927.D 8000=I05081928.D

		Compound	20	50	100	200	500	1000	2000	4000	6000	8000	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------											8.69
2)	T	N-Nitrosodimet...	1.211	0.973	0.975	0.931	0.938	0.919	0.976	1.007	1.030	1.035	0.999	8.42
3)	T	Pyridine	1.392	1.406	1.367	1.433	1.518	1.469	1.537	1.706	1.705	1.722	1.526	9.08
4)	S	2-Fluorophenol...	1.132	1.060	1.214	1.247	1.324	1.305	1.391	1.440	1.493	1.463	1.307	11.06
5)	S	Phenol-d6 (Surr)	1.463	1.476	1.583	1.634	1.720	1.695	1.792	1.894	1.902	1.847	1.701	9.47
6)	T	Phenol	1.607	1.682	1.785	1.828	1.909	1.843	1.897	1.899	1.877	1.758	1.809	5.59
7)	T	Aniline	[illegible]	1.734	1.841	1.764	1.793	1.389	1.120	1.260	1.396	1.555	1.539	16.90
8)	T	Bis(2-chloroet...	1.679	1.527	1.547	1.558	1.533	1.567	1.613	1.508	1.356	1.334	1.522	6.93
9)	T	2-Chlorophenol	1.315	1.287	1.361	1.368	1.433	1.399	1.423	1.393	1.364	1.315	1.366	3.54
10)	T	1,3-Dichlorobe...	1.764	1.576	1.689	1.623	1.642	1.568	1.532	1.453	1.421	1.352	1.562	8.09
11)	T	1,4-Dichlorobe...	1.514	1.547	1.519	1.559	1.557	1.498	1.445	1.380	1.318	1.255	1.459	7.34
12)	T	Benzyl alcohol	[illegible]	0.421	0.502	0.579	0.721	0.785	0.853	0.935	0.925	0.883	0.734	26.02
13)	T	1,2-Dichlorobe...	1.391	1.481	1.532	1.532	1.544	1.442	1.413	1.314	1.257	1.173	1.408	8.95
14)	T	2-Methylphenol	1.007	0.914	1.105	1.011	1.118	1.061	1.064	1.078	1.036	0.965	1.036	6.11
15)	T	2,2'-Oxybis(1-...	1.993	1.994	2.123	2.028	2.009	1.881	1.829	1.678	1.567	1.437	1.854	12.12
16)	T	N-Nitrosodi-n-...	1.076	1.073	1.093	1.102	1.120	1.067	1.038	0.999	0.930	0.887	1.038	7.40
17)	T	3+4-Methylphenol	1.188	1.142	1.290	1.315	1.405	1.350	1.354	1.357	1.282	1.198	1.288	6.69
18)	T	Hexachloroethane	0.494	0.481	0.481	0.479	0.505	0.472	0.466	0.452	0.448	0.423	0.470	5.05
19)	S	Nitrobenzene-d...	1.553	1.376	1.415	1.465	1.447	1.396	1.393	1.394	1.376	1.326	1.414	4.40
20)	T	Nitrobenzene	1.479	1.409	1.487	1.519	1.461	1.390	1.354	1.328	1.275	1.208	1.391	7.22
21)	I	Naphthalene-d8 (ISTD)	----------ISTD----------											9.39
22)	T	Isophorone	0.673	0.711	0.716	0.756	0.796	0.778	0.757	0.759	0.728	0.732	0.741	4.84
23)	T	2-Nitrophenol	0.141	0.159	0.172	0.198	0.227	0.203	0.201	0.203	0.195	0.192	0.189	13.19
24)	T	2,4-Dimethylph...	[illegible]	0.219	0.260	0.280	0.301	0.310	0.311	0.307	0.286	0.280	0.284	10.49
25)	T	Bis(2-chloroet...	0.409	0.463	0.480	0.460	0.473	0.451	0.428	0.419	0.386	0.376	0.435	8.40
26)	T	Benzoic acid	[illegible]	[illegible]	[illegible]	[illegible]	0.056	0.132	0.149	0.218	0.226	0.237	0.170	41.46
27)	T	2,4-Dichloroph...	[illegible]	0.151	0.195	0.222	0.253	0.272	0.277	0.278	0.248	0.244	0.238	17.71
28)	T	1,2,4-Trichlor...	0.331	0.342	0.354	0.350	0.351	0.336	0.315	0.294	0.268	0.255	0.320	11.19
29)	T	Naphthalene	1.068	1.095	1.107	1.099	1.084	1.048	0.982	0.908	0.816	0.768	0.998	12.52
30)	T	4-Chloroaniline	0.296	0.294	0.285	0.273	0.229	0.264	0.209	0.226	0.212	0.270	0.256	13.18
31)	T	Hexachlorobuta...	0.185	0.172	0.176	0.175	0.180	0.171	0.167	0.157	0.143	0.136	0.166	9.74
32)	T	4-Chloro-3-met...	[illegible]	[illegible]	0.126	0.192	0.266	0.308	0.318	0.341	0.320	0.313	0.273	27.63
33)	T	2-Methylnaphth...	0.694	0.720	0.764	0.787	0.839	0.815	0.773	0.735	0.647	[illegible]	0.753	7.98
34)	T	1-Methylnaphth...	0.716	0.723	0.761	0.774	0.801	0.766	0.717	0.669	0.601	0.560	0.709	10.96
35)	I	Acenaphthene-d10 (...	----------ISTD----------											8.19
36)	T	Hexachlorocycl...	[illegible]	0.101	0.150	0.217	0.281	0.309	0.315	0.322	0.313	0.293	0.256	31.74
37)	T	2,4,6-Trichlor...	[illegible]	0.168	0.217	0.291	0.370	0.395	0.393	0.389	0.371	0.354	0.327	25.56
38)	T	2,4,5-Trichlor...	[illegible]	0.184	0.225	0.260	0.340	0.377	0.379	0.375	0.348	0.334	0.314	23.08
39)	T	1,1'-Biphenyl	1.432	1.545	1.686	1.812	1.920	1.819	1.679	1.478	[illegible]	[illegible]	1.671	10.48

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9G01054	Instrument:	SV-GCMS9
Date:	07/01/19 15:23	Calibration:	A9E1009

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9G01054-TUN1	Oil	QC	QC			A19D031	A19F170
2	9G01054-CCV1	Oil	QC	QC			A19D031	A19D058
3	9G01054-IBL1	Oil	QC	QC			A19D031	
4	9G01054-TUN2	Oil	QC	QC			A19D031	A19F170
5	9G01054-CCV2	Oil	QC	QC			A19D031	A19D058
6	9G01054-CCB1	Oil	QC	QC			A19D031	
7	9061508-BLK1	Oil	QC	QC		9061508	A19D031	
8	9061508-BS1	Oil	QC	QC		9061508	A19D031	
9	A9F0684-01	Oil	8270D LL Full List	Hahn and Associates	07/05/19	9061508	A19D031	
10	9061508-DUP1	Oil	QC	QC		9061508	A19D031	
11	9070529-BLK2	Soil	QC	QC		9070529	A19D031	
12	9070529-BS2	Soil	QC	QC		9070529	A19D031	
13	A9F0911-01	Soil	8270D LL PAH/PHTH/Phenols		07/05/19	9070529	A19D031	
14	9070529-DUP2	Soil	QC	QC		9070529	A19D031	
15	A9F0911-02	Soil	8270D LL PAH/PHTH/Phenols		07/05/19	9070529	A19D031	
16	9G01054-IBL2	Oil	QC	QC			A19D031	

Comments: Reprint of original data. Data not found in warehouse. original signed data not available

Data Entered By: _____

Data Reviewed By: _____ WK7 10/4/19

No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

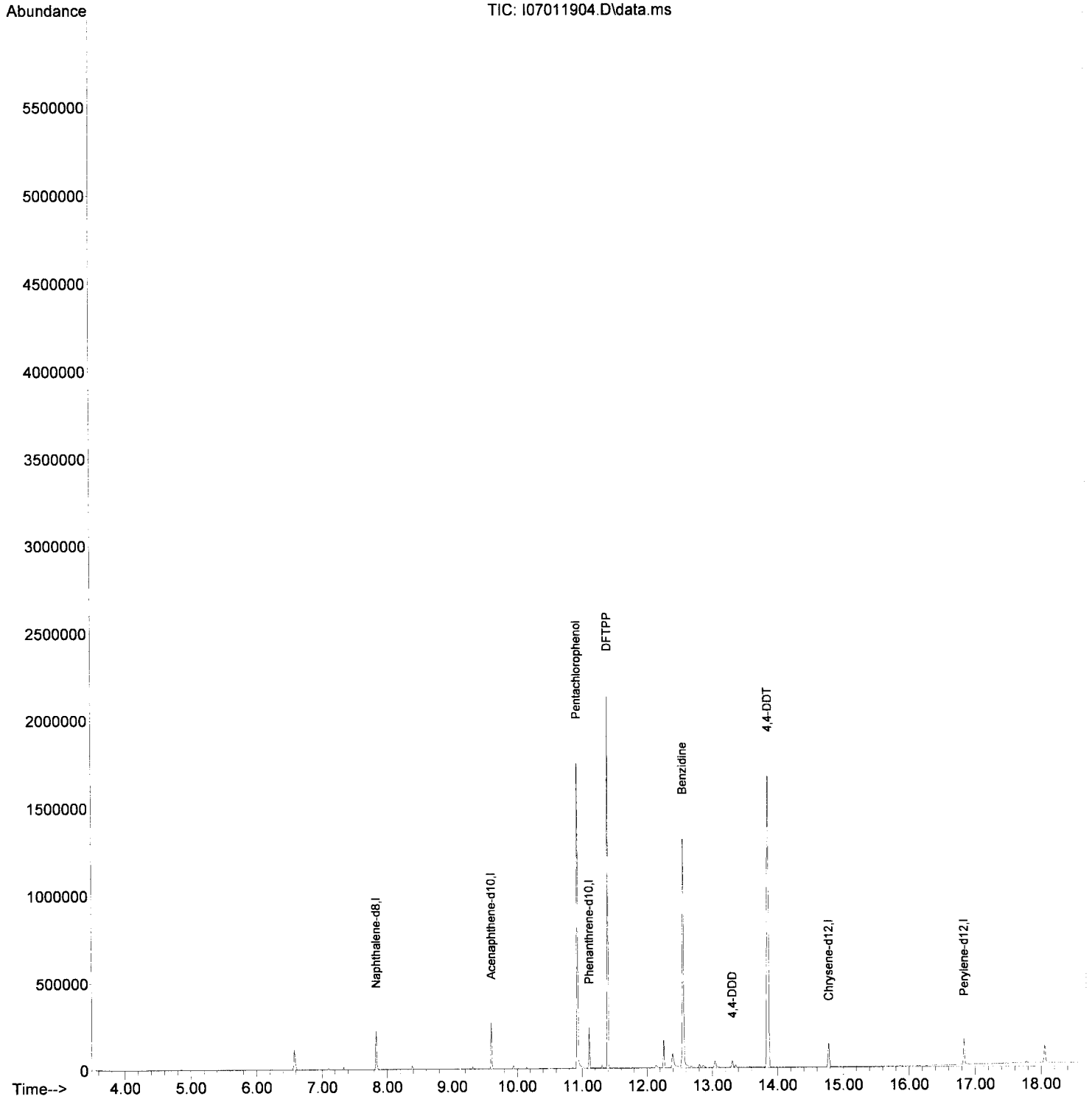
Quant Time: Jul 01 17:11:13 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Jun 13 15:30:01 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.830	136	113406	2.00	ug/mL	0.00
2) Acenaphthene-d10	9.600	162	57178	2.00	ug/mL	0.00
4) Phenanthrene-d10	11.109	188	84728	2.00	ug/mL	0.00
10) Chrysene-d12	14.778	240	71755	2.00	ug/mL	0.00
11) Perylene-d12	16.832	264	62036	2.00	ug/mL	-0.05
Target Compounds						Qvalue
3) Pentachlorophenol	10.927	266	232611	36.26	ug/mL	92
5) DFTPP	11.397	442	220088	30.90	ug/mL	95
6) Benzidine	12.553	184	723014	28.34	ug/mL	89
7) 4,4-DDE	12.804	TIC	19780	No Calib	#	
8) 4,4-DDD	13.307	TIC	51421	14.65	ug/mL#	1
9) 4,4-DDT	13.858	TIC	2929952	41.03	ug/mL#	1

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

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 17:11:13 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu Jun 13 15:30:01 2019
Response via : Initial Calibration
InstName : SV-GCMS9

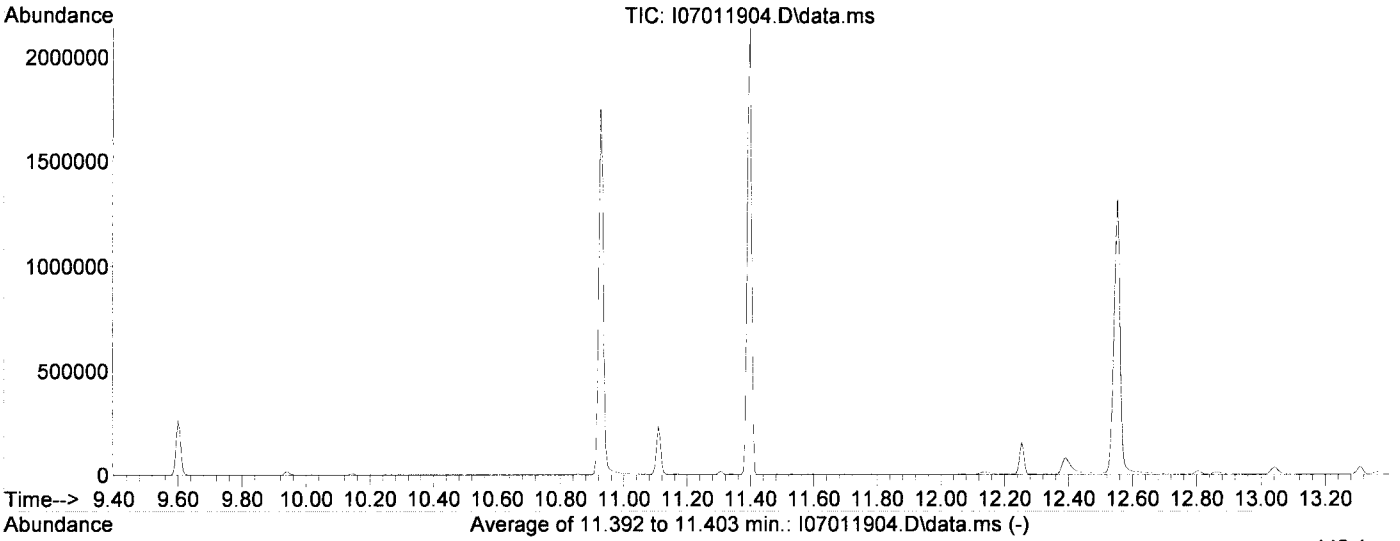


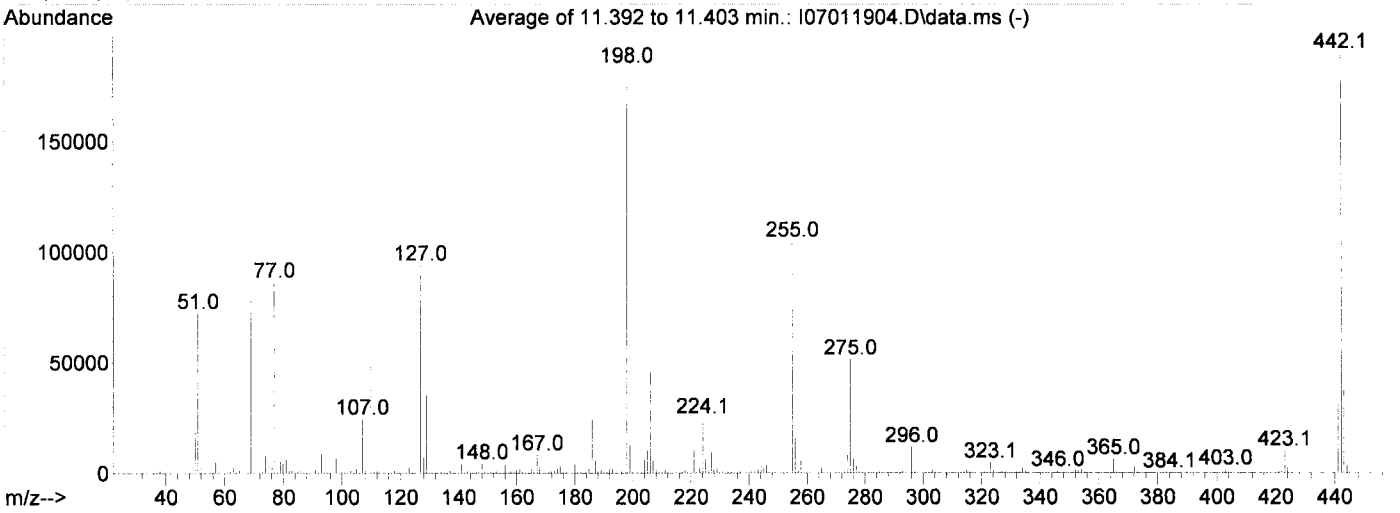
DFTPP

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011904.D
Acq On : 1 Jul 2019 3:28 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN1
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu Oct 03 11:34:01 2019





AutoFind: Scans 1478, 1479, 1480; Background Corrected with Scan 1472

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	81064	PASS
70	69	0.00	2	0.3	214	PASS
197	198	0.00	2	0.2	350	PASS
198	198	100	100	100.0	182848	PASS
199	198	5	9	7.0	12758	PASS
365	198	1	100	3.4	6268	PASS
441	443	0.01	150	82.3	31480	PASS
442	198	0.10	200	104.1	190379	PASS
443	442	15	24	20.1	38272	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	102870	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	396793	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	191412	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	345240	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	296134	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.308	264	250301	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	20.694	292	221254	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.354	112	69664	1036.36	ng/ml	-0.01
5) Phenol-d6 (Surr)	6.242	99	91119	1041.70	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.125	82	73318	1007.92	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	153184	1067.35	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	17796	1120.10	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.880	244	154582	1065.21	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.028	74	44137	858.58	ng/ml	88
3) Pyridine	4.044	79	73034	930.75	ng/ml	98
6) Phenol	6.253	94	96594	1038.33	ng/ml	100
7) Aniline	6.274	93	38082	481.07	ng/ml	77
8) Bis(2-chloroethyl) ether	6.328	93	78418	1001.60	ng/ml	99
9) 2-Chlorophenol	6.392	128	75053	1068.35	ng/ml	93
10) 1,3-Dichlorobenzene	6.531	146	79193	985.59	ng/ml	97
11) 1,4-Dichlorobenzene	6.600	146	75585	1007.09	ng/ml	97
12) Benzyl alcohol	6.723	108	38412	979.18	ng/ml	92
13) 1,2-Dichlorobenzene	6.755	146	74711	1031.72	ng/ml	97
14) 2-Methylphenol	6.830	107	55443	1040.47	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.846	45	97523	1022.72	ng/ml	94
16) N-Nitrosodi-n-propylamine	6.975	70	52929	991.05	ng/ml	92
17) 3+4-Methylphenol	6.980	107	69903	1055.04	ng/ml	98
18) Hexachloroethane	7.087	201	22574	933.58	ng/ml	82
20) Nitrobenzene	7.146	77	71604	1000.72	ng/ml	91
22) Isophorone	7.376	82	138319	941.34	ng/ml	95
23) 2-Nitrophenol	7.461	139	49682	1324.16	ng/ml	94
24) 2,4-Dimethylphenol	7.499	122	56178	997.93	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.584	93	81709	947.43	ng/ml	98
26) Benzoic acid	7.601	105	39539	1732.29	ng/ml	93
27) 2,4-Dichlorophenol	7.702	162	52700	1007.82	ng/ml	99
28) 1,2,4-Trichlorobenzene	7.782	180	63551	1001.84	ng/ml	97
29) Naphthalene	7.863	128	200990	1015.56	ng/ml	98
30) 4-Chloroaniline	7.921	127	30007	591.66	ng/ml	96
31) Hexachlorobutadiene	7.991	225	32349	982.14	ng/ml	97
32) 4-Chloro-3-methylphenol	8.397	107	55259	932.96	ng/ml	97
33) 2-Methylnaphthalene	8.553	142	151606	1015.38	ng/ml	95
34) 1-Methylnaphthalene	8.654	142	141636	1007.19	ng/ml	96
36) Hexachlorocyclopentadiene	8.718	237	24752	893.34	ng/ml	96
37) 2,4,6-Trichlorophenol	8.841	196	36764	1032.21	ng/ml	99
38) 2,4,5-Trichlorophenol	8.879	198	35559	1063.09	ng/ml	96
39) 1,1'-Biphenyl	9.018	154	168790	1055.29	ng/ml	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 2-Chloronaphthalene	9.045	162	120393	1044.65 ng/ml	96
42) 2-Nitroaniline	9.146	138	40162	1038.59 ng/ml	91
43) 2,6-Dimethylnaphthalene	9.178	156	124445	1055.90 ng/ml	98
44) 1,4-Dinitrobenzene	9.275	168	18123	967.60 ng/ml	81
45) Dimethyl phthalate	9.323	163	137738	1028.59 ng/ml	98
46) 1,3-Dinitrobenzene	9.355	168	20800	967.25 ng/ml	93
47) 2,6-Dinitrotoluene	9.387	165	32515	1085.89 ng/ml	82
48) 1,2-Dinitrobenzene	9.440	168	14799	996.49 ng/ml	88
49) Acenaphthylene	9.467	152	196736	1039.01 ng/ml	100
50) 3-Nitroaniline	9.563	138	19596	805.17 ng/ml	88
51) Acenaphthene	9.644	153	123042	1031.50 ng/ml	98
52) 2,4-Dinitrophenol	9.665	184	6173	683.49 ng/ml	93
53) 4-Nitrophenol	9.740	139	17476	826.69 ng/ml	87
54) 2,4-Dinitrotoluene	9.793	165	38980	943.67 ng/ml	89
55) Dibenzofuran	9.815	168	168479	1037.90 ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	9.900	232	25490	898.01 ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	9.943	232	28722	961.78 ng/ml	86
58) Diethyl phthalate	10.034	149	127405	981.88 ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.023	170	113527	976.95 ng/ml	100
60) Fluorene	10.163	166	135405	967.91 ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.157	204	64003	979.27 ng/ml	85
62) 4-Nitroaniline	10.179	138	23162	808.05 ng/ml	97
63) 4,6-Dinitro-2-methylph...	10.211	198	12233	741.84 ng/ml	86
65) N-Nitrosodiphenylamine	10.275	169	109287	1024.88 ng/ml	98
66) Azobenzene (1,2-DPH)	10.312	77	126421	1056.33 ng/ml	94
68) 4-Bromophenyl phenyl e...	10.649	248	38749	1020.84 ng/ml	88
69) Hexachlorobenzene	10.735	284	43391	1029.10 ng/ml	91
70) Pentachlorophenol (PCP)	10.933	266	12018	674.38 ng/ml	100
71) Phenanthrene	11.136	178	184874	1002.45 ng/ml	97
72) Anthracene	11.189	178	184136	998.56 ng/ml	99
73) Carbazole	11.350	167	146050	903.73 ng/ml	96
74) Di-n-butyl phthalate	11.692	149	217306	1037.75 ng/ml	98
75) Fluoranthene	12.398	202	205708	954.56 ng/ml	96
76) Benzidine	12.548	184	29179	349.88 ng/ml	93
77) Pyrene	12.682	202	202088	921.47 ng/ml	99
80) Butyl benzyl phthalate	13.671	149	89166	1087.22 ng/ml	92
81) Bis(2-ethylhexyl) adipate	13.832	129	79523	1018.69 ng/ml	98
82) 3,3-Dichlorobenzidine	14.800	252	45799	2292.74 ng/ml	98
83) Benz(a)anthracene	14.821	228	170300	990.07 ng/ml	98
84) Chrysene	14.907	228	157511	992.60 ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.976	149	113440	1086.51 ng/ml	97
87) Di-n-octyl phthalate	16.629	149	191496	1099.62 ng/ml	99
88) Benzo(b)fluoranthene	17.399	252	161488	1021.83 ng/ml	93
89) Benzo(k)fluoranthene	17.458	252	161464	1032.01 ng/ml	95
90) Benzo(b+k)fluoranthene	17.458	252	330884	2041.37 ng/ml	95
91) Benzo(e)pyrene	18.046	252	156873	1048.22 ng/ml	98
92) Benzo(a)pyrene	18.164	252	144769	1010.42 ng/ml	98
93) Perylene	18.367	252	126529	998.51 ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.694	276	118578	975.99 ng/ml	93
96) Dibenz(a,h)anthracene	20.758	278	108955	1015.79 ng/ml	92
97) Benzo(g,h,i)perylene	21.224	276	120064	1010.64 ng/ml	87

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

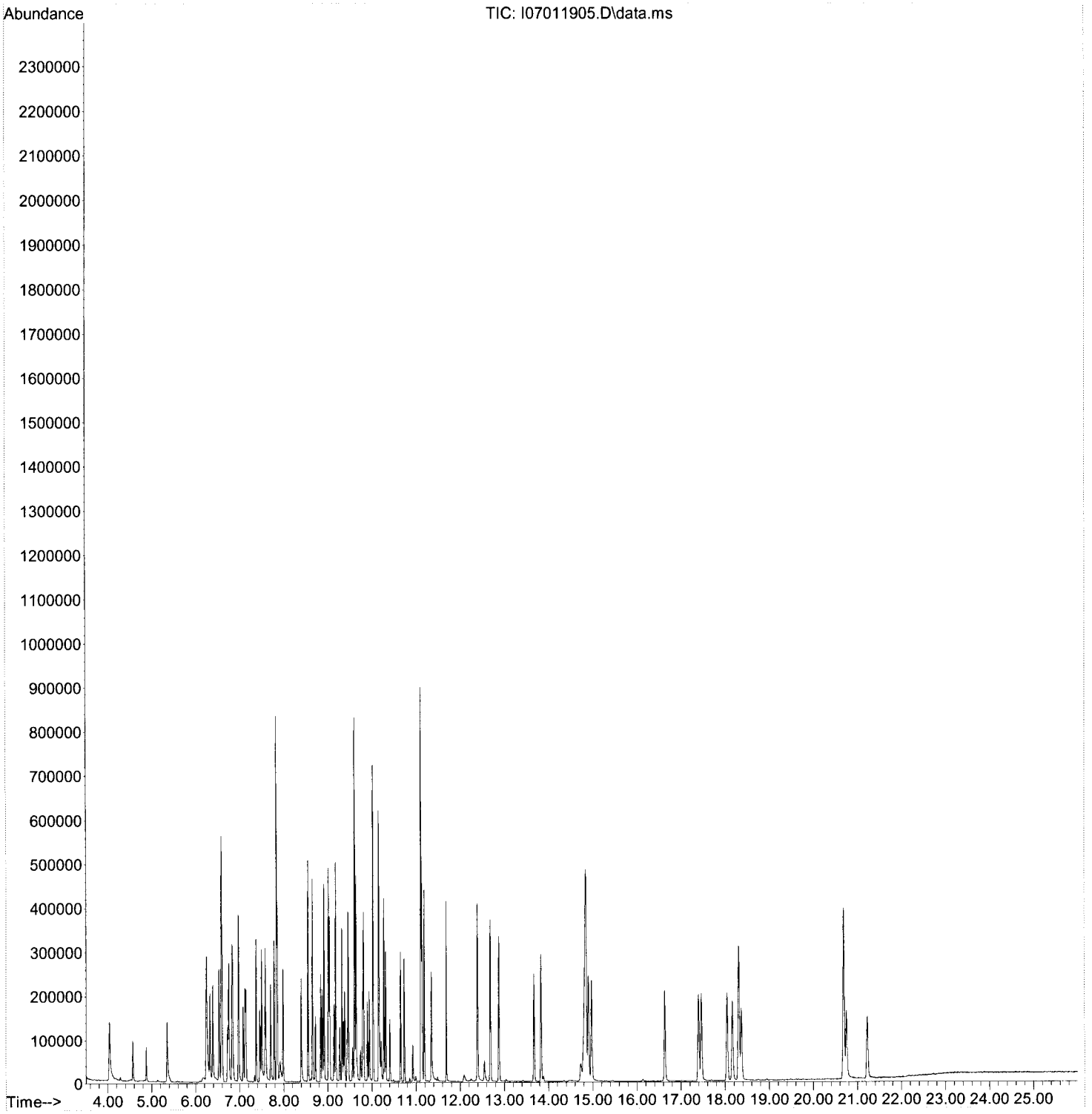
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011905.D
Acq On : 1 Jul 2019 3:56 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV1
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 17:11:33 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.841	136	122228	2.00	ug/mL	0.00
2) Acenaphthene-d10	9.606	162	61150	2.00	ug/mL	0.00
4) Phenanthrene-d10	11.114	188	92812	2.00	ug/mL	0.00
10) Chrysene-d12	14.783	240	82959	2.00	ug/mL	0.00
11) Perylene-d12	16.810	264	73278	2.00	ug/mL	0.00
Target Compounds						Qvalue
3) Pentachlorophenol	10.932	266	247884	36.13	ug/mL	93
5) DFTPP	11.403	442	229699	29.44	ug/mL	97
6) Benzidine	12.558	184	835060	29.88	ug/mL	89
7) 4,4-DDE	12.810	TIC	20842	No Calib	#	
8) 4,4-DDD	13.312	TIC	6359	1.65	ug/mL#	1
9) 4,4-DDT	13.863	TIC	3309845	42.32	ug/mL#	1

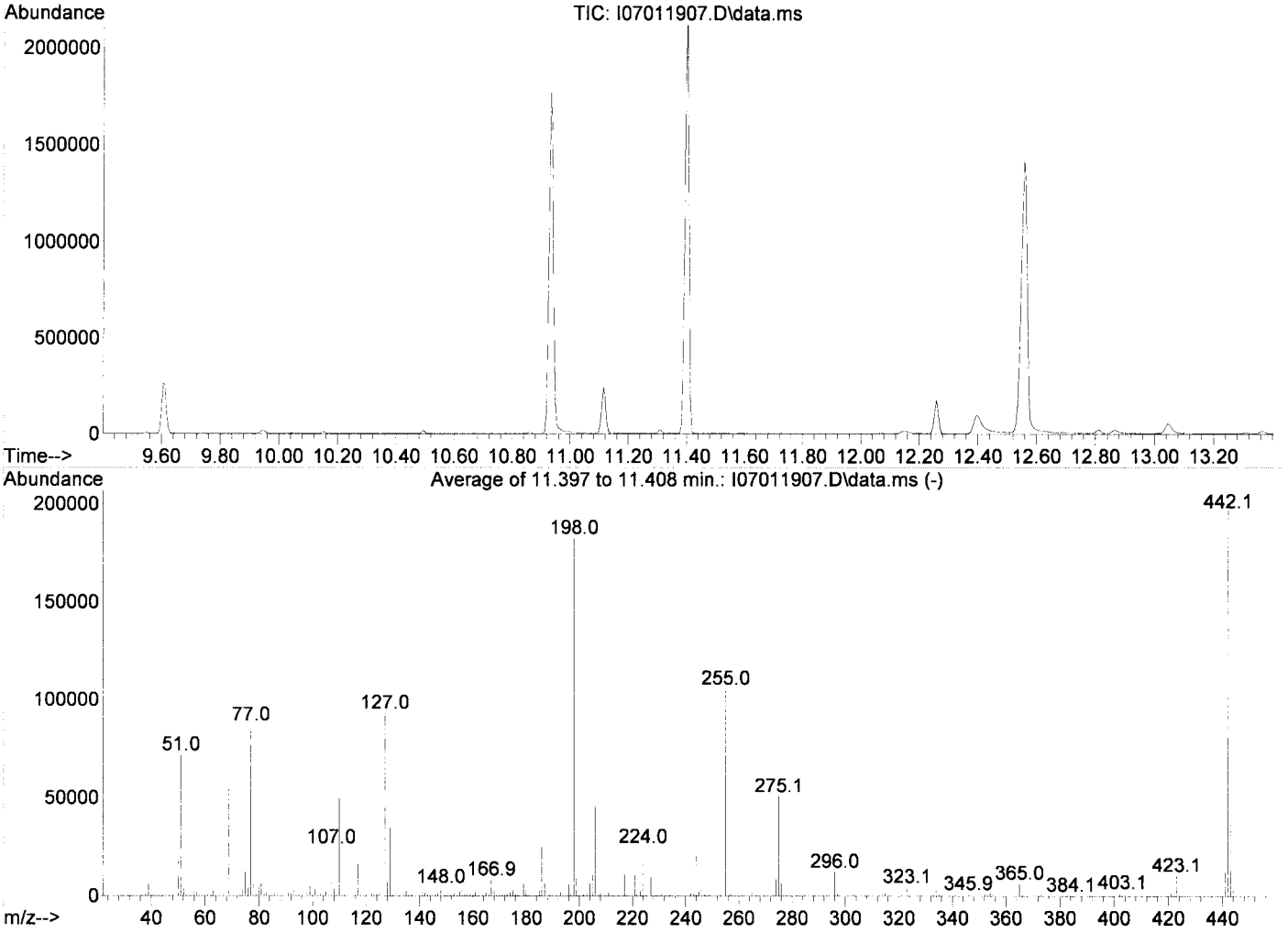
(#) = qualifier out of range (m) = manual integration (+) = signals summed

DFTPP

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu Oct 03 11:34:01 2019



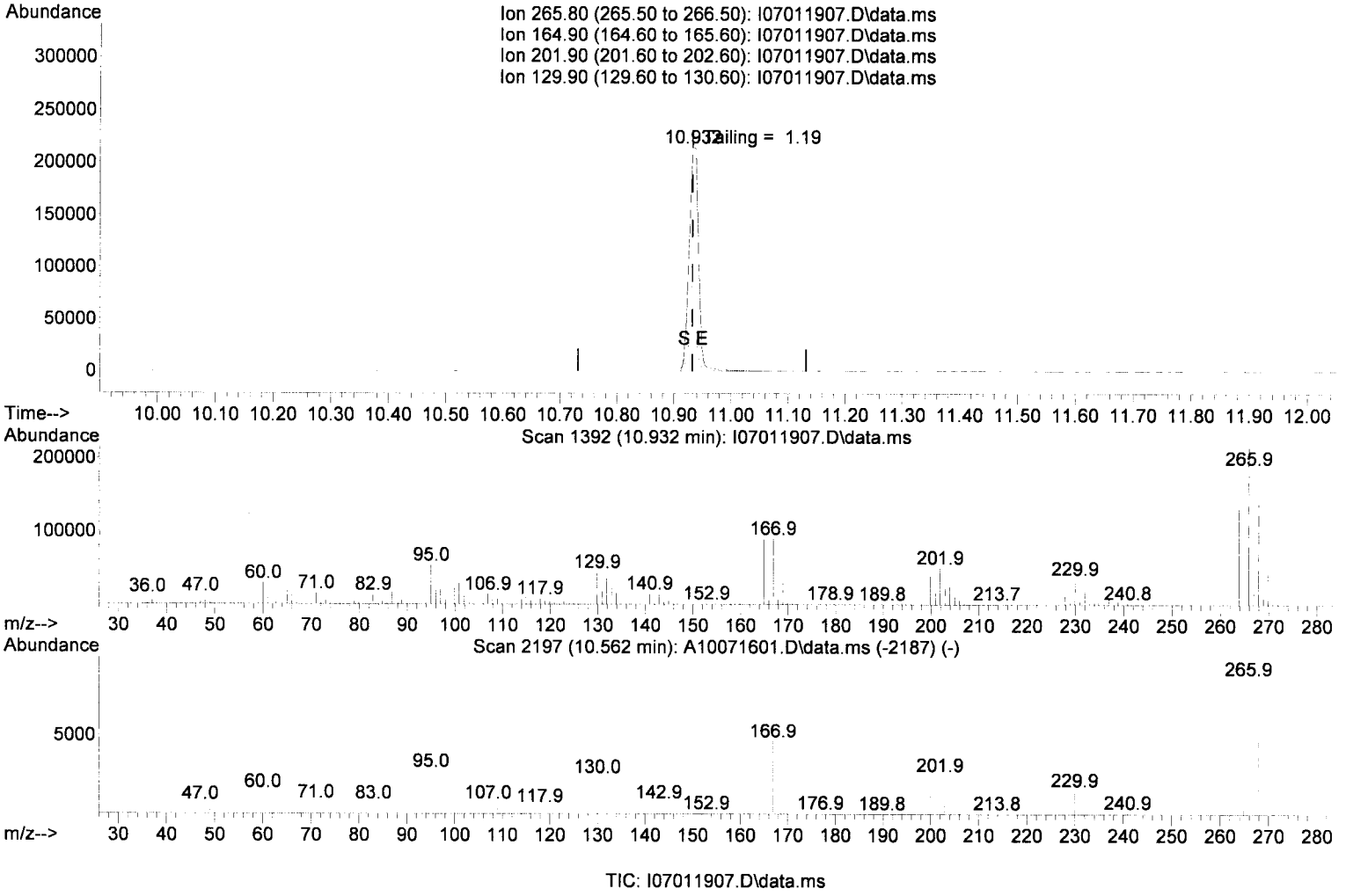
AutoFind: Scans 1479, 1480, 1481; Background Corrected with Scan 1472

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	78570	PASS
70	69	0.00	2	0.4	298	PASS
197	198	0.00	2	0.5	926	PASS
198	198	100	100	100.0	182488	PASS
199	198	5	9	6.7	12198	PASS
365	198	1	100	3.4	6269	PASS
441	443	0.01	150	55.2	21285	PASS
442	198	0.10	200	107.9	196971	PASS
443	442	15	24	19.6	38552	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I07011907.D\data.ms

(3) Pentachlorophenol

10.932min (0.000) 36.13 ug/mL

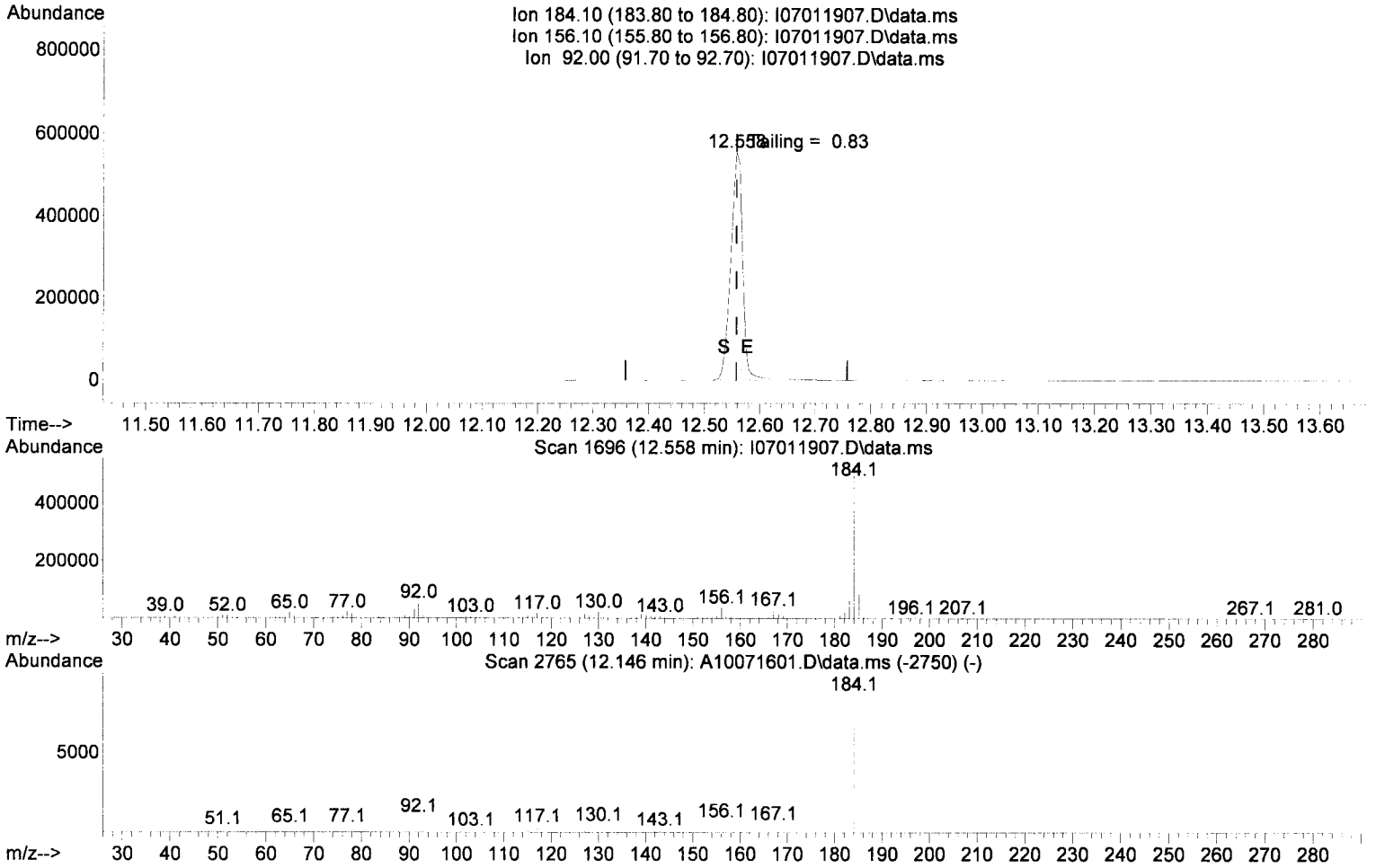
response 247884

Ion	Exp%	Act%
265.80	100.00	100.00
164.90	47.40	41.61
201.90	26.10	23.15
129.90	22.80	20.38

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I07011907.D\data.ms

(6) Benzidine

12.558min (0.000) 29.88 ug/mL

response 835060

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	9.40	6.83
92.00	15.50	10.05
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9G01054-TUN2
SV-GCMS9

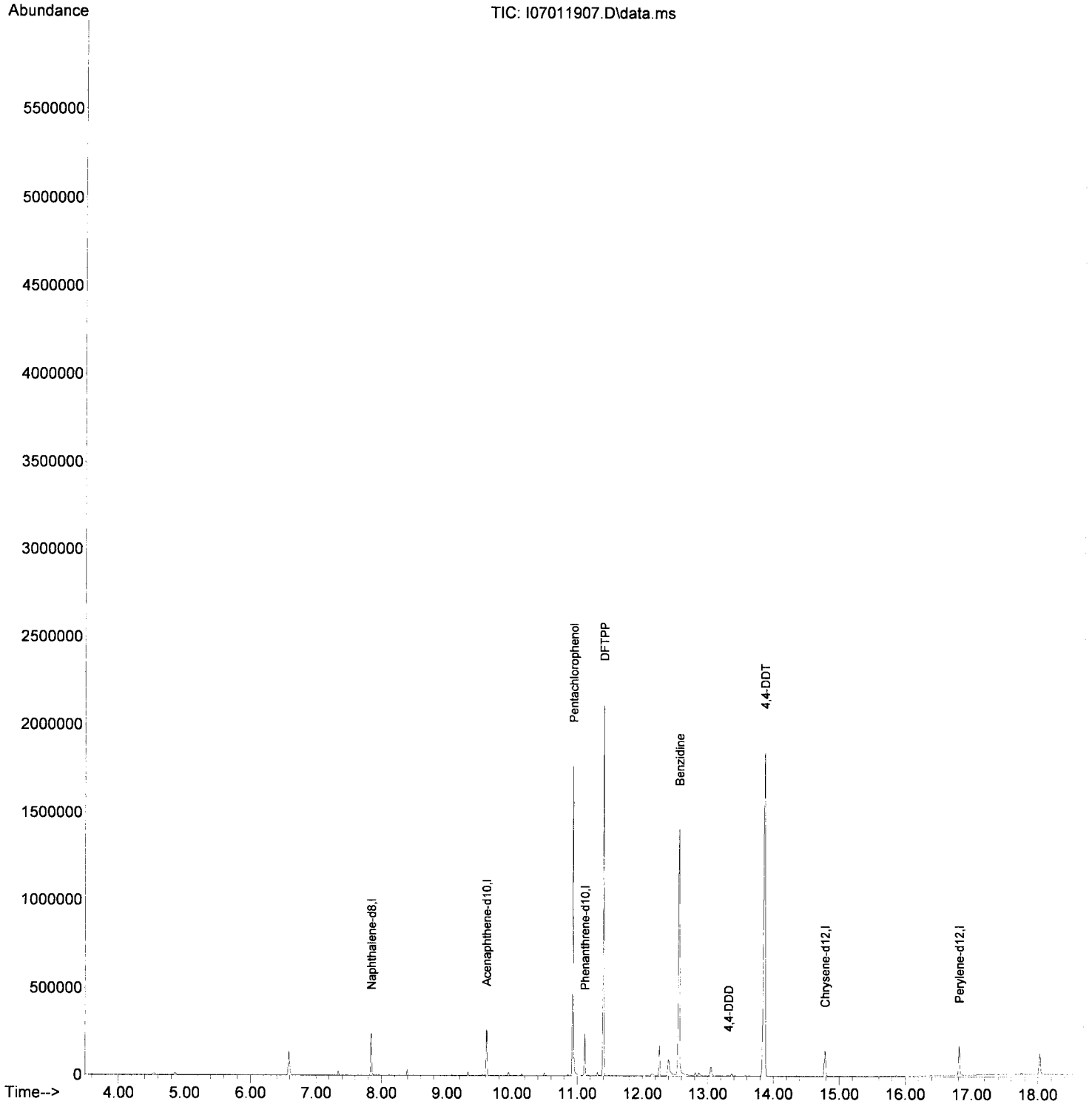
First Column Area Counts		Percent Breakdown	
DDE	20842		
DDD	6359		
DDT	3309845	**0.82**	**PASS**

Breakdown must be less than 20% to accept sample data.

No Name Entered Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-07\9G01054\
Data File : I07011907.D
Acq On : 1 Jul 2019 5:31 pm
Operator : JK /AMS /DTH
Sample : 9G01054-TUN2
Misc : 1x, A19F170 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jul 01 19:06:35 2019
Quant Method : C:\msdchem\1\methods\DFTPP-8270.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Mon Jul 01 19:06:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	108363	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	411652	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	197429	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	374232	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.853	240	356296	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	334168	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.700	292	329125	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.349	112	74873	1057.39	ng/ml	-0.02
5) Phenol-d6 (Surr)	6.242	99	93447	1014.16	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.130	82	76105	993.19	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	158472	1070.54	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	20162	1170.71	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.880	244	180038	1031.14	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.017	74	49553	915.08	ng/ml	88
3) Pyridine	4.028	79	79323	959.65	ng/ml	98
6) Phenol	6.253	94	98969	1009.93	ng/ml	99
7) Aniline	6.274	93	52113	624.94	ng/ml	84
8) Bis(2-chloroethyl) ether	6.328	93	84503	1024.61	ng/ml	97
9) 2-Chlorophenol	6.392	128	77424	1046.24	ng/ml	93
10) 1,3-Dichlorobenzene	6.536	146	84362	996.70	ng/ml	97
11) 1,4-Dichlorobenzene	6.606	146	80077	1012.85	ng/ml	96
12) Benzyl alcohol	6.724	108	41931	1012.72	ng/ml	98
13) 1,2-Dichlorobenzene	6.756	146	78631	1030.81	ng/ml	96
14) 2-Methylphenol	6.831	107	56660	1009.41	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.847	45	99238	987.95	ng/ml	95
16) N-Nitrosodi-n-propylamine	6.975	70	55528	987.01	ng/ml	94
17) 3+4-Methylphenol	6.980	107	73661	1055.41	ng/ml	97
18) Hexachloroethane	7.087	201	25386	996.66	ng/ml	88
20) Nitrobenzene	7.146	77	73382	973.59	ng/ml	92
22) Isophorone	7.376	82	144060	945.02	ng/ml	95
23) 2-Nitrophenol	7.462	139	43853	1126.61	ng/ml	98
24) 2,4-Dimethylphenol	7.504	122	59005	1010.32	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.585	93	85331	953.71	ng/ml	99
26) Benzoic acid	7.606	105	55546	2085.53	ng/ml	95
27) 2,4-Dichlorophenol	7.708	162	54153	998.36	ng/ml	97
28) 1,2,4-Trichlorobenzene	7.783	180	65004	987.75	ng/ml	98
29) Naphthalene	7.863	128	207707	1011.62	ng/ml	99
30) 4-Chloroaniline	7.927	127	37590	714.42	ng/ml	93
31) Hexachlorobutadiene	7.991	225	34962	1023.15	ng/ml	99
32) 4-Chloro-3-methylphenol	8.403	107	60285	977.62	ng/ml	99
33) 2-Methylnaphthalene	8.553	142	154358	996.50	ng/ml	96
34) 1-Methylnaphthalene	8.654	142	145194	995.22	ng/ml	98
36) Hexachlorocyclopentadiene	8.724	237	33189	1148.73	ng/ml	97
37) 2,4,6-Trichlorophenol	8.842	196	39018	1061.35	ng/ml	97
38) 2,4,5-Trichlorophenol	8.884	198	38423	1112.52	ng/ml	99
39) 1,1'-Biphenyl	9.023	154	176656	1070.81	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
41) 2-Chloronaphthalene	9.045	162	126626	1065.25 ng/ml	96
42) 2-Nitroaniline	9.146	138	44060	1104.67 ng/ml	95
43) 2,6-Dimethylnaphthalene	9.184	156	130476	1073.33 ng/ml	94
44) 1,4-Dinitrobenzene	9.275	168	21360	1094.82 ng/ml	85
45) Dimethyl phthalate	9.328	163	145747	1055.23 ng/ml	100
46) 1,3-Dinitrobenzene	9.355	168	24288	1095.03 ng/ml	94
47) 2,6-Dinitrotoluene	9.387	165	33561	1086.67 ng/ml	84
48) 1,2-Dinitrobenzene	9.446	168	16750	1093.48 ng/ml	83
49) Acenaphthylene	9.467	152	207090	1060.36 ng/ml	100
50) 3-Nitroaniline	9.564	138	23030	927.93 ng/ml	90
51) Acenaphthene	9.644	153	126961	1031.92 ng/ml	97
52) 2,4-Dinitrophenol	9.665	184	11499	1077.50 ng/ml	94
53) 4-Nitrophenol	9.740	139	21056	952.74 ng/ml	95
54) 2,4-Dinitrotoluene	9.799	165	43327	1016.04 ng/ml	82
55) Dibenzofuran	9.815	168	176892	1056.52 ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	9.901	232	28635	975.17 ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	9.949	232	32965	1069.44 ng/ml	87
58) Diethyl phthalate	10.034	149	139674	1043.63 ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.029	170	117975	984.28 ng/ml	100
60) Fluorene	10.163	166	142840	989.94 ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.157	204	68281	1012.89 ng/ml	88
62) 4-Nitroaniline	10.184	138	29578	1000.43 ng/ml	98
63) 4,6-Dinitro-2-methylph...	10.216	198	17915	1017.06 ng/ml	76
65) N-Nitrosodiphenylamine	10.275	169	119882	1037.14 ng/ml	97
66) Azobenzene (1,2-DPH)	10.318	77	135843	1047.12 ng/ml	89
68) 4-Bromophenyl phenyl e...	10.655	248	42837	1041.11 ng/ml	85
69) Hexachlorobenzene	10.735	284	45260	990.27 ng/ml	90
70) Pentachlorophenol (PCP)	10.933	266	16130	819.38 ng/ml	95
71) Phenanthrene	11.142	178	199430	997.60 ng/ml	98
72) Anthracene	11.190	178	204369	1022.42 ng/ml	98
73) Carbazole	11.355	167	172145	982.68 ng/ml	99
74) Di-n-butyl phthalate	11.692	149	248397	1094.33 ng/ml	99
75) Fluoranthene	12.398	202	239311	1024.46 ng/ml	95
76) Benzidine	12.548	184	74763	1460.93 ng/ml	99
77) Pyrene	12.682	202	238595	1003.65 ng/ml	98
80) Butyl benzyl phthalate	13.671	149	111057	1123.44 ng/ml	91
81) Bis(2-ethylhexyl) adipate	13.837	129	113575	1209.23 ng/ml	100
82) 3,3-Dichlorobenzidine	14.795	252	59004	2522.58 ng/ml	98
83) Benz(a)anthracene	14.827	228	208396	1006.97 ng/ml	96
84) Chrysene	14.907	228	191268	1001.80 ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.982	149	140167	1115.81 ng/ml	97
87) Di-n-octyl phthalate	16.635	149	243800	1051.38 ng/ml	98
88) Benzo(b)fluoranthene	17.399	252	214189	1015.20 ng/ml	97
89) Benzo(k)fluoranthene	17.464	252	208188	995.38 ng/ml	95
90) Benzo(b+k)fluoranthene	17.464	252	433915	2004.56 ng/ml	95
91) Benzo(e)pyrene	18.052	252	210124	1051.66 ng/ml	97
92) Benzo(a)pyrene	18.170	252	194689	1017.92 ng/ml	97
93) Perylene	18.373	252	171161	1011.73 ng/ml	98
95) Indeno(1,2,3-cd)pyrene	20.694	276	176895	978.78 ng/ml	91
96) Dibenz(a,h)anthracene	20.758	278	162716	1019.81 ng/ml	95
97) Benzo(g,h,i)perylene	21.234	276	187575	1061.42 ng/ml	85

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

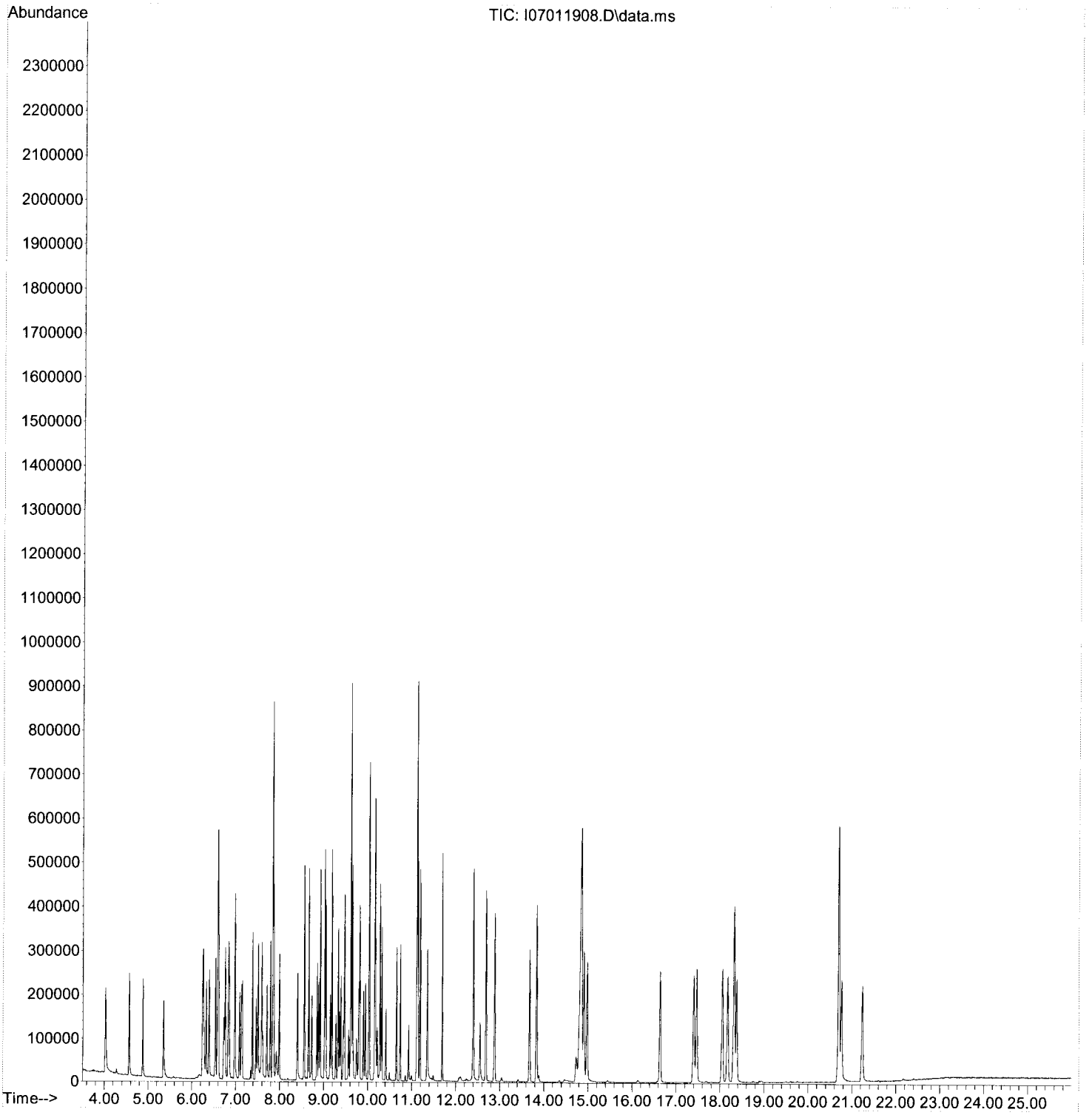
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011908.D
Acq On : 1 Jul 2019 5:59 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCV2
Misc : 1x, A19D058@1000
ALS Vial : 2 Sample Multiplier: 1

Quant Time: Jul 01 19:03:27 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011909.D
Acq On : 1 Jul 2019 6:35 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 01 19:04:38 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

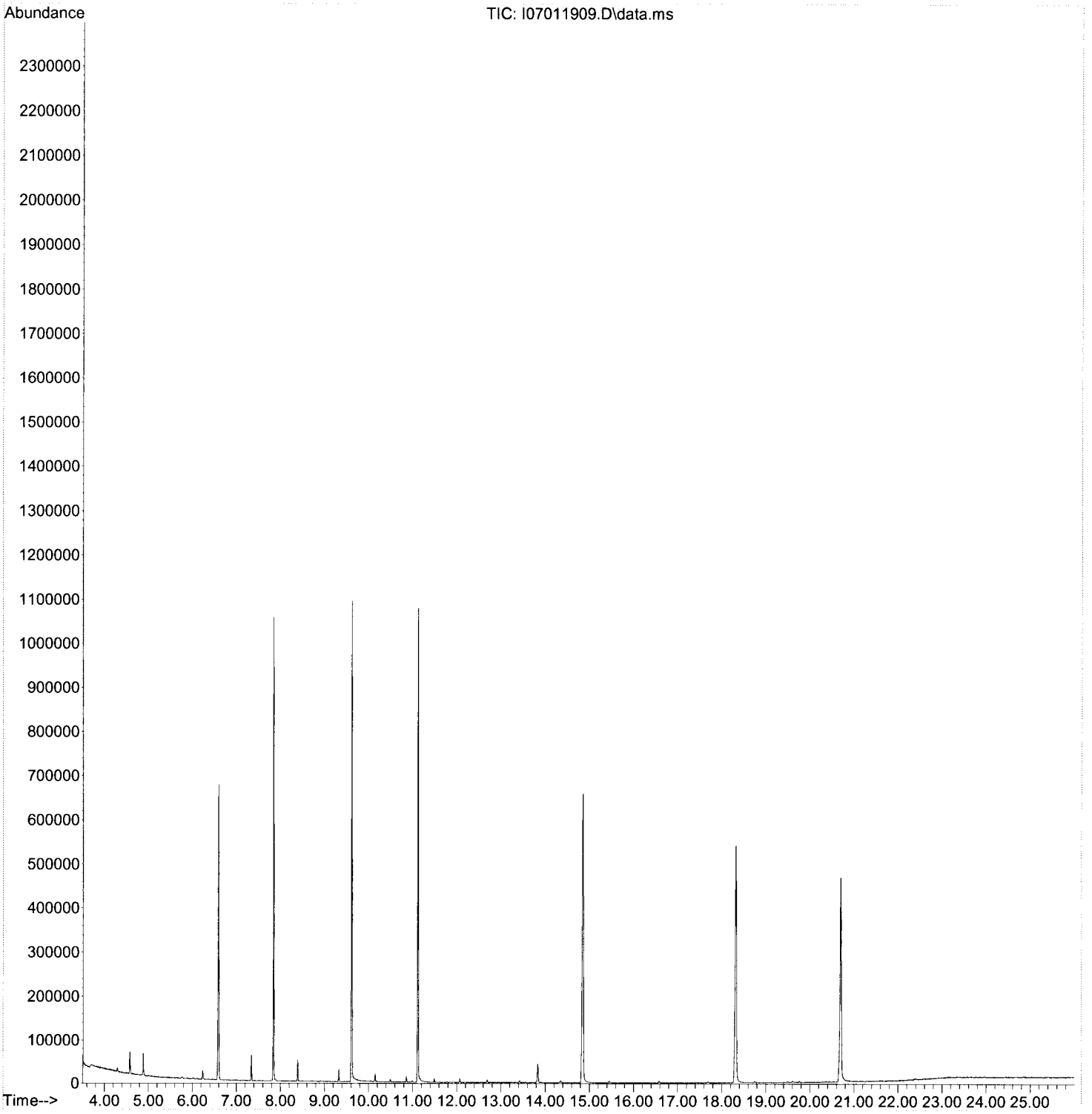
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.590	152	129884	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	510661	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	242857	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	454000	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.853	240	461266	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	428580	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	400276	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	0.000	112	0	0.00	ng/ml	
5) Phenol-d6 (Surr)	0.000	99	0	0.00	ng/ml	
19) Nitrobenzene-d5 (Surr)	0.000	82	0	0.00	ng/ml	
40) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
54) 2,4-Dinitrotoluene	9.799	165	116	34.85	ng/ml#	17
59) 2,3,5-Trimethylnaphtha...	10.141	170	50	0.34	ng/ml#	4
71) Phenanthrene	11.120	178	115	0.47	ng/ml#	1
72) Anthracene	11.120	178	115	0.47	ng/ml#	1
81) Bis(2-ethylhexyl) adipate	13.832	129	11664	95.93	ng/ml	91
83) Benz(a)anthracene	14.848	228	1011	3.77	ng/ml	78
84) Chrysene	14.848	228	976	3.95	ng/ml	75
93) Perylene	18.303	252	1219	5.62	ng/ml#	58
95) Indeno(1,2,3-cd)pyrene	20.689	276	193	0.88	ng/ml#	44

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011909.D
Acq On : 1 Jul 2019 6:35 pm
Operator : JK /AMS /DTH
Sample : 9G01054-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1

Quant Time: Jul 01 19:04:38 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011910.D
Acq On : 1 Jul 2019 7:11 pm
Operator : JK /AMS /DTH
Sample : 9061508-BLK1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 02 07:31:03 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

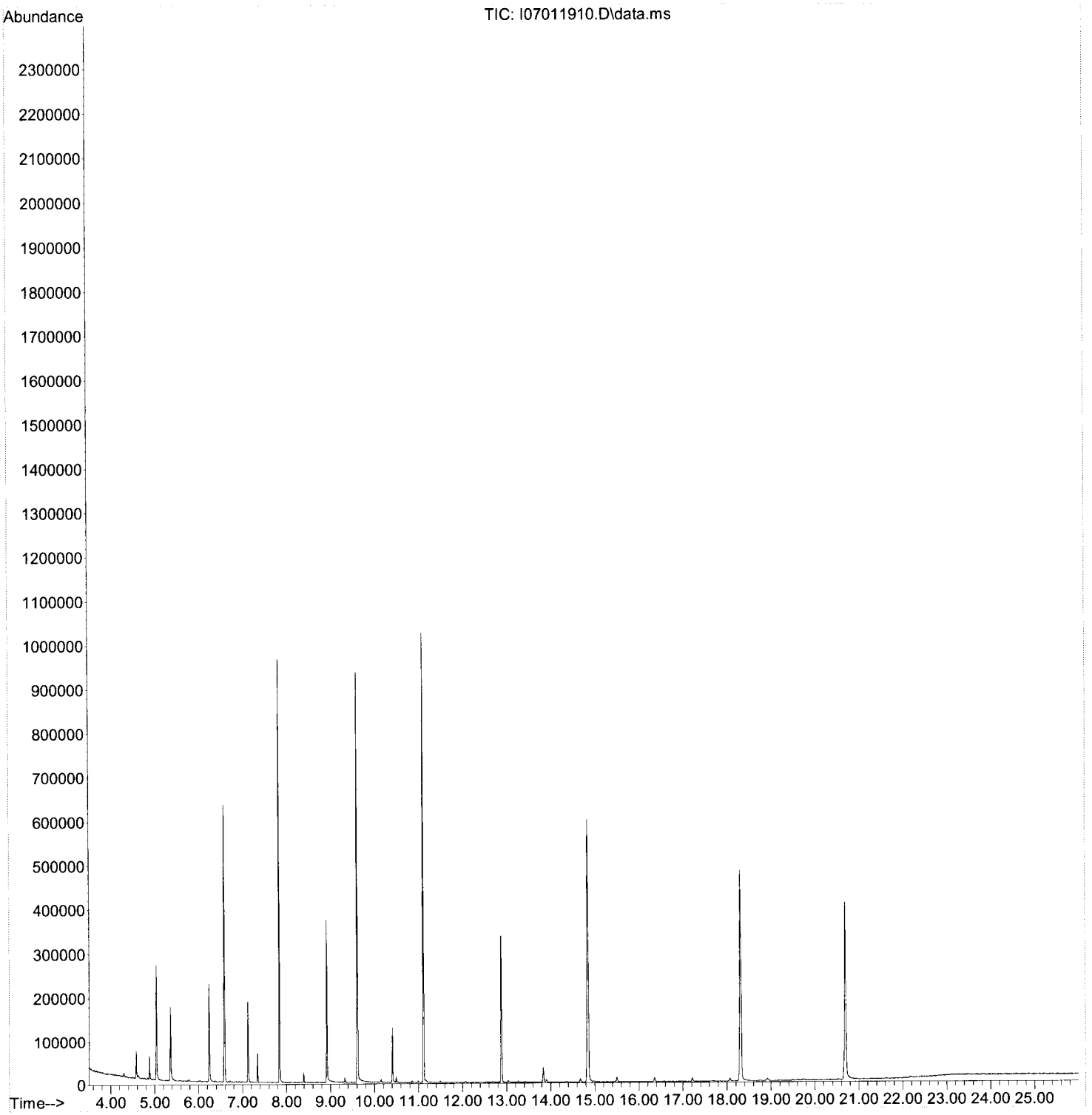
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	120657	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	463135	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	214779	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	401451	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	399515	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	371048	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	344390	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.359	112	62558	793.45	ng/ml	0.00
5) Phenol-d6 (Surr)	6.242	99	76296	743.65	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.125	82	69755	817.57	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	130720	811.73	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	16073	870.00	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.885	244	163101	833.08	ng/ml	0.00
Target Compounds						Qvalue
6) Phenol	6.247	94	96	0.88	ng/ml#	1
16) N-Nitrosodi-n-propylamine	6.948	70	52	0.83	ng/ml	59
20) Nitrobenzene	7.130	77	335	3.99	ng/ml#	40
22) Isophorone	7.360	82	108	0.63	ng/ml	66
29) Naphthalene	7.852	128	140	0.61	ng/ml	68
33) 2-Methylnaphthalene	8.558	142	83	0.48	ng/ml#	21
39) 1,1'-Biphenyl	9.029	154	459	2.56	ng/ml	70
49) Acenaphthylene	9.467	152	167	0.79	ng/ml	61
51) Acenaphthene	9.638	153	170	1.27	ng/ml#	65
54) 2,4-Dinitrotoluene	9.793	165	142	35.66	ng/ml#	17
55) Dibenzofuran	9.820	168	152	0.83	ng/ml#	1
58) Diethyl phthalate	10.034	149	109	0.75	ng/ml	64
59) 2,3,5-Trimethylnaphtha...	10.034	170	225	1.73	ng/ml	74
60) Fluorene	10.163	166	119	0.76	ng/ml#	65
71) Phenanthrene	11.141	178	398	1.86	ng/ml	69
72) Anthracene	11.189	178	236	1.10	ng/ml	62
73) Carbazole	11.361	167	103	0.55	ng/ml	59
74) Di-n-butyl phthalate	11.698	149	179	0.74	ng/ml	78
75) Fluoranthene	12.404	202	162	0.65	ng/ml#	46
77) Pyrene	12.687	202	166	0.65	ng/ml	58
81) Bis(2-ethylhexyl) adipate	13.837	129	9128	86.67	ng/ml	96
83) Benz(a)anthracene	14.848	228	1126	4.85	ng/ml	58
84) Chrysene	14.901	228	56	0.26	ng/ml	50
85) Bis(2-ethylhexyl) phth...	14.976	149	345	2.45	ng/ml	52
88) Benzo(b)fluoranthene	17.394	252	55	4.63	ng/ml#	1
89) Benzo(k)fluoranthene	17.394	252	55	5.27	ng/ml#	1
90) Benzo(b+k)fluoranthene	17.394	252	55	10.46	ng/ml#	1
93) Perylene	18.319	252	1214	6.46	ng/ml#	70
95) Indeno(1,2,3-cd)pyrene	20.694	276	134	0.71	ng/ml#	1

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011910.D
Acq On : 1 Jul 2019 7:11 pm
Operator : JK /AMS /DTH
Sample : 9061508-BLK1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 4 Sample Multiplier: 1

Quant Time: Jul 02 07:31:03 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.590	152	103191	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.847	136	387480	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.617	162	192368	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.120	188	367679	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.859	240	340877	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.319	264	328423	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.705	292	326359	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.365	112	70046	1038.80	ng/ml	0.00
5) Phenol-d6 (Surr)	6.247	99	86852	989.83	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.130	82	68537	939.26	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	143344	993.82	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.414	330	17741	1048.49	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.885	244	163323	977.72	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.028	74	73966	1434.36	ng/ml	87
3) Pyridine	4.044	79	96741	1229.03	ng/ml	98
6) Phenol	6.263	94	150591	1613.73	ng/ml	99
7) Aniline	6.279	93	69508	875.32	ng/ml	91
8) Bis(2-chloroethyl) ether	6.328	93	117438	1495.32	ng/ml	99
9) 2-Chlorophenol	6.397	128	114915	1630.69	ng/ml	94
10) 1,3-Dichlorobenzene	6.536	146	121907	1512.46	ng/ml	97
11) 1,4-Dichlorobenzene	6.606	146	116985	1553.85	ng/ml	96
12) Benzyl alcohol	6.729	108	66101	1628.59	ng/ml	93
13) 1,2-Dichlorobenzene	6.761	146	111719	1537.98	ng/ml	97
14) 2-Methylphenol	6.836	107	86920	1626.11	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	6.852	45	140216	1465.87	ng/ml	94
16) N-Nitrosodi-n-propylamine	6.980	70	82099	1532.45	ng/ml	94
17) 3+4-Methylphenol	6.991	107	111054	1670.92	ng/ml	97
18) Hexachloroethane	7.087	201	37389	1541.47	ng/ml	91
20) Nitrobenzene	7.151	77	110470	1539.10	ng/ml	94
22) Isophorone	7.381	82	216161	1506.46	ng/ml	94
23) 2-Nitrophenol	7.467	139	64628	1763.91	ng/ml	98
24) 2,4-Dimethylphenol	7.504	122	94119	1712.09	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.590	93	128829	1529.69	ng/ml	97
26) Benzoic acid	7.627	105	86219	2940.22	ng/ml	98
27) 2,4-Dichlorophenol	7.708	162	85110	1661.79	ng/ml	98
28) 1,2,4-Trichlorobenzene	7.788	180	93537	1509.98	ng/ml	98
29) Naphthalene	7.868	128	299910	1551.81	ng/ml	99
30) 4-Chloroaniline	7.932	127	28997	585.48	ng/ml	92
31) Hexachlorobutadiene	7.996	225	50316	1564.34	ng/ml	98
32) 4-Chloro-3-methylphenol	8.403	107	93928	1573.26	ng/ml	99
33) 2-Methylnaphthalene	8.558	142	225755	1548.34	ng/ml	98
34) 1-Methylnaphthalene	8.660	142	211662	1541.33	ng/ml	98
36) Hexachlorocyclopentadiene	8.724	237	52102	1822.00	ng/ml	97
37) 2,4,6-Trichlorophenol	8.847	196	60109	1665.11	ng/ml	99
38) 2,4,5-Trichlorophenol	8.884	198	56634	1671.26	ng/ml	94
39) 1,1'-Biphenyl	9.023	154	259729	1615.78	ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 2-Chloronaphthalene	9.050	162	185866	1604.74	ng/ml	95
42) 2-Nitroaniline	9.152	138	66788	1718.56	ng/ml	88
43) 2,6-Dimethylnaphthalene	9.184	156	189664	1601.28	ng/ml	97
44) 1,4-Dinitrobenzene	9.280	168	32018	1639.10	ng/ml	82
45) Dimethyl phthalate	9.334	163	215563	1601.77	ng/ml	99
46) 1,3-Dinitrobenzene	9.366	168	35842	1658.46	ng/ml	87
47) 2,6-Dinitrotoluene	9.392	165	51347	1706.30	ng/ml	82
48) 1,2-Dinitrobenzene	9.451	168	24210	1622.07	ng/ml	88
49) Acenaphthylene	9.473	152	304884	1602.16	ng/ml	99
50) 3-Nitroaniline	9.569	138	36165	1561.85	ng/ml	94
51) Acenaphthene	9.649	153	193146	1611.16	ng/ml	98
52) 2,4-Dinitrophenol	9.671	184	17280	1528.60	ng/ml	88
53) 4-Nitrophenol	9.745	139	33111	1480.77	ng/ml	89
54) 2,4-Dinitrotoluene	9.804	165	66115	1593.51	ng/ml	84
55) Dibenzofuran	9.820	168	260835	1598.87	ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	9.906	232	45503	1570.65	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	9.949	232	48385	1609.31	ng/ml	88
58) Diethyl phthalate	10.040	149	198981	1525.88	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.029	170	173540	1485.96	ng/ml	97
60) Fluorene	10.168	166	209357	1489.10	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.157	204	100501	1530.06	ng/ml	91
62) 4-Nitroaniline	10.189	138	47079	1634.27	ng/ml	92
63) 4,6-Dinitro-2-methylph...	10.216	198	29916	1667.25	ng/ml	82
65) N-Nitrosodiphenylamine	10.280	169	180131	1586.16	ng/ml	96
66) Azobenzene (1,2-DPH)	10.323	77	199724	1566.98	ng/ml	86
68) 4-Bromophenyl phenyl e...	10.655	248	64665	1599.63	ng/ml	89
69) Hexachlorobenzene	10.740	284	68428	1523.86	ng/ml	92
70) Pentachlorophenol (PCP)	10.933	266	29088	1439.71	ng/ml	95
71) Phenanthrene	11.141	178	301540	1535.26	ng/ml	98
72) Anthracene	11.195	178	300585	1530.58	ng/ml	99
73) Carbazole	11.355	167	257112	1493.87	ng/ml	98
74) Di-n-butyl phthalate	11.692	149	364849	1636.02	ng/ml	99
75) Fluoranthene	12.404	202	353135	1538.66	ng/ml	96
76) Benzidine	12.553	184	82905	1691.75	ng/ml	95
77) Pyrene	12.687	202	354830	1519.19	ng/ml	99
80) Butyl benzyl phthalate	13.677	149	166025	1707.83	ng/ml	92
81) Bis(2-ethylhexyl) adipate	13.842	129	155386	1729.23	ng/ml	98
82) 3,3-Dichlorobenzidine	14.800	252	165671	9118.28	ng/ml	98
83) Benz(a)anthracene	14.832	228	312679	1579.21	ng/ml	98
84) Chrysene	14.918	228	278970	1527.25	ng/ml	97
85) Bis(2-ethylhexyl) phth...	14.987	149	206146	1715.27	ng/ml	95
87) Di-n-octyl phthalate	16.640	149	387638	1663.26	ng/ml	99
88) Benzo(b)fluoranthene	17.410	252	332306	1597.65	ng/ml	96
89) Benzo(k)fluoranthene	17.480	252	310185	1540.57	ng/ml	95
90) Benzo(b+k)fluoranthene	17.480	252	658831	3128.45	ng/ml	95
91) Benzo(e)pyrene	18.063	252	313896	1598.52	ng/ml	98
92) Benzo(a)pyrene	18.180	252	299145	1608.79	ng/ml	97
93) Perylene	18.383	252	295936	1779.88	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.705	276	273621	1526.81	ng/ml	95
96) Dibenz(a,h)anthracene	20.769	278	247603	1564.98	ng/ml	94
97) Benzo(g,h,i)perylene	21.245	276	286731	1636.27	ng/ml	87

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

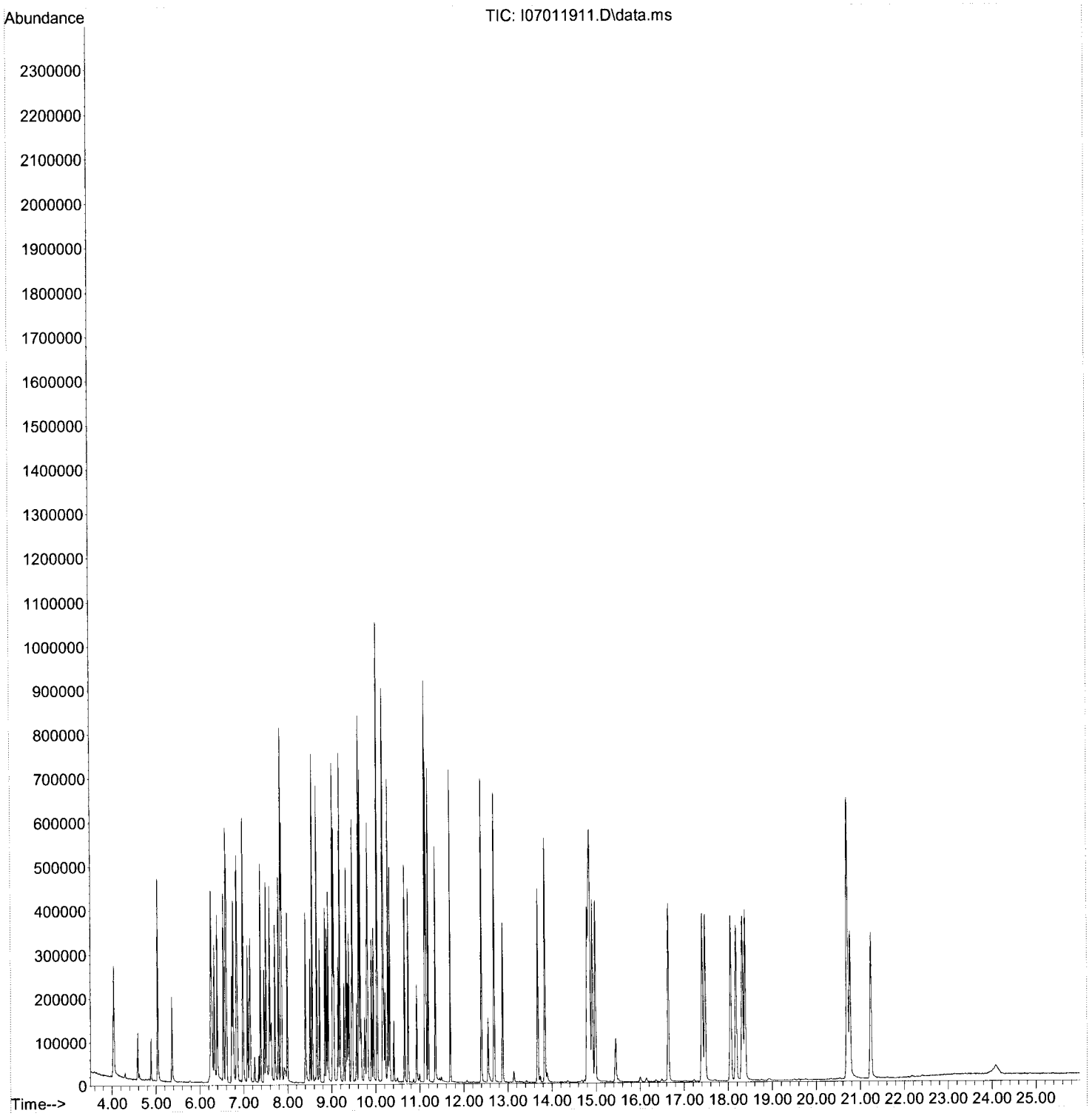
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011911.D
Acq On : 1 Jul 2019 7:46 pm
Operator : JK /AMS /DTH
Sample : 9061508-BS1
Misc : 1x, 8270D LL FULL LIST
ALS Vial : 5 Sample Multiplier: 1

Quant Time: Jul 02 07:31:06 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	115476	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.841	136	440735	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	200689	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	373678	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.848	240	380732	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.314	264	349379	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.694	292	332293	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.327	112	58	0.77	ng/ml	-0.04
5) Phenol-d6 (Surr)	0.000	99	0	0.00	ng/ml	
19) Nitrobenzene-d5 (Surr)	7.103	82	159	1.95	ng/ml	-0.03
40) 2-Fluorobiphenyl (Surr)	8.927	172	159	1.06	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	12.890	244	220	1.18	ng/ml	0.00
Target Compounds						Qvalue
20) Nitrobenzene	7.151	77	163	2.03	ng/ml#	42
22) Isophorone	7.365	82	209	1.28	ng/ml	51
23) 2-Nitrophenol	7.403	139	96	2.30	ng/ml	79
25) Bis(2-chloroethoxy) me...	7.585	93	127	1.33	ng/ml	88
26) Benzoic acid	7.585	105	256	710.75	ng/ml#	1
27) 2,4-Dichlorophenol	7.691	162	383	30.42	ng/ml#	26
29) Naphthalene	7.863	128	635208	2889.58	ng/ml	97
30) 4-Chloroaniline	7.932	127	181	3.21	ng/ml	80
32) 4-Chloro-3-methylphenol	8.419	107	176	67.21	ng/ml#	1
33) 2-Methylnaphthalene	8.553	142	160089	965.30	ng/ml	99
34) 1-Methylnaphthalene	8.654	142	74815	478.97	ng/ml	96
39) 1,1'-Biphenyl	9.023	154	49077	292.65	ng/ml	98
41) 2-Chloronaphthalene	9.098	162	1733	14.34	ng/ml	56
42) 2-Nitroaniline	9.141	138	73	1.80	ng/ml#	48
43) 2,6-Dimethylnaphthalene	9.189	156	20955	169.58	ng/ml	99
44) 1,4-Dinitrobenzene	9.296	168	427	85.80	ng/ml#	47
45) Dimethyl phthalate	9.301	163	220	1.57	ng/ml#	30
46) 1,3-Dinitrobenzene	9.355	168	126	5.59	ng/ml#	1
47) 2,6-Dinitrotoluene	9.403	165	244	7.77	ng/ml	74
49) Acenaphthylene	9.467	152	28464	143.38	ng/ml	96
50) 3-Nitroaniline	9.596	138	235	Below Cal	#	1
51) Acenaphthene	9.644	153	9557	76.42	ng/ml	98
53) 4-Nitrophenol	9.719	139	489	78.90	ng/ml#	14
54) 2,4-Dinitrotoluene	9.799	165	71	34.31	ng/ml#	47
55) Dibenzofuran	9.815	168	7493	44.03	ng/ml	89
58) Diethyl phthalate	10.034	149	165	1.21	ng/ml	86
59) 2,3,5-Trimethylnaphtha...	10.024	170	4455	36.56	ng/ml	85
60) Fluorene	10.163	166	21599	147.26	ng/ml	98
62) 4-Nitroaniline	10.163	138	467	15.54	ng/ml#	40
65) N-Nitrosodiphenylamine	10.280	169	1453	12.59	ng/ml#	54
66) Azobenzene (1,2-DPH)	10.334	77	236	1.82	ng/ml#	1
71) Phenanthrene	11.141	178	112091	561.54	ng/ml	99
72) Anthracene	11.190	178	14402	72.16	ng/ml	97

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

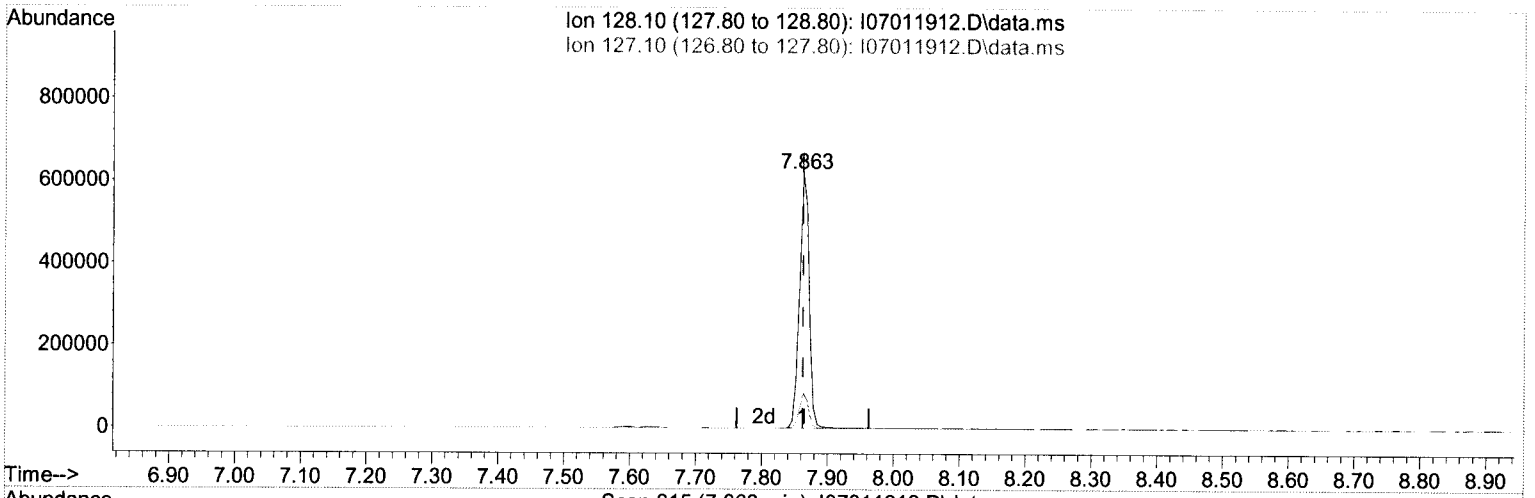
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
73) Carbazole	11.350	167	4136	23.65	ng/ml	97
74) Di-n-butyl phthalate	11.687	149	105	0.46	ng/ml	78
75) Fluoranthene	12.398	202	37066	158.91	ng/ml	93
77) Pyrene	12.682	202	45469	191.55	ng/ml	96
81) Bis(2-ethylhexyl) adipate	13.837	129	7468	74.41	ng/ml	99
83) Benz(a)anthracene	14.827	228	9096	41.13	ng/ml	88
84) Chrysene	14.901	228	10396	50.96	ng/ml	98
85) Bis(2-ethylhexyl) phth...	14.982	149	773	5.76	ng/ml	94
87) Di-n-octyl phthalate	16.592	149	257	58.04	ng/ml	73
88) Benzo(b)fluoranthene	17.394	252	6928	35.74	ng/ml	94
89) Benzo(k)fluoranthene	17.453	252	2900m	17.73	ng/ml	
90) Benzo(b+k)fluoranthene	17.394	252	9828	52.56	ng/ml	93
91) Benzo(e)pyrene	18.036	252	5344	25.58	ng/ml	97
92) Benzo(a)pyrene	18.164	252	7429	42.77	ng/ml	99
93) Perylene	18.367	252	2091	11.82	ng/ml	88
95) Indeno(1,2,3-cd)pyrene	20.683	276	4658	25.53	ng/ml	90
96) Dibenz(a,h)anthracene	20.748	278	945	5.87	ng/ml	86
97) Benzo(g,h,i)perylene	21.218	276	5557	31.15	ng/ml	86

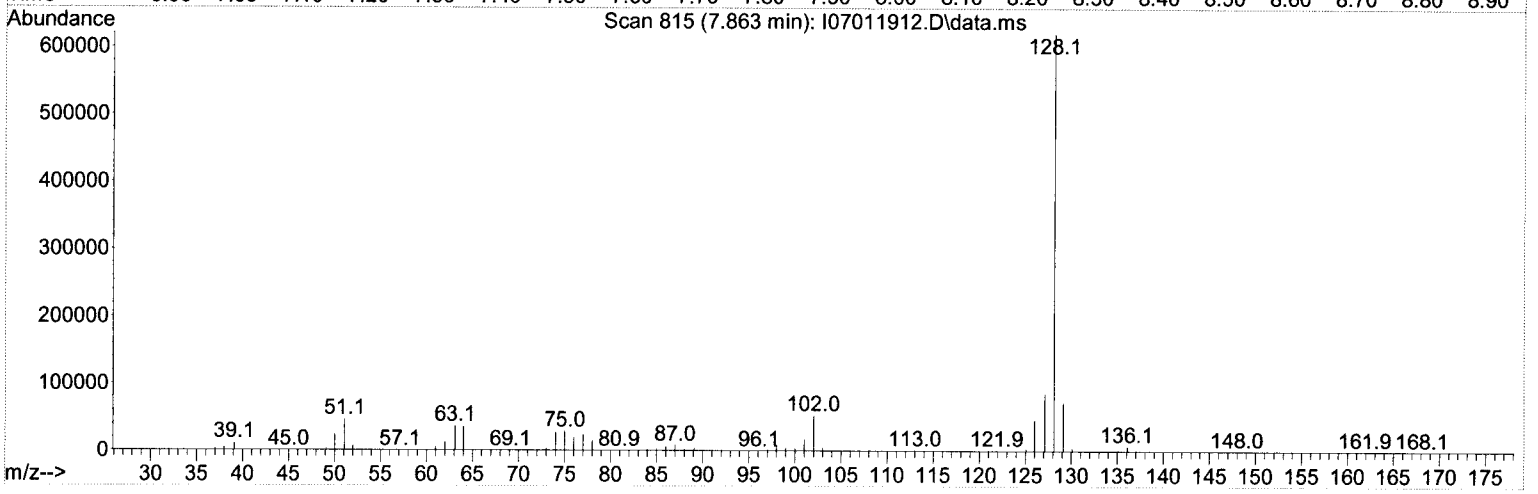
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(29) Naphthalene (T)

7.863min (-0.000) 2889.58 ng/ml

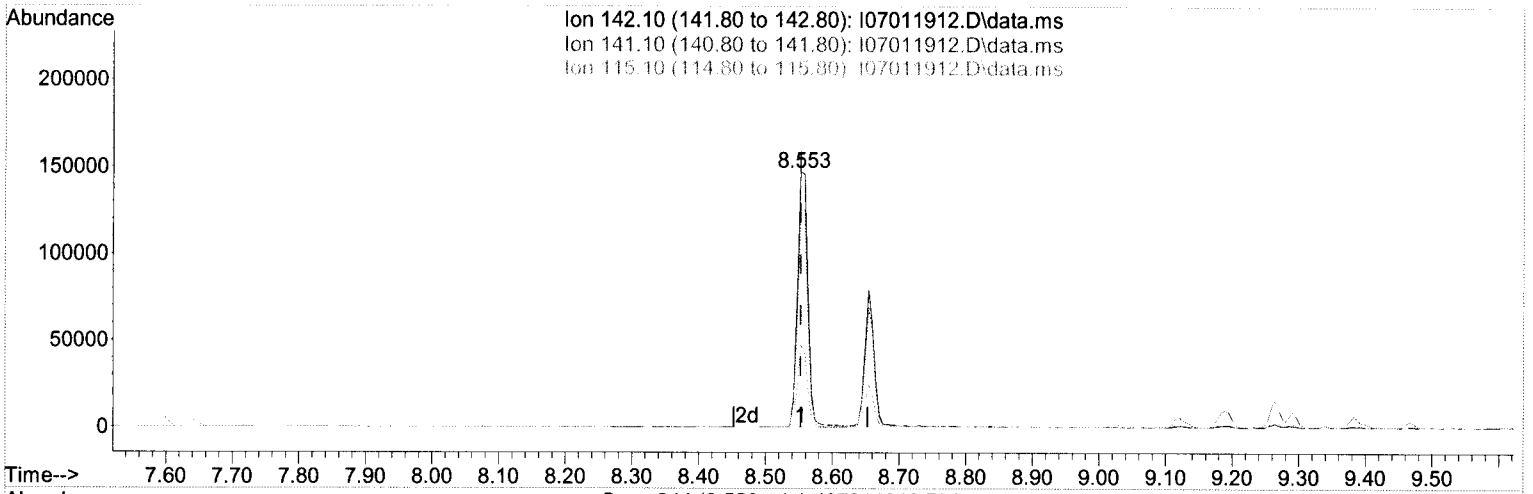
response 635208

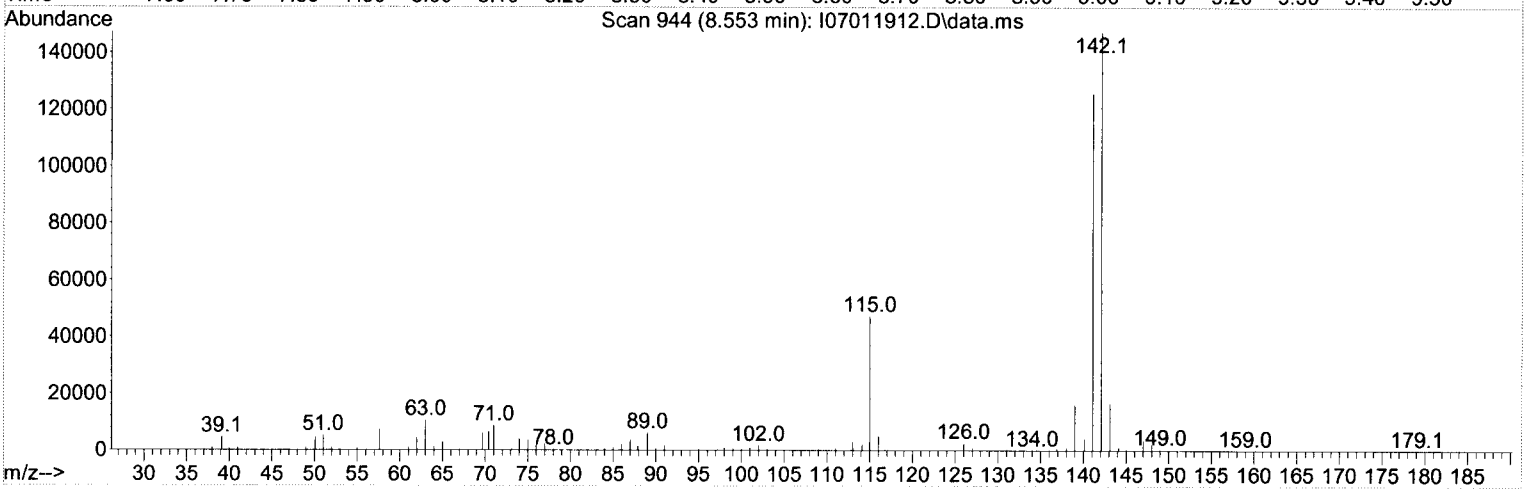
Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	13.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(33) 2-Methylnaphthalene (T)

8.553min (-0.000) 965.30 ng/ml

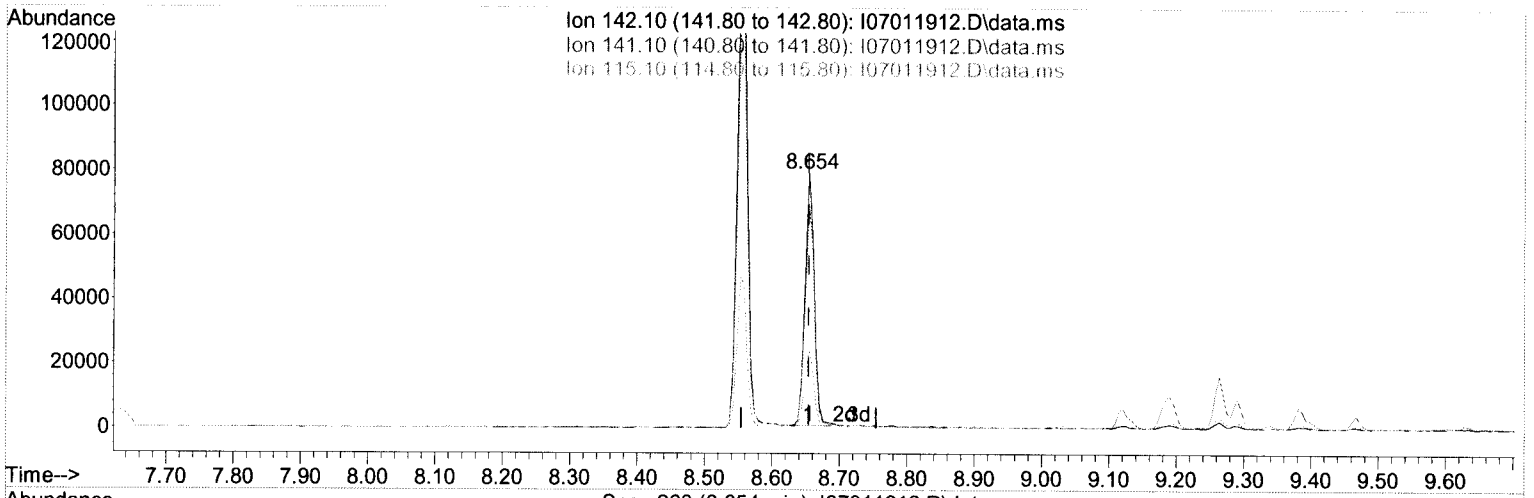
response 160089

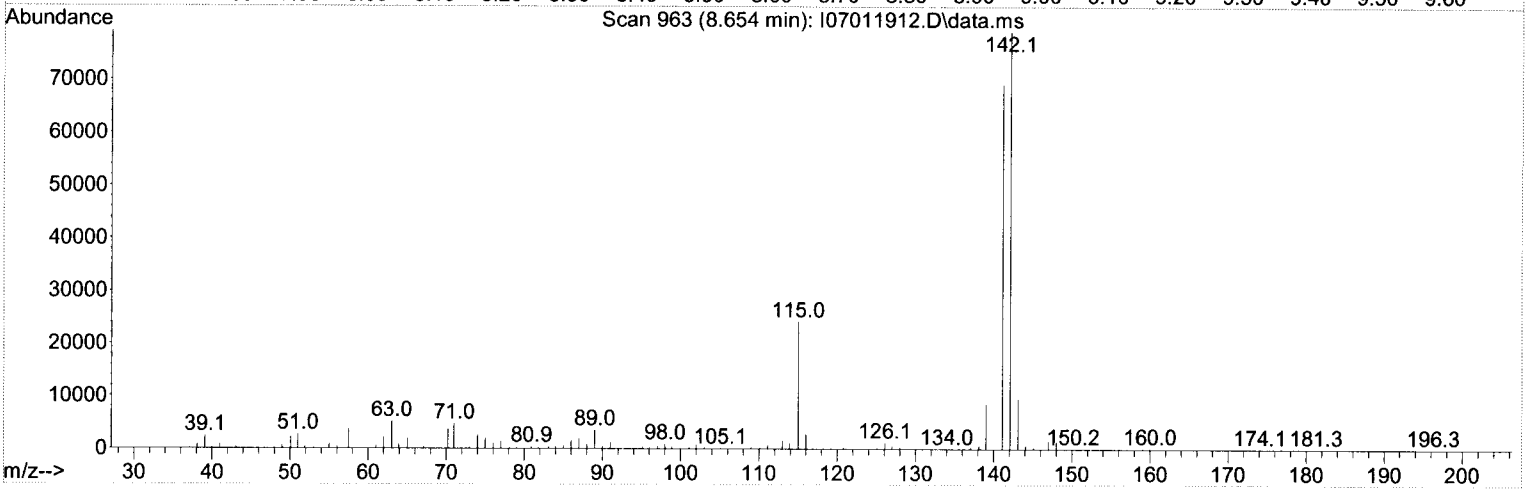
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	85.42
115.10	33.70	32.16
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(34) 1-Methylnaphthalene (T)

8.654min (-0.000) 478.97 ng/ml

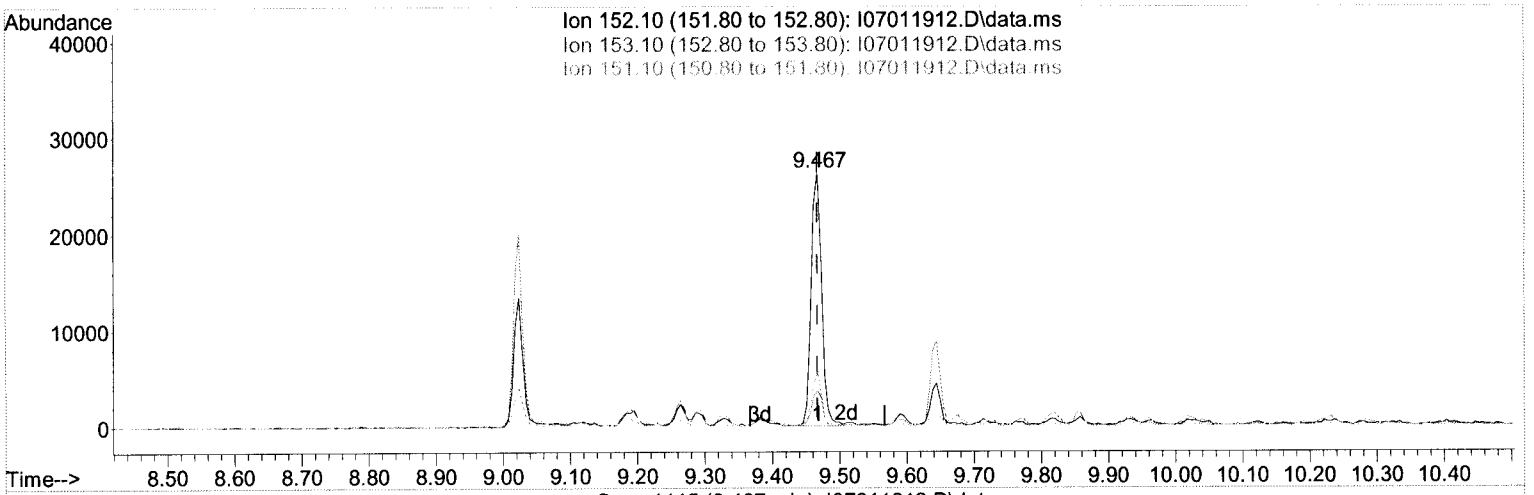
response 74815

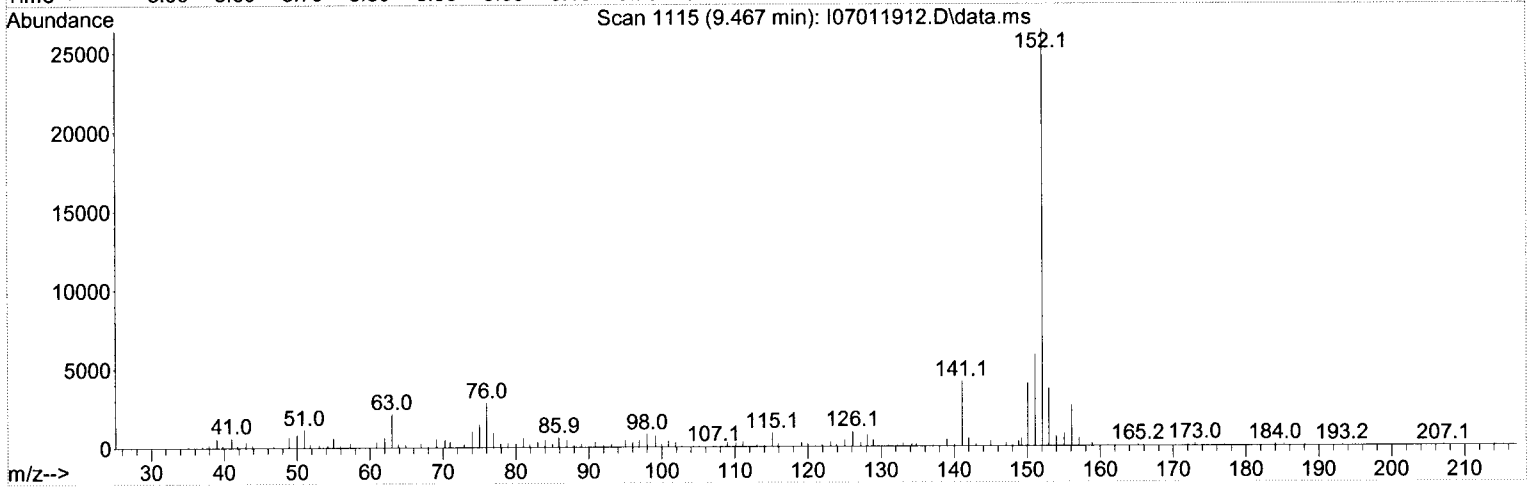
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	89.20	87.33
115.10	34.90	30.60
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(49) Acenaphthylene (T)

9.467min (-0.000) 143.38 ng/ml

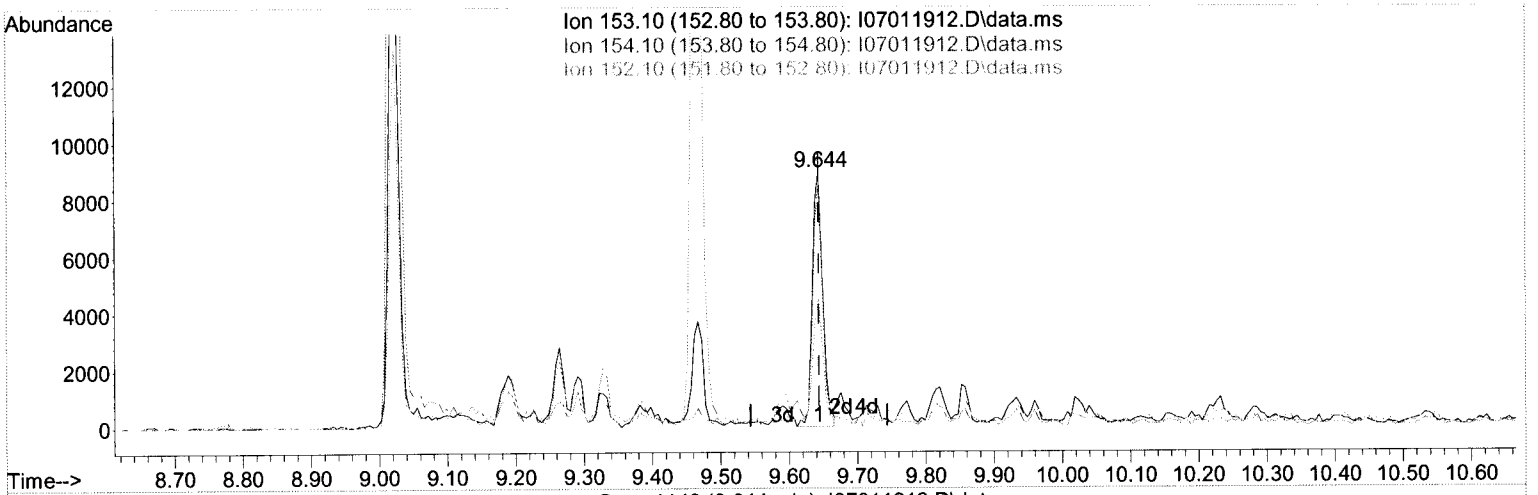
response 28464

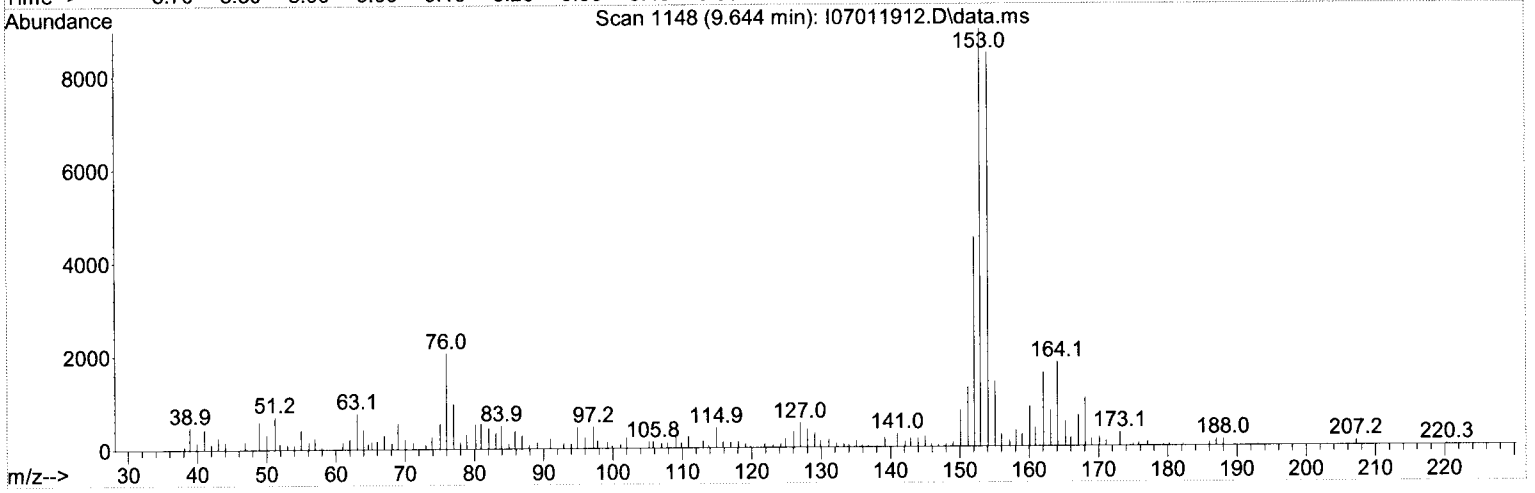
Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	14.03
151.10	20.00	22.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(51) Acenaphthene (T)

9.644min (-0.000) 76.42 ng/ml

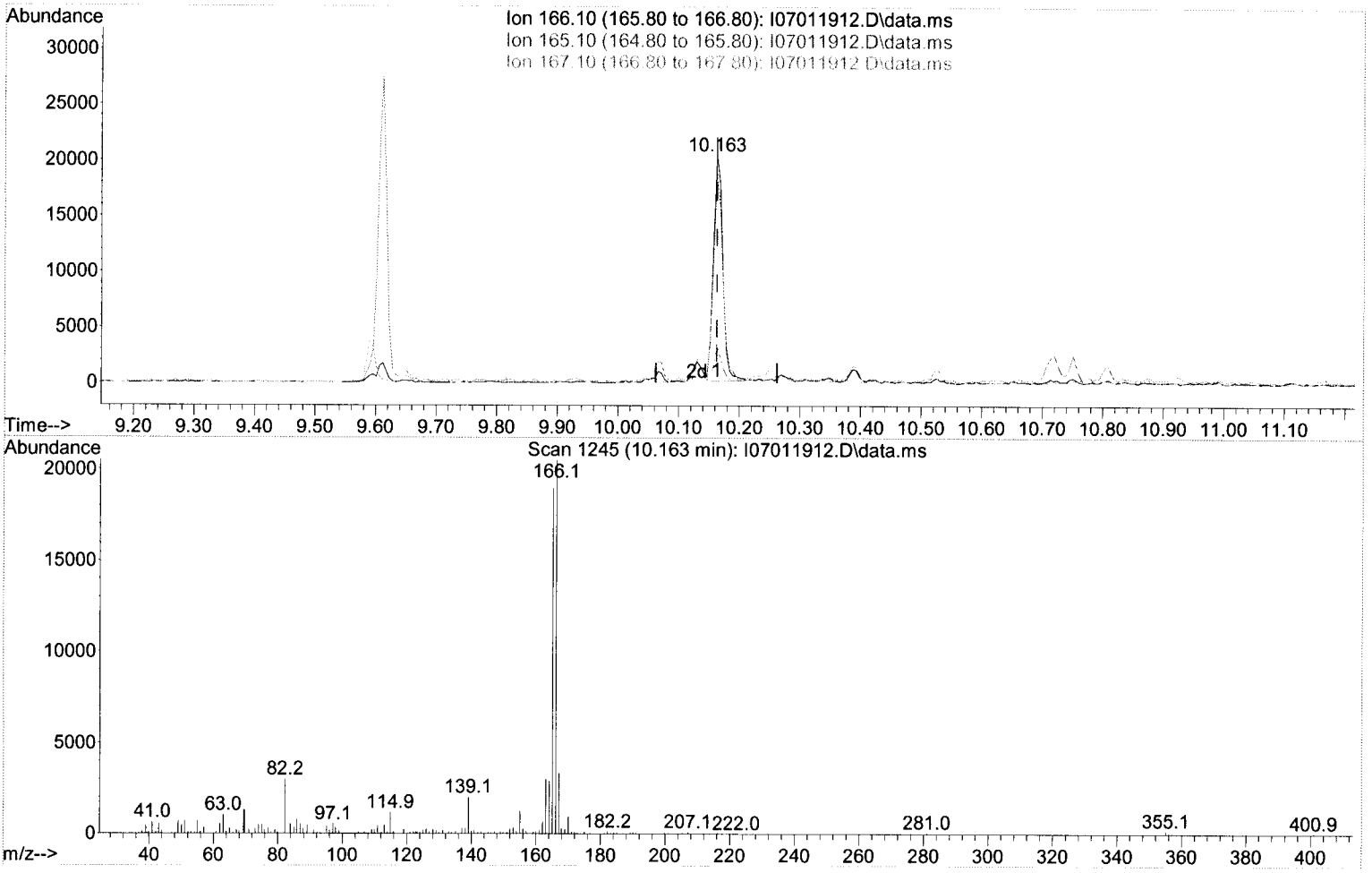
response 9557

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	94.41
152.10	47.70	50.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011912.D\data.ms

(60) Fluorene (T)

10.163min (-0.000) 147.26 ng/ml

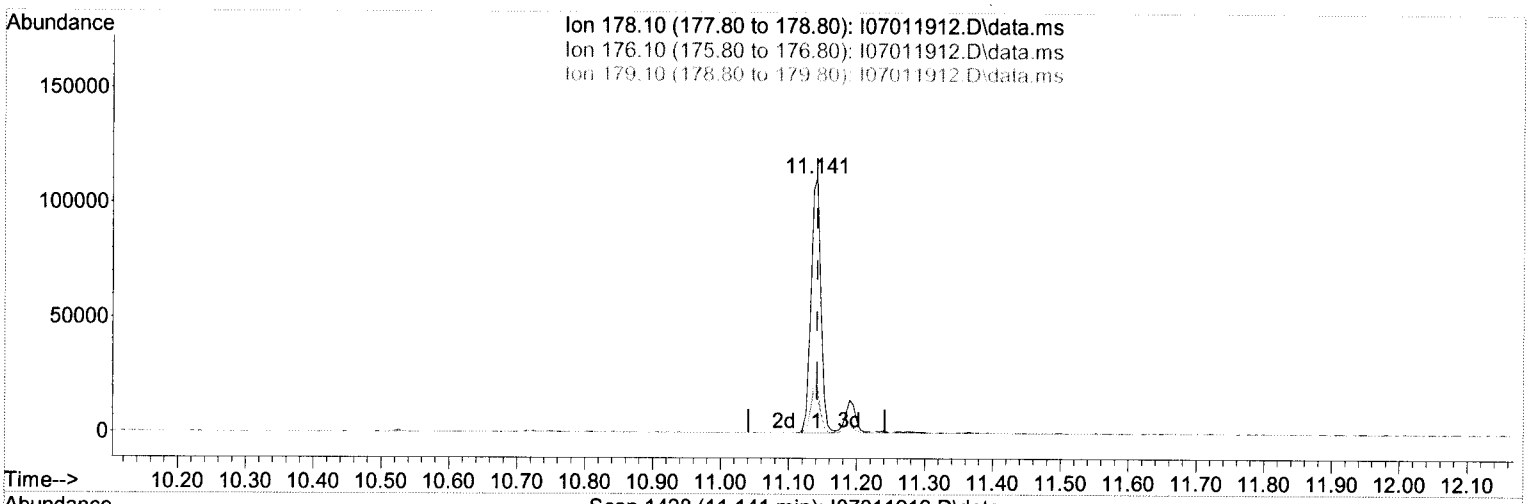
response 21599

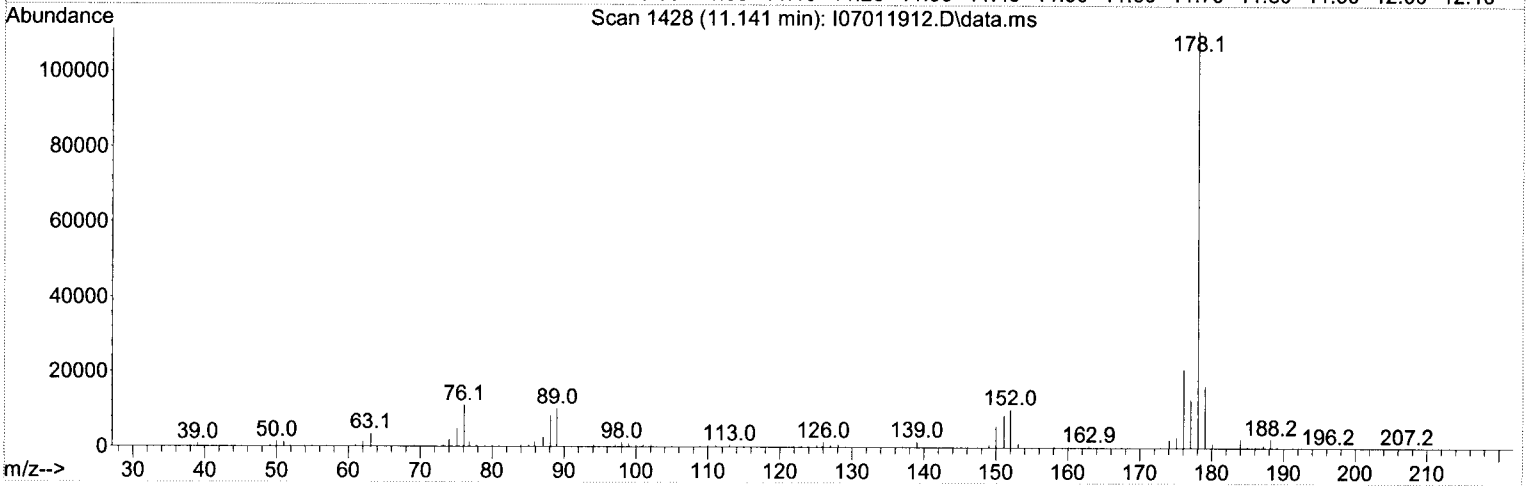
Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	92.47
167.10	13.50	16.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(71) Phenanthrene (T)

11.141min (-0.000) 561.54 ng/ml

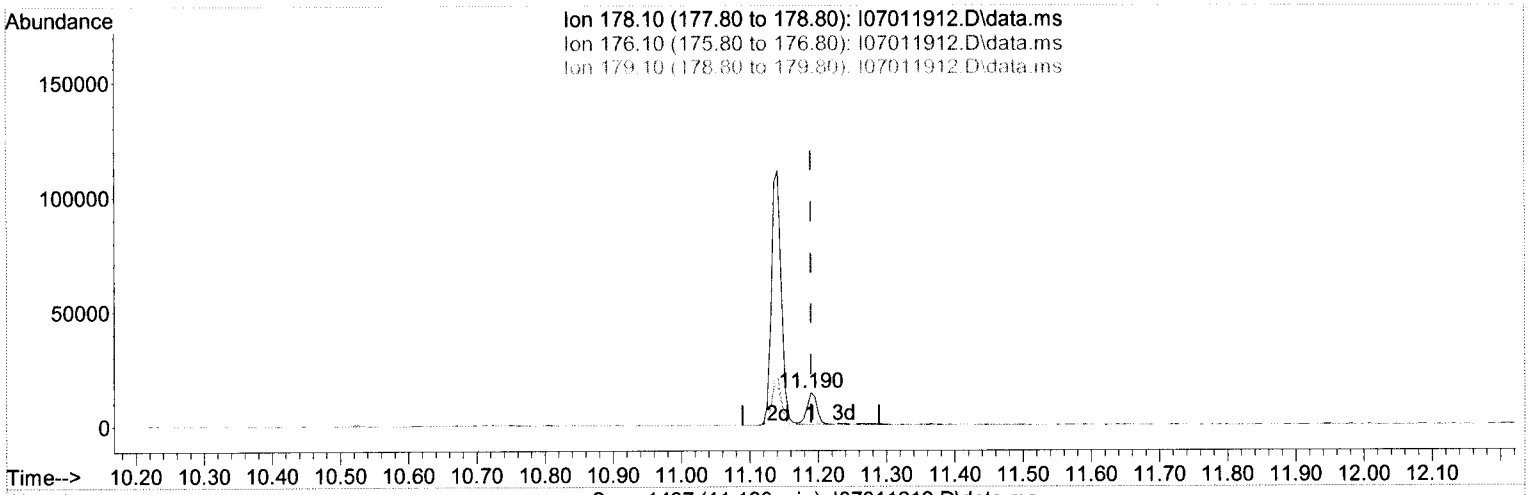
response 112091

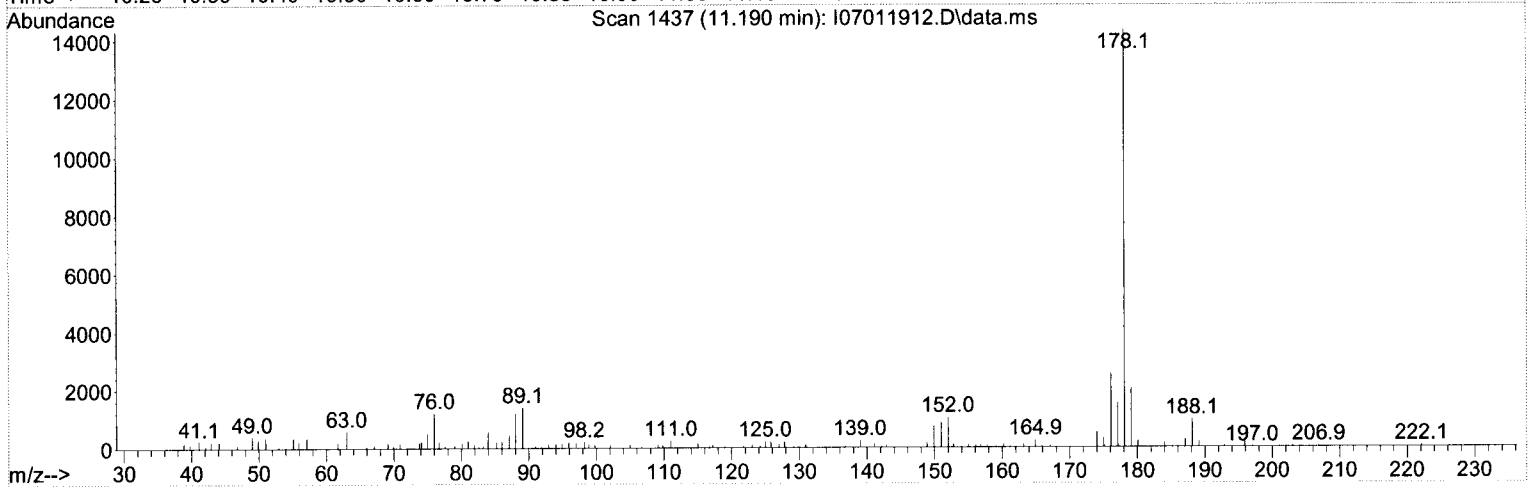
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	18.87
179.10	15.20	14.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(72) Anthracene (T)

11.190min (-0.000) 72.16 ng/ml

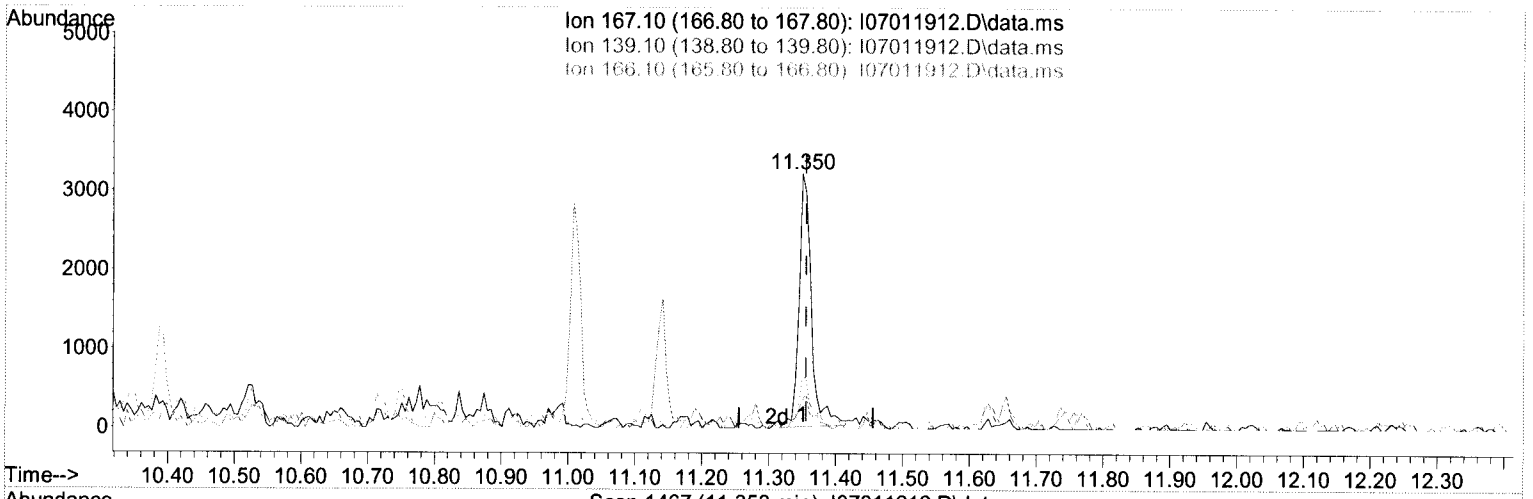
response 14402

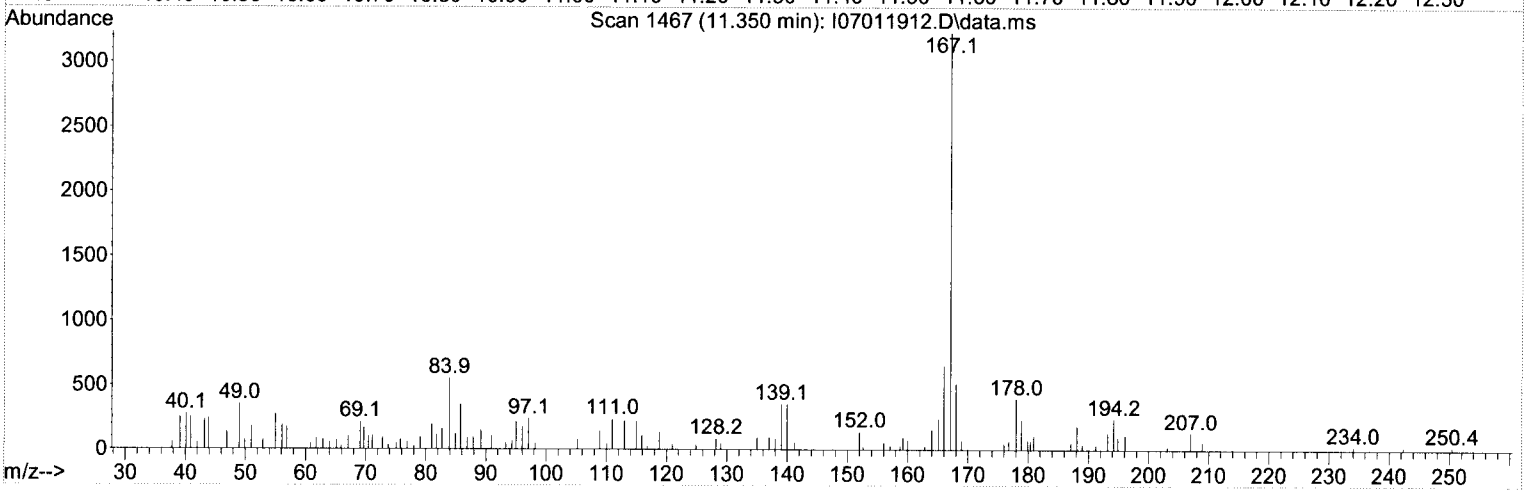
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	17.63
179.10	15.90	14.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(73) Carbazole (T)

11.350min (-0.005) 23.65 ng/ml

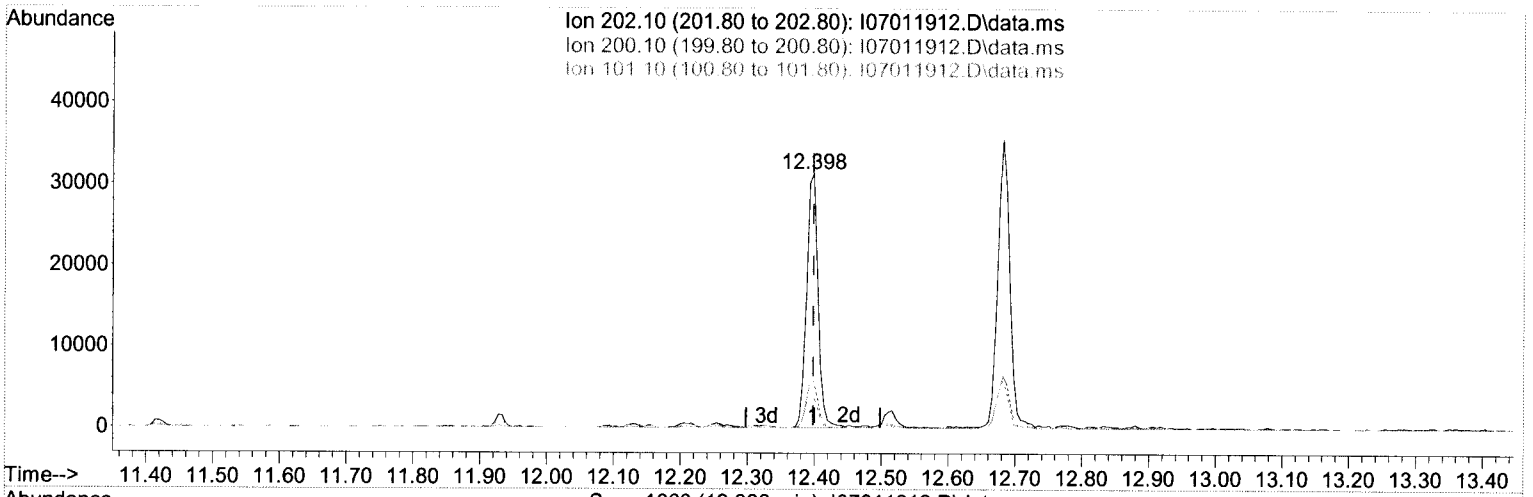
response 4136

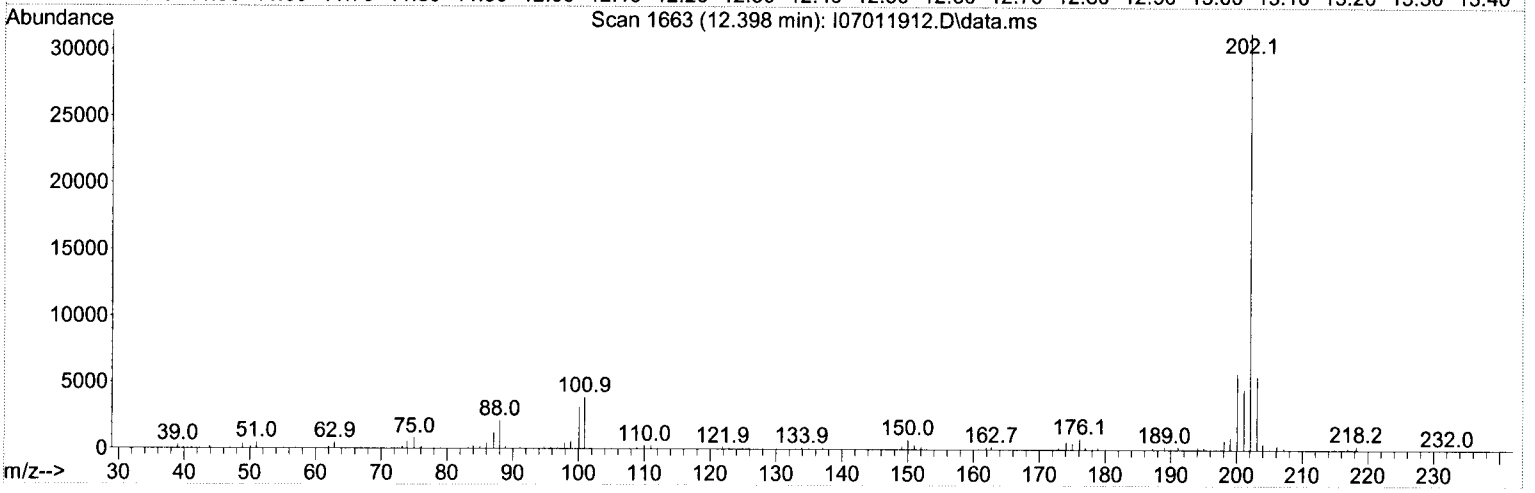
Ion	Exp%	Act%
167.10	100.00	100.00
139.10	13.50	11.07
166.10	21.10	20.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(75) Fluoranthene (T)

12.398min (-0.000) 158.91 ng/ml

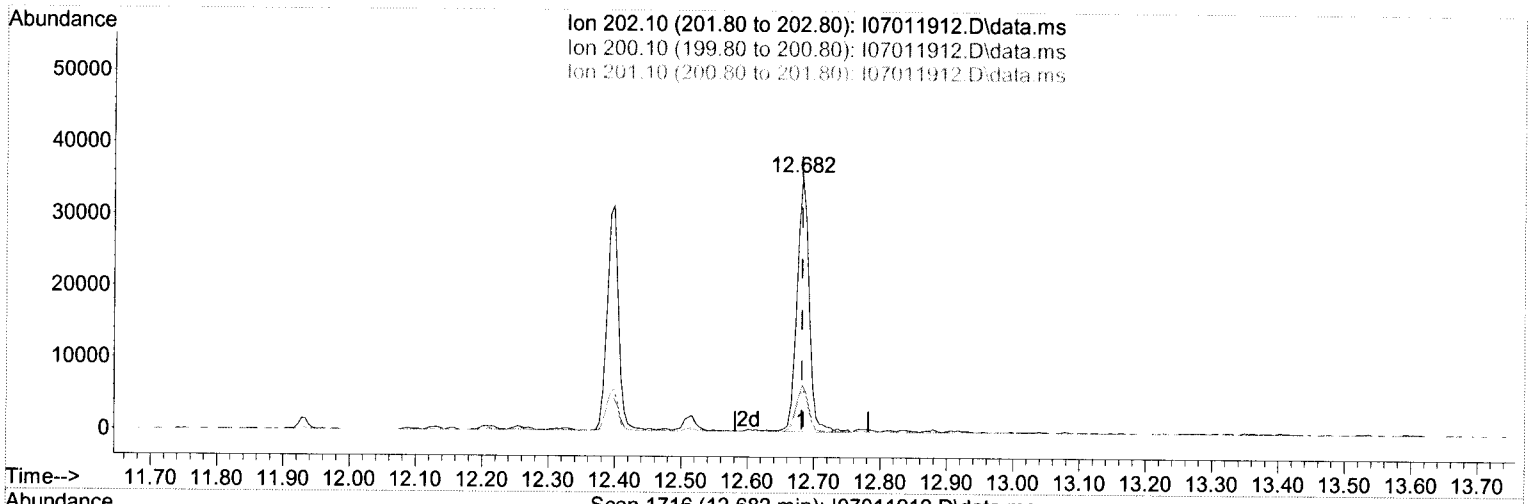
response 37066

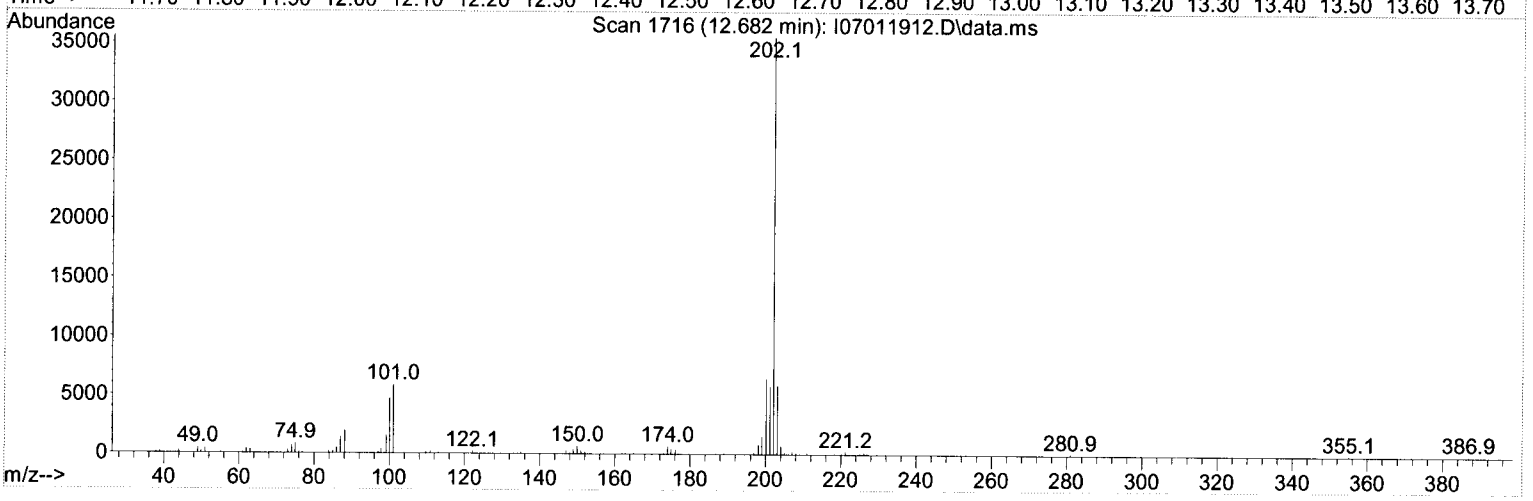
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	18.30
101.10	17.00	12.44
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(77) Pyrene (T)

12.682min (-0.000) 191.55 ng/ml

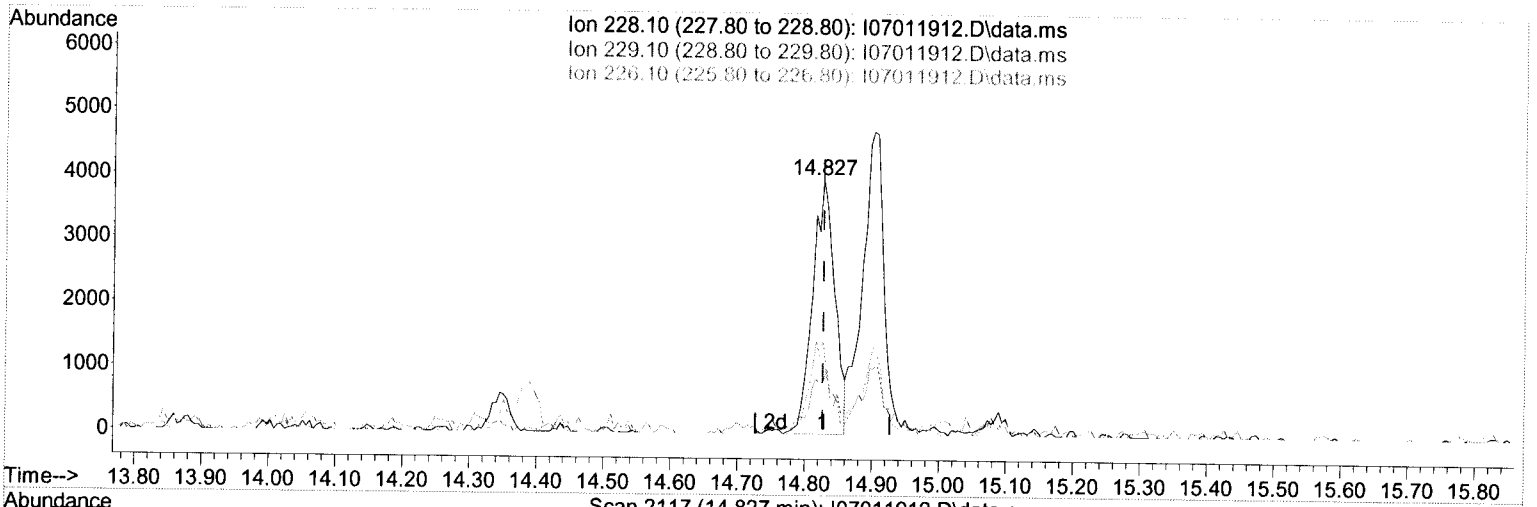
response 45469

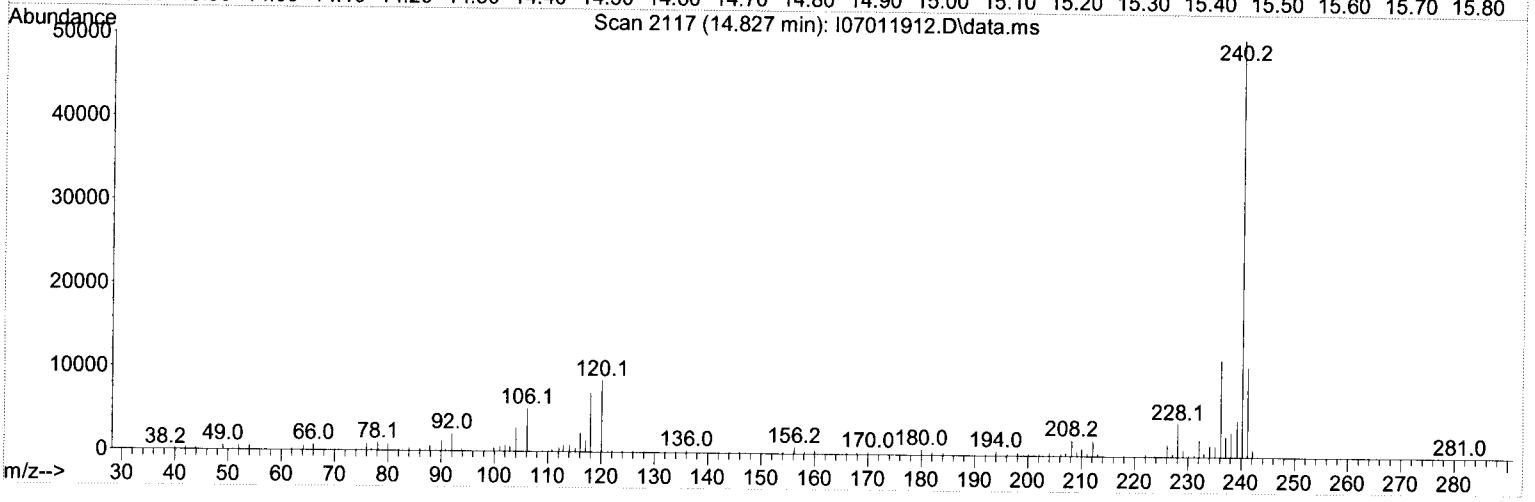
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	18.13
201.10	17.30	16.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(83) Benz(a)anthracene (T)

14.827min (-0.000) 41.13 ng/ml

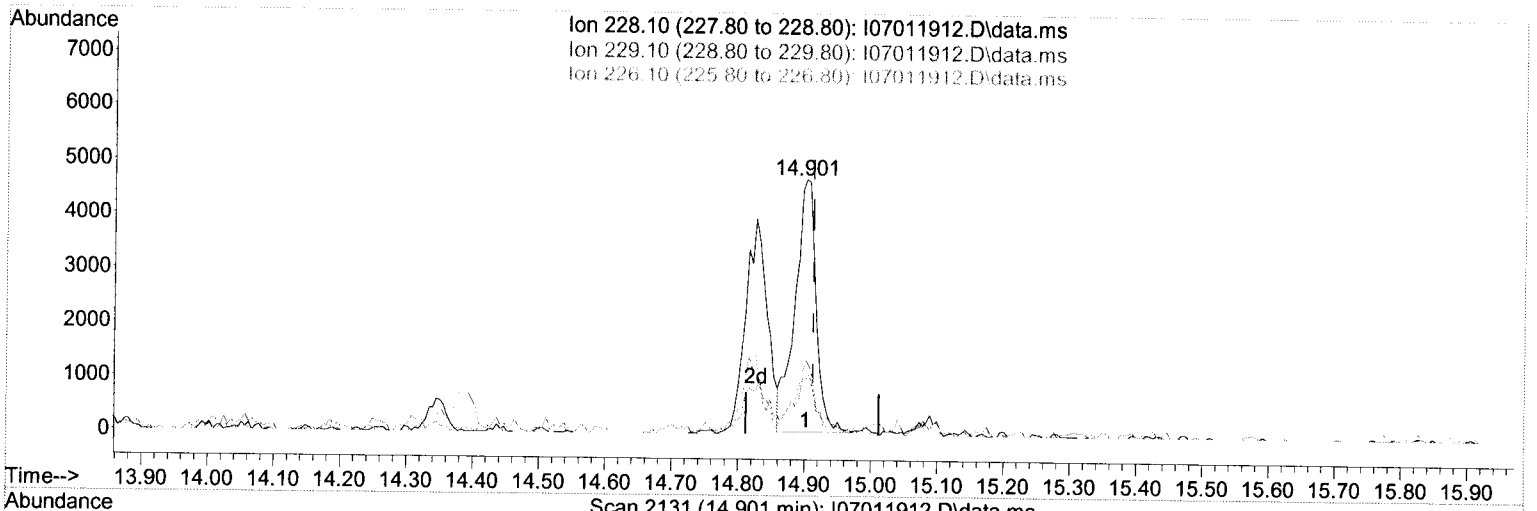
response 9096

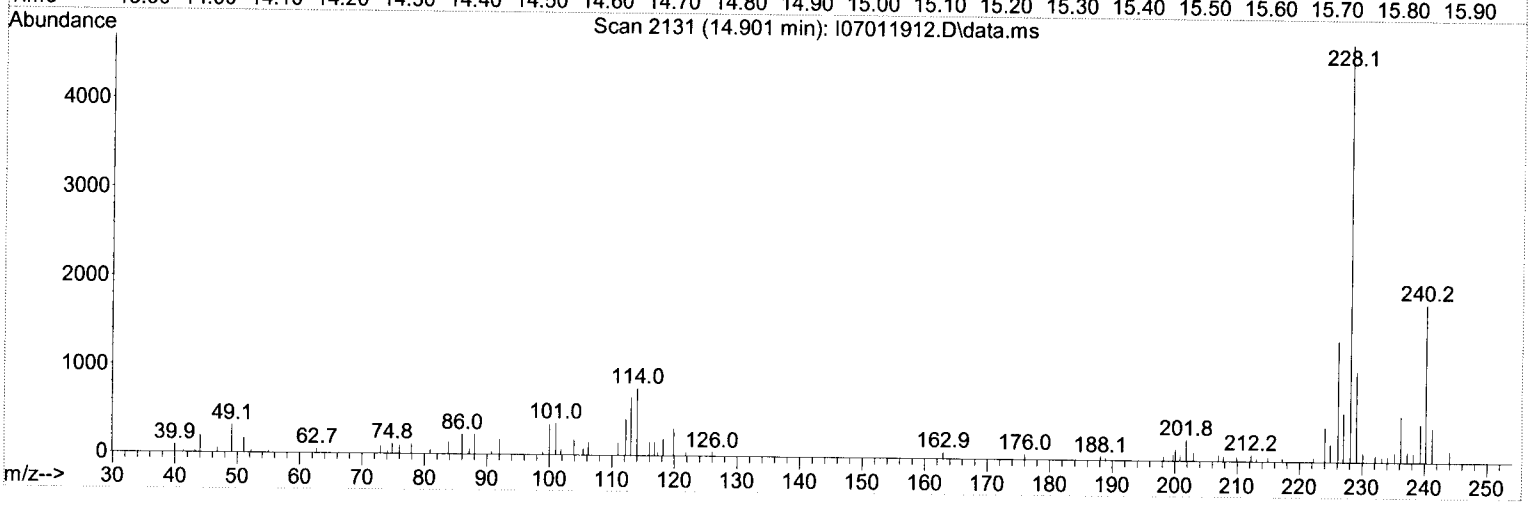
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	20.17
226.10	26.50	36.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(84) Chrysene (T)

14.901min (-0.011) 50.96 ng/ml

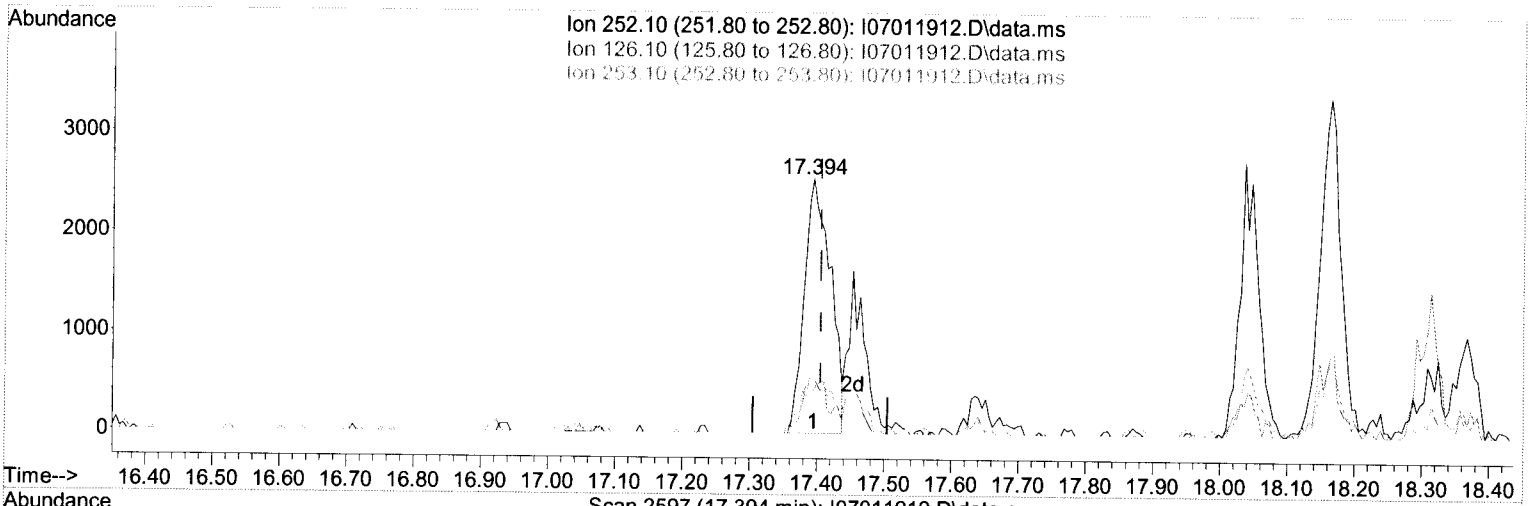
response 10396

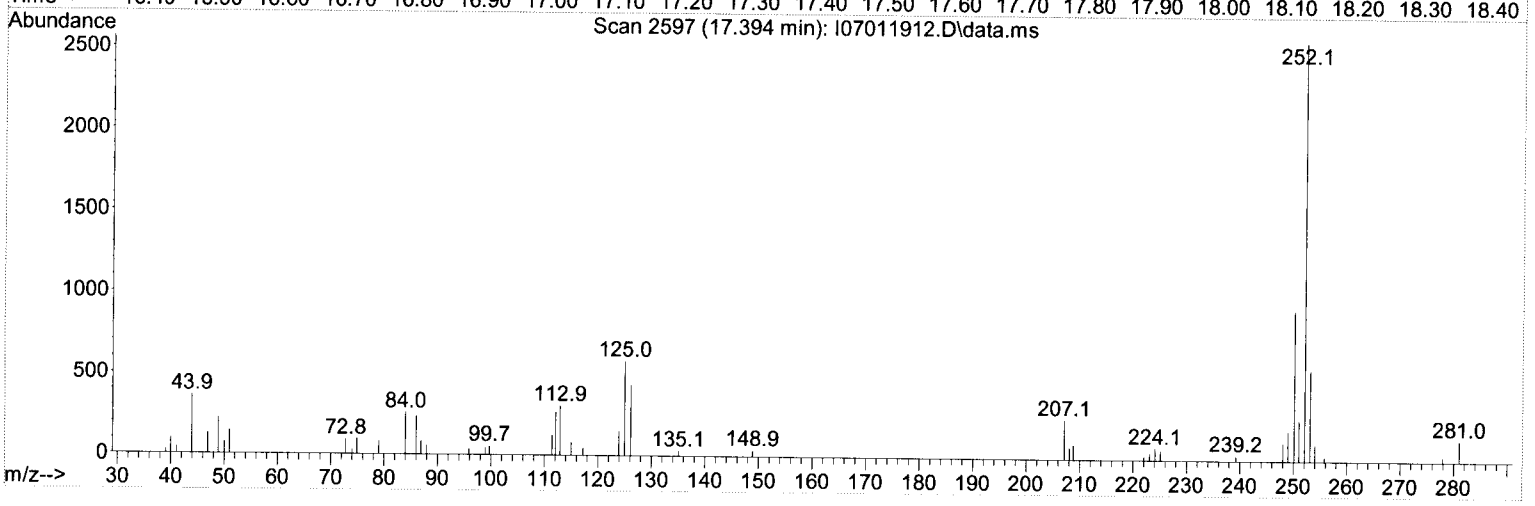
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	21.71
226.10	29.30	29.07
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.394min (-0.011) 35.74 ng/ml

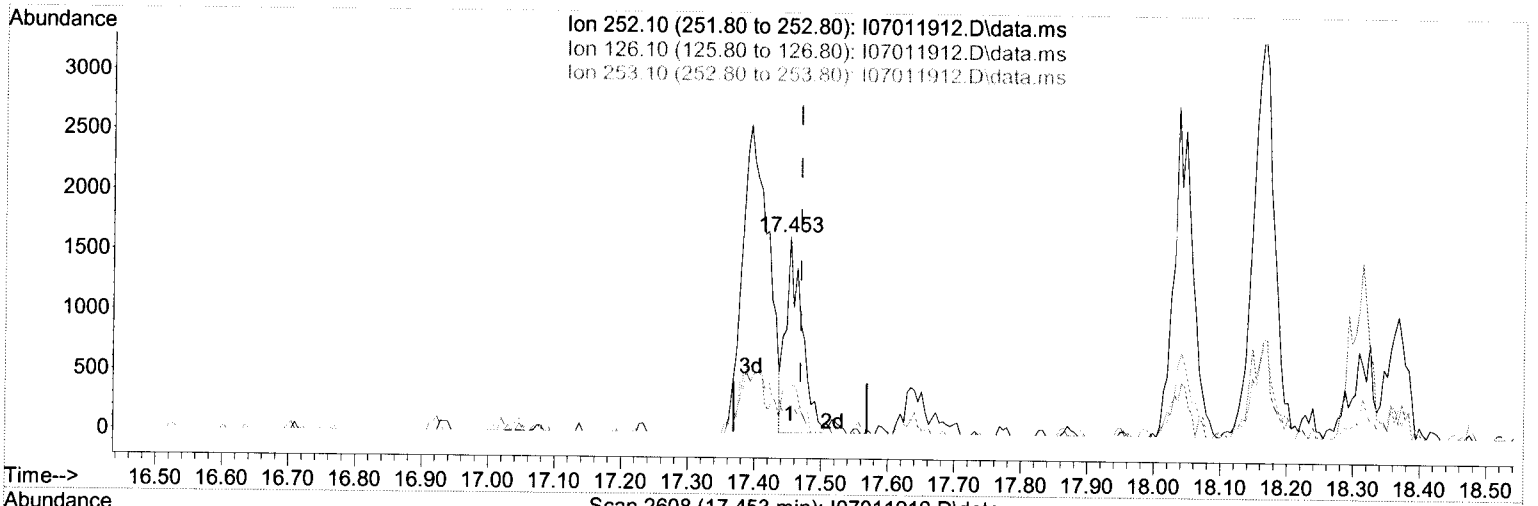
response 6928

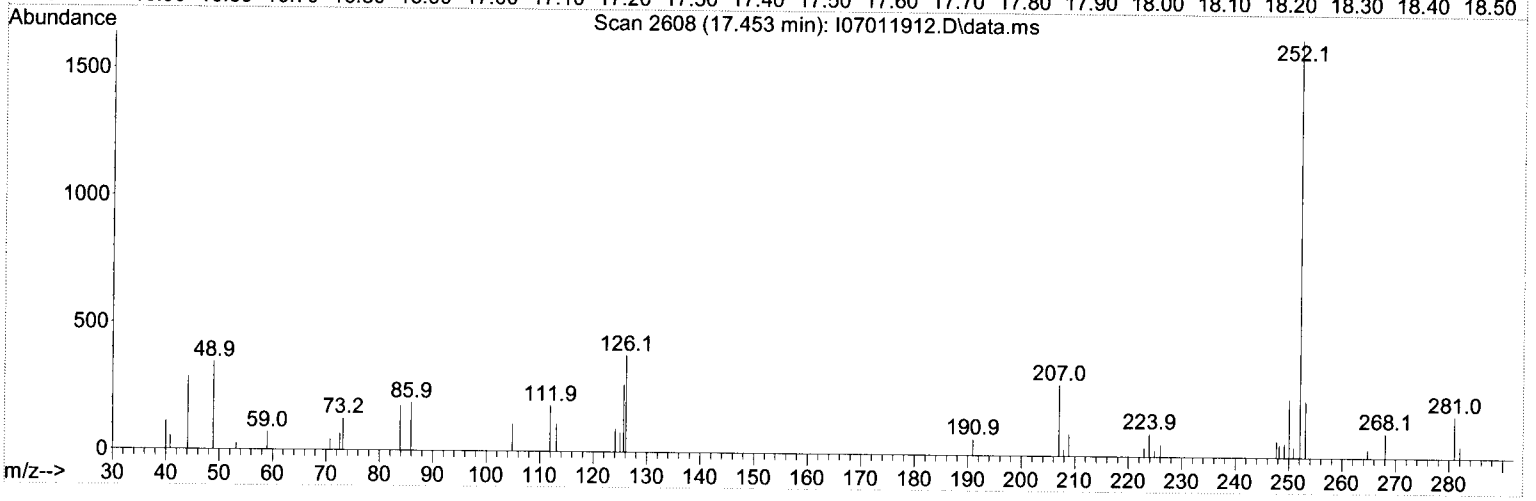
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	16.89
253.10	22.00	21.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.453min (-0.016) 17.73 ng/ml m

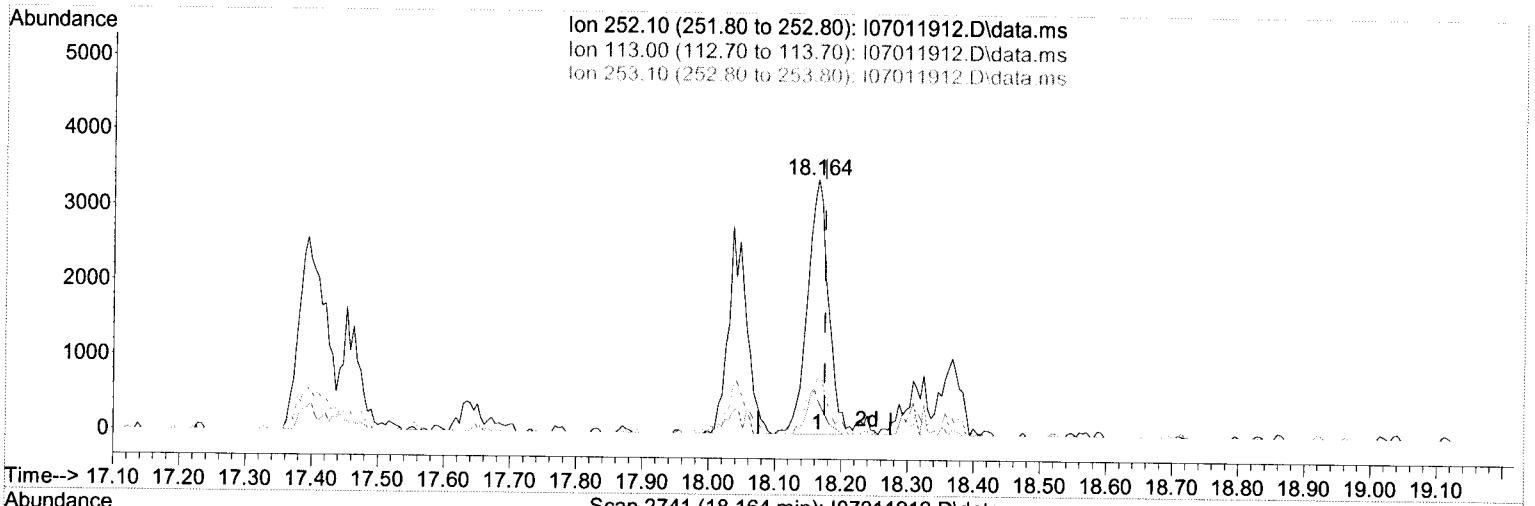
response 2900

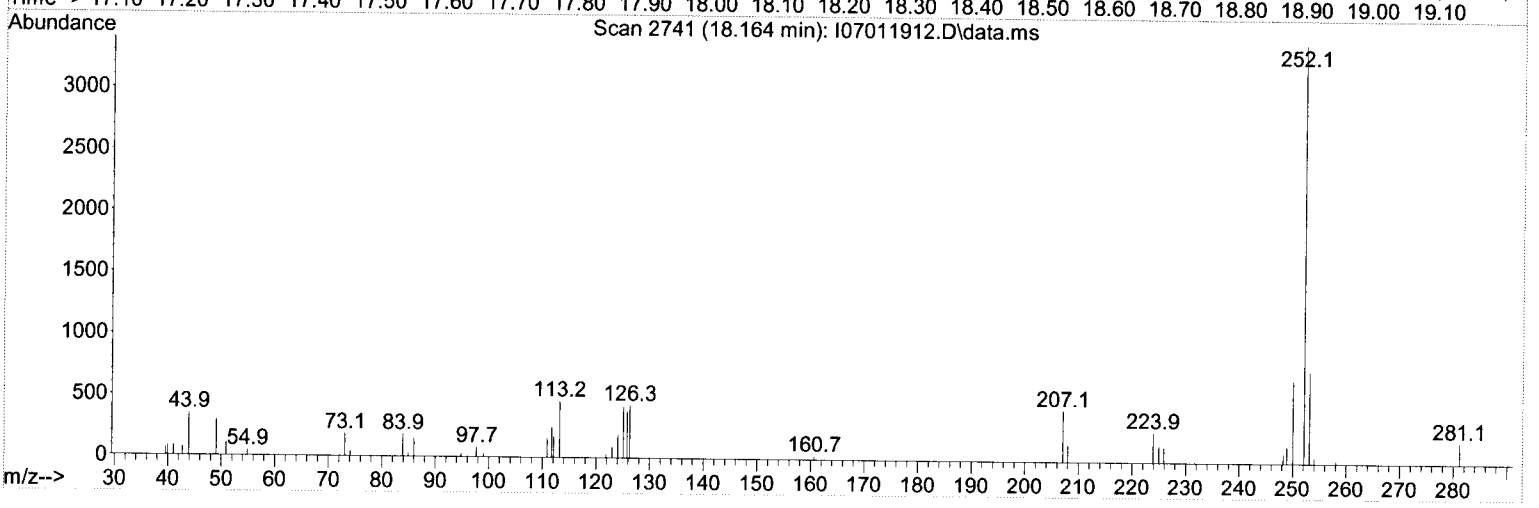
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	23.26
253.10	21.70	13.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(92) Benzo(a)pyrene (T)

18.164min (-0.011) 42.77 ng/ml

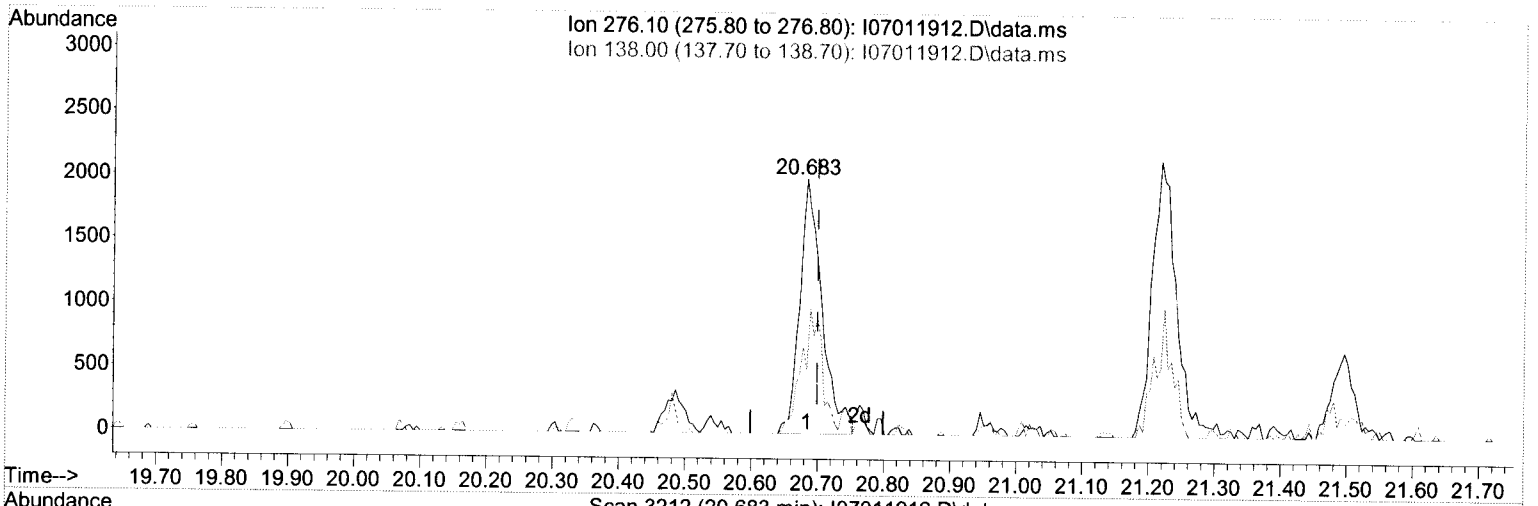
response 7429

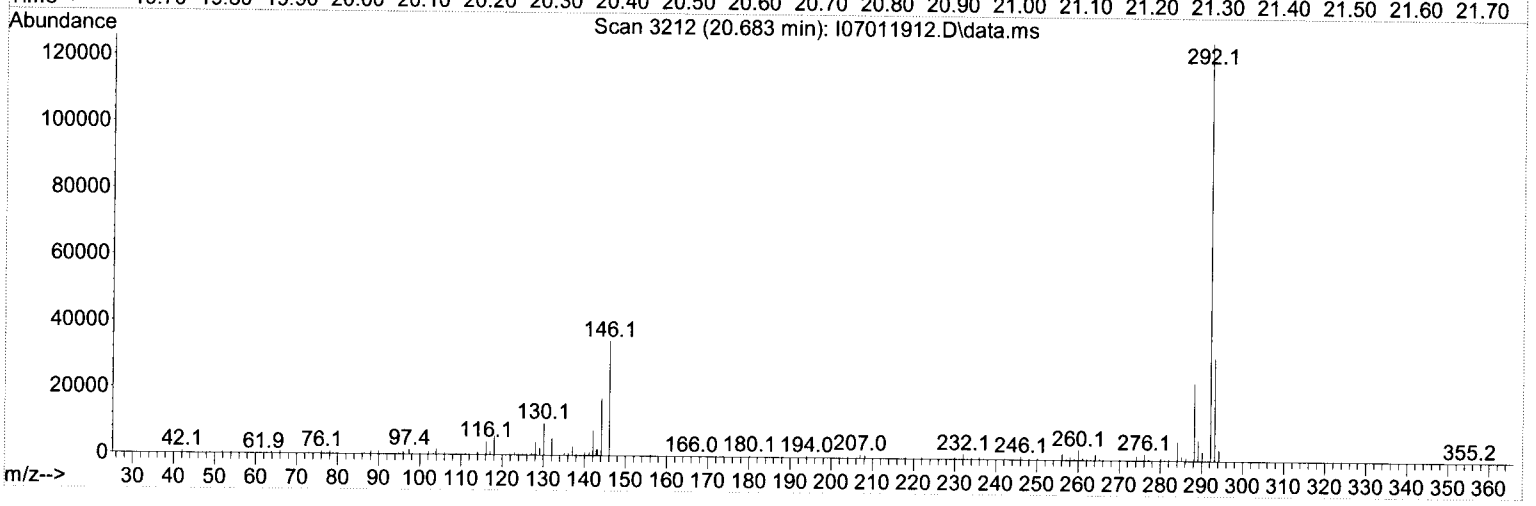
Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	13.55
253.10	21.60	21.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011912.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

20.683min (-0.016) 25.53 ng/ml

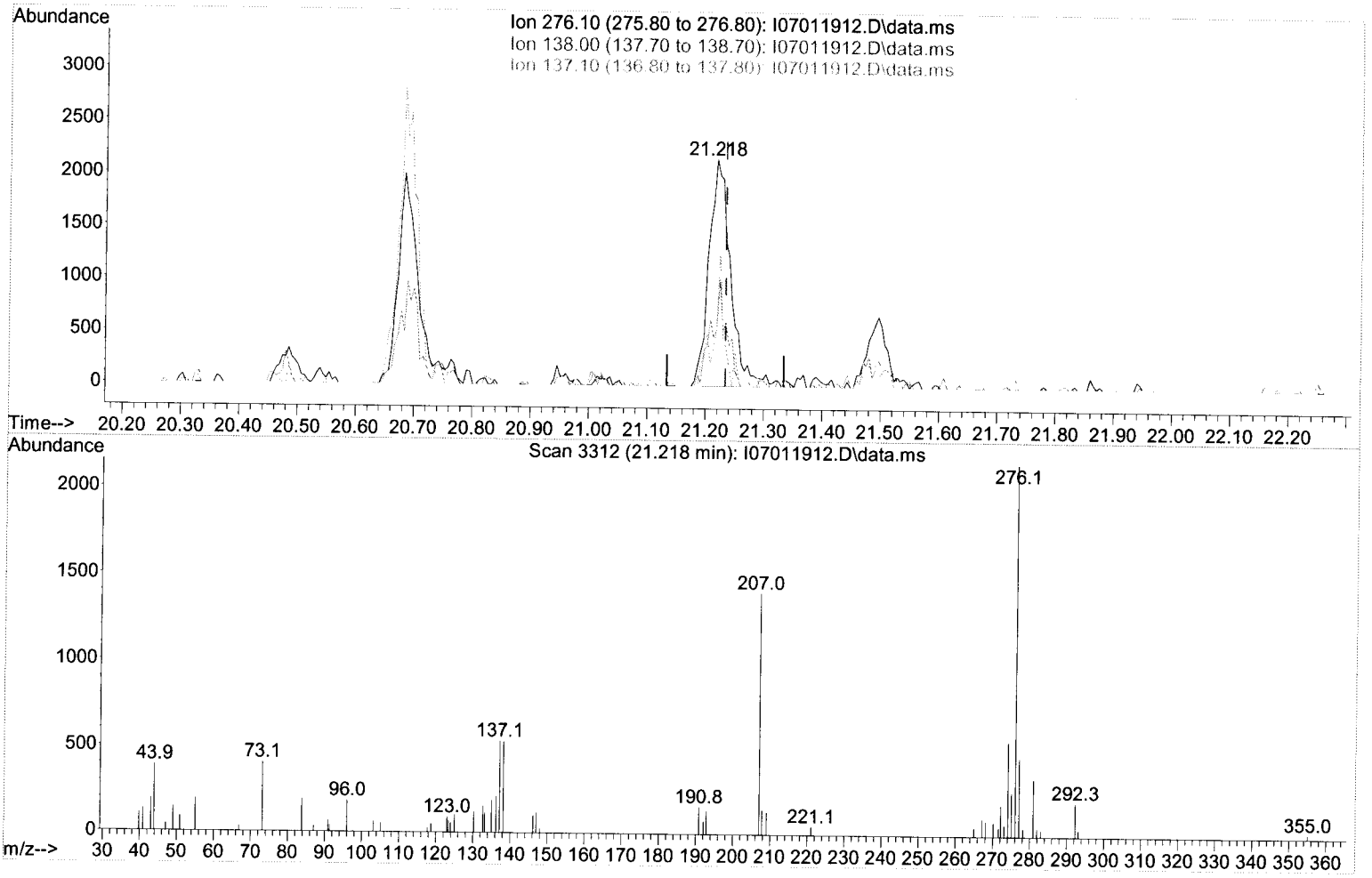
response 4658

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	25.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



TIC: I07011912.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.218min (-0.016) 31.15 ng/ml

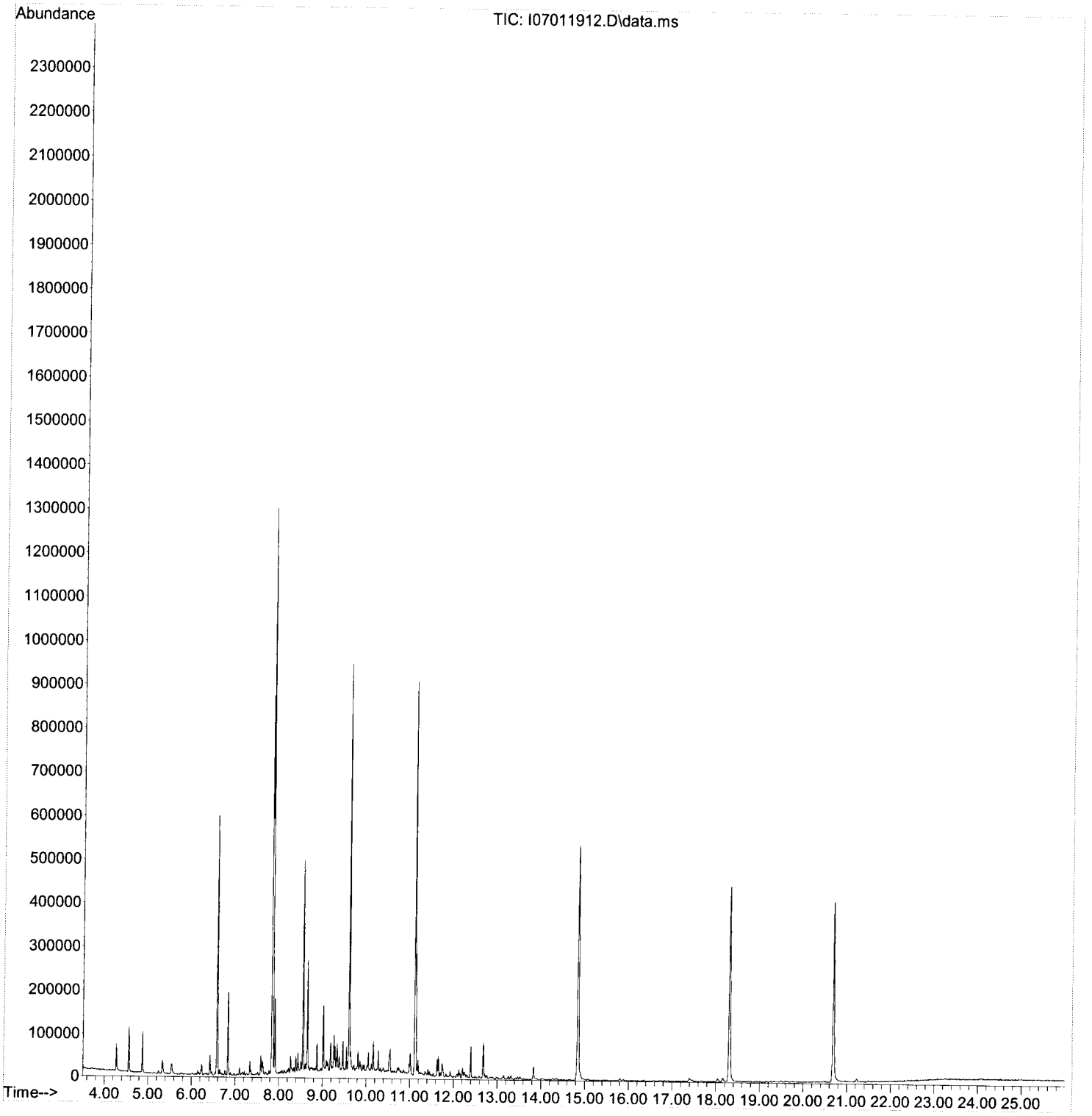
response 5557

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	36.60	24.69
137.10	27.90	24.78
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011912.D
Acq On : 1 Jul 2019 8:22 pm
Operator : JK /AMS /DTH
Sample : A9F0684-01@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 6 Sample Multiplier: 1

Quant Time: Jul 02 08:31:54 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	118737	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.836	136	460025	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.606	162	208384	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	399790	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.843	240	420103	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.309	264	391111	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	20.689	292	366244	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.354	112	50	0.64	ng/ml	-0.01
5) Phenol-d6 (Surr)	0.000	99	0	0.00	ng/ml	
19) Nitrobenzene-d5 (Surr)	7.135	82	72	0.86	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.916	172	213	1.36	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	12.885	244	277	1.35	ng/ml	0.00
Target Compounds						Qvalue
16) N-Nitrosodi-n-propylamine	6.975	70	52	0.84	ng/ml	59
20) Nitrobenzene	7.141	77	122	1.48	ng/ml#	5
22) Isophorone	7.387	82	119	0.70	ng/ml#	41
23) 2-Nitrophenol	7.392	139	56	1.29	ng/ml#	12
25) Bis(2-chloroethoxy) me...	7.585	93	105	1.05	ng/ml#	37
26) Benzoic acid	7.585	105	325	712.07	ng/ml#	1
27) 2,4-Dichlorophenol	7.691	162	273	28.40	ng/ml#	26
29) Naphthalene	7.863	128	592329	2581.54	ng/ml	98
30) 4-Chloroaniline	7.932	127	72	1.22	ng/ml#	1
32) 4-Chloro-3-methylphenol	8.403	107	134	66.54	ng/ml#	1
33) 2-Methylnaphthalene	8.553	142	150974	872.17	ng/ml	95
34) 1-Methylnaphthalene	8.649	142	72546	444.97	ng/ml	98
39) 1,1'-Biphenyl	9.018	154	46458	266.80	ng/ml	99
41) 2-Chloronaphthalene	9.093	162	1426	11.37	ng/ml	59
42) 2-Nitroaniline	9.136	138	123	2.92	ng/ml#	67
43) 2,6-Dimethylnaphthalene	9.189	156	19415	151.32	ng/ml	89
44) 1,4-Dinitrobenzene	9.296	168	439	85.60	ng/ml#	20
45) Dimethyl phthalate	9.291	163	370	2.54	ng/ml#	1
46) 1,3-Dinitrobenzene	9.323	168	69	2.95	ng/ml#	1
47) 2,6-Dinitrotoluene	9.360	165	134	4.11	ng/ml	91
49) Acenaphthylene	9.462	152	26620	129.14	ng/ml	98
50) 3-Nitroaniline	9.606	138	108	Below Cal	#	1
51) Acenaphthene	9.638	153	8787	67.66	ng/ml	98
53) 4-Nitrophenol	9.740	139	82	61.32	ng/ml#	1
54) 2,4-Dinitrotoluene	9.777	165	136	35.62	ng/ml#	36
55) Dibenzofuran	9.815	168	7089	40.11	ng/ml	79
58) Diethyl phthalate	10.034	149	84	0.59	ng/ml#	1
59) 2,3,5-Trimethylnaphtha...	10.018	170	4446	35.14	ng/ml	84
60) Fluorene	10.157	166	20321	133.43	ng/ml	96
62) 4-Nitroaniline	10.157	138	418	13.39	ng/ml#	41
65) N-Nitrosodiphenylamine	10.275	169	1734	14.04	ng/ml	82
66) Azobenzene (1,2-DPH)	10.328	77	345	2.49	ng/ml#	1
71) Phenanthrene	11.136	178	108773	509.33	ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

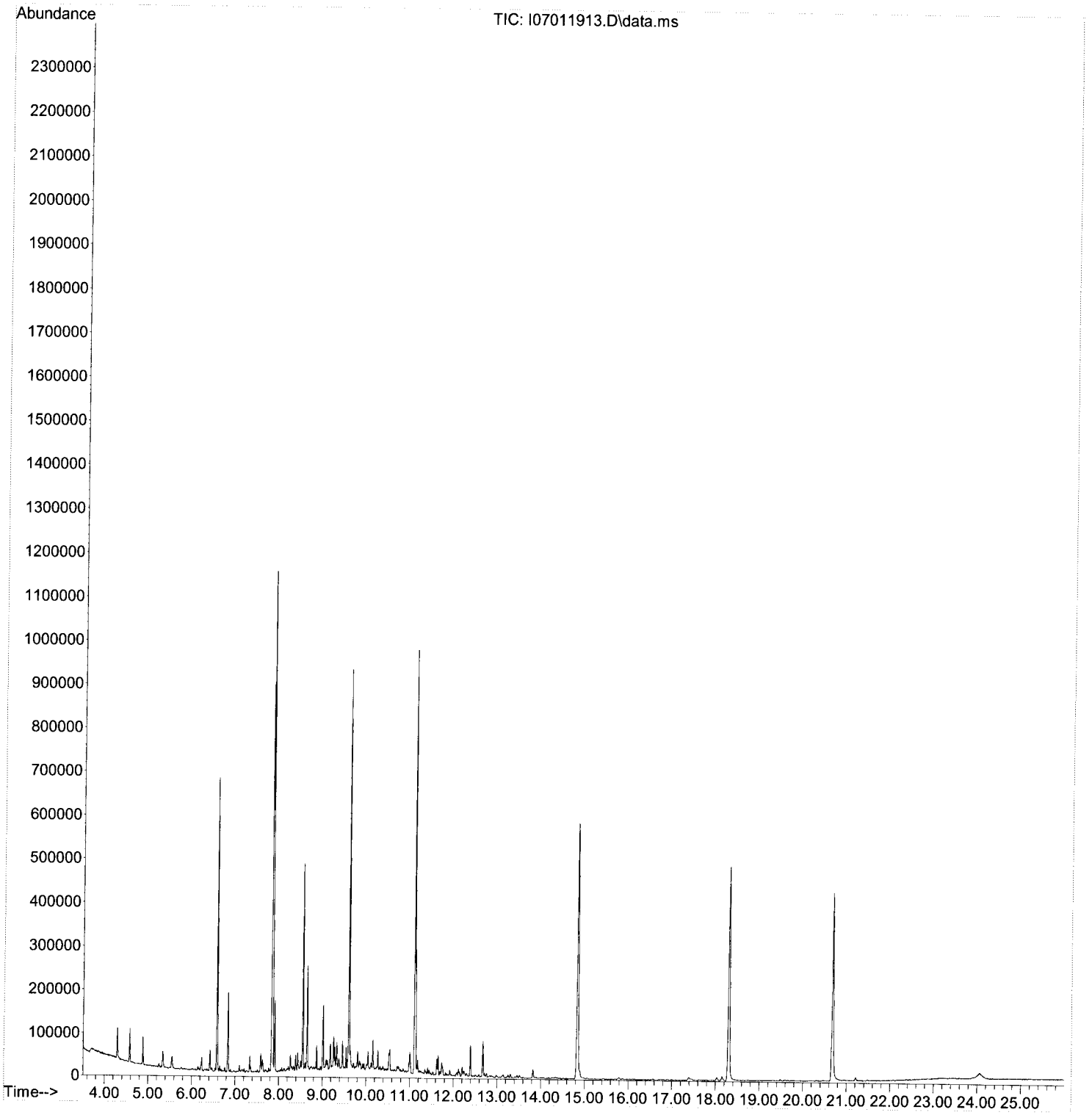
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
72) Anthracene	11.189	178	14141	66.22	ng/ml	98
73) Carbazole	11.350	167	4263	22.78	ng/ml	92
74) Di-n-butyl phthalate	11.682	149	113	0.47	ng/ml	78
75) Fluoranthene	12.393	202	36974	148.16	ng/ml	97
77) Pyrene	12.676	202	43417	170.96	ng/ml	99
81) Bis(2-ethylhexyl) adipate	13.826	129	4742	42.82	ng/ml	91
83) Benz(a)anthracene	14.816	228	10136	41.54	ng/ml	96
84) Chrysene	14.896	228	9641	42.83	ng/ml	86
85) Bis(2-ethylhexyl) phth...	14.971	149	555	3.75	ng/ml	77
87) Di-n-octyl phthalate	16.624	149	128	57.48	ng/ml#	1
88) Benzo(b)fluoranthene	17.383	252	7250	33.70	ng/ml	87
89) Benzo(k)fluoranthene	17.458	252	2984m	16.71	ng/ml	
90) Benzo(b+k)fluoranthene	17.533	252	130	10.73	ng/ml	69
91) Benzo(e)pyrene	18.036	252	5240	22.41	ng/ml	92
92) Benzo(a)pyrene	18.153	252	6940	36.78	ng/ml	91
93) Perylene	18.362	252	2003	10.12	ng/ml	96
95) Indeno(1,2,3-cd)pyrene	20.678	276	4912	24.42	ng/ml	50
96) Dibenz(a,h)anthracene	20.731	278	717	4.04	ng/ml	58
97) Benzo(g,h,i)perylene	21.218	276	5342	27.16	ng/ml	77

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

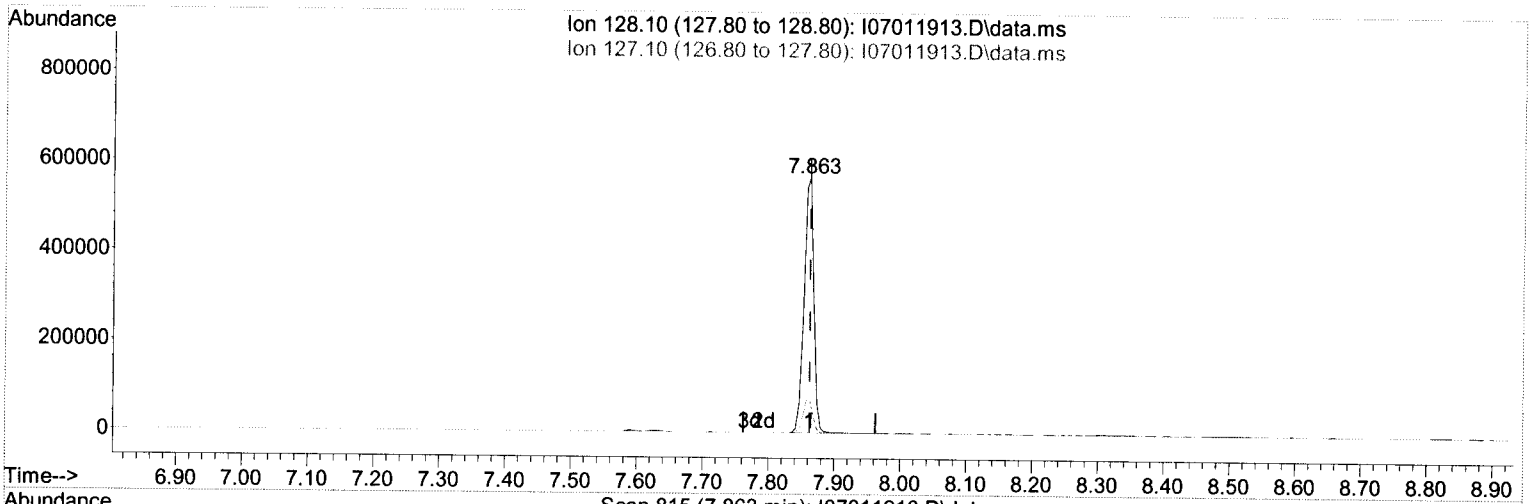
Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

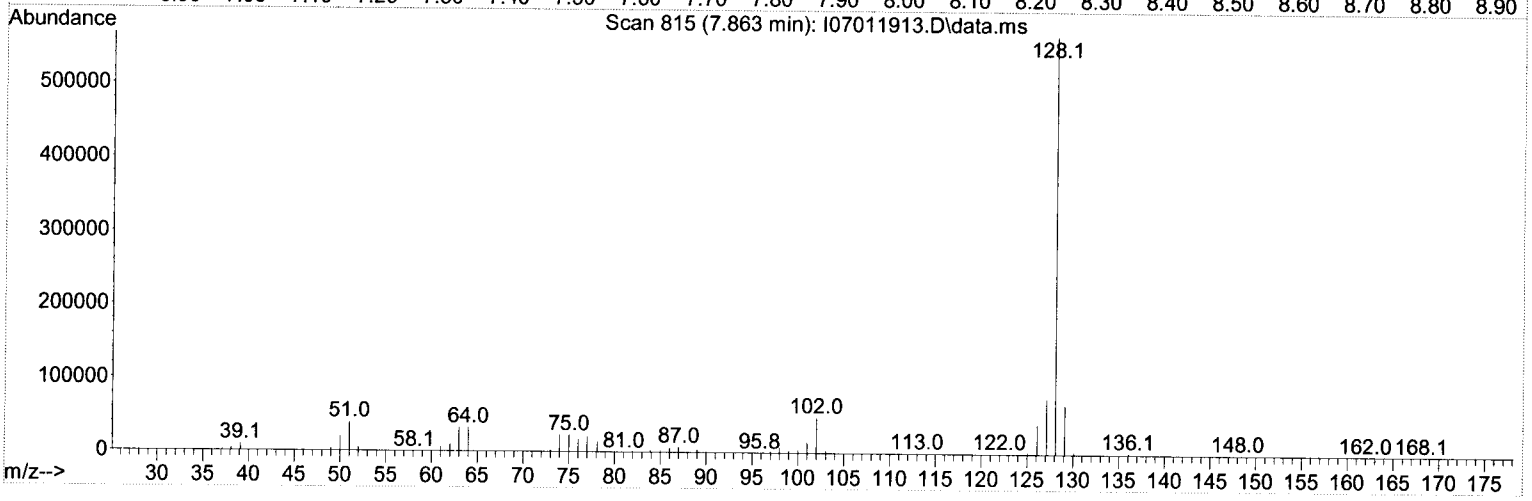


Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(29) Naphthalene (T)

7.863min (-0.000) 2581.54 ng/ml

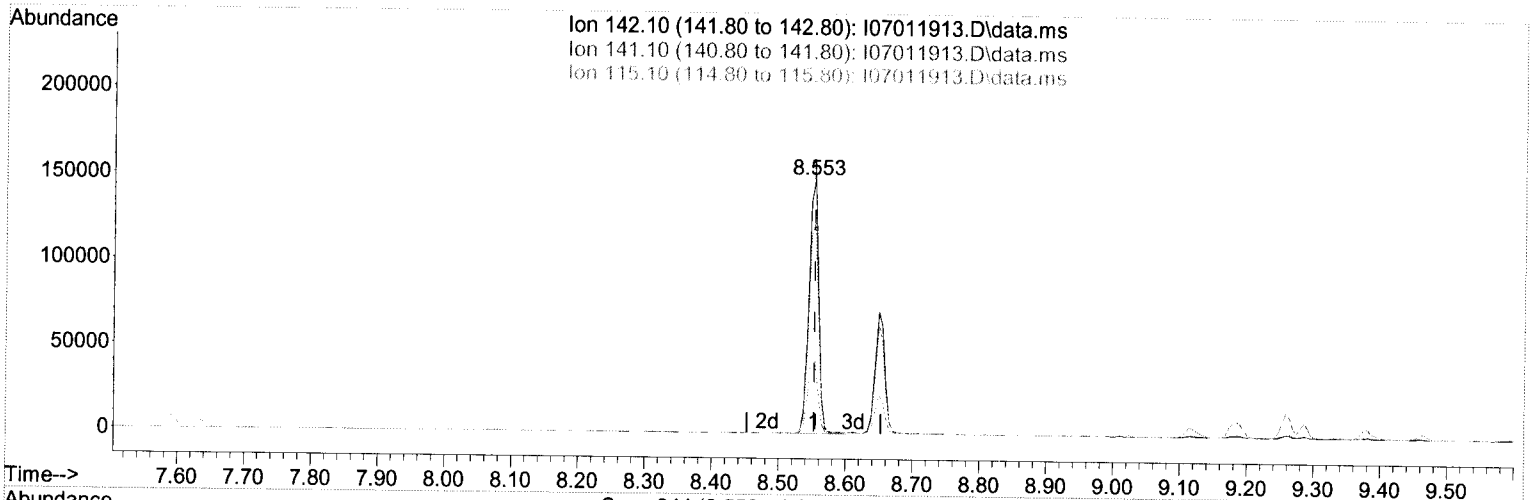
response 592329

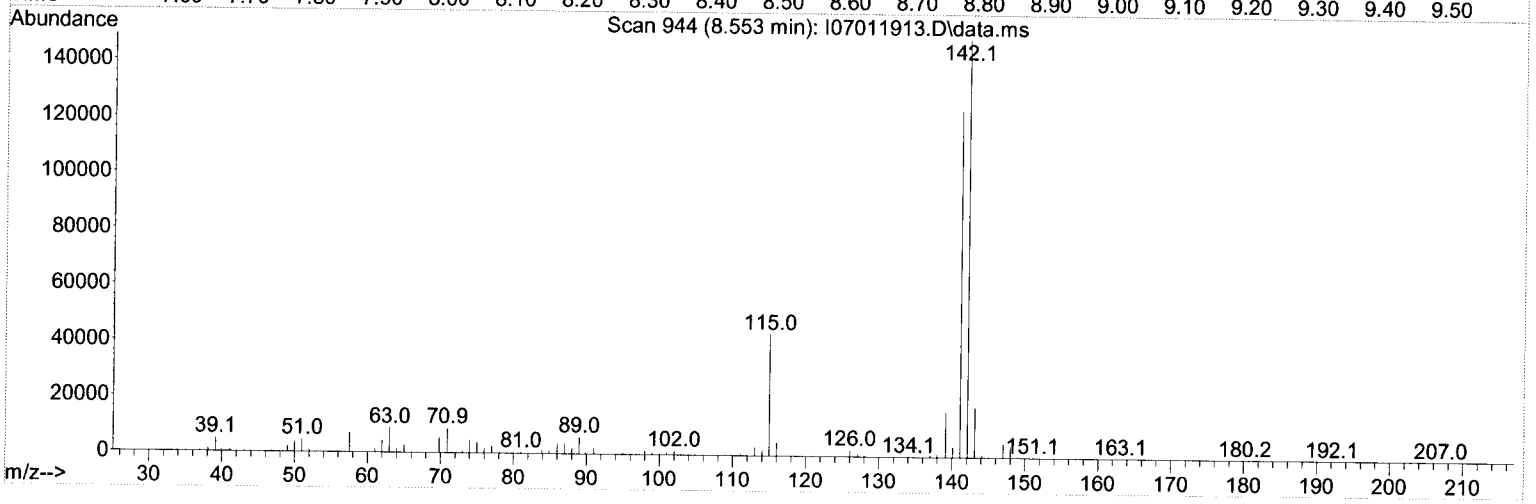
Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	13.30
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(33) 2-Methylnaphthalene (T)

8.553min (-0.000) 872.17 ng/ml

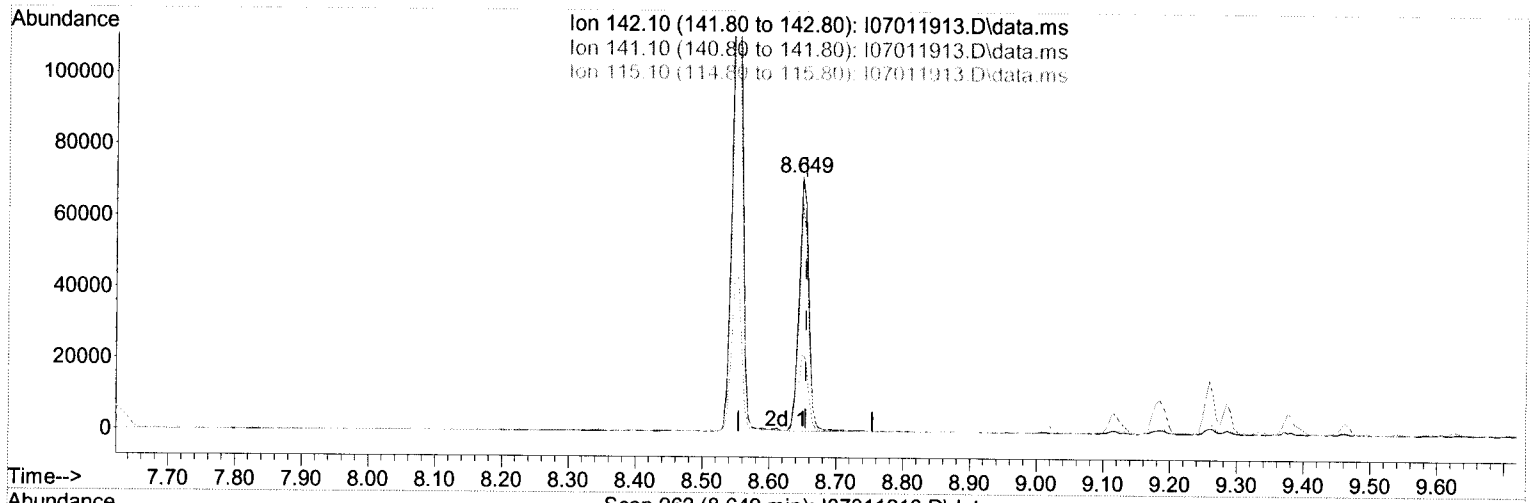
response 150974

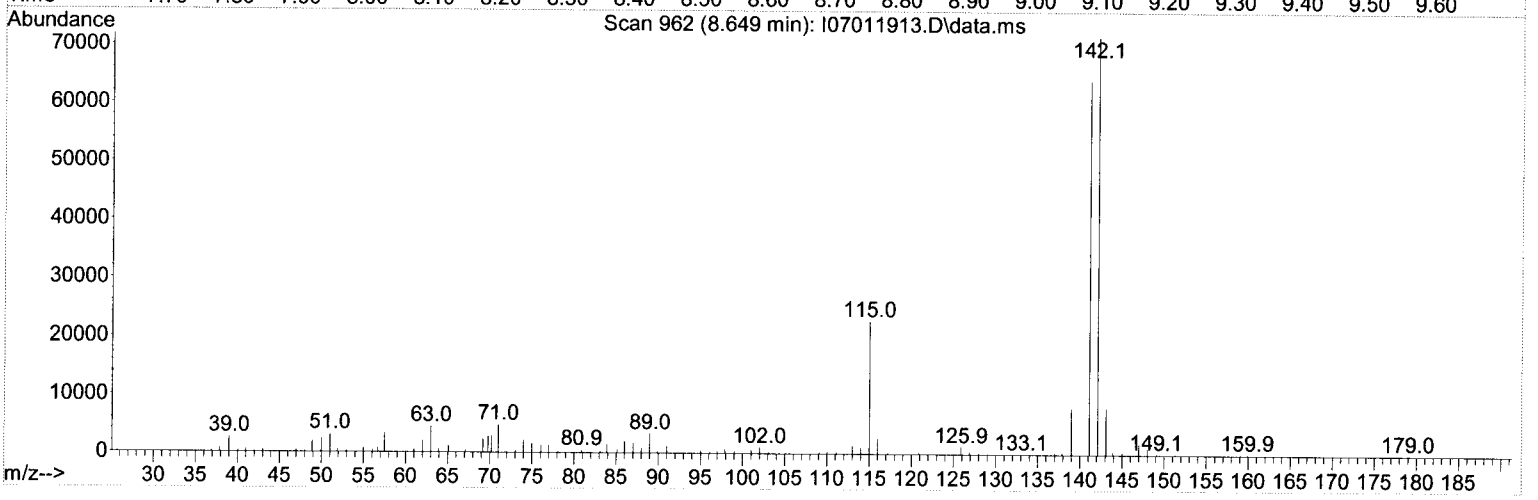
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	83.12
115.10	33.70	29.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(34) 1-Methylnaphthalene (T)

8.649min (-0.005) 444.97 ng/ml

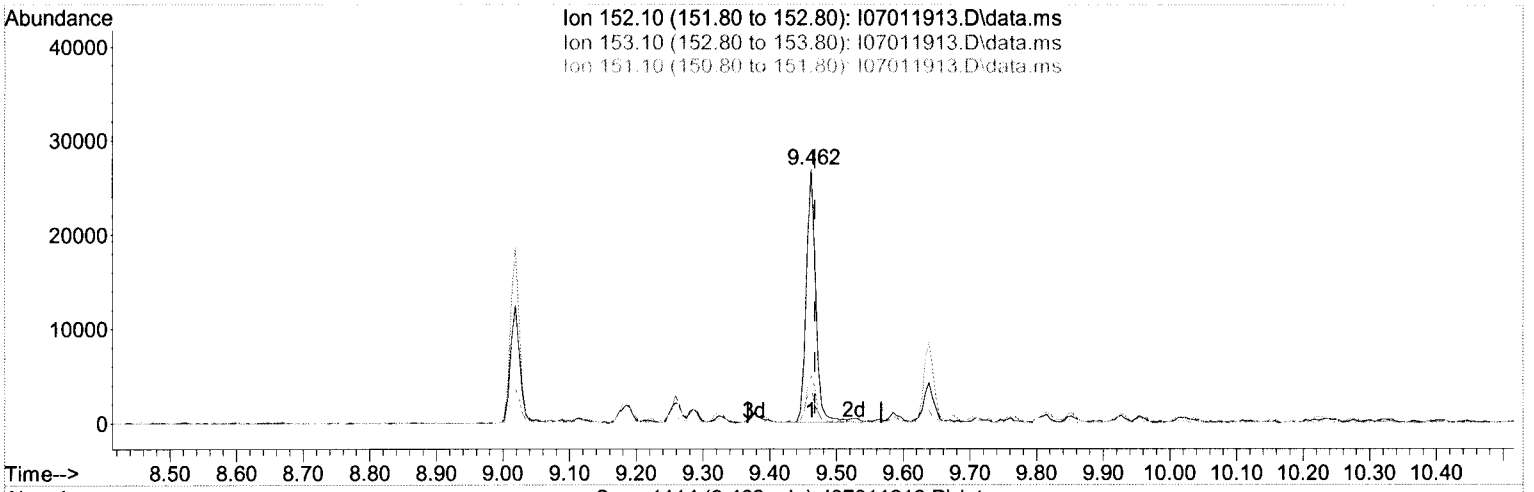
response 72546

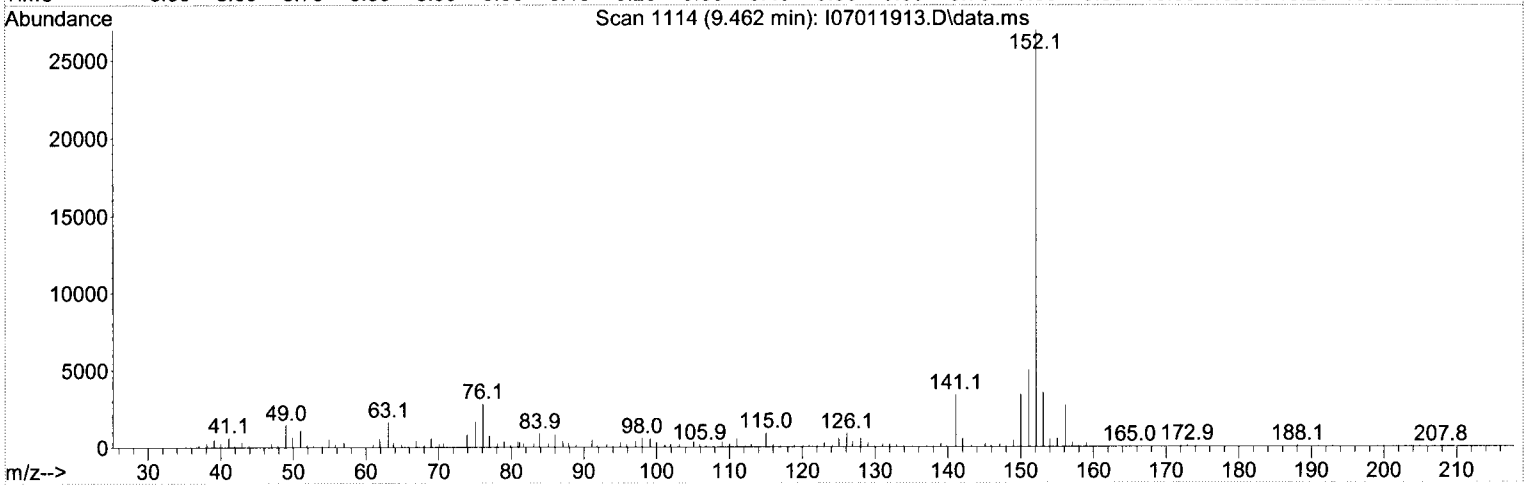
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	89.20	89.35
115.10	34.90	31.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(49) Acenaphthylene (T)

9.462min (-0.005) 129.14 ng/ml

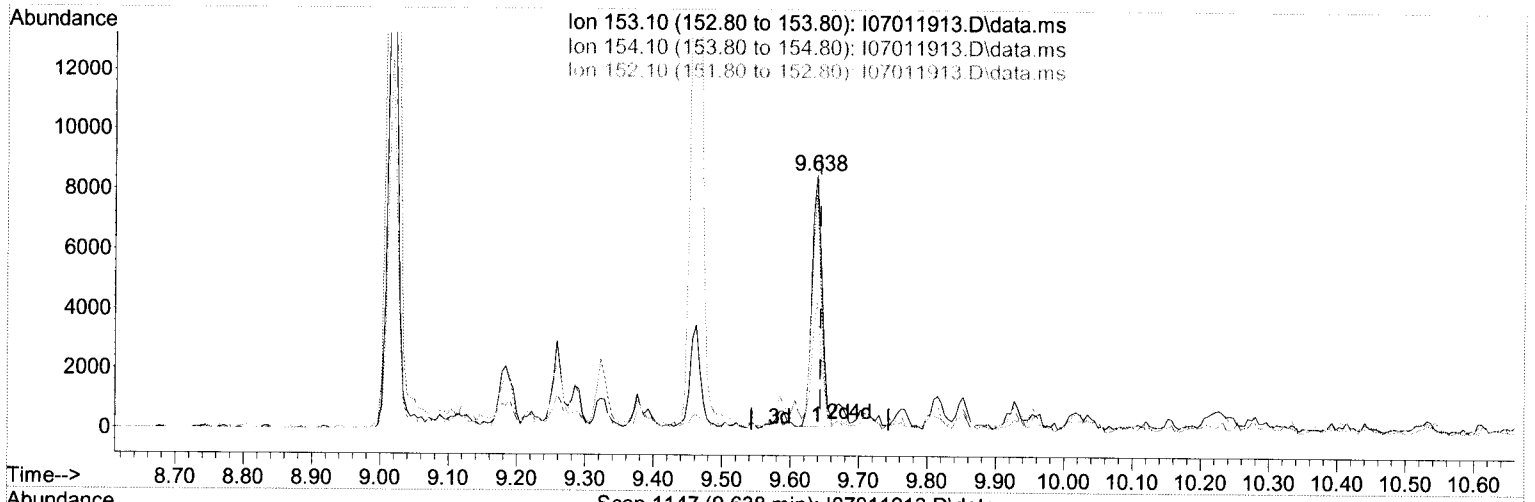
response 26620

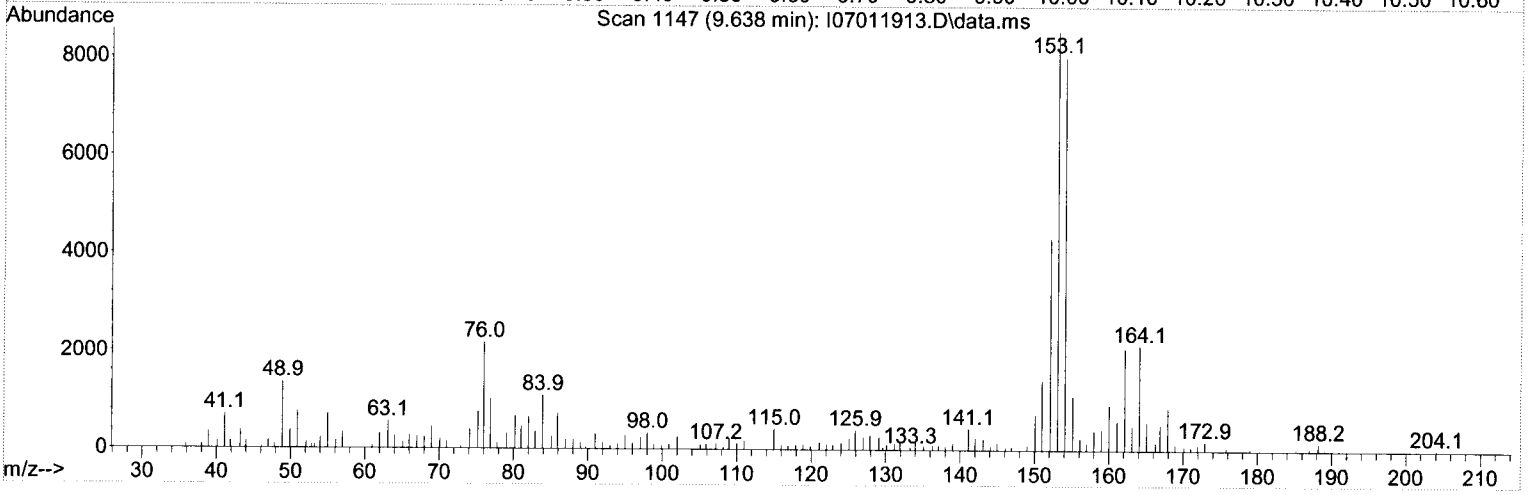
Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	13.06
151.10	20.00	18.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(51) Acenaphthene (T)

9.638min (-0.005) 67.66 ng/ml

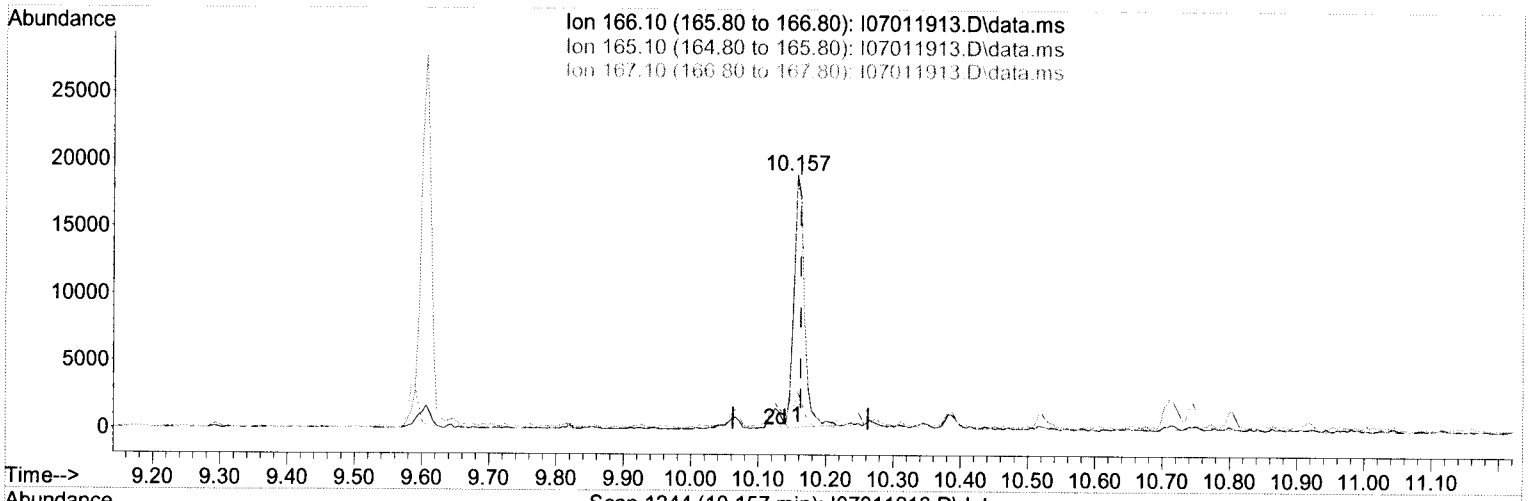
response 8787

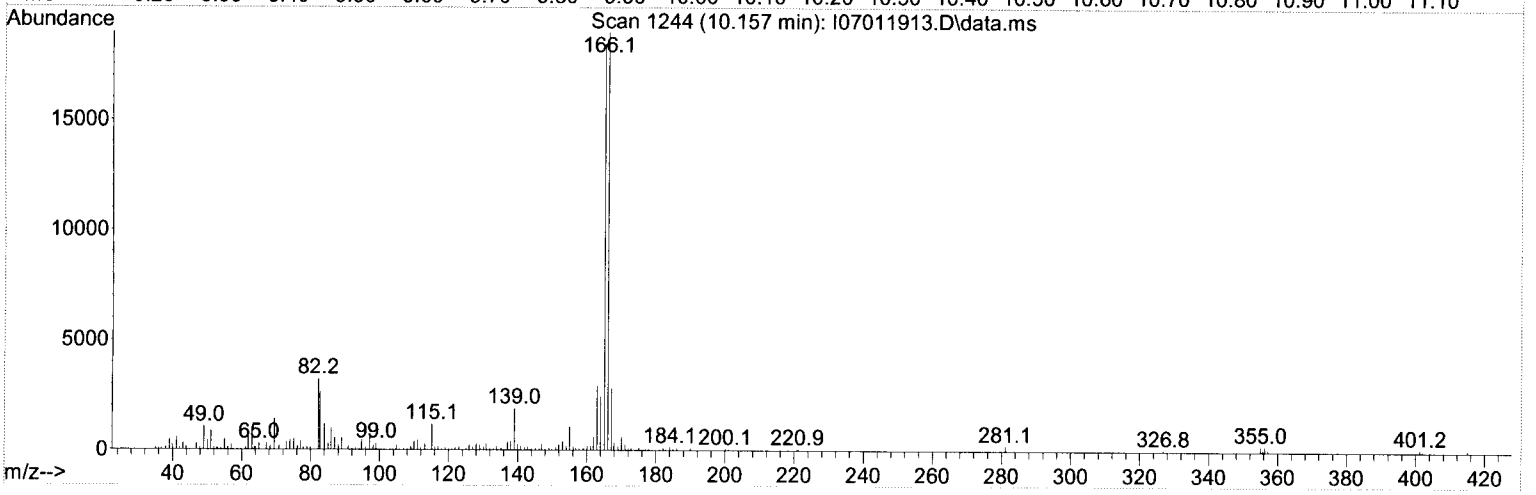
Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	93.86
152.10	47.70	50.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(60) Fluorene (T)

10.157min (-0.005) 133.43 ng/ml

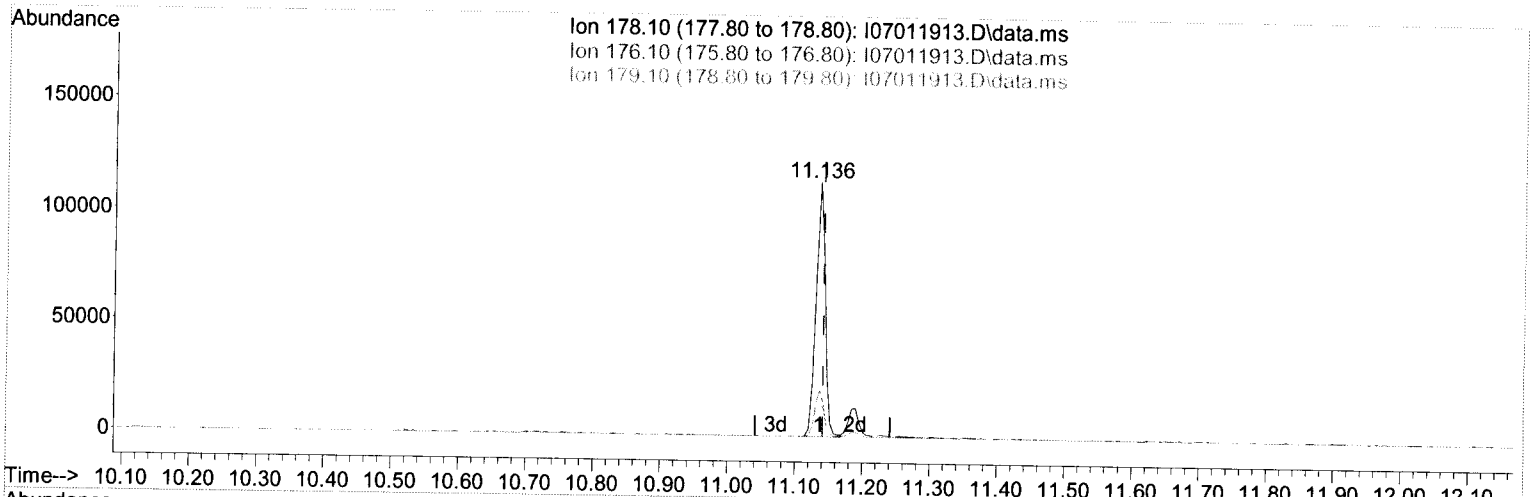
response 20321

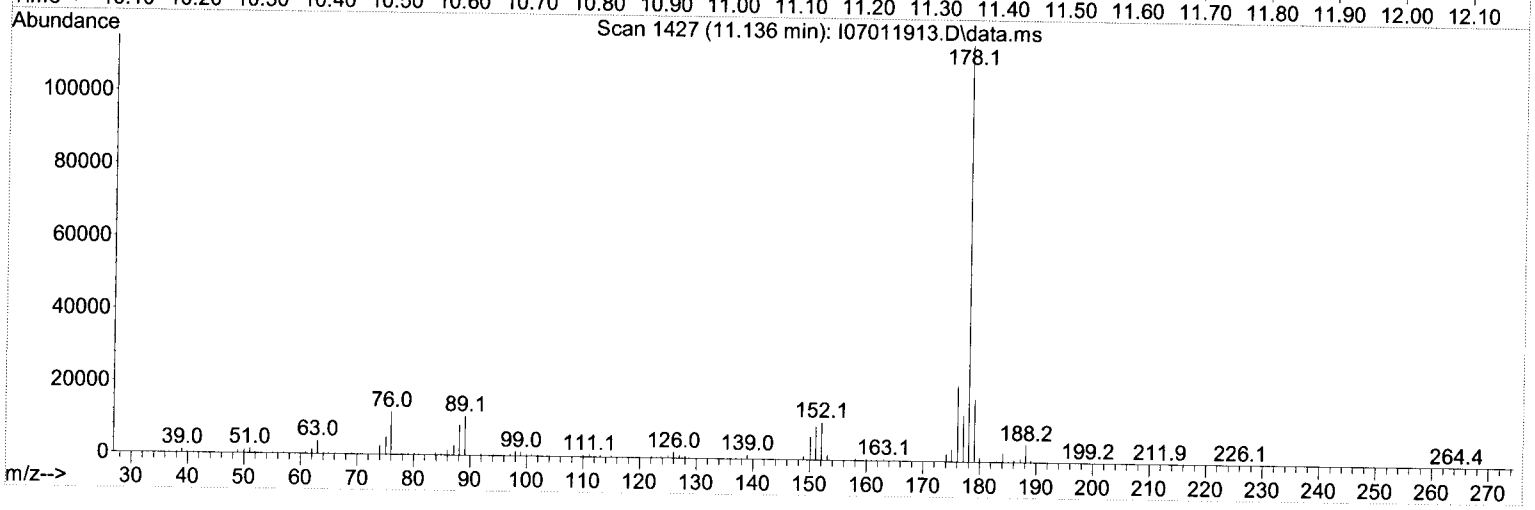
Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	97.39
167.10	13.50	15.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(71) Phenanthrene (T)

11.136min (-0.006) 509.33 ng/ml

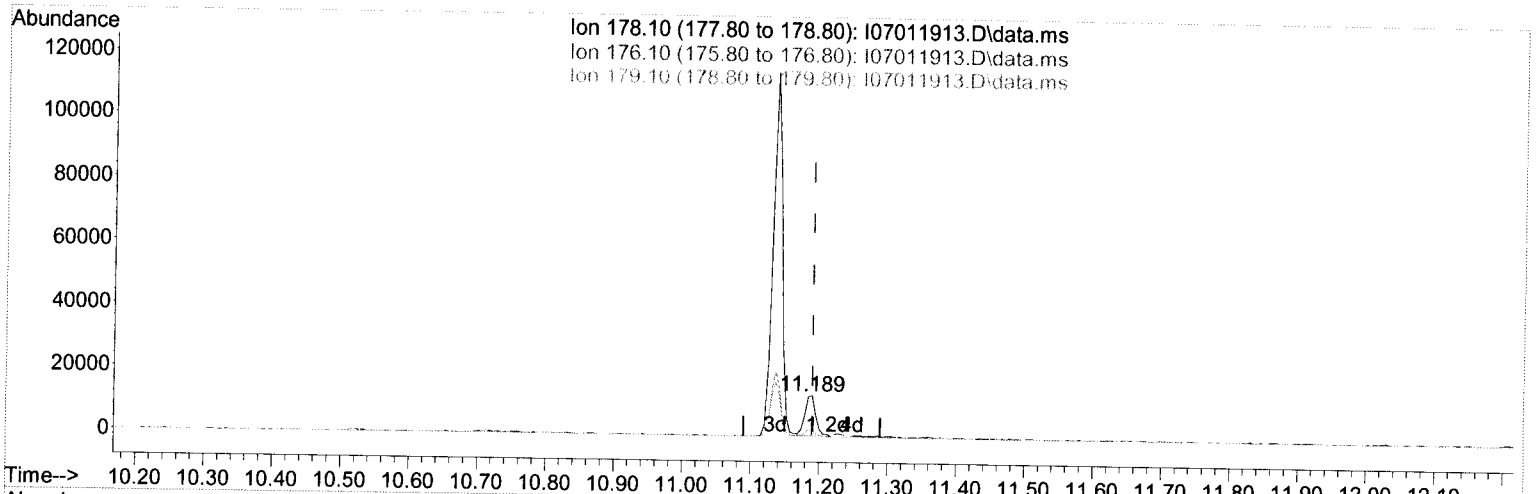
response 108773

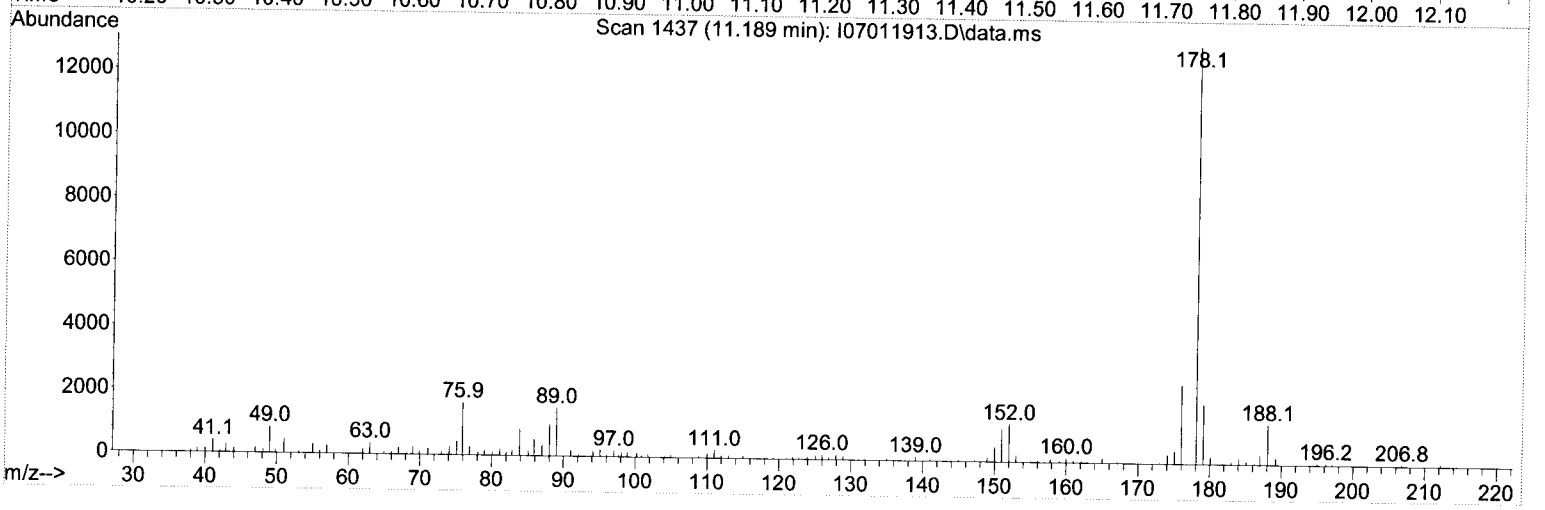
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	18.20
179.10	15.20	15.07
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(72) Anthracene (T)

11.189min (-0.000) 66.22 ng/ml

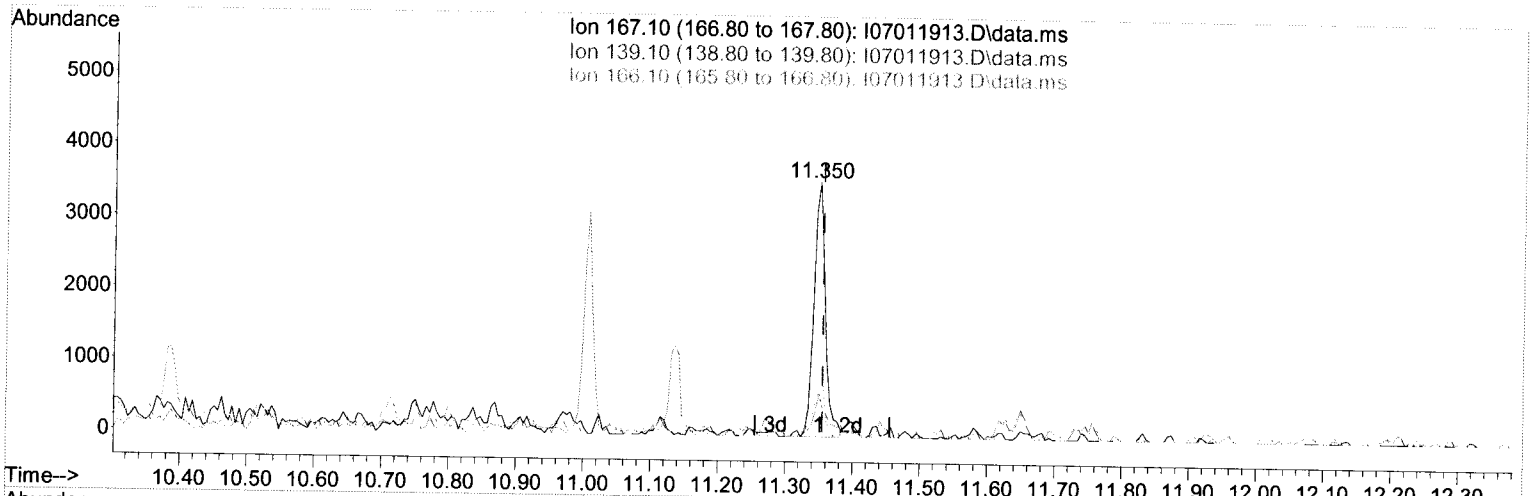
response 14141

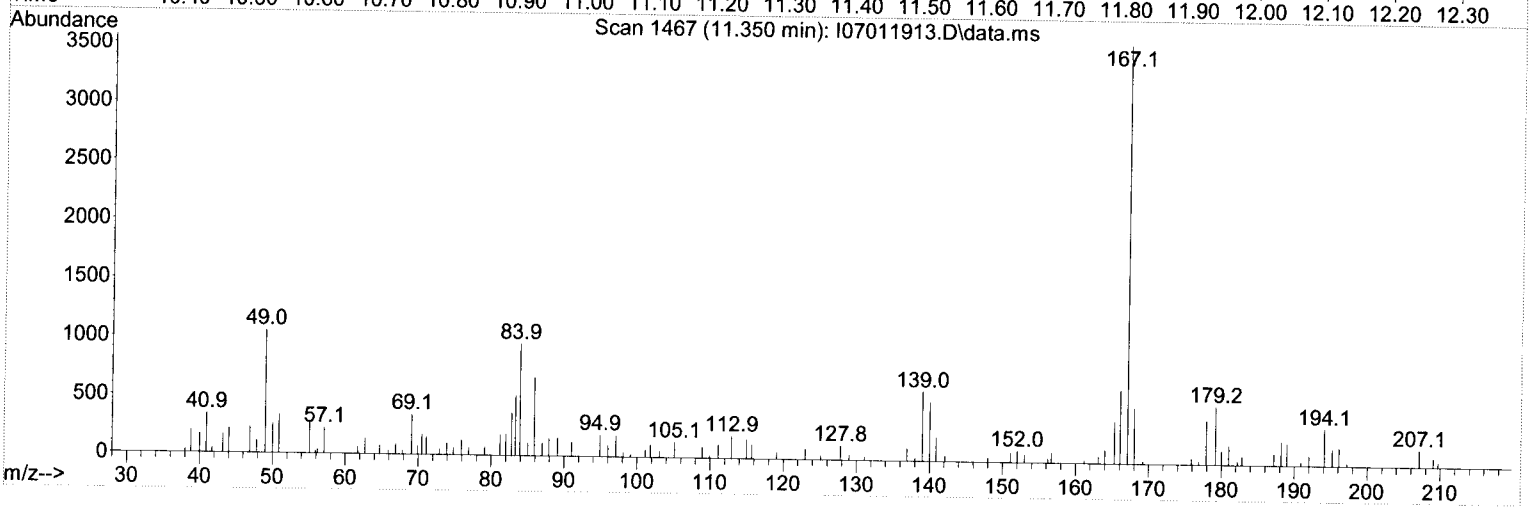
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	19.00
179.10	15.90	14.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(73) Carbazole (T)

11.350min (-0.005) 22.78 ng/ml

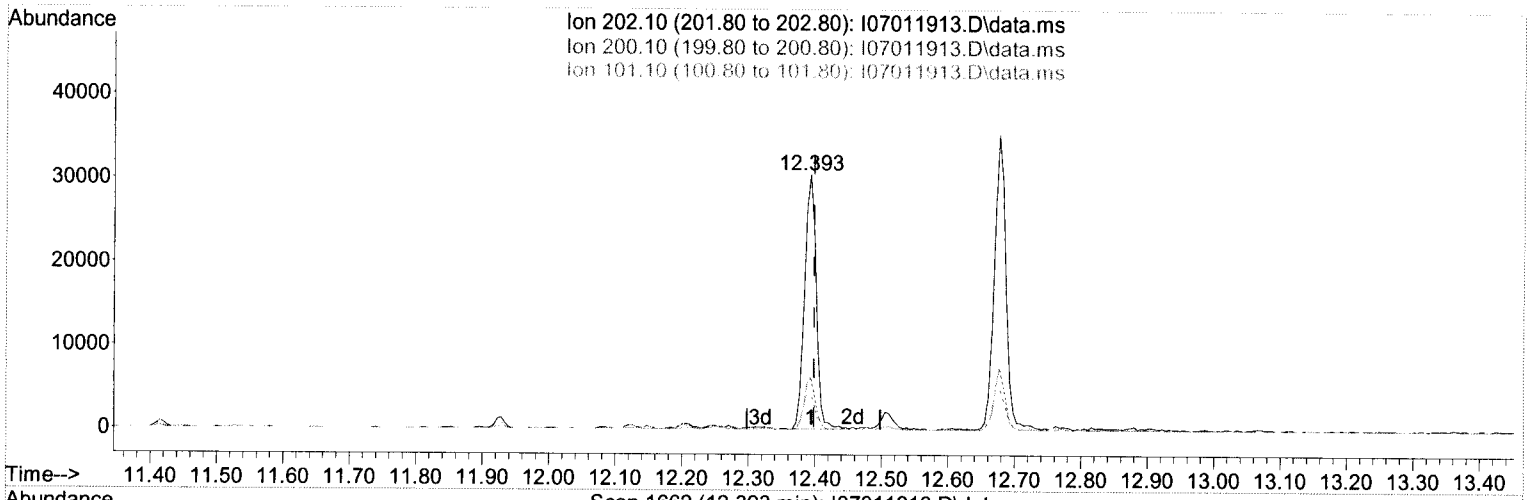
response 4263

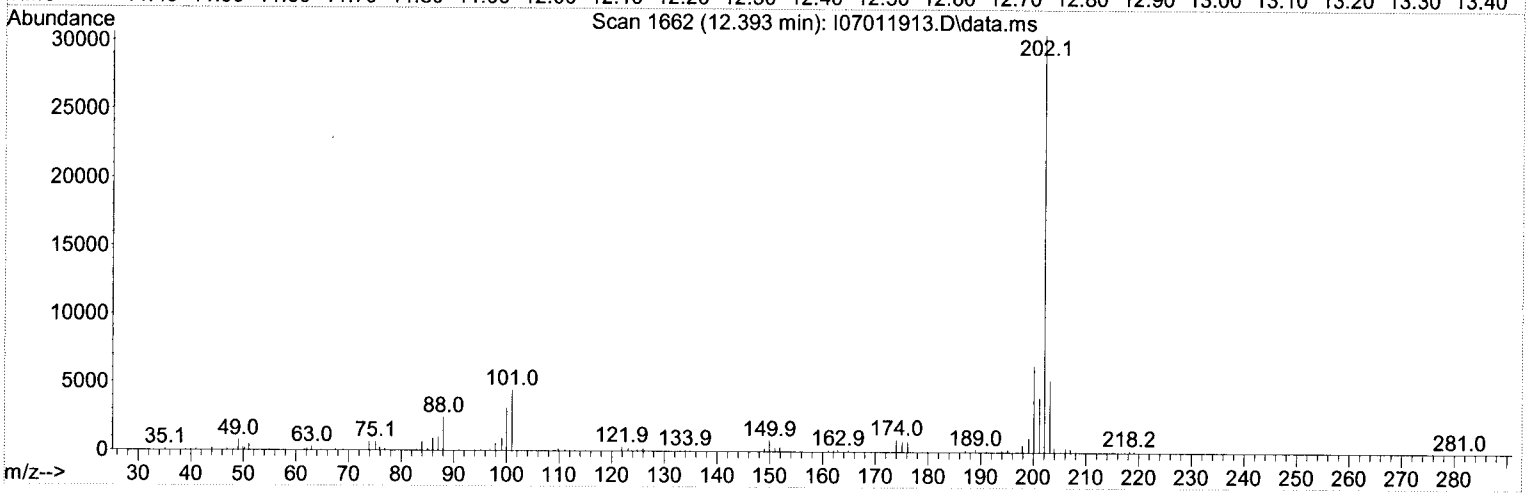
Ion	Exp%	Act%
167.10	100.00	100.00
139.10	13.50	16.75
166.10	21.10	17.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(75) Fluoranthene (T)

12.393min (-0.005) 148.16 ng/ml

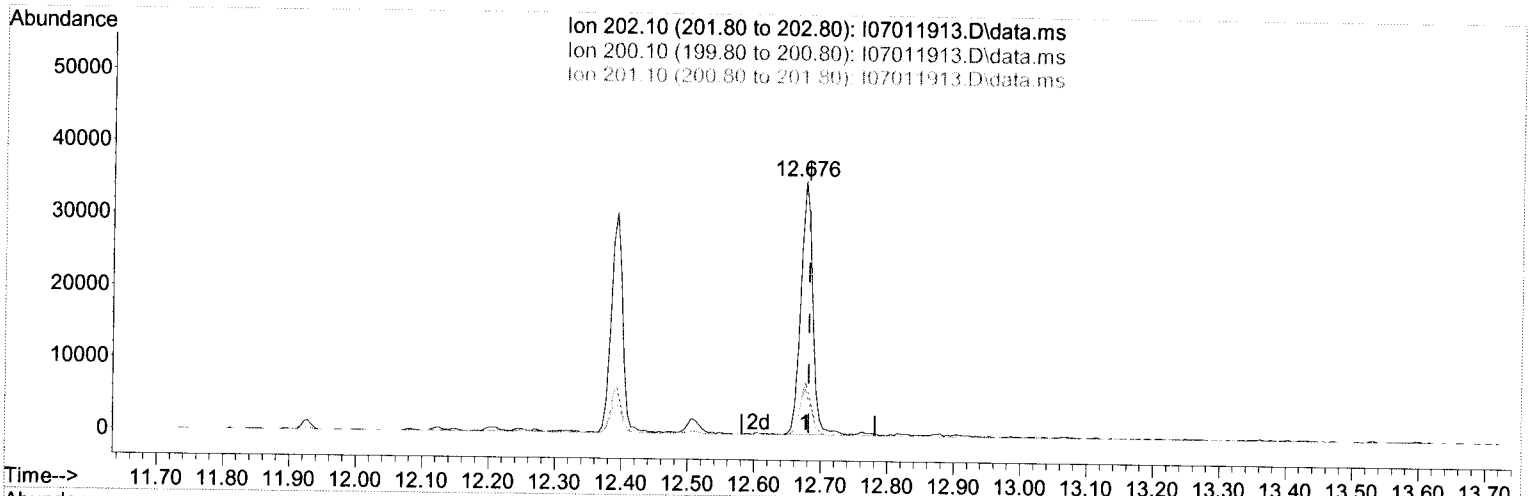
response 36974

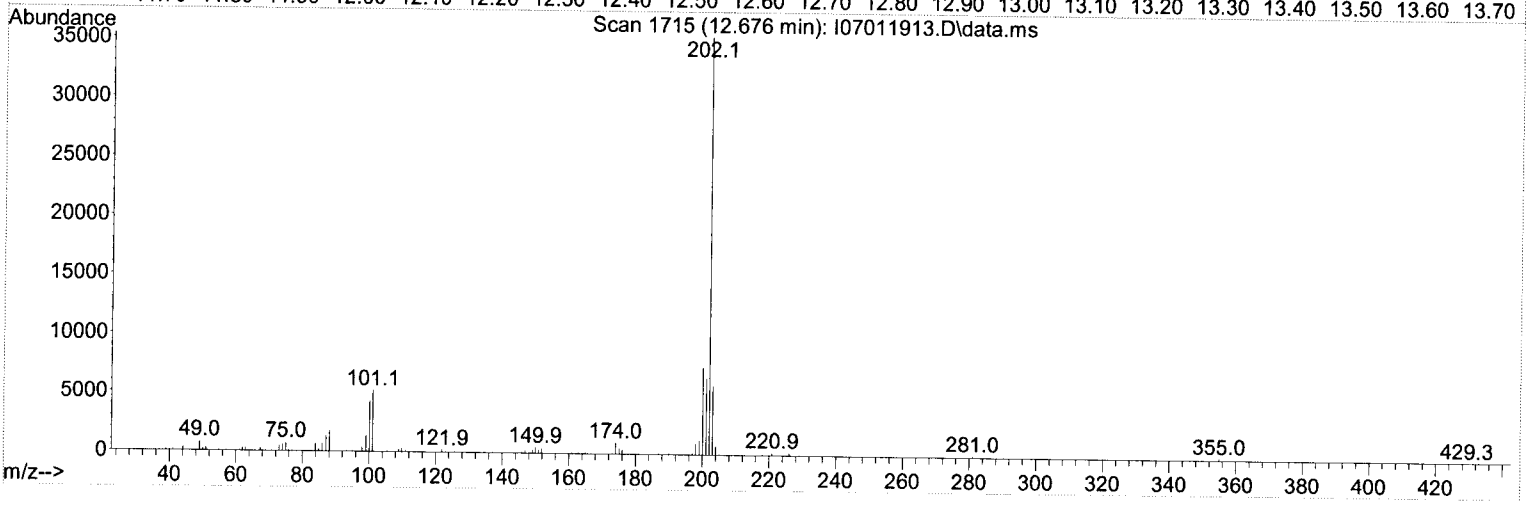
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	20.78
101.10	17.00	14.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(77) Pyrene (T)

12.676min (-0.005) 170.96 ng/ml

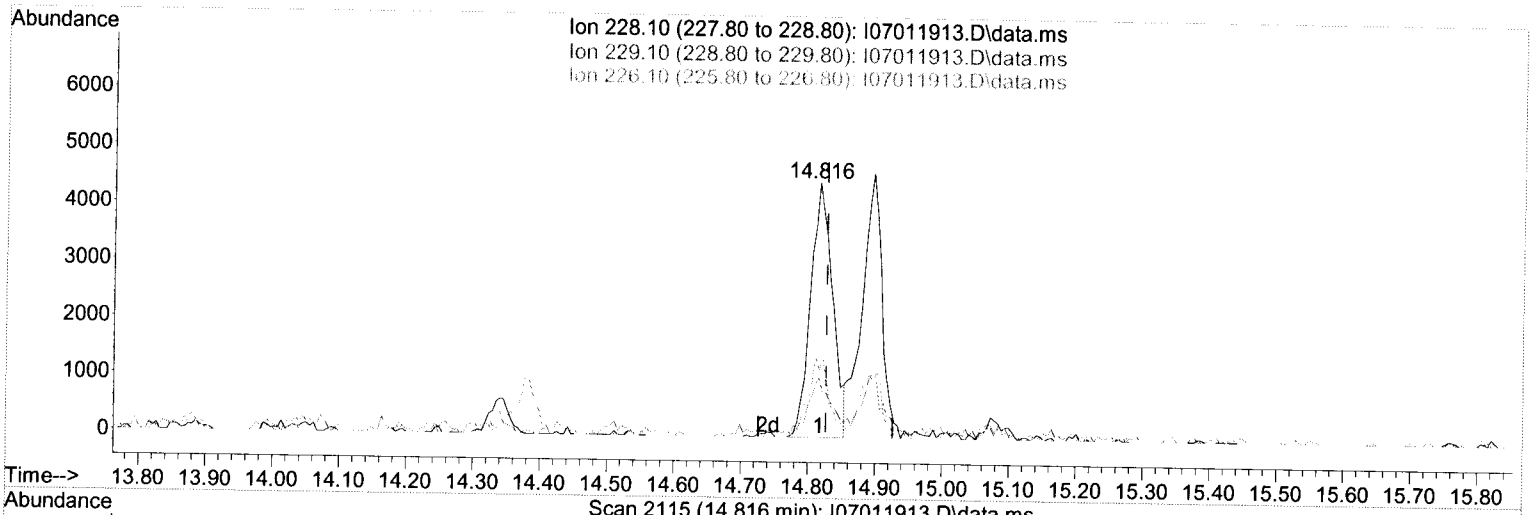
response 43417

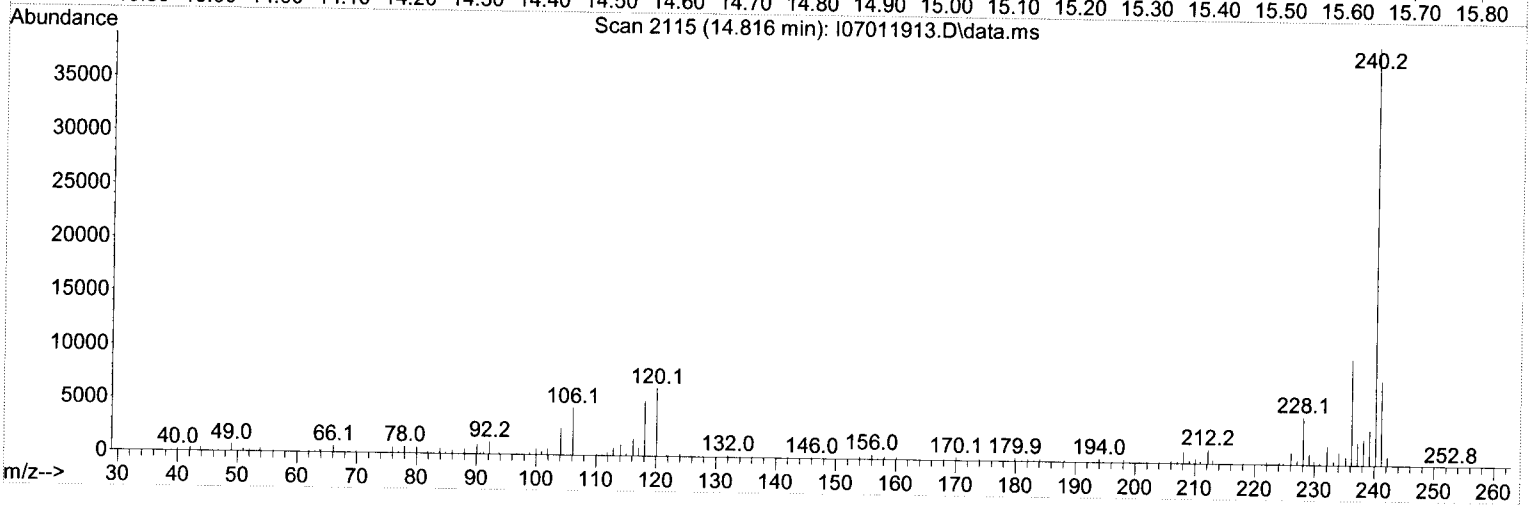
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	20.92
201.10	17.30	18.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(83) Benz(a)anthracene (T)

14.816min (-0.011) 41.54 ng/ml

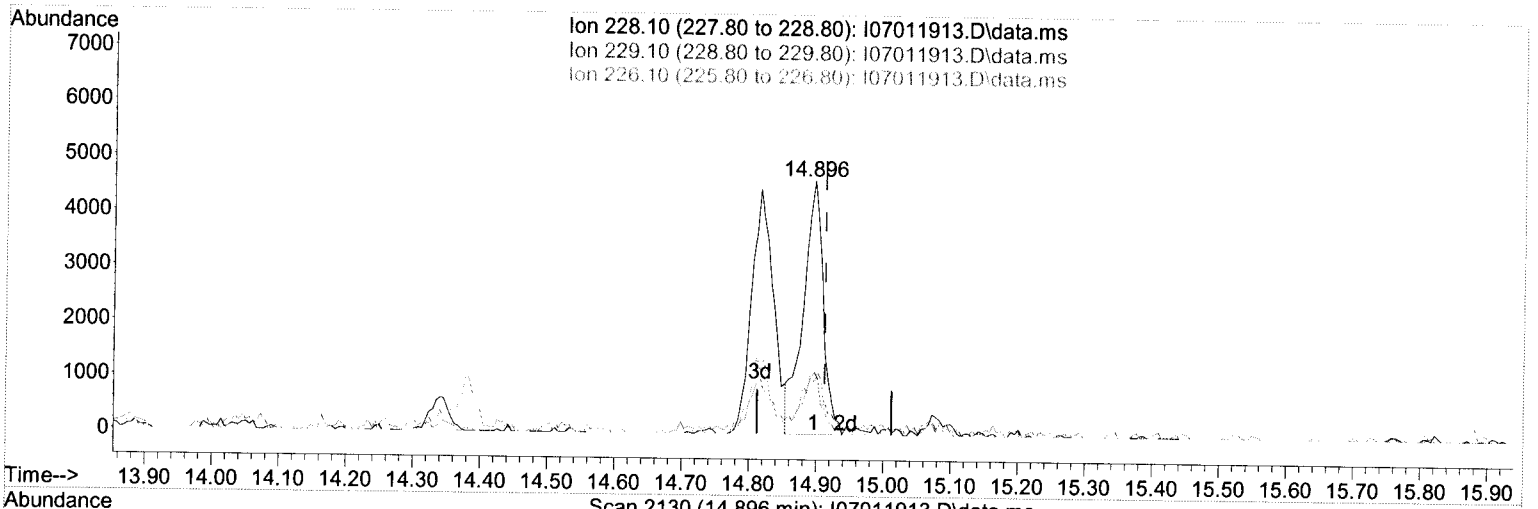
response 10136

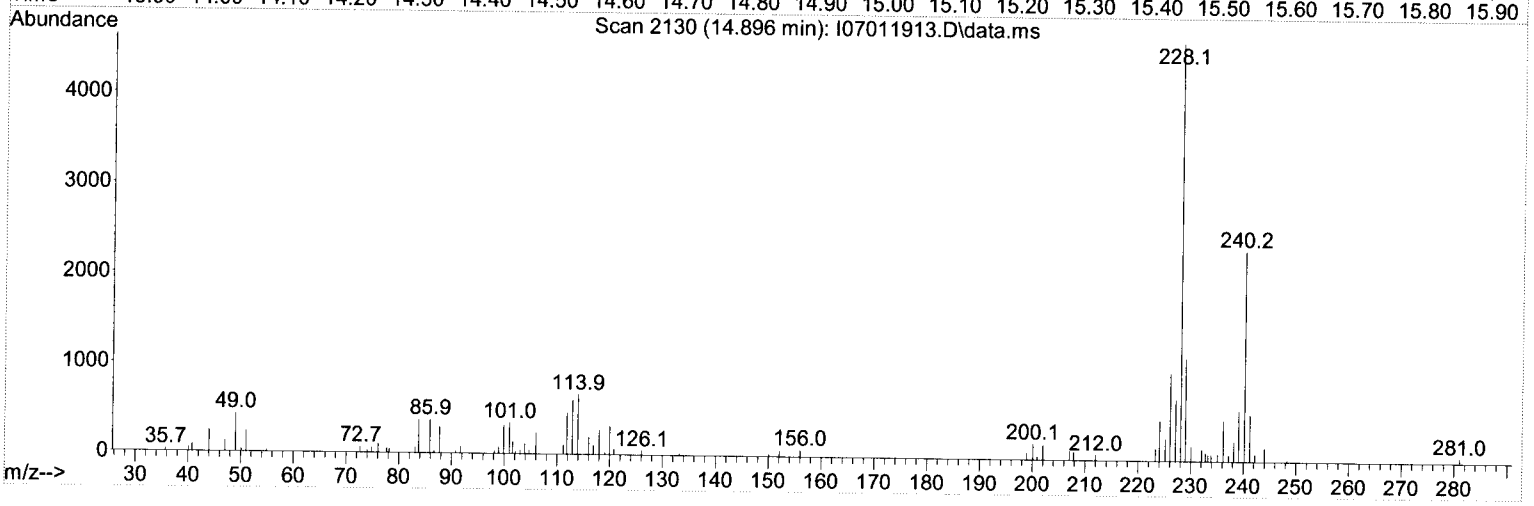
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	23.34
226.10	26.50	26.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(84) Chrysene (T)

14.896min (-0.016) 42.83 ng/ml

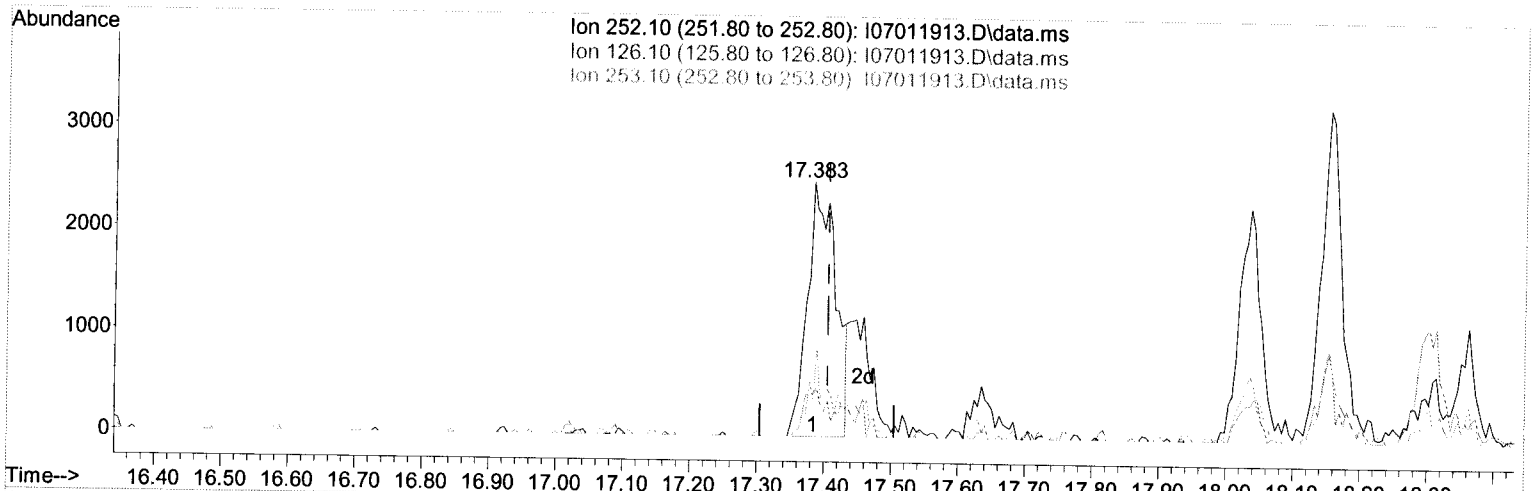
response 9641

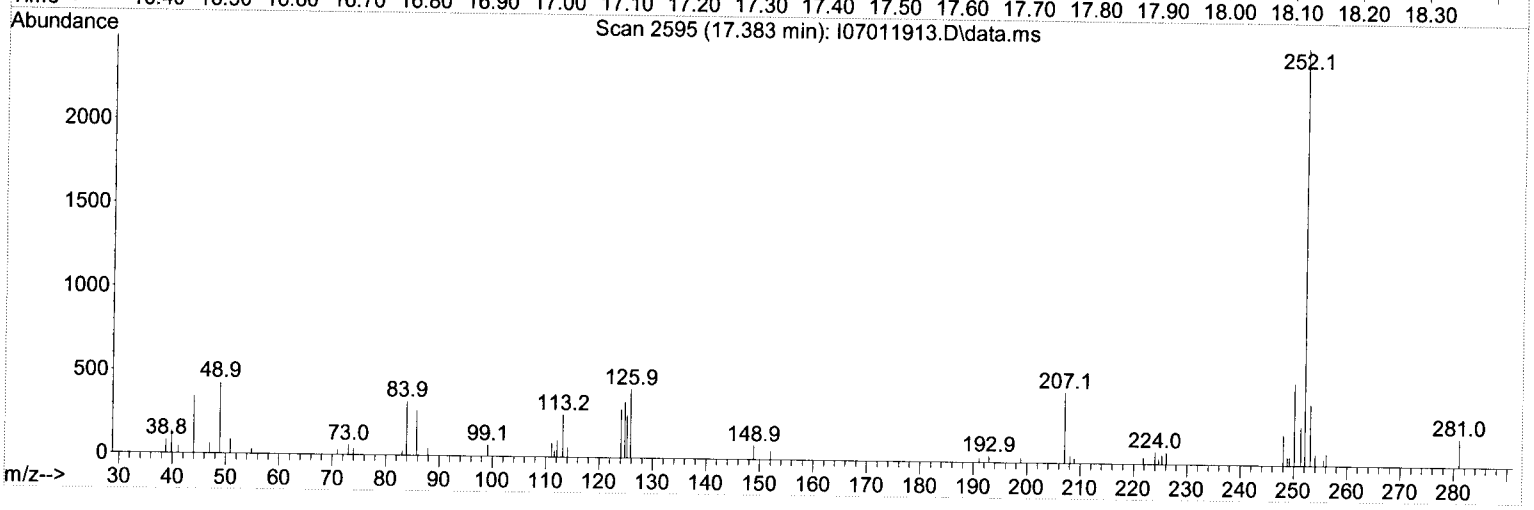
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	24.50
226.10	29.30	20.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.383min (-0.022) 33.70 ng/ml

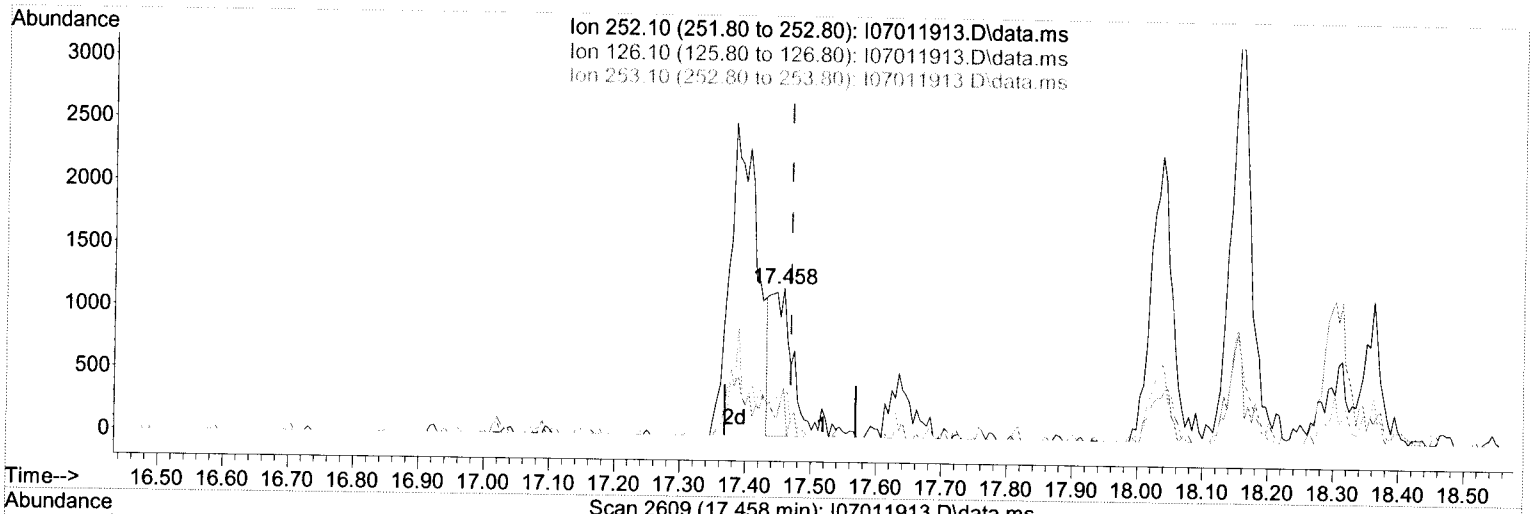
response 7250

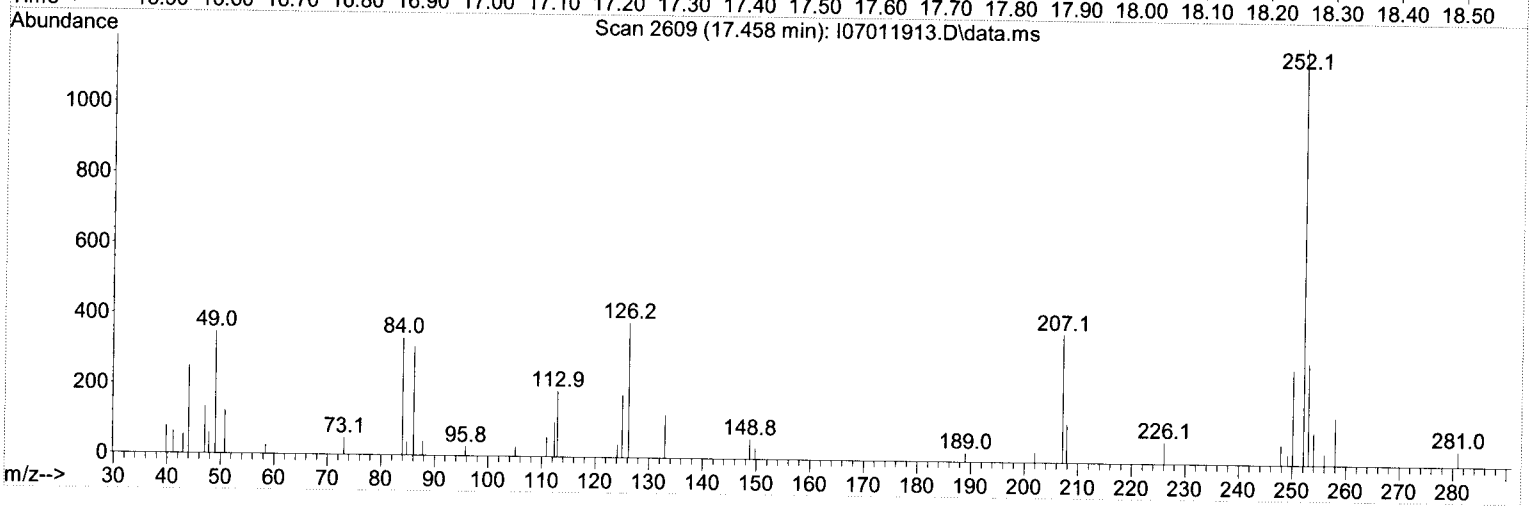
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	16.53
253.10	22.00	14.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.458min (-0.011) 16.71 ng/ml m

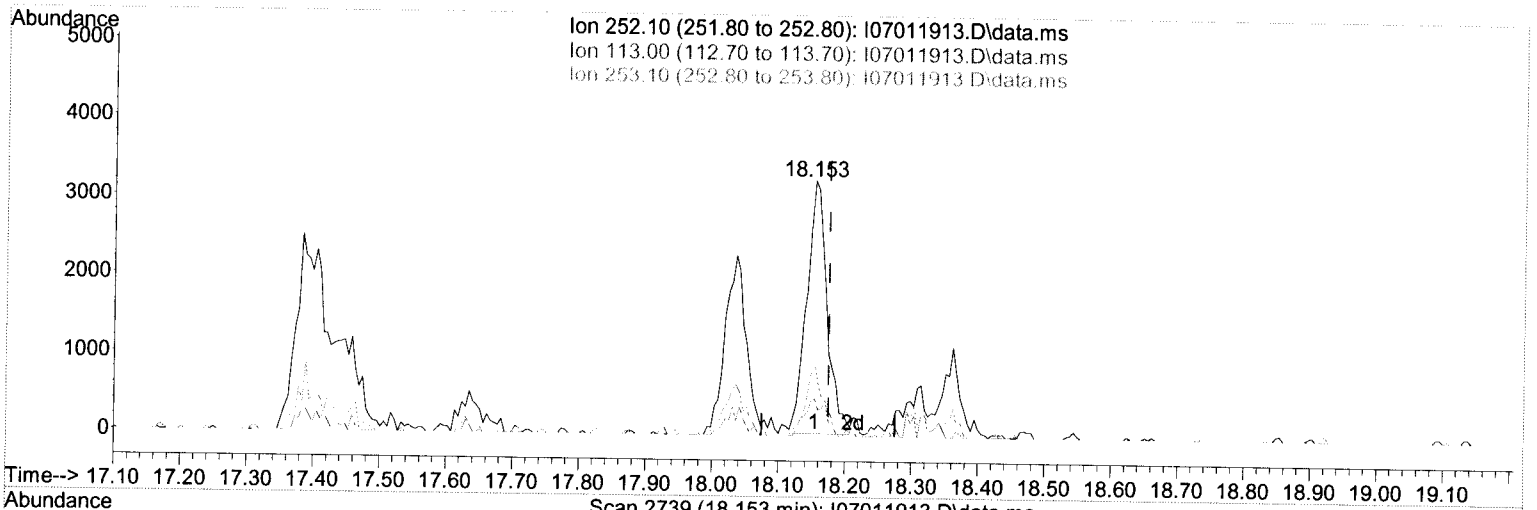
response 2984

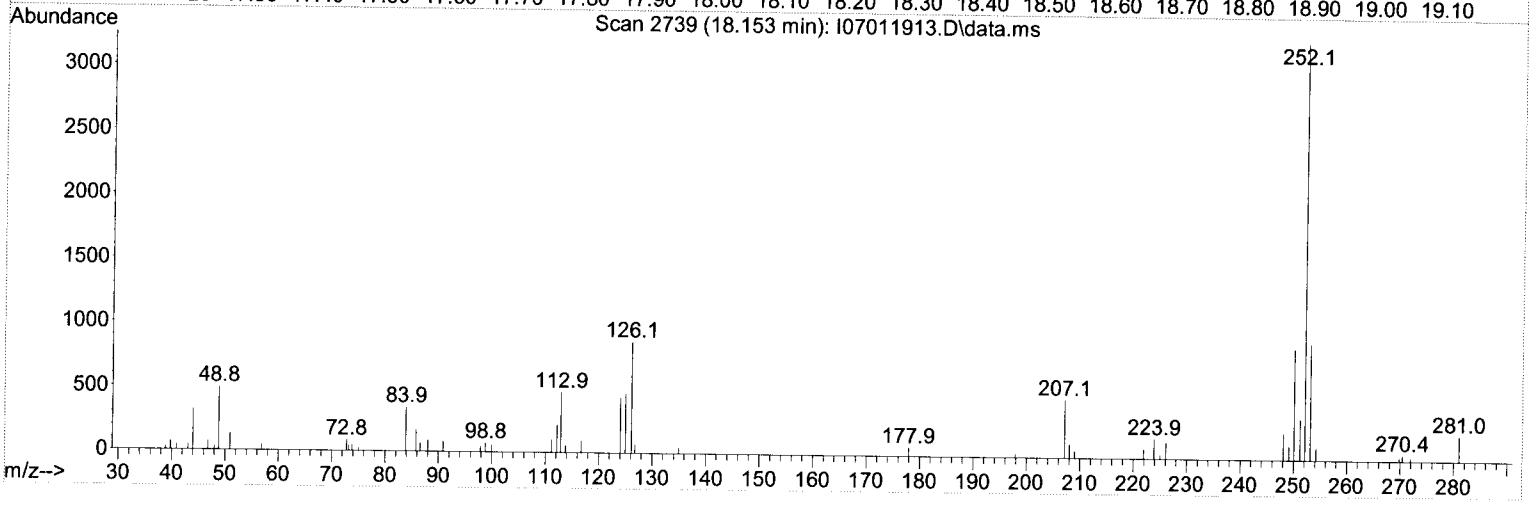
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	32.35
253.10	21.70	24.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(92) Benzo(a)pyrene (T)

18.153min (-0.022) 36.78 ng/ml

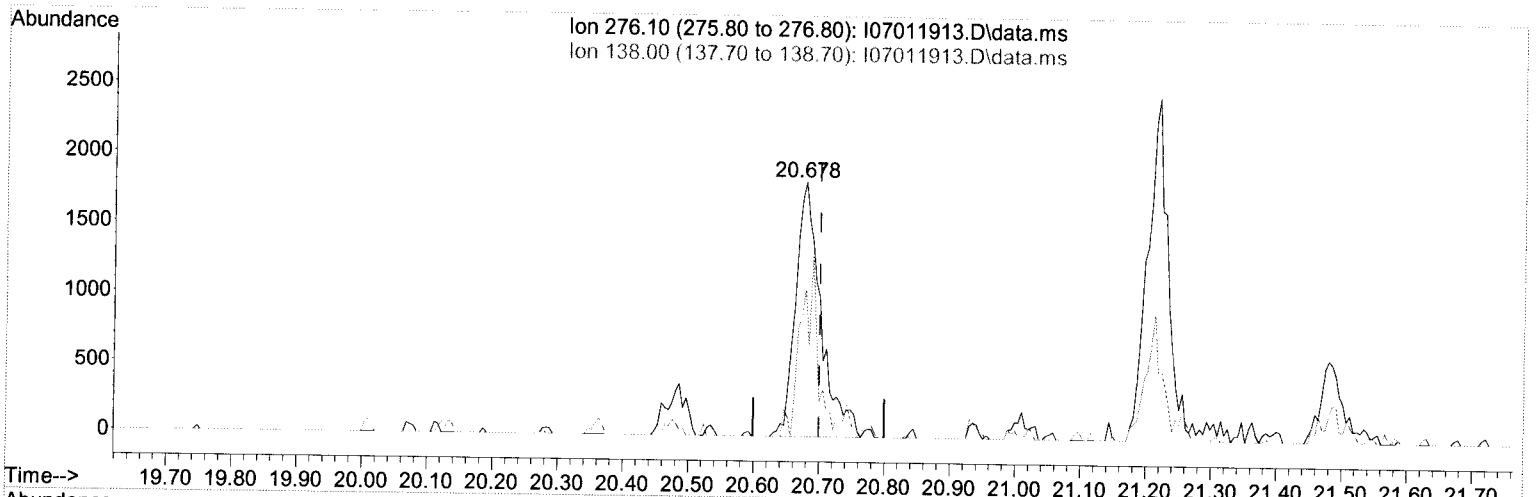
response 6940

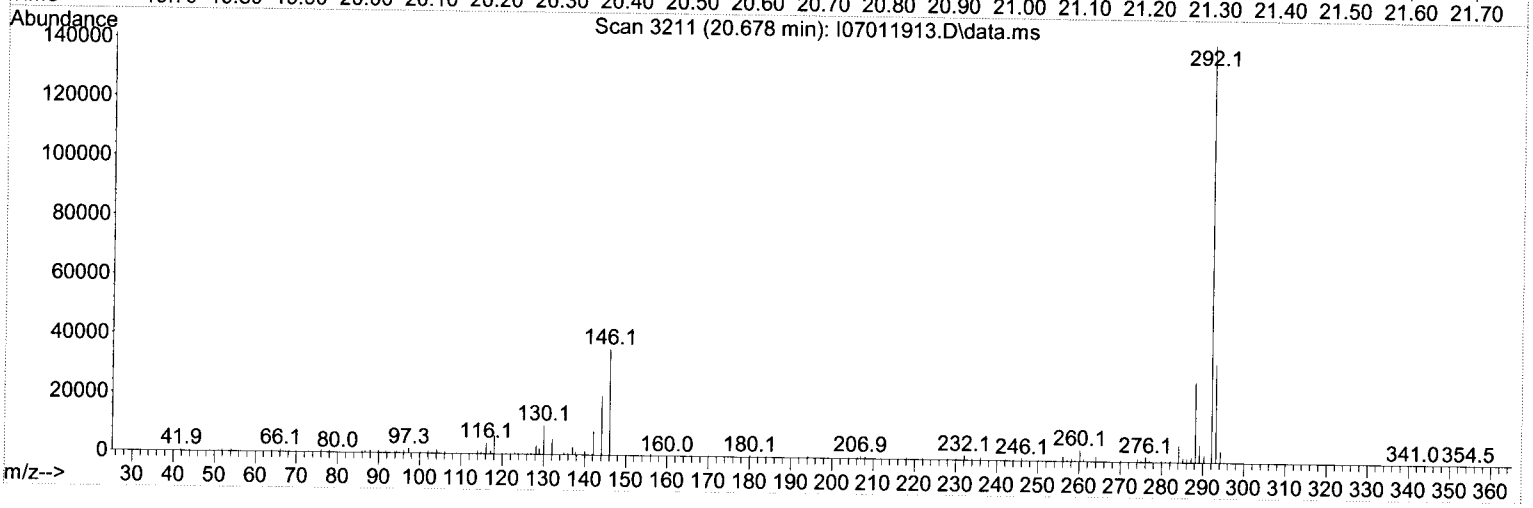
Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	14.48
253.10	21.60	28.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

20.678min (-0.022) 24.42 ng/ml

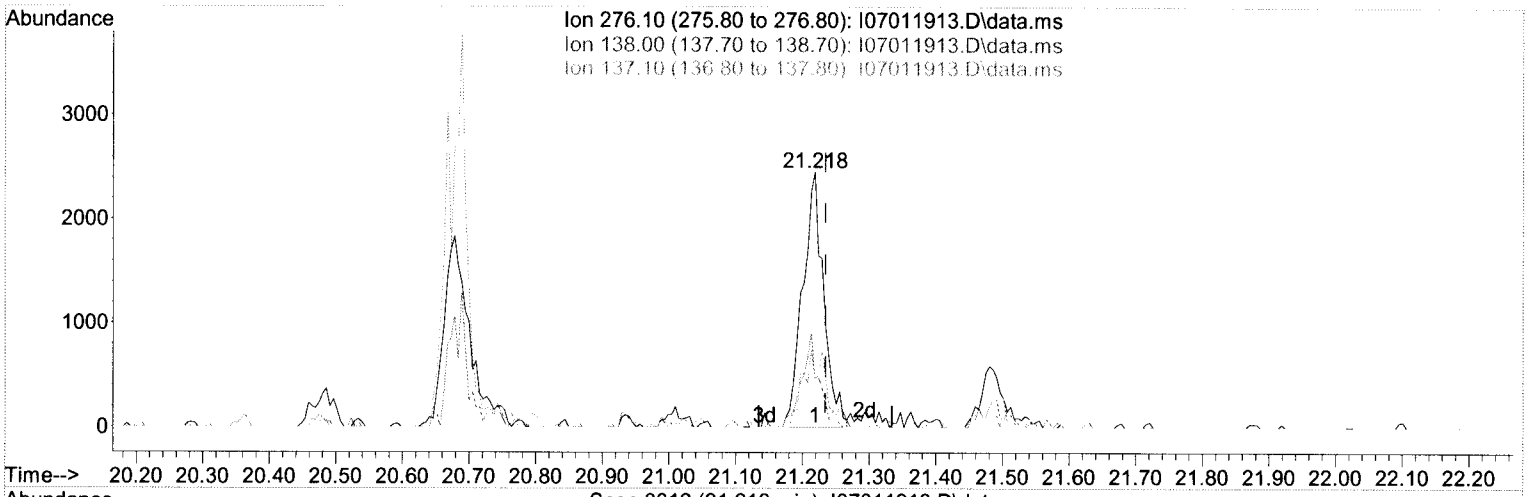
response 4912

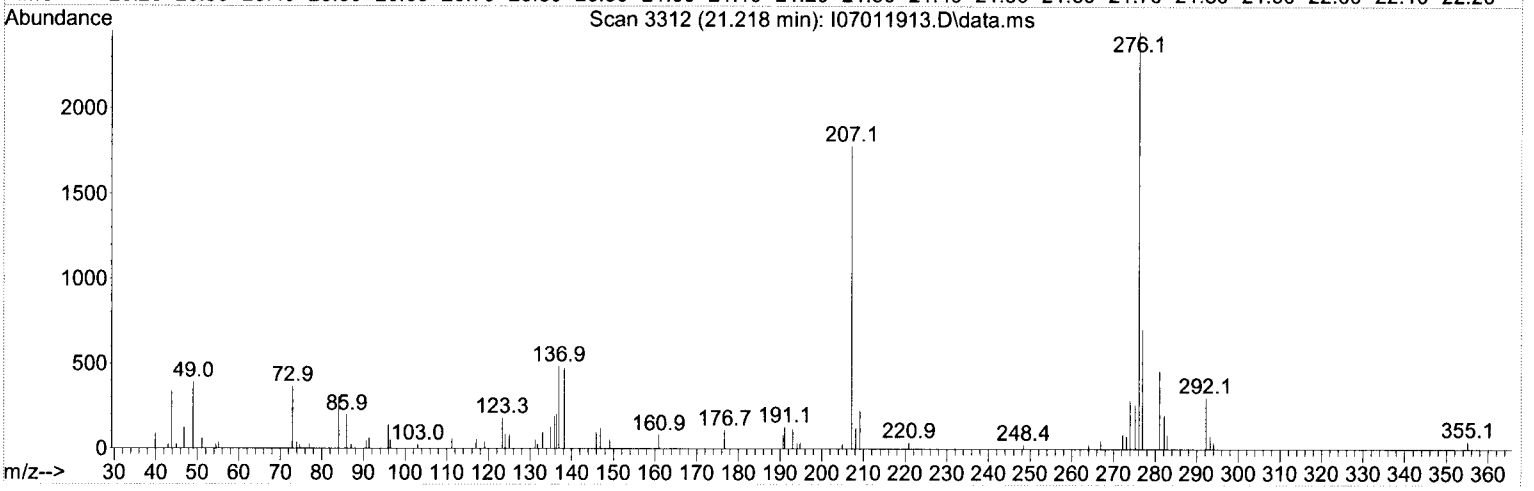
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	58.13
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011913.D
Acq On : 1 Jul 2019 8:58 pm
Operator : JK /AMS /DTH
Sample : 9061508-DUP1@1000
Misc : 1000x, 8270D LL FULL LIST
ALS Vial : 7 Sample Multiplier: 1

Quant Time: Jul 02 08:36:16 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration





TIC: I07011913.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.218min (-0.016) 27.16 ng/ml

response 5342

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	36.60	19.35
137.10	27.90	19.88
0.00	0.00	0.00

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011914.D
Acq On : 1 Jul 2019 9:34 pm
Operator : JK /AMS /DTH
Sample : 9070529-BLK2
Misc : 1x, 8270D LL PAH/PCP
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 02 07:31:15 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

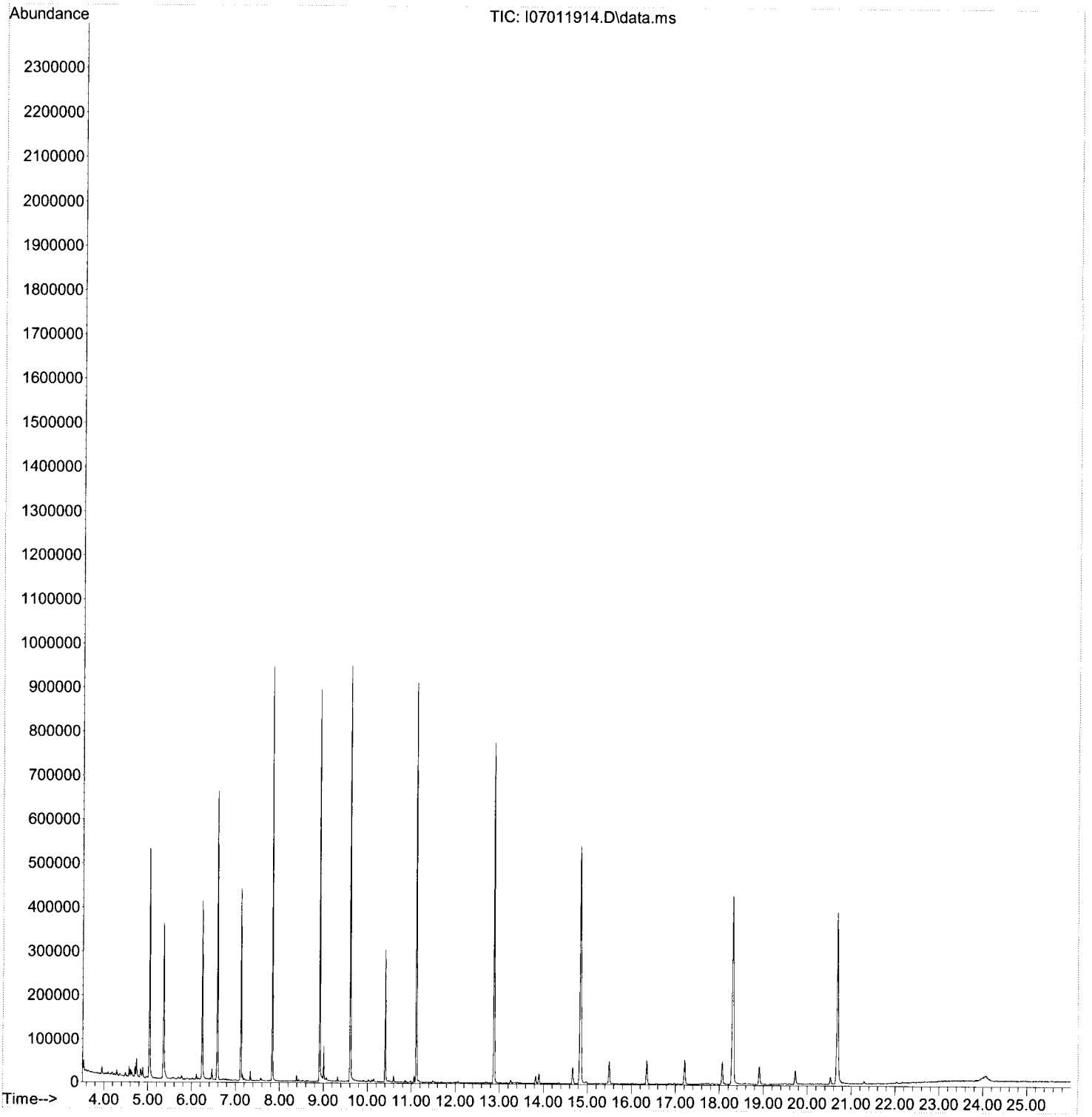
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.584	152	122138	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.836	136	460192	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.606	162	217328	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.115	188	388947	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.843	240	379731	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.303	264	347969	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	20.683	292	324438	2000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.354	112	135199	1694.00	ng/ml	-0.01
5) Phenol-d6 (Surr)	6.237	99	173467	1670.28	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.125	82	158140	1831.02	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.916	172	294099	1804.85	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.409	330	39608	2212.83	ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.880	244	375431	2017.53	ng/ml	0.00
Target Compounds						Qvalue
3) Pyridine	4.167	79	53	0.57	ng/ml#	1
6) Phenol	6.247	94	658	5.96	ng/ml#	1
7) Aniline	6.306	93	194	2.06	ng/ml	72
8) Bis(2-chloroethyl) ether	6.306	93	194	2.09	ng/ml#	24
15) 2,2'-Oxybis(1-Chloropr...	6.788	45	61	0.54	ng/ml	88
16) N-Nitrosodi-n-propylamine	6.996	70	121	1.91	ng/ml	59
20) Nitrobenzene	7.125	77	686	8.07	ng/ml#	31
22) Isophorone	7.371	82	87	0.51	ng/ml	66
24) 2,4-Dimethylphenol	7.568	122	109	1.67	ng/ml#	4
26) Benzoic acid	7.574	105	203	709.27	ng/ml#	80
29) Naphthalene	7.857	128	265	1.15	ng/ml	68
33) 2-Methylnaphthalene	8.547	142	96	0.55	ng/ml#	70
39) 1,1'-Biphenyl	9.018	154	541	2.98	ng/ml	86
49) Acenaphthylene	9.467	152	87	0.40	ng/ml	61
54) 2,4-Dinitrotoluene	9.777	165	83	34.43	ng/ml#	17
58) Diethyl phthalate	10.034	149	246	1.67	ng/ml	61
59) 2,3,5-Trimethylnaphtha...	10.018	170	183	1.39	ng/ml#	44
66) Azobenzene (1,2-DPH)	10.312	77	57	0.42	ng/ml#	10
71) Phenanthrene	11.136	178	102	0.49	ng/ml	60
72) Anthracene	11.136	178	102	0.49	ng/ml	60
74) Di-n-butyl phthalate	11.687	149	915	3.88	ng/ml	88
77) Pyrene	12.682	202	63	0.25	ng/ml	58
80) Butyl benzyl phthalate	13.666	149	160	11.32	ng/ml#	39
81) Bis(2-ethylhexyl) adipate	13.832	129	4453	44.49	ng/ml	87
83) Benz(a)anthracene	14.837	228	721	3.27	ng/ml	59
84) Chrysene	14.837	228	721	3.54	ng/ml	56
85) Bis(2-ethylhexyl) phth...	14.976	149	1554	11.61	ng/ml	88
91) Benzo(e)pyrene	18.068	252	55	0.26	ng/ml#	1
93) Perylene	18.303	252	1077	6.11	ng/ml#	66
96) Dibenz(a,h)anthracene	20.683	278	53	0.34	ng/ml	54

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011914.D
Acq On : 1 Jul 2019 9:34 pm
Operator : JK /AMS /DTH
Sample : 9070529-BLK2
Misc : 1x, 8270D LL PAH/PCP
ALS Vial : 8 Sample Multiplier: 1

Quant Time: Jul 02 07:31:15 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011915.D
Acq On : 1 Jul 2019 10:10 pm
Operator : JK /AMS /DTH
Sample : 9070529-BS2@2
Misc : 2x, 8270D LL PAH/PCP
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 07:31:18 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.590	152	111719	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.847	136	418974	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.612	162	209457	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.120	188	405926	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	14.859	240	373244	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.319	264	364433	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.705	292	370323	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.370	112	63180	865.45 ng/ml	0.00
5) Phenol-d6 (Surr)	6.247	99	82050	863.72 ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.130	82	66221	838.25 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	8.922	172	145202	924.57 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.414	330	21354	1143.11 ng/ml	0.00
79) Terphenyl-d14 (Surr)	12.885	244	201511	1101.72 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.049	74	73486	1316.27 ng/ml	88
3) Pyridine	4.065	79	91658	1075.57 ng/ml	99
6) Phenol	6.263	94	149971	1484.41 ng/ml	100
7) Aniline	6.285	93	61282	712.82 ng/ml	95
8) Bis(2-chloroethyl) ether	6.333	93	113394	1333.62 ng/ml	98
9) 2-Chlorophenol	6.397	128	113841	1492.13 ng/ml	92
10) 1,3-Dichlorobenzene	6.542	146	121141	1388.23 ng/ml	97
11) 1,4-Dichlorobenzene	6.606	146	116010	1423.27 ng/ml	98
12) Benzyl alcohol	6.729	108	68758	1568.60 ng/ml	91
13) 1,2-Dichlorobenzene	6.761	146	112495	1430.45 ng/ml	98
14) 2-Methylphenol	6.836	107	89147	1540.47 ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.852	45	140361	1355.37 ng/ml	94
16) N-Nitrosodi-n-propylamine	6.980	70	84348	1454.24 ng/ml	95
17) 3+4-Methylphenol	6.986	107	113608	1578.87 ng/ml	99
18) Hexachloroethane	7.087	201	36466	1388.65 ng/ml	92
20) Nitrobenzene	7.151	77	112805	1451.67 ng/ml	92
22) Isophorone	7.381	82	229046	1476.27 ng/ml	94
23) 2-Nitrophenol	7.467	139	61655	1556.27 ng/ml	96
24) 2,4-Dimethylphenol	7.504	122	100049	1683.16 ng/ml	98
25) Bis(2-chloroethoxy) me...	7.590	93	132775	1458.04 ng/ml	98
26) Benzoic acid	7.622	105	72068	2451.07 ng/ml	96
27) 2,4-Dichlorophenol	7.708	162	88269	1593.82 ng/ml	99
28) 1,2,4-Trichlorobenzene	7.788	180	95334	1423.31 ng/ml	98
29) Naphthalene	7.868	128	305154	1460.26 ng/ml	99
30) 4-Chloroaniline	7.932	127	26542	495.63 ng/ml	99
31) Hexachlorobutadiene	7.991	225	50891	1463.28 ng/ml	97
32) 4-Chloro-3-methylphenol	8.403	107	106098	1640.33 ng/ml	99
33) 2-Methylnaphthalene	8.558	142	236456	1499.83 ng/ml	97
34) 1-Methylnaphthalene	8.654	142	221784	1493.63 ng/ml	97
36) Hexachlorocyclopentadiene	8.724	237	52353	1685.40 ng/ml	98
37) 2,4,6-Trichlorophenol	8.847	196	66318	1687.01 ng/ml	98
38) 2,4,5-Trichlorophenol	8.884	198	66265	1794.47 ng/ml	99
39) 1,1'-Biphenyl	9.023	154	273007	1559.81 ng/ml	98

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011915.D
Acq On : 1 Jul 2019 10:10 pm
Operator : JK /AMS /DTH
Sample : 9070529-BS2@2
Misc : 2x, 8270D LL PAH/PCP
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 07:31:18 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
41) 2-Chloronaphthalene	9.050	162	196362	1557.05	ng/ml	97
42) 2-Nitroaniline	9.152	138	76389	1805.24	ng/ml	91
43) 2,6-Dimethylnaphthalene	9.184	156	200165	1552.06	ng/ml	96
44) 1,4-Dinitrobenzene	9.280	168	38297	1791.10	ng/ml	81
45) Dimethyl phthalate	9.328	163	245885	1678.01	ng/ml	99
46) 1,3-Dinitrobenzene	9.360	168	42289	1797.12	ng/ml	90
47) 2,6-Dinitrotoluene	9.392	165	59199	1806.72	ng/ml	81
48) 1,2-Dinitrobenzene	9.451	168	27978	1721.59	ng/ml	83
49) Acenaphthylene	9.467	152	330889	1596.95	ng/ml	99
50) 3-Nitroaniline	9.569	138	44054	1767.77	ng/ml	90
51) Acenaphthene	9.649	153	207150	1587.00	ng/ml	99
52) 2,4-Dinitrophenol	9.671	184	23927	1859.50	ng/ml	89
53) 4-Nitrophenol	9.745	139	45972	1853.57	ng/ml	90
54) 2,4-Dinitrotoluene	9.799	165	78417	1738.69	ng/ml	87
55) Dibenzofuran	9.820	168	289814	1631.56	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	9.906	232	54137	1713.49	ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	9.949	232	55819	1705.22	ng/ml	89
58) Diethyl phthalate	10.040	149	228803	1611.42	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.029	170	195570	1537.97	ng/ml	97
60) Fluorene	10.168	166	233802	1527.30	ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.157	204	112723	1576.12	ng/ml	89
62) 4-Nitroaniline	10.189	138	56194	1791.53	ng/ml	99
63) 4,6-Dinitro-2-methylph...	10.216	198	40885	2056.23	ng/ml	83
65) N-Nitrosodiphenylamine	10.280	169	205712	1640.74	ng/ml	97
66) Azobenzene (1,2-DPH)	10.318	77	226854	1612.14	ng/ml	93
68) 4-Bromophenyl phenyl e...	10.655	248	73499	1646.85	ng/ml	89
69) Hexachlorobenzene	10.735	284	78537	1584.19	ng/ml	90
70) Pentachlorophenol (PCP)	10.933	266	37878	1680.26	ng/ml	96
71) Phenanthrene	11.141	178	347043	1600.45	ng/ml	98
72) Anthracene	11.195	178	348599	1607.82	ng/ml	99
73) Carbazole	11.355	167	293181	1542.94	ng/ml	99
74) Di-n-butyl phthalate	11.692	149	435622	1769.32	ng/ml	99
75) Fluoranthene	12.398	202	425708	1680.11	ng/ml	98
76) Benzidine	12.548	184	70877	1229.44	ng/ml	98
77) Pyrene	12.687	202	422997	1640.41	ng/ml	99
80) Butyl benzyl phthalate	13.677	149	206516	1921.85	ng/ml	90
81) Bis(2-ethylhexyl) adipate	13.837	129	182822	1858.12	ng/ml	96
82) 3,3-Dichlorobenzidine	14.800	252	223022	11357.08	ng/ml	96
83) Benz(a)anthracene	14.832	228	376935	1738.65	ng/ml	98
84) Chrysene	14.918	228	340817	1704.03	ng/ml	99
85) Bis(2-ethylhexyl) phth...	14.982	149	254601	1934.74	ng/ml	97
87) Di-n-octyl phthalate	16.634	149	488109	1878.77	ng/ml	99
88) Benzo(b)fluoranthene	17.410	252	407662	1765.05	ng/ml	94
89) Benzo(k)fluoranthene	17.474	252	371385	1670.94	ng/ml	95
90) Benzo(b+k)fluoranthene	17.474	252	799717	3432.43	ng/ml	95
91) Benzo(e)pyrene	18.057	252	386235	1772.55	ng/ml	97
92) Benzo(a)pyrene	18.180	252	359924	1749.37	ng/ml	96
93) Perylene	18.383	252	359241	1947.12	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	20.710	276	341708	1680.37	ng/ml	90
96) Dibenz(a,h)anthracene	20.774	278	310171	1727.71	ng/ml	90
97) Benzo(g,h,i)perylene	21.245	276	354306	1781.86	ng/ml	86

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011915.D
Acq On : 1 Jul 2019 10:10 pm
Operator : JK /AMS /DTH
Sample : 9070529-BS2@2
Misc : 2x, 8270D LL PAH/PCP
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 07:31:18 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration

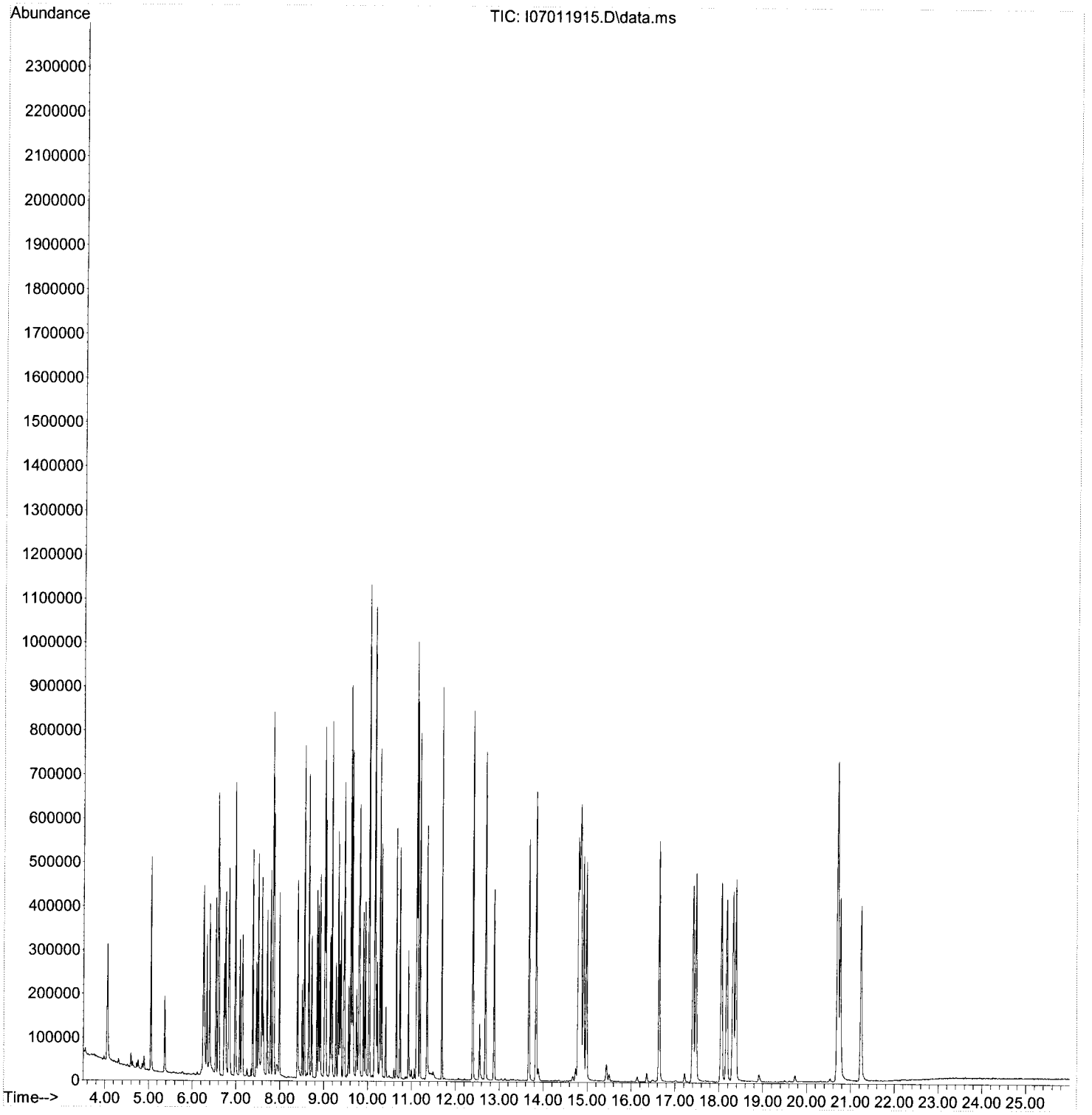
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)

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

Quantitation Report (QT Reviewed)

Data Path : C:\msdchem\1\data\9G01054\
Data File : I07011915.D
Acq On : 1 Jul 2019 10:10 pm
Operator : JK /AMS /DTH
Sample : 9070529-BS2@2
Misc : 2x, 8270D LL PAH/PCP
ALS Vial : 9 Sample Multiplier: 1

Quant Time: Jul 02 07:31:18 2019
Quant Method : C:\msdchem\1\methods\SV9_050819R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jun 20 19:27:38 2019
Response via : Initial Calibration



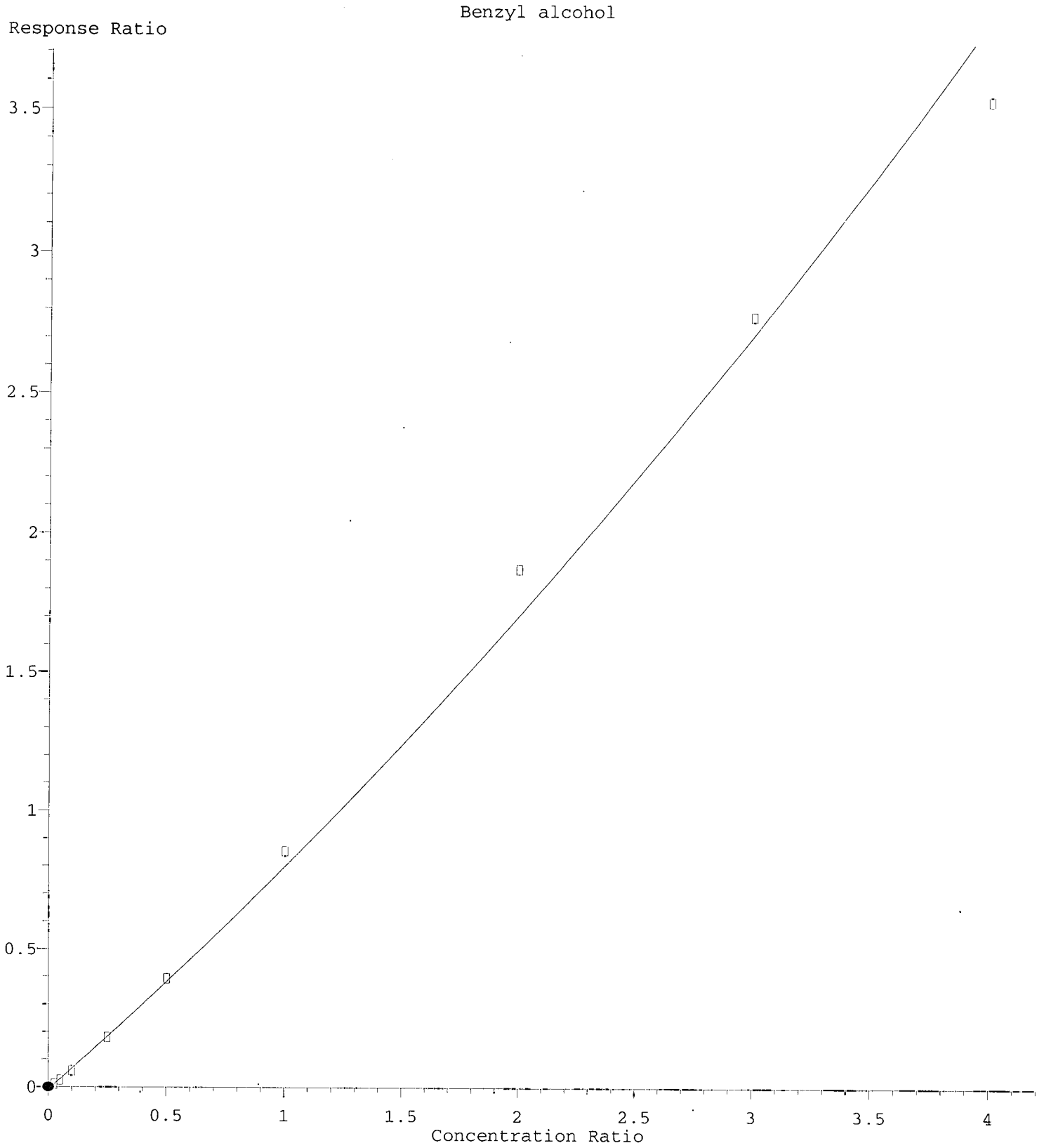
Method Path : T:\methods\
Method File : SV9_050819.M
Title : EPA 8270D: Semivolatile Organics

40)	S	2-Fluorobiphen...	1.343	1.502	1.633	1.702	1.729	1.621	1.495	1.313	1.158		1.500	12.96
41)	T	2-Chloronaphth...	1.066	1.120	1.220	1.313	1.373	1.298	1.193	1.050			1.204	9.89
42)	T	2-Nitroaniline				0.287	0.392	0.436	0.429	0.433	0.427	0.425	0.404	13.26
43)	T	2,6-Dimethylna...	1.115	1.215	1.314	1.403	1.410	1.341	1.236	1.085	0.966		1.231	12.38
44)	T	1,4-Dinitroben...			0.080	0.124	0.177	0.205	0.206	0.221	0.220	0.221	0.182	28.96
45)	T	Dimethyl phtha...	1.305	1.473	1.542	1.564	1.575	1.490	1.402	1.297	1.193	1.151	1.399	11.07
46)	T	1,3-Dinitroben...				0.172	0.228	0.244	0.234	0.240	0.231	0.223	0.225	10.70
47)	T	2,6-Dinitrotol...			0.238	0.309	0.358	0.350	0.337	0.324	0.302	0.286	0.313	12.48
48)	T	1,2-Dinitroben...				0.142	0.161	0.170	0.164	0.162	0.149	0.138	0.155	7.87
49)	T	Acenaphthylene	1.863	2.011	2.189	2.231	2.222	2.160	1.961	1.711	1.459		1.978	13.33
50)	T	3-Nitroaniline				0.257	0.298	0.274	0.225	0.202	0.197		0.242	16.76
51)	T	Acenaphthene	1.289	1.420	1.407	1.393	1.372	1.307	1.223	1.107	1.010	0.938	1.246	13.87
52)	T	2,4-Dinitrophenol				0.030	0.066	0.108	0.124	0.164	0.175	0.178	0.121	47.41
53)	T	4-Nitrophenol			0.109	0.144	0.200	0.238	0.234	0.272	0.274	0.273	0.218	28.71
54)	T	2,4-Dinitrotol...		0.184	0.257	0.362	0.435	0.448	0.435	0.430	0.394	0.359	0.367	24.75
55)	T	Dibenzofuran	1.480	1.739	1.835	1.921	1.944	1.835	1.690	1.501	1.321		1.696	12.81
56)	T	2,3,5,6-Tetrac...		0.122	0.164	0.241	0.292	0.315	0.311	0.317	0.305	0.292	0.262	27.46
57)	T	2,3,4,6-Tetrac...	0.153	0.184	0.254	0.293	0.327	0.339	0.328	0.325	0.305	0.291	0.280	22.92
58)	T	Diethyl phthalate	1.341	1.402	1.484	1.509	1.457	1.379	1.215	1.060			1.356	11.17
59)	T	2,3,5-Trimethy...	1.269	1.271	1.338	1.303	1.308	1.207	1.087	0.930			1.214	11.44
60)	T	Fluorene	1.520	1.512	1.604	1.584	1.576	1.450	1.306	1.142			1.462	10.99
61)	T	4-Chlorophenyl...	0.630	0.729	0.757	0.784	0.762	0.708	0.656	0.590	0.530		0.683	12.71
62)	T	4-Nitroaniline				0.313	0.337	0.327	0.287	0.294	0.277	0.261	0.300	9.17
63)	T	4,6-Dinitro-2-...			0.064	0.103	0.153	0.187	0.192	0.216	0.214	0.213	0.168	34.03
64)	I	Phenanthrene-d10 (...	----------ISTD----------											5.28
65)	T	N-Nitrosodiphe...	0.546	0.569	0.671	0.713	0.721	0.654	0.575	0.493			0.618	13.51
66)	T	Azobenzene (1,...	0.630	0.686	0.784	0.800	0.801	0.738	0.668	0.595	0.536		0.693	13.73
67)	S	2,4,6-Tribromo...		0.071	0.081	0.092	0.102	0.104	0.098	0.097	0.093	0.090	0.092	11.41
68)	T	4-Bromophenyl ...	0.219	0.222	0.246	0.240	0.249	0.234	0.222	0.203	0.187	0.176	0.220	11.23
69)	T	Hexachlorobenzene	0.233	0.278	0.280	0.260	0.266	0.249	0.233	0.209	0.189		0.244	12.77
70)	T	Pentachlorophe...			0.055	0.067	0.097	0.110	0.114	0.128	0.125	0.122	0.102	26.74
71)	T	Phenanthrene	1.135	1.183	1.186	1.183	1.170	1.092	1.004	0.881	0.781		1.068	13.94
72)	T	Anthracene	1.128	1.141	1.199	1.200	1.188	1.107	1.003	0.879	0.769		1.068	14.39
73)	T	Carbazole	0.881	0.949	1.015	1.061	1.074	1.029	0.920	0.824	0.671		0.936	13.91
74)	T	Di-n-butyl pht...		1.070	1.202	1.275	1.356	1.325	1.189	1.075			1.213	9.34
75)	T	Fluoranthene	1.230	1.262	1.343	1.396	1.432	1.353	1.199	1.080	0.940		1.248	12.71
76)	T	Benzidine				0.412	0.354	0.281	0.193	0.314	0.341	0.368	0.323	21.84
77)	T	Pyrene	1.318	1.338	1.404	1.440	1.421	1.349	1.183	1.055	0.926		1.270	14.05
78)	I	Chrysene-d12 (ISTD)	----------ISTD----------											16.76
79)	S	Terphenyl-d14 ...	0.975	0.930	1.015	1.037	1.060	1.024	1.008	0.965	0.906	0.880	0.980	6.07
80)	T	Butyl benzyl p...	0.314	0.372	0.395	0.491	0.562	0.600	0.621	0.674	0.676	0.681	0.539	25.48
81)	T	Bis(2-ethylhex...	0.635	0.442	0.439	0.473	0.508	0.536	0.543	0.571	0.564	0.563	0.527	11.82
82)	T	3,3-Dichlorobe...				0.301	0.212	0.145	0.116	0.102	0.108		0.164	47.85
83)	T	Benz(a)anthracene	1.238	1.147	1.157	1.210	1.233	1.202	1.161	1.143	1.081	1.046	1.162	5.39
84)	T	Chrysene	1.104	1.076	1.102	1.125	1.127	1.079	1.062	1.050	1.011	0.981	1.072	4.43
85)	T	Bis(2-ethylhex...			0.502	0.615	0.730	0.746	0.752	0.783	0.767	0.747	0.705	13.70
86)	I	Perylene-d12 (ISTD)	----------ISTD----------											11.43
87)	T	Di-n-octyl pht...			0.686	0.939	1.250	1.419	1.468	1.530	1.462	1.443	1.275	23.85

Method Path : T:\methods\
Method File : SV9_050819.M
Title : EPA 8270D: Semivolatile Organics

88)	T	Benzo(b)fluora...	1.041	1.070	1.095	1.221	1.318	1.340	1.330	1.268	1.251	1.292	1.223	9.23
89)	T	Benzo(k)fluora...	1.018	1.108	1.153	1.268	1.344	1.311	1.203	1.091	0.980	0.908	1.138	12.73
90)	T	Benzo(b+k)fluo...	1.029	1.130	1.171	1.278	1.367	1.356	1.294	1.210	1.146	1.109	1.209	9.25
91)	T	Benzo(e)pyrene	1.085	1.133	1.184	1.245	1.321	1.297	1.262	1.195	1.135	1.101	1.196	6.93
92)	T	Benzo(a)pyrene	0.831	0.950	1.011	1.099	1.218	1.227	1.147	1.066	1.009	0.968	1.053	11.81
93)	T	Perylene	1.029	0.986	1.041	1.036	1.098	1.080	1.033	0.976	0.937	0.908	1.013	5.95
94)	I	Dibenz(a,h)Anthrce...	----------ISTD----------											8.46
95)	T	Indeno(1,2,3-c...	1.128	1.088	1.108	1.085	1.136	1.091	1.081	1.100	1.080	1.084	1.098	1.82
96)	T	Dibenz(a,h)ant...	0.972	0.979	1.003	1.035	1.045	0.999	1.007	0.937	0.877	0.841	0.970	6.84
97)	T	Benzo(g,h,i)pe...	1.008	1.041	1.074	1.126	1.175	1.133	1.119	1.079	1.011	0.972	1.074	6.08

(#) = Out of Range

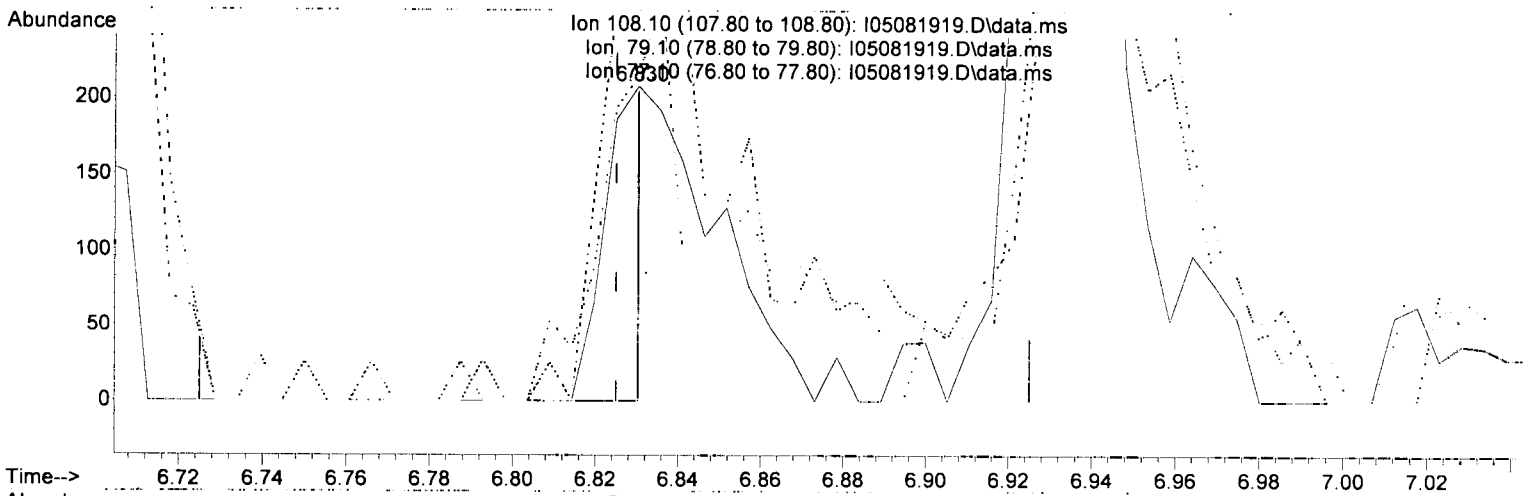


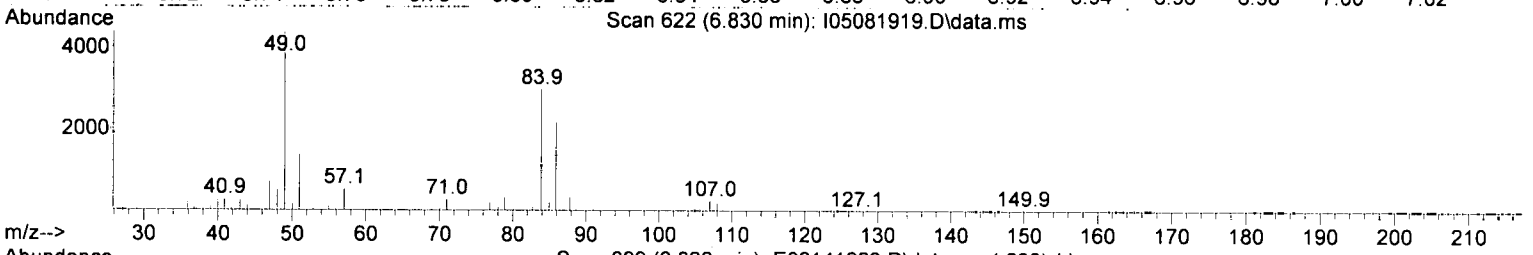
R = 4.94e-002 A*A + 7.58e-001 A - 9.75e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

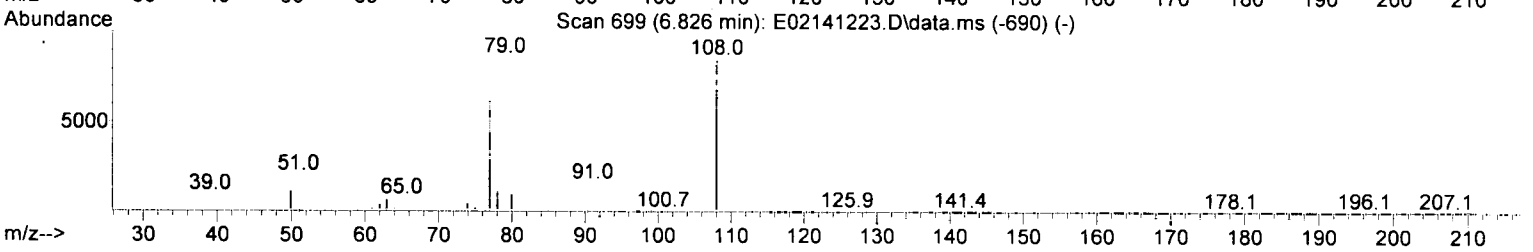
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







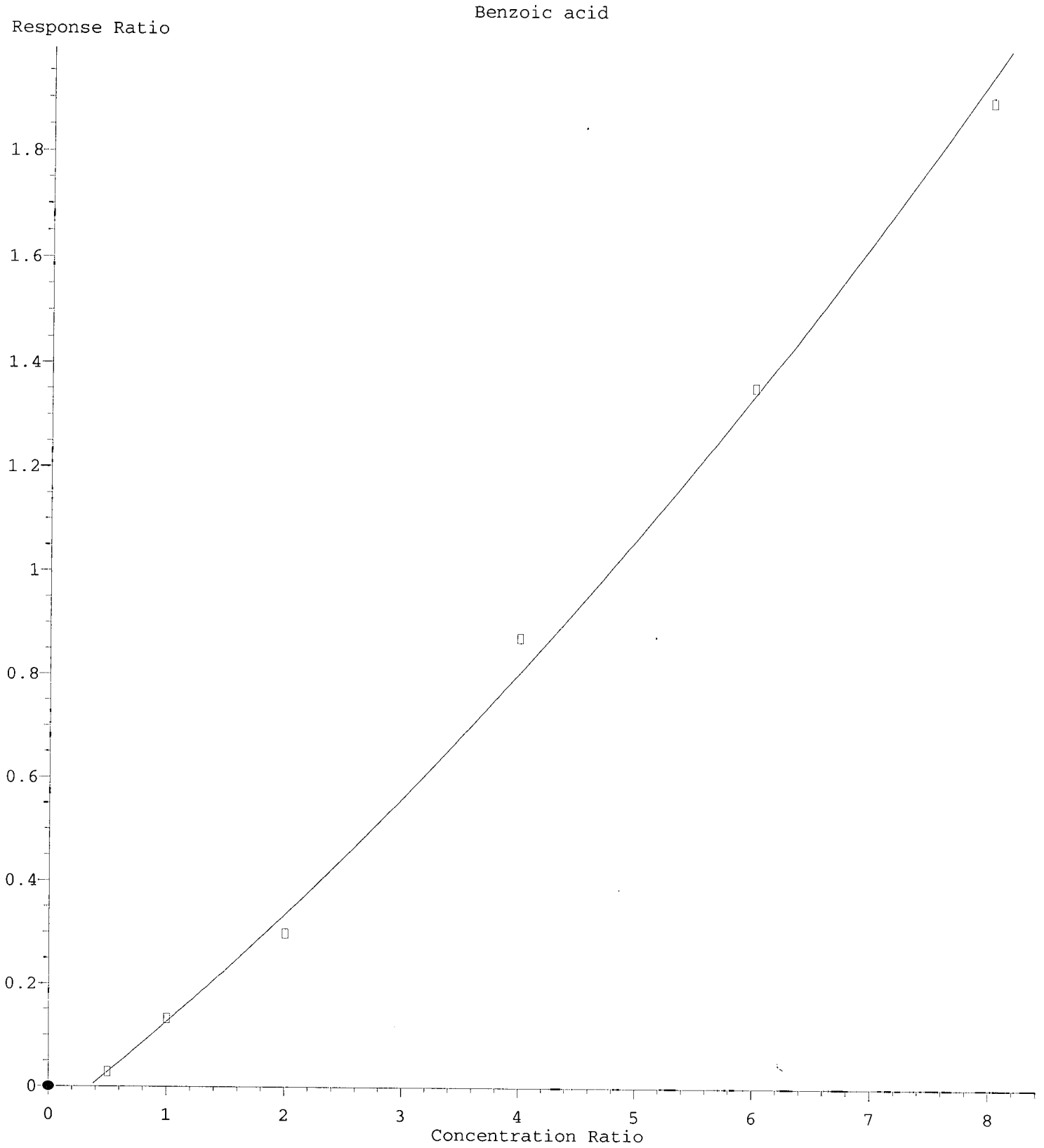
TIC: I05081919.D\data.ms

(12) Benzyl alcohol (T)

6.830min (+ 0.005) 29.07 ng/ml m

response 147

Ion	Exp%	Act%
108.10	100.00	100.00
79.10	130.20	173.56#
77.10	80.10	103.37
0.00	0.00	0.00

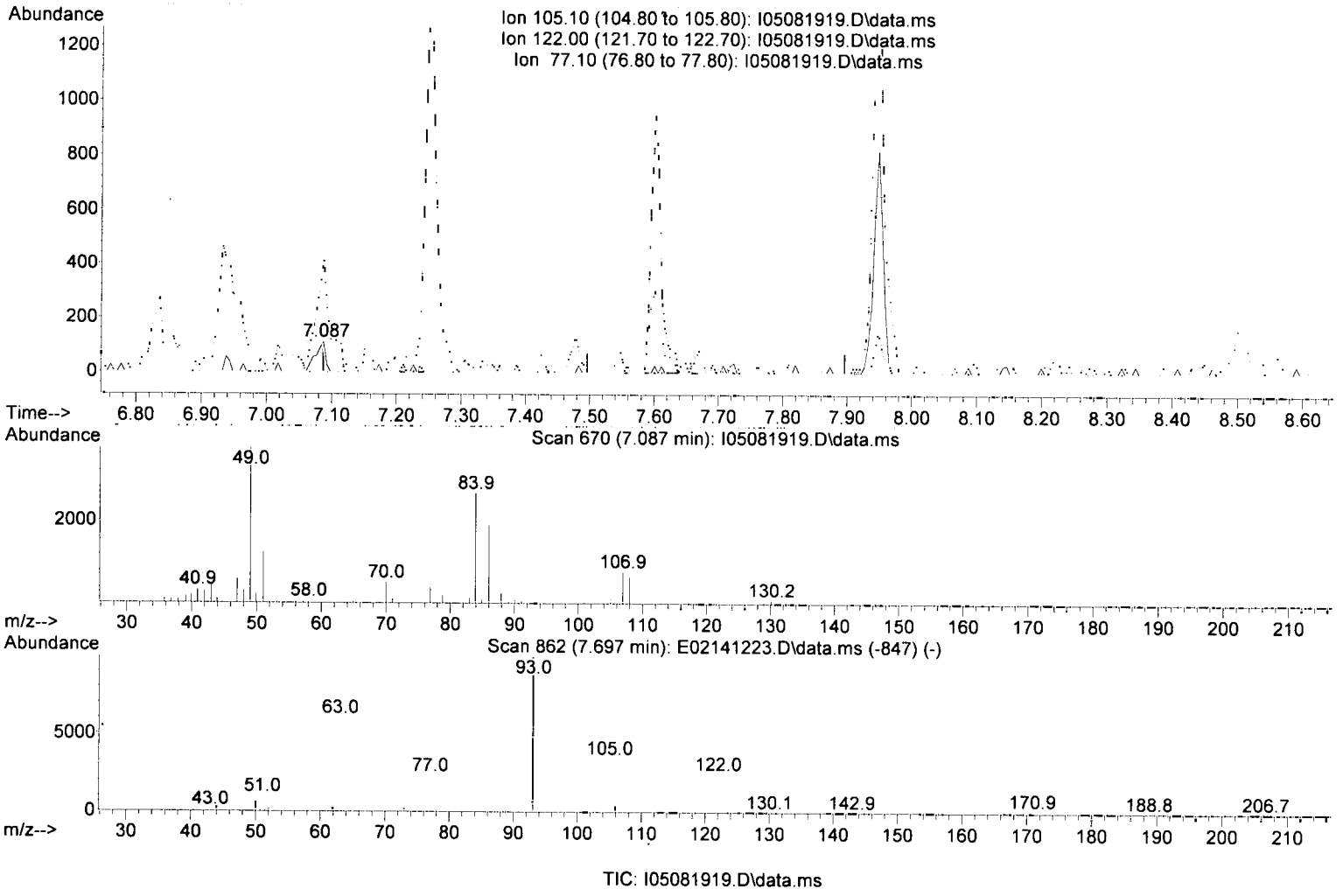


R = 8.50e-003 A*A + 1.84e-001 A - 6.57e-002
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



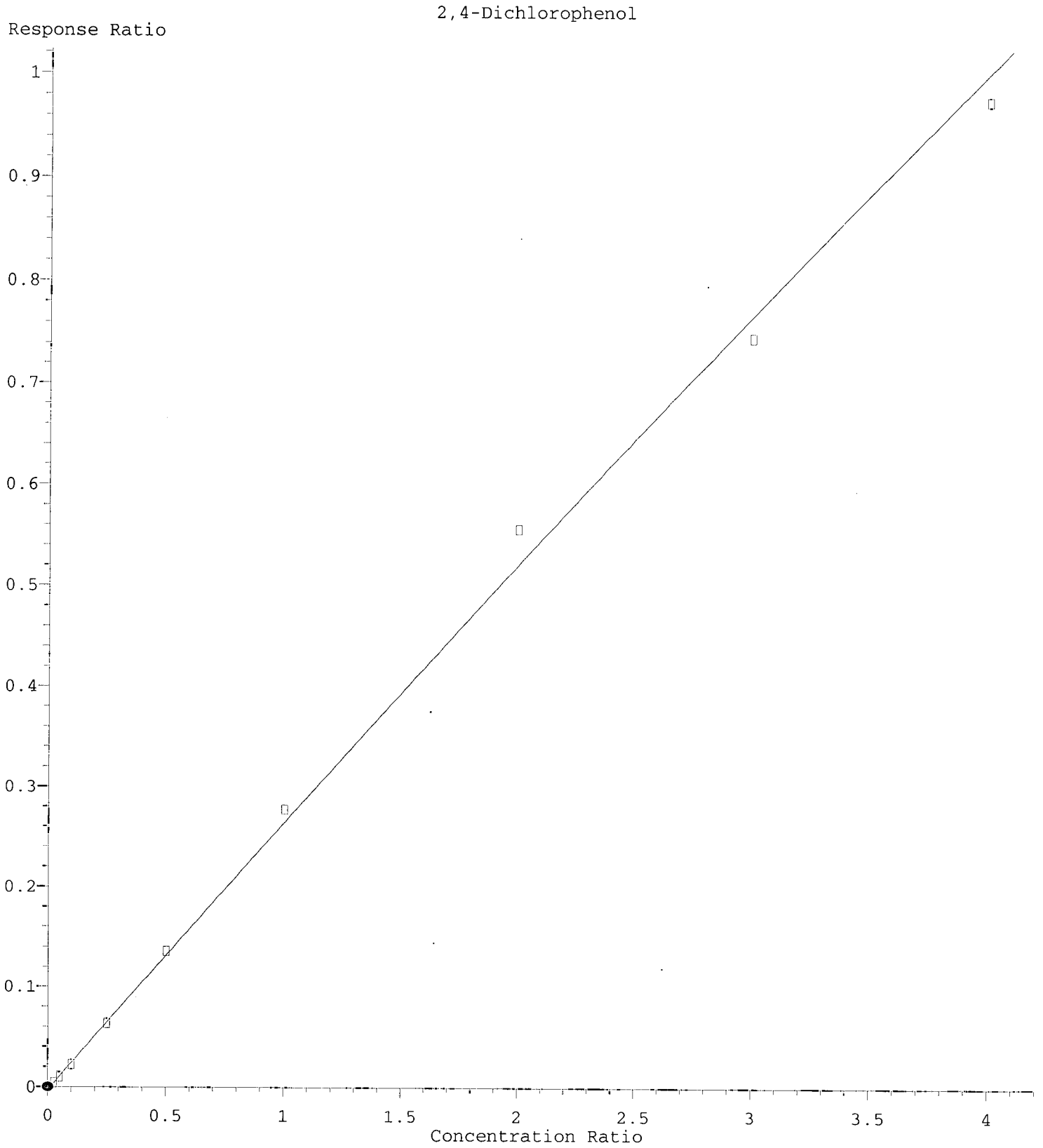
TIC: I05081919.D\data.ms

(26) Benzoic acid (T)

7.087min (-0.609) 707.06 ng/ml m

response 107

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	0.00#
77.10	76.00	371.17#
0.00	0.00	0.00

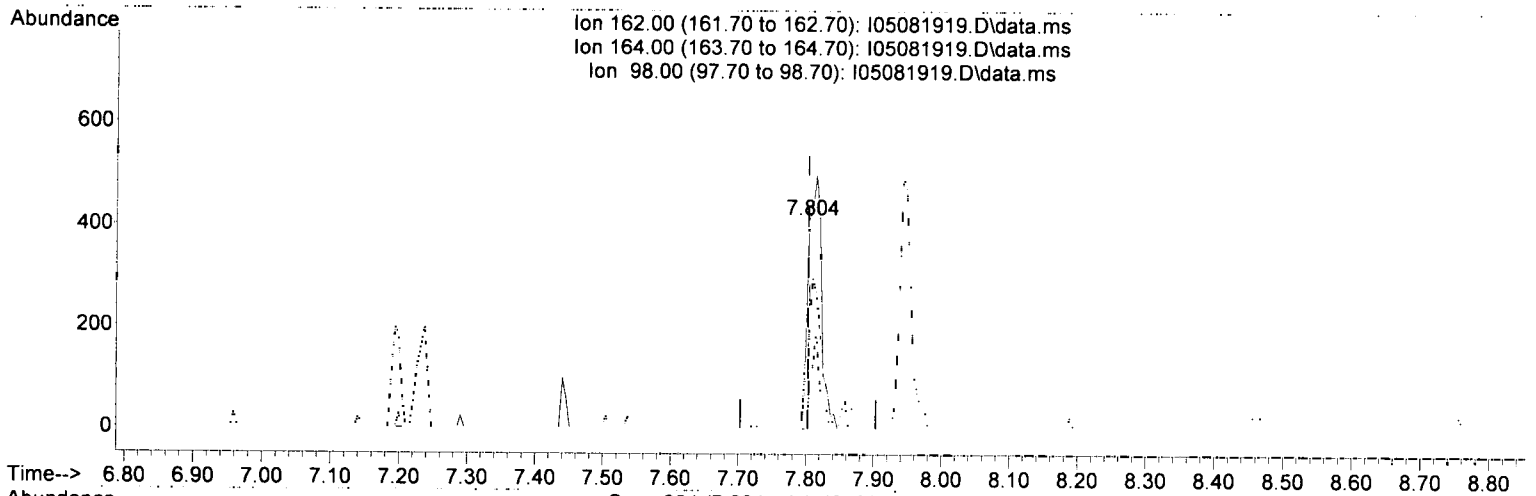


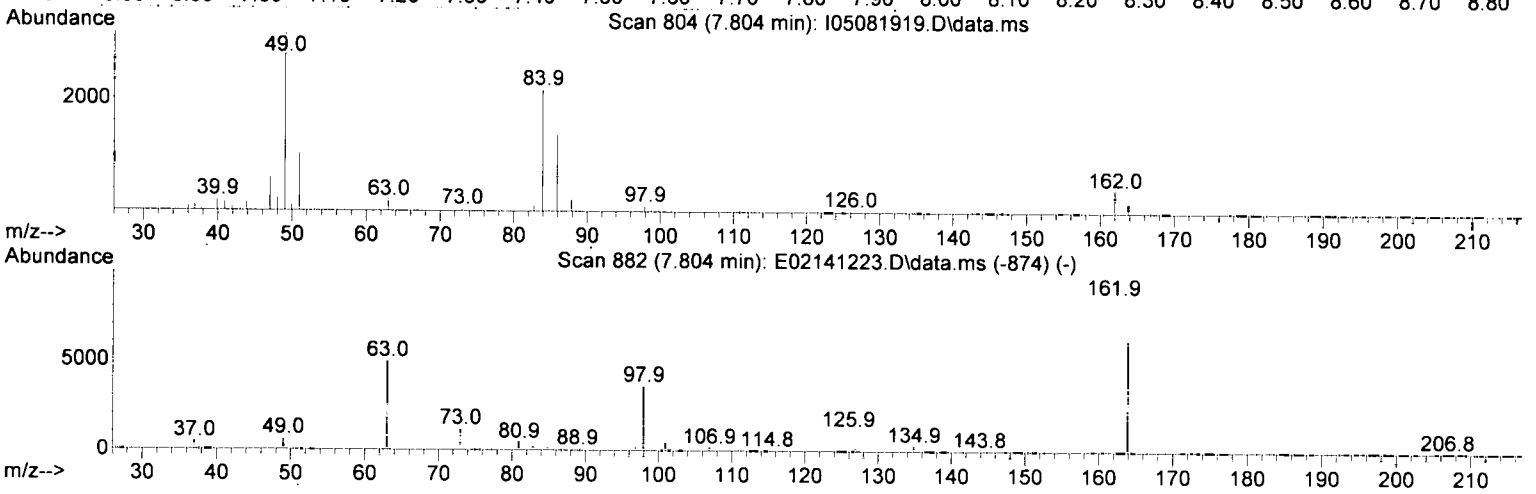
R = -5.43e-003 A*A + 2.73e-001 A - 3.28e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9





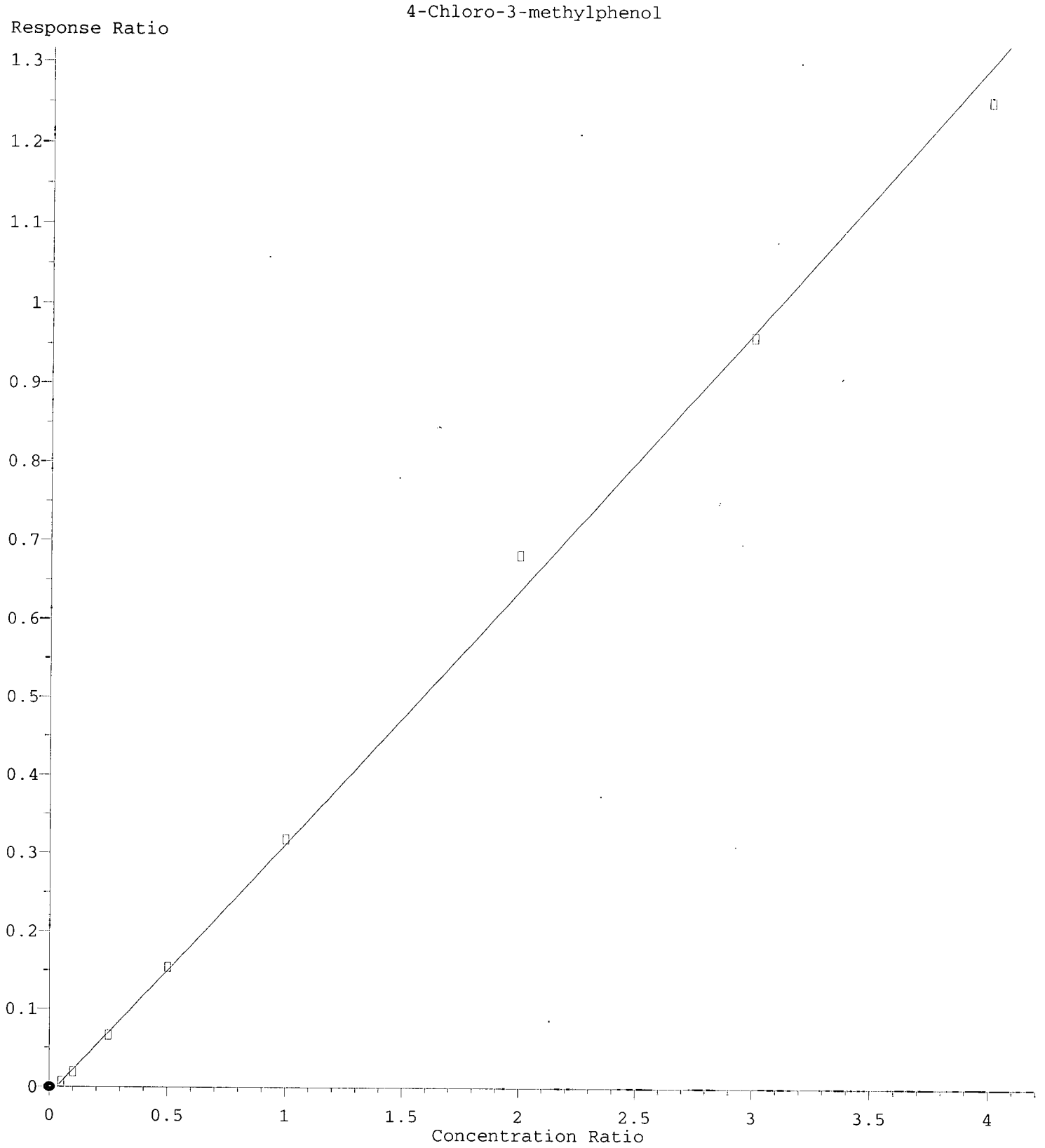
TIC: I05081919.D\data.ms

(27) 2,4-Dichlorophenol (T)

7.804min (+ 0.001) 26.83 ng/ml m

response 175

Ion	Exp%	Act%
162.00	100.00	100.00
164.00	63.60	43.20
98.00	37.40	28.40
0.00	0.00	0.00

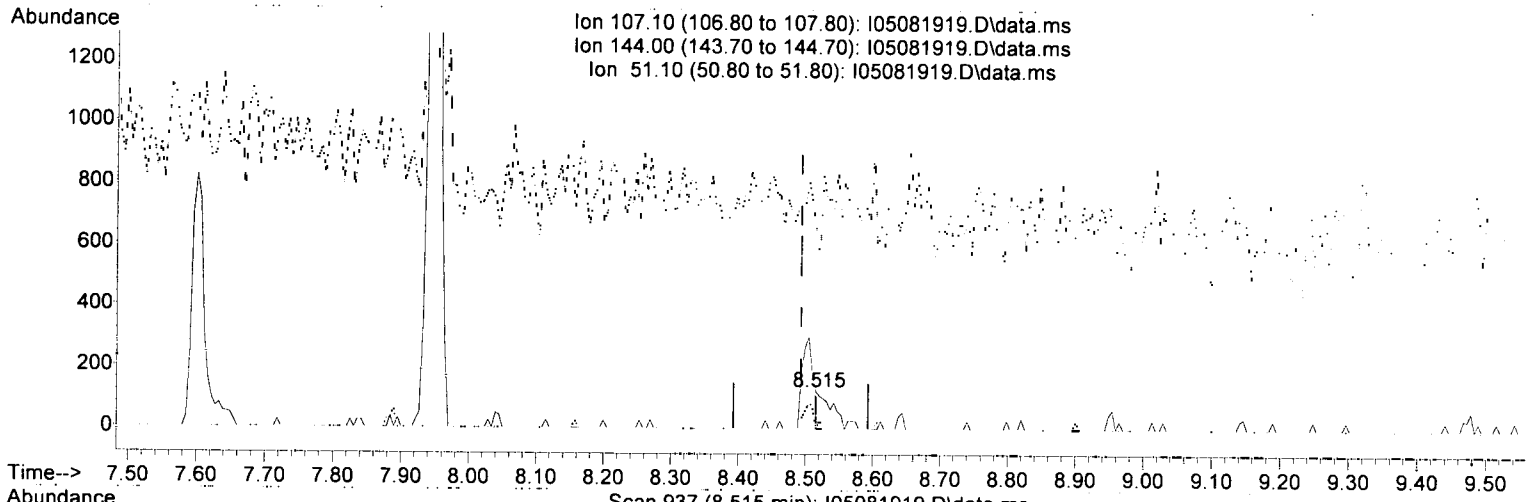


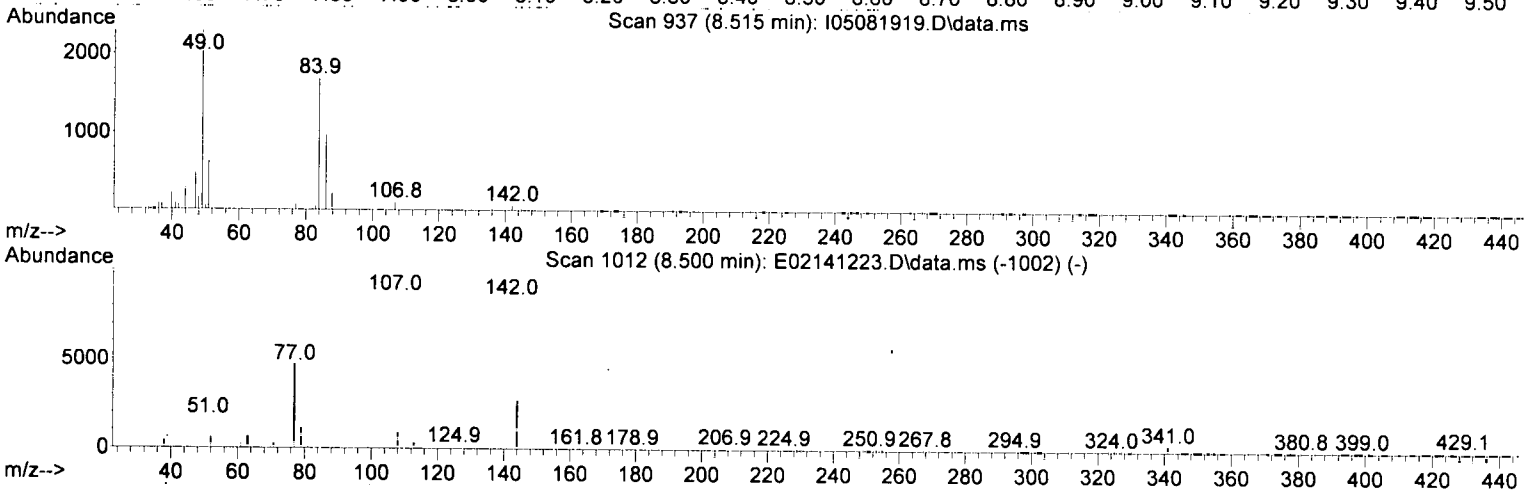
R = 1.82e-003 A*A + 3.20e-001 A - 1.04e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9





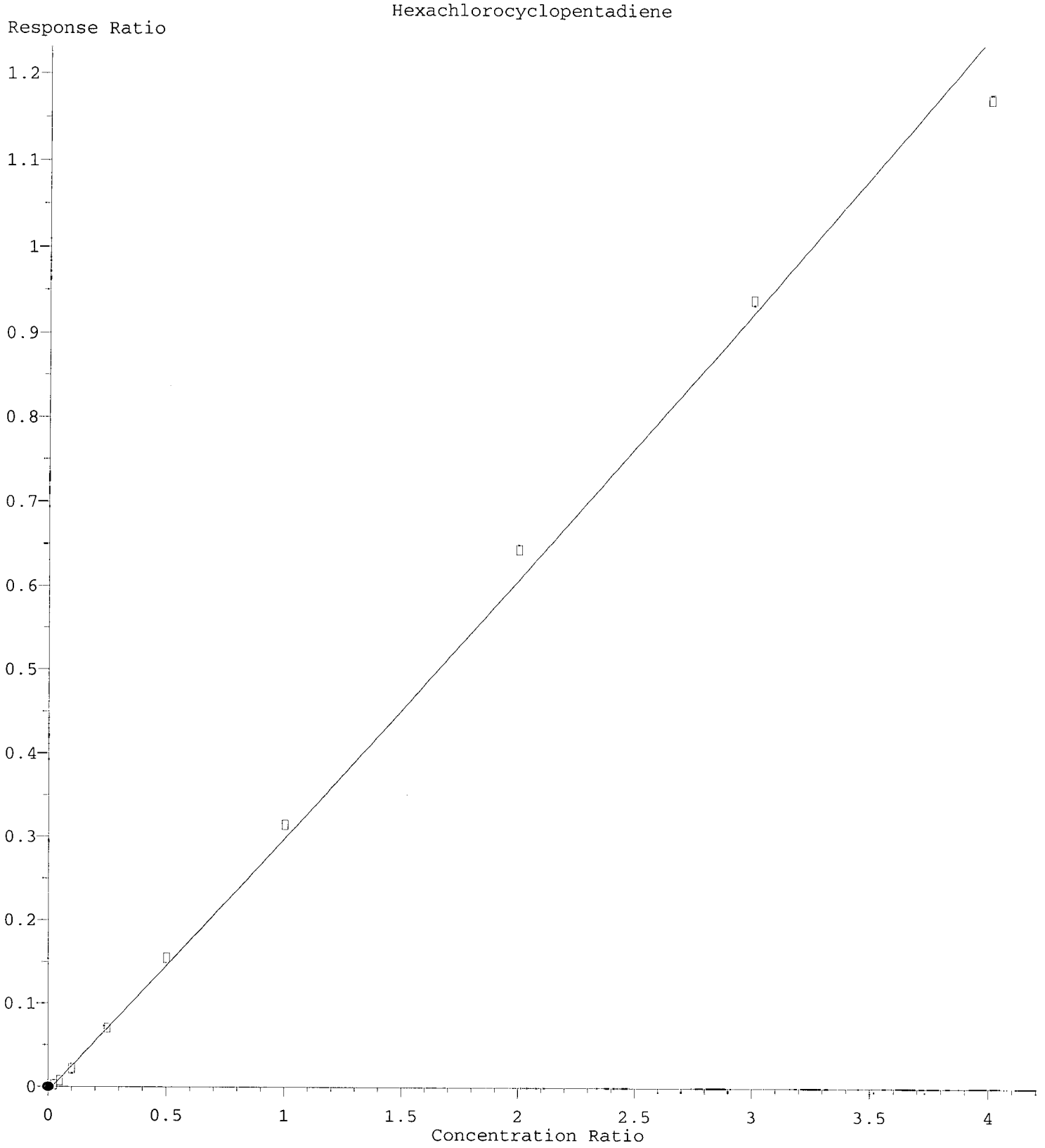
TIC: I05081919.D\data.ms

(32) 4-Chloro-3-methylphenol (T)

8.515min (+ 0.022) 67.07 ng/ml m

response 174

Ion	Exp%	Act%
107.10	100.00	100.00
144.00	26.00	0.00
51.10	19.80	529.75#
0.00	0.00	0.00

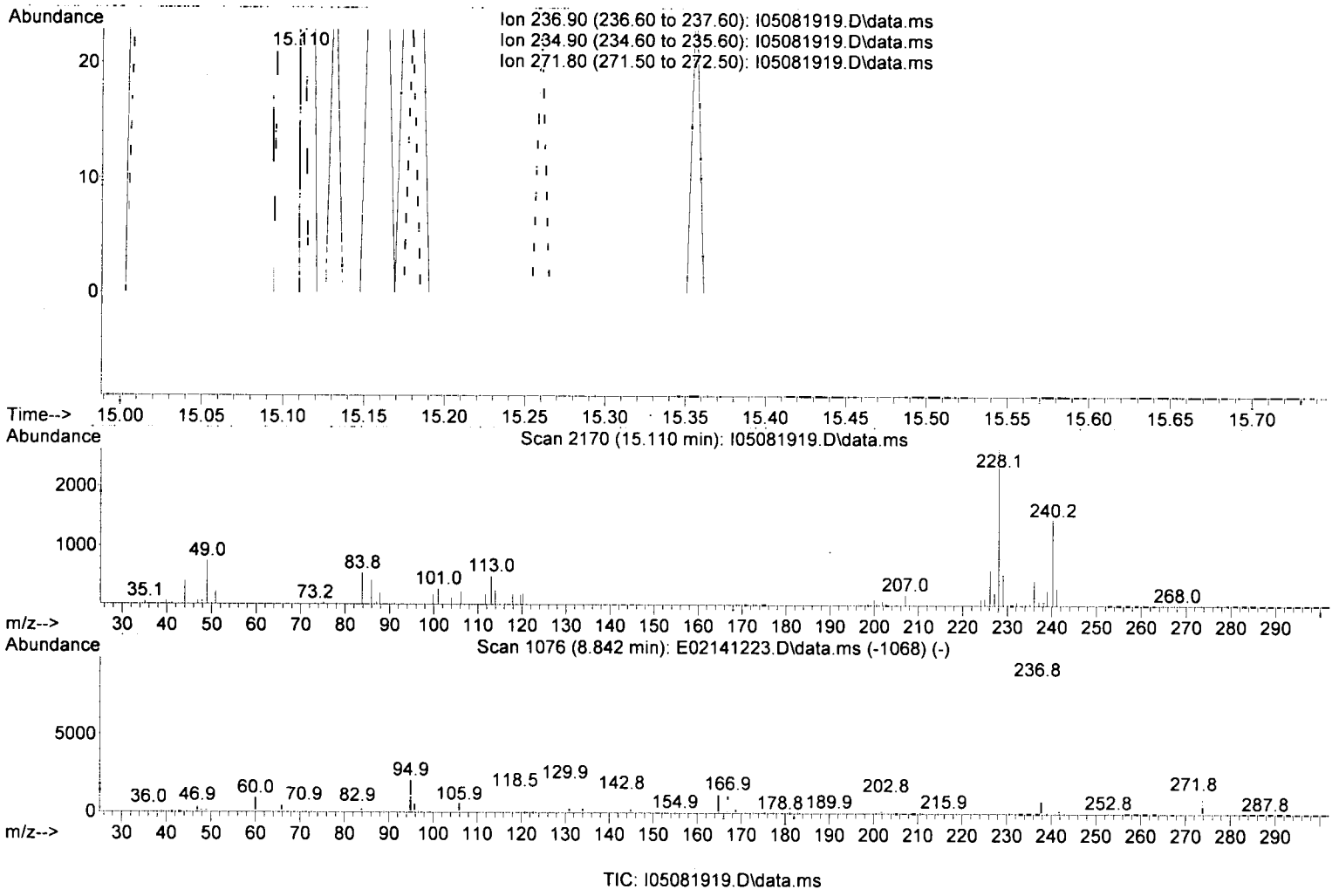


R = 3.01e-003 A*A + 3.01e-001 A - 5.61e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



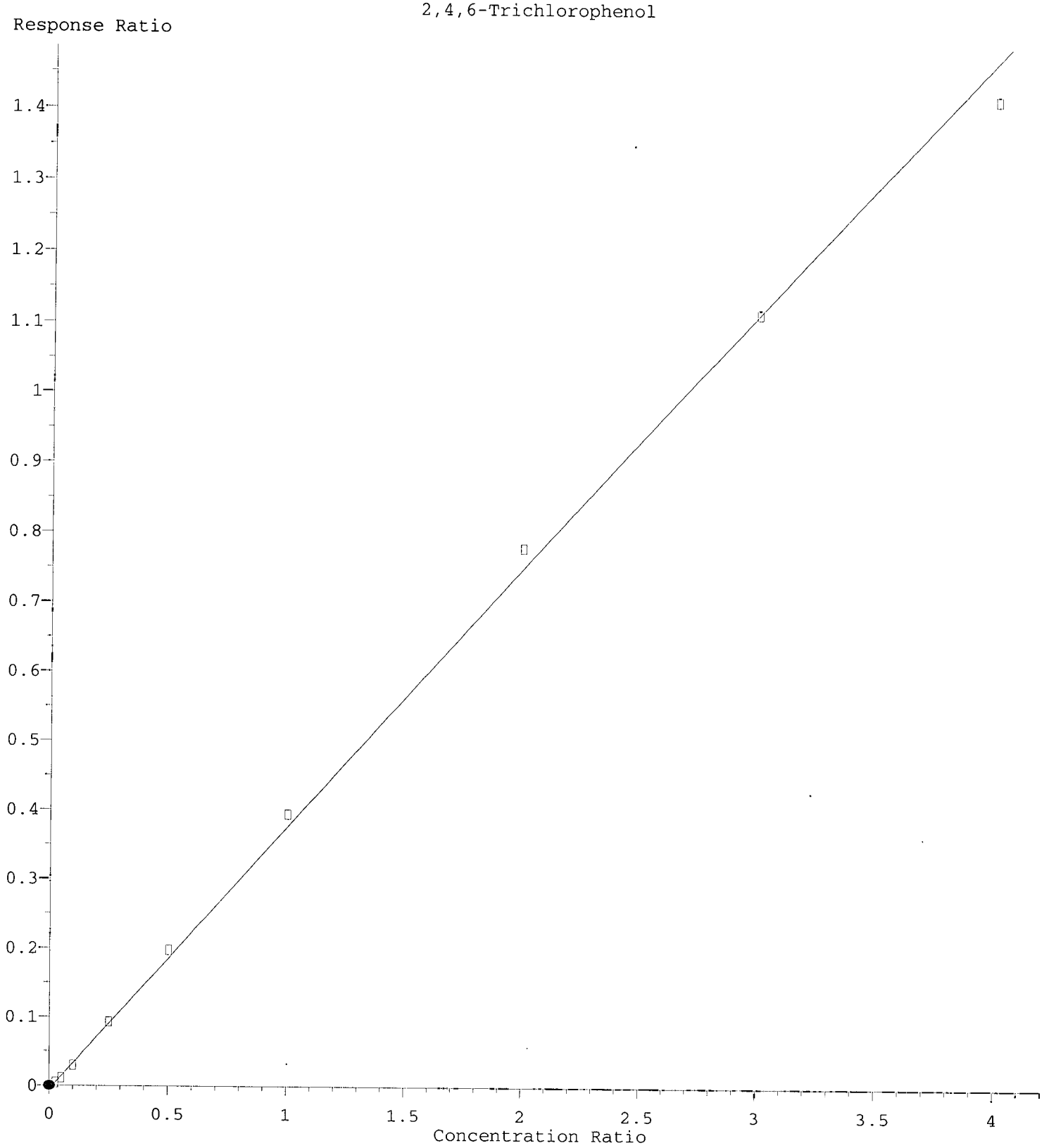
TIC: I05081919.D\data.ms

(36) Hexachlorocyclopentadiene (T)

15.110min (+ 6.285) 40.65 ng/ml m

response 115

Ion	Exp%	Act%
236.90	100.00	100.00
234.90	62.80	64.00
271.80	12.50	0.00
0.00	0.00	0.00

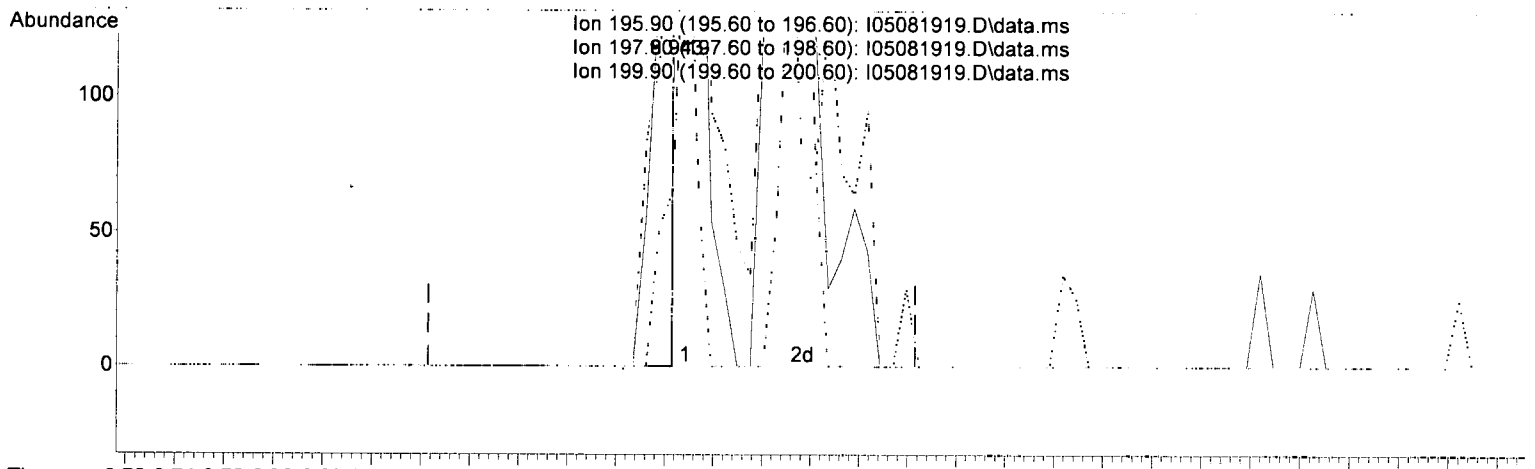


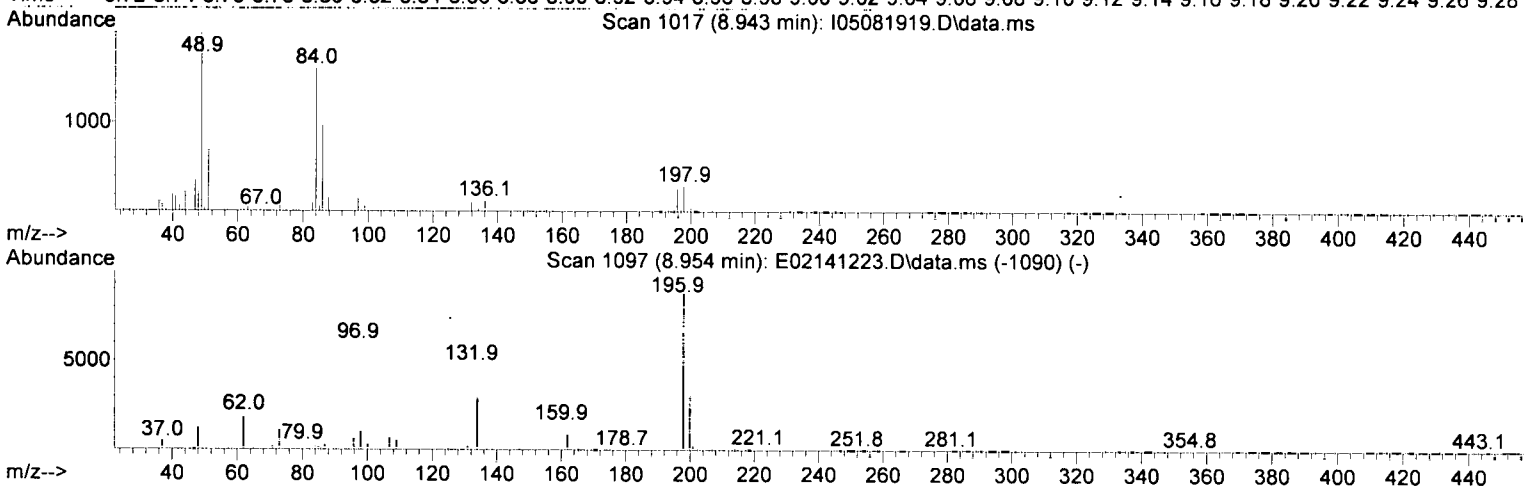
R = -4.37e-003 A*A + 3.86e-001 A - 6.17e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9





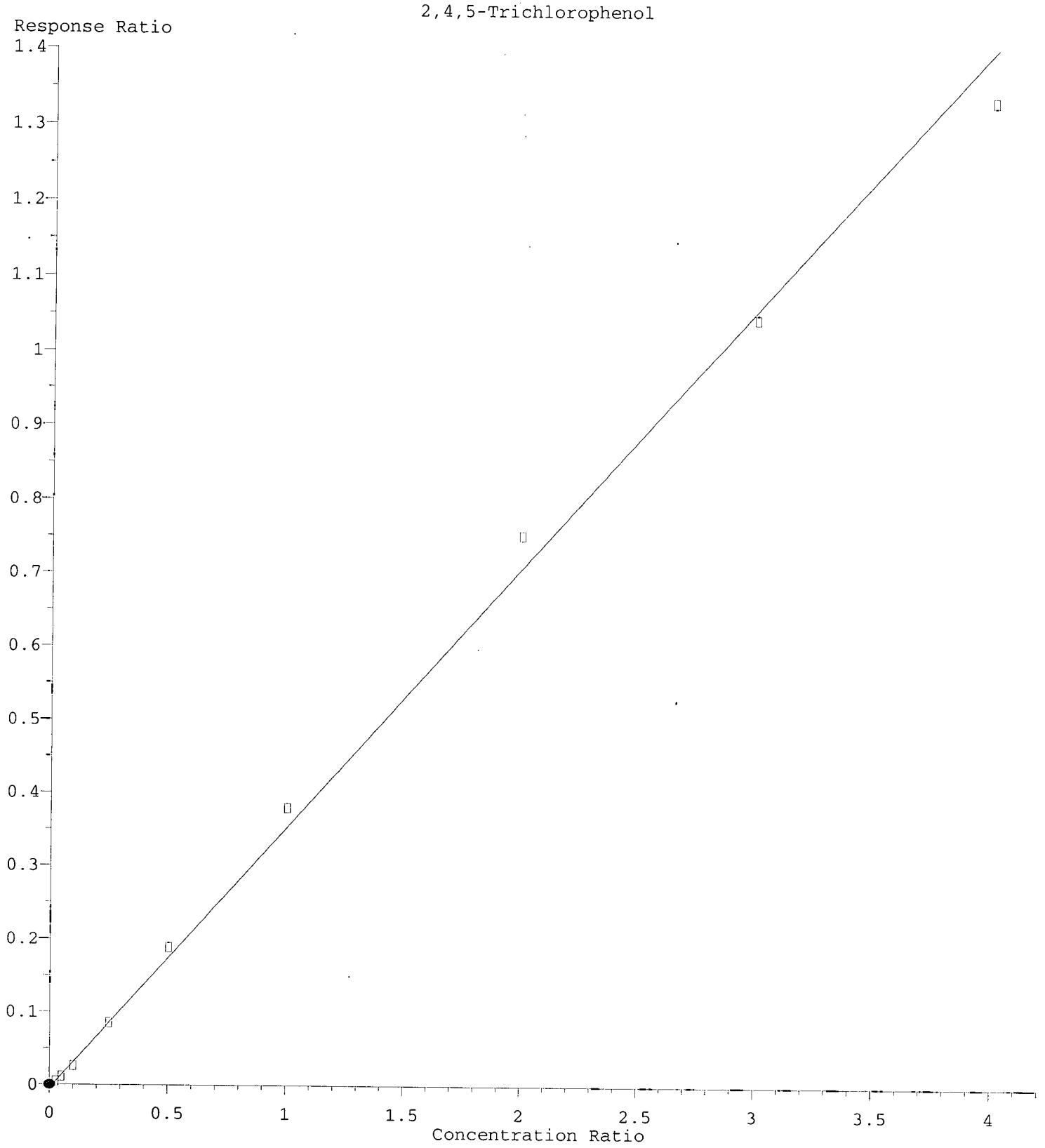
TIC: I05081919.D\data.ms

(37) 2,4,6-Trichlorophenol (T)

8.943min (+ 0.000) 35.47 ng/ml m

response 156

Ion	Exp%	Act%
195.90	100.00	100.00
197.90	97.50	110.11
199.90	30.40	23.47
0.00	0.00	0.00

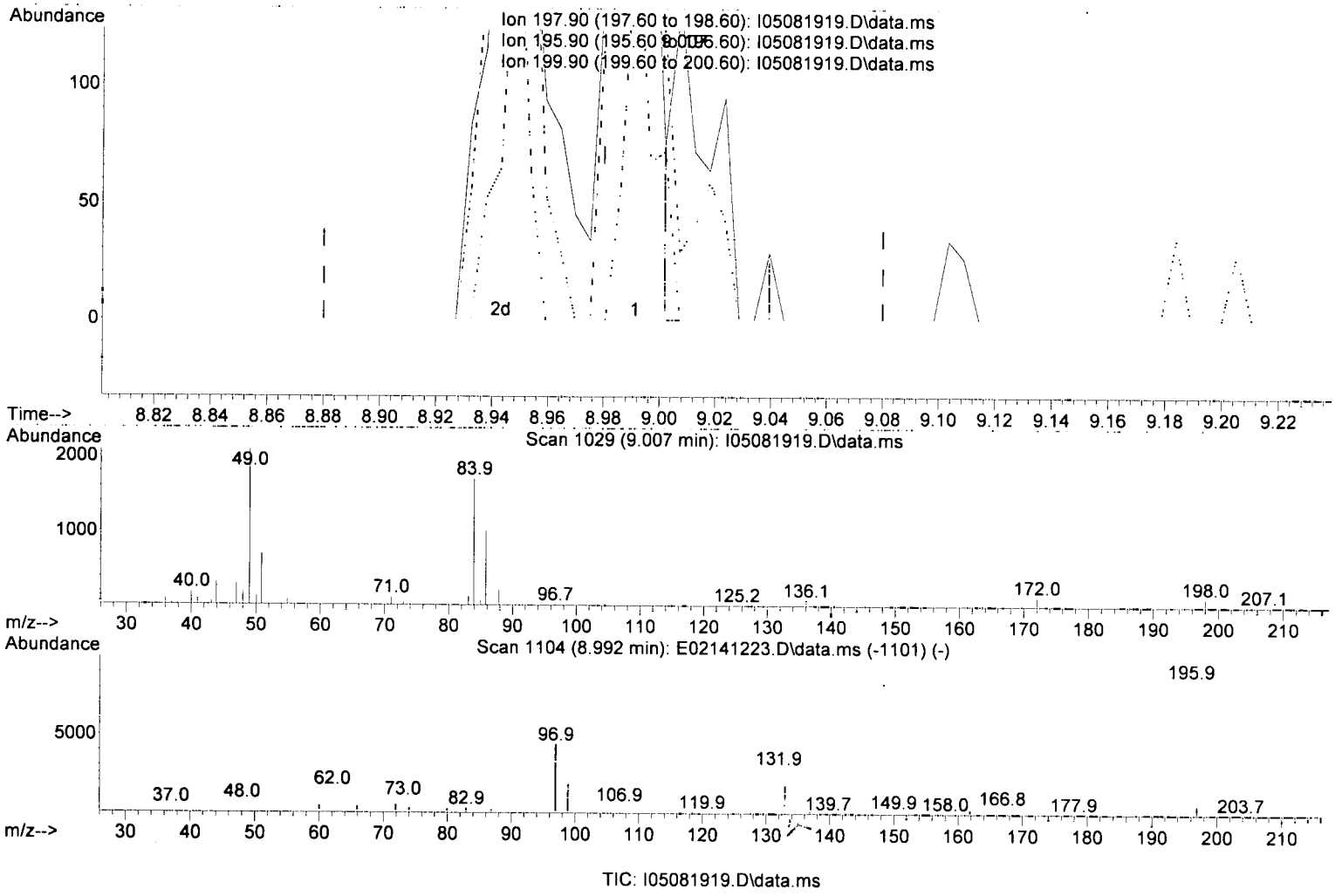


R = -2.14e-003 A*A + 3.60e-001 A - 5.07e-003
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



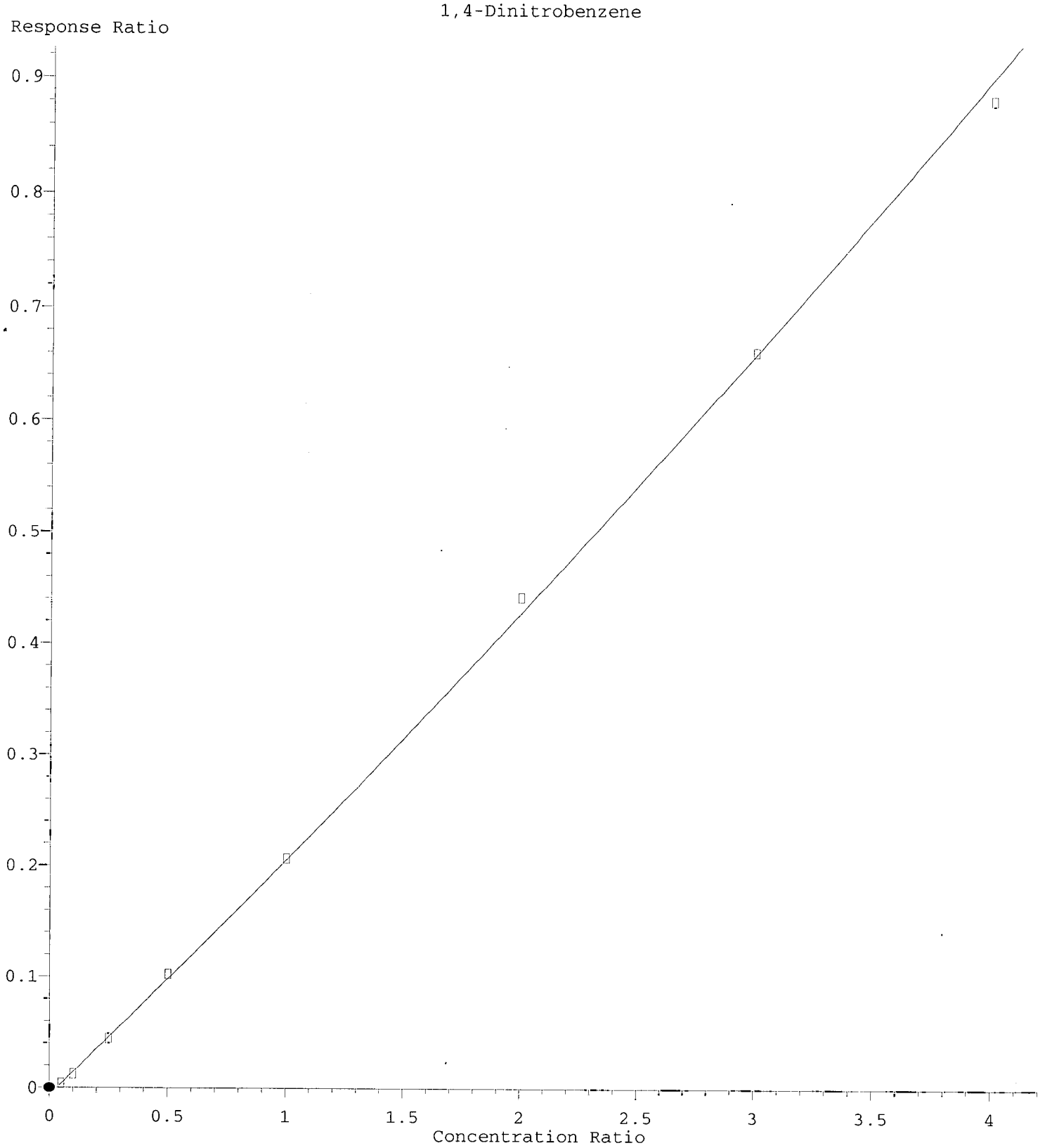
TIC: I05081919.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.007min (+ 0.027) 31.20 ng/ml m

response 126

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	21.64#
199.90	31.10	0.00#
0.00	0.00	0.00

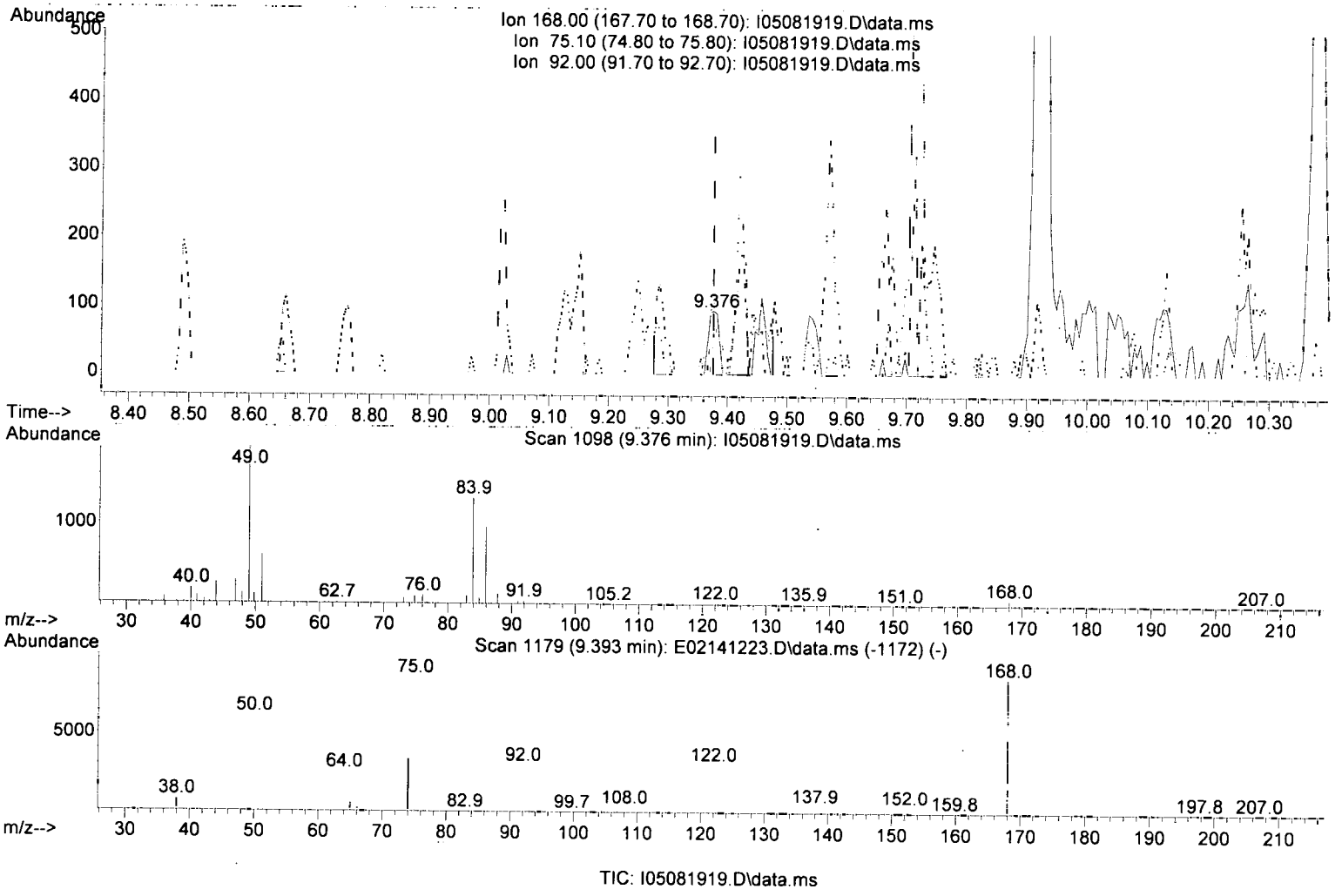


R = 4.91e-003 A*A + 2.07e-001 A - 6.78e-003
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



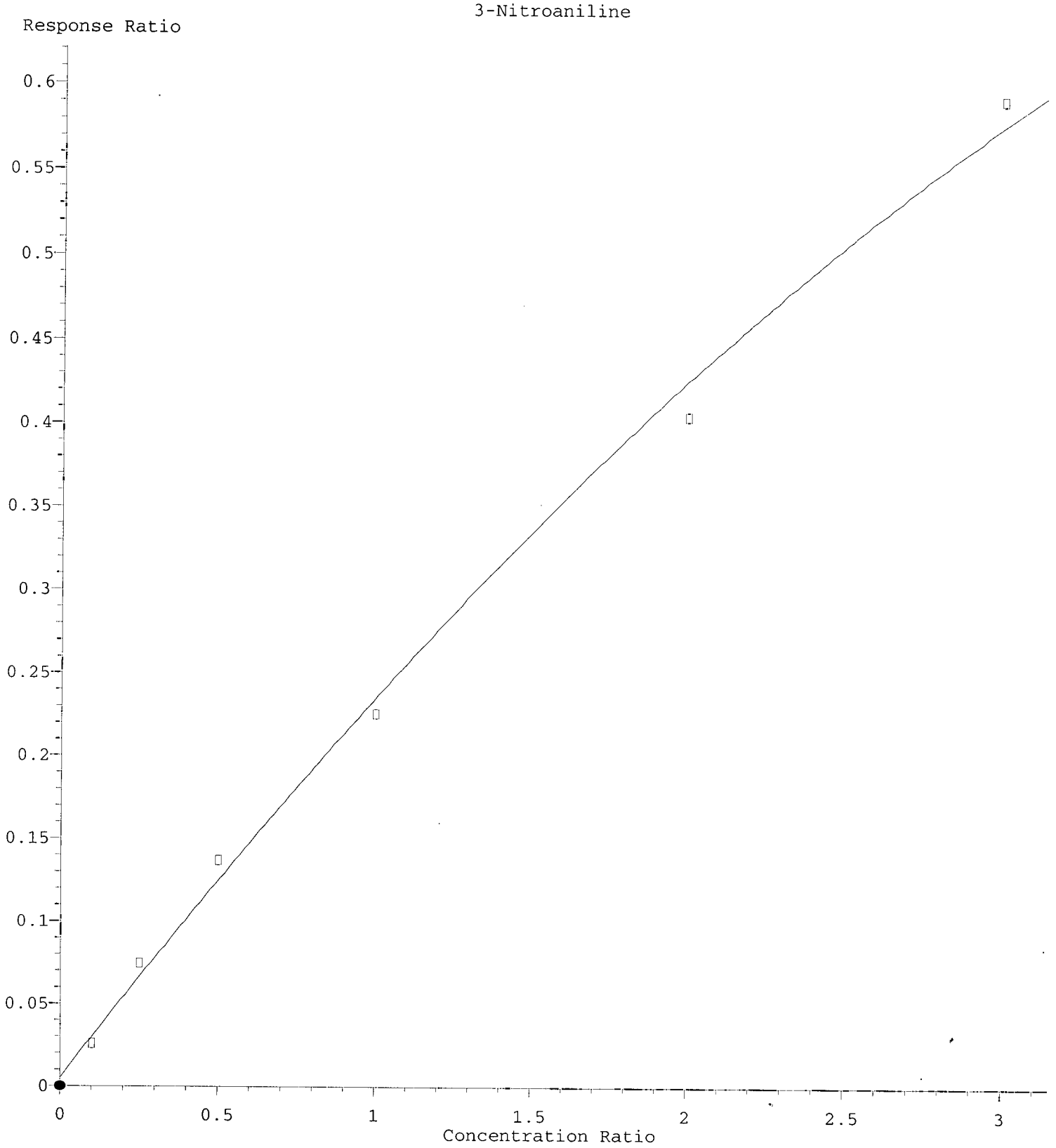
TIC: I05081919.D\data.ms

(44) 1,4-Dinitrobenzene (T)

9.376min (+ 0.000) 70.15 ng/ml

response 116

Ion	Exp%	Act%
168.00	100.00	100.00
75.10	134.30	124.73
92.00	43.50	65.59
0.00	0.00	0.00

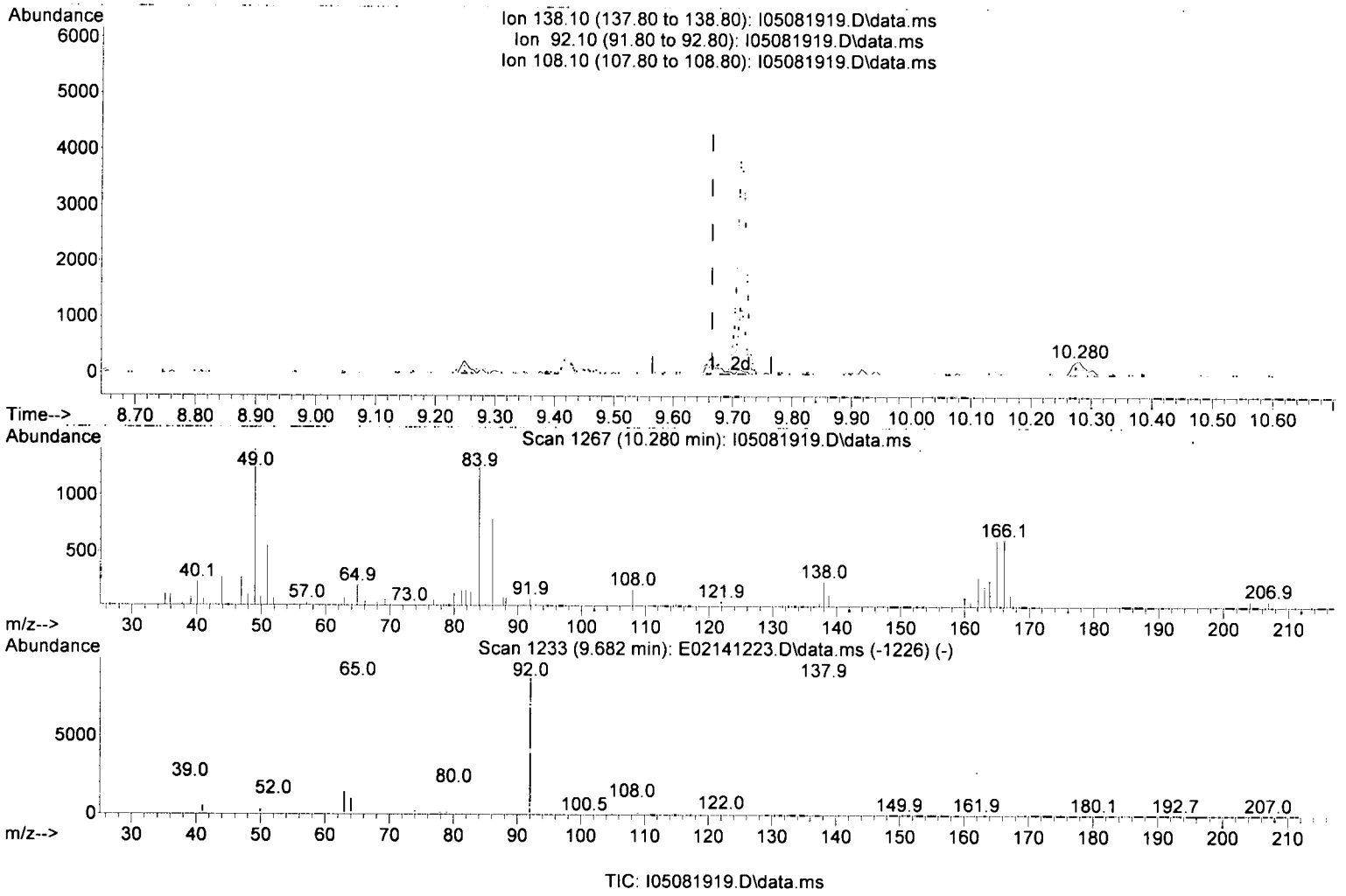


R = -1.97e-002 A*A + 2.50e-001 A + 5.08e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



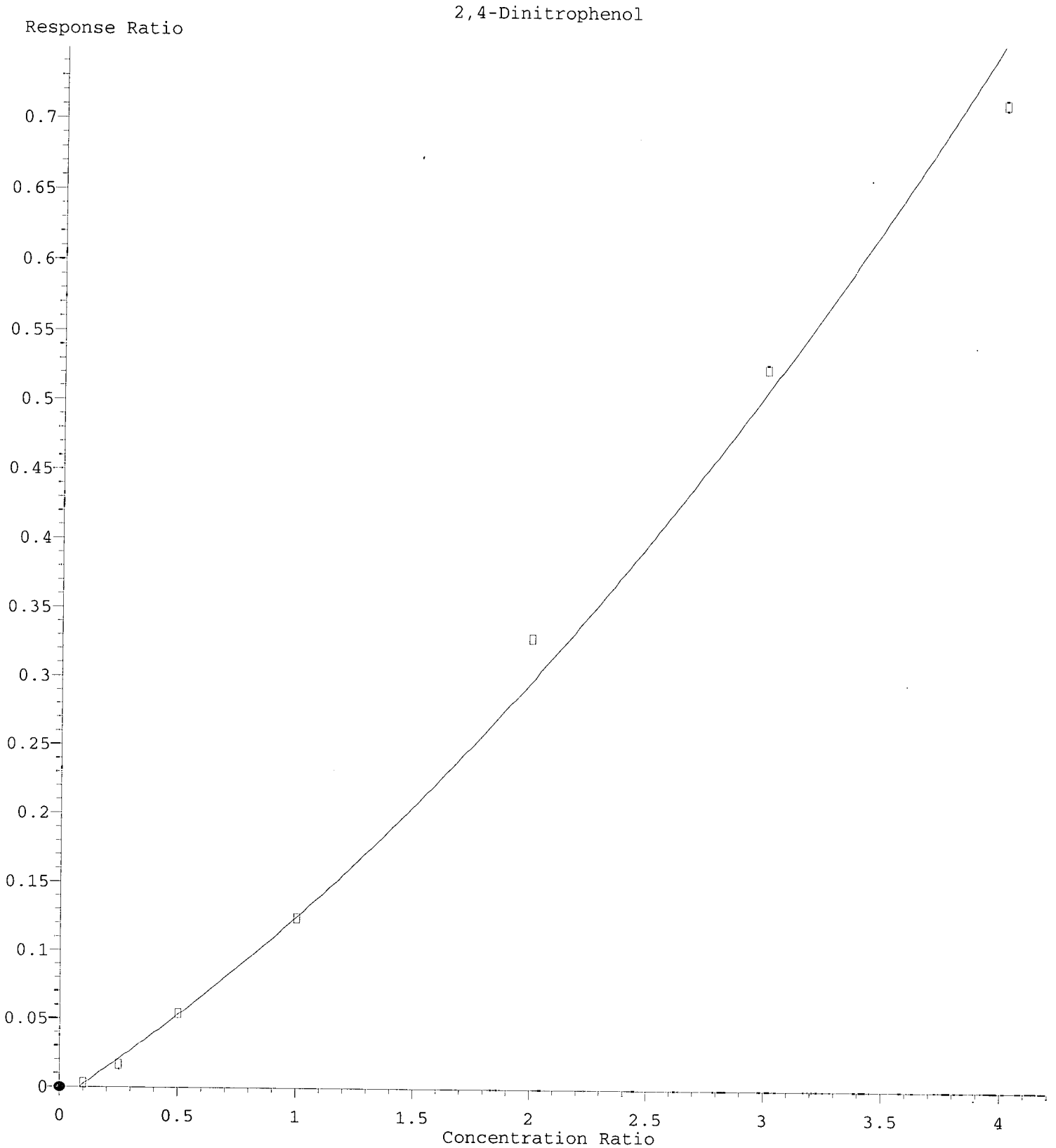
TIC: I05081919.D\data.ms

(50) 3-Nitroaniline (T)

10.280min (+ 0.615) -1.00 ng/ml m

response 1143

Ion	Exp%	Act%
138.10	100.00	100.00
92.10	114.60	35.66#
108.10	11.10	70.08#
0.00	0.00	0.00

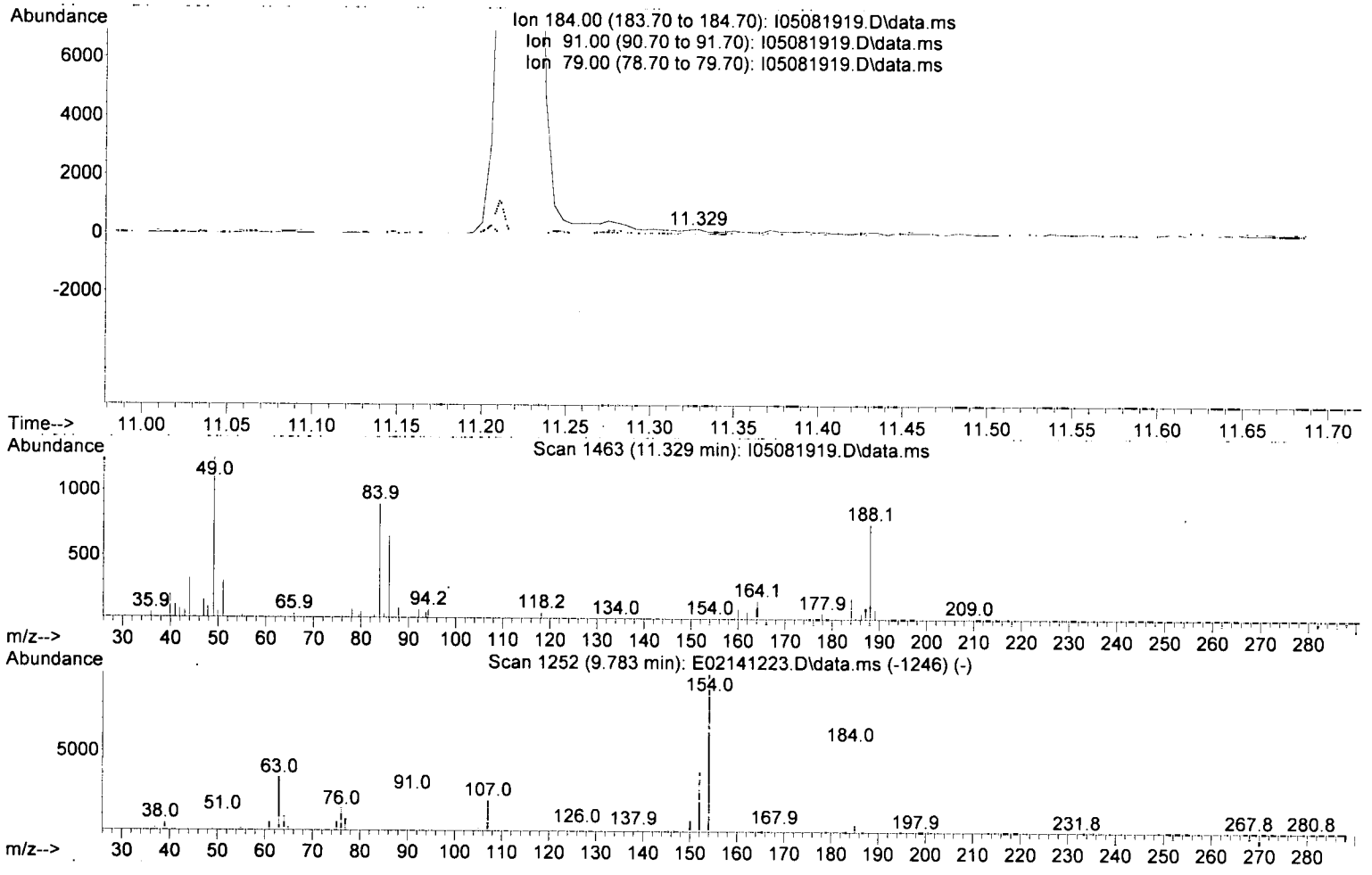


R = 1.91e-002 A*A + 1.15e-001 A - 9.32e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



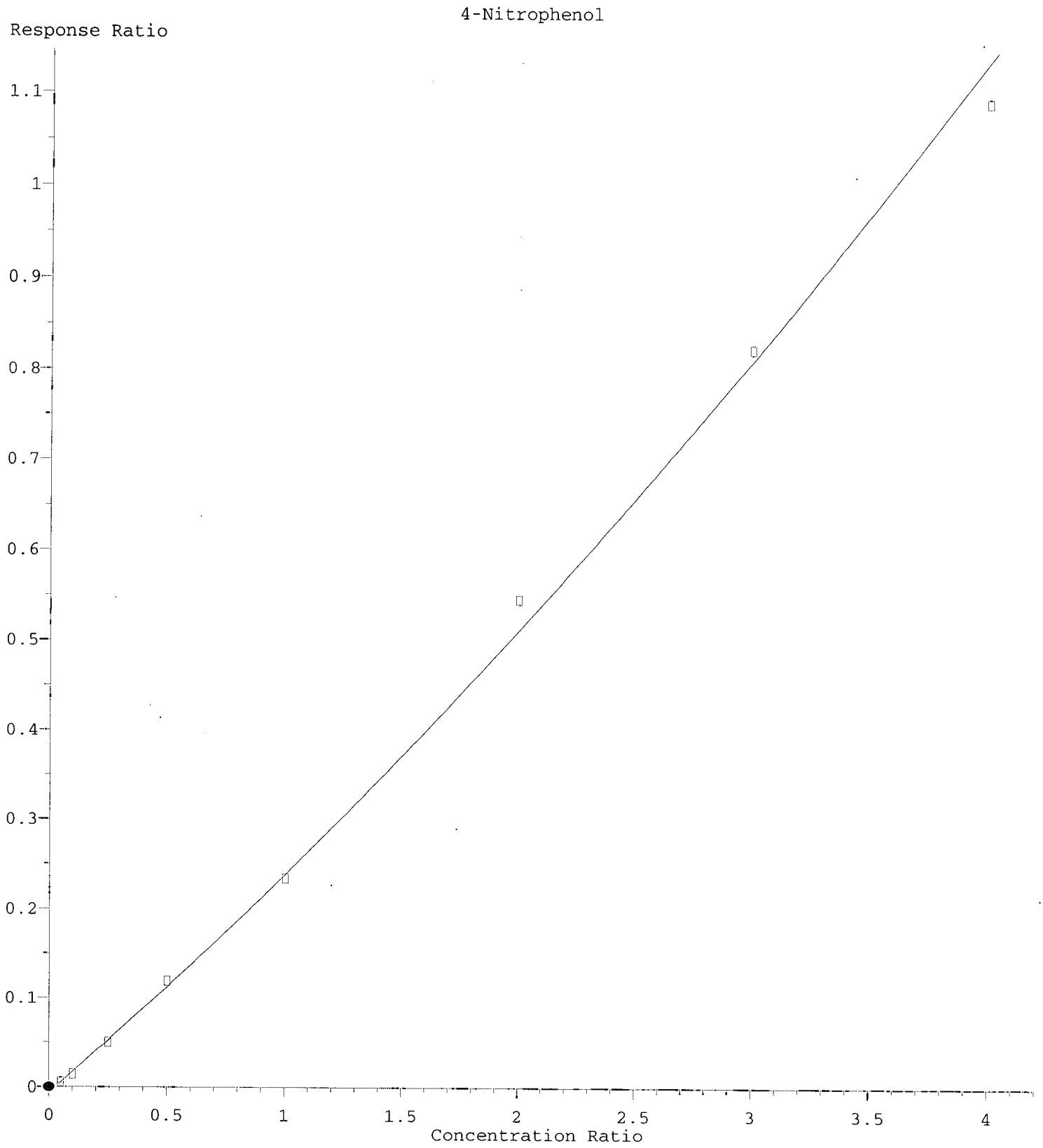
TIC: I05081919.D\data.ms

(52) 2,4-Dinitrophenol (T)

11.329min (+ 1.563) 173.74 ng/ml m

response 190

Ion	Exp%	Act%
184.00	100.00	100.00
91.00	53.50	0.00#
79.00	32.30	25.00
0.00	0.00	0.00

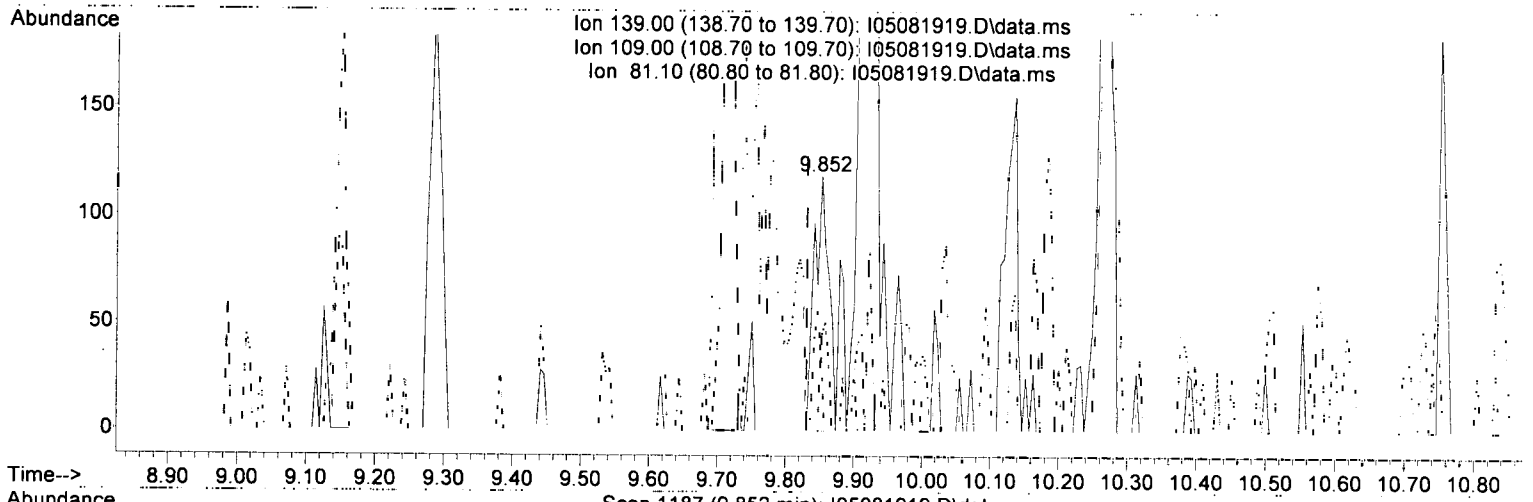


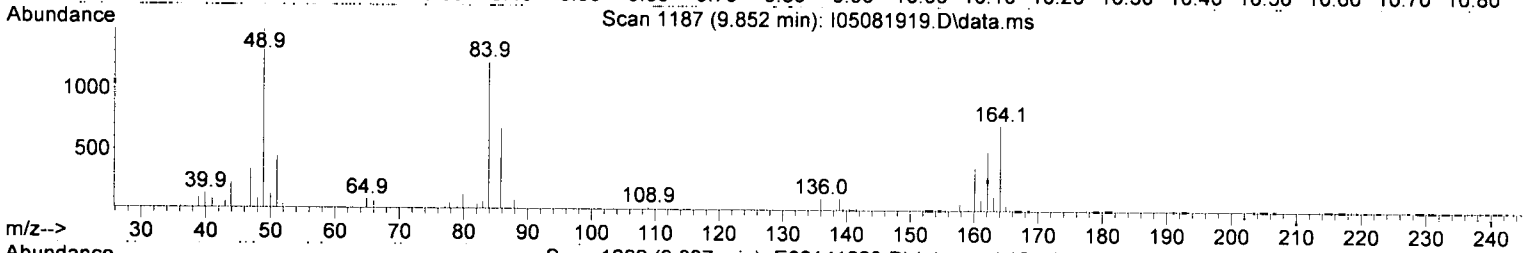
R = 1.35e-002 A*A + 2.32e-001 A - 6.72e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

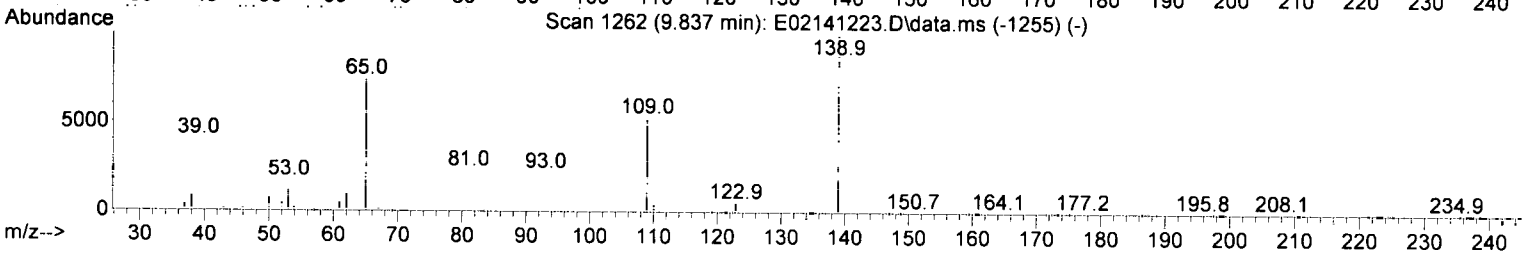
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







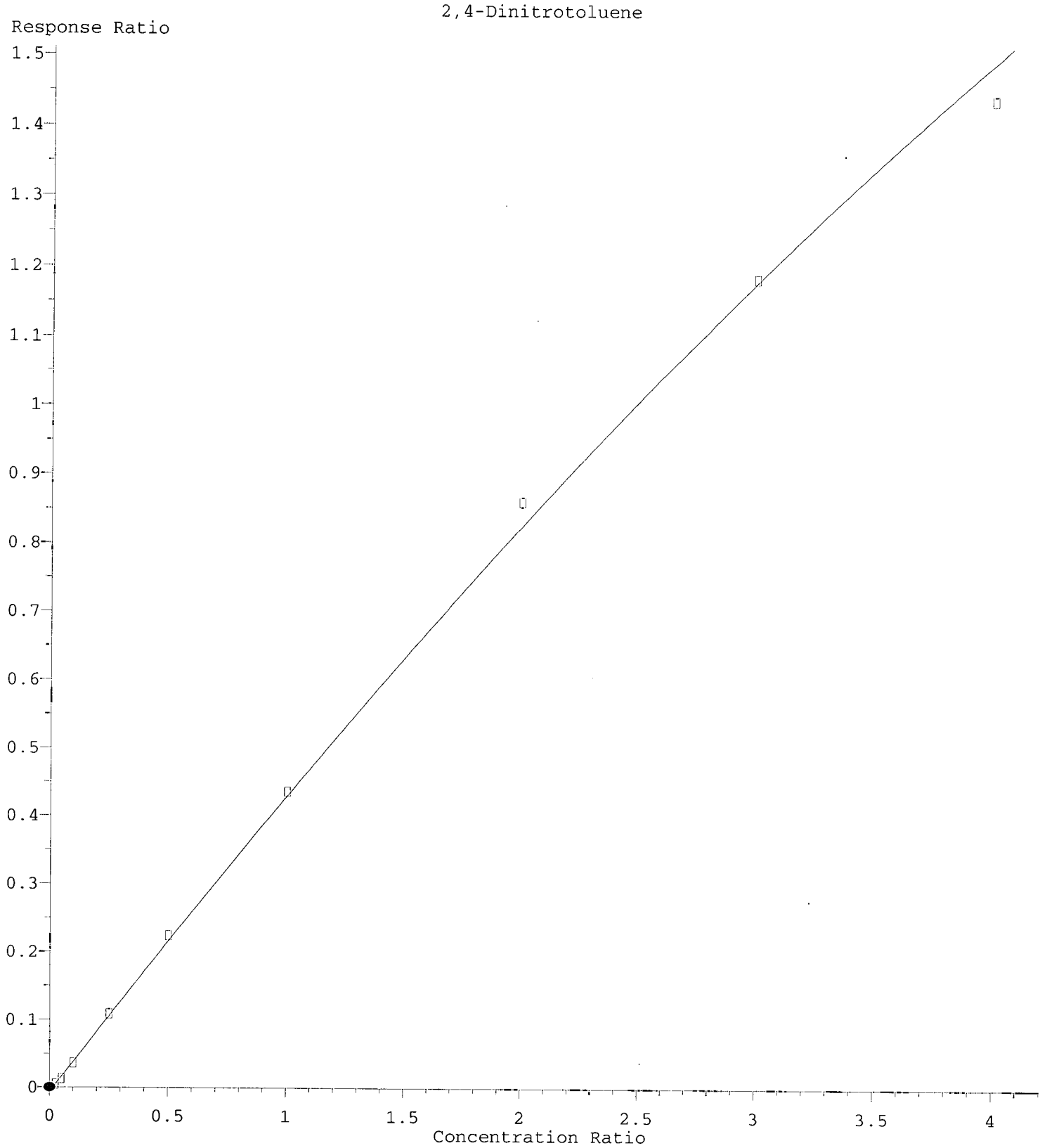
TIC: I05081919.D\data.ms

(53) 4-Nitrophenol (T)

9.852min (+ 0.021) 64.39 ng/ml

response 173

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	64.20	36.97
81.10	30.90	26.89
0.00	0.00	0.00

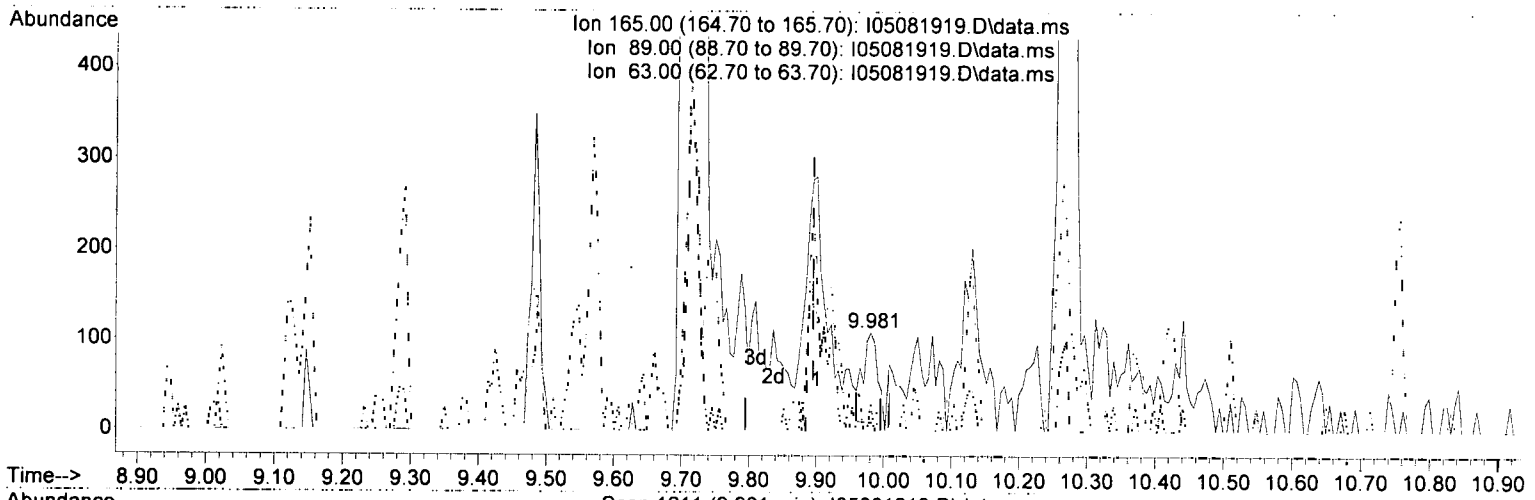


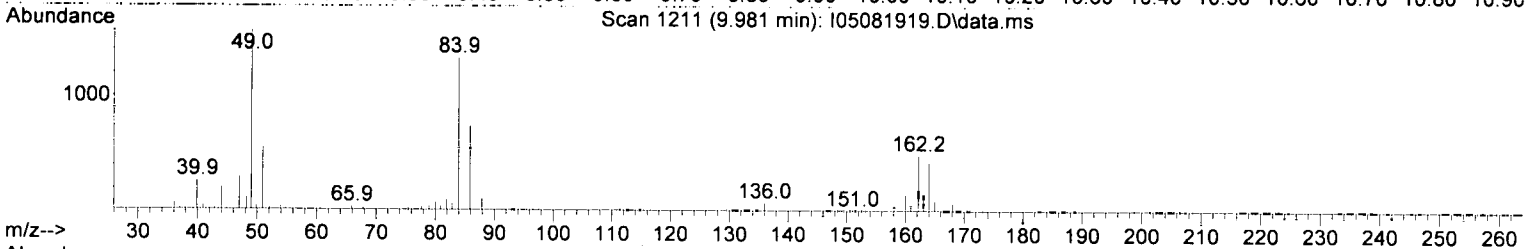
R = -2.06e-002 A*A + 4.57e-001 A - 7.48e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

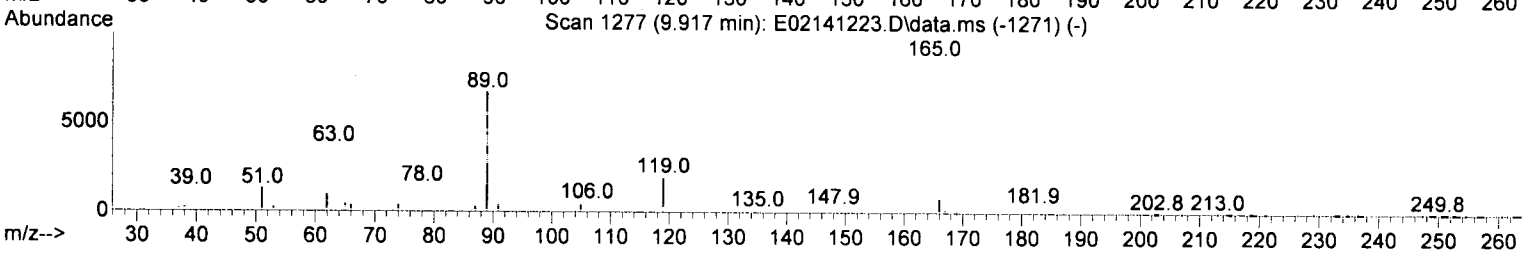
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







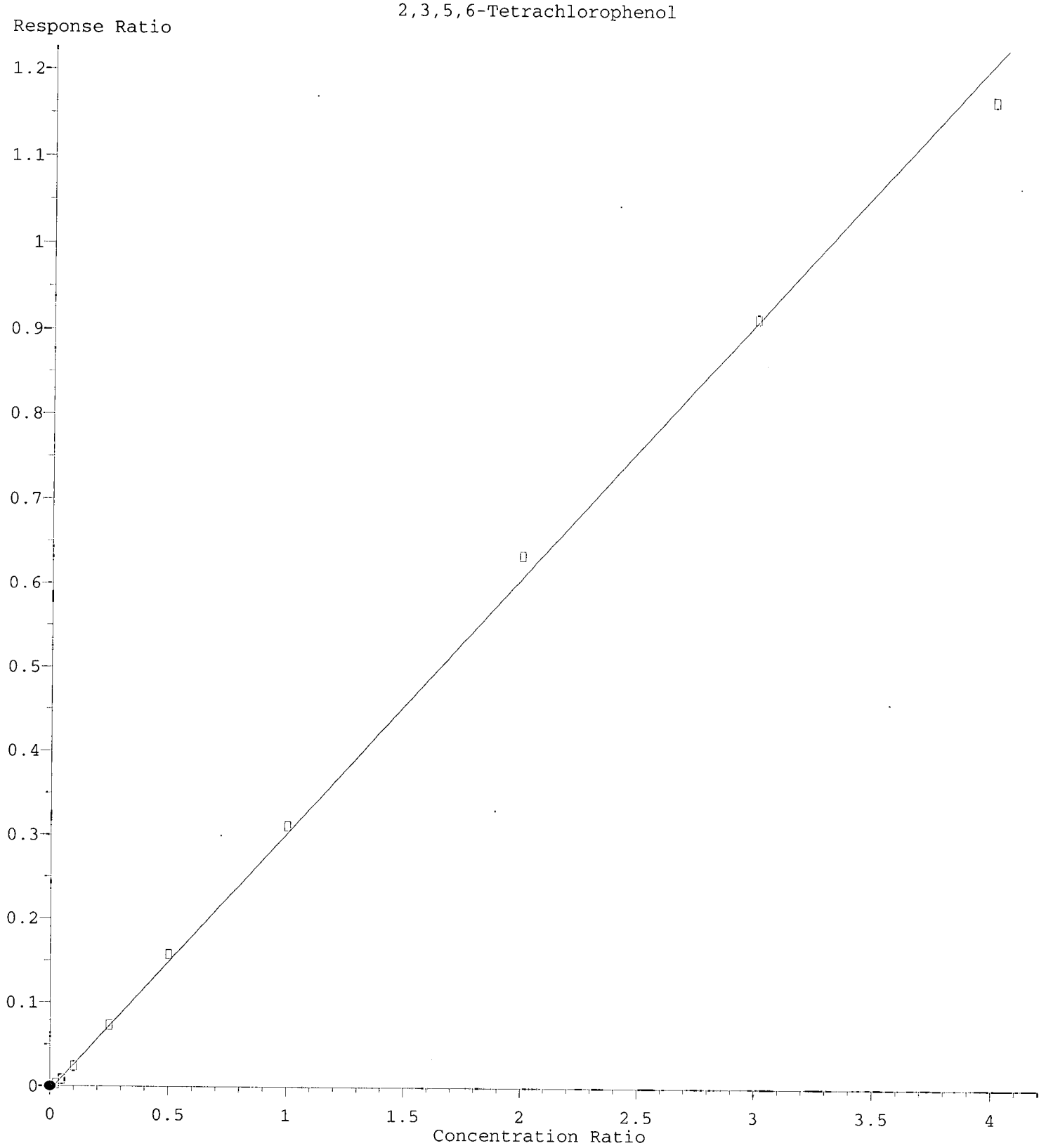
TIC: I05081919.D\data.ms

(54) 2,4-Dinitrotoluene (T)

9.981min (+ 0.086) 35.93 ng/ml m

response 167

Ion	Exp%	Act%
165.00	100.00	100.00
89.00	80.10	26.61#
63.00	47.20	0.00#
0.00	0.00	0.00

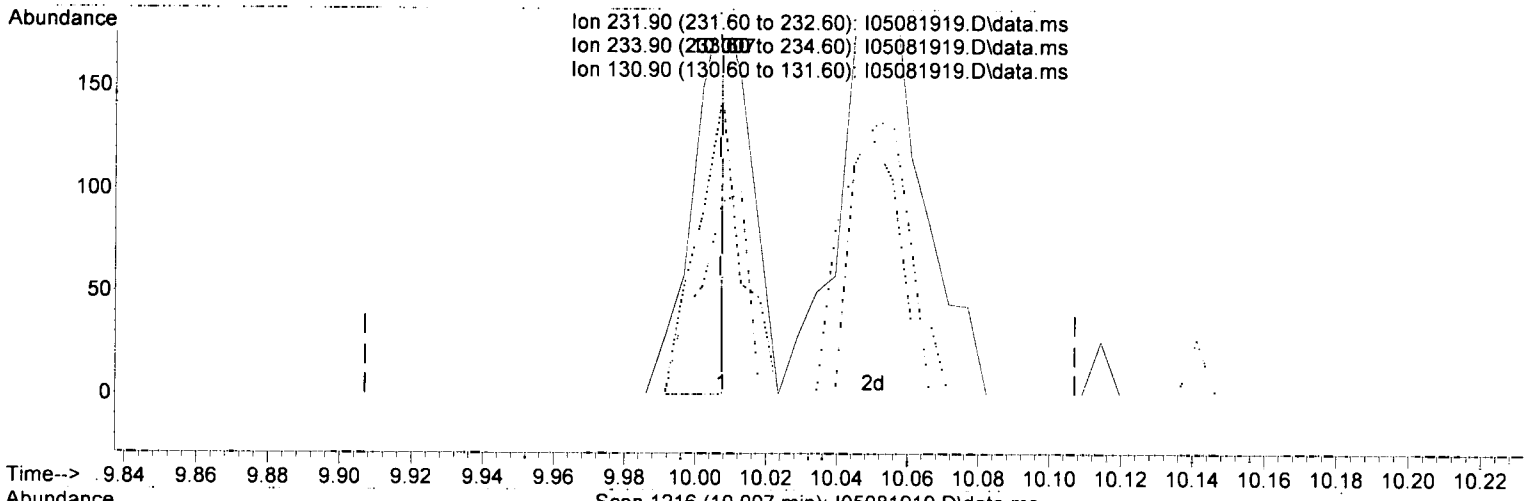


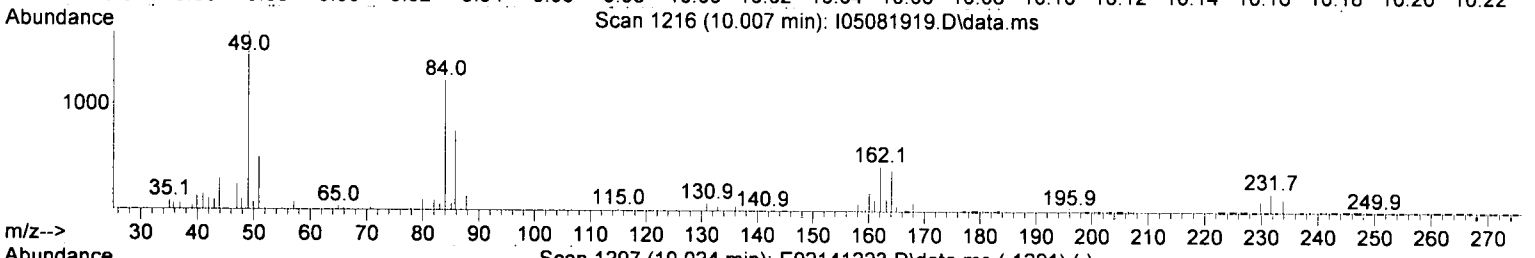
R = -1.07e-003 A*A + 3.09e-001 A - 5.22e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

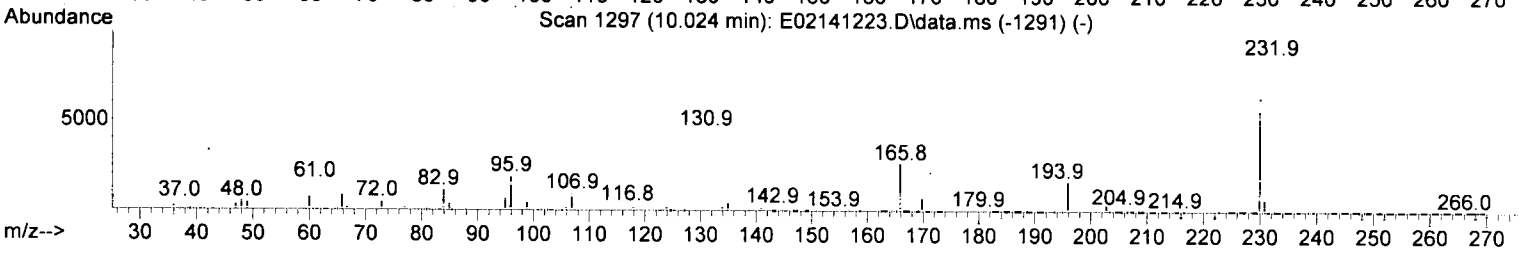
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







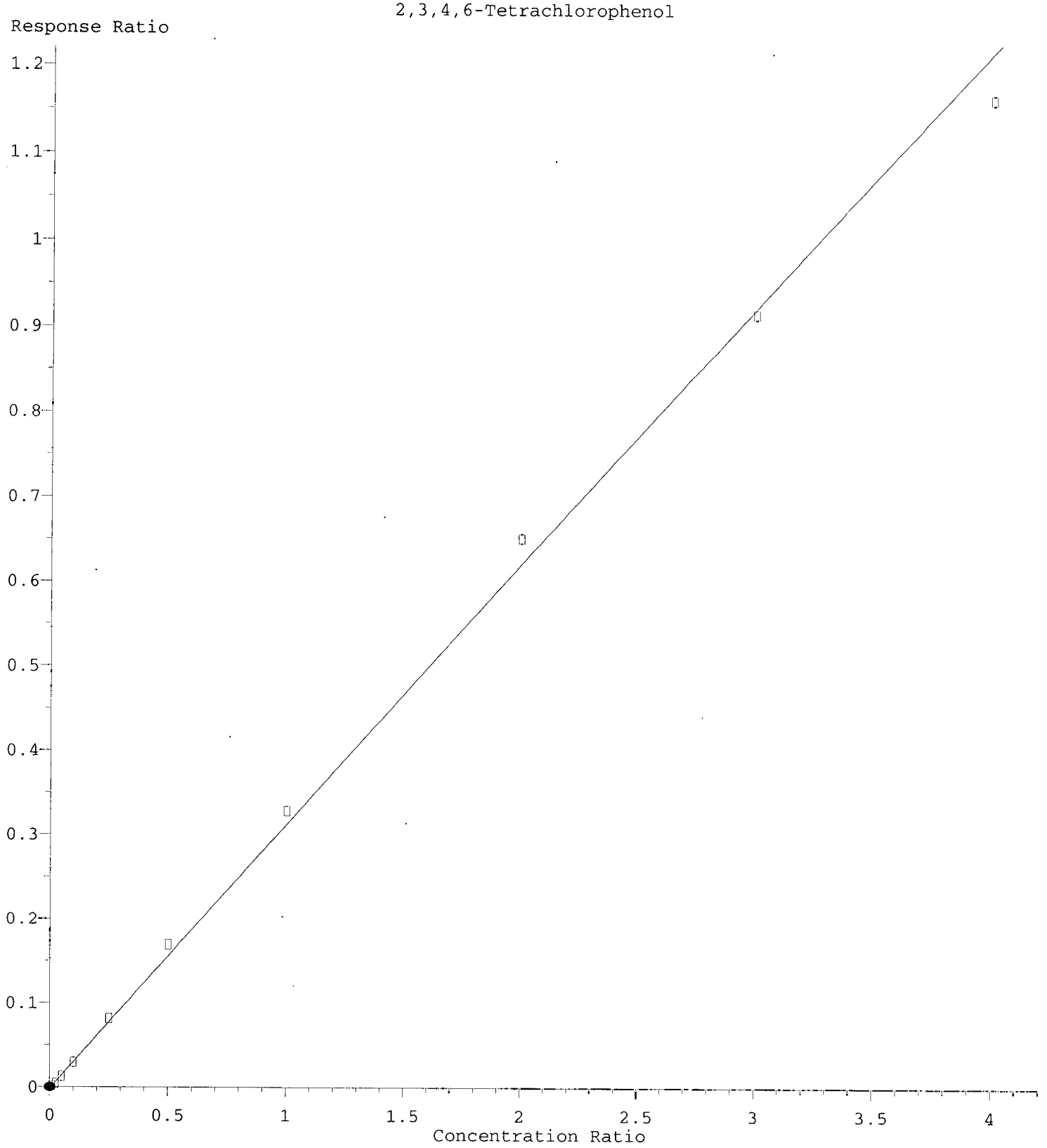
TIC: I05081919.D\data.ms

(56) 2,3,5,6-Tetrachlorophenol (T)

10.007min (+ 0.000) 37.74 ng/ml m

response 140

Ion	Exp%	Act%
231.90	100.00	100.00
233.90	49.20	72.86
130.90	53.00	47.24
0.00	0.00	0.00

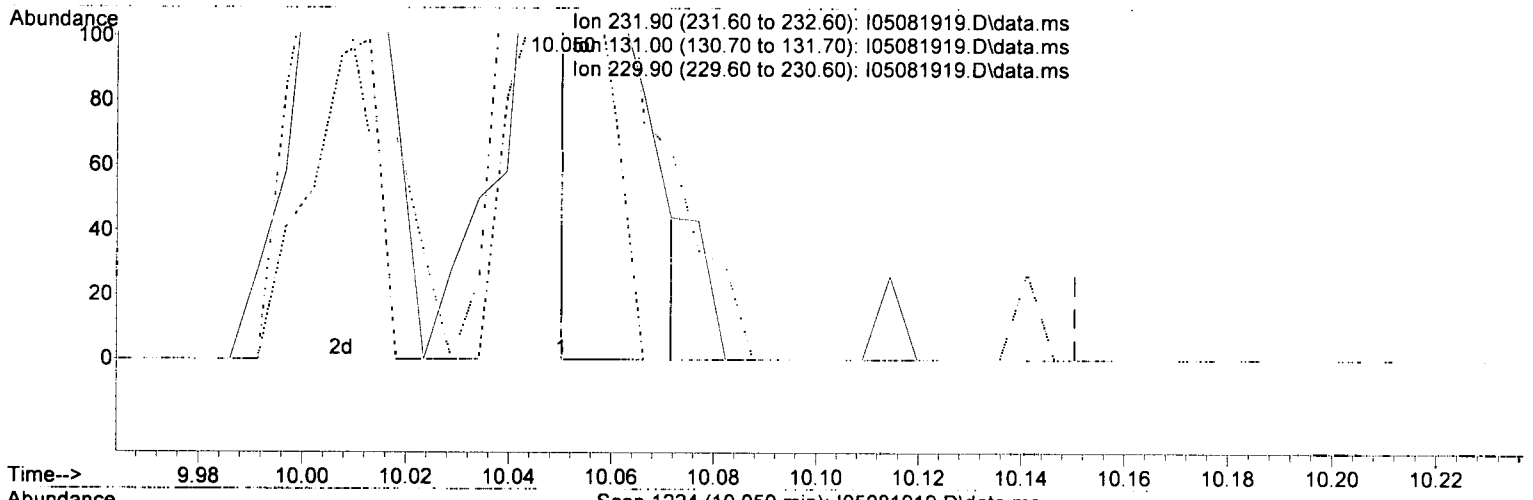


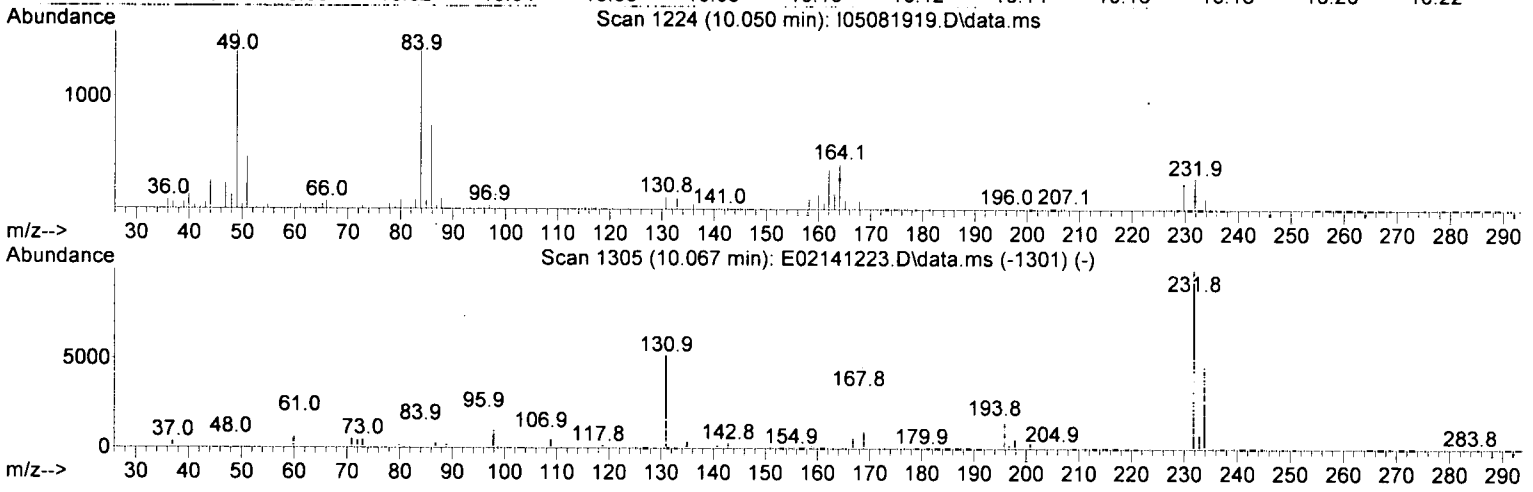
R = -3.25e-003 A*A + 3.18e-001 A - 1.92e-003
Coef of Det (r^2) = 0.991 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9





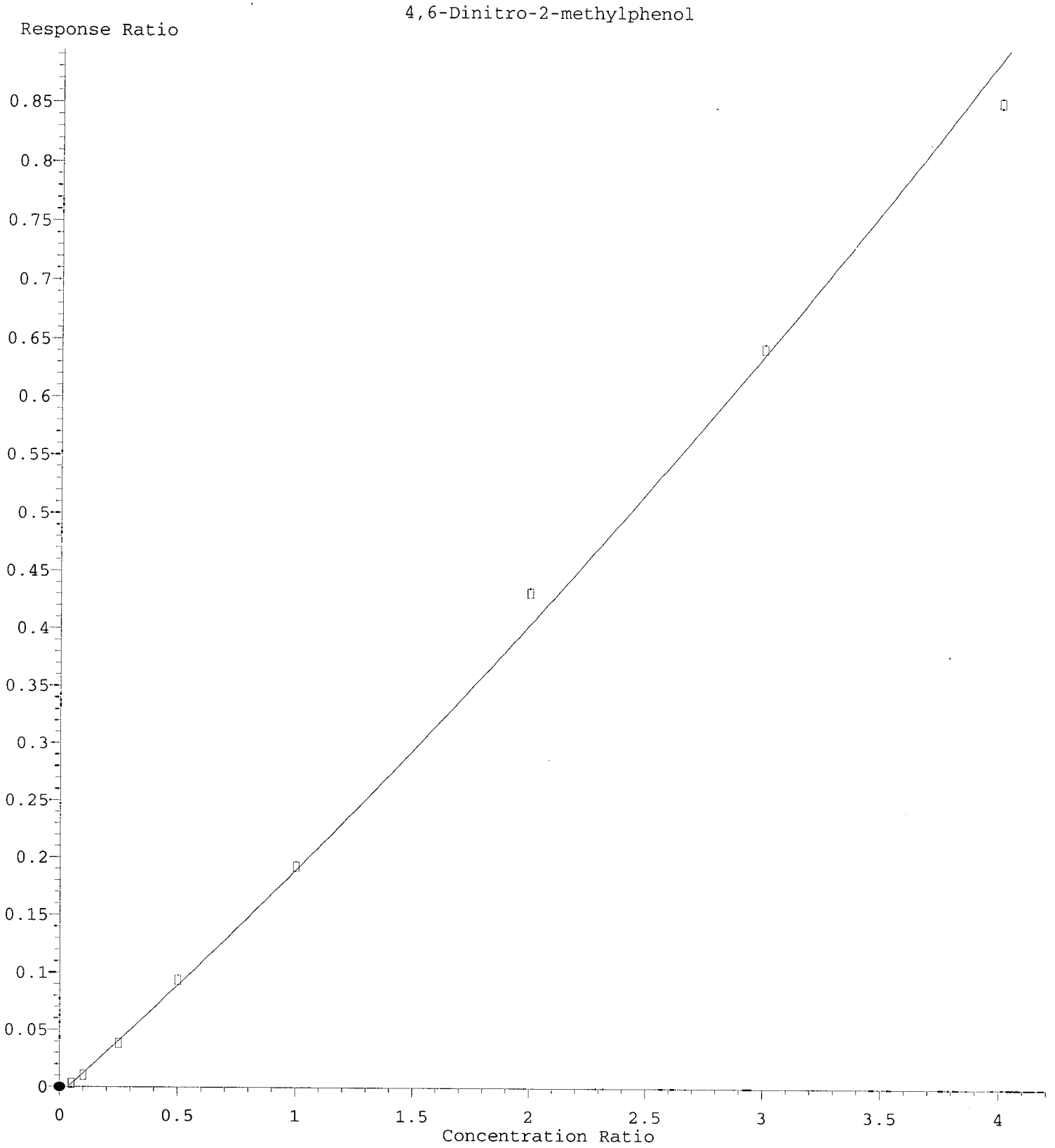
TIC: I05081919.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.050min (-0.000) 16.03 ng/ml m

response 145

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	45.33
229.90	78.40	85.47
0.00	0.00	0.00

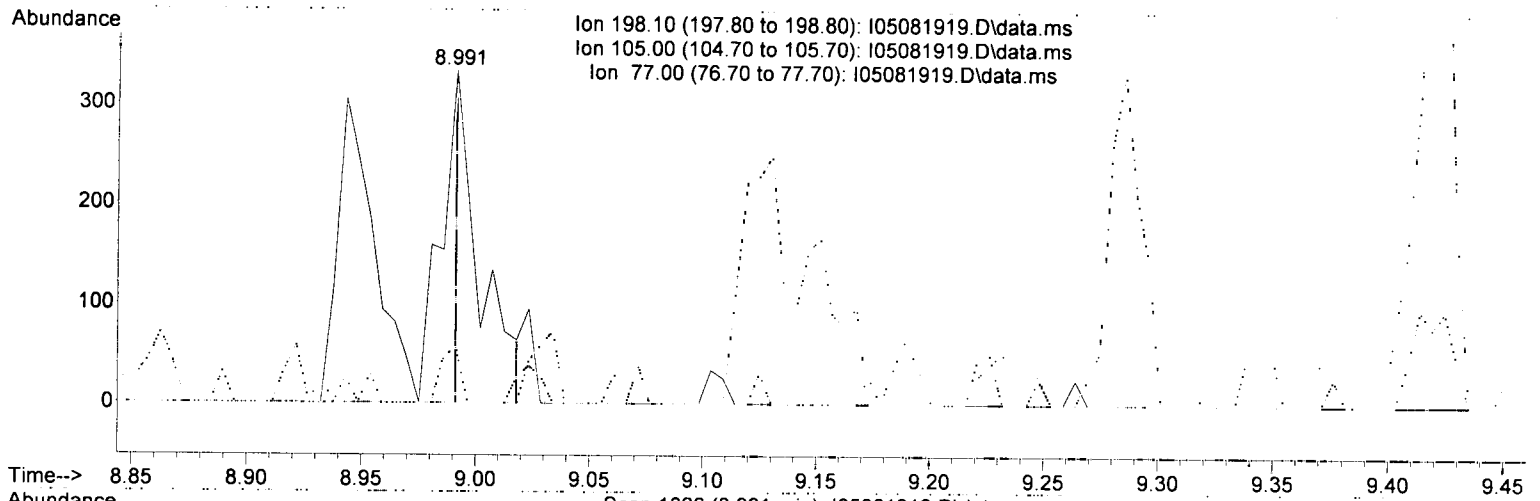


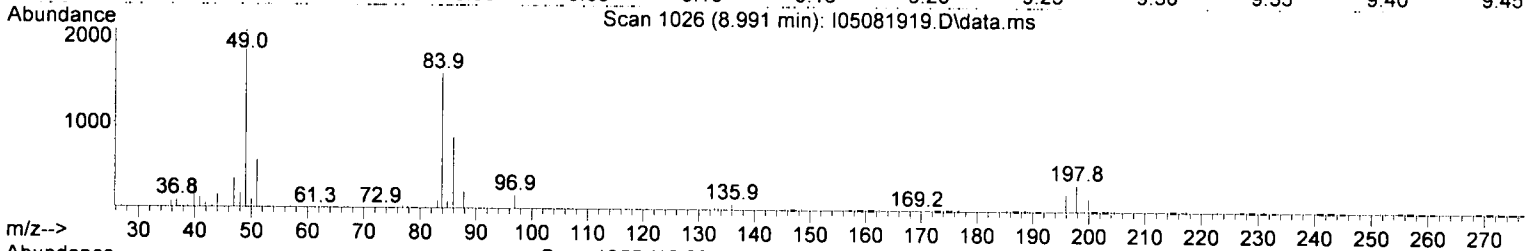
R = 9.20e-003 A*A + 1.87e-001 A - 6.68e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

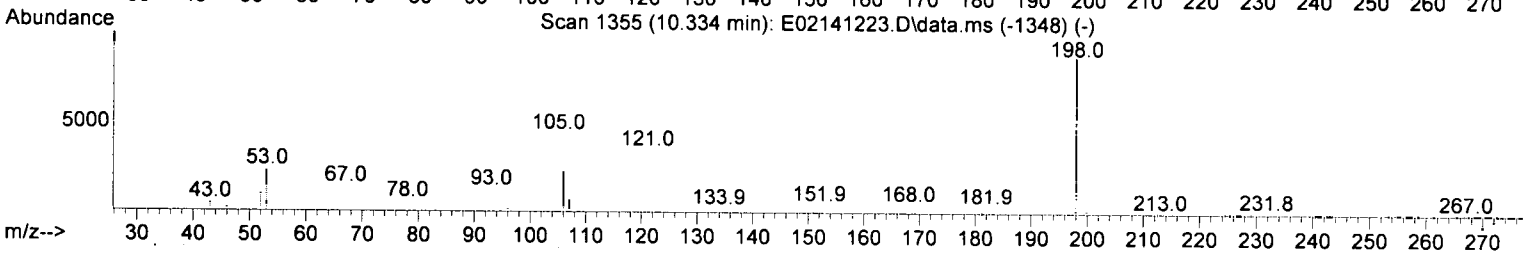
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







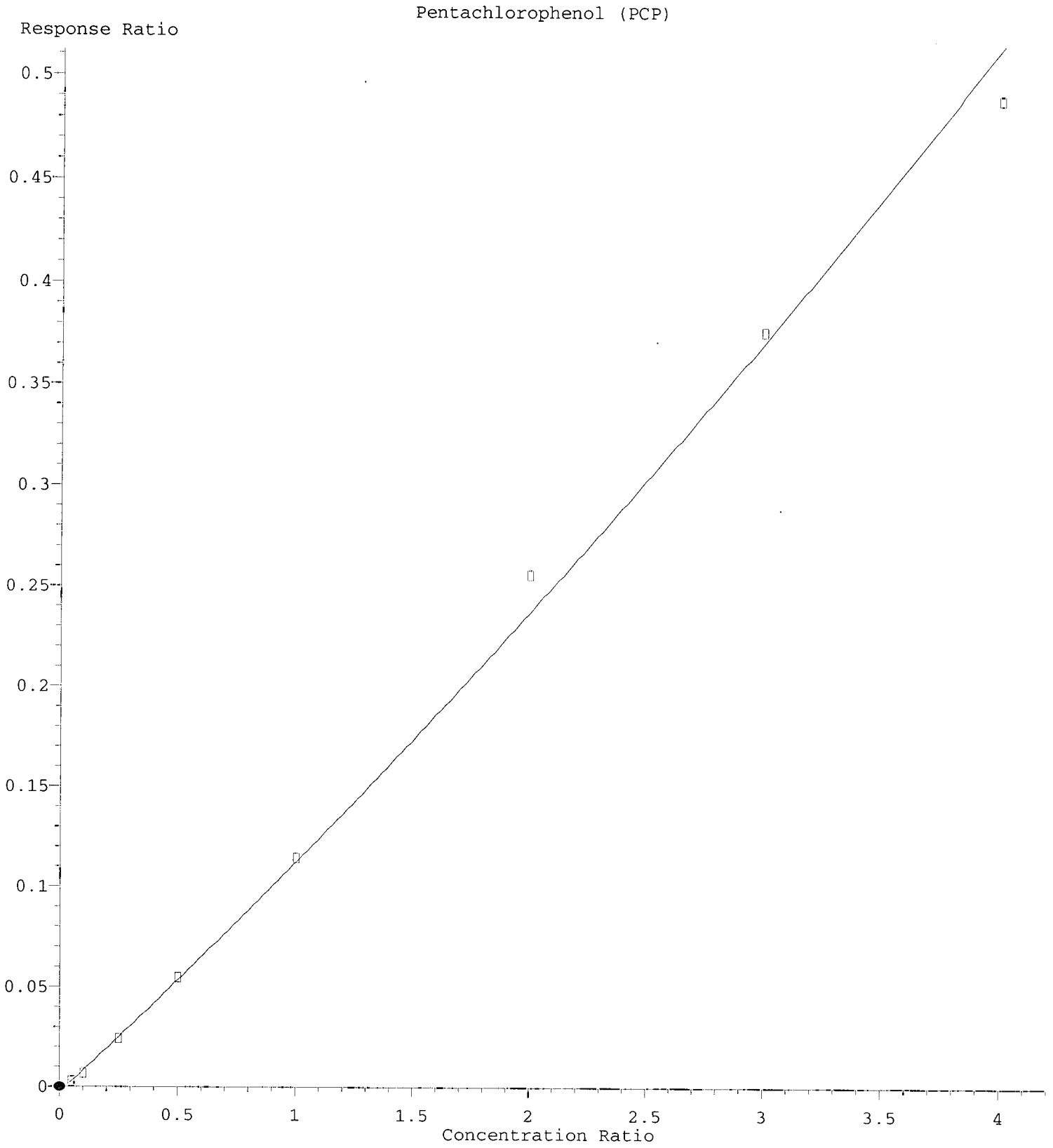
TIC: I05081919.D\data.ms

(63) 4,6-Dinitro-2-methylphenol (T)

8.991min (-1.321) 79.54 ng/ml m

response 177

Ion	Exp%	Act%
198.10	100.00	100.00
105.00	58.40	0.00#
77.00	31.80	16.77
0.00	0.00	0.00

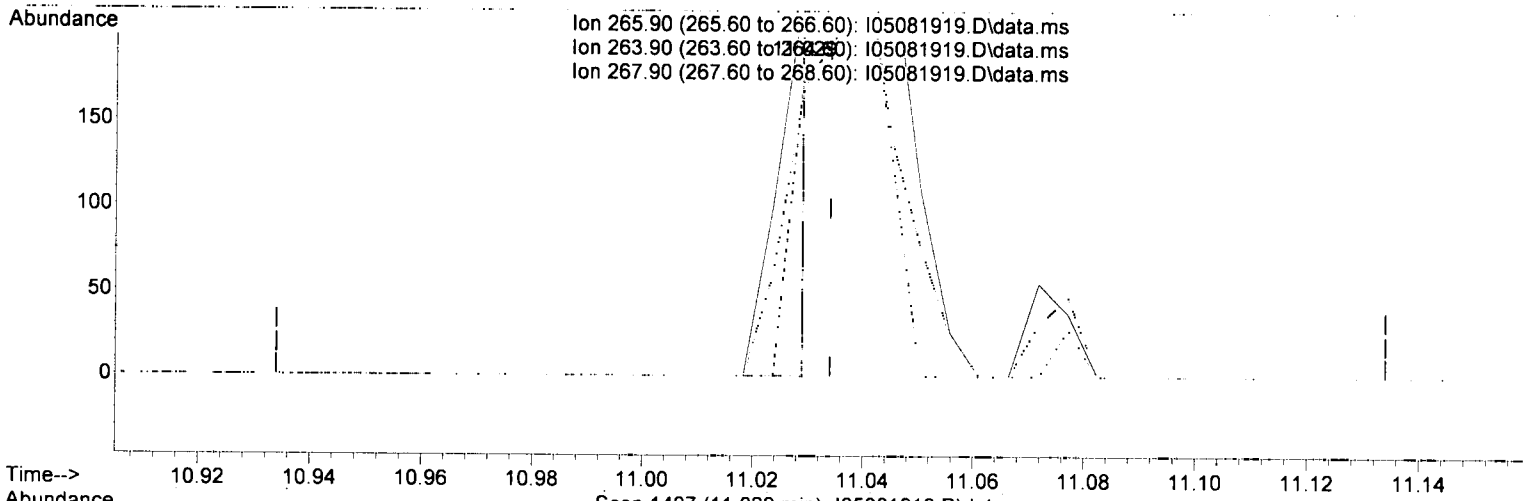


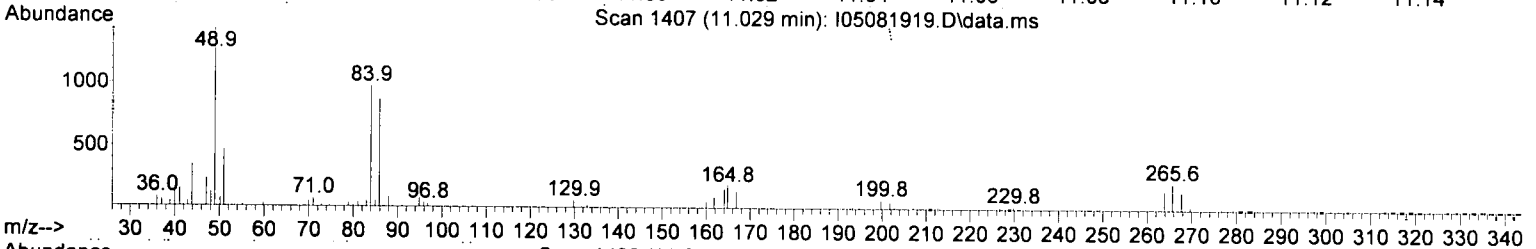
R = 4.56e-003 A*A + 1.11e-001 A - 3.12e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

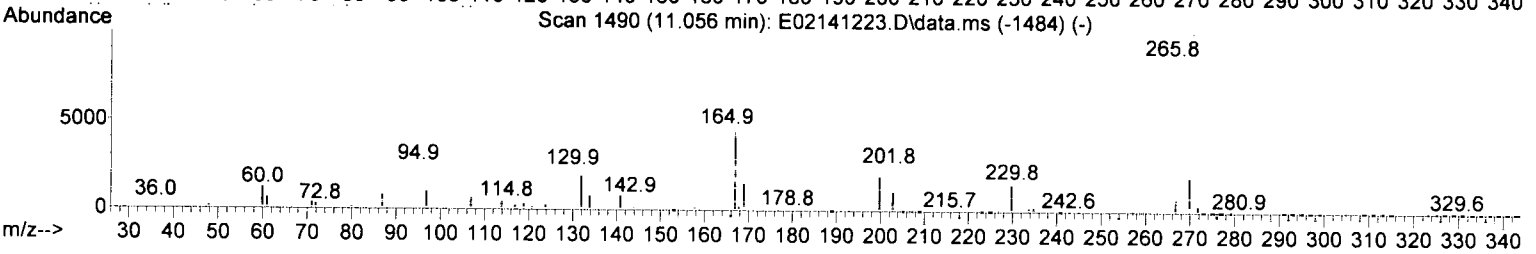
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







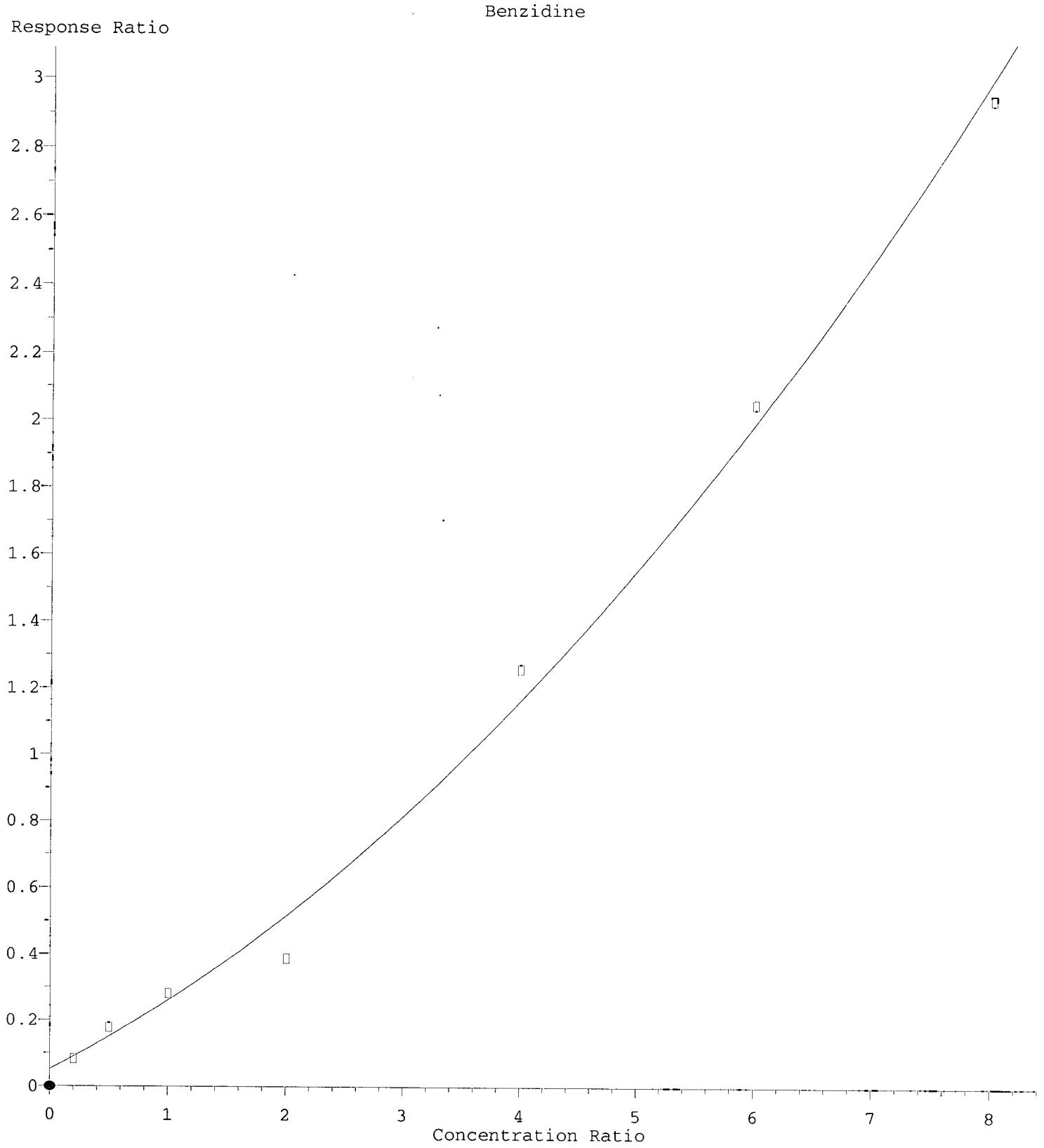
TIC: I05081919.D\data.ms

(70) Pentachlorophenol (PCP) (T)

11.029min (-0.005) 60.50 ng/ml m

response 107

Ion	Exp%	Act%
265.90	100.00	100.00
263.90	65.20	74.89
267.90	61.20	72.29
0.00	0.00	0.00

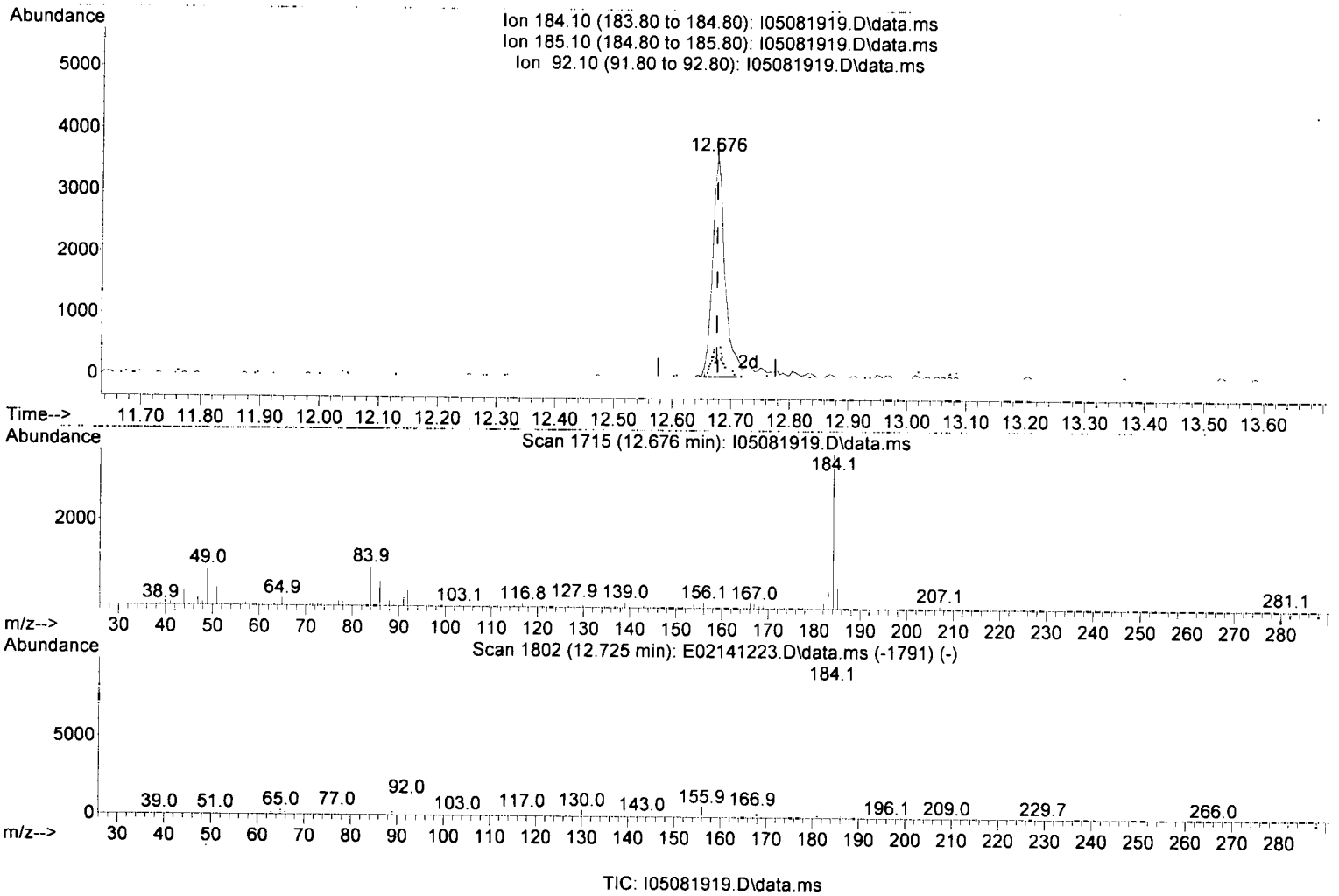


R = 2.27e-002 A*A + 1.87e-001 A + 5.11e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



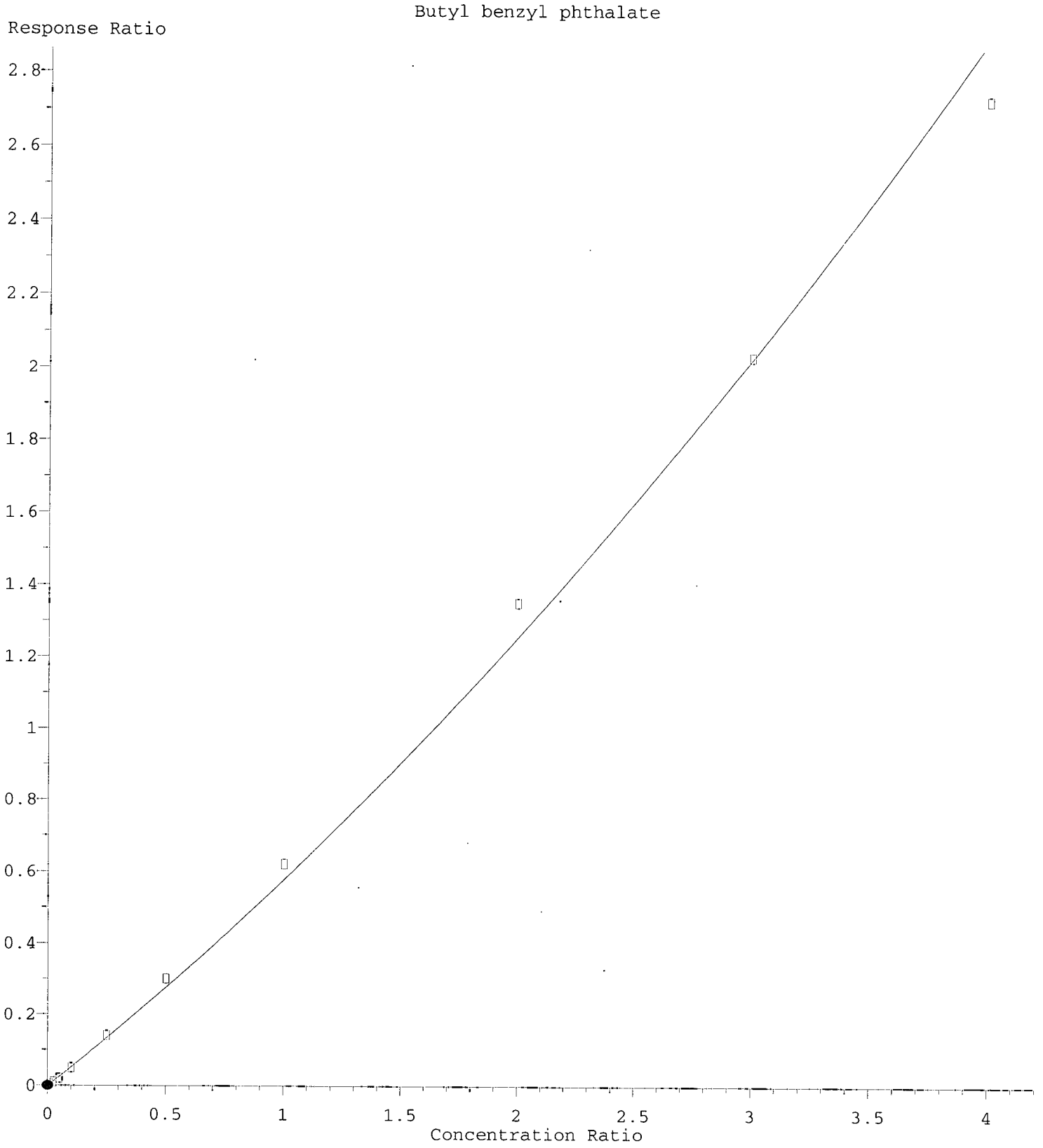
TIC: I05081919.D\data.ms

(76) Benzidine (T)

12.676min (+ 0.000) -1.00 ng/ml m

response 6349

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	15.10	14.46
92.10	11.90	10.75
0.00	0.00	0.00

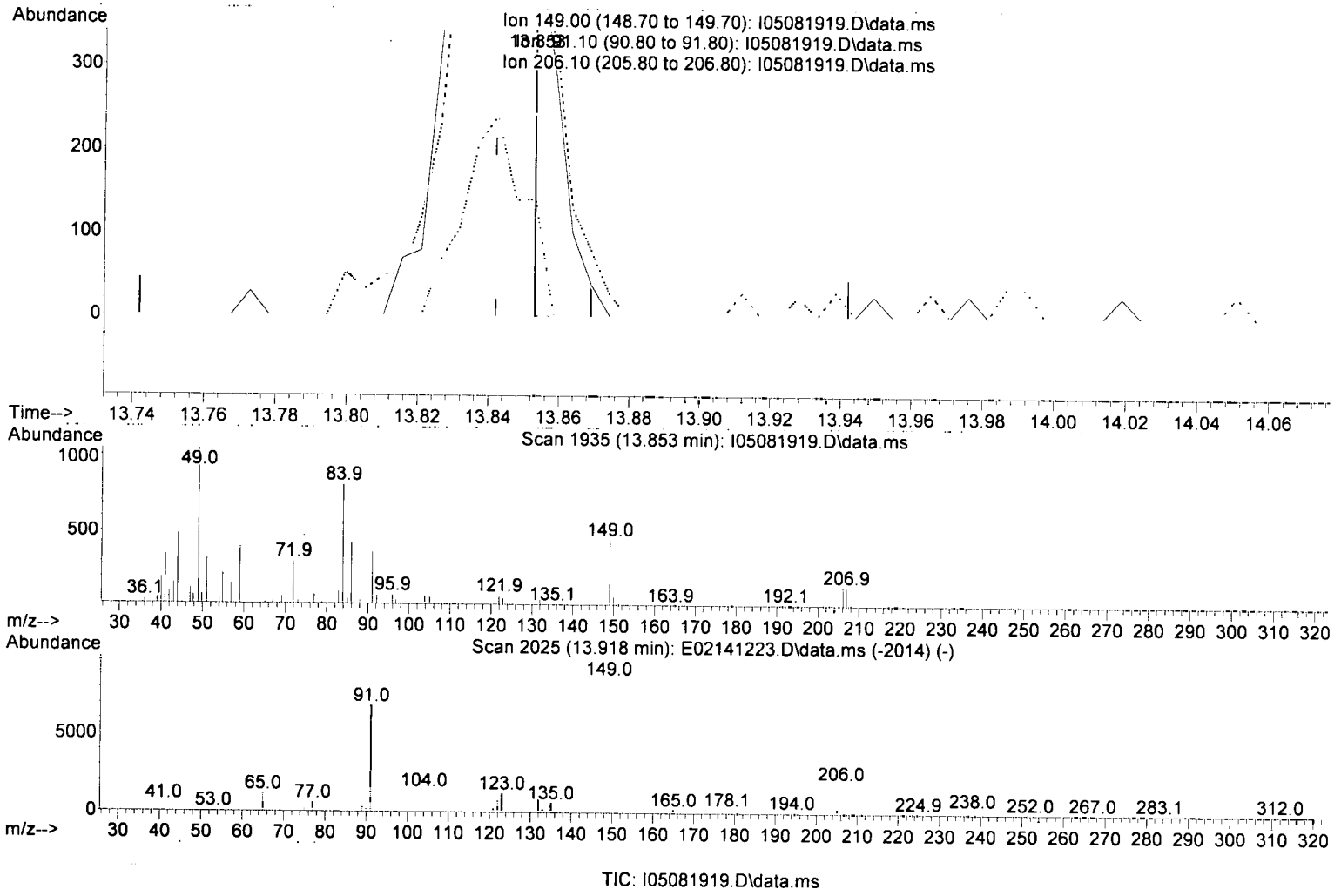


R = 4.75e-002 A*A + 5.33e-001 A - 2.59e-003
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



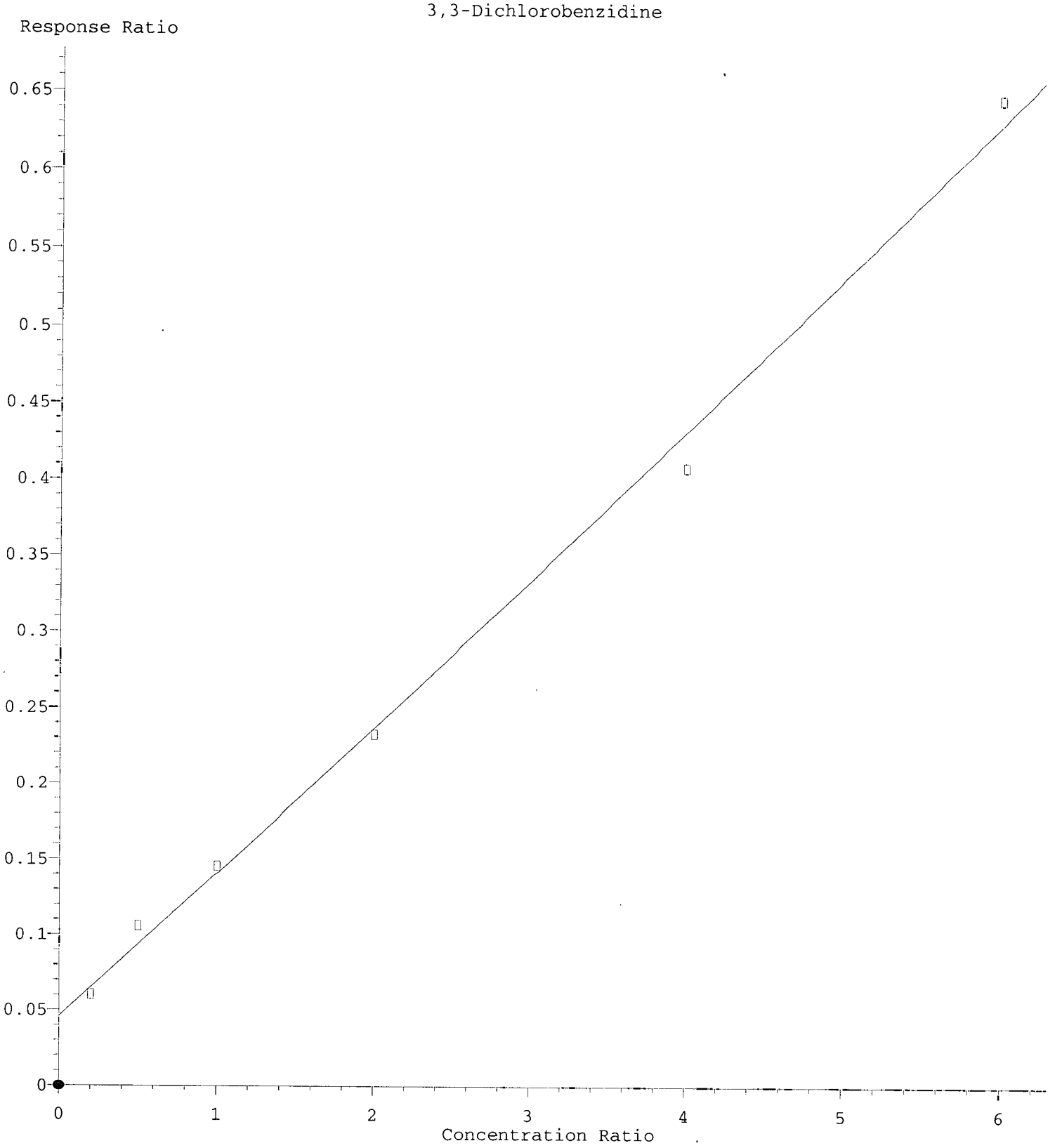
TIC: I05081919.D\data.ms

(80) Butyl benzyl phthalate (T)

13.853min (+ 0.011) 10.86 ng/ml m

response 141

Ion	Exp%	Act%
149.00	100.00	100.00
91.10	76.30	80.79
206.10	18.00	31.13
0.00	0.00	0.00

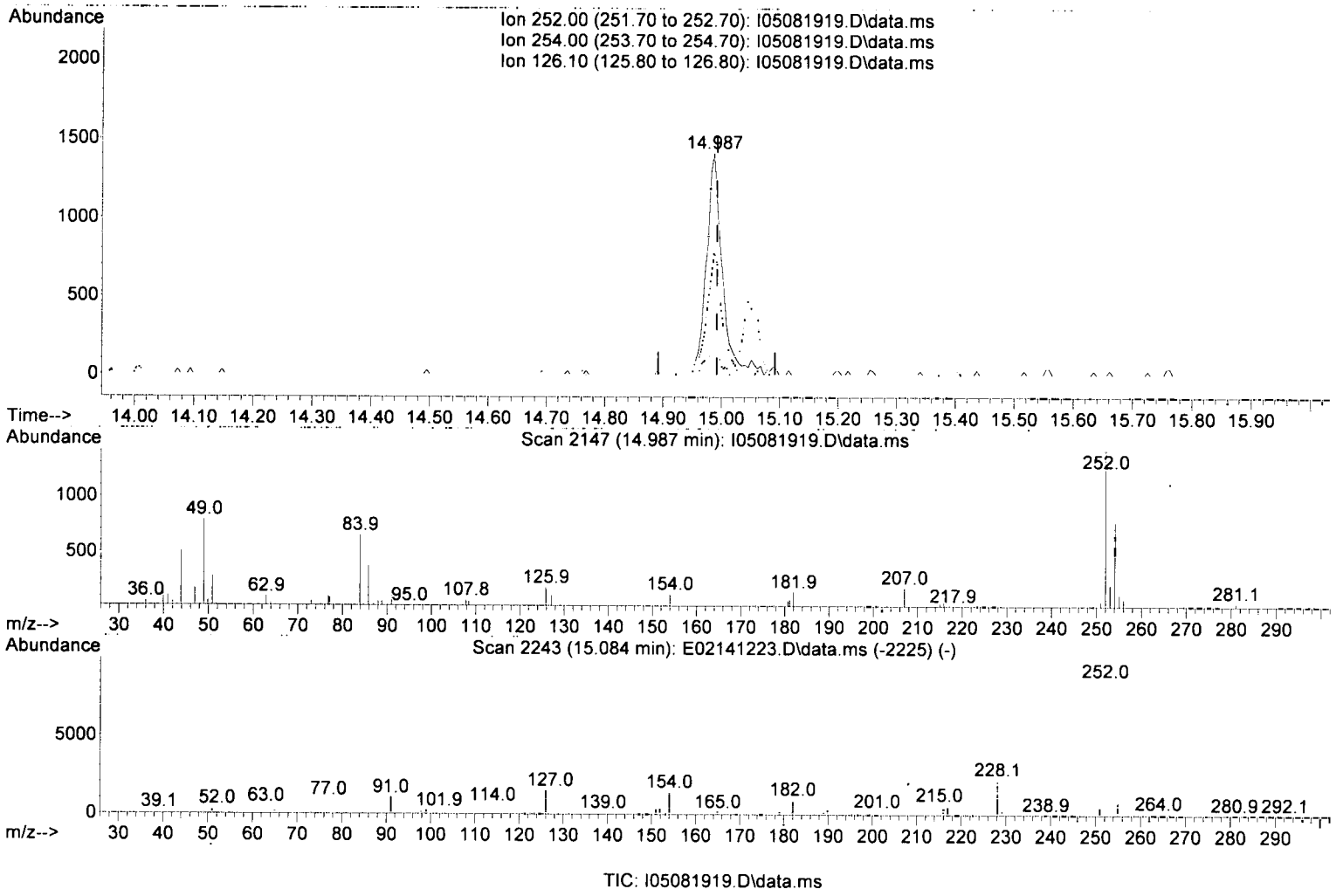


R = 5.56e-004 A*A + 9.39e-002 A + 4.63e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



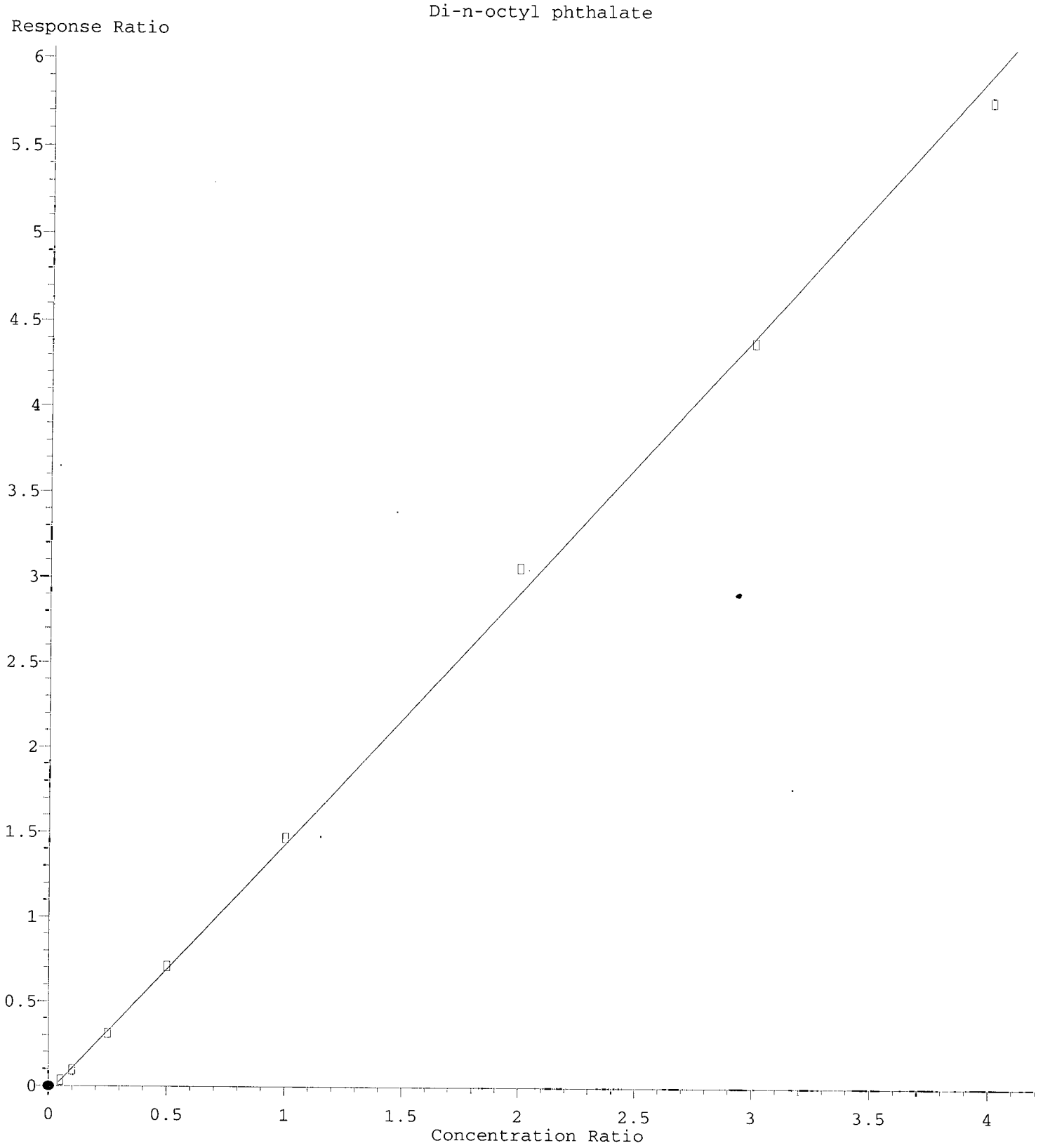
TIC: I05081919.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

14.987min (-0.005) -1.00 ng/ml m

response 2973

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	55.05
126.10	16.90	13.29
0.00	0.00	0.00

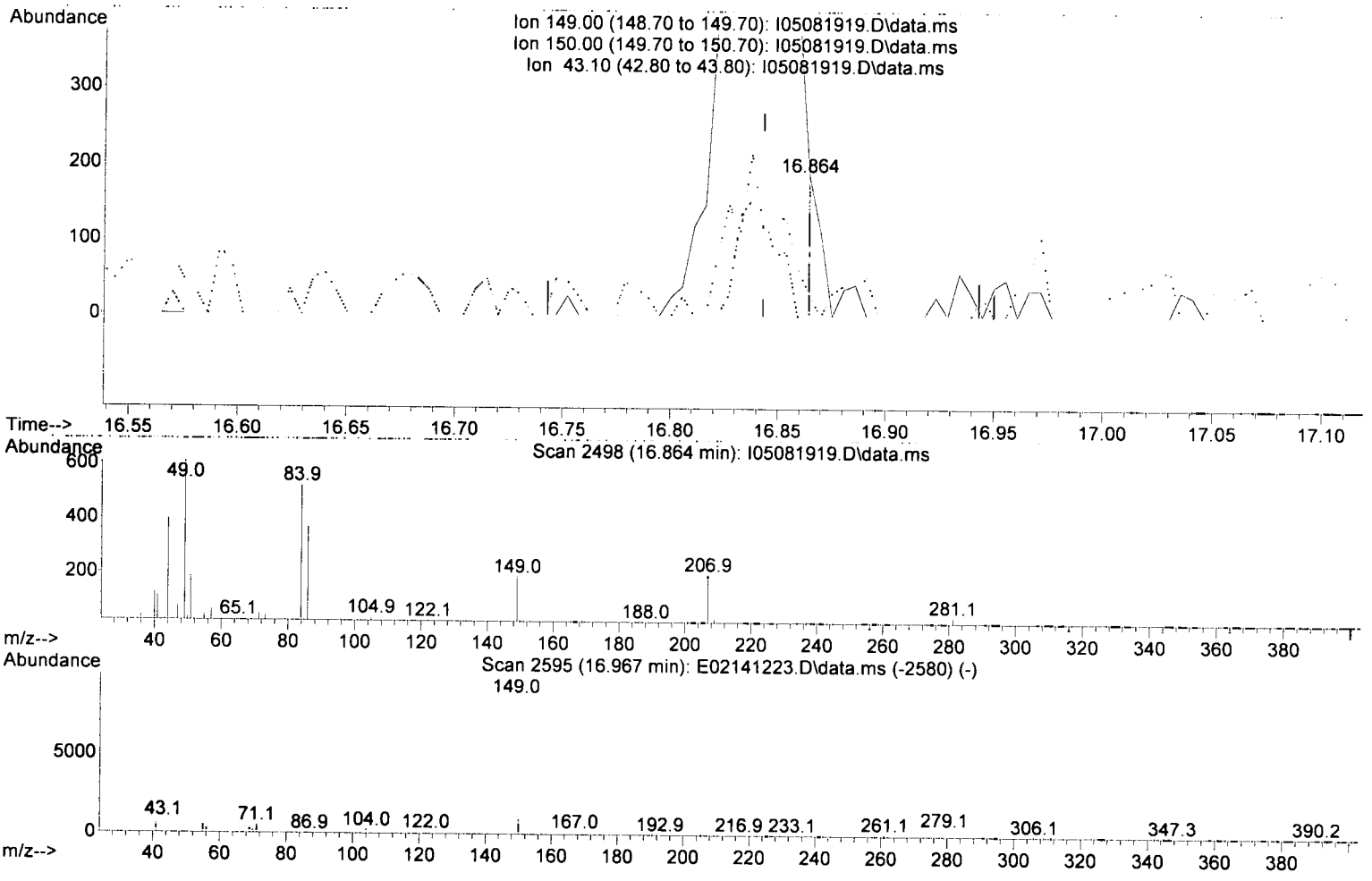


R = 7.21e-003 A*A + 1.46e+000 A - 4.17e-002
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



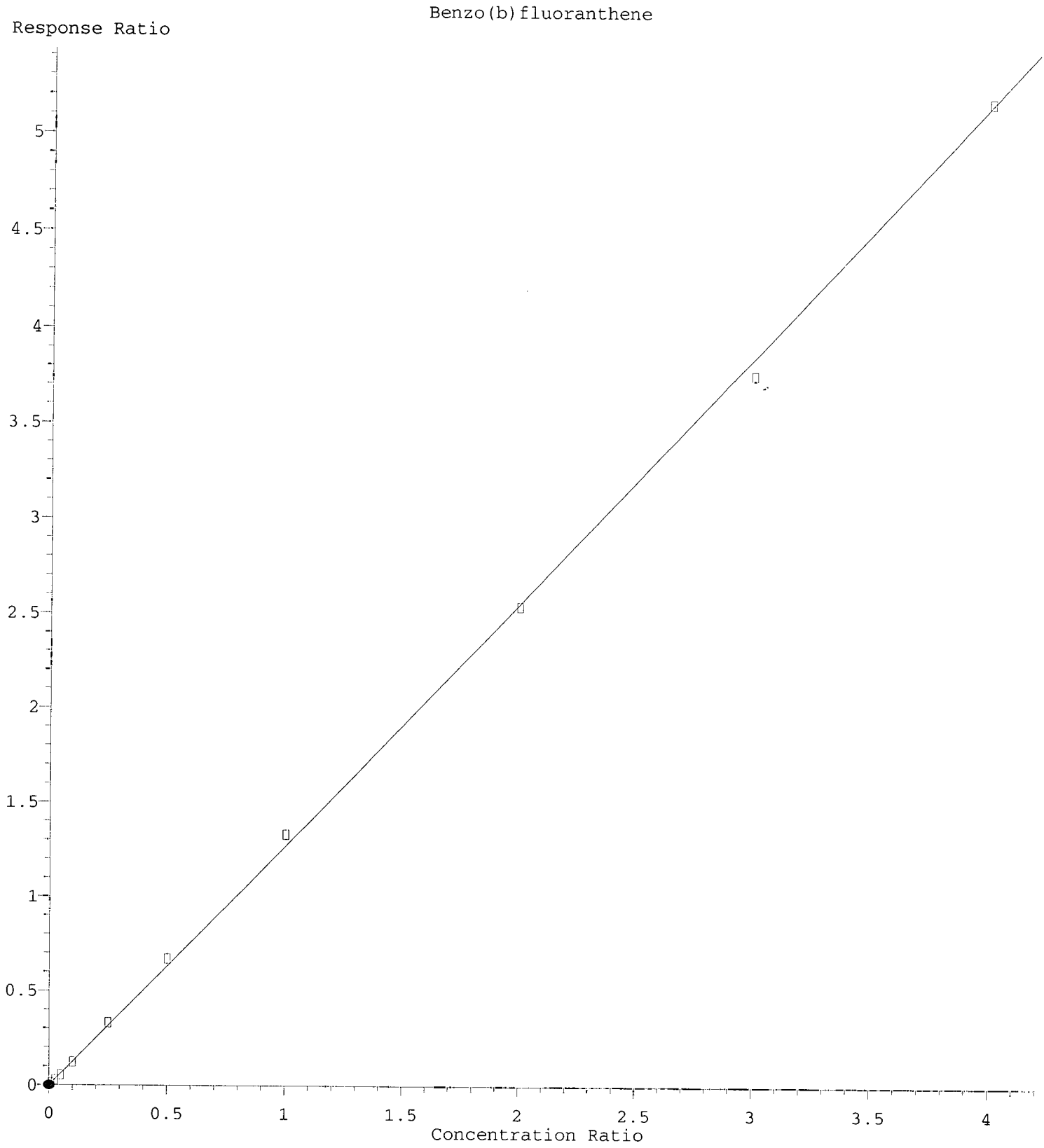
TIC: I05081919.D\data.ms

(87) Di-n-octyl phthalate (T)

16.864min (+ 0.021) 57.38 ng/ml m

response 110

Ion	Exp%	Act%
149.00	100.00	100.00
150.00	9.60	0.00
43.10	10.40	16.04
0.00	0.00	0.00

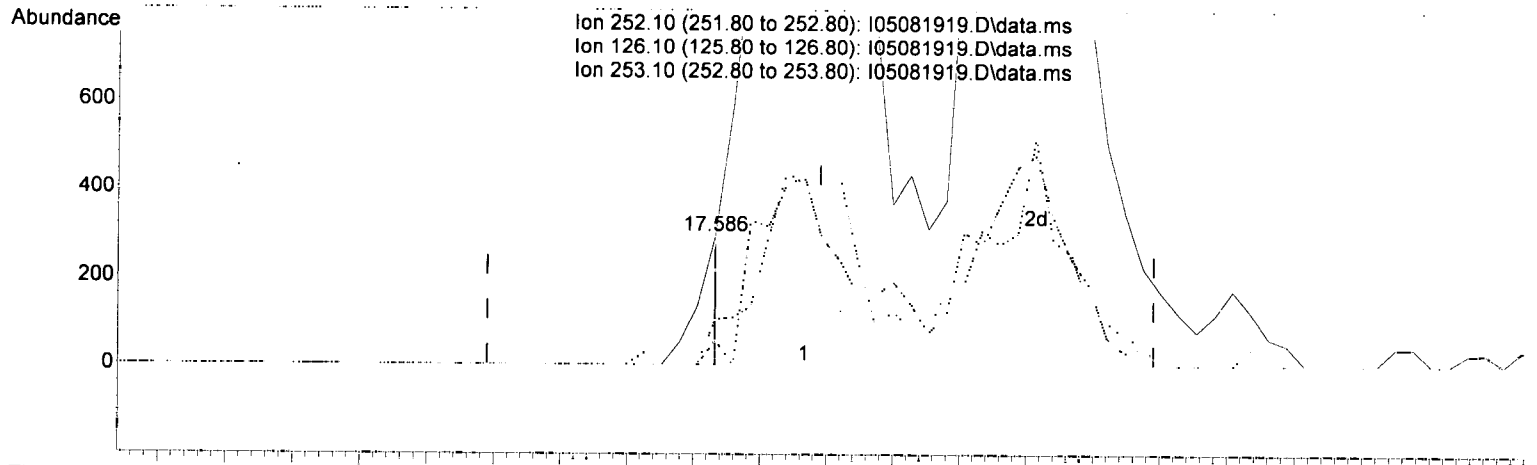


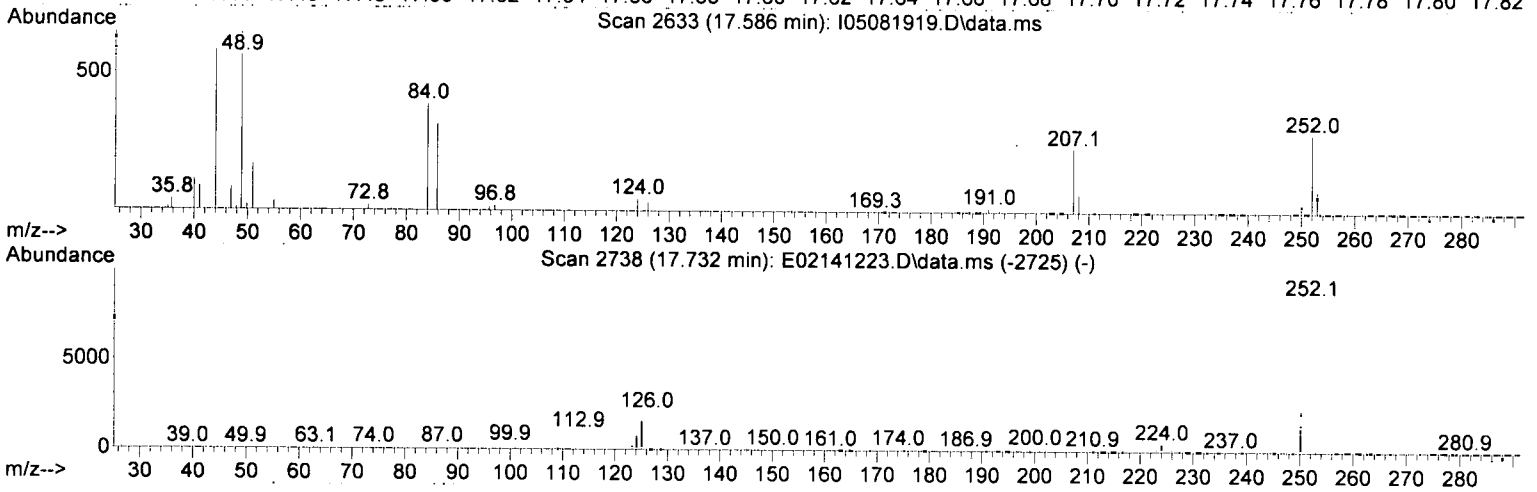
R = 6.58e-003 A*A + 1.26e+000 A - 2.78e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9





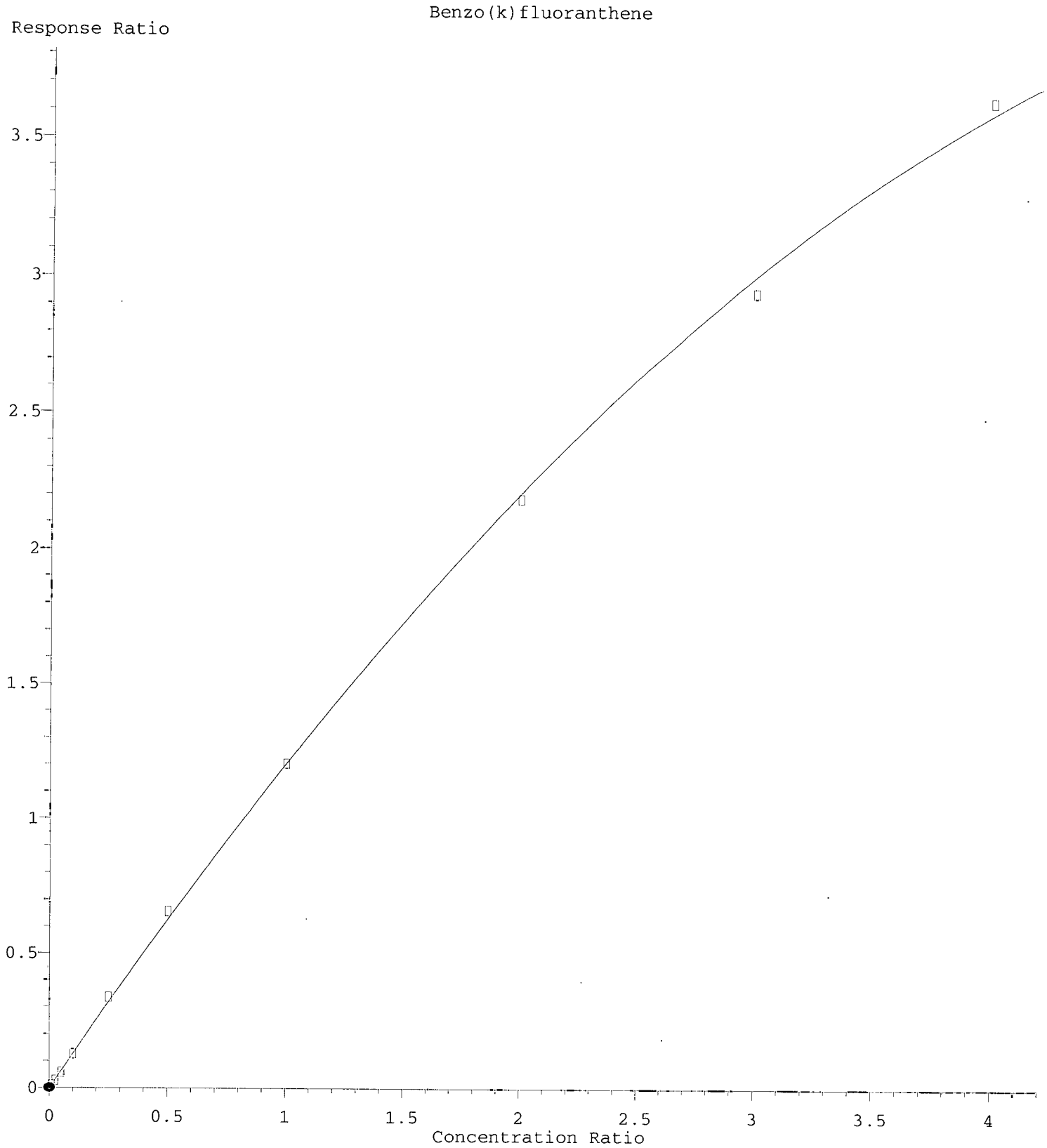
TIC: I05081919.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.586min (-0.032) 4.95 ng/ml m

response 153

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	18.71
253.10	22.00	35.03
0.00	0.00	0.00

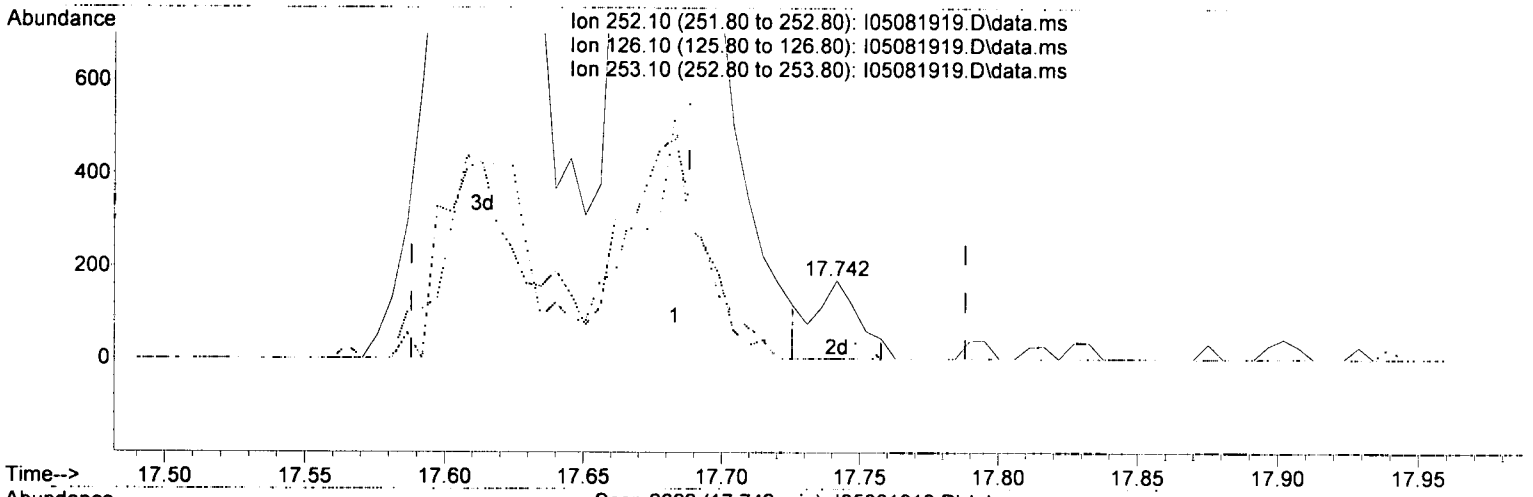


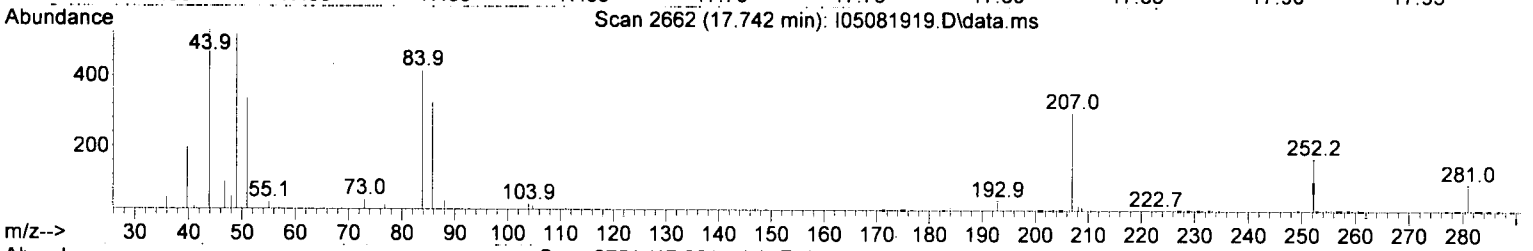
R = -1.03e-001 A*A + 1.31e+000 A - 3.30e-003
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

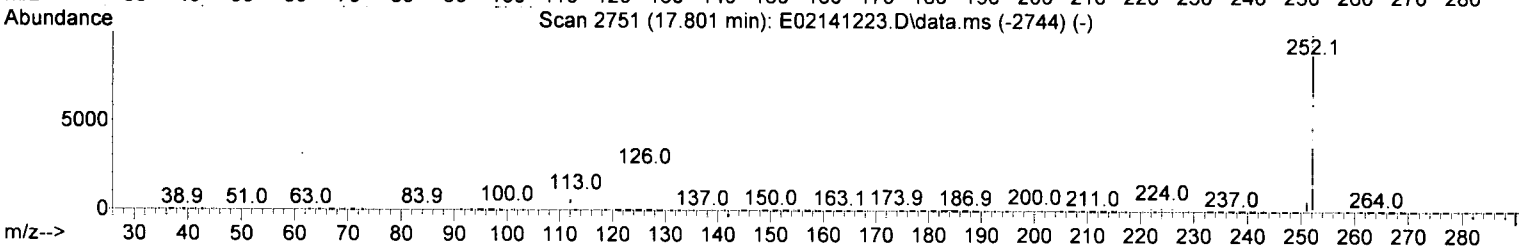
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







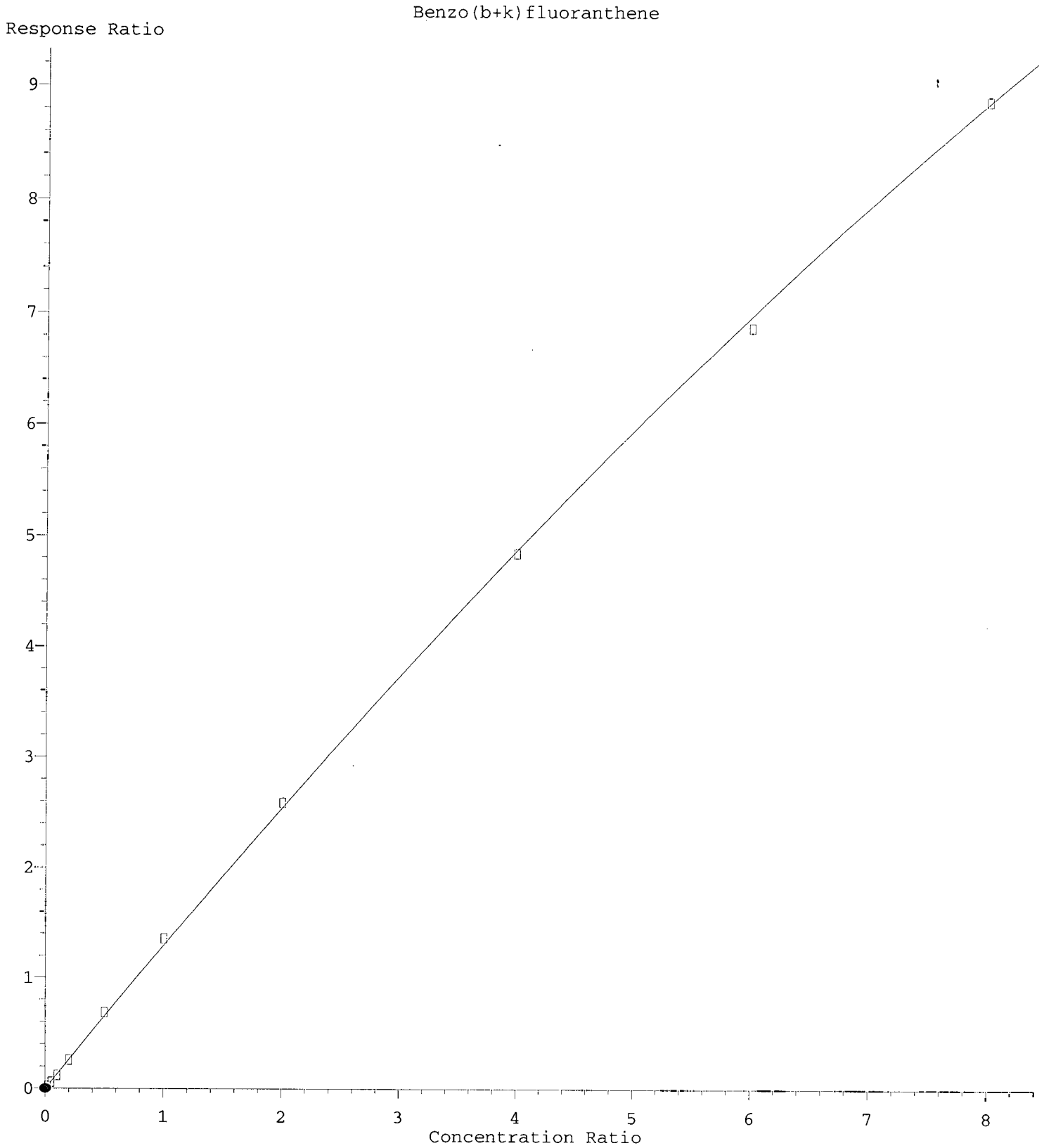
TIC: I05081919.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.742min (+ 0.054) 5.70 ng/ml m

response 187

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	0.00
253.10	21.70	0.00
0.00	0.00	0.00

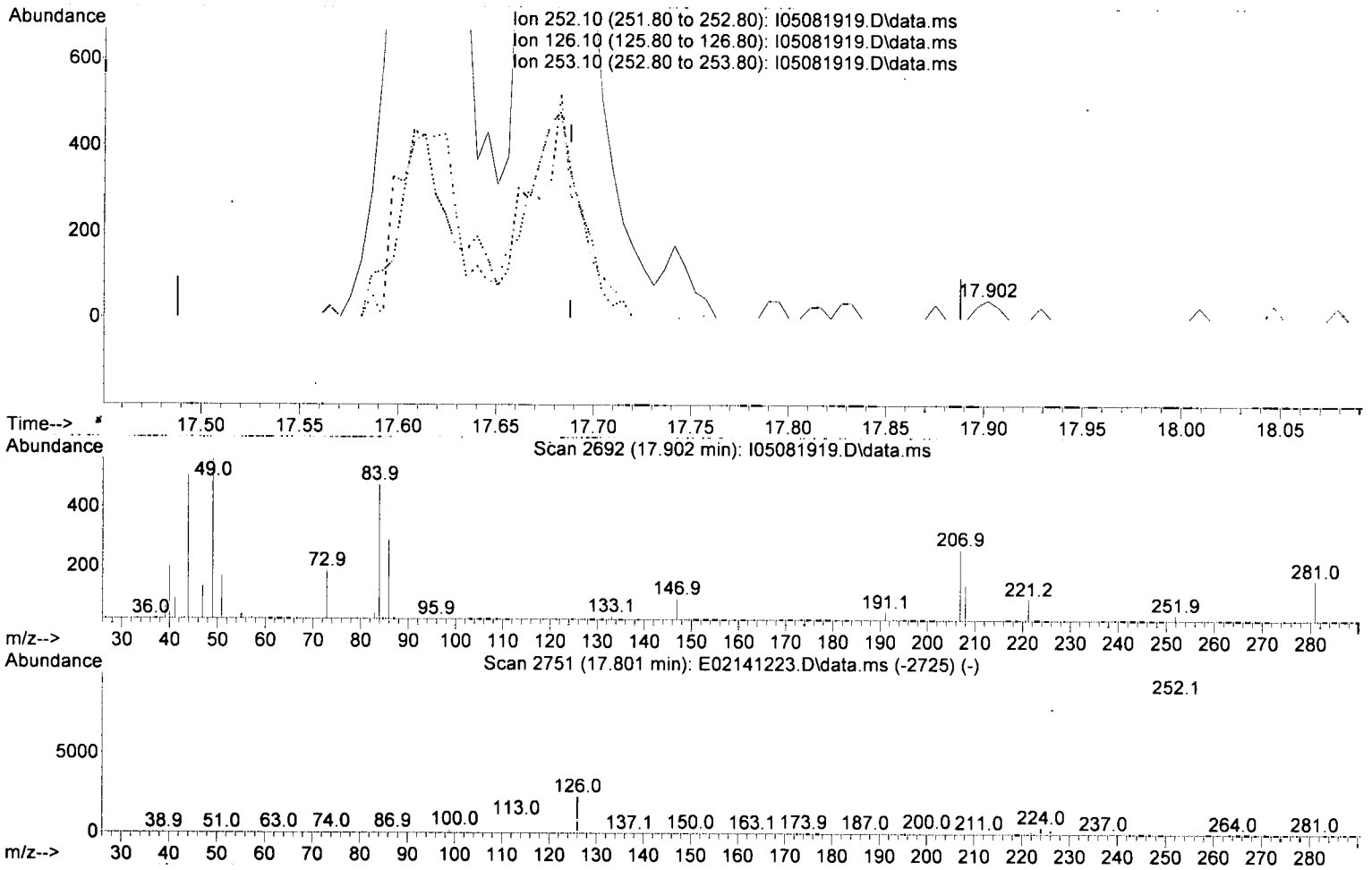


R = -2.76e-002 A*A + 1.33e+000 A - 6.81e-003
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



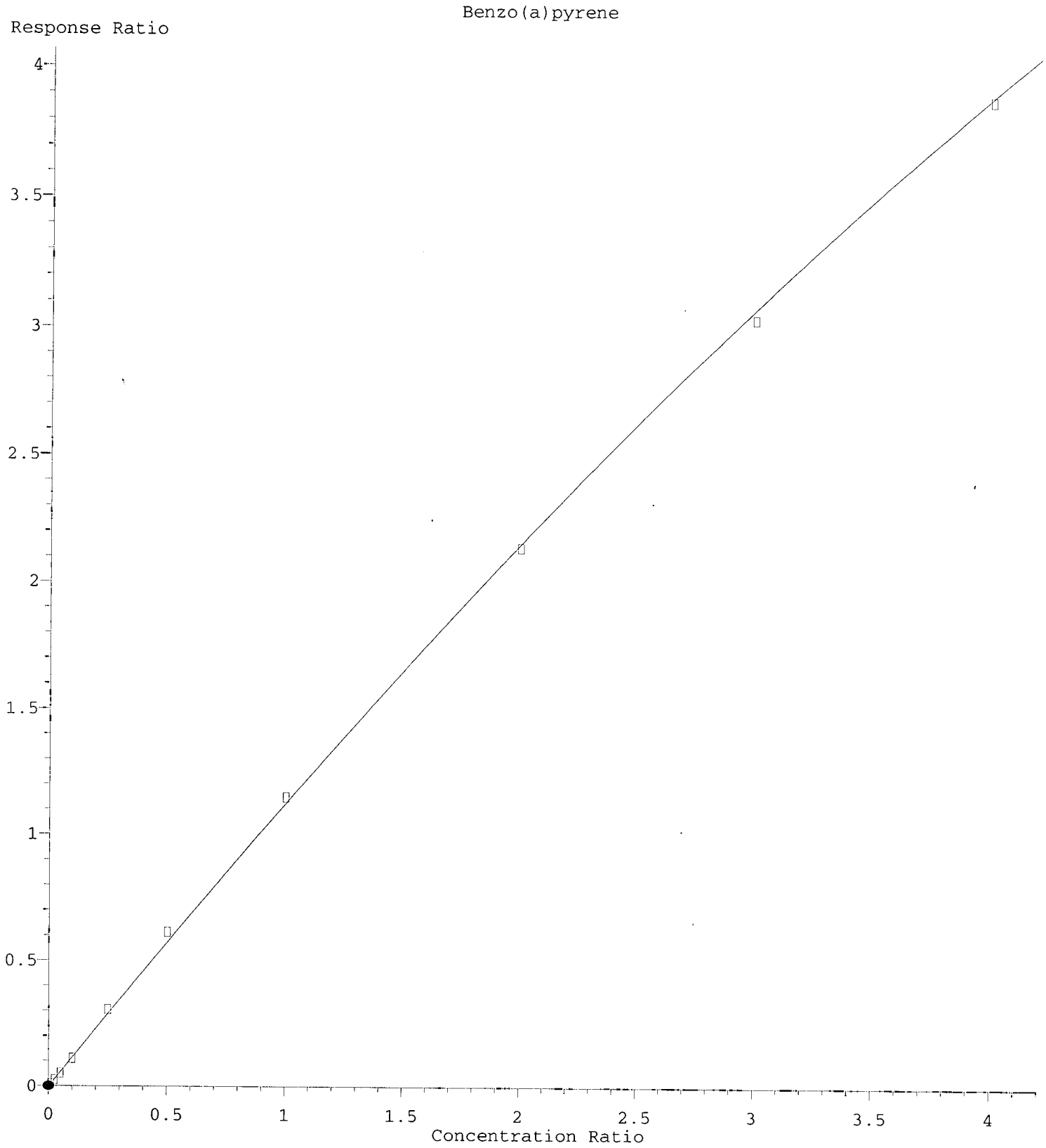
TIC: I05081919.D\data.ms

(90) Benzo(b+k)fluoranthene (T)

17.902min (+ 0.214) 10.63 ng/ml m

response 115

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	0.00
253.10	21.70	0.00
0.00	0.00	0.00

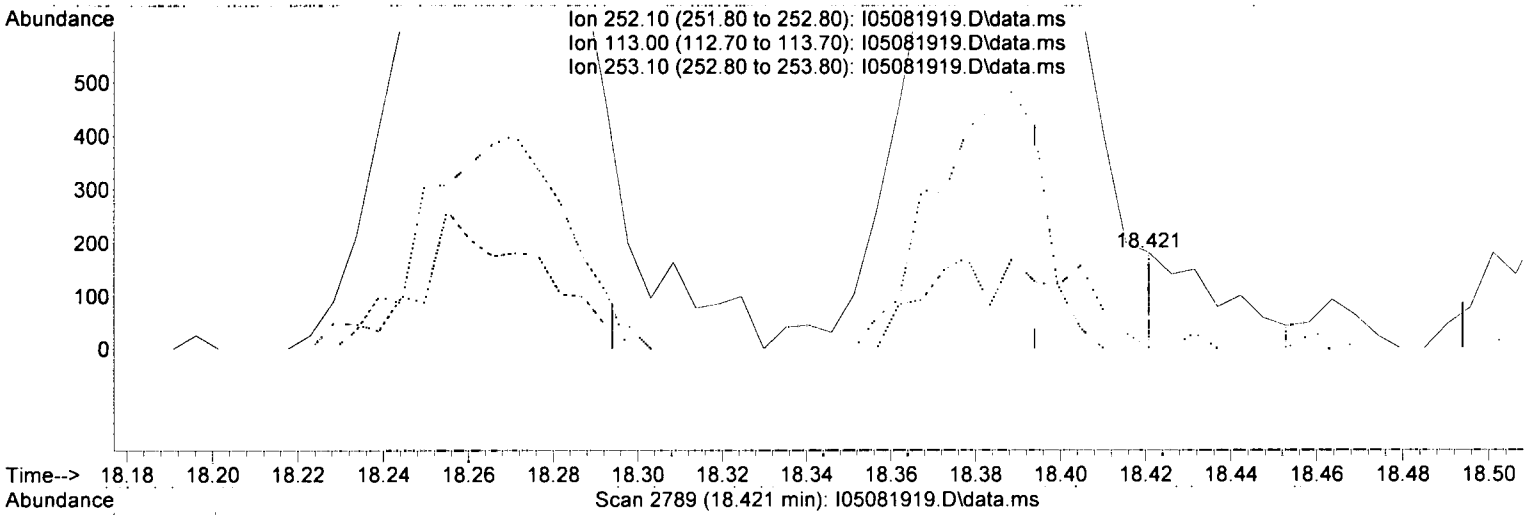


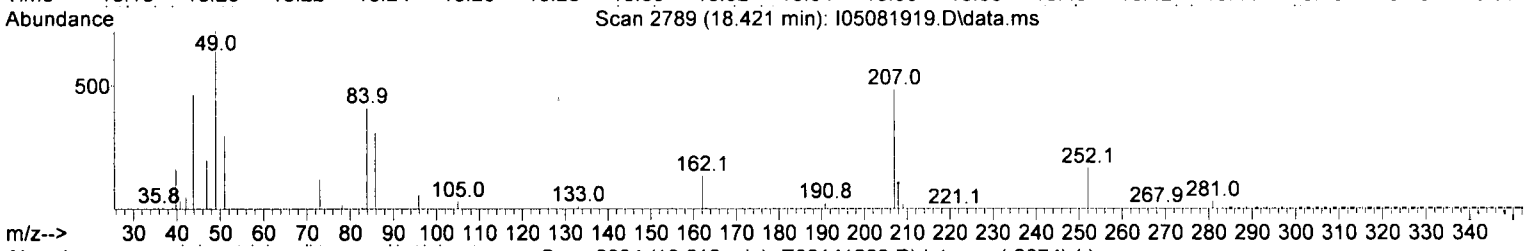
R = -5.14e-002 A*A + 1.18e+000 A - 3.91e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: T:\methods\SV9_050819.M
Calibration Table Last Updated: Thu May 09 13:06:21 2019

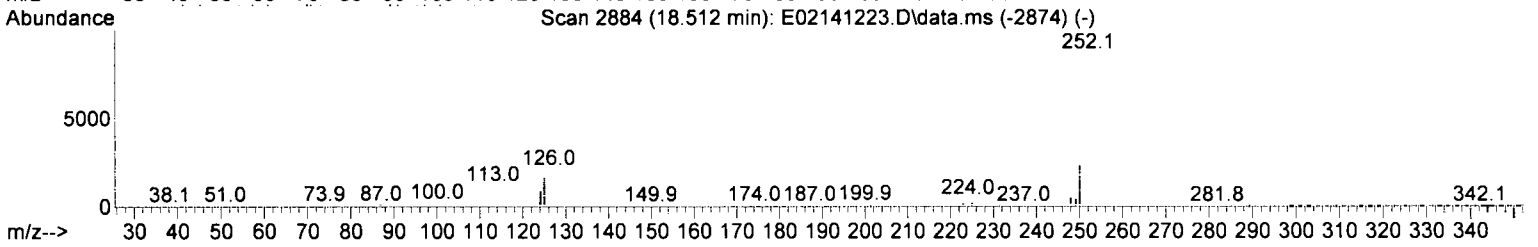
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\REQUANT\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 13:11:43 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081919.D\data.ms

(92) Benzo(a)pyrene (T)

18.421min (+ 0.027) 7.36 ng/ml m

response 183

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	0.00
253.10	21.60	0.00
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9E08056

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E08056-TUN1	MS Tune	Soil	A19D323	A19D031	5/8/2019 7:08:00PM
9E08056-ICB1	Initial Cal Blank	Soil		A19D031	5/8/2019 7:35:00PM
9E08056-CAL1	Cal Standard	Soil	A19D053	"	5/8/2019 8:12:00PM
9E08056-CAL2	Cal Standard	Soil	A19D054	"	5/8/2019 8:48:00PM
9E08056-CAL3	Cal Standard	Soil	A19D055	"	5/8/2019 9:25:00PM
9E08056-CAL4	Cal Standard	Soil	A19D056	"	5/8/2019 10:01:00PM
9E08056-CAL5	Cal Standard	Soil	A19D057	"	5/8/2019 10:38:00PM
9E08056-CAL6	Cal Standard	Soil	A19D058	"	5/8/2019 11:14:00PM
9E08056-CAL7	Cal Standard	Soil	A19D059	"	5/8/2019 11:50:00PM
9E08056-CAL8	Cal Standard	Soil	A19D060	"	5/9/2019 12:26:00AM
9E08056-CAL9	Cal Standard	Soil	A19D061	"	5/9/2019 1:01:00AM
9E08056-CALA	Cal Standard	Soil	A19D062	"	5/9/2019 1:37:00AM
9E08056-ICV1	Initial Cal Check	Soil	A19C239	"	5/9/2019 2:48:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E1009** Instrument: **SV-GCMS9**

8270D LL Full List Sequence: **9E08056** Matrix: **Soil**

9E08056-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9E08056-CALA	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: 9E08056

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: **A9E1009** Instrument: **SV-GCMS9**

8270D LL Full List Sequence: **9E08056** Matrix: **Soil**

9E08056-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 SEQUENCE REVIEW SHEET

SEQUENCE: 9E08056

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9E08056-TUN1	MS Tune	Water	A19D323	A19D031	5/8/2019 7:08:00PM
9E08056-ICB1	Initial Cal Blank	Water		A19D031	5/8/2019 7:35:00PM
9E08056-CAL1	Cal Standard	Water	A19D053	"	5/8/2019 8:12:00PM
9E08056-CAL2	Cal Standard	Water	A19D054	"	5/8/2019 8:48:00PM
9E08056-CAL3	Cal Standard	Water	A19D055	"	5/8/2019 9:25:00PM
9E08056-CAL4	Cal Standard	Water	A19D056	"	5/8/2019 10:01:00PM
9E08056-CAL5	Cal Standard	Water	A19D057	"	5/8/2019 10:38:00PM
9E08056-CAL6	Cal Standard	Water	A19D058	"	5/8/2019 11:14:00PM
9E08056-CAL7	Cal Standard	Water	A19D059	"	5/8/2019 11:50:00PM
9E08056-CAL8	Cal Standard	Water	A19D060	"	5/9/2019 12:26:00AM
9E08056-CAL9	Cal Standard	Water	A19D061	"	5/9/2019 1:01:00AM
9E08056-CALA	Cal Standard	Water	A19D062	"	5/9/2019 1:37:00AM
9E08056-ICV1	Initial Cal Check	Water	A19C239	"	5/9/2019 2:48:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9E1009** Instrument: **SV-GCMS9**

8270D LL Full List Sequence: **9E08056** Matrix: **Water**

9E08056-CAL1	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL2	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL3	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL4	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL5	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL6	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL7	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL8	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CAL9	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9E08056-CALA	**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: 9E08056

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: **A9E1009** Instrument: **SV-GCMS9**

8270D LL Full List Sequence: **9E08056** Matrix: **Water**

9E08056-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.

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	100	0.00
2	T	N-Nitrosodimethylamine	1000.000	979.663	2.0	106	0.00
3	T	Pyridine	1000.000	944.023	5.6	98	0.00
4	S	2-Fluorophenol (Surr)	1000.000	1015.004	-1.5	102	0.00
5	S	Phenol-d6 (Surr)	1000.000	1003.193	-0.3	101	0.00
6	T	Phenol	1000.000	1055.456	-5.5	104	0.00
7	T	Aniline	1000.000	1016.543	-1.7	113	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	1038.528	-3.9	101	0.00
9	T	2-Chlorophenol	1000.000	1028.048	-2.8	100	0.00
10	T	1,3-Dichlorobenzene	1000.000	988.801	1.1	98	0.00
11	T	1,4-Dichlorobenzene	1000.000	1008.149	-0.8	98	0.00
12	T	Benzyl alcohol	1000.000	966.033	3.4	94	0.00
13	T	1,2-Dichlorobenzene	1000.000	1021.899	-2.2	100	0.00
14	T	2-Methylphenol	1000.000	1042.888	-4.3	102	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	986.011	1.4	97	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1034.019	-3.4	101	0.00
17	T	3+4-Methylphenol	1000.000	1053.446	-5.3	100	0.00
18	T	Hexachloroethane	1000.000	1002.566	-0.3	100	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	982.981	1.7	100	0.00
20	T	Nitrobenzene	1000.000	997.639	0.2	100	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	102	0.00
22	T	Isophorone	1000.000	1041.611	-4.2	101	0.00
23	T	2-Nitrophenol	1000.000	1112.080	-11.2	106	0.00
24	T	2,4-Dimethylphenol	1000.000	1029.019	-2.9	96	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1029.922	-3.0	101	0.00
26	T	Benzoic acid	2000.000	1883.744	5.8	88	0.00
27	T	2,4-Dichlorophenol	1000.000	1034.808	-3.5	103	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1012.195	-1.2	98	0.00
29	T	Naphthalene	1000.000	1009.997	-1.0	98	0.00
30	T	4-Chloroaniline	1000.000	967.402	3.3	96	0.00
31	T	Hexachlorobutadiene	1000.000	1022.646	-2.3	102	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1007.280	-0.7	100	0.00
33	T	2-Methylnaphthalene	1000.000	1061.904	-6.2	100	0.00
34	T	1-Methylnaphthalene	1000.000	1041.615	-4.2	98	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	101	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1071.823	-7.2	102	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1042.933	-4.3	100	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1087.056	-8.7	102	0.00
39	T	1,1'-Biphenyl	1000.000	1072.168	-7.2	100	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1079.788	-8.0	101	0.00
41	T	2-Chloronaphthalene	1000.000	1075.710	-7.6	101	0.00
42	T	2-Nitroaniline	1000.000	1099.892	-10.0	103	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1064.534	-6.5	99	0.00
44	T	1,4-Dinitrobenzene	1000.000	1073.010	-7.3	105	0.00
45	T	Dimethyl phthalate	1000.000	1061.689	-6.2	101	0.00
46	T	1,3-Dinitrobenzene	1000.000	1096.253	-9.6	102	0.00
47	T	2,6-Dinitrotoluene	1000.000	1126.253	-12.6	102	0.00
48	T	1,2-Dinitrobenzene	1000.000	1070.352	-7.0	99	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

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)
49	T	Acenaphthylene	1000.000	1088.765	-8.9	101	0.00
50	T	3-Nitroaniline	1000.000	1148.365	-14.8	105	0.00
51	T	Acenaphthene	1000.000	1038.577	-3.9	100	0.00
52	T	2,4-Dinitrophenol	1000.000	946.801	5.3	93	0.00
53	T	4-Nitrophenol	1000.000	1034.680	-3.5	99	0.00
54	T	2,4-Dinitrotoluene	1000.000	1028.340	-2.8	100	0.00
55	T	Dibenzofuran	1000.000	1074.202	-7.4	101	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1036.218	-3.6	99	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1057.546	-5.8	99	0.00
58	T	Diethyl phthalate	1000.000	1008.933	-0.9	100	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	979.815	2.0	100	0.00
60	T	Fluorene	1000.000	980.699	1.9	100	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1021.183	-2.1	100	0.00
62	T	4-Nitroaniline	1000.000	1148.137	-14.8	107	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1164.436	-16.4	114	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	102	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1041.336	-4.1	100	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1062.752	-6.3	101	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1085.756	-8.6	98	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1067.925	-6.8	102	0.00
69	T	Hexachlorobenzene	1000.000	1008.788	-0.9	101	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1037.903	-3.8	103	0.00
71	T	Phenanthrene	1000.000	1007.111	-0.7	100	0.00
72	T	Anthracene	1000.000	1026.924	-2.7	101	0.00
73	T	Carbazole	1000.000	1083.500	-8.3	100	0.00
74	T	Di-n-butyl phthalate	1000.000	1076.331	-7.6	100	0.00
75	T	Fluoranthene	1000.000	1068.458	-6.8	100	0.00
76	T	Benzidine	2000.000	1732.757	13.4	83	0.00
77	T	Pyrene	1000.000	1041.218	-4.1	100	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	101	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1043.187	-4.3	101	0.00
80	T	Butyl benzyl phthalate	1000.000	1062.300	-6.2	99	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	995.630	0.4	99	0.00
82	T	3,3-Dichlorobenzidine	2000.000	2074.489	-3.7	100	0.00
83	T	Benz(a)anthracene	1000.000	1044.678	-4.5	102	0.00
84	T	Chrysene	1000.000	1000.048	-0.0	100	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	1060.069	-6.0	101	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	102	0.00
87	T	Di-n-octyl phthalate	1000.000	1012.789	-1.3	101	0.00
88	T	Benzo(b)fluoranthene	1000.000	1035.108	-3.5	100	0.00
89	T	Benzo(k)fluoranthene	1000.000	1008.985	-0.9	98	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2026.947	-1.3	99	0.00
91	T	Benzo(e)pyrene	1000.000	1058.505	-5.9	100	0.00
92	T	Benzo(a)pyrene	1000.000	1026.248	-2.6	98	0.00
93	T	Perylene	1000.000	1159.571	-16.0	111	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	100	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

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)
95 T	Indeno(1,2,3-cd)pyrene	1000.000	987.220	1.3	99	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1027.936	-2.8	99	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1055.892	-5.6	100	0.00

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 09 10:13:18 2019
Quant Method : T:\methods\DFTPP-625.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu May 09 10:12:54 2019
Response via : Initial Calibration
InstName : SV-GCMS9

9/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) Naphthalene-d8	7.942	136	177402	2.00	ug/mL	0.00
2) Acenaphthene-d10	9.713	162	79924	2.00	ug/mL	0.00
4) Phenanthrene-d10	11.221	188	119012	2.00	ug/mL	0.00
10) Chrysene-d12	14.944	240	104422	2.00	ug/mL	0.00
11) Perylene-d12	16.933	264	91182	2.00	ug/mL	0.00
Target Compounds						Qvalue
3) Pentachlorophenol	11.039	266	258730	28.85	ug/mL	98
5) DFTPP	11.504	442	233124	23.30	ug/mL#	68
6) Benzidine	12.687	184	1059560	29.57	ug/mL	96
7) 4,4-DDE	12.949	TIC	14865	No Calib	#	
8) 4,4-DDD	13.467	TIC	27182	5.51	ug/mL#	100
9) 4,4-DDT	14.045	TIC	3476962	34.67	ug/mL#	1

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

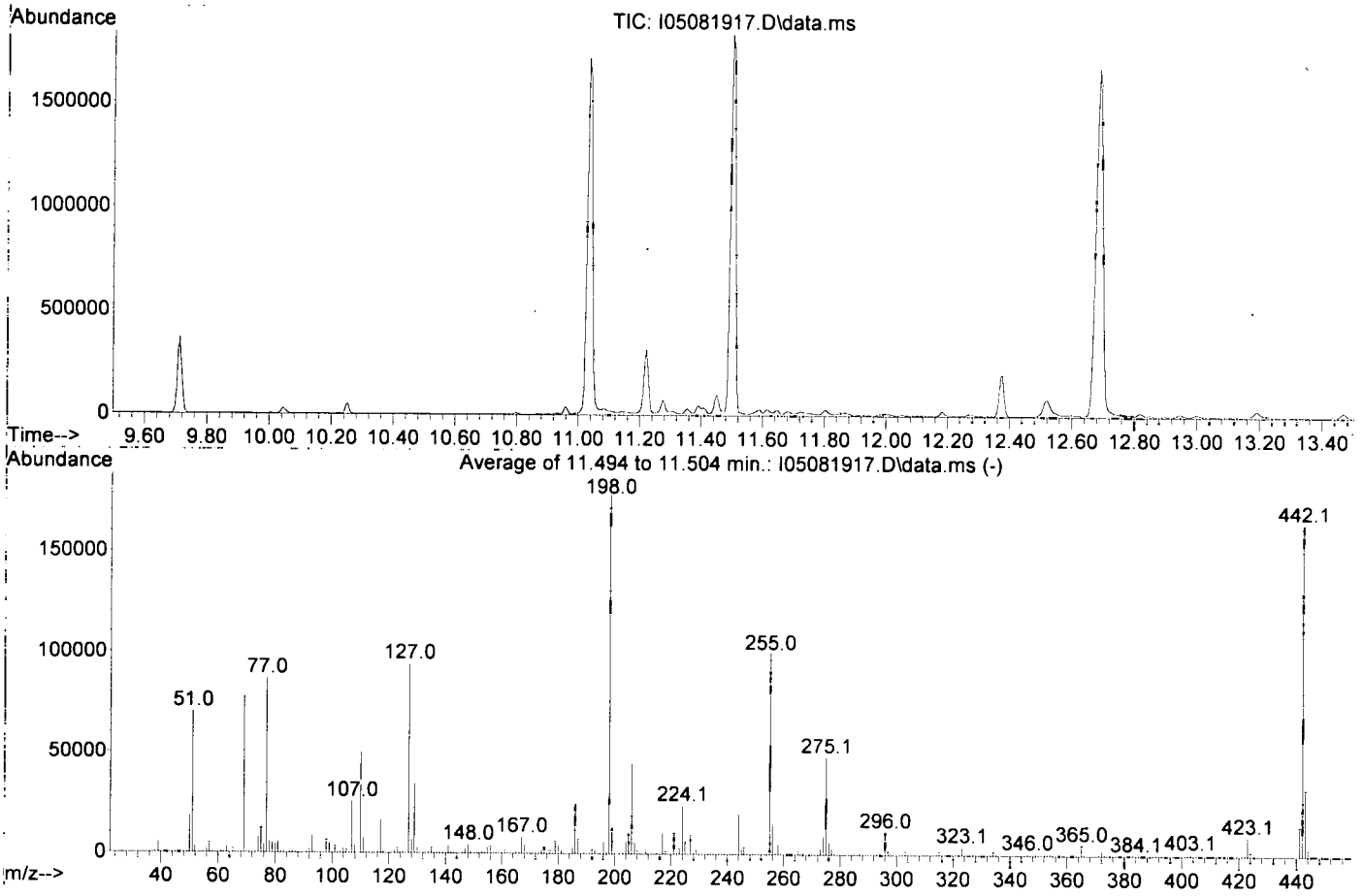
DFTPP

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

JK 5/9/19

Method : T:\methods\DFTPP-625.M
Title : DFTPP Tune Methodug/mL
Last Update : Thu May 09 10:12:54 2019



AutoFind: Scans 1497, 1498, 1499; Background Corrected with Scan 1491

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	39.1	70134	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.5	78009	PASS
70	69	0.00	2	0.5	368	PASS
127	198	40	60	52.5	94209	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	179499	PASS
199	198	5	9	7.1	12762	PASS
275	198	10	30	27.0	48432	PASS
365	198	1	100	2.9	5249	PASS
441	443	0.01	100	43.2	14368	PASS
442	198	40	100	91.7	164629	PASS
443	442	17	23	20.2	33256	PASS

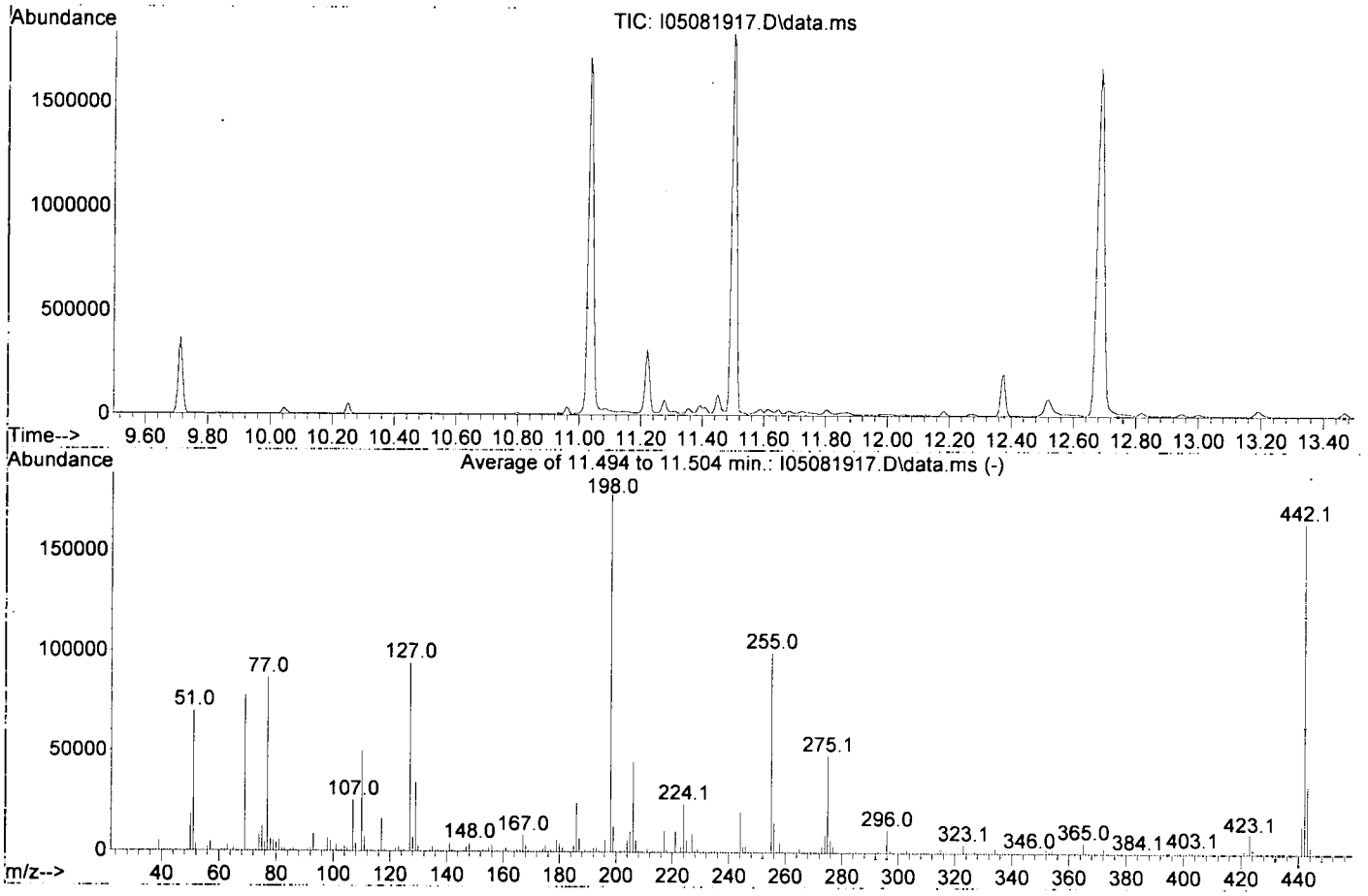
DFTPP

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\methods\DFTPP-8270.M
Title : DFTPP Tune Methodug/mL
Last Update : Wed May 08 19:51:32 2019

JK 5/10/19



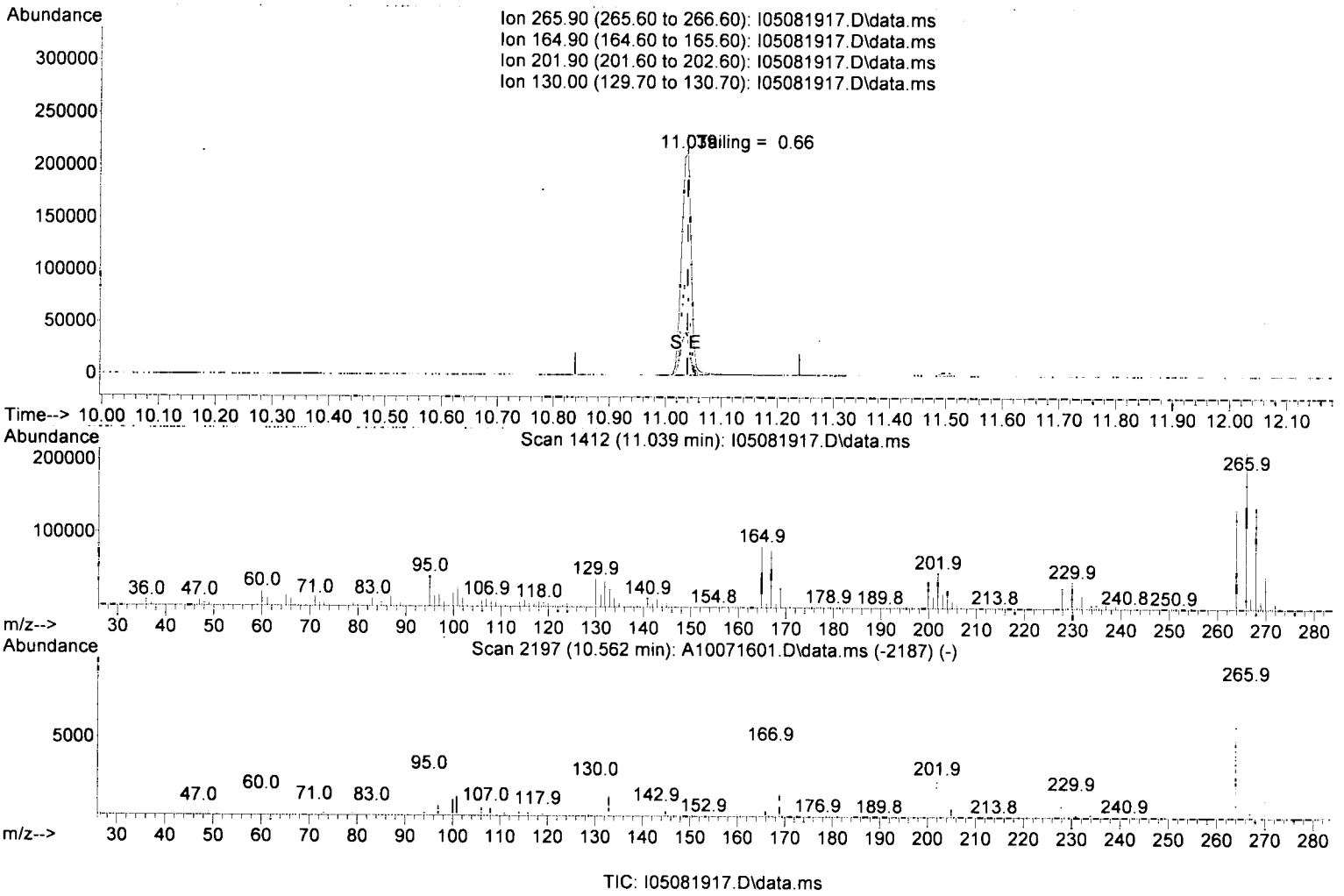
AutoFind: Scans 1497, 1498, 1499; Background Corrected with Scan 1491

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.1	70134	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.5	78009	PASS
70	69	0.00	2	0.5	368	PASS
127	198	10	80	52.5	94209	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	179499	PASS
199	198	5	9	7.1	12762	PASS
275	198	10	60	27.0	48432	PASS
365	198	1	100	2.9	5249	PASS
441	442	0.01	24	8.7	14368	PASS
442	198	50	200	91.7	164629	PASS
443	442	15	24	20.2	33256	PASS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 09 10:13:18 2019
Quant Method : T:\methods\DFTPP-625.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu May 09 10:12:54 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081917.D\data.ms

(3) Pentachlorophenol

11.039min (0.000) 28.85 ug/mL

response 258730

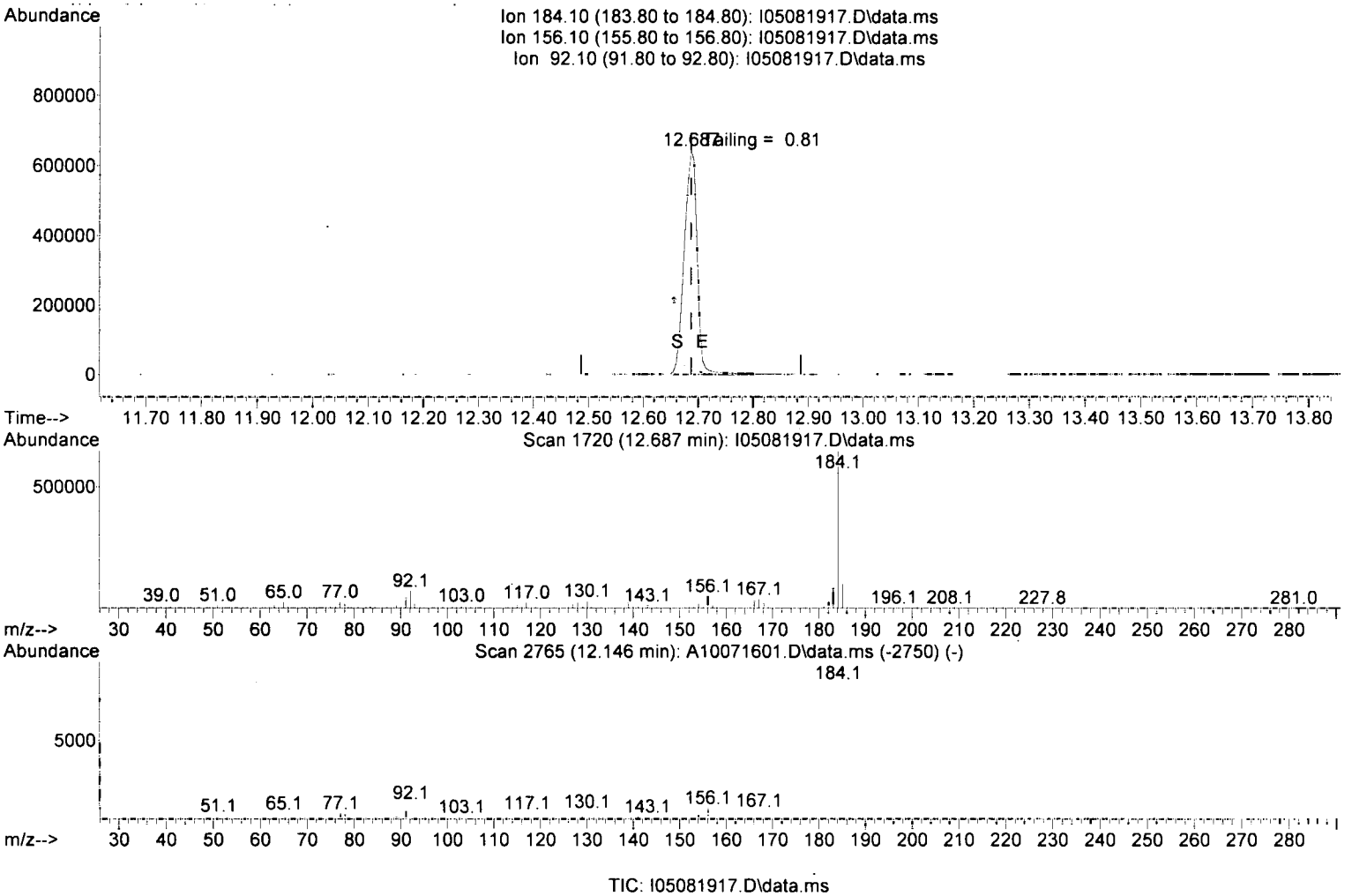
Ion	Exp%	Act%
265.90	100.00	100.00
164.90	40.70	38.94
201.90	21.80	22.28
130.00	18.60	17.95

JK 5/9/19

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 09 10:13:18 2019
Quant Method : T:\methods\DFTPP-625.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu May 09 10:12:54 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081917.D\data.ms

(6) Benzidine

12.687min (0.000) 29.57 ug/mL

response 1059560

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	7.00	7.51
92.10	8.90	10.92
0.00	0.00	0.00

JK 5/9/19

DDT Breakdown Check (Validated 5/1/2013)

From:
9E08056-TUN1
SV-GCMS9

First Column Area Counts		Percent Breakdown	
DDE	14865		
DDD	27182		
DDT	13476962	1.19	PASS

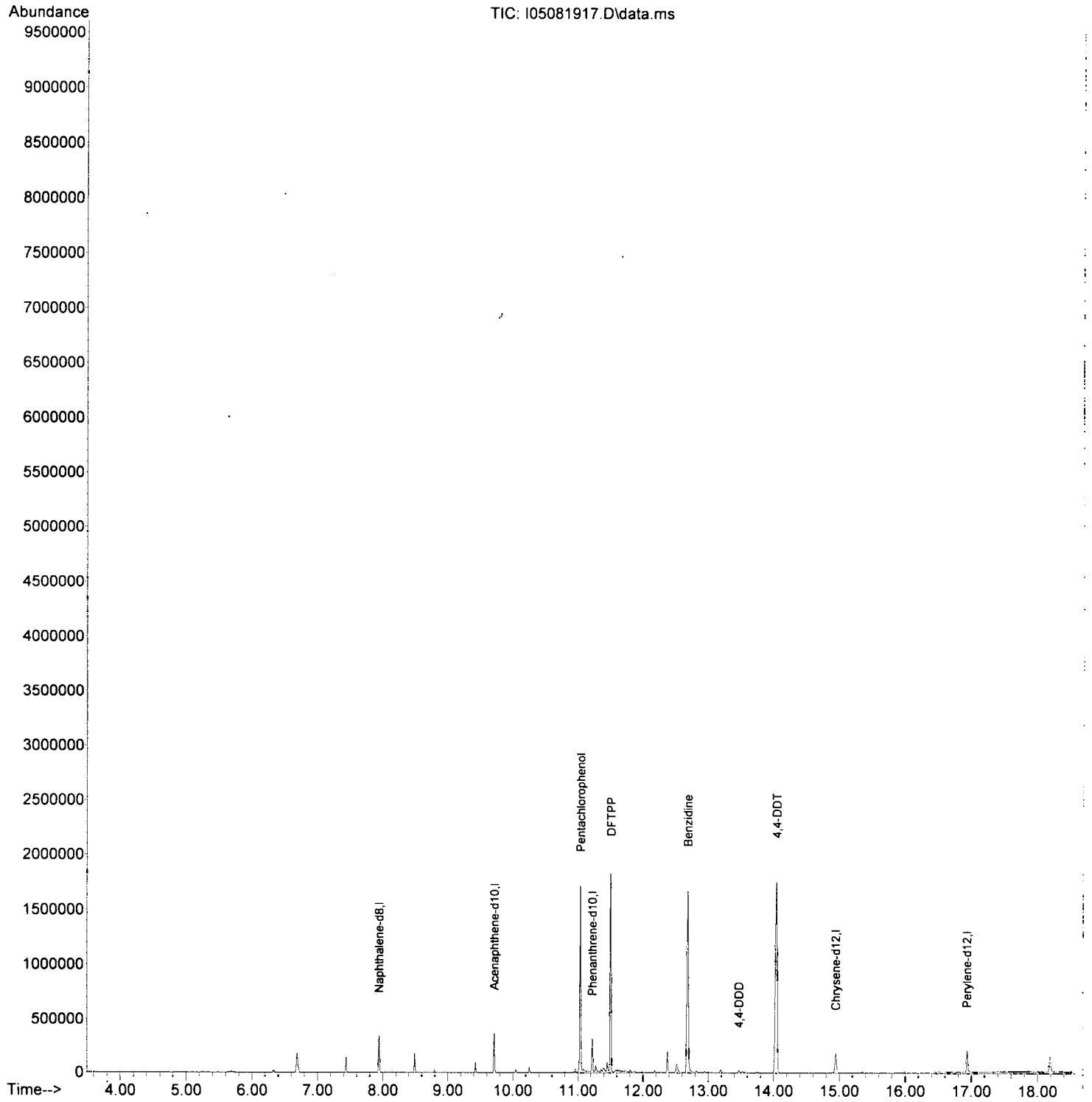
Breakdown must be less than 20% to accept sample data.

5/9/19

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081917.D
Acq On : 8 May 2019 7:08 pm
Operator : JK /AMS /DTH
Sample : 9E08056-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 09 10:13:18 2019
Quant Method : T:\methods\DFTPP-625.M
Quant Title : DFTPP Tune Methodug/mL
QLast Update : Thu May 09 10:12:54 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:07 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	127428	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	522440	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	251914	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	480361	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	512978	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.539	264	472385	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	430097	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.477	112	80	0.94	ng/ml	0.01
5) Phenol-d6 (Surr)	6.360	99	63	0.56	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	0.000	82	0	0.00	ng/ml	
40) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.188	74	449	6.67	ng/ml#	1
3) Pyridine	4.279	79	159	N.D.		
6) Phenol	6.360	94	69	N.D.		
7) Aniline	6.387	93	176	N.D.		
8) Bis(2-chloroethyl) ether	6.435	93	248	N.D.		
9) 2-Chlorophenol	6.499	128	75	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.		
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	52	N.D.		
16) N-Nitrosodi-n-propylamine	0.000		0	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.210	77	113	N.D.		
22) Isophorone	7.478	82	59	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	0.000		0	N.D.		
25) Bis(2-chloroethoxy) me...	0.000		0	N.D.		
26) Benzoic acid	0.000		0	N.D.		
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	7.964	128	78	N.D.		
30) 4-Chloroaniline	0.000		0	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
39) 1,1'-Biphenyl	0.000		0	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	0.000		0	N.D.		
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.		

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:07 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

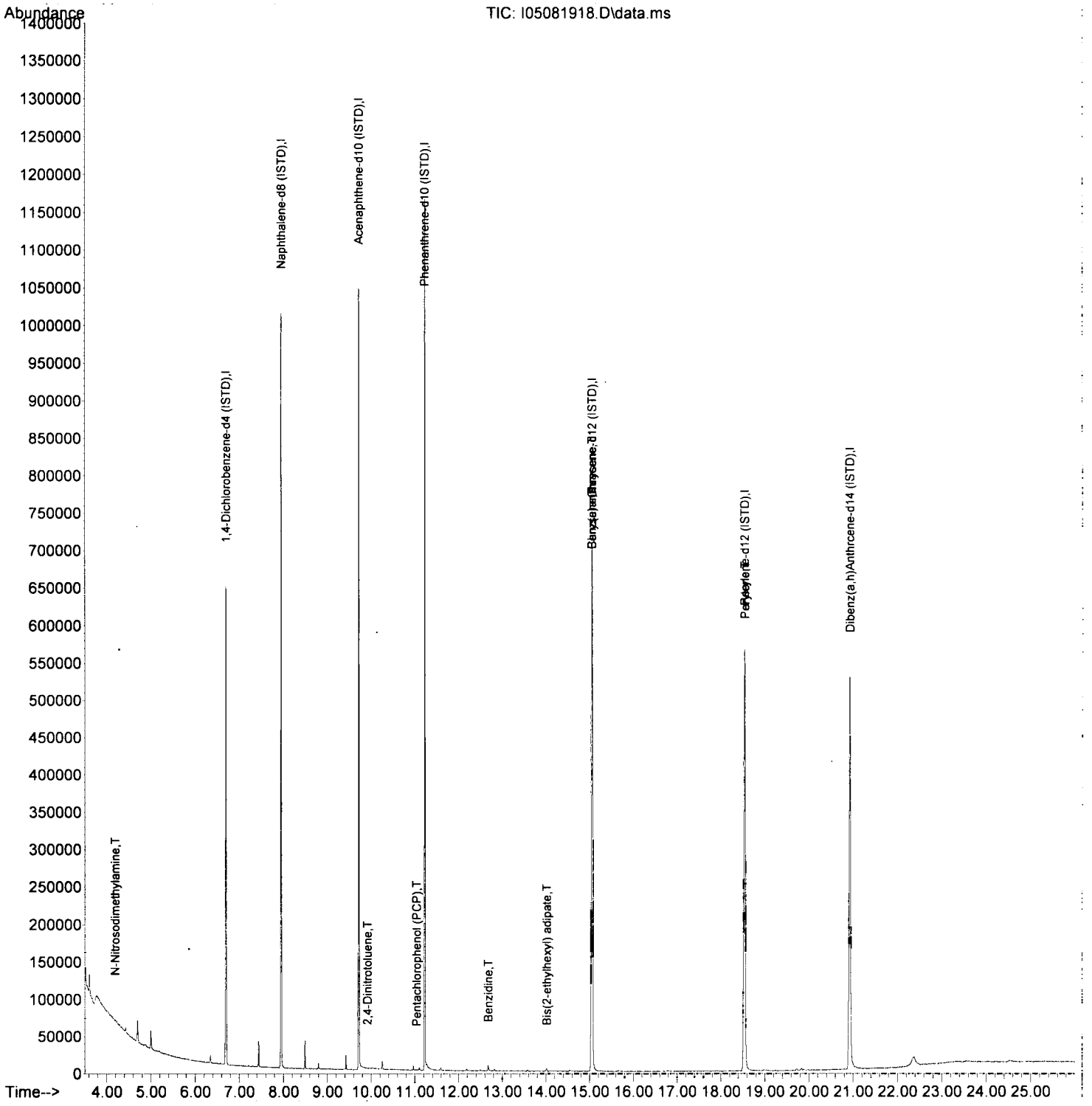
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	0.000		0	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	0.000		0	N.D.		
50) 3-Nitroaniline	0.000		0	N.D.		
51) Acenaphthene	0.000		0	N.D.		
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	9.911	165	97	33.10	ng/ml#	17
55) Dibenzofuran	0.000		0	N.D.		
56) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.		
57) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.		
58) Diethyl phthalate	10.131	149	55	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.238	170	50	N.D.		
60) Fluorene	0.000		0	N.D.		
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	0.000		0	N.D.		
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	0.000		0	N.D.		
66) Azobenzene (1,2-DPH)	0.000		0	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.035	266	254	90.33	ng/ml	86
71) Phenanthrene	11.222	178	214	N.D.		
72) Anthracene	11.222	178	214	N.D.		
73) Carbazole	0.000		0	N.D.		
74) Di-n-butyl phthalate	0.000		0	N.D.		
75) Fluoranthene	0.000		0	N.D.		
76) Benzidine	12.677	184	5254	103.92	ng/ml	99
77) Pyrene	0.000		0	N.D.		
80) Butyl benzyl phthalate	0.000		0	N.D.		
81) Bis(2-ethylhexyl) adipate	14.014	129	1009	7.10	ng/ml	94
82) 3,3-Dichlorobenzidine	14.992	252	376	Below	Cal	91
83) Benz(a)anthracene	15.046	228	1291	4.40	ng/ml	68
84) Chrysene	15.046	228	1279	4.68	ng/ml	65
85) Bis(2-ethylhexyl) phth...	0.000		0	N.D.		
87) Di-n-octyl phthalate	0.000		0	N.D.		
88) Benzo(b)fluoranthene	0.000		0	N.D.		
89) Benzo(k)fluoranthene	0.000		0	N.D.		
90) Benzo(b+k)fluoranthene	0.000		0	N.D.		
91) Benzo(e)pyrene	0.000		0	N.D.		
92) Benzo(a)pyrene	0.000		0	N.D.		
93) Perylene	18.544	252	1717	7.10	ng/ml	74
95) Indeno(1,2,3-cd)pyrene	20.929	276	304	N.D.		
96) Dibenz(a,h)anthracene	20.924	278	137	N.D.		
97) 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 : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:07 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Final Reqmant

Quant Time: May 09 17:11:39 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	127428	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	522440	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	251914	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	480361	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	512978	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.539	264	472385	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	430097	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.477	112	80	0.96	ng/ml	0.01
5) Phenol-d6 (Surr)	6.360	99	63	0.58	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	0.000	82	0	0.00	ng/ml	
40) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
67) 2,4,6-Tribromophenol (...	0.000	330	0	0.00	ng/ml	
79) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.188	74	449	7.05	ng/ml#	1
3) Pyridine	4.279	79	159	N.D.		
6) Phenol	6.360	94	69	N.D.		
7) Aniline	6.387	93	176	N.D.		
8) Bis(2-chloroethyl) ether	6.435	93	248	2.56	ng/ml	93
9) 2-Chlorophenol	6.499	128	75	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	0.000		0	N.D.		
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	52	N.D.		
16) N-Nitrosodi-n-propylamine	0.000		0	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.210	77	113	N.D.		
22) Isophorone	7.478	82	59	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	0.000		0	N.D.		
25) Bis(2-chloroethoxy) me...	0.000		0	N.D.		
26) Benzoic acid	0.000		0	N.D.		
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	7.964	128	78	N.D.		
30) 4-Chloroaniline	0.000		0	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	0.000		0	N.D.		
33) 2-Methylnaphthalene	0.000		0	N.D.		
34) 1-Methylnaphthalene	0.000		0	N.D.		
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	0.000		0	N.D.		
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
39) 1,1'-Biphenyl	0.000		0	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	0.000		0	N.D.		
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.		

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:39 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

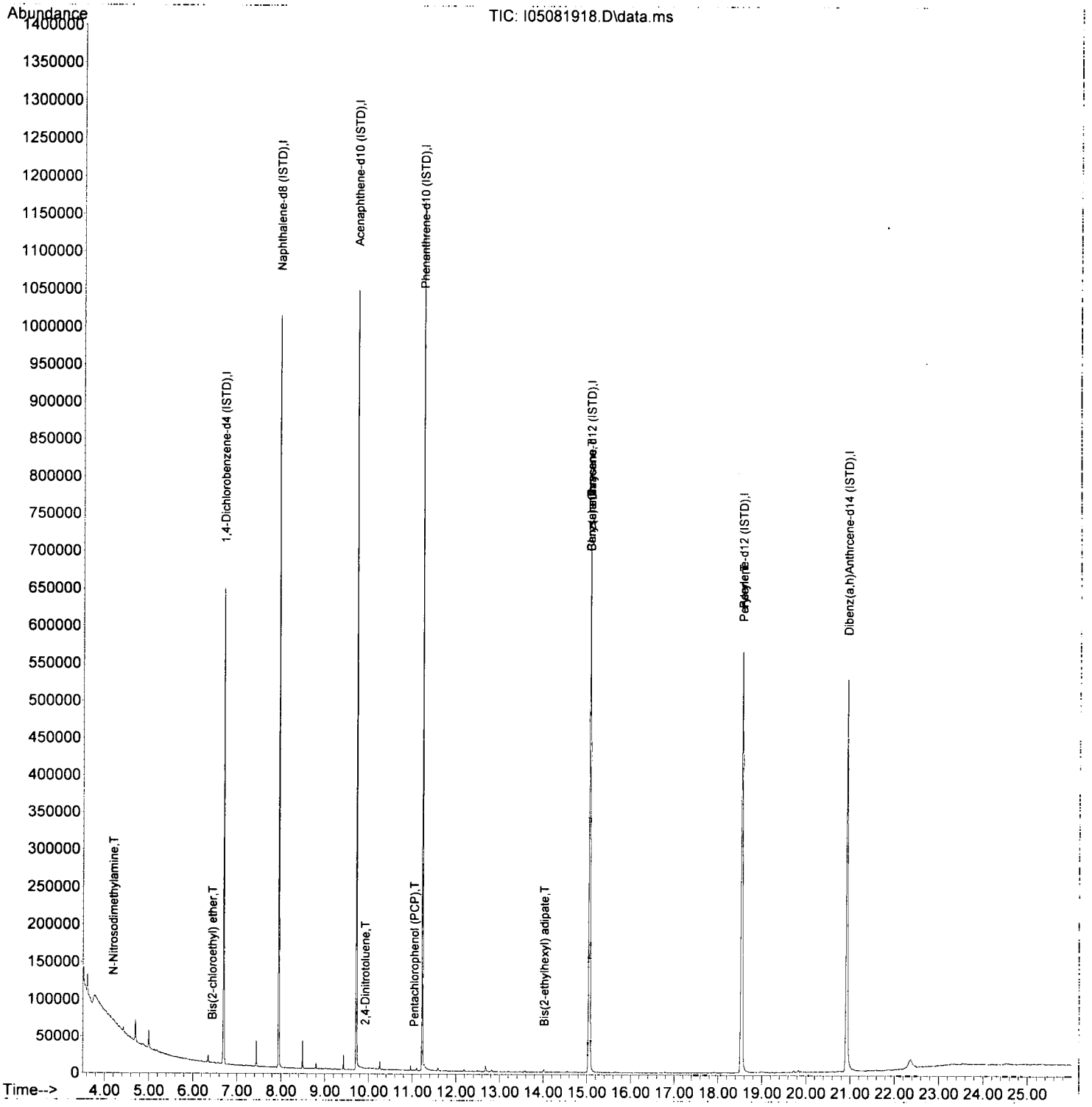
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	0.000		0	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	9.911	165	97	34.45 ng/ml#	17
55) Dibenzofuran	0.000		0	N.D.	
56) 2,3,5,6-Tetrachlorophenol	0.000		0	N.D.	
57) 2,3,4,6-Tetrachlorophenol	0.000		0	N.D.	
58) Diethyl phthalate	10.131	149	55	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.238	170	50	N.D.	
60) Fluorene	0.000		0	N.D.	
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	0.000		0	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	0.000		0	N.D.	
66) Azobenzene (1,2-DPH)	0.000		0	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.035	266	254	65.69 ng/ml	86
71) Phenanthrene	11.222	178	214	N.D.	
72) Anthracene	11.222	178	214	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	0.000		0	N.D.	
75) Fluoranthene	0.000		0	N.D.	
76) Benzidine	12.677	184	5254	Below Cal	99
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.014	129	1009	7.46 ng/ml	94
82) 3,3-Dichlorobenzidine	14.992	252	376	Below Cal	91
83) Benz(a)anthracene	15.046	228	1291	4.33 ng/ml	68
84) Chrysene	15.046	228	1279	4.65 ng/ml	65
85) Bis(2-ethylhexyl) phth...	0.000		0	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	0.000		0	N.D.	
89) Benzo(k)fluoranthene	0.000		0	N.D.	
90) Benzo(b+k)fluoranthene	0.000		0	N.D.	
91) Benzo(e)pyrene	0.000		0	N.D.	
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.544	252	1717	7.18 ng/ml	74
95) Indeno(1,2,3-cd)pyrene	20.929	276	304	N.D.	
96) Dibenz(a,h)anthracene	20.924	278	137	N.D.	
97) 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 : T:\data\2019-05\9E08056\
Data File : I05081918.D
Acq On : 8 May 2019 7:35 pm
Operator : JK /AMS /DTH
Sample : 9E08056-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:39 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:14 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	114486	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	461650	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	230578	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	445843	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	468796	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.538	264	432537	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	400350	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.472	112	1296	16.93	ng/ml	0.00
5) Phenol-d6 (Surr)	6.349	99	1675	16.59	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.231	82	1778	21.02	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	3096	18.40	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	296	43.31	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	4571	20.48	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.193	74	1386	22.92	ng/ml#	36
3) Pyridine	4.236	79	1594	16.87	ng/ml#	49
6) Phenol	6.354	94	1840	16.72	ng/ml	97
7) Aniline	6.386	93	2217	22.05	ng/ml	98
8) Bis(2-chloroethyl) ether	6.434	93	1922	21.30	ng/ml	92
9) 2-Chlorophenol	6.504	128	1505	19.20	ng/ml	85
10) 1,3-Dichlorobenzene	6.643	146	2020	23.21	ng/ml	92
11) 1,4-Dichlorobenzene	6.713	146	1733	20.88	ng/ml	84
12) Benzyl alcohol	6.830	108	394	32.12	ng/ml#	67
13) 1,2-Dichlorobenzene	6.862	146	1593	19.64	ng/ml	94
14) 2-Methylphenol	6.937	107	1153	18.58	ng/ml	78
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	2282	18.10	ng/ml	99
16) N-Nitrosodi-n-propylamine	7.082	70	1232	19.27	ng/ml	95
17) 3+4-Methylphenol	7.082	107	1360	17.39	ng/ml	87
18) Hexachloroethane	7.194	201	565	22.14	ng/ml	83
20) Nitrobenzene	7.253	77	1693	19.66	ng/ml	97
22) Isophorone	7.478	82	3108	18.23	ng/ml	95
23) 2-Nitrophenol	7.563	139	652	40.14	ng/ml	98
24) 2,4-Dimethylphenol	7.601	122	1035	15.16	ng/ml	84
25) Bis(2-chloroethoxy) me...	7.686	93	1890	18.62	ng/ml	96
26) Benzoic acid	0.000		0	N.D.		
27) 2,4-Dichlorophenol	7.814	162	685	21.81	ng/ml	91
28) 1,2,4-Trichlorobenzene	7.889	180	1529	21.22	ng/ml	95
29) Naphthalene	7.970	128	4931	21.54	ng/ml	95
30) 4-Chloroaniline	8.012	127	1367	22.10	ng/ml	95
31) Hexachlorobutadiene	8.093	225	856	23.61	ng/ml	89
32) 4-Chloro-3-methylphenol	8.504	107	518	37.77	ng/ml#	1
33) 2-Methylnaphthalene	8.660	142	3206	19.00	ng/ml	99
34) 1-Methylnaphthalene	8.761	142	3306	20.65	ng/ml	94
36) Hexachlorocyclopentadiene	8.825	237	56	33.22	ng/ml#	27
37) 2,4,6-Trichlorophenol	8.948	196	344	40.72	ng/ml#	74
38) 2,4,5-Trichlorophenol	8.991	198	415	38.85	ng/ml#	62
39) 1,1'-Biphenyl	9.125	154	3301	16.94	ng/ml	98
41) 2-Chloronaphthalene	9.152	162	2457	17.33	ng/ml	92
42) 2-Nitroaniline	9.248	138	198	4.26	ng/ml#	79
43) 2,6-Dimethylnaphthalene	9.285	156	2570	18.38	ng/ml	87

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:14 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	116	66.58	ng/ml	86
45) Dimethyl phthalate	9.419	163	3008	18.69	ng/ml	98
46) 1,3-Dinitrobenzene	9.456	168	110	4.44	ng/ml	48
47) 2,6-Dinitrotoluene	9.483	165	309	8.81	ng/ml#	66
48) 1,2-Dinitrobenzene	9.537	168	108	6.10	ng/ml#	1
49) Acenaphthylene	9.569	152	4296	19.09	ng/ml	98
50) 3-Nitroaniline	9.665	138	279	22.94	ng/ml	83
51) Acenaphthene	9.745	153	2971	20.99	ng/ml	98
52) 2,4-Dinitrophenol	0.000		0	N.D		
53) 4-Nitrophenol	9.852	139	173	78.89	ng/ml	74
54) 2,4-Dinitrotoluene	9.900	165	414	39.85	ng/ml	83
55) Dibenzofuran	9.922	168	3412	17.51	ng/ml#	82
56) 2,3,5,6-Tetrachlorophenol	10.007	232	213	55.74	ng/ml	79
57) 2,3,4,6-Tetrachlorophenol	10.050	232	352	45.87	ng/ml	85
58) Diethyl phthalate	10.130	149	3091	20.52	ng/ml	94
59) 2,3,5-Trimethylnaphtha...	10.130	170	2925	22.62	ng/ml	91
60) Fluorene	10.269	166	3504	22.08	ng/ml	90
61) 4-Chlorophenyl phenyl ...	10.259	204	1452	19.48	ng/ml	86
62) 4-Nitroaniline	10.280	138	396	11.51	ng/ml	79
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.376	169	2436	17.88	ng/ml	89
66) Azobenzene (1,2-DPH)	10.419	77	2808	16.45	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.756	248	976	21.64	ng/ml#	83
69) Hexachlorobenzene	10.836	284	1039	21.71	ng/ml	90
70) Pentachlorophenol (PCP)	11.034	266	515	103.76	ng/ml	75
71) Phenanthrene	11.248	178	5060	21.87	ng/ml	94
72) Anthracene	11.296	178	5028	22.51	ng/ml	95
73) Carbazole	11.457	167	3928	22.54	ng/ml	99
74) Di-n-butyl phthalate	11.794	149	4702	17.52	ng/ml	96
75) Fluoranthene	12.521	202	5484	21.36	ng/ml	96
76) Benzidine	12.676	184	5337	112.28	ng/ml	99
77) Pyrene	12.821	202	5874	22.60	ng/ml	96
80) Butyl benzyl phthalate	13.837	149	1472	44.58	ng/ml	83
81) Bis(2-ethylhexyl) adipate	14.014	129	2977	22.91	ng/ml	95
82) 3,3-Dichlorobenzidine	14.987	252	2583	Below	Cal	87
83) Benz(a)anthracene	15.030	228	5805	21.64	ng/ml	99
84) Chrysene	15.110	228	5174	20.70	ng/ml	93
85) Bis(2-ethylhexyl) phth...	15.180	149	1776	9.88	ng/ml	99
87) Di-n-octyl phthalate	16.838	149	2233	79.02	ng/ml	86
88) Benzo(b)fluoranthene	17.613	252	4502	27.10	ng/ml	97
89) Benzo(k)fluoranthene	~~17.683~~	~~252~~	~~3913~~	~~23.87~~	~~ng/ml~~	96
90) Benzo(b+k)fluoranthene	17.613	252	8905	50.62	ng/ml	96
91) Benzo(e)pyrene	18.266	252	4695	19.12	ng/ml	91
92) Benzo(a)pyrene	18.383	252	3596	26.47	ng/ml	90
93) Perylene	18.587	252	4452	20.10	ng/ml	96
95) Indeno(1,2,3-cd)pyrene	20.913	276	4515	19.92	ng/ml	73
96) Dibenz(a,h)anthracene	20.972	278	3890	20.39	ng/ml	98
97) Benzo(g,h,i)perylene	21.448	276	4035	19.00	ng/ml	72

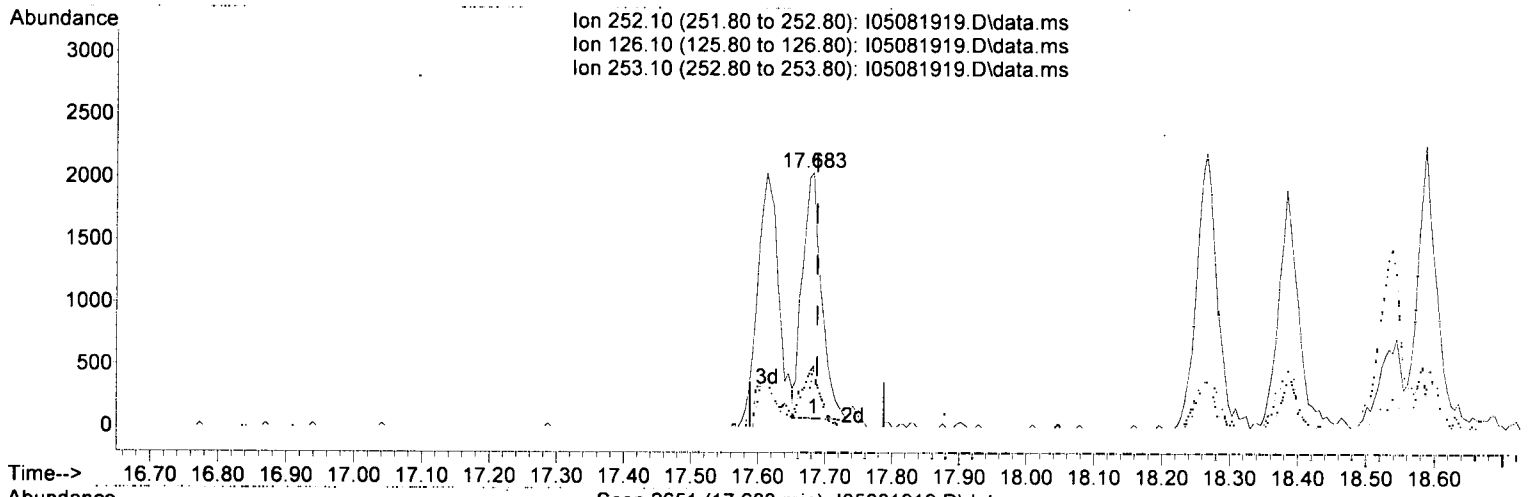
See ML

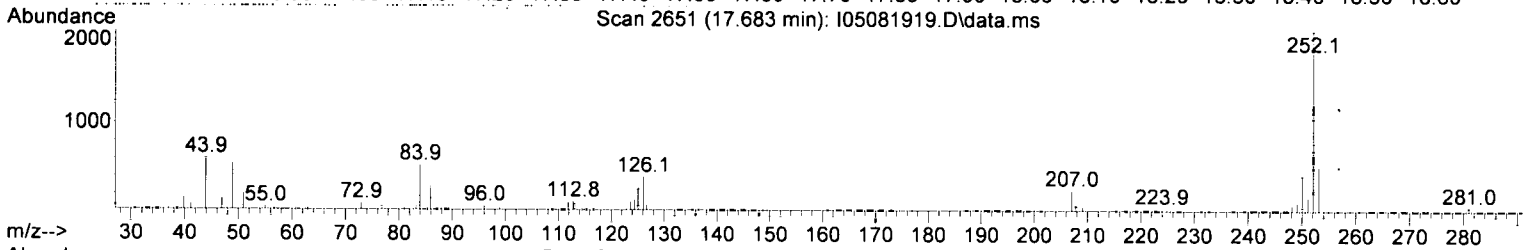
(#) = qualifier out of range (m) = manual integration (+) = signals summed

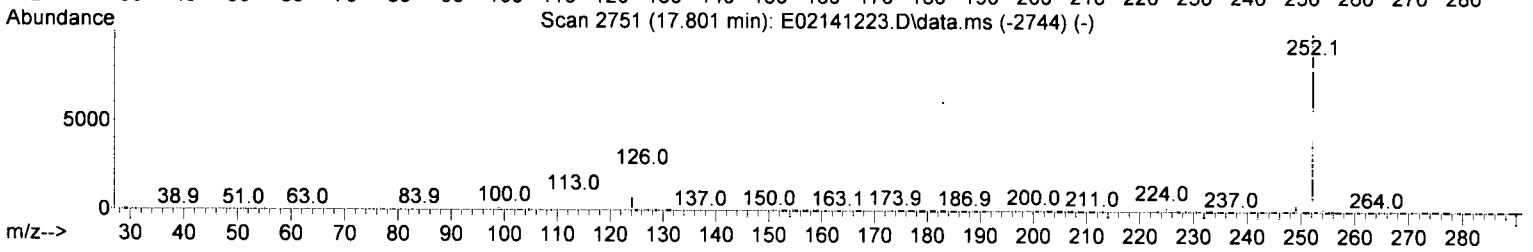
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:14 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081919.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.683min (-0.006) 23.87 ng/ml

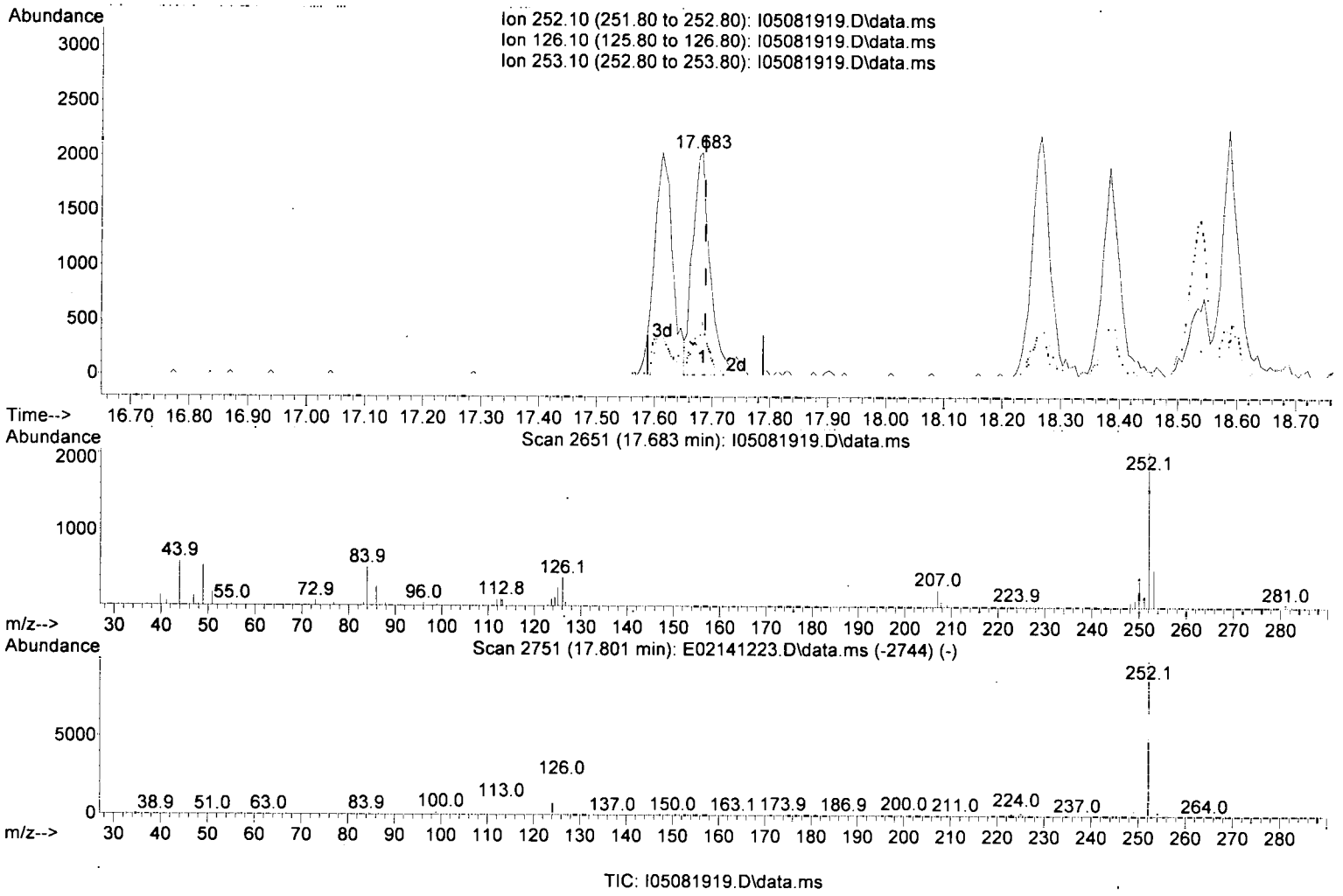
response 3913

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	23.46
253.10	21.70	25.42
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:14 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081919.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.683min (-0.006) 25.71 ng/ml (m)

response 4403

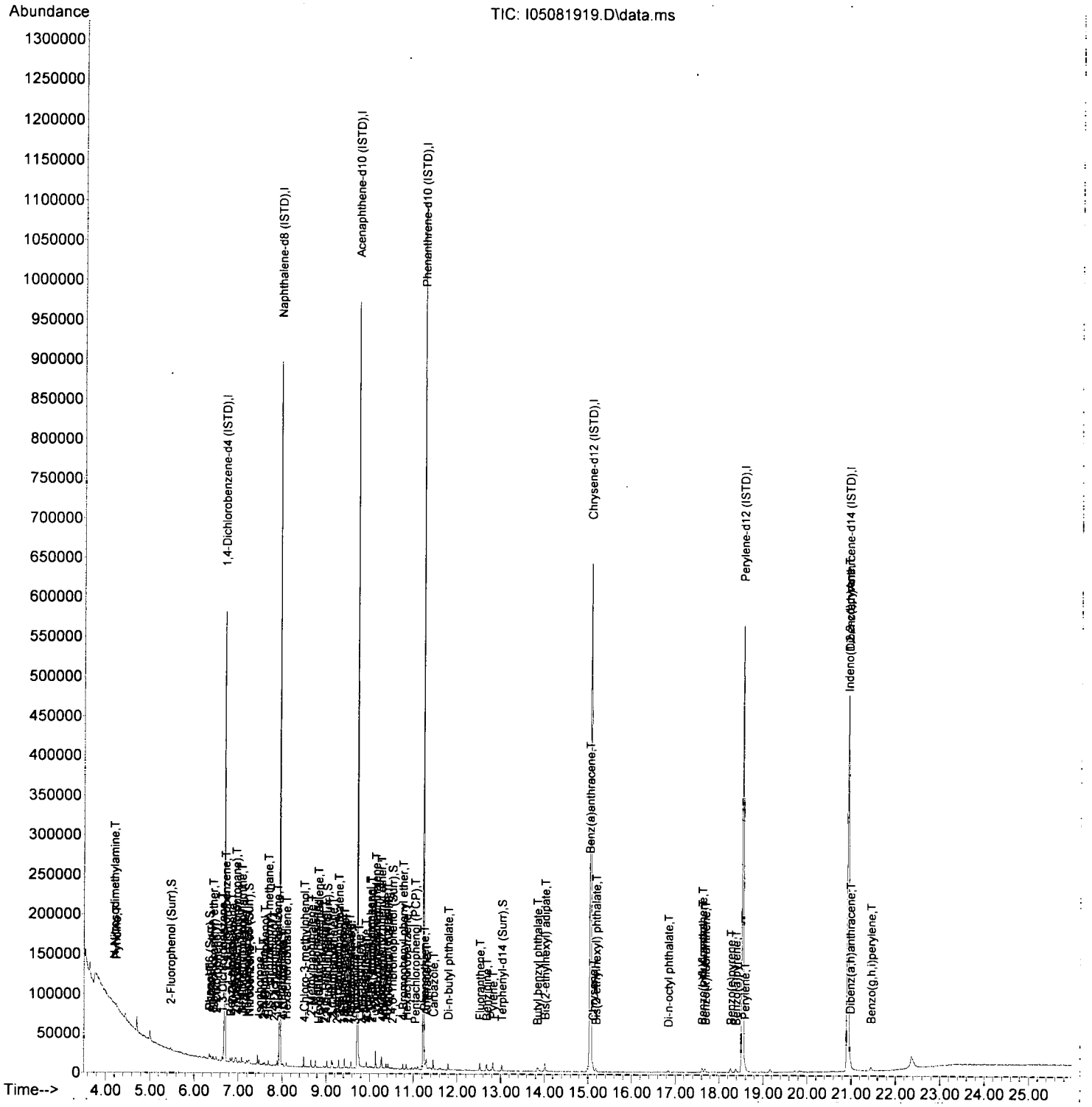
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	19.44
253.10	21.70	25.42
0.00	0.00	0.00

JK 5/9/19

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081919.D
Acq On : 8 May 2019 8:12 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:14 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081920.D
Acq On : 8 May 2019 8:48 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.691	152	117186	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.943	136	466642	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	235336	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	447217	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	470097	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.539	264	436889	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.919	292	403848	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	3106	39.64	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	4324	41.83	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.232	82	4032	46.57	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	8836	51.45	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	790	70.57	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	10935	48.86	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.178	74	2851	46.07	ng/ml#	70
3) Pyridine	4.215	79	4118	42.59	ng/ml#	61
6) Phenol	6.354	94	4928	43.76	ng/ml	93
7) Aniline	6.381	93	5080	49.37	ng/ml	94
8) Bis(2-chloroethyl) ether	6.429	93	4474	48.44	ng/ml	98
9) 2-Chlorophenol	6.499	128	3771	47.01	ng/ml	92
10) 1,3-Dichlorobenzene	6.643	146	4617	51.82	ng/ml	93
11) 1,4-Dichlorobenzene	6.707	146	4532	53.35	ng/ml	98
12) Benzyl alcohol	6.830	108	1234	49.30	ng/ml	89
13) 1,2-Dichlorobenzene	6.863	146	4338	52.25	ng/ml	97
14) 2-Methylphenol	6.932	107	2679	42.19	ng/ml	93
15) 2,2'-Oxybis(1-Chloropr...	6.948	45	5842	45.28	ng/ml	98
16) N-Nitrosodi-n-propylamine	7.077	70	3144	48.05	ng/ml	93
17) 3+4-Methylphenol	7.082	107	3346	41.79	ng/ml	97
18) Hexachloroethane	7.194	201	1408	53.91	ng/ml	85
20) Nitrobenzene	7.248	77	4129	46.85	ng/ml	98
22) Isophorone	7.478	82	8299	48.17	ng/ml	97
23) 2-Nitrophenol	7.563	139	1851	66.48	ng/ml	98
24) 2,4-Dimethylphenol	7.601	122	2552	36.98	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.681	93	5405	52.67	ng/ml	97
26) Benzoic acid	7.681	105	157	795.44	ng/ml	94
27) 2,4-Dichlorophenol	7.804	162	1767	40.41	ng/ml	94
28) 1,2,4-Trichlorobenzene	7.890	180	3994	54.83	ng/ml	89
29) Naphthalene	7.964	128	12776	55.21	ng/ml	99
30) 4-Chloroaniline	8.013	127	3426	54.81	ng/ml	93
31) Hexachlorobutadiene	8.093	225	2007	54.77	ng/ml	85
32) 4-Chloro-3-methylphenol	8.499	107	1435	51.37	ng/ml#	1
33) 2-Methylnaphthalene	8.660	142	8403	49.27	ng/ml	98
34) 1-Methylnaphthalene	8.756	142	8435	52.12	ng/ml	99
36) Hexachlorocyclopentadiene	8.826	237	592	49.29	ng/ml	88
37) 2,4,6-Trichlorophenol	8.943	196	987	55.28	ng/ml	84
38) 2,4,5-Trichlorophenol	8.991	196	862	49.18	ng/ml	92
39) 1,1'-Biphenyl	9.125	154	9087	45.69	ng/ml	98
41) 2-Chloronaphthalene	9.152	162	6592	45.56	ng/ml	97
42) 2-Nitroaniline	9.248	138	759	16.01	ng/ml	94
43) 2,6-Dimethylnaphthalene	9.286	156	7150	50.10	ng/ml	98

See MQ

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081920.D
Acq On : 8 May 2019 8:48 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

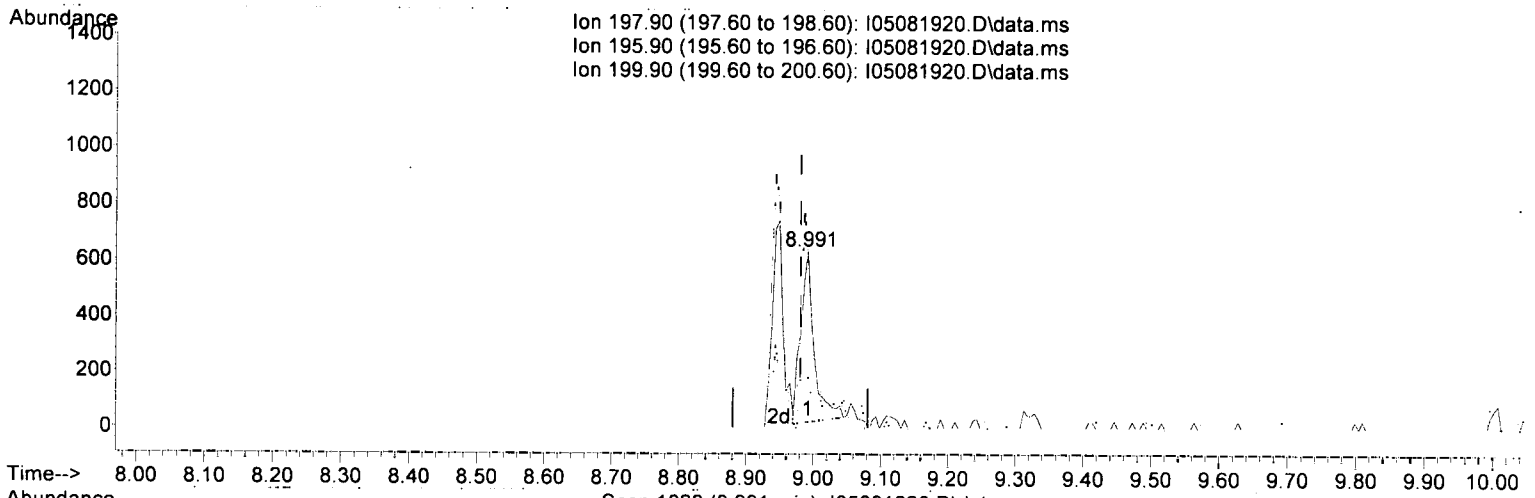
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	303	74.86	ng/ml#	70
45) Dimethyl phthalate	9.419	163	8669	52.79	ng/ml	98
46) 1,3-Dinitrobenzene	9.451	168	617	24.40	ng/ml	76
47) 2,6-Dinitrotoluene	9.483	165	1045	29.21	ng/ml	77
48) 1,2-Dinitrobenzene	9.542	168	519	28.72	ng/ml	93
49) Acenaphthylene	9.569	152	11830	51.50	ng/ml	98
50) 3-Nitroaniline	9.660	138	912	40.89	ng/ml	93
51) Acenaphthene	9.745	153	8352	57.80	ng/ml	96
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.842	139	405	87.39	ng/ml	91
54) 2,4-Dinitrotoluene	9.890	165	1084	53.31	ng/ml	92
55) Dibenzofuran	9.917	168	10231	51.44	ng/ml	86
56) 2,3,5,6-Tetrachlorophenol	10.008	232	720	71.19	ng/ml	84
57) 2,3,4,6-Tetrachlorophenol	10.050	232	1085	66.47	ng/ml	86
58) Diethyl phthalate	10.131	149	8249	53.66	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.131	170	7475	56.65	ng/ml	91
60) Fluorene	10.264	166	8897	54.93	ng/ml	96
61) 4-Chlorophenyl phenyl ...	10.259	204	4291	56.42	ng/ml	86
62) 4-Nitroaniline	10.275	138	1270	36.16	ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.312	198	217	101.38	ng/ml	71
65) N-Nitrosodiphenylamine	10.377	169	6367	46.58	ng/ml	96
66) Azobenzene (1,2-DPH)	10.419	77	7675	44.83	ng/ml	93
68) 4-Bromophenyl phenyl e...	10.756	248	2481	54.83	ng/ml#	77
69) Hexachlorobenzene	10.837	284	3112	64.82	ng/ml	90
70) Pentachlorophenol (PCP)	11.035	266	782	116.47	ng/ml	75
71) Phenanthrene	11.243	178	13230	57.00	ng/ml	98
72) Anthracene	11.297	178	12760	56.96	ng/ml	98
73) Carbazole	11.452	167	10615	51.27	ng/ml	99
74) Di-n-butyl phthalate	11.794	149	11962	44.43	ng/ml	98
75) Fluoranthene	12.521	202	14115	54.81	ng/ml	98
76) Benzidine	12.677	184	6670	136.06	ng/ml	95
77) Pyrene	12.821	202	14957	57.38	ng/ml	97
80) Butyl benzyl phthalate	13.837	149	4377	64.96	ng/ml	93
81) Bis(2-ethylhexyl) adipate	14.008	129	5191	39.84	ng/ml	96
82) 3,3-Dichlorobenzidine	14.987	252	6262	Below Cal		92
83) Benz(a)anthracene	15.030	228	13479	50.10	ng/ml	97
84) Chrysene	15.105	228	12647	50.46	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.180	149	5059	28.08	ng/ml	88
87) Di-n-octyl phthalate	16.843	149	6475	93.63	ng/ml	96
88) Benzo(b)fluoranthene	17.613	252	11686	54.36	ng/ml	93
89) Benzo(k)fluoranthene	17.677	252	12101	54.18	ng/ml	97
90) Benzo(b+k)fluoranthene	17.677	252	24677	108.29	ng/ml	97
91) Benzo(e)pyrene	18.271	252	12373	49.90	ng/ml	96
92) Benzo(a)pyrene	18.389	252	10371	55.04	ng/ml	94
93) Perylene	18.587	252	10773	48.16	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	20.913	276	10988	48.06	ng/ml	74
96) Dibenz(a,h)anthracene	20.988	278	9885	51.38	ng/ml	89
97) Benzo(g,h,i)perylene	21.454	276	10510	49.07	ng/ml	91

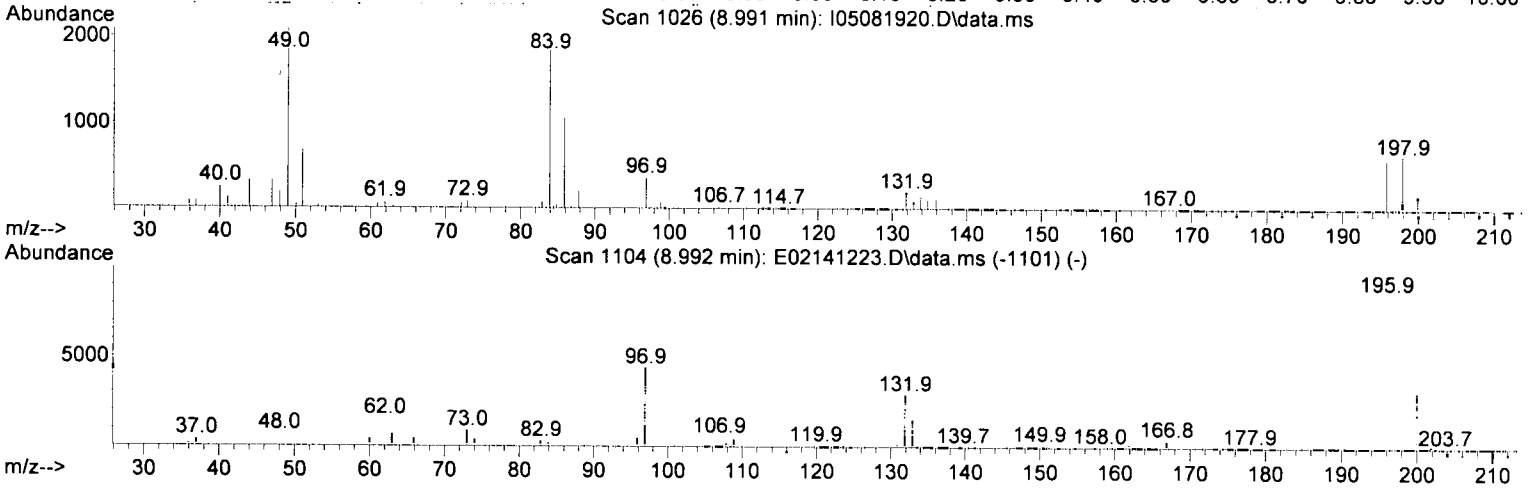
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081920.D
Acq On : 8 May 2019 8:48 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081920.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

8.991min (+0.011) 49.18 ng/ml

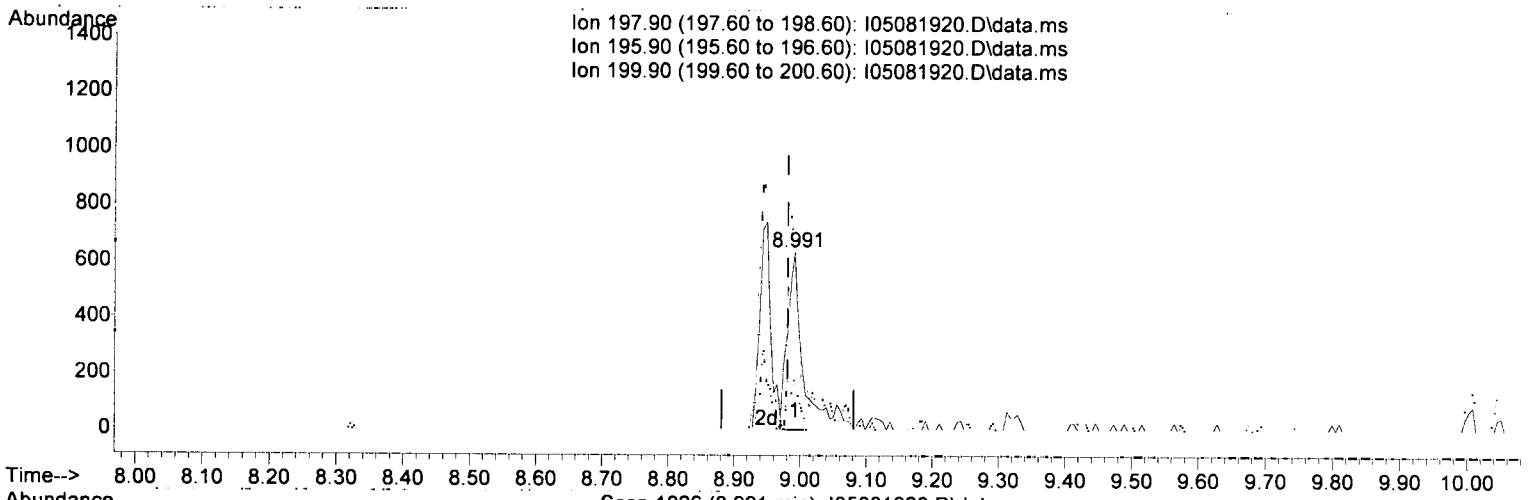
response 862

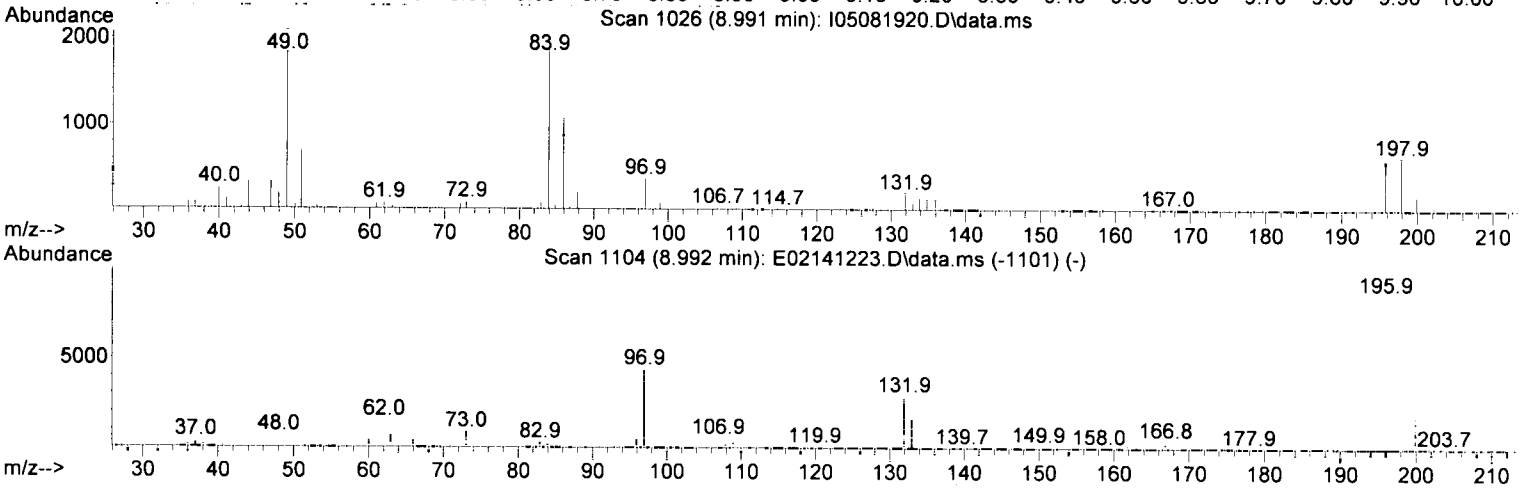
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	95.28
199.90	31.10	29.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081920.D
Acq On : 8 May 2019 8:48 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081920.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

8.991min (+ 0.011) 54.39 ng/ml (m) JK 5/9/19

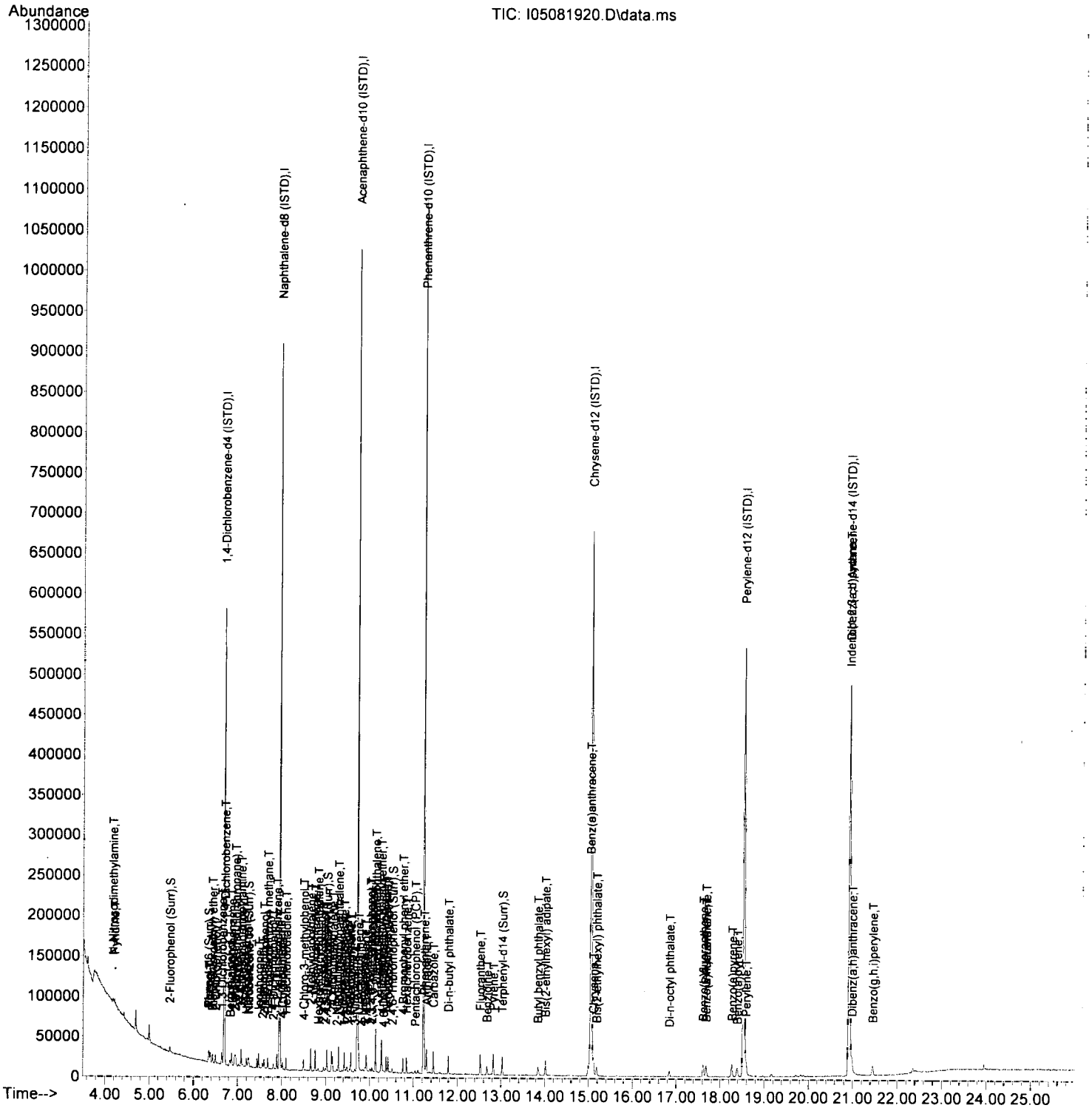
response 1083

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	95.28
199.90	31.10	29.13
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081920.D
Acq On : 8 May 2019 8:48 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.691	152	115550	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.943	136	461862	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	238866	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.221	188	441856	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	464995	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.533	264	434795	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.919	292	409849	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.472	112	7013	90.77	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	9148	89.75	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.231	82	8175	95.75	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	19505	111.89	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.510	330	1794	127.24	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.019	244	23610	106.65	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.188	74	5631	92.28	ng/ml	76
3) Pyridine	4.215	79	7898	82.84	ng/ml	84
6) Phenol	6.354	94	10314	92.88	ng/ml	98
7) Aniline	6.381	93	10637	104.83	ng/ml	92
8) Bis(2-chloroethyl) ether	6.429	93	8939	98.15	ng/ml	95
9) 2-Chlorophenol	6.499	128	7863	99.40	ng/ml	91
10) 1,3-Dichlorobenzene	6.643	146	9757	111.06	ng/ml	97
11) 1,4-Dichlorobenzene	6.713	146	8776	104.78	ng/ml	95
12) Benzyl alcohol	6.825	108	2898	84.51	ng/ml	99
13) 1,2-Dichlorobenzene	6.862	146	8854	108.15	ng/ml	98
14) 2-Methylphenol	6.932	107	6386	101.99	ng/ml	89
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	12268	96.43	ng/ml	97
16) N-Nitrosodi-n-propylamine	7.076	70	6313	97.85	ng/ml	91
17) 3+4-Methylphenol	7.076	107	7451	94.37	ng/ml	95
18) Hexachloroethane	7.194	201	2779	107.90	ng/ml	88
20) Nitrobenzene	7.247	77	8591	98.85	ng/ml	93
22) Isophorone	7.477	82	16536	96.96	ng/ml	97
23) 2-Nitrophenol	7.563	139	3972	114.25	ng/ml	89
24) 2,4-Dimethylphenol	7.595	122	6013	88.03	ng/ml	94
25) Bis(2-chloroethoxy) me...	7.686	93	11079	109.07	ng/ml	99
26) Benzoic acid	7.686	105	112	794.36	ng/ml#	27
27) 2,4-Dichlorophenol	7.804	162	4504	88.55	ng/ml	98
28) 1,2,4-Trichlorobenzene	7.889	180	8177	113.42	ng/ml	96
29) Naphthalene	7.964	128	25557	111.59	ng/ml	100
30) 4-Chloroaniline	8.012	127	6574	106.26	ng/ml	95
31) Hexachlorobutadiene	8.093	225	4053	111.76	ng/ml	98
32) 4-Chloro-3-methylphenol	8.499	107	2916	73.90	ng/ml#	53
33) 2-Methylnaphthalene	8.659	142	17636	104.47	ng/ml	96
34) 1-Methylnaphthalene	8.756	142	17565	109.66	ng/ml	96
36) Hexachlorocyclopentadiene	8.825	237	1795	84.61	ng/ml	92
37) 2,4,6-Trichlorophenol	8.943	196	2595	91.22	ng/ml	97
38) 2,4,5-Trichlorophenol	8.986	198	2233	80.70	ng/ml	98
39) 1,1'-Biphenyl	9.125	154	20138	99.75	ng/ml	99
41) 2-Chloronaphthalene	9.146	162	14570	99.21	ng/ml	98
42) 2-Nitroaniline	9.248	138	1934	40.20	ng/ml	91
43) 2,6-Dimethylnaphthalene	9.285	156	15688	108.29	ng/ml	93

See MI

See MI

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.371	168	955	103.43	ng/ml	92
45) Dimethyl phthalate	9.419	163	18418	110.50	ng/ml	98
46) 1,3-Dinitrobenzene	9.451	168	1664	64.83	ng/ml	89
47) 2,6-Dinitrotoluene	9.483	165	2837	78.12	ng/ml	85
48) 1,2-Dinitrobenzene	9.537	168	1261	68.76	ng/ml	90
49) Acenaphthylene	9.569	152	26148	112.15	ng/ml	99
50) 3-Nitroaniline	9.654	138	2267	78.90	ng/ml	98
51) Acenaphthene	9.745	153	16799	114.54	ng/ml	99
52) 2,4-Dinitrophenol	9.767	184	124	187.96	ng/ml	80
53) 4-Nitrophenol	9.836	139	1299	119.92	ng/ml	95
54) 2,4-Dinitrotoluene	9.890	165	3069	92.76	ng/ml	97
55) Dibenzofuran	9.916	168	21911	108.53	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.002	232	1956	108.24	ng/ml	81
57) 2,3,4,6-Tetrachlorophenol	~~10.050~~	~~232~~	~~2718~~	~~111.52~~	~~ng/ml#~~	77
58) Diethyl phthalate	10.130	149	17729	113.63	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.130	170	15984	119.35	ng/ml	93
60) Fluorene	10.264	166	19156	116.53	ng/ml	97
61) 4-Chlorophenyl phenyl ...	10.259	204	9040	117.10	ng/ml	84
62) 4-Nitroaniline	10.275	138	2732	76.64	ng/ml	97
63) 4,6-Dinitro-2-methylph...	10.307	198	760	134.94	ng/ml	75
65) N-Nitrosodiphenylamine	10.376	169	14816	109.71	ng/ml	98
66) Azobenzene (1,2-DPH)	10.419	77	17330	102.46	ng/ml	88
68) 4-Bromophenyl phenyl e...	10.756	248	5435	121.58	ng/ml#	78
69) Hexachlorobenzene	10.836	284	6195	130.59	ng/ml	90
70) Pentachlorophenol (PCP)	11.034	266	1222	138.21	ng/ml	89
71) Phenanthrene	11.243	178	26210	114.29	ng/ml	99
72) Anthracene	11.296	178	26491	119.69	ng/ml	97
73) Carbazole	11.451	167	22432	103.59	ng/ml	100
74) Di-n-butyl phthalate	11.788	149	26562	99.86	ng/ml	99
75) Fluoranthene	12.521	202	29669	116.61	ng/ml	98
76) Benzidine	12.676	184	14400	277.95	ng/ml	99
77) Pyrene	12.815	202	31027	120.46	ng/ml	96
80) Butyl benzyl phthalate	13.837	149	9184	99.39	ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.008	129	10197	79.13	ng/ml	100
82) 3,3-Dichlorobenzidine	14.982	252	13834	121.71	ng/ml	94
83) Benz(a)anthracene	15.024	228	26892	101.04	ng/ml	99
84) Chrysene	15.105	228	25625	103.37	ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.179	149	11680	65.53	ng/ml	93
87) Di-n-octyl phthalate	16.838	149	14915	122.97	ng/ml	98
88) Benzo(b)fluoranthene	17.613	252	23806	101.01	ng/ml	93
89) Benzo(k)fluoranthene	17.677	252	25069	102.98	ng/ml	96
90) Benzo(b+k)fluoranthene	17.613	252	50907	205.68	ng/ml	91
91) Benzo(e)pyrene	18.266	252	25730	104.26	ng/ml	96
92) Benzo(a)pyrene	18.383	252	21986	104.74	ng/ml	97
93) Perylene	18.592	252	22641	101.71	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	20.908	276	22712	97.88	ng/ml	100
96) Dibenz(a,h)anthracene	20.977	278	20562	105.30	ng/ml	90
97) Benzo(g,h,i)perylene	21.448	276	22018	101.29	ng/ml	86

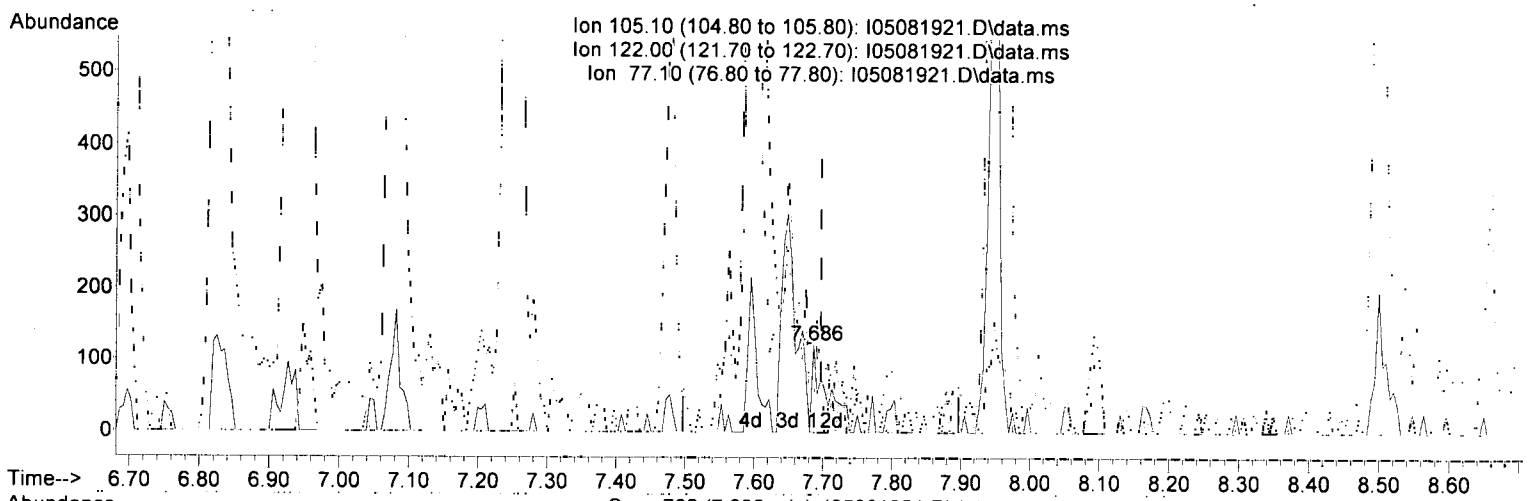
see MJ

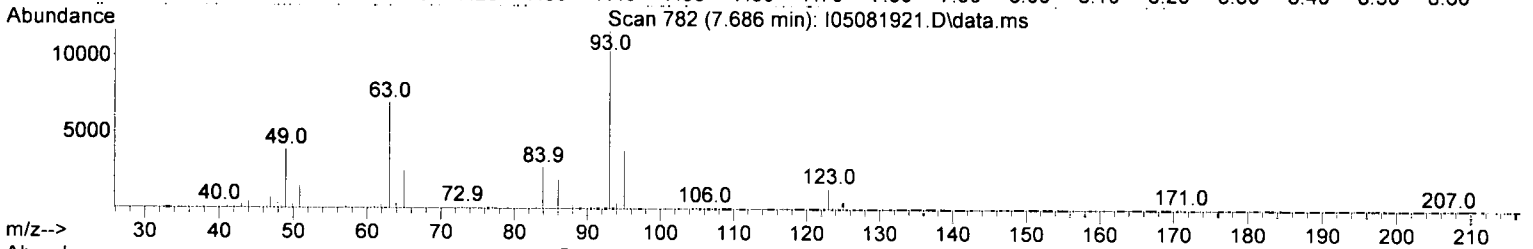
(#) = qualifier out of range (m) = manual integration (+) = signals summed

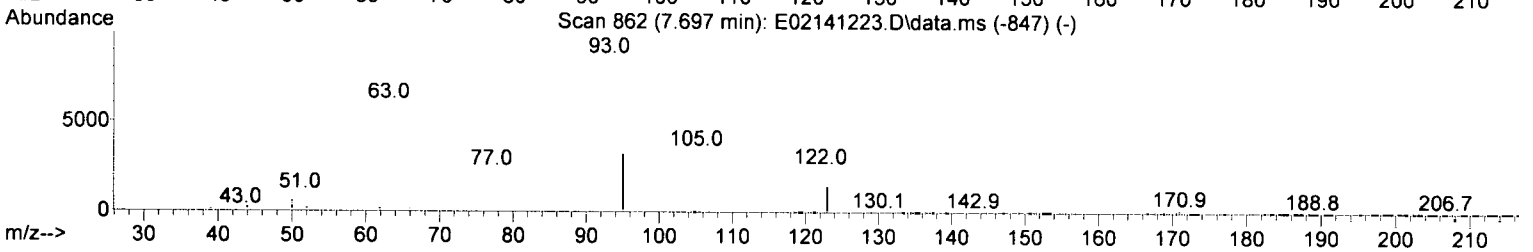
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081921.D\data.ms

(26) Benzoic acid (T)

7.686min (-0.011) 794.36 ng/ml

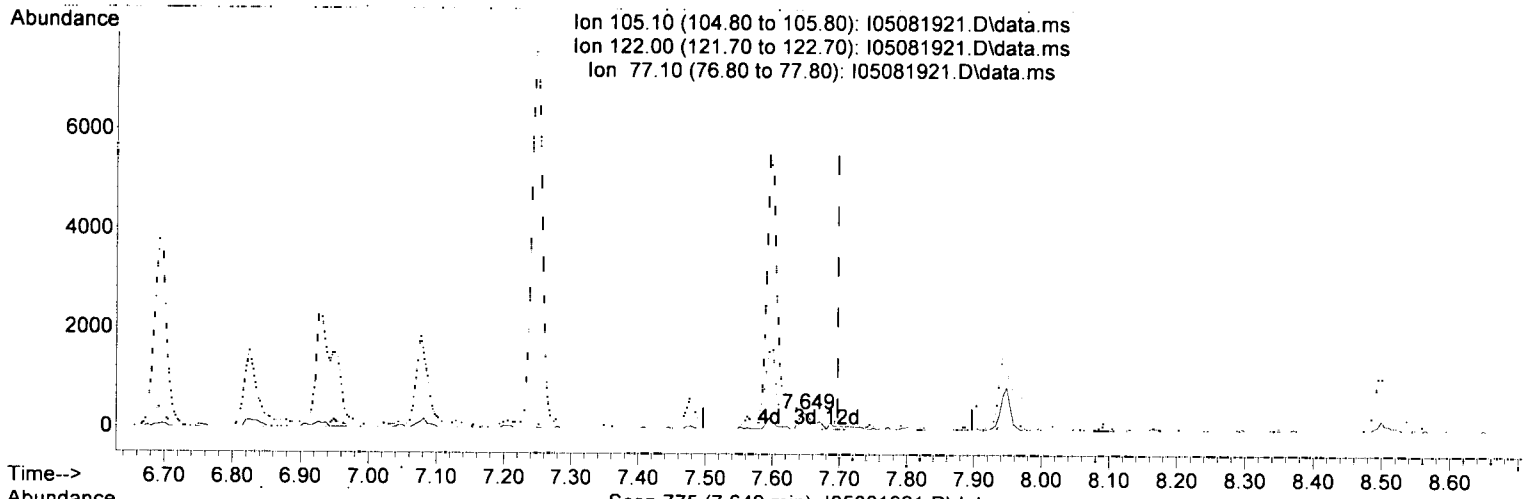
response 112

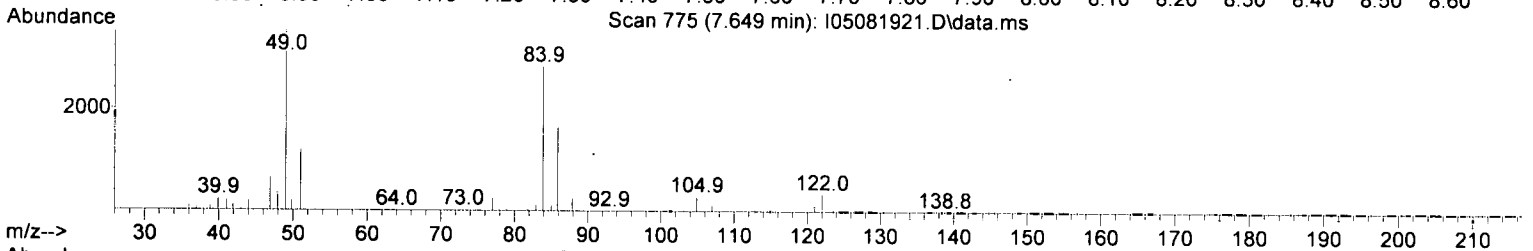
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	0.00#
77.10	76.00	122.13#
0.00	0.00	0.00

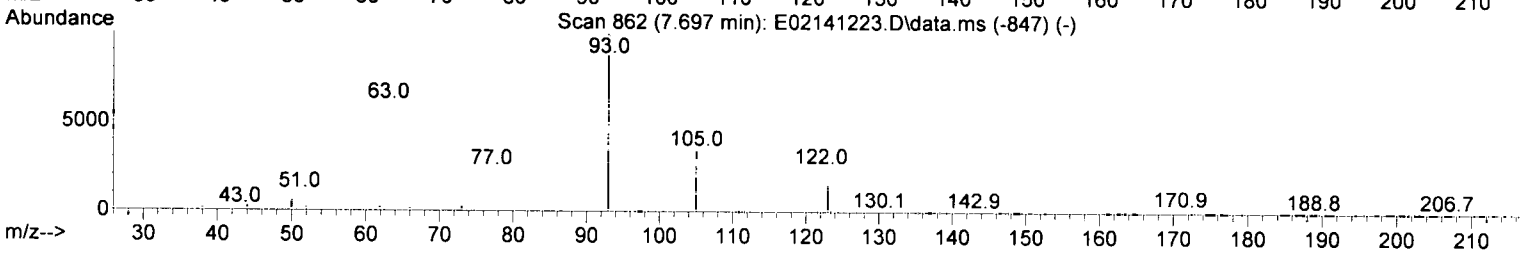
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081921.D\data.ms

(26) Benzoic acid (T)

7.649min (-0.048) 805.72 ng/ml (m)

response 570

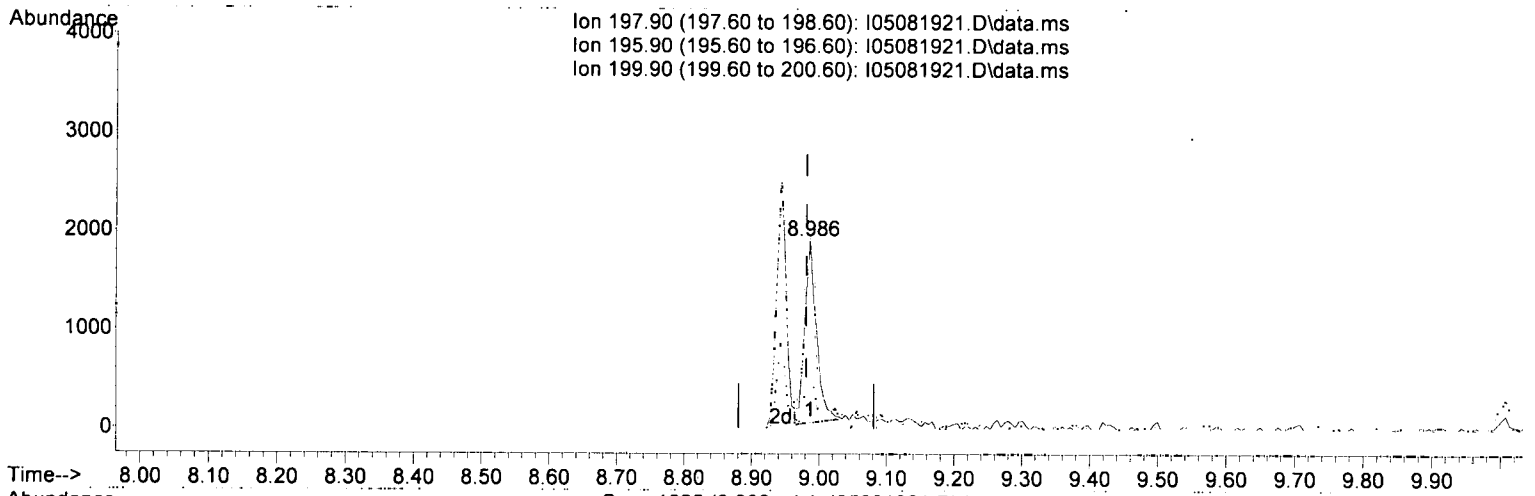
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	116.39#
77.10	76.00	86.89
0.00	0.00	0.00

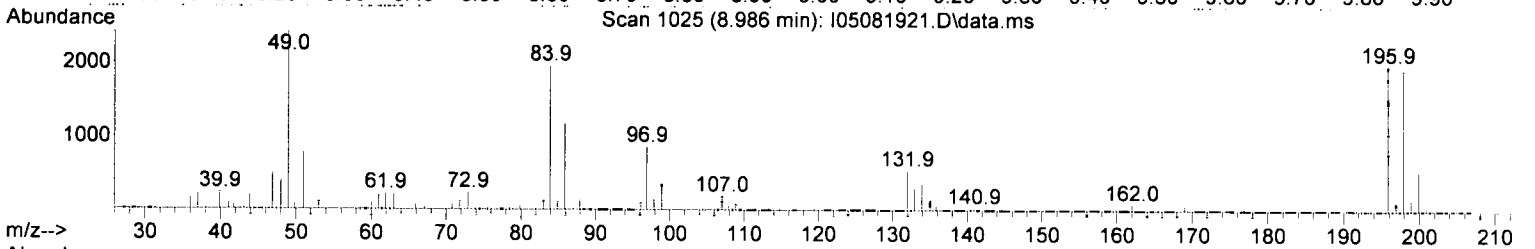
5/9/19

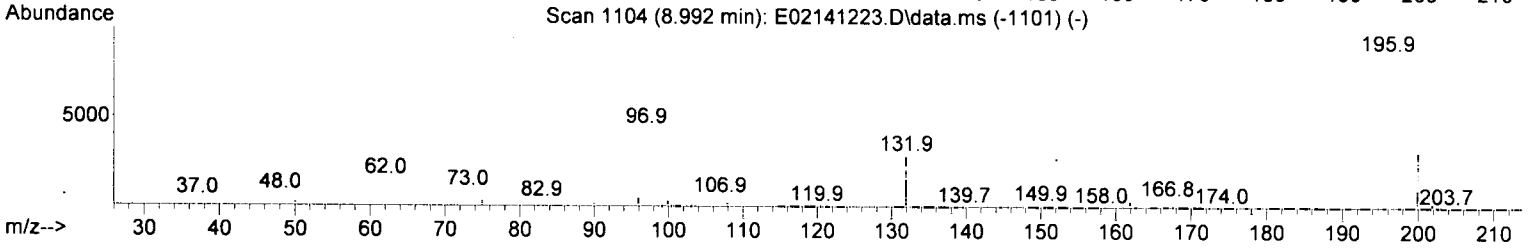
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081921.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

8.986min (+ 0.005) 80.70 ng/ml

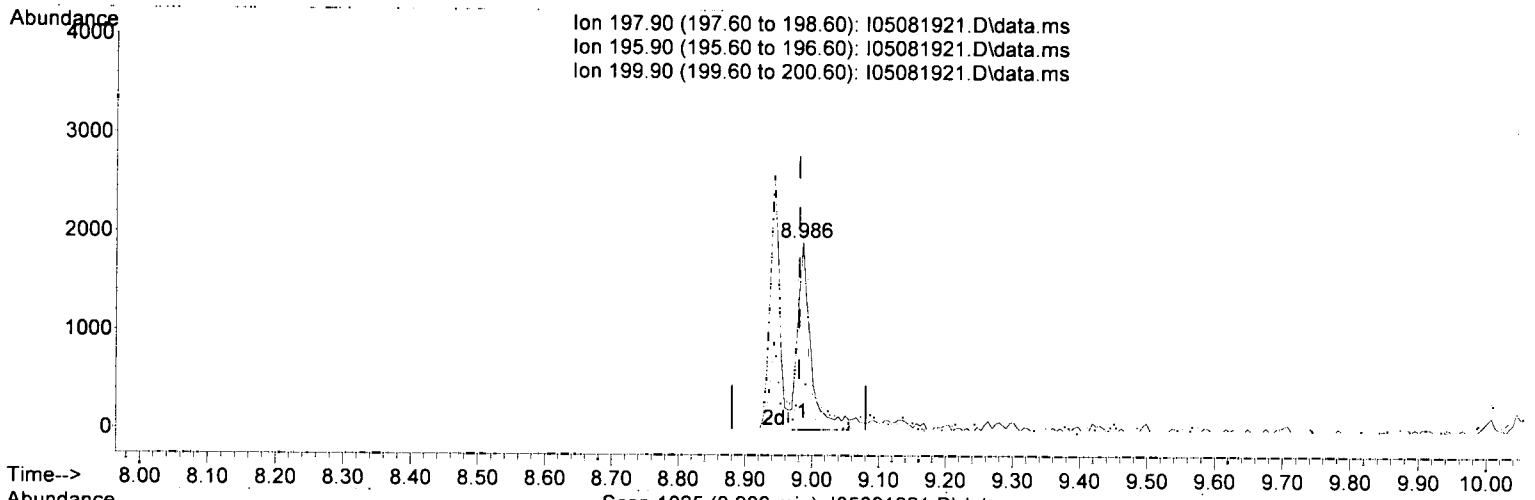
response 2233

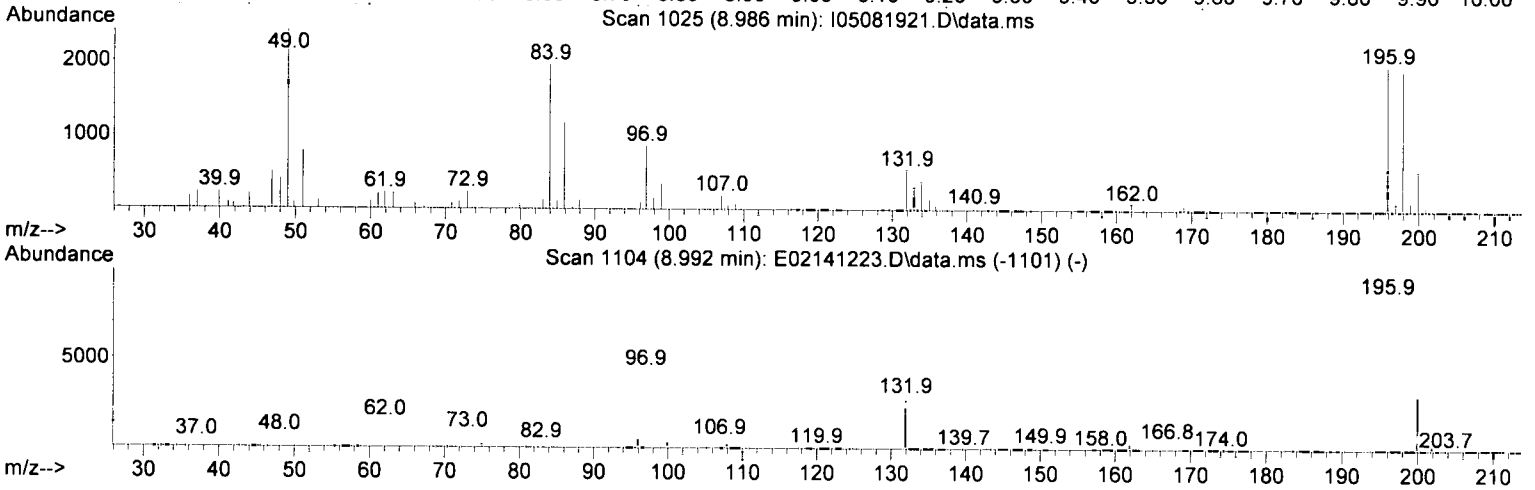
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	103.25
199.90	31.10	28.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081921.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

8.986min (+ 0.005) 91.36 ng/ml D

5/9/19

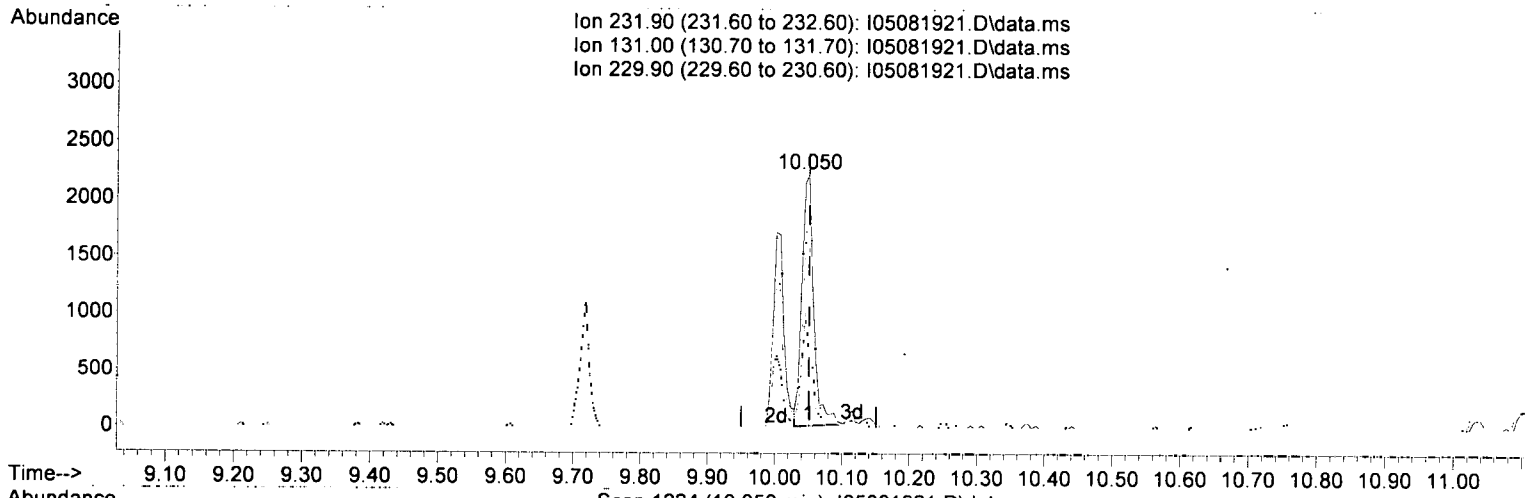
response 2692

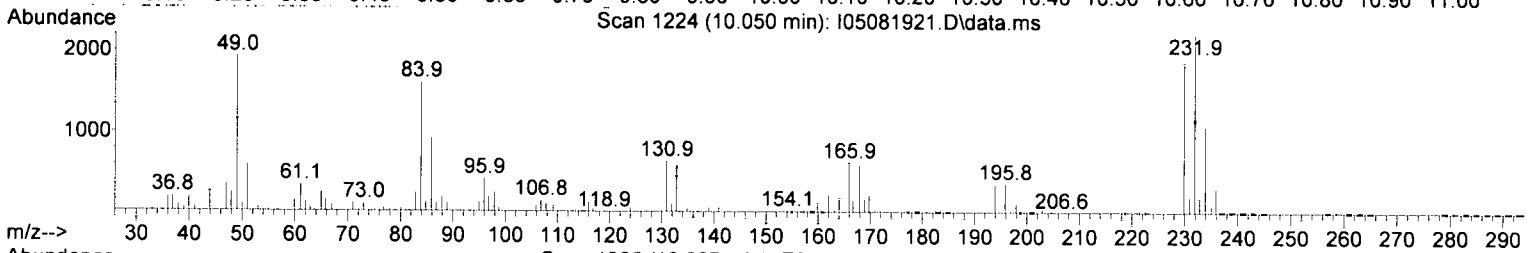
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	103.25
199.90	31.10	28.81
0.00	0.00	0.00

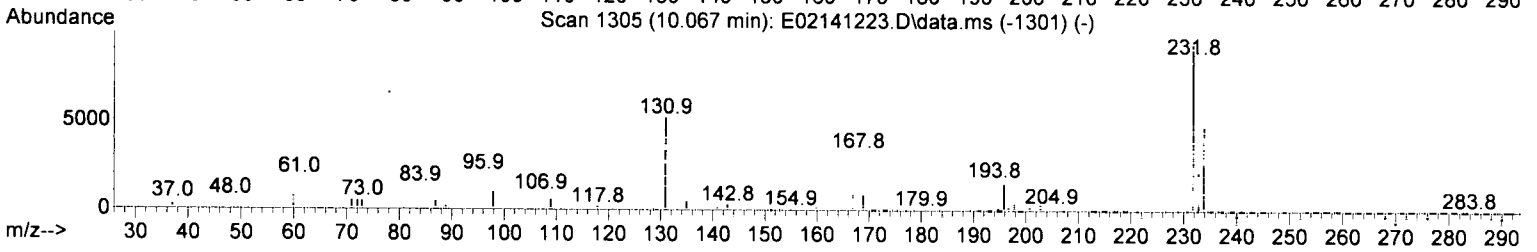
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081921.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.050min (-0.000) 111.52 ng/ml

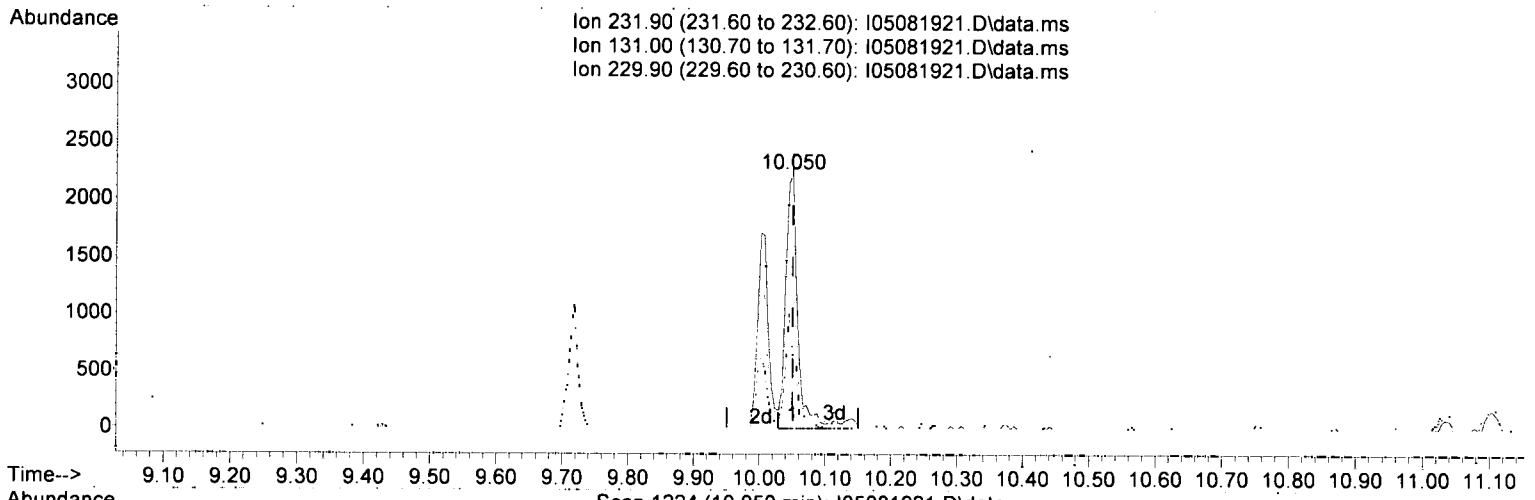
response 2712

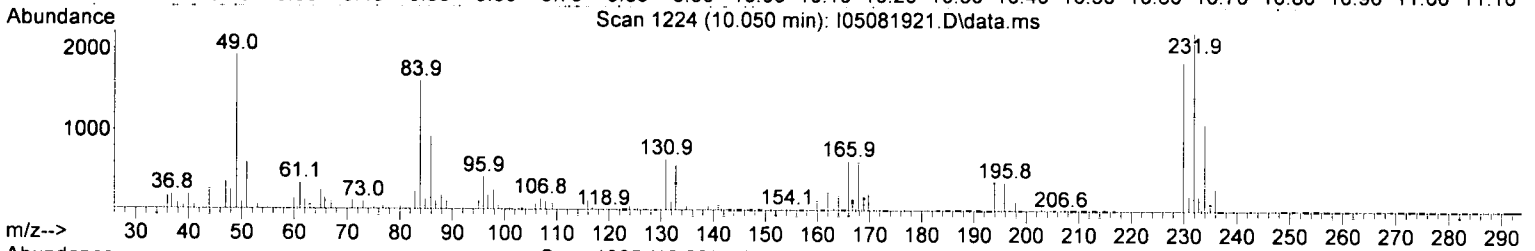
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	29.25#
229.90	78.40	83.76
0.00	0.00	0.00

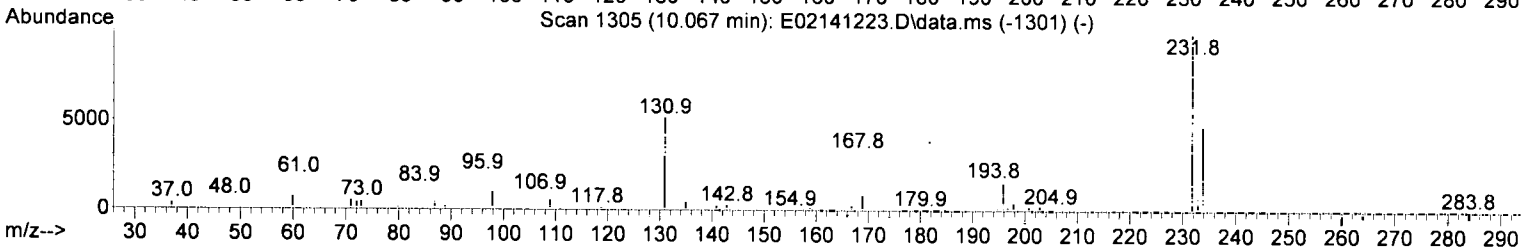
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081921.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.050min (-0.000) 120.47 ng/ml m

5/9/19

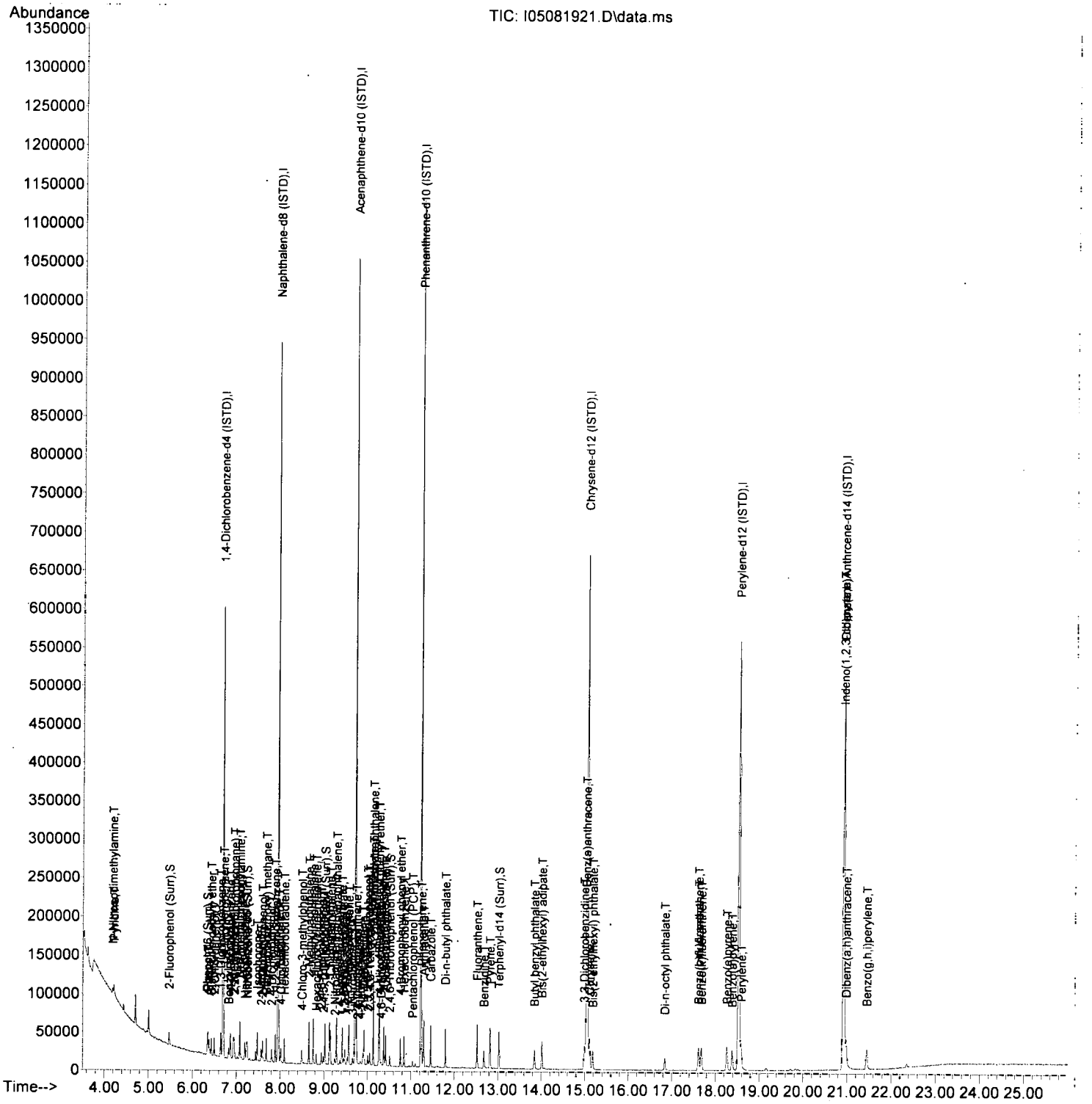
response 3032

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	29.25#
229.90	78.40	83.76
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081921.D
Acq On : 8 May 2019 9:25 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:31 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081922.D
Acq On : 8 May 2019 10:01 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.691	152	120284	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.943	136	469577	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	245169	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	455298	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	479919	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.539	264	448879	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.919	292	416516	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	14997	186.46	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	19650	185.20	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.226	82	17627	198.33	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	41740	233.29	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.510	330	4189	254.08	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	49759	217.77	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.167	74	11200	176.32	ng/ml	91
3) Pyridine	4.188	79	17242	173.73	ng/ml	95
6) Phenol	6.349	94	21991	190.24	ng/ml	99
7) Aniline	6.381	93	21214	200.85	ng/ml	98
8) Bis(2-chloroethyl) ether	6.429	93	18736	197.62	ng/ml	95
9) 2-Chlorophenol	6.499	128	16450	199.77	ng/ml	92
10) 1,3-Dichlorobenzene	6.643	146	19525	213.49	ng/ml	94
11) 1,4-Dichlorobenzene	6.707	146	18751	215.07	ng/ml	94
12) Benzyl alcohol	6.820	108	6970	163.75	ng/ml	98
13) 1,2-Dichlorobenzene	6.863	146	18424	216.20	ng/ml	96
14) 2-Methylphenol	6.927	107	12165	186.63	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.948	45	24389	184.15	ng/ml	97
16) N-Nitrosodi-n-propylamine	7.077	70	13250	197.28	ng/ml	92
17) 3+4-Methylphenol	7.077	107	15823	192.53	ng/ml	97
18) Hexachloroethane	7.194	201	5764	214.99	ng/ml	84
20) Nitrobenzene	7.248	77	18273	201.98	ng/ml	96
22) Isophorone	7.478	82	35486	204.67	ng/ml	97
23) 2-Nitrophenol	7.563	139	9275	229.22	ng/ml	93
24) 2,4-Dimethylphenol	7.595	122	13165	189.57	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.681	93	21622	209.37	ng/ml	99
26) Benzoic acid	~~7.697~~	~~105~~	~~180~~	~~795.98~~	~~ng/ml~~	98 see MI
27) 2,4-Dichlorophenol	7.804	162	10432	189.02	ng/ml	98
28) 1,2,4-Trichlorobenzene	7.890	180	16423	224.06	ng/ml	98
29) Naphthalene	7.964	128	51599	221.59	ng/ml	100
30) 4-Chloroaniline	8.013	127	12811	203.66	ng/ml	98
31) Hexachlorobutadiene	8.093	225	8220	222.93	ng/ml	98
32) 4-Chloro-3-methylphenol	8.494	107	9012	163.32	ng/ml	85
33) 2-Methylnaphthalene	8.660	142	36961	215.36	ng/ml	97
34) 1-Methylnaphthalene	8.756	142	36346	223.19	ng/ml	96
36) Hexachlorocyclopentadiene	8.826	237	5324	184.81	ng/ml	92
37) 2,4,6-Trichlorophenol	8.943	196	7125	189.25	ng/ml	94
38) 2,4,5-Trichlorophenol	8.986	198	6364	172.87	ng/ml	96
39) 1,1'-Biphenyl	9.125	154	44415	214.36	ng/ml	99
41) 2-Chloronaphthalene	9.146	162	32196	213.60	ng/ml	96
42) 2-Nitroaniline	9.248	138	7039	142.55	ng/ml	83
43) 2,6-Dimethylnaphthalene	9.286	156	34391	231.30	ng/ml	94

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081922.D
Acq On : 8 May 2019 10:01 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

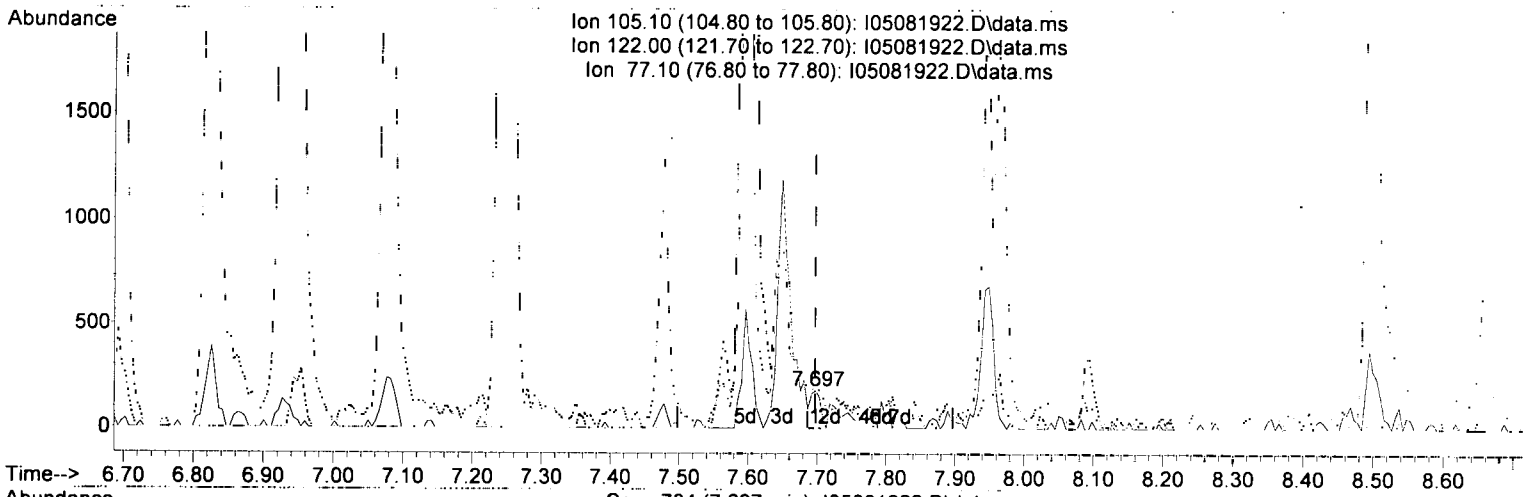
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.371	168	3037	191.61	ng/ml	97
45) Dimethyl phthalate	9.419	163	38348	224.15	ng/ml	100
46) 1,3-Dinitrobenzene	9.451	168	4229	160.53	ng/ml	91
47) 2,6-Dinitrotoluene	9.483	165	7570	203.08	ng/ml	88
48) 1,2-Dinitrobenzene	9.537	168	3477	184.71	ng/ml	85
49) Acenaphthylene	9.569	152	54704	228.60	ng/ml	99
50) 3-Nitroaniline	9.660	138	6297	189.89	ng/ml	91
51) Acenaphthene	9.745	153	34142	226.81	ng/ml	97
52) 2,4-Dinitrophenol	9.767	184	725	248.66	ng/ml	76
53) 4-Nitrophenol	9.836	139	3537	198.32	ng/ml	89
54) 2,4-Dinitrotoluene	9.895	165	8883	204.75	ng/ml	82
55) Dibenzofuran	9.922	168	47089	227.25	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	10.002	232	5912	222.82	ng/ml	89
57) 2,3,4,6-Tetrachlorophenol	10.045	232	7180	231.35	ng/ml	85
58) Diethyl phthalate	10.131	149	36994	231.01	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.131	170	31957	232.47	ng/ml	98
60) Fluorene	10.270	166	38831	230.14	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.259	204	19218	242.54	ng/ml	86
62) 4-Nitroaniline	10.275	138	7673	209.71	ng/ml	93
63) 4,6-Dinitro-2-methylph...	10.307	198	2514	238.84	ng/ml	83
65) N-Nitrosodiphenylamine	10.377	169	32443	233.15	ng/ml	97
66) Azobenzene (1,2-DPH)	10.419	77	36434	209.04	ng/ml	90
68) 4-Bromophenyl phenyl e...	10.756	248	10934	237.37	ng/ml	83
69) Hexachlorobenzene	10.837	284	11859	242.61	ng/ml	94
70) Pentachlorophenol (PCP)	11.035	266	3055	222.18	ng/ml	97
71) Phenanthrene	11.243	178	53865	227.94	ng/ml	97
72) Anthracene	11.297	178	54658	239.66	ng/ml	97
73) Carbazole	11.452	167	48320	211.98	ng/ml	97
74) Di-n-butyl phthalate	11.794	149	58030	211.72	ng/ml	99
75) Fluoranthene	12.521	202	63551	242.40	ng/ml	97
76) Benzidine	12.677	184	37553	670.44	ng/ml	99
77) Pyrene	12.816	202	65571	247.07	ng/ml	99
80) Butyl benzyl phthalate	13.843	149	23562	195.74	ng/ml	87
81) Bis(2-ethylhexyl) adipate	14.014	129	22694	170.62	ng/ml	93
82) 3,3-Dichlorobenzidine	14.987	252	28902	759.23	ng/ml	90
83) Benz(a)anthracene	15.025	228	58075	211.43	ng/ml	98
84) Chrysene	15.105	228	53969	210.93	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.180	149	29512	160.43	ng/ml	94
87) Di-n-octyl phthalate	16.843	149	42140	211.67	ng/ml	98
88) Benzo(b)fluoranthene	17.613	252	54791	212.85	ng/ml	95
89) Benzo(k)fluoranthene	17.678	252	56932	216.15	ng/ml	94
90) Benzo(b+k)fluoranthene	17.613	252	114689	428.28	ng/ml	94
91) Benzo(e)pyrene	18.266	252	55890	219.38	ng/ml	94
92) Benzo(a)pyrene	18.384	252	49339	214.68	ng/ml	98
93) Perylene	18.592	252	46507	202.37	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.913	276	45199	191.67	ng/ml	96
96) Dibenz(a,h)anthracene	20.983	278	43093	217.16	ng/ml	94
97) Benzo(g,h,i)perylene	21.448	276	46913	212.36	ng/ml	89

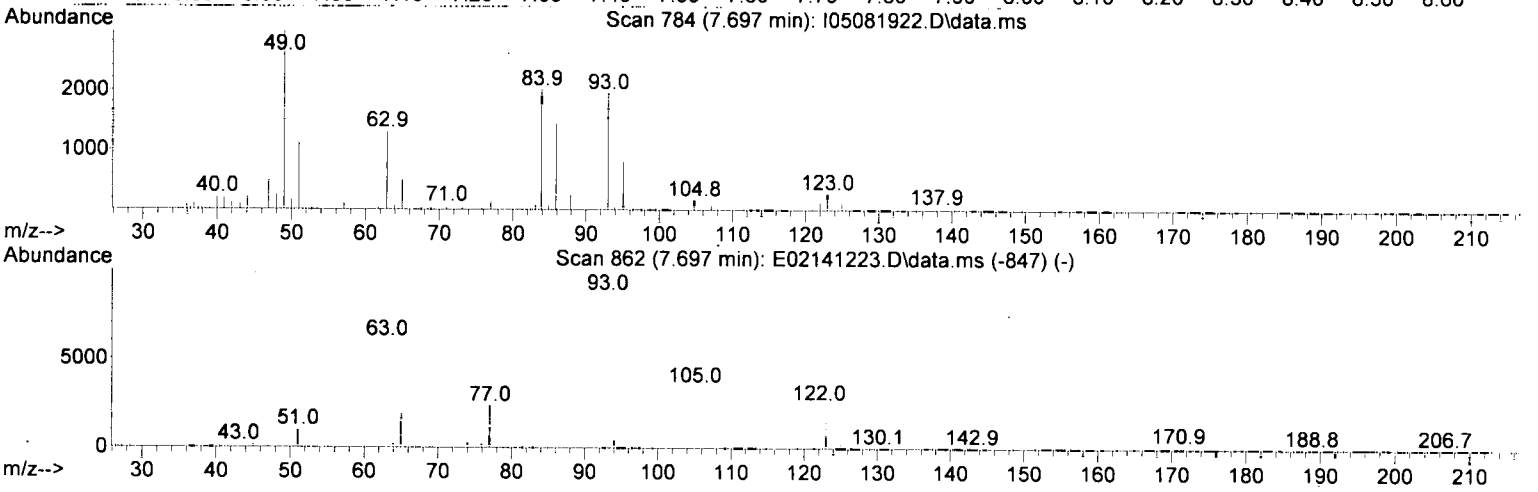
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081922.D
Acq On : 8 May 2019 10:01 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081922.D\data.ms

(26) Benzoic acid (T)

7.697min (+ 0.000) 795.98 ng/ml

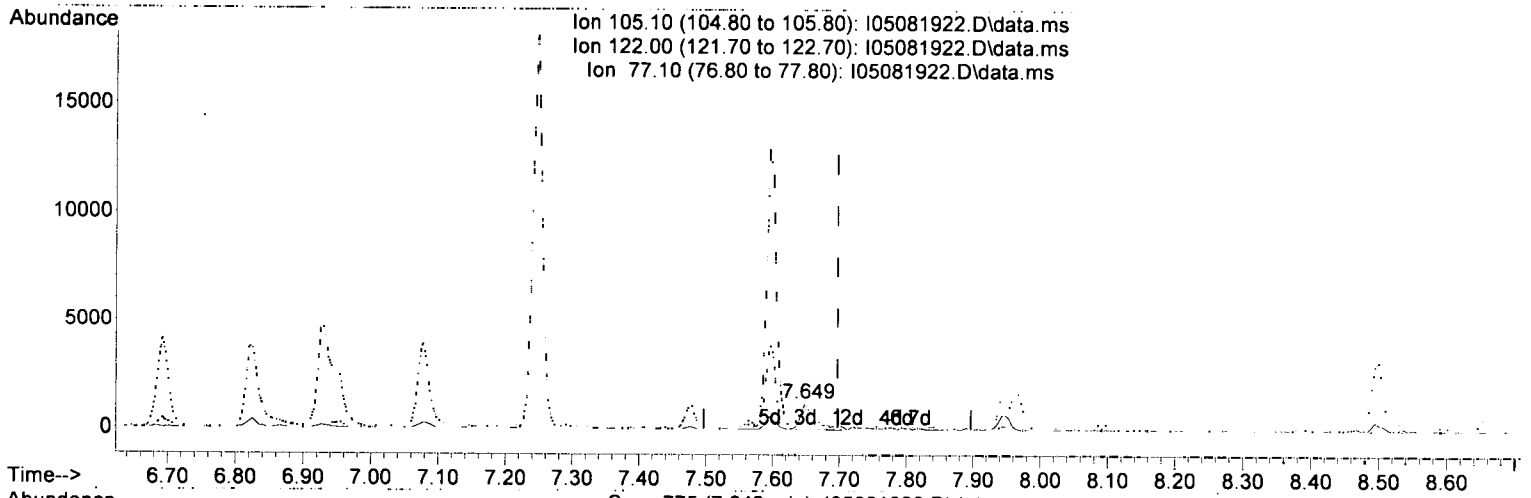
response 180

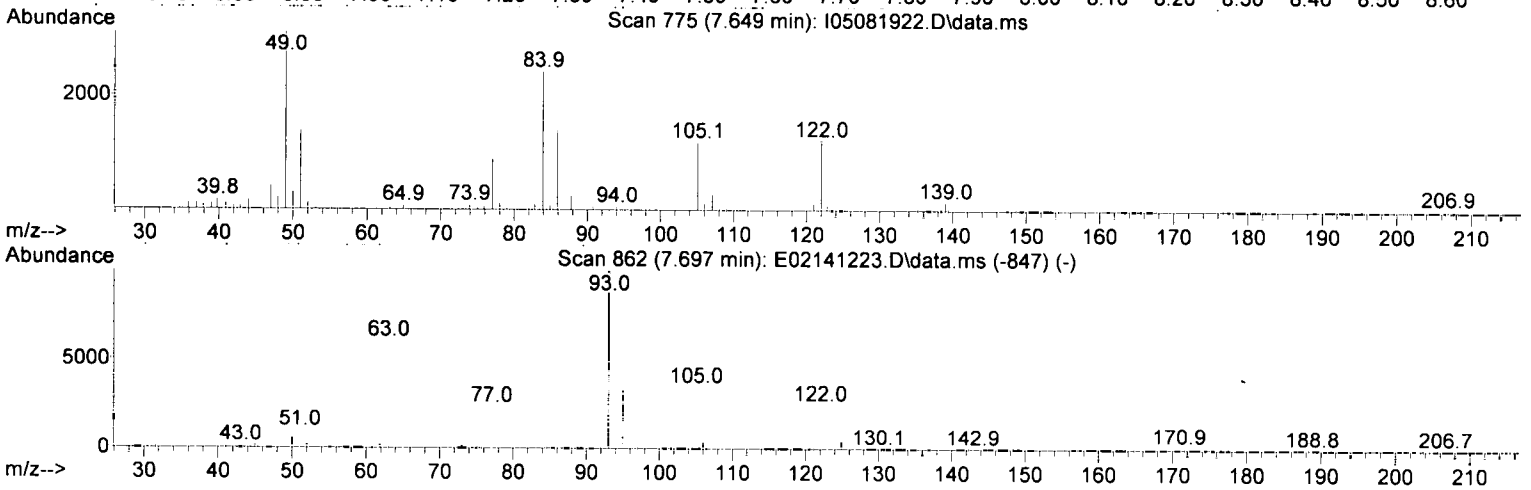
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	82.68
77.10	76.00	77.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081922.D
Acq On : 8 May 2019 10:01 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081922.D\data.ms

(26) Benzoic acid (T)

7.649min (-0.048) 835.63 ng/ml m

5/9/19

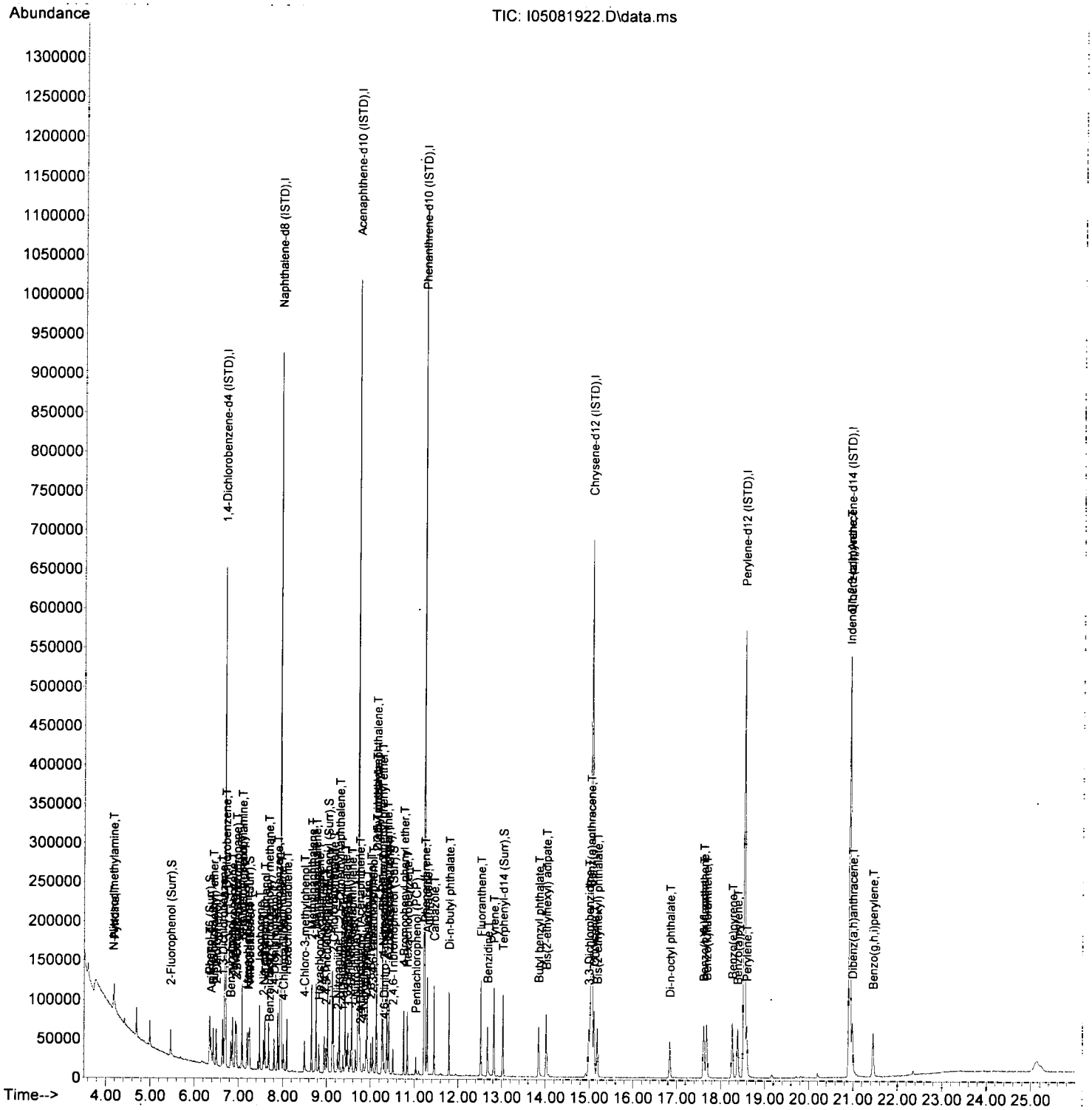
response 1808

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	101.76
77.10	76.00	76.19
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081922.D
Acq On : 8 May 2019 10:01 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081923.D
Acq On : 8 May 2019 10:38 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:45 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	118130	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	449407	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.713	162	233204	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	434358	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.051	240	448745	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.538	264	423882	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	408680	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.472	112	39110	495.14	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	50799	487.51	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.231	82	42745	489.72	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	100779	592.16	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.515	330	11050	653.33	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	118955	556.78	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.183	74	27689	443.85	ng/ml	94
3) Pyridine	4.199	79	44836	460.01	ng/ml	96
6) Phenol	6.349	94	56392	496.73	ng/ml	97
7) Aniline	6.381	93	52964	510.59	ng/ml	99
8) Bis(2-chloroethyl) ether	6.429	93	45269	486.19	ng/ml	98
9) 2-Chlorophenol	6.499	128	42307	523.15	ng/ml	93
10) 1,3-Dichlorobenzene	6.643	146	48498	539.96	ng/ml	96
11) 1,4-Dichlorobenzene	6.713	146	45970	536.88	ng/ml	96
12) Benzyl alcohol	6.825	108	21295	455.40	ng/ml	94
13) 1,2-Dichlorobenzene	6.862	146	45584	544.66	ng/ml	95
14) 2-Methylphenol	6.932	107	33013	515.71	ng/ml	96
15) 2,2'-Oxybis(1-Chloropr...	6.948	45	59332	456.16	ng/ml	97
16) N-Nitrosodi-n-propylamine	7.076	70	33065	501.29	ng/ml	97
17) 3+4-Methylphenol	7.076	107	41496	514.11	ng/ml	95
18) Hexachloroethane	7.194	201	14906	566.11	ng/ml	86
20) Nitrobenzene	7.247	77	43153	485.69	ng/ml	94
22) Isophorone	7.477	82	89488	539.19	ng/ml	96
23) 2-Nitrophenol	7.563	139	25491	610.26	ng/ml	96
24) 2,4-Dimethylphenol	7.595	122	33821	508.87	ng/ml	97
25) Bis(2-chloroethoxy) me...	7.686	93	53158	537.84	ng/ml	99
26) Benzoic acid	7.670	105	12609	1109.66	ng/ml	96
27) 2,4-Dichlorophenol	7.804	162	28435	518.94	ng/ml	95
28) 1,2,4-Trichlorobenzene	7.889	180	39463	562.55	ng/ml	97
29) Naphthalene	7.964	128	121753	546.34	ng/ml	99
30) 4-Chloroaniline	8.018	127	25718	427.20	ng/ml	95
31) Hexachlorobutadiene	8.093	225	20186	572.03	ng/ml	97
32) 4-Chloro-3-methylphenol	8.494	107	29879	489.21	ng/ml	97
33) 2-Methylnaphthalene	8.660	142	94207	573.54	ng/ml	97
34) 1-Methylnaphthalene	8.756	142	90038	577.72	ng/ml	97
36) Hexachlorocyclopentadiene	8.825	237	16399	526.00	ng/ml	98
37) 2,4,6-Trichlorophenol	8.943	196	21591	531.23	ng/ml	100
38) 2,4,5-Trichlorophenol	8.980	198	19810	501.07	ng/ml	99
39) 1,1'-Biphenyl	9.125	154	111947	568.00	ng/ml	99
41) 2-Chloronaphthalene	9.152	162	80038	558.24	ng/ml	93
42) 2-Nitroaniline	9.243	138	22855	486.58	ng/ml	95
43) 2,6-Dimethylnaphthalene	9.285	156	82179	581.06	ng/ml	96

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081923.D
Acq On : 8 May 2019 10:38 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:45 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

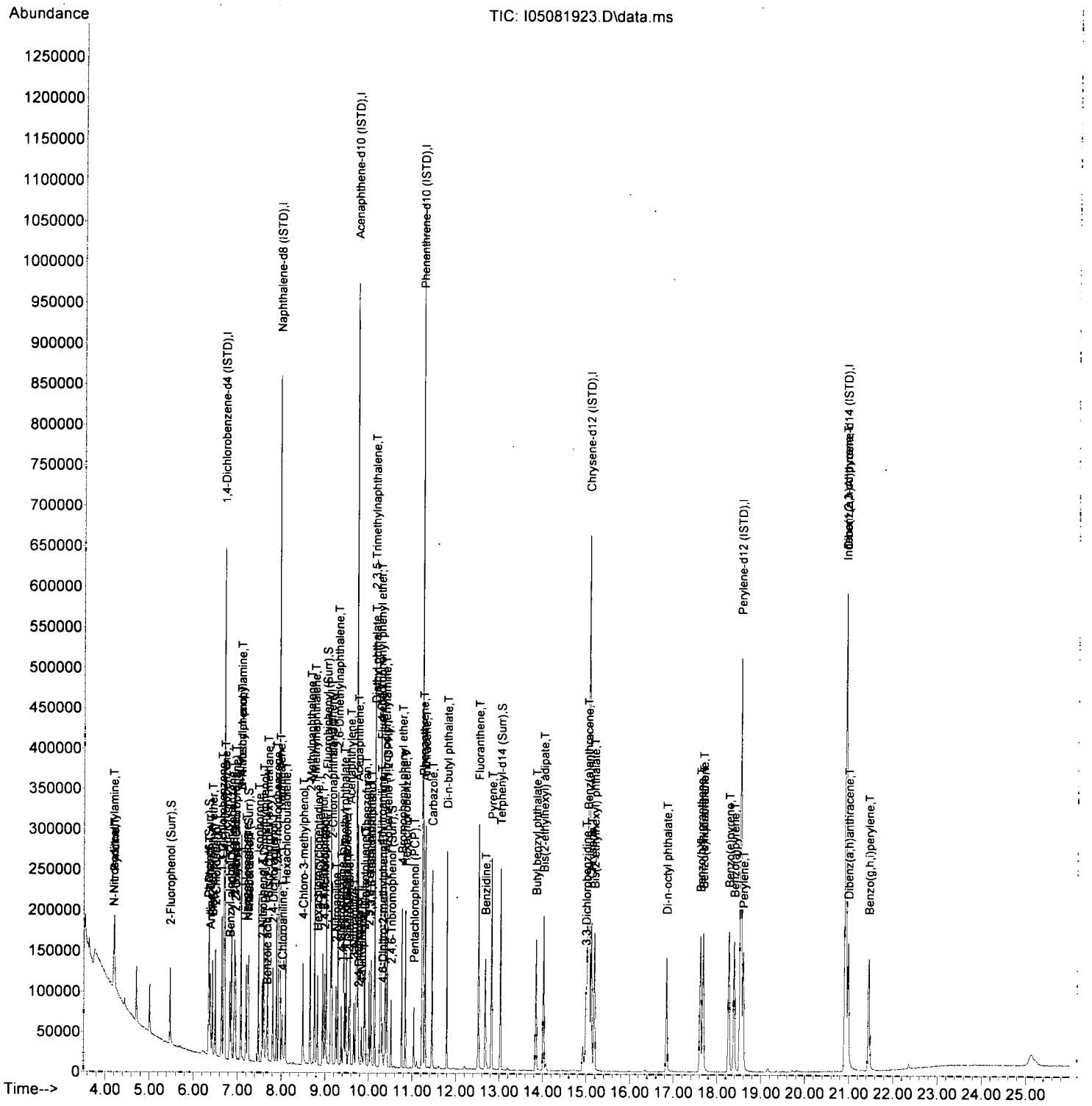
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.371	168	10337	524.07	ng/ml	84
45) Dimethyl phthalate	9.424	163	91807	564.16	ng/ml	99
46) 1,3-Dinitrobenzene	9.451	168	13273	529.67	ng/ml	97
47) 2,6-Dinitrotoluene	9.483	165	20865	588.48	ng/ml	86
48) 1,2-Dinitrobenzene	9.537	168	9375	523.58	ng/ml	85
49) Acenaphthylene	9.569	152	129518	569.00	ng/ml	99
50) 3-Nitroaniline	9.660	138	17372	538.16	ng/ml	89
51) Acenaphthene	9.745	153	79978	558.57	ng/ml	99
52) 2,4-Dinitrophenol	9.761	184	3835	566.86	ng/ml	99
53) 4-Nitrophenol	9.831	139	11649	504.51	ng/ml	84
54) 2,4-Dinitrotoluene	9.895	165	25345	552.15	ng/ml	82
55) Dibenzofuran	9.922	168	113330	574.99	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	10.002	232	17017	570.18	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	10.045	232	19079	582.63	ng/ml	88
58) Diethyl phthalate	10.136	149	84929	557.56	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.130	170	76253	583.17	ng/ml	94
60) Fluorene	10.269	166	91858	572.35	ng/ml	97
61) 4-Chlorophenyl phenyl ...	10.259	204	44439	589.61	ng/ml	88
62) 4-Nitroaniline	10.275	138	19675	565.32	ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.312	198	8901	633.37	ng/ml	77
65) N-Nitrosodiphenylamine	10.376	169	78301	589.83	ng/ml	96
66) Azobenzene (1,2-DPH)	10.419	77	87002	523.24	ng/ml	90
68) 4-Bromophenyl phenyl e...	10.756	248	27078	616.17	ng/ml	86
69) Hexachlorobenzene	10.836	284	28884	619.40	ng/ml	93
70) Pentachlorophenol (PCP)	11.034	266	10538	588.98	ng/ml	94
71) Phenanthrene	11.243	178	127029	563.47	ng/ml	98
72) Anthracene	11.296	178	128961	592.72	ng/ml	98
73) Carbazole	11.452	167	116650	540.21	ng/ml	98
74) Di-n-butyl phthalate	11.794	149	147202	562.95	ng/ml	99
75) Fluoranthene	12.521	202	155537	621.85	ng/ml	96
76) Benzidine	12.676	184	76984	1386.28	ng/ml	97
77) Pyrene	12.821	202	154311	609.46	ng/ml	99
80) Butyl benzyl phthalate	13.842	149	63002	491.75	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.014	129	56949	457.91	ng/ml	98
82) 3,3-Dichlorobenzidine	14.987	252	47477	1694.22	ng/ml	97
83) Benz(a)anthracene	15.024	228	138304	538.49	ng/ml	97
84) Chrysene	15.110	228	126427	528.46	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.180	149	81848	475.85	ng/ml	96
87) Di-n-octyl phthalate	16.843	149	132449	524.88	ng/ml	99
88) Benzo(b)fluoranthene	17.613	252	139653	554.84	ng/ml	95
89) Benzo(k)fluoranthene	17.677	252	142423	562.67	ng/ml	94
90) Benzo(b+k)fluoranthene	17.677	252	289741	1117.93	ng/ml	94
91) Benzo(e)pyrene	18.271	252	140018	582.00	ng/ml	98
92) Benzo(a)pyrene	18.389	252	129040	575.04	ng/ml	97
93) Perylene	18.592	252	116376	536.26	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.919	276	116104	501.79	ng/ml	95
96) Dibenz(a,h)anthracene	20.983	278	106785	548.44	ng/ml	96
97) Benzo(g,h,i)perylene	21.453	276	120043	553.82	ng/ml	89

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081923.D
Acq On : 8 May 2019 10:38 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:45 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081924.D
Acq On : 8 May 2019 11:14 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:52 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	116694	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	435111	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.719	162	224844	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	425173	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.057	240	428978	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.539	264	400554	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	399119	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	76115	975.49	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	98894	960.76	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.232	82	81436	944.48	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	182200	1110.38	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	22087	1300.38	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	219562	1075.04	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.172	74	53609	869.93	ng/ml	100
3) Pyridine	4.183	79	85720	890.30	ng/ml	99
6) Phenol	6.354	94	107531	958.84	ng/ml	97
7) Aniline	6.381	93	81018	790.65	ng/ml	97
8) Bis(2-chloroethyl) ether	6.435	93	91455	994.32	ng/ml	98
9) 2-Chlorophenol	6.499	128	81650	1022.08	ng/ml	95
10) 1,3-Dichlorobenzene	6.643	146	91509	1031.37	ng/ml	98
11) 1,4-Dichlorobenzene	6.713	146	87432	1033.67	ng/ml	97
12) Benzyl alcohol	6.825	108	45805	949.75	ng/ml	91
13) 1,2-Dichlorobenzene	6.863	146	84135	1017.65	ng/ml	97
14) 2-Methylphenol	6.932	107	61935	979.41	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	6.954	45	109743	854.12	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.077	70	62234	955.13	ng/ml	96
17) 3+4-Methylphenol	7.077	107	78741	987.56	ng/ml	98
18) Hexachloroethane	7.194	201	27533	1058.54	ng/ml	94
20) Nitrobenzene	7.248	77	81129	924.35	ng/ml	95
22) Isophorone	7.483	82	169224	1053.31	ng/ml	95
23) 2-Nitrophenol	7.563	139	44264	1073.97	ng/ml	99
24) 2,4-Dimethylphenol	7.601	122	67530	1049.45	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.686	93	98157	1025.75	ng/ml	99
26) Benzoic acid	7.697	105	57591	2238.59	ng/ml	98
27) 2,4-Dichlorophenol	7.804	162	59077	1097.68	ng/ml	99
28) 1,2,4-Trichlorobenzene	7.890	180	73101	1076.31	ng/ml	97
29) Naphthalene	7.970	128	228023	1056.83	ng/ml	99
30) 4-Chloroaniline	8.023	127	57359	984.09	ng/ml	96
31) Hexachlorobutadiene	8.098	225	37131	1086.79	ng/ml	99
32) 4-Chloro-3-methylphenol	8.494	107	67094	1083.65	ng/ml	98
33) 2-Methylnaphthalene	8.660	142	177224	1114.40	ng/ml	97
34) 1-Methylnaphthalene	8.761	142	166590	1104.02	ng/ml	98
36) Hexachlorocyclopentadiene	8.826	237	34750	1111.10	ng/ml	96
37) 2,4,6-Trichlorophenol	8.943	196	44351	1093.91	ng/ml	99
38) 2,4,5-Trichlorophenol	8.981	198	42377	1080.38	ng/ml	99
39) 1,1'-Biphenyl	9.125	154	204461	1075.97	ng/ml	99
41) 2-Chloronaphthalene	9.152	162	145871	1055.23	ng/ml	96
42) 2-Nitroaniline	9.248	138	48960	1081.11	ng/ml	91
43) 2,6-Dimethylnaphthalene	9.286	156	150715	1105.27	ng/ml	96

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081924.D
Acq On : 8 May 2019 11:14 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:52 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

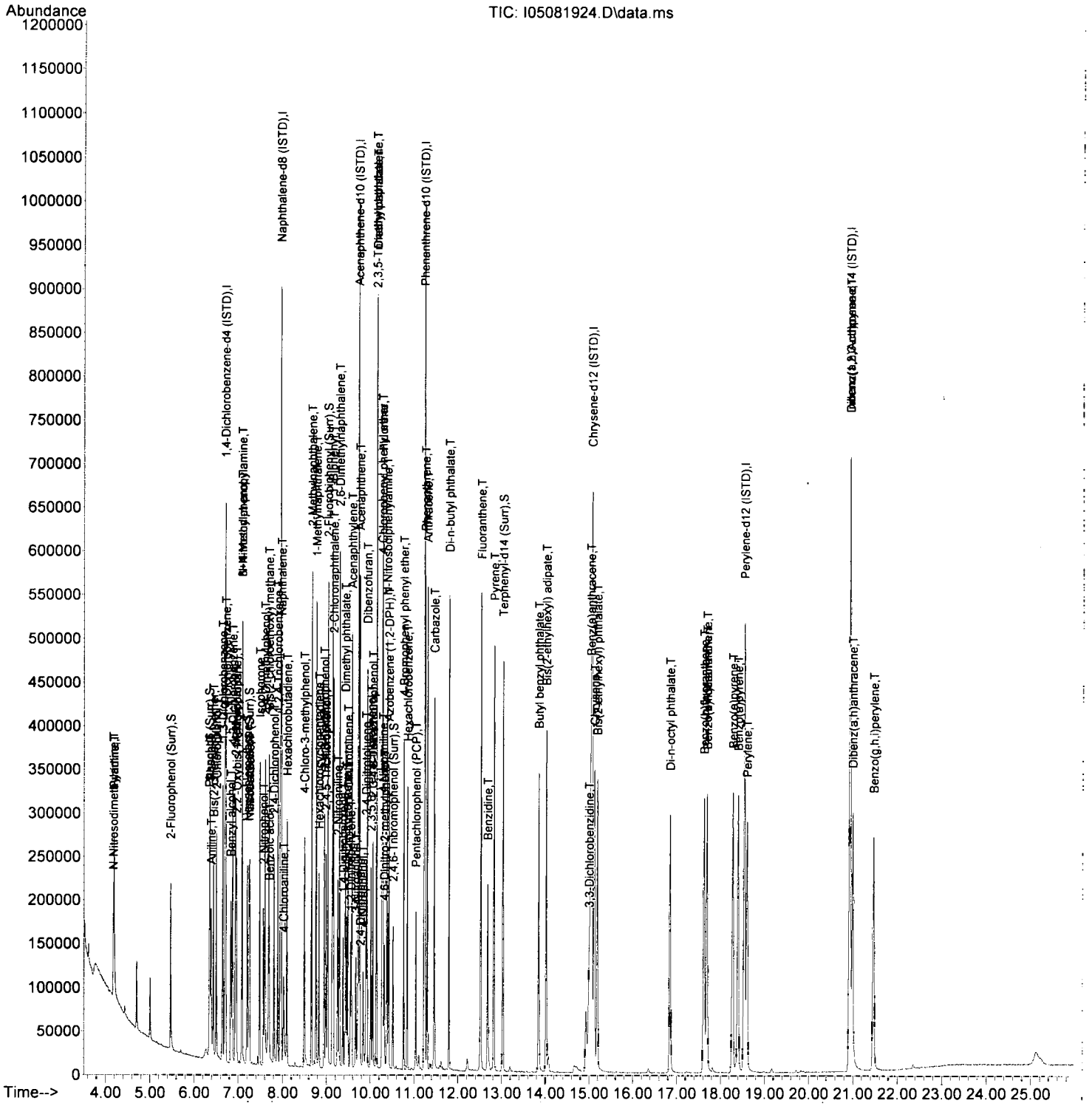
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	23019	1115.72	ng/ml	81
45) Dimethyl phthalate	9.425	163	167550	1067.88	ng/ml	99
46) 1,3-Dinitrobenzene	9.457	168	27406	1134.32	ng/ml	91
47) 2,6-Dinitrotoluene	9.489	165	39367	1151.59	ng/ml	78
48) 1,2-Dinitrobenzene	9.548	168	19142	1108.80	ng/ml#	72
49) Acenaphthylene	9.574	152	242796	1106.31	ng/ml	99
50) 3-Nitroaniline	9.665	138	30789	1019.40	ng/ml	92
51) Acenaphthene	9.751	153	146889	1064.01	ng/ml	99
52) 2,4-Dinitrophenol	9.767	184	12133	1336.11	ng/ml	87
53) 4-Nitrophenol	9.831	139	26763	1084.22	ng/ml	89
54) 2,4-Dinitrotoluene	9.895	165	50363	1106.48	ng/ml	85
55) Dibenzofuran	9.922	168	206307	1085.63	ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	10.008	232	35452	1158.39	ng/ml	87
57) 2,3,4,6-Tetrachlorophenol	10.050	232	38150	1171.11	ng/ml	87
58) Diethyl phthalate	10.136	149	154986	1055.31	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.131	170	135724	1076.59	ng/ml	96
60) Fluorene	10.270	166	163031	1053.59	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.259	204	79614	1095.58	ng/ml	88
62) 4-Nitroaniline	10.280	138	36743	1094.98	ng/ml	91
63) 4,6-Dinitro-2-methylph...	10.312	198	21051	1355.86	ng/ml	82
65) N-Nitrosodiphenylamine	10.377	169	139124	1070.63	ng/ml	98
66) Azobenzene (1,2-DPH)	10.419	77	156991	964.57	ng/ml	91
68) 4-Bromophenyl phenyl e...	10.756	248	49801	1157.73	ng/ml	87
69) Hexachlorobenzene	10.842	284	52902	1158.97	ng/ml	91
70) Pentachlorophenol (PCP)	11.035	266	23287	1202.11	ng/ml	98
71) Phenanthrene	11.248	178	232143	1051.98	ng/ml	100
72) Anthracene	11.297	178	235356	1105.09	ng/ml	99
73) Carbazole	11.457	167	218760	1070.75	ng/ml	98
74) Di-n-butyl phthalate	11.794	149	281730	1100.70	ng/ml	99
75) Fluoranthene	12.527	202	287574	1174.59	ng/ml	97
76) Benzidine	12.677	184	119397	2129.89	ng/ml	97
77) Pyrene	12.821	202	286850	1157.41	ng/ml	100
80) Butyl benzyl phthalate	13.843	149	128733	996.48	ng/ml	90
81) Bis(2-ethylhexyl) adipate	14.014	129	114896	966.42	ng/ml	98
82) 3,3-Dichlorobenzidine	14.993	252	62412	2491.37	ng/ml	94
83) Benz(a)anthracene	15.030	228	257723	1049.68	ng/ml	99
84) Chrysene	15.116	228	231498	1012.24	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.180	149	159937	972.69	ng/ml	96
87) Di-n-octyl phthalate	16.843	149	284170	1052.31	ng/ml	98
88) Benzo(b)fluoranthene	17.619	252	268390	1108.16	ng/ml	96
89) Benzo(k)fluoranthene	17.688	252	262537	1105.11	ng/ml	95
90) Benzo(b+k)fluoranthene	17.688	252	543058	2204.99	ng/ml	95
91) Benzo(e)pyrene	18.277	252	259798	1142.77	ng/ml	98
92) Benzo(a)pyrene	18.394	252	245703	1147.61	ng/ml	97
93) Perylene	18.597	252	216265	1054.59	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	20.924	276	217807	963.89	ng/ml	94
96) Dibenz(a,h)anthracene	20.988	278	199329	1048.27	ng/ml	94
97) Benzo(g,h,i)perylene	21.464	276	226164	1068.40	ng/ml	90

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081924.D
Acq On : 8 May 2019 11:14 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:02:52 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081925.D
Acq On : 8 May 2019 11:50 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:00 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	107016	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	404790	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.719	162	208028	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.222	188	396363	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.062	240	353171	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.544	264	333963	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.929	292	322705	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	148818	2079.73	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	191806	2031.91	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.232	82	149113	1885.78	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	311047	2048.84	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	38932	2416.44	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	356113	2117.90	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.167	74	104473	1848.62	ng/ml	97
3) Pyridine	4.183	79	164460	1862.57	ng/ml	99
6) Phenol	6.354	94	203006	1973.89	ng/ml	97
7) Aniline	6.381	93	119883	1275.74	ng/ml	97
8) Bis(2-chloroethyl) ether	6.435	93	172619	2046.48	ng/ml	98
9) 2-Chlorophenol	6.499	128	152301	2078.88	ng/ml	94
10) 1,3-Dichlorobenzene	6.643	146	163909	2014.44	ng/ml	95
11) 1,4-Dichlorobenzene	6.713	146	154653	1993.74	ng/ml	97
12) Benzyl alcohol	6.825	108	91265	1975.88	ng/ml	93
13) 1,2-Dichlorobenzene	6.863	146	151209	1994.34	ng/ml	98
14) 2-Methylphenol	6.932	107	113843	1963.07	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	195754	1661.32	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.082	70	111051	1858.47	ng/ml	94
17) 3+4-Methylphenol	7.082	107	144919	1981.92	ng/ml	98
18) Hexachloroethane	7.194	201	49920	2092.81	ng/ml	90
20) Nitrobenzene	7.253	77	144892	1800.13	ng/ml	91
22) Isophorone	7.483	82	306230	2048.86	ng/ml	95
23) 2-Nitrophenol	7.563	139	81543	2100.52	ng/ml	99
24) 2,4-Dimethylphenol	7.601	122	125958	2104.07	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.686	93	173377	1947.52	ng/ml	99
26) Benzoic acid	7.724	105	120684	3889.47	ng/ml	98
27) 2,4-Dichlorophenol	7.809	162	112156	2211.77	ng/ml	98
28) 1,2,4-Trichlorobenzene	7.889	180	127703	2021.09	ng/ml	96
29) Naphthalene	7.970	128	397624	1980.92	ng/ml	98
30) 4-Chloroaniline	8.034	127	84586	1559.92	ng/ml	96
31) Hexachlorobutadiene	8.098	225	67587	2126.39	ng/ml	100
32) 4-Chloro-3-methylphenol	8.499	107	128769	2162.11	ng/ml	95
33) 2-Methylnaphthalene	8.660	142	312815	2114.36	ng/ml	98
34) 1-Methylnaphthalene	8.761	142	290157	2066.96	ng/ml	98
36) Hexachlorocyclopentadiene	8.825	237	65488	2203.54	ng/ml	98
37) 2,4,6-Trichlorophenol	8.943	196	81849	2145.98	ng/ml	98
38) 2,4,5-Trichlorophenol	8.981	198	78891	2159.17	ng/ml	97
39) 1,1'-Biphenyl	9.130	154	349335	1986.97	ng/ml	98
41) 2-Chloronaphthalene	9.152	162	248276	1941.20	ng/ml	97
42) 2-Nitroaniline	9.253	138	89274	2130.66	ng/ml	86
43) 2,6-Dimethylnaphthalene	9.291	156	257201	2038.65	ng/ml	95

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081925.D
Acq On : 8 May 2019 11:50 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:00 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

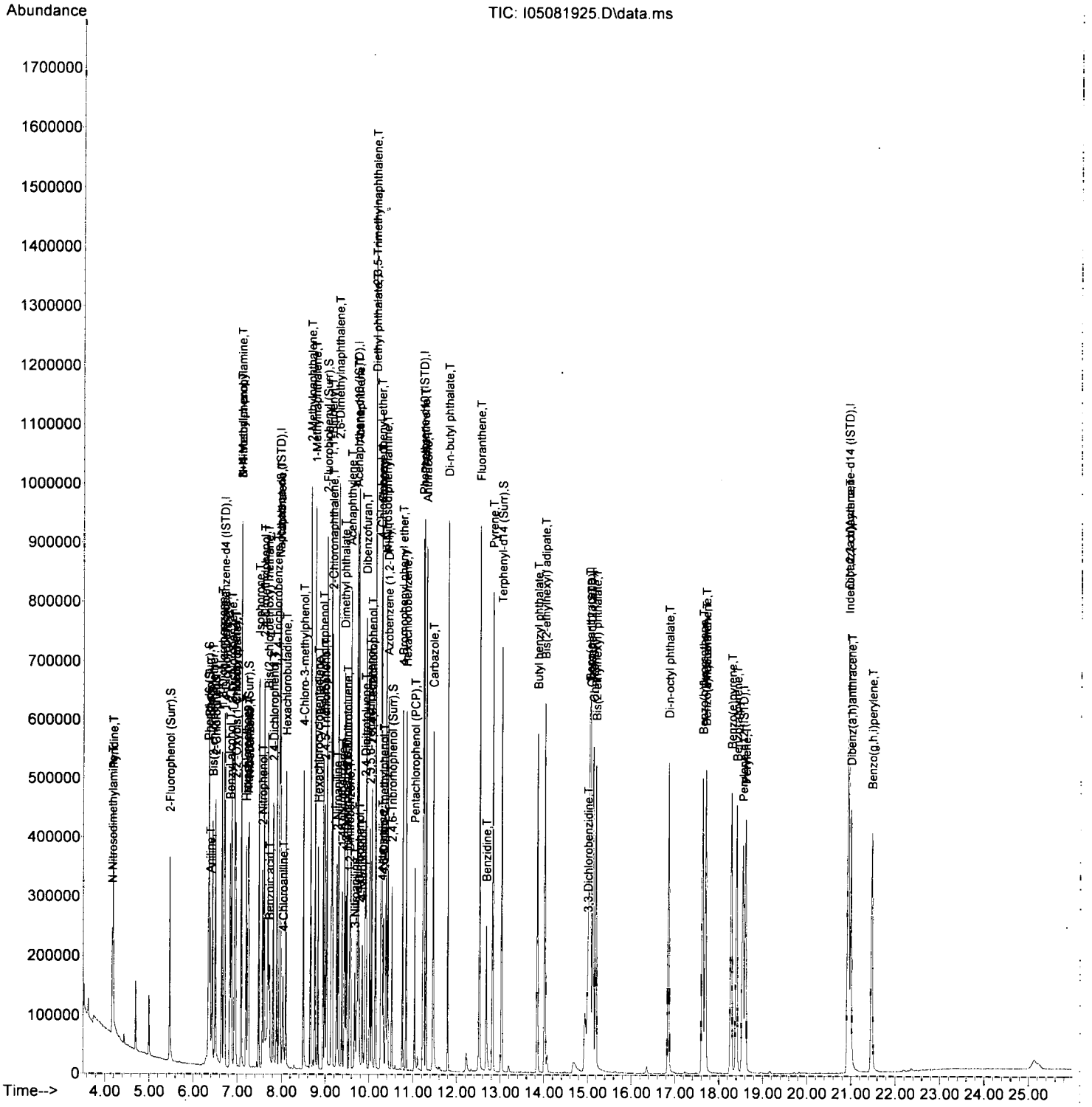
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	42957	2139.47	ng/ml	82
45) Dimethyl phthalate	9.430	163	291628	2008.94	ng/ml	98
46) 1,3-Dinitrobenzene	9.462	168	48772	2181.83	ng/ml	90
47) 2,6-Dinitrotoluene	9.489	165	70090	2216.06	ng/ml	85
48) 1,2-Dinitrobenzene	9.548	168	34100	2134.92	ng/ml	88
49) Acenaphthylene	9.574	152	407881	2008.76	ng/ml	99
50) 3-Nitroaniline	9.665	138	46893	1795.57	ng/ml	95
51) Acenaphthene	9.751	153	254388	1991.66	ng/ml	100
52) 2,4-Dinitrophenol	9.767	184	25811	2502.10	ng/ml	88
53) 4-Nitrophenol	9.836	139	48681	2007.95	ng/ml	86
54) 2,4-Dinitrotoluene	9.901	165	90563	2127.03	ng/ml	81
55) Dibenzofuran	9.922	168	351544	1999.43	ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	10.008	232	64681	2181.55	ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	10.050	232	68233	2234.46	ng/ml	88
58) Diethyl phthalate	10.141	149	252775	1860.29	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.136	170	226222	1939.49	ng/ml	98
60) Fluorene	10.275	166	271787	1898.41	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.259	204	136404	2028.81	ng/ml	90
62) 4-Nitroaniline	10.286	138	59807	1926.38	ng/ml	97
63) 4,6-Dinitro-2-methylph...	10.318	198	40019	2494.03	ng/ml	75
65) N-Nitrosodiphenylamine	10.382	169	227824	1880.66	ng/ml	98
66) Azobenzene (1,2-DPH)	10.425	77	264872	1745.69	ng/ml	87
68) 4-Bromophenyl phenyl e...	10.756	248	88111	2197.21	ng/ml	89
69) Hexachlorobenzene	10.842	284	92531	2174.50	ng/ml	91
70) Pentachlorophenol (PCP)	11.034	266	45320	2323.06	ng/ml	97
71) Phenanthrene	11.248	178	398028	1934.81	ng/ml	98
72) Anthracene	11.302	178	397681	2003.00	ng/ml	100
73) Carbazole	11.457	167	364563	2063.64	ng/ml	98
74) Di-n-butyl phthalate	11.794	149	471443	1975.77	ng/ml	98
75) Fluoranthene	12.527	202	475094	2081.55	ng/ml	97
76) Benzidine	12.677	184	153390	2855.74	ng/ml	99
77) Pyrene	12.821	202	468721	2028.71	ng/ml	99
80) Butyl benzyl phthalate	13.848	149	219372	1966.35	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.014	129	191848	1960.05	ng/ml	97
82) 3,3-Dichlorobenzidine	14.998	252	81995	4181.32	ng/ml	98
83) Benz(a)anthracene	15.030	228	409861	2027.64	ng/ml	99
84) Chrysene	15.121	228	375111	1992.25	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.185	149	265428	1960.75	ng/ml	95
87) Di-n-octyl phthalate	16.848	149	490249	1949.45	ng/ml	98
88) Benzo(b)fluoranthene	17.624	252	444019	2152.11	ng/ml	96
89) Benzo(k)fluoranthene	17.694	252	401664	2075.77	ng/ml	96
90) Benzo(b+k)fluoranthene	17.694	252	864585	4211.83	ng/ml	96
91) Benzo(e)pyrene	18.282	252	421328	2222.82	ng/ml	98
92) Benzo(a)pyrene	18.405	252	383125	2137.17	ng/ml	97
93) Perylene	18.608	252	344990	2017.74	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.935	276	348943	1909.89	ng/ml	93
96) Dibenz(a,h)anthracene	20.994	278	325096	2114.51	ng/ml	96
97) Benzo(g,h,i)perylene	21.470	276	360991	2109.13	ng/ml	91

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081925.D
Acq On : 8 May 2019 11:50 pm
Operator : JK /AMS /DTH
Sample : 9E08056-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:00 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081926.D
Acq On : 9 May 2019 12:26 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:08 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	98792	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.954	136	378186	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.724	162	202901	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.227	188	404511	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.073	240	346046	2000.00	ng/ml	0.02
86) Perylene-d12 (ISTD)	18.555	264	361418	2000.00	ng/ml	0.02
94) Dibenz(a,h)Anthrcene-d...	20.951	292	360190	2000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	284613	4308.58	ng/ml	0.00
5) Phenol-d6 (Surr)	6.349	99	374178	4293.86	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.237	82	275454	3773.57	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.029	172	532909	3598.93	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.521	330	78802	4693.62	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.030	244	667601	4052.16	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.167	74	199054	3815.42	ng/ml	99
3) Pyridine	4.172	79	337112	4135.74	ng/ml	99
6) Phenol	6.360	94	375248	3952.38	ng/ml	100
7) Aniline	6.387	93	249012	2870.46	ng/ml	96
8) Bis(2-chloroethyl) ether	6.440	93	297917	3825.96	ng/ml	99
9) 2-Chlorophenol	6.504	128	275296	4070.56	ng/ml	94
10) 1,3-Dichlorobenzene	6.649	146	287179	3823.24	ng/ml	97
11) 1,4-Dichlorobenzene	6.718	146	272704	3808.28	ng/ml	97
12) Benzyl alcohol	6.836	108	184713	4060.15	ng/ml	92
13) 1,2-Dichlorobenzene	6.868	146	259626	3709.35	ng/ml	98
14) 2-Methylphenol	6.937	107	213032	3979.25	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.959	45	331551	3048.03	ng/ml	92
16) N-Nitrosodi-n-propylamine	7.093	70	197390	3578.37	ng/ml	93
17) 3+4-Methylphenol	7.087	107	268146	3972.46	ng/ml	99
18) Hexachloroethane	7.200	201	89376	4058.84	ng/ml	87
20) Nitrobenzene	7.258	77	262312	3530.24	ng/ml	93
22) Isophorone	7.494	82	573921	4110.00	ng/ml	94
23) 2-Nitrophenol	7.574	139	153577	4204.01	ng/ml	96
24) 2,4-Dimethylphenol	7.611	122	231859	4145.56	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.697	93	317226	3814.03	ng/ml	98
26) Benzoic acid	7.783	105	329662	8705.24	ng/ml	97
27) 2,4-Dichlorophenol	7.815	162	210069	4356.34	ng/ml	99
28) 1,2,4-Trichlorobenzene	7.895	180	222596	3770.73	ng/ml	98
29) Naphthalene	7.975	128	687088	3663.80	ng/ml	97
30) 4-Chloroaniline	8.045	127	170567	3366.84	ng/ml	95
31) Hexachlorobutadiene	8.098	225	118434	3988.23	ng/ml	99
32) 4-Chloro-3-methylphenol	8.505	107	257664	4420.43	ng/ml	96
33) 2-Methylnaphthalene	8.665	142	555825	4021.18	ng/ml	98
34) 1-Methylnaphthalene	8.767	142	506152	3859.27	ng/ml	98
36) Hexachlorocyclopentadiene	8.831	237	130554	4365.71	ng/ml	100
37) 2,4,6-Trichlorophenol	8.949	196	157742	4195.02	ng/ml	98
38) 2,4,5-Trichlorophenol	8.986	198	152327	4304.48	ng/ml	99
39) 1,1'-Biphenyl	9.136	154	599715	3497.29	ng/ml	98
41) 2-Chloronaphthalene	9.157	162	426263	3417.05	ng/ml	98
42) 2-Nitroaniline	9.259	138	175844	4302.84	ng/ml	93
43) 2,6-Dimethylnaphthalene	9.296	156	440208	3577.39	ng/ml	97

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081926.D
Acq On : 9 May 2019 12:26 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:08 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

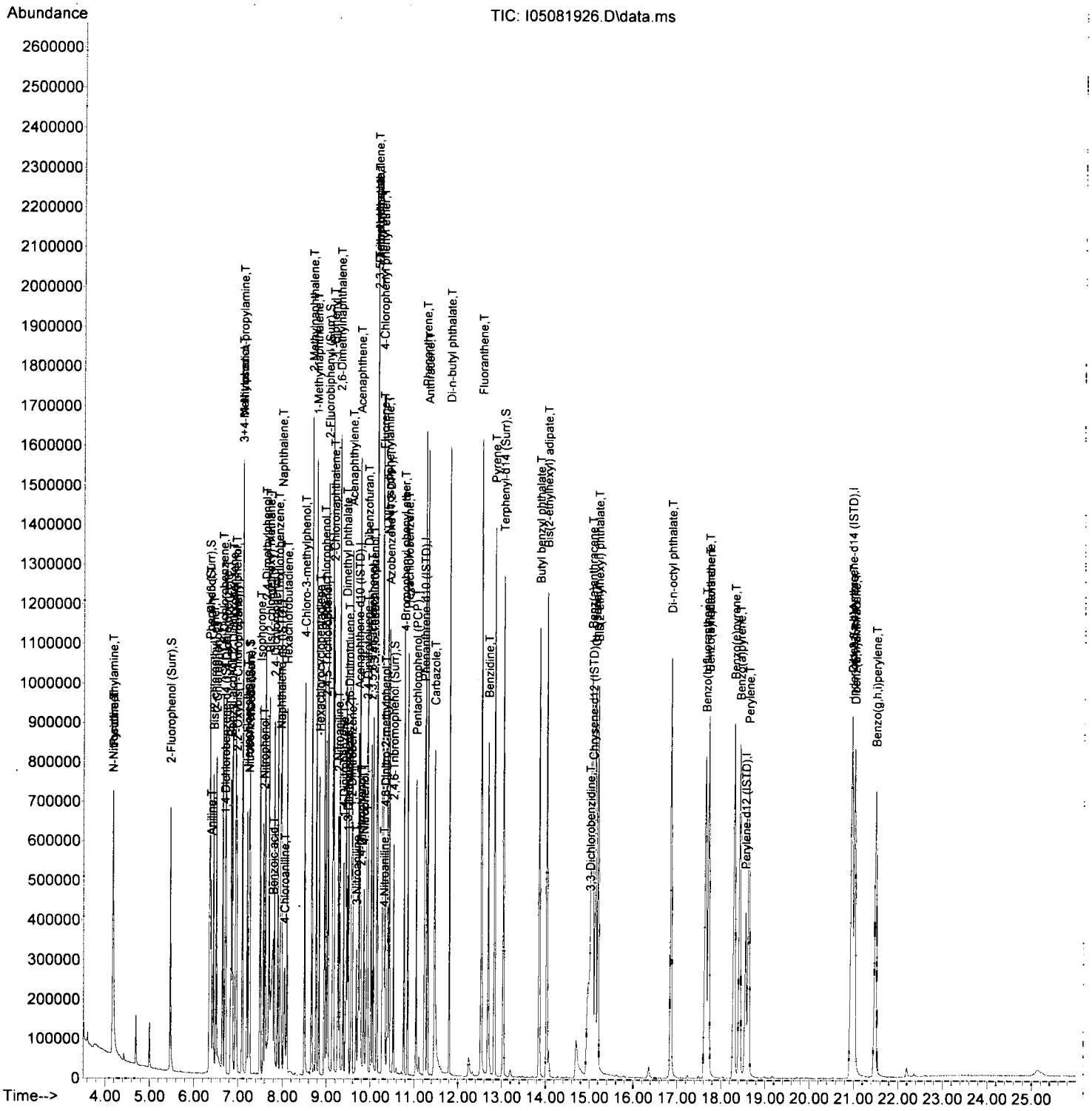
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.387	168	89593	4300.59	ng/ml	80
45) Dimethyl phthalate	9.441	163	526270	3716.92	ng/ml	97
46) 1,3-Dinitrobenzene	9.473	168	97308	4463.09	ng/ml	90
47) 2,6-Dinitrotoluene	9.499	165	131486	4262.28	ng/ml	83
48) 1,2-Dinitrobenzene	9.564	168	65816	4224.70	ng/ml	80
49) Acenaphthylene	9.580	152	694303	3505.74	ng/ml	97
50) 3-Nitroaniline	9.676	138	82018	4212.09	ng/ml	94
51) Acenaphthene	9.756	153	449192	3605.68	ng/ml	99
52) 2,4-Dinitrophenol	9.778	184	66685	5006.82	ng/ml	88
53) 4-Nitrophenol	9.847	139	110480	4293.76	ng/ml	87
54) 2,4-Dinitrotoluene	9.911	165	174398	4193.29	ng/ml	85
55) Dibenzofuran	9.927	168	609207	3552.47	ng/ml	98
56) 2,3,5,6-Tetrachlorophenol	10.013	232	128540	4189.58	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	10.056	232	131983	4411.97	ng/ml	91
58) Diethyl phthalate	10.147	149	430062	3245.01	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.141	170	377414	3317.49	ng/ml	98
60) Fluorene	10.280	166	463326	3318.07	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.270	204	239379	3650.38	ng/ml	89
62) 4-Nitroaniline	10.302	138	119176	3935.66	ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.329	198	87463	4765.28	ng/ml	78
65) N-Nitrosodiphenylamine	10.393	169	398485	3223.19	ng/ml	99
66) Azobenzene (1,2-DPH)	10.430	77	481159	3107.29	ng/ml	86
68) 4-Bromophenyl phenyl e...	10.767	248	164575	4021.31	ng/ml	86
69) Hexachlorobenzene	10.847	284	169055	3892.80	ng/ml	94
70) Pentachlorophenol (PCP)	11.040	266	103356	4679.02	ng/ml	97
71) Phenanthrene	11.254	178	712691	3394.59	ng/ml	98
72) Anthracene	11.307	178	710857	3508.25	ng/ml	98
73) Carbazole	11.462	167	666936	4706.84	ng/ml	99
74) Di-n-butyl phthalate	11.799	149	869303	3569.78	ng/ml	98
75) Fluoranthene	12.532	202	874011	3752.21	ng/ml	98
76) Benzidine	12.687	184	507935	7862.86	ng/ml	98
77) Pyrene	12.832	202	853568	3619.97	ng/ml	98
80) Butyl benzyl phthalate	13.853	149	466198	3979.59	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.024	129	395039	4119.09	ng/ml	97
82) 3,3-Dichlorobenzidine	15.009	252	140872	7405.50	ng/ml	95
83) Benz(a)anthracene	15.046	228	790890	3993.20	ng/ml	99
84) Chrysene	15.132	228	726806	3939.62	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.190	149	541901	4085.51	ng/ml	94
87) Di-n-octyl phthalate	16.859	149	1106017	3530.60	ng/ml	97
88) Benzo(b)fluoranthene	17.651	252	916793	3978.72	ng/ml	96
89) Benzo(k)fluoranthene	17.720	252	788525	3971.90	ng/ml	96
90) Benzo(b+k)fluoranthene	17.720	252	1749715	7921.59	ng/ml	96
91) Benzo(e)pyrene	18.303	252	863719	4210.62	ng/ml	99
92) Benzo(a)pyrene	18.426	252	770441	3963.51	ng/ml	97
93) Perylene	18.630	252	705720	3813.99	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.962	276	792468	3886.05	ng/ml	95
96) Dibenz(a,h)anthracene	21.020	278	675316	3935.31	ng/ml	96
97) Benzo(g,h,i)perylene	21.496	276	777615	4070.47	ng/ml	93

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081926.D
Acq On : 9 May 2019 12:26 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:08 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.702	152	97132	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.954	136	383773	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.724	162	200935	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.232	188	408419	2000.00	ng/ml	0.01
78) Chrysene-d12 (ISTD)	15.083	240	325607	2000.00	ng/ml	0.03
86) Perylene-d12 (ISTD)	18.565	264	352282	2000.00	ng/ml	0.03
94) Dibenz(a,h)Anthrcene-d...	20.956	292	359354	2000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.472	112	435036	6698.29	ng/ml	0.00
5) Phenol-d6 (Surr)	6.354	99	554225	6468.67	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.242	82	400998	5587.34	ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.034	172	698194	4761.29	ng/ml	0.01
67) 2,4,6-Tribromophenol (...	10.526	330	114295	6644.05	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.040	244	884802	5707.63	ng/ml	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.172	74	300039	5849.36	ng/ml	98
3) Pyridine	4.178	79	496772	6198.63	ng/ml	98
6) Phenol	6.370	94	546989	5859.74	ng/ml	98
7) Aniline	6.392	93	406652	4767.74	ng/ml	97
8) Bis(2-chloroethyl) ether	6.445	93	395115	5160.94	ng/ml	96
9) 2-Chlorophenol	6.504	128	397555	5978.76	ng/ml	95
10) 1,3-Dichlorobenzene	6.649	146	414202	5608.54	ng/ml	97
11) 1,4-Dichlorobenzene	6.718	146	384033	5454.63	ng/ml	98
12) Benzyl alcohol	6.841	108	269444	5748.55	ng/ml	93
13) 1,2-Dichlorobenzene	6.868	146	366398	5324.29	ng/ml	99
14) 2-Methylphenol	6.943	107	301798	5733.66	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	6.959	45	456599	4269.37	ng/ml	93
16) N-Nitrosodi-n-propylamine	7.103	70	270883	4994.60	ng/ml	92
17) 3+4-Methylphenol	7.098	107	373641	5629.91	ng/ml	97
18) Hexachloroethane	7.200	201	130625	6033.47	ng/ml	90
20) Nitrobenzene	7.264	77	371635	5087.01	ng/ml	92
22) Isophorone	7.504	82	838709	5918.77	ng/ml	94
23) 2-Nitrophenol	7.574	139	224039	6026.89	ng/ml	98
24) 2,4-Dimethylphenol	7.617	122	328729	5791.99	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.702	93	444685	5268.64	ng/ml	96
26) Benzoic acid	~~7.617~~	~~105~~	~~12038~~	~~1146.75~~	~~ng/ml#~~	1
27) 2,4-Dichlorophenol	7.820	162	285851	5779.38	ng/ml	100
28) 1,2,4-Trichlorobenzene	7.895	180	308537	5150.47	ng/ml	100
29) Naphthalene	7.980	128	939298	4935.76	ng/ml	95
30) 4-Chloroaniline	8.045	127	243860	4743.50	ng/ml	95
31) Hexachlorobutadiene	8.103	225	164363	5454.30	ng/ml	99
32) 4-Chloro-3-methylphenol	8.505	107	368355	6047.98	ng/ml	97
33) 2-Methylnaphthalene	8.665	142	744774	5309.71	ng/ml	100
34) 1-Methylnaphthalene	8.767	142	691750	5197.62	ng/ml	100
36) Hexachlorocyclopentadiene	8.831	237	188663	6229.45	ng/ml	99
37) 2,4,6-Trichlorophenol	8.954	196	223754	5978.05	ng/ml	98
38) 2,4,5-Trichlorophenol	8.991	198	209851	6044.28	ng/ml	99
39) 1,1'-Biphenyl	9.136	154	789288	4647.84	ng/ml	97
41) 2-Chloronaphthalene	9.162	162	576153	4663.80	ng/ml	98
42) 2-Nitroaniline	9.264	138	257132	6353.49	ng/ml	91
43) 2,6-Dimethylnaphthalene	9.296	156	582020	4776.12	ng/ml	98

See MI

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

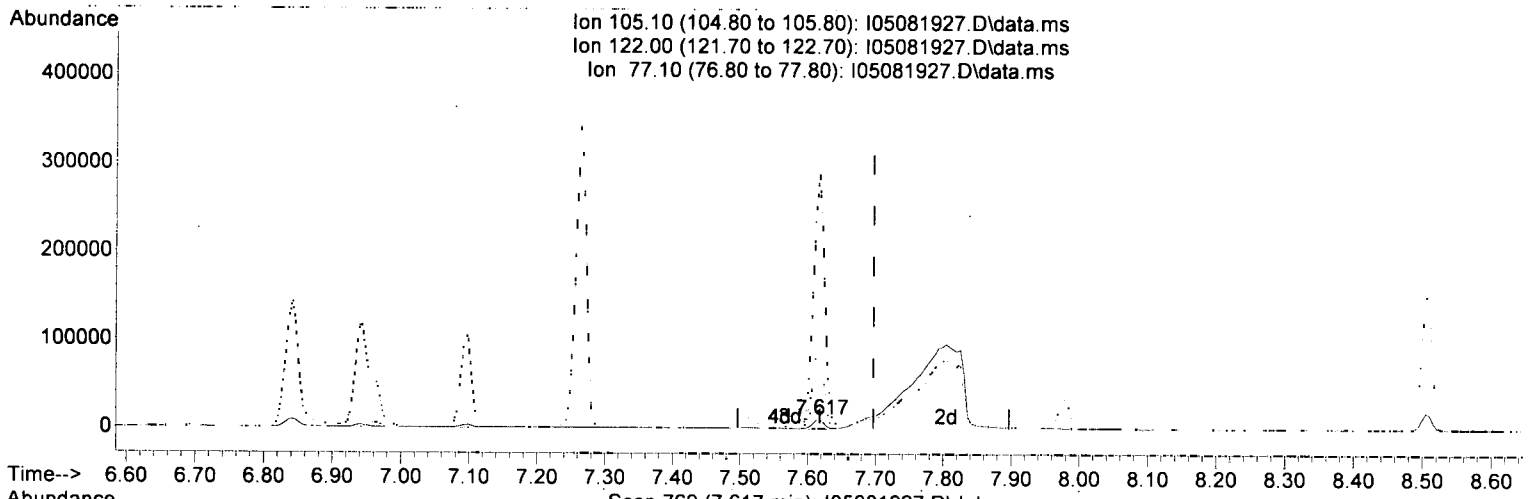
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.392	168	132868	6167.00	ng/ml	80
45) Dimethyl phthalate	9.451	163	719060	5128.25	ng/ml	97
46) 1,3-Dinitrobenzene	9.483	168	139435	6457.85	ng/ml	92
47) 2,6-Dinitrotoluene	9.505	165	182024	5958.26	ng/ml	87
48) 1,2-Dinitrobenzene	9.574	168	89987	5832.75	ng/ml	85
49) Acenaphthylene	9.585	152	879320	4483.39	ng/ml	96
50) 3-Nitroaniline	9.681	138	118898	Below Cal		95
51) Acenaphthene	9.762	153	608926	4935.69	ng/ml	99
52) 2,4-Dinitrophenol	9.783	184	105311	6831.80	ng/ml	90
53) 4-Nitrophenol	9.852	139	165172	6138.35	ng/ml	91
54) 2,4-Dinitrotoluene	9.922	165	237610	5783.24	ng/ml	89
55) Dibenzofuran	9.933	168	796168	4688.12	ng/ml	100
56) 2,3,5,6-Tetrachlorophenol	10.018	232	183781	5808.43	ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	10.061	232	183789	6207.71	ng/ml	91
58) Diethyl phthalate	10.157	149	560826	4273.09	ng/ml	93
59) 2,3,5-Trimethylnaphtha...	10.147	170	492303	4369.71	ng/ml	98
60) Fluorene	10.286	166	605832	4381.07	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.270	204	319658	4922.28	ng/ml	93
62) 4-Nitroaniline	10.307	138	166859	5564.25	ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.339	198	129071	6438.23	ng/ml	77
65) N-Nitrosodiphenylamine	10.398	169	527740	4227.84	ng/ml	100
66) Azobenzene (1,2-DPH)	10.435	77	656969	4202.06	ng/ml	84
68) 4-Bromophenyl phenyl e...	10.767	248	229006	5542.11	ng/ml	91
69) Hexachlorobenzene	10.853	284	231353	5276.35	ng/ml	92
70) Pentachlorophenol (PCP)	11.045	266	153485	6449.00	ng/ml	97
71) Phenanthrene	11.259	178	956642	4512.95	ng/ml	96
72) Anthracene	11.313	178	942171	4605.35	ng/ml	96
73) Carbazole	11.462	167	822554	Below Cal		99
74) Di-n-butyl phthalate	11.799	149	1162762	4729.17	ng/ml	96
75) Fluoranthene	12.537	202	1152260	4899.43	ng/ml	98
76) Benzidine	12.698	184	835608	11543.22	ng/ml	98
77) Pyrene	12.837	202	1135183	4768.23	ng/ml	97
80) Butyl benzyl phthalate	13.859	149	660330	5691.70	ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.030	129	550853	6104.32	ng/ml	97
82) 3,3-Dichlorobenzidine	~~15.019~~	~~252~~	~~133256~~	~~7443.98~~	~~ng/ml~~	98 See MI
83) Benz(a)anthracene	15.057	228	1056377	5668.45	ng/ml	98
84) Chrysene	15.148	228	987765	5690.22	ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.196	149	749108	6002.20	ng/ml	94
87) Di-n-octyl phthalate	16.870	149	1544982	4650.93	ng/ml	98
88) Benzo(b)fluoranthene	17.667	252	1322262	5724.25	ng/ml	96
89) Benzo(k)fluoranthene	17.736	252	1035740	5629.61	ng/ml	96
90) Benzo(b+k)fluoranthene	17.736	252	2421312	11319.06	ng/ml	96
91) Benzo(e)pyrene	18.319	252	1199867	6001.03	ng/ml	99
92) Benzo(a)pyrene	18.448	252	1066798	5628.06	ng/ml	97
93) Perylene	18.651	252	989986	5489.03	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.983	276	1164266	5722.54	ng/ml	95
96) Dibenz(a,h)anthracene	21.042	278	945959	5525.27	ng/ml	96
97) Benzo(g,h,i)perylene	21.518	276	1089470	5716.16	ng/ml	94

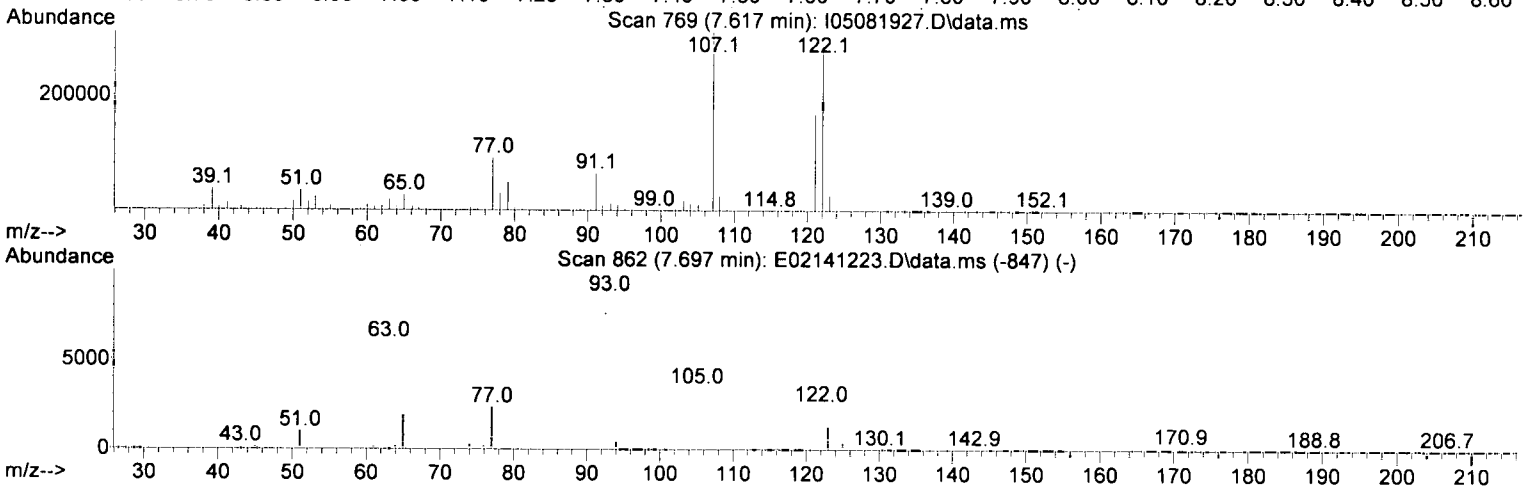
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081927.D\data.ms

(26) Benzoic acid (T)

7.617min (-0.080) 1146.75 ng/ml

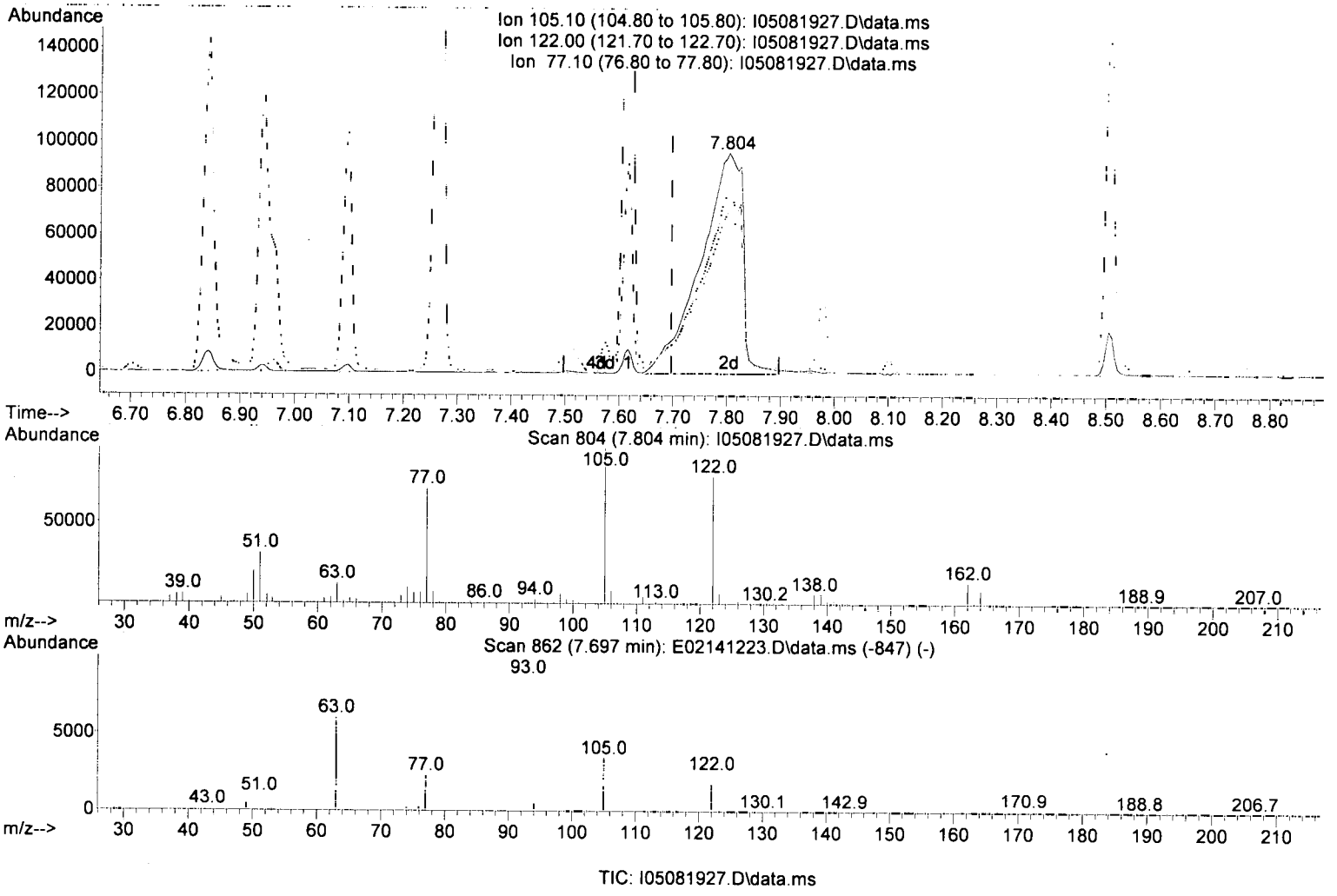
response 12038

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	2757.81#
77.10	76.00	872.30#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081927.D\data.ms

(26) Benzoic acid (T)

7.804min (+ 0.107) 12091.52 ng/ml (m)

response 520098

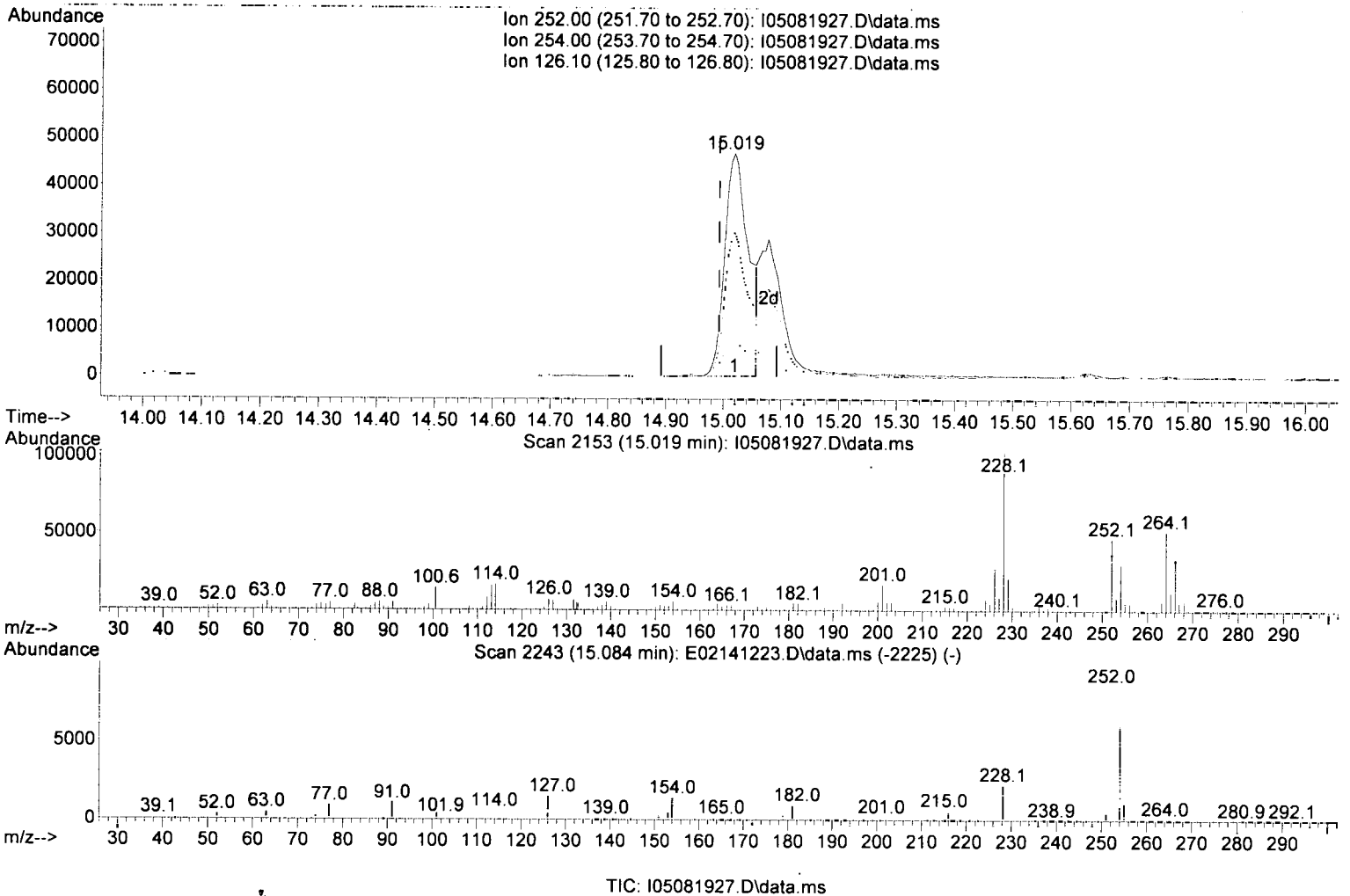
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	82.17
77.10	76.00	74.36
0.00	0.00	0.00

JK 5/9/19

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081927.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.019min (+ 0.027) 7443.98 ng/ml

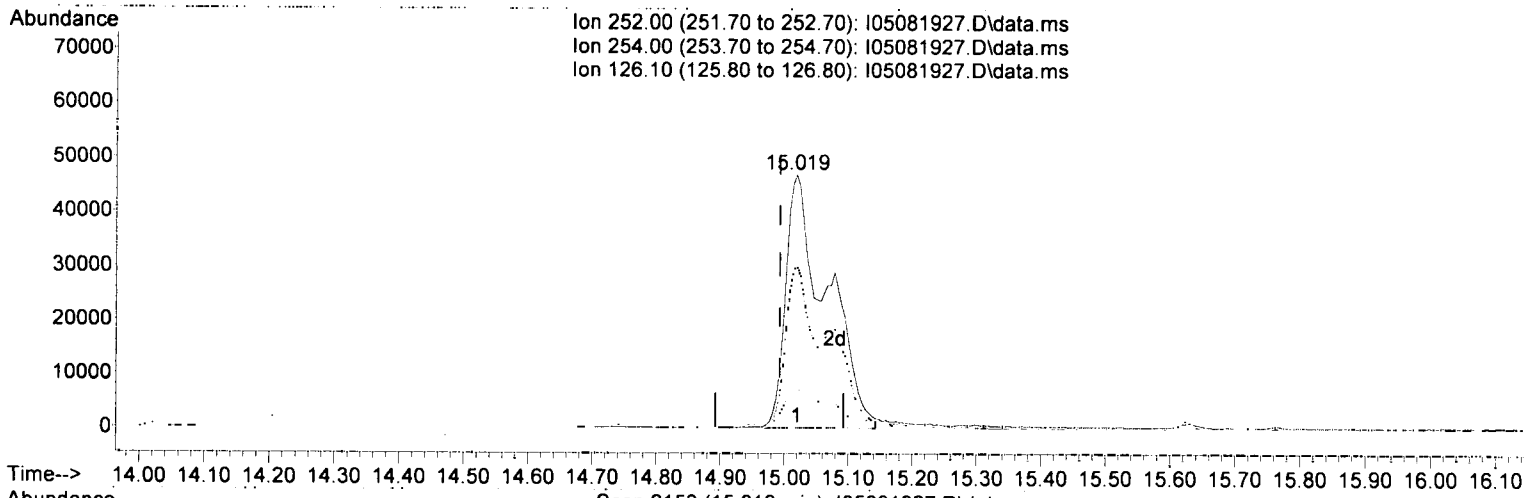
response 133256

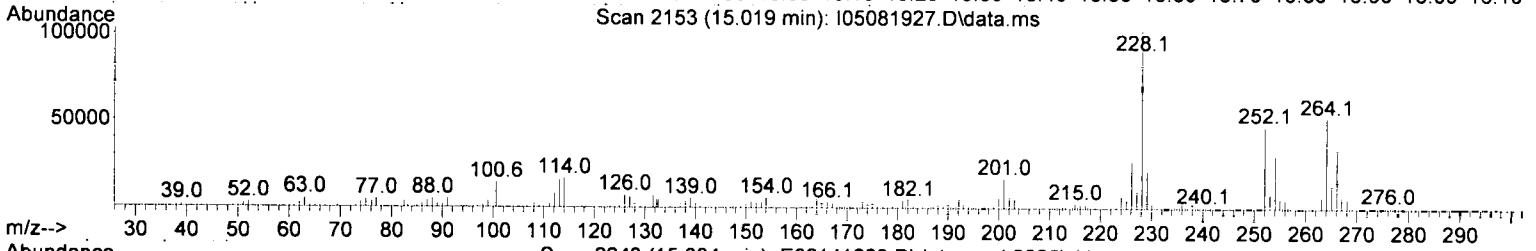
Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.54
126.10	16.90	15.63
0.00	0.00	0.00

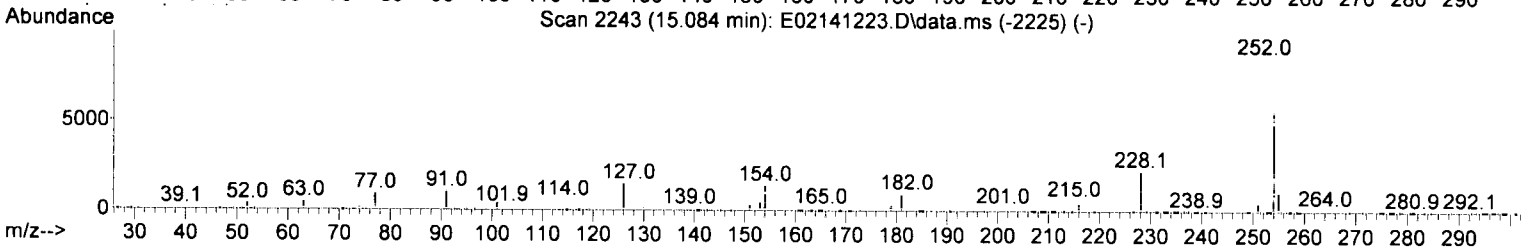
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081927.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.019min (+ 0.027) 11468.11 ng/ml m 5/9/19

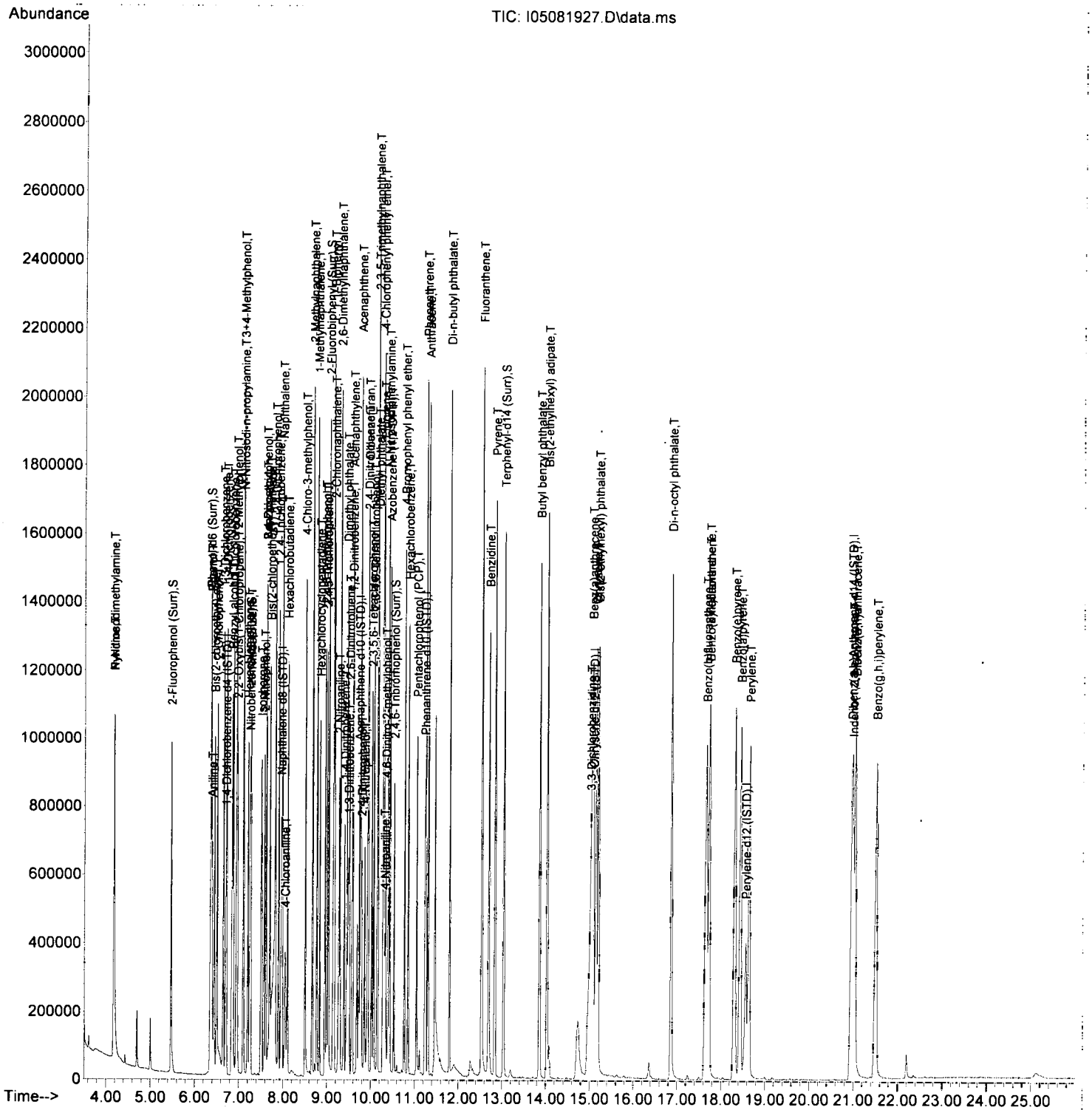
response 210131

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.54
126.10	16.90	15.63
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081927.D
Acq On : 9 May 2019 1:01 am
Operator : JK /AMS /DTH
Sample : 9E08056-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:16 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	95689	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.954	136	368532	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.724	162	194593	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.232	188	396349	2000.00	ng/ml	0.01
78) Chrysene-d12 (ISTD)	15.089	240	305019	2000.00	ng/ml	0.03
86) Perylene-d12 (ISTD)	18.571	264	337687	2000.00	ng/ml	0.03
94) Dibenz(a,h)Anthrcene-d...	20.962	292	348077	2000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.467	112	560056	8753.27	ng/ml	0.00
5) Phenol-d6 (Surr)	6.360	99	706999	8376.22	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.248	82	507577	7179.02	ng/ml	0.02
40) 2-Fluorobiphenyl (Surr)	9.034	172	835510	5883.40	ng/ml	0.01
67) 2,4,6-Tribromophenol (...	10.532	330	142560	8432.13	ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.040	244	1074072	7396.22	ng/ml	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.162	74	396249	7841.50	ng/ml	99
3) Pyridine	4.162	79	659225	8349.73	ng/ml	98
6) Phenol	6.376	94	672921	7317.52	ng/ml	90
7) Aniline	6.392	93	595081	7082.17	ng/ml	95
8) Bis(2-chloroethyl) ether	6.445	93	510517	6768.86	ng/ml	96
9) 2-Chlorophenol	6.504	128	503387	7684.51	ng/ml	95
10) 1,3-Dichlorobenzene	6.649	146	517626	7114.66	ng/ml	96
11) 1,4-Dichlorobenzene	6.718	146	480345	6925.49	ng/ml	97
12) Benzyl alcohol	6.847	108	337977	7070.03	ng/ml	93
13) 1,2-Dichlorobenzene	6.868	146	448803	6620.11	ng/ml	99
14) 2-Methylphenol	6.943	107	369236	7120.66	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	6.959	45	549922	5219.51	ng/ml	90
16) N-Nitrosodi-n-propylamine	7.109	70	339637	6356.74	ng/ml	94
17) 3+4-Methylphenol	7.098	107	458606	7014.35	ng/ml	100
18) Hexachloroethane	7.200	201	161926	7592.02	ng/ml	89
20) Nitrobenzene	7.269	77	462505	6426.32	ng/ml	89
22) Isophorone	7.510	82	1078748	7927.56	ng/ml	93
23) 2-Nitrophenol	7.574	139	283482	7925.73	ng/ml	97
24) 2,4-Dimethylphenol	7.622	122	412108	7561.36	ng/ml	97
25) Bis(2-chloroethoxy) me...	7.702	93	553975	6834.95	ng/ml	96
26) Benzoic acid	~~7.622~~	~~105~~	~~15549~~	1267.44	ng/ml#	1
27) 2,4-Dichlorophenol	7.825	162	358983	7465.88	ng/ml	99
28) 1,2,4-Trichlorobenzene	7.900	180	375837	6533.38	ng/ml	99
29) Naphthalene	7.980	128	1132611	6197.70	ng/ml	94
30) 4-Chloroaniline	8.039	127	398347	8068.99	ng/ml	95
31) Hexachlorobutadiene	8.103	225	199760	6903.08	ng/ml	99
32) 4-Chloro-3-methylphenol	8.510	107	462055	7683.16	ng/ml	96
33) 2-Methylnaphthalene	8.670	142	907754	6739.28	ng/ml	99
34) 1-Methylnaphthalene	8.772	142	826000	6463.00	ng/ml	99
36) Hexachlorocyclopentadiene	8.831	237	228123	7653.38	ng/ml	97
37) 2,4,6-Trichlorophenol	8.954	196	275262	7566.36	ng/ml	97
38) 2,4,5-Trichlorophenol	8.997	198	259729	7806.13	ng/ml	98
39) 1,1'-Biphenyl	9.141	154	939145	5710.53	ng/ml	94
41) 2-Chloronaphthalene	9.162	162	683312	5711.49	ng/ml	97
42) 2-Nitroaniline	9.269	138	330555	8433.89	ng/ml	91
43) 2,6-Dimethylnaphthalene	9.302	156	693134	5873.31	ng/ml	97

See ML

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.398	168	171694	7925.07 ng/ml	81
45) Dimethyl phthalate	9.462	163	895747	6596.56 ng/ml	97
46) 1,3-Dinitrobenzene	9.489	168	173847	8314.03 ng/ml	95
47) 2,6-Dinitrotoluene	9.510	165	222349	7515.44 ng/ml	89
48) 1,2-Dinitrobenzene	9.580	168	107372	7186.42 ng/ml	96
49) Acenaphthylene	9.585	152	984732	5184.49 ng/ml	96
50) 3-Nitroaniline	9.692	138	173485	Below Cal	90
51) Acenaphthene	9.762	153	730149	6111.16 ng/ml	99
52) 2,4-Dinitrophenol	9.794	184	138854	8328.38 ng/ml	85
53) 4-Nitrophenol	9.863	139	212171	7786.41 ng/ml	91
54) 2,4-Dinitrotoluene	9.927	165	279820	7051.12 ng/ml	93
55) Dibenzofuran	9.938	168	933154	5673.82 ng/ml	97
56) 2,3,5,6-Tetrachlorophenol	10.018	232	227276	7182.34 ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	10.066	232	226177	7900.84 ng/ml	90
58) Diethyl phthalate	10.163	149	666758	5245.78 ng/ml	93
59) 2,3,5-Trimethylnaphtha...	10.147	170	595050	5453.83 ng/ml	98
60) Fluorene	10.286	166	722035	5391.56 ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.275	204	378804	6023.15 ng/ml	92
62) 4-Nitroaniline	10.318	138	203360	7002.47 ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.345	198	165731	7900.50 ng/ml	79
65) N-Nitrosodiphenylamine	10.398	169	645120	5325.58 ng/ml	100
66) Azobenzene (1,2-DPH)	10.435	77	801688	5283.85 ng/ml	86
68) 4-Bromophenyl phenyl e...	10.772	248	278562	6946.70 ng/ml	90
69) Hexachlorobenzene	10.853	284	281208	6608.67 ng/ml	93
70) Pentachlorophenol (PCP)	11.045	266	193595	7963.68 ng/ml	97
71) Phenanthrene	11.259	178	1153195	5605.85 ng/ml	96
72) Anthracene	11.313	178	1111218	5597.06 ng/ml	95
73) Carbazole	11.462	167	892838	Below Cal	100
74) Di-n-butyl phthalate	11.799	149	1386560	5811.14 ng/ml	95
75) Fluoranthene	12.543	202	1406107	6160.86 ng/ml	98
76) Benzidine	12.703	184	1165482	15132.51 ng/ml	98
77) Pyrene	12.842	202	1376701	5958.81 ng/ml	96
80) Butyl benzyl phthalate	13.864	149	830873	7307.82 ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.030	129	686647	8122.73 ng/ml	96
82) 3,3-Dichlorobenzidine	15.025	252	162347	9581.85 ng/ml	98
83) Benz(a)anthracene	15.062	228	1276068	7309.47 ng/ml	98
84) Chrysene	15.158	228	1196829	7359.94 ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.201	149	911551	7796.76 ng/ml	94
87) Di-n-octyl phthalate	16.875	149	1949268	5698.09 ng/ml	98
88) Benzo(b)fluoranthene	17.672	252	1745814	7653.17 ng/ml	96
89) Benzo(k)fluoranthene	17.747	252	1092068	6332.06 ng/ml	97
90) Benzo(b+k)fluoranthene	17.747	252	2997124	14716.03 ng/ml	97
91) Benzo(e)pyrene	18.335	252	1487060	7758.85 ng/ml	98
92) Benzo(a)pyrene	18.464	252	1307681	7196.72 ng/ml	97
93) Perylene	18.662	252	1226461	7094.08 ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.999	276	1508870	7656.59 ng/ml	98
96) Dibenz(a,h)anthracene	21.058	278	1170463	7058.07 ng/ml	94
97) Benzo(g,h,i)perylene	21.534	276	1353653	7332.36 ng/ml	94

See NI

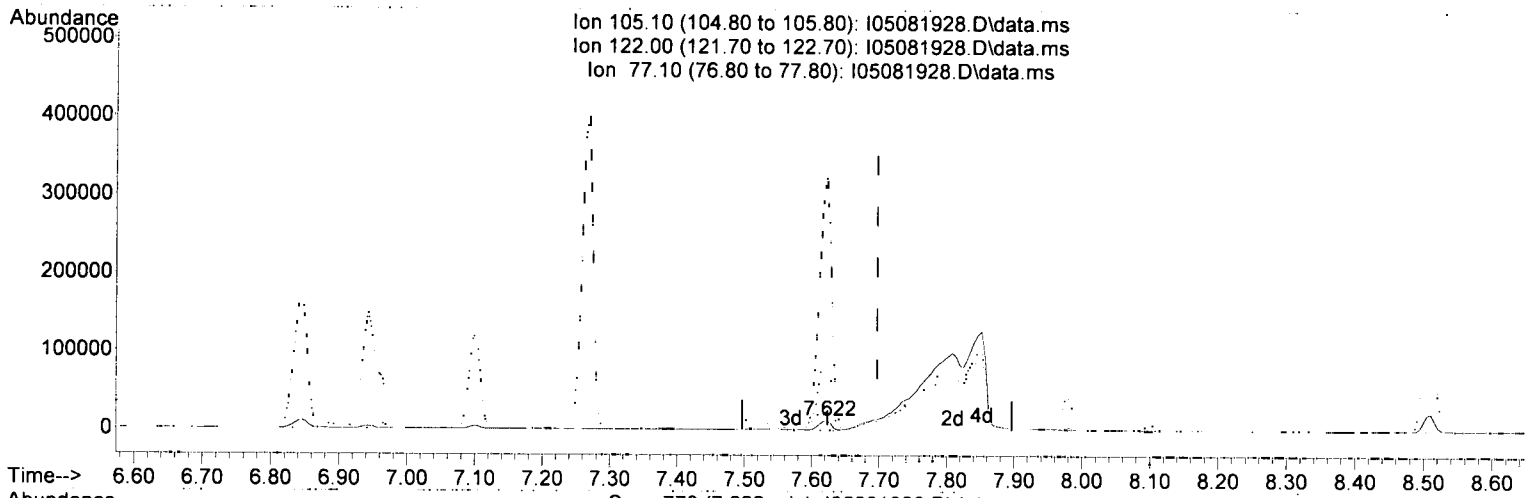
See NI

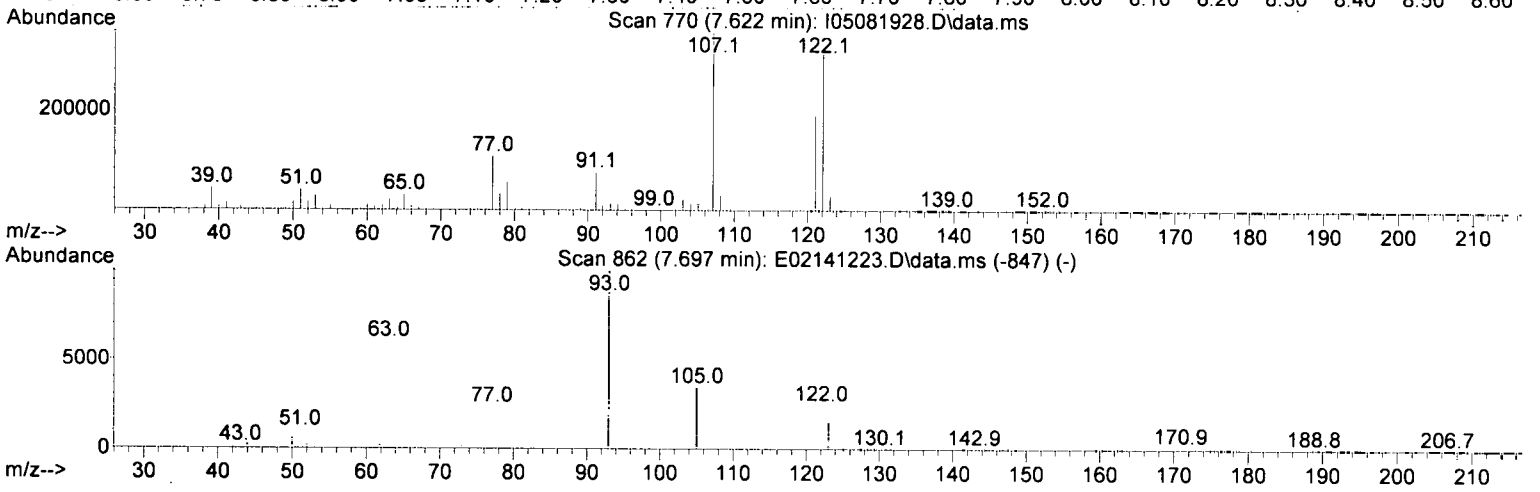
(#) = qualifier out of range (m) = manual integration (+) = signals summed

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9





TIC: I05081928.D\data.ms

(26) Benzoic acid (T)

7.622min (-0.075) 1267.44 ng/ml

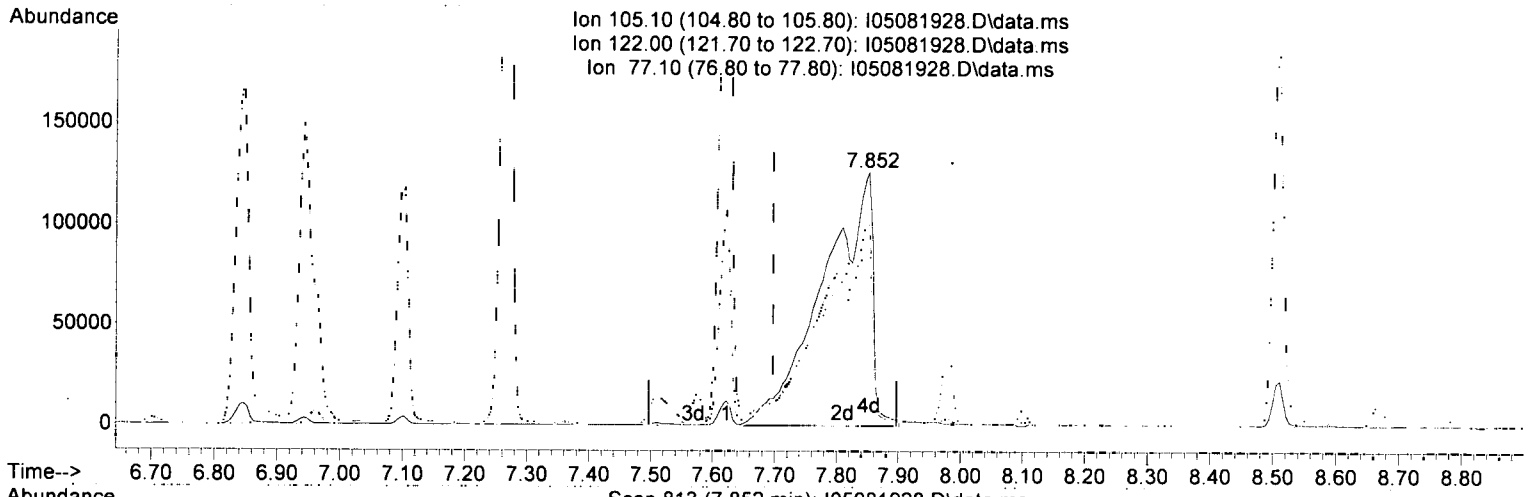
response 15549

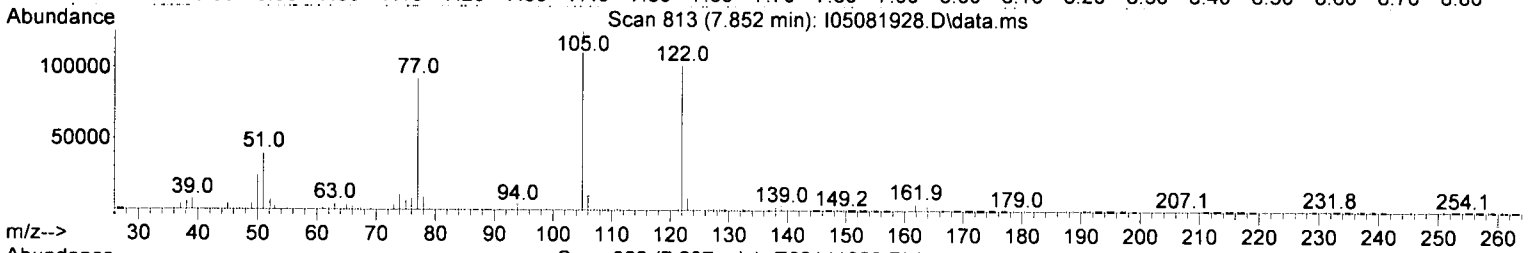
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	2689.53#
77.10	76.00	883.46#
0.00	0.00	0.00

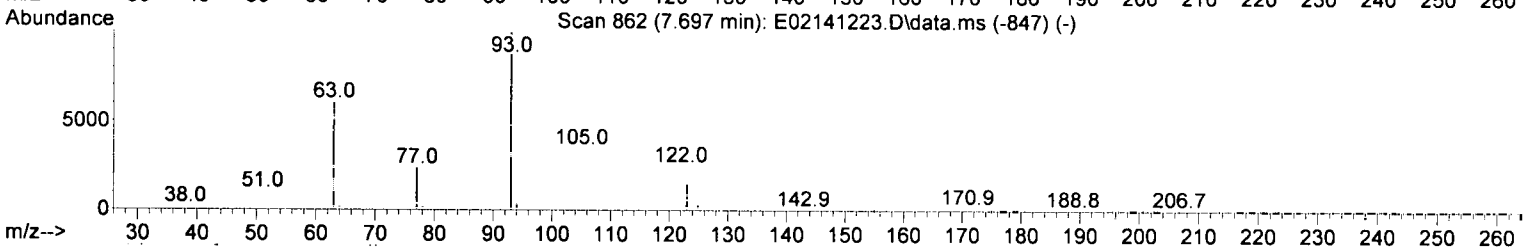
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081928.D\data.ms

(26) Benzoic acid (T)

7.852min (+ 0.155) 15436.52 ng/ml (m)

5/9/19

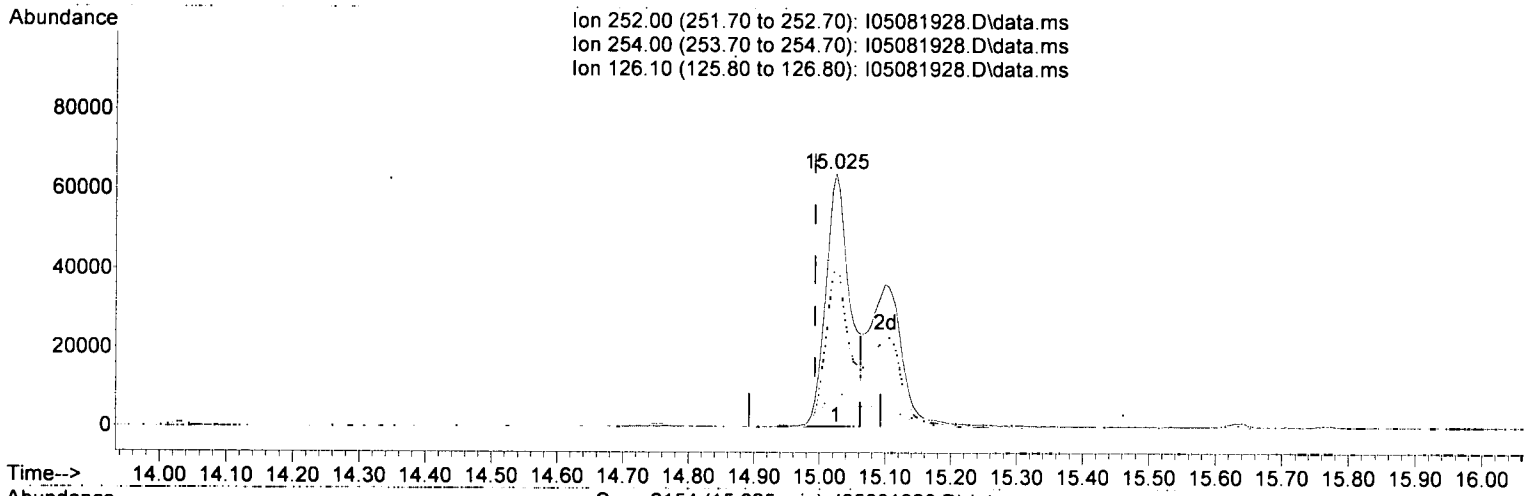
response 699436

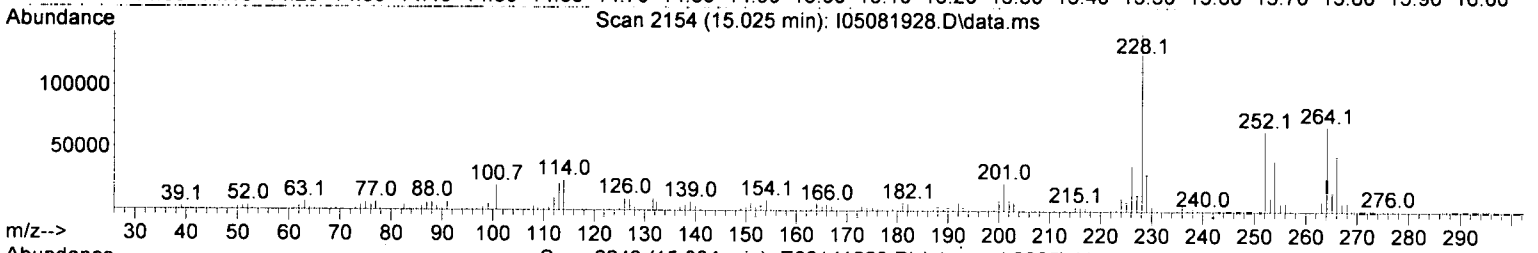
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	80.97
77.10	76.00	73.43
0.00	0.00	0.00

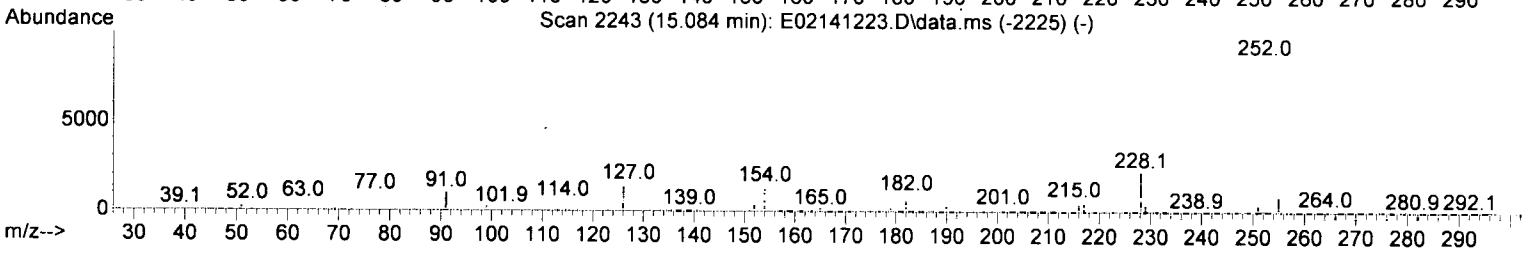
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081928.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.025min (+ 0.032) 9581.85 ng/ml

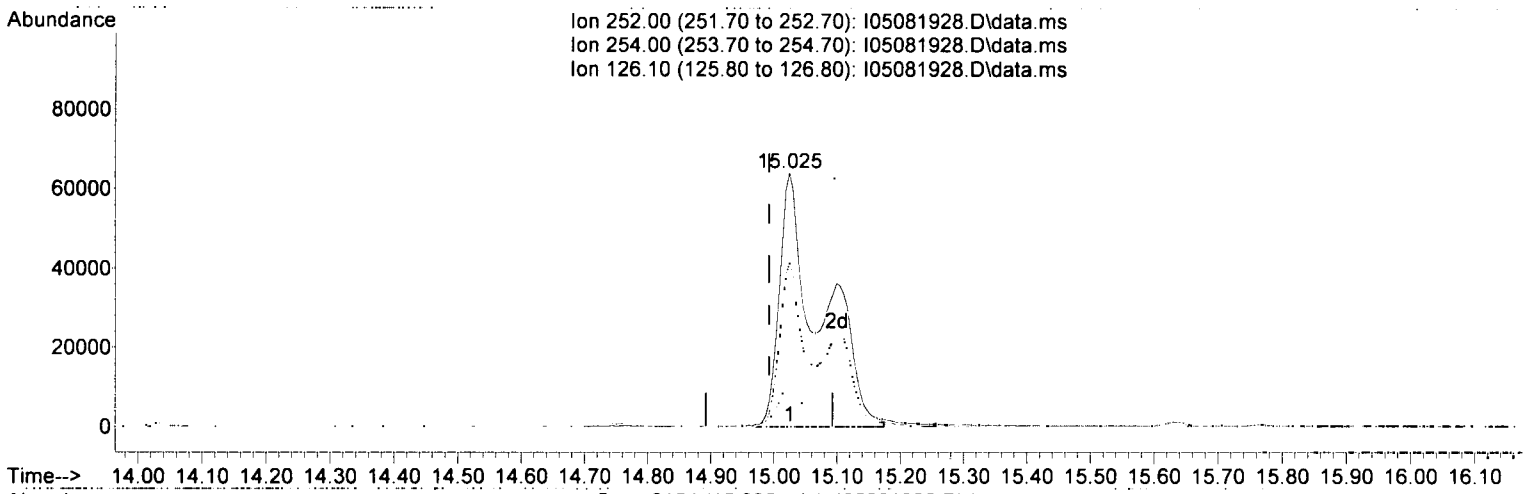
response 162347

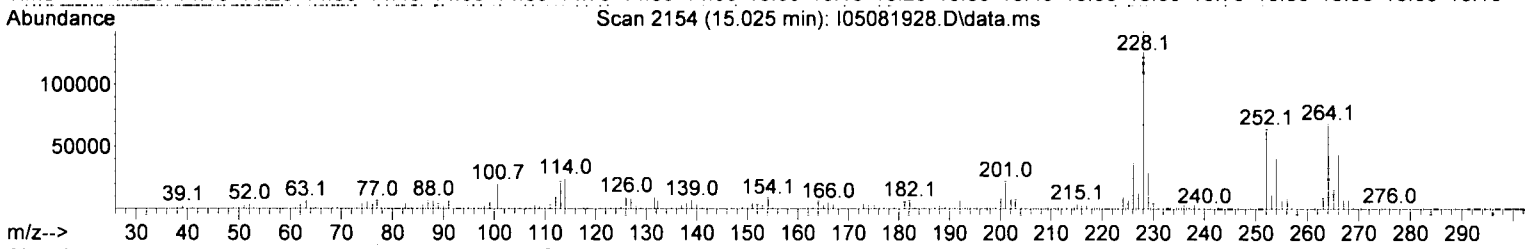
Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.49
126.10	16.90	15.19
0.00	0.00	0.00

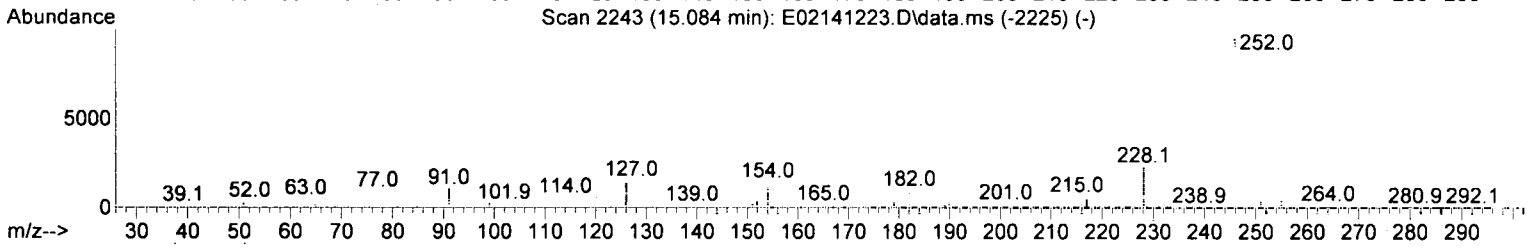
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081928.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.025min (+ 0.032) 16113.65 ng/ml m

5/9/19

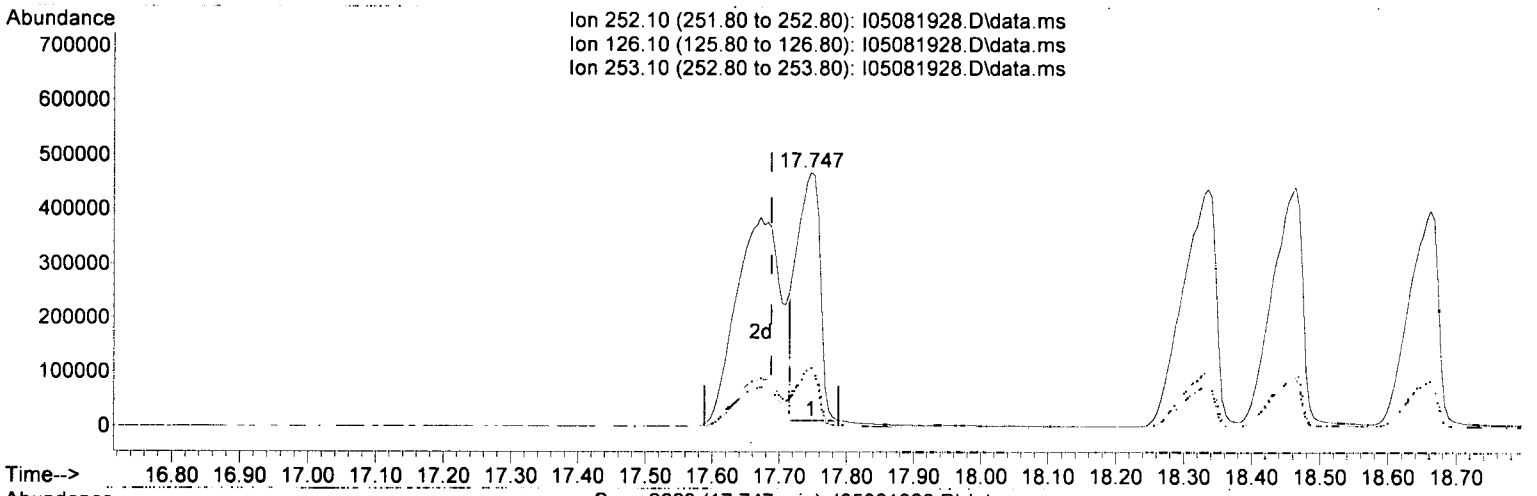
response 287387

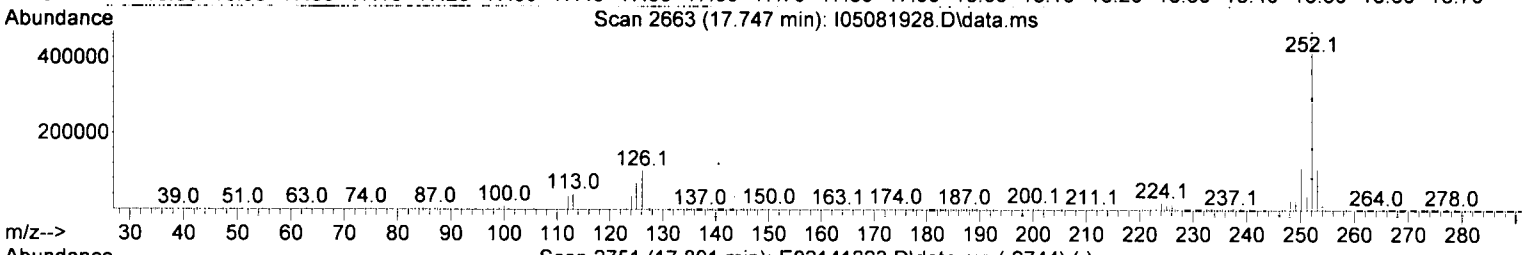
Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.49
126.10	16.90	15.19
0.00	0.00	0.00

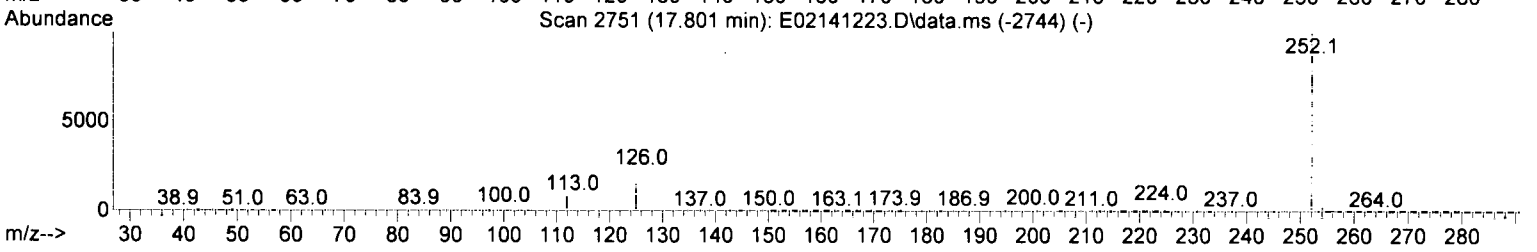
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9







TIC: I05081928.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.747min (+ 0.059) 6332.06 ng/ml

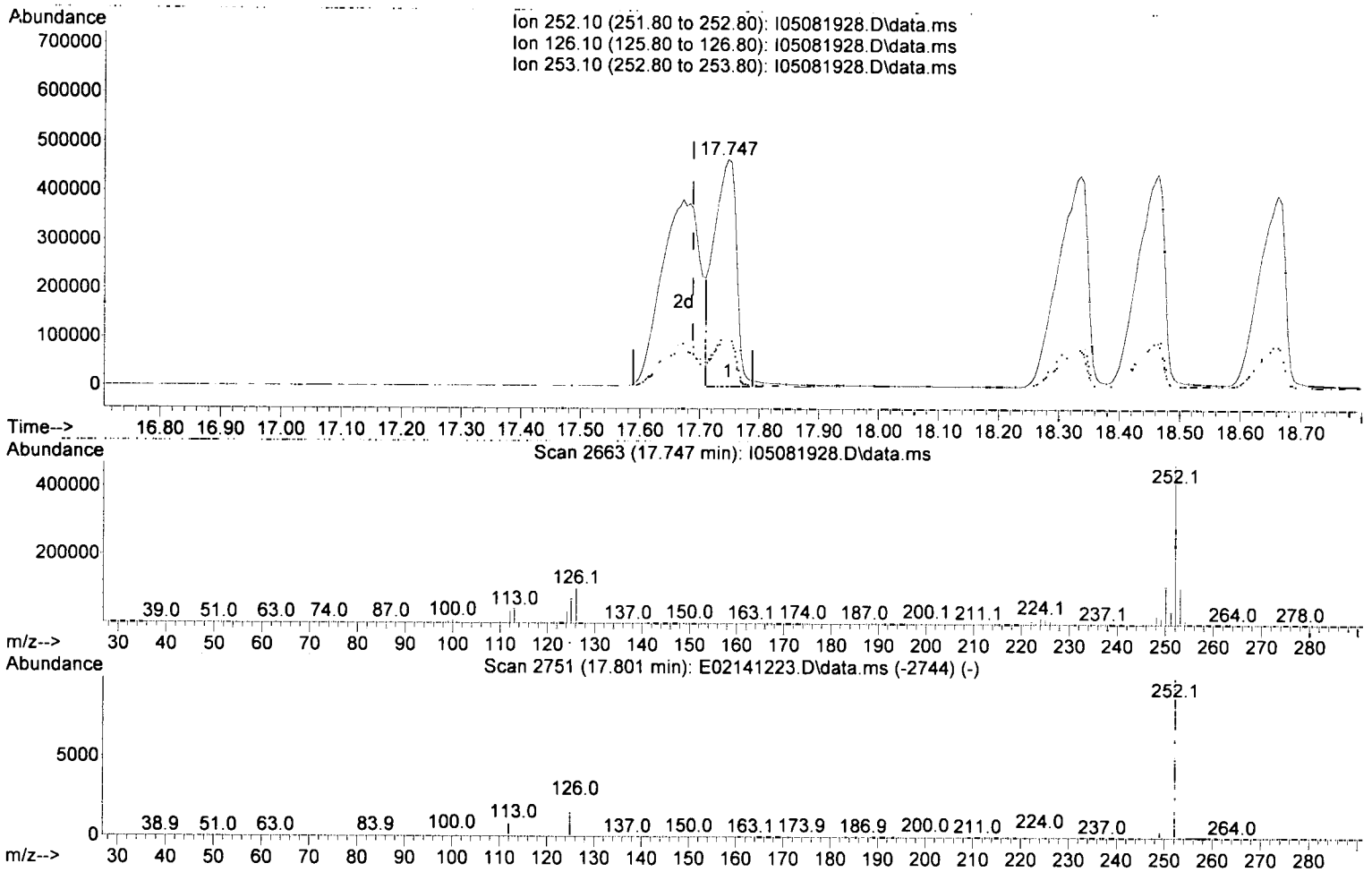
response 1092068

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	21.87
253.10	21.70	23.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



TIC: I05081928.D\data.ms

(89) Benzo(k)fluoranthene (T)

17.747min (+ 0.059) 7354.87 ng/ml m GB 5/9/19

response 1226693

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	21.87
253.10	21.70	23.14
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081928.D
Acq On : 9 May 2019 1:37 am
Operator : JK /AMS /DTH
Sample : 9E08056-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:23 2019
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
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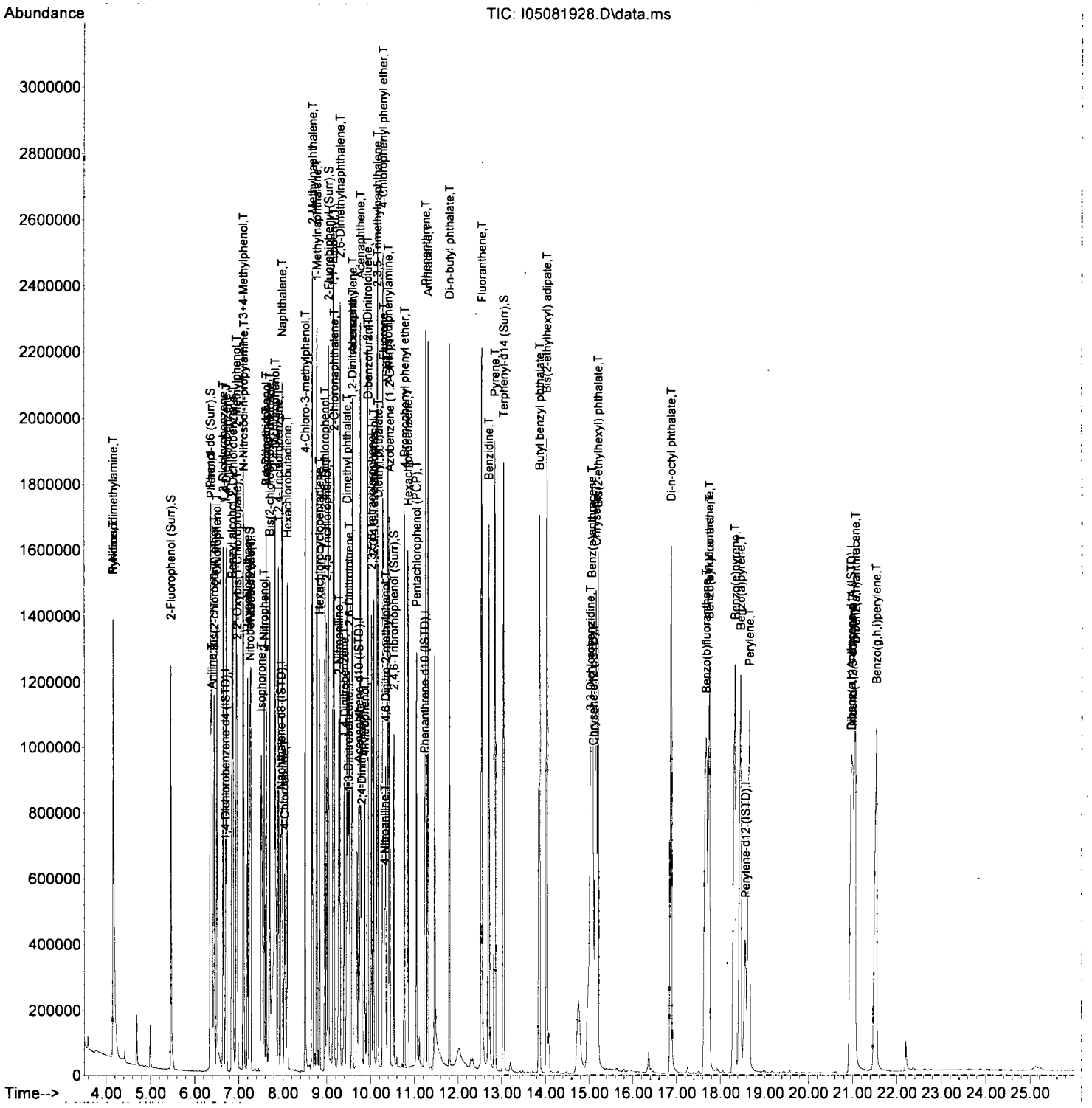


Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

JK 5/9/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	116606	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	444228	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.719	162	227633	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.227	188	432433	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.057	240	431821	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.544	264	409331	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	397711	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.466	112	77339	991.92	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	99468	967.06	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.231	82	81052	940.74	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	184294	1109.38	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	21607	1252.19	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	220750	1073.74	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.167	74	57086	927.05	ng/ml	98
3) Pyridine	4.183	79	83967	872.75	ng/ml	97
6) Phenol	6.354	94	111298	993.18	ng/ml	98
7) Aniline	6.381	93	91216	890.85	ng/ml	94
8) Bis(2-chloroethyl) ether	6.434	93	92166	1002.81	ng/ml	98
9) 2-Chlorophenol	6.499	128	81865	1025.54	ng/ml	95
10) 1,3-Dichlorobenzene	6.643	146	90060	1015.81	ng/ml	96
11) 1,4-Dichlorobenzene	6.713	146	85768	1014.76	ng/ml	97
12) Benzyl alcohol	6.825	108	42923	893.60	ng/ml	95
13) 1,2-Dichlorobenzene	6.862	146	83881	1015.35	ng/ml	97
14) 2-Methylphenol	6.932	107	62992	996.88	ng/ml	97
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	106577	830.11	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.082	70	62598	961.44	ng/ml	94
17) 3+4-Methylphenol	7.082	107	79117	993.02	ng/ml	98
18) Hexachloroethane	7.194	201	27479	1057.26	ng/ml	93
20) Nitrobenzene	7.247	77	80915	922.61	ng/ml	94
22) Isophorone	7.483	82	171349	1044.65	ng/ml	95
23) 2-Nitrophenol	7.568	139	46713	1109.25	ng/ml	93
24) 2,4-Dimethylphenol	7.601	122	64853	987.16	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.686	93	99442	1017.85	ng/ml	98
26) Benzoic acid	7.702	105	50958	2053.05	ng/ml	96
27) 2,4-Dichlorophenol	7.809	162	60602	1102.81	ng/ml	97
28) 1,2,4-Trichlorobenzene	7.889	180	71884	1036.67	ng/ml	99
29) Naphthalene	7.970	128	223784	1015.89	ng/ml	98
30) 4-Chloroaniline	8.023	127	54929	923.06	ng/ml	95
31) Hexachlorobutadiene	8.098	225	37710	1081.09	ng/ml	99
32) 4-Chloro-3-methylphenol	8.499	107	67175	1063.65	ng/ml	97
33) 2-Methylnaphthalene	8.660	142	177506	1093.27	ng/ml	98
34) 1-Methylnaphthalene	8.761	142	163988	1064.48	ng/ml	98
36) Hexachlorocyclopentadiene	8.831	237	35605	1123.95	ng/ml	97
37) 2,4,6-Trichlorophenol	8.943	196	44187	1077.06	ng/ml	98
38) 2,4,5-Trichlorophenol	8.986	198	43264	1089.29	ng/ml	98
39) 1,1'-Biphenyl	9.125	154	203941	1060.08	ng/ml	99
41) 2-Chloronaphthalene	9.152	162	147432	1053.45	ng/ml	96
42) 2-Nitroaniline	9.248	138	50581	1103.22	ng/ml	90
43) 2,6-Dimethylnaphthalene	9.285	156	149204	1080.78	ng/ml	95

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9

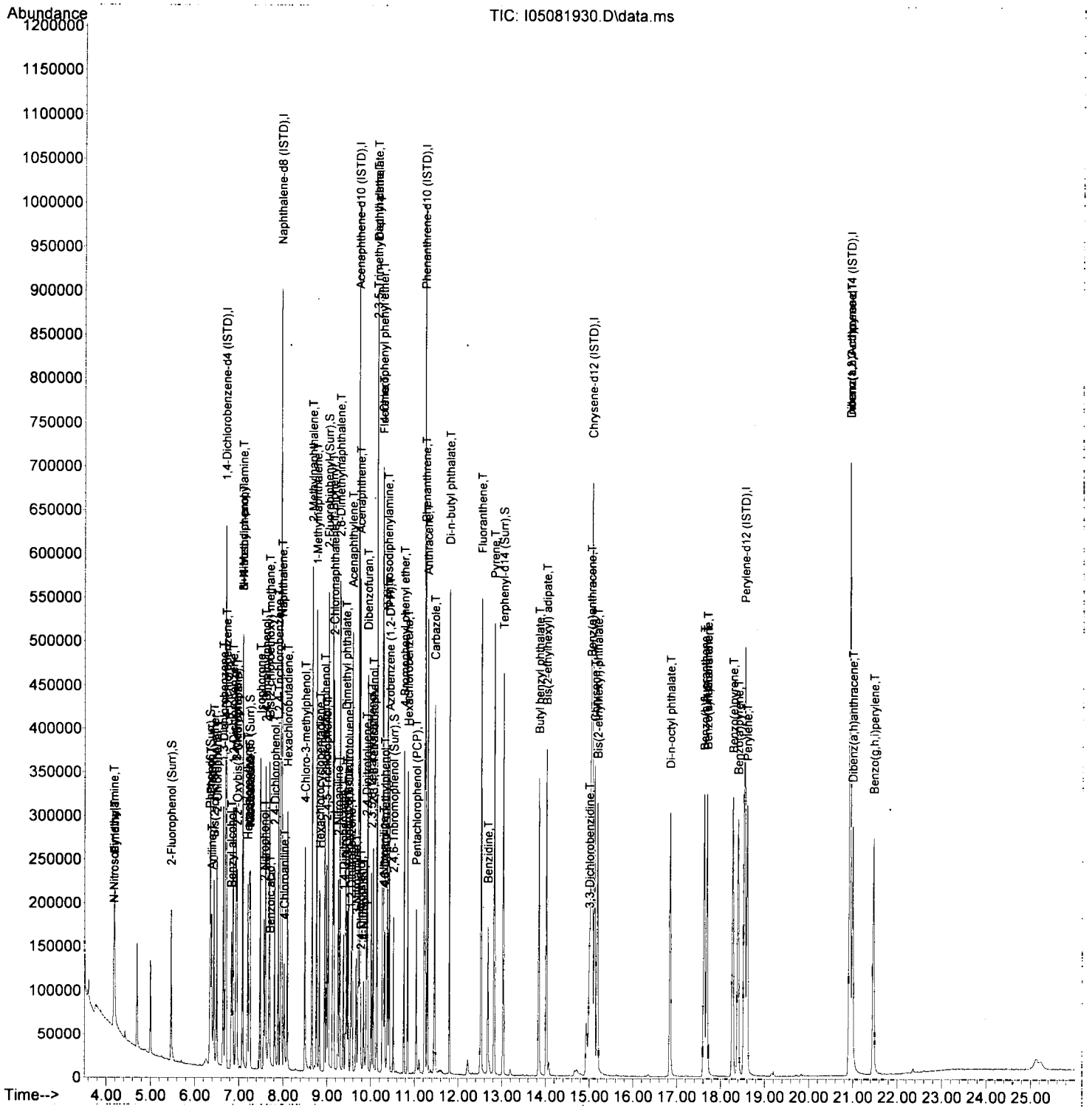
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	24100	1150.84	ng/ml	79
45) Dimethyl phthalate	9.430	163	169073	1064.38	ng/ml	100
46) 1,3-Dinitrobenzene	9.456	168	28035	1146.14	ng/ml	91
47) 2,6-Dinitrotoluene	9.489	165	40105	1158.80	ng/ml	80
48) 1,2-Dinitrobenzene	9.547	168	18904	1081.60	ng/ml	77
49) Acenaphthylene	9.574	152	245169	1108.43	ng/ml	99
50) 3-Nitroaniline	9.665	138	32303	1059.76	ng/ml	95
51) Acenaphthene	9.751	153	147329	1054.13	ng/ml	99
52) 2,4-Dinitrophenol	9.767	184	11258	1250.76	ng/ml	90
53) 4-Nitrophenol	9.836	139	26562	1064.89	ng/ml	86
54) 2,4-Dinitrotoluene	9.895	165	50566	1097.56	ng/ml	87
55) Dibenzofuran	9.922	168	207368	1077.84	ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	10.007	232	35153	1136.16	ng/ml	87
57) 2,3,4,6-Tetrachlorophenol	10.050	232	37583	1140.48	ng/ml	86
58) Diethyl phthalate	10.136	149	155688	1047.10	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.130	170	135406	1060.91	ng/ml	99
60) Fluorene	10.269	166	163155	1041.47	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.264	204	79372	1078.87	ng/ml	84
62) 4-Nitroaniline	10.286	138	39138	1152.06	ng/ml	90
63) 4,6-Dinitro-2-methylph...	10.312	198	23959	1498.70	ng/ml	81
65) N-Nitrosodiphenylamine	10.382	169	139086	1052.37	ng/ml	98
66) Azobenzene (1,2-DPH)	10.425	77	159312	962.39	ng/ml	85
68) 4-Bromophenyl phenyl e...	10.756	248	50774	1160.53	ng/ml	89
69) Hexachlorobenzene	10.842	284	53277	1147.59	ng/ml	91
70) Pentachlorophenol (PCP)	11.034	266	24081	1220.08	ng/ml	95
71) Phenanthrene	11.248	178	232643	1036.54	ng/ml	99
72) Anthracene	11.296	178	237192	1095.01	ng/ml	98
73) Carbazole	11.457	167	219325	1054.27	ng/ml	98
74) Di-n-butyl phthalate	11.794	149	282307	1084.43	ng/ml	99
75) Fluoranthene	12.527	202	288406	1158.21	ng/ml	96
76) Benzidine	12.676	184	99508	1770.57	ng/ml	98
77) Pyrene	12.821	202	286022	1134.69	ng/ml	100
80) Butyl benzyl phthalate	13.842	149	126879	976.97	ng/ml	90
81) Bis(2-ethylhexyl) adipate	14.014	129	113335	947.01	ng/ml	98
82) 3,3-Dichlorobenzidine	14.992	252	62301	2467.19	ng/ml	97
83) Benz(a)anthracene	15.030	228	262028	1060.19	ng/ml	99
84) Chrysene	15.115	228	231406	1005.17	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.180	149	161392	975.08	ng/ml	95
87) Di-n-octyl phthalate	16.843	149	287021	1041.82	ng/ml	98
88) Benzo(b)fluoranthene	17.619	252	267547	1081.70	ng/ml	96
89) Benzo(k)fluoranthene	17.688	252	258374	1063.39	ng/ml	96
90) Benzo(b+k)fluoranthene	17.688	252	537352	2135.29	ng/ml	96
91) Benzo(e)pyrene	18.276	252	259061	1115.09	ng/ml	97
92) Benzo(a)pyrene	18.394	252	240398	1099.22	ng/ml	96
93) Perylene	18.597	252	240296	1146.64	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.924	276	215601	957.51	ng/ml	96
96) Dibenz(a,h)anthracene	20.988	278	198191	1045.97	ng/ml	93
97) Benzo(g,h,i)perylene	21.464	276	225482	1068.95	ng/ml	90

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 11:03:38 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 11:01:22 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Final Reqmant

JK 5/9/19

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.697	152	116606	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	7.948	136	444228	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.719	162	227633	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.227	188	432433	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.057	240	431821	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.544	264	409331	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	20.924	292	397711	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.466	112	77339	1015.00	ng/ml	0.00
5) Phenol-d6 (Surr)	6.338	99	99468	1003.19	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.231	82	81052	982.98	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.023	172	184294	1079.79	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.516	330	21607	1085.76	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.024	244	220750	1043.19	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.167	74	57086	979.66	ng/ml	98
3) Pyridine	4.183	79	83967	944.02	ng/ml	97
6) Phenol	6.354	94	111298	1055.46	ng/ml	98
7) Aniline	6.381	93	91216	1016.54	ng/ml	94
8) Bis(2-chloroethyl) ether	6.434	93	92166	1038.53	ng/ml	98
9) 2-Chlorophenol	6.499	128	81865	1028.05	ng/ml	95
10) 1,3-Dichlorobenzene	6.643	146	90060	988.80	ng/ml	96
11) 1,4-Dichlorobenzene	6.713	146	85768	1008.15	ng/ml	97
12) Benzyl alcohol	6.825	108	42923	966.03	ng/ml	95
13) 1,2-Dichlorobenzene	6.862	146	83881	1021.90	ng/ml	97
14) 2-Methylphenol	6.932	107	62992	1042.89	ng/ml	97
15) 2,2'-Oxybis(1-Chloropr...	6.953	45	106577	986.01	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.082	70	62598	1034.02	ng/ml	94
17) 3+4-Methylphenol	7.082	107	79117	1053.45	ng/ml	98
18) Hexachloroethane	7.194	201	27479	1002.57	ng/ml	93
20) Nitrobenzene	7.247	77	80915	997.64	ng/ml	94
22) Isophorone	7.483	82	171349	1041.61	ng/ml	95
23) 2-Nitrophenol	7.568	139	46713	1112.08	ng/ml	93
24) 2,4-Dimethylphenol	7.601	122	64853	1029.02	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.686	93	99442	1029.92	ng/ml	98
26) Benzoic acid	7.702	105	50958	1883.74	ng/ml	96
27) 2,4-Dichlorophenol	7.809	162	60602	1034.81	ng/ml	97
28) 1,2,4-Trichlorobenzene	7.889	180	71884	1012.20	ng/ml	99
29) Naphthalene	7.970	128	223784	1010.00	ng/ml	98
30) 4-Chloroaniline	8.023	127	54929	967.40	ng/ml	95
31) Hexachlorobutadiene	8.098	225	37710	1022.65	ng/ml	99
32) 4-Chloro-3-methylphenol	8.499	107	67175	1007.28	ng/ml	97
33) 2-Methylnaphthalene	8.660	142	177506	1061.90	ng/ml	98
34) 1-Methylnaphthalene	8.761	142	163988	1041.62	ng/ml	98
36) Hexachlorocyclopentadiene	8.831	237	35605	1071.82	ng/ml	97
37) 2,4,6-Trichlorophenol	8.943	196	44187	1042.93	ng/ml	98
38) 2,4,5-Trichlorophenol	8.986	198	43264	1087.06	ng/ml	98
39) 1,1'-Biphenyl	9.125	154	203941	1072.17	ng/ml	99
41) 2-Chloronaphthalene	9.152	162	147432	1075.71	ng/ml	96
42) 2-Nitroaniline	9.248	138	50581	1099.89	ng/ml	90
43) 2,6-Dimethylnaphthalene	9.285	156	149204	1064.53	ng/ml	95

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9

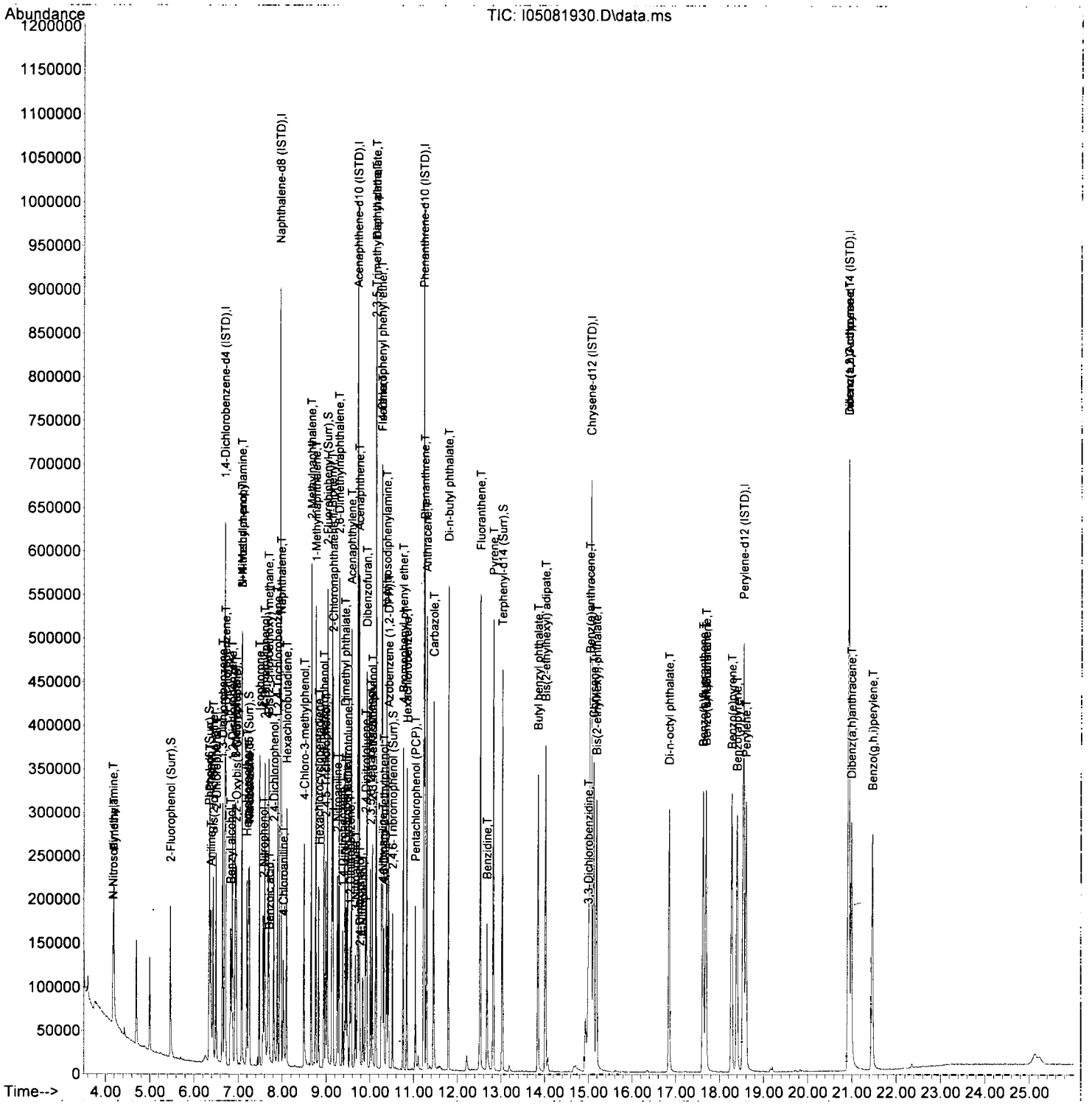
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.376	168	24100	1073.01	ng/ml	79
45) Dimethyl phthalate	9.430	163	169073	1061.69	ng/ml	100
46) 1,3-Dinitrobenzene	9.456	168	28035	1096.25	ng/ml	91
47) 2,6-Dinitrotoluene	9.489	165	40105	1126.25	ng/ml	80
48) 1,2-Dinitrobenzene	9.547	168	18904	1070.35	ng/ml	77
49) Acenaphthylene	9.574	152	245169	1088.77	ng/ml	99
50) 3-Nitroaniline	9.665	138	32303	1148.36	ng/ml	95
51) Acenaphthene	9.751	153	147329	1038.58	ng/ml	99
52) 2,4-Dinitrophenol	9.767	184	11258	946.80	ng/ml	90
53) 4-Nitrophenol	9.836	139	26562	1034.68	ng/ml	86
54) 2,4-Dinitrotoluene	9.895	165	50566	1028.34	ng/ml	87
55) Dibenzofuran	9.922	168	207368	1074.20	ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	10.007	232	35153	1036.22	ng/ml	87
57) 2,3,4,6-Tetrachlorophenol	10.050	232	37583	1057.55	ng/ml	86
58) Diethyl phthalate	10.136	149	155688	1008.93	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.130	170	135406	979.82	ng/ml	99
60) Fluorene	10.269	166	163155	980.70	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.264	204	79372	1021.18	ng/ml	84
62) 4-Nitroaniline	10.286	138	39138	1148.14	ng/ml	90
63) 4,6-Dinitro-2-methylph...	10.312	198	23959	1164.44	ng/ml	81
65) N-Nitrosodiphenylamine	10.382	169	139086	1041.34	ng/ml	98
66) Azobenzene (1,2-DPH)	10.425	77	159312	1062.75	ng/ml	85
68) 4-Bromophenyl phenyl e...	10.756	248	50774	1067.93	ng/ml	89
69) Hexachlorobenzene	10.842	284	53277	1008.79	ng/ml	91
70) Pentachlorophenol (PCP)	11.034	266	24081	1037.90	ng/ml	95
71) Phenanthrene	11.248	178	232643	1007.11	ng/ml	99
72) Anthracene	11.296	178	237192	1026.92	ng/ml	98
73) Carbazole	11.457	167	219325	1083.50	ng/ml	98
74) Di-n-butyl phthalate	11.794	149	282307	1076.33	ng/ml	99
75) Fluoranthene	12.527	202	288406	1068.46	ng/ml	96
76) Benzidine	12.676	184	99508	1732.76	ng/ml	98
77) Pyrene	12.821	202	286022	1041.22	ng/ml	100
80) Butyl benzyl phthalate	13.842	149	126879	1062.30	ng/ml	90
81) Bis(2-ethylhexyl) adipate	14.014	129	113335	995.63	ng/ml	98
82) 3,3-Dichlorobenzidine	14.992	252	62301	2074.49	ng/ml	97
83) Benz(a)anthracene	15.030	228	262028	1044.68	ng/ml	99
84) Chrysene	15.115	228	231406	1000.05	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.180	149	161392	1060.07	ng/ml	95
87) Di-n-octyl phthalate	16.843	149	287021	1012.79	ng/ml	98
88) Benzo(b)fluoranthene	17.619	252	267547	1035.11	ng/ml	96
89) Benzo(k)fluoranthene	17.688	252	258374	1008.99	ng/ml	96
90) Benzo(b+k)fluoranthene	17.688	252	537352	2026.95	ng/ml	96
91) Benzo(e)pyrene	18.276	252	259061	1058.50	ng/ml	97
92) Benzo(a)pyrene	18.394	252	240398	1026.25	ng/ml	96
93) Perylene	18.597	252	240296	1159.57	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	20.924	276	215601	987.22	ng/ml	96
96) Dibenz(a,h)anthracene	20.988	278	198191	1027.94	ng/ml	93
97) Benzo(g,h,i)perylene	21.464	276	225482	1055.89	ng/ml	90

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

Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E08056\
Data File : I05081930.D
Acq On : 9 May 2019 2:48 am
Operator : JK /AMS /DTH
Sample : 9E08056-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV9_AQUISITION.M

Quant Time: May 09 17:11:47 2019
Quant Method : T:\methods\SV9_050819.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu May 09 12:25:58 2019
Response via : Initial Calibration
InstName : SV-GCMS9



Total Metals by EPA 6020 A (ICPMS)
Benchsheet & Analysis Sequence Data (including calibration)

Batch 9061422

Sequence 9F27029

APEX LABORATORIES

Ag (Silver) - 6020 - Total
Al (Aluminum) - 6020 - Total
As (Arsenic) - 6020 - Total
Ba (Barium) - 6020 - Total
Be (Beryllium) - 6020 - Total
Ca (Calcium) - 6020 - Total
Cd (Cadmium) - 6020 - Total
Cr (Chromium) - 6020 - Total

PREPARATION BENCH SHEET

9061422

JUL 1 0 2019

Apex Laboratories
BATCH #: 9061422 (Oil)
Prep Method: EPA 3051A

Lab Number	Due	Prepared	Initial (g)	Final (mL)	Client	ClientID / Sample	Extraction Comments
9061422-BLK1	---	**06/27/19 08:07**	**0.5**	**50**	*QC Sample*		
9061422-BS1	---	**06/27/19 08:07**	**0.5**	**50**	*QC Sample*		
	Spike 1: **2500 uL of A19F268**	Spike 2: **250 uL of A19E299**					
A9F0684-01	*07/05/19*	**06/27/19 08:07**	~~0.25~~ .113	**50**	**Hahn and Associates**	**2708-190619-OIL**	4th priority Added 6/26/19 Ag, Al, As, Ba, Be, Cd, Cr, Cu, Fe, Hg, Mn, Ni, Pb, Sb, Se, Tl, V, Z, Ca, Mg, K, Na

☐ Ag (Silver) - 6020 - Total ☐ Al (Aluminum) - 6020 - Total ☐ As (Arsenic) - 6020 - Total ☐ Ba (Barium) - 6020 - Total ☐ Be (Beryllium) - 6020 - Total ☐ Ca (Calcium) - 6020 - Total ☐ Cd (Cadmium) - 6020 - Total
☐ Cr (Chromium) - 6020 - Total ☐ Cu (Copper) - 6020 - Total ☐ Fe (Iron) - 6020 - Total ☐ Hg (Mercury) - 6020 - Total ☐ K (Potassium) - 6020 - Total ☐ Mg (Magnesium) - 6020 - Total ☐ Mn (Manganese) - 6020 - Total
☐ Na (Sodium) - 6020 - Total ☐ Ni (Nickel) - 6020 - Total ☐ Pb (Lead) - 6020 - Total ☐ Sb (Antimony) - 6020 - Total ☐ Se (Selenium) - 6020 - Total ☐ Tl (Thallium) - 6020 - Total ☐ V (Vanadium) - 6020 - Total
☐ Zn (Zinc) - 6020 - Total

9061422-DUP1	---	**06/27/19 08:07**	~~0.5~~ .132	**50**	*QC Sample*		
	Source: **A9F0684-01**						
9061422-MS1	---	**06/27/19 08:07**	~~0.5~~ .116	**50**	*QC Sample*		
	Source: **A9F0684-01**	Spike 1: **2500 uL of A19F268**	Spike 2: **250 uL of A19E299**				

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L213	11/30/23	Metals Prep Balance 2
A15E001	05/01/20	Mars-1 Microwave
A19D164	10/07/19	MW Liners -Disposable
A19E111	08/31/19	30% hydrogen peroxide
A19F073	07/07/20	Conc. HNO3 - Omnitrace
A19F075	06/07/20	Conc. HCl - Omnitrace

Analyte Spike(s)

Std ID	Exp. Date	Description
A19E299	11/20/19	Hg Spiking Standard
A19F268	08/02/19	**Combo Spike** A+B+C

6/27/19
A.) A19F267, 1250 uL
B.) A19F112, 625 uL
C.) A19F116, 625 uL

Digestion time and temperature achieved? YES
Initials: LF 6/27/19

Prepared By: 6/27/19 Date

Reviewed By: 06/27/19 Date

Batch #: 9061422

If observed weight loss < 0.2g Digestion is within control limits

If observed weight loss > 0.2g Enter data in to electronic VWW. Acceptance limit 1.0% sample loss.

KT 6/27/19

Date: 06/27/19 Prepared by: KT

#	Mars Tube ID	Sample ID	Pre-digestion Vessel + Sample Wt. (g)	Post-digestion Vessel + Sample Wt. (g)	Sample Wt. Loss (%)* *Formula only used if sample loss >0.2g*
1	S25	9061422-BLK1	192.50	~~187~~ 192.38	n/a
2	S27	9061422-BS1	188.64	188.54	n/a
3	S19	A9F0684-01	189.03	189.02	n/a
4	S21	9061422-DUP1	189.18	189.19	n/a
5	S22	9061422-MS1	189.30	189.29	n/a
6					n/a
7					n/a
8					n/a
9					n/a
10					n/a
11					n/a
12					n/a
13					n/a
14					n/a
15					n/a
16					n/a
17					n/a
18					n/a
19					n/a
20					n/a
21					n/a
22					n/a
23					n/a
24					n/a
25					n/a

*Example Calculation: (Pre(g) – Post(g))/(Post(g) – 159.32g) This represents the mean weight of the empty digestion vessels. By factoring in the mean digestion vessel weight, we observe weight loss from only the sample, rather than as a percentage of the sample+vessel weight.

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence: **9F27029** Instrument: **ICPMS5**

Date: **06/27/19 10:50** Calibration: **UNASSIGNED**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9F27029-CAL1	Water	QC	QC			A19F327	A19F223
2	9F27029-CAL2	Water	QC	QC			A19F327	A19F224
3	9F27029-CAL4	Water	QC	QC			A19F327	A19F226
4	9F27029-CAL3	Water	QC	QC			A19F327	A19F225
5	9F27029-CAL5	Water	QC	QC			A19F327	A19E313
6	9F27029-CAL6	Water	QC	QC			A19F327	A19F227
7	9F27029-CAL7	Water	QC	QC			A19F327	A19E312
8	9F27029-CAL8	Water	QC	QC			A19F327	A19E307
9	9F27029-CAL9	Water	QC	QC			A19F327	A19F228
10	9F27029-ICV1	Water	QC	QC			A19F327	A19F305
11	9F27029-ICB1	Water	QC	QC			A19F327	
12	9F27029-CRL1	Water	QC	QC			A19F327	A19F223
13	9F27029-CRL2	Water	QC	QC			A19F327	A19F224
14	9F27029-CRL3	Water	QC	QC			A19F327	A19F225
15	9F27029-IFA1	Water	QC	QC			A19F327	A19F259
16	9F27029-IFB1	Water	QC	QC			A19F327	A19F260
17	9061367-BLK1	Solid	QC	QC		9061367	A19F327	
18	9061367-BS1	Solid	QC	QC		9061367	A19F327	
19	A9F0657-02	Solid	Ag (Silver) - 6020 - Total		07/03/19	9061367	A19F327	
20	"	Solid	As (Arsenic) - 6020 - Total	"	07/03/19	9061367	A19F327	
21	"	Solid	Ba (Barium) - 6020 - Total	"	07/03/19	9061367	A19F327	
22	"	Solid	Cd (Cadmium) - 6020 - Total	"	07/03/19	9061367	A19F327	
23	"	Solid	Cr (Chromium) - 6020 - Total	"	07/03/19	9061367	A19F327	
24	"	Solid	Hg (Mercury) - 6020 - Total	"	07/03/19	9061367	A19F327	
25	"	Solid	Pb (Lead) - 6020 - Total	"	07/03/19	9061367	A19F327	
26	"	Solid	Se (Selenium) - 6020 - Total	"	07/03/19	9061367	A19F327	
27	A9F0742-03	Solid	Ag (Silver) - 6020 - Total		06/28/19	9061367	A19F327	
28	"	Solid	As (Arsenic) - 6020 - Total	"	06/28/19	9061367	A19F327	
29	"	Solid	Ba (Barium) - 6020 - Total	"	06/28/19	9061367	A19F327	
30	"	Solid	Cd (Cadmium) - 6020 - Total	"	06/28/19	9061367	A19F327	
31	"	Solid	Cr (Chromium) - 6020 - Total	"	06/28/19	9061367	A19F327	
32	"	Solid	Hg (Mercury) - 6020 - Total	"	06/28/19	9061367	A19F327	
33	"	Solid	Pb (Lead) - 6020 - Total	"	06/28/19	9061367	A19F327	
34	"	Solid	Se (Selenium) - 6020 - Total	"	06/28/19	9061367	A19F327	
35	A9F0795-01	Solid	Ag (Silver) - 6020 - Total		06/28/19	9061367	A19F327	
36	"	Solid	As (Arsenic) - 6020 - Total	"	06/28/19	9061367	A19F327	
37	"	Solid	Ba (Barium) - 6020 - Total	"	06/28/19	9061367	A19F327	
38	"	Solid	Cd (Cadmium) - 6020 - Total	"	06/28/19	9061367	A19F327	
39	"	Solid	Cr (Chromium) - 6020 - Total	"	06/28/19	9061367	A19F327	
40	"	Solid	Hg (Mercury) - 6020 - Total	"	06/28/19	9061367	A19F327	
41	"	Solid	Pb (Lead) - 6020 - Total	"	06/28/19	9061367	A19F327	
42	"	Solid	Se (Selenium) - 6020 - Total	"	06/28/19	9061367	A19F327	
43	A9F0795-02	Solid	Ag (Silver) - 6020 - Total		06/28/19	9061367	A19F327	
44	"	Solid	As (Arsenic) - 6020 - Total	"	06/28/19	9061367	A19F327	
45	"	Solid	Ba (Barium) - 6020 - Total	"	06/28/19	9061367	A19F327	
46	"	Solid	Cd (Cadmium) - 6020 - Total	"	06/28/19	9061367	A19F327	
47	"	Solid	Cr (Chromium) - 6020 - Total	"	06/28/19	9061367	A19F327	
48	"	Solid	Hg (Mercury) - 6020 - Total	"	06/28/19	9061367	A19F327	
49	"	Solid	Pb (Lead) - 6020 - Total	"	06/28/19	9061367	A19F327	
50	"	Solid	Se (Selenium) - 6020 - Total	"	06/28/19	9061367	A19F327	
51	9061367-DUP1	Solid	QC	QC		9061367	A19F327	

Sequence: **9F27029** Instrument: **ICPMS5**

Date: **06/27/19 10:50** Calibration: **UNASSIGNED**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
52	9061367-MS1	Solid	QC	QC		9061367	A19F327	
53	A9F0795-03	Solid	Ag (Silver) - 6020 - Total		06/28/19	9061367	A19F327	
54	"	Solid	As (Arsenic) - 6020 - Total	"	06/28/19	9061367	A19F327	
55	"	Solid	Ba (Barium) - 6020 - Total	"	06/28/19	9061367	A19F327	
56	"	Solid	Cd (Cadmium) - 6020 - Total	"	06/28/19	9061367	A19F327	
57	"	Solid	Cr (Chromium) - 6020 - Total	"	06/28/19	9061367	A19F327	
58	"	Solid	Hg (Mercury) - 6020 - Total	"	06/28/19	9061367	A19F327	
59	"	Solid	Pb (Lead) - 6020 - Total	"	06/28/19	9061367	A19F327	
60	"	Solid	Se (Selenium) - 6020 - Total	"	06/28/19	9061367	A19F327	
61	A9F0817-01	Solid	Ag (Silver) - 6020 - Total		06/28/19	9061367	A19F327	
62	"	Solid	As (Arsenic) - 6020 - Total	"	06/28/19	9061367	A19F327	
63	"	Solid	Ba (Barium) - 6020 - Total	"	06/28/19	9061367	A19F327	
64	"	Solid	Cd (Cadmium) - 6020 - Total	"	06/28/19	9061367	A19F327	
65	"	Solid	Cr (Chromium) - 6020 - Total	"	06/28/19	9061367	A19F327	
66	"	Solid	Hg (Mercury) - 6020 - Total	"	06/28/19	9061367	A19F327	
67	"	Solid	Pb (Lead) - 6020 - Total	"	06/28/19	9061367	A19F327	
68	"	Solid	Se (Selenium) - 6020 - Total	"	06/28/19	9061367	A19F327	
69	9F27029-CCV1	Water	QC	QC			A19F327	A19F305
70	9F27029-CCV2	Water	QC	QC			A19F327	A19F305
71	9F27029-CCB1	Water	QC	QC			A19F327	
72	9061367-MSD1	Solid	QC	QC		9061367	A19F327	
73	A9F0663-01RE1	Water	Zn (Zinc) - 200.8 - Total		07/03/19	9061224	A19F327	
74	A9F0681-01RE1	Water	Zn (Zinc) - 200.8 - Total		07/03/19	9061224	A19F327	
75	A9F0697-01RE1	Soil	Pb (Lead) - 6020 - Total		06/28/19	9061365	A19F327	
76	A9F0740-01RE1	Water	Se (Selenium) - 200.8 - Total		06/28/19	9061384	A19F327	
77	9061384-DUP2	Water	QC	QC		9061384	A19F327	
78	9061384-MS2	Water	QC	QC		9061384	A19F327	
79	9061386-BLK2	Water	QC	QC		9061386	A19F327	
80	9061386-BS2	Water	QC	QC		9061386	A19F327	
81	A9F0709-17RE1	Water	Sb (Antimony) - 6020 - Dissolved		07/05/19	9061386	A19F327	
82	9F27029-CCV3	Water	QC	QC			A19F327	A19F305
83	9F27029-CCB2	Water	QC	QC			A19F327	
84	9F27029-CRL4	Water	QC	QC			A19F327	A19F223
85	9F27029-CRL5	Water	QC	QC			A19F327	A19F224
86	9F27029-CRL6	Water	QC	QC			A19F327	A19F225
87	A9F0709-18RE1	Water	Sb (Antimony) - 6020 - Dissolved		07/05/19	9061386	A19F327	
88	A9F0709-20RE2	Water	Sb (Antimony) - 6020 - Dissolved		07/05/19	9061386	A19F327	
89	9061386-DUP3	Water	QC	QC		9061386	A19F327	
90	9061386-MS3	Water	QC	QC		9061386	A19F327	
91	A9F0764-01RE1	Digest	Cr (Chromium) - 6020 - Total		07/03/19	9061383	A19F327	
92	A9F0766-01RE1	Digest	Cr (Chromium) - 6020 - Total		07/03/19	9061383	A19F327	
93	9061423-BLK1	Soil	QC	QC		9061423	A19F327	
94	9061423-BLK2	Soil	QC	QC		9061423	A19F327	
95	9061423-BS1	Soil	QC	QC		9061423	A19F327	
96	A9F0664-01	Soil	Ag (Silver) - 6020 - TCLP		07/03/19	9061423	A19F327	
97	"	Soil	As (Arsenic) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
98	"	Soil	Ba (Barium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
99	"	Soil	Cd (Cadmium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
100	"	Soil	Cr (Chromium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
101	"	Soil	Hg (Mercury) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
102	"	Soil	Pb (Lead) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
103	"	Soil	Se (Selenium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
104	9F27029-CCV4	Water	QC	QC			A19F327	A19F305
105	9F27029-CCB3	Water	QC	QC			A19F327	
106	A9F0664-02	Soil	Ag (Silver) - 6020 - TCLP		07/03/19	9061423	A19F327	

Sequence: **9F27029** Instrument: **ICPMS5**

Date: **06/27/19 10:50** Calibration: **UNASSIGNED**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
107	"	Soil	As (Arsenic) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
108	"	Soil	Ba (Barium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
109	"	Soil	Cd (Cadmium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
110	"	Soil	Cr (Chromium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
111	"	Soil	Hg (Mercury) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
112	"	Soil	Pb (Lead) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
113	"	Soil	Se (Selenium) - 6020 - TCLP	"	07/03/19	9061423	A19F327	
114	9061423-MS1	Soil	QC	QC		9061423	A19F327	
115	9061421-BLK1	Liquid	QC	QC		9061421	A19F327	
116	9061421-BS1	Liquid	QC	QC		9061421	A19F327	
117	A9F0830-01	Liquid	Ag (Silver) - 6020 - Total		07/01/19	9061421	A19F327	
118	"	Liquid	As (Arsenic) - 6020 - Total	"	07/01/19	9061421	A19F327	
119	"	Liquid	Ba (Barium) - 6020 - Total	"	07/01/19	9061421	A19F327	
120	"	Liquid	Cd (Cadmium) - 6020 - Total	"	07/01/19	9061421	A19F327	
121	"	Liquid	Cr (Chromium) - 6020 - Total	"	07/01/19	9061421	A19F327	
122	"	Liquid	Hg (Mercury) - 6020 - Total	"	07/01/19	9061421	A19F327	
123	"	Liquid	Pb (Lead) - 6020 - Total	"	07/01/19	9061421	A19F327	
124	"	Liquid	Se (Selenium) - 6020 - Total	"	07/01/19	9061421	A19F327	
125	9061421-DUP1	Liquid	QC	QC		9061421	A19F327	
126	9061421-MS1	Liquid	QC	QC		9061421	A19F327	
127	9061422-BLK1	Oil	QC	QC		9061422	A19F327	
128	9061422-BS1	Oil	QC	QC		9061422	A19F327	
129	9F27029-CCV5	Water	QC	QC			A19F327	A19F305
130	9F27029-CCB4	Water	QC	QC			A19F327	
131	A9F0684-01	Oil	Ag (Silver) - 6020 - Total	Hahn and Associates	07/05/19	9061422	A19F327	
132	"	Oil	Al (Aluminum) - 6020 - Total	"	07/05/19	9061422	A19F327	
133	"	Oil	As (Arsenic) - 6020 - Total	"	07/05/19	9061422	A19F327	
134	"	Oil	Ba (Barium) - 6020 - Total	"	07/05/19	9061422	A19F327	
135	"	Oil	Be (Beryllium) - 6020 - Total	"	07/05/19	9061422	A19F327	
136	"	Oil	Ca (Calcium) - 6020 - Total	"	07/05/19	9061422	A19F327	
137	"	Oil	Cd (Cadmium) - 6020 - Total	"	07/05/19	9061422	A19F327	
138	"	Oil	Cr (Chromium) - 6020 - Total	"	07/05/19	9061422	A19F327	
139	"	Oil	Cu (Copper) - 6020 - Total	"	07/05/19	9061422	A19F327	
140	"	Oil	Fe (Iron) - 6020 - Total	"	07/05/19	9061422	A19F327	
141	"	Oil	Hg (Mercury) - 6020 - Total	"	07/05/19	9061422	A19F327	
142	"	Oil	K (Potassium) - 6020 - Total	"	07/05/19	9061422	A19F327	
143	"	Oil	Mg (Magnesium) - 6020 - Total	"	07/05/19	9061422	A19F327	
144	"	Oil	Mn (Manganese) - 6020 - Total	"	07/05/19	9061422	A19F327	
145	"	Oil	Na (Sodium) - 6020 - Total	"	07/05/19	9061422	A19F327	
146	"	Oil	Ni (Nickel) - 6020 - Total	"	07/05/19	9061422	A19F327	
147	"	Oil	Pb (Lead) - 6020 - Total	"	07/05/19	9061422	A19F327	
148	"	Oil	Sb (Antimony) - 6020 - Total	"	07/05/19	9061422	A19F327	
149	"	Oil	Se (Selenium) - 6020 - Total	"	07/05/19	9061422	A19F327	
150	"	Oil	Tl (Thallium) - 6020 - Total	"	07/05/19	9061422	A19F327	
151	"	Oil	V (Vanadium) - 6020 - Total	"	07/05/19	9061422	A19F327	
152	"	Oil	Zn (Zinc) - 6020 - Total	"	07/05/19	9061422	A19F327	
153	9061422-DUP1	Oil	QC	QC		9061422	A19F327	
154	9061422-MS1	Oil	QC	QC		9061422	A19F327	
155	9061427-BLK1	Soil	QC	QC		9061427	A19F327	
156	9061427-BS1	Soil	QC	QC		9061427	A19F327	
157	A9F0567-01	Soil	Ag (Silver) - 6020 - Total		07/05/19	9061427	A19F327	
158	"	Soil	As (Arsenic) - 6020 - Total	"	07/05/19	9061427	A19F327	
159	"	Soil	Ba (Barium) - 6020 - Total	"	07/05/19	9061427	A19F327	
160	"	Soil	Cd (Cadmium) - 6020 - Total	"	07/05/19	9061427	A19F327	
161	"	Soil	Cr (Chromium) - 6020 - Total	"	07/05/19	9061427	A19F327	

Sequence: **9F27029** Instrument: **ICPMS5**

Date: **06/27/19 10:50** Calibration: **UNASSIGNED**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
162	"	Soil	Hg (Mercury) - 6020 - Total	"	07/05/19	9061427	A19F327	
163	"	Soil	Pb (Lead) - 6020 - Total	"	07/05/19	9061427	A19F327	
164	"	Soil	Se (Selenium) - 6020 - Total	"	07/05/19	9061427	A19F327	
165	A9F0769-01	Soil	Ag (Silver) - 6020 - Total		07/03/19	9061427	A19F327	
166	"	Soil	As (Arsenic) - 6020 - Total	"	07/03/19	9061427	A19F327	
167	"	Soil	Ba (Barium) - 6020 - Total	"	07/03/19	9061427	A19F327	
168	"	Soil	Cd (Cadmium) - 6020 - Total	"	07/03/19	9061427	A19F327	
169	"	Soil	Cr (Chromium) - 6020 - Total	"	07/03/19	9061427	A19F327	
170	"	Soil	Hg (Mercury) - 6020 - Total	"	07/03/19	9061427	A19F327	
171	"	Soil	Pb (Lead) - 6020 - Total	"	07/03/19	9061427	A19F327	
172	"	Soil	Se (Selenium) - 6020 - Total	"	07/03/19	9061427	A19F327	
173	9061427-DUP1	Soil	QC	QC		9061427	A19F327	
174	9061427-MS1	Soil	QC	QC		9061427	A19F327	
175	9F27029-CCV6	Water	QC	QC			A19F327	A19F305
176	9F27029-CCB5	Water	QC	QC			A19F327	
177	9F27029-CRL7	Water	QC	QC			A19F327	A19F223
178	9F27029-CRL8	Water	QC	QC			A19F327	A19F224
179	9F27029-CRL9	Water	QC	QC			A19F327	A19F225

Data Entered By: 06/28/19 Comments:

Data Reviewed By: 06/28/19

Metals Rerun Tracking Sheet

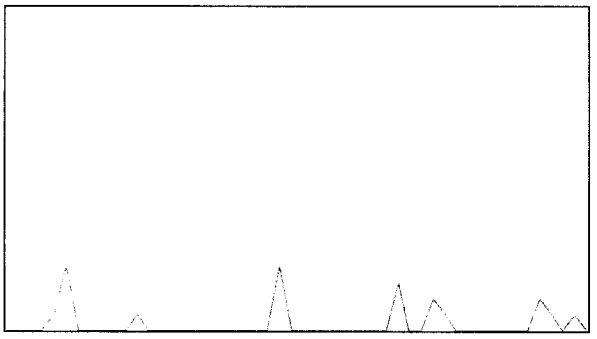
Instrument: ICPMS 6 **Sequence:** 9F25054

Batch	Sample			Analytes
Batch Number/Matrix	Element Sample ID	RE Number (RE1, RE2)	Dilution	Analytes that need reanalysis and reason (i.e. RR-1, RR-2)
9061224-W	A9F0663-01	RE1	10X	Zn RR-2
↓	A9F0681-01	RE1	10X	↓
9061365-Soil	A9F0697-01	RE1	100X	Pb RR-2
9061384-W	A9F0740-01	RE1	50X	Se RR-2
↓	DUP2		↓	
	MS2			

Tune Report

Batch Folder	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq. Date-Time	6/27/2019 11:40
Report Comment	9F27029 General Multi-mode Tune Report A19E047
Instrument Name	7700x JP09240003

[H2]



Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	1000	532	5324.80	1000.00	
89	5000	2061	20613.85	1000.00	
78	20	0			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
78		-	

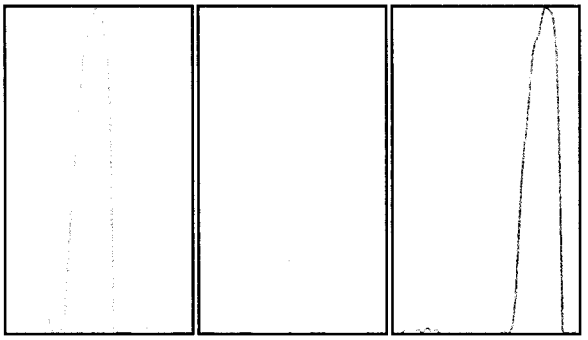
Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	7.91	5.00	[F]
89	6.05	5.00	[F]
78	242.23		

See EPA Tune for RSD
06/27/19

Mass	Background (Actual)	Background (Required)	Background (Flag)
59			
89			
78			

Integration Time [sec]	0.1	**Sampling Period [sec]**	0.306

Tune Report



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	528.11	58.95	58.9 - 59.1		0.57	0.730	0.900	
89	2143.92	89.00	88.9 - 89.1		0.59	0.749	0.900	
78			-					

Integration Time [sec] 0.1 **Acquisition Time [sec]** 22.14 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	1.5 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	0.0 mL/min	OctP RF	170 V
H2 Flow	3.1 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59	1000	441	4409.75	1000.00	
89	500	419	4189.11	1000.00	
205	1000	656	6556.55	1000.00	
75	20	1			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	

Tune Report

89		-
205		-
75		-

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	5.43	5.00	[F]
89	7.11	5.00	[F]
205	5.31	5.00	[F]
75	115.01		

See EPA tune for RSD
06/27/19

Mass	Background (Actual)	Background (Required)	Background (Flag)
59			
89			
205			
75			

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.412

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
59	443.57	59.00	58.9 - 59.1		0.57	0.728	0.900	
89	436.08	88.95	88.9 - 89.1		0.58	0.715	0.900	
205	691.18	205.05	204.9 - 205.1		0.51	0.740	0.900	
75	1.75	74.80	-		0.31	0.341		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 29.92 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	-0.2 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	3.4 mL/min	OctP RF	170 V
H2 Flow	0.0 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

[NoGas]

Tune Report

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
7	2000	1075	10748.31	1000.00	
89	2000	1803	18025.54	1000.00	
205	2000	1124	11237.77	1000.00	
102	20	0			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
7		-	
89		-	
205		-	
102		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	4.12	5.00	
89	2.63	5.00	
205	4.41	5.00	
102	167.26		

Mass	Background (Actual)	Background (Required)	Background (Flag)
7	0.80	10	
89	1.50	10	
205	6.30	30	
102	1.90		

Ratio (oxide)	156/140	1.013 %		
Ratio (2+)	69/138	2.457 %		

Integration Time [sec] 0.1 **Sampling Period [sec]** 0.413

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-10% (Actual)	W-10% (Required)	W-10% (Flag)
7	1054.59	7.00	6.9 - 7.1		0.62	0.784	0.900	
89	1808.77	89.00	88.9 - 89.1		0.59	0.753	0.900	
205	1181.00	205.05	204.9 - 205.1		0.55	0.750	0.900	
102			-					

Integration Time [sec] 0.1 **Acquisition Time [sec]** 30.12 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V

Tune Report

Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	12.0 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	false	OctP Bias	-8.0 V
He Flow	0.0 mL/min	OctP RF	170 V
H2 Flow	0.0 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

Tune Report

Batch Folder	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq. Date-Time	6/27/2019 11:54
Report Comment	9F27029 EPA Multi-mode Tune Report A19E047
Instrument Name	7700x JP09240003

[H2]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59		3131	31310.86	1000.00	
89		11912	119124.86	1000.00	
78		13			

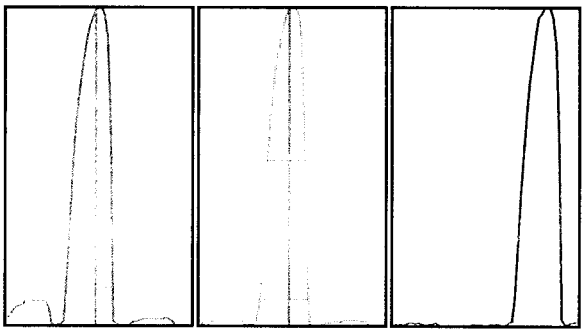
Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
78		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	1.87	5.00	
89	1.39	5.00	
78	28.87		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59			
89			
78			

Mass	Rep. 1 Count	Rep. 2 Count	Rep. 3 Count	Rep. 4 Count	Rep. 5 Count
59	3171	3149	3156	3151	3027
89	11651	11903	11933	11968	12108
78	7	17	15	12	15

Integration Time [sec] 0.1



Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-5% (Actual)	W-5% (Required)	W-5% (Flag)
59	550.85	59.00	58.9 - 59.1		0.59	0.752	0.900	

Tune Report

89	2130.15	89.00	88.9 - 89.1	0.58	0.780	0.900
78			-			

Integration Time [sec] 0.1 **Acquisition Time [sec]** 100.35 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	1.5 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	0.0 mL/min	OctP RF	170 V
H2 Flow	3.1 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

[He]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
59		2525	25252.28	1000.00	
89		2316	23159.95	1000.00	
205		3544	35436.13	1000.00	
75		9			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
59		-	
89		-	
205		-	
75		-	

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
59	1.65	5.00	
89	1.80	5.00	
205	1.66	5.00	
75	16.85		

Mass	Background (Actual)	Background (Required)	Background (Flag)
59			
89			

Tune Report

205
75

Mass	Rep. 1 Count	Rep. 2 Count	Rep. 3 Count	Rep. 4 Count	Rep. 5 Count
59	2565	2564	2465	2521	2511
89	2302	2317	2287	2287	2387
205	3549	3474	3532	3528	3636
75	10	9	8	11	8

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-5% (Actual)	W-5% (Required)	W-5% (Flag)
59	454.22	59.00	58.9 - 59.1		0.58	0.751	0.900	
89	420.56	89.05	88.9 - 89.1		0.57	0.741	0.900	
205	674.66	205.05	204.9 - 205.1		0.54	0.777	0.900	
75	1.60	75.15	-		0.18	0.733		

Integration Time [sec] 0.1 **Acquisition Time [sec]** 134.8 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	-0.2 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	true	OctP Bias	-18.0 V
He Flow	3.4 mL/min	OctP RF	170 V
H2 Flow	0.0 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

[NoGas]

Mass	Range	Count (Actual)	Response (Actual) [cps/ug/l]	Response (Required) [cps/ug/l]	Response (Flag)
7		6411	64107.40	1000.00	
89		10371	103707.28	1000.00	
205		6254	62539.85	1000.00	
102		2			

Mass	Resp Ratio (Actual)	Resp Ratio (Required)	Resp Ratio (Flag)
7		-	

Tune Report

89	-
205	-
102	-

Mass	RSD% (Actual)	RSD% (Required)	RSD% (Flag)
7	1.17	5.00	
89	1.69	5.00	
205	0.90	5.00	
102	35.36		

Mass	Background (Actual)	Background (Required)	Background (Flag)
7			
89			
205			
102			

Mass	Rep. 1 Count	Rep. 2 Count	Rep. 3 Count	Rep. 4 Count	Rep. 5 Count
7	6340	6324	6495	6445	6450
89	10252	10188	10312	10611	10490
205	6273	6168	6249	6258	6323
102	2	3	2	1	2

Integration Time [sec] 0.1

Mass	Peak Height	Axis (Actual)	Axis (Required)	Axis (Flag)	W-50%	W-5% (Actual)	W-5% (Required)	W-5% (Flag)
7	1071.73	6.95	6.9 - 7.1		0.61	0.812	0.900	
89	1868.65	89.00	88.9 - 89.1		0.58	0.746	0.900	
205	1173.76	205.00	204.9 - 205.1		0.54	0.782	0.900	
102			-					

Integration Time [sec] 0.1 **Acquisition Time [sec]** 135.3 **Y Axis** Linear

Tune Parameters
Plasma Paramters

RF Power	1550 W	Nebulizer Pump	0.10 rps
RF Matching	1.94 V	S/C Temp	2 °C
Smpl Depth	8.5 mm	Gas Switch	Makeup Gas
Carrier Gas	1.00 L/min	Makeup/Dilution Gas	0.10 L/min
Option Gas	0.0 %		

Lenses Parameters

Extract 1	0.0 V	Cell Entrance	-40 V
Extract 2	-165.0 V	Cell Exit	-60 V
Omega Bias	-95 V	Deflect	12.0 V
Omega Lens	7.2 V	Plate Bias	-70 V

Cell Parameters

Use Gas	false	OctP Bias	-8.0 V

Tune Report

He Flow	0.0 mL/min	OctP RF	170 V
H2 Flow	0.0 mL/min	Energy Discrimination	5.0 V
3rd Gas Flow	0 %		

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
6	Li	0.086690	✓
7	Li	Signal too low	✓
9	Be	Signal too low	✓
23	Na	0.110050	✓
24	Mg	0.115794	✓
27	Al	0.120092	✓
39	K	0.123712	✓
44	Ca	0.123952	✓
45	Sc	0.124272	✓
47	Ti	0.125259	✓
51	V	0.127544	✓
52	Cr	0.128910	✓
55	Mn	0.130532	✓
57	Fe	0.131999	✓
59	Co	0.134372	✓
60	Ni	0.138475	✓
65	Cu	0.140596	✓
66	Zn	0.139849	✓
74	Ge	0.138427	✓
75	As	Signal too low	✓
78	Se	Signal too low	✓
95	Mo	Signal too low	✓
103	Rh	0.141630	✓
106	[Cd]	Signal too low	✓
107	Ag	Signal too low	✓

Mass (Custom Setting)	Element Name	Current Value	Retain Mass for Startup
108	[Cd]	Signal too low	✓
111	Cd	0.145778	✓
121	Sb	Signal too low	✓
138	Ba	0.143219	✓
159	Tb	0.146331	✓
182	W	Signal too low	✓
201	Hg	Signal too low	✓
205	Tl	Signal too low	✓
206	[Pb]	0.150773	✓
207	[Pb]	0.150690	✓
208	Pb	0.151266	✓

Quantitation Report ICPMS5

File Name	001RINS.d		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 12:23:59	Sample Type	Rinse
Sample Name	**rinse**		
Comment	**rinse blank**	Last Calib	N/A
Prep Dilution	1.0000	Vial:	3
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas			ppb			
Na	23	45	H2			ppb			
Mg	24	45	He			ppb		22.5	
Al	27	45	He			ppb		22.5	
K	39	45	He			ppb			
Ca	44	45	H2			ppb			
Ti	47	45	NoGas			ppb			
V	51	74	He			ppb			
Cr	52	74	He			ppb			
Mn	55	74	He			ppb		1	
Fe	56	74	H2			ppb			
Fe	57	74	H2			ppb			
Co	59	74	NoGas			ppb			
Ni	60	74	He			ppb			
Cu	65	74	He			ppb		1	
Cu	65	74	NoGas			ppb			
Zn	66	74	He			ppb			
As	75	74	He			ppb			
Se	78	74	H2			ppb			
Mo	95	103	He			ppb			
Ag	107	103	He			ppb			
Cd	111	103	NoGas			ppb			
Sb	121	103	He			ppb			
Ba	138	159	He			ppb			
W	182	159	NoGas			ppb			
Hg	201	159	NoGas			ppt			
Tl	205	159	He			ppb		1	
Pb	208	159	NoGas			ppb			

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	793796	0.7	0	Pulse		
Sc	45	H2	1463330	0.5	0	Analog		
Sc	45	He	205893	1.1	0	Pulse		
Sc	45	NoGas	1864602	0.8	0	Analog		
Ge	74	H2	515745	0.3	0	Pulse		
Ge	74	He	122279	0.9	0	Pulse		
Ge	74	NoGas	539501	1.0	0	Pulse		
Rh	103	He	308784	1.3	0	Pulse		
Rh	103	NoGas	581202	0.2	0	Pulse		
Tb	159	He	434669	1.9	0	Pulse		
Tb	159	NoGas	924856	0.9	0	Pulse		
Bi	209	He	263585	1.3	0	Pulse		
Bi	209	NoGas	503294	0.8	0	Pulse		

Quantitation Report ICPMS5

File Name	002RINS.d		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 12:28:18	Sample Type	
Sample Name	**rinse**		Rinse
Comment	**rinse blank**	Last Calib	N/A
Prep Dilution	1.0000	Vial:	3
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas			ppb			
Na	23	45	H2			ppb			
Mg	24	45	He			ppb		22.5	
Al	27	45	He			ppb		22.5	
K	39	45	He			ppb			
Ca	44	45	H2			ppb			
Ti	47	45	NoGas			ppb			
V	51	74	He			ppb			
Cr	52	74	He			ppb			
Mn	55	74	He			ppb		1	
Fe	56	74	H2			ppb			
Fe	57	74	H2			ppb			
Co	59	74	NoGas			ppb			
Ni	60	74	He			ppb			
Cu	65	74	He			ppb		1	
Cu	65	74	NoGas			ppb			
Zn	66	74	He			ppb			
As	75	74	He			ppb			
Se	78	74	H2			ppb			
Mo	95	103	He			ppb			
Ag	107	103	He			ppb			
Cd	111	103	NoGas			ppb			
Sb	121	103	He			ppb			
Ba	138	159	He			ppb			
W	182	159	NoGas			ppb			
Hg	201	159	NoGas			ppt			
Tl	205	159	He			ppb		1	
Pb	208	159	NoGas			ppb			

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	803113	0.1	0	Pulse		
Sc	45	H2	1488085	0.8	0	Analog		
Sc	45	He	207902	0.3	0	Pulse		
Sc	45	NoGas	1886542	1.4	0	Analog		
Ge	74	H2	512391	0.3	0	Pulse		
Ge	74	He	121465	1.4	0	Pulse		
Ge	74	NoGas	533667	0.1	0	Pulse		
Rh	103	He	302249	0.5	0	Pulse		
Rh	103	NoGas	569144	1.1	0	Pulse		
Tb	159	He	429414	0.6	0	Pulse		
Tb	159	NoGas	898096	0.9	0	Pulse		
Bi	209	He	259002	1.0	0	Pulse		
Bi	209	NoGas	485930	0.3	0	Pulse		

Quantitation Report ICPMS5

File Name	003RINS.d		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 12:32:38	Sample Type	
Sample Name	**cal blk**	Rinse	
Comment	**cal blk check**	Last Calib	N/A
Prep Dilution	1.0000	Vial:	1
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas			ppb			
Na	23	45	H2			ppb			
Mg	24	45	He			ppb		22.5	
Al	27	45	He			ppb		22.5	
K	39	45	He			ppb			
Ca	44	45	H2			ppb			
Ti	47	45	NoGas			ppb			
V	51	74	He			ppb			
Cr	52	74	He			ppb			
Mn	55	74	He			ppb		1	
Fe	56	74	H2			ppb			
Fe	57	74	H2			ppb			
Co	59	74	NoGas			ppb			
Ni	60	74	He			ppb			
Cu	65	74	He			ppb		1	
Cu	65	74	NoGas			ppb			
Zn	66	74	He			ppb			
As	75	74	He			ppb			
Se	78	74	H2			ppb			
Mo	95	103	He			ppb			
Ag	107	103	He			ppb			
Cd	111	103	NoGas			ppb			
Sb	121	103	He			ppb			
Ba	138	159	He			ppb			
W	182	159	NoGas			ppb			
Hg	201	159	NoGas			ppt			
Tl	205	159	He			ppb		1	
Pb	208	159	NoGas			ppb			

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	796040	1.0	0	Pulse		
Sc	45	H2	1497715	1.1	0	Analog		
Sc	45	He	210389	2.8	0	Pulse		
Sc	45	NoGas	1880748	1.4	0	Analog		
Ge	74	H2	512108	0.8	0	Pulse		
Ge	74	He	123116	1.7	0	Pulse		
Ge	74	NoGas	529203	0.5	0	Pulse		
Rh	103	He	305523	1.6	0	Pulse		
Rh	103	NoGas	565826	0.2	0	Pulse		
Tb	159	He	432322	2.7	0	Pulse		
Tb	159	NoGas	888777	0.7	0	Pulse		
Bi	209	He	259904	1.2	0	Pulse		
Bi	209	NoGas	480310	0.7	0	Pulse		

Sample Name	9F27029-CAL0	Vial	1
File Name	004CALB.d		
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 12:36:58		
Sample Type	CalBlk		
Total Dilution	1.0000		
Comment	3.5%HNO3+0.4%HCl		
ISTD Ref FileName	004CALB.d		
Sample QC Pass/Fial	Pass		
ISTD QC Pass/Fail	Pass		
Operator	**ICPMS Analyst**		

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2		ppb	Pulse	13074	0.8	0.009	0.2001	3
Ca	44	45	1	H2		ppb	Pulse	885	1.5	0.001	0.2001	3
Fe	56	74	1	H2		ppb	Pulse	6864	4.1	0.014	0.3000	3
Fe	57	74	1	H2		ppb	Pulse	723	8.4	0.001	0.3000	3
Se	78	74	1	H2		ppb	Pulse	3	94.4	0.000	0.9999	3
Mg	24	45	2	He		ppb	Pulse	113	18.4	0.001	0.0999	3
Al	27	45	2	He		ppb	Pulse	123	30.7	0.001	0.0999	3
K	39	45	2	He		ppb	Pulse	20814	5.3	0.100	0.0999	3
V	51	74	2	He		ppb	Pulse	981	6.9	0.008	0.3000	3
Cr	52	74	2	He		ppb	Pulse	238	9.9	0.002	0.3000	3
Mn	55	74	2	He		ppb	Pulse	71	7.2	0.001	0.3000	3
Ni	60	74	2	He		ppb	Pulse	12	56.8	0.000	0.3000	3
Cu	65	74	2	He		ppb	Pulse	132	20.4	0.001	0.3000	3
Zn	66	74	2	He		ppb	Pulse	209	16.1	0.002	0.3000	3
As	75	74	2	He		ppb	Pulse	20	29.8	0.000	0.9999	3
Mo	95	103	2	He		ppb	Pulse	3	173.2	0.000	0.3000	3
Ag	107	103	2	He		ppb	Pulse	9	21.6	0.000	0.3000	3
Sb	121	103	2	He		ppb	Pulse	6	124.9	0.000	0.3000	3
Ba	138	159	2	He		ppb	Pulse	154	16.3	0.000	0.3000	3
Tl	205	159	2	He		ppb	Pulse	90	46.4	0.000	0.3000	3
Be	9	6	3	NoGas		ppb	Pulse	0	N/A		0.3000	3
Ti	47	45	3	NoGas		ppb	Pulse	47	27.0	0.000	0.2001	3
Co	59	74	3	NoGas		ppb	Pulse	396	8.9	0.001	0.2001	3
Cu	65	74	3	NoGas		ppb	Pulse	290	18.2	0.001	0.2001	3
Cd	111	103	3	NoGas		ppb	Pulse	12	144.8	0.000	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	32	6.0	0.000	0.3000	3
Hg	201	159	3	NoGas		ppt	Pulse	7	21.3	0.000	2.0001	3
Pb	208	159	3	NoGas		ppb	Pulse	460	8.6	0.001	0.2001	3

QC ISTD Table

Name	Mass	Det.	Tune Mode	CPS	CPS RSD
Sc	45	Analog	H2	1483837	2.0
Ge	74	Pulse	H2	508025	0.7
Sc	45	Pulse	He	208835	0.1
Ge	74	Pulse	He	121380	0.9
Rh	103	Pulse	He	302021	1.0
Tb	159	Pulse	He	429916	0.8
Bi	209	Pulse	He	256831	1.1
Li	6	Pulse	NoGas	793244	1.0
Sc	45	Analog	NoGas	1874561	1.7
Ge	74	Pulse	NoGas	528713	0.5
Rh	103	Pulse	NoGas	560665	1.0
Tb	159	Pulse	NoGas	882042	0.4
Bi	209	Pulse	NoGas	475402	0.5

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL1	1102
File Name	005CALS.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 12:41:18	
Sample Type	CalStd	
Total Dilution	1.0000	
Comment	A19F223 JPB 06/26	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Pass	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	9.000	ppb	Pulse	42454	1.8	0.028	0.2001	3
Ca	44	45	1	H2	9.000	ppb	Pulse	2196	9.9	0.001	0.2001	3
Fe	56	74	1	H2	9.000	ppb	Pulse	79328	2.2	0.156	0.3000	3
Fe	57	74	1	H2	9.000	ppb	Pulse	2522	1.4	0.005	0.3000	3
Se	78	74	1	H2	0.180	ppb	Pulse	46	7.1	0.000	0.9999	3
Mg	24	45	2	He	9.000	ppb	Pulse	3177	7.6	0.015	0.0999	3
Al	27	45	2	He	9.000	ppb	Pulse	1829	13.1	0.009	0.0999	3
K	39	45	2	He	9.000	ppb	Pulse	24018	4.1	0.116	0.0999	3
V	51	74	2	He	0.180	ppb	Pulse	1306	5.5	0.011	0.3000	3
Cr	52	74	2	He	0.180	ppb	Pulse	664	5.4	0.006	0.3000	3
Mn	55	74	2	He	0.180	ppb	Pulse	386	15.6	0.003	0.3000	3
Ni	60	74	2	He	0.180	ppb	Pulse	220	10.6	0.002	0.3000	3
Cu	65	74	2	He	0.180	ppb	Pulse	329	14.7	0.003	0.3000	3
Zn	66	74	2	He	0.180	ppb	Pulse	238	11.8	0.002	0.3000	3
As	75	74	2	He	0.180	ppb	Pulse	66	11.5	0.001	0.9999	3
Mo	95	103	2	He	0.180	ppb	Pulse	212	14.2	0.001	0.3000	3
Ag	107	103	2	He	0.180	ppb	Pulse	637	5.9	0.002	0.3000	3
Sb	121	103	2	He	0.180	ppb	Pulse	234	20.7	0.001	0.3000	3
Ba	138	159	2	He	0.180	ppb	Pulse	723	11.8	0.002	0.3000	3
Tl	205	159	2	He	0.180	ppb	Pulse	1045	12.2	0.002	0.3000	3
Be	9	6	3	NoGas	0.180	ppb	Pulse	344	21.8	0.000	0.3000	3
Ti	47	45	3	NoGas	0.180	ppb	Pulse	142	19.4	0.000	0.2001	3
Co	59	74	3	NoGas	0.180	ppb	Pulse	2162	6.9	0.004	0.2001	3
Cu	65	74	3	NoGas	0.180	ppb	Pulse	753	3.8	0.001	0.2001	3
Cd	111	103	3	NoGas	0.180	ppb	Pulse	239	16.3	0.000	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	26	7.5	0.000	0.3000	3
Hg	201	159	3	NoGas		ppt	Pulse	12	6.3	0.000	2.0001	3
Pb	208	159	3	NoGas	0.180	ppb	Pulse	2676	9.3	0.003	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1502119	1.1	Analog	101.2	
Ge	74	H2	508025.38	507773	1.3	Pulse	100.0	
Sc	45	He	208835.17	207294	0.4	Pulse	99.3	
Ge	74	He	121380.146666667	120681	0.3	Pulse	99.4	
Rh	103	He	302021.16	300076	0.1	Pulse	99.4	
Tb	159	He	429916.006666667	424339	0.9	Pulse	98.7	
Bi	209	He	256831.363333333	253328	0.7	Pulse	98.6	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	791904	1.2	Pulse	99.8	
Sc	45	NoGas	1874561.46	1908477	1.1	Analog	101.8	
Ge	74	NoGas	528713.046666667	528022	0.1	Pulse	99.9	
Rh	103	NoGas	560665.076666667	561487	0.5	Pulse	100.1	
Tb	159	NoGas	882041.703333333	886865	0.5	Pulse	100.5	
Bi	209	NoGas	475402.23	473194	0.7	Pulse	99.5	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL2	1103
File Name	006CALS.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 12:45:56	
Sample Type	CalStd	
Total Dilution	1.0000	
Comment	A19F224 JPB 06/26	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Pass	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	45.026	ppb	Pulse	162828	0.4	0.108	0.2001	3
Ca	44	45	1	H2	44.986	ppb	Pulse	7395	5.4	0.005	0.2001	3
Fe	56	74	1	H2	44.992	ppb	Pulse	367403	0.5	0.724	0.3000	3
Fe	57	74	1	H2	44.952	ppb	Pulse	9479	2.4	0.019	0.3000	3
Se	78	74	1	H2	0.895	ppb	Pulse	188	8.5	0.000	0.9999	3
Mg	24	45	2	He	44.972	ppb	Pulse	15035	1.2	0.073	0.0999	3
Al	27	45	2	He	45.021	ppb	Pulse	8671	2.0	0.042	0.0999	3
K	39	45	2	He	44.902	ppb	Pulse	36181	2.3	0.176	0.0999	3
V	51	74	2	He	0.905	ppb	Pulse	2881	2.6	0.024	0.3000	3
Cr	52	74	2	He	0.902	ppb	Pulse	2515	3.2	0.021	0.3000	3
Mn	55	74	2	He	0.900	ppb	Pulse	1658	5.6	0.014	0.3000	3
Ni	60	74	2	He	0.888	ppb	Pulse	773	5.4	0.006	0.3000	3
Cu	65	74	2	He	0.899	ppb	Pulse	1077	3.1	0.009	0.3000	3
Zn	66	74	2	He	0.917	ppb	Pulse	500	8.8	0.004	0.3000	3
As	75	74	2	He	0.898	ppb	Pulse	238	5.0	0.002	0.9999	3
Mo	95	103	2	He	0.899	ppb	Pulse	1007	5.7	0.003	0.3000	3
Ag	107	103	2	He	0.897	ppb	Pulse	2886	1.9	0.010	0.3000	3
Sb	121	103	2	He	0.902	ppb	Pulse	1222	1.7	0.004	0.3000	3
Ba	138	159	2	He	0.899	ppb	Pulse	2907	6.0	0.007	0.3000	3
Tl	205	159	2	He	0.900	ppb	Pulse	4864	2.0	0.012	0.3000	3
Be	9	6	3	NoGas	0.904	ppb	Pulse	1953	4.7	0.002	0.3000	3
Ti	47	45	3	NoGas	0.902	ppb	Pulse	545	2.4	0.000	0.2001	3
Co	59	74	3	NoGas	0.901	ppb	Pulse	9413	4.4	0.018	0.2001	3
Cu	65	74	3	NoGas	0.899	ppb	Pulse	2562	1.7	0.005	0.2001	3
Cd	111	103	3	NoGas	0.901	ppb	Pulse	1168	8.2	0.002	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	33	52.9	0.000	0.3000	3
Hg	201	159	3	NoGas	36.000	ppt	Pulse	22	14.9	0.000	2.0001	3
Pb	208	159	3	NoGas	0.899	ppb	Pulse	11196	4.5	0.013	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1513612	0.8	Analog	102.0	
Ge	74	H2	508025.38	507768	0.6	Pulse	99.9	
Sc	45	He	208835.17	205293	1.2	Pulse	98.3	
Ge	74	He	121380.146666667	120140	0.7	Pulse	99.0	
Rh	103	He	302021.16	298370	0.4	Pulse	98.8	
Tb	159	He	429916.006666667	422672	0.5	Pulse	98.3	
Bi	209	He	256831.363333333	253611	1.1	Pulse	98.7	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	798387	1.5	Pulse	100.6	
Sc	45	NoGas	1874561.46	1921815	0.5	Analog	102.5	
Ge	74	NoGas	528713.046666667	530927	0.6	Pulse	100.4	
Rh	103	NoGas	560665.076666667	562592	0.7	Pulse	100.3	
Tb	159	NoGas	882041.703333333	889892	0.5	Pulse	100.9	
Bi	209	NoGas	475402.23	476010	0.4	Pulse	100.1	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL3
File Name	007CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 12:50:43
Sample Type	CalStd
Total Dilution	1.0000
Comment	A19F225 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Fail
Operator	ICPMS

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Missed vial
Did not shoot
06/27/19

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	-9.513	ppb	Pulse	16945	4.7	0.005	0.2001	3
Ca	44	45	1	H2	-18.165	ppb	Pulse	1078	23.0	0.000	0.2001	3
Fe	56	74	1	H2	-1.403	ppb	Pulse	10594	8.8	0.009	0.3000	3
Fe	57	74	1	H2	-13.627	ppb	Pulse	571	6.2	0.000	0.3000	3
Se	78	74	1	H2	-0.058	ppb	Pulse	1	173.2	0.000	0.9999	3
Mg	24	45	2	He	0.913	ppb	Pulse	267	29.1	0.001	0.0999	3
Al	27	45	2	He	-0.026	ppb	Pulse	174	12.0	0.001	0.0999	3
K	39	45	2	He	-1250.791	ppb	Pulse	18329	6.6	0.063	0.0999	3
V	51	74	2	He	-13.755	ppb	Pulse	198	35.8	0.001	0.3000	3
Cr	52	74	2	He	-0.282	ppb	Pulse	150	11.8	0.001	0.3000	3
Mn	55	74	2	He	-0.033	ppb	Pulse	77	45.2	0.000	0.3000	3
Ni	60	74	2	He	0.043	ppb	Pulse	31	37.6	0.000	0.3000	3
Cu	65	74	2	He	-0.306	ppb	Pulse	120	43.7	0.001	0.3000	3
Zn	66	74	2	He	-1.439	ppb	Pulse	244	42.8	0.001	0.3000	3
As	75	74	2	He	-0.282	ppb	Pulse	12	49.5	0.000	0.9999	3
Mo	95	103	2	He	0.023	ppb	Pulse	12	31.5	0.000	0.3000	3
Ag	107	103	2	He	-0.005	ppb	Pulse	10	88.2	0.000	0.3000	3
Sb	121	103	2	He	-0.004	ppb	Pulse	4	114.6	0.000	0.3000	3
Ba	138	159	2	He	0.008	ppb	Pulse	243	33.0	0.000	0.3000	3
Tl	205	159	2	He	-0.016	ppb	Pulse	99	15.2	0.000	0.3000	3
Be	9	6	3	NoGas	0.006	ppb	Pulse	8	173.2	0.000	0.3000	3
Ti	47	45	3	NoGas	-0.328	ppb	Pulse	22	48.0	0.000	0.2001	3
Co	59	74	3	NoGas	-0.105	ppb	Pulse	310	15.4	0.000	0.2001	3
Cu	65	74	3	NoGas	-0.331	ppb	Pulse	282	46.0	0.000	0.2001	3
Cd	111	103	3	NoGas	-0.008	ppb	Pulse	12	114.2	0.000	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	17	0.0	0.000	0.3000	3
Hg	201	159	3	NoGas	164.720	ppt	Pulse	4	41.9	0.000	2.0001	3
Pb	208	159	3	NoGas	-0.019	ppb	Pulse	691	18.0	0.000	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	4021018	40.9	Analog	271.0	IS Q-06[] Note RSD; OK < 20%
Ge	74	H2	508025.38	142395	41.4	Mix	280.3	IS Q-06[] Note RSD; OK < 20%
Sc	45	He	208835.17	328539	39.7	Pulse	157.3	IS Q-06[] Note RSD; OK < 20%
Ge	74	He	121380.146666667	195888	39.2	Pulse	161.4	IS Q-06[] Note RSD; OK < 20%
Rh	103	He	302021.16	47043	40.0	Pulse	155.8	IS Q-06[] Note RSD; OK < 20%
Tb	159	He	429916.006666667	684822	40.2	Mix	159.3	IS Q-06[] Note RSD; OK < 20%
Bi	209	He	256831.363333333	415531	39.1	Pulse	161.8	IS Q-06[] Note RSD; OK < 20%

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	1687873	46.2	Analog	212.8	IS Q-06[] Note RSD; OK < 20%
Sc	45	NoGas	1874561.46	3794706	49.2	Analog	202.4	IS Q-06[] Note RSD; OK < 20%
Ge	74	NoGas	528713.046666667	1079629	49.5	Mix	204.2	IS Q-06[] Note RSD; OK < 20%
Rh	103	NoGas	560665.076666667	1115012	49.4	Mix	198.9	IS Q-06[] Note RSD; OK < 20%
Tb	159	NoGas	882041.703333333	1775396	49.2	Mix	201.3	IS Q-06[] Note RSD; OK < 20%
Bi	209	NoGas	475402.23	939052	49.2	Mix	197.5	IS Q-06[] Note RSD; OK < 20%

Calibration Standard Report ICPMS5

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Sample Name	9F27029-CAL4
File Name	008CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 12:55:16
Sample Type	CalStd
Total Dilution	1.0000
Comment	A19F226 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	223.354	ppb	Pulse	611240	0.2	0.405	0.2001	3
Ca	44	45	1	H2	224.063	ppb	Pulse	26614	1.6	0.018	0.2001	3
Fe	56	74	1	H2	222.647	ppb	Analog	1481462	0.7	2.903	0.3000	3
Fe	57	74	1	H2	223.633	ppb	Pulse	35724	2.1	0.070	0.3000	3
Se	78	74	1	H2	4.445	ppb	Pulse	735	3.7	0.001	0.9999	3
Mg	24	45	2	He	222.011	ppb	Pulse	60071	0.8	0.289	0.0999	3
Al	27	45	2	He	222.307	ppb	Pulse	34890	0.7	0.168	0.0999	3
K	39	45	2	He	235.298	ppb	Pulse	78630	1.4	0.378	0.0999	3
V	51	74	2	He	4.689	ppb	Pulse	8339	3.9	0.069	0.3000	3
Cr	52	74	2	He	4.468	ppb	Pulse	9110	1.2	0.076	0.3000	3
Mn	55	74	2	He	4.446	ppb	Pulse	6377	1.5	0.053	0.3000	3
Ni	60	74	2	He	4.445	ppb	Pulse	3168	1.9	0.026	0.3000	3
Cu	65	74	2	He	4.486	ppb	Pulse	4074	2.7	0.034	0.3000	3
Zn	66	74	2	He	4.583	ppb	Pulse	1606	4.6	0.013	0.3000	3
As	75	74	2	He	4.477	ppb	Pulse	903	2.8	0.007	0.9999	3
Mo	95	103	2	He	4.421	ppb	Pulse	3720	2.3	0.013	0.3000	3
Ag	107	103	2	He	4.445	ppb	Pulse	11490	4.4	0.039	0.3000	3
Sb	121	103	2	He	4.412	ppb	Pulse	4308	1.0	0.014	0.3000	3
Ba	138	159	2	He	4.437	ppb	Pulse	10976	2.5	0.026	0.3000	3
Tl	205	159	2	He	4.452	ppb	Pulse	19725	1.6	0.046	0.3000	3
Be	9	6	3	NoGas	4.451	ppb	Pulse	7668	2.8	0.010	0.3000	3
Ti	47	45	3	NoGas	4.521	ppb	Pulse	2327	5.2	0.001	0.2001	3
Co	59	74	3	NoGas	4.467	ppb	Pulse	36617	1.9	0.071	0.2001	3
Cu	65	74	3	NoGas	4.469	ppb	Pulse	8708	4.1	0.017	0.2001	3
Cd	111	103	3	NoGas	4.448	ppb	Pulse	4495	4.5	0.008	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	27	33.1	0.000	0.3000	3
Hg	201	159	3	NoGas	170.830	ppt	Pulse	84	8.1	0.000	2.0001	3
Pb	208	159	3	NoGas	4.463	ppb	Pulse	44505	3.0	0.052	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1509042	1.1	Analog	101.7	
Ge	74	H2	508025.38	510310	0.8	Pulse	100.4	
Sc	45	He	208835.17	208047	1.3	Pulse	99.6	
Ge	74	He	121380.146666667	120641	0.8	Pulse	99.4	
Rh	103	He	302021.16	297556	1.0	Pulse	98.5	
Tb	159	He	429916.006666667	425976	0.7	Pulse	99.1	
Bi	209	He	256831.363333333	258015	0.8	Pulse	100.5	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	769422	4.3	Pulse	97.0	
Sc	45	NoGas	1874561.46	1845494	7.6	Analog	98.4	
Ge	74	NoGas	528713.046666667	515091	5.6	Pulse	97.4	
Rh	103	NoGas	560665.076666667	542702	5.4	Pulse	96.8	
Tb	159	NoGas	882041.703333333	860801	6.3	Pulse	97.6	
Bi	209	NoGas	475402.23	460309	6.2	Pulse	96.8	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL3
File Name	009CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 12:59:52
Sample Type	CalStd
Total Dilution	1.0000
Comment	A19F225 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	91.520	ppb	Pulse	313073	0.7	0.211	0.2001	3
Ca	44	45	1	H2	92.385	ppb	Pulse	13954	5.6	0.009	0.2001	3
Fe	56	74	1	H2	89.375	ppb	Pulse	727431	0.8	1.444	0.3000	3
Fe	57	74	1	H2	92.346	ppb	Pulse	18553	2.1	0.037	0.3000	3
Se	78	74	1	H2	1.824	ppb	Pulse	371	10.0	0.001	0.9999	3
Mg	24	45	2	He	89.900	ppb	Pulse	29853	1.4	0.145	0.0999	3
Al	27	45	2	He	87.791	ppb	Pulse	16856	2.8	0.082	0.0999	3
K	39	45	2	He	90.589	ppb	Pulse	49741	1.8	0.241	0.0999	3
V	51	74	2	He	1.814	ppb	Pulse	4686	1.8	0.039	0.3000	3
Cr	52	74	2	He	1.789	ppb	Pulse	4634	2.2	0.039	0.3000	3
Mn	55	74	2	He	1.796	ppb	Pulse	3208	8.6	0.027	0.3000	3
Ni	60	74	2	He	1.767	ppb	Pulse	1549	2.4	0.013	0.3000	3
Cu	65	74	2	He	1.844	ppb	Pulse	2152	4.0	0.018	0.3000	3
Zn	66	74	2	He	1.629	ppb	Pulse	818	8.4	0.007	0.3000	3
As	75	74	2	He	1.769	ppb	Pulse	450	10.7	0.004	0.9999	3
Mo	95	103	2	He	1.824	ppb	Pulse	1902	8.6	0.006	0.3000	3
Ag	107	103	2	He	1.779	ppb	Pulse	5670	0.5	0.019	0.3000	3
Sb	121	103	2	He	1.780	ppb	Pulse	2145	5.5	0.007	0.3000	3
Ba	138	159	2	He	1.753	ppb	Pulse	5359	3.4	0.013	0.3000	3
Tl	205	159	2	He	1.791	ppb	Pulse	9762	4.2	0.023	0.3000	3
Be	9	6	3	NoGas	1.810	ppb	Pulse	3982	4.2	0.005	0.3000	3
Ti	47	45	3	NoGas	1.816	ppb	Pulse	1241	1.0	0.001	0.2001	3
Co	59	74	3	NoGas	1.759	ppb	Pulse	18494	0.8	0.035	0.2001	3
Cu	65	74	3	NoGas	1.801	ppb	Pulse	4643	2.4	0.009	0.2001	3
Cd	111	103	3	NoGas	1.801	ppb	Pulse	2348	3.5	0.004	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	21	39.7	0.000	0.3000	3
Hg	201	159	3	NoGas	81.367	ppt	Pulse	53	6.6	0.000	2.0001	3
Pb	208	159	3	NoGas	1.781	ppb	Pulse	22929	2.2	0.026	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1483525	1.5	Analog	100.0	
Ge	74	H2	508025.38	503602	0.8	Pulse	99.1	
Sc	45	He	208835.17	206538	0.4	Pulse	98.9	
Ge	74	He	121380.146666667	120308	0.1	Pulse	99.1	
Rh	103	He	302021.16	297678	0.6	Pulse	98.6	
Tb	159	He	429916.006666667	422958	1.0	Pulse	98.4	
Bi	209	He	256831.363333333	254313	0.6	Pulse	99.0	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	793792	0.7	Pulse	100.1	
Sc	45	NoGas	1874561.46	1919975	1.4	Analog	102.4	
Ge	74	NoGas	528713.046666667	529761	0.7	Pulse	100.2	
Rh	103	NoGas	560665.076666667	563693	0.9	Pulse	100.5	
Tb	159	NoGas	882041.703333333	891364	0.6	Pulse	101.1	
Bi	209	NoGas	475402.23	476018	0.2	Pulse	100.1	

Calibration Standard Report ICPMS5

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Sample Name	9F27029-CAL5
File Name	010CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:04:28
Sample Type	CalStd
Total Dilution	1.0000
Comment	A19E313 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	403.115	ppb	Analog	1400311	0.6	0.926	0.2001	3
Ca	44	45	1	H2	400.204	ppb	Pulse	58670	0.8	0.039	0.2001	3
Fe	56	74	1	H2	400.481	ppb	Analog	3261011	0.7	6.455	0.3000	3
Fe	57	74	1	H2	399.739	ppb	Pulse	77983	0.9	0.154	0.3000	3
Se	78	74	1	H2	10.040	ppb	Pulse	2083	4.4	0.004	0.9999	3
Mg	24	45	2	He	400.877	ppb	Pulse	131889	0.5	0.648	0.0999	3
Al	27	45	2	He	399.842	ppb	Pulse	75123	2.1	0.369	0.0999	3
K	39	45	2	He	404.110	ppb	Pulse	153593	0.6	0.755	0.0999	3
V	51	74	2	He	20.026	ppb	Pulse	43012	1.0	0.360	0.3000	3
Cr	52	74	2	He	19.992	ppb	Pulse	48631	0.6	0.407	0.3000	3
Mn	55	74	2	He	20.004	ppb	Pulse	34968	1.8	0.292	0.3000	3
Ni	60	74	2	He	20.000	ppb	Pulse	17295	0.1	0.145	0.3000	3
Cu	65	74	2	He	20.004	ppb	Pulse	22026	0.6	0.184	0.3000	3
Zn	66	74	2	He	20.029	ppb	Pulse	7929	1.9	0.066	0.3000	3
As	75	74	2	He	19.997	ppb	Pulse	4845	2.3	0.041	0.9999	3
Mo	95	103	2	He	10.054	ppb	Pulse	10719	3.1	0.036	0.3000	3
Ag	107	103	2	He	10.077	ppb	Pulse	33293	0.2	0.113	0.3000	3
Sb	121	103	2	He	10.137	ppb	Pulse	13139	4.0	0.045	0.3000	3
Ba	138	159	2	He	19.990	ppb	Pulse	58822	1.6	0.139	0.3000	3
Tl	205	159	2	He	10.006	ppb	Pulse	54326	0.5	0.128	0.3000	3
Be	9	6	3	NoGas	10.051	ppb	Pulse	22616	2.2	0.029	0.3000	3
Ti	47	45	3	NoGas	20.015	ppb	Pulse	13417	1.4	0.007	0.2001	3
Co	59	74	3	NoGas	19.989	ppb	Pulse	202535	1.1	0.384	0.2001	3
Cu	65	74	3	NoGas	19.985	ppb	Pulse	47568	1.9	0.090	0.2001	3
Cd	111	103	3	NoGas	19.950	ppb	Pulse	24181	0.4	0.043	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	38	13.5	0.000	0.3000	3
Hg	201	159	3	NoGas	399.455	ppt	Pulse	230	7.5	0.000	2.0001	3
Pb	208	159	3	NoGas	19.978	ppb	Pulse	245038	0.3	0.276	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1511494	0.3	Analog	101.9	
Ge	74	H2	508025.38	505238	0.6	Pulse	99.5	
Sc	45	He	208835.17	203547	0.4	Pulse	97.5	
Ge	74	He	121380.146666667	119592	0.6	Pulse	98.5	
Rh	103	He	302021.16	295159	0.3	Pulse	97.7	
Tb	159	He	429916.006666667	422782	0.5	Pulse	98.3	
Bi	209	He	256831.363333333	254382	0.7	Pulse	99.0	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	787637	0.7	Pulse	99.3	
Sc	45	NoGas	1874561.46	1917245	1.5	Analog	102.3	
Ge	74	NoGas	528713.046666667	527337	0.7	Pulse	99.7	
Rh	103	NoGas	560665.076666667	557256	0.3	Pulse	99.4	
Tb	159	NoGas	882041.703333333	887560	0.6	Pulse	100.6	
Bi	209	NoGas	475402.23	475135	0.4	Pulse	99.9	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL6	1107
File Name	011CALS.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 13:09:02	
Sample Type	CalStd	
Total Dilution	1.0000	
Comment	A19F227	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Pass	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	2499.876	ppb	Analog	8262095	0.3	5.691	0.2001	3
Ca	44	45	1	H2	2500.069	ppb	Pulse	347797	0.5	0.240	0.2001	3
Fe	56	74	1	H2	2499.173	ppb	Analog	19557171	0.3	39.803	0.3000	3
Fe	57	74	1	H2	2499.901	ppb	Pulse	470038	0.3	0.957	0.3000	3
Se	78	74	1	H2	50.001	ppb	Pulse	10083	1.8	0.021	0.9999	3
Mg	24	45	2	He	2499.244	ppb	Pulse	799970	0.6	4.000	0.0999	3
Al	27	45	2	He	2500.055	ppb	Pulse	461256	0.9	2.306	0.0999	3
K	39	45	2	He	2498.682	ppb	Pulse	816905	0.2	4.084	0.0999	3
V	51	74	2	He	49.922	ppb	Pulse	102740	0.6	0.876	0.3000	3
Cr	52	74	2	He	49.934	ppb	Pulse	117796	1.0	1.005	0.3000	3
Mn	55	74	2	He	49.958	ppb	Pulse	85087	0.9	0.726	0.3000	3
Ni	60	74	2	He	49.883	ppb	Pulse	41686	0.6	0.356	0.3000	3
Cu	65	74	2	He	49.880	ppb	Pulse	52889	1.7	0.451	0.3000	3
Zn	66	74	2	He	49.936	ppb	Pulse	18933	1.9	0.162	0.3000	3
As	75	74	2	He	50.025	ppb	Pulse	11888	0.6	0.101	0.9999	3
Mo	95	103	2	He	49.978	ppb	Pulse	51471	0.3	0.179	0.3000	3
Ag	107	103	2	He	49.876	ppb	Pulse	152580	0.8	0.530	0.3000	3
Sb	121	103	2	He	49.874	ppb	Pulse	59797	0.9	0.208	0.3000	3
Ba	138	159	2	He	49.999	ppb	Pulse	145065	1.3	0.347	0.3000	3
Tl	205	159	2	He	49.977	ppb	Pulse	265026	0.2	0.635	0.3000	3
Be	9	6	3	NoGas	49.934	ppb	Pulse	107279	1.5	0.139	0.3000	3
Ti	47	45	3	NoGas	49.904	ppb	Pulse	32406	3.1	0.017	0.2001	3
Co	59	74	3	NoGas	49.836	ppb	Pulse	486496	0.7	0.938	0.2001	3
Cu	65	74	3	NoGas	49.729	ppb	Pulse	112357	1.2	0.217	0.2001	3
Cd	111	103	3	NoGas	50.125	ppb	Pulse	60285	0.3	0.111	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	63	18.2	0.000	0.3000	3
Hg	201	159	3	NoGas	1996.082	ppt	Pulse	1045	1.5	0.001	2.0001	3
Pb	208	159	3	NoGas	49.921	ppb	Pulse	602261	0.5	0.683	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1452183	1.8	Analog	97.9	
Ge	74	H2	508025.38	491369	0.7	Pulse	96.7	
Sc	45	He	208835.17	200021	1.1	Pulse	95.8	
Ge	74	He	121380.146666667	117231	0.3	Pulse	96.6	
Rh	103	He	302021.16	287853	1.3	Pulse	95.3	
Tb	159	He	429916.006666667	417566	0.5	Pulse	97.1	
Bi	209	He	256831.363333333	251852	0.8	Pulse	98.1	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	773122	1.0	Pulse	97.5	
Sc	45	NoGas	1874561.46	1882073	1.6	Analog	100.4	
Ge	74	NoGas	528713.046666667	518642	0.4	Pulse	98.1	
Rh	103	NoGas	560665.076666667	544797	0.4	Pulse	97.2	
Tb	159	NoGas	882041.703333333	882236	0.4	Pulse	100.0	
Bi	209	NoGas	475402.23	470484	0.5	Pulse	99.0	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL7
File Name	012CALS.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:13:36
Sample Type	CalStd
Total Dilution	1.0000
Comment	A19E312
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

1108

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	3978.873	ppb	Analog	12661447	0.1	8.935	0.2001	3
Ca	44	45	1	H2	3971.681	ppb	Pulse	529491	0.3	0.374	0.2001	3
Fe	56	74	1	H2	3983.843	ppb	Analog	29825865	0.4	62.811	0.3000	3
Fe	57	74	1	H2	3981.928	ppb	Pulse	715136	0.5	1.506	0.3000	3
Se	78	74	1	H2	99.897	ppb	Pulse	19387	0.8	0.041	0.9999	3
Mg	24	45	2	He	4014.104	ppb	Analog	1250873	1.9	6.480	0.0999	3
Al	27	45	2	He	3978.324	ppb	Pulse	698962	1.4	3.621	0.0999	3
K	39	45	2	He	4012.847	ppb	Analog	1264398	0.5	6.550	0.0999	3
V	51	74	2	He	199.699	ppb	Pulse	391263	0.9	3.411	0.3000	3
Cr	52	74	2	He	199.641	ppb	Pulse	449048	1.1	3.915	0.3000	3
Mn	55	74	2	He	199.571	ppb	Pulse	322850	0.9	2.815	0.3000	3
Ni	60	74	2	He	199.601	ppb	Pulse	158813	1.2	1.385	0.3000	3
Cu	65	74	2	He	199.504	ppb	Pulse	199794	1.0	1.742	0.3000	3
Zn	66	74	2	He	199.843	ppb	Pulse	72755	0.2	0.634	0.3000	3
As	75	74	2	He	199.704	ppb	Pulse	45454	1.1	0.396	0.9999	3
Mo	95	103	2	He	100.199	ppb	Pulse	100915	1.2	0.361	0.3000	3
Ag	107	103	2	He	100.844	ppb	Pulse	309376	1.4	1.107	0.3000	3
Sb	121	103	2	He	101.535	ppb	Pulse	125500	1.0	0.449	0.3000	3
Ba	138	159	2	He	199.257	ppb	Pulse	549925	0.4	1.316	0.3000	3
Tl	205	159	2	He	100.005	ppb	Pulse	530584	0.4	1.270	0.3000	3
Be	9	6	3	NoGas	99.973	ppb	Pulse	209985	1.3	0.278	0.3000	3
Ti	47	45	3	NoGas	199.784	ppb	Pulse	124011	1.1	0.068	0.2001	3
Co	59	74	3	NoGas	199.818	ppb	Analog	1878254	0.6	3.713	0.2001	3
Cu	65	74	3	NoGas	199.302	ppb	Pulse	418414	1.3	0.827	0.2001	3
Cd	111	103	3	NoGas	199.842	ppb	Pulse	230916	0.4	0.436	0.3000	3
W	182	159	3	NoGas		ppb	Pulse	81	19.4	0.000	0.3000	3
Hg	201	159	3	NoGas	4020.862	ppt	Pulse	2145	1.3	0.002	2.0001	3
Pb	208	159	3	NoGas	199.578	ppb	Pulse	2340756	0.3	2.651	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1417101	1.0	Analog	95.5	
Ge	74	H2	508025.38	474856	0.7	Pulse	93.5	
Sc	45	He	208835.17	193041	1.1	Pulse	92.4	
Ge	74	He	121380.146666667	114694	0.2	Pulse	94.5	
Rh	103	He	302021.16	279341	0.9	Pulse	92.5	
Tb	159	He	429916.006666667	417748	0.2	Pulse	97.2	
Bi	209	He	256831.363333333	251288	0.7	Pulse	97.8	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	756653	0.8	Pulse	95.4	
Sc	45	NoGas	1874561.46	1828023	1.2	Analog	97.5	
Ge	74	NoGas	528713.046666667	505917	0.9	Pulse	95.7	
Rh	103	NoGas	560665.076666667	529188	0.9	Pulse	94.4	
Tb	159	NoGas	882041.703333333	883030	0.7	Pulse	100.1	
Bi	209	NoGas	475402.23	467387	1.4	Pulse	98.3	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL8	1109
File Name	013CALS.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 13:18:08	
Sample Type	CalStd	
Total Dilution	1.0000	
Comment	A19E307	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Pass	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	9975.693	ppb	Analog	30174335	0.7	22.149	0.2001	3
Ca	44	45	1	H2	10053.082	ppb	Analog	1318380	1.0	0.968	0.2001	3
Fe	56	74	1	H2	10010.286	ppb	Analog	71295298	0.2	158.533	0.3000	3
Fe	57	74	1	H2	10060.749	ppb	Analog	1757858	0.7	3.909	0.3000	3
Se	78	74	1	H2	0.161	ppb	Pulse	32	21.7	0.000	0.9999	3
Mg	24	45	2	He	10030.097	ppb	Analog	3030832	1.2	16.411	0.0999	3
Al	27	45	2	He	10037.777	ppb	Analog	1715960	1.1	9.291	0.0999	3
K	39	45	2	He	10012.003	ppb	Analog	3007068	0.5	16.281	0.0999	3
V	51	74	2	He	500.361	ppb	Pulse	938000	0.5	8.571	0.3000	3
Cr	52	74	2	He	500.172	ppb	Pulse	1075262	0.6	9.826	0.3000	3
Mn	55	74	2	He	500.423	ppb	Pulse	776147	0.5	7.092	0.3000	3
Ni	60	74	2	He	499.945	ppb	Pulse	379271	0.6	3.466	0.3000	3
Cu	65	74	2	He	498.841	ppb	Pulse	470121	0.4	4.296	0.3000	3
Zn	66	74	2	He	499.920	ppb	Pulse	173203	1.1	1.583	0.3000	3
As	75	74	2	He	501.008	ppb	Pulse	110072	1.2	1.006	0.9999	3
Mo	95	103	2	He	0.127	ppb	Pulse	124	24.0	0.000	0.3000	3
Ag	107	103	2	He	0.050	ppb	Pulse	154	2.5	0.001	0.3000	3
Sb	121	103	2	He	0.079	ppb	Pulse	98	36.1	0.000	0.3000	3
Ba	138	159	2	He	500.130	ppb	Pulse	1332341	0.6	3.309	0.3000	3
Tl	205	159	2	He	0.064	ppb	Pulse	410	13.1	0.001	0.3000	3
Be	9	6	3	NoGas	0.004	ppb	Pulse	9	21.6	0.000	0.3000	3
Ti	47	45	3	NoGas	500.676	ppb	Pulse	306367	0.2	0.171	0.2001	3
Co	59	74	3	NoGas	499.277	ppb	Analog	4495243	0.9	9.198	0.2001	3
Cu	65	74	3	NoGas	498.530	ppb	Pulse	993611	0.6	2.033	0.2001	3
Cd	111	103	3	NoGas	500.635	ppb	Pulse	561170	0.4	1.101	0.3000	3
W	182	159	3	NoGas	100.000	ppb	Pulse	424823	0.4	0.492	0.3000	3
Hg	201	159	3	NoGas	118.857	ppt	Pulse	69	12.6	0.000	2.0001	3
Pb	208	159	3	NoGas	500.591	ppb	Analog	5782851	0.2	6.694	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1362317	0.5	Analog	91.8	
Ge	74	H2	508025.38	449721	0.3	Pulse	88.5	
Sc	45	He	208835.17	184733	1.6	Pulse	88.5	
Ge	74	He	121380.146666667	109439	0.9	Pulse	90.2	
Rh	103	He	302021.16	266003	1.2	Pulse	88.1	
Tb	159	He	429916.006666667	402769	1.8	Pulse	93.7	
Bi	209	He	256831.363333333	240229	1.3	Pulse	93.5	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	735471	1.5	Pulse	92.7	
Sc	45	NoGas	1874561.46	1788765	2.4	Analog	95.4	
Ge	74	NoGas	528713.046666667	488721	0.2	Pulse	92.4	
Rh	103	NoGas	560665.076666667	509564	0.6	Pulse	90.9	
Tb	159	NoGas	882041.703333333	863876	0.9	Pulse	97.9	
Bi	209	NoGas	475402.23	451329	0.7	Pulse	94.9	

Calibration Standard Report ICPMS5

Sample Name	9F27029-CAL9	1110
File Name	014CALS.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 13:22:38	
Sample Type	CalStd	
Total Dilution	1.0000	
Comment	A19F228	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Pass	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	T #	Tune	Conc.	Units	Det.	CPS	CPS RSD	Ratio	Integ Time	Reps
Na	23	45	1	H2	50185.483	ppb	Analog	140632449	0.8	120.520	0.2001	3
Ca	44	45	1	H2	50184.967	ppb	Analog	6095053	0.8	5.223	0.2001	3
Fe	56	74	1	H2	50129.613	ppb	Analog	327198128	1.1	838.209	0.3000	3
Fe	57	74	1	H2	50140.650	ppb	Analog	8065993	0.7	20.661	0.3000	3
Se	78	74	1	H2	0.092	ppb	Pulse	17	36.2	0.000	0.9999	3
Mg	24	45	2	He	49933.850	ppb	Analog	14346997	0.7	79.551	0.0999	3
Al	27	45	2	He	49992.147	ppb	Analog	8318299	0.9	46.123	0.0999	3
K	39	45	2	He	49937.749	ppb	Analog	14212982	0.8	78.808	0.0999	3
V	51	74	2	He	-0.062	ppb	Pulse	734	4.3	0.007	0.3000	3
Cr	52	74	2	He	1011.996	ppb	Analog	2165833	0.6	20.727	0.3000	3
Mn	55	74	2	He	2502.596	ppb	Analog	3789987	1.0	36.270	0.3000	3
Ni	60	74	2	He	989.936	ppb	Pulse	693264	0.5	6.635	0.3000	3
Cu	65	74	2	He	988.382	ppb	Pulse	855400	0.4	8.186	0.3000	3
Zn	66	74	2	He	2493.391	ppb	Pulse	780193	0.4	7.466	0.3000	3
As	75	74	2	He	0.134	ppb	Pulse	45	11.6	0.000	0.9999	3
Mo	95	103	2	He	0.153	ppb	Pulse	139	9.1	0.001	0.3000	3
Ag	107	103	2	He	0.097	ppb	Pulse	270	5.4	0.001	0.3000	3
Sb	121	103	2	He	0.039	ppb	Pulse	47	14.3	0.000	0.3000	3
Ba	138	159	2	He	2497.756	ppb	Analog	6206692	0.8	16.212	0.3000	3
Tl	205	159	2	He	0.015	ppb	Pulse	151	16.6	0.000	0.3000	3
Be	9	6	3	NoGas	0.005	ppb	Pulse	10	66.7	0.000	0.3000	3
Ti	47	45	3	NoGas	2507.761	ppb	Analog	1591929	0.4	0.919	0.2001	3
Co	59	74	3	NoGas	0.290	ppb	Pulse	2831	8.3	0.006	0.2001	3
Cu	65	74	3	NoGas	1010.784	ppb	Analog	1991575	1.5	4.279	0.2001	3
Cd	111	103	3	NoGas	1016.784	ppb	Pulse	1104929	0.4	2.373	0.3000	3
W	182	159	3	NoGas	0.187	ppb	Pulse	790	5.9	0.001	0.3000	3
Hg	201	159	3	NoGas	48.754	ppt	Pulse	31	13.0	0.000	2.0001	3
Pb	208	159	3	NoGas	0.211	ppb	Pulse	2769	4.0	0.003	0.2001	3

QC ISTD Table

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Sc	45	H2	1483837.48	1168202	3.7	Mix	78.7	
Ge	74	H2	508025.38	390718	3.3	Pulse	76.9	
Sc	45	He	208835.17	180349	0.4	Pulse	86.4	
Ge	74	He	121380.146666667	104494	0.5	Pulse	86.1	
Rh	103	He	302021.16	246733	0.8	Pulse	81.7	
Tb	159	He	429916.006666667	382849	0.8	Pulse	89.1	
Bi	209	He	256831.363333333	218177	0.6	Pulse	84.9	

Calibration Standard Report ICPMS5

Name	Mass	Tune Mode	ISTD Ref CPS	CPS	CPS RSD	Det.	ISTD Recovery %	QC flag
Li	6	NoGas	793244.14	720595	2.7	Pulse	90.8	
Sc	45	NoGas	1874561.46	1735055	4.9	Analog	92.6	
Ge	74	NoGas	528713.046666667	466025	3.8	Pulse	88.1	
Rh	103	NoGas	560665.076666667	466505	4.9	Pulse	83.2	
Tb	159	NoGas	882041.703333333	827518	5.2	Pulse	93.8	
Bi	209	NoGas	475402.23	418586	4.8	Pulse	88.0	

P/A Factor Tuning Report

Current Sample

Sample Name: 9F27029-ICV1
Data File: 015_ICV_9F27029_9F27029a.D
Acquired: 6/27/2019 13:38:50

Detector Parameters and P/A Factors

Discriminator: 4.5 mV
AnalogHV: 1902 V
PulseHV: 1653 V

Acquired: 6/27/2019 12:02:43

Mass[u]	Element	P/A Factor
6	Li	0.086690
23	Na	0.110050
24	Mg	0.115794
27	Al	0.120092
39	K	0.123712
44	Ca	0.123952
45	Sc	0.124272
47	Ti	0.125259
51	V	0.127544
52	Cr	0.128910
55	Mn	0.130532
57	Fe	0.131999
59	Co	0.134372
60	Ni	0.138475
65	Cu	0.140596
66	Zn	0.139849
74	Ge	0.138427
103	Rh	0.141630
111	Cd	0.145778
138	Ba	0.143219
159	Tb	0.146331
206	[Pb]	0.150773
207	[Pb]	0.150690
208	Pb	0.151266
7	Li	Signal too low
9	Be	Signal too low
75	As	Signal too low
78	Se	Signal too low
95	Mo	Signal too low
106	[Cd]	Signal too low
107	Ag	Signal too low
108	[Cd]	Signal too low
121	Sb	Signal too low
182	W	Signal too low
201	Hg	Signal too low
205	Tl	Signal too low

Independent Detector Parameters and P/A Factors

Tune Mode Name: H2
Discriminator: 4.5 mV
AnalogHV: 1902 V
PulseHV: 1653 V

Acquired: 6/27/2019 13:18:10

Mass[u]	Element	P/A Factor
23	Na	0.111824
44	Ca	0.125507
45	Sc	0.124241
56	Fe	0.131679
57	Fe	0.131649
74	Ge	Signal too low
78	Se	Signal too low

Tune Mode Name: He
Discriminator: 4.5 mV
AnalogHV: 1902 V
PulseHV: 1653 V

Acquired: 6/27/2019 13:23:31

Mass[u]	Element	P/A Factor
24	Mg	0.116858
27	Al	0.120044
39	K	0.125362
51	V	0.127729
52	Cr	0.130229
55	Mn	0.131337
60	Ni	0.135031
65	Cu	0.137186
66	Zn	0.137547
138	Ba	0.143710
45	Sc	Signal too low
74	Ge	Signal too low
75	As	Signal too low
95	Mo	Signal too low
103	Rh	Signal too low
107	Ag	Signal too low
121	Sb	Signal too low
159	Tb	Signal too low
205	Tl	Signal too low
209	Bi	Signal too low

Tune Mode Name: NoGas
Discriminator: 4.5 mV
AnalogHV: 1902 V
PulseHV: 1653 V

Acquired: 6/27/2019 13:24:42

Mass[u]	Element	P/A Factor
6	Li	0.087414
45	Sc	0.123801
47	Ti	0.123120
59	Co	0.132795
65	Cu	0.138042
74	Ge	0.137503
103	Rh	0.141379
111	Cd	0.142229
159	Tb	0.145933
206	Pb	0.148435
207	Pb	0.149498
208	Pb	0.149649
209	Bi	0.151155
7	Li	Signal too low
9	Be	Signal too low
106	[Cd]	Signal too low
108	[Cd]	Signal too low
182	W	Signal too low
201	Hg	Signal too low

Created: 6/28/2019 12:56:03

Calibration for 015_ICV_9F27029_9F27029a.D

Batch Folder: C:\Agilent\ICPMH\1\DATA\9F27029b.b\
Analysis File: 9F27029b.batch.bin
DA Date-Time: 6/28/2019 12:29:45
Calibration Title:
Calibration Method: External Calibration
VIS Interpolation Fit:

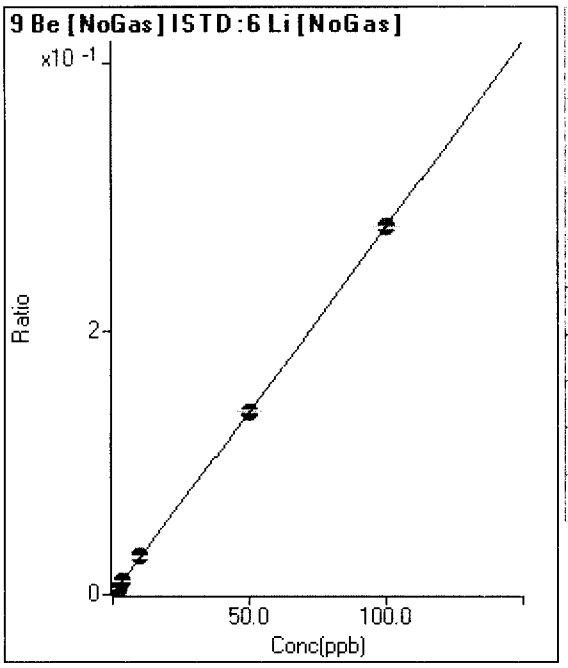
Level	Standard Data File	Sample Name	Acq. Date-Time
1	004CALB_9F27029_9F27029a.D	9F27029-CAL0	6/27/2019 12:36:58
2	005CALS_9F27029_9F27029a.D	9F27029-CAL1	6/27/2019 12:41:18
3	006CALS_9F27029_9F27029a.D	9F27029-CAL2	6/27/2019 12:45:56
4	009CALS_9F27029_9F27029a.D	9F27029-CAL3	6/27/2019 12:59:52
5	008CALS_9F27029_9F27029a.D	9F27029-CAL4	6/27/2019 12:55:16
6	010CALS_9F27029_9F27029a.D	9F27029-CAL5	6/27/2019 13:04:28
7	011CALS_9F27029_9F27029a.D	9F27029-CAL6	6/27/2019 13:09:02
8	012CALS_9F27029_9F27029a.D	9F27029-CAL7	6/27/2019 13:13:36
9	013CALS_9F27029_9F27029a.D	9F27029-CAL8	6/27/2019 13:18:08
10	014CALS_9F27029_9F27029a.D	9F27029-CAL9	6/27/2019 13:22:38

Na, Ca LDR = 10,000 ppb

Ni, Cu, Cd LDR = 500 ppb

Sb LDR = 50 ppb

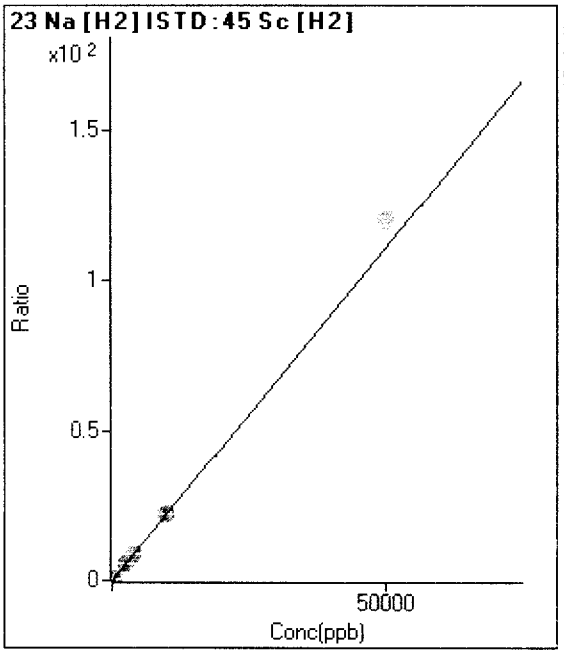
06/28/19



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	0	0.000	P	
2	☐	0.180	0.157	344	0.000	P	22.1
3	☐	0.900	0.881	1953	0.002	P	3.6
4	☐	1.800	1.807	3982	0.005	P	4.2
5	☐	3.600	3.594	7668	0.010	P	4.2
6	☐	10.000	10.343	22616	0.029	P	1.5
7	☐	50.000	49.986	107279	0.139	P	0.5
8	☐	100.000	99.973	209985	0.278	P	0.8
9	☐			9	0.000	P	20.6
10	☐			10	0.000	P	68.9

y = 0.0028 * x + 0.0000E+000
R = 1.0000
DL = 0
BEC = 0

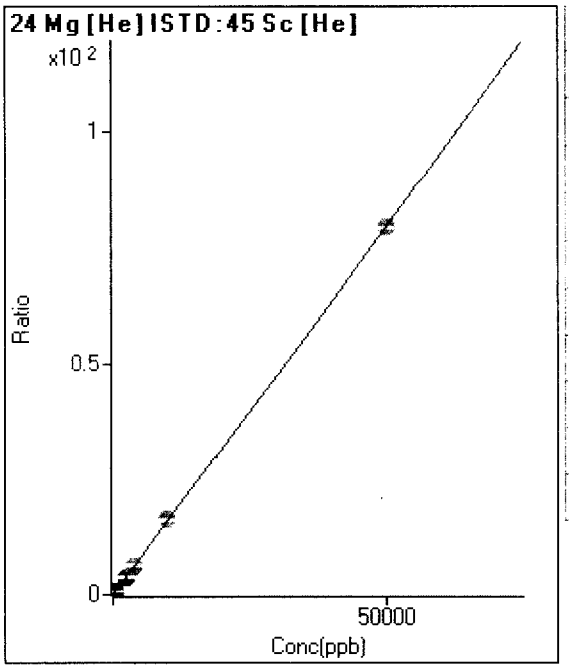
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	13074	0.009	P	1.2
2	☐	9.000	8.765	42454	0.028	P	2.2
3	☐	45.000	44.501	162828	0.108	P	0.7
4	☐	90.000	91.121	313073	0.211	P	0.9
5	☐	180.000	178.543	611240	0.405	P	1.0
6	☐	400.000	413.446	1400311	0.926	A	0.3
7	☐	2500.000	2560.035	8262095	5.691	A	1.9
8	☐	4000.000	4021.948	12661447	8.935	A	1.0
9	☐	10000.000	9975.693	30174335	22.149	A	0.6
10	☑	50000.000		140632449	120.520	A	4.6

y = 0.0022 * x + 0.0088
R = 1.0000
DL = 0.1437
BEC = 3.97

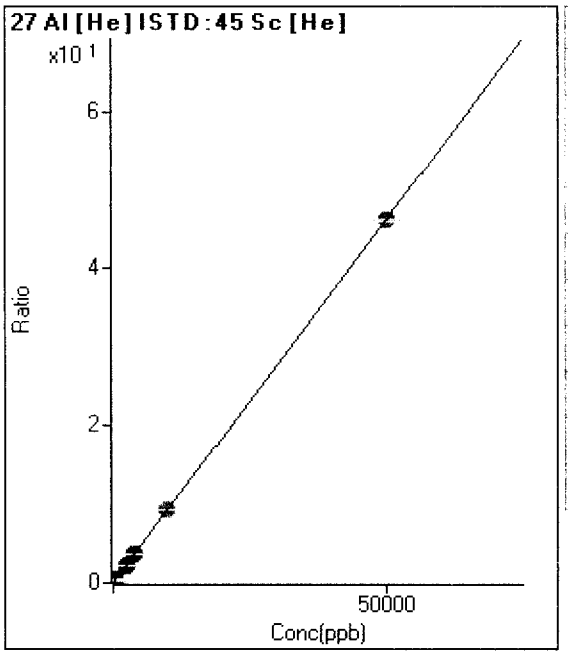
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	113	0.001	P	18.3
2	☐	9.000	9.277	3177	0.015	P	7.2
3	☐	45.000	45.640	15035	0.073	P	2.4
4	☐	90.000	90.387	29853	0.145	P	1.5
5	☐	180.000	180.914	60071	0.289	P	1.1
6	☐	400.000	406.392	131889	0.648	P	0.8
7	☐	2500.000	2510.202	799970	4.000	P	0.5
8	☐	4000.000	4067.266	1250873	6.480	A	1.9
9	☐	10000.000	10301.014	3030832	16.411	A	2.7
10	☐	50000.000	49933.850	14346997	79.551	A	0.3

y = 0.0016 * x + 5.4325E-004
R = 1.0000
DL = 0.1874
BEC = 0.341

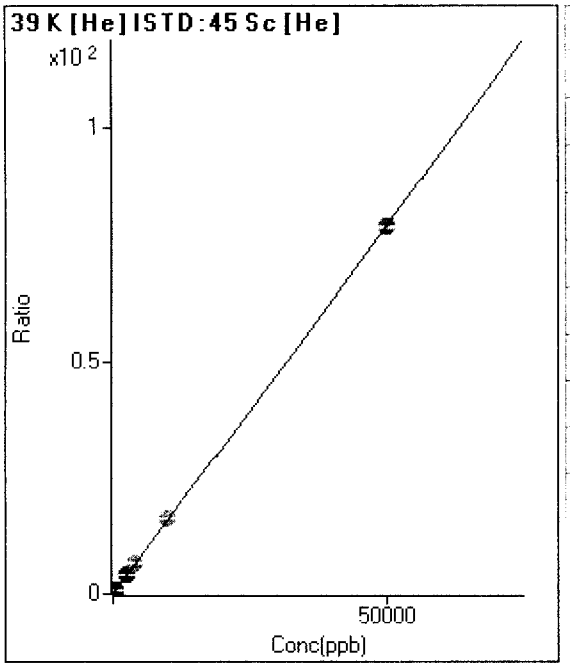
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	123	0.001	P	30.7
2	☐	9.000	8.918	1829	0.009	P	12.8
3	☐	45.000	45.140	8671	0.042	P	1.2
4	☐	90.000	87.824	16856	0.082	P	3.1
5	☐	180.000	181.146	34890	0.168	P	0.8
6	☐	400.000	399.403	75123	0.369	P	2.1
7	☐	2500.000	2499.007	461256	2.306	P	1.0
8	☐	4000.000	3923.930	698962	3.621	P	0.5
9	☐	10000.000	10069.963	1715960	9.291	A	2.4
10	☐	50000.000	49992.147	8318299	46.123	A	0.6

y = 9.2259E-004 * x + 5.9118E-004
R = 1.0000
DL = 0.5897
BEC = 0.6408

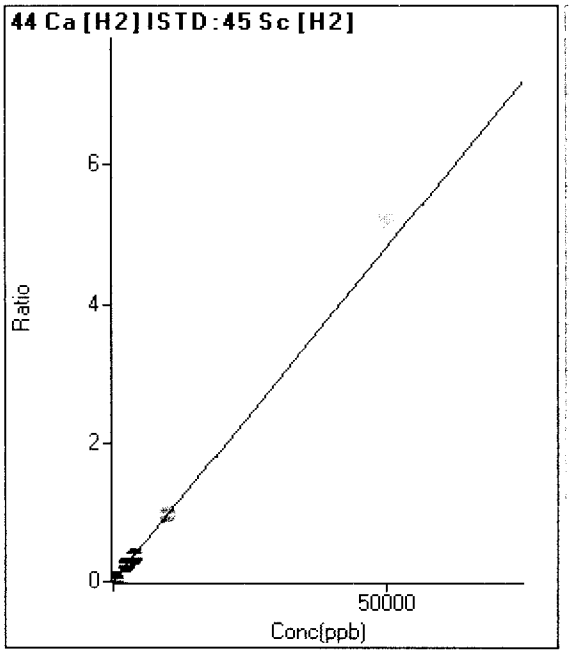
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20814	0.100	P	5.4
2	☐	9.000	10.271	24018	0.116	P	3.9
3	☐	45.000	48.586	36181	0.176	P	2.3
4	☐	90.000	89.556	49741	0.241	P	1.4
5	☐	180.000	176.561	78630	0.378	P	0.8
6	☐	400.000	415.532	153593	0.755	P	0.9
7	☐	2500.000	2528.201	816905	4.084	P	1.1
8	☐	4000.000	4092.848	1264398	6.550	A	1.3
9	☐	10000.000	10266.491	3007068	16.281	A	1.8
10	☐	50000.000	49937.749	14212982	78.808	A	0.5

y = 0.0016 * x + 0.0997
R = 1.0000
DL = 10.19
BEC = 63.24

Weight: <None>
Min Conc: <None>

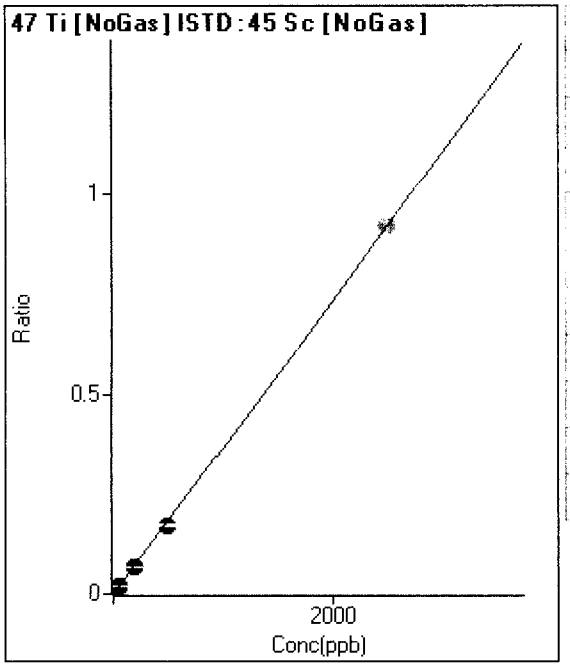


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	885	0.001	P	2.0
2	☐	9.000	8.986	2196	0.001	P	8.7
3	☐	45.000	44.571	7395	0.005	P	4.6
4	☐	90.000	91.530	13954	0.009	P	4.2
5	☐	180.000	177.152	26614	0.018	P	2.7
6	☐	400.000	397.263	58670	0.039	P	1.0
7	☐	2500.000	2483.813	347797	0.240	P	2.2
8	☐	4000.000	3877.783	529491	0.374	P	1.1
9	☐	10000.000	10053.082	1318380	0.968	A	1.3
10	☑	50000.000		6095053	5.223	A	4.5

y = 9.6208E-005 * x + 5.9628E-004
R = 0.9999
DL = 0.3698
BEC = 6.198

Weight: <None>
Min Conc: <None>

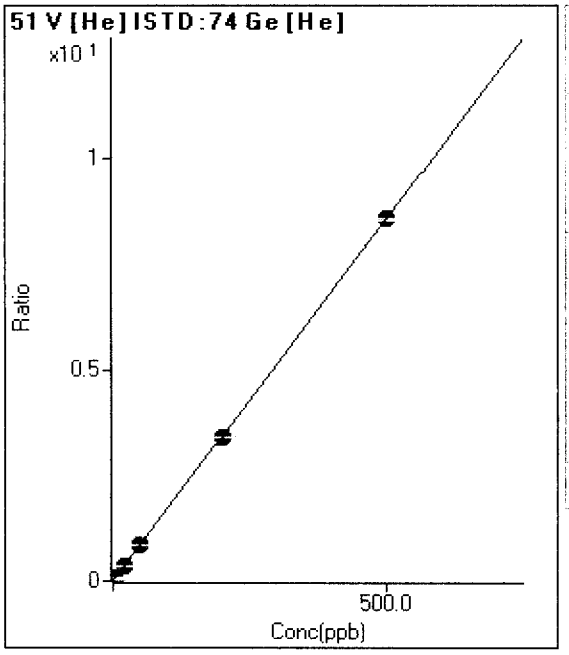
Calibration for 015_ICV_9F27029_9F27029a.D



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	47	0.000	P	28.6
2	☐	0.180	0.134	142	0.000	P	18.7
3	☐	0.900	0.705	545	0.000	P	2.3
4	☐	1.800	1.696	1241	0.001	P	2.4
5	☐	3.600	3.391	2327	0.001	P	10.9
6	☐	20.000	19.032	13417	0.007	P	1.7
7	☐	50.000	46.914	32406	0.017	P	1.5
8	☐	200.000	185.080	124011	0.068	P	1.3
9	☐	500.000	467.510	306367	0.171	P	2.2
10	☐	2500.000	2507.761	1591929	0.919	A	4.8

y = 3.6642E-004 * x + 2.4962E-005
R = 0.9999
DL = 0.05853
BEC = 0.06812

Weight: <None>
Min Conc: <None>

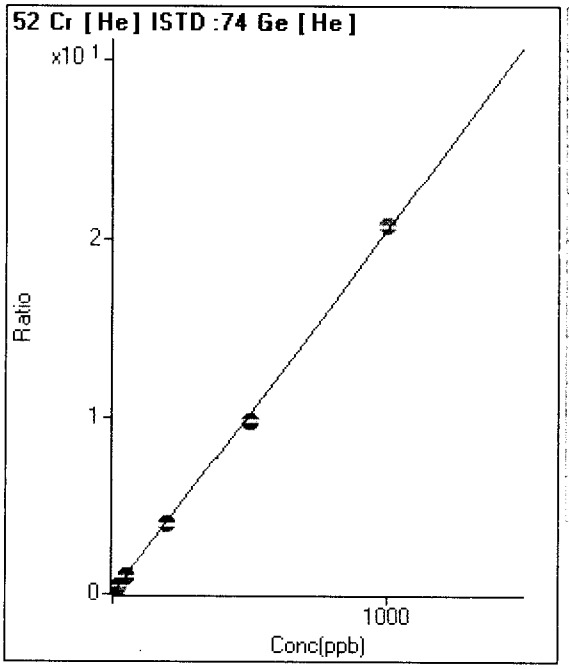


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	981	0.008	P	6.9
2	☐	0.180	0.160	1306	0.011	P	5.4
3	☐	0.900	0.929	2881	0.024	P	2.0
4	☐	1.800	1.804	4686	0.039	P	1.7
5	☐	3.600	3.566	8339	0.069	P	3.3
6	☐	20.000	20.544	43012	0.360	P	1.4
7	☐	50.000	50.736	102740	0.876	P	0.3
8	☐	200.000	198.858	391263	3.411	P	0.9
9	☐	500.000	500.361	938000	8.571	P	0.8
10	☐			734	0.007	P	4.6

y = 0.0171 * x + 0.0081
R = 1.0000
DL = 0.09748
BEC = 0.4723

Weight: <None>
Min Conc: <None>

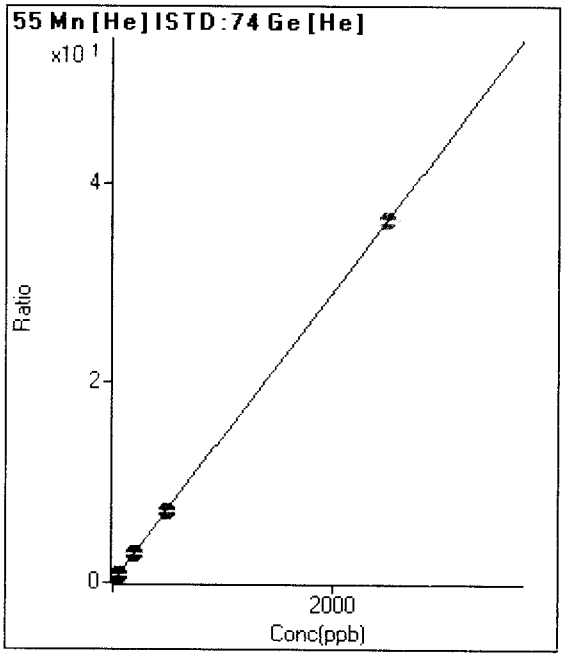
Calibration for 015_ICV_9F27029_9F27029a.D



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	238	0.002	P	9.3
2	☐	0.180	0.173	664	0.006	P	5.7
3	☐	0.900	0.926	2515	0.021	P	2.7
4	☐	1.800	1.785	4634	0.039	P	2.2
5	☐	3.600	3.592	9110	0.076	P	0.8
6	☐	20.000	19.761	48631	0.407	P	1.1
7	☐	50.000	48.969	117796	1.005	P	0.8
8	☐	200.000	191.081	449048	3.915	P	0.9
9	☐	500.000	479.689	1075262	9.826	P	1.0
10	☐	1000.000	1011.996	2165833	20.727	A	0.4

y = 0.0205 * x + 0.0020
R = 0.9997
DL = 0.02658
BEC = 0.09562

Weight: <None>
Min Conc: <None>

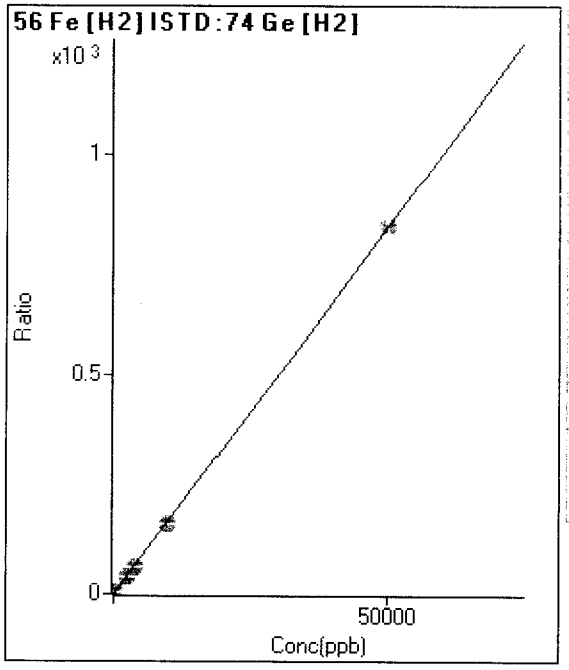


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	71	0.001	P	7.6
2	☐	0.180	0.180	386	0.003	P	15.9
3	☐	0.900	0.912	1658	0.014	P	6.2
4	☐	1.800	1.800	3208	0.027	P	8.6
5	☐	3.600	3.607	6377	0.053	P	2.3
6	☐	20.000	20.136	34968	0.292	P	2.2
7	☐	50.000	50.040	85087	0.726	P	0.6
8	☐	200.000	194.187	322850	2.815	P	0.8
9	☐	500.000	489.335	776147	7.092	P	0.8
10	☐	2500.000	2502.596	3789987	36.270	A	0.8

y = 0.0145 * x + 5.8602E-004
R = 1.0000
DL = 0.00921
BEC = 0.04044

Weight: <None>
Min Conc: <None>

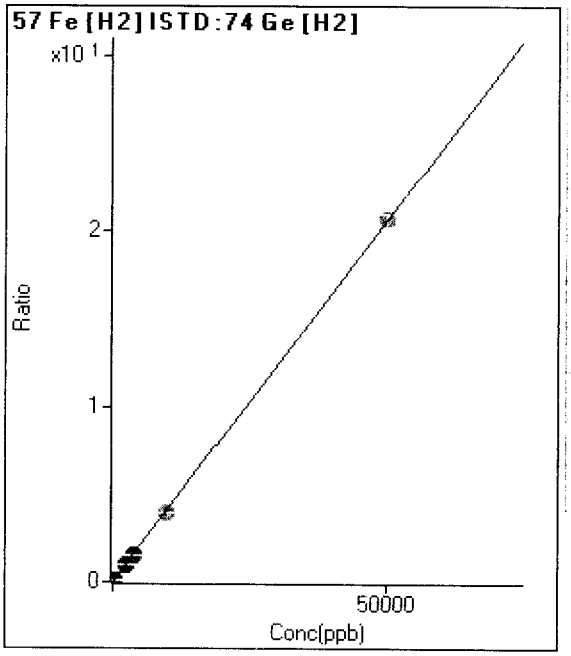
Calibration for 015_ICV_9F27029_9F27029a.D



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6864	0.014	P	4.6
2	☐	9.000	8.535	79328	0.156	P	0.9
3	☐	45.000	42.466	367403	0.724	P	0.2
4	☐	90.000	85.581	727431	1.444	P	0.5
5	☐	180.000	172.819	1481462	2.903	A	0.8
6	☐	400.000	385.220	3261011	6.455	A	1.0
7	☐	2500.000	2379.662	19557171	39.803	A	0.8
8	☐	4000.000	3755.719	29825865	62.811	A	0.3
9	☐	10000.000	9480.505	71295298	158.533	A	0.2
10	☐	50000.000	50129.613	327198128	838.209	A	4.3

y = 0.0167 * x + 0.0135
R = 0.9999
DL = 0.1124
BEC = 0.8082

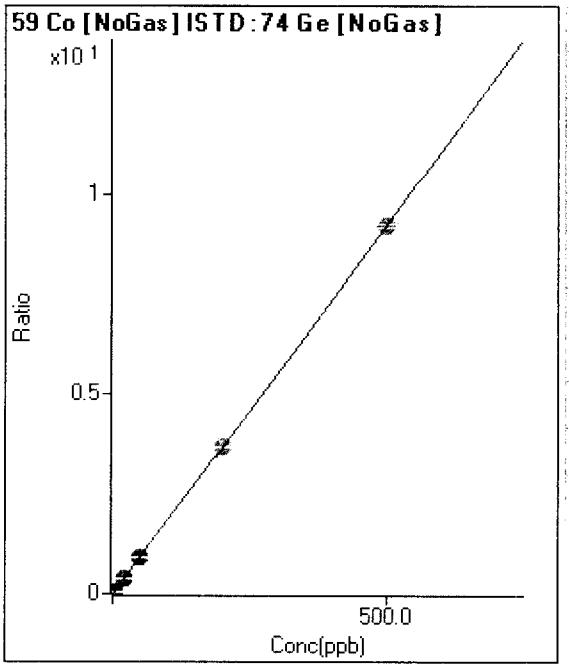
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	723	0.001	P	8.7
2	☐	9.000	8.602	2522	0.005	P	2.4
3	☐	45.000	41.854	9479	0.019	P	2.7
4	☐	90.000	85.951	18553	0.037	P	1.4
5	☐	180.000	166.440	35724	0.070	P	1.8
6	☐	400.000	371.148	77983	0.154	P	1.0
7	☐	2500.000	2318.259	470038	0.957	P	1.0
8	☐	4000.000	3651.693	715136	1.506	P	0.9
9	☐	10000.000	9482.955	1757858	3.909	A	0.6
10	☐	50000.000	50140.650	8065993	20.661	A	3.9

y = 4.1204E-004 * x + 0.0014
R = 0.9999
DL = 0.897
BEC = 3.456

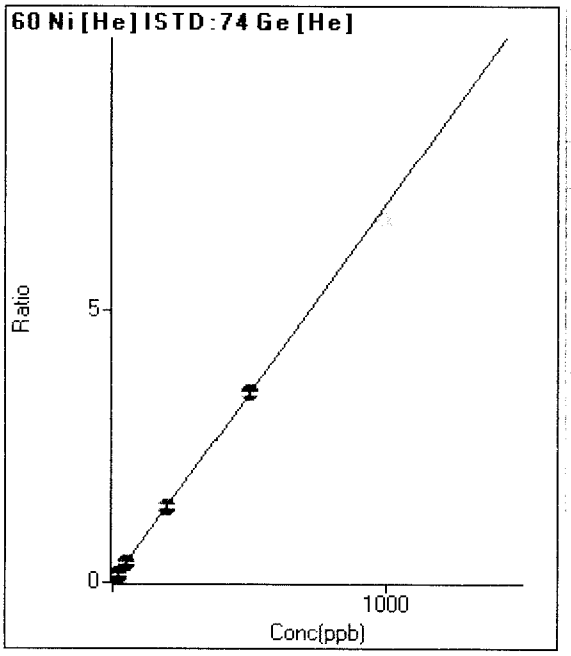
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	396	0.001	P	8.6
2	☐	0.180	0.182	2162	0.004	P	7.1
3	☐	0.900	0.922	9413	0.018	P	4.7
4	☐	1.800	1.854	18494	0.035	P	1.1
5	☐	3.600	3.825	36617	0.071	P	4.5
6	☐	20.000	20.811	202535	0.384	P	1.8
7	☐	50.000	50.881	486496	0.938	P	0.9
8	☐	200.000	201.501	1878254	3.713	A	0.4
9	☐	500.000	499.277	4495243	9.198	A	0.9
10	☐			2831	0.006	P	11.7

y = 0.0184 * x + 7.4982E-004
R = 1.0000
DL = 0.01053
BEC = 0.0407

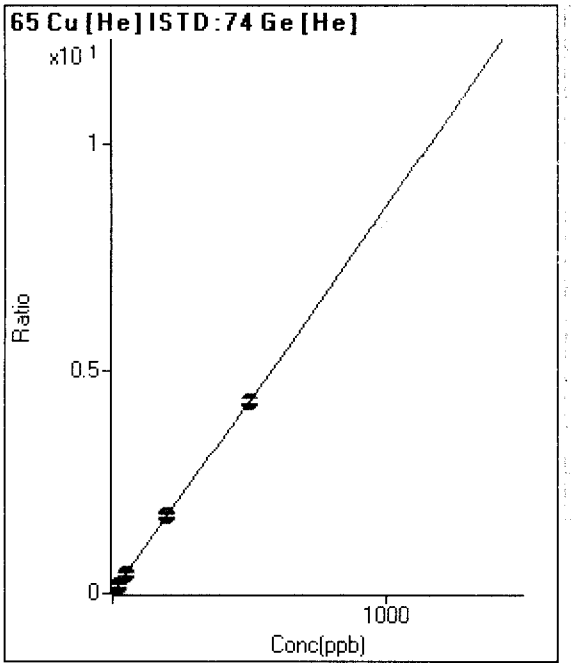
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12	0.000	P	55.9
2	☑	0.180		220	0.002	P	10.6
3	☐	0.900	0.914	773	0.006	P	5.9
4	☐	1.800	1.843	1549	0.013	P	2.4
5	☐	3.600	3.774	3168	0.026	P	1.8
6	☐	20.000	20.848	17295	0.145	P	0.7
7	☐	50.000	51.281	41686	0.356	P	0.3
8	☐	200.000	199.730	158813	1.385	P	1.0
9	☐	500.000	499.945	379271	3.466	P	1.1
10	☑	1000.000		693264	6.635	P	0.5

y = 0.0069 * x + 1.0043E-004
R = 1.0000
DL = 0.0243
BEC = 0.01449

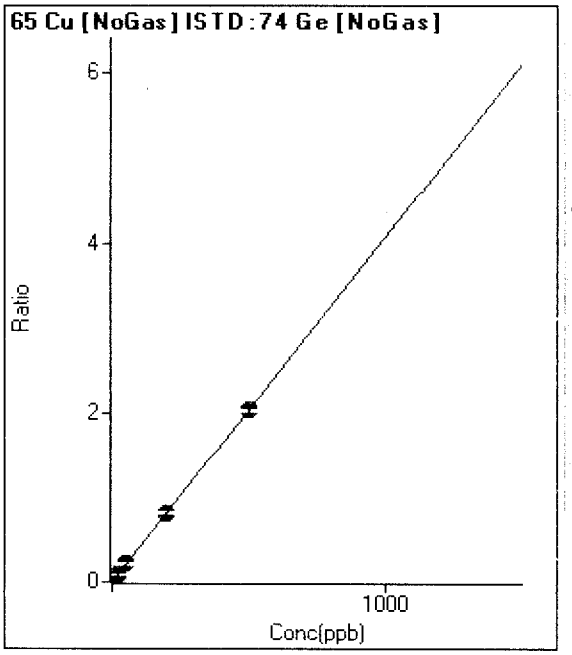
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	132	0.001	P	20.5
2	☐	0.180	0.190	329	0.003	P	14.9
3	☐	0.900	0.914	1077	0.009	P	2.5
4	☐	1.800	1.951	2152	0.018	P	4.1
5	☐	3.600	3.795	4074	0.034	P	2.4
6	☐	20.000	21.265	22026	0.184	P	0.2
7	☐	50.000	52.272	52889	0.451	P	1.4
8	☐	200.000	202.198	199794	1.742	P	0.8
9	☐	500.000	498.841	470121	4.296	P	1.0
10	☑	1000.000		855400	8.186	P	0.1

y = 0.0086 * x + 0.0011
R = 1.0000
DL = 0.078
BEC = 0.1266

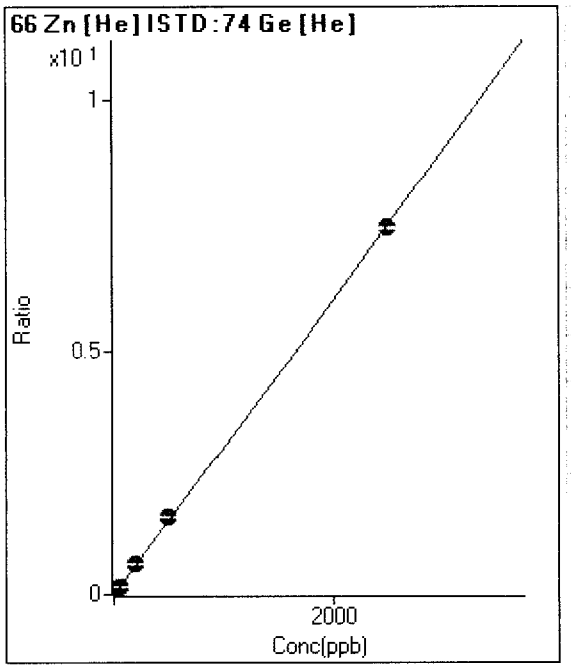
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	290	0.001	P	18.1
2	☐	0.180	0.215	753	0.001	P	3.7
3	☐	0.900	1.049	2562	0.005	P	2.0
4	☐	1.800	2.015	4643	0.009	P	2.5
5	☐	3.600	4.017	8708	0.017	P	4.8
6	☐	20.000	21.993	47568	0.090	P	2.5
7	☐	50.000	53.003	112357	0.217	P	1.6
8	☐	200.000	202.715	418414	0.827	P	0.8
9	☐	500.000	498.530	993611	2.033	P	0.7
10	☑	1000.000		1991575	4.279	A	5.2

y = 0.0041 * x + 5.4819E-004
R = 1.0000
DL = 0.07315
BEC = 0.1345

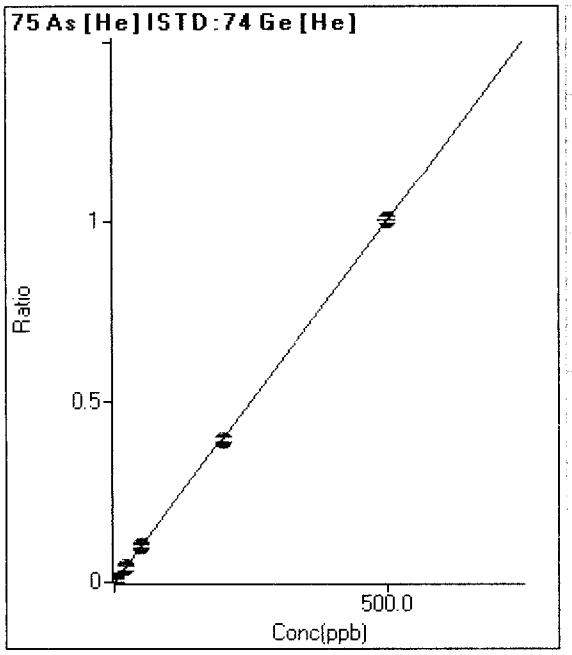
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	209	0.002	P	16.4
2	☑	0.180		238	0.002	P	11.8
3	☐	0.900	0.816	500	0.004	P	9.4
4	☐	1.800	1.695	818	0.007	P	8.3
5	☐	3.600	3.871	1606	0.013	P	4.7
6	☐	20.000	21.571	7929	0.066	P	2.2
7	☐	50.000	53.370	18933	0.162	P	2.0
8	☐	200.000	211.310	72755	0.634	P	0.1
9	☐	500.000	528.118	173203	1.583	P	1.9
10	☐	2500.000	2493.391	780193	7.466	P	0.2

y = 0.0030 * x + 0.0017
R = 0.9999
DL = 0.2823
BEC = 0.575

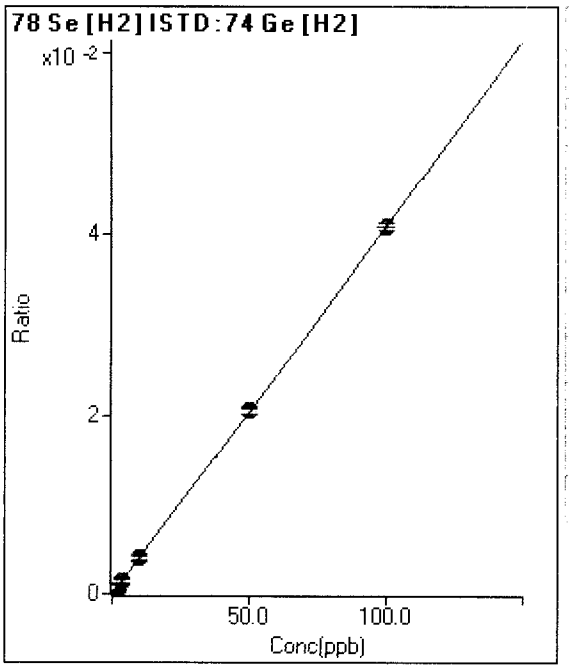
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	20	0.000	P	29.9
2	☐	0.180	0.193	66	0.001	P	11.6
3	☐	0.900	0.905	238	0.002	P	4.4
4	☐	1.800	1.784	450	0.004	P	10.8
5	☐	3.600	3.648	903	0.007	P	3.5
6	☐	20.000	20.103	4845	0.041	P	2.9
7	☐	50.000	50.441	11888	0.101	P	0.3
8	☐	200.000	197.358	45454	0.396	P	1.1
9	☐	500.000	501.008	110072	1.006	P	1.1
10	☐			45	0.000	P	11.8

y = 0.0020 * x + 1.6204E-004
R = 1.0000
DL = 0.07239
BEC = 0.08073

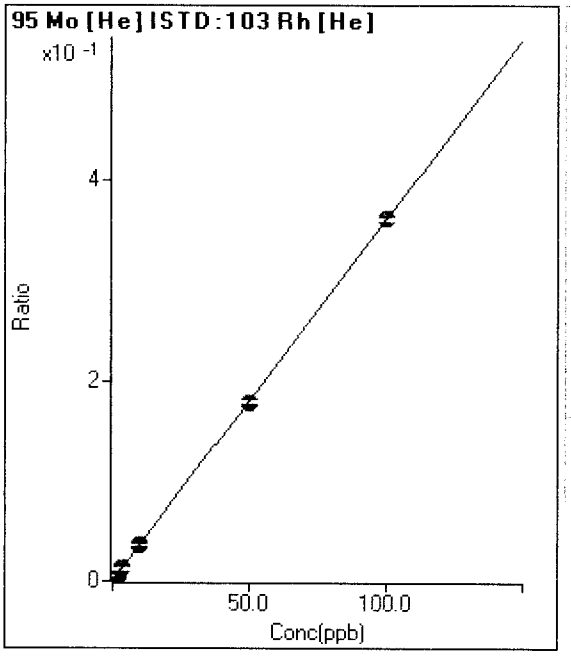
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3	0.000	P	94.4
2	☐	0.180	0.207	46	0.000	P	5.9
3	☐	0.900	0.895	188	0.000	P	7.9
4	☐	1.800	1.788	371	0.001	P	9.3
5	☐	3.600	3.512	735	0.001	P	3.8
6	☐	10.000	10.077	2083	0.004	P	4.0
7	☐	50.000	50.197	10083	0.021	P	1.1
8	☐	100.000	99.897	19387	0.041	P	1.0
9	☐			32	0.000	P	21.3
10	☐			17	0.000	P	39.5

y = 4.0865E-004 * x + 5.2712E-006
R = 1.0000
DL = 0.03654
BEC = 0.0129

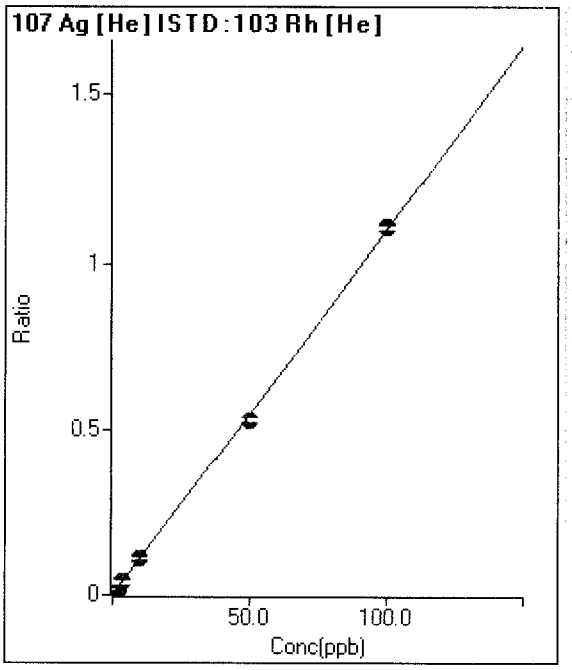
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	3	0.000	P	173.2
2	☐	0.180	0.193	212	0.001	P	14.3
3	☐	0.900	0.933	1007	0.003	P	5.5
4	☐	1.800	1.770	1902	0.006	P	9.0
5	☐	3.600	3.465	3720	0.013	P	2.5
6	☐	10.000	10.071	10719	0.036	P	3.4
7	☐	50.000	49.598	51471	0.179	P	1.1
8	☐	100.000	100.199	100915	0.361	P	0.4
9	☐			124	0.000	P	24.5
10	☐			139	0.001	P	9.7

y = 0.0036 * x + 1.0983E-005
R = 1.0000
DL = 0.01583
BEC = 0.003046

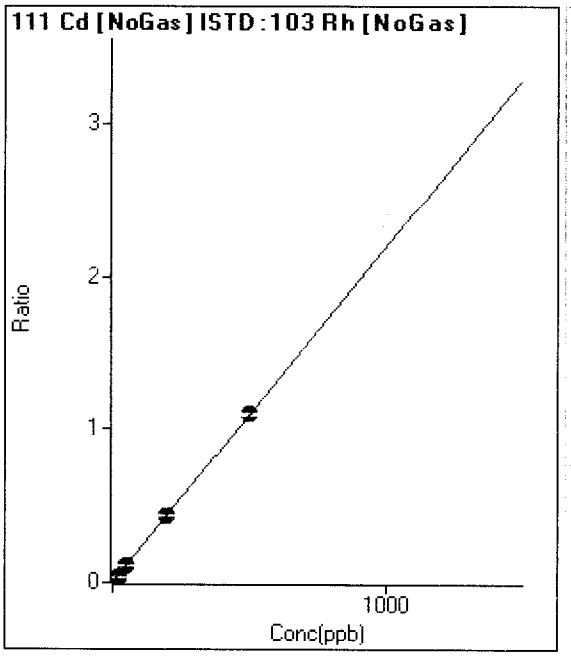
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	9	0.000	P	22.0
2	☐	0.180	0.191	637	0.002	P	6.0
3	☐	0.900	0.878	2886	0.010	P	1.9
4	☐	1.800	1.732	5670	0.019	P	0.2
5	☐	3.600	3.513	11490	0.039	P	3.3
6	☐	10.000	10.269	33293	0.113	P	0.5
7	☐	50.000	48.267	152580	0.530	P	0.7
8	☐	100.000	100.844	309376	1.107	P	0.5
9	☐			154	0.001	P	3.2
10	☐			270	0.001	P	5.9

y = 0.0110 * x + 2.9455E-005
R = 0.9998
DL = 0.001771
BEC = 0.002682

Weight: <None>
Min Conc: <None>

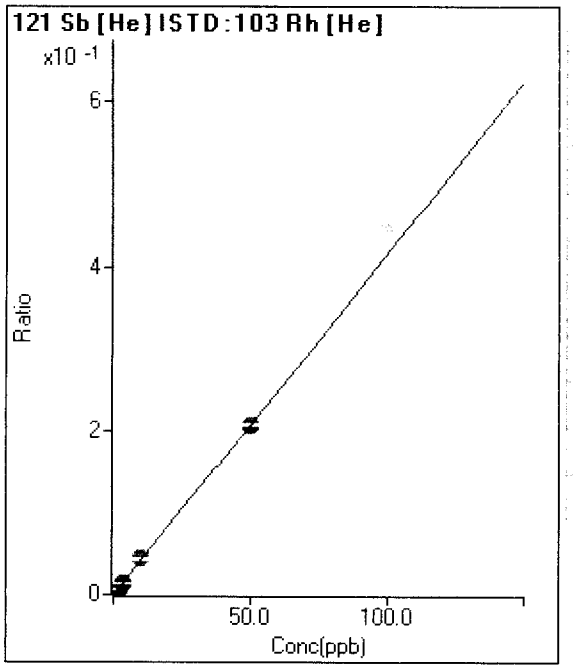


	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	12	0.000	P	144.3
2	☐	0.180	0.184	239	0.000	P	16.1
3	☐	0.900	0.935	1168	0.002	P	8.9
4	☐	1.800	1.884	2348	0.004	P	4.1
5	☐	3.600	3.767	4495	0.008	P	8.9
6	☐	20.000	19.717	24181	0.043	P	0.3
7	☐	50.000	50.294	60285	0.111	P	0.4
8	☐	200.000	198.364	230916	0.436	P	0.6
9	☐	500.000	500.635	561170	1.101	P	0.7
10	☑	1000.000		1104929	2.373	P	5.4

y = 0.0022 * x + 2.1097E-005
R = 1.0000
DL = 0.04153
BEC = 0.009591

Weight: <None>
Min Conc: <None>

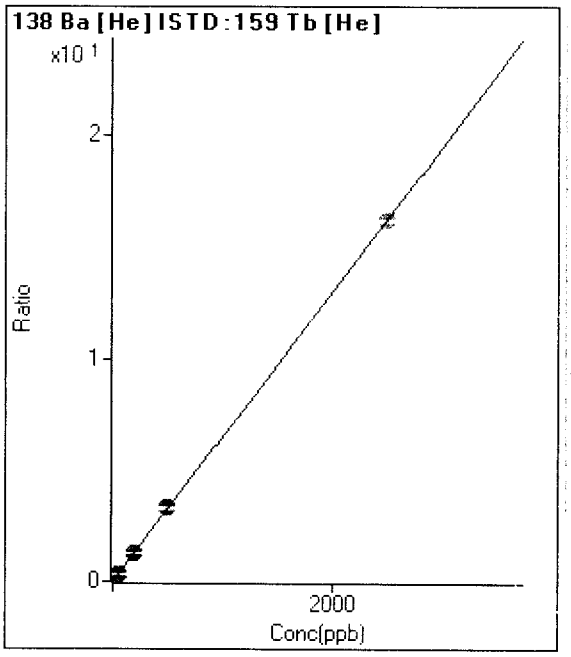
Calibration for 015_ICV_9F27029_9F27029a.D



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	6	0.000	P	125.5
2	☐	0.180	0.183	234	0.001	P	20.8
3	☐	0.900	0.979	1222	0.004	P	2.1
4	☐	1.800	1.726	2145	0.007	P	6.0
5	☐	3.600	3.472	4308	0.014	P	2.0
6	☐	10.000	10.682	13139	0.045	P	3.7
7	☐	50.000	49.874	59797	0.208	P	1.1
8	☑	100.000		125500	0.449	P	0.3
9	☐			98	0.000	P	36.2
10	☐			47	0.000	P	14.4

y = 0.0042 * x + 1.8529E-005
R = 0.9999
DL = 0.01675
BEC = 0.004449

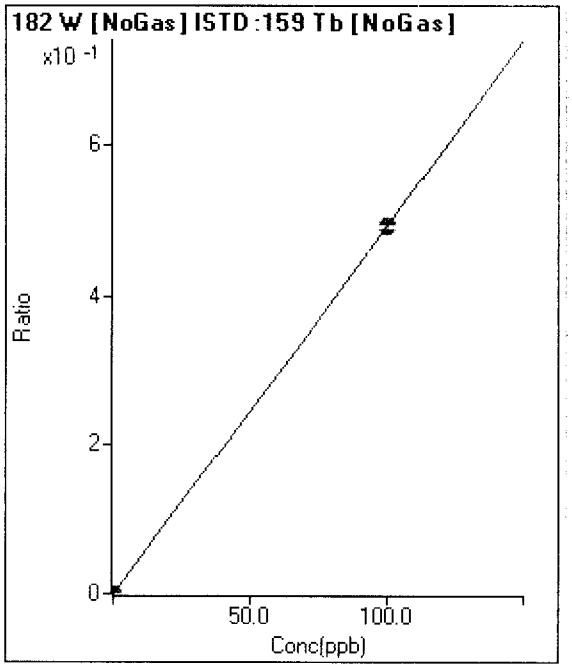
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	154	0.000	P	16.1
2	☐	0.180	0.207	723	0.002	P	11.5
3	☐	0.900	1.004	2907	0.007	P	5.5
4	☐	1.800	1.897	5359	0.013	P	4.2
5	☐	3.600	3.914	10976	0.026	P	1.8
6	☐	20.000	21.381	58822	0.139	P	1.5
7	☐	50.000	53.470	145065	0.347	P	1.2
8	☐	200.000	202.766	549925	1.316	P	0.2
9	☐	500.000	509.709	1332341	3.309	P	1.7
10	☐	2500.000	2497.756	6206692	16.212	A	0.3

y = 0.0065 * x + 3.5915E-004
R = 1.0000
DL = 0.02667
BEC = 0.05534

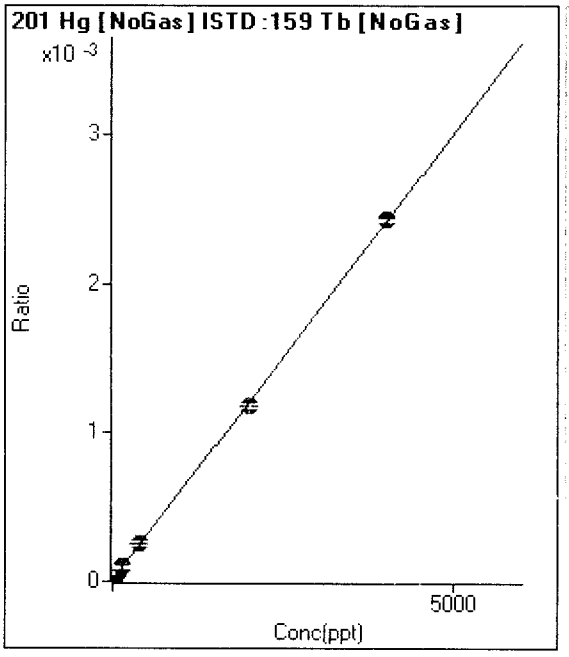
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	32	0.000	P	6.0
2	☐			26	0.000	P	7.1
3	☐			33	0.000	P	52.5
4	☐			21	0.000	P	40.4
5	☐			27	0.000	P	30.8
6	☐			38	0.000	P	14.1
7	☐			63	0.000	P	18.3
8	☐			81	0.000	P	20.0
9	☐	100.000	100.000	424823	0.492	P	0.9
10	☐			790	0.001	P	9.2

y = 0.0049 * x + 3.6529E-005
R = 1.0000
DL = 0.00133
BEC = 0.007428

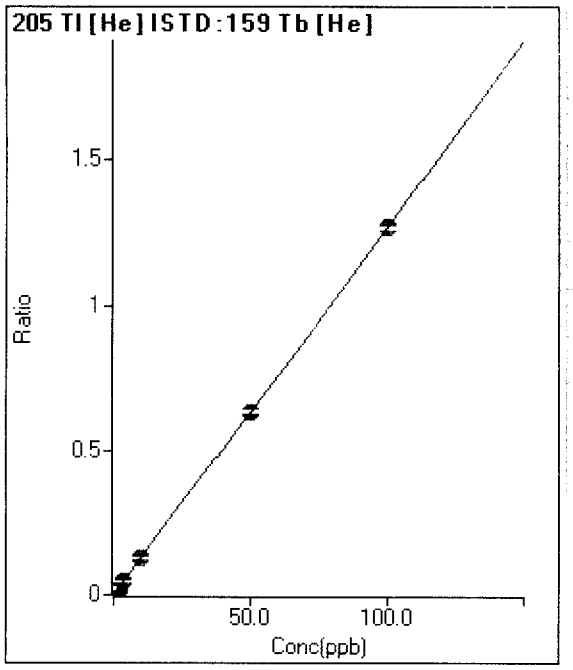
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	-0.420	7	0.000	P	20.9
2	☐			12	0.000	P	6.4
3	☐	36.000	27.797	22	0.000	P	15.4
4	☐	72.000	84.559	53	0.000	P	7.1
5	☐	144.000	148.257	84	0.000	P	9.8
6	☐	400.000	416.600	230	0.000	P	8.1
7	☐	2000.000	1954.344	1045	0.001	P	1.8
8	☐	4000.000	4020.862	2145	0.002	P	0.8
9	☐			69	0.000	P	13.5
10	☐			31	0.000	P	13.5

y = 6.020979E-007 * x + 8.372779E-006
R = 0.9999
DL = 8.46
BEC = 13.91

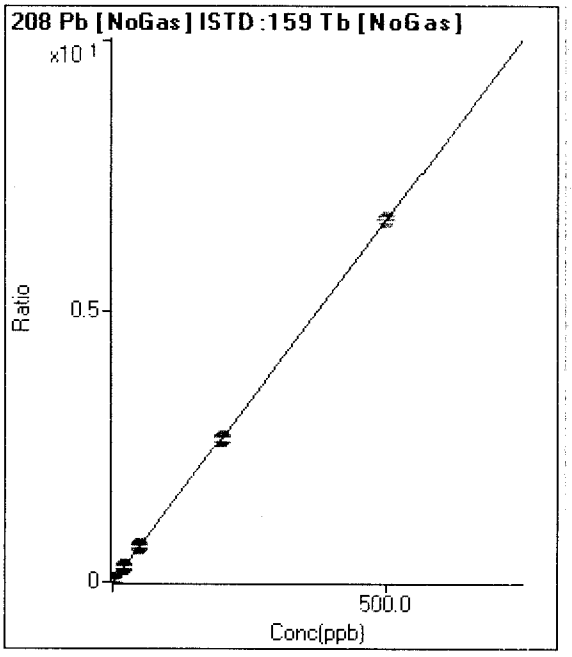
Weight: <None>
Min Conc: <None>



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	90	0.000	P	47.1
2	☐	0.180	0.177	1045	0.002	P	11.8
3	☐	0.900	0.890	4864	0.012	P	1.4
4	☐	1.800	1.802	9762	0.023	P	5.1
5	☐	3.600	3.630	19725	0.046	P	0.9
6	☐	10.000	10.103	54326	0.128	P	0.7
7	☐	50.000	49.967	265026	0.635	P	0.6
8	☐	100.000	100.005	530584	1.270	P	0.2
9	☐			410	0.001	P	13.4
10	☐			151	0.000	P	17.1

y = 0.0127 * x + 2.0974E-004
R = 1.0000
DL = 0.02334
BEC = 0.01652

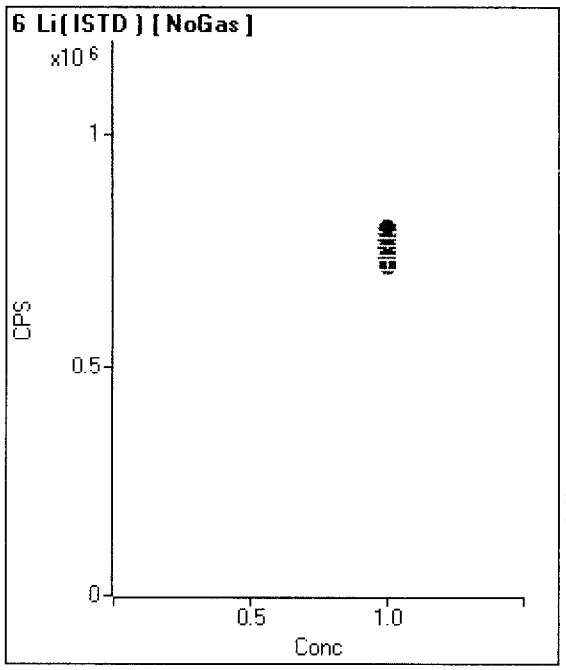
Weight: <None>
Min Conc: <None>



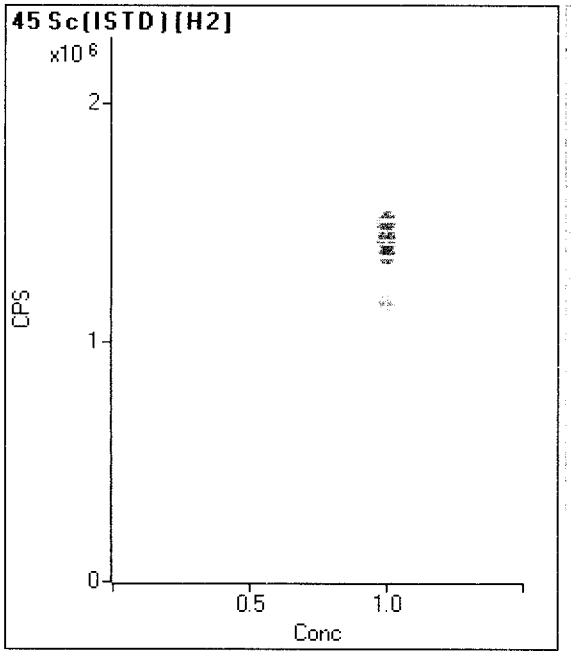
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	0.000	0.000	460	0.001	P	9.1
2	☐	0.180	0.187	2676	0.003	P	8.8
3	☐	0.900	0.902	11196	0.013	P	4.2
4	☐	1.800	1.885	22929	0.026	P	2.8
5	☐	3.600	3.833	44505	0.052	P	3.4
6	☐	20.000	20.608	245038	0.276	P	0.6
7	☐	50.000	51.013	602261	0.683	P	0.9
8	☐	200.000	198.204	2340756	2.651	P	0.8
9	☐	500.000	500.591	5782851	6.694	A	1.0
10	☐			2769	0.003	P	1.9

y = 0.0134 * x + 5.2141E-004
R = 1.0000
DL = 0.01059
BEC = 0.03899

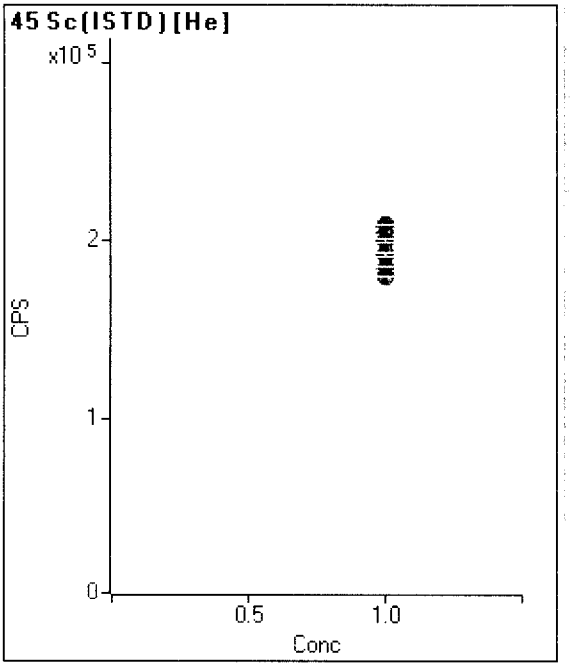
Weight: <None>
Min Conc: <None>



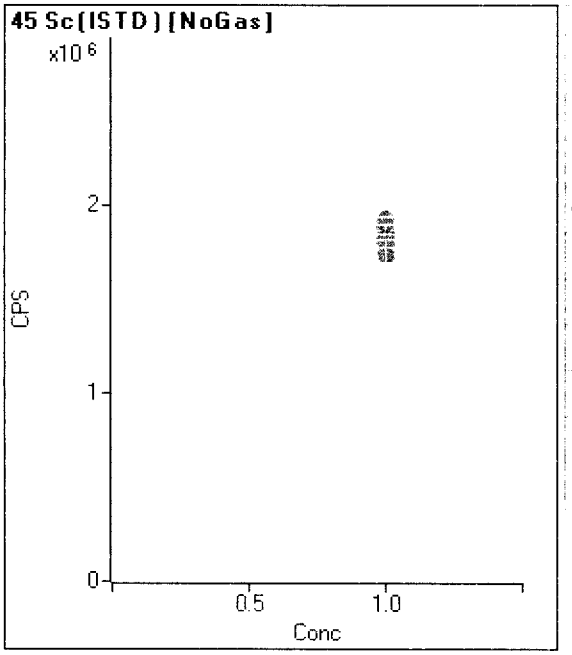
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		793244		P	1.0
2	☐	1.000		791904		P	1.2
3	☐	1.000		798387		P	1.5
4	☐	1.000		793792		P	0.7
5	☐	1.000		769422		P	4.3
6	☐	1.000		787637		P	0.7
7	☐	1.000		773122		P	1.0
8	☐	1.000		756653		P	0.8
9	☐	1.000		735471		P	1.5
10	☐	1.000		720595		P	2.7



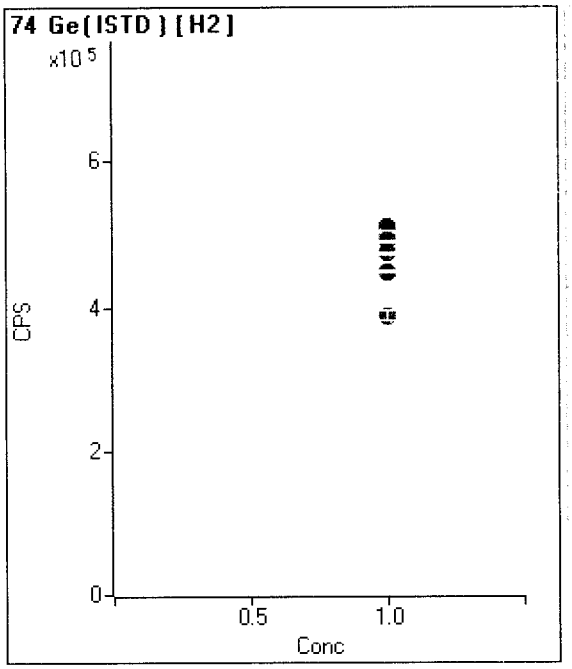
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		1483837		A	2.0
2	☐	1.000		1502119		A	1.1
3	☐	1.000		1513612		A	0.8
4	☐	1.000		1483525		A	1.5
5	☐	1.000		1509042		A	1.1
6	☐	1.000		1511494		A	0.3
7	☐	1.000		1452183		A	1.8
8	☐	1.000		1417101		A	1.0
9	☐	1.000		1362317		A	0.5
10	☐	1.000		1168202		M	3.7



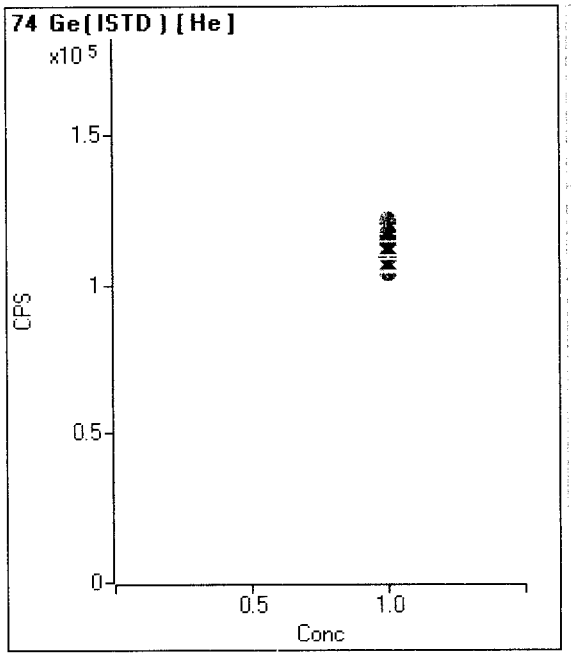
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		208835		P	0.1
2		1.000		207294		P	0.4
3		1.000		205293		P	1.2
4		1.000		206538		P	0.4
5		1.000		208047		P	1.3
6		1.000		203547		P	0.4
7		1.000		200021		P	1.1
8		1.000		193041		P	1.1
9		1.000		184733		P	1.6
10		1.000		180349		P	0.4



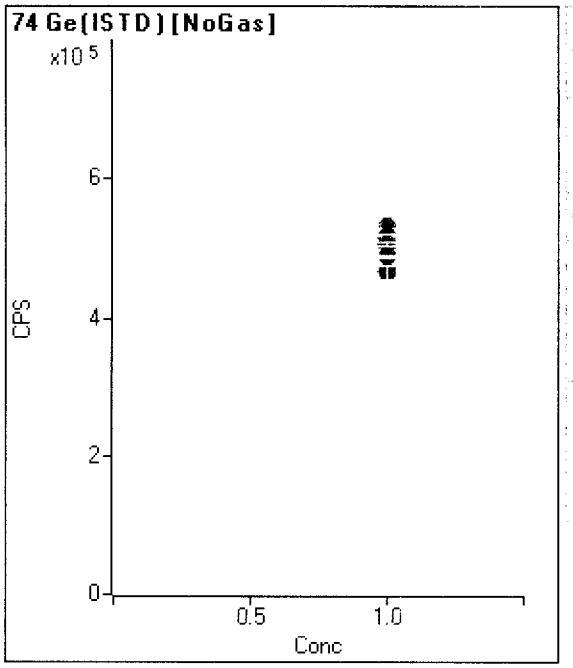
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		1874561		A	1.7
2		1.000		1908477		A	1.1
3		1.000		1921815		A	0.5
4		1.000		1919976		A	1.4
5		1.000		1845494		A	7.6
6		1.000		1917245		A	1.5
7		1.000		1882073		A	1.6
8		1.000		1828023		A	1.2
9		1.000		1788765		A	2.4
10		1.000		1735055		A	4.9



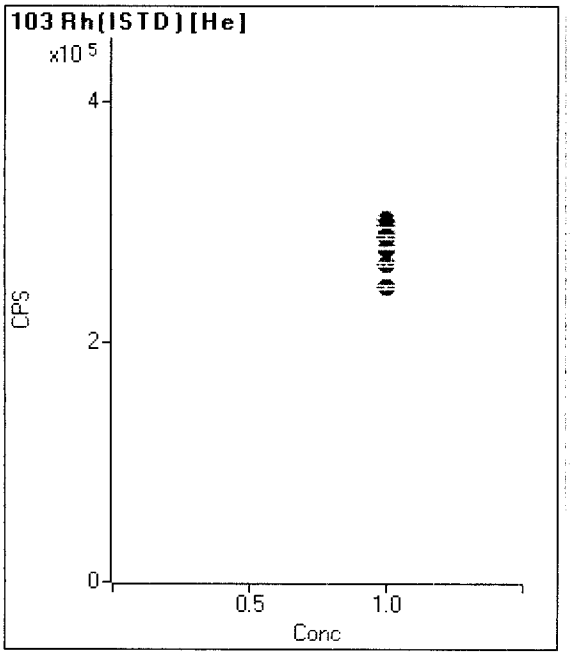
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		508025		P	0.7
2	☐	1.000		507773		P	1.3
3	☐	1.000		507768		P	0.6
4	☐	1.000		503602		P	0.8
5	☐	1.000		510310		P	0.8
6	☐	1.000		505238		P	0.6
7	☐	1.000		491369		P	0.7
8	☐	1.000		474856		P	0.7
9	☐	1.000		449721		P	0.3
10	☐	1.000		390718		P	3.3



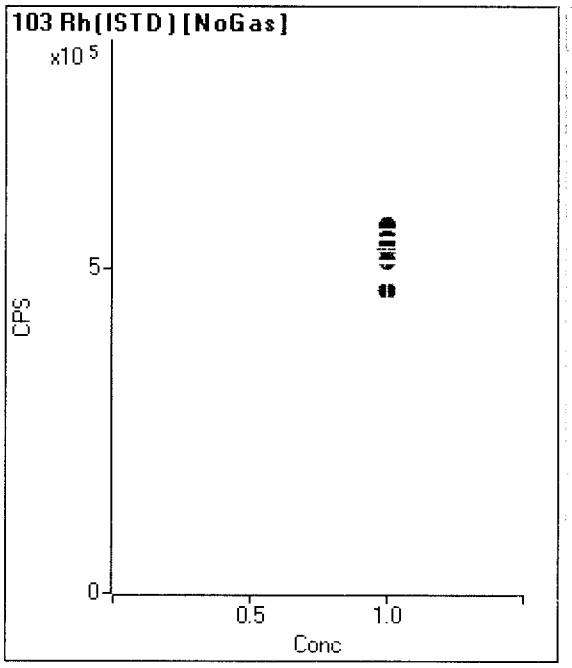
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		121380		P	0.9
2	☐	1.000		120681		P	0.3
3	☐	1.000		120140		P	0.7
4	☐	1.000		120308		P	0.1
5	☐	1.000		120641		P	0.8
6	☐	1.000		119592		P	0.6
7	☐	1.000		117231		P	0.3
8	☐	1.000		114694		P	0.2
9	☐	1.000		109439		P	0.9
10	☐	1.000		104494		P	0.5



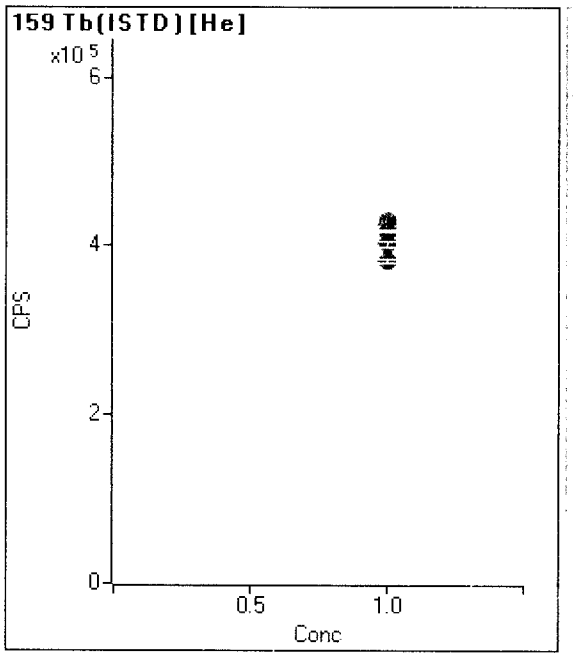
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		528713		P	0.5
2		1.000		528022		P	0.1
3		1.000		530927		P	0.6
4		1.000		529761		P	0.7
5		1.000		515091		P	5.6
6		1.000		527337		P	0.7
7		1.000		518642		P	0.4
8		1.000		505917		P	0.9
9		1.000		488721		P	0.2
10		1.000		466025		P	3.8



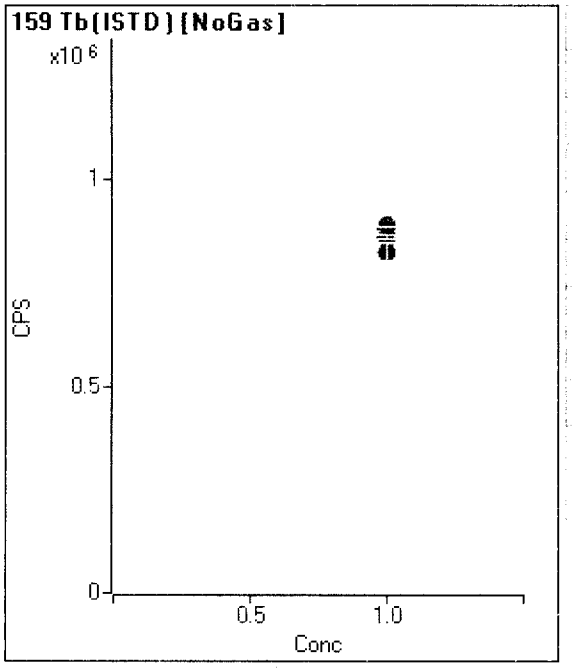
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		302021		P	1.0
2		1.000		300076		P	0.1
3		1.000		298370		P	0.4
4		1.000		297678		P	0.6
5		1.000		297556		P	1.0
6		1.000		295159		P	0.3
7		1.000		287853		P	1.3
8		1.000		279341		P	0.9
9		1.000		266003		P	1.2
10		1.000		246733		P	0.8



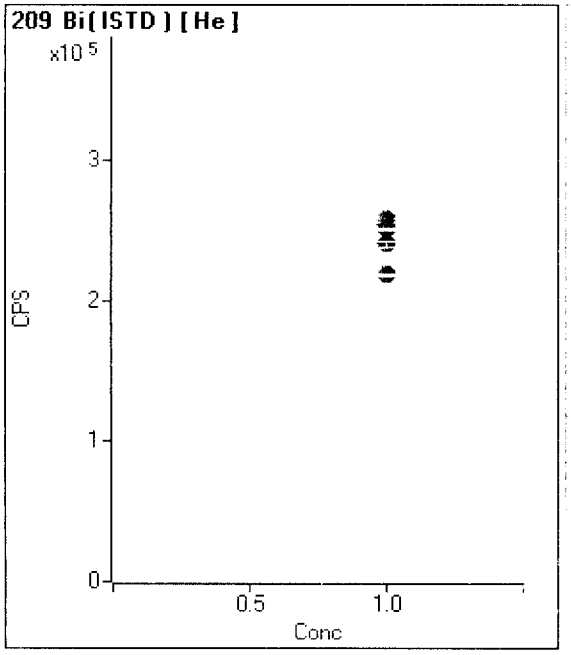
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		560665		P	1.0
2		1.000		561487		P	0.5
3		1.000		562592		P	0.7
4		1.000		563693		P	0.9
5		1.000		542702		P	5.4
6		1.000		557256		P	0.3
7		1.000		544797		P	0.4
8		1.000		529188		P	0.9
9		1.000		509564		P	0.6
10		1.000		466505		P	4.9



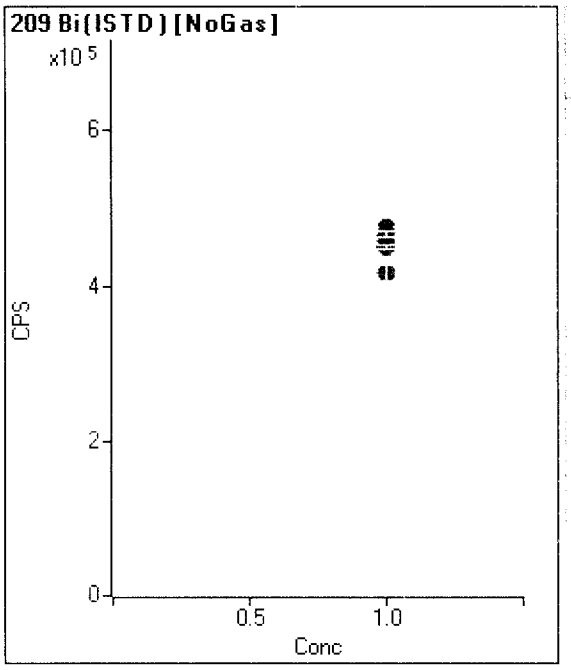
	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		429916		P	0.8
2		1.000		424339		P	0.9
3		1.000		422672		P	0.5
4		1.000		422958		P	1.0
5		1.000		425976		P	0.7
6		1.000		422782		P	0.5
7		1.000		417566		P	0.5
8		1.000		417748		P	0.2
9		1.000		402769		P	1.8
10		1.000		382849		P	0.8



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		882042		P	0.4
2		1.000		886865		P	0.5
3		1.000		889892		P	0.5
4		1.000		891364		P	0.6
5		1.000		860801		P	6.3
6		1.000		887560		P	0.6
7		1.000		882236		P	0.4
8		1.000		883030		P	0.7
9		1.000		863876		P	0.9
10		1.000		827518		P	5.2



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1		1.000		256831		P	1.1
2		1.000		253328		P	0.7
3		1.000		253611		P	1.1
4		1.000		254313		P	0.6
5		1.000		258015		P	0.8
6		1.000		254382		P	0.7
7		1.000		251852		P	0.8
8		1.000		251288		P	0.7
9		1.000		240229		P	1.3
10		1.000		218177		P	0.6



	Rjct	Conc.	Calc Conc.	CPS	Ratio	Det.	RSD
1	☐	1.000		475402		P	0.5
2	☐	1.000		473194		P	0.7
3	☐	1.000		476010		P	0.4
4	☐	1.000		476018		P	0.2
5	☐	1.000		460309		P	6.2
6	☐	1.000		475135		P	0.4
7	☐	1.000		470484		P	0.5
8	☐	1.000		467387		P	1.4
9	☐	1.000		451329		P	0.7
10	☐	1.000		418586		P	4.8

Initial Calibration Verification (ICV) Report ICPMS5

Sample Name	9F27029-ICV1
File Name	015_ICV.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:38:50
Sample Type	ICV
Total Dilution	1.0000
Comment	A19E305 JPB 06/27
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	ICPMS Analyst

reprocessed for Na
Note, files for sequence needed to be reprocessed under new file (Bin file) directory due to Batch file corrupts- after computer shut down
JB 06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	Det.	CPS	Ratio	Integ Time	QC Flag
Na	23	45	1	H2	3695.777	ppb	Analog	12902286	8.884	0.2001	
Ca	44	45	1	H2	3949.838	ppb	Pulse	552806	0.381	0.2001	
Fe	56	74	1	H2	3765.736	ppb	Analog	30444762	62.979	0.3000	
Fe	57	74	1	H2	3650.796	ppb	Pulse	727875	1.506	0.3000	
Se	78	74	1	H2	38.845	ppb	Pulse	7676	0.016	0.9999	
Mg	24	45	2	He	4246.381	ppb	Analog	1329341	6.765	0.0999	
Al	27	45	2	He	4007.657	ppb	Pulse	726516	3.698	0.0999	
K	39	45	2	He	4216.689	ppb	Analog	1325425	6.746	0.0999	
V	51	74	2	He	99.024	ppb	Pulse	197546	1.703	0.3000	
Cr	52	74	2	He	97.093	ppb	Pulse	230905	1.990	0.3000	
Mn	55	74	2	He	99.144	ppb	Pulse	166761	1.437	0.3000	
Ni	60	74	2	He	102.544	ppb	Pulse	82484	0.711	0.3000	
Cu	65	74	2	He	101.767	ppb	Pulse	101778	0.877	0.3000	
Zn	66	74	2	He	104.432	ppb	Pulse	36475	0.314	0.3000	
As	75	74	2	He	96.909	ppb	Pulse	22585	0.195	0.9999	
Mo	95	103	2	He	39.406	ppb	Pulse	39795	0.142	0.3000	
Ag	107	103	2	He	39.237	ppb	Pulse	120705	0.431	0.3000	
Sb	121	103	2	He	37.992	ppb	Pulse	44327	0.158	0.3000	
Ba	138	159	2	He	103.045	ppb	Pulse	278716	0.669	0.3000	
Tl	205	159	2	He	38.892	ppb	Pulse	205785	0.494	0.3000	
Be	9	6	3	NoGas	39.853	ppb	Pulse	83145	0.111	0.3000	
Ti	47	45	3	NoGas	92.737	ppb	Pulse	60191	0.034	0.2001	
Co	59	74	3	NoGas	101.598	ppb	Pulse	925619	1.872	0.2001	
Cu	65	74	3	NoGas	105.526	ppb	Pulse	212960	0.431	0.2001	
Cd	111	103	3	NoGas	99.012	ppb	Pulse	112707	0.218	0.3000	
W	182	159	3	NoGas	0.042	ppb	Pulse	206	0.000	0.3000	
Hg	201	159	3	NoGas	782.873	ppt	Pulse	406	0.000	2.0001	
Pb	208	159	3	NoGas	101.400	ppb	Pulse	1148315	1.356	0.2001	

QC ISTD Table

Name	Mass	Det.	Tune Mode	CPS RSD	ISTD Ref CPS	CPS	ISTD Recovery %	QC flag
Sc	45	Analog	H2	0.7	1483837.48	1452467	97.9	
Ge	74	Pulse	H2	0.4	508025.38	483415	95.2	
Sc	45	Pulse	He	1.3	208835.17	196487	94.1	
Ge	74	Pulse	He	1.0	121380.146666667	116015	95.6	
Rh	103	Pulse	He	0.7	302021.16	280101	92.7	
Tb	159	Pulse	He	0.1	429916.006666667	416518	96.9	
Bi	209	Pulse	He	1.3	256831.363333333	248468	96.7	
Li	6	Pulse	NoGas	1.1	793244.14	751538	94.7	

Initial Calibration Verification (ICV) Report ICPMS5

Name	Mass	Det.	Tune Mode	CPS RSD	ISTD Ref CPS	CPS	ISTD Recovery %	QC flag
Sc	45	Analog	NoGas	0.7	1874561.46	1770096	94.4	
Ge	74	Pulse	NoGas	0.7	528713.046666667	494364	93.5	
Rh	103	Pulse	NoGas	0.8	560665.076666667	517449	92.3	
Tb	159	Pulse	NoGas	0.2	882041.703333333	846565	96.0	
Bi	209	Pulse	NoGas	0.8	475402.23	450351	94.7	

Quantitation Report ICPMS5

File Name	015_ICV_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F26056.b		
Acq Time	6/27/2019 13:38:50	Sample Type	
Sample Name	**9F27029-ICV1**		ICV
Comment	**A19E305 JPB 06/27**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial:	2
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	39.853	39.853	ppb	1.3	40	
Na	23	45	H2	3998.618	3998.618	ppb	1.3	4000	
Mg	24	45	He	4246.381	4246.381	ppb	2.0	4000	
Al	27	45	He	4007.657	4007.657	ppb	1.7	4000	
K	39	45	He	4216.689	4216.689	ppb	0.3	4000	
Ca	44	45	H2	3949.838	3949.838	ppb	0.4	4000	
Ti	47	45	NoGas	92.737	92.737	ppb	1.2	100	
V	51	74	He	99.024	99.024	ppb	1.2	100	
Cr	52	74	He	97.093	97.093	ppb	1.4	100	
Mn	55	74	He	99.144	99.144	ppb	1.1	100	
Fe	56	74	H2	3765.736	3765.736	ppb	0.6	4000	
Fe	57	74	H2	3650.796	3650.796	ppb	0.1	4000	
Co	59	74	NoGas	101.598	101.598	ppb	0.7	100	
Ni	60	74	He	102.544	102.544	ppb	0.5	100	
Cu	65	74	He	101.767	101.767	ppb	0.2	100	
Cu	65	74	NoGas	105.526	105.526	ppb	1.0	100	
Zn	66	74	He	104.432	104.432	ppb	1.8	100	
As	75	74	He	96.909	96.909	ppb	2.1	100	
Se	78	74	H2	38.845	38.845	ppb	2.2	40	
Mo	95	103	He	39.406	39.406	ppb	0.6	40	
Ag	107	103	He	39.237	39.237	ppb	1.5	40	
Cd	111	103	NoGas	99.012	99.012	ppb	1.0	100	
Sb	121	103	He	37.992	37.992	ppb	1.0	40	
Ba	138	159	He	103.045	103.045	ppb	1.7	100	
W	182	159	NoGas	0.042	0.042	ppb	20.4		
Hg	201	159	NoGas	782.873	782.873	ppt	5.2	800	
Tl	205	159	He	38.892	38.892	ppb	0.9	40	
Pb	208	159	NoGas	101.4	101.400	ppb	0.5	100	

Note that reprocessed files may not show correct flagging. JB 06/28/19

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	751538	1.1	793244.14	Pulse	94.7	
Sc	45	H2	1452467	0.7	1483837.48	Analog	97.9	
Sc	45	He	196487	1.3	208835.17	Pulse	94.1	
Sc	45	NoGas	1770096	0.7	1874561.46	Analog	94.4	
Ge	74	H2	483415	0.4	508025.38	Pulse	95.2	
Ge	74	He	116015	1.0	121380.146666667	Pulse	95.6	
Ge	74	NoGas	494364	0.7	528713.046666667	Pulse	93.5	
Rh	103	He	280101	0.7	302021.16	Pulse	92.7	
Rh	103	NoGas	517449	0.8	560665.076666667	Pulse	92.3	
Tb	159	He	416518	0.1	429916.006666667	Pulse	96.9	
Tb	159	NoGas	846565	0.2	882041.703333333	Pulse	96.0	
Bi	209	He	248468	1.3	256831.363333333	Pulse	96.7	
Bi	209	NoGas	450351	0.8	475402.23	Pulse	94.7	

Initial Calibration Blank (ICB) Report ICPMS5

Sample Name	9F27029-ICB1
File Name	016_ICB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:43:08
Sample Type	ICB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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JB 06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune Step	Tune Mode	Conc.	Units	Det.	CPS	Ratio	Integ Time	QC flag
Na	23	45	1	H2	0.616	ppb	Pulse	14166	0.010	0.2001	
Ca	44	45	1	H2	-0.079	ppb	Pulse	810	0.001	0.2001	
Fe	56	74	1	H2	0.542	ppb	Pulse	10419	0.023	0.3000	
Fe	57	74	1	H2	1.099	ppb	Pulse	866	0.002	0.3000	
Se	78	74	1	H2	0.049	ppb	Pulse	12	0.000	0.9999	
Mg	24	45	2	He	0.058	ppb	Pulse	317	0.002	0.0999	
Al	27	45	2	He	0.067	ppb	Pulse	130	0.001	0.0999	
K	39	45	2	He	-0.108	ppb	Pulse	19812	0.100	0.0999	
V	51	74	2	He	-0.120	ppb	Pulse	703	0.006	0.3000	
Cr	52	74	2	He	0.000	ppb	Pulse	229	0.002	0.3000	
Mn	55	74	2	He	0.008	ppb	Pulse	82	0.001	0.3000	
Ni	60	74	2	He	0.023	ppb	Pulse	30	0.000	0.3000	
Cu	65	74	2	He	0.020	ppb	Pulse	148	0.001	0.3000	
Zn	66	74	2	He	-0.044	ppb	Pulse	186	0.002	0.3000	
As	75	74	2	He	0.012	ppb	Pulse	22	0.000	0.9999	
Mo	95	103	2	He	0.032	ppb	Pulse	37	0.000	0.3000	
Ag	107	103	2	He	0.007	ppb	Pulse	30	0.000	0.3000	
Sb	121	103	2	He	0.414	ppb	Pulse	502	0.002	0.3000	
Ba	138	159	2	He	0.020	ppb	Pulse	204	0.000	0.3000	
Tl	205	159	2	He	0.005	ppb	Pulse	116	0.000	0.3000	
Be	9	6	3	NoGas	0.005	ppb	Pulse	11	0.000	0.3000	
Ti	47	45	3	NoGas	-0.011	ppb	Pulse	38	0.000	0.2001	
Co	59	74	3	NoGas	-0.003	ppb	Pulse	350	0.001	0.2001	
Cu	65	74	3	NoGas	0.019	ppb	Pulse	317	0.001	0.2001	
Cd	111	103	3	NoGas	0.028	ppb	Pulse	45	0.000	0.3000	
W	182	159	3	NoGas	0.016	ppb	Pulse	99	0.000	0.3000	
Hg	201	159	3	NoGas	10.750	ppt	Pulse	13	0.000	2.0001	
Pb	208	159	3	NoGas	0.017	ppb	Pulse	650	0.001	0.2001	

QC ISTD Table

Name	Mass	Det.	Tune Mode	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	Analog	H2	1.0	1376265	1483837.48	92.8	
Ge	74	Pulse	H2	0.8	461404	508025.38	90.8	
Sc	45	Pulse	He	0.6	199134	208835.17	95.4	
Ge	74	Pulse	He	0.8	116734	121380.146666667	96.2	
Rh	103	Pulse	He	0.9	288498	302021.16	95.5	
Tb	159	Pulse	He	0.6	420521	429916.006666667	97.8	
Bi	209	Pulse	He	0.8	253238	256831.363333333	98.6	

Initial Calibration Blank (ICB) Report ICPMS5

Name	Mass	Det.	Tune Mode	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Li	6	Pulse	NoGas	1.0	769541	793244.14	97.0	
Sc	45	Analog	NoGas	0.5	1831942	1874561.46	97.7	
Ge	74	Pulse	NoGas	0.4	505278	528713.046666667	95.6	
Rh	103	Pulse	NoGas	0.2	539498	560665.076666667	96.2	
Tb	159	Pulse	NoGas	1.1	864644	882041.703333333	98.0	
Bi	209	Pulse	NoGas	0.8	462033	475402.23	97.2	

Quantitation Report ICPMS5

File Name	016_ICB_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 13:43:08	Sample Type	
Sample Name	**9F27029-ICB1**		ICB
Comment	**Cal Blk 3%HNO3 0.4%HCl**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial:	1
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.005	0.005	ppb	91.2	0.18	
Na	23	45	H2	0.667	0.667	ppb	7.1	90	
Mg	24	45	He	0.658	0.658	ppb	13.0	90	
Al	27	45	He	0.067	0.067	ppb	211.9	45	
K	39	45	He	-0.108	-0.108	ppb	N/A	90	
Ca	44	45	H2	-0.079	-0.079	ppb	N/A	90	
Ti	47	45	NoGas	-0.011	-0.011	ppb	N/A	0.9	
V	51	74	He	-0.12	-0.120	ppb	N/A	0.9	
Cr	52	74	He	0	0.000	ppb	5355.4	0.9	
Mn	55	74	He	0.008	0.008	ppb	127.4	0.9	
Fe	56	74	H2	0.542	0.542	ppb	2.5	45	
Fe	57	74	H2	1.099	1.099	ppb	30.4	45	
Co	59	74	NoGas	-0.003	-0.003	ppb	N/A	0.18	
Ni	60	74	He	0.023	0.023	ppb	17.6	0.9	
Cu	65	74	He	0.02	0.020	ppb	15.0	0.9	
Cu	65	74	NoGas	0.019	0.019	ppb	127.1	0.9	
Zn	66	74	He	-0.044	-0.044	ppb	N/A	3.6	
As	75	74	He	0.012	0.012	ppb	147.4	0.9	
Se	78	74	H2	0.049	0.049	ppb	60.4	0.9	
Mo	95	103	He	0.032	0.032	ppb	35.1	0.9	
Ag	107	103	He	0.007	0.007	ppb	14.9	0.18	
Cd	111	103	NoGas	0.028	0.028	ppb	65.1	0.18	
Sb	121	103	He	0.414	0.414	ppb	5.0	0.9	
Ba	138	159	He	0.02	0.020	ppb	70.3	0.9	
W	182	159	NoGas	0.016	0.016	ppb	33.3		
Hg	201	159	NoGas	10.75	10.750	ppt	59.8	72	
Tl	205	159	He	0.005	0.005	ppb	86.7	0.18	
Pb	208	159	NoGas	0.017	0.017	ppb	20.6	0.18	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	769541	1.0	793244.14	Pulse	97.0	
Sc	45	H2	1376265	1.0	1483837.48	Analog	92.8	
Sc	45	He	199134	0.6	208835.17	Pulse	95.4	
Sc	45	NoGas	1831942	0.5	1874561.46	Analog	97.7	
Ge	74	H2	461404	0.8	508025.38	Pulse	90.8	
Ge	74	He	116734	0.8	121380.146666667	Pulse	96.2	
Ge	74	NoGas	505278	0.4	528713.046666667	Pulse	95.6	
Rh	103	He	288498	0.9	302021.16	Pulse	95.5	
Rh	103	NoGas	539498	0.2	560665.076666667	Pulse	96.2	
Tb	159	He	420521	0.6	429916.006666667	Pulse	97.8	
Tb	159	NoGas	864644	1.1	882041.703333333	Pulse	98.0	
Bi	209	He	253238	0.8	256831.363333333	Pulse	98.6	
Bi	209	NoGas	462033	0.8	475402.23	Pulse	97.2	

CRL Verification ICPMS5

Sample Name	9F27029-CRL1
File Name	017CRL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:50:19
Sample Type	CRL1
Total Dilution	1.0000
Comment	A19F223 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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reprinted
06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune	Conc	Units	RSD	CPS	%Rec	%QC Low	%QC High	Flag
Na	23	45	H2	7.895	ppb	6.1	41773	87.72	70	130	
Ca	44	45	H2	8.134	ppb	19.5	2071	90.38	70	130	
Fe	56	74	H2	8.352	ppb	3.5	76751	92.8	70	130	
Fe	57	74	H2	9.030	ppb	1.7	2579	100.33	70	130	
Se	78	74	H2	0.178	ppb	4.6	39	98.89	70	130	
Mg	24	45	He	9.412	ppb	3.8	3154	104.58	70	130	
Al	27	45	He	9.826	ppb	6.9	1959	109.18	70	130	
K	39	45	He	13.613	ppb	24.1	24576	151.26	70	130	<>CRL1 NR<MRL<R-11
V	51	74	He	0.101	ppb	5.3	1177	56.11	70	130	<>CRL1 NR<MRL<R-11
Cr	52	74	He	0.171	ppb	24.8	652	95	70	130	
Mn	55	74	He	0.181	ppb	9.7	784	100.56	70	130	
Ni	60	74	He	0.179	ppb	2.4	161	99.44	70	130	
Cu	65	74	He	0.209	ppb	22.2	347	116.11	70	130	
Zn	66	74	He	0.185	ppb	54.4	272	102.78	70	130	
As	75	74	He	0.188	ppb	16.0	65	104.44	70	130	
Mo	95	103	He	0.217	ppb	16.0	231	120.56	70	130	
Ag	107	103	He	0.197	ppb	5.7	642	109.44	70	130	
Sb	121	103	He	0.268	ppb	3.1	332	148.89	70	130	<>CRL1 NR<MRL<R-11
Ba	138	159	He	0.205	ppb	1.9	716	113.89	70	130	
Tl	205	159	He	0.178	ppb	8.1	1047	98.89	70	130	
Be	9	6	NoGas	0.172	ppb	14.7	354	95.56	70	130	
Ti	47	45	NoGas	0.149	ppb	7.9	140	82.78	70	130	
Co	59	74	NoGas	0.197	ppb	6.8	2146	109.44	70	130	
Cu	65	74	NoGas	0.238	ppb	22.2	745	132.22	70	130	<>CRL1 NR<MRL<R-11
Cd	111	103	NoGas	0.228	ppb	22.4	268	126.67	70	130	
Hg	201	159	NoGas	11.887	ppt	25.9	13	165.1	70	130	<>CRL1 NR<MRL<R-11
Pb	208	159	NoGas	0.214	ppb	10.4	2764	118.89	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	3.3	1505556	1483837.48	101.5	
Ge	74	H2	Pulse	2.9	501369	508025.38	98.7	
Sc	45	He	Pulse	1.9	203003	208835.17	97.2	
Ge	74	He	Pulse	2.8	119987	121380.146666667	98.9	
Rh	103	He	Pulse	2.9	292492	302021.16	96.8	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Tb	159	He	Pulse	2.8	423354	429916.006666667	98.5	
Bi	209	He	Pulse	2.5	252828	256831.363333333	98.4	
Li	6	NoGas	Pulse	6.0	748194	793244.14	94.3	
Sc	45	NoGas	Analog	9.3	1752333	1874561.46	93.5	
Ge	74	NoGas	Pulse	5.8	490057	528713.046666667	92.7	
Rh	103	NoGas	Pulse	8.0	518991	560665.076666667	92.6	
Tb	159	NoGas	Pulse	8.3	820861	882041.703333333	93.1	
Bi	209	NoGas	Pulse	7.7	439249	475402.23	92.4	

CRL Verification ICPMS5

Sample Name	9F27029-CRL2
File Name	018_CRL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:54:38
Sample Type	CRL2
Total Dilution	1.0000
Comment	A19F224 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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JB 06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	40.684	ppb	1.6	156158	90.41	70	130	
Ca	44	45	H2	45.342	ppb	1.7	7270	100.76	70	130	
Fe	57	74	H2	42.009	ppb	2.4	9298	93.35	70	130	
Se	78	74	H2	0.896	ppb	12.6	782	99.56	70	130	
Mg	24	45	He	44.908	ppb	5.2	14695	99.8	70	130	
Al	27	45	He	45.265	ppb	3.6	8635	100.59	70	130	
K	39	45	He	51.277	ppb	8.4	36793	113.95	70	130	
V	51	74	He	0.820	ppb	3.1	2633	91.11	70	130	
Cr	52	74	He	0.869	ppb	5.6	2350	96.56	70	130	
Mn	55	74	He	0.898	ppb	6.0	1618	99.78	70	130	
Ni	60	74	He	0.932	ppb	4.6	781	103.56	70	130	
Cu	65	74	He	0.936	ppb	5.7	1089	104	70	130	
Zn	66	74	He	0.956	ppb	11.7	546	106.22	70	130	
As	75	74	He	0.809	ppb	5.2	212	89.89	70	130	
Mo	95	103	He	0.883	ppb	5.3	938	98.11	70	130	
Ag	107	103	He	0.894	ppb	1.3	2891	99.33	70	130	
Sb	121	103	He	0.951	ppb	6.1	1169	105.67	70	130	
Ba	138	159	He	1.011	ppb	8.7	2927	112.33	70	130	
Tl	205	159	He	0.897	ppb	2.7	4911	99.67	70	130	
Be	9	6	NoGas	0.906	ppb	2.9	1968	100.67	70	130	
Ti	47	45	NoGas	0.799	ppb	13.5	601	88.78	70	130	
Co	59	74	NoGas	0.921	ppb	3.4	9180	102.33	70	130	
Cu	65	74	NoGas	0.946	ppb	16.3	2282	105.11	70	130	
Cd	111	103	NoGas	0.898	ppb	1.6	1098	99.78	70	130	
Hg	201	159	NoGas	40.687	ppt	20.6	29	113.02	70	130	
Pb	208	159	NoGas	0.954	ppb	0.3	11585	106	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.2	1466183	1483837.48	98.8	
Ge	74	H2	Pulse	1.5	491573	508025.38	96.8	
Sc	45	He	Pulse	1.8	203939	208835.17	97.7	
Ge	74	He	Pulse	1.5	119008	121380.146666667	98.0	
Rh	103	He	Pulse	2.0	293741	302021.16	97.3	
Tb	159	He	Pulse	2.4	423275	429916.006666667	98.5	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	1.7	254118	256831.363333333	98.9	
Li	6	NoGas	Pulse	0.9	782757	793244.14	98.7	
Sc	45	NoGas	Analog	0.5	1893841	1874561.46	101.0	
Ge	74	NoGas	Pulse	0.3	517955	528713.046666667	98.0	
Rh	103	NoGas	Pulse	0.3	549739	560665.076666667	98.1	
Tb	159	NoGas	Pulse	0.2	872229	882041.703333333	98.9	
Bi	209	NoGas	Pulse	0.7	468401	475402.23	98.5	

Quantitation Report ICPMS5

File Name	018_CRL_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 13:54:38	Sample Type	
Sample Name	**9F27029-CRL2**	CRL2	
Comment	**A19F224 JPB 06/26**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial: 1103	
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.906	0.906	ppb	2.9	0.9	
Na	23	45	H2	44.018	44.018	ppb	1.6	45	
Mg	24	45	He	44.908	44.908	ppb	5.2	45	
Al	27	45	He	45.265	45.265	ppb	3.6	45	
K	39	45	He	51.277	51.277	ppb	8.4	45	
Ca	44	45	H2	45.342	45.342	ppb	1.7	45	
Ti	47	45	NoGas	0.799	0.799	ppb	13.5	0.9	
V	51	74	He	0.82	0.820	ppb	3.1	0.9	
Cr	52	74	He	0.869	0.869	ppb	5.6	0.9	
Mn	55	74	He	0.898	0.898	ppb	8.0	0.9	
Fe	56	74	H2	42.198	42.198	ppb	1.4	45	
Fe	57	74	H2	42.009	42.009	ppb	2.4	45	
Co	59	74	NoGas	0.921	0.921	ppb	3.4	0.9	
Ni	60	74	He	0.932	0.932	ppb	4.6	0.9	
Cu	65	74	He	0.936	0.936	ppb	5.7	0.9	
Cu	65	74	NoGas	0.946	0.946	ppb	16.3	0.9	
Zn	66	74	He	0.956	0.956	ppb	11.7	0.9	
As	75	74	He	0.809	0.809	ppb	5.2	0.9	
Se	78	74	H2	0.896	0.896	ppb	12.6	0.9	
Mo	95	103	He	0.883	0.883	ppb	5.3	0.9	
Ag	107	103	He	0.894	0.894	ppb	1.3	0.9	
Cd	111	103	NoGas	0.898	0.898	ppb	1.6	0.9	
Sb	121	103	He	0.951	0.951	ppb	6.1	0.9	
Ba	138	159	He	1.011	1.011	ppb	8.7	0.9	
W	182	159	NoGas	0.006	0.006	ppb	65.2		
Hg	201	159	NoGas	40.687	40.687	ppt	20.6	36	
Tl	205	159	He	0.897	0.897	ppb	2.7	0.9	
Pb	208	159	NoGas	0.954	0.954	ppb	0.3	0.9	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	782757	0.9	793244.14	Pulse	98.7	
Sc	45	H2	1466183	1.2	1483837.48	Analog	98.8	
Sc	45	He	203939	1.8	208835.17	Pulse	97.7	
Sc	45	NoGas	1893841	0.5	1874561.46	Analog	101.0	
Ge	74	H2	491573	1.5	508025.38	Pulse	96.8	
Ge	74	He	119008	1.5	121380.146666667	Pulse	98.0	
Ge	74	NoGas	517955	0.3	528713.046666667	Pulse	98.0	
Rh	103	He	293741	2.0	302021.16	Pulse	97.3	
Rh	103	NoGas	549739	0.3	560665.076666667	Pulse	98.1	
Tb	159	He	423275	2.4	429916.006666667	Pulse	98.5	
Tb	159	NoGas	872229	0.2	882041.703333333	Pulse	98.9	
Bi	209	He	254118	1.7	256831.363333333	Pulse	98.9	
Bi	209	NoGas	468401	0.7	475402.23	Pulse	98.5	

CRL Verification ICPMS5

Sample Name	9F27029-CRL3
File Name	019CRL_.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 13:58:57
Sample Type	CRL3
Total Dilution	1.0000
Comment	A19F225 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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JB 06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	83.032	ppb	0.8	303118	92.26	70	130	
Ca	44	45	H2	88.738	ppb	4.4	13295	98.6	70	130	
Fe	57	74	H2	86.590	ppb	1.2	17985	96.21	70	130	
Se	78	74	H2	1.759	ppb	3.2	351	97.72	70	130	
Mg	24	45	He	91.890	ppb	3.4	29963	102.1	70	130	
Al	27	45	He	88.795	ppb	1.7	16825	98.66	70	130	
K	39	45	He	94.462	ppb	2.5	50685	104.96	70	130	
V	51	74	He	1.753	ppb	2.9	4554	97.39	70	130	
Cr	52	74	He	1.784	ppb	2.6	4603	99.11	70	130	
Mn	55	74	He	1.799	ppb	9.7	3187	99.94	70	130	
Ni	60	74	He	1.888	ppb	8.0	1577	104.89	70	130	
Cu	65	74	He	1.968	ppb	7.7	2156	109.33	70	130	
Zn	66	74	He	1.961	ppb	3.9	908	108.94	70	130	
As	75	74	He	1.850	ppb	5.4	463	102.78	70	130	
Mo	95	103	He	1.786	ppb	4.3	1908	99.22	70	130	
Ag	107	103	He	1.741	ppb	3.8	5659	96.72	70	130	
Sb	121	103	He	1.834	ppb	4.8	2262	101.89	70	130	
Ba	138	159	He	1.946	ppb	1.4	5511	108.11	70	130	
Tl	205	159	He	1.827	ppb	2.6	9930	101.5	70	130	
Be	9	6	NoGas	1.770	ppb	1.1	3843	98.33	70	130	
Ti	47	45	NoGas	1.722	ppb	13.2	1223	95.67	70	130	
Co	59	74	NoGas	1.869	ppb	0.3	18268	103.83	70	130	
Cu	65	74	NoGas	2.033	ppb	2.0	4588	112.94	70	130	
Cd	111	103	NoGas	1.915	ppb	1.8	2330	106.39	70	130	
Hg	201	159	NoGas	74.718	ppt	7.5	47	103.78	70	130	
Pb	208	159	NoGas	1.877	ppb	2.6	22414	104.28	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.8	1455954	1483837.48	98.1	
Ge	74	H2	Pulse	0.4	484753	508025.38	95.4	
Sc	45	He	Pulse	0.6	203927	208835.17	97.6	
Ge	74	He	Pulse	1.3	119591	121380.146666667	98.5	
Rh	103	He	Pulse	1.5	295654	302021.16	97.9	
Tb	159	He	Pulse	1.3	424379	429916.006666667	98.7	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	1.3	255221	256831.363333333	99.4	
Li	6	NoGas	Pulse	0.6	781929	793244.14	98.6	
Sc	45	NoGas	Analog	0.7	1864492	1874561.46	99.5	
Ge	74	NoGas	Pulse	0.1	519139	528713.046666667	98.2	
Rh	103	NoGas	Pulse	0.6	550388	560665.076666667	98.2	
Tb	159	NoGas	Pulse	0.6	874647	882041.703333333	99.2	
Bi	209	NoGas	Pulse	0.7	472165	475402.23	99.3	

Quantitation Report ICPMS5

File Name	019CRL__9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 13:58:57	Sample Type	
Sample Name	**9F27029-CRL3**	CRL3	
Comment	**A19F225 JPB 06/26**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial: 1104	
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	1.77	1.770	ppb	1.1	1.8	
Na	23	45	H2	89.836	89.836	ppb	0.8	90	
Mg	24	45	He	91.89	91.890	ppb	3.4	90	
Al	27	45	He	88.795	88.795	ppb	1.7	90	
K	39	45	He	94.462	94.462	ppb	2.5	90	
Ca	44	45	H2	88.738	88.738	ppb	4.4	90	
Ti	47	45	NoGas	1.722	1.722	ppb	13.2	1.8	
V	51	74	He	1.753	1.753	ppb	2.9	1.8	
Cr	52	74	He	1.784	1.784	ppb	2.6	1.8	
Mn	55	74	He	1.799	1.799	ppb	9.7	1.8	
Fe	56	74	H2	85.946	85.946	ppb	0.5	90	
Fe	57	74	H2	86.59	86.590	ppb	1.2	90	
Co	59	74	NoGas	1.869	1.869	ppb	0.3	1.8	
Ni	60	74	He	1.888	1.888	ppb	8.0	1.8	
Cu	65	74	He	1.968	1.968	ppb	7.7	1.8	
Cu	65	74	NoGas	2.033	2.033	ppb	2.0	1.8	
Zn	66	74	He	1.961	1.961	ppb	3.9	1.8	
As	75	74	He	1.85	1.850	ppb	5.4	1.8	
Se	78	74	H2	1.759	1.759	ppb	3.2	1.8	
Mo	95	103	He	1.786	1.786	ppb	4.3	1.8	
Ag	107	103	He	1.741	1.741	ppb	3.8	1.8	
Cd	111	103	NoGas	1.915	1.915	ppb	1.8	1.8	
Sb	121	103	He	1.834	1.834	ppb	4.8	1.8	
Ba	138	159	He	1.946	1.946	ppb	1.4	1.8	
W	182	159	NoGas	0.008	0.008	ppb	72.9		
Hg	201	159	NoGas	74.718	74.718	ppt	7.5	72	
Tl	205	159	He	1.827	1.827	ppb	2.6	1.8	
Pb	208	159	NoGas	1.877	1.877	ppb	2.6	1.8	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	781929	0.6	793244.14	Pulse	98.6	
Sc	45	H2	1455954	0.8	1483837.48	Analog	98.1	
Sc	45	He	203927	0.6	208835.17	Pulse	97.6	
Sc	45	NoGas	1864492	0.7	1874561.46	Analog	99.5	
Ge	74	H2	484753	0.4	508025.38	Pulse	95.4	
Ge	74	He	119591	1.3	121380.146666667	Pulse	98.5	
Ge	74	NoGas	519139	0.1	528713.046666667	Pulse	98.2	
Rh	103	He	295654	1.5	302021.16	Pulse	97.9	
Rh	103	NoGas	550388	0.6	560665.076666667	Pulse	98.2	
Tb	159	He	424379	1.3	429916.006666667	Pulse	98.7	
Tb	159	NoGas	874647	0.6	882041.703333333	Pulse	99.2	
Bi	209	He	255221	1.3	256831.363333333	Pulse	99.4	
Bi	209	NoGas	472165	0.7	475402.23	Pulse	99.3	

Quantitation Report ICPMS5

06/26/19

File Name	020ICSA.d		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 14:03:27	Sample Type	
Sample Name	**9F27029-IFA1**		ICSA
Comment	**A19F259**	Last Calib	06/27/2019 13:36:02
Prep Dilution	1.0000	Vial:	1111
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.007	0.007	ppb	43.8		
Na	23	45	H2	235726.021	235726.021	ppb	0.6		
Mg	24	45	He	99386.963	99386.963	ppb	0.9	100000	
Al	27	45	He	99393.453	99393.453	ppb	0.2	100000	
K	39	45	He	98278.13	98278.130	ppb	0.6	100000	
Ca	44	45	H2	306779.329	306779.329	ppb	0.7		
Ti	47	45	NoGas	1943.482	1943.482	ppb	0.8		
V	51	74	He	0.273	0.273	ppb	18.9	2	
Cr	52	74	He	1.832	1.832	ppb	1.5	2	
Mn	55	74	He	16.102	16.102	ppb	1.3	2	> CRI
Fe	56	74	H2	236416.628	236416.628	ppb	0.7		
Fe	57	74	H2	236482.645	236482.645	ppb	0.5		
Co	59	74	NoGas	1.125	1.125	ppb	4.9		
Ni	60	74	He	0.958	0.958	ppb	11.7	2	
Cu	65	74	He	0.61	0.610	ppb	21.0	2	
Cu	65	74	NoGas	1.796	1.796	ppb	1.3		
Zn	66	74	He	2.703	2.703	ppb	5.2	2	> CRI
As	75	74	He	0.253	0.253	ppb	15.9	0.9	
Se	78	74	H2	0.211	0.211	ppb	16.0	0.9	
Mo	95	103	He	2222.259	2222.259	ppb	1.9	2000	
Ag	107	103	He	0.276	0.276	ppb	19.4		
Cd	111	103	NoGas	0.434	0.434	ppb	39.6		
Sb	121	103	He	0.169	0.169	ppb	37.3	0.9	
Ba	138	159	He	1.584	1.584	ppb	2.6	2	> CRI
W	182	159	NoGas	98.634	98.634	ppb	0.7		
Hg	201	159	NoGas	121.72	121.720	ppt	8.9		
Tl	205	159	He	0.001	0.001	ppb	855.2	0.9	
Pb	208	159	NoGas	0.808	0.808	ppb	3.1		

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	704666	0.9	793244.14	Pulse	88.8	
Sc	45	H2	1062180	0.8	1483837.48	Pulse	71.6	
Sc	45	He	160188	0.5	208835.17	Pulse	76.7	
Sc	45	NoGas	1721608	1.8	1874561.46	Analog	91.8	
Ge	74	H2	349556	0.9	508025.38	Pulse	68.8	IS Q-06
Ge	74	He	89221	0.8	121380.146666667	Pulse	73.5	
Ge	74	NoGas	458843	0.3	528713.046666667	Pulse	86.8	
Rh	103	He	203317	1.2	302021.16	Pulse	67.3	IS Q-06
Rh	103	NoGas	445958	0.5	560665.076666667	Pulse	79.5	
Tb	159	He	322146	0.8	429916.006666667	Pulse	74.9	
Tb	159	NoGas	826712	0.3	882041.703333333	Pulse	93.7	
Bi	209	He	170468	0.8	256831.363333333	Pulse	66.4	IS Q-06
Bi	209	NoGas	398183	0.2	475402.23	Pulse	83.8	

Quantitation Report ICPMS5

File Name	020ICSA_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 14:03:27	Sample Type	
Sample Name	**9F27029-IFA1**	ICSA	
Comment	**A19F259**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial:	1111
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.007	0.007	ppb	43.8		
Na	23	45	H2	255041.996	255041.996	ppb	0.6		
Mg	24	45	He	99386.963	99386.963	ppb	0.9	100000	
Al	27	45	He	99393.453	99393.453	ppb	0.2	100000	
K	39	45	He	98278.13	98278.130	ppb	0.6	100000	
Ca	44	45	H2	306779.329	306779.329	ppb	0.7		
Ti	47	45	NoGas	1943.482	1943.482	ppb	0.8		
V	51	74	He	0.273	0.273	ppb	18.9	2	
Cr	52	74	He	1.832	1.832	ppb	1.5	2	
Mn	55	74	He	16.102	16.102	ppb	1.3	2	> CRI
Fe	56	74	H2	236416.628	236416.628	ppb	0.7		
Fe	57	74	H2	236482.645	236482.645	ppb	0.5		
Co	59	74	NoGas	1.125	1.125	ppb	4.9		
Ni	60	74	He	0.958	0.958	ppb	11.7	2	
Cu	65	74	He	0.61	0.610	ppb	21.0	2	
Cu	65	74	NoGas	1.796	1.796	ppb	1.3		
Zn	66	74	He	2.703	2.703	ppb	5.2	2	> CRI
As	75	74	He	0.253	0.253	ppb	15.9	0.9	
Se	78	74	H2	0.211	0.211	ppb	16.0	0.9	
Mo	95	103	He	2222.259	2222.259	ppb	1.9	2000	
Ag	107	103	He	0.276	0.276	ppb	19.4		
Cd	111	103	NoGas	0.434	0.434	ppb	39.6		
Sb	121	103	He	0.169	0.169	ppb	37.3	0.9	
Ba	138	159	He	1.584	1.584	ppb	2.6	2	> CRI
W	182	159	NoGas	98.634	98.634	ppb	0.7		
Hg	201	159	NoGas	121.72	121.720	ppt	8.9		
Tl	205	159	He	0.001	0.001	ppb	855.2	0.9	
Pb	208	159	NoGas	0.808	0.808	ppb	3.1		

Caution evaluating High matrix Samples for low levels of Mn. KO 06/28/19

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	704666	0.9	793244.14	Pulse	88.8	
Sc	45	H2	1062180	0.8	1483837.48	Pulse	71.6	
Sc	45	He	160188	0.5	208835.17	Pulse	76.7	
Sc	45	NoGas	1721608	1.8	1874561.46	Analog	91.8	
Ge	74	H2	349556	0.9	508025.38	Pulse	68.8	IS Q-06
Ge	74	He	89221	0.8	121380.146666667	Pulse	73.5	
Ge	74	NoGas	458843	0.3	528713.046666667	Pulse	86.8	
Rh	103	He	203317	1.2	302021.16	Pulse	67.3	IS Q-06
Rh	103	NoGas	445958	0.5	560665.076666667	Pulse	79.5	
Tb	159	He	322146	0.8	429916.006666667	Pulse	74.9	
Tb	159	NoGas	826712	0.3	882041.703333333	Pulse	93.7	
Bi	209	He	170468	0.8	256831.363333333	Pulse	66.4	IS Q-06
Bi	209	NoGas	398183	0.2	475402.23	Pulse	83.8	

IFA ok 06/28/19

Quantitation Report ICPMS5

File Name	021ICSB.d		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029.b		
Acq Time	6/27/2019 14:07:41	Sample Type	
Sample Name	**9F27029-IFB1**	ICSB	
Comment	**A19F260**	Last Calib	06/27/2019 13:36:02
Prep Dilution	1.0000	Vial:	1112
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.006	0.006	ppb	76.1		
Na	23	45	H2	241665.866	241665.866	ppb	0.7		
Mg	24	45	He	102329.708	102329.708	ppb	0.2	100000	
Al	27	45	He	100076.073	100076.073	ppb	0.5	100000	
K	39	45	He	97316.85	97316.850	ppb	0.7	100000	
Ca	44	45	H2	305183.248	305183.248	ppb	1.3		
Ti	47	45	NoGas	1922.122	1922.122	ppb	1.2		
V	51	74	He	216.265	216.265	ppb	1.1	200	
Cr	52	74	He	202.335	202.335	ppb	0.3	200	
Mn	55	74	He	216.768	216.768	ppb	0.2	200	
Fe	56	74	H2	240656.157	240656.157	ppb	0.5		
Fe	57	74	H2	240920.814	240920.814	ppb	0.6		
Co	59	74	NoGas	206.18	206.180	ppb	0.8		
Ni	60	74	He	194.763	194.763	ppb	0.7	200	
Cu	65	74	He	191.336	191.336	ppb	1.1	200	
Cu	65	74	NoGas	189.457	189.457	ppb	0.4		
Zn	66	74	He	96.98	96.980	ppb	1.4	100	
As	75	74	He	98.531	98.531	ppb	0.7	100	
Se	78	74	H2	96.798	96.798	ppb	0.7	100	
Mo	95	103	He	2244.503	2244.503	ppb	1.5	2000	
Ag	107	103	He	47.293	47.293	ppb	0.9	50	
Cd	111	103	NoGas	100.338	100.338	ppb	0.7		
Sb	121	103	He	0.151	0.151	ppb	16.8	0.9	
Ba	138	159	He	2.135	2.135	ppb	1.8	2	> +/- 10%
W	182	159	NoGas	97.605	97.605	ppb	0.5		
Hg	201	159	NoGas	1955.693	1955.693	ppt	0.4		
Tl	205	159	He	0	0.000	ppb	N/A	0.9	
Pb	208	159	NoGas	0.775	0.775	ppb	1.6		

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	693805	1.0	793244.14	Pulse	87.5	
Sc	45	H2	1096979	0.7	1483837.48	Pulse	73.9	
Sc	45	He	161215	0.2	208835.17	Pulse	77.2	
Sc	45	NoGas	1706806	0.9	1874561.46	Analog	91.1	
Ge	74	H2	365630	0.9	508025.38	Pulse	72.0	
Ge	74	He	90355	0.5	121380.146666667	Pulse	74.4	
Ge	74	NoGas	454501	1.0	528713.046666667	Pulse	86.0	
Rh	103	He	204136	0.2	302021.16	Pulse	67.6	IS Q-06
Rh	103	NoGas	444527	0.3	560665.076666667	Pulse	79.3	
Tb	159	He	320759	0.6	429916.006666667	Pulse	74.6	
Tb	159	NoGas	813711	0.4	882041.703333333	Pulse	92.3	
Bi	209	He	166828	0.6	256831.363333333	Pulse	65.0	IS Q-06
Bi	209	NoGas	384875	0.5	475402.23	Pulse	81.0	

Quantitation Report ICPMS5

File Name	021ICSB_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 14:07:41	Sample Type	
Sample Name	**9F27029-IFB1**	ICSB	
Comment	**A19F260**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial:	1112
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	0.006	0.006	ppb	76.1		
Na	23	45	H2	261468.568	261468.568	ppb	0.7		
Mg	24	45	He	102329.708	102329.708	ppb	0.2	100000	
Al	27	45	He	100076.073	100076.073	ppb	0.5	100000	
K	39	45	He	97316.85	97316.850	ppb	0.7	100000	
Ca	44	45	H2	305183.248	305183.248	ppb	1.3		
Ti	47	45	NoGas	1922.122	1922.122	ppb	1.2		
V	51	74	He	216.265	216.265	ppb	1.1	200	
Cr	52	74	He	202.335	202.335	ppb	0.3	200	
Mn	55	74	He	216.768	216.768	ppb	0.2	200	
Fe	56	74	H2	240656.157	240656.157	ppb	0.5		
Fe	57	74	H2	240920.814	240920.814	ppb	0.6		
Co	59	74	NoGas	206.18	206.180	ppb	0.8		
Ni	60	74	He	194.763	194.763	ppb	0.7	200	
Cu	65	74	He	191.336	191.336	ppb	1.1	200	
Cu	65	74	NoGas	189.457	189.457	ppb	0.4		
Zn	66	74	He	96.98	96.980	ppb	1.4	100	
As	75	74	He	98.531	98.531	ppb	0.7	100	
Se	78	74	H2	96.798	96.798	ppb	0.7	100	
Mo	95	103	He	2244.503	2244.503	ppb	1.5	2000	
Ag	107	103	He	47.293	47.293	ppb	0.9	50	
Cd	111	103	NoGas	100.338	100.338	ppb	0.7		
Sb	121	103	He	0.151	0.151	ppb	16.8	0.9	
Ba	138	159	He	2.135	2.135	ppb	1.8	2	> +/- 10%
W	182	159	NoGas	97.605	97.605	ppb	0.5		
Hg	201	159	NoGas	1955.693	1955.693	ppt	0.4		
Tl	205	159	He	0	0.000	ppb	N/A	0.9	
Pb	208	159	NoGas	0.775	0.775	ppb	1.6		

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	693805	1.0	793244.14	Pulse	87.5	
Sc	45	H2	1096979	0.7	1483837.48	Pulse	73.9	
Sc	45	He	161215	0.2	208835.17	Pulse	77.2	
Sc	45	NoGas	1706806	0.9	1874561.46	Analog	91.1	
Ge	74	H2	365630	0.9	508025.38	Pulse	72.0	
Ge	74	He	90355	0.5	121380.146666667	Pulse	74.4	
Ge	74	NoGas	454501	1.0	528713.046666667	Pulse	86.0	
Rh	103	He	204136	0.2	302021.16	Pulse	67.6	IS Q-06
Rh	103	NoGas	444527	0.3	560665.076666667	Pulse	79.3	
Tb	159	He	320759	0.6	429916.006666667	Pulse	74.6	
Tb	159	NoGas	813711	0.4	882041.703333333	Pulse	92.3	
Bi	209	He	166828	0.6	256831.363333333	Pulse	65.0	IS Q-06
Bi	209	NoGas	384875	0.5	475402.23	Pulse	81.0	

Continuing Calibration Verification (CCV) Report ICPMS5

Sample Name	9F27029-CCV1	**Total Dilution**	1.0000
File Name	033_CCV.d	**Sample Type**	CCV
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	**ISTD Ref FileName**	004CALB.d
Acq Time	6/27/2019 15:04:06	**Comment**	A19E305 JPB 06/27

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	Low	High	% Rec	Flag
Na	23	45	H2	3581.738	ppb	0.4	12936683	4000	90	110	89.54	> +/- 10%
Ca	44	45	H2	3963.505	ppb	0.7	573846	4000	90	110	99.09	
Fe	56	74	H2	3812.900	ppb	0.5	32113360	4000	90	110	95.32	
Fe	57	74	H2	3651.626	ppb	0.4	758448	4000	90	110	91.29	
Se	78	74	H2	39.147	ppb	1.3	8059	40	90	110	97.87	
Mg	24	45	He	4061.198	ppb	1.9	1292194	4000	90	110	101.53	
Al	27	45	He	3771.877	ppb	1.7	695076	4000	90	110	94.3	
K	39	45	He	4083.517	ppb	1.4	1305274	4000	90	110	102.09	
V	51	74	He	99.593	ppb	1.2	200022	100	90	110	99.59	
Cr	52	74	He	97.639	ppb	1.7	233774	100	90	110	97.64	
Mn	55	74	He	97.657	ppb	1.8	165370	100	90	110	97.66	
Ni	60	74	He	104.097	ppb	2.5	84291	100	90	110	104.1	
Cu	65	74	He	104.969	ppb	2.5	105678	100	90	110	104.97	
Zn	66	74	He	104.071	ppb	2.3	36591	100	90	110	104.07	
As	75	74	He	97.012	ppb	1.1	22763	100	90	110	97.01	
Mo	95	103	He	38.603	ppb	0.7	39730	40	90	110	96.51	
Ag	107	103	He	39.239	ppb	1.7	123014	40	90	110	98.1	
Sb	121	103	He	36.220	ppb	0.9	43067	40	90	110	90.55	
Ba	138	159	He	102.055	ppb	2.1	272390	100	90	110	102.06	
Tl	205	159	He	38.635	ppb	1.6	201734	40	90	110	96.59	
Be	9	6	NoGas	39.275	ppb	1.1	78621	40	90	110	98.19	
Ti	47	45	NoGas	91.682	ppb	2.4	62232	100	90	110	91.68	
Co	59	74	NoGas	100.012	ppb	1.6	940369	100	90	110	100.01	
Cu	65	74	NoGas	104.094	ppb	2.1	216798	100	90	110	104.09	
Cd	111	103	NoGas	98.004	ppb	2.2	115437	100	90	110	98	
Hg	201	159	NoGas	783.341	ppt	3.3	425	800	90	110	97.92	
Pb	208	159	NoGas	99.601	ppb	2.2	1178846	100	90	110	99.6	

reprocessed after curve changed JPB 06/28/19

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.9	1502599	1483837.48	101.3	
Ge	74	H2	Pulse	0.8	503614	508025.38	99.1	
Sc	45	He	Pulse	0.7	199719	208835.17	95.6	
Ge	74	He	Pulse	0.7	116805	121380.146666667	96.2	
Rh	103	He	Pulse	0.4	285451	302021.16	94.5	
Tb	159	He	Pulse	0.9	411042	429916.006666667	95.6	
Bi	209	He	Pulse	1.1	244248	256831.363333333	95.1	
Li	6	NoGas	Pulse	2.9	721286	793244.14	90.9	
Sc	45	NoGas	Analog	1.4	1851493	1874561.46	98.8	
Ge	74	NoGas	Pulse	2.0	510324	528713.046666667	96.5	
Rh	103	NoGas	Pulse	2.7	535613	560665.076666667	95.5	
Tb	159	NoGas	Pulse	1.9	885005	882041.703333333	100.3	
Bi	209	NoGas	Pulse	1.5	466750	475402.23	98.2	

Quantitation Report ICPMS5

File Name	033_CCV_9F27029_9F27029a.D		
File Path	C:\Agilent\ICPMH\1\DATA\9F27029b.b		
Acq Time	6/27/2019 15:04:06	Sample Type	
Sample Name	**9F27029-CCV1**	CCV	
Comment	**A19E305 JPB 06/27**	Last Calib	06/28/2019 12:29:45
Prep Dilution	1.0000	Vial:	2
Total Dilution	**1.0000**	Operator Name	ICPMS Analyst

FullQuant Table

Element	Mass	ISTD	Tune Mode	Raw Conc	Corrected Conc.	Units	RSD(%)	ExpectedValue	QC Flag
Be	9	6	NoGas	39.275	39.275	ppb	1.1	40	
Na	23	45	H2	3875.235	3875.235	ppb	0.4	4000	
Mg	24	45	He	4061.198	4061.198	ppb	1.9	4000	
Al	27	45	He	3771.877	3771.877	ppb	1.7	4000	
K	39	45	He	4083.517	4083.517	ppb	1.4	4000	
Ca	44	45	H2	3963.505	3963.505	ppb	0.7	4000	
Ti	47	45	NoGas	91.682	91.682	ppb	2.4	100	
V	51	74	He	99.593	99.593	ppb	1.2	100	
Cr	52	74	He	97.639	97.639	ppb	1.7	100	
Mn	55	74	He	97.657	97.657	ppb	1.8	100	
Fe	56	74	H2	3812.9	3812.900	ppb	0.5	4000	
Fe	57	74	H2	3651.626	3651.626	ppb	0.4	4000	
Co	59	74	NoGas	100.012	100.012	ppb	1.6	100	
Ni	60	74	He	104.097	104.097	ppb	2.5	100	
Cu	65	74	He	104.969	104.969	ppb	2.5	100	
Cu	65	74	NoGas	104.094	104.094	ppb	2.1	100	
Zn	66	74	He	104.071	104.071	ppb	2.3	100	
As	75	74	He	97.012	97.012	ppb	1.1	100	
Se	78	74	H2	39.147	39.147	ppb	1.3	40	
Mo	95	103	He	38.603	38.603	ppb	0.7	40	
Ag	107	103	He	39.239	39.239	ppb	1.7	40	
Cd	111	103	NoGas	98.004	98.004	ppb	2.2	100	
Sb	121	103	He	36.22	36.220	ppb	0.9	40	
Ba	138	159	He	102.055	102.055	ppb	2.1	100	
W	182	159	NoGas	0.018	0.018	ppb	13.7		
Hg	201	159	NoGas	783.341	783.341	ppt	3.3	800	
Tl	205	159	He	38.635	38.635	ppb	1.6	40	
Pb	208	159	NoGas	99.601	99.601	ppb	2.2	100	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD Recovery %	QC Flag
Li	6	NoGas	721286	2.9	793244.14	Pulse	90.9	
Sc	45	H2	1502599	0.9	1483837.48	Analog	101.3	
Sc	45	He	199719	0.7	208835.17	Pulse	95.6	
Sc	45	NoGas	1851493	1.4	1874561.46	Analog	98.8	
Ge	74	H2	503614	0.8	508025.38	Pulse	99.1	
Ge	74	He	116805	0.7	121380.146666667	Pulse	96.2	
Ge	74	NoGas	510324	2.0	528713.046666667	Pulse	96.5	
Rh	103	He	285451	0.4	302021.16	Pulse	94.5	
Rh	103	NoGas	535613	2.7	560665.076666667	Pulse	95.5	
Tb	159	He	411042	0.9	429916.006666667	Pulse	95.6	
Tb	159	NoGas	885005	1.9	882041.703333333	Pulse	100.3	
Bi	209	He	244248	1.1	256831.363333333	Pulse	95.1	
Bi	209	NoGas	466750	1.5	475402.23	Pulse	98.2	

Continuing Calibration Blank (CCB) Report ICPMS6

Sample Name	9F27029-CCB1
File Name	035_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 15:12:41
Sample Type	CCB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	Limit	QC Flag
Na	23	45	H2	1.058	ppb	32.3	16513	45	
Ca	44	45	H2	0.666	ppb	64.6	978	45	
Fe	56	74	H2	1.113	ppb	20.1	16001	22.5	
Fe	57	74	H2	1.070	ppb	43.5	929	22.5	
Se	78	74	H2	0.035	ppb	46.1	10	0.45	
Mg	24	45	He	0.487	ppb	6.7	260	45	
Al	27	45	He	0.404	ppb	34.7	190	22.5	
K	39	45	He	3.765	ppb	17.7	20834	45	
V	51	74	He	-0.082	ppb	N/A	779	0.45	
Cr	52	74	He	-0.019	ppb	N/A	183	0.45	
Mn	55	74	He	-0.008	ppb	N/A	56	0.45	
Ni	60	74	He	0.005	ppb	277.6	16	0.45	
Cu	65	74	He	0.021	ppb	132.4	148	0.45	
Zn	66	74	He	0.007	ppb	335.5	203	1.8	
As	75	74	He	-0.017	ppb	N/A	15	0.45	
Mo	95	103	He	0.062	ppb	46.3	68	0.45	
Ag	107	103	He	0.004	ppb	119.9	21	0.09	
Sb	121	103	He	0.407	ppb	9.3	497	0.45	
Ba	138	159	He	0.010	ppb	70.8	174	0.45	
Tl	205	159	He	0.004	ppb	61.8	106	0.09	
Be	9	6	NoGas	0.004	ppb	77.2	9	0.09	
Ti	47	45	NoGas	-0.001	ppb	N/A	45	0.45	
Co	59	74	NoGas	-0.001	ppb	N/A	378	0.09	
Cu	65	74	NoGas	-0.020	ppb	N/A	238	0.45	
Cd	111	103	NoGas	0.016	ppb	25.9	31	0.09	
Hg	201	159	NoGas	7.780	ppt	3.3	12	36	
Pb	208	159	NoGas	0.016	ppb	24.1	648	0.09	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Sc	45	H2	Analog	1.5	1480748	1483837.48	99.8	
Ge	74	H2	Pulse	0.6	498267	508025.38	98.1	
Sc	45	He	Pulse	1.2	197299	208835.17	94.5	
Ge	74	He	Pulse	0.9	116616	121380.146666667	96.1	
Rh	103	He	Pulse	0.4	289913	302021.16	96.0	

Continuing Calibration Blank (CCB) Report ICPMS6

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Tb	159	He	Pulse	1.5	412037	429916.006666667	95.8	
Bi	209	He	Pulse	1.5	248553	256831.363333333	96.8	
Li	6	NoGas	Pulse	0.9	716836	793244.14	90.4	
Sc	45	NoGas	Analog	1.6	1838823	1874561.46	98.1	
Ge	74	NoGas	Pulse	0.8	510809	528713.046666667	96.6	
Rh	103	NoGas	Pulse	0.9	548153	560665.076666667	97.8	
Tb	159	NoGas	Pulse	1.2	880829	882041.703333333	99.9	
Bi	209	NoGas	Pulse	0.7	470794	475402.23	99.0	

Continuing Calibration Verification (CCV) Report ICPMS5

Sample Name	9F27029-CCV3	**Total Dilution**	1.0000
File Name	046_CCV.d	**Sample Type**	CCV
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	**ISTD Ref FileName**	004CALB.d
Acq Time	6/27/2019 16:00:01	**Comment**	A19E305 JPB 06/27

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	Low	High	% Rec	Flag
Na	23	45	H2	3860.998	ppb	1.6	13050514	4000	90	110	96.52	
Ca	44	45	H2	3846.318	ppb	1.2	563914	4000	90	110	96.16	
Fe	56	74	H2	3824.197	ppb	0.4	31806677	4000	90	110	95.6	
Fe	57	74	H2	3660.007	ppb	0.4	750702	4000	90	110	91.5	
Se	78	74	H2	39.342	ppb	2.0	7998	40	90	110	98.35	
Mg	24	45	He	4290.515	ppb	2.1	1355461	4000	90	110	107.26	
Al	27	45	He	3840.616	ppb	2.1	702696	4000	90	110	96.02	
K	39	45	He	4190.128	ppb	1.5	1329364	4000	90	110	104.75	
V	51	74	He	99.586	ppb	1.4	200109	100	90	110	99.59	
Cr	52	74	He	98.411	ppb	1.0	235745	100	90	110	98.41	
Mn	55	74	He	97.540	ppb	1.7	165253	100	90	110	97.54	
Ni	60	74	He	104.666	ppb	2.3	84790	100	90	110	104.67	
Cu	65	74	He	104.928	ppb	1.4	105694	100	90	110	104.93	
Zn	66	74	He	105.734	ppb	0.6	37197	100	90	110	105.73	
As	75	74	He	96.814	ppb	1.7	22727	100	90	110	96.81	
Mo	95	103	He	39.161	ppb	1.1	40286	40	90	110	97.9	
Ag	107	103	He	39.324	ppb	1.3	123210	40	90	110	98.31	
Sb	121	103	He	36.426	ppb	2.3	43288	40	90	110	91.07	
Ba	138	159	He	102.227	ppb	0.9	270209	100	90	110	102.23	
Tl	205	159	He	39.251	ppb	0.3	202951	40	90	110	98.13	
Be	9	6	NoGas	38.947	ppb	1.9	79717	40	90	110	97.37	
Ti	47	45	NoGas	92.997	ppb	0.3	62968	100	90	110	93	
Co	59	74	NoGas	100.491	ppb	1.7	942366	100	90	110	100.49	
Cu	65	74	NoGas	104.304	ppb	1.5	216674	100	90	110	104.3	
Cd	111	103	NoGas	98.083	ppb	1.3	115461	100	90	110	98.08	
Hg	201	159	NoGas	800.148	ppt	2.9	435	800	90	110	100.02	
Pb	208	159	NoGas	98.988	ppb	0.9	1175824	100	90	110	98.99	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.3	1521586	1483837.48	102.5	
Ge	74	H2	Pulse	0.6	497326	508025.38	97.9	
Sc	45	He	Pulse	1.3	198318	208835.17	95.0	
Ge	74	He	Pulse	1.3	116869	121380.146666667	96.3	
Rh	103	He	Pulse	1.1	285301	302021.16	94.5	
Tb	159	He	Pulse	1.3	407032	429916.006666667	94.7	
Bi	209	He	Pulse	1.3	243041	256831.363333333	94.6	
Li	6	NoGas	Pulse	1.1	737357	793244.14	93.0	
Sc	45	NoGas	Analog	1.5	1846447	1874561.46	98.5	
Ge	74	NoGas	Pulse	1.1	508914	528713.046666667	96.3	
Rh	103	NoGas	Pulse	0.9	535126	560665.076666667	95.4	
Tb	159	NoGas	Pulse	1.0	888008	882041.703333333	100.7	
Bi	209	NoGas	Pulse	1.2	464523	475402.23	97.7	

Continuing Calibration Blank (CCB) Report ICPMS6

Sample Name	9F27029-CCB2
File Name	047_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 16:04:19
Sample Type	CCB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	Limit	QC Flag
Na	23	45	H2	7.821	ppb	3.6	41419	45	
Ca	44	45	H2	5.795	ppb	16.2	1826	45	
Fe	56	74	H2	4.107	ppb	2.6	43022	22.5	
Fe	57	74	H2	4.090	ppb	16.1	1628	22.5	
Se	78	74	H2	0.051	ppb	29.8	14	0.45	
Mg	24	45	He	2.113	ppb	16.9	801	45	
Al	27	45	He	1.460	ppb	29.4	397	22.5	
K	39	45	He	5.651	ppb	27.3	22241	45	
V	51	74	He	-0.087	ppb	N/A	786	0.45	
Cr	52	74	He	0.022	ppb	84.2	287	0.45	
Mn	55	74	He	0.102	ppb	15.6	246	0.45	
Ni	60	74	He	0.025	ppb	52.6	32	0.45	
Cu	65	74	He	0.057	ppb	35.4	188	0.45	
Zn	66	74	He	-0.064	ppb	N/A	182	1.8	
As	75	74	He	-0.005	ppb	N/A	18	0.45	
Mo	95	103	He	0.059	ppb	59.2	67	0.45	
Ag	107	103	He	0.008	ppb	78.6	34	0.09	
Sb	121	103	He	0.320	ppb	5.5	401	0.45	
Ba	138	159	He	0.030	ppb	45.0	228	0.45	
Tl	205	159	He	0.004	ppb	32.0	108	0.09	
Be	9	6	NoGas	0.004	ppb	107.7	8	0.09	
Ti	47	45	NoGas	0.028	ppb	95.8	67	0.45	
Co	59	74	NoGas	0.005	ppb	42.1	430	0.09	
Cu	65	74	NoGas	0.030	ppb	94.1	345	0.45	
Cd	111	103	NoGas	0.029	ppb	31.0	48	0.09	
Hg	201	159	NoGas	7.377	ppt	19.4	11	36	
Pb	208	159	NoGas	0.022	ppb	22.2	716	0.09	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Sc	45	H2	Analog	0.4	1582802	1483837.48	106.7	
Ge	74	H2	Pulse	0.7	523511	508025.38	103.0	
Sc	45	He	Pulse	0.4	204831	208835.17	98.1	
Ge	74	He	Pulse	0.3	119127	121380.146666667	98.1	
Rh	103	He	Pulse	1.5	297121	302021.16	98.4	

Continuing Calibration Blank (CCB) Report ICPMS6

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Tb	159	He	Pulse	0.4	411670	429916.006666667	95.8	
Bi	209	He	Pulse	1.5	245369	256831.363333333	95.5	
Li	6	NoGas	Pulse	1.4	744969	793244.14	93.9	
Sc	45	NoGas	Analog	0.7	1890281	1874561.46	100.8	
Ge	74	NoGas	Pulse	0.8	515313	528713.046666667	97.5	
Rh	103	NoGas	Pulse	0.9	556967	560665.076666667	99.3	
Tb	159	NoGas	Pulse	0.8	884436	882041.703333333	100.3	
Bi	209	NoGas	Pulse	0.7	468974	475402.23	98.6	

CRL Verification ICPMS5

Sample Name	9F27029-CRL4
File Name	048CRL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 16:08:39
Sample Type	CRL1
Total Dilution	1.0000
Comment	A19F223 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Fail
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na ✓	23	45	H2	15.799	ppb	0.7	69601	175.54	70	130	<>CRL1 NR<MRL<R-11
Ca ✓	44	45	H2	13.353	ppb	7.1	2984	148.37	70	130	<>CRL1 NR<MRL<R-11
Fe	56	74	H2	11.531	ppb	0.6	106629	128.12	70	130	
Fe	57	74	H2	11.523	ppb	4.1	3190	128.03	70	130	
Se	78	74	H2	0.210	ppb	27.8	47	116.67	70	130	
Mg ✓	24	45	He	12.280	ppb	7.5	3828	136.44	70	130	<>CRL1 NR<MRL<R-11
Al	27	45	He	11.585	ppb	10.9	2146	128.72	70	130	
K ✓	39	45	He	20.877	ppb	28.6	25244	231.97	70	130	<>CRL1 NR<MRL<R-11
V	51	74	He	0.167	ppb	20.6	1238	92.78	70	130	
Cr	52	74	He	0.204	ppb	5.9	692	113.33	70	130	
Mn ✓	55	74	He	0.293	ppb	8.1	547	162.78	70	130	<>CRL1 NR<MRL<R-11
Ni	60	74	He	0.232	ppb	16.6	192	128.89	70	130	
Cu ✓	65	74	He	0.311	ppb	22.5	421	172.78	70	130	<>CRL1 NR<MRL<R-11
Zn ✓	66	74	He	0.521	ppb	15.4	370	289.44	70	130	<>CRL1 NR<MRL<R-11
As	75	74	He	0.190	ppb	12.3	61	105.56	70	130	
Mo	95	103	He	0.216	ppb	3.9	219	120	70	130	
Ag	107	103	He	0.187	ppb	10.6	573	103.89	70	130	
Sb ✓	121	103	He	0.286	ppb	15.4	334	158.89	70	130	<>CRL1 NR<MRL<R-11
Ba ✓	138	159	He	0.268	ppb	14.3	806	148.89	70	130	<>CRL1 NR<MRL<R-11
Tl	205	159	He	0.180	ppb	13.0	958	100	70	130	
Be	9	6	NoGas	0.189	ppb	9.9	390	105	70	130	
Ti	47	45	NoGas	0.226	ppb	36.6	203	125.56	70	130	
Co	59	74	NoGas	0.185	ppb	4.5	2151	102.78	70	130	
Cu ✓	65	74	NoGas	0.256	ppb	7.8	823	142.22	70	130	<>CRL1 NR<MRL<R-11
Cd	111	103	NoGas	0.205	ppb	4.2	262	113.89	70	130	
Hg ✓	201	159	NoGas	16.092	ppt	54.2	16	223.5	70	130	<>CRL1 NR<MRL<R-11
Pb	208	159	NoGas	0.212	ppb	8.4	2970	117.78	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.3	1586223	1483837.48	106.9	
Ge	74	H2	Pulse	0.1	516820	508025.38	101.7	
Sc	45	He	Pulse	10.3	191346	208835.17	91.6	
Ge	74	He	Pulse	8.6	112888	121380.146666667	93.0	
Rh	103	He	Pulse	10.1	276810	302021.16	91.7	

JM 06/27/19

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Tb	159	He	Pulse	10.5	386500	429916.006666667	89.9	
Bi	209	He	Pulse	9.2	232360	256831.363333333	90.5	
Li	6	NoGas	Pulse	0.8	744250	793244.14	93.8	
Sc	45	NoGas	Analog	1.3	1892473	1874561.46	101.0	
Ge	74	NoGas	Pulse	0.6	516536	528713.046666667	97.7	
Rh	103	NoGas	Pulse	0.0	554818	560665.076666667	99.0	
Tb	159	NoGas	Pulse	0.9	884498	882041.703333333	100.3	
Bi	209	NoGas	Pulse	0.6	468731	475402.23	98.6	

CRL Verification ICPMS5

Sample Name	9F27029-CRL5
File Name	049_CRL.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 16:12:58
Sample Type	CRL2
Total Dilution	1.0000
Comment	A19F224 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

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QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	51.252	ppb	0.6	189356	113.89	70	130	
Ca	44	45	H2	52.070	ppb	8.1	8660	115.71	70	130	
Fe	57	74	H2	44.976	ppb	0.8	10214	99.95	70	130	
Se	78	74	H2	0.963	ppb	3.2	204	107	70	130	
Mg	24	45	He	46.083	ppb	4.9	14795	102.41	70	130	
Al	27	45	He	43.093	ppb	2.2	8077	95.76	70	130	
K	39	45	He	52.277	ppb	3.4	36436	116.17	70	130	
V	51	74	He	0.895	ppb	8.1	2750	99.44	70	130	
Cr	52	74	He	0.873	ppb	7.4	2330	97	70	130	
Mn	55	74	He	0.983	ppb	2.7	1742	109.22	70	130	
Ni	60	74	He	0.927	ppb	16.6	766	103	70	130	
Cu	65	74	He	1.045	ppb	5.7	1185	116.11	70	130	
Zn	66	74	He	0.919	ppb	12.7	526	102.11	70	130	
As	75	74	He	0.886	ppb	3.6	228	98.44	70	130	
Mo	95	103	He	0.882	ppb	4.1	931	98	70	130	
Ag	107	103	He	0.880	ppb	3.3	2829	97.78	70	130	
Sb	121	103	He	0.913	ppb	4.3	1115	101.44	70	130	
Ba	138	159	He	1.029	ppb	6.5	2866	114.33	70	130	
Tl	205	159	He	0.896	ppb	2.2	4716	99.56	70	130	
Be	9	6	NoGas	0.890	ppb	1.2	1830	98.89	70	130	
Ti	47	45	NoGas	0.883	ppb	19.8	648	98.11	70	130	
Co	59	74	NoGas	0.892	ppb	3.0	8723	99.11	70	130	
Cu	65	74	NoGas	1.065	ppb	3.0	2482	118.33	70	130	
Cd	111	103	NoGas	0.915	ppb	5.6	1113	101.67	70	130	
Hg	201	159	NoGas	44.646	ppt	13.9	31	124.02	70	130	
Pb	208	159	NoGas	0.944	ppb	1.7	11615	104.89	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.6	1544995	1483837.48	104.1	
Ge	74	H2	Pulse	0.3	511838	508025.38	100.8	
Sc	45	He	Pulse	1.8	200161	208835.17	95.8	
Ge	74	He	Pulse	1.2	117446	121380.146666667	96.8	
Rh	103	He	Pulse	1.1	291702	302021.16	96.6	
Tb	159	He	Pulse	1.3	406922	429916.006666667	94.7	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	1.5	245280	256831.363333333	95.5	
Li	6	NoGas	Pulse	2.1	740744	793244.14	93.4	
Sc	45	NoGas	Analog	1.2	1860992	1874561.46	99.3	
Ge	74	NoGas	Pulse	1.1	507687	528713.046666667	96.0	
Rh	103	NoGas	Pulse	1.1	547560	560665.076666667	97.7	
Tb	159	NoGas	Pulse	1.4	884108	882041.703333333	100.2	
Bi	209	NoGas	Pulse	1.2	469217	475402.23	98.7	

CRL Verification ICPMS5

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Sample Name	9F27029-CRL6
File Name	050CRL_.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 16:17:17
Sample Type	CRL3
Total Dilution	1.0000
Comment	A19F225 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	92.963	ppb	0.6	328477	103.29	70	130	
Ca	44	45	H2	96.292	ppb	2.9	15058	106.99	70	130	
Fe	57	74	H2	87.300	ppb	1.0	18774	97	70	130	
Se	78	74	H2	1.779	ppb	0.7	368	98.83	70	130	
Mg	24	45	He	91.587	ppb	1.1	28953	101.76	70	130	
Al	27	45	He	90.892	ppb	1.6	16695	100.99	70	130	
K	39	45	He	98.474	ppb	2.2	50380	109.42	70	130	
V	51	74	He	1.791	ppb	1.6	4507	99.5	70	130	
Cr	52	74	He	1.758	ppb	2.7	4417	97.67	70	130	
Mn	55	74	He	1.885	ppb	5.7	3247	104.72	70	130	
Ni	60	74	He	1.904	ppb	2.3	1548	105.78	70	130	
Cu	65	74	He	1.963	ppb	1.9	2094	109.06	70	130	
Zn	66	74	He	2.310	ppb	12.9	1004	128.33	70	130	
As	75	74	He	1.708	ppb	3.3	418	94.89	70	130	
Mo	95	103	He	1.855	ppb	2.4	1945	103.06	70	130	
Ag	107	103	He	1.786	ppb	2.6	5702	99.22	70	130	
Sb	121	103	He	1.715	ppb	5.0	2077	95.28	70	130	
Ba	138	159	He	1.891	ppb	1.3	5138	105.06	70	130	
Tl	205	159	He	1.821	ppb	0.7	9484	101.17	70	130	
Be	9	6	NoGas	1.853	ppb	5.3	3746	102.94	70	130	
Ti	47	45	NoGas	1.630	ppb	6.2	1148	90.56	70	130	
Co	59	74	NoGas	1.825	ppb	2.1	17294	101.39	70	130	
Cu	65	74	NoGas	2.100	ppb	0.5	4583	116.67	70	130	
Cd	111	103	NoGas	1.812	ppb	5.5	2157	100.67	70	130	
Hg	201	159	NoGas	75.011	ppt	10.8	47	104.18	70	130	
Pb	208	159	NoGas	1.890	ppb	1.1	22487	105	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.9	1526852	1483837.48	102.9	
Ge	74	H2	Pulse	0.6	502052	508025.38	98.8	
Sc	45	He	Pulse	1.5	197688	208835.17	94.7	
Ge	74	He	Pulse	1.1	116359	121380.146666667	95.9	
Rh	103	He	Pulse	1.2	290170	302021.16	96.1	
Tb	159	He	Pulse	1.4	406576	429916.006666667	94.6	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	1.8	244351	256831.363333333	95.1	
Li	6	NoGas	Pulse	1.0	728477	793244.14	91.8	
Sc	45	NoGas	Analog	0.4	1844621	1874561.46	98.4	
Ge	74	NoGas	Pulse	0.3	503124	528713.046666667	95.2	
Rh	103	NoGas	Pulse	0.4	538264	560665.076666667	96.0	
Tb	159	NoGas	Pulse	0.7	871976	882041.703333333	98.9	
Bi	209	NoGas	Pulse	0.4	462319	475402.23	97.2	

Continuing Calibration Verification (CCV) Report ICPMS5

Sample Name	9F27029-CCV4 JB 06/27/19	**Total Dilution**	1.0000
File Name	061_CCV.d	**Sample Type**	CCV
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	**ISTD Ref FileName**	004CALB.d
Acq Time	6/27/2019 17:27:48	**Comment**	A19E305 JPB 06/27

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	Low	High	% Rec	Flag
Na	23	45	H2	4022.489	ppb	0.9	13813092	4000	90	110	100.56	
Ca	44	45	H2	3940.571	ppb	0.8	586915	4000	90	110	98.51	
Fe	56	74	H2	3890.077	ppb	0.3	33286587	4000	90	110	97.25	
Fe	57	74	H2	3693.758	ppb	0.2	779434	4000	90	110	92.34	
Se	78	74	H2	39.542	ppb	1.9	8270	40	90	110	98.86	
Mg	24	45	He	4294.680	ppb	1.2	1374474	4000	90	110	107.37	
Al	27	45	He	3889.615	ppb	0.7	720921	4000	90	110	97.24	
K	39	45	He	4183.320	ppb	1.1	1344515	4000	90	110	104.58	
V	51	74	He	101.131	ppb	0.4	204582	100	90	110	101.13	
Cr	52	74	He	99.000	ppb	0.4	238768	100	90	110	99	
Mn	55	74	He	99.358	ppb	0.9	169489	100	90	110	99.36	
Ni	60	74	He	104.969	ppb	0.6	85624	100	90	110	104.97	
Cu	65	74	He	105.277	ppb	0.8	106769	100	90	110	105.28	
Zn	66	74	He	104.935	ppb	0.8	37163	100	90	110	104.94	
As	75	74	He	97.344	ppb	0.5	23007	100	90	110	97.34	
Mo	95	103	He	38.930	ppb	1.2	40071	40	90	110	97.32	
Ag	107	103	He	39.581	ppb	0.4	124103	40	90	110	98.95	
Sb	121	103	He	36.785	ppb	1.9	43743	40	90	110	91.96	
Ba	138	159	He	102.402	ppb	0.3	272083	100	90	110	102.4	
Tl	205	159	He	39.039	ppb	0.1	202914	40	90	110	97.6	
Be	9	6	NoGas	39.286	ppb	1.0	83345	40	90	110	98.22	
Ti	47	45	NoGas	91.399	ppb	0.9	63782	100	90	110	91.4	
Co	59	74	NoGas	101.595	ppb	1.2	962949	100	90	110	101.59	
Cu	65	74	NoGas	105.480	ppb	2.0	221457	100	90	110	105.48	
Cd	111	103	NoGas	99.863	ppb	0.8	119227	100	90	110	99.86	
Hg	201	159	NoGas	773.907	ppt	5.4	423	800	90	110	96.74	
Pb	208	159	NoGas	100.613	ppb	0.4	1200244	100	90	110	100.61	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.5	1545721	1483837.48	104.2	
Ge	74	H2	Pulse	0.7	511645	508025.38	100.7	
Sc	45	He	Pulse	1.0	200868	208835.17	96.2	
Ge	74	He	Pulse	0.5	117653	121380.146666667	96.9	
Rh	103	He	Pulse	0.7	285489	302021.16	94.5	
Tb	159	He	Pulse	0.9	409157	429916.006666667	95.2	
Bi	209	He	Pulse	0.9	242262	256831.363333333	94.3	
Li	6	NoGas	Pulse	0.5	764227	793244.14	96.3	
Sc	45	NoGas	Analog	1.6	1903153	1874561.46	101.5	
Ge	74	NoGas	Pulse	0.9	514354	528713.046666667	97.3	
Rh	103	NoGas	Pulse	0.0	542689	560665.076666667	96.8	
Tb	159	NoGas	Pulse	0.5	891771	882041.703333333	101.1	
Bi	209	NoGas	Pulse	0.9	469322	475402.23	98.7	

Continuing Calibration Blank (CCB) Report ICPMS6

Sample Name	9F27029-CCB3 06/27/19
File Name	062_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 17:32:05
Sample Type	CCB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	Limit	QC Flag
Na	23	45	H2	5.031	ppb	6.0	31814	45	
Ca	44	45	H2	0.810	ppb	66.5	1075	45	
Fe	56	74	H2	0.436	ppb	8.5	10828	22.5	
Fe	57	74	H2	0.596	ppb	44.8	869	22.5	
Se	78	74	H2	0.043	ppb	66.8	12	0.45	
Mg	24	45	He	0.485	ppb	54.6	274	45	
Al	27	45	He	-0.221	ppb	N/A	80	22.5	
K	39	45	He	5.770	ppb	54.8	22558	45	
V	51	74	He	-0.097	ppb	N/A	777	0.45	
Cr	52	74	He	-0.015	ppb	N/A	199	0.45	
Mn	55	74	He	0.033	ppb	41.1	129	0.45	
Ni	60	74	He	0.020	ppb	81.3	29	0.45	
Cu	65	74	He	0.001	ppb	3347.7	132	0.45	
Zn	66	74	He	-0.062	ppb	N/A	186	1.8	
As	75	74	He	0.022	ppb	240.2	25	0.45	
Mo	95	103	He	0.045	ppb	4.4	52	0.45	
Ag	107	103	He	0.006	ppb	42.3	30	0.09	
Sb	121	103	He	0.343	ppb	3.7	433	0.45	
Ba	138	159	He	0.003	ppb	190.0	159	0.45	
Tl	205	159	He	-0.002	ppb	N/A	80	0.09	
Be	9	6	NoGas	0.003	ppb	50.4	7	0.09	
Ti	47	45	NoGas	-0.003	ppb	N/A	45	0.45	
Co	59	74	NoGas	0.006	ppb	11.4	443	0.09	
Cu	65	74	NoGas	0.016	ppb	64.1	313	0.45	
Cd	111	103	NoGas	0.000	ppb	12447.7	12	0.09	
Hg	201	159	NoGas	5.098	ppt	24.6	10	36	
Pb	208	159	NoGas	0.014	ppb	62.0	620	0.09	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Sc	45	H2	Analog	1.2	1592907	1483837.48	107.4	
Ge	74	H2	Pulse	1.0	520449	508025.38	102.4	
Sc	45	He	Pulse	1.2	207382	208835.17	99.3	
Ge	74	He	Pulse	0.6	120842	121380.146666667	99.6	
Rh	103	He	Pulse	0.6	299160	302021.16	99.1	

Continuing Calibration Blank (CCB) Report ICPMS6

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Tb	159	He	Pulse	0.6	420165	429916.006666667	97.7	
Bi	209	He	Pulse	1.2	251080	256831.363333333	97.8	
Li	6	NoGas	Pulse	2.7	760187	793244.14	95.8	
Sc	45	NoGas	Analog	3.9	1868359	1874561.46	99.7	
Ge	74	NoGas	Pulse	2.2	511147	528713.046666667	96.7	
Rh	103	NoGas	Pulse	3.4	545019	560665.076666667	97.2	
Tb	159	NoGas	Pulse	3.4	873402	882041.703333333	99.0	
Bi	209	NoGas	Pulse	3.5	463877	475402.23	97.6	

Quantitation Report - ICPMS5

Sample Name:	**9061422-BLK1**	Total Dilution:	**5.0000**
File Name:	071SMPL.d	Vial:	3315
File Path:	C:\Agilent\ICPMH\1\DATA\9F27029.b	Sample Type:	Sample
Acq Time:	6/27/2019 18:11:02		
Comment:	**9061422 Oil Biglist-CoMo**	Last Calib:	06/27/2019 15:14:46

FullQuant Table:

Element	Mass	ISTD	Tune Mode	Raw Conc	Units	RSD(%)	CPS	LDR	QC Flag
Be	9	6	NoGas	0.006	ppb	79.6	12	100	
Na	23	45	H2	7.85	ppb	1.5	39658	10000	
Mg	24	45	He	1.911	ppb	18.5	714	50000	
Al	27	45	He	4.48	ppb	10.7	941	50000	
K	39	45	He	3.53	ppb	48.2	20958	50000	
Ca	44	45	H2	14.033	ppb	3.3	2942	10000	
Ti	47	45	NoGas	0.08	ppb	143.4	102	2500	
V	51	74	He	0.084	ppb	44.4	1106	500	
Cr	52	74	He	0.058	ppb	14.8	367	1000	
Mn	55	74	He	0.126	ppb	18.5	281	2500	
Fe	56	74	H2	0.957	ppb	2.5	14562	50000	
Fe	57	74	H2	1.294	ppb	53.3	966	50000	
Co	59	74	NoGas	0.018	ppb	44.9	546	500	
Ni	60	74	He	0.037	ppb	64.1	41	500	
Cu	65	74	He	0.038	ppb	52.5	164	500	
Cu	65	74	NoGas	0.016	ppb	52.0	312	500	
Zn	66	74	He	0.061	ppb	140.5	221	2500	
As	75	74	He	-0.001	ppb	N/A	19	500	
Se	78	74	H2	0.002	ppb	251.3	3	100	
Mo	95	103	He	0.011	ppb	62.4	14	100	
Ag	107	103	He	0.005	ppb	75.0	24	100	
Cd	111	103	NoGas	0.018	ppb	77.2	34	500	
Sb	121	103	He	0.023	ppb	13.3	33	50	
Ba	138	159	He	0.038	ppb	24.6	249	2500	
W	182	159	NoGas	0.007	ppb	56.0	62	40	
Hg	201	159	NoGas	12.779	ppt	51.2	14	4000	
Tl	205	159	He	-0.006	ppb	N/A	57	100	
Pb	208	159	NoGas	0.013	ppb	65.9	626	500	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD %	QC Flag
Li	6	NoGas	750251	1.3	793244.14	Pulse	94.6	
Sc	45	H2	1511591	0.7	1483837.48	Analog	101.9	
Sc	45	He	199157	0.4	208835.17	Pulse	95.4	
Sc	45	NoGas	1877089	0.5	1874561.46	Analog	100.1	
Ge	74	H2	493371	0.7	508025.38	Pulse	97.1	
Ge	74	He	116193	0.3	121380.146666667	Pulse	95.7	
Ge	74	NoGas	508362	0.7	528713.046666667	Pulse	96.2	
Rh	103	He	288917	1.1	302021.16	Pulse	95.7	
Rh	103	NoGas	551249	0.4	560665.076666667	Pulse	98.3	
Tb	159	He	411319	1.2	429916.006666667	Pulse	95.7	
Tb	159	NoGas	892226	0.4	882041.703333333	Pulse	101.2	
Bi	209	He	247844	1.4	256831.363333333	Pulse	96.5	
Bi	209	NoGas	472673	1.1	475402.23	Pulse	99.4	

Quantitation Report - ICPMS5

Sample Name:	**9061422-BS1**	Total Dilution:	**5.0000**
File Name:	072SMPL.d	Vial:	3401
File Path:	C:\Agilent\ICPMH\1\DATA\9F27029.b	Sample Type:	Sample
Acq Time:	6/27/2019 18:15:21	Last Calib:	06/27/2019 15:14:46
Comment:	**9061422 Oil Biglist-CoMo**		

FullQuant Table:

Element	Mass	ISTD	Tune Mode	Raw Conc	Units	RSD(%)	CPS	LDR	QC Flag
Be	9	6	NoGas	23.672	ppb	0.7	47807	100	
Na	23	45	H2	2384.215	ppb	1.6	7989156	10000	
Mg	24	45	He	2404.064	ppb	0.6	755275	50000	
Al	27	45	He	2350	ppb	0.8	427605	50000	
K	39	45	He	2465.964	ppb	0.5	786023	50000	
Ca	44	45	H2	2333.25	ppb	1.0	339253	10000	
Ti	47	45	NoGas	46.718	ppb	1.7	31652	2500	
V	51	74	He	49.946	ppb	0.6	98712	500	
Cr	52	74	He	48.754	ppb	0.4	114448	1000	
Mn	55	74	He	50.114	ppb	1.9	83154	2500	
Fe	56	74	H2	2338.378	ppb	0.3	19147304	50000	
Fe	57	74	H2	2217.6	ppb	0.3	448010	50000	
Co	59	74	NoGas	49.243	ppb	0.7	455364	500	
Ni	60	74	He	50.505	ppb	1.4	40065	500	
Cu	65	74	He	50.945	ppb	1.1	50301	500	
Cu	65	74	NoGas	50.957	ppb	1.4	104476	500	
Zn	66	74	He	51.215	ppb	2.2	17738	2500	
As	75	74	He	47.717	ppb	1.5	10976	500	
Se	78	74	H2	22.43	ppb	1.9	4490	100	
Mo	95	103	He	23.389	ppb	0.7	23901	100	
Ag	107	103	He	23.88	ppb	0.0	74331	100	
Cd	111	103	NoGas	49.121	ppb	1.0	57847	500	
Sb	121	103	He	24.068	ppb	1.6	28413	50	
Ba	138	159	He	50.35	ppb	0.6	134623	2500	
W	182	159	NoGas	0.02	ppb	51.1	118	40	
Hg	201	159	NoGas	955.318	ppt	2.6	519	4000	
Tl	205	159	He	23.715	ppb	0.6	124014	100	
Pb	208	159	NoGas	50.367	ppb	1.3	599163	500	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD %	QC Flag
Li	6	NoGas	727493	2.1	793244.14	Pulse	91.7	
Sc	45	H2	1507391	1.0	1483837.48	Analog	101.6	
Sc	45	He	197178	0.4	208835.17	Pulse	94.4	
Sc	45	NoGas	1846424	0.8	1874561.46	Analog	98.5	
Ge	74	H2	489542	0.2	508025.38	Pulse	96.4	
Ge	74	He	114400	0.3	121380.146666667	Pulse	94.2	
Ge	74	NoGas	501591	0.8	528713.046666667	Pulse	94.9	
Rh	103	He	283404	0.8	302021.16	Pulse	93.8	
Rh	103	NoGas	535296	1.8	560665.076666667	Pulse	95.5	
Tb	159	He	411513	0.8	429916.006666667	Pulse	95.7	
Tb	159	NoGas	888995	1.0	882041.703333333	Pulse	100.8	
Bi	209	He	245028	0.7	256831.363333333	Pulse	95.4	
Bi	209	NoGas	467826	1.2	475402.23	Pulse	98.4	

Continuing Calibration Verification (CCV) Report ICPMS5

Sample Name	9F27029-CCV 5	**Total Dilution**	1.0000
File Name	073_CCV.d	**Sample Type**	CCV
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	**ISTD Ref FileName**	004CALB.d
Acq Time	6/27/2019 18:19:39	**Comment**	A19E305 JPB 06/27

JB 06/27/19

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	Low	High	% Rec	Flag
Na	23	45	H2	3891.511	ppb	0.5	12935211	4000	90	110	97.29	
Ca	44	45	H2	3899.030	ppb	1.0	562102	4000	90	110	97.48	
Fe	56	74	H2	3838.468	ppb	0.5	31606663	4000	90	110	95.96	
Fe	57	74	H2	3655.904	ppb	0.8	742361	4000	90	110	91.4	
Se	78	74	H2	39.129	ppb	1.6	7875	40	90	110	97.82	
Mg	24	45	He	4197.389	ppb	2.2	1324425	4000	90	110	104.93	
Al	27	45	He	3807.013	ppb	1.9	695707	4000	90	110	95.18	
K	39	45	He	4124.204	ppb	2.4	1307061	4000	90	110	103.11	
V	51	74	He	97.907	ppb	2.3	197527	100	90	110	97.91	
Cr	52	74	He	95.887	ppb	2.6	230600	100	90	110	95.89	
Mn	55	74	He	97.137	ppb	3.3	165210	100	90	110	97.14	
Ni	60	74	He	101.513	ppb	2.2	82571	100	90	110	101.51	
Cu	65	74	He	102.707	ppb	2.4	103869	100	90	110	102.71	
Zn	66	74	He	102.721	ppb	2.8	36280	100	90	110	102.72	
As	75	74	He	94.857	ppb	3.7	22354	100	90	110	94.86	
Mo	95	103	He	38.741	ppb	1.8	39745	40	90	110	96.85	
Ag	107	103	He	39.190	ppb	1.7	122472	40	90	110	97.98	
Sb	121	103	He	36.998	ppb	2.4	43851	40	90	110	92.49	
Ba	138	159	He	101.406	ppb	2.1	275007	100	90	110	101.41	
Tl	205	159	He	39.080	ppb	2.5	207320	40	90	110	97.7	
Be	9	6	NoGas	39.513	ppb	2.1	80459	40	90	110	98.78	
Ti	47	45	NoGas	93.099	ppb	1.0	62505	100	90	110	93.1	
Co	59	74	NoGas	100.860	ppb	2.1	934395	100	90	110	100.86	
Cu	65	74	NoGas	104.309	ppb	2.5	214057	100	90	110	104.31	
Cd	111	103	NoGas	99.160	ppb	2.1	115687	100	90	110	99.16	
Hg	201	159	NoGas	792.406	ppt	2.3	429	800	90	110	99.05	
Pb	208	159	NoGas	101.280	ppb	1.3	1196856	100	90	110	101.28	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.0	1496162	1483837.48	100.8	
Ge	74	H2	Pulse	0.7	492359	508025.38	96.9	
Sc	45	He	Pulse	0.7	198062	208835.17	94.8	
Ge	74	He	Pulse	1.5	117346	121380.146666667	96.7	
Rh	103	He	Pulse	1.4	284581	302021.16	94.2	
Tb	159	He	Pulse	0.8	417655	429916.006666667	97.1	
Bi	209	He	Pulse	1.8	250492	256831.363333333	97.5	
Li	6	NoGas	Pulse	1.4	733671	793244.14	92.5	
Sc	45	NoGas	Analog	1.7	1831088	1874561.46	97.7	
Ge	74	NoGas	Pulse	1.6	502813	528713.046666667	95.1	
Rh	103	NoGas	Pulse	1.7	530432	560665.076666667	94.6	
Tb	159	NoGas	Pulse	1.6	883517	882041.703333333	100.2	
Bi	209	NoGas	Pulse	1.2	466931	475402.23	98.2	

Continuing Calibration Blank (CCB) Report ICPMS6

Sample Name	9F27029-CCB 4 06/27/19
File Name	074_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 18:23:57
Sample Type	CCB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	Limit	QC Flag
Na	23	45	H2	1.487	ppb	13.9	18921	45	
Ca	44	45	H2	0.750	ppb	76.6	1046	45	
Fe	56	74	H2	0.140	ppb	16.2	8034	22.5	
Fe	57	74	H2	0.191	ppb	104.2	761	22.5	
Se	78	74	H2	0.042	ppb	36.3	11	0.45	
Mg	24	45	He	0.181	ppb	123.7	164	45	
Al	27	45	He	-0.011	ppb	N/A	113	22.5	
K	39	45	He	6.991	ppb	71.1	21619	45	
V	51	74	He	-0.075	ppb	N/A	788	0.45	
Cr	52	74	He	-0.023	ppb	N/A	173	0.45	
Mn	55	74	He	-0.006	ppb	N/A	58	0.45	
Ni	60	74	He	0.013	ppb	94.1	22	0.45	
Cu	65	74	He	-0.001	ppb	N/A	126	0.45	
Zn	66	74	He	-0.081	ppb	N/A	171	1.8	
As	75	74	He	0.010	ppb	169.1	21	0.45	
Mo	95	103	He	0.047	ppb	46.3	52	0.45	
Ag	107	103	He	0.004	ppb	51.9	21	0.09	
Sb	121	103	He	0.290	ppb	13.0	351	0.45	
Ba	138	159	He	0.006	ppb	181.6	161	0.45	
Tl	205	159	He	-0.005	ppb	N/A	58	0.09	
Be	9	6	NoGas	0.004	ppb	94.4	9	0.09	
Ti	47	45	NoGas	-0.031	ppb	N/A	25	0.45	
Co	59	74	NoGas	-0.005	ppb	N/A	327	0.09	
Cu	65	74	NoGas	-0.021	ppb	N/A	232	0.45	
Cd	111	103	NoGas	0.008	ppb	36.0	20	0.09	
Hg	201	159	NoGas	15.308	ppt	6.9	15	36	
Pb	208	159	NoGas	0.013	ppb	108.6	593	0.09	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Sc	45	H2	Analog	2.7	1562964	1483837.48	105.3	
Ge	74	H2	Pulse	1.5	506721	508025.38	99.7	
Sc	45	He	Pulse	2.5	195512	208835.17	93.6	
Ge	74	He	Pulse	2.8	116048	121380.146666667	95.6	
Rh	103	He	Pulse	2.8	286729	302021.16	94.9	

Continuing Calibration Blank (CCB) Report ICPMS6

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Tb	159	He	Pulse	3.4	406186	429916.006666667	94.5	
Bi	209	He	Pulse	2.4	246708	256831.363333333	96.1	
Li	6	NoGas	Pulse	4.4	733043	793244.14	92.4	
Sc	45	NoGas	Analog	5.4	1844643	1874561.46	98.4	
Ge	74	NoGas	Pulse	4.6	500480	528713.046666667	94.7	
Rh	103	NoGas	Pulse	5.1	530647	560665.076666667	94.6	
Tb	159	NoGas	Pulse	5.3	861483	882041.703333333	97.7	
Bi	209	NoGas	Pulse	5.3	462325	475402.23	97.2	

Quantitation Report - ICPMS5

Sample Name:	**A9F0684-01**	Total Dilution:	**5.0000**
File Name:	075SMPL.d	Vial:	3402
File Path:	C:\Agilent\ICPMH\1\DATA\9F27029.b	Sample Type:	Sample
Acq Time:	6/27/2019 18:28:17		
Comment:	**9061422 Oil Biglist-CoMo**	Last Calib:	06/27/2019 15:14:46

FullQuant Table:

Element	Mass	ISTD	Tune Mode	Raw Conc	Units	RSD(%)	CPS	LDR	QC Flag
Be	9	6	NoGas	0.004	ppb	77.7	9	100	
Na	23	45	H2	5.718	ppb	1.8	32657	10000	
Mg	24	45	He	5.286	ppb	12.6	1805	50000	
Al	27	45	He	26.579	ppb	5.8	5059	50000	
K	39	45	He	3.188	ppb	27.7	21088	50000	
Ca	44	45	H2	28.824	ppb	5.3	5117	10000	
Ti	47	45	NoGas	4.195	ppb	6.2	2916	2500	
V	51	74	He	0.908	ppb	3.5	2768	500	
Cr	52	74	He	0.567	ppb	4.1	1590	1000	
Mn	55	74	He	1.229	ppb	3.0	2157	2500	
Fe	56	74	H2	73.75	ppb	0.4	617574	50000	
Fe	57	74	H2	72.666	ppb	3.2	15539	50000	
Co	59	74	NoGas	0.121	ppb	4.7	1516	500	
Ni	60	74	He	0.871	ppb	7.6	719	500	
Cu	65	74	He	0.451	ppb	7.6	583	500	
Cu	65	74	NoGas	0.487	ppb	6.0	1291	500	
Zn	66	74	He	4.586	ppb	11.6	1810	2500	
As	75	74	He	0.872	ppb	15.3	224	500	
Se	78	74	H2	0.176	ppb	13.0	38	100	
Mo	95	103	He	0.047	ppb	20.5	53	100	
Ag	107	103	He	0.001	ppb	158.5	11	100	
Cd	111	103	NoGas	0.012	ppb	64.4	27	500	
Sb	121	103	He	0.123	ppb	5.0	157	50	
Ba	138	159	He	0.869	ppb	4.3	2519	2500	
W	182	159	NoGas	0.013	ppb	32.9	91	40	
Hg	201	159	NoGas	11.914	ppt	68.5	14	4000	
Tl	205	159	He	0.001	ppb	167.4	93	100	
Pb	208	159	NoGas	0.546	ppb	4.4	7037	500	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD %	QC Flag
Li	6	NoGas	744457	0.6	793244.14	Pulse	93.8	
Sc	45	H2	1518766	0.6	1483837.48	Analog	102.4	
Sc	45	He	201430	0.5	208835.17	Pulse	96.5	
Sc	45	NoGas	1866430	0.6	1874561.46	Analog	99.6	
Ge	74	H2	495391	0.4	508025.38	Pulse	97.5	
Ge	74	He	117210	1.0	121380.146666667	Pulse	96.6	
Ge	74	NoGas	509456	0.3	528713.046666667	Pulse	96.4	
Rh	103	He	294941	0.9	302021.16	Pulse	97.7	
Rh	103	NoGas	551874	0.0	560665.076666667	Pulse	98.4	
Tb	159	He	419709	0.7	429916.006666667	Pulse	97.6	
Tb	159	NoGas	900132	0.4	882041.703333333	Pulse	102.1	
Bi	209	He	255878	0.9	256831.363333333	Pulse	99.6	
Bi	209	NoGas	483323	0.5	475402.23	Pulse	101.7	

Quantitation Report - ICPMS5

Sample Name:	**9061422-DUP1**	Total Dilution:	**5.0000**
File Name:	076SMPL.d	Vial:	3403
File Path:	C:\Agilent\ICPMH\1\DATA\9F27029.b	Sample Type:	Sample
Acq Time:	6/27/2019 18:32:36	Last Calib:	06/27/2019 15:14:46
Comment:	**9061422 Oil Biglist-CoMo**		

FullQuant Table:

Element	Mass	ISTD	Tune Mode	Raw Conc	Units	RSD(%)	CPS	LDR	QC Flag
Be	9	6	NoGas	0.007	ppb	48.2	14	100	
Na	23	45	H2	7.555	ppb	7.7	39513	10000	
Mg	24	45	He	6.739	ppb	4.4	2276	50000	
Al	27	45	He	35.055	ppb	2.5	6645	50000	
K	39	45	He	3.332	ppb	28.9	21172	50000	
Ca	44	45	H2	32.588	ppb	4.9	5763	10000	
Ti	47	45	NoGas	5.386	ppb	4.1	3797	2500	
V	51	74	He	1.105	ppb	3.9	3160	500	
Cr	52	74	He	0.688	ppb	7.7	1879	1000	
Mn	55	74	He	1.645	ppb	2.0	2860	2500	
Fe	56	74	H2	109.76	ppb	0.8	924495	50000	
Fe	57	74	H2	107.163	ppb	1.0	22792	50000	
Co	59	74	NoGas	0.146	ppb	7.3	1751	500	
Ni	60	74	He	1.055	ppb	12.2	868	500	
Cu	65	74	He	0.522	ppb	6.8	653	500	
Cu	65	74	NoGas	0.603	ppb	10.8	1533	500	
Zn	66	74	He	5.534	ppb	4.5	2141	2500	
As	75	74	He	1.013	ppb	8.8	257	500	
Se	78	74	H2	0.242	ppb	16.2	52	100	
Mo	95	103	He	0.058	ppb	16.2	66	100	
Ag	107	103	He	0.001	ppb	145.3	12	100	
Cd	111	103	NoGas	0.004	ppb	110.0	16	500	
Sb	121	103	He	0.054	ppb	9.4	72	50	
Ba	138	159	He	1.116	ppb	5.1	3205	2500	
W	182	159	NoGas	0.011	ppb	48.6	82	40	
Hg	201	159	NoGas	11.53	ppt	52.8	14	4000	
Tl	205	159	He	-0.003	ppb	N/A	70	100	
Pb	208	159	NoGas	0.663	ppb	4.5	8490	500	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD %	QC Flag
Li	6	NoGas	749262	0.8	793244.14	Pulse	94.5	
Sc	45	H2	1544230	0.9	1483837.48	Analog	104.1	
Sc	45	He	201797	0.7	208835.17	Pulse	96.6	
Sc	45	NoGas	1899830	1.9	1874561.46	Analog	101.3	
Ge	74	H2	500062	0.6	508025.38	Pulse	98.4	
Ge	74	He	117069	0.8	121380.146666667	Pulse	96.4	
Ge	74	NoGas	510042	0.3	528713.046666667	Pulse	96.5	
Rh	103	He	296963	1.1	302021.16	Pulse	98.3	
Rh	103	NoGas	557686	1.0	560665.076666667	Pulse	99.5	
Tb	159	He	421312	0.6	429916.006666667	Pulse	98.0	
Tb	159	NoGas	904185	0.7	882041.703333333	Pulse	102.5	
Bi	209	He	252962	0.6	256831.363333333	Pulse	98.5	
Bi	209	NoGas	483972	0.4	475402.23	Pulse	101.8	

Quantitation Report - ICPMS5

Sample Name:	**9061422-MS1**	Total Dilution:	**5.0000**
File Name:	077SMPL.d	Vial:	3404
File Path:	C:\Agilent\ICPMH\1\DATA\9F27029.b	Sample Type:	Sample
Acq Time:	6/27/2019 18:36:55	Last Calib:	06/27/2019 15:14:46
Comment:	**9061422 Oil Biglist-CoMo**		

FullQuant Table:

Element	Mass	ISTD	Tune Mode	Raw Conc	Units	RSD(%)	CPS	LDR	QC Flag
Be	9	6	NoGas	22.91	ppb	0.6	46754	100	
Na	23	45	H2	2324.033	ppb	1.3	7769397	10000	
Mg	24	45	He	2334.827	ppb	0.7	730638	50000	
Al	27	45	He	2320.237	ppb	1.2	420527	50000	
K	39	45	He	2414.355	ppb	0.4	766938	50000	
Ca	44	45	H2	2308.707	ppb	1.2	334894	10000	
Ti	47	45	NoGas	48.337	ppb	1.2	33139	2500	
V	51	74	He	48.883	ppb	0.9	97198	500	
Cr	52	74	He	47.767	ppb	1.1	112787	1000	
Mn	55	74	He	49.677	ppb	0.5	82911	2500	
Fe	56	74	H2	2382.358	ppb	1.0	19464700	50000	
Fe	57	74	H2	2248.792	ppb	0.4	453323	50000	
Co	59	74	NoGas	48.008	ppb	1.0	441697	500	
Ni	60	74	He	50.144	ppb	2.3	40010	500	
Cu	65	74	He	50.878	ppb	1.0	50530	500	
Cu	65	74	NoGas	50.264	ppb	0.9	102545	500	
Zn	66	74	He	53.52	ppb	1.6	18635	2500	
As	75	74	He	48.169	ppb	0.8	11145	500	
Se	78	74	H2	22.435	ppb	0.9	4481	100	
Mo	95	103	He	22.977	ppb	1.9	23634	100	
Ag	107	103	He	23.107	ppb	0.6	72403	100	
Cd	111	103	NoGas	47.658	ppb	1.5	56284	500	
Sb	121	103	He	22.992	ppb	0.2	27325	50	
Ba	138	159	He	49.621	ppb	1.0	133104	2500	
W	182	159	NoGas	0.029	ppb	22.8	159	40	
Hg	201	159	NoGas	880.236	ppt	0.3	481	4000	
Tl	205	159	He	23.003	ppb	0.4	120667	100	
Pb	208	159	NoGas	49.157	ppb	0.6	587532	500	

ISTD Table:

Element	Mass	Tune Mode	CPS	RSD(%)	ISTD Ref CPS	Det.	ISTD %	QC Flag
Li	6	NoGas	735155	1.0	793244.14	Pulse	92.7	
Sc	45	H2	1503862	1.4	1483837.48	Analog	101.3	
Sc	45	He	196398	0.3	208835.17	Pulse	94.0	
Sc	45	NoGas	1868377	1.3	1874561.46	Analog	99.7	
Ge	74	H2	488496	0.7	508025.38	Pulse	96.2	
Ge	74	He	115070	0.4	121380.146666667	Pulse	94.8	
Ge	74	NoGas	499052	0.8	528713.046666667	Pulse	94.4	
Rh	103	He	285287	1.1	302021.16	Pulse	94.5	
Rh	103	NoGas	536798	0.7	560665.076666667	Pulse	95.7	
Tb	159	He	412816	0.3	429916.006666667	Pulse	96.0	
Tb	159	NoGas	893136	0.8	882041.703333333	Pulse	101.3	
Bi	209	He	245033	0.6	256831.363333333	Pulse	95.4	
Bi	209	NoGas	472089	0.3	475402.23	Pulse	99.3	

Continuing Calibration Verification (CCV) Report ICPMS5

Sample Name	9F27029-CCV 6 JPB 06/27/19	**Total Dilution**	1.0000
File Name	085_CCV.d	**Sample Type**	CCV
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	**ISTD Ref FileName**	004CALB.d
Acq Time	6/27/2019 19:11:13	**Comment**	A19E305 JPB 06/27

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	Conc. RSD	CPS	ExpValue	Low	High	% Rec	Flag
Na	23	45	H2	3861.626	ppb	1.1	13195504	4000	90	110	96.54	
Ca	44	45	H2	3842.670	ppb	1.3	569508	4000	90	110	96.07	
Fe	56	74	H2	3852.268	ppb	0.1	32156099	4000	90	110	96.31	
Fe	57	74	H2	3640.317	ppb	0.2	749365	4000	90	110	91.01	
Se	78	74	H2	38.781	ppb	0.4	7913	40	90	110	96.95	
Mg	24	45	He	4235.512	ppb	0.7	1337501	4000	90	110	105.89	
Al	27	45	He	3871.517	ppb	0.9	708054	4000	90	110	96.79	
K	39	45	He	4210.969	ppb	0.7	1335248	4000	90	110	105.27	
V	51	74	He	100.026	ppb	1.1	201595	100	90	110	100.03	
Cr	52	74	He	97.673	ppb	0.4	234682	100	90	110	97.67	
Mn	55	74	He	98.438	ppb	0.8	167283	100	90	110	98.44	
Ni	60	74	He	103.993	ppb	0.5	84511	100	90	110	103.99	
Cu	65	74	He	104.150	ppb	0.2	105232	100	90	110	104.15	
Zn	66	74	He	104.410	ppb	1.3	36840	100	90	110	104.41	
As	75	74	He	96.837	ppb	2.0	22804	100	90	110	96.84	
Mo	95	103	He	39.324	ppb	0.9	40331	40	90	110	98.31	
Ag	107	103	He	39.766	ppb	0.6	124231	40	90	110	99.42	
Sb	121	103	He	37.069	ppb	0.2	43922	40	90	110	92.67	
Ba	138	159	He	103.398	ppb	0.5	278296	100	90	110	103.4	
Tl	205	159	He	39.361	ppb	0.2	207242	40	90	110	98.4	
Be	9	6	NoGas	39.142	ppb	1.5	82308	40	90	110	97.86	
Ti	47	45	NoGas	92.950	ppb	2.6	64486	100	90	110	92.95	
Co	59	74	NoGas	100.413	ppb	0.6	954647	100	90	110	100.41	
Cu	65	74	NoGas	103.723	ppb	0.7	218449	100	90	110	103.72	
Cd	111	103	NoGas	99.370	ppb	1.3	118375	100	90	110	99.37	
Hg	201	159	NoGas	789.676	ppt	3.7	431	800	90	110	98.71	
Pb	208	159	NoGas	100.713	ppb	0.8	1201390	100	90	110	100.71	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.1	1538133	1483837.48	103.7	
Ge	74	H2	Pulse	0.2	499120	508025.38	98.2	
Sc	45	He	Pulse	0.6	198200	208835.17	94.9	
Ge	74	He	Pulse	0.6	117212	121380.146666667	96.6	
Rh	103	He	Pulse	1.0	284442	302021.16	94.2	
Tb	159	He	Pulse	0.8	414458	429916.006666667	96.4	
Bi	209	He	Pulse	1.3	247884	256831.363333333	96.5	
Li	6	NoGas	Pulse	1.1	757486	793244.14	95.5	
Sc	45	NoGas	Analog	0.8	1892079	1874561.46	100.9	
Ge	74	NoGas	Pulse	0.4	515899	528713.046666667	97.6	
Rh	103	NoGas	Pulse	1.1	541535	560665.076666667	96.6	
Tb	159	NoGas	Pulse	0.8	891765	882041.703333333	101.1	
Bi	209	NoGas	Pulse	0.8	471788	475402.23	99.2	

Continuing Calibration Blank (CCB) Report ICPMS6

Sample Name	9F27029-CCB 5 6/27/19
File Name	086_CCB.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 19:15:31
Sample Type	CCB
Total Dilution	1.0000
Comment	Cal Blk 3%HNO3 0.4%HCl
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	**ICPMS Analyst**

QC Analyte Table

Name	Mass	ISTD	Tune Mode	Conc.	Units	Conc. RSD	CPS	Limit	QC Flag
Na	23	45	H2	0.620	ppb	23.2	16186	45	
Ca	44	45	H2	0.665	ppb	228.2	1048	45	
Fe	56	74	H2	1.950	ppb	6.3	23674	22.5	
Fe	57	74	H2	1.901	ppb	26.9	1133	22.5	
Se	78	74	H2	0.044	ppb	92.6	12	0.45	
Mg	24	45	He	0.707	ppb	17.8	344	45	
Al	27	45	He	0.467	ppb	49.7	210	22.5	
K	39	45	He	2.433	ppb	110.4	21295	45	
V	51	74	He	-0.130	ppb	N/A	703	0.45	
Cr	52	74	He	-0.025	ppb	N/A	174	0.45	
Mn	55	74	He	0.000	ppb	N/A	70	0.45	
Ni	60	74	He	0.023	ppb	9.0	31	0.45	
Cu	65	74	He	-0.003	ppb	N/A	128	0.45	
Zn	66	74	He	-0.131	ppb	N/A	160	1.8	
As	75	74	He	0.033	ppb	46.9	27	0.45	
Mo	95	103	He	0.036	ppb	27.1	42	0.45	
Ag	107	103	He	0.007	ppb	43.6	31	0.09	
Sb	121	103	He	0.287	ppb	13.9	361	0.45	
Ba	138	159	He	0.195	ppb	174.3	682	0.45	
Tl	205	159	He	0.003	ppb	164.8	102	0.09	
Be	9	6	NoGas	0.006	ppb	103.8	12	0.09	
Ti	47	45	NoGas	0.045	ppb	17.2	80	0.45	
Co	59	74	NoGas	-0.001	ppb	N/A	388	0.09	
Cu	65	74	NoGas	-0.019	ppb	N/A	250	0.45	
Cd	111	103	NoGas	0.032	ppb	29.7	52	0.09	
Hg	201	159	NoGas	16.372	ppt	52.2	16	36	
Pb	208	159	NoGas	0.018	ppb	22.4	685	0.09	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Sc	45	H2	Analog	0.7	1588549	1483837.48	107.1	
Ge	74	H2	Pulse	1.0	513376	508025.38	101.1	
Sc	45	He	Pulse	0.3	205757	208835.17	98.5	
Ge	74	He	Pulse	0.9	120241	121380.146666667	99.1	
Rh	103	He	Pulse	0.6	297235	302021.16	98.4	

Continuing Calibration Blank (CCB) Report ICPMS6

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC flag
Tb	159	He	Pulse	0.8	418278	429916.006666667	97.3	
Bi	209	He	Pulse	1.0	250799	256831.363333333	97.7	
Li	6	NoGas	Pulse	0.7	777419	793244.14	98.0	
Sc	45	NoGas	Analog	0.7	1932561	1874561.46	103.1	
Ge	74	NoGas	Pulse	0.4	528501	528713.046666667	100.0	
Rh	103	NoGas	Pulse	0.2	564603	560665.076666667	100.7	
Tb	159	NoGas	Pulse	0.7	897164	882041.703333333	101.7	
Bi	209	NoGas	Pulse	0.2	475468	475402.23	100.0	

CRL Verification ICPMS5

Sample Name	9F27029-CRL7	1102
File Name	087CRL.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 19:19:50	
Sample Type	CRL1	
Total Dilution	1.0000	
Comment	A19F223 JPB 06/26	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Fail	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	9.391	ppb	1.5	47767	104.34	70	130	
Ca	44	45	H2	9.627	ppb	11.8	2452	106.97	70	130	
Fe	56	74	H2	9.273	ppb	1.0	87719	103.03	70	130	
Fe	57	74	H2	9.257	ppb	3.3	2726	102.86	70	130	
Se	78	74	H2	0.185	ppb	29.6	42	102.78	70	130	
Mg	24	45	He	10.023	ppb	11.7	3434	111.37	70	130	
Al	27	45	He	9.537	ppb	1.4	1952	105.97	70	130	
K	39	45	He	13.598	ppb	6.6	25178	151.09	70	130	<>CRL1 NR<MRL<R-1
V	51	74	He	0.118	ppb	29.1	1227	65.56	70	130	<>CRL1 NR<MRL<R-1
Cr	52	74	He	0.142	ppb	19.4	589	78.89	70	130	
Mn	55	74	He	0.185	ppb	24.0	397	102.78	70	130	
Ni	60	74	He	0.205	ppb	1.2	184	113.89	70	130	
Cu	65	74	He	0.318	ppb	10.6	464	176.67	70	130	<>CRL1 NR<MRL<R-1
Zn	66	74	He	0.377	ppb	16.0	346	209.44	70	130	<>CRL1 NR<MRL<R-1
As	75	74	He	0.137	ppb	21.6	53	76.11	70	130	
Mo	95	103	He	0.181	ppb	15.2	198	100.56	70	130	
Ag	107	103	He	0.156	ppb	14.0	520	86.67	70	130	
Sb	121	103	He	0.272	ppb	9.7	342	151.11	70	130	<>CRL1 NR<MRL<R-1
Ba	138	159	He	0.239	ppb	11.2	802	132.78	70	130	<>CRL1 NR<MRL<R-1
Tl	205	159	He	0.177	ppb	3.0	1030	98.33	70	130	
Be	9	6	NoGas	0.180	ppb	7.1	392	100	70	130	
Ti	47	45	NoGas	0.224	ppb	10.9	208	124.44	70	130	
Co	59	74	NoGas	0.186	ppb	6.9	2212	103.33	70	130	
Cu	65	74	NoGas	0.313	ppb	26.3	966	173.89	70	130	<>CRL1 NR<MRL<R-1
Cd	111	103	NoGas	0.190	ppb	6.9	248	105.56	70	130	
Hg	201	159	NoGas	12.916	ppt	48.4	15	179.39	70	130	<>CRL1 NR<MRL<R-1
Pb	208	159	NoGas	0.183	ppb	6.2	2669	101.67	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.9	1610996	1483837.48	108.6	
Ge	74	H2	Pulse	0.2	520392	508025.38	102.4	
Sc	45	He	Pulse	0.5	207904	208835.17	99.6	
Ge	74	He	Pulse	0.8	121299	121380.146666667	99.9	
Rh	103	He	Pulse	1.3	298010	302021.16	98.7	

JB 06/27/19

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Tb	159	He	Pulse	0.9	419458	429916.006666667	97.6	
Bi	209	He	Pulse	1.2	251768	256831.363333333	98.0	
Li	6	NoGas	Pulse	0.8	783894	793244.14	98.8	
Sc	45	NoGas	Analog	1.4	1944961	1874561.46	103.8	
Ge	74	NoGas	Pulse	0.3	529260	528713.046666667	100.1	
Rh	103	NoGas	Pulse	0.8	563571	560665.076666667	100.5	
Tb	159	NoGas	Pulse	0.8	898894	882041.703333333	101.9	
Bi	209	NoGas	Pulse	0.8	474087	475402.23	99.7	

CRL Verification ICPMS5

Sample Name	9F27029-CRL8	1103
File Name	088_CRL.d	
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b	
Acq Time	6/27/2019 19:24:09	
Sample Type	CRL2	
Total Dilution	1.0000	
Comment	A19F224 JPB 06/26	
ISTD Ref FileName	004CALB.d	
Sample QC Pass/Fial	Fail	
ISTD QC Pass/Fail	Pass	
Operator	**ICPMS Analyst**	

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	45.031	ppb	1.2	175163	100.07	70	130	
Ca	44	45	H2	46.234	ppb	3.5	8125	102.74	70	130	
Fe	57	74	H2	44.292	ppb	1.9	10220	98.43	70	130	
Se	78	74	H2	0.862	ppb	19.7	186	95.78	70	130	
Mg	24	45	He	45.670	ppb	5.1	15139	101.49	70	130	
Al	27	45	He	44.427	ppb	0.8	8591	98.73	70	130	
K	39	45	He	51.914	ppb	2.9	37499	115.36	70	130	
V	51	74	He	0.839	ppb	1.9	2724	93.22	70	130	
Cr	52	74	He	0.959	ppb	7.9	2622	106.56	70	130	
Mn	55	74	He	0.923	ppb	2.6	1693	102.56	70	130	
Ni	60	74	He	0.959	ppb	16.9	819	106.56	70	130	
Cu	65	74	He	1.031	ppb	4.2	1209	114.56	70	130	
Zn	66	74	He	1.196	ppb	2.6	643	132.89	70	130	<>CRL2 NR<MRL<R-11
As	75	74	He	0.875	ppb	6.6	233	97.22	70	130	
Mo	95	103	He	0.896	ppb	6.5	969	99.56	70	130	
Ag	107	103	He	0.882	ppb	7.5	2906	98	70	130	
Sb	121	103	He	0.931	ppb	1.2	1165	103.44	70	130	
Ba	138	159	He	0.997	ppb	4.8	2853	110.78	70	130	
Tl	205	159	He	0.905	ppb	4.8	4884	100.56	70	130	
Be	9	6	NoGas	0.882	ppb	3.3	1918	98	70	130	
Ti	47	45	NoGas	0.889	ppb	12.7	691	98.78	70	130	
Co	59	74	NoGas	0.917	ppb	3.2	9310	101.89	70	130	
Cu	65	74	NoGas	1.023	ppb	8.5	2492	113.67	70	130	
Cd	111	103	NoGas	0.933	ppb	14.0	1162	103.67	70	130	
Hg	201	159	NoGas	53.677	ppt	40.1	36	149.1	70	130	<>CRL2 NR<MRL<R-11
Pb	208	159	NoGas	0.915	ppb	1.2	11391	101.67	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	0.3	1610649	1483837.48	108.5	
Ge	74	H2	Pulse	0.3	519442	508025.38	102.2	
Sc	45	He	Pulse	2.0	206647	208835.17	99.0	
Ge	74	He	Pulse	0.6	121339	121380.146666667	100.0	
Rh	103	He	Pulse	0.9	299061	302021.16	99.0	
Tb	159	He	Pulse	1.0	417502	429916.006666667	97.1	

JB 06/28/19

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	0.8	250306	256831.363333333	97.5	
Li	6	NoGas	Pulse	1.0	783532	793244.14	98.8	
Sc	45	NoGas	Analog	0.5	1971249	1874561.46	105.2	
Ge	74	NoGas	Pulse	0.4	527898	528713.046666667	99.8	
Rh	103	NoGas	Pulse	0.2	560348	560665.076666667	99.9	
Tb	159	NoGas	Pulse	0.6	892897	882041.703333333	101.2	
Bi	209	NoGas	Pulse	0.5	469795	475402.23	98.8	

CRL Verification ICPMS5

Sample Name	9F27029-CRL9
File Name	089CRL_.d
Data Path Name	C:\Agilent\ICPMH\1\DATA\9F27029.b
Acq Time	6/27/2019 19:28:40
Sample Type	CRL3
Total Dilution	1.0000
Comment	A19F225 JPB 06/26
ISTD Ref FileName	004CALB.d
Sample QC Pass/Fial	Pass
ISTD QC Pass/Fail	Pass
Operator	ICPMS

1104

End of sequence
Power outage caused
Next CCV to not
Run JB 06/28/19

QC Analyte Table

Name	Mass	ISTD	Tune	Conc.	Units	RSD	CPS	% Rec	%QC Low	%QC High	Flag
Na	23	45	H2	86.931	ppb	1.1	326588	96.59	70	130	
Ca	44	45	H2	89.888	ppb	3.0	14963	99.88	70	130	
Fe	57	74	H2	84.438	ppb	1.6	18890	93.82	70	130	
Se	78	74	H2	1.823	ppb	4.8	391	101.28	70	130	
Mg	24	45	He	91.037	ppb	2.8	30321	101.15	70	130	
Al	27	45	He	88.712	ppb	4.9	17170	98.57	70	130	
K	39	45	He	99.678	ppb	3.1	53485	110.75	70	130	
V	51	74	He	1.803	ppb	2.7	4714	100.17	70	130	
Cr	52	74	He	1.783	ppb	4.4	4657	99.06	70	130	
Mn	55	74	He	1.855	ppb	0.4	3326	103.06	70	130	
Ni	60	74	He	1.827	ppb	3.6	1546	101.5	70	130	
Cu	65	74	He	1.974	ppb	5.7	2189	109.67	70	130	
Zn	66	74	He	2.335	ppb	14.3	1055	129.72	70	130	
As	75	74	He	1.823	ppb	5.9	463	101.28	70	130	
Mo	95	103	He	1.797	ppb	3.5	1925	99.83	70	130	
Ag	107	103	He	1.721	ppb	1.7	5614	95.61	70	130	
Sb	121	103	He	1.792	ppb	2.6	2219	99.56	70	130	
Ba	138	159	He	1.953	ppb	1.5	5424	108.5	70	130	
Tl	205	159	He	1.820	ppb	1.6	9705	101.11	70	130	
Be	9	6	NoGas	1.720	ppb	4.3	3848	95.56	70	130	
Ti	47	45	NoGas	1.506	ppb	14.1	1145	83.67	70	130	
Co	59	74	NoGas	1.810	ppb	4.8	18333	100.56	70	130	
Cu	65	74	NoGas	1.867	ppb	7.5	4387	103.72	70	130	
Cd	111	103	NoGas	1.789	ppb	5.1	2274	99.39	70	130	
Hg	201	159	NoGas	84.023	ppt	2.6	54	116.7	70	130	
Pb	208	159	NoGas	1.849	ppb	5.0	22946	102.72	70	130	

QC ISTD Table

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Sc	45	H2	Analog	1.4	1618915	1483837.48	109.1	
Ge	74	H2	Pulse	0.6	521643	508025.38	102.7	
Sc	45	He	Pulse	0.4	208298	208835.17	99.7	
Ge	74	He	Pulse	0.4	121051	121380.146666667	99.7	
Rh	103	He	Pulse	0.5	296635	302021.16	98.2	
Tb	159	He	Pulse	1.0	416195	429916.006666667	96.8	

CRL Verification ICPMS5

Name	Mass	Tune Mode	Det.	CPS RSD	CPS	ISTD Ref CPS	ISTD Recovery %	QC Flag
Bi	209	He	Pulse	1.3	249497	256831.363333333	97.1	
Li	6	NoGas	Mix	3.8	806850	793244.14	101.7	
Sc	45	NoGas	Analog	3.4	1989388	1874561.46	106.1	
Ge	74	NoGas	Pulse	3.6	538456	528713.046666667	101.8	
Rh	103	NoGas	Pulse	3.3	575391	560665.076666667	102.6	
Tb	159	NoGas	Pulse	4.0	909694	882041.703333333	103.1	
Bi	209	NoGas	Pulse	4.5	482441	475402.23	101.5	

Metals IFA/IFB Metals Internal Standards Recovery Summary

A19259 IFA

A19260 IFB

A9F0684 (I.S Tables)

APEX LABORATORIES

Analytical Standard Record

Apex Laboratories

A19E259

Description:	8260C SIM Cal 5 (200 ng/L)	Expires:	06/16/19
Standard Type:	Calibration Standa	Prepared:	05/22/19
Solvent:	DI	Prepared By:	Michelle Magura
Final Volume (mls):	100	Department:	Volatiles
Vials:	1	Last Edit:	06/06/19 13:21 by mm

Contains ISTD/Surrogates added manually to vial following preparation.

Analyte	CAS Number	Concentration	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0002	ug/mL
1,1,1-Trichloroethane	71-55-6	0.0002	ug/mL
1,1,2,2-Tetrachloroethane	79-34-5	0.0002	ug/mL
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	0.0002	ug/mL
1,1,2-Trichloroethane	79-00-5	0.0002	ug/mL
1,1-Dichloroethane	75-34-3	0.0002	ug/mL
1,1-Dichloroethene	75-35-4	0.0002	ug/mL
1,1-Dichloropropene	563-58-6	0.0002	ug/mL
1,2,3-Trichlorobenzene	87-61-6	0.0002	ug/mL
1,2,3-Trichloropropane	96-18-4	0.0002	ug/mL
1,2,4-Trichlorobenzene	120-82-1	0.0002	ug/mL
1,2,4-Trimethylbenzene	95-63-6	0.0002	ug/mL
1,2-Dibromo-3-chloropropane	96-12-8	0.0002	ug/mL
1,2-Dibromoethane (EDB)	106-93-4	0.0002	ug/mL
1,2-Dichlorobenzene	95-50-1	0.0002	ug/mL
1,2-Dichloroethane (EDC)	107-06-2	0.0002	ug/mL
1,2-Dichloropropane	78-87-5	0.0002	ug/mL
1,3,5-Trimethylbenzene	108-67-8	0.0002	ug/mL
1,3-Dichlorobenzene	541-73-1	0.0002	ug/mL
1,3-Dichloropropane	142-28-9	0.0002	ug/mL
1,4-Dichlorobenzene	106-46-7	0.0002	ug/mL
2,2-Dichloropropane	594-20-7	0.0002	ug/mL
2-Butanone (MEK)	78-93-3	0.0004	ug/mL
2-Chloroethyl vinyl ether	110-75-8	0.0002	ug/mL
2-Chlorotoluene	95-49-8	0.0002	ug/mL
2-Hexanone	591-78-6	0.0004	ug/mL
4-Chlorotoluene	106-43-4	0.0002	ug/mL
4-Isopropyltoluene	99-87-6	0.0002	ug/mL
4-Methyl-2-pentanone (MiBK)	108-10-1	0.0004	ug/mL
Acetone	67-64-1	0.0004	ug/mL

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Acrolein	107-02-8	0.0002	ug/mL
Acrylonitrile	107-13-1	0.0002	ug/mL
Benzene	71-43-2	0.0002	ug/mL
Bromobenzene	108-86-1	0.0002	ug/mL
Bromochloromethane	74-97-5	0.0002	ug/mL
Bromodichloromethane	75-27-4	0.0002	ug/mL
Bromoform	75-25-2	0.0002	ug/mL
Bromomethane	74-83-9	0.0002	ug/mL
Carbon disulfide	75-15-0	0.0002	ug/mL
Carbon tetrachloride	56-23-5	0.0002	ug/mL
Chlorobenzene	108-90-7	0.0002	ug/mL
Chloroethane	75-00-3	0.0002	ug/mL
Chloroform	67-66-3	0.0002	ug/mL
Chloromethane	74-87-3	0.0002	ug/mL
cis-1,2-Dichloroethene	156-59-2	0.0002	ug/mL
cis-1,3-Dichloropropene	10061-01-5	0.0002	ug/mL
Dibromochloromethane	124-48-1	0.0002	ug/mL
Dibromomethane	74-95-3	0.0002	ug/mL
Dichlorodifluoromethane	75-71-8	0.0002	ug/mL
Ethylbenzene	100-41-4	0.0002	ug/mL
Hexachlorobutadiene	87-68-3	0.0002	ug/mL
Iodomethane	74-88-4	0.0002	ug/mL
Isobutyl alcohol	78-83-1	0.005	ug/mL
Isopropylbenzene	98-82-8	0.0002	ug/mL
m,p-Xylene	179601-23-1	0.0004	ug/mL
Methyl tert-butyl ether (MTBE)	1634-04-4	0.0002	ug/mL
Methylene chloride	75-09-2	0.0002	ug/mL
Naphthalene	91-20-3	0.0002	ug/mL
n-Butylbenzene	104-51-8	0.0002	ug/mL
n-Hexane	110-54-3	0.0002	ug/mL
n-Hexane (C6)	110-54-3	0.0002	ug/mL
n-Propylbenzene	103-65-1	0.0002	ug/mL
o-Xylene	95-47-6	0.0002	ug/mL
sec-Butylbenzene	135-98-8	0.0002	ug/mL
Styrene	100-42-5	0.0002	ug/mL
tert-Butylbenzene	98-06-6	0.0002	ug/mL
Tetrachloroethene (PCE)	127-18-4	0.0002	ug/mL
Tetrahydrofuran	109-99-9	0.0002	ug/mL
Toluene	108-88-3	0.0002	ug/mL

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trans-1,2-Dichloroethene	156-60-5	0.0002	ug/mL
trans-1,3-Dichloropropene	10061-02-6	0.0002	ug/mL
trans-1,4-Dichloro-2-butene	110-57-6	0.0002	ug/mL
Trichloroethene (TCE)	79-01-6	0.0002	ug/mL
Trichlorofluoromethane	75-69-4	0.0002	ug/mL
Vinyl acetate	108-05-4	0.0002	ug/mL
Vinyl chloride	75-01-4	0.0002	ug/mL
Xylenes, total	1330-20-7	0.0006	ug/mL

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
A19E227	8260B Cal. Std. B VOCR Spike Mix (2	05/17/19	Trang N. Lindquist	06/16/19	06/06/19 13:21 by mm	0.001

Reviewed By Date

Analytical Standard Record

Apex Laboratories

A19E260

Description:	8260C SIM Cal 6 (500 ng/L)	Expires:	06/16/19
Standard Type:	Calibration Standa	Prepared:	05/22/19
Solvent:	DI	Prepared By:	Michelle Magura
Final Volume (mls):	100	Department:	Volatiles
Vials:	1	Last Edit:	06/06/19 13:21 by mm

Contains ISTD/Surrogates added manually to vial following preparation.

Analyte	CAS Number	Concentration	Units
1,1,1,2-Tetrachloroethane	630-20-6	0.0005	ug/mL
1,1,1-Trichloroethane	71-55-6	0.0005	ug/mL
1,1,2,2-Tetrachloroethane	79-34-5	0.0005	ug/mL
1,1,2-Trichloro-1,2,2-trifluoroethane (Freon-113)	76-13-1	0.0005	ug/mL
1,1,2-Trichloroethane	79-00-5	0.0005	ug/mL
1,1-Dichloroethane	75-34-3	0.0005	ug/mL
1,1-Dichloroethene	75-35-4	0.0005	ug/mL
1,1-Dichloropropene	563-58-6	0.0005	ug/mL
1,2,3-Trichlorobenzene	87-61-6	0.0005	ug/mL
1,2,3-Trichloropropane	96-18-4	0.0005	ug/mL
1,2,4-Trichlorobenzene	120-82-1	0.0005	ug/mL
1,2,4-Trimethylbenzene	95-63-6	0.0005	ug/mL
1,2-Dibromo-3-chloropropane	96-12-8	0.0005	ug/mL
1,2-Dibromoethane (EDB)	106-93-4	0.0005	ug/mL
1,2-Dichlorobenzene	95-50-1	0.0005	ug/mL
1,2-Dichloroethane (EDC)	107-06-2	0.0005	ug/mL
1,2-Dichloropropane	78-87-5	0.0005	ug/mL
1,3,5-Trimethylbenzene	108-67-8	0.0005	ug/mL
1,3-Dichlorobenzene	541-73-1	0.0005	ug/mL
1,3-Dichloropropane	142-28-9	0.0005	ug/mL
1,4-Dichlorobenzene	106-46-7	0.0005	ug/mL
2,2-Dichloropropane	594-20-7	0.0005	ug/mL
2-Butanone (MEK)	78-93-3	0.001	ug/mL
2-Chloroethyl vinyl ether	110-75-8	0.0005	ug/mL
2-Chlorotoluene	95-49-8	0.0005	ug/mL
2-Hexanone	591-78-6	0.001	ug/mL
4-Chlorotoluene	106-43-4	0.0005	ug/mL
4-Isopropyltoluene	99-87-6	0.0005	ug/mL
4-Methyl-2-pentanone (MiBK)	108-10-1	0.001	ug/mL
Acetone	67-64-1	0.001	ug/mL

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A19E260

Acrolein	107-02-8	0.0005	ug/mL
Acrylonitrile	107-13-1	0.0005	ug/mL
Benzene	71-43-2	0.0005	ug/mL
Bromobenzene	108-86-1	0.0005	ug/mL
Bromochloromethane	74-97-5	0.0005	ug/mL
Bromodichloromethane	75-27-4	0.0005	ug/mL
Bromoform	75-25-2	0.0005	ug/mL
Bromomethane	74-83-9	0.0005	ug/mL
Carbon disulfide	75-15-0	0.0005	ug/mL
Carbon tetrachloride	56-23-5	0.0005	ug/mL
Chlorobenzene	108-90-7	0.0005	ug/mL
Chloroethane	75-00-3	0.0005	ug/mL
Chloroform	67-66-3	0.0005	ug/mL
Chloromethane	74-87-3	0.0005	ug/mL
cis-1,2-Dichloroethene	156-59-2	0.0005	ug/mL
cis-1,3-Dichloropropene	10061-01-5	0.0005	ug/mL
Dibromochloromethane	124-48-1	0.0005	ug/mL
Dibromomethane	74-95-3	0.0005	ug/mL
Dichlorodifluoromethane	75-71-8	0.0005	ug/mL
Ethylbenzene	100-41-4	0.0005	ug/mL
Hexachlorobutadiene	87-68-3	0.0005	ug/mL
Iodomethane	74-88-4	0.0005	ug/mL
Isobutyl alcohol	78-83-1	0.0125	ug/mL
Isopropylbenzene	98-82-8	0.0005	ug/mL
m,p-Xylene	179601-23-1	0.001	ug/mL
Methyl tert-butyl ether (MTBE)	1634-04-4	0.0005	ug/mL
Methylene chloride	75-09-2	0.0005	ug/mL
Naphthalene	91-20-3	0.0005	ug/mL
n-Butylbenzene	104-51-8	0.0005	ug/mL
n-Hexane	110-54-3	0.0005	ug/mL
n-Hexane (C6)	110-54-3	0.0005	ug/mL
n-Propylbenzene	103-65-1	0.0005	ug/mL
o-Xylene	95-47-6	0.0005	ug/mL
sec-Butylbenzene	135-98-8	0.0005	ug/mL
Styrene	100-42-5	0.0005	ug/mL
tert-Butylbenzene	98-06-6	0.0005	ug/mL
Tetrachloroethene (PCE)	127-18-4	0.0005	ug/mL
Tetrahydrofuran	109-99-9	0.0005	ug/mL
Toluene	108-88-3	0.0005	ug/mL

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trans-1,2-Dichloroethene	156-60-5	0.0005	ug/mL
trans-1,3-Dichloropropene	10061-02-6	0.0005	ug/mL
trans-1,4-Dichloro-2-butene	110-57-6	0.0005	ug/mL
Trichloroethene (TCE)	79-01-6	0.0005	ug/mL
Trichlorofluoromethane	75-69-4	0.0005	ug/mL
Vinyl acetate	108-05-4	0.0005	ug/mL
Vinyl chloride	75-01-4	0.0005	ug/mL
Xylenes, total	1330-20-7	0.0015	ug/mL

Parent Standards used in this standard:

Standard	Description	Prepared	Prepared By	Expires	Last Edit	(mls)
A19E227	8260B Cal. Std. B VOCR Spike Mix (2	05/17/19	Trang N. Lindquist	06/16/19	06/06/19 13:21 by mm	0.0025

Reviewed By Date

		6 Li (ISTD) [NoGas]	45 Sc (ISTD) [H2]	45 Sc (ISTD) [He]	45 Sc (ISTD) [NoGas]	74 Ge (ISTD) [H2]	74 Ge (ISTD) [He]	74 Ge (ISTD) [NoGas]	103 Rh (ISTD) [He]	103 Rh (ISTD) [NoGas]	159 Tb (ISTD) [He]	159 Tb (ISTD) [NoGas]	209 Bi (ISTD) [He]	209 Bi (ISTD) [NoGas]
Acq. Date-Time	Sample Name	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %	ISTD Recovery %
6/27/2019 12:23 PM	rinse													
6/27/2019 12:28 PM	rinse													
6/27/2019 12:32 PM	cal blk													
6/27/2019 12:36 PM	9F27029-CAL0	100	100	100	100	100	100	100	100	100	100	100	100	100
6/27/2019 12:41 PM	9F27029-CAL1	99.83101377	101.2320199	99.26222516	101.8092308	99.95030301	99.42377177	99.86928133	99.35602415	100.1465533	98.70277762	100.5467825	98.6358299	99.53547266
6/27/2019 12:45 PM	9F27029-CAL2	100.6483926	102.0066142	98.3037723	102.5207858	99.94925582	98.97817446	100.4186575	98.79106042	100.3437584	98.31512283	100.8899753	98.74606306	100.1277704
6/27/2019 12:50 PM	9F27029-CAL3	212.7810084	270.9877794	157.3197193	202.4316841	280.2913193	161.3840748	204.1993964	155.7609683	198.8730949	159.2920957	201.2825002	161.7911878	197.5279158
6/27/2019 12:55 PM	9F27029-CAL4	96.99686194	101.6986294	99.62243269	98.44937991	100.4496311	99.39111954	97.42363208	98.52167753	96.79605156	99.08343104	97.59187312	100.4607083	96.82522033
6/27/2019 12:59 PM	9F27029-CAL3	100.0690372	99.97892941	98.90017727	102.4226966	99.12927316	99.11699178	100.1982796	98.56180827	100.5401133	98.38156759	101.05693	99.01956548	100.1296046
6/27/2019 1:04 PM	9F27029-CAL5	99.29313397	101.8638265	97.46768867	102.2769724	99.45136468	98.52710399	99.73966471	97.72806978	99.39194655	98.34068208	100.6256322	99.04626394	99.94372274
6/27/2019 1:09 PM	9F27029-CAL6	97.46334548	97.86670303	95.7794194	100.4006902	96.72133047	96.58201654	98.09524024	95.30883531	97.16984453	97.12730166	100.0220541	98.06113633	98.96536735
6/27/2019 1:13 PM	9F27029-CAL7	95.38719946	95.5024322	92.43692206	97.51735338	93.47092331	94.49166646	95.68833665	92.49069613	94.38577005	97.16976421	100.1120559	97.84181992	98.31397299
6/27/2019 1:18 PM	9F27029-CAL8	92.71688495	91.81037648	88.4588948	95.42313593	88.52326564	90.16226267	92.43598957	88.07429696	90.88569532	93.68547819	97.94052066	93.53567527	94.93628585
6/27/2019 1:22 PM	9F27029-CAL9	90.84157747	78.72845527	86.35967783	92.55789992	76.90916807	86.08837843	88.14330501	81.69387425	83.20565095	89.05209019	93.81842191	84.9493758	88.04888862
6/27/2019 1:38 PM	9F27029-ICV1	94.74234797	97.88586124	94.0872188	94.42717872	95.15574399	95.58008718	93.50335116	92.74222265	92.29199954	96.88365794	95.97785155	96.74365445	94.73046014
6/27/2019 1:43 PM	9F27029-ICB1	97.01181026	92.75039092	95.35450215	97.72643944	90.8230989	96.17185337	95.56749164	95.52255544	96.22471284	97.81468709	98.02758873	98.60097824	97.187787
6/27/2019 1:50 PM	9F27029-CRL1	94.32082368	101.4636731	97.2072584	93.47962021	98.68983711	98.85203357	92.68855821	96.84482593	92.5670467	98.47365147	93.06368813	98.4412262	92.39522218
6/27/2019 1:54 PM	9F27029-CRL2	98.67800221	98.81021292	97.65568542	101.0284843	96.76148135	98.04534481	97.96531785	97.25843161	98.05122575	98.4552471	98.88749667	98.94350001	98.52732285
6/27/2019 1:58 PM	9F27029-CRL3	98.57357072	98.12082116	97.64983392	99.46281214	95.41911797	98.5256183	98.18916202	97.89196558	98.16695794	98.71207556	99.1616054	99.37283101	99.31912393
6/27/2019 2:03 PM	9F27029-IFA1	88.83346473	71.58334415	76.7053621	91.84059384	68.80683665	73.50552715	86.78485861	67.3187446	79.54097884	74.93229414	93.72709063	66.37341501	83.75713551
6/27/2019 2:07 PM	9F27029-IFB1	87.46424861	73.92854034	77.19747748	91.05093892	71.97087148	74.43960907	85.96361414	67.58984922	79.28560654	74.60958227	92.25316712	64.95618286	80.9578463
6/27/2019 2:13 PM	rinse	87.07644408	102.4373662	93.73650042	93.41752906	99.4099094	94.44221301	92.39453041	95.04881821	94.59068858	95.14568823	98.15347355	96.55009554	97.00885641
6/27/2019 2:19 PM	9061367-BLK1	84.19869029	97.91633582	91.73518043	89.5252427	95.22915502	92.41246866	89.11188586	92.60374119	91.88313691	93.67167162	95.49866673	94.76288001	95.28028437
6/27/2019 2:23 PM	9061367-BS1	88.41186943	98.36770713	93.53369294	94.47789867	95.29255343	94.24395159	93.34667449	92.69623029	94.2177339	93.1008671	98.65747315	93.11958642	96.82668506
6/27/2019 2:28 PM	A9F0657-02	83.19527243	95.6396905	89.70171547	89.17463537	91.71549789	90.32089652	88.05799093	89.75138364	89.12607439	93.13230967	95.89866973	93.85084187	94.4316998
6/27/2019 2:32 PM	A9F0742-03	87.44050728	94.22329863	91.07959162	96.33093474	88.99573351	89.21410102	91.92324578	86.77833147	90.65453414	90.425605	98.55525803	87.7312362	93.79411339
6/27/2019 2:36 PM	A9F0795-01	90.99404336	102.9893754	96.0412511	98.39145827	100.1738069	96.57377796	95.79916614	96.11330654	97.07725568	95.62306054	100.6718673	96.44253469	100.303381
6/27/2019 2:40 PM	A9F0795-02	91.95908	102.441142	96.48536371	100.3277414	100.3546306	97.23681336	97.85038279	96.53869175	98.73934244	96.23005275	101.292106	95.89694062	100.1540457
6/27/2019 2:45 PM	9061367-DUP1	91.69357158	106.3083115	96.90060667	100.0959919	101.8404468	97.07351922	97.78350719	97.08368336	99.15310937	96.03906196	101.3956237	96.4775979	100.3534095
6/27/2019 2:49 PM	9061367-MS1	90.55806703	101.7666919	95.43529952	99.09742125	98.66399523	96.41385615	96.04033351	94.72799301	96.85135195	95.31003273	100.6220942	93.77722028	97.77228713
6/27/2019 2:53 PM	A9F0795-03	90.98923441	103.7464624	98.16688284	100.6561248	100.2535169	98.23814405	97.72365305	98.38537031	99.61643589	97.25327277	102.151455	97.58134809	100.8559559
6/27/2019 2:59 PM	A9F0817-01	91.90165044	104.5039072	96.59872584	100.5770932	100.5386719	95.69613581	97.78242469	95.24246248	98.19602639	95.66955567	101.7005791	95.2430031	100.3484025
6/27/2019 3:04 PM	9F27029-CCV1	90.92863894	101.2643813	95.63454119	98.76940445	99.13160572	96.23063838	96.52189215	94.51367028	95.53163239	95.60975717	100.3359346	95.10058929	98.18005832
6/27/2019 3:08 PM	9F27029-CCV2	88.69152902	100.5874138	91.97721821	96.02938439	96.23479441	93.5723316	93.54044123	92.7057208	93.43576379	94.40304084	98.84186995	93.43668944	96.97275365
6/27/2019 3:12 PM	9F27029-CCB1	90.36762671	99.79180514	94.47595281	98.09348547	98.07905857	96.07476445	96.61360163	95.99095529	97.76828737	95.84134271	99.86247891	96.77692401	99.03076952
6/27/2019 3:17 PM	9061367-MSD1	91.03736125	101.5593774	95.03758075	100.2339212	98.43262358	96.88761018	97.51132678	96.48051591	98.96545367	96.20445395	101.8307883	97.16184715	100.7227964
6/27/2019 3:21 PM	A9F0663-01RE1	94.02959136	97.38580895	93.26020453	99.31937468	92.194222	93.19761903	96.02907157	86.71229747	90.63368509	90.36178323	97.21266656	85.04206048	89.77795007
6/27/2019 3:25 PM	A9F0681-01RE1	96.48671761	110.5359991	99.2323627	102.5154955	105.6703506	99.03214815	100.5079687	98.99301426	101.0112442	95.17029303	102.2925292	94.65703884	99.84891671
6/27/2019 3:29 PM	A9F0697-01RE1	96.58371213	110.3895945	99.9661248	103.5234026	105.8562074	100.2981075	100.2995462	99.0399293	100.5904428	95.84460459	102.1375796	95.95393522	101.0751099
6/27/2019 3:34 PM	A9F0740-01RE1	94.19240126	111.6960823	98.84688325	101.8018145	105.1838296	99.28776381	99.00745719	98.18127754	98.95169501	94.96740766	100.6049582	94.80959938	98.66936888
6/27/2019 3:38 PM	9061384-DUP2	94.18871219	106.3786642	99.64714117	101.3478214	104.7714296	98.72467612	98.37874816	97.47582476	98.36106491	95.18215969	100.2248786	95.46032728	98.57021565
6/27/2019 3:42 PM	9061384-MS2	95.46465186	110.460923	98.6487573	103.6061432	104.4251706	99.06687925	100.2180874	97.83435593	99.72652538	95.07180868	102.219089	95.82676228	99.95962857
6/27/2019 3:47 PM	9061386-BLK2	93.53578752	108.3911977	98.75571246	101.3087041	103.3267019	98.36836853	98.10011687	98.62393416	99.60049173	95.61691283	101.6373995	95.67052487	99.83633158
6/27/2019 3:51 PM	9061386-BS2	91.98855475	106.0571074	96.51302508	98.18646295	101.7188603	96.98579757	96.35410548	95.37671025	96.41853622	94.79282705	99.7752918	93.63279088	97.34124301
6/27/2019 3:55 PM	A9F0709-17RE1	89.41935455	102.8755465	92.42895565	96.09877359	95.36271331	92.51589854	92.89082293	90.44198426	91.88856855	91.17725569	99.03729949	90.39485559	96.25453938
6/27/2019 4:00 PM	9F27029-CCV3	92.95467051	102.5440086	94.96410973	98.50020584	97.89387688	96.28380468	96.25532726	94.46396074	95.44489374	94.67708119	100.6764306	94.63067913	97.71151123
6/27/2019 4:04 PM	9F27029-CCB2	93.91417628	106.6695179	98.0826697	100.8385652	103.0481463	98.14343609	97.46548465	98.37752538	99.34048089	95.75586323	100.2714913	95.53710918	98.64786779
6/27/2019 4:08 PM	9F27029-CRL4	93.82357912	106.9000712	91.62527397	100.9554994	101.7310513	93.0036609	97.69684581	91.65257494	98.95715459	89.90138709	100.2785031	90.47170628	98.5967637
6/27/2019 4:12 PM	9F27029-CRL5	93.38162944	104.1215834	95.84622169	99.27611958	100.750471	96.75875879	96.02322719	96.58328465	97.66261406	94.65160567	100.2342765	95.50227439	98.69895997
6/27/2019 4:17 PM	9F27029-CRL6	91.83516019	102.8988808	94.66234862	98.40277896	98.82411649	95.86313731	95.16014087	96.07614358	96.0045618	94.57107133	98.85877769	95.14059349	97.24788908
6/27/2019 4:21 PM	A9F0709-18RE1	93.22504881	97.37197208	91.26481106	101.0208576	91.15539595	91.52955931	94.78470029	87.68450087	92.31366191	90.23007766	99.65233012	86.99102027	94.70585992
6/27/2019 4:44 PM	A9F0709-20RE2	93.93127779	98.91351444	90.67469494	98.83134978	89.6207843	90.03449878	94.52772409	82.89163912	89.61141763	86.83007864	97.38669764	80.412914	89.54251855
6/27/2019 4:53 PM	9061386-DUP3	97.48100545	103.6126245	95.73850196	102.5704673	94.02607996	93.49409255	96.17814361	86.11082416	91.76971209	89.0790536	98.91941731	82.45021321	91.3213028
6/27/2019 4:57 PM	9061386-MS3	95.61968988	102.4665334	93.09609903	102.218263	93.52090506	91.28343724	96.09689223	85.33744236	90.34787394	89.05404173	99.32721624	81.33319232	90.86077418
6/27/2019 5:02 PM	A9F0764-01RE1	89.58373312	94.290979	86.49992081	90.05816361	97.1127512	97.36354743	102.3168585	83.3704091	85.97230267	84.51848447	94.4728373	81.07113709	89.05656094
6/27/2019 5:06 PM	A9F0766-01RE1	98.09930564	98.8313345	91.07861797	96.49743786	104.0883876	103.840845	108.6412577	84.16859931	87.95735586	84.06688386	94.37257258	79.76857421	89.65791207
6/27/2019 5:10 PM	9061423-BLK1	102.7038153	107.1287064	100.0383811	104.8438689	105.0801675	98.6281694	100.1757362	96.02691414	98.58165591	95.58465071	101.1340189	94.32790069	98.74165083
6/27/2019 5:14 PM	9061423-BLK1	103.928337	110.516733	99.77331404	104.9221507	103.5870288	99.15375233	99.92601469	96.1125428	99.43671243	94.85227742	101.3254199	93.63126718	98.26688374
6/27/2019 5:19 PM	9061423-BS1	102.6641773	108.2281927	100.0787128	104.8457675	102.1730896	98.98465548	101.1008208	95.93508503	99.16157432	95.00878707	101.7539307	93.50299754	98.75198594
6/27/2019 5:23 PM	A9F0664-01	101.1748754	110.2275859	100.111493	104.2453551	103.0521211	98.70197334	99.38469396	96.26756726	98.06721271	95.18642409	100.2886719	93.5448538	97.99579611
6/27/2019 5:27 PM	9F27029-CCV4	96.34190973	104.1705084	96.18508702	101.5252159	100.7125536	96.92931661	97.2841689	94.52629964	96.79384881	95.17126764	101.103	94.32713494	98.72103461
6/27/2019 5:32 PM	9F27029-CCB3	95.83271845	107.3505188	99.30435887	99.66914288	102.4453785	99.55661612	96.67765654	99.05280698	97.20940647	97.73185308	99.02050814	97.76077971	97.57560456
6/27/2019 5:36 PM	A9F0664-02	97.9971328	104.5084574	98.4046094	101.8315574	101.6828575	97.89917593	98.34568738	95.53243333	96.89898883	95.74459668	100.6278838	94.52323249	98.01981437
6/27/2019 5:40 PM	9061423-MS1	95.41561778	102.9076008	97.16059959	98.90969059	99.84272505	97.31340194	95.94111964	94.14101537	94.16025157	95.19766117	97.3349242	94.04062918	95.96370285
6/27/2019 5:45 PM	9061421-BLK1	97.45294515	105.3141107	97.93918492	101.7684278	100.3235317	97.69808594	98.40227825	97.56643431	99.81250482	96.32217927	102.1907679	95.98269728	99.42033998
6/27/2019 5:49 PM	9061421-BS1	94.49671068	104.0280577	93.86874347	100.8694917	98.75439556	94.4563614	96.46661831	93.18546533	96.61403796	94.02161827	101.1076683	93.68668616	99.21716887
6/27/2019 5:53 PM	A9F0830-01	96.33900773	98.33307845	97.60747675	100.7818234	99.63737638	97.05680589	97.10854434	96.96696307	98.02292305	95.72463232	101.6890641	97.776371	101.4927268
6/27/2019 5:58 PM	9061421-DUP1	96.26066489	106.1275275	97.34341682	101.0922388	99.59921884	97.30842309	97.26348345	97.39397288	98.3231522	96.8588593	101.6612514	97.72531675	101.3672149
6/27/2019 6:02 PM	9061421-MS1	88.21640586	103.0139105	95.84635098	92.1571052	97.62231892	95.85694739	89.7957275	94.32574415	89.56832595	95.9070478	94.0292619	95.16395642	92.58406718
6/27/2019 6:06 PM	9061421-MSD1	97.44850936	104.4729721	98.62017973	103.4671355	99.57194396	98.91486922	99.33764827	98.19604582	100.1141715	98.0425502	102.9760418	99.33816624	102.2865599
6/27/2019 6:11 PM	9061422-BLK1	94.58013603	101.8703827	95.36570875	100.1348114	97.11539543	95.72629725	96.15074753	95.66115721	98.32050951	95.67423953	101.1545962	96.5005559	99.42598292
6/27/2019 6:15 PM	9061422-BS1	91.71105674	101.5873569	94.41793257	98.49899222	96.36166274	94.24940279	94.87023314	93.83587671	95.47526065	95.71936773	100.7882787	95.40415683	98.4062843
6/27/2019 6:19 PM	9F27029-CCV5	92.48992162	100.8306112	94.84129198	97.6808791	96.9162807	96.67677119	95.10127655	94.22557016	94.60761015	97.14793049	100.167206	97.53152292	98.21806123
6/27/2019 6:23 PM	9F27029-CCB4	92.41072784	105.3325896	93.62008803	98.40399951	99.7431854	95.60721957	94.66010025	94.93674218	94.64600027	94.48024041	97.66916312	96.05848502	97.24922269
6/27/2019 6:28 PM	A9F0684-01	93.84971273	102.3539593	96.45412376	99.56623917	97.51311637	96.56438598	96.35766822	97.65558921	98.43196166	97.6258533	102.0509835	99.62871227	101.6660846
6/27/2019 6:32 PM	9061422-DUP1	94.4553678	104.0699949	96.62969604	101.3479963	98.43239065	96.44855155	96.46860741	98.32539106	99.4685734	97.99867419	102.5104633	98.49360298	101.8027366
6/27/2019 6:36 PM	9061422-MS1	92.67698467	101.3495065	94.04460944	99.67007395	96.15580492	94.80159358	94.39002054	94.45914319	95.74308603	96.02240909	101.2577701	95.40615555	99.30314729
6/27/2019 6:41 PM	9061422-MSD1	95.62465767	104.3882189	97.47174291	101.9958519	99.61943043	97.42419436	97.21465672	96.79260552	98.92840957	97.17087296	102.1757751	98.56822912	100.2051603
6/27/2019 6:45 PM	9061427-BLK1	95.31009793	104.0347655	96.86559022	100.8202459	99.014086	96.99092196	97.47037451	97.06733131	98.5376207	96.67816897	101.2983797	96.20149974	98.74124977
6/27/2019 6:49 PM	9061427-BS1	92.02088401	99.68913307	94.1945762	99.06068519	96.80903147	95.11397855	95.06444498	93.78338149	94.70776442	95.56379858	99.68664331	95.78645308	97.34440315
6/27/2019 6:54 PM	A9F0567-01	95.22392228	93.77891798	104.6044926	104.6324549	86.47382998	89.55474981	96.39940794	87.73265975	94.90323644	91.06326211	102.2642928	89.39189397	98.21210206
6/27/2019 6:58 PM	A9F0769-01	94.42205313	104.9861532	96.85654481	103.3555244	95.52666903	94.74524719	95.50783609	93.47538431	95.90573809	96.81240449	102.692782	96.136557	100.3272843
6/27/2019 7:02 PM	9061427-DUP1	92.96468802	101.5062881	95.86981605	101.3429498	92.97204928	92.63859296	93.29900339	92.06847295	93.75428728	95.16848415	100.8135689	94.77715267	98.22063729
6/27/2019 7:06 PM	9061427-MS1	92.48734864	99.31432967	92.32223353	100.5333534	90.89014542	90.89836603	93.28946955	89.28080403	92.85652612	93.49065486	100.8953424	93.23508503	97.47733128
6/27/2019 7:11 PM	9F27029-CCV6	95.49221925	103.659106	94.90759467	100.9344717	98.24697603	96.5662122	97.57638476	94.17939238	96.5880254	96.40444806	101.1023666	96.51617704	99.23966841
6/27/2019 7:15 PM	9F27029-CCB5	98.00507277	107.0568139	98.52584856	103.094059	101.0532164	99.06115069	99.95997955	98.41522473	100.7023022	97.29304333	101.7144133	97.65126686	100.0139384
6/27/2019 7:19 PM	9F27029-CRL7	98.82131286	108.5695984	99.55427687	103.7555305	102.4342727	99.93295169	100.1034947	98.67179395	100.5183166	97.56745352	101.9105514	98.02865457	99.7234391
6/27/2019 7:24 PM	9F27029-CRL8	98.77562411	108.5461938	98.95206029	105.1578714	102.2473169	99.96589228	99.84590444	99.0197497	99.94353076	97.11241193	101.2306637	97.45942114	98.82042833
6/27/2019 7:28 PM	9F27029-CRL9	101.7152597	109.10326	99.74296954	106.1254897	102.6804599	99.72883539	101.8428005	98.21674746	102.6264462	96.80851691	103.1350766	97.14417018	101.4806935
6/27/2019 7:33 PM	9061428-BLK1	97.71722738	108.4575111	94.86748488	102.2257332	102.5796441	95.21277285	97.58932813	93.81086742	97.64120734	92.88933043	99.21514104	93.38115364	97.76320359
6/27/2019 7:38 PM	9061427-MSD1	97.01236579	105.6097682	97.02735256	103.0812417	98.31088951	96.96796104	97.25864655	95.90943231	97.5678308	96.7821195	102.2579998	97.25349224	100.9788546
6/27/2019 7:42 PM	9061428-BS1	95.84483746	103.0687442	96.10173101	101.8545964	98.14687539	96.17948778	96.90032364	94.87263078	96.47117132	96.02181673	100.8150159	96.1125659	98.95099006
6/27/2019 7:46 PM	A9F0254-01RE1	94.67994557	103.9904822	96.18722108	100.0804021	98.85883654	95.72286176	95.3078177	95.23442993	96.09268095	96.19126843	99.64291447	97.58563755	98.88713956
6/27/2019 7:50 PM	A9F0747-01	98.17328328	102.6451911	96.51131241	104.7224204	97.67840142	96.81953479	98.89555843	91.7439096	94.83941402	94.88105746	99.39546547	91.6058253	95.1788096
6/27/2019 7:55 PM	A9F0748-01	100.892518	108.1676696	99.47698624	107.1310035	102.2899151	99.54154776	101.2967273	94.18476396	97.8228993	95.57309729	101.4488752	92.68444746	97.13047973
6/27/2019 7:59 PM	A9F0767-01	94.252753	108.2774685	96.32724539	99.77318535	101.2372604	96.89669458	95.81162407	94.00784148	95.06690278	95.13730442	100.1952504	94.84977101	98.3535486
6/27/2019 8:03 PM	A9F0771-01	96.08144726	105.9265536	97.33384627	102.2792154	98.9468538	97.26513759	96.85457355	94.65918768	95.88228499	95.84413473	99.88562975	95.24362607	98.08145059
6/27/2019 8:08 PM	9061428-DUP1	95.82050321	104.8961517	95.73980283	101.3488483	98.53574704	96.04768424	95.78780838	93.65638156	94.71464316	94.61634762	99.65807928	94.49560476	97.43536822
6/27/2019 8:12 PM	9061428-MS1	94.47577808	103.0134994	94.32638829	99.02202744	96.33228298	94.19807369	94.03973601	90.95694377	92.47526879	93.34437823	99.42785698	92.26709838	96.2070126