Apex Laboratories, LLC
12232 SW Garden Place Tigard, Oregon 97223
503.718.2323

Level IV Data Package for

Anchor QEA, LLC

Port of Portland - T4 - PDI

Apex Laboratories Work Order #:

A9D0674

The information contained in this Data Package is intended solely for the purpose of validating client sample results submitted under the associated Chain of Custody(ies). An effort has been made to remove all traceable non-client data. Any incidental inclusion of non-client data is considered privileged and confidential information. The use of this information for any purpose other than data validation is strictly prohibited, and constitutes a breach of contract.

APEX LABORATORIES, LLC
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Analytical Case Narrative

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Analytical Case Narrative

Client: Anchor QEA, LLC
Date: 06/20/2019
Project: Port of Portland - T4 - PDI
Apex Work Order Number: A9D0674

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

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

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

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

Estella Rieben,
Quality Systems Manager
Apex Laboratories, LLC

APEX LABORATORIES, LLC
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Analytical Report

Apex Laboratories, LLC

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

Tuesday, May 21, 2019

Cindy Fields
Anchor QEA, LLC
6720 SW Macadam Ave. Suite 125
Portland, OR 97219

RE: A9D0674 - Port of Portland - T4 - PDI - Port of Portland T4 PDI

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 A9D0674, which was received by the laboratory on 4/18/2019 at 7:40:00AM.

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

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

Cooler Receipt Information

(See Cooler Receipt Form for details)

Cooler #1	2.5 degC	Cooler #2	4.5 degC
Cooler #3	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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The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL REPORT FOR SAMPLES

SAMPLE INFORMATION

Client Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
RB-201904171558	A9D0674-01	Water	04/17/19 15:58	04/18/19 07:40
T4-PDI2019-SG05-190417	A9D0674-02	Sediment	04/17/19 11:35	04/18/19 07:40
T4-PDI2019-SG06-190417	A9D0674-03	Sediment	04/17/19 10:21	04/18/19 07:40
T4-PDI2019-SG08-190415	A9D0674-04	Sediment	04/15/19 12:29	04/18/19 07:40
T4-PDI2019-SG11-190415	A9D0674-05	Sediment	04/15/19 11:35	04/18/19 07:40
T4-PDI2019-SG13-190415	A9D0674-06	Sediment	04/15/19 15:34	04/18/19 07:40
T4-PDI2019-SG15-190416	A9D0674-07	Sediment	04/16/19 14:34	04/18/19 07:40
T4-PDI2019-SG16-190416	A9D0674-08	Sediment	04/16/19 10:13	04/18/19 07:40
T4-PDI2019-SG17-190416	A9D0674-12	Sediment	04/16/19 11:14	04/18/19 07:40
FD-201904151441	A9D0674-13	Sediment	04/15/19 14:41	04/18/19 07:40
T4-PDI2019-SG18-190415	A9D0674-14	Sediment	04/15/19 14:41	04/18/19 07:40
T4-PDI2019-SG51-190417	A9D0674-15	Sediment	04/17/19 15:25	04/18/19 07:40
T4-PDI2019-SG52-190417	A9D0674-16	Sediment	04/17/19 14:26	04/18/19 07:40
T4-PDI2019-SG53-190416	A9D0674-17	Sediment	04/16/19 16:27	04/18/19 07:40
T4-PDI2019-SG54-190416	A9D0674-18	Sediment	04/16/19 13:27	04/18/19 07:40
T4-PDI2019-SG57-190417	A9D0674-19	Sediment	04/17/19 15:49	04/18/19 07:40
T4-PDI2019-SG58-190417	A9D0674-20	Sediment	04/17/19 14:54	04/18/19 07:40
T4-PDI2019-SG59-190417	A9D0674-21	Sediment	04/17/19 13:50	04/18/19 07:40
FD-201904171301	A9D0674-22	Sediment	04/17/19 13:01	04/18/19 07:40
T4-PDI2019-SG60-190417	A9D0674-23	Sediment	04/16/19 13:01	04/18/19 07:40
T4-PDI2019-SG61-190416	A9D0674-24	Sediment	04/16/19 15:09	04/18/19 07:40
T4-PDI2019-SG59-190417-DUP	A9D0674-25	Sediment	04/17/19 13:50	04/18/19 07:40

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
RB-201904171558 (A9D0674-01)				**Matrix: Water**		**Batch: 9041150**		
Acenaphthene	ND	0.0652	0.0652	ug/L	1	04/23/19	EPA 8270D	R-02
Acenaphthylene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Anthracene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Benz(a)anthracene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Benzo(a)pyrene	ND	0.0163	0.0326	ug/L	1	04/23/19	EPA 8270D	
Benzo(b)fluoranthene	ND	0.0163	0.0326	ug/L	1	04/23/19	EPA 8270D	
Benzo(k)fluoranthene	ND	0.0163	0.0326	ug/L	1	04/23/19	EPA 8270D	
Benzo(g,h,i)perylene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Chrysene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Dibenz(a,h)anthracene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Fluoranthene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Fluorene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
1-Methylnaphthalene	ND	0.0217	0.0435	ug/L	1	04/23/19	EPA 8270D	
2-Methylnaphthalene	ND	0.0217	0.0435	ug/L	1	04/23/19	EPA 8270D	
Naphthalene	ND	0.0435	0.0435	ug/L	1	04/23/19	EPA 8270D	
Phenanthrene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Pyrene	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Carbazole	ND	0.0163	0.0326	ug/L	1	04/23/19	EPA 8270D	
Dibenzofuran	ND	0.0109	0.0217	ug/L	1	04/23/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*48 %*	*Limits: 44-120 %*	*1*	*04/23/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*45 %*	*44-120 %*	*1*	*04/23/19*	*EPA 8270D*	
Phenol-d6 (Surr)			*17 %*	*10-120 %*	*1*	*04/23/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*81 %*	*50-133 %*	*1*	*04/23/19*	*EPA 8270D*	
2-Fluorophenol (Surr)			*28 %*	*19-120 %*	*1*	*04/23/19*	*EPA 8270D*	
2,4,6-Tribromophenol (Surr)			*68 %*	*43-140 %*	*1*	*04/23/19*	*EPA 8270D*	*Q-41*
T4-PDI2019-SG05-190417 (A9D0674-02)				**Matrix: Sediment**		**Batch: 9041271**		
Acenaphthene	**96.4**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**J, Q-42**
Acenaphthylene	ND	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	Q-42
Anthracene	**165**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Benz(a)anthracene	**498**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Benzo(a)pyrene	**661**	102	204	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Benzo(b)fluoranthene	**607**	102	204	ug/kg dry	40	04/25/19	EPA 8270D	**M-05, Q-42**

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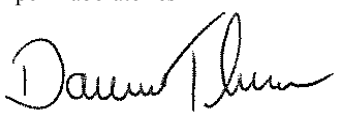

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG05-190417 (A9D0674-02)				**Matrix: Sediment**			**Batch: 9041271**	
Benzo(k)fluoranthene	**232**	102	204	ug/kg dry	40	04/25/19	EPA 8270D	**M-05, Q-42**
Benzo(g,h,i)perylene	**459**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Chrysene	**592**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Dibenz(a,h)anthracene	ND	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	Q-42
Fluoranthene	**1260**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Fluorene	**70.4**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**J, Q-42**
Indeno(1,2,3-cd)pyrene	**433**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
2-Methylnaphthalene	ND	136	272	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	ND	136	272	ug/kg dry	40	04/25/19	EPA 8270D	Q-42, Q-37
Phenanthrene	**603**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Pyrene	**1620**	68.0	136	ug/kg dry	40	04/25/19	EPA 8270D	**Q-42**
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*37 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*60 %*	*44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*83 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	ND	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	**217**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Benz(a)anthracene	**721**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(a)pyrene	**941**	104	207	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**894**	104	207	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**306**	104	207	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**646**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Chrysene	**821**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Dibenz(a,h)anthracene	**75.8**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Fluoranthene	**1660**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	**101**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Indeno(1,2,3-cd)pyrene	**607**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	138	276	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	**150**	138	276	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Phenanthrene	**594**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**2100**	68.9	138	ug/kg dry	40	04/25/19	EPA 8270D	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**			**Batch: 9041271**	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*30 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*58 %*	*44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*83 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG08-190415 (A9D0674-04)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	ND	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	**246**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Benz(a)anthracene	**870**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(a)pyrene	**1220**	174	347	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**1280**	174	347	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**412**	174	347	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**885**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Chrysene	**1040**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Dibenz(a,h)anthracene	**135**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Fluoranthene	**1910**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	ND	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**866**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	232	463	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	**232**	232	463	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Phenanthrene	**900**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**2400**	115	232	ug/kg dry	40	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*46 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*39 %*	*44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*44 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	**252**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	**788**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	**6370**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Benz(a)anthracene	**8980**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(a)pyrene	**12300**	150	300	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**10900**	150	300	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**3910**	150	300	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**			**Batch: 9041271**	
Benzo(g,h,i)perylene	**7850**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Chrysene	**10300**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Dibenz(a,h)anthracene	**1030**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Fluoranthene	**25500**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	**2090**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**6900**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	**329**	200	400	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Naphthalene	**1850**	200	400	ug/kg dry	40	04/25/19	EPA 8270D	
Phenanthrene	**19200**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**31000**	99.7	200	ug/kg dry	40	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*48 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*61 %*	*44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*68 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG13-190415 (A9D0674-06)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	ND	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	**246**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Benz(a)anthracene	**772**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(a)pyrene	**1070**	162	323	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**1140**	162	323	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**494**	162	323	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**803**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Chrysene	**911**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Dibenz(a,h)anthracene	**123**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Fluoranthene	**1560**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	**107**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Indeno(1,2,3-cd)pyrene	**780**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	216	430	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	ND	216	430	ug/kg dry	40	04/25/19	EPA 8270D	
Phenanthrene	**846**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**1810**	107	216	ug/kg dry	40	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*38 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG13-190415 (A9D0674-06)				**Matrix: Sediment**			**Batch: 9041271**	
Surrogate: 2-Fluorobiphenyl (Surr)			*Recovery: 44 %*	*Limits: 44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*55 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG15-190416 (A9D0674-07RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Acenaphthylene	ND	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Anthracene	ND	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Benz(a)anthracene	**26.4**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**31.9**	10.3	20.6	ug/kg dry	4	04/29/19	EPA 8270D	
Benzo(b)fluoranthene	**37.5**	10.3	20.6	ug/kg dry	4	04/29/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**15.5**	10.3	20.6	ug/kg dry	4	04/29/19	EPA 8270D	**J**
Benzo(g,h,i)perylene	**26.1**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Chrysene	**31.9**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Fluoranthene	**51.7**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Fluorene	ND	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**27.0**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
2-Methylnaphthalene	ND	13.7	27.4	ug/kg dry	4	04/29/19	EPA 8270D	
Naphthalene	ND	13.7	27.4	ug/kg dry	4	04/29/19	EPA 8270D	
Phenanthrene	**22.9**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Pyrene	**60.6**	6.84	13.7	ug/kg dry	4	04/29/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)			*Recovery: 65 %*	*Limits: 37-122 %*	*4*	*04/29/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*77 %*	*44-115 %*	*4*	*04/29/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*86 %*	*54-127 %*	*4*	*04/29/19*	*EPA 8270D*	
T4-PDI2019-SG16-190416 (A9D0674-08)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	ND	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	**182**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Benz(a)anthracene	**827**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(a)pyrene	**1110**	157	314	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**1170**	157	314	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**471**	157	314	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**883**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG16-190416 (A9D0674-08)				**Matrix: Sediment**			**Batch: 9041271**	
Chrysene	**945**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Dibenz(a,h)anthracene	**125**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Fluoranthene	**2060**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	ND	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**859**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	209	418	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	**251**	209	418	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Phenanthrene	**738**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**2520**	104	209	ug/kg dry	40	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*38 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*49 %*	*44-115 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*47 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG17-190416 (A9D0674-12RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	**33.2**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Acenaphthylene	**9.60**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Anthracene	**45.7**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Benz(a)anthracene	**220**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(a)pyrene	**298**	11.0	22.0	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(b)fluoranthene	**327**	11.0	22.0	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**104**	11.0	22.0	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**210**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Chrysene	**225**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Dibenz(a,h)anthracene	**38.6**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Fluoranthene	**368**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Fluorene	**20.1**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**197**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
2-Methylnaphthalene	ND	14.7	29.4	ug/kg dry	4	04/30/19	EPA 8270D	
Naphthalene	**29.1**	14.7	29.4	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Phenanthrene	**166**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Pyrene	**401**	7.32	14.7	ug/kg dry	4	04/30/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*62 %*	*Limits: 37-122 %*	*4*	*04/30/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*68 %*	*44-115 %*	*4*	*04/30/19*	*EPA 8270D*	

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG17-190416 (A9D0674-12RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Surrogate: p-Terphenyl-d14 (Surr)			*Recovery: 93 %*	*Limits: 54-127 %*	*4*	*04/30/19*	*EPA 8270D*	
FD-201904151441 (A9D0674-13)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Acenaphthylene	ND	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Anthracene	**91.7**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	**J**
Benz(a)anthracene	**364**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**425**	127	254	ug/kg dry	40	04/29/19	EPA 8270D	
Benzo(b)fluoranthene	**529**	127	254	ug/kg dry	40	04/29/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**212**	127	254	ug/kg dry	40	04/29/19	EPA 8270D	**J**
Benzo(g,h,i)perylene	**359**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Chrysene	**453**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Fluoranthene	**750**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Fluorene	ND	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**387**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
2-Methylnaphthalene	ND	169	338	ug/kg dry	40	04/29/19	EPA 8270D	
Naphthalene	ND	169	338	ug/kg dry	40	04/29/19	EPA 8270D	
Phenanthrene	**404**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Pyrene	**831**	84.4	169	ug/kg dry	40	04/29/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)			*Recovery: 37 %*	*Limits: 37-122 %*	*40*	*04/29/19*	*EPA 8270D*	*S-05*
2-Fluorobiphenyl (Surr)			*53 %*	*44-115 %*	*40*	*04/29/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*67 %*	*54-127 %*	*40*	*04/29/19*	*EPA 8270D*	*S-05*
T4-PDI2019-SG18-190415 (A9D0674-14RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	**19.7**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Acenaphthylene	**19.9**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Anthracene	**64.3**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Benz(a)anthracene	**217**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(a)pyrene	**308**	12.1	24.2	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(b)fluoranthene	**321**	12.1	24.2	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**119**	12.1	24.2	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**227**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Chrysene	**233**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG18-190415 (A9D0674-14RE1)				**Matrix: Sediment**		**Batch: 9041271**		
Dibenz(a,h)anthracene	**35.6**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Fluoranthene	**455**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Fluorene	**33.8**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**202**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
2-Methylnaphthalene	**17.1**	16.2	32.2	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Naphthalene	**55.0**	16.2	32.2	ug/kg dry	4	04/30/19	EPA 8270D	
Phenanthrene	**209**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Pyrene	**537**	8.05	16.2	ug/kg dry	4	04/30/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*59 %*	*Limits: 37-122 %*	*4*	*04/30/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*56 %*	*44-115 %*	*4*	*04/30/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*74 %*	*54-127 %*	*4*	*04/30/19*	*EPA 8270D*	
T4-PDI2019-SG51-190417 (A9D0674-15RE2)				**Matrix: Sediment**		**Batch: 9041271**		
Acenaphthene	ND	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Acenaphthylene	ND	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Anthracene	**5.93**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Benz(a)anthracene	**13.3**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**19.0**	5.01	10.0	ug/kg dry	1	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**24.1**	5.01	10.0	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**11.0**	5.01	10.0	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**13.7**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Chrysene	**20.0**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Fluoranthene	**30.8**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Fluorene	**7.57**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**12.3**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
2-Methylnaphthalene	ND	6.69	13.4	ug/kg dry	1	05/01/19	EPA 8270D	
Naphthalene	**9.64**	6.69	13.4	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Phenanthrene	**16.8**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Pyrene	**29.9**	3.33	6.69	ug/kg dry	1	05/01/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*66 %*	*Limits: 37-122 %*	*1*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*57 %*	*44-115 %*	*1*	*05/01/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*50 %*	*54-127 %*	*1*	*05/01/19*	*EPA 8270D*	*S-06*

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG52-190417 (A9D0674-16RE2)				**Matrix: Sediment**		**Batch: 9050375**		
Acenaphthene	**3.78**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Acenaphthylene	ND	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Anthracene	**8.41**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Benz(a)anthracene	**36.0**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Benzo(a)pyrene	**49.6**	5.41	10.8	ug/kg dry	1	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**75.7**	5.41	10.8	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**28.6**	5.41	10.8	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**31.1**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Chrysene	**47.7**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Dibenz(a,h)anthracene	**7.17**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Fluoranthene	**62.8**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	**Q-42**
Fluorene	**5.51**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Indeno(1,2,3-cd)pyrene	**34.7**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
2-Methylnaphthalene	ND	7.22	14.4	ug/kg dry	1	05/01/19	EPA 8270D	
Naphthalene	ND	7.22	14.4	ug/kg dry	1	05/01/19	EPA 8270D	
Phenanthrene	**24.7**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	
Pyrene	**62.3**	3.60	7.22	ug/kg dry	1	05/01/19	EPA 8270D	**Q-42**
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*54 %*	*Limits: 37-122 %*	*1*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*43 %*	*44-115 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
p-Terphenyl-d14 (Surr)			*52 %*	*54-127 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
T4-PDI2019-SG53-190416 (A9D0674-17RE1)				**Matrix: Sediment**		**Batch: 9041271**		
Acenaphthene	ND	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Acenaphthylene	ND	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Anthracene	ND	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Benz(a)anthracene	**41.0**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**53.5**	23.5	47.0	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(b)fluoranthene	**61.9**	23.5	47.0	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**36.6**	23.5	47.0	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Benzo(g,h,i)perylene	**23.0**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Chrysene	**42.0**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Fluoranthene	**44.0**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG53-190416 (A9D0674-17RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Fluorene	ND	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**26.5**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	**J**
2-Methylnaphthalene	ND	31.4	62.7	ug/kg dry	4	04/30/19	EPA 8270D	
Naphthalene	ND	31.4	62.7	ug/kg dry	4	04/30/19	EPA 8270D	
Phenanthrene	**18.2**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Pyrene	**40.6**	15.6	31.4	ug/kg dry	4	04/30/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*68 %*	*Limits: 37-122 %*	*4*	*04/30/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*54 %*	*44-115 %*	*4*	*04/30/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*58 %*	*54-127 %*	*4*	*04/30/19*	*EPA 8270D*	
T4-PDI2019-SG54-190416 (A9D0674-18RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	**25.4**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Acenaphthylene	**8.15**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Anthracene	**32.1**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Benz(a)anthracene	**105**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(a)pyrene	**149**	11.1	22.2	ug/kg dry	4	04/30/19	EPA 8270D	
Benzo(b)fluoranthene	**174**	11.1	22.2	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**57.9**	11.1	22.2	ug/kg dry	4	04/30/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**103**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Chrysene	**117**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Dibenz(a,h)anthracene	**22.3**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Fluoranthene	**184**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Fluorene	**16.7**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**94.3**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
2-Methylnaphthalene	**17.0**	14.8	29.6	ug/kg dry	4	04/30/19	EPA 8270D	**J**
Naphthalene	**50.9**	14.8	29.6	ug/kg dry	4	04/30/19	EPA 8270D	
Phenanthrene	**116**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Pyrene	**192**	7.39	14.8	ug/kg dry	4	04/30/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*63 %*	*Limits: 37-122 %*	*4*	*04/30/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*75 %*	*44-115 %*	*4*	*04/30/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*83 %*	*54-127 %*	*4*	*04/30/19*	*EPA 8270D*	
T4-PDI2019-SG57-190417 (A9D0674-19RE2)				**Matrix: Sediment**			**Batch: 9050375**	
Acenaphthene	ND	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG57-190417 (A9D0674-19RE2)				**Matrix: Sediment**		**Batch: 9050375**		
Acenaphthylene	ND	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Anthracene	**3.72**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Benz(a)anthracene	**14.7**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**21.2**	5.57	11.1	ug/kg dry	1	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**30.1**	5.57	11.1	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**11.3**	5.57	11.1	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**15.7**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Chrysene	**19.7**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Fluoranthene	**27.6**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Fluorene	ND	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**17.1**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
2-Methylnaphthalene	ND	7.43	14.8	ug/kg dry	1	05/01/19	EPA 8270D	
Naphthalene	ND	7.43	14.8	ug/kg dry	1	05/01/19	EPA 8270D	
Phenanthrene	**12.0**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Pyrene	**27.1**	3.70	7.43	ug/kg dry	1	05/01/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*61 %*	*Limits: 37-122 %*	*1*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*30 %*	*44-115 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
p-Terphenyl-d14 (Surr)			*40 %*	*54-127 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
T4-PDI2019-SG58-190417 (A9D0674-20RE2)				**Matrix: Sediment**		**Batch: 9050375**		
Acenaphthene	ND	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Acenaphthylene	ND	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Anthracene	**4.91**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Benz(a)anthracene	**18.3**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**26.5**	5.61	11.2	ug/kg dry	1	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**42.4**	5.61	11.2	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**12.6**	5.61	11.2	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**19.9**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Chrysene	**28.2**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	**4.35**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	**J**
Fluoranthene	**36.1**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Fluorene	ND	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG58-190417 (A9D0674-20RE2)				**Matrix: Sediment**			**Batch: 9050375**	
Indeno(1,2,3-cd)pyrene	**21.5**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
2-Methylnaphthalene	ND	7.49	15.0	ug/kg dry	1	05/01/19	EPA 8270D	
Naphthalene	ND	7.49	15.0	ug/kg dry	1	05/01/19	EPA 8270D	
Phenanthrene	**13.4**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Pyrene	**34.6**	3.73	7.49	ug/kg dry	1	05/01/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*40 %*	*Limits: 37-122 %*	*1*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*20 %*	*44-115 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
p-Terphenyl-d14 (Surr)			*33 %*	*54-127 %*	*1*	*05/01/19*	*EPA 8270D*	*S-03*
T4-PDI2019-SG59-190417 (A9D0674-21RE2)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Acenaphthylene	**4.09**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	**J**
Anthracene	**9.97**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Benz(a)anthracene	**26.4**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**33.9**	5.82	11.6	ug/kg dry	1	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**54.4**	5.82	11.6	ug/kg dry	1	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**17.8**	5.82	11.6	ug/kg dry	1	04/25/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**27.7**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Chrysene	**37.4**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	**5.70**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	**J**
Fluoranthene	**53.6**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Fluorene	**5.83**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	**J**
Indeno(1,2,3-cd)pyrene	**30.0**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	7.77	15.5	ug/kg dry	1	04/25/19	EPA 8270D	
Naphthalene	ND	7.77	15.5	ug/kg dry	1	04/25/19	EPA 8270D	
Phenanthrene	**19.6**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Pyrene	**50.1**	3.87	7.77	ug/kg dry	1	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*56 %*	*Limits: 37-122 %*	*1*	*04/25/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*43 %*	*44-115 %*	*1*	*04/25/19*	*EPA 8270D*	*S-03*
p-Terphenyl-d14 (Surr)			*44 %*	*54-127 %*	*1*	*04/25/19*	*EPA 8270D*	*S-03*
FD-201904171301 (A9D0674-22RE2)				**Matrix: Sediment**			**Batch: 9050375**	
Acenaphthene	ND	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Acenaphthylene	ND	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	

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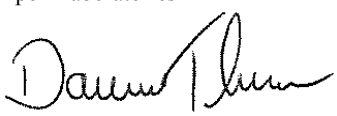

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FD-201904171301 (A9D0674-22RE2)				**Matrix: Sediment**			**Batch: 9050375**	
Anthracene	**23.9**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	**J**
Benz(a)anthracene	**81.4**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Benzo(a)pyrene	**126**	20.8	41.7	ug/kg dry	4	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**175**	20.8	41.7	ug/kg dry	4	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**67.8**	20.8	41.7	ug/kg dry	4	05/01/19	EPA 8270D	**M-05**
Benzo(g,h,i)perylene	**85.6**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Chrysene	**109**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Dibenz(a,h)anthracene	**22.7**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	**J**
Fluoranthene	**153**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Fluorene	ND	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**101**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
2-Methylnaphthalene	ND	27.8	55.5	ug/kg dry	4	05/01/19	EPA 8270D	
Naphthalene	ND	27.8	55.5	ug/kg dry	4	05/01/19	EPA 8270D	
Phenanthrene	**55.4**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Pyrene	**156**	13.9	27.8	ug/kg dry	4	05/01/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*63 %*	*Limits: 37-122 %*	*4*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*69 %*	*44-115 %*	*4*	*05/01/19*	*EPA 8270D*	
p-Terphenyl-d14 (Surr)			*74 %*	*54-127 %*	*4*	*05/01/19*	*EPA 8270D*	
T4-PDI2019-SG60-190417 (A9D0674-23RE1)				**Matrix: Sediment**			**Batch: 9041271**	
Acenaphthene	ND	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Acenaphthylene	ND	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Anthracene	ND	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Benz(a)anthracene	**45.9**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**65.3**	21.6	43.1	ug/kg dry	4	05/01/19	EPA 8270D	
Benzo(b)fluoranthene	**79.1**	21.6	43.1	ug/kg dry	4	05/01/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**37.7**	21.6	43.1	ug/kg dry	4	05/01/19	EPA 8270D	**J**
Benzo(g,h,i)perylene	**47.4**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Chrysene	**50.1**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Fluoranthene	**77.8**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Fluorene	ND	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**48.4**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Semivolatile Organic Compounds by EPA 8270D

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG60-190417 (A9D0674-23RE1)				**Matrix: Sediment**		**Batch: 9041271**		
2-Methylnaphthalene	ND	28.8	57.4	ug/kg dry	4	05/01/19	EPA 8270D	
Naphthalene	ND	28.8	57.4	ug/kg dry	4	05/01/19	EPA 8270D	
Phenanthrene	**37.6**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Pyrene	**76.1**	14.3	28.8	ug/kg dry	4	05/01/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*51 %*	*Limits: 37-122 %*	*4*	*05/01/19*	*EPA 8270D*	
2-Fluorobiphenyl (Surr)			*39 %*	*44-115 %*	*4*	*05/01/19*	*EPA 8270D*	*S-04*
p-Terphenyl-d14 (Surr)			*49 %*	*54-127 %*	*4*	*05/01/19*	*EPA 8270D*	*S-04*
T4-PDI2019-SG61-190416 (A9D0674-24)				**Matrix: Sediment**		**Batch: 9041271**		
Acenaphthene	ND	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Acenaphthylene	ND	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Anthracene	ND	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Benz(a)anthracene	**586**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(a)pyrene	**681**	283	566	ug/kg dry	40	04/25/19	EPA 8270D	
Benzo(b)fluoranthene	**881**	283	566	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Benzo(k)fluoranthene	**336**	283	566	ug/kg dry	40	04/25/19	EPA 8270D	**J**
Benzo(g,h,i)perylene	**475**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Chrysene	**578**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	**M-05**
Dibenz(a,h)anthracene	ND	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Fluoranthene	**765**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Fluorene	ND	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Indeno(1,2,3-cd)pyrene	**545**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
2-Methylnaphthalene	ND	378	754	ug/kg dry	40	04/25/19	EPA 8270D	
Naphthalene	ND	378	754	ug/kg dry	40	04/25/19	EPA 8270D	
Phenanthrene	**403**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Pyrene	**749**	188	378	ug/kg dry	40	04/25/19	EPA 8270D	
Surrogate: Nitrobenzene-d5 (Surr)		*Recovery:*	*48 %*	*Limits: 37-122 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*
p-Terphenyl-d14 (Surr)			*74 %*	*54-127 %*	*40*	*04/25/19*	*EPA 8270D*	*S-05*

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Demand Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG05-190417 (A9D0674-02)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**0.063**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**0.086**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG08-190415 (A9D0674-04)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**1.7**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**1.1**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG13-190415 (A9D0674-06)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**1.4**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG15-190416 (A9D0674-07)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**0.064**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG16-190416 (A9D0674-08)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**1.1**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG17-190416 (A9D0674-12)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**0.11**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
FD-201904151441 (A9D0674-13)				**Matrix: Sediment**				
Batch: 9041101								
Total Organic Carbon	**0.59**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG18-190415 (A9D0674-14)				**Matrix: Sediment**				
Batch: 9041101								

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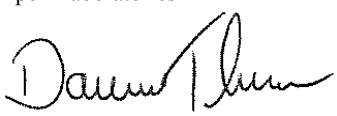

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Demand Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG18-190415 (A9D0674-14)				**Matrix: Sediment**				
Total Organic Carbon	**0.47**	0.020	0.020	% by Weight	1	04/23/19	EPA 9060Amod	
T4-PDI2019-SG51-190417 (A9D0674-15)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.1**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG52-190417 (A9D0674-16)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.2**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG53-190416 (A9D0674-17)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.4**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG54-190416 (A9D0674-18)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**0.50**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG57-190417 (A9D0674-19)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.3**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG58-190417 (A9D0674-20)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.4**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG59-190417 (A9D0674-21)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.4**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
FD-201904171301 (A9D0674-22)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**2.3**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG60-190417 (A9D0674-23)				**Matrix: Sediment**				
Batch: 9041103								

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Demand Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG60-190417 (A9D0674-23)				**Matrix: Sediment**				
Total Organic Carbon	**2.3**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	
T4-PDI2019-SG61-190416 (A9D0674-24)				**Matrix: Sediment**				
Batch: 9041103								
Total Organic Carbon	**0.87**	0.020	0.020	% by Weight	1	04/24/19	EPA 9060Amod	

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ANALYTICAL SAMPLE RESULTS

Solid and Moisture Determinations

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG05-190417 (A9D0674-02)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**74.7**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**75.5**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG08-190415 (A9D0674-04)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**45.9**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**52.1**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG13-190415 (A9D0674-06)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**49.2**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG15-190416 (A9D0674-07)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**75.8**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG16-190416 (A9D0674-08)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**50.6**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG17-190416 (A9D0674-12)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**71.4**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
FD-201904151441 (A9D0674-13)				**Matrix: Sediment**				
Batch: 9041165								
Total Solids	**62.4**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG18-190415 (A9D0674-14)				**Matrix: Sediment**				
Batch: 9041165								

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Solid and Moisture Determinations

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG18-190415 (A9D0674-14)				**Matrix: Sediment**				
Total Solids	**64.0**	1.00	1.00	% by Weight	1	04/23/19	PSEP 1986	**A-01**
T4-PDI2019-SG51-190417 (A9D0674-15)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**39.0**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG52-190417 (A9D0674-16)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**35.2**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG53-190416 (A9D0674-17)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**33.1**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG54-190416 (A9D0674-18)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**70.6**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG57-190417 (A9D0674-19)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**34.6**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG58-190417 (A9D0674-20)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**34.2**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG59-190417 (A9D0674-21)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**33.8**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
FD-201904171301 (A9D0674-22)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**37.0**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG60-190417 (A9D0674-23)				**Matrix: Sediment**				
Batch: 9041414								

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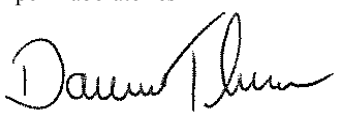

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Solid and Moisture Determinations

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG60-190417 (A9D0674-23)				**Matrix: Sediment**				
Total Solids	**36.7**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**
T4-PDI2019-SG61-190416 (A9D0674-24)				**Matrix: Sediment**				
Batch: 9041414								
Total Solids	**69.4**	1.00	1.00	% by Weight	1	04/30/19	PSEP 1986	**A-01**

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ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG05-190417 (A9D0674-02)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**4.94**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**2.38**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**2.56**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**92.3**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**7.65**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**46.9**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**33.9**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**3.33**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.29**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.19**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.10**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**1.90**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**0.90**			% of Total	1	05/20/19	D422mod	**GS-01**
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**7.98**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**5.02**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**2.96**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**89.2**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**7.42**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**41.6**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**35.3**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**4.10**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.40**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.29**			% of Total	1	05/20/19	D422mod	**GS-01**

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG06-190417 (A9D0674-03)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.063 mm sieve (#230)	**0.16**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**2.00**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**0.80**			% of Total	1	05/20/19	D422mod	**GS-01**
T4-PDI2019-SG08-190415 (A9D0674-04)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.68**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.40**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.29**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**53.1**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.18**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**6.51**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**27.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**11.1**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**3.05**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**3.43**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.63**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**31.4**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**14.8**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.33**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.05**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.28**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**66.0**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.56**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**9.71**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**33.2**			% of Total	1	05/20/19	D422mod	**GS-01**

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG11-190415 (A9D0674-05)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.150 mm sieve (#100)	**15.2**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**3.40**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**2.65**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.31**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**28.8**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**4.90**			% of Total	1	05/20/19	D422mod	**GS-01**
T4-PDI2019-SG13-190415 (A9D0674-06)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.20**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/20/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	**0.20**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**58.8**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.31**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**7.57**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**28.8**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**14.0**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**3.49**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**2.99**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.61**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**29.7**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**11.3**			% of Total	1	05/20/19	D422mod	**GS-01**
T4-PDI2019-SG15-190416 (A9D0674-07)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**2.97**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**1.78**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**1.18**			% of Total	1	05/15/19	D422mod	**GS-01**

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG15-190416 (A9D0674-07)				**Matrix: Sediment**			**Batch: 9041136**	
Sand (0.063mm - 2.00mm)	**93.8**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**4.06**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**40.7**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**40.9**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**6.93**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.65**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.39**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.23**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**2.80**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**0.40**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG16-190416 (A9D0674-08)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.27**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.15**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.12**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**66.5**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.24**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**12.2**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**35.3**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**13.9**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**2.16**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**1.66**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.93**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**22.2**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**11.0**			% of Total	1	05/20/19	D422mod	**GS-01**

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG17-190416 (A9D0674-12)				**Matrix: Sediment**		**Batch: 9041136**		
Gravel (>2.00mm)	**0.40**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.08**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.32**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**94.7**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**1.27**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**29.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**50.9**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**11.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.84**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.36**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.18**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**4.10**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**0.80**			% of Total	1	05/15/19	D422mod	**GS-01**
FD-201904151441 (A9D0674-13)				**Matrix: Sediment**		**Batch: 9041136**		
Gravel (>2.00mm)	**0.08**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/20/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	**0.08**			% of Total	1	05/20/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**82.0**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.98**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**26.2**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**42.1**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**10.0**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**1.36**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.92**			% of Total	1	05/20/19	D422mod	**GS-01**

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FD-201904151441 (A9D0674-13)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.063 mm sieve (#230)	**0.46**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**12.3**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**5.60**			% of Total	1	05/20/19	D422mod	**GS-01**
T4-PDI2019-SG18-190415 (A9D0674-14)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.57**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.41**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.16**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**81.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.85**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**24.5**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**43.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**9.47**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**1.24**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**1.04**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.51**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**7.40**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**10.8**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG51-190417 (A9D0674-15)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.22**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.19**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**0.04**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**3.24**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 0.425 mm sieve (#40)	**0.11**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.30**			% of Total	1	05/15/19	D422mod	**GS-01**

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG51-190417 (A9D0674-15)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.150 mm sieve (#100)	**0.75**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.50**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.82**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.77**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**65.3**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**31.2**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG52-190417 (A9D0674-16)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**0.01**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	**0.01**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**1.39**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.01**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.03**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.30**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.25**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.23**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.29**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.28**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**63.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**35.4**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG53-190416 (A9D0674-17)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG53-190416 (A9D0674-17)				**Matrix: Sediment**			**Batch: 9041136**	
Sand (0.063mm - 2.00mm)	**3.09**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.06**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.75**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.56**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.47**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.34**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.54**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.38**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**64.8**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**32.1**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG54-190416 (A9D0674-18)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**2.96**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**1.12**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**1.84**			% of Total	1	05/15/19	D422mod	**GS-01**
Sand (0.063mm - 2.00mm)	**87.1**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**3.04**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**23.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**39.5**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**14.1**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**3.72**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**2.27**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.83**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**7.20**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**2.70**			% of Total	1	05/15/19	D422mod	**GS-01**

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG57-190417 (A9D0674-19)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**2.47**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.12**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.66**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.46**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.29**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.21**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.39**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.35**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**67.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**30.4**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG58-190417 (A9D0674-20)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**2.53**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.06**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.53**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.34**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.32**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.31**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.52**			% of Total	1	05/15/19	D422mod	**GS-01**

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG58-190417 (A9D0674-20)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.063 mm sieve (#230)	**0.44**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**65.1**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**32.3**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG59-190417 (A9D0674-21)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**3.97**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.07**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.56**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.67**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.63**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.54**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**0.89**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.62**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**65.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**30.8**			% of Total	1	05/15/19	D422mod	**GS-01**
FD-201904171301 (A9D0674-22)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**10.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.21**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**1.05**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**2.99**			% of Total	1	05/15/19	D422mod	**GS-01**

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
FD-201904171301 (A9D0674-22)				**Matrix: Sediment**			**Batch: 9041136**	
Percent Retained 0.150 mm sieve (#100)	**2.32**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**1.16**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**1.70**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.12**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**58.2**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**31.2**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG60-190417 (A9D0674-23)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/15/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**10.8**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.05**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**1.00**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**2.93**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**2.44**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**1.24**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**1.82**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.30**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**60.5**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**28.7**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG61-190416 (A9D0674-24)				**Matrix: Sediment**			**Batch: 9041136**	
Gravel (>2.00mm)	**1.83**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 4.75 mm sieve (#4)	**0.68**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 2.00 mm sieve (#10)	**1.15**			% of Total	1	05/15/19	D422mod	**GS-01**

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes
T4-PDI2019-SG61-190416 (A9D0674-24)				**Matrix: Sediment**			**Batch: 9041136**	
Sand (0.063mm - 2.00mm)	**89.3**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**2.01**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**20.4**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**37.8**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**17.6**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**6.84**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**3.65**			% of Total	1	05/15/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**1.01**			% of Total	1	05/15/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**7.00**			% of Total	1	05/15/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**1.80**			% of Total	1	05/15/19	D422mod	**GS-01**
T4-PDI2019-SG59-190417-DUP (A9D0674-25)				**Matrix: Sediment**			**Batch: 9041137**	
Gravel (>2.00mm)	0.00			% of Total	1	05/20/19	D422mod	GS-01
Percent Retained 4.75 mm sieve (#4)	0.00			% of Total	1	05/20/19	D422mod	GS-01
Percent Retained 2.00 mm sieve (#10)	0.00			% of Total	1	05/20/19	D422mod	GS-01
Sand (0.063mm - 2.00mm)	**2.91**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.85 mm sieve (#20)	**0.03**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.425 mm sieve (#40)	**0.14**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.250 mm sieve (#60)	**0.14**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.150 mm sieve (#100)	**0.23**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.106 mm sieve (#140)	**0.59**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.075 mm sieve (#200)	**1.07**			% of Total	1	05/20/19	D422mod	**GS-01**
Percent Retained 0.063 mm sieve (#230)	**0.71**			% of Total	1	05/20/19	D422mod	**GS-01**
Silt (0.005mm < 0.063mm)	**65.7**			% of Total	1	05/20/19	D422mod	**GS-01**
Clay (< 0.005 mm)	**31.4**			% of Total	1	05/20/19	D422mod	**GS-01**

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

ANALYTICAL SAMPLE RESULTS

Grain Size by ASTM D 422m/PSET Parameters

Analyte	Sample Result	Detection Limit	Reporting Limit	Units	Dilution	Date Analyzed	Method Ref.	Notes

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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 9041150 - EPA 3510C (Acid Extraction)							**Water**					
Blank (9041150-BLK1)			Prepared: 04/22/19 10:10 Analyzed: 04/23/19 13:02									
EPA 8270D												
Acenaphthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Acenaphthylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	0.0136	0.0273	ug/L	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	0.0136	0.0273	ug/L	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	0.0136	0.0273	ug/L	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Chrysene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluoranthene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Fluorene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	
Naphthalene	**0.0509**	0.0182	0.0364	ug/L	1	---	---	---	---	---	---	B
Phenanthrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Pyrene	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Carbazole	ND	0.0136	0.0273	ug/L	1	---	---	---	---	---	---	
Dibenzofuran	ND	0.00909	0.0182	ug/L	1	---	---	---	---	---	---	
Bis(2-ethylhexyl)phthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Butyl benzyl phthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Diethylphthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Dimethylphthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Di-n-butylphthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Di-n-octyl phthalate	ND	0.182	0.364	ug/L	1	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 76 %*		*Limits: 44-120 %*			*Dilution: 1x*				
2-Fluorobiphenyl (Surr)			*73 %*		*44-120 %*			*"*				
Phenol-d6 (Surr)			*25 %*		*10-120 %*			*"*				
p-Terphenyl-d14 (Surr)			*84 %*		*50-133 %*			*"*				
2-Fluorophenol (Surr)			*40 %*		*19-120 %*			*"*				
2,4,6-Tribromophenol (Surr)			*76 %*		*43-140 %*			*"*				Q-41

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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 9041150 - EPA 3510C (Acid Extraction)							**Water**					
LCS (9041150-BS1)			Prepared: 04/22/19 10:10 Analyzed: 04/23/19 13:39									
EPA 8270D												
Acenaphthene	2.34	0.0200	0.0400	ug/L	2	4.00	---	59	47-122%	---	---	
Acenaphthylene	2.47	0.0200	0.0400	ug/L	2	4.00	---	62	41-130%	---	---	
Anthracene	2.89	0.0200	0.0400	ug/L	2	4.00	---	72	57-123%	---	---	
Benz(a)anthracene	3.43	0.0200	0.0400	ug/L	2	4.00	---	86	58-125%	---	---	
Benzo(a)pyrene	4.06	0.0300	0.0600	ug/L	2	4.00	---	101	54-128%	---	---	
Benzo(b)fluoranthene	4.05	0.0300	0.0600	ug/L	2	4.00	---	101	53-131%	---	---	
Benzo(k)fluoranthene	4.09	0.0300	0.0600	ug/L	2	4.00	---	102	57-129%	---	---	
Benzo(g,h,i)perylene	3.52	0.0200	0.0400	ug/L	2	4.00	---	88	50-134%	---	---	
Chrysene	3.56	0.0200	0.0400	ug/L	2	4.00	---	89	59-123%	---	---	
Dibenz(a,h)anthracene	3.73	0.0200	0.0400	ug/L	2	4.00	---	93	51-134%	---	---	
Fluoranthene	3.28	0.0200	0.0400	ug/L	2	4.00	---	82	57-128%	---	---	
Fluorene	2.73	0.0200	0.0400	ug/L	2	4.00	---	68	52-124%	---	---	
Indeno(1,2,3-cd)pyrene	3.51	0.0200	0.0400	ug/L	2	4.00	---	88	52-133%	---	---	
1-Methylnaphthalene	1.95	0.0400	0.0800	ug/L	2	4.00	---	49	41-120%	---	---	
2-Methylnaphthalene	1.96	0.0400	0.0800	ug/L	2	4.00	---	49	40-121%	---	---	
Naphthalene	1.84	0.0400	0.0800	ug/L	2	4.00	---	46	40-121%	---	---	B
Phenanthrene	2.92	0.0200	0.0400	ug/L	2	4.00	---	73	59-120%	---	---	
Pyrene	3.32	0.0200	0.0400	ug/L	2	4.00	---	83	57-126%	---	---	
Carbazole	3.29	0.0300	0.0600	ug/L	2	4.00	---	82	60-122%	---	---	
Dibenzofuran	2.51	0.0200	0.0400	ug/L	2	4.00	---	63	53-120%	---	---	
Bis(2-ethylhexyl)phthalate	3.31	0.400	0.800	ug/L	2	4.00	---	83	55-135%	---	---	
Butyl benzyl phthalate	3.47	0.400	0.800	ug/L	2	4.00	---	87	53-134%	---	---	
Diethylphthalate	3.46	0.400	0.800	ug/L	2	4.00	---	87	55-125%	---	---	
Dimethylphthalate	3.30	0.400	0.800	ug/L	2	4.00	---	82	45-127%	---	---	
Di-n-butylphthalate	3.28	0.400	0.800	ug/L	2	4.00	---	82	59-127%	---	---	
Di-n-octyl phthalate	3.52	0.400	0.800	ug/L	2	4.00	---	88	51-140%	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 52 %*		*Limits: 44-120 %*			*Dilution: 2x*				
2-Fluorobiphenyl (Surr)			*54 %*		*44-120 %*			*"*				
Phenol-d6 (Surr)			*18 %*		*10-120 %*			*"*				
p-Terphenyl-d14 (Surr)			*78 %*		*50-133 %*			*"*				
2-Fluorophenol (Surr)			*28 %*		*19-120 %*			*"*				
2,4,6-Tribromophenol (Surr)			*87 %*		*43-140 %*			*"*				Q-41

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9041150 - EPA 3510C (Acid Extraction)							**Water**					
LCS Dup (9041150-BSD1)			Prepared: 04/22/19 10:10		Analyzed: 04/23/19 14:17							**Q-19**
EPA 8270D												
Acenaphthene	3.33	0.0200	0.0400	ug/L	2	4.00	---	83	47-122%	**35**	**30%**	Q-24
Acenaphthylene	3.46	0.0200	0.0400	ug/L	2	4.00	---	86	41-130%	**33**	**30%**	Q-24
Anthracene	3.54	0.0200	0.0400	ug/L	2	4.00	---	88	57-123%	20	30%	
Benz(a)anthracene	3.67	0.0200	0.0400	ug/L	2	4.00	---	92	58-125%	7	30%	
Benzo(a)pyrene	4.33	0.0300	0.0600	ug/L	2	4.00	---	108	54-128%	7	30%	
Benzo(b)fluoranthene	4.19	0.0300	0.0600	ug/L	2	4.00	---	105	53-131%	4	30%	
Benzo(k)fluoranthene	4.38	0.0300	0.0600	ug/L	2	4.00	---	110	57-129%	7	30%	
Benzo(g,h,i)perylene	3.70	0.0200	0.0400	ug/L	2	4.00	---	93	50-134%	5	30%	
Chrysene	3.72	0.0200	0.0400	ug/L	2	4.00	---	93	59-123%	5	30%	
Dibenz(a,h)anthracene	3.92	0.0200	0.0400	ug/L	2	4.00	---	98	51-134%	5	30%	
Fluoranthene	3.88	0.0200	0.0400	ug/L	2	4.00	---	97	57-128%	17	30%	
Fluorene	3.54	0.0200	0.0400	ug/L	2	4.00	---	88	52-124%	26	30%	
Indeno(1,2,3-cd)pyrene	3.58	0.0200	0.0400	ug/L	2	4.00	---	90	52-133%	2	30%	
1-Methylnaphthalene	3.02	0.0400	0.0800	ug/L	2	4.00	---	76	41-120%	**43**	**30%**	Q-24
2-Methylnaphthalene	3.09	0.0400	0.0800	ug/L	2	4.00	---	77	40-121%	**45**	**30%**	Q-24
Naphthalene	2.98	0.0400	0.0800	ug/L	2	4.00	---	75	40-121%	**48**	**30%**	Q-24, B
Phenanthrene	3.58	0.0200	0.0400	ug/L	2	4.00	---	90	59-120%	20	30%	
Pyrene	3.94	0.0200	0.0400	ug/L	2	4.00	---	98	57-126%	17	30%	
Carbazole	3.64	0.0300	0.0600	ug/L	2	4.00	---	91	60-122%	10	30%	
Dibenzofuran	3.43	0.0200	0.0400	ug/L	2	4.00	---	86	53-120%	**31**	**30%**	Q-24
Bis(2-ethylhexyl)phthalate	3.47	0.400	0.800	ug/L	2	4.00	---	87	55-135%	5	30%	
Butyl benzyl phthalate	3.54	0.400	0.800	ug/L	2	4.00	---	88	53-134%	2	30%	
Diethylphthalate	3.78	0.400	0.800	ug/L	2	4.00	---	94	55-125%	9	30%	
Dimethylphthalate	3.70	0.400	0.800	ug/L	2	4.00	---	93	45-127%	12	30%	
Di-n-butylphthalate	3.60	0.400	0.800	ug/L	2	4.00	---	90	59-127%	9	30%	
Di-n-octyl phthalate	3.78	0.400	0.800	ug/L	2	4.00	---	94	51-140%	7	30%	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 78 %*		*Limits: 44-120 %*			*Dilution: 2x*				
2-Fluorobiphenyl (Surr)			*77 %*		*44-120 %*			*"*				
Phenol-d6 (Surr)			*29 %*		*10-120 %*			*"*				
p-Terphenyl-d14 (Surr)			*82 %*		*50-133 %*			*"*				
2-Fluorophenol (Surr)			*46 %*		*19-120 %*			*"*				
2,4,6-Tribromophenol (Surr)			*96 %*		*43-140 %*			*"*				Q-41

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Darwin Thomas, Business Development Director

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	A9D0674 - 05 21 19 1556

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 9041271 - EPA 3546							**Sediment**					
Blank (9041271-BLK1)			Prepared: 04/24/19 12:22 Analyzed: 04/25/19 09:57									
EPA 8270D												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 71 %*	*Limits: 37-122 %*			*Dilution: 1x*					
2-Fluorobiphenyl (Surr)			*82 %*	*44-115 %*			*"*					
p-Terphenyl-d14 (Surr)			*86 %*	*54-127 %*			*"*					
LCS (9041271-BS1)			Prepared: 04/24/19 12:22 Analyzed: 04/25/19 10:34									
EPA 8270D												
Acenaphthene	473	2.66	5.34	ug/kg wet	2	533	---	89	40-122%	---	---	
Acenaphthylene	492	2.66	5.34	ug/kg wet	2	533	---	92	32-132%	---	---	
Anthracene	480	2.66	5.34	ug/kg wet	2	533	---	90	47-123%	---	---	
Benz(a)anthracene	473	2.66	5.34	ug/kg wet	2	533	---	89	49-126%	---	---	
Benzo(a)pyrene	568	4.00	8.00	ug/kg wet	2	533	---	106	45-129%	---	---	
Benzo(b)fluoranthene	547	4.00	8.00	ug/kg wet	2	533	---	103	45-132%	---	---	
Benzo(k)fluoranthene	563	4.00	8.00	ug/kg wet	2	533	---	106	47-132%	---	---	
Benzo(g,h,i)perylene	459	2.66	5.34	ug/kg wet	2	533	---	86	43-134%	---	---	
Chrysene	485	2.66	5.34	ug/kg wet	2	533	---	91	50-124%	---	---	
Dibenz(a,h)anthracene	508	2.66	5.34	ug/kg wet	2	533	---	95	45-134%	---	---	

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Darwin Thomas, Business Development Director

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9041271 - EPA 3546							**Sediment**					
LCS (9041271-BS1)			Prepared: 04/24/19 12:22		Analyzed: 04/25/19 10:34							
Fluoranthene	487	2.66	5.34	ug/kg wet	2	533	---	91	50-127%	---	---	
Fluorene	513	2.66	5.34	ug/kg wet	2	533	---	96	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	444	2.66	5.34	ug/kg wet	2	533	---	83	45-133%	---	---	
2-Methylnaphthalene	483	5.34	10.7	ug/kg wet	2	533	---	91	38-122%	---	---	
Naphthalene	456	5.34	10.7	ug/kg wet	2	533	---	85	35-123%	---	---	
Phenanthrene	482	2.66	5.34	ug/kg wet	2	533	---	90	50-121%	---	---	
Pyrene	495	2.66	5.34	ug/kg wet	2	533	---	93	47-127%	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 75 %*		*Limits: 37-122 %*		*Dilution: 2x*					
2-Fluorobiphenyl (Surr)			*79 %*		*44-115 %*		*"*					
p-Terphenyl-d14 (Surr)			*88 %*		*54-127 %*		*"*					
Duplicate (9041271-DUP1)			Prepared: 04/24/19 12:22		Analyzed: 04/25/19 13:04							
QC Source Sample: T4-PDI2019-SG05-190417 (A9D0674-02)												
EPA 8270D												
Acenaphthene	ND	68.1	137	ug/kg dry	40	---	96.4	---	---	***	**30%**	Q-04
Acenaphthylene	**123**	68.1	137	ug/kg dry	40	---	ND	---	---		**30%**	Q-04, J
Anthracene	**398**	68.1	137	ug/kg dry	40	---	165	---	---	**83**	**30%**	Q-04
Benz(a)anthracene	**1020**	68.1	137	ug/kg dry	40	---	498	---	---	**69**	**30%**	Q-04
Benzo(a)pyrene	**1470**	102	205	ug/kg dry	40	---	661	---	---	**76**	**30%**	Q-04
Benzo(b)fluoranthene	**1280**	102	205	ug/kg dry	40	---	607	---	---	**71**	**30%**	Q-04, M-05
Benzo(k)fluoranthene	**495**	102	205	ug/kg dry	40	---	232	---	---	**72**	**30%**	Q-04, M-05
Benzo(g,h,i)perylene	**1100**	68.1	137	ug/kg dry	40	---	459	---	---	**82**	**30%**	Q-04
Chrysene	**1150**	68.1	137	ug/kg dry	40	---	592	---	---	**64**	**30%**	Q-04
Dibenz(a,h)anthracene	**110**	68.1	137	ug/kg dry	40	---	ND	---	---		**30%**	Q-04, J
Fluoranthene	**2860**	68.1	137	ug/kg dry	40	---	1260	---	---	**78**	**30%**	Q-04
Fluorene	**119**	68.1	137	ug/kg dry	40	---	70.4	---	---	**51**	**30%**	Q-04, J
Indeno(1,2,3-cd)pyrene	**952**	68.1	137	ug/kg dry	40	---	433	---	---	**75**	**30%**	Q-04
2-Methylnaphthalene	ND	137	273	ug/kg dry	40	---	ND	---	---	---	30%	
Naphthalene	**283**	137	273	ug/kg dry	40	---	ND	---	---		**30%**	Q-04
Phenanthrene	**1400**	68.1	137	ug/kg dry	40	---	603	---	---	**80**	**30%**	Q-04
Pyrene	**3520**	68.1	137	ug/kg dry	40	---	1620	---	---	**74**	**30%**	Q-04
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 36 %*		*Limits: 37-122 %*		*Dilution: 40x*					S-05
2-Fluorobiphenyl (Surr)			*55 %*		*44-115 %*		*"*					S-05
p-Terphenyl-d14 (Surr)			*74 %*		*54-127 %*		*"*					S-05

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9041271 - EPA 3546							**Sediment**					
Matrix Spike (9041271-MS1)				Prepared: 04/24/19 12:22		Analyzed: 04/25/19 18:50						
QC Source Sample: T4-PDI2019-SG59-190417 (A9D0674-21RE2)												
EPA 8270D												
Acenaphthene	1140	7.73	15.5	ug/kg dry	2	1550	ND	73	40-122%	---	---	
Acenaphthylene	1180	7.73	15.5	ug/kg dry	2	1550	ND	76	32-132%	---	---	
Anthracene	1230	7.73	15.5	ug/kg dry	2	1550	9.97	79	47-123%	---	---	
Benz(a)anthracene	1230	7.73	15.5	ug/kg dry	2	1550	26.4	78	49-126%	---	---	
Benzo(a)pyrene	1480	11.6	23.3	ug/kg dry	2	1550	33.9	93	45-129%	---	---	
Benzo(b)fluoranthene	1430	11.6	23.3	ug/kg dry	2	1550	54.4	89	45-132%	---	---	
Benzo(k)fluoranthene	1420	11.6	23.3	ug/kg dry	2	1550	17.8	91	47-132%	---	---	
Benzo(g,h,i)perylene	1130	7.73	15.5	ug/kg dry	2	1550	27.7	71	43-134%	---	---	
Chrysene	1250	7.73	15.5	ug/kg dry	2	1550	37.4	78	50-124%	---	---	
Dibenz(a,h)anthracene	1290	7.73	15.5	ug/kg dry	2	1550	ND	83	45-134%	---	---	
Fluoranthene	1270	7.73	15.5	ug/kg dry	2	1550	53.6	79	50-127%	---	---	
Fluorene	1240	7.73	15.5	ug/kg dry	2	1550	ND	80	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	1160	7.73	15.5	ug/kg dry	2	1550	30.0	73	45-133%	---	---	
2-Methylnaphthalene	1030	15.5	31.0	ug/kg dry	2	1550	ND	67	38-122%	---	---	
Naphthalene	1020	15.5	31.0	ug/kg dry	2	1550	ND	66	35-123%	---	---	
Phenanthrene	1230	7.73	15.5	ug/kg dry	2	1550	19.6	78	50-121%	---	---	
Pyrene	1270	7.73	15.5	ug/kg dry	2	1550	50.1	79	47-127%	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 56 %*		*Limits: 37-122 %*			*Dilution: 2x*				
2-Fluorobiphenyl (Surr)			*56 %*		*44-115 %*			*"*				
p-Terphenyl-d14 (Surr)			*62 %*		*54-127 %*			*"*				
Matrix Spike Dup (9041271-MSD1)				Prepared: 04/24/19 12:22		Analyzed: 04/25/19 19:26						
QC Source Sample: T4-PDI2019-SG59-190417 (A9D0674-21RE2)												
EPA 8270D												
Acenaphthene	1180	7.72	15.5	ug/kg dry	2	1550	ND	76	40-122%	3	30%	
Acenaphthylene	1230	7.72	15.5	ug/kg dry	2	1550	ND	79	32-132%	4	30%	
Anthracene	1220	7.72	15.5	ug/kg dry	2	1550	9.97	78	47-123%	0.3	30%	
Benz(a)anthracene	1190	7.72	15.5	ug/kg dry	2	1550	26.4	75	49-126%	3	30%	
Benzo(a)pyrene	1430	11.6	23.2	ug/kg dry	2	1550	33.9	90	45-129%	3	30%	
Benzo(b)fluoranthene	1340	11.6	23.2	ug/kg dry	2	1550	54.4	83	45-132%	6	30%	
Benzo(k)fluoranthene	1390	11.6	23.2	ug/kg dry	2	1550	17.8	89	47-132%	2	30%	

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9041271 - EPA 3546							**Sediment**					
Matrix Spike Dup (9041271-MSD1)			Prepared: 04/24/19 12:22		Analyzed: 04/25/19 19:26							
QC Source Sample: T4-PDI2019-SG59-190417 (A9D0674-21RE2)												
Benzo(g,h,i)perylene	1130	7.72	15.5	ug/kg dry	2	1550	27.7	71	43-134%	0.05	30%	
Chrysene	1220	7.72	15.5	ug/kg dry	2	1550	37.4	76	50-124%	3	30%	
Dibenz(a,h)anthracene	1280	7.72	15.5	ug/kg dry	2	1550	ND	83	45-134%	0.7	30%	
Fluoranthene	1280	7.72	15.5	ug/kg dry	2	1550	53.6	79	50-127%	0.2	30%	
Fluorene	1270	7.72	15.5	ug/kg dry	2	1550	ND	82	43-125%	2	30%	
Indeno(1,2,3-cd)pyrene	1170	7.72	15.5	ug/kg dry	2	1550	30.0	74	45-133%	1	30%	
2-Methylnaphthalene	1200	15.5	31.0	ug/kg dry	2	1550	ND	77	38-122%	15	30%	
Naphthalene	1120	15.5	31.0	ug/kg dry	2	1550	ND	72	35-123%	9	30%	
Phenanthrene	1230	7.72	15.5	ug/kg dry	2	1550	19.6	78	50-121%	0.09	30%	
Pyrene	1290	7.72	15.5	ug/kg dry	2	1550	50.1	80	47-127%	2	30%	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 59 %*		*Limits: 37-122 %*		*Dilution: 2x*					
2-Fluorobiphenyl (Surr)			*33 %*		*44-115 %*		*"*					S-03
p-Terphenyl-d14 (Surr)			*31 %*		*54-127 %*		*"*					S-03

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503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9050375 - EPA 3546							**Sediment**					
Blank (9050375-BLK1)			Prepared: 05/01/19 13:10 Analyzed: 05/01/19 18:26									
EPA 8270D												
Acenaphthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Acenaphthylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benz(a)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Benzo(a)pyrene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(b)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(k)fluoranthene	ND	1.87	3.75	ug/kg wet	1	---	---	---	---	---	---	
Benzo(g,h,i)perylene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Chrysene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Dibenz(a,h)anthracene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluoranthene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Fluorene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Indeno(1,2,3-cd)pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
1-Methylnaphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
2-Methylnaphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Naphthalene	ND	2.50	5.00	ug/kg wet	1	---	---	---	---	---	---	
Phenanthrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Pyrene	ND	1.25	2.50	ug/kg wet	1	---	---	---	---	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 74 %*		*Limits: 37-122 %*			*Dilution: 1x*				
2-Fluorobiphenyl (Surr)			*83 %*		*44-115 %*			*"*				
Phenol-d6 (Surr)			*74 %*		*33-122 %*			*"*				
p-Terphenyl-d14 (Surr)			*90 %*		*54-127 %*			*"*				
2-Fluorophenol (Surr)			*72 %*		*35-115 %*			*"*				
2,4,6-Tribromophenol (Surr)			*84 %*		*39-132 %*			*"*				
LCS (9050375-BS1)			Prepared: 05/01/19 13:10 Analyzed: 05/01/19 19:03									
EPA 8270D												
Acenaphthene	470	2.66	5.34	ug/kg wet	2	533	---	88	40-122%	---	---	
Acenaphthylene	493	2.66	5.34	ug/kg wet	2	533	---	92	32-132%	---	---	
Anthracene	481	2.66	5.34	ug/kg wet	2	533	---	90	47-123%	---	---	
Benz(a)anthracene	480	2.66	5.34	ug/kg wet	2	533	---	90	49-126%	---	---	
Benzo(a)pyrene	576	4.00	8.00	ug/kg wet	2	533	---	108	45-129%	---	---	
Benzo(b)fluoranthene	550	4.00	8.00	ug/kg wet	2	533	---	103	45-132%	---	---	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9050375 - EPA 3546							**Sediment**					
LCS (9050375-BS1)			Prepared: 05/01/19 13:10 Analyzed: 05/01/19 19:03									
Benzo(k)fluoranthene	570	4.00	8.00	ug/kg wet	2	533	---	107	47-132%	---	---	
Benzo(g,h,i)perylene	521	2.66	5.34	ug/kg wet	2	533	---	98	43-134%	---	---	
Chrysene	491	2.66	5.34	ug/kg wet	2	533	---	92	50-124%	---	---	
Dibenz(a,h)anthracene	523	2.66	5.34	ug/kg wet	2	533	---	98	45-134%	---	---	
Fluoranthene	491	2.66	5.34	ug/kg wet	2	533	---	92	50-127%	---	---	
Fluorene	492	2.66	5.34	ug/kg wet	2	533	---	92	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	487	2.66	5.34	ug/kg wet	2	533	---	91	45-133%	---	---	
1-Methylnaphthalene	457	5.34	10.7	ug/kg wet	2	533	---	86	40-120%	---	---	
2-Methylnaphthalene	467	5.34	10.7	ug/kg wet	2	533	---	88	38-122%	---	---	
Naphthalene	443	5.34	10.7	ug/kg wet	2	533	---	83	35-123%	---	---	
Phenanthrene	487	2.66	5.34	ug/kg wet	2	533	---	91	50-121%	---	---	
Pyrene	494	2.66	5.34	ug/kg wet	2	533	---	93	47-127%	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 75 %*	*Limits: 37-122 %*			*Dilution: 2x*					
2-Fluorobiphenyl (Surr)			*82 %*	*44-115 %*			*"*					
Phenol-d6 (Surr)			*78 %*	*33-122 %*			*"*					
p-Terphenyl-d14 (Surr)			*91 %*	*54-127 %*			*"*					
2-Fluorophenol (Surr)			*77 %*	*35-115 %*			*"*					
2,4,6-Tribromophenol (Surr)			*107 %*	*39-132 %*			*"*					
Duplicate (9050375-DUP1)			Prepared: 05/01/19 13:10 Analyzed: 05/01/19 20:15									
QC Source Sample: T4-PDI2019-SG52-190417 (A9D0674-16RE2)												
EPA 8270D												
Acenaphthene	ND	3.59	7.20	ug/kg dry	1	---	3.78	---	---	***	**30%**	Q-05
Acenaphthylene	ND	3.59	7.20	ug/kg dry	1	---	ND	---	---	---	30%	
Anthracene	**4.95**	3.59	7.20	ug/kg dry	1	---	8.41	---	---	**52**	**30%**	Q-05, J
Benz(a)anthracene	**25.1**	3.59	7.20	ug/kg dry	1	---	36.0	---	---	**36**	**30%**	Q-05
Benzo(a)pyrene	**33.8**	5.40	10.8	ug/kg dry	1	---	49.6	---	---	**38**	**30%**	Q-05
Benzo(b)fluoranthene	**52.2**	5.40	10.8	ug/kg dry	1	---	75.7	---	---	**37**	**30%**	M-05, Q-05
Benzo(k)fluoranthene	**15.4**	5.40	10.8	ug/kg dry	1	---	28.6	---	---	**60**	**30%**	M-05, Q-05
Chrysene	**34.8**	3.59	7.20	ug/kg dry	1	---	47.7	---	---	**31**	**30%**	Q-05
Fluoranthene	**39.6**	3.59	7.20	ug/kg dry	1	---	62.8	---	---	**45**	**30%**	Q-17
Fluorene	ND	3.59	7.20	ug/kg dry	1	---	5.51	---	---	***	**30%**	Q-05
1-Methylnaphthalene	ND	7.20	14.4	ug/kg dry	1	---	ND	---	---	---	30%	
2-Methylnaphthalene	ND	7.20	14.4	ug/kg dry	1	---	ND	---	---	---	30%	

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EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9050375 - EPA 3546							**Sediment**					
Duplicate (9050375-DUP1)				Prepared: 05/01/19 13:10 Analyzed: 05/01/19 20:15								
QC Source Sample: T4-PDI2019-SG52-190417 (A9D0674-16RE2)												
Naphthalene	ND	7.20	14.4	ug/kg dry	1	---	ND	---	---	---	30%	
Phenanthrene	**17.9**	3.59	7.20	ug/kg dry	1	---	24.7	---	---	**32**	**30%**	Q-05
Pyrene	**39.0**	3.59	7.20	ug/kg dry	1	---	62.3	---	---	**46**	**30%**	Q-17
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 50 %*	*Limits: 37-122 %*			*Dilution: 1x*					
2-Fluorobiphenyl (Surr)			*59 %*	*44-115 %*			*"*					
p-Terphenyl-d14 (Surr)			*80 %*	*54-127 %*			*"*					
Duplicate (9050375-DUP2)				Prepared: 05/01/19 13:10 Analyzed: 05/02/19 12:33								
QC Source Sample: T4-PDI2019-SG52-190417 (A9D0674-16RE2)												
EPA 8270D												
Benzo(g,h,i)perylene	**26.9**	14.4	28.8	ug/kg dry	4	---	31.1	---	---	15	30%	J
Dibenz(a,h)anthracene	ND	14.4	28.8	ug/kg dry	4	---	ND	---	---	**---**	**30%**	Q-05
Indeno(1,2,3-cd)pyrene	**28.6**	14.4	28.8	ug/kg dry	4	---	34.7	---	---	19	30%	J
Matrix Spike (9050375-MS1)				Prepared: 05/01/19 13:10 Analyzed: 05/01/19 22:40								
QC Source Sample: FD-201904171301 (A9D0674-22RE2)												
EPA 8270D												
Acenaphthene	958	13.8	27.7	ug/kg dry	4	1380	ND	69	40-122%	---	---	
Acenaphthylene	1010	13.8	27.7	ug/kg dry	4	1380	ND	73	32-132%	---	---	
Anthracene	1030	13.8	27.7	ug/kg dry	4	1380	23.9	73	47-123%	---	---	
Benz(a)anthracene	1130	13.8	27.7	ug/kg dry	4	1380	81.4	76	49-126%	---	---	
Benzo(a)pyrene	1360	20.7	41.4	ug/kg dry	4	1380	126	90	45-129%	---	---	
Benzo(b)fluoranthene	1420	20.7	41.4	ug/kg dry	4	1380	175	90	45-132%	---	---	
Benzo(k)fluoranthene	1310	20.7	41.4	ug/kg dry	4	1380	67.8	90	47-132%	---	---	
Benzo(g,h,i)perylene	905	13.8	27.7	ug/kg dry	4	1380	85.6	59	43-134%	---	---	
Chrysene	1170	13.8	27.7	ug/kg dry	4	1380	109	77	50-124%	---	---	
Dibenz(a,h)anthracene	1020	13.8	27.7	ug/kg dry	4	1380	22.7	72	45-134%	---	---	
Fluoranthene	1170	13.8	27.7	ug/kg dry	4	1380	153	73	50-127%	---	---	
Fluorene	1020	13.8	27.7	ug/kg dry	4	1380	ND	74	43-125%	---	---	
Indeno(1,2,3-cd)pyrene	1010	13.8	27.7	ug/kg dry	4	1380	101	66	45-133%	---	---	
1-Methylnaphthalene	893	27.7	55.2	ug/kg dry	4	1380	ND	65	40-120%	---	---	
2-Methylnaphthalene	900	27.7	55.2	ug/kg dry	4	1380	ND	65	38-122%	---	---	

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

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 9050375 - EPA 3546							**Sediment**					
Matrix Spike (9050375-MS1)			Prepared: 05/01/19 13:10 Analyzed: 05/01/19 22:40									
QC Source Sample: FD-201904171301 (A9D0674-22RE2)												
Naphthalene	861	27.7	55.2	ug/kg dry	4	1380	ND	62	35-123%	---	---	
Phenanthrene	1080	13.8	27.7	ug/kg dry	4	1380	55.4	74	50-121%	---	---	
Pyrene	1160	13.8	27.7	ug/kg dry	4	1380	156	72	47-127%	---	---	
Surr: Nitrobenzene-d5 (Surr)			*Recovery: 60 %*			*Limits: 37-122 %*		*Dilution: 4x*				
2-Fluorobiphenyl (Surr)			*59 %*			*44-115 %*		*"*				
Phenol-d6 (Surr)			*68 %*			*33-122 %*		*"*				
p-Terphenyl-d14 (Surr)			*65 %*			*54-127 %*		*"*				
2-Fluorophenol (Surr)			*63 %*			*35-115 %*		*"*				
2,4,6-Tribromophenol (Surr)			*96 %*			*39-132 %*		*"*				

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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

Demand Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9041101 - PSEP TOC							**Sediment**					
Blank (9041101-BLK1)			Prepared: 04/19/19 09:17		Analyzed: 04/23/19 15:25							
EPA 9060Amod												
Total Organic Carbon	ND	0.020	0.020	% by Weight	1	---	---	---	---	---	---	
LCS (9041101-BS1)			Prepared: 04/19/19 09:17		Analyzed: 04/23/19 15:25							
EPA 9060Amod												
Total Organic Carbon	9600			mg/kg	1	10000	---	96	90-110%	---	---	
Duplicate (9041101-DUP1)			Prepared: 04/19/19 09:17		Analyzed: 04/23/19 15:25							
QC Source Sample: T4-PDI2019-SG05-190417 (A9D0674-02)												
EPA 9060Amod												
Total Organic Carbon	**0.11**	0.020	0.020	% by Weight	1	---	0.063	---	---	**51**	**20%**	Q-04

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

Demand Parameters

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9041103 - PSEP TOC							**Sediment**					
Blank (9041103-BLK1)			Prepared: 04/19/19 10:30		Analyzed: 04/24/19 17:08							
EPA 9060Amod												
Total Organic Carbon	ND	0.020	0.020	% by Weight	1	---	---	---	---	---	---	
LCS (9041103-BS1)			Prepared: 04/19/19 10:30		Analyzed: 04/24/19 17:08							
EPA 9060Amod												
Total Organic Carbon	9500			mg/kg	1	10000	---	95	90-110%	---	---	
Duplicate (9041103-DUP1)			Prepared: 04/19/19 10:30		Analyzed: 04/24/19 17:08							
QC Source Sample: T4-PDI2019-SG59-190417 (A9D0674-21)												
EPA 9060Amod												
Total Organic Carbon	**2.4**	0.020	0.020	% by Weight	1	---	2.4	---	---	0.9	20%	

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

Solid and Moisture Determinations

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9041165 - Total Solids (SM2540G/PSEP)							**Sediment**					
Duplicate (9041165-DUP1)			Prepared: 04/22/19 12:06		Analyzed: 04/23/19 15:34							
QC Source Sample: T4-PDI2019-SG05-190417 (A9D0674-02)												
PSEP 1986												
Total Solids	**74.7**	1.00	1.00	% by Weight	1	---	74.7	---	---	0.09	20%	A-01

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

QUALITY CONTROL (QC) SAMPLE RESULTS

Solid and Moisture Determinations

Analyte	Result	Detection Limit	Reporting Limit	Units	Dilution	Spike Amount	Source Result	% REC	% REC Limits	RPD	RPD Limit	Notes
Batch 9041414 - Total Solids (SM2540G/PSEP)							**Sediment**					
Duplicate (9041414-DUP1)			Prepared: 04/29/19 10:50		Analyzed: 04/30/19 14:39							
QC Source Sample: T4-PDI2019-SG59-190417 (A9D0674-21)												
PSEP 1986												
Total Solids	**33.7**	1.00	1.00	% by Weight	1	---	33.8	---	---	0.3	20%	A-01



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Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

SAMPLE PREPARATION INFORMATION

Semivolatile Organic Compounds by EPA 8270D

Prep: EPA 3510C (Acid Extraction)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9041150							
A9D0674-01	Water	EPA 8270D	04/17/19 15:58	04/22/19 10:10	920mL/1mL	1000mL/1mL	1.09

Prep: EPA 3546

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9041271							
A9D0674-02	Sediment	EPA 8270D	04/17/19 11:35	04/24/19 12:22	15.72g/2mL	15g/2mL	0.95
A9D0674-03	Sediment	EPA 8270D	04/17/19 10:21	04/24/19 12:22	15.35g/2mL	15g/2mL	0.98
A9D0674-04	Sediment	EPA 8270D	04/15/19 12:29	04/24/19 12:22	15.07g/2mL	15g/2mL	1.00
A9D0674-05	Sediment	EPA 8270D	04/15/19 11:35	04/24/19 12:22	15.37g/2mL	15g/2mL	0.98
A9D0674-06	Sediment	EPA 8270D	04/15/19 15:34	04/24/19 12:22	15.09g/2mL	15g/2mL	0.99
A9D0674-07RE1	Sediment	EPA 8270D	04/16/19 14:34	04/24/19 12:22	15.39g/2mL	15g/2mL	0.98
A9D0674-08	Sediment	EPA 8270D	04/16/19 10:13	04/24/19 12:22	15.12g/2mL	15g/2mL	0.99
A9D0674-12RE1	Sediment	EPA 8270D	04/16/19 11:14	04/24/19 12:22	15.26g/2mL	15g/2mL	0.98
A9D0674-13	Sediment	EPA 8270D	04/15/19 14:41	04/24/19 12:22	15.17g/2mL	15g/2mL	0.99
A9D0674-14RE1	Sediment	EPA 8270D	04/15/19 14:41	04/24/19 12:22	15.5g/2mL	15g/2mL	0.97
A9D0674-15RE2	Sediment	EPA 8270D	04/17/19 15:25	04/24/19 12:22	15.34g/2mL	15g/2mL	0.98
A9D0674-17RE1	Sediment	EPA 8270D	04/16/19 16:27	04/24/19 12:22	15.42g/2mL	15g/2mL	0.97
A9D0674-18RE1	Sediment	EPA 8270D	04/16/19 13:27	04/24/19 12:22	15.29g/2mL	15g/2mL	0.98
A9D0674-21RE2	Sediment	EPA 8270D	04/17/19 13:50	04/24/19 12:22	15.25g/2mL	15g/2mL	0.98
A9D0674-23RE1	Sediment	EPA 8270D	04/16/19 13:01	04/24/19 12:22	15.17g/2mL	15g/2mL	0.99
A9D0674-24	Sediment	EPA 8270D	04/16/19 15:09	04/24/19 12:22	15.28g/5mL	15g/2mL	2.45
Batch: 9050375							
A9D0674-16RE2	Sediment	EPA 8270D	04/17/19 14:26	05/01/19 13:10	15.77g/2mL	15g/2mL	0.95
A9D0674-19RE2	Sediment	EPA 8270D	04/17/19 15:49	05/01/19 13:10	15.57g/2mL	15g/2mL	0.96
A9D0674-20RE2	Sediment	EPA 8270D	04/17/19 14:54	05/01/19 13:10	15.65g/2mL	15g/2mL	0.96
A9D0674-22RE2	Sediment	EPA 8270D	04/17/19 13:01	05/01/19 13:10	15.55g/2mL	15g/2mL	0.97

Demand Parameters

Prep: PSEP TOC

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9041101							
A9D0674-02	Sediment	EPA 9060Amod	04/17/19 11:35	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-03	Sediment	EPA 9060Amod	04/17/19 10:21	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-04	Sediment	EPA 9060Amod	04/15/19 12:29	04/19/19 09:17	5g/5g	5g/5g	NA

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Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

SAMPLE PREPARATION INFORMATION

Demand Parameters

Prep: PSEP TOC

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A9D0674-05	Sediment	EPA 9060Amod	04/15/19 11:35	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-06	Sediment	EPA 9060Amod	04/15/19 15:34	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-07	Sediment	EPA 9060Amod	04/16/19 14:34	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-08	Sediment	EPA 9060Amod	04/16/19 10:13	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-12	Sediment	EPA 9060Amod	04/16/19 11:14	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-13	Sediment	EPA 9060Amod	04/15/19 14:41	04/19/19 09:17	5g/5g	5g/5g	NA
A9D0674-14	Sediment	EPA 9060Amod	04/15/19 14:41	04/19/19 09:17	5g/5g	5g/5g	NA
Batch: 9041103							
A9D0674-15	Sediment	EPA 9060Amod	04/17/19 15:25	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-16	Sediment	EPA 9060Amod	04/17/19 14:26	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-17	Sediment	EPA 9060Amod	04/16/19 16:27	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-18	Sediment	EPA 9060Amod	04/16/19 13:27	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-19	Sediment	EPA 9060Amod	04/17/19 15:49	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-20	Sediment	EPA 9060Amod	04/17/19 14:54	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-21	Sediment	EPA 9060Amod	04/17/19 13:50	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-22	Sediment	EPA 9060Amod	04/17/19 13:01	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-23	Sediment	EPA 9060Amod	04/16/19 13:01	04/19/19 10:30	5g/5g	5g/5g	NA
A9D0674-24	Sediment	EPA 9060Amod	04/16/19 15:09	04/19/19 10:30	5g/5g	5g/5g	NA

Solid and Moisture Determinations

Prep: Total Solids (SM2540G/PSEP)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9041165							
A9D0674-02	Sediment	PSEP 1986	04/17/19 11:35	04/22/19 12:06			NA
A9D0674-03	Sediment	PSEP 1986	04/17/19 10:21	04/22/19 12:06			NA
A9D0674-04	Sediment	PSEP 1986	04/15/19 12:29	04/22/19 12:06			NA
A9D0674-05	Sediment	PSEP 1986	04/15/19 11:35	04/22/19 12:06			NA
A9D0674-06	Sediment	PSEP 1986	04/15/19 15:34	04/22/19 12:06			NA
A9D0674-07	Sediment	PSEP 1986	04/16/19 14:34	04/22/19 12:06			NA
A9D0674-08	Sediment	PSEP 1986	04/16/19 10:13	04/22/19 12:06			NA
A9D0674-12	Sediment	PSEP 1986	04/16/19 11:14	04/22/19 12:06			NA
A9D0674-13	Sediment	PSEP 1986	04/15/19 14:41	04/22/19 12:06			NA
A9D0674-14	Sediment	PSEP 1986	04/15/19 14:41	04/22/19 12:06			NA
Batch: 9041414							
A9D0674-15	Sediment	PSEP 1986	04/17/19 15:25	04/29/19 10:50			NA

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6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

SAMPLE PREPARATION INFORMATION

Solid and Moisture Determinations

Prep: Total Solids (SM2540G/PSEP)

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
A9D0674-16	Sediment	PSEP 1986	04/17/19 14:26	04/29/19 10:50			NA
A9D0674-17	Sediment	PSEP 1986	04/16/19 16:27	04/29/19 10:50			NA
A9D0674-18	Sediment	PSEP 1986	04/16/19 13:27	04/29/19 10:50			NA
A9D0674-19	Sediment	PSEP 1986	04/17/19 15:49	04/29/19 10:50			NA
A9D0674-20	Sediment	PSEP 1986	04/17/19 14:54	04/29/19 10:50			NA
A9D0674-21	Sediment	PSEP 1986	04/17/19 13:50	04/29/19 10:50			NA
A9D0674-22	Sediment	PSEP 1986	04/17/19 13:01	04/29/19 10:50			NA
A9D0674-23	Sediment	PSEP 1986	04/16/19 13:01	04/29/19 10:50			NA
A9D0674-24	Sediment	PSEP 1986	04/16/19 15:09	04/29/19 10:50			NA

Grain Size by ASTM D 422m/PSET Parameters

Prep: ASTM D 421

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor
Batch: 9041136							
A9D0674-02	Sediment	D422mod	04/17/19 11:35	04/24/19 08:46			NA
A9D0674-03	Sediment	D422mod	04/17/19 10:21	05/06/19 09:19			NA
A9D0674-04	Sediment	D422mod	04/15/19 12:29	04/24/19 09:03			NA
A9D0674-05	Sediment	D422mod	04/15/19 11:35	05/15/19 08:20			NA
A9D0674-06	Sediment	D422mod	04/15/19 15:34	05/15/19 08:42			NA
A9D0674-07	Sediment	D422mod	04/16/19 14:34	04/24/19 09:41			NA
A9D0674-08	Sediment	D422mod	04/16/19 10:13	05/15/19 09:03			NA
A9D0674-12	Sediment	D422mod	04/16/19 11:14	04/24/19 09:58			NA
A9D0674-13	Sediment	D422mod	04/15/19 14:41	05/15/19 09:26			NA
A9D0674-14	Sediment	D422mod	04/15/19 14:41	04/24/19 09:20			NA
A9D0674-15	Sediment	D422mod	04/17/19 15:25	04/30/19 08:43			NA
A9D0674-16	Sediment	D422mod	04/17/19 14:26	04/30/19 09:01			NA
A9D0674-17	Sediment	D422mod	04/16/19 16:27	05/02/19 09:40			NA
A9D0674-18	Sediment	D422mod	04/16/19 13:27	04/30/19 09:56			NA
A9D0674-19	Sediment	D422mod	04/17/19 15:49	04/30/19 08:50			NA
A9D0674-20	Sediment	D422mod	04/17/19 14:54	04/30/19 09:10			NA
A9D0674-21	Sediment	D422mod	04/17/19 13:50	05/02/19 09:55			NA
A9D0674-22	Sediment	D422mod	04/17/19 13:01	04/30/19 10:10			NA
A9D0674-23	Sediment	D422mod	04/16/19 13:01	05/02/19 10:25			NA
A9D0674-24	Sediment	D422mod	04/16/19 15:09	04/30/19 10:21			NA
Batch: 9041137							
A9D0674-25	Sediment	D422mod	04/17/19 13:50	05/02/19 10:13			NA

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

SAMPLE PREPARATION INFORMATION

Grain Size by ASTM D 422m/PSET Parameters

Prep: ASTM D 421

Lab Number	Matrix	Method	Sampled	Prepared	Sample Initial/Final	Default Initial/Final	RL Prep Factor

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Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

QUALIFIER DEFINITIONS

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

Apex Laboratories

A-01	Sample was decanted prior to solids analysis.
B	Analyte detected in an associated blank at a level above the MRL. (See Notes and Conventions below.)
GS-01	See detailed Particle Size Analysis results, accumulation curves, and Case Narratives at the end of this report.
J	Estimated Result. Result detected below the lowest point of the calibration curve, but above the specified MDL.
M-05	Estimated results. Peak separation for structural isomers is insufficient for accurate quantification.
Q-04	Spike recovery and/or RPD is outside control limits due to a non-homogeneous sample matrix.
Q-05	Analyses are not controlled on RPD values from sample and duplicate concentrations that are below 5 times the reporting level.
Q-17	RPD between original and duplicate sample is outside of established control limits.
Q-19	Blank Spike Duplicate (BSD) sample analyzed in place of Matrix Spike/Duplicate samples due to limited sample amount available for analysis.
Q-24	The RPD for this spike and spike duplicate is above established control limits. Recoveries for both the spike and spike duplicate are within control limits.
Q-37	Sample is non-homogenous. Sample results are less than MRL and duplicate results have hits greater than the MRL. See Duplicate results.
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.)
R-02	The Reporting Limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
S-03	Reextraction and analysis, or analysis of laboratory duplicate, confirms surrogate failure due to sample matrix effect.
S-04	Surrogate recovery is outside of established control limits due to a sample matrix effect.
S-05	Surrogate recovery is estimated due to sample dilution required for high analyte concentration and/or matrix interference.
S-06	Surrogate recovery is outside of established control limits.

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REPORTING NOTES AND CONVENTIONS:

Abbreviations:

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

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

NR Result Not Reported

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

Detection Limits: Limit of Detection (LOD)

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

Reporting Limits: Limit of Quantitation (LOQ)

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

Reporting Conventions:

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

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

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

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

QC Source:

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

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

Miscellaneous Notes:

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

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

Blanks:

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

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REPORTING NOTES AND CONVENTIONS (Cont.):

Blanks (Cont.):

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

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

Preparation Notes:

Mixed Matrix Samples:

Water Samples:

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

Soil and Sediment Samples:

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

Sampling and Preservation Notes:

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

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

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

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

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LABORATORY ACCREDITATION INFORMATION

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

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

Apex Laboratories

Matrix	Analysis	TNI_ID	Analyte	TNI_ID	Accreditation

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

Secondary Accreditations

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

Subcontract Laboratory Accreditations

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

Field Testing Parameters

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

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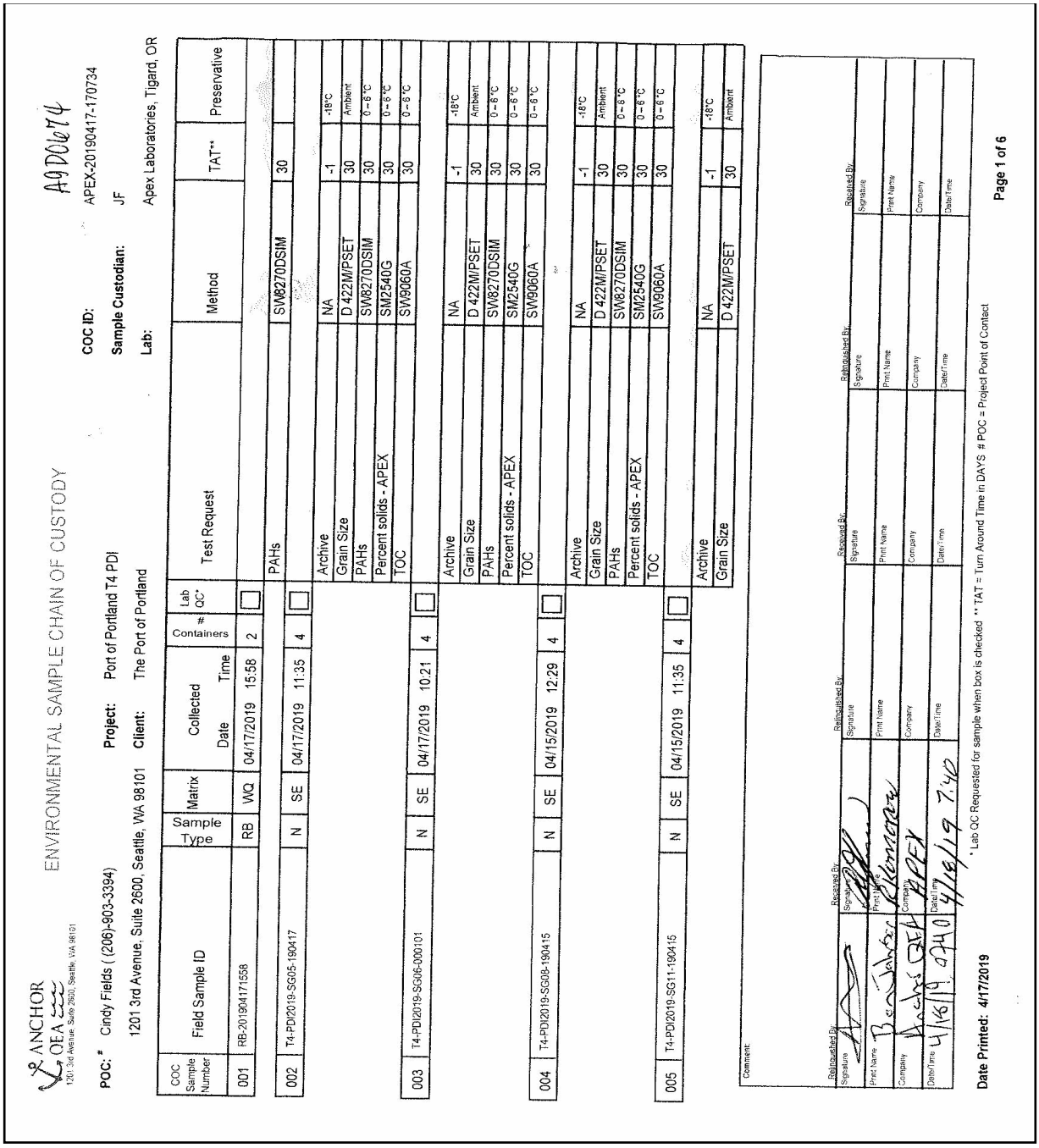

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

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

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

COC ID: APEX-20190417-170734
Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	RB-20190417-1558	RB	WQ	04/17/2019	15:58	2	☐	PAHs	SW8270DSIM	30	
002	T4-PDI2019-SG05-190417	N	SE	04/17/2019	11:35	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
003	T4-PDI2019-SG06-000101	N	SE	04/17/2019	10:21	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
004	T4-PDI2019-SG08-190415	N	SE	04/15/2019	12:29	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
005	T4-PDI2019-SG11-190415	N	SE	04/15/2019	11:35	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient

Comment:

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

Relinquished By: Signature / Print Name: [illegible] / Company: Anchor QEA / Date/Time: 4/16/19 7:40
Received By: Signature / Print Name: [illegible] / Company: APEX / Date/Time: 4/16/19 7:40

Date Printed: 4/17/2019

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

Page 1 of 6

Apex Laboratories

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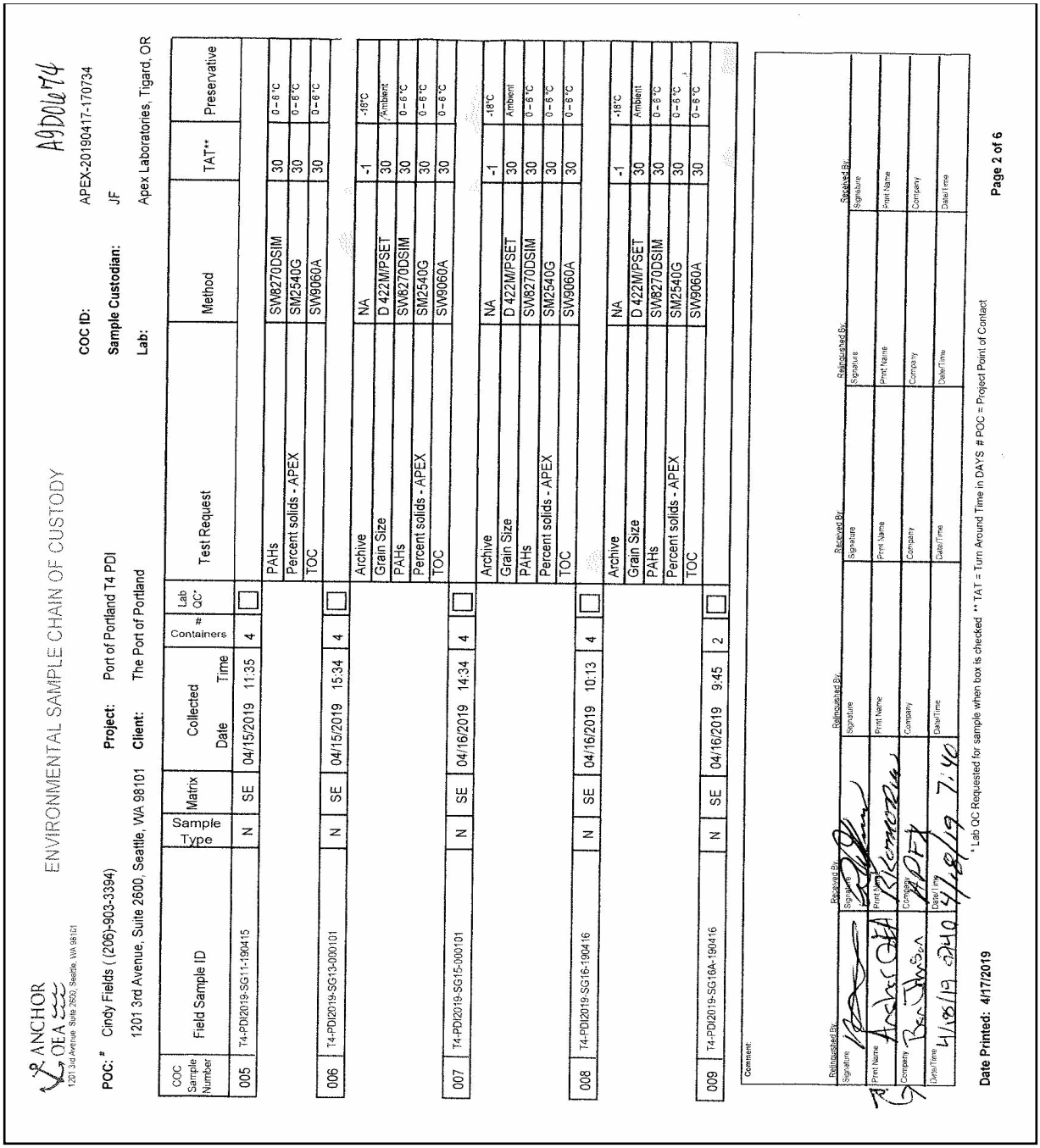
Darwin Thomas, Business Development Director

Apex Laboratories, LLC

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**



ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

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

POC: # Cindy Fields ((206)-903-3394) | Project: Port of Portland T4 PDI | Client: The Port of Portland | 1201 3rd Avenue, Suite 2600, Seattle, WA 98101

COC ID: APEX-20190417-170734 | Sample Custodian: JF | Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
005	T4-PDI2019-SG11-190415	N	SE	04/15/2019	11:35	4	☐	PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
006	T4-PDI2019-SG13-000101	N	SE	04/15/2019	15:34	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
007	T4-PDI2019-SG15-000101	N	SE	04/16/2019	14:34	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
008	T4-PDI2019-SG16-190416	N	SE	04/16/2019	10:13	4	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
009	T4-PDI2019-SG16A-190416	N	SE	04/16/2019	9:45	2	☐	Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C

Comment:

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Date/Time: 4/18/19 7:40

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

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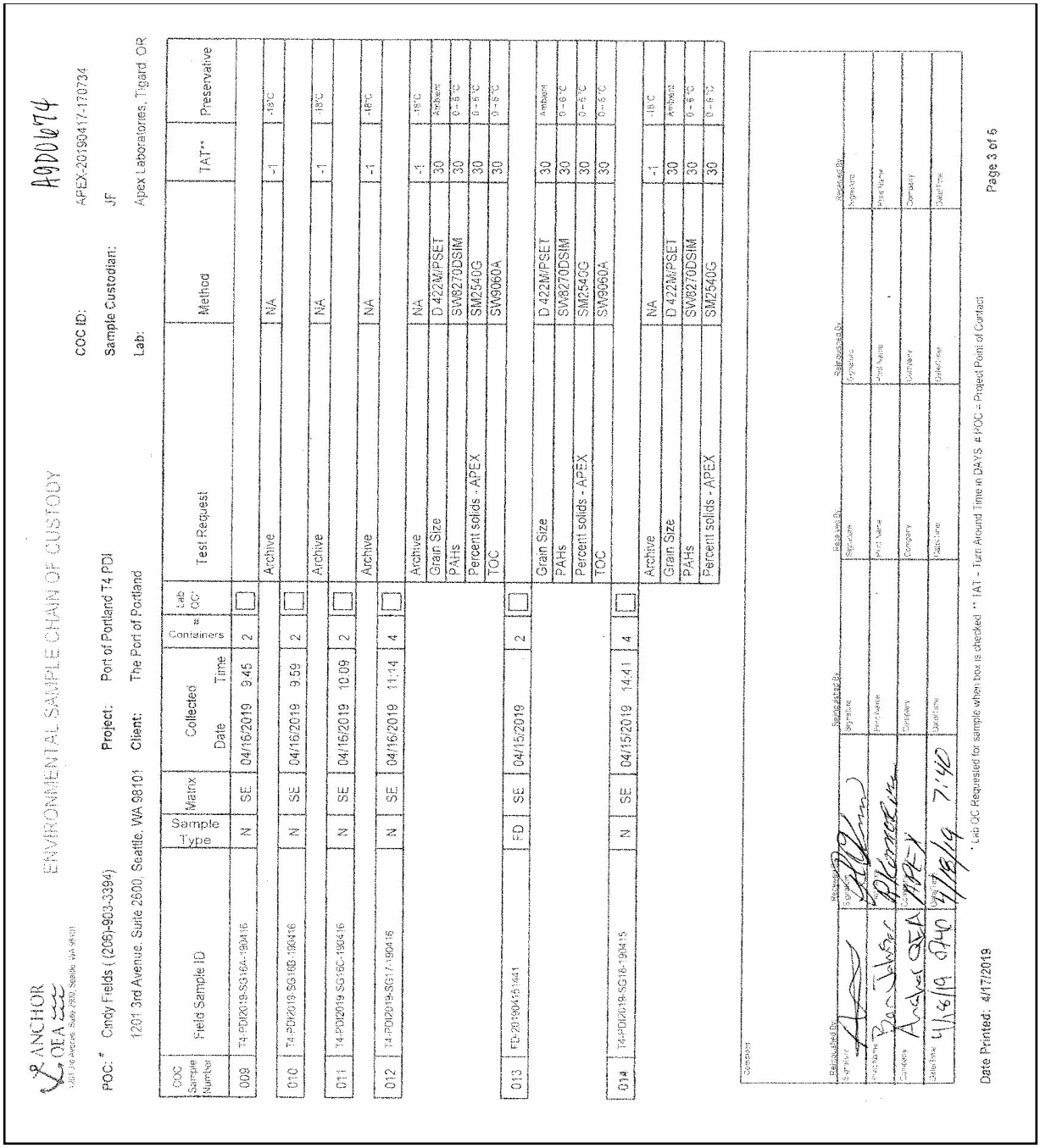
Apex Laboratories, LLC

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**



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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: * Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
009	T4-PDI2019-SG16A-190416	N	SE	04/16/2019	9:45	2	☐				
								Archive	NA	-1	-18°C
010	T4-PDI2019-SG16B-190416	N	SE	04/16/2019	9:59	2	☐				
								Archive	NA	-1	-18°C
011	T4-PDI2019-SG16C-190416	N	SE	04/16/2019	10:09	2	☐				
								Archive	NA	-1	-18°C
012	T4-PDI2019-SG17-190416	N	SE	04/16/2019	11:14	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6°C
								Percent solids - APEX	SM2540G	30	0 - 6°C
								TOC	SW9060A	30	0 - 6°C
013	FD-20190415 1441	FD	SE	04/15/2019		2	☐				
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6°C
								Percent solids - APEX	SM2540G	30	0 - 6°C
								TOC	SW9060A	30	0 - 6°C
014	T4-PDI2019-SG18-190415	N	SE	04/15/2019	14:41	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6°C
								Percent solids - APEX	SM2540G	30	0 - 6°C

Comment

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name Ben Johnson	Print Name Dkanor	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company APEX	Company	Company	Company	Company
Date/Time 4/16/19 0740	Date/Time 4/18/19 7:40	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 4/17/2019

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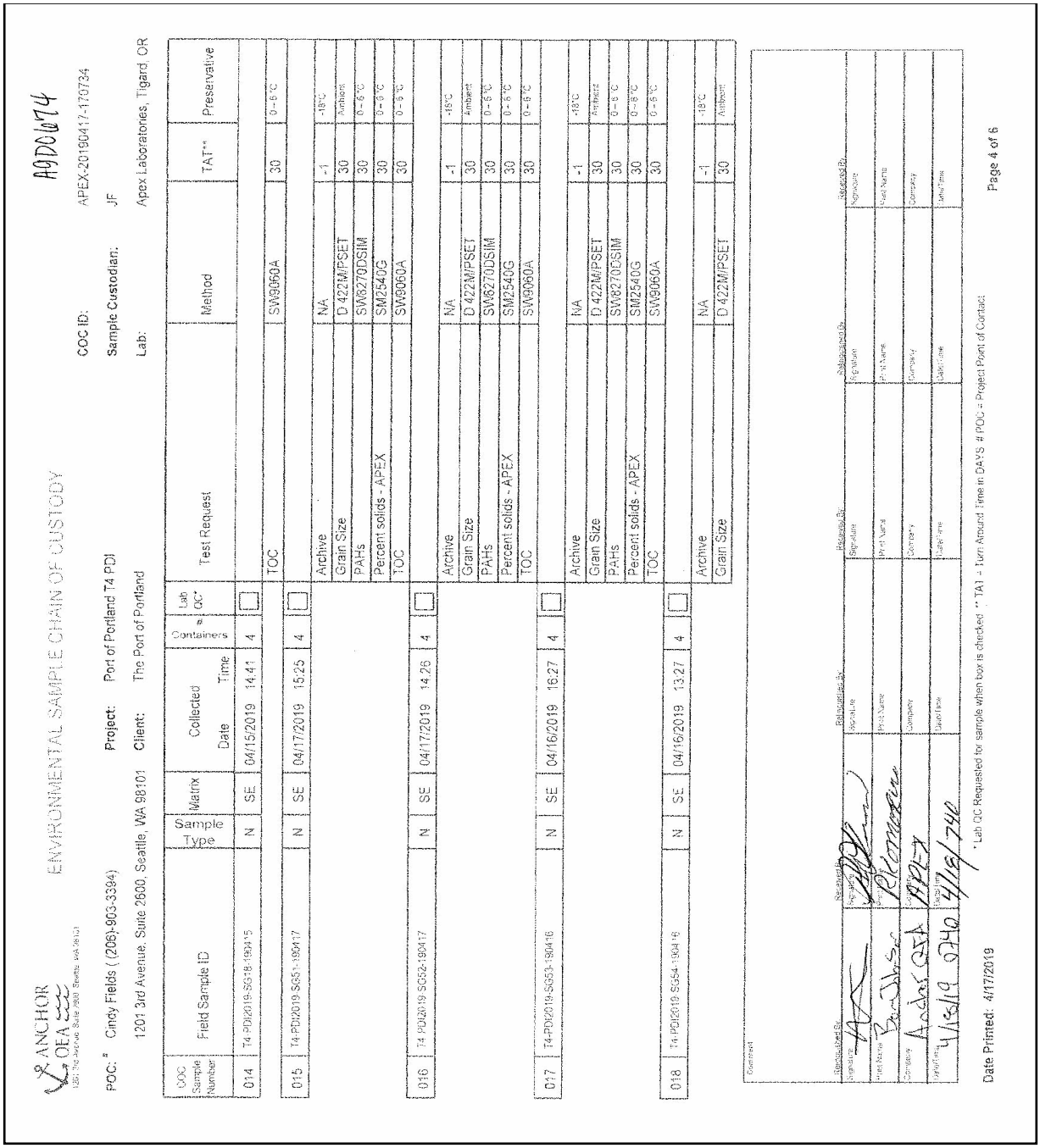
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**



ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

ANCHOR QEA inc

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

POC: Cindy Fields ((206)-903-3394)

COC ID: APEX-20190417-170734

Project: Port of Portland T4 PDI

Sample Custodian: JF

Client: The Port of Portland

Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
014	T4-PDI2019-SG518-190415	N	SE	04/15/2019	14:41	4		TOC	SW9060A	30	0 - 6 °C
015	T4-PDI2019-SG51-190417	N	SE	04/17/2019	15:25	4		Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
016	T4-PDI2019-SG52-190417	N	SE	04/17/2019	14:26	4		Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
017	T4-PDI2019-SG53-190416	N	SE	04/16/2019	16:27	4		Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
018	T4-PDI2019-SG54-190416	N	SE	04/16/2019	13:27	4		Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient

Comment

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

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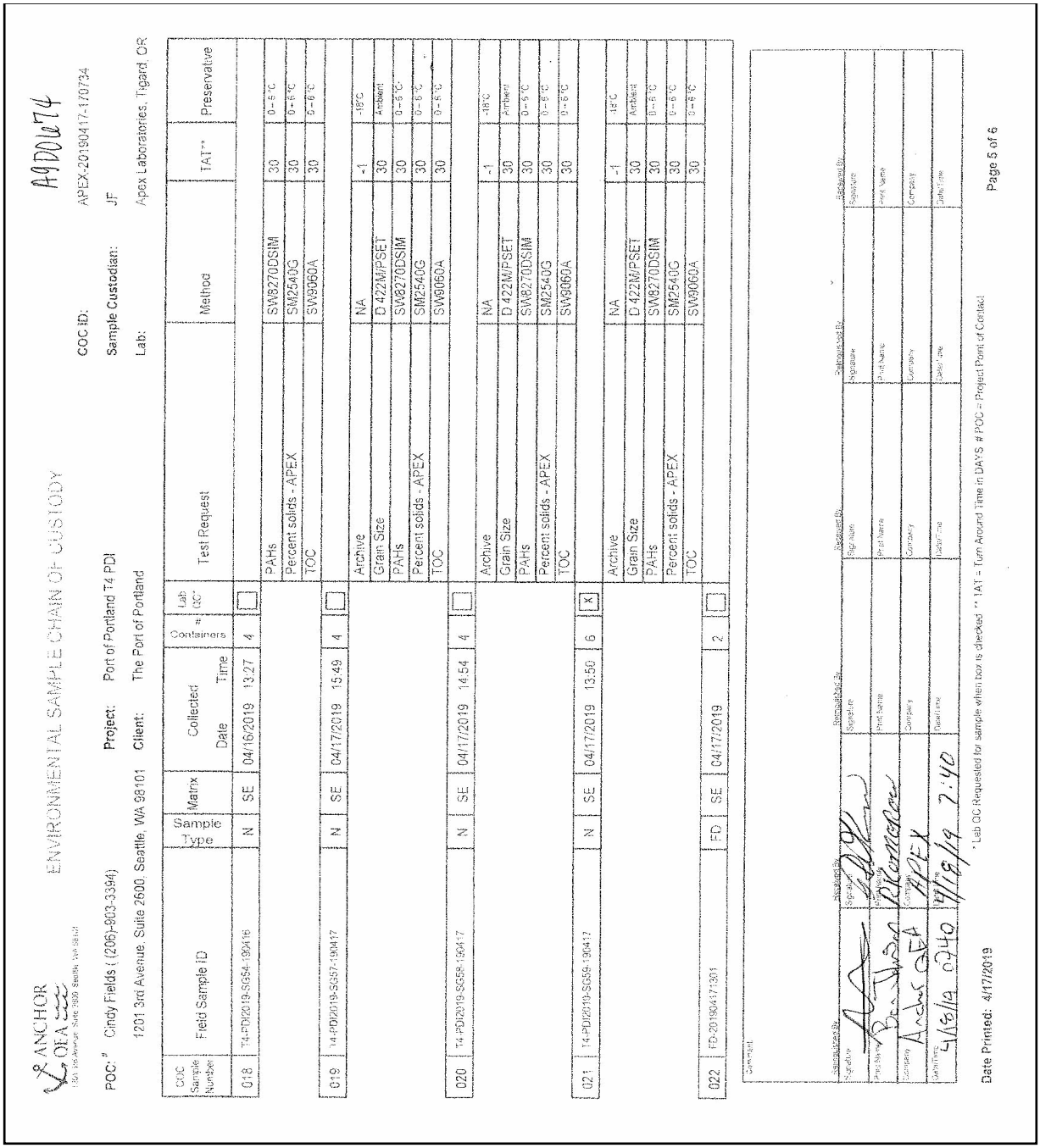
Tigard, OR 97223
503-718-2323
EPA ID: OR01039

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**



ANCHOR QEA

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: Cindy Fields ((206)-903-3394) Project: Port of Portland T4 PDI Sample Custodian: JF

1201 3rd Avenue, Suite 2600, Seattle, WA 98101 Client: The Port of Portland Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC	Test Request	Method	TAT**	Preservative
018	T4-PDI2019-S054-190416	N	SE	04/16/2019	13:27	4		PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
019	T4-PDI2019-S057-190417	N	SE	04/17/2019	15:49	4		Archive	NA	<1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
020	T4-PDI2019-S058-190417	N	SE	04/17/2019	14:54	4		Archive	NA	<1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
021	T4-PDI2019-S059-190417	N	SE	04/17/2019	13:50	6	X	Archive	NA	<1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
022	FD-20190417301	FD	SE	04/17/2019		2		Archive	NA	<1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C

Comment:

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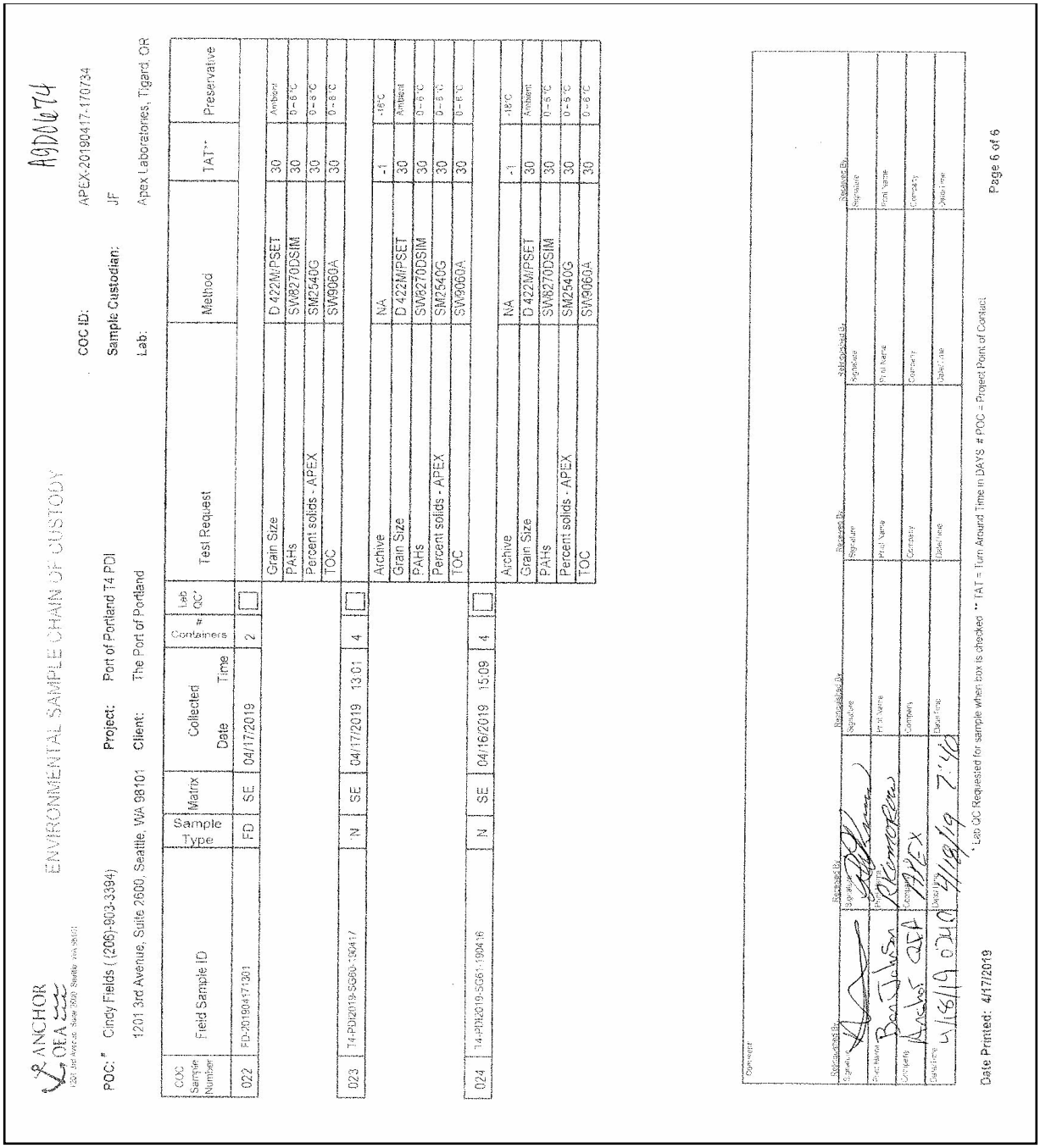
Apex Laboratories, LLC

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**



ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

ANCHOR QEA

POC: * Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

COC ID: APEX-20190417-170734
Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC	Test Request	Method	TAT**	Preservative
022	FD-20190417-1301	FD	SE	04/17/2019		2		Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
023	T4-PDI2019-SG60-190417	N	SE	04/17/2019	13:01	4		Archive	NA	1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
024	T4-PDI2019-SG61-190416	N	SE	04/16/2019	15:09	4		Archive	NA	1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C

Comment:

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Apex Laboratories

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

Anchor QEA, LLC	Project: **Port of Portland - T4 - PDI**	
6720 SW Macadam Ave. Suite 125	Project Number: **Port of Portland T4 PDI**	**Report ID:**
Portland, OR 97219	Project Manager: **Cindy Fields**	**A9D0674 - 05 21 19 1556**

APEX LABS COOLER RECEIPT FORM

Client: Anchor Element WO#: A9D0674

Project/Project #: Port of Portland T4 PDI

Delivery Info:

Date/time received: 4/18/19 @ 7:40 By: RK

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

Cooler Inspection Date/time inspected: 4/18/19 @ 8:27 By: MS

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

Signed/dated by client? Yes X No

Signed/dated by Apex? Yes X No

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.5	4.5	5.7				
Received on ice? (Y/N)	Y	Y	Y				
Temp. blanks? (Y/N)	Y	Y	Y				
Ice type: (Gel/Real/Other)	Real	Real	Real				
Condition:	Good	Good	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: 4/18/19 @1000 By:

All samples intact? Yes X No Comments:

Bottle labels/COCs agree? Yes X No Comments: FD-20190415 1441 no T on CoC, container reads T of 1441, FD-20190417 1301 no T on CoC, container reads T of 1301

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: Witness: Cooler Inspected by: See Project Contact Form: Y

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Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-02		Client Sample ID:	T4-PDI2019-SG05-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	SAND with trace Silt and Clay			Max Particle Size:	Gravel		
Particle Shape:	Sub-angular to Sub-rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.106	527.749	516.64	1.89	507.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.357	13.425	12.07	12.07	2.4	97.6
10	2.00	1.377	14.339	12.96	25.03	2.6	95.1
Pan		11.122	501.402	490.28	515.31	94.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9814		D67403	1.367	16.483	16.202	1.89

Hydrometer Analysis

Start Date/Time	4/24/2019	8:46	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.420		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	95.1		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.55		Corrected Dry Weight of Soil Tested (g) (W)	103.67

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8	20.4	1.91	1.8	14.8	0.01365	0.053	1.75
2	7.5	20.4	1.41	1.4	14.8	0.01365	0.037	1.30
4	7	20.3	0.88	0.8	15	0.01365	0.026	0.81
8	10	20.3	3.88	3.7	14.5	0.01365	0.018	3.56
15	7	20.6	0.98	0.9	15	0.01348	0.013	0.90
30	6	20.4		0.0	15.2	0.01365	0.010	0.00
60	5.5	20.4		0.0	15.2	0.01365	0.007	0.00
90	5.5	20.4		0.0	15.2	0.01365	0.006	0.00
120	5.5	20.4		0.0	15.2	0.01365	0.005	0.00
240	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
360	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
1440	4.5	19.6		0.0	15.3	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.300	9.227	7.93	63.73	7.6	87.4
40	0.425	1.293	49.911	48.62	301.10	46.9	40.5
60	0.250	1.297	36.424	35.13	472.60	33.9	6.6
100	0.150	1.302	4.752	3.45	489.44	3.3	3.3
140	0.105	1.285	1.583	0.30	490.90	0.3	3.0
200	0.075	1.297	1.494	0.20	491.86	0.2	2.8
230	0.063	1.289	1.391	0.10	492.36	0.1	2.7
			Sum	95.72	230 Minus	2.83	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG05-190417 (A9D0674-02)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*4.94*
Retained on No. 4 sieve		4.75	97.62	2.38
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	95.06	2.56
Sand				*92.33*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	87.42	7.65
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	40.52	46.9
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	6.64	33.88
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	3.31	3.33
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	3.02	0.29
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	2.83	0.19
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	2.73	0.1
Silt and Clay (Measurements in the Clay fraction are noted)				*2.83*
Hydrometer Test		0.0525	1.75	0.98
Hydrometer Test		0.0371	1.3	0.46
Hydrometer Test		0.0264	0.81	0.49
Hydrometer Test		0.0184	3.56	0
Hydrometer Test		0.0135	0.9	0
Hydrometer Test		0.0097	0.9	0
Hydrometer Test		0.0069	0.9	0
Hydrometer Test		0.0056	0.9	0
Hydrometer Test	Clay	0.0049	0.9	0
Hydrometer Test	Clay	0.0034	0.9	0
Hydrometer Test	Clay	0.0028	0.9	0
Hydrometer Test	Clay	0.0014	0.9	0

Grain Size Summary	Percent of Total Sample
Gravel	4.9
Sand	92.3
Coarse sand	7.6
Medium sand	84.1
Fine sand	0.6
Silt	1.9
Clay	0.9

Case Narrative for Sample ID: T4-PDI2019-SG05-190417 (A9D0674-02)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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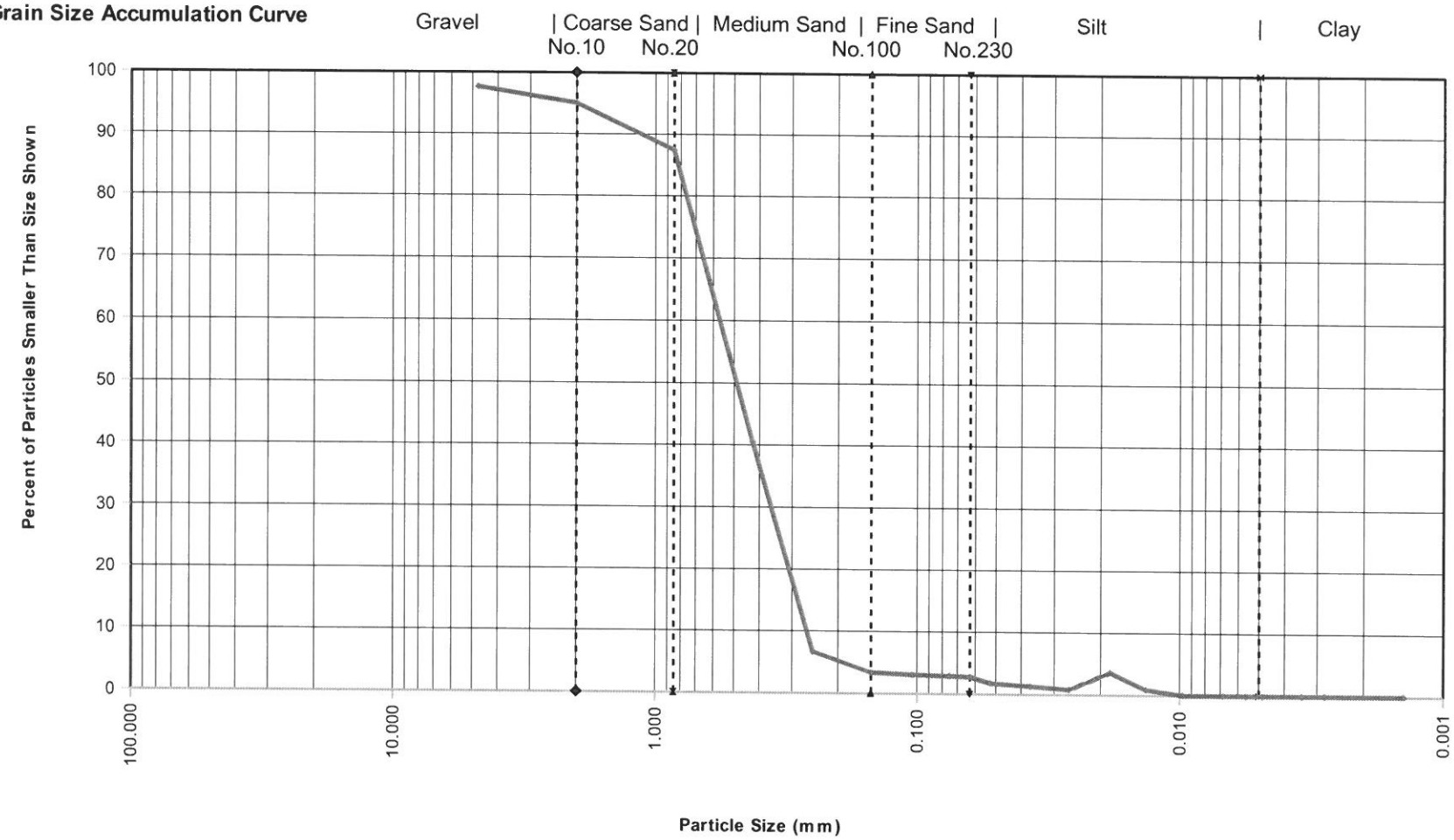
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG05-190417 (A9D0674-02)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Sub-angular to Sub-rounded	Hard and Durable	SAND with trace Silt and Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 68 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-03		Client Sample ID:	T4-PDI2019-SG06-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	SAND with trace Gravel, Silt, and Clay			Max Particle Size:	Gravel		
Particle Shape:	Angular to Sub-rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.110	526.467	515.36	1.72	506.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.384	26.828	25.44	25.44	5.0	95.0
10	2.00	1.373	16.347	14.97	40.42	3.0	92.0
Pan		11.125	484.735	473.61	514.03	91.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9831		D67403	1.364	18.137	17.853	1.72

Hydrometer Analysis

Start Date/Time	5/6/2019	9:19	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.178		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	92.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.48		Corrected Dry Weight of Soil Tested (g) (W)	107.02

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	7.5	20.4	1.41	1.3	14.8	0.01365	0.053	1.22
2	7.5	20.4	1.41	1.3	14.8	0.01365	0.037	1.22
4	7.5	20.5	1.45	1.4	14.8	0.01348	0.026	1.24
8	7	20.5	0.95	0.9	15	0.01348	0.018	0.81
15	7	20.5	0.95	0.9	15	0.01348	0.013	0.81
30	7.5	20.5	1.45	1.4	14.8	0.01348	0.009	1.24
60	7	20.5	0.95	0.9	15	0.01348	0.007	0.81
90	7.5	20.6	1.48	1.4	14.8	0.01348	0.005	1.27
120	7	20.6	0.98	0.9	15	0.01348	0.005	0.84
240	6.5	20.5	0.45	0.4	15	0.01348	0.003	0.38
360	6.5	20.4	0.41	0.4	15	0.01365	0.003	0.36
1440	6	20		0.0	15.2	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.295	9.232	7.94	77.94	7.4	84.6
40	0.425	1.294	45.795	44.50	288.33	41.6	43.0
60	0.250	1.296	39.028	37.73	466.71	35.3	7.8
100	0.150	1.294	5.683	4.39	487.46	4.1	3.7
140	0.105	1.299	1.727	0.43	489.49	0.4	3.3
200	0.075	1.303	1.610	0.31	490.94	0.3	3.0
230	0.063	1.297	1.465	0.17	491.73	0.2	2.8
			Sum	95.46	230 Minus	3.02	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG06-190417 (A9D0674-03)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*7.98*
Retained on No. 4 sieve		4.75	94.98	5.02
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	92.02	2.96
Sand				*89.2*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	84.61	7.42
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	43.02	41.58
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	7.77	35.26
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	3.67	4.1
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	3.27	0.4
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	2.98	0.29
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	2.82	0.16
Silt and Clay (Measurements in the Clay fraction are noted)				*2.82*
Hydrometer Test		0.0525	1.22	1.61
Hydrometer Test		0.0371	1.22	0
Hydrometer Test		0.0259	1.24	0
Hydrometer Test		0.0185	0.81	0.4
Hydrometer Test		0.0135	0.81	0
Hydrometer Test		0.0095	1.24	0
Hydrometer Test		0.0067	0.81	0
Hydrometer Test		0.0055	1.27	0
Hydrometer Test	Clay	0.0048	0.84	0
Hydrometer Test	Clay	0.0034	0.38	0.43
Hydrometer Test	Clay	0.0028	0.36	0.03
Hydrometer Test	Clay	0.0014	0.36	0

Grain Size Summary	Percent of Total Sample
Gravel	8.0
Sand	89.2
Coarse sand	7.4
Medium sand	80.9
Fine sand	0.8
Silt	2.0
Clay	0.8

Case Narrative for Sample ID: **T4-PDI2019-SG06-190417 (A9D0674-03)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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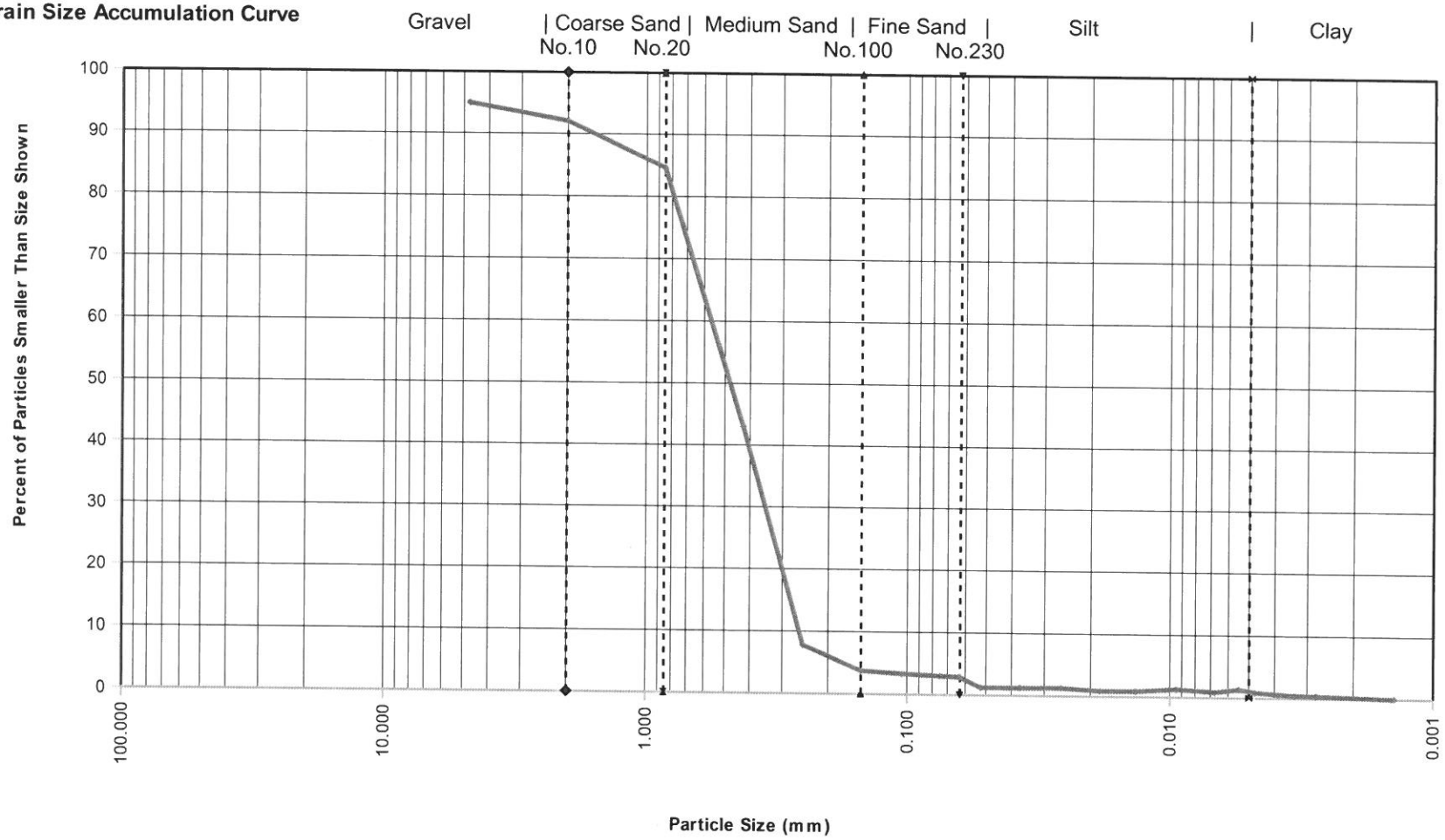
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG06-190417 (A9D0674-03)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Angular to Sub-rounded	Hard and Durable	SAND with trace Gravel, Silt, and Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 71 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-04		Client Sample ID:	T4-PDI2019-SG08-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/13/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey Silty SAND			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.195	283.114	271.92	6.97	254.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.377	2.384	1.01	1.01	0.4	99.6
10	2.00	1.376	2.109	0.73	1.74	0.3	99.3
Pan		11.208	279.415	268.21	269.95	98.2	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9348		674-4	1.372	16.905	15.893	6.97

Hydrometer Analysis

Start Date/Time	4/24/2019	9:03	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.842		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.3		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.46		Corrected Dry Weight of Soil Tested (g) (W)	48.80

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	28	20	23.21	47.6	11.5	0.01365	0.046	47.23
2	26	20	21.21	43.5	11.9	0.01365	0.033	43.16
4	23	20	18.21	37.3	12.4	0.01365	0.024	37.05
8	21	19.9	16.18	33.2	12.7	0.01365	0.017	32.93
15	20	20	15.21	31.2	12.9	0.01365	0.013	30.95
30	16	20.2	11.26	23.1	13.5	0.01365	0.009	22.91
60	14	20.2	9.26	19.0	13.8	0.01365	0.007	18.84
90	12	20.3	7.28	14.9	14.2	0.01365	0.005	14.82
120	11.5	20.3	6.78	13.9	14.2	0.01365	0.005	13.80
240	10.5	20.5	5.83	12.0	14.3	0.01348	0.003	11.87
360	9.5	20.5	4.83	9.9	14.5	0.01348	0.003	9.84
1440	8.5	19.8	3.66	7.5	14.7	0.01365	0.001	7.44

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.395	1.484	0.09	2.20	0.2	99.1
40	0.425	1.392	4.570	3.18	18.64	6.5	92.6
60	0.250	1.366	14.648	13.28	87.36	27.2	65.4
100	0.150	1.381	6.786	5.41	115.32	11.1	54.3
140	0.105	1.380	2.868	1.49	123.02	3.0	51.3
200	0.075	1.380	3.056	1.68	131.69	3.4	47.8
230	0.063	1.374	2.171	0.80	135.81	1.6	46.2
			Sum	25.92	230 Minus	22.55	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG08-190415 (A9D0674-04)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.68*
Retained on No. 4 sieve		4.75	99.6	0.4
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.32	0.29
Sand				*53.11*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.13	0.18
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	92.62	6.51
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	65.4	27.22
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	54.33	11.08
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	51.28	3.05
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	47.84	3.43
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	46.21	1.63
Silt and Clay (Measurements in the Clay fraction are noted)				*46.21*
Hydrometer Test		0.0463	47.23	0
Hydrometer Test		0.0333	43.16	3.05
Hydrometer Test		0.0240	37.05	6.11
Hydrometer Test		0.0172	32.93	4.12
Hydrometer Test		0.0127	30.95	1.98
Hydrometer Test		0.0092	22.91	8.04
Hydrometer Test		0.0065	18.84	4.07
Hydrometer Test		0.0054	14.82	4.02
Hydrometer Test	Clay	0.0047	13.8	1.02
Hydrometer Test	Clay	0.0033	11.87	1.93
Hydrometer Test	Clay	0.0027	9.84	2.04
Hydrometer Test	Clay	0.0014	7.44	2.4

Grain Size Summary	Percent of Total Sample
Gravel	0.7
Sand	53.1
Coarse sand	0.2
Medium sand	44.8
Fine sand	8.1
Silt	31.4
Clay	14.8

Case Narrative for Sample ID: T4-PDI2019-SG08-190415 (A9D0674-04)

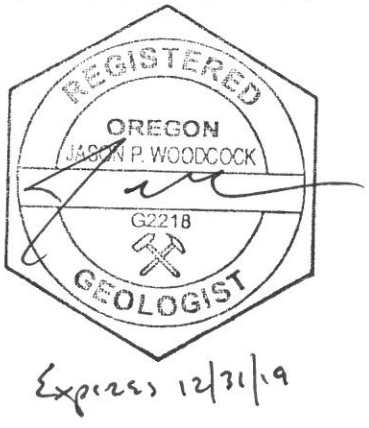
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist entirely of organic material.



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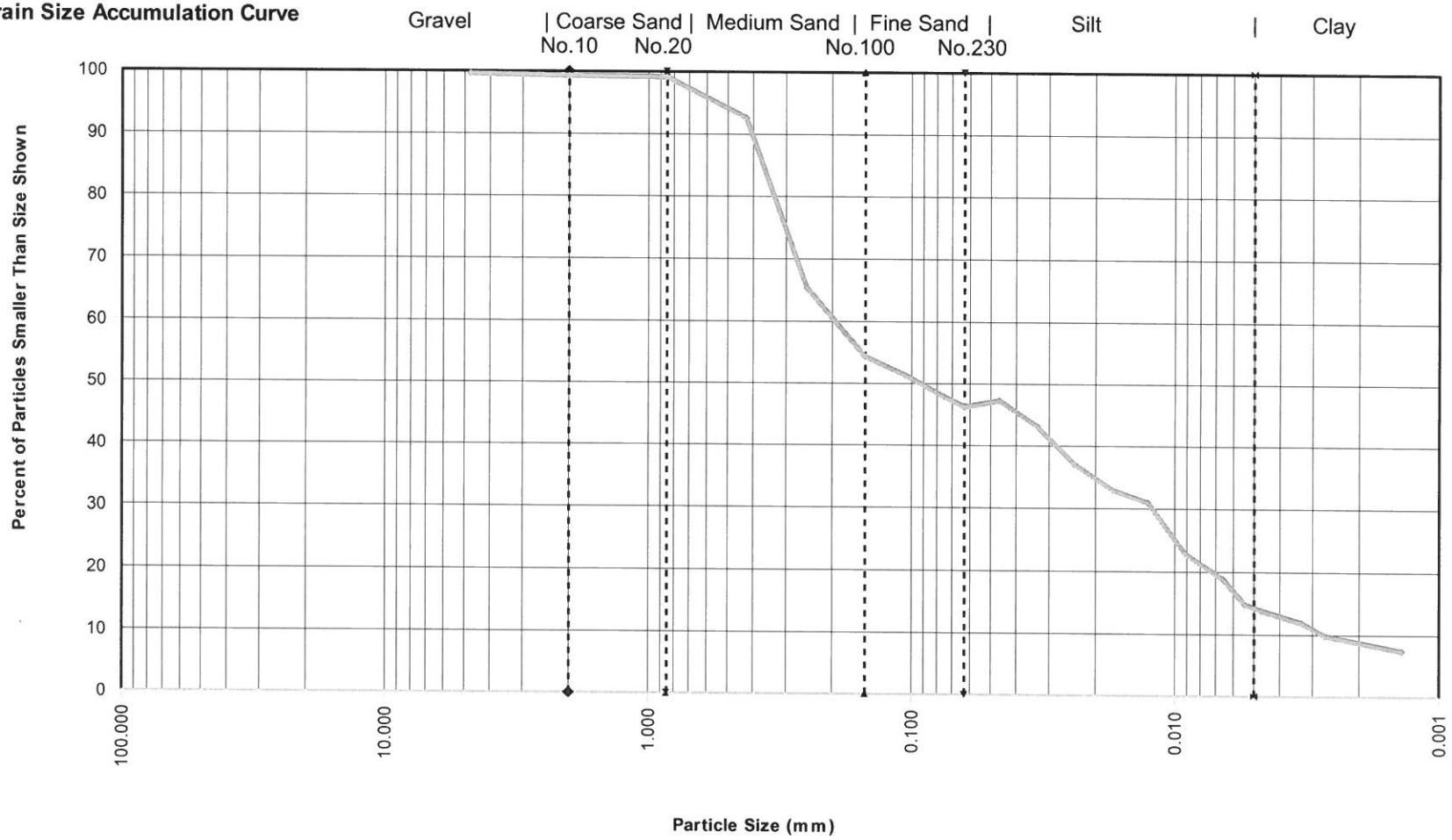
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG08-190415 (A9D0674-04)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey Silty SAND

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Report is complete only if it includes Apex Labs Grain Size Data. Page 74 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-05		Client Sample ID:	T4-PDI2019-SG11-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with trace Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.445	338.065	326.62	4.52	312.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.384	1.525	0.14	0.14	0.0	100.0
10	2.00	1.378	2.260	0.88	1.02	0.3	99.7
Pan		11.459	336.438	324.98	326.00	99.3	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
0.9568		D67405	1.386	27.795	26.653	4.52

Hydrometer Analysis

Start Date/Time	5/15/2019	8:20	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.166		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.7		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.00		Corrected Dry Weight of Soil Tested (g) (W)	48.15

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	21	20.1	16.23	33.7	12.7	0.01365	0.049	33.60
2	19	20.3	14.28	29.7	13	0.01365	0.035	29.56
4	16	20.4	11.31	23.5	13.5	0.01365	0.025	23.41
8	13	20.3	8.28	17.2	14	0.01365	0.018	17.14
15	11	20.4	6.31	13.1	14.3	0.01365	0.013	13.06
30	9.5	20.4	4.81	10.0	14.5	0.01365	0.009	9.95
60	7.5	20.4	2.81	5.8	14.8	0.01365	0.007	5.81
90	7	20.6	2.36	4.9	15	0.01348	0.006	4.88
120	6	20.6	1.36	2.8	15.2	0.01348	0.005	2.81
240	6	20.7	1.38	2.9	15.2	0.01348	0.003	2.86
360	6	20.6	1.36	2.8	15.2	0.01348	0.003	2.81
1440	5	19.9	0.18	0.4	15.3	0.01365	0.001	0.38

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.301	1.572	0.27	2.78	0.6	99.1
40	0.425	1.295	5.969	4.67	33.06	9.7	89.4
60	0.250	1.295	17.258	15.96	136.47	33.1	56.3
100	0.150	1.297	8.616	7.32	183.88	15.2	41.1
140	0.105	1.304	2.942	1.64	194.49	3.4	37.7
200	0.075	1.299	2.575	1.28	202.76	2.6	35.0
230	0.063	1.282	1.914	0.63	206.85	1.3	33.7
			Sum	31.77	230 Minus	16.22	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.33*
Retained on No. 4 sieve		4.75	99.95	0.05
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.67	0.28
Sand				*65.98*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.11	0.56
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	89.4	9.71
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	56.25	33.15
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	41.05	15.2
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	37.65	3.4
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	35	2.65
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	33.69	1.31
Silt and Clay (Measurements in the Clay fraction are noted)				*33.69*
Hydrometer Test		0.0486	33.6	0.09
Hydrometer Test		0.0348	29.56	4.04
Hydrometer Test		0.0251	23.41	6.16
Hydrometer Test		0.0181	17.14	6.26
Hydrometer Test		0.0133	13.06	4.09
Hydrometer Test		0.0095	9.95	3.1
Hydrometer Test		0.0068	5.81	4.14
Hydrometer Test		0.0055	4.88	0.93
Hydrometer Test	Clay	0.0048	2.81	2.07
Hydrometer Test	Clay	0.0034	2.86	0
Hydrometer Test	Clay	0.0028	2.81	0
Hydrometer Test	Clay	0.0014	0.38	2.44

Grain Size Summary	Percent of Total Sample
Gravel	0.3
Sand	66.0
Coarse sand	0.6
Medium sand	58.1
Fine sand	7.4
Silt	28.8
Clay	4.9

Case Narrative for Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

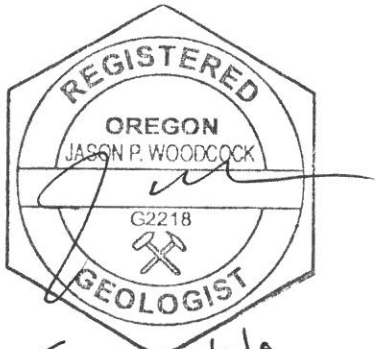
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

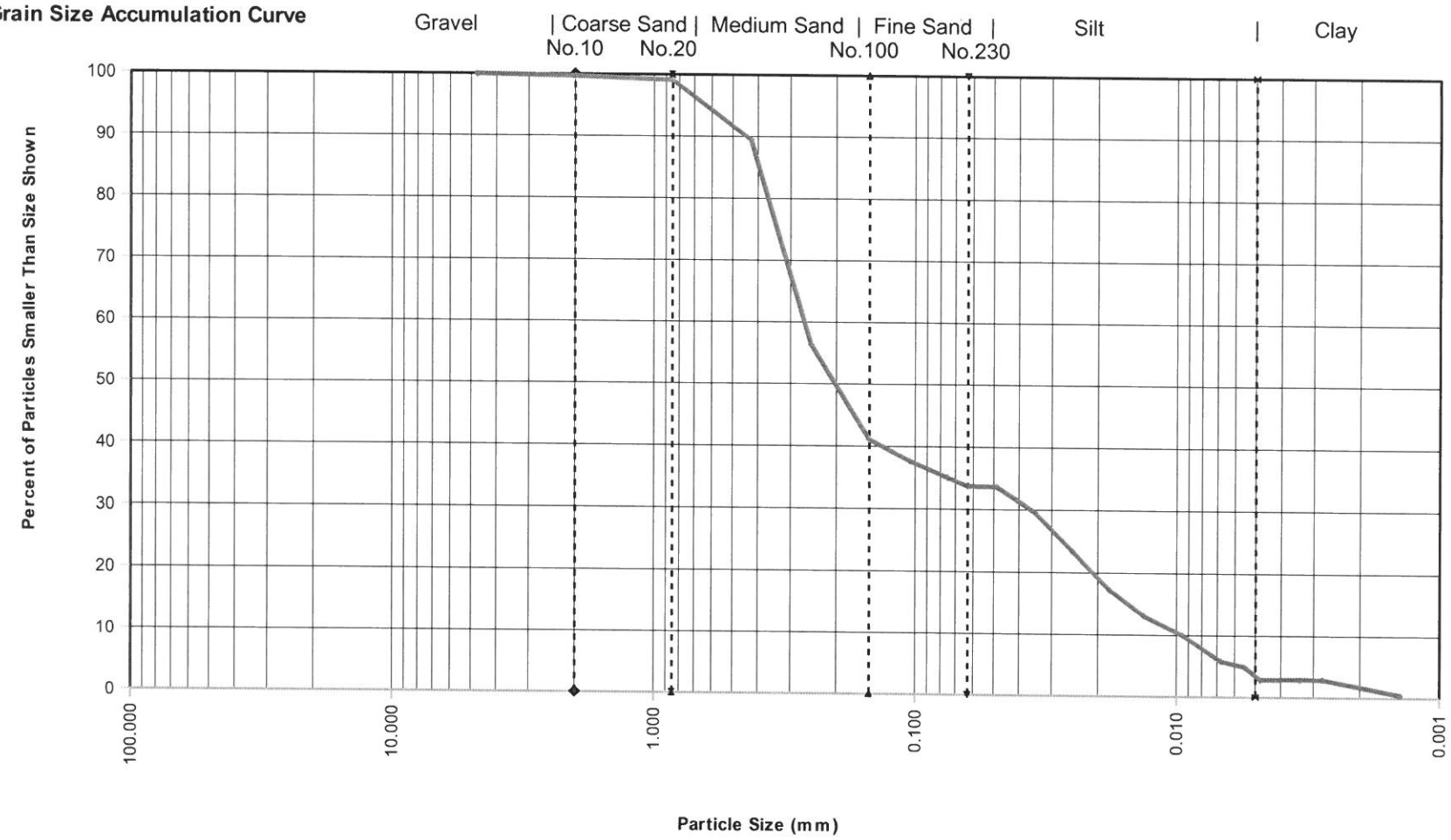
The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist almost entirely of organic material.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG11-190415 (A9D0674-05)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with trace Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 77 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-06		Client Sample ID:	T4-PDI2019-SG13-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.257	315.244	303.99	5.47	288.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.361	1.938	0.58	0.58	0.2	99.8
Pan		11.259	314.215	302.96	303.53	99.4	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
0.9481		D67406	1.374	23.068	21.942	5.47

Hydrometer Analysis

Start Date/Time	5/15/2019	8:42	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.182		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.8		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.58		Corrected Dry Weight of Soil Tested (g) (W)	47.67

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	26	20.4	21.31	44.7	11.9	0.01365	0.047	44.61
2	23.5	20.6	18.86	39.6	12.2	0.01348	0.033	39.48
4	21	20.6	16.36	34.3	12.7	0.01348	0.024	34.24
8	18.5	20.6	13.86	29.1	13	0.01348	0.017	29.01
15	16	20.6	11.36	23.8	13.5	0.01348	0.013	23.78
30	13.5	20.8	8.91	18.7	13.8	0.01348	0.009	18.65
60	11.5	20.8	6.91	14.5	14.2	0.01348	0.007	14.46
90	10	20.7	5.38	11.3	14.5	0.01348	0.005	11.27
120	10	20.8	5.41	11.3	14.5	0.01348	0.005	11.32
240	8	20.7	3.38	7.1	14.8	0.01348	0.003	7.08
360	7.5	20.7	2.88	6.0	14.8	0.01348	0.003	6.04
1440	7	20	2.21	4.6	15	0.01365	0.001	4.62

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.283	1.430	0.15	1.46	0.3	99.5
40	0.425	1.294	4.904	3.61	23.26	7.6	91.9
60	0.250	1.295	15.002	13.71	106.01	28.8	63.2
100	0.150	1.295	7.992	6.70	146.44	14.0	49.1
140	0.105	1.289	2.954	1.67	156.49	3.5	45.6
200	0.075	1.296	2.723	1.43	165.11	3.0	42.6
230	0.063	1.287	2.056	0.77	169.75	1.6	41.0
			Sum	28.02	230 Minus	19.56	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.2*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.8	0.2
Sand				*58.78*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.49	0.31
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	91.92	7.57
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	63.17	28.75
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	49.12	14.05
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	45.63	3.49
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	42.63	2.99
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	41.02	1.61
Silt and Clay (Measurements in the Clay fraction are noted)				*41.02*
Hydrometer Test		0.0471	44.61	0
Hydrometer Test		0.0333	39.48	1.54
Hydrometer Test		0.0240	34.24	5.23
Hydrometer Test		0.0172	29.01	5.23
Hydrometer Test		0.0128	23.78	5.23
Hydrometer Test		0.0091	18.65	5.13
Hydrometer Test		0.0066	14.46	4.19
Hydrometer Test		0.0054	11.27	3.19
Hydrometer Test	Clay	0.0047	11.32	0
Hydrometer Test	Clay	0.0033	7.08	4.19
Hydrometer Test	Clay	0.0027	6.04	1.05
Hydrometer Test	Clay	0.0014	4.62	1.42

Grain Size Summary	**Percent of Total Sample**
Gravel	0.2
Sand	58.8
Coarse sand	0.3
Medium sand	50.4
Fine sand	8.1
Silt	29.7
Clay	11.3

Case Narrative for Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+10 fraction consists almost entirely of organic material.



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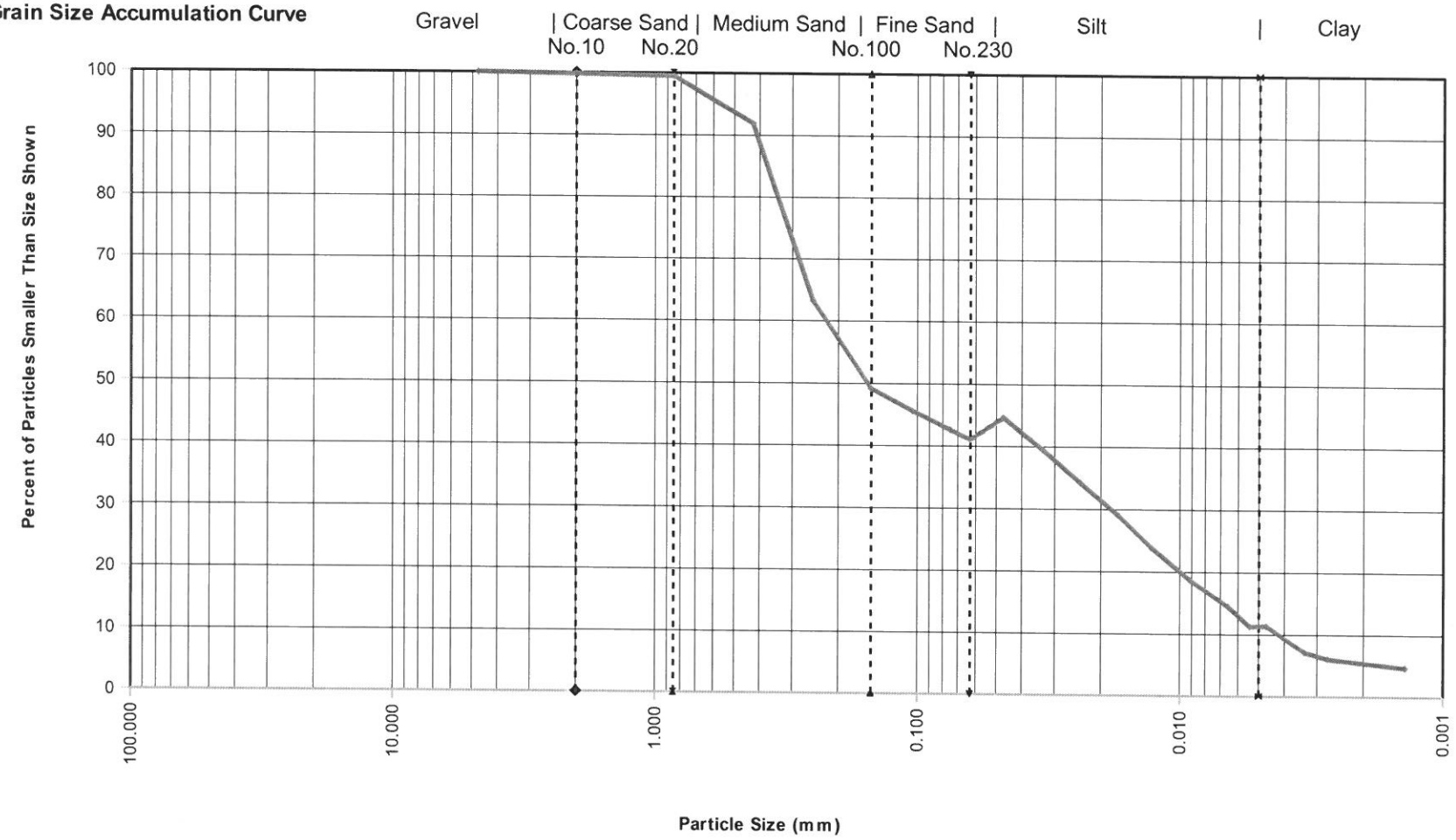
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG13-190415 (A9D0674-06)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 80 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-07		Client Sample ID:	T4-PDI2019-SG15-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with trace Silt			Max Particle Size:	Gravel		
Particle Shape:	Sub-angular to Rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	16.841	622.206	605.37	2.38	591.3

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.381	11.933	10.55	10.55	1.8	98.2
10	2.00	1.376	8.377	7.00	17.55	1.2	97.0
Pan		16.865	603.998	587.13	604.69	96.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9768		D67407	1.370	18.301	17.908	2.38

Hydrometer Analysis

Start Date/Time	4/24/2019	9:41	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.566		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	97.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.23		Corrected Dry Weight of Soil Tested (g) (W)	101.24

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	9	20	2.78	2.7	14.7	0.01365	0.052	2.66
2	8.5	20	2.28	2.3	14.7	0.01365	0.037	2.19
4	8.5	20	2.28	2.3	14.7	0.01365	0.026	2.19
8	7.5	20.4	1.41	1.4	14.8	0.01365	0.019	1.36
15	6.5	20.5	0.45	0.4	15	0.01348	0.013	0.43
30	6.5	20.5	0.45	0.4	15	0.01348	0.010	0.43
60	6.5	20.5	0.45	0.4	15	0.01348	0.007	0.43
90	5.5	20.4		0.0	15.2	0.01365	0.006	0.00
120	5	20.4		0.0	15.3	0.01365	0.005	0.00
240	4.5	20.4		0.0	15.3	0.01365	0.003	0.00
360	4	20.5		0.0	15.5	0.01348	0.003	0.00
1440	4	20.1		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.379	5.486	4.11	41.53	4.1	93.0
40	0.425	1.369	42.548	41.18	281.95	40.7	52.3
60	0.250	1.388	42.772	41.38	523.56	40.9	11.4
100	0.150	1.347	8.364	7.02	564.52	6.9	4.5
140	0.105	1.362	2.022	0.66	568.38	0.7	3.8
200	0.075	1.371	1.768	0.40	570.70	0.4	3.4
230	0.063	1.384	1.613	0.23	572.03	0.2	3.2
			Sum	94.97	230 Minus	3.26	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG15-190416 (A9D0674-07)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*2.97*
Retained on No. 4 sieve		4.75	98.22	1.78
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	97.03	1.18
Sand				*93.81*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	92.97	4.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	52.3	40.68
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	11.42	40.88
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	4.49	6.93
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	3.84	0.65
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	3.45	0.39
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	3.22	0.23
Silt and Clay (Measurements in the Clay fraction are noted)				*3.22*
Hydrometer Test		0.0523	2.66	0.55
Hydrometer Test		0.0370	2.19	0.48
Hydrometer Test		0.0262	2.19	0
Hydrometer Test		0.0186	1.36	0.83
Hydrometer Test		0.0135	0.43	0.93
Hydrometer Test		0.0095	0.43	0
Hydrometer Test		0.0067	0.43	0
Hydrometer Test		0.0056	0.43	0
Hydrometer Test	Clay	0.0049	0.43	0
Hydrometer Test	Clay	0.0034	0.43	0
Hydrometer Test	Clay	0.0028	0.43	0
Hydrometer Test	Clay	0.0014	0.43	0

Grain Size Summary	Percent of Total Sample
Gravel	3.0
Sand	93.8
Coarse sand	4.1
Medium sand	88.5
Fine sand	1.3
Silt	2.8
Clay	0.4

Case Narrative for Sample ID: T4-PDI2019-SG15-190416 (A9D0674-07)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

Trace organic material present in +10 fraction.



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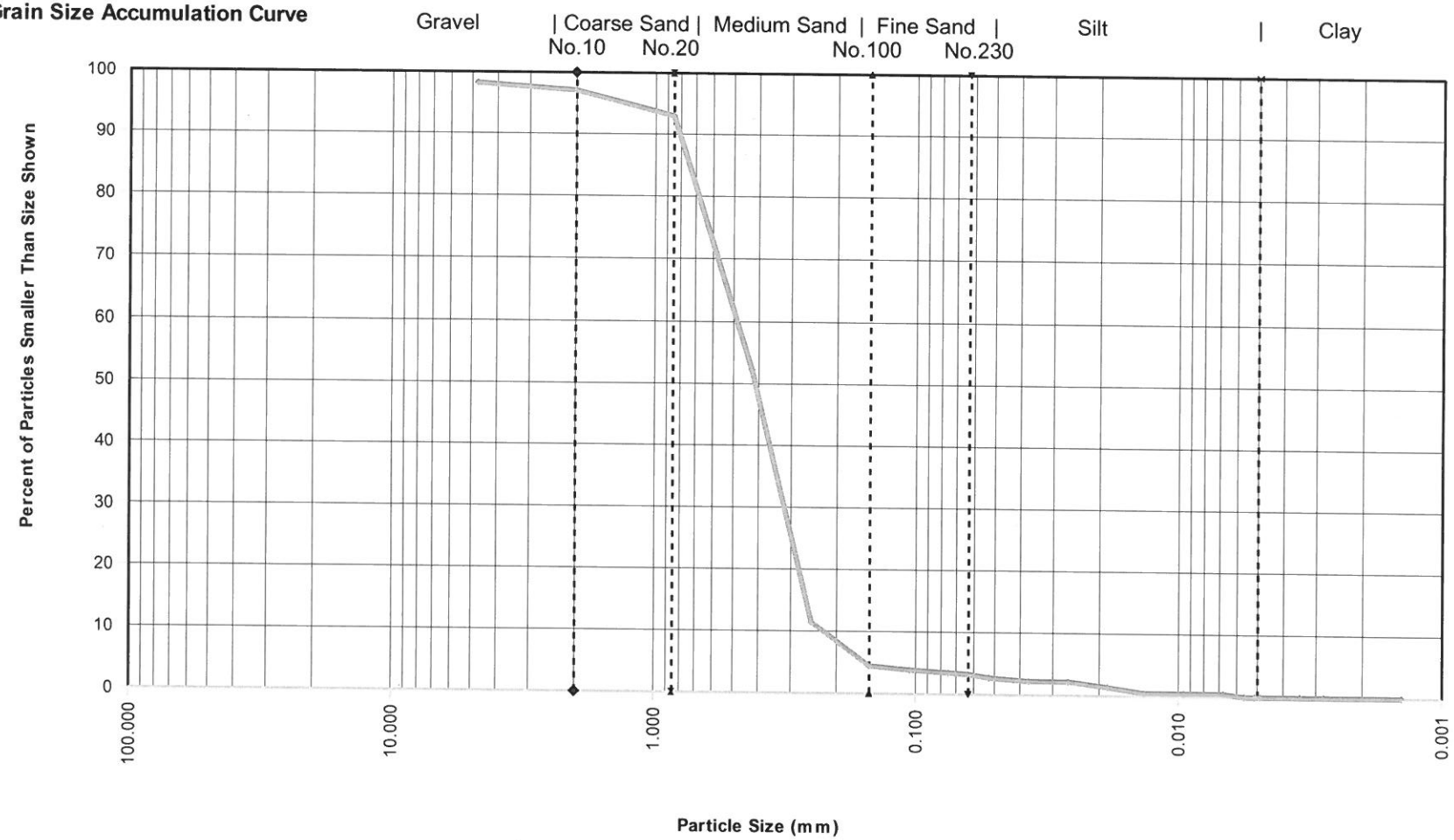
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG15-190416 (A9D0674-07)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Sub-angular to Rounded	Hard and Durable	SAND with trace Silt

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-08		Client Sample ID:	T4-PDI2019-SG16-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.869	339.078	328.21	2.98	318.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.386	1.860	0.47	0.47	0.1	99.9
10	2.00	1.363	1.740	0.38	0.85	0.1	99.7
Pan		10.892	337.926	327.03	327.89	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9711		D67408	1.377	19.104	18.591	2.98

Hydrometer Analysis

Start Date/Time	5/15/2019	9:03	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.099		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.7		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.65		Corrected Dry Weight of Soil Tested (g) (W)	48.78

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	21	20.6	16.36	33.5	12.7	0.01348	0.048	33.45
2	20	20.6	15.36	31.5	12.9	0.01348	0.034	31.40
4	18.5	20.6	13.86	28.4	13	0.01348	0.024	28.33
8	17	20.6	12.36	25.3	13.3	0.01348	0.017	25.27
15	15	20.6	10.36	21.2	13.7	0.01348	0.013	21.18
30	13	20.7	8.38	17.2	14	0.01348	0.009	17.14
60	11	20.7	6.38	13.1	14.3	0.01348	0.007	13.05
90	10	20.7	5.38	11.0	14.5	0.01348	0.005	11.01
120	10	20.7	5.38	11.0	14.5	0.01348	0.005	11.01
240	8	20.7	3.38	6.9	14.8	0.01348	0.003	6.92
360	7.5	20.7	2.88	5.9	14.8	0.01348	0.003	5.90
1440	6.5	20.1	1.73	3.6	15	0.01365	0.001	3.54

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.289	1.406	0.12	1.61	0.2	99.5
40	0.425	1.307	7.278	5.97	40.59	12.2	87.3
60	0.250	1.288	18.527	17.24	153.12	35.3	51.9
100	0.150	1.291	8.089	6.80	197.50	13.9	38.0
140	0.105	1.281	2.336	1.06	204.39	2.2	35.8
200	0.075	1.293	2.104	0.81	209.68	1.7	34.2
230	0.063	1.300	1.752	0.45	212.63	0.9	33.2
			Sum	32.44	230 Minus	16.21	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG16-190416 (A9D0674-08)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.27*
Retained on No. 4 sieve		4.75	99.85	0.15
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.73	0.12
Sand				*66.51*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.49	0.24
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	87.25	12.24
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	51.91	35.34
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	37.98	13.94
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	35.81	2.16
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	34.15	1.66
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	33.22	0.93
Silt and Clay (Measurements in the Clay fraction are noted)				*33.22*
Hydrometer Test		0.0480	33.45	0
Hydrometer Test		0.0342	31.4	1.82
Hydrometer Test		0.0243	28.33	3.07
Hydrometer Test		0.0174	25.27	3.07
Hydrometer Test		0.0129	21.18	4.09
Hydrometer Test		0.0092	17.14	4.04
Hydrometer Test		0.0066	13.05	4.09
Hydrometer Test		0.0054	11.01	2.04
Hydrometer Test	Clay	0.0047	11.01	0
Hydrometer Test	Clay	0.0033	6.92	4.09
Hydrometer Test	Clay	0.0027	5.9	1.02
Hydrometer Test	Clay	0.0014	3.54	2.35

Grain Size Summary	Percent of Total Sample
Gravel	0.3
Sand	66.5
Coarse sand	0.2
Medium sand	61.5
Fine sand	4.8
Silt	22.2
Clay	11.0

Case Narrative for Sample ID: T4-PDI2019-SG16-190416 (A9D0674-08)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 fraction consists entirely of organic material.

+10 fraction consists almost entirely of organic material.



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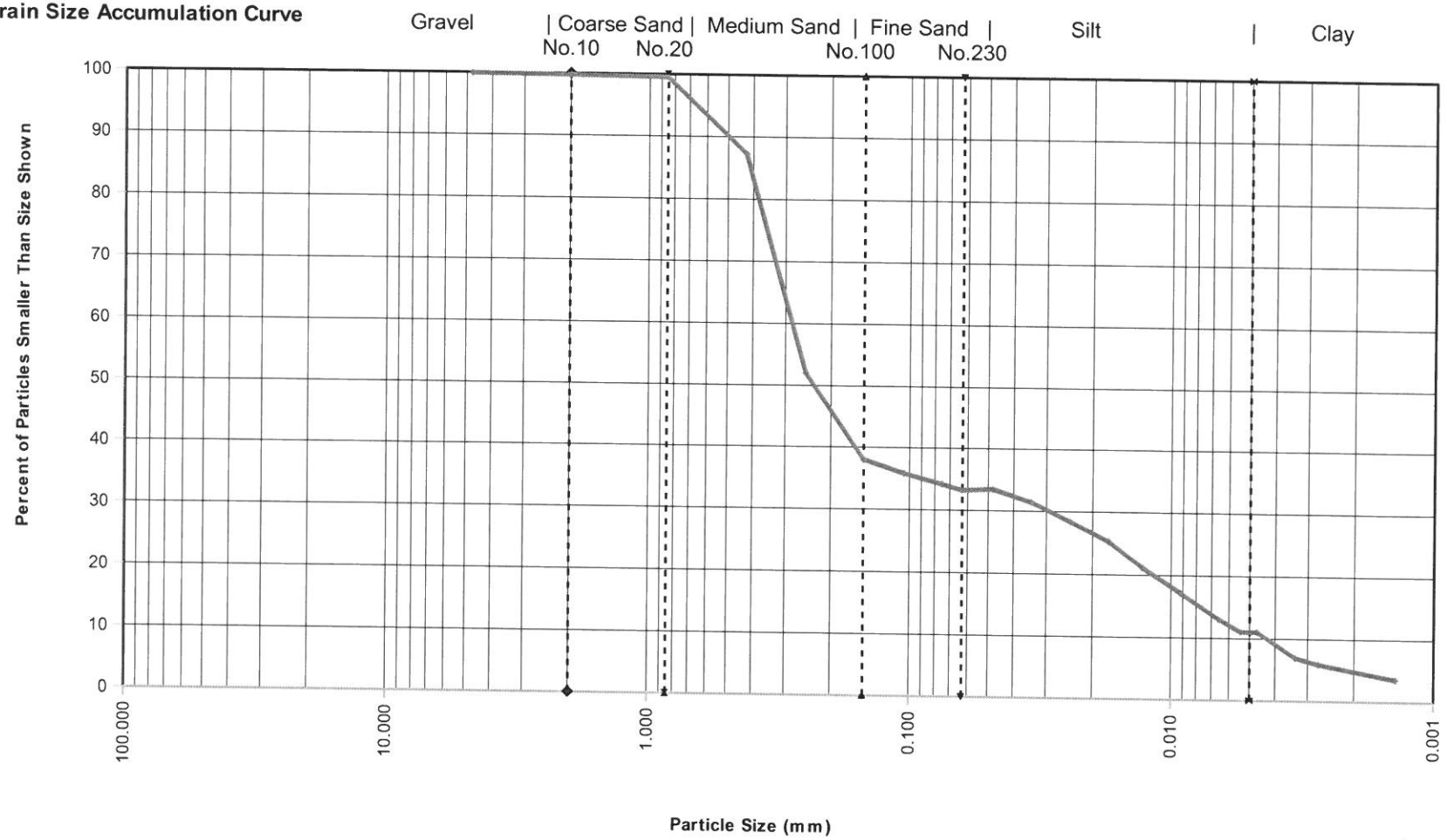
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG16-190416 (A9D0674-08)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 86 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-12		Client Sample ID:	T4-PDI2019-SG17-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with trace Silt and Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.537	505.616	494.08	2.08	484.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.370	1.733	0.36	0.36	0.1	99.9
10	2.00	1.379	2.946	1.57	1.93	0.3	99.6
Pan		11.558	503.373	491.82	493.75	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9796		D67412	1.362	18.514	18.164	2.08

Hydrometer Analysis

Start Date/Time	4/24/2019	9:58	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	101.628		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.6		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	99.55		Corrected Dry Weight of Soil Tested (g) (W)	99.95

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8	20.1	3.23	3.2	14.8	0.01365	0.053	3.22
2	7	20.1	2.23	2.2	15	0.01365	0.037	2.22
4	7	20.1	2.23	2.2	15	0.01365	0.026	2.22
8	7	20.1	2.23	2.2	15	0.01365	0.019	2.22
15	6.5	20.1	1.73	1.7	15	0.01365	0.014	1.73
30	6.5	20.1	1.73	1.7	15	0.01365	0.010	1.73
60	6	20.3	1.28	1.3	15.2	0.01365	0.007	1.28
90	5.5	20.3	0.78	0.8	15.2	0.01365	0.006	0.78
120	5	20.3	0.28	0.3	15.3	0.01365	0.005	0.28
240	4.5	20.5		0.0	15.3	0.01348	0.003	0.00
360	4.5	20.5		0.0	15.3	0.01348	0.003	0.00
1440	4	20.3		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.282	2.550	1.27	8.07	1.3	98.3
40	0.425	1.291	30.881	29.59	151.26	29.6	68.7
60	0.250	6.450	57.313	50.86	397.41	50.9	17.8
100	0.150	1.295	12.892	11.60	453.53	11.6	6.2
140	0.105	1.289	2.132	0.84	457.61	0.8	5.4
200	0.075	1.296	1.660	0.36	459.37	0.4	5.0
230	0.063	1.287	1.462	0.18	460.22	0.2	4.9
			Sum	94.70	230 Minus	4.85	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG17-190416 (A9D0674-12)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.4*
Retained on No. 4 sieve		4.75	99.92	0.08
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.6	0.32
Sand				*94.74*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.33	1.27
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	68.73	29.6
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	17.84	50.89
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	6.24	11.6
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	5.4	0.84
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	5.03	0.36
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	4.86	0.18
Silt and Clay (Measurements in the Clay fraction are noted)				*4.86*
Hydrometer Test		0.0525	3.22	1.64
Hydrometer Test		0.0374	2.22	1
Hydrometer Test		0.0264	2.22	0
Hydrometer Test		0.0187	2.22	0
Hydrometer Test		0.0137	1.73	0.5
Hydrometer Test		0.0097	1.73	0
Hydrometer Test		0.0069	1.28	0.45
Hydrometer Test		0.0056	0.78	0.5
Hydrometer Test	Clay	0.0049	0.28	0.5
Hydrometer Test	Clay	0.0034	0.28	0
Hydrometer Test	Clay	0.0028	0.28	0
Hydrometer Test	Clay	0.0014	0.28	0

Grain Size Summary	Percent of Total Sample
Gravel	0.4
Sand	94.7
Coarse sand	1.3
Medium sand	92.1
Fine sand	1.4
Silt	4.1
Clay	0.8

Case Narrative for Sample ID: T4-PDI2019-SG17-190416 (A9D0674-12)

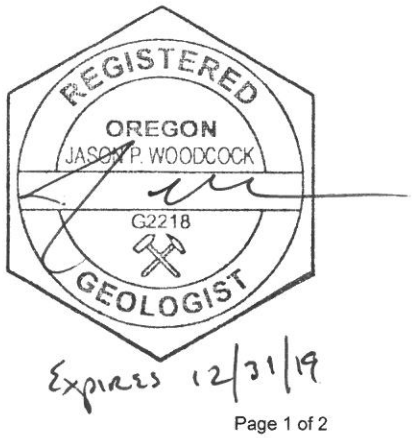
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

Organic material present in +4 and +10 fractions.



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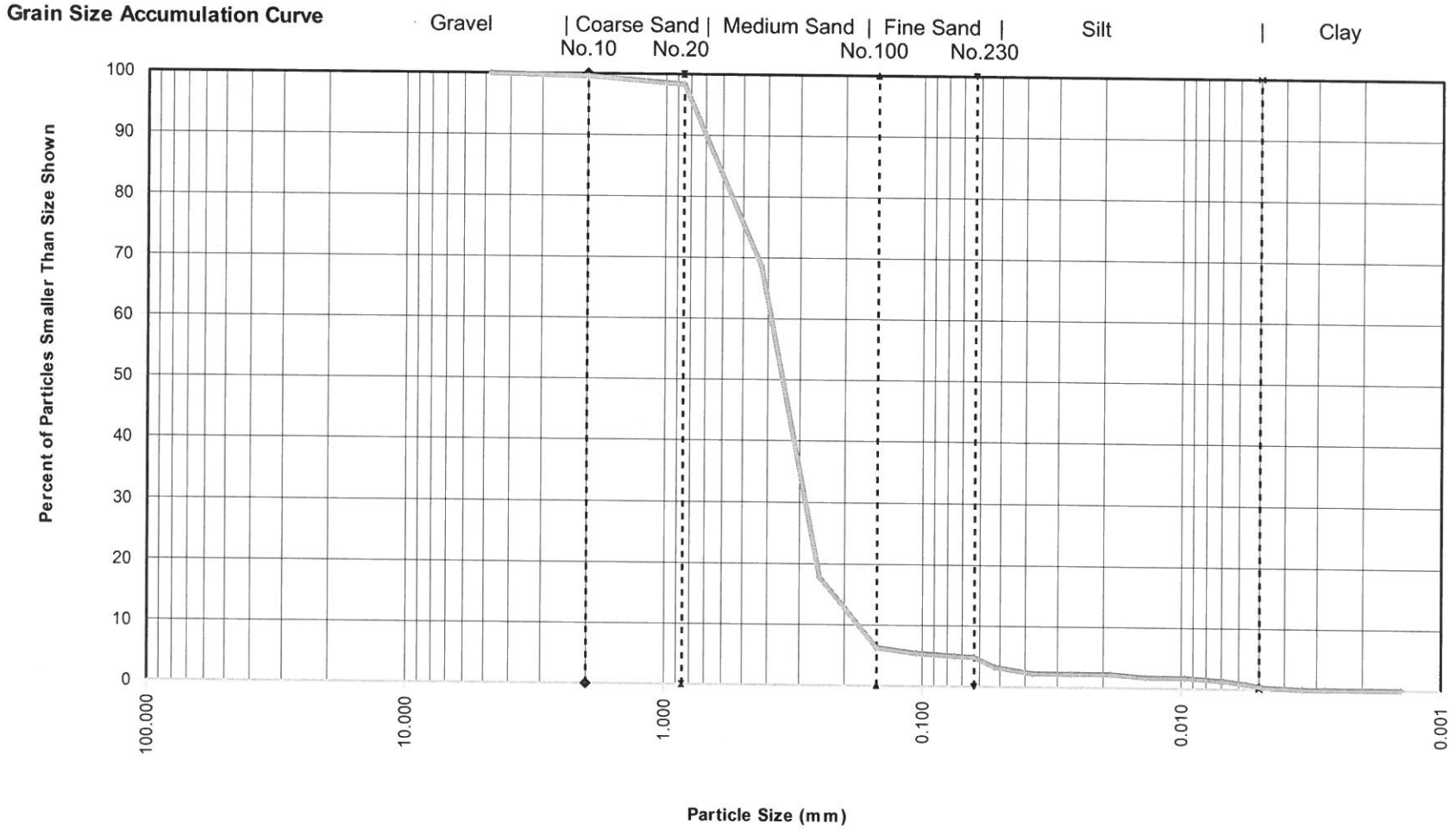
Report is complete only if it includes Apex Labs Grain Size Data. Page 89 of 128 05/21/2019

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified



Sample ID:	T4-PDI2019-SG17-190416 (A9D0674-12)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with trace Silt and Clay

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-13		Client Sample ID:	FD-201904151441		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	16.925	431.687	414.76	3.18	402.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.367	1.701	0.33	0.33	0.1	99.9
Pan		18.226	431.941	413.72	414.05	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9692		D67413	1.381	17.041	16.559	3.18

Hydrometer Analysis

Start Date/Time	5/15/2019	9:26	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.100		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.9		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	97.02		Corrected Dry Weight of Soil Tested (g) (W)	97.10

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	23	20.6	18.36	18.9	12.4	0.01348	0.047	18.89
2	21.5	20.6	16.86	17.4	12.5	0.01348	0.034	17.35
4	19.5	20.6	14.86	15.3	12.9	0.01348	0.024	15.29
8	17.5	20.6	12.86	13.2	13.2	0.01348	0.017	13.23
15	15.5	20.7	10.88	11.2	13.5	0.01348	0.013	11.20
30	13.5	20.6	8.86	9.1	13.8	0.01348	0.009	9.12
60	11.5	20.7	6.88	7.1	14.2	0.01348	0.007	7.08
90	10	20.8	5.41	5.6	14.5	0.01348	0.005	5.57
120	10	20.7	5.38	5.5	14.5	0.01348	0.005	5.54
240	8	20.7	3.38	3.5	14.8	0.01348	0.003	3.48
360	7.5	20.7	2.88	3.0	14.8	0.01348	0.003	2.97
1440	7	20.2	2.26	2.3	15	0.01365	0.001	2.32

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.289	2.243	0.95	4.28	1.0	98.9
40	0.425	1.283	26.722	25.44	109.42	26.2	72.7
60	0.250	1.286	42.170	40.88	278.39	42.1	30.6
100	0.150	1.300	11.006	9.71	318.51	10.0	20.6
140	0.105	1.291	2.615	1.32	323.98	1.4	19.3
200	0.075	1.297	2.194	0.90	327.69	0.9	18.3
230	0.063	1.283	1.733	0.45	329.55	0.5	17.9
			Sum	79.65	230 Minus	17.37	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: FD-201904151441 (A9D0674-13)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.08*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.92	0.08
Sand				*82.03*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.93	0.98
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	72.74	26.2
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.63	42.11
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	20.63	10
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	19.27	1.36
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	18.35	0.92
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	17.88	0.46
Silt and Clay (Measurements in the Clay fraction are noted)				*17.88*
Hydrometer Test		0.0475	18.89	0
Hydrometer Test		0.0337	17.35	0.54
Hydrometer Test		0.0242	15.29	2.06
Hydrometer Test		0.0173	13.23	2.06
Hydrometer Test		0.0128	11.2	2.03
Hydrometer Test		0.0091	9.12	2.08
Hydrometer Test		0.0066	7.08	2.03
Hydrometer Test		0.0054	5.57	1.52
Hydrometer Test	Clay	0.0047	5.54	0.03
Hydrometer Test	Clay	0.0033	3.48	2.06
Hydrometer Test	Clay	0.0027	2.97	0.51
Hydrometer Test	Clay	0.0014	2.32	0.64

Grain Size Summary	Percent of Total Sample
Gravel	0.1
Sand	82.0
Coarse sand	1.0
Medium sand	78.3
Fine sand	2.8
Silt	12.3
Clay	5.6

Case Narrative for Sample ID: **FD-201904151441 (A9D0674-13)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+10 fraction consists almost entirely of organic material.



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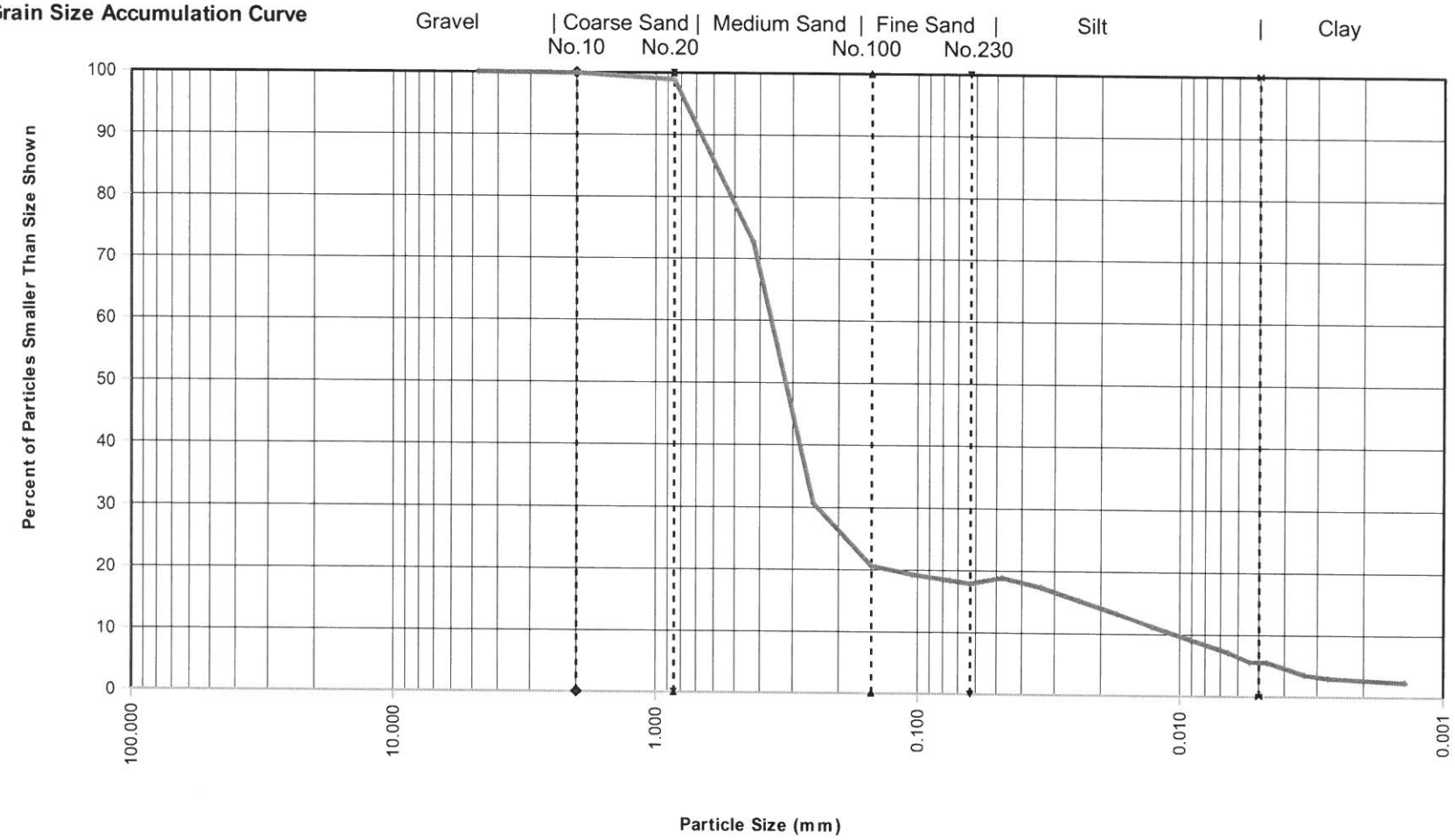
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	FD-201904151441 (A9D0674-13)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 92 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-14		Client Sample ID:	T4-PDI2019-SG18-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date: 05/15/19	Data Reviewed by:	JW		Date:	05/16/19
Sample Description:	SAND with some Clay and Silt		Max Particle Size:	Gravel			
Particle Shape:	N/A		Hardness	N/A			

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.219	402.323	391.10	4.40	374.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.379	2.931	1.55	1.55	0.4	99.6
10	2.00	1.378	1.963	0.59	2.14	0.2	99.4
Pan		11.226	398.104	386.88	389.02	98.7	

Hygroscopic Moisture Correction

Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
0.9579		D67414	1.377	18.421	17.703	4.40

Hydrometer Analysis

Start Date/Time	4/24/2019	9:20	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.276		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.4		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.16		Corrected Dry Weight of Soil Tested (g) (W)	48.43

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	15	20.1	10.23	21.1	13.7	0.01365	0.051	21.00
2	14.5	20.2	9.76	20.1	13.7	0.01365	0.036	20.03
4	14	20.1	9.23	19.1	13.8	0.01365	0.025	18.95
8	12.5	20.1	7.73	16.0	14	0.01365	0.018	15.87
15	12	20.1	7.23	14.9	14.2	0.01365	0.013	14.85
30	11.5	20.1	6.73	13.9	14.2	0.01365	0.009	13.82
60	10.5	20.1	5.73	11.8	14.3	0.01365	0.007	11.77
90	10	20.3	5.28	10.9	14.5	0.01365	0.005	10.84
120	9.5	20.3	4.78	9.9	14.5	0.01365	0.005	9.82
240	9	20.5	4.33	8.9	14.7	0.01348	0.003	8.89
360	8.5	20.5	3.83	7.9	14.7	0.01348	0.003	7.87
1440	8	19.9	3.18	6.6	14.8	0.01365	0.001	6.53

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.290	1.702	0.41	5.31	0.9	98.6
40	0.425	1.311	13.195	11.88	96.76	24.5	74.0
60	0.250	1.287	22.379	21.09	259.06	43.5	30.5
100	0.150	1.296	5.881	4.59	294.34	9.5	21.0
140	0.105	1.295	1.895	0.60	298.96	1.2	19.8
200	0.075	1.288	1.792	0.50	302.84	1.0	18.7
230	0.063	1.294	1.540	0.25	304.73	0.5	18.2
			Sum	39.32	230 Minus	8.84	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG18-190415 (A9D0674-14)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.57*
Retained on No. 4 sieve		4.75	99.59	0.41
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.43	0.16
Sand				*81.19*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.58	0.85
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	74.04	24.54
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.5	43.55
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	21.03	9.47
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	19.79	1.24
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	18.75	1.04
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	18.24	0.51
Silt and Clay (Measurements in the Clay fraction are noted)				*18.24*
Hydrometer Test		0.0505	21	0
Hydrometer Test		0.0357	20.03	0
Hydrometer Test		0.0254	18.95	0
Hydrometer Test		0.0181	15.87	2.37
Hydrometer Test		0.0133	14.85	1.03
Hydrometer Test		0.0094	13.82	1.03
Hydrometer Test		0.0067	11.77	2.05
Hydrometer Test		0.0055	10.84	0.92
Hydrometer Test	Clay	0.0047	9.82	1.03
Hydrometer Test	Clay	0.0033	8.89	0.92
Hydrometer Test	Clay	0.0027	7.87	1.03
Hydrometer Test	Clay	0.0014	6.53	1.34

Grain Size Summary	Percent of Total Sample
Gravel	0.6
Sand	81.2
Coarse sand	0.9
Medium sand	77.6
Fine sand	2.8
Silt	7.4
Clay	10.8

Case Narrative for Sample ID: T4-PDI2019-SG18-190415 (A9D0674-14)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist entirely of organic material.



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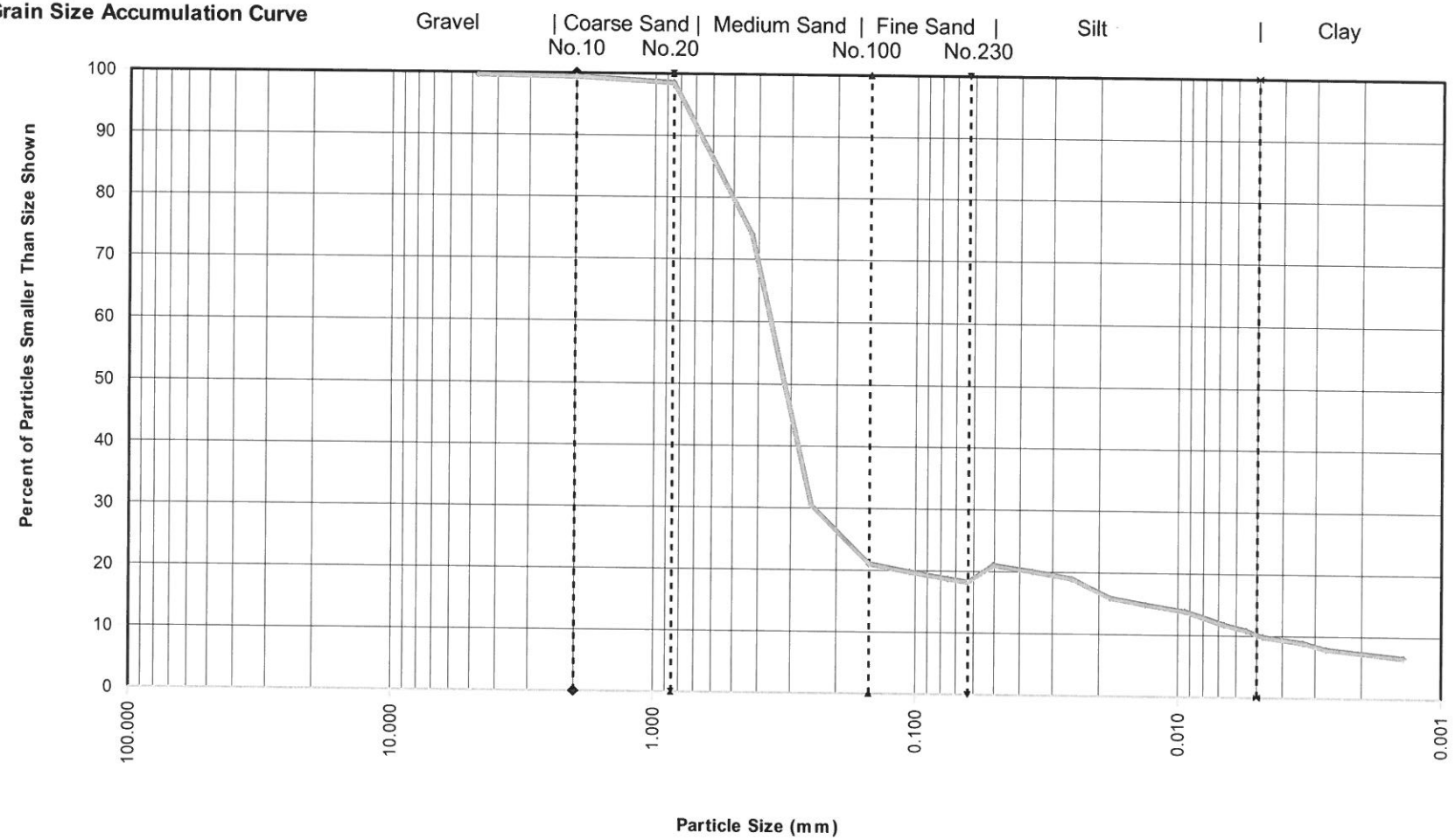
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG18-190415 (A9D0674-14)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Clay and Silt

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Report is complete only if it includes Apex Labs Grain Size Data. Page 95 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-15		Client Sample ID:	T4-PDI2019-SG51-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.771	226.780	215.01	4.61	205.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.376	1.765	0.39	0.39	0.2	99.8
10	2.00	1.383	1.456	0.07	0.46	0.0	99.8
Pan		13.177	227.111	213.93	214.40	99.3	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9559		D67415	1.381	16.587	15.917	4.61

Hydrometer Analysis

Start Date/Time	4/30/2019	8:43	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.086		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.8		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.84		Corrected Dry Weight of Soil Tested (g) (W)	48.95

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.4	46.31	94.6	7.8	0.01365	0.038	94.40
2	47	20.2	42.26	86.3	8.4	0.01365	0.028	86.14
4	42	20.3	37.28	76.2	9.2	0.01365	0.021	76.00
8	37	20.4	32.31	66.0	10.1	0.01365	0.015	65.86
15	32	20.5	27.33	55.8	10.9	0.01348	0.011	55.72
30	26.5	20.4	21.81	44.6	11.7	0.01365	0.009	44.46
60	22.5	20.3	17.78	36.3	12.4	0.01365	0.006	36.25
90	20	20.4	15.31	31.3	12.9	0.01365	0.005	31.20
120	17.5	20.3	12.78	26.1	13.2	0.01365	0.005	26.06
240	15.5	20.4	10.81	22.1	13.5	0.01365	0.003	22.03
360	13.5	20.4	8.81	18.0	13.8	0.01365	0.003	17.95
1440	11	19.5	6.08	12.4	14.3	0.01365	0.001	12.39

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.307	1.307	0.00	0.46	0.0	99.8
40	0.425	1.301	1.355	0.05	0.69	0.1	99.7
60	0.250	1.295	1.441	0.15	1.30	0.3	99.4
100	0.150	1.288	1.653	0.37	2.83	0.7	98.6
140	0.105	1.286	1.530	0.24	3.85	0.5	98.1
200	0.075	1.298	1.698	0.40	5.52	0.8	97.3
230	0.063	1.292	1.669	0.38	7.10	0.8	96.5
			Sum	1.59	230 Minus	47.25	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG51-190417 (A9D0674-15)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.22*
Retained on No. 4 sieve		4.75	99.81	0.19
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.78	0.04
Sand				*3.24*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.78	0
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.66	0.11
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.37	0.3
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.62	0.75
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.12	0.5
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.31	0.82
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.53	0.77
Silt and Clay (Measurements in the Clay fraction are noted)				*96.53*
Hydrometer Test		0.0381	94.4	2.14
Hydrometer Test		0.0280	86.14	8.26
Hydrometer Test		0.0207	76	10.14
Hydrometer Test		0.0153	65.86	10.14
Hydrometer Test		0.0115	55.72	10.14
Hydrometer Test		0.0085	44.46	11.26
Hydrometer Test		0.0062	36.25	8.21
Hydrometer Test		0.0052	31.2	5.04
Hydrometer Test	Clay	0.0045	26.06	5.15
Hydrometer Test	Clay	0.0032	22.03	4.03
Hydrometer Test	Clay	0.0027	17.95	4.08
Hydrometer Test	Clay	0.0014	12.39	5.56

Grain Size Summary	Percent of Total Sample
Gravel	0.2
Sand	3.2
Coarse sand	0.0
Medium sand	1.2
Fine sand	2.1
Silt	65.3
Clay	31.2

Case Narrative for Sample ID: T4-PDI2019-SG51-190417 (A9D0674-15)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist entirely of organic material.



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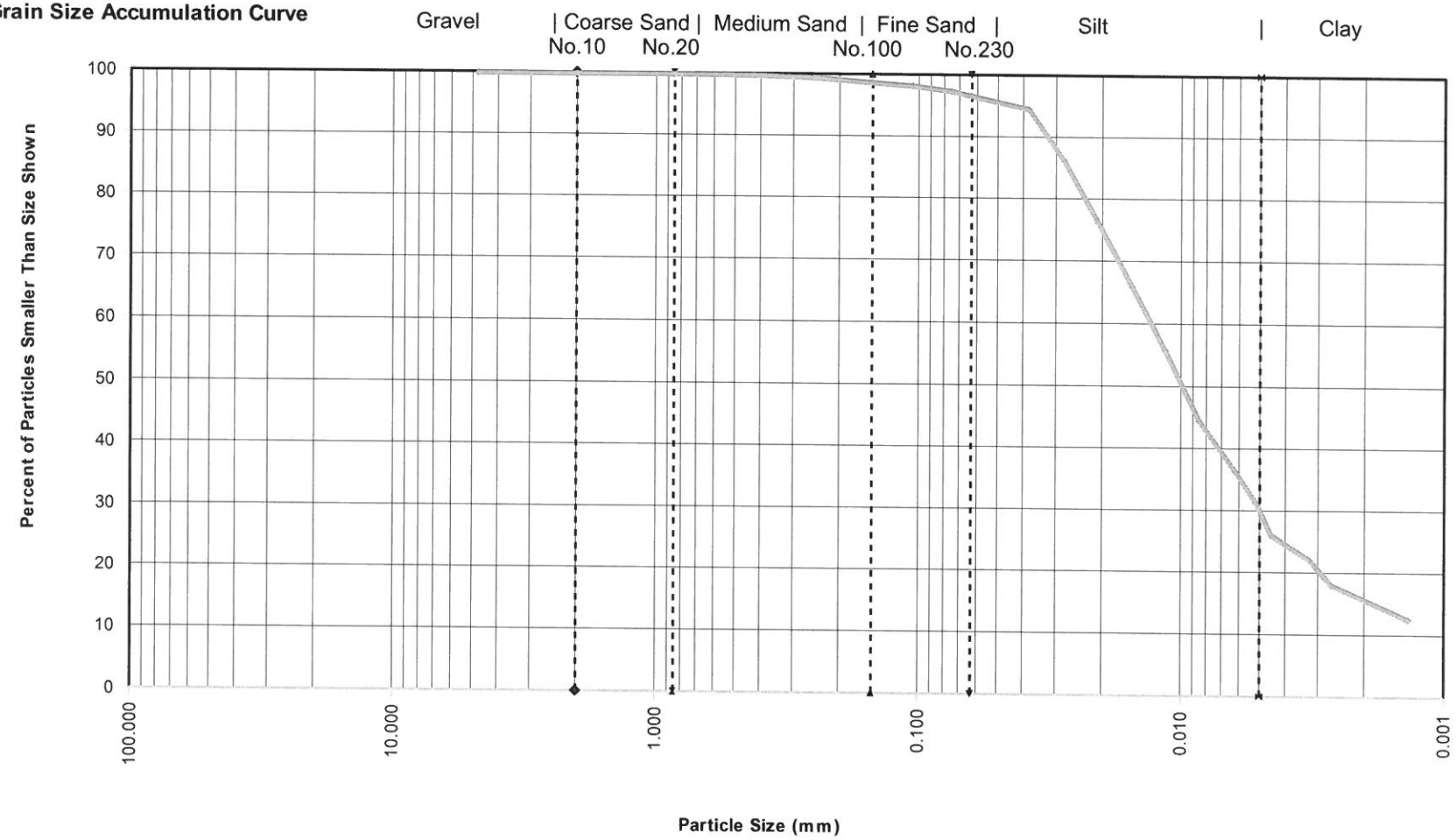
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG51-190417 (A9D0674-15)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey SILT

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Report is complete only if it includes Apex Labs Grain Size Data. Page 98 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-16		Client Sample ID:	T4-PDI2019-SG52-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	5.636	181.679	176.04	5.34	167.1

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.378	1.388	0.01	0.01	0.0	100.0
Pan		5.651	181.113	175.46	175.47	99.4	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9493		D67416	1.367	16.198	15.446	5.34

Hydrometer Analysis

Start Date/Time	4/30/2019	9:01	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.099		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.56		Corrected Dry Weight of Soil Tested (g) (W)	47.56

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.3	46.28	97.3	7.8	0.01365	0.038	97.30
2	48.5	20.3	43.78	92.1	8.1	0.01365	0.027	92.05
4	45	20.4	40.31	84.7	8.8	0.01365	0.020	84.74
8	40.5	20.5	35.83	75.3	9.4	0.01348	0.015	75.34
15	35	20.3	30.28	63.7	10.4	0.01365	0.011	63.67
30	30.5	20.5	25.83	54.3	11.1	0.01348	0.008	54.31
60	24.5	20.5	19.83	41.7	12	0.01348	0.006	41.70
90	21.5	20.5	16.83	35.4	12.5	0.01348	0.005	35.39
120	20	20.4	15.31	32.2	12.9	0.01365	0.004	32.18
240	17	20.3	12.28	25.8	13.3	0.01365	0.003	25.82
360	15.5	20.2	10.76	22.6	13.5	0.01365	0.003	22.62
1440	11.5	19.6	6.61	13.9	14.2	0.01365	0.001	13.89

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.294	1.299	0.00	0.03	0.0	100.0
40	0.425	1.300	1.315	0.01	0.08	0.0	100.0
60	0.250	1.295	1.436	0.14	0.57	0.3	99.7
100	0.150	1.313	1.434	0.12	1.00	0.3	99.4
140	0.105	1.285	1.395	0.11	1.38	0.2	99.2
200	0.075	1.289	1.427	0.14	1.87	0.3	98.9
230	0.063	1.288	1.420	0.13	2.33	0.3	98.6
			Sum	0.66	230 Minus	46.90	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG52-190417 (A9D0674-16)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.01*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.99	0.01
Sand				*1.39*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.98	0.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.95	0.03
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.66	0.3
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.4	0.25
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	99.17	0.23
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	98.88	0.29
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	98.6	0.28
Silt and Clay (Measurements in the Clay fraction are noted)				*98.6*
Hydrometer Test		0.0381	97.3	1.3
Hydrometer Test		0.0275	92.05	5.26
Hydrometer Test		0.0202	84.74	7.31
Hydrometer Test		0.0146	75.34	9.41
Hydrometer Test		0.0114	63.67	11.67
Hydrometer Test		0.0082	54.31	9.35
Hydrometer Test		0.0060	41.7	12.61
Hydrometer Test		0.0050	35.39	6.31
Hydrometer Test	Clay	0.0045	32.18	3.21
Hydrometer Test	Clay	0.0032	25.82	6.36
Hydrometer Test	Clay	0.0026	22.62	3.21
Hydrometer Test	Clay	0.0014	13.89	8.73

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	1.4
Coarse sand	0.0
Medium sand	0.6
Fine sand	0.8
Silt	63.2
Clay	35.4

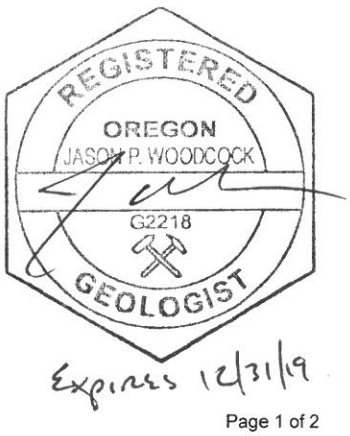
Case Narrative for Sample ID: T4-PDI2019-SG52-190417 (A9D0674-16)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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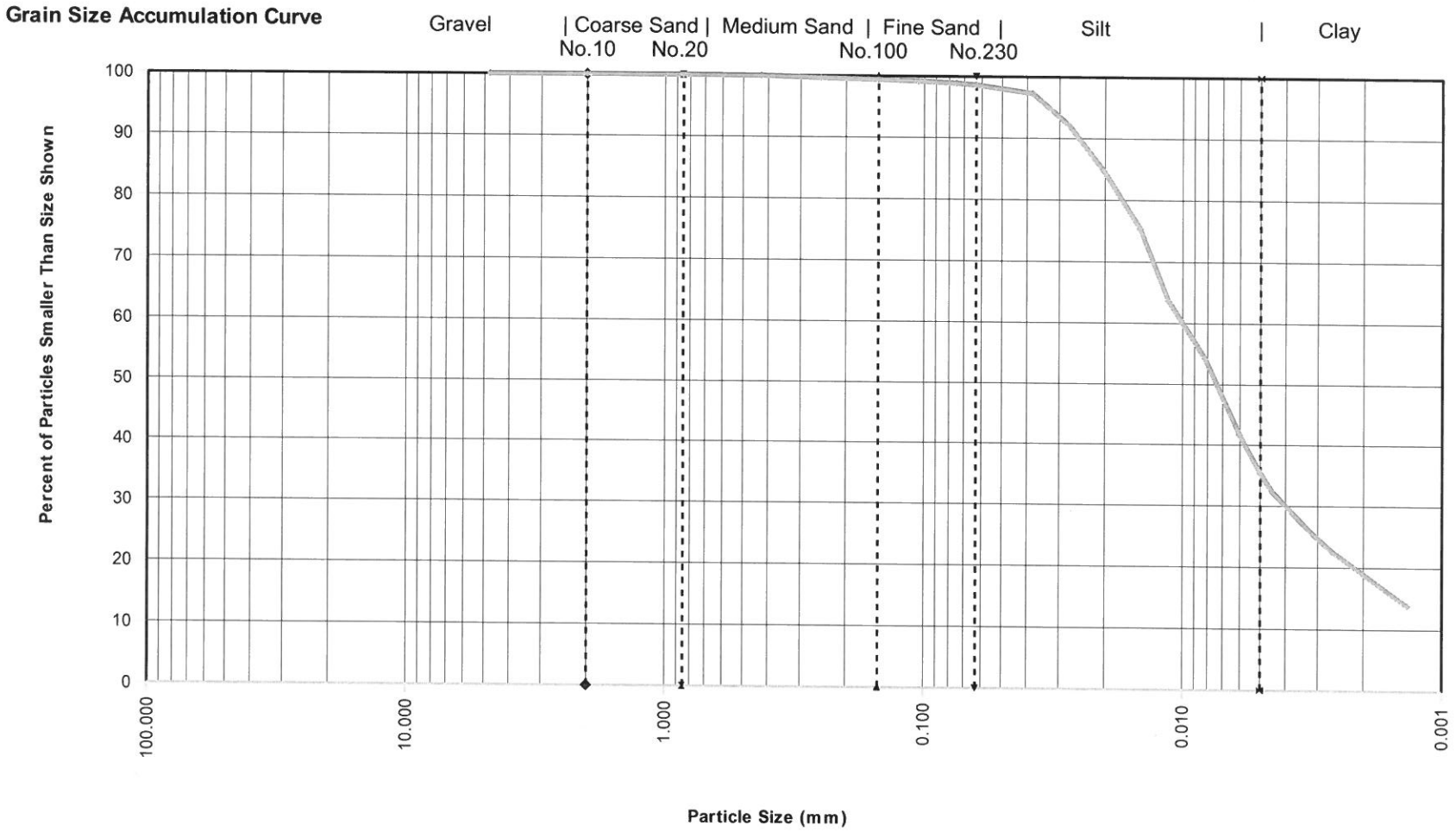
Report is complete only if it includes Apex Labs Grain Size Data. Page 101 of 128 05/21/2019

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified



Sample ID:	T4-PDI2019-SG52-190417 (A9D0674-16)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey SILT

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-17		Client Sample ID:	T4-PDI2019-SG53-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.234	188.555	177.32	4.42	169.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.258	188.511	177.25	177.25	99.8	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9577		D67417	1.378	15.483	14.886	4.42

Hydrometer Analysis

Start Date/Time	5/2/2019	9:40	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.086		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.97		Corrected Dry Weight of Soil Tested (g) (W)	47.97

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	50	20.7	45.38	94.6	7.9	0.01348	0.038	94.62
2	49.5	20.6	44.86	93.5	7.9	0.01348	0.027	93.52
4	46.5	20.6	41.86	87.3	8.4	0.01348	0.020	87.27
8	42	20.6	37.36	77.9	9.2	0.01348	0.014	77.88
15	36	20.6	31.36	65.4	10.2	0.01348	0.011	65.38
30	30	20.7	25.38	52.9	11.2	0.01348	0.008	52.92
60	24	20.8	19.41	40.5	12.2	0.01348	0.006	40.46
90	20	20.8	15.41	32.1	12.9	0.01348	0.005	32.12
120	18	20.7	13.38	27.9	13.2	0.01348	0.004	27.90
240	15	20.6	10.36	21.6	13.7	0.01348	0.003	21.59
360	14	20.6	9.36	19.5	13.8	0.01348	0.003	19.51
1440	10.5	19.6	5.61	11.7	14.3	0.01365	0.001	11.69

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.304	1.334	0.03	0.11	0.1	99.9
40	0.425	1.293	1.651	0.36	1.37	0.7	99.2
60	0.250	1.288	1.555	0.27	2.32	0.6	98.6
100	0.150	1.288	1.513	0.23	3.11	0.5	98.2
140	0.105	1.296	1.459	0.16	3.69	0.3	97.8
200	0.075	1.289	1.547	0.26	4.60	0.5	97.3
230	0.063	1.282	1.462	0.18	5.24	0.4	96.9
			Sum	1.48	230 Minus	46.49	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG53-190416 (A9D0674-17)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*3.09*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.19	0.75
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.63	0.56
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.17	0.47
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	97.83	0.34
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.29	0.54
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.91	0.38
Silt and Clay (Measurements in the Clay fraction are noted)				*96.91*
Hydrometer Test		0.0379	94.62	2.3
Hydrometer Test		0.0268	93.52	1.1
Hydrometer Test		0.0195	87.27	6.25
Hydrometer Test		0.0145	77.88	9.38
Hydrometer Test		0.0111	65.38	12.51
Hydrometer Test		0.0082	52.92	12.46
Hydrometer Test		0.0061	40.46	12.46
Hydrometer Test		0.0051	32.12	8.34
Hydrometer Test	Clay	0.0045	27.9	4.22
Hydrometer Test	Clay	0.0032	21.59	6.31
Hydrometer Test	Clay	0.0026	19.51	2.08
Hydrometer Test	Clay	0.0014	11.69	7.82

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	3.1
Coarse sand	0.1
Medium sand	1.8
Fine sand	1.3
Silt	64.8
Clay	32.1

Case Narrative for Sample ID: T4-PDI2019-SG53-190416 (A9D0674-17)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

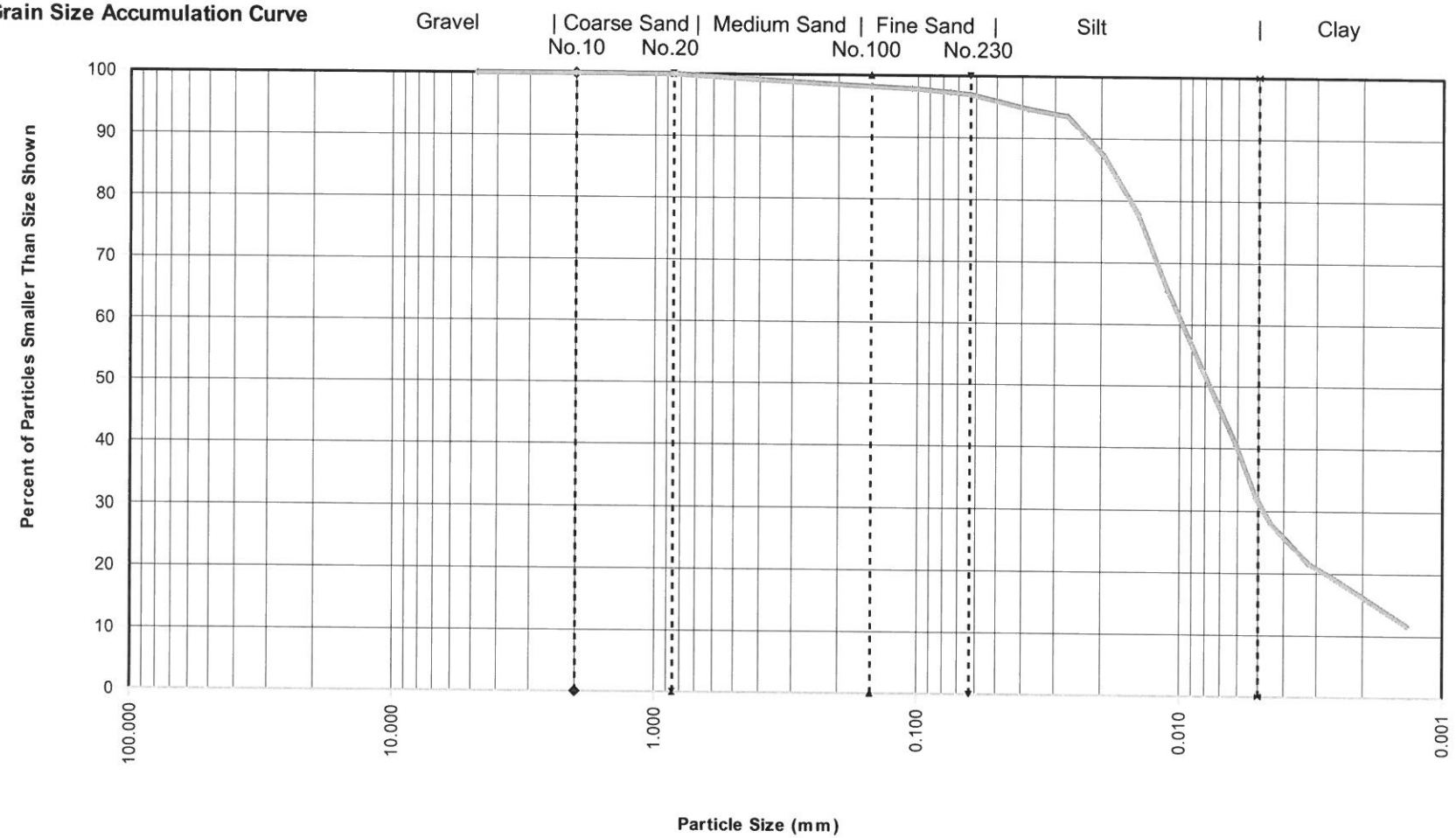
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG53-190416 (A9D0674-17)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

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Report is complete only if it includes Apex Labs Grain Size Data. Page 104 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-18		Client Sample ID:	T4-PDI2019-SG54-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date: 05/15/19	Data Reviewed by:	JW		Date:	05/16/19
Sample Description:	SAND with some Silt and trace Clay		Max Particle Size:	Gravel			
Particle Shape:	N/A		Hardness	N/A			

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.681	419.919	408.24	2.00	400.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.385	5.866	4.48	4.48	1.1	98.9
10	2.00	1.374	8.743	7.37	11.85	1.8	97.0
Pan		11.701	407.255	395.55	407.40	96.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9804		D67418	1.383	16.346	16.052	2.00

Hydrometer Analysis

Start Date/Time	4/30/2019	9:56	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.787		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	97.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.81		Corrected Dry Weight of Soil Tested (g) (W)	101.82

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	14.5	20.4	9.81	9.6	13.7	0.01365	0.051	9.35
2	13.5	20.3	8.78	8.6	13.8	0.01365	0.036	8.37
4	12.5	20.3	7.78	7.6	14	0.01365	0.026	7.42
8	12	20.5	7.33	7.2	14.2	0.01348	0.018	6.99
15	10.5	20.6	5.86	5.8	14.3	0.01348	0.013	5.58
30	10.5	20.7	5.88	5.8	14.3	0.01348	0.009	5.61
60	8	20.7	3.38	3.3	14.8	0.01348	0.007	3.22
90	7.5	20.7	2.88	2.8	14.8	0.01348	0.005	2.75
120	7	20.5	2.33	2.3	15	0.01348	0.005	2.22
240	6	20.3	1.28	1.3	15.2	0.01365	0.003	1.22
360	5	20.4	0.31	0.3	15.3	0.01365	0.003	0.29
1440	5	19.7	0.13	0.1	15.3	0.01365	0.001	0.12

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.295	4.386	3.09	23.98	3.0	94.0
40	0.425	1.299	25.353	24.05	118.38	23.6	70.4
60	0.250	1.280	41.492	40.21	276.20	39.5	30.9
100	0.150	1.287	15.647	14.36	332.56	14.1	16.8
140	0.105	1.287	5.073	3.79	347.42	3.7	13.1
200	0.075	1.290	3.604	2.31	356.50	2.3	10.8
230	0.063	1.290	2.139	0.85	359.83	0.8	10.0
			Sum	88.67	230 Minus	10.14	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG54-190416 (A9D0674-18)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*2.96*
Retained on No. 4 sieve		4.75	98.88	1.12
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	97.04	1.84
Sand				*87.08*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	94	3.04
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	70.38	23.62
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.89	39.49
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	16.78	14.1
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	13.07	3.72
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	10.79	2.27
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	9.96	0.83
Silt and Clay (Measurements in the Clay fraction are noted)				*9.96*
Hydrometer Test		0.0505	9.35	0.61
Hydrometer Test		0.0359	8.37	0.98
Hydrometer Test		0.0255	7.42	0.95
Hydrometer Test		0.0180	6.99	0.43
Hydrometer Test		0.0132	5.58	1.41
Hydrometer Test		0.0093	5.61	0
Hydrometer Test		0.0067	3.22	2.36
Hydrometer Test		0.0055	2.75	0.48
Hydrometer Test	Clay	0.0048	2.22	0.52
Hydrometer Test	Clay	0.0034	1.22	1
Hydrometer Test	Clay	0.0028	0.29	0.93
Hydrometer Test	Clay	0.0014	0.12	0.17

Grain Size Summary	Percent of Total Sample
Gravel	3.0
Sand	87.1
Coarse sand	3.0
Medium sand	77.2
Fine sand	6.8
Silt	7.2
Clay	2.7

Case Narrative for Sample ID: T4-PDI2019-SG54-190416 (A9D0674-18)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist almost entirely of organic material.



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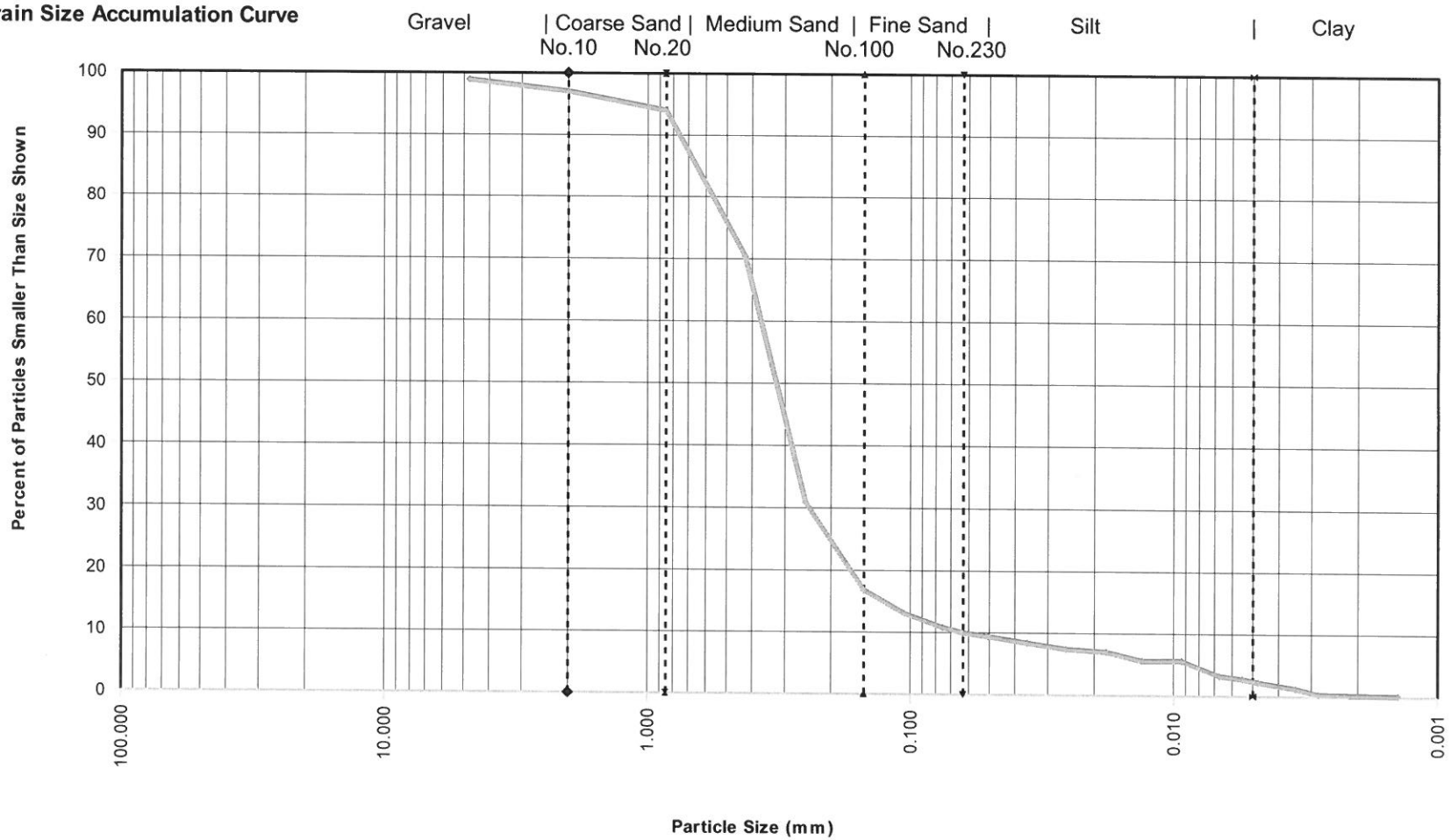
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG54-190416 (A9D0674-18)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Silt and trace Clay

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Report is complete only if it includes Apex Labs Grain Size Data. Page 107 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-19		Client Sample ID:	T4-PDI2019-SG57-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.357	189.770	178.41	5.12	169.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.380	189.499	178.12	178.12	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9513		D67419	1.386	15.480	14.794	5.12

Hydrometer Analysis

Start Date/Time	4/30/2019	8:50	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.015		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.58		Corrected Dry Weight of Soil Tested (g) (W)	47.58

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.1	44.81	94.2	7.8	0.01365	0.038	94.18
2	48.5	20.2	42.35	89.0	8.1	0.01365	0.027	89.00
4	46.5	20.1	40.31	84.7	8.4	0.01365	0.020	84.73
8	40.5	20.1	34.31	72.1	9.4	0.01365	0.015	72.12
15	35	20.3	28.88	60.7	10.4	0.01365	0.011	60.70
30	28.5	20.4	22.41	47.1	11.4	0.01365	0.008	47.11
60	23	20.5	16.95	35.6	12.4	0.01348	0.006	35.62
90	20.5	20.5	14.45	30.4	12.7	0.01348	0.005	30.36
120	18.5	20.4	12.41	26.1	13	0.01365	0.004	26.09
240	15	20.5	8.95	18.8	13.7	0.01348	0.003	18.80
360	14	20.4	7.91	16.6	13.8	0.01365	0.003	16.63
1440	11	19.7	4.68	9.8	14.3	0.01365	0.001	9.84

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.285	1.341	0.06	0.20	0.1	99.9
40	0.425	1.294	1.608	0.31	1.32	0.7	99.2
60	0.250	1.288	1.505	0.22	2.09	0.5	98.8
100	0.150	1.290	1.427	0.14	2.58	0.3	98.5
140	0.105	1.303	1.405	0.10	2.94	0.2	98.3
200	0.075	1.295	1.479	0.18	3.60	0.4	97.9
230	0.063	1.292	1.459	0.17	4.19	0.4	97.5
			Sum	1.18	230 Minus	46.40	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG57-190417 (A9D0674-19)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.47*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.88	0.12
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.22	0.66
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.77	0.46
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.48	0.29
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.26	0.21
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.88	0.39
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.53	0.35
Silt and Clay (Measurements in the Clay fraction are noted)				*97.53*
Hydrometer Test		0.0381	94.18	3.34
Hydrometer Test		0.0275	89	5.18
Hydrometer Test		0.0198	84.73	4.27
Hydrometer Test		0.0148	72.12	12.61
Hydrometer Test		0.0114	60.7	11.42
Hydrometer Test		0.0084	47.11	13.59
Hydrometer Test		0.0061	35.62	11.49
Hydrometer Test		0.0051	30.36	5.25
Hydrometer Test	Clay	0.0045	26.09	4.27
Hydrometer Test	Clay	0.0032	18.8	7.29
Hydrometer Test	Clay	0.0027	16.63	2.17
Hydrometer Test	Clay	0.0014	9.84	6.8

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.5
Coarse sand	0.1
Medium sand	1.4
Fine sand	1.0
Silt	67.2
Clay	30.4

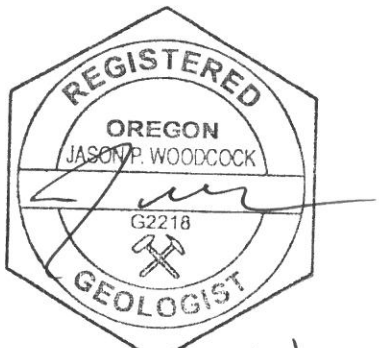
Case Narrative for Sample ID: T4-PDI2019-SG57-190417 (A9D0674-19)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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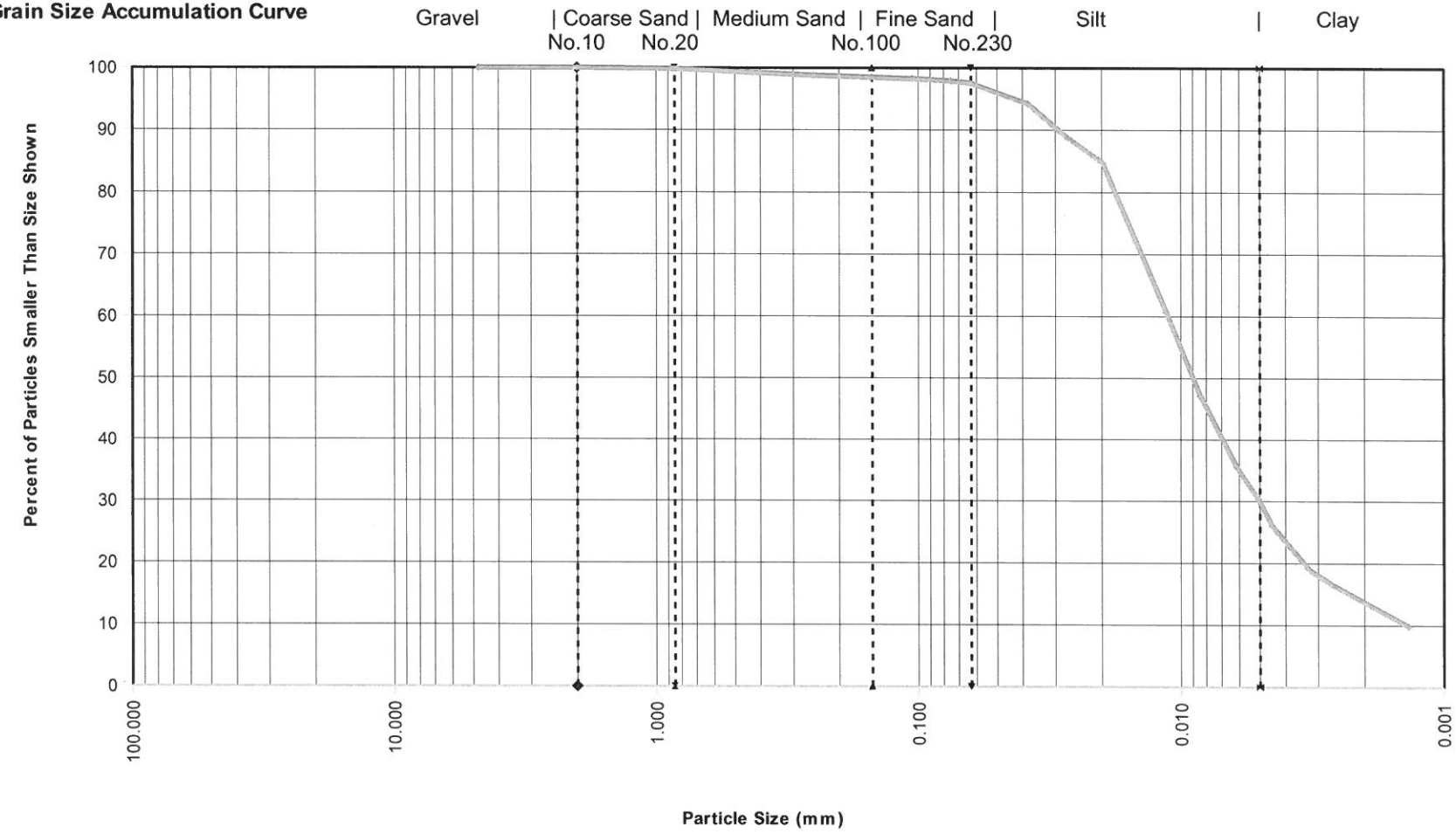
Report is complete only if it includes Apex Labs Grain Size Data. Page 110 of 128 05/21/2019

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG57-190417 (A9D0674-19)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-20		Client Sample ID:	T4-PDI2019-SG58-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey Silt			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.853	171.041	160.19	5.00	152.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		10.873	170.823	159.95	159.95	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9523		D67420	1.383	16.259	15.550	5.00

Hydrometer Analysis

Start Date/Time	4/30/2019	9:10	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.251		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.86		Corrected Dry Weight of Soil Tested (g) (W)	47.86

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.2	44.85	93.7	7.8	0.01365	0.038	93.71
2	49	20.2	42.85	89.5	8.1	0.01365	0.027	89.53
4	46	20.3	39.88	83.3	8.6	0.01365	0.020	83.33
8	41	20.4	34.91	73.0	9.4	0.01365	0.015	72.96
15	34.5	20.4	28.41	59.4	10.4	0.01365	0.011	59.37
30	30	20.5	23.95	50.0	11.2	0.01348	0.008	50.04
60	24	20.7	18.01	37.6	12.2	0.01348	0.006	37.64
90	21.5	20.6	15.48	32.3	12.5	0.01348	0.005	32.35
120	19.5	20.6	13.48	28.2	12.9	0.01348	0.004	28.17
240	15.5	20.5	9.45	19.7	13.5	0.01348	0.003	19.74
360	14	20.4	7.91	16.5	13.8	0.01365	0.003	16.54
1440	11	19.8	4.71	9.8	14.3	0.01365	0.001	9.85

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.310	1.337	0.03	0.09	0.1	99.9
40	0.425	1.298	1.554	0.26	0.90	0.5	99.4
60	0.250	1.286	1.451	0.17	1.43	0.3	99.1
100	0.150	1.304	1.455	0.15	1.91	0.3	98.7
140	0.105	1.308	1.458	0.15	2.38	0.3	98.4
200	0.075	1.299	1.549	0.25	3.18	0.5	97.9
230	0.063	1.297	1.508	0.21	3.85	0.4	97.5
			Sum	1.21	230 Minus	46.65	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG58-190417 (A9D0674-20)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.53*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.41	0.53
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.06	0.34
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.75	0.32
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.43	0.31
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.91	0.52
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.47	0.44
Silt and Clay (Measurements in the Clay fraction are noted)				*97.47*
Hydrometer Test		0.0381	93.71	3.76
Hydrometer Test		0.0275	89.53	4.18
Hydrometer Test		0.0200	83.33	6.2
Hydrometer Test		0.0148	72.96	10.38
Hydrometer Test		0.0114	59.37	13.58
Hydrometer Test		0.0082	50.04	9.33
Hydrometer Test		0.0061	37.64	12.4
Hydrometer Test		0.0050	32.35	5.29
Hydrometer Test	Clay	0.0044	28.17	4.18
Hydrometer Test	Clay	0.0032	19.74	8.43
Hydrometer Test	Clay	0.0027	16.54	3.2
Hydrometer Test	Clay	0.0014	9.85	6.69

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.5
Coarse sand	0.1
Medium sand	1.2
Fine sand	1.3
Silt	65.1
Clay	32.3

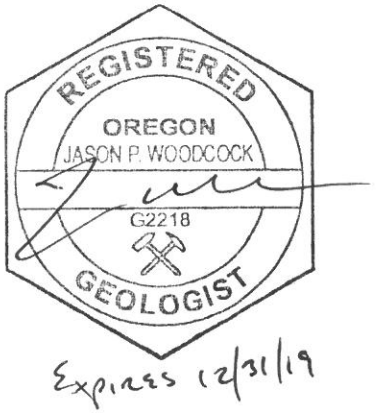
Case Narrative for Sample ID: T4-PDI2019-SG58-190417 (A9D0674-20)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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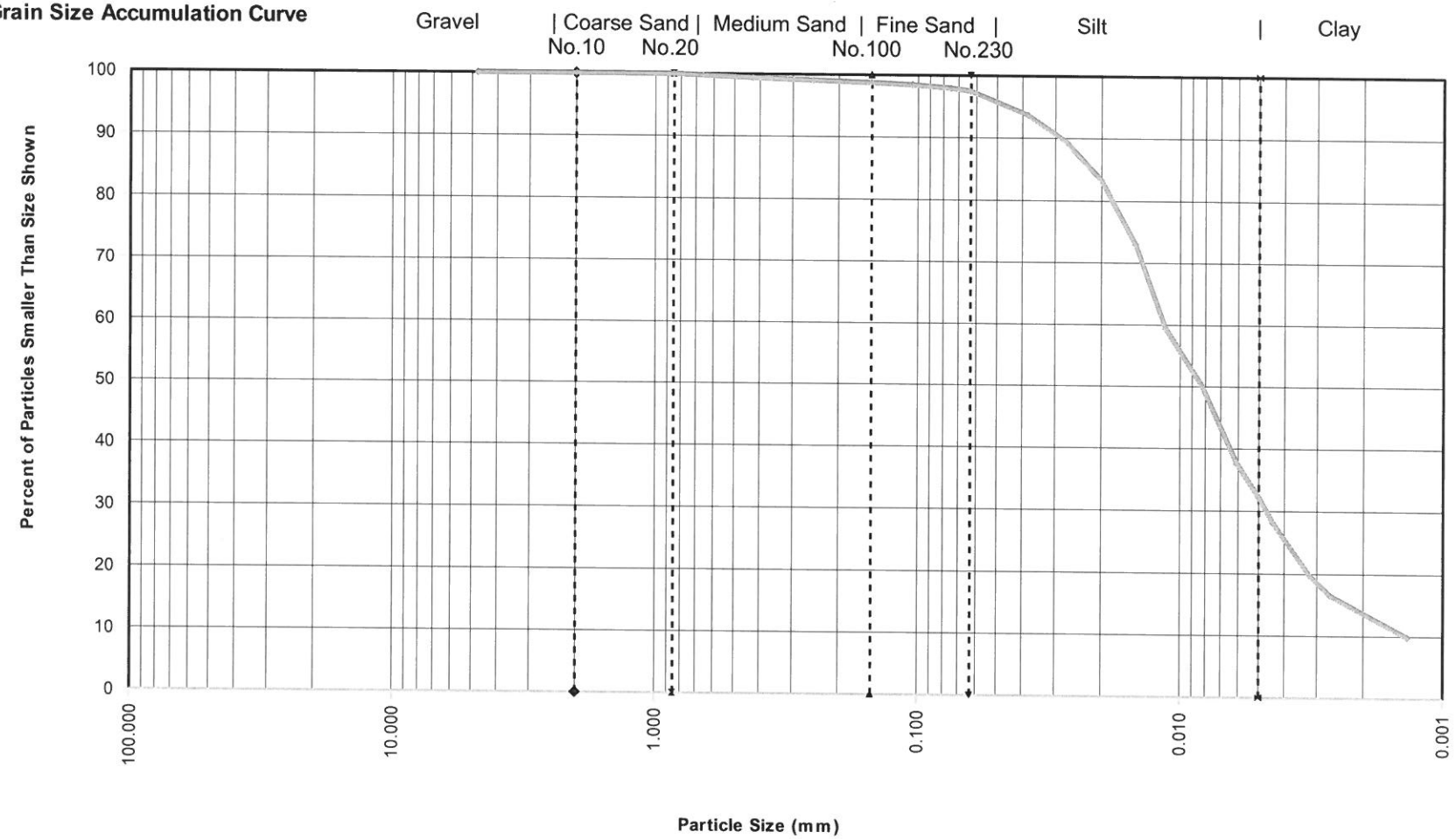
Report is complete only if it includes Apex Labs Grain Size Data. Page 113 of 128 05/21/2019

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG58-190417 (A9D0674-20)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey Silt

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-21		Client Sample ID:	T4-PDI2019-SG59-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.549	176.839	165.29	4.14	158.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.558	175.763	164.21	164.21	99.2	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9602		D67421	1.381	16.512	15.910	4.14

Hydrometer Analysis

Start Date/Time	5/2/2019	9:55	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.362		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.36		Corrected Dry Weight of Soil Tested (g) (W)	48.36

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.6	46.36	95.9	7.8	0.01348	0.038	95.86
2	48.5	20.5	43.83	90.6	8.1	0.01348	0.027	90.64
4	45	20.5	40.33	83.4	8.8	0.01348	0.020	83.40
8	40.5	20.6	35.86	74.2	9.4	0.01348	0.015	74.15
15	35	20.7	30.38	62.8	10.4	0.01348	0.011	62.83
30	29	20.8	24.41	50.5	11.4	0.01348	0.008	50.47
60	22	20.8	17.41	36.0	12.5	0.01348	0.006	36.00
90	19.5	20.8	14.91	30.8	12.9	0.01348	0.005	30.83
120	17.5	20.7	12.88	26.6	13.2	0.01348	0.004	26.64
240	14	20.6	9.36	19.4	13.8	0.01348	0.003	19.35
360	13	20.6	8.36	17.3	14	0.01348	0.003	17.28
1440	10.5	19.7	5.63	11.6	14.3	0.01365	0.001	11.64

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.291	1.324	0.03	0.11	0.1	99.9
40	0.425	1.290	1.561	0.27	0.99	0.6	99.4
60	0.250	1.307	1.629	0.32	2.04	0.7	98.7
100	0.150	1.294	1.597	0.30	3.03	0.6	98.1
140	0.105	1.292	1.552	0.26	3.88	0.5	97.5
200	0.075	1.288	1.719	0.43	5.28	0.9	96.7
230	0.063	1.306	1.606	0.30	6.26	0.6	96.0
			Sum	1.92	230 Minus	46.44	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG59-190417 (A9D0674-21)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*3.97*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.93	0.07
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.37	0.56
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.71	0.67
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.08	0.63
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	97.54	0.54
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	96.65	0.89
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.03	0.62
Silt and Clay (Measurements in the Clay fraction are noted)				*96.03*
Hydrometer Test		0.0376	95.86	0.17
Hydrometer Test		0.0271	90.64	5.22
Hydrometer Test		0.0200	83.4	7.24
Hydrometer Test		0.0146	74.15	9.25
Hydrometer Test		0.0112	62.83	11.32
Hydrometer Test		0.0083	50.47	12.36
Hydrometer Test		0.0062	36	14.48
Hydrometer Test		0.0051	30.83	5.17
Hydrometer Test	Clay	0.0045	26.64	4.19
Hydrometer Test	Clay	0.0032	19.35	7.29
Hydrometer Test	Clay	0.0027	17.28	2.07
Hydrometer Test	Clay	0.0014	11.64	5.64

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	4.0
Coarse sand	0.1
Medium sand	1.9
Fine sand	2.0
Silt	65.2
Clay	30.8

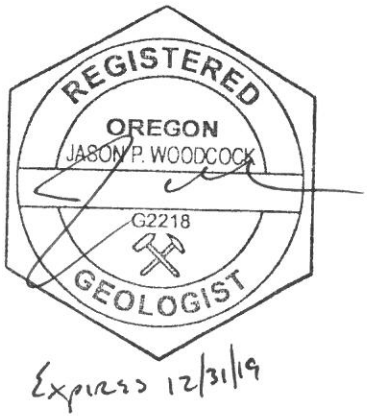
Case Narrative for Sample ID: T4-PDI2019-SG59-190417 (A9D0674-21)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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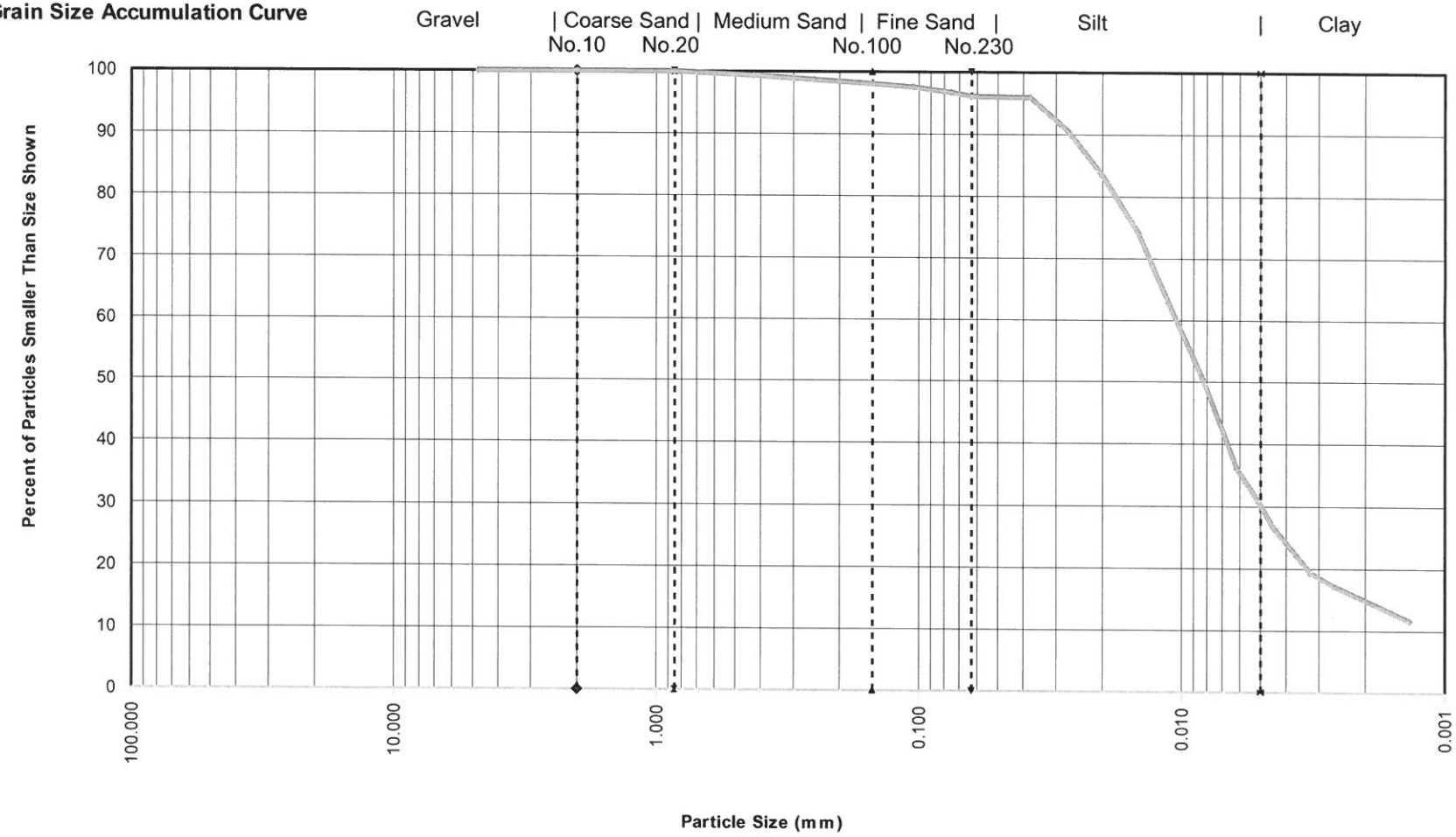
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG59-190417 (A9D0674-21)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

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Report is complete only if it includes Apex Labs Grain Size Data. Page 116 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-22		Client Sample ID:	FD-201904171301		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT with trace Sand			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.996	202.979	191.98	4.45	183.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.022	201.279	190.26	190.26	98.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9574		D67422	1.371	16.096	15.468	4.45

Hydrometer Analysis

Start Date/Time	4/30/2019	10:10	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.904		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.69		Corrected Dry Weight of Soil Tested (g) (W)	49.69

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	49	20.5	42.95	86.4	8.1	0.01348	0.038	86.43
2	46	20.5	39.95	80.4	8.6	0.01348	0.028	80.39
4	43	20.4	36.91	74.3	9.1	0.01365	0.021	74.29
8	39.5	20.6	33.48	67.4	9.6	0.01348	0.015	67.38
15	34	20.6	27.98	56.3	10.5	0.01348	0.011	56.31
30	28.5	20.8	22.55	45.4	11.4	0.01348	0.008	45.38
60	24	20.8	18.05	36.3	12.2	0.01348	0.006	36.32
90	21.5	20.7	15.51	31.2	12.5	0.01348	0.005	31.22
120	19	20.5	12.95	26.1	13	0.01348	0.004	26.06
240	16	20.5	9.95	20.0	13.5	0.01348	0.003	20.02
360	14	20.6	7.98	16.1	13.8	0.01348	0.003	16.06
1440	11	19.9	4.75	9.6	14.3	0.01365	0.001	9.55

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.291	1.396	0.11	0.38	0.2	99.8
40	0.425	1.296	1.819	0.52	2.30	1.1	98.7
60	0.250	1.291	2.777	1.49	7.75	3.0	95.7
100	0.150	1.303	2.454	1.15	11.97	2.3	93.4
140	0.105	1.304	1.879	0.58	14.08	1.2	92.3
200	0.075	1.298	2.142	0.84	17.17	1.7	90.6
230	0.063	1.301	1.859	0.56	19.21	1.1	89.5
			Sum	5.24	230 Minus	44.45	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: FD-201904171301 (A9D0674-22)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*10.55*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.79	0.21
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	98.74	1.05
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	95.75	2.99
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	93.43	2.32
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	92.27	1.16
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	90.57	1.7
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	89.45	1.12
Silt and Clay (Measurements in the Clay fraction are noted)				*89.45*
Hydrometer Test		0.0384	86.43	3.02
Hydrometer Test		0.0280	80.39	6.04
Hydrometer Test		0.0206	74.29	6.1
Hydrometer Test		0.0148	67.38	6.91
Hydrometer Test		0.0113	56.31	11.07
Hydrometer Test		0.0083	45.38	10.93
Hydrometer Test		0.0061	36.32	9.06
Hydrometer Test		0.0050	31.22	5.1
Hydrometer Test	Clay	0.0044	26.06	5.17
Hydrometer Test	Clay	0.0032	20.02	6.04
Hydrometer Test	Clay	0.0026	16.06	3.96
Hydrometer Test	Clay	0.0014	9.55	6.51

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	10.5
Coarse sand	0.2
Medium sand	6.4
Fine sand	4.0
Silt	58.2
Clay	31.2

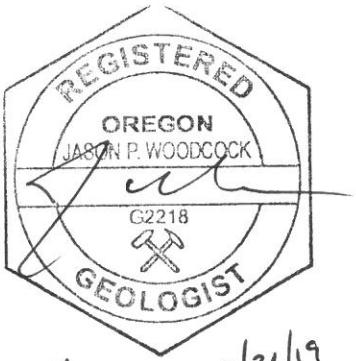
Case Narrative for Sample ID: **FD-201904171301 (A9D0674-22)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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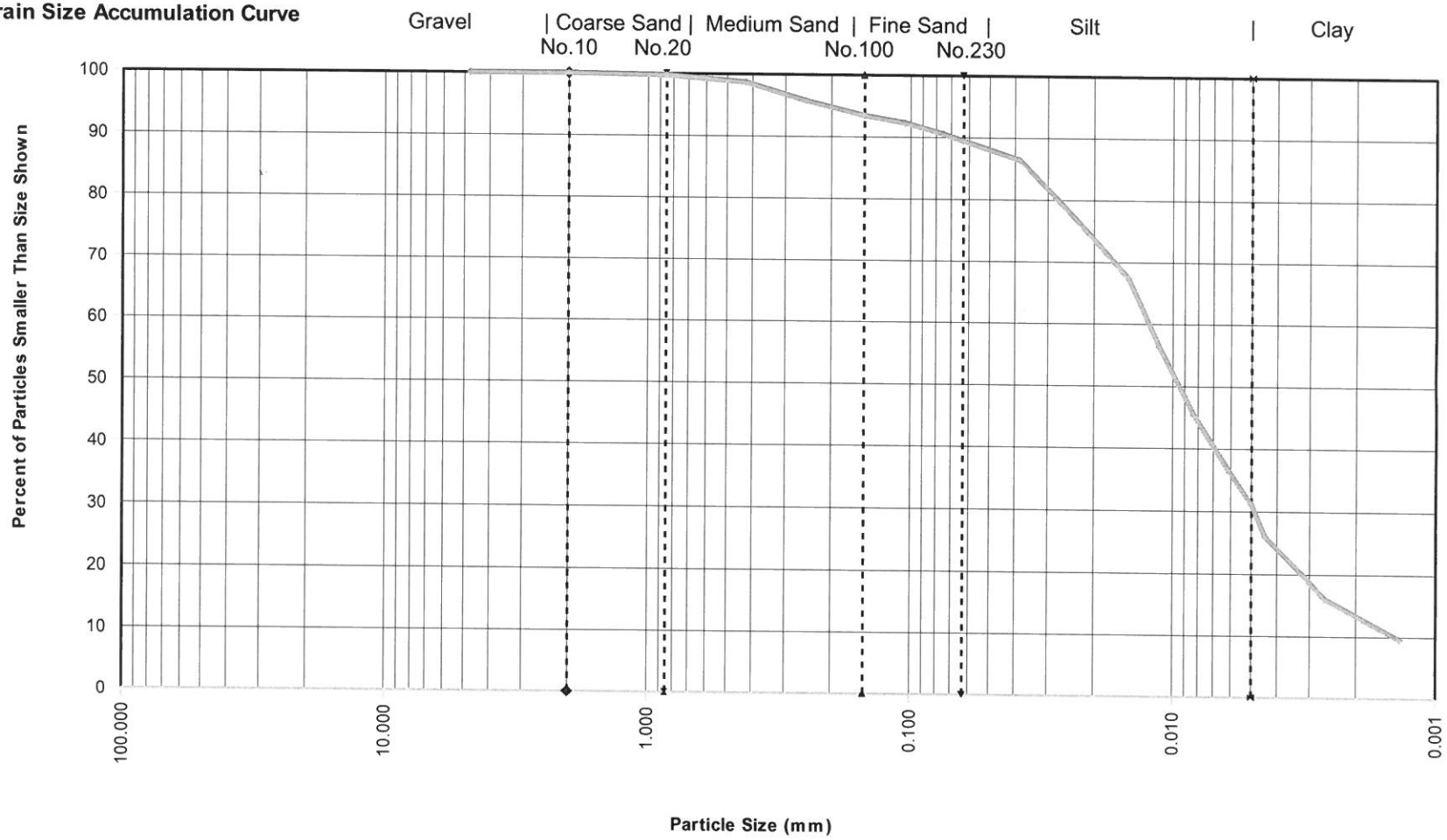
Report is complete only if it includes Apex Labs Grain Size Data. Page 119 of 128 05/21/2019

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	FD-201904171301 (A9D0674-22)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT with trace Sand

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-23		Client Sample ID:	T4-PDI2019-SG60-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT with trace Sand			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.989	198.095	186.11	3.57	179.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.367	1.375	0.01	0.01	0.0	100.0
Pan		5.977	191.378	185.40	185.41	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9655		D67423	1.367	18.024	17.450	3.57

Hydrometer Analysis

Start Date/Time	5/2/2019	10:25	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	56.139		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	54.20		Corrected Dry Weight of Soil Tested (g) (W)	54.21

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	53	20.8	47.05	86.8	7.4	0.01348	0.037	86.79
2	49	20.8	43.05	79.4	8.1	0.01348	0.027	79.41
4	47	20.7	41.01	75.7	8.4	0.01348	0.020	75.66
8	43	20.7	37.01	68.3	9.1	0.01348	0.014	68.28
15	36	20.8	30.05	55.4	10.2	0.01348	0.011	55.43
30	31	20.8	25.05	46.2	11.1	0.01348	0.008	46.20
60	25	20.8	19.05	35.1	12	0.01348	0.006	35.14
90	21.5	20.9	15.58	28.7	12.5	0.01348	0.005	28.74
120	20	20.8	14.05	25.9	12.9	0.01348	0.004	25.91
240	16.5	20.7	10.51	19.4	13.3	0.01348	0.003	19.40
360	15	20.7	9.01	16.6	13.7	0.01348	0.003	16.63
1440	12.5	19.9	6.25	11.5	14	0.01365	0.001	11.52

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.297	1.326	0.03	0.10	0.1	99.9
40	0.425	1.298	1.840	0.54	1.89	1.0	98.9
60	0.250	1.303	2.889	1.59	7.13	2.9	96.0
100	0.150	1.297	2.619	1.32	11.50	2.4	93.6
140	0.105	1.300	1.970	0.67	13.71	1.2	92.3
200	0.075	1.297	2.286	0.99	16.98	1.8	90.5
230	0.063	1.296	1.999	0.70	19.30	1.3	89.2
			Sum	5.84	230 Minus	48.36	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG60-190417 (A9D0674-23)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*10.78*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.05
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	98.94	1
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	96.02	2.93
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	93.58	2.44
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	92.34	1.24
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	90.52	1.82
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	89.22	1.3
Silt and Clay (Measurements in the Clay fraction are noted)				*89.22*
Hydrometer Test		0.0367	86.79	2.43
Hydrometer Test		0.0271	79.41	7.38
Hydrometer Test		0.0195	75.66	3.75
Hydrometer Test		0.0144	68.28	7.38
Hydrometer Test		0.0111	55.43	12.85
Hydrometer Test		0.0082	46.2	9.22
Hydrometer Test		0.0060	35.14	11.07
Hydrometer Test		0.0050	28.74	6.39
Hydrometer Test	Clay	0.0044	25.91	2.83
Hydrometer Test	Clay	0.0032	19.4	6.52
Hydrometer Test	Clay	0.0026	16.63	2.77
Hydrometer Test	Clay	0.0013	11.52	5.1

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	10.8
Coarse sand	0.1
Medium sand	6.4
Fine sand	4.4
Silt	60.5
Clay	28.7

Case Narrative for Sample ID: T4-PDI2019-SG60-190417 (A9D0674-23)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.



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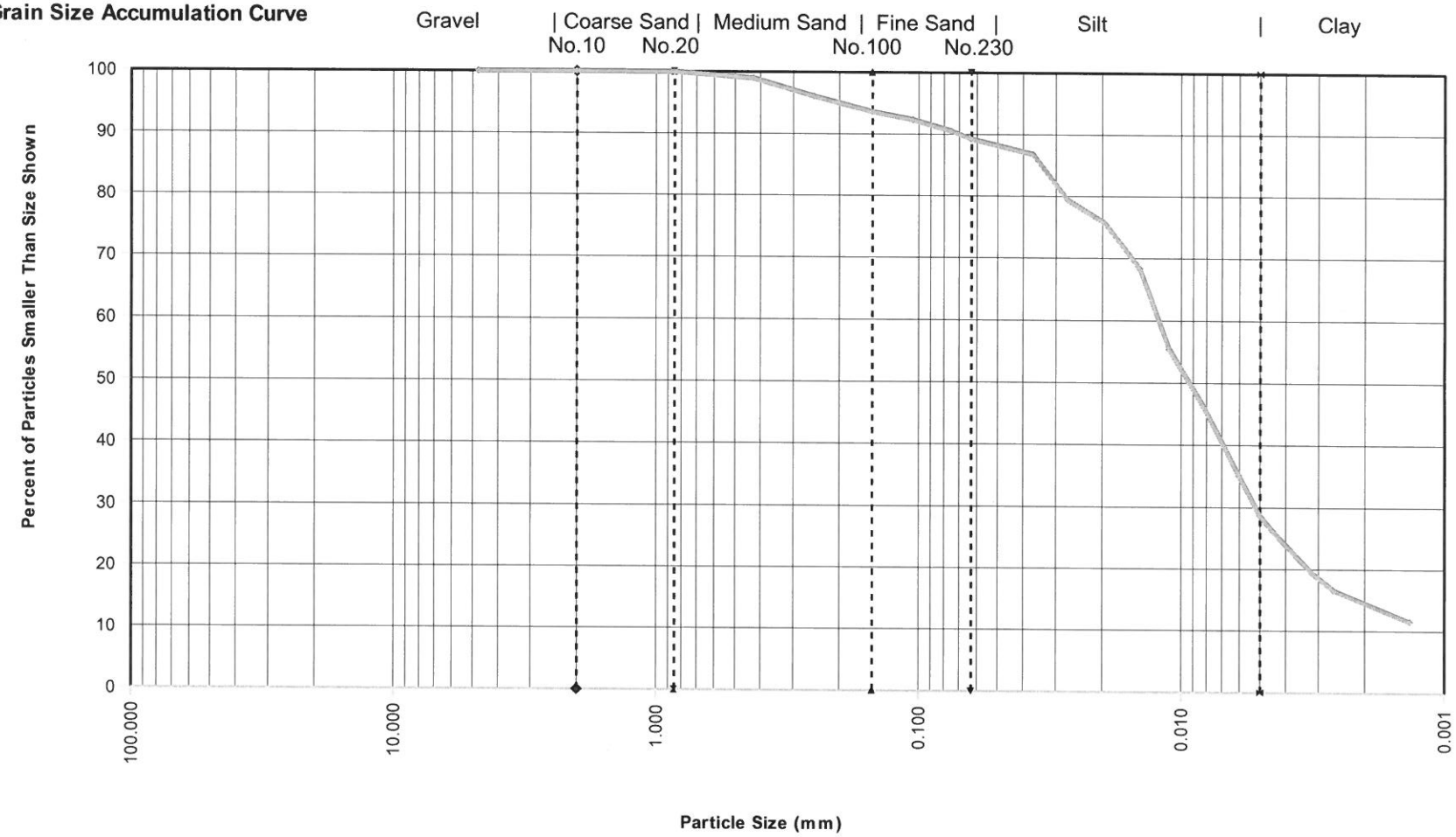
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG60-190417 (A9D0674-23)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT with trace Sand

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Report is complete only if it includes Apex Labs Grain Size Data. Page 122 of 128 05/21/2019

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-24		Client Sample ID:	T4-PDI2019-SG61-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	SAND with some Silt and trace Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.536	444.346	432.81	2.20	423.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.372	4.254	2.88	2.88	0.7	99.3
10	2.00	1.370	6.254	4.88	7.77	1.2	98.2
Pan		11.561	435.846	424.29	432.05	98.0	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9785		D67424	1.384	17.547	17.199	2.20

Hydrometer Analysis

Start Date/Time	4/30/2019	10:21	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.495		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	98.2		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.41		Corrected Dry Weight of Soil Tested (g) (W)	50.33

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8.5	20.3	2.38	4.7	14.7	0.01365	0.052	4.64
2	8.5	20.3	2.38	4.7	14.7	0.01365	0.037	4.64
4	8	20.4	1.91	3.8	14.8	0.01365	0.026	3.73
8	7	20.5	0.95	1.9	15	0.01348	0.018	1.85
15	6	20.5		0.0	15.2	0.01348	0.014	0.00
30	6	20.5		0.0	15.2	0.01348	0.010	0.00
60	5.5	20.4		0.0	15.2	0.01365	0.007	0.00
90	5	20.3		0.0	15.3	0.01365	0.006	0.00
120	5	20.3		0.0	15.3	0.01365	0.005	0.00
240	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
360	4	20.2		0.0	15.5	0.01365	0.003	0.00
1440	4	19.9		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.298	2.310	1.01	16.27	2.0	96.2
40	0.425	1.309	11.558	10.25	102.39	20.4	75.8
60	0.250	1.290	20.307	19.02	262.18	37.8	38.0
100	0.150	1.300	10.175	8.88	336.75	17.6	20.4
140	0.105	1.303	4.746	3.44	365.68	6.8	13.5
200	0.075	1.306	3.143	1.84	381.11	3.6	9.9
230	0.063	1.292	1.802	0.51	385.40	1.0	8.9
			Sum	44.94	230 Minus	4.46	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG61-190416 (A9D0674-24)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*1.83*
Retained on No. 4 sieve		4.75	99.32	0.68
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	98.17	1.15
Sand				*89.3*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	96.16	2.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	75.79	20.36
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	38.01	37.78
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	20.37	17.63
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	13.53	6.84
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	9.88	3.65
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	8.87	1.01
Silt and Clay (Measurements in the Clay fraction are noted)				*8.87*
Hydrometer Test		0.0523	4.64	4.23
Hydrometer Test		0.0370	4.64	0
Hydrometer Test		0.0263	3.73	0.91
Hydrometer Test		0.0185	1.85	1.89
Hydrometer Test		0.0136	1.85	0
Hydrometer Test		0.0096	1.85	0
Hydrometer Test		0.0069	1.85	0
Hydrometer Test		0.0056	1.85	0
Hydrometer Test	Clay	0.0049	1.85	0
Hydrometer Test	Clay	0.0034	1.85	0
Hydrometer Test	Clay	0.0028	1.85	0
Hydrometer Test	Clay	0.0014	1.85	0

Grain Size Summary	Percent of Total Sample
Gravel	1.8
Sand	89.3
Coarse sand	2.0
Medium sand	75.8
Fine sand	11.5
Silt	7.0
Clay	1.8

Case Narrative for Sample ID: T4-PDI2019-SG61-190416 (A9D0674-24)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist almost entirely of organic material.



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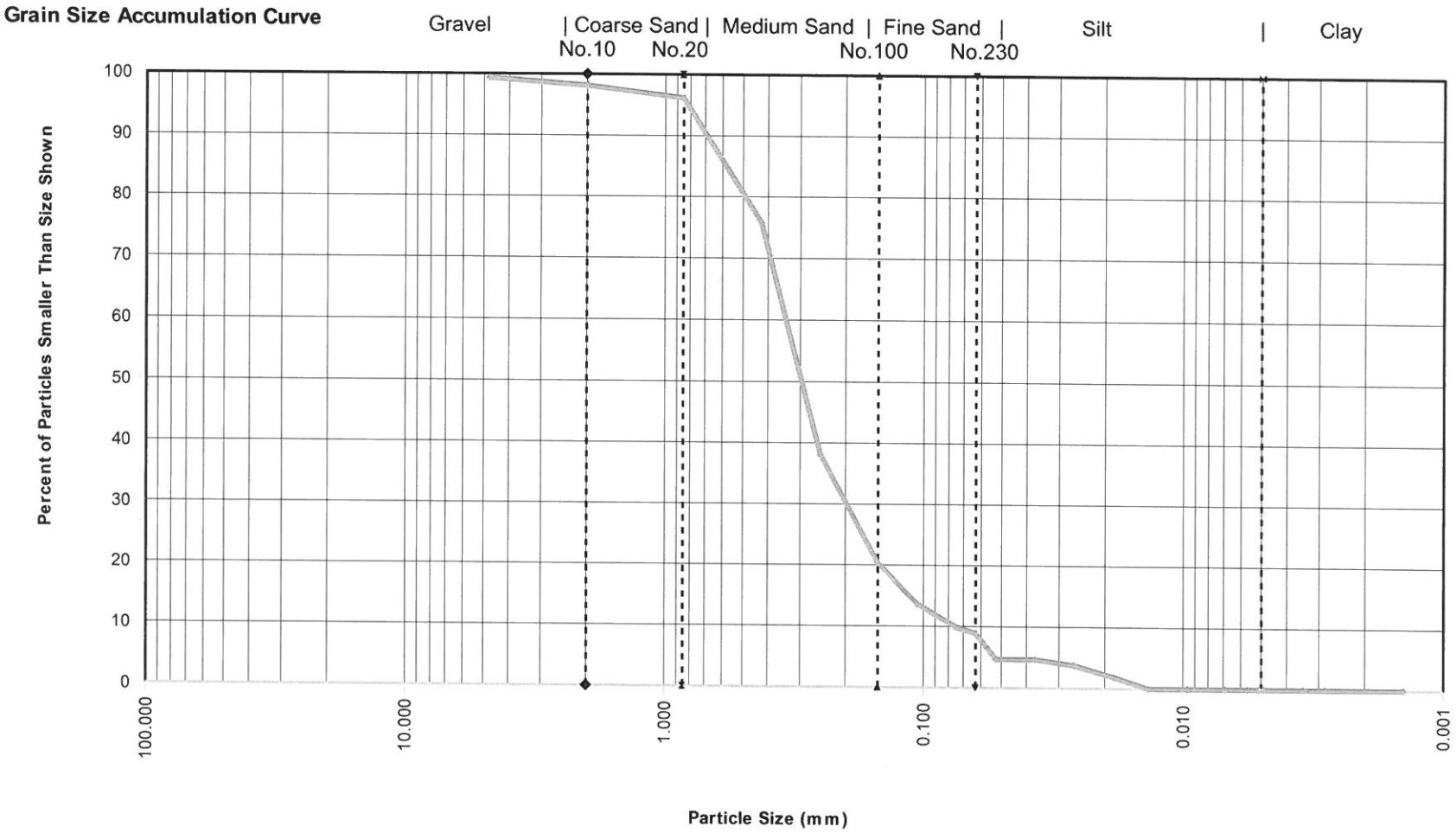
Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified



Sample ID:	T4-PDI2019-SG61-190416 (A9D0674-24)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Silt and trace Clay

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-25		Client Sample ID:	4-PDI2019-SG59-190417-DU		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.673	174.808	163.14	3.85	157.1

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.660	174.176	162.52	162.52	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9629		D67425	1.385	17.738	17.131	3.85

Hydrometer Analysis

Start Date/Time	5/2/2019	10:13	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.960		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.07		Corrected Dry Weight of Soil Tested (g) (W)	49.07

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.7	46.38	94.5	7.8	0.01348	0.038	94.53
2	48.5	20.7	43.88	89.4	8.1	0.01348	0.027	89.43
4	45.5	20.7	40.88	83.3	8.6	0.01348	0.020	83.32
8	41	20.7	36.38	74.1	9.4	0.01348	0.015	74.15
15	36	20.7	31.38	64.0	10.2	0.01348	0.011	63.96
30	30	20.8	25.41	51.8	11.2	0.01348	0.008	51.78
60	23	20.8	18.41	37.5	12.4	0.01348	0.006	37.52
90	20	20.8	15.41	31.4	12.9	0.01348	0.005	31.40
120	17.5	20.9	12.93	26.4	13.2	0.01348	0.004	26.36
240	15	20.5	10.33	21.1	13.7	0.01348	0.003	21.06
360	13.5	20.6	8.86	18.1	13.8	0.01348	0.003	18.05
1440	11	19.8	6.16	12.5	14.3	0.01365	0.001	12.55

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.307	1.322	0.02	0.05	0.0	100.0
40	0.425	1.301	1.368	0.07	0.26	0.1	99.8
60	0.250	1.302	1.373	0.07	0.49	0.1	99.7
100	0.150	1.293	1.405	0.11	0.85	0.2	99.5
140	0.105	1.301	1.592	0.29	1.77	0.6	98.9
200	0.075	1.282	1.805	0.52	3.44	1.1	97.8
230	0.063	1.302	1.651	0.35	4.55	0.7	97.1
		Sum	1.43	230 Minus	47.64		

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG59-190417-DUP (A9D0674-25)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.91*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.97	0.03
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.83	0.14
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.69	0.14
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.46	0.23
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.87	0.59
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.8	1.07
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.09	0.71
Silt and Clay (Measurements in the Clay fraction are noted)				*97.09*
Hydrometer Test		0.0376	94.53	2.56
Hydrometer Test		0.0271	89.43	5.09
Hydrometer Test		0.0198	83.32	6.11
Hydrometer Test		0.0146	74.15	9.17
Hydrometer Test		0.0111	63.96	10.19
Hydrometer Test		0.0082	51.78	12.18
Hydrometer Test		0.0061	37.52	14.27
Hydrometer Test		0.0051	31.4	6.11
Hydrometer Test	Clay	0.0045	26.36	5.04
Hydrometer Test	Clay	0.0032	21.06	5.3
Hydrometer Test	Clay	0.0026	18.05	3.01
Hydrometer Test	Clay	0.0014	12.55	5.51

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.9
Coarse sand	0.0
Medium sand	0.5
Fine sand	2.4
Silt	65.7
Clay	31.4

Case Narrative for Sample ID: **T4-PDI2019-SG59-190417-DUP (A9D0674-25)**

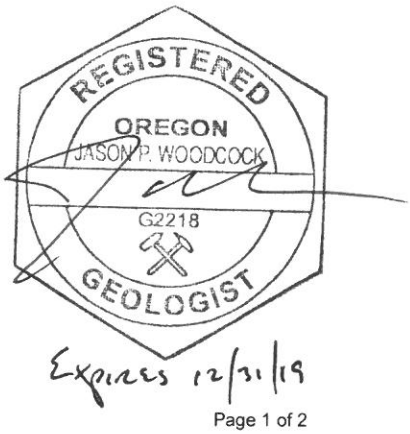
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

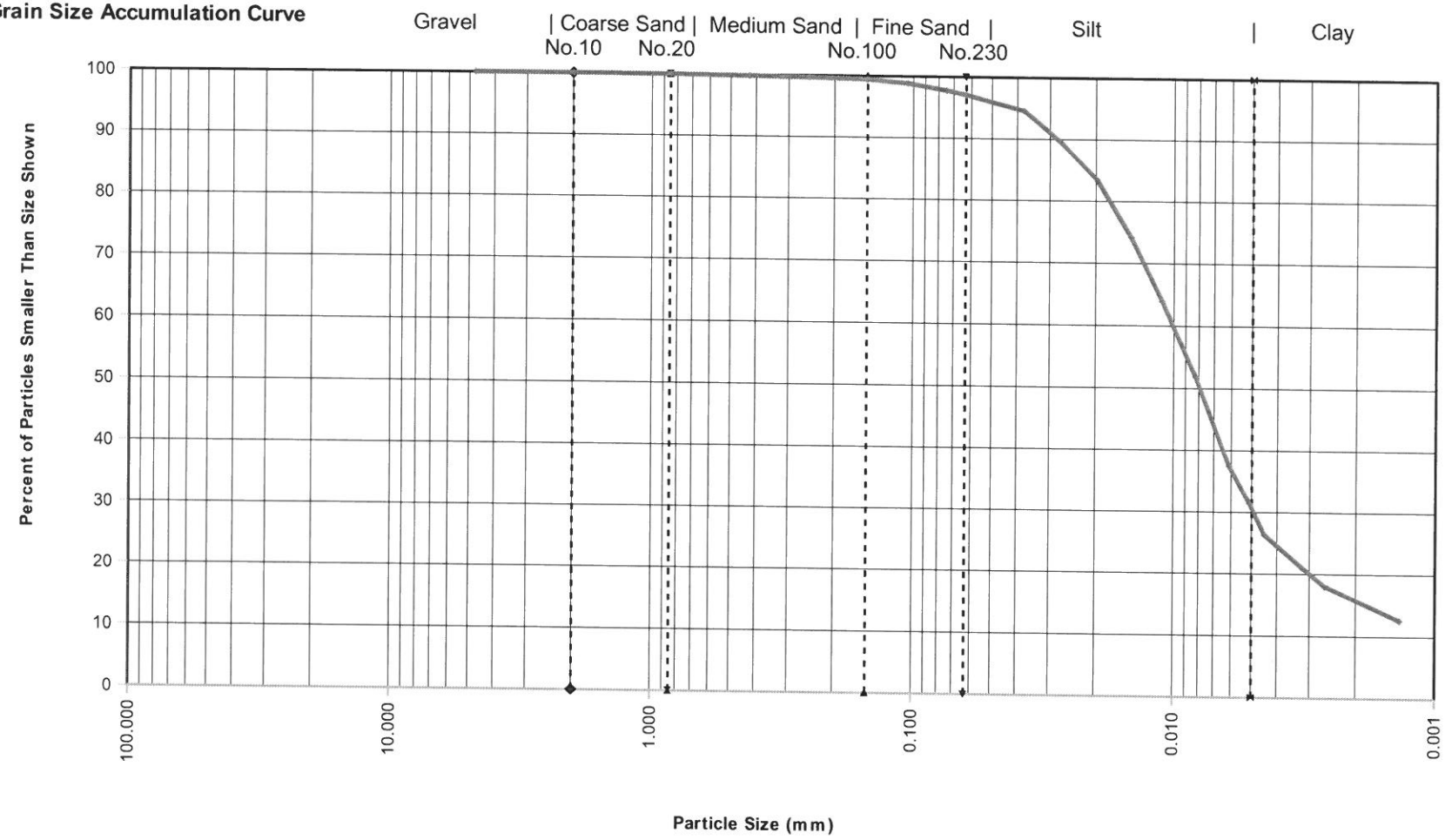
The assumed specific gravity used in the calculations was 2.65.

All fractions (+20 to +230) contain abundant organic material.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG59-190417-DUP (A9D0674-25)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

06/21/19 Anchor Port of Portland - T4 - PDI Page 134 of 1591
Report is complete only if it includes Apex Labs Grain Size Data. Page 128 of 128 05/21/2019

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

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

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Report To:

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

Invoice To:

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

Date Due:	05/02/19 17:00 (10 day TAT)		
Received By:	Russ Komorow	Date Received:	04/18/19 07:40
Logged In By:	Susan L. Treat	Date Logged In:	04/18/19 10:29

Cooler #1 received at 2.5°C

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

Cooler #2 received at 4.5°C

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

Cooler #3 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
A9D0674-01 RB-201904171558 [Water] Sampled 04/17/19 15:58 (GMT-08:00) Pacific Time (US & Canada) 2 Containers				
Project Mgmt				
Data Package	05/01/19 17:00	10	07/25/19 15:58	
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/24/19 15:58	PAHs Only
A9D0674-02 T4-PDI2019-SG05-190417 [Sediment] Sampled 04/17/19 11:35 (GMT-08:00) Pacific Time (US & Canada) 4 Containers				
Dry Weight				
Dry Weight	04/23/19 17:00	3	10/14/19 11:35	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 11:35	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 11:35	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 11:35	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 11:35	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 11:35	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-03 T4-PDI2019-SG06-190417 [Sediment] Sampled 04/17/19 10:21 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/14/19 10:21	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 10:21	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 10:21	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 10:21	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 10:21	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 10:21	

A9D0674-04 T4-PDI2019-SG08-190415 [Sediment] Sampled 04/15/19 12:29 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/12/19 12:29	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/12/19 12:29	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/16/19 12:29	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/29/19 12:29	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/12/19 12:29	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/13/19 12:29	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments

Analysis	Due	TAT	Expires	Comments

A9D0674-05 T4-PDI2019-SG11-190415 [Sediment] Sampled 04/15/19 11:35 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/12/19 11:35	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/12/19 11:35	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/16/19 11:35	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/29/19 11:35	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/12/19 11:35	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/13/19 11:35	

A9D0674-06 T4-PDI2019-SG13-190415 [Sediment] Sampled 04/15/19 15:34 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/12/19 15:34	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/12/19 15:34	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/16/19 15:34	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/29/19 15:34	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/12/19 15:34	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/13/19 15:34	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-07 T4-PDI2019-SG15-190416 [Sediment] Sampled 04/16/19 14:34 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/13/19 14:34	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 14:34	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 14:34	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 14:34	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 14:34	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 14:34	

A9D0674-08 T4-PDI2019-SG16-190416 [Sediment] Sampled 04/16/19 10:13 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/13/19 10:13	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 10:13	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 10:13	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 10:13	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 10:13	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 10:13	

A9D0674-09 T4-PDI2019-SG16A-190416 [Sediment] Sampled 04/16/19 09:45 (GMT-08:00) Pacific Time (US & Canada) 2 Containers

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 09:45	$2/sample/quarter

A9D0674-10 T4-PDI2019-SG16B-190416 [Sediment] Sampled 04/16/19 09:59 (GMT-08:00) Pacific Time (US & Canada) 2 Containers

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 09:59	$2/sample/quarter

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments

Analysis	Due	TAT	Expires	Comments

A9D0674-11 T4-PDI2019-SG16C-190416 [Sediment] Sampled 04/16/19 10:09 (GMT-08:00) Pacific Time (US & Canada) 2 Containers

Analysis	Due	TAT	Expires	Comments
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 10:09	$2/sample/quarter

A9D0674-12 T4-PDI2019-SG17-190416 [Sediment] Sampled 04/16/19 11:14 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Analysis	Due	TAT	Expires	Comments
Dry Weight				
Dry Weight	04/23/19 17:00	3	10/13/19 11:14	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 11:14	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 11:14	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 11:14	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 11:14	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 11:14	

A9D0674-13 FD-201904151441 [Sediment] Sampled 04/15/19 14:41 (GMT-08:00) Pacific Time (US & Canada) 2 Containers

No T on CoC, containers read T of 1441

Analysis	Due	TAT	Expires	Comments
Dry Weight				
Dry Weight	04/23/19 17:00	3	10/12/19 14:41	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/12/19 14:41	
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/29/19 14:41	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/12/19 14:41	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/13/19 14:41	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-14 T4-PDI2019-SG18-190415 [Sediment] Sampled 04/15/19 14:41 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/12/19 14:41	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/12/19 14:41	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/16/19 14:41	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/29/19 14:41	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/12/19 14:41	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/13/19 14:41	

A9D0674-15 T4-PDI2019-SG51-190417 [Sediment] Sampled 04/17/19 15:25 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/14/19 15:25	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 15:25	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 15:25	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 15:25	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 15:25	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 15:25	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-16 T4-PDI2019-SG52-190417 [Sediment] Sampled 04/17/19 14:26 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/14/19 14:26	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 14:26	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 14:26	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 14:26	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 14:26	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 14:26	

A9D0674-17 T4-PDI2019-SG53-190416 [Sediment] Sampled 04/16/19 16:27 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/13/19 16:27	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 16:27	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 16:27	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 16:27	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 16:27	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 16:27	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-18 T4-PDI2019-SG54-190416 [Sediment] Sampled 04/16/19 13:27 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/13/19 13:27	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 13:27	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 13:27	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 13:27	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 13:27	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 13:27	

A9D0674-19 T4-PDI2019-SG57-190417 [Sediment] Sampled 04/17/19 15:49 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight

Dry Weight	04/23/19 17:00	3	10/14/19 15:49	**USE SOLIDS DATA**

Geotechnical

Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 15:49	

Sample Control

Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 15:49	$2/sample/quarter

Semivols (Scan)

8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 15:49	PAHs Only

Wet Chem

Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 15:49	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 15:49	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**

A9D0674-20 T4-PDI2019-SG58-190417 [Sediment] Sampled 04/17/19 14:54 (GMT-08:00) Pacific Time (US & Canada) 4 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/14/19 14:54	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 14:54	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 14:54	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 14:54	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 14:54	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 14:54	

A9D0674-21 T4-PDI2019-SG59-190417 [Sediment] Sampled 04/17/19 13:50 (GMT-08:00) Pacific Time (US & Canada) 6 Containers

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/14/19 13:50	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 13:50	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/18/19 13:50	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 13:50	MS/MSD this sample, PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 13:50	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 13:50	MS/MSD this sample

A9D0674-22 FD-201904171301 [Sediment] Sampled 04/17/19 13:01 (GMT-08:00) Pacific Time (US & Canada) 2 Containers

No T on CoC, containers read T of 1301

Dry Weight				
Dry Weight	04/23/19 17:00	3	10/14/19 13:01	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 13:01	
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	05/01/19 13:01	PAHs Only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/14/19 13:01	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/15/19 13:01	

A9D0674

Apex Laboratories

Client:	**Anchor QEA, LLC**	**Project Manager:**	**Darwin Thomas**
Project:	**Port of Portland - T4 - PDI**	**Project Number:**	**Port of Portland T4 PDI**

Analysis	Due	TAT	Expires	Comments
Analysis	**Due**	**TAT**	**Expires**	**Comments**
A9D0674-23 T4-PDI2019-SG60-190417 [Sediment] Sampled 04/16/19 13:01 (GMT-08:00) Pacific Time (US & Canada) 4 Containers				
Dry Weight				
Dry Weight	04/23/19 17:00	3	10/13/19 13:01	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 13:01	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 13:01	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 13:01	PAHs only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 13:01	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 13:01	
A9D0674-24 T4-PDI2019-SG61-190416 [Sediment] Sampled 04/16/19 15:09 (GMT-08:00) Pacific Time (US & Canada) 4 Containers				
Dry Weight				
Dry Weight	04/23/19 17:00	3	10/13/19 15:09	**USE SOLIDS DATA**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/13/19 15:09	
Sample Control				
Archive Samples - Frozen	04/19/20 17:00	1	04/17/19 15:09	$2/sample/quarter
Semivols (Scan)				
8270D LL PAH/PHTH/Phenols	05/01/19 17:00	10	04/30/19 15:09	PAHs only
Wet Chem				
Solids, PSEP 1986	05/01/19 17:00	10	10/13/19 15:09	enter TS data for DWt.
Total Organic Carbon - Soil (9060A)	05/01/19 17:00	10	05/14/19 15:09	
A9D0674-25 FD-201904171350 [Sediment] Sampled 04/17/19 13:50 (GMT-08:00) Pacific Time (US & Canada) 1 Containers				**changed from T4-PDI2019-SG59-190417-DUP per CF 5/23**
Geotechnical				
Grain Size (D422m/PSET)	05/01/19 17:00	10	10/14/19 13:50	

Reviewed By

Date

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

COC ID: APEX-20190417-170734
Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
001	RB-201904171558	RB	WQ	04/17/2019	15:58	2	☐				
								PAHs	SW8270DSIM	30	
002	T4-PDI2019-SG05-190417	N	SE	04/17/2019	11:35	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
003	T4-PDI2019-SG06-000101	N	SE	04/17/2019	10:21	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
004	T4-PDI2019-SG08-190415	N	SE	04/15/2019	12:29	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
005	T4-PDI2019-SG11-190415	N	SE	04/15/2019	11:35	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature [signature]	Signature	Signature	Signature	Signature
Print Name Ben Johnson	Print Name R Komorow	Print Name	Print Name	Print Name	Print Name
Company Anchor QEA	Company APEX	Company	Company	Company	Company
Date/Time 4/18/19 0740	Date/Time 4/18/19 7:40	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 4/17/2019

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

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI

Client: The Port of Portland

Sample Custodian: JF

Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
005	T4-PDI2019-SG11-190415	N	SE	04/15/2019	11:35	4	☐				
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
006	T4-PDI2019-SG13-000101	N	SE	04/15/2019	15:34	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
007	T4-PDI2019-SG15-000101	N	SE	04/16/2019	14:34	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
008	T4-PDI2019-SG16-190416	N	SE	04/16/2019	10:13	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
009	T4-PDI2019-SG16A-190416	N	SE	04/16/2019	9:45	2	☐				

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Signature	Signature	Signature	Signature	Signature
Print Name: Anchor QEA	Print Name: Rkomorita	Print Name	Print Name	Print Name	Print Name
Company: Ben Johnson	Company: APEX	Company	Company	Company	Company
Date/Time: 4/18/19 2240	Date/Time: 4/18/19 7:40	Date/Time	Date/Time	Date/Time	Date/Time

Date Printed: 4/17/2019

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

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
009	T4-PDI2019-SG16A-190416	N	SE	04/16/2019	9:45	2	☐				
								Archive	NA	-1	-18°C
010	T4-PDI2019-SG16B-190416	N	SE	04/16/2019	9:59	2	☐				
								Archive	NA	-1	-18°C
011	T4-PDI2019-SG16C-190416	N	SE	04/16/2019	10:09	2	☐				
								Archive	NA	-1	-18°C
012	T4-PDI2019-SG17-190416	N	SE	04/16/2019	11:14	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
013	FD-201904151441	FD	SE	04/15/2019		2	☐				
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
014	T4-PDI2019-SG18-190415	N	SE	04/15/2019	14:41	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C

Comment

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: [signature]	Signature: [signature]	Signature:	Signature:	Signature:	Signature:
Print Name: Ben Johnson	Print Name: R Komorowski	Print Name:	Print Name:	Print Name:	Print Name:
Company: Anchor QEA	Company: APEX	Company:	Company:	Company:	Company:
Date/Time: 4/18/19 0740	Date/Time: 4/18/19 7:40	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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

Date Printed: 4/17/2019

ANCHOR QEA
1201 3rd Avenue Suite 2600 Seattle WA 98101

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
014	T4-PDI2019-SG18-190415	N	SE	04/15/2019	14:41	4	☐				
								TOC	SW9060A	30	0 – 6 °C
015	T4-PDI2019-SG51-190417	N	SE	04/17/2019	15:25	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
016	T4-PDI2019-SG52-190417	N	SE	04/17/2019	14:26	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
017	T4-PDI2019-SG53-190416	N	SE	04/16/2019	16:27	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
018	T4-PDI2019-SG54-190416	N	SE	04/16/2019	13:27	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient

Comment

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: [signature]	Signature: [signature]	Signature:	Signature:	Signature:	Signature:
Print Name: Ben Johnson	Print Name: R Komorowski	Print Name:	Print Name:	Print Name:	Print Name:
Company: Anchor QEA	Company: APEX	Company:	Company:	Company:	Company:
Date/Time: 4/18/19 0740	Date/Time: 4/18/740	Date/Time:	Date/Time:	Date/Time:	Date/Time:

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

Date Printed: 4/17/2019

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: # Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	# Containers	Lab QC*	Test Request	Method	TAT**	Preservative
018	T4-PDI2019-SG54-190416	N	SE	04/16/2019	13:27	4	☐				
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
019	T4-PDI2019-SG57-190417	N	SE	04/17/2019	15:49	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
020	T4-PDI2019-SG58-190417	N	SE	04/17/2019	14:54	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
021	T4-PDI2019-SG59-190417	N	SE	04/17/2019	13:50	6	☒				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 – 6 °C
								Percent solids - APEX	SM2540G	30	0 – 6 °C
								TOC	SW9060A	30	0 – 6 °C
022	FD-201904171301	FD	SE	04/17/2019		2	☐				

Comment:

Relinquished By	Received By	Relinquished By	Received By	Relinquished By	Received By
Signature: [signature]	Signature: [signature]	Signature	Signature	Signature	Signature
Print Name: Ben Johnson	Print Name: R Kamorow	Print Name	Print Name	Print Name	Print Name
Company: Anchor QEA	Company: APEX	Company	Company	Company	Company
Date/Time: 4/18/19 0740	Date/Time: 4/18/19 7:40	Date/Time	Date/Time	Date/Time	Date/Time

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

Date Printed: 4/17/2019

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

ENVIRONMENTAL SAMPLE CHAIN OF CUSTODY

A9D0674

COC ID: APEX-20190417-170734

POC: Cindy Fields ((206)-903-3394)
1201 3rd Avenue, Suite 2600, Seattle, WA 98101

Project: Port of Portland T4 PDI
Client: The Port of Portland

Sample Custodian: JF
Lab: Apex Laboratories, Tigard, OR

COC Sample Number	Field Sample ID	Sample Type	Matrix	Collected Date	Collected Time	Containers #	Lab QC*	Test Request	Method	TAT**	Preservative
022	FD-201904171301	FD	SE	04/17/2019		2	☐				
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
023	T4-PDI2019-SG60-190417	N	SE	04/17/2019	13:01	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C
024	T4-PDI2019-SG61-190416	N	SE	04/16/2019	15:09	4	☐				
								Archive	NA	-1	-18°C
								Grain Size	D 422M/PSET	30	Ambient
								PAHs	SW8270DSIM	30	0 - 6 °C
								Percent solids - APEX	SM2540G	30	0 - 6 °C
								TOC	SW9060A	30	0 - 6 °C

Comment:

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Print Name: Ben Johnson	Print Name: RKumokawa	Print Name:	Print Name:	Print Name:	Print Name:
Company: Anchor QEA	Company: APEX	Company:	Company:	Company:	Company:
Date/Time: 4/18/19 0240	Date/Time: 4/19/19 7:40	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Date Printed: 4/17/2019

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

APEX LABS COOLER RECEIPT FORM

Client: Anchor Element WO#: A9D0674

Project/Project #: Port of Portland T4 PDI

Delivery Info:

Date/time received: 4/18/19 @ 7:40 By: PK

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

Cooler Inspection Date/time inspected: 4/18/19 @ 8:27 By: KS

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

Signed/dated by client? Yes X No ___

Signed/dated by Apex? Yes X No ___

	Cooler #1	Cooler #2	Cooler #3	Cooler #4	Cooler #5	Cooler #6	Cooler #7
Temperature (°C)	2.5	4.5	5.7				
Received on ice? (Y/N)	Y	Y	Y				
Temp. blanks? (Y/N)	Y	Y	Y				
Ice type: (Gel/Real/Other)	Real	Real	Real				
Condition:	Good	Good	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: 4/18/19 @1000 By: ___

All samples intact? Yes X No ___ Comments: ___

Bottle labels/COCs agree? Yes X No ___ Comments: FD-20190415 1441 no T on CoC, container reads T of 1441, FD-20190417 1301 no T on CoC, container reads T of 1301

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: ___ Witness: ___ Cooler Inspected by: ___ See Project Contact Form: Y

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

CLP-Like Forms

Apex Laboratories

SDG: A9D0674

CLASS: GCMS

METHOD: EPA 8270D

ANALYSES DATA PACKAGE COVER PAGE

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI

Client Sample Id:	Lab Sample Id:	Matrix
RB-201904171558	A9D0674-01	Water
T4-PDI2019-SG05-190417	A9D0674-02	Sediment
T4-PDI2019-SG06-190417	A9D0674-03	Sediment
T4-PDI2019-SG08-190415	A9D0674-04	Sediment
T4-PDI2019-SG11-190415	A9D0674-05	Sediment
T4-PDI2019-SG13-190415	A9D0674-06	Sediment
T4-PDI2019-SG15-190416	A9D0674-07	Sediment
T4-PDI2019-SG16-190416	A9D0674-08	Sediment
T4-PDI2019-SG17-190416	A9D0674-12	Sediment
FD-201904151441	A9D0674-13	Sediment
T4-PDI2019-SG18-190415	A9D0674-14	Sediment
T4-PDI2019-SG51-190417	A9D0674-15	Sediment
T4-PDI2019-SG52-190417	A9D0674-16	Sediment
T4-PDI2019-SG53-190416	A9D0674-17	Sediment
T4-PDI2019-SG54-190416	A9D0674-18	Sediment
T4-PDI2019-SG57-190417	A9D0674-19	Sediment
T4-PDI2019-SG58-190417	A9D0674-20	Sediment
T4-PDI2019-SG59-190417	A9D0674-21	Sediment
FD-201904171301	A9D0674-22	Sediment
T4-PDI2019-SG60-190417	A9D0674-23	Sediment
T4-PDI2019-SG61-190416	A9D0674-24	Sediment

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: 6/17/2019 10:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D

Laboratory: Apex Laboratories **SDG:** A9D0674

Client: Anchor QEA, LLC **Project:** Port of Portland - T4 - PDI

Batch Matrix: Sediment

Analyte	MDL	MRL	Units
Acenaphthene	1.33	2.67	ug/kg
Acenaphthylene	1.33	2.67	ug/kg
Anthracene	1.33	2.67	ug/kg
Benz(a)anthracene	1.33	2.67	ug/kg
Benzo(a)pyrene	2.00	4.00	ug/kg
Benzo(b)fluoranthene	2.00	4.00	ug/kg
Benzo(k)fluoranthene	2.00	4.00	ug/kg
Benzo(g,h,i)perylene	1.33	2.67	ug/kg
Chrysene	1.33	2.67	ug/kg
Dibenz(a,h)anthracene	1.33	2.67	ug/kg
Fluoranthene	1.33	2.67	ug/kg
Fluorene	1.33	2.67	ug/kg
Indeno(1,2,3-cd)pyrene	1.33	2.67	ug/kg
1-Methylnaphthalene	2.67	5.33	ug/kg
2-Methylnaphthalene	2.67	5.33	ug/kg
Naphthalene	2.67	5.33	ug/kg
Phenanthrene	1.33	2.67	ug/kg
Pyrene	1.33	2.67	ug/kg
Carbazole	2.00	4.00	ug/kg
Dibenzofuran	1.33	2.67	ug/kg
Butyl benzyl phthalate	6.67	13.3	ug/kg
Diethylphthalate	6.67	13.3	ug/kg
Dimethylphthalate	6.67	13.3	ug/kg
Di-n-butylphthalate	6.67	13.3	ug/kg
Di-n-octyl phthalate	10.7	13.3	ug/kg

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

METHOD DETECTION AND REPORTING LIMITS

EPA 8270D

Laboratory: Apex Laboratories **SDG:** A9D0674

Client: Anchor QEA, LLC **Project:** Port of Portland - T4 - PDI

Batch Matrix: Water

Analyte	MDL	MRL	Units
Acenaphthene	0.0100	0.0200	ug/L
Acenaphthylene	0.0100	0.0200	ug/L
Anthracene	0.0100	0.0200	ug/L
Benz(a)anthracene	0.0100	0.0200	ug/L
Benzo(a)pyrene	0.0150	0.0300	ug/L
Benzo(b)fluoranthene	0.0150	0.0300	ug/L
Benzo(k)fluoranthene	0.0150	0.0300	ug/L
Benzo(g,h,i)perylene	0.0100	0.0200	ug/L
Chrysene	0.0100	0.0200	ug/L
Dibenz(a,h)anthracene	0.0100	0.0200	ug/L
Fluoranthene	0.0100	0.0200	ug/L
Fluorene	0.0100	0.0200	ug/L
Indeno(1,2,3-cd)pyrene	0.0100	0.0200	ug/L
1-Methylnaphthalene	0.0200	0.0400	ug/L
2-Methylnaphthalene	0.0200	0.0400	ug/L
Naphthalene	0.0200	0.0400	ug/L
Phenanthrene	0.0100	0.0200	ug/L
Pyrene	0.0100	0.0200	ug/L
Carbazole	0.0150	0.0300	ug/L
Dibenzofuran	0.0100	0.0200	ug/L
Butyl benzyl phthalate	0.200	0.400	ug/L
Diethylphthalate	0.200	0.400	ug/L
Dimethylphthalate	0.200	0.400	ug/L
Di-n-butylphthalate	0.200	0.400	ug/L
Di-n-octyl phthalate	0.200	0.400	ug/L

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

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

RB-201904171558

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Water | Laboratory ID: A9D0674-01 | File ID: E04231912.D

Sampled: 04/17/19 15:58 | Prepared: 04/22/19 10:10 | Analyzed: 04/23/19 14:54

Preparation: EPA 3510C (Acid Extraction | Initial/Final: 920 mL / 1 mL

Batch: 9041150 | Sequence: 9D23025 | Calibration: A9A3103 | Instrument: SV-GCMS5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/L)	Q
83-32-9	Acenaphthene	1	0.0652	U
208-96-8	Acenaphthylene	1	0.0109	U
120-12-7	Anthracene	1	0.0109	U
56-55-3	Benz(a)anthracene	1	0.0109	U
50-32-8	Benzo(a)pyrene	1	0.0163	U
205-99-2	Benzo(b)fluoranthene	1	0.0163	U
207-08-9	Benzo(k)fluoranthene	1	0.0163	U
191-24-2	Benzo(g,h,i)perylene	1	0.0109	U
218-01-9	Chrysene	1	0.0109	U
53-70-3	Dibenz(a,h)anthracene	1	0.0109	U
206-44-0	Fluoranthene	1	0.0109	U
86-73-7	Fluorene	1	0.0109	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	0.0109	U
90-12-0	1-Methylnaphthalene	1	0.0217	U
91-57-6	2-Methylnaphthalene	1	0.0217	U
91-20-3	Naphthalene	1	0.0435	U
85-01-8	Phenanthrene	1	0.0109	U
129-00-0	Pyrene	1	0.0109	U
86-74-8	Carbazole	1	0.0163	U
132-64-9	Dibenzofuran	1	0.0109	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	5.43	2.61	48	44 - 120	
2-Fluorobiphenyl (Surr)	5.43	2.42	45	44 - 120	
Phenol-d6 (Surr)	5.43	0.944	17	10 - 120	
p-Terphenyl-d14 (Surr)	5.43	4.41	81	50 - 133	
2-Fluorophenol (Surr)	5.43	1.50	28	19 - 120	
2,4,6-Tribromophenol (Surr)	5.43	3.71	68	43 - 140	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	190998	6.863	180966	6.858	
Naphthalene-d8 (ISTD)	762561	8.11	697420	8.11	
Acenaphthene-d10 (ISTD)	357424	9.885	330094	9.885	
Phenanthrene-d10 (ISTD)	658201	11.404	669189	11.405	
Chrysene-d12 (ISTD)	601647	15.41	663777	15.416	
Perylene-d12 (ISTD)	480474	18.941	577187	18.946	
Dibenz(a,h)anthracene-d14 (ISTD)	423963	21.342	488530	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG05-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-02	File ID:	E04251909.D
Sampled:	04/17/19 11:35	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 12:27
Solids:	74.66	Preparation:	EPA 3546	Initial/Final:	15.72 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103	Instrument:	SV-GCMS5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	96.4	JD
208-96-8	Acenaphthylene	40	68.0	U
120-12-7	Anthracene	40	165	D
56-55-3	Benz(a)anthracene	40	498	D
50-32-8	Benzo(a)pyrene	40	661	D
205-99-2	Benzo(b)fluoranthene	40	607	D
207-08-9	Benzo(k)fluoranthene	40	232	D
191-24-2	Benzo(g,h,i)perylene	40	459	D
218-01-9	Chrysene	40	592	D
53-70-3	Dibenz(a,h)anthracene	40	68.0	U
206-44-0	Fluoranthene	40	1260	D
86-73-7	Fluorene	40	70.4	JD
193-39-5	Indeno(1,2,3-cd)pyrene	40	433	D
91-57-6	2-Methylnaphthalene	40	136	U
91-20-3	Naphthalene	40	136	U
85-01-8	Phenanthrene	40	603	D
129-00-0	Pyrene	40	1620	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	426	156	37	37 - 122	D
2-Fluorobiphenyl (Surr)	426	255	60	44 - 115	D
p-Terphenyl-d14 (Surr)	426	353	83	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	173331	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	656862	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	304626	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	623360	11.399	514606	11.404	
Chrysene-d12 (ISTD)	613910	15.411	458000	15.411	
Perylene-d12 (ISTD)	533019	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	450344	21.342	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG06-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-03	File ID:	E04251913.D
Sampled:	04/17/19 10:21	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 14:57
Solids:	75.49	Preparation:	EPA 3546	Initial/Final:	15.35 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103	Instrument:	SV-GCMS5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	68.9	U
208-96-8	Acenaphthylene	40	68.9	U
120-12-7	Anthracene	40	217	D
56-55-3	Benz(a)anthracene	40	721	D
50-32-8	Benzo(a)pyrene	40	941	D
205-99-2	Benzo(b)fluoranthene	40	894	D
207-08-9	Benzo(k)fluoranthene	40	306	D
191-24-2	Benzo(g,h,i)perylene	40	646	D
218-01-9	Chrysene	40	821	D
53-70-3	Dibenz(a,h)anthracene	40	75.8	JD
206-44-0	Fluoranthene	40	1660	D
86-73-7	Fluorene	40	101	JD
193-39-5	Indeno(1,2,3-cd)pyrene	40	607	D
91-57-6	2-Methylnaphthalene	40	138	U
91-20-3	Naphthalene	40	150	JD
85-01-8	Phenanthrene	40	594	D
129-00-0	Pyrene	40	2100	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	432	128	30	37 - 122	D
2-Fluorobiphenyl (Surr)	432	251	58	44 - 115	D
p-Terphenyl-d14 (Surr)	432	357	83	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	187425	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	711198	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	312814	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	571215	11.399	514606	11.404	
Chrysene-d12 (ISTD)	497125	15.411	458000	15.411	
Perylene-d12 (ISTD)	410218	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	346859	21.342	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG08-190415

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-04	File ID:	E04251914.D
Sampled:	04/15/19 12:29	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 15:35
Solids:	45.87	Preparation:	EPA 3546	Initial/Final:	15.07 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	115	U
208-96-8	Acenaphthylene	40	115	U
120-12-7	Anthracene	40	246	D
56-55-3	Benz(a)anthracene	40	870	D
50-32-8	Benzo(a)pyrene	40	1220	D
205-99-2	Benzo(b)fluoranthene	40	1280	D
207-08-9	Benzo(k)fluoranthene	40	412	D
191-24-2	Benzo(g,h,i)perylene	40	885	D
218-01-9	Chrysene	40	1040	D
53-70-3	Dibenz(a,h)anthracene	40	135	JD
206-44-0	Fluoranthene	40	1910	D
86-73-7	Fluorene	40	115	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	866	D
91-57-6	2-Methylnaphthalene	40	232	U
91-20-3	Naphthalene	40	232	JD
85-01-8	Phenanthrene	40	900	D
129-00-0	Pyrene	40	2400	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	723	335	46	37 - 122	D
2-Fluorobiphenyl (Surr)	723	282	39	44 - 115	D
p-Terphenyl-d14 (Surr)	723	315	44	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	186479	6.858	178755	6.863	
Naphthalene-d8 (ISTD)	711864	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	309341	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	562121	11.399	514606	11.404	
Chrysene-d12 (ISTD)	485824	15.405	458000	15.411	
Perylene-d12 (ISTD)	415151	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	359746	21.337	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG11-190415

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-05	File ID:	E04251908.D
Sampled:	04/15/19 11:35	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 11:49
Solids:	52.07	Preparation:	EPA 3546	Initial/Final:	15.37 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103	Instrument:	SV-GCMS5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	252	D
208-96-8	Acenaphthylene	40	788	D
120-12-7	Anthracene	40	6370	D
56-55-3	Benz(a)anthracene	40	8980	D
50-32-8	Benzo(a)pyrene	40	12300	D
205-99-2	Benzo(b)fluoranthene	40	10900	D
207-08-9	Benzo(k)fluoranthene	40	3910	D
191-24-2	Benzo(g,h,i)perylene	40	7850	D
218-01-9	Chrysene	40	10300	D
53-70-3	Dibenz(a,h)anthracene	40	1030	D
206-44-0	Fluoranthene	40	25500	D
86-73-7	Fluorene	40	2090	D
193-39-5	Indeno(1,2,3-cd)pyrene	40	6900	D
91-57-6	2-Methylnaphthalene	40	329	JD
91-20-3	Naphthalene	40	1850	D
85-01-8	Phenanthrene	40	19200	D
129-00-0	Pyrene	40	31000	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	625	300	48	37 - 122	D
2-Fluorobiphenyl (Surr)	625	381	61	44 - 115	D
p-Terphenyl-d14 (Surr)	625	428	68	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	190270	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	721983	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	325280	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	591119	11.399	514606	11.404	
Chrysene-d12 (ISTD)	544066	15.411	458000	15.411	
Perylene-d12 (ISTD)	470674	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	414805	21.337	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG13-190415

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-06	File ID:	E04251915.D
Sampled:	04/15/19 15:34	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 16:18
Solids:	49.23	Preparation:	EPA 3546	Initial/Final:	15.09 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	107	U
208-96-8	Acenaphthylene	40	107	U
120-12-7	Anthracene	40	246	D
56-55-3	Benz(a)anthracene	40	772	D
50-32-8	Benzo(a)pyrene	40	1070	D
205-99-2	Benzo(b)fluoranthene	40	1140	D
207-08-9	Benzo(k)fluoranthene	40	494	D
191-24-2	Benzo(g,h,i)perylene	40	803	D
218-01-9	Chrysene	40	911	D
53-70-3	Dibenz(a,h)anthracene	40	123	JD
206-44-0	Fluoranthene	40	1560	D
86-73-7	Fluorene	40	107	JD
193-39-5	Indeno(1,2,3-cd)pyrene	40	780	D
91-57-6	2-Methylnaphthalene	40	216	U
91-20-3	Naphthalene	40	216	U
85-01-8	Phenanthrene	40	846	D
129-00-0	Pyrene	40	1810	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	673	258	38	37 - 122	D
2-Fluorobiphenyl (Surr)	673	296	44	44 - 115	D
p-Terphenyl-d14 (Surr)	673	367	55	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	189523	6.858	178755	6.863	
Naphthalene-d8 (ISTD)	755322	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	330834	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	583430	11.399	514606	11.404	
Chrysene-d12 (ISTD)	480897	15.41	458000	15.411	
Perylene-d12 (ISTD)	401441	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	331886	21.342	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG15-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-07RE1	File ID:	E04291920.D
Sampled:	04/16/19 14:34	Prepared:	04/24/19 12:22	Analyzed:	04/29/19 19:34
Solids:	75.84	Preparation:	EPA 3546	Initial/Final:	15.39 g / 2 mL
Batch:	9041271	Sequence:	9D29024	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	6.84	U
208-96-8	Acenaphthylene	4	6.84	U
120-12-7	Anthracene	4	6.84	U
56-55-3	Benz(a)anthracene	4	26.4	D
50-32-8	Benzo(a)pyrene	4	31.9	D
205-99-2	Benzo(b)fluoranthene	4	37.5	D
207-08-9	Benzo(k)fluoranthene	4	15.5	JD
191-24-2	Benzo(g,h,i)perylene	4	26.1	D
218-01-9	Chrysene	4	31.9	D
53-70-3	Dibenz(a,h)anthracene	4	6.84	U
206-44-0	Fluoranthene	4	51.7	D
86-73-7	Fluorene	4	6.84	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	27.0	D
91-57-6	2-Methylnaphthalene	4	13.7	U
91-20-3	Naphthalene	4	13.7	U
85-01-8	Phenanthrene	4	22.9	D
129-00-0	Pyrene	4	60.6	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	428	279	65	37 - 122	
2-Fluorobiphenyl (Surr)	428	330	77	44 - 115	
p-Terphenyl-d14 (Surr)	428	369	86	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	192746	6.837	187829	6.837	
Naphthalene-d8 (ISTD)	753276	8.077	733555	8.083	
Acenaphthene-d10 (ISTD)	347757	9.853	346443	9.853	
Phenanthrene-d10 (ISTD)	589814	11.367	615921	11.367	
Chrysene-d12 (ISTD)	547065	15.346	560047	15.346	
Perylene-d12 (ISTD)	467895	18.871	476018	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	405353	21.267	398819	21.267	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG16-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-08	File ID:	E04251917.D
Sampled:	04/16/19 10:13	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 17:45
Solids:	50.61	Preparation:	EPA 3546	Initial/Final:	15.12 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	104	U
208-96-8	Acenaphthylene	40	104	U
120-12-7	Anthracene	40	182	JD
56-55-3	Benz(a)anthracene	40	827	D
50-32-8	Benzo(a)pyrene	40	1110	D
205-99-2	Benzo(b)fluoranthene	40	1170	D
207-08-9	Benzo(k)fluoranthene	40	471	D
191-24-2	Benzo(g,h,i)perylene	40	883	D
218-01-9	Chrysene	40	945	D
53-70-3	Dibenz(a,h)anthracene	40	125	JD
206-44-0	Fluoranthene	40	2060	D
86-73-7	Fluorene	40	104	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	859	D
91-57-6	2-Methylnaphthalene	40	209	U
91-20-3	Naphthalene	40	251	JD
85-01-8	Phenanthrene	40	738	D
129-00-0	Pyrene	40	2520	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	653	248	38	37 - 122	D
2-Fluorobiphenyl (Surr)	653	323	49	44 - 115	D
p-Terphenyl-d14 (Surr)	653	307	47	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	186488	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	742907	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	348664	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	707392	11.399	514606	11.404	
Chrysene-d12 (ISTD)	714986	15.41	458000	15.411	
Perylene-d12 (ISTD)	636946	18.946	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	566834	21.342	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG17-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-12RE1	File ID:	J04301910.D
Sampled:	04/16/19 11:14	Prepared:	04/24/19 12:22	Analyzed:	04/30/19 13:21
Solids:	71.40	Preparation:	EPA 3546	Initial/Final:	15.26 g / 2 mL
Batch:	9041271	Sequence:	9D30020	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	33.2	D
208-96-8	Acenaphthylene	4	9.60	JD
120-12-7	Anthracene	4	45.7	D
56-55-3	Benz(a)anthracene	4	220	D
50-32-8	Benzo(a)pyrene	4	298	D
205-99-2	Benzo(b)fluoranthene	4	327	D
207-08-9	Benzo(k)fluoranthene	4	104	D
191-24-2	Benzo(g,h,i)perylene	4	210	D
218-01-9	Chrysene	4	225	D
53-70-3	Dibenz(a,h)anthracene	4	38.6	D
206-44-0	Fluoranthene	4	368	D
86-73-7	Fluorene	4	20.1	D
193-39-5	Indeno(1,2,3-cd)pyrene	4	197	D
91-57-6	2-Methylnaphthalene	4	14.7	U
91-20-3	Naphthalene	4	29.1	JD
85-01-8	Phenanthrene	4	166	D
129-00-0	Pyrene	4	401	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	459	283	62	37 - 122	
2-Fluorobiphenyl (Surr)	459	314	68	44 - 115	
p-Terphenyl-d14 (Surr)	459	426	93	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	214359	6.808	197538	6.808	
Naphthalene-d8 (ISTD)	917218	8.081	883856	8.081	
Acenaphthene-d10 (ISTD)	441210	9.862	431952	9.862	
Phenanthrene-d10 (ISTD)	739559	11.376	760322	11.376	
Chrysene-d12 (ISTD)	628338	15.355	649652	15.355	
Perylene-d12 (ISTD)	570138	18.87	586554	18.875	
Dibenz(a,h)anthracene-d14 (ISTD)	538808	21.266	563388	21.266	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

FD-201904151441

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	A9D0674-13	File ID:	E04291906.D
Sampled:	04/15/19 14:41	Prepared:	04/24/19 12:22	Analyzed:	04/29/19 11:07
Solids:	62.36	Preparation:	EPA 3546	Initial/Final:	15.17 g / 2 mL
Batch:	9041271	Sequence:	9D29024	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	84.4	U
208-96-8	Acenaphthylene	40	84.4	U
120-12-7	Anthracene	40	91.7	JD
56-55-3	Benz(a)anthracene	40	364	D
50-32-8	Benzo(a)pyrene	40	425	D
205-99-2	Benzo(b)fluoranthene	40	529	D
207-08-9	Benzo(k)fluoranthene	40	212	JD
191-24-2	Benzo(g,h,i)perylene	40	359	D
218-01-9	Chrysene	40	453	D
53-70-3	Dibenz(a,h)anthracene	40	84.4	U
206-44-0	Fluoranthene	40	750	D
86-73-7	Fluorene	40	84.4	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	387	D
91-57-6	2-Methylnaphthalene	40	169	U
91-20-3	Naphthalene	40	169	U
85-01-8	Phenanthrene	40	404	D
129-00-0	Pyrene	40	831	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	529	194	37	37 - 122	D
2-Fluorobiphenyl (Surr)	529	279	53	44 - 115	D
p-Terphenyl-d14 (Surr)	529	356	67	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	204552	6.837	187829	6.837	
Naphthalene-d8 (ISTD)	809537	8.083	733555	8.083	
Acenaphthene-d10 (ISTD)	381207	9.853	346443	9.853	
Phenanthrene-d10 (ISTD)	677319	11.372	615921	11.367	
Chrysene-d12 (ISTD)	621625	15.346	560047	15.346	
Perylene-d12 (ISTD)	529242	18.877	476018	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	463714	21.267	398819	21.267	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG18-190415

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-14RE1	File ID:	J04301914.D
Sampled:	04/15/19 14:41	Prepared:	04/24/19 12:22	Analyzed:	04/30/19 15:49
Solids:	63.98	Preparation:	EPA 3546	Initial/Final:	15.5 g / 2 mL
Batch:	9041271	Sequence:	9D30020	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	19.7	D
208-96-8	Acenaphthylene	4	19.9	D
120-12-7	Anthracene	4	64.3	D
56-55-3	Benz(a)anthracene	4	217	D
50-32-8	Benzo(a)pyrene	4	308	D
205-99-2	Benzo(b)fluoranthene	4	321	D
207-08-9	Benzo(k)fluoranthene	4	119	D
191-24-2	Benzo(g,h,i)perylene	4	227	D
218-01-9	Chrysene	4	233	D
53-70-3	Dibenz(a,h)anthracene	4	35.6	D
206-44-0	Fluoranthene	4	455	D
86-73-7	Fluorene	4	33.8	D
193-39-5	Indeno(1,2,3-cd)pyrene	4	202	D
91-57-6	2-Methylnaphthalene	4	17.1	JD
91-20-3	Naphthalene	4	55.0	D
85-01-8	Phenanthrene	4	209	D
129-00-0	Pyrene	4	537	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	504	295	59	37 - 122	
2-Fluorobiphenyl (Surr)	504	284	56	44 - 115	
p-Terphenyl-d14 (Surr)	504	373	74	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	209638	6.808	197538	6.808	
Naphthalene-d8 (ISTD)	953377	8.081	883856	8.081	
Acenaphthene-d10 (ISTD)	465152	9.862	431952	9.862	
Phenanthrene-d10 (ISTD)	784110	11.381	760322	11.376	
Chrysene-d12 (ISTD)	683362	15.355	649652	15.355	
Perylene-d12 (ISTD)	603413	18.875	586554	18.875	
Dibenz(a,h)anthracene-d14 (ISTD)	569621	21.266	563388	21.266	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG51-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-15RE2	File ID:	J05011910.D
Sampled:	04/17/19 15:25	Prepared:	04/24/19 12:22	Analyzed:	05/01/19 13:23
Solids:	39.02	Preparation:	EPA 3546	Initial/Final:	15.34 g / 2 mL
Batch:	9041271	Sequence:	9E01028	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	1	3.33	U
208-96-8	Acenaphthylene	1	3.33	U
120-12-7	Anthracene	1	5.93	J
56-55-3	Benz(a)anthracene	1	13.3	
50-32-8	Benzo(a)pyrene	1	19.0	
205-99-2	Benzo(b)fluoranthene	1	24.1	
207-08-9	Benzo(k)fluoranthene	1	11.0	
191-24-2	Benzo(g,h,i)perylene	1	13.7	
218-01-9	Chrysene	1	20.0	
53-70-3	Dibenz(a,h)anthracene	1	3.33	U
206-44-0	Fluoranthene	1	30.8	
86-73-7	Fluorene	1	7.57	
193-39-5	Indeno(1,2,3-cd)pyrene	1	12.3	
91-57-6	2-Methylnaphthalene	1	6.69	U
91-20-3	Naphthalene	1	9.64	J
85-01-8	Phenanthrene	1	16.8	
129-00-0	Pyrene	1	29.9	

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	835	553	66	37 - 122	
2-Fluorobiphenyl (Surr)	835	480	57	44 - 115	
p-Terphenyl-d14 (Surr)	835	418	50	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	208589	6.808	222998	6.808	
Naphthalene-d8 (ISTD)	857536	8.081	913064	8.081	
Acenaphthene-d10 (ISTD)	423606	9.863	444992	9.863	
Phenanthrene-d10 (ISTD)	715027	11.382	783014	11.376	
Chrysene-d12 (ISTD)	651979	15.356	710488	15.361	
Perylene-d12 (ISTD)	580859	18.875	667303	18.88	
Dibenz(a,h)anthracene-d14 (ISTD)	567644	21.271	637372	21.271	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG52-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-16RE2	File ID:	E05011917.D
Sampled:	04/17/19 14:26	Prepared:	05/01/19 13:10	Analyzed:	05/01/19 19:39
Solids:	35.19	Preparation:	EPA 3546	Initial/Final:	15.77 g / 2 mL
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	1	3.78	J
208-96-8	Acenaphthylene	1	3.60	U
120-12-7	Anthracene	1	8.41	
56-55-3	Benz(a)anthracene	1	36.0	
50-32-8	Benzo(a)pyrene	1	49.6	
205-99-2	Benzo(b)fluoranthene	1	75.7	
207-08-9	Benzo(k)fluoranthene	1	28.6	
191-24-2	Benzo(g,h,i)perylene	1	31.1	
218-01-9	Chrysene	1	47.7	
53-70-3	Dibenz(a,h)anthracene	1	7.17	J
206-44-0	Fluoranthene	1	62.8	
86-73-7	Fluorene	1	5.51	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	34.7	
91-57-6	2-Methylnaphthalene	1	7.22	U
91-20-3	Naphthalene	1	7.22	U
85-01-8	Phenanthrene	1	24.7	
129-00-0	Pyrene	1	62.3	

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	901	491	54	37 - 122	
2-Fluorobiphenyl (Surr)	901	386	43	44 - 115	*
p-Terphenyl-d14 (Surr)	901	472	52	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	198796	6.826	166667	6.815	
Naphthalene-d8 (ISTD)	760688	8.072	650925	8.078	
Acenaphthene-d10 (ISTD)	396345	9.848	309388	9.853	
Phenanthrene-d10 (ISTD)	773424	11.367	635497	11.367	
Chrysene-d12 (ISTD)	692056	15.346	688297	15.352	
Perylene-d12 (ISTD)	516347	18.877	585826	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	307390	21.267	512443	21.273	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG53-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-17RE1	File ID:	J04301917.D
Sampled:	04/16/19 16:27	Prepared:	04/24/19 12:22	Analyzed:	04/30/19 17:36
Solids:	33.09	Preparation:	EPA 3546	Initial/Final:	15.42 g / 2 mL
Batch:	9041271	Sequence:	9D30020	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	15.6	U
208-96-8	Acenaphthylene	4	15.6	U
120-12-7	Anthracene	4	15.6	U
56-55-3	Benz(a)anthracene	4	41.0	D
50-32-8	Benzo(a)pyrene	4	53.5	D
205-99-2	Benzo(b)fluoranthene	4	61.9	D
207-08-9	Benzo(k)fluoranthene	4	36.6	JD
191-24-2	Benzo(g,h,i)perylene	4	23.0	JD
218-01-9	Chrysene	4	42.0	D
53-70-3	Dibenz(a,h)anthracene	4	15.6	U
206-44-0	Fluoranthene	4	44.0	D
86-73-7	Fluorene	4	15.6	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	26.5	JD
91-57-6	2-Methylnaphthalene	4	31.4	U
91-20-3	Naphthalene	4	31.4	U
85-01-8	Phenanthrene	4	18.2	JD
129-00-0	Pyrene	4	40.6	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	980	663	68	37 - 122	
2-Fluorobiphenyl (Surr)	980	526	54	44 - 115	
p-Terphenyl-d14 (Surr)	980	568	58	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	217552	6.808	197538	6.808	
Naphthalene-d8 (ISTD)	960901	8.081	883856	8.081	
Acenaphthene-d10 (ISTD)	467020	9.862	431952	9.862	
Phenanthrene-d10 (ISTD)	773367	11.376	760322	11.376	
Chrysene-d12 (ISTD)	673455	15.355	649652	15.355	
Perylene-d12 (ISTD)	598362	18.875	586554	18.875	
Dibenz(a,h)anthracene-d14 (ISTD)	561914	21.26	563388	21.266	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG54-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-18RE1	File ID:	J04301918.D
Sampled:	04/16/19 13:27	Prepared:	04/24/19 12:22	Analyzed:	04/30/19 18:08
Solids:	70.63	Preparation:	EPA 3546	Initial/Final:	15.29 g / 2 mL
Batch:	9041271	Sequence:	9D30020	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	25.4	D
208-96-8	Acenaphthylene	4	8.15	JD
120-12-7	Anthracene	4	32.1	D
56-55-3	Benz(a)anthracene	4	105	D
50-32-8	Benzo(a)pyrene	4	149	D
205-99-2	Benzo(b)fluoranthene	4	174	D
207-08-9	Benzo(k)fluoranthene	4	57.9	D
191-24-2	Benzo(g,h,i)perylene	4	103	D
218-01-9	Chrysene	4	117	D
53-70-3	Dibenz(a,h)anthracene	4	22.3	D
206-44-0	Fluoranthene	4	184	D
86-73-7	Fluorene	4	16.7	D
193-39-5	Indeno(1,2,3-cd)pyrene	4	94.3	D
91-57-6	2-Methylnaphthalene	4	17.0	JD
91-20-3	Naphthalene	4	50.9	D
85-01-8	Phenanthrene	4	116	D
129-00-0	Pyrene	4	192	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	463	291	63	37 - 122	
2-Fluorobiphenyl (Surr)	463	346	75	44 - 115	
p-Terphenyl-d14 (Surr)	463	386	83	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	226848	6.808	197538	6.808	
Naphthalene-d8 (ISTD)	986832	8.081	883856	8.081	
Acenaphthene-d10 (ISTD)	475856	9.863	431952	9.862	
Phenanthrene-d10 (ISTD)	791336	11.382	760322	11.376	
Chrysene-d12 (ISTD)	647023	15.356	649652	15.355	
Perylene-d12 (ISTD)	569838	18.88	586554	18.875	
Dibenz(a,h)anthracene-d14 (ISTD)	536896	21.266	563388	21.266	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG57-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-19RE2	File ID:	E05011919.D
Sampled:	04/17/19 15:49	Prepared:	05/01/19 13:10	Analyzed:	05/01/19 20:52
Solids:	34.62	Preparation:	EPA 3546	Initial/Final:	15.57 g / 2 mL
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	1	3.70	U
208-96-8	Acenaphthylene	1	3.70	U
120-12-7	Anthracene	1	3.72	J
56-55-3	Benz(a)anthracene	1	14.7	
50-32-8	Benzo(a)pyrene	1	21.2	
205-99-2	Benzo(b)fluoranthene	1	30.1	
207-08-9	Benzo(k)fluoranthene	1	11.3	
191-24-2	Benzo(g,h,i)perylene	1	15.7	
218-01-9	Chrysene	1	19.7	
53-70-3	Dibenz(a,h)anthracene	1	3.70	U
206-44-0	Fluoranthene	1	27.6	
86-73-7	Fluorene	1	3.70	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	17.1	
91-57-6	2-Methylnaphthalene	1	7.43	U
91-20-3	Naphthalene	1	7.43	U
85-01-8	Phenanthrene	1	12.0	
129-00-0	Pyrene	1	27.1	

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	928	566	61	37 - 122	
2-Fluorobiphenyl (Surr)	928	280	30	44 - 115	*
p-Terphenyl-d14 (Surr)	928	372	40	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	197666	6.826	166667	6.815	
Naphthalene-d8 (ISTD)	818768	8.072	650925	8.078	
Acenaphthene-d10 (ISTD)	413632	9.848	309388	9.853	
Phenanthrene-d10 (ISTD)	750672	11.367	635497	11.367	
Chrysene-d12 (ISTD)	687639	15.346	688297	15.352	
Perylene-d12 (ISTD)	583843	18.871	585826	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	401288	21.267	512443	21.273	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG58-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-20RE2	File ID:	E05011920.D
Sampled:	04/17/19 14:54	Prepared:	05/01/19 13:10	Analyzed:	05/01/19 21:28
Solids:	34.16	Preparation:	EPA 3546	Initial/Final:	15.65 g / 2 mL
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103	Instrument:	SV-GCMS5

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	1	3.73	U
208-96-8	Acenaphthylene	1	3.73	U
120-12-7	Anthracene	1	4.91	J
56-55-3	Benz(a)anthracene	1	18.3	
50-32-8	Benzo(a)pyrene	1	26.5	
205-99-2	Benzo(b)fluoranthene	1	42.4	
207-08-9	Benzo(k)fluoranthene	1	12.6	
191-24-2	Benzo(g,h,i)perylene	1	19.9	
218-01-9	Chrysene	1	28.2	
53-70-3	Dibenz(a,h)anthracene	1	4.35	J
206-44-0	Fluoranthene	1	36.1	
86-73-7	Fluorene	1	3.73	U
193-39-5	Indeno(1,2,3-cd)pyrene	1	21.5	
91-57-6	2-Methylnaphthalene	1	7.49	U
91-20-3	Naphthalene	1	7.49	U
85-01-8	Phenanthrene	1	13.4	
129-00-0	Pyrene	1	34.6	

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	935	378	40	37 - 122	
2-Fluorobiphenyl (Surr)	935	189	20	44 - 115	*
p-Terphenyl-d14 (Surr)	935	311	33	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	212318	6.831	166667	6.815	
Naphthalene-d8 (ISTD)	816260	8.072	650925	8.078	
Acenaphthene-d10 (ISTD)	366616	9.853	309388	9.853	
Phenanthrene-d10 (ISTD)	617110	11.367	635497	11.367	
Chrysene-d12 (ISTD)	535231	15.341	688297	15.352	
Perylene-d12 (ISTD)	433061	18.871	585826	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	284399	21.262	512443	21.273	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG59-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-21RE2	File ID:	E04251918.D
Sampled:	04/17/19 13:50	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 18:17
Solids:	33.79	Preparation:	EPA 3546	Initial/Final:	15.25 g / 2 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	1	3.87	U
208-96-8	Acenaphthylene	1	4.09	J
120-12-7	Anthracene	1	9.97	
56-55-3	Benz(a)anthracene	1	26.4	
50-32-8	Benzo(a)pyrene	1	33.9	
205-99-2	Benzo(b)fluoranthene	1	54.4	
207-08-9	Benzo(k)fluoranthene	1	17.8	
191-24-2	Benzo(g,h,i)perylene	1	27.7	
218-01-9	Chrysene	1	37.4	
53-70-3	Dibenz(a,h)anthracene	1	5.70	J
206-44-0	Fluoranthene	1	53.6	
86-73-7	Fluorene	1	5.83	J
193-39-5	Indeno(1,2,3-cd)pyrene	1	30.0	
91-57-6	2-Methylnaphthalene	1	7.77	U
91-20-3	Naphthalene	1	7.77	U
85-01-8	Phenanthrene	1	19.6	
129-00-0	Pyrene	1	50.1	

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	970	544	56	37 - 122	
2-Fluorobiphenyl (Surr)	970	419	43	44 - 115	*
p-Terphenyl-d14 (Surr)	970	431	44	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	162723	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	618999	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	285760	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	521652	11.399	514606	11.404	
Chrysene-d12 (ISTD)	485321	15.411	458000	15.411	
Perylene-d12 (ISTD)	424888	18.941	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	349274	21.337	319458	21.342	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

FD-201904171301

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-22RE2	File ID:	E05011921.D
Sampled:	04/17/19 13:01	Prepared:	05/01/19 13:10	Analyzed:	05/01/19 22:04
Solids:	37.04	Preparation:	EPA 3546	Initial/Final:	15.55 g / 2 mL
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	13.9	U
208-96-8	Acenaphthylene	4	13.9	U
120-12-7	Anthracene	4	23.9	JD
56-55-3	Benz(a)anthracene	4	81.4	D
50-32-8	Benzo(a)pyrene	4	126	D
205-99-2	Benzo(b)fluoranthene	4	175	D
207-08-9	Benzo(k)fluoranthene	4	67.8	D
191-24-2	Benzo(g,h,i)perylene	4	85.6	D
218-01-9	Chrysene	4	109	D
53-70-3	Dibenz(a,h)anthracene	4	22.7	JD
206-44-0	Fluoranthene	4	153	D
86-73-7	Fluorene	4	13.9	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	101	D
91-57-6	2-Methylnaphthalene	4	27.8	U
91-20-3	Naphthalene	4	27.8	U
85-01-8	Phenanthrene	4	55.4	D
129-00-0	Pyrene	4	156	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	868	545	63	37 - 122	
2-Fluorobiphenyl (Surr)	868	601	69	44 - 115	
p-Terphenyl-d14 (Surr)	868	642	74	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	209953	6.81	166667	6.815	
Naphthalene-d8 (ISTD)	825557	8.056	650925	8.078	
Acenaphthene-d10 (ISTD)	377181	9.848	309388	9.853	
Phenanthrene-d10 (ISTD)	659725	11.367	635497	11.367	
Chrysene-d12 (ISTD)	722565	15.346	688297	15.352	
Perylene-d12 (ISTD)	620599	18.877	585826	18.877	
Dibenz(a,h)anthracene-d14 (ISTD)	426092	21.267	512443	21.273	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG60-190417

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-23RE1	File ID:	J05011909.D
Sampled:	04/16/19 13:01	Prepared:	04/24/19 12:22	Analyzed:	05/01/19 12:47
Solids:	36.70	Preparation:	EPA 3546	Initial/Final:	15.17 g / 2 mL
Batch:	9041271	Sequence:	9E01028	Calibration:	A9D1505
Instrument:	SV-GCMS10				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	4	14.3	U
208-96-8	Acenaphthylene	4	14.3	U
120-12-7	Anthracene	4	14.3	U
56-55-3	Benz(a)anthracene	4	45.9	D
50-32-8	Benzo(a)pyrene	4	65.3	D
205-99-2	Benzo(b)fluoranthene	4	79.1	D
207-08-9	Benzo(k)fluoranthene	4	37.7	JD
191-24-2	Benzo(g,h,i)perylene	4	47.4	D
218-01-9	Chrysene	4	50.1	D
53-70-3	Dibenz(a,h)anthracene	4	14.3	U
206-44-0	Fluoranthene	4	77.8	D
86-73-7	Fluorene	4	14.3	U
193-39-5	Indeno(1,2,3-cd)pyrene	4	48.4	D
91-57-6	2-Methylnaphthalene	4	28.8	U
91-20-3	Naphthalene	4	28.8	U
85-01-8	Phenanthrene	4	37.6	D
129-00-0	Pyrene	4	76.1	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	898	454	51	37 - 122	
2-Fluorobiphenyl (Surr)	898	350	39	44 - 115	*
p-Terphenyl-d14 (Surr)	898	439	49	54 - 127	*

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	243953	6.808	222998	6.808	
Naphthalene-d8 (ISTD)	981479	8.081	913064	8.081	
Acenaphthene-d10 (ISTD)	481889	9.862	444992	9.863	
Phenanthrene-d10 (ISTD)	814905	11.376	783014	11.376	
Chrysene-d12 (ISTD)	744251	15.355	710488	15.361	
Perylene-d12 (ISTD)	696472	18.875	667303	18.88	
Dibenz(a,h)anthracene-d14 (ISTD)	656862	21.266	637372	21.271	

* Values outside of QC limits

ORGANIC ANALYSIS DATA SHEET

EPA 8270D

T4-PDI2019-SG61-190416

Laboratory:	Apex Laboratories		SDG:	A9D0674	
Client:	Anchor QEA, LLC		Project:	Port of Portland - T4 - PDI	
Matrix:	Sediment	Laboratory ID:	A9D0674-24	File ID:	E04251907.D
Sampled:	04/16/19 15:09	Prepared:	04/24/19 12:22	Analyzed:	04/25/19 11:12
Solids:	69.40	Preparation:	EPA 3546	Initial/Final:	15.28 g / 5 mL
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103
Instrument:	SV-GCMS5				

CAS NO.	COMPOUND	DILUTION	CONC. (ug/kg dry)	Q
83-32-9	Acenaphthene	40	188	U
208-96-8	Acenaphthylene	40	188	U
120-12-7	Anthracene	40	188	U
56-55-3	Benz(a)anthracene	40	586	D
50-32-8	Benzo(a)pyrene	40	681	D
205-99-2	Benzo(b)fluoranthene	40	881	D
207-08-9	Benzo(k)fluoranthene	40	336	JD
191-24-2	Benzo(g,h,i)perylene	40	475	D
218-01-9	Chrysene	40	578	D
53-70-3	Dibenz(a,h)anthracene	40	188	U
206-44-0	Fluoranthene	40	765	D
86-73-7	Fluorene	40	188	U
193-39-5	Indeno(1,2,3-cd)pyrene	40	545	D
91-57-6	2-Methylnaphthalene	40	378	U
91-20-3	Naphthalene	40	378	U
85-01-8	Phenanthrene	40	403	D
129-00-0	Pyrene	40	749	D

SYSTEM MONITORING COMPOUND	ADDED (ug/kg dry)	CONC (ug/kg dry)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	471	225	48	37 - 122	D
p-Terphenyl-d14 (Surr)	471	350	74	54 - 127	D

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	167847	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	659945	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	318377	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	626585	11.404	514606	11.404	
Chrysene-d12 (ISTD)	588534	15.411	458000	15.411	
Perylene-d12 (ISTD)	516026	18.946	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	450002	21.337	319458	21.342	

* Values outside of QC limits

PREPARATION BATCH SUMMARY

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Batch: 9041150 Batch Matrix: Water Preparation: EPA 3510C (Acid Extraction)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9041150-BLK1	E04231909.D	04/22/19 10:10	
LCS	9041150-BS1	E04231910.D	04/22/19 10:10	
LCS Dup	9041150-BSD1	E04231911.D	04/22/19 10:10	
RB-201904171558	A9D0674-01	E04231912.D	04/22/19 10:10	

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

PREPARATION BATCH SUMMARY

EPA 8270D

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041271 Batch Matrix: Sediment Preparation: EPA 3546

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9041271-BLK1	E04251905.D	04/24/19 12:22	
LCS	9041271-BS1	E04251906.D	04/24/19 12:22	
T4-PDI2019-SG05-190417 (Dup)	9041271-DUP1	E04251910.D	04/24/19 12:22	
T4-PDI2019-SG59-190417 (MS)	9041271-MS1	E04251919.D	04/24/19 12:22	
T4-PDI2019-SG59-190417 (MSD)	9041271-MSD1	E04251920.D	04/24/19 12:22	
T4-PDI2019-SG05-190417	A9D0674-02	E04251909.D	04/24/19 12:22	
T4-PDI2019-SG06-190417	A9D0674-03	E04251913.D	04/24/19 12:22	
T4-PDI2019-SG08-190415	A9D0674-04	E04251914.D	04/24/19 12:22	
T4-PDI2019-SG11-190415	A9D0674-05	E04251908.D	04/24/19 12:22	
T4-PDI2019-SG13-190415	A9D0674-06	E04251915.D	04/24/19 12:22	
T4-PDI2019-SG15-190416	A9D0674-07RE1	E04291920.D	04/24/19 12:22	
T4-PDI2019-SG16-190416	A9D0674-08	E04251917.D	04/24/19 12:22	
T4-PDI2019-SG17-190416	A9D0674-12RE1	J04301910.D	04/24/19 12:22	
FD-201904151441	A9D0674-13	E04291906.D	04/24/19 12:22	
T4-PDI2019-SG18-190415	A9D0674-14RE1	J04301914.D	04/24/19 12:22	
T4-PDI2019-SG51-190417	A9D0674-15RE2	J05011910.D	04/24/19 12:22	
T4-PDI2019-SG53-190416	A9D0674-17RE1	J04301917.D	04/24/19 12:22	
T4-PDI2019-SG54-190416	A9D0674-18RE1	J04301918.D	04/24/19 12:22	
T4-PDI2019-SG59-190417	A9D0674-21RE2	E04251918.D	04/24/19 12:22	
T4-PDI2019-SG60-190417	A9D0674-23RE1	J05011909.D	04/24/19 12:22	
T4-PDI2019-SG61-190416	A9D0674-24	E04251907.D	04/24/19 12:22	

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

PREPARATION BATCH SUMMARY

EPA 8270D

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9050375 Batch Matrix: Sediment Preparation: EPA 3546

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9050375-BLK1	E05011915.D	05/01/19 13:10	
LCS	9050375-BS1	E05011916.D	05/01/19 13:10	
T4-PDI2019-SG52-190417 (Dup)	9050375-DUP1	E05011918.D	05/01/19 13:10	
T4-PDI2019-SG52-190417 (Dup)	9050375-DUP2	E05021908.D	05/01/19 13:10	
FD-201904171301 (MS)	9050375-MS1	E05011922.D	05/01/19 13:10	
T4-PDI2019-SG52-190417	A9D0674-16RE2	E05011917.D	05/01/19 13:10	
T4-PDI2019-SG57-190417	A9D0674-19RE2	E05011919.D	05/01/19 13:10	
T4-PDI2019-SG58-190417	A9D0674-20RE2	E05011920.D	05/01/19 13:10	
FD-201904171301	A9D0674-22RE2	E05011921.D	05/01/19 13:10	

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:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Water	Laboratory ID:	9041150-BLK1	File ID:	E04231909.D
Prepared:	04/22/19 10:10	Preparation:	EPA 3510C (Acid Extraction	Initial/Final:	1100 mL / 1 mL
Analyzed:	04/23/19 13:02	Instrument:	SV-GCMS5		
Batch:	9041150	Sequence:	9D23025	Calibration:	A9A3103

CAS NO.	COMPOUND	CONC. (ug/L)	Q
83-32-9	Acenaphthene	0.00909	U
208-96-8	Acenaphthylene	0.00909	U
120-12-7	Anthracene	0.00909	U
56-55-3	Benz(a)anthracene	0.00909	U
50-32-8	Benzo(a)pyrene	0.0136	U
205-99-2	Benzo(b)fluoranthene	0.0136	U
207-08-9	Benzo(k)fluoranthene	0.0136	U
191-24-2	Benzo(g,h,i)perylene	0.00909	U
218-01-9	Chrysene	0.00909	U
53-70-3	Dibenz(a,h)anthracene	0.00909	U
206-44-0	Fluoranthene	0.00909	U
86-73-7	Fluorene	0.00909	U
193-39-5	Indeno(1,2,3-cd)pyrene	0.00909	U
90-12-0	1-Methylnaphthalene	0.0182	U
91-57-6	2-Methylnaphthalene	0.0182	U
91-20-3	Naphthalene	0.0509	B
85-01-8	Phenanthrene	0.00909	U
129-00-0	Pyrene	0.00909	U
86-74-8	Carbazole	0.0136	U
132-64-9	Dibenzofuran	0.00909	U
117-81-7	Bis(2-ethylhexyl)phthalate	0.182	U
85-68-7	Butyl benzyl phthalate	0.182	U
84-66-2	Diethylphthalate	0.182	U
131-11-3	Dimethylphthalate	0.182	U
84-74-2	Di-n-butylphthalate	0.182	U
117-84-0	Di-n-octyl phthalate	0.182	U

SYSTEM MONITORING COMPOUND	ADDED (ug/L)	CONC (ug/L)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	4.55	3.47	76	44 - 120	
2-Fluorobiphenyl (Surr)	4.55	3.33	73	44 - 120	
Phenol-d6 (Surr)	4.55	1.12	25	10 - 120	
p-Terphenyl-d14 (Surr)	4.55	3.83	84	50 - 133	
2-Fluorophenol (Surr)	4.55	1.83	40	19 - 120	
2,4,6-Tribromophenol (Surr)	4.55	3.44	76	43 - 140	

METHOD BLANK DATA SHEET
EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Water	Laboratory ID:	9041150-BLK1	File ID:	E04231909.D
Prepared:	04/22/19 10:10	Preparation:	EPA 3510C (Acid Extraction	Initial/Final:	1100 mL / 1 mL
Analyzed:	04/23/19 13:02	Instrument:	SV-GCMS5		
Batch:	9041150	Sequence:	9D23025	Calibration:	A9A3103

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	160974	6.863	180966	6.858	
Naphthalene-d8 (ISTD)	658528	8.11	697420	8.11	
Acenaphthene-d10 (ISTD)	332490	9.885	330094	9.885	
Phenanthrene-d10 (ISTD)	649763	11.404	669189	11.405	
Chrysene-d12 (ISTD)	645737	15.411	663777	15.416	
Perylene-d12 (ISTD)	516462	18.946	577187	18.946	
Dibenz(a,h)anthracene-d14 (ISTD)	468382	21.342	488530	21.342	

METHOD BLANK DATA SHEET
EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	9041271-BLK1	File ID:	E04251905.D
Prepared:	04/24/19 12:22	Preparation:	EPA 3546	Initial/Final:	16 g / 2 mL
Analyzed:	04/25/19 09:57	Instrument:	SV-GCMS5		
Batch:	9041271	Sequence:	9D25002	Calibration:	A9A3103

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
83-32-9	Acenaphthene	1.25	U
208-96-8	Acenaphthylene	1.25	U
120-12-7	Anthracene	1.25	U
56-55-3	Benz(a)anthracene	1.25	U
50-32-8	Benzo(a)pyrene	1.87	U
205-99-2	Benzo(b)fluoranthene	1.87	U
207-08-9	Benzo(k)fluoranthene	1.87	U
191-24-2	Benzo(g,h,i)perylene	1.25	U
218-01-9	Chrysene	1.25	U
53-70-3	Dibenz(a,h)anthracene	1.25	U
206-44-0	Fluoranthene	1.25	U
86-73-7	Fluorene	1.25	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.25	U
91-57-6	2-Methylnaphthalene	2.50	U
91-20-3	Naphthalene	2.50	U
85-01-8	Phenanthrene	1.25	U
129-00-0	Pyrene	1.25	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	312	223	71	37 - 122	
2-Fluorobiphenyl (Surr)	312	256	82	44 - 115	
p-Terphenyl-d14 (Surr)	312	268	86	54 - 127	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	178196	6.863	178755	6.863	
Naphthalene-d8 (ISTD)	673965	8.11	666726	8.11	
Acenaphthene-d10 (ISTD)	297181	9.885	293375	9.885	
Phenanthrene-d10 (ISTD)	576574	11.404	514606	11.404	
Chrysene-d12 (ISTD)	520600	15.411	458000	15.411	
Perylene-d12 (ISTD)	419004	18.946	386724	18.941	
Dibenz(a,h)anthracene-d14 (ISTD)	345247	21.342	319458	21.342	

METHOD BLANK DATA SHEET
EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	9050375-BLK1	File ID:	E05011915.D
Prepared:	05/01/19 13:10	Preparation:	EPA 3546	Initial/Final:	16 g / 2 mL
Analyzed:	05/01/19 18:26	Instrument:	SV-GCMS5		
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103

CAS NO.	COMPOUND	CONC. (ug/kg wet)	Q
83-32-9	Acenaphthene	1.25	U
208-96-8	Acenaphthylene	1.25	U
120-12-7	Anthracene	1.25	U
56-55-3	Benz(a)anthracene	1.25	U
50-32-8	Benzo(a)pyrene	1.87	U
205-99-2	Benzo(b)fluoranthene	1.87	U
207-08-9	Benzo(k)fluoranthene	1.87	U
191-24-2	Benzo(g,h,i)perylene	1.25	U
218-01-9	Chrysene	1.25	U
53-70-3	Dibenz(a,h)anthracene	1.25	U
206-44-0	Fluoranthene	1.25	U
86-73-7	Fluorene	1.25	U
193-39-5	Indeno(1,2,3-cd)pyrene	1.25	U
90-12-0	1-Methylnaphthalene	2.50	U
91-57-6	2-Methylnaphthalene	2.50	U
91-20-3	Naphthalene	2.50	U
85-01-8	Phenanthrene	1.25	U
129-00-0	Pyrene	1.25	U

SYSTEM MONITORING COMPOUND	ADDED (ug/kg wet)	CONC (ug/kg wet)	% REC	QC LIMITS	Q
Nitrobenzene-d5 (Surr)	312	231	74	37 - 122	
2-Fluorobiphenyl (Surr)	312	258	83	44 - 115	
Phenol-d6 (Surr)	312	232	74	33 - 122	
p-Terphenyl-d14 (Surr)	312	283	90	54 - 127	
2-Fluorophenol (Surr)	312	225	72	35 - 115	
2,4,6-Tribromophenol (Surr)	312	262	84	39 - 132	

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
1,4-Dichlorobenzene-d4 (ISTD)	200006	6.837	166667	6.815	
Naphthalene-d8 (ISTD)	755188	8.078	650925	8.078	
Acenaphthene-d10 (ISTD)	326675	9.853	309388	9.853	
Phenanthrene-d10 (ISTD)	667305	11.367	635497	11.367	
Chrysene-d12 (ISTD)	605892	15.346	688297	15.352	
Perylene-d12 (ISTD)	523144	18.871	585826	18.877	

METHOD BLANK DATA SHEET

EPA 8270D

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	9050375-BLK1	File ID:	E05011915.D
Prepared:	05/01/19 13:10	Preparation:	EPA 3546	Initial/Final:	16 g / 2 mL
Analyzed:	05/01/19 18:26	Instrument:	SV-GCMS5		
Batch:	9050375	Sequence:	9E01044	Calibration:	A9A3103

INTERNAL STANDARD	AREA	RT	REF AREA	REF RT	Q
Dibenz(a,h)anthracene-d14 (ISTD)	454132	21.262	512443	21.273	

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Water		
Batch:	9041150	Laboratory ID:	9041150-BS1
Preparation:	EPA 3510C (Acid Extraction)	Initial/Final:	1000 mL / 1 mL

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	4.00	2.34	59	47 - 122
Acenaphthylene	4.00	2.47	62	41 - 130
Anthracene	4.00	2.89	72	57 - 123
Benz(a)anthracene	4.00	3.43	86	58 - 125
Benzo(a)pyrene	4.00	4.06	101	54 - 128
Benzo(b)fluoranthene	4.00	4.05	101	53 - 131
Benzo(k)fluoranthene	4.00	4.09	102	57 - 129
Benzo(g,h,i)perylene	4.00	3.52	88	50 - 134
Chrysene	4.00	3.56	89	59 - 123
Dibenz(a,h)anthracene	4.00	3.73	93	51 - 134
Fluoranthene	4.00	3.28	82	57 - 128
Fluorene	4.00	2.73	68	52 - 124
Indeno(1,2,3-cd)pyrene	4.00	3.51	88	52 - 133
1-Methylnaphthalene	4.00	1.95	49	41 - 120
2-Methylnaphthalene	4.00	1.96	49	40 - 121
Naphthalene	4.00	1.84	46	40 - 121
Phenanthrene	4.00	2.92	73	59 - 120
Pyrene	4.00	3.32	83	57 - 126
Carbazole	4.00	3.29	82	60 - 122
Dibenzofuran	4.00	2.51	63	53 - 120
Bis(2-ethylhexyl)phthalate	4.00	3.31	83	55 - 135
Butyl benzyl phthalate	4.00	3.47	87	53 - 134
Diethylphthalate	4.00	3.46	87	55 - 125
Dimethylphthalate	4.00	3.30	82	45 - 127
Di-n-butylphthalate	4.00	3.28	82	59 - 127
Di-n-octyl phthalate	4.00	3.52	88	51 - 140

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Water		
Batch:	9041150	Laboratory ID:	9041150-BSD1
Preparation:	EPA 3510C (Acid Extraction)	Initial/Final:	1000 mL / 1 mL

COMPOUND	SPIKE ADDED (ug/L)	LCSD CONCENTRATION (ug/L)	LCSD % REC. #	% RPD #	QC LIMITS RPD	QC LIMITS
Acenaphthene	4.00	3.33	83	35 *	30	47 - 122
Acenaphthylene	4.00	3.46	86	33 *	30	41 - 130
Anthracene	4.00	3.54	88	20	30	57 - 123
Benz(a)anthracene	4.00	3.67	92	7	30	58 - 125
Benzo(a)pyrene	4.00	4.33	108	7	30	54 - 128
Benzo(b)fluoranthene	4.00	4.19	105	4	30	53 - 131
Benzo(k)fluoranthene	4.00	4.38	110	7	30	57 - 129
Benzo(g,h,i)perylene	4.00	3.70	93	5	30	50 - 134
Chrysene	4.00	3.72	93	5	30	59 - 123
Dibenz(a,h)anthracene	4.00	3.92	98	5	30	51 - 134
Fluoranthene	4.00	3.88	97	17	30	57 - 128
Fluorene	4.00	3.54	88	26	30	52 - 124
Indeno(1,2,3-cd)pyrene	4.00	3.58	90	2	30	52 - 133
1-Methylnaphthalene	4.00	3.02	76	43 *	30	41 - 120
2-Methylnaphthalene	4.00	3.09	77	45 *	30	40 - 121
Naphthalene	4.00	2.98	75	48 *	30	40 - 121
Phenanthrene	4.00	3.58	90	20	30	59 - 120
Pyrene	4.00	3.94	98	17	30	57 - 126
Carbazole	4.00	3.64	91	10	30	60 - 122
Dibenzofuran	4.00	3.43	86	31 *	30	53 - 120
Bis(2-ethylhexyl)phthalate	4.00	3.47	87	5	30	55 - 135
Butyl benzyl phthalate	4.00	3.54	88	2	30	53 - 134
Diethylphthalate	4.00	3.78	94	9	30	55 - 125
Dimethylphthalate	4.00	3.70	93	12	30	45 - 127
Di-n-butylphthalate	4.00	3.60	90	9	30	59 - 127
Di-n-octyl phthalate	4.00	3.78	94	7	30	51 - 140

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9041271	Laboratory ID:	9041271-BS1
Preparation:	EPA 3546	Initial/Final:	15 g / 2 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	533	473	89	40 - 122
Acenaphthylene	533	492	92	32 - 132
Anthracene	533	480	90	47 - 123
Benz(a)anthracene	533	473	89	49 - 126
Benzo(a)pyrene	533	568	106	45 - 129
Benzo(b)fluoranthene	533	547	103	45 - 132
Benzo(k)fluoranthene	533	563	106	47 - 132
Benzo(g,h,i)perylene	533	459	86	43 - 134
Chrysene	533	485	91	50 - 124
Dibenz(a,h)anthracene	533	508	95	45 - 134
Fluoranthene	533	487	91	50 - 127
Fluorene	533	513	96	43 - 125
Indeno(1,2,3-cd)pyrene	533	444	83	45 - 133
2-Methylnaphthalene	533	483	91	38 - 122
Naphthalene	533	456	85	35 - 123
Phenanthrene	533	482	90	50 - 121
Pyrene	533	495	93	47 - 127

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9050375	Laboratory ID:	9050375-BS1
Preparation:	EPA 3546	Initial/Final:	15 g / 2 mL

COMPOUND	SPIKE ADDED (ug/kg wet)	LCS CONCENTRATION (ug/kg wet)	LCS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	533	470	88	40 - 122
Acenaphthylene	533	493	92	32 - 132
Anthracene	533	481	90	47 - 123
Benz(a)anthracene	533	480	90	49 - 126
Benzo(a)pyrene	533	576	108	45 - 129
Benzo(b)fluoranthene	533	550	103	45 - 132
Benzo(k)fluoranthene	533	570	107	47 - 132
Benzo(g,h,i)perylene	533	521	98	43 - 134
Chrysene	533	491	92	50 - 124
Dibenz(a,h)anthracene	533	523	98	45 - 134
Fluoranthene	533	491	92	50 - 127
Fluorene	533	492	92	43 - 125
Indeno(1,2,3-cd)pyrene	533	487	91	45 - 133
1-Methylnaphthalene	533	457	86	40 - 120
2-Methylnaphthalene	533	467	88	38 - 122
Naphthalene	533	443	83	35 - 123
Phenanthrene	533	487	91	50 - 121
Pyrene	533	494	93	47 - 127

* = Values outside of QC limits

DUPLICATES

T4-PDI2019-SG05-190417

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: 9041271-DUP1
Batch: 9041271
Lab Source ID: A9D0674-02
Preparation: EPA 3546
Initial/Final: 15.69 g / 2 mL
Source Sample Name: T4-PDI2019-SG05-190417
% Solids: 74.66

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg dry)	C	DUPLICATE CONCENTRATION (ug/kg dry)	C	RPD %	Q	METHOD
Acenaphthene	30	96.4		ND				EPA 8270D
Acenaphthylene	30	61.9		123		200	*	EPA 8270D
Anthracene	30	165		398		83	*	EPA 8270D
Benz(a)anthracene	30	498		1020		69	*	EPA 8270D
Benzo(a)pyrene	30	661		1470		76	*	EPA 8270D
Benzo(b)fluoranthene	30	607		1280		71	*	EPA 8270D
Benzo(k)fluoranthene	30	232		495		72	*	EPA 8270D
Benzo(g,h,i)perylene	30	459		1100		82	*	EPA 8270D
Chrysene	30	592		1150		64	*	EPA 8270D
Dibenz(a,h)anthracene	30	65.5		110		200	*	EPA 8270D
Fluoranthene	30	1260		2860		78	*	EPA 8270D
Fluorene	30	70.4		119		51	*	EPA 8270D
Indeno(1,2,3-cd)pyrene	30	433		952		75	*	EPA 8270D
2-Methylnaphthalene	30	29.0		ND				EPA 8270D
Naphthalene	30	129		283		200	*	EPA 8270D
Phenanthrene	30	603		1400		80	*	EPA 8270D
Pyrene	30	1620		3520		74	*	EPA 8270D
1,4-Dichlorobenzene-d4 (ISTD)		2000		2000				EPA 8270D

* Values outside of QC limits

DUPLICATES

EPA 8270D

T4-PDI2019-SG52-190417

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9050375
Preparation: EPA 3546
Source Sample Name: T4-PDI2019-SG52-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9050375-DUP1
Lab Source ID: A9D0674-16RE2
Initial/Final: 15.8 g / 2 mL
% Solids: 35.19

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg dry)	C	DUPLICATE CONCENTRATION (ug/kg dry)	C	RPD %	Q	METHOD
Acenaphthene	30	3.78		ND				EPA 8270D
Acenaphthylene	30	3.11		ND				EPA 8270D
Anthracene	30	8.41		4.95		52	*	EPA 8270D
Benz(a)anthracene	30	36.0		25.1		36	*	EPA 8270D
Benzo(a)pyrene	30	49.6		33.8		38	*	EPA 8270D
Benzo(b)fluoranthene	30	75.7		52.2		37	*	EPA 8270D
Benzo(k)fluoranthene	30	28.6		15.4		60	*	EPA 8270D
Chrysene	30	47.7		34.8		31	*	EPA 8270D
Fluoranthene	30	62.8		39.6		45	*	EPA 8270D
Fluorene	30	5.51		ND				EPA 8270D
1-Methylnaphthalene	30	1.74		ND				EPA 8270D
2-Methylnaphthalene	30	3.09		ND				EPA 8270D
Naphthalene	30	6.75		ND				EPA 8270D
Phenanthrene	30	24.7		17.9		32	*	EPA 8270D
Pyrene	30	62.3		39.0		46	*	EPA 8270D
1,4-Dichlorobenzene-d4 (ISTD)		2000		2000				EPA 8270D

* Values outside of QC limits

DUPLICATES

T4-PDI2019-SG52-190417

EPA 8270D

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9050375
Preparation: EPA 3546
Source Sample Name: T4-PDI2019-SG52-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9050375-DUP2
Lab Source ID: A9D0674-16RE2
Initial/Final: 15.8 g / 2 mL
% Solids: 35.19

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (ug/kg dry)	C	DUPLICATE CONCENTRATION (ug/kg dry)	C	RPD %	Q	METHOD
Benzo(g,h,i)perylene	30	31.1		26.9		15		EPA 8270D
Dibenz(a,h)anthracene	30	7.17		ND				EPA 8270D
Indeno(1,2,3-cd)pyrene	30	34.7		28.6		19		EPA 8270D

* Values outside of QC limits

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 8270D

T4-PDI2019-SG59-190417

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9041271	Laboratory ID:	9041271-MS1
Preparation:	EPA 3546	Initial/Final:	15.27 g / 2 mL

Source Sample Name: T4-PDI2019-SG59-190417

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	MS CONCENTRATION (ug/kg dry)	MS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	1550	ND	1140	73	40 - 122
Acenaphthylene	1550	ND	1180	76	32 - 132
Anthracene	1550	9.97	1230	79	47 - 123
Benz(a)anthracene	1550	26.4	1230	78	49 - 126
Benzo(a)pyrene	1550	33.9	1480	93	45 - 129
Benzo(b)fluoranthene	1550	54.4	1430	89	45 - 132
Benzo(k)fluoranthene	1550	17.8	1420	91	47 - 132
Benzo(g,h,i)perylene	1550	27.7	1130	71	43 - 134
Chrysene	1550	37.4	1250	78	50 - 124
Dibenz(a,h)anthracene	1550	ND	1290	83	45 - 134
Fluoranthene	1550	53.6	1270	79	50 - 127
Fluorene	1550	ND	1240	80	43 - 125
Indeno(1,2,3-cd)pyrene	1550	30.0	1160	73	45 - 133
2-Methylnaphthalene	1550	ND	1030	67	38 - 122
Naphthalene	1550	ND	1020	66	35 - 123
Phenanthrene	1550	19.6	1230	78	50 - 121
Pyrene	1550	50.1	1270	79	47 - 127

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 8270D

T4-PDI2019-SG59-190417

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9041271	Laboratory ID:	9041271-MSD1
Preparation:	EPA 3546	Initial/Final:	15.29 g / 2 mL

Source Sample Name: T4-PDI2019-SG59-190417

COMPOUND	SPIKE ADDED (ug/kg dry)	MSD CONCENTRATION (ug/kg dry)	MSD % RECOVERY	% RPD	QC LIMITS RPD	QC LIMITS REC.
Acenaphthene	1550	1180	76	3	30	40 - 122
Acenaphthylene	1550	1230	79	4	30	32 - 132
Anthracene	1550	1220	78	0.3	30	47 - 123
Benz(a)anthracene	1550	1190	75	3	30	49 - 126
Benzo(a)pyrene	1550	1430	90	3	30	45 - 129
Benzo(b)fluoranthene	1550	1340	83	6	30	45 - 132
Benzo(k)fluoranthene	1550	1390	89	2	30	47 - 132
Benzo(g,h,i)perylene	1550	1130	71	0.05	30	43 - 134
Chrysene	1550	1220	76	3	30	50 - 124
Dibenz(a,h)anthracene	1550	1280	83	0.7	30	45 - 134
Fluoranthene	1550	1280	79	0.2	30	50 - 127
Fluorene	1550	1270	82	2	30	43 - 125
Indeno(1,2,3-cd)pyrene	1550	1170	74	1	30	45 - 133
2-Methylnaphthalene	1550	1200	77	15	30	38 - 122
Naphthalene	1550	1120	72	9	30	35 - 123
Phenanthrene	1550	1230	78	0.09	30	50 - 121
Pyrene	1550	1290	80	2	30	47 - 127

MATRIX SPIKE / MATRIX SPIKE DUPLICATE RECOVERY

EPA 8270D

FD-201904171301

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9050375	Laboratory ID:	9050375-MS1
Preparation:	EPA 3546	Initial/Final:	15.64 g / 2 mL

Source Sample Name: FD-201904171301

COMPOUND	SPIKE ADDED (ug/kg dry)	SAMPLE CONCENTRATION (ug/kg dry)	MS CONCENTRATION (ug/kg dry)	MS % REC. (*=Out)	QC LIMITS REC.
Acenaphthene	1380	ND	958	69	40 - 122
Acenaphthylene	1380	ND	1010	73	32 - 132
Anthracene	1380	23.9	1030	73	47 - 123
Benz(a)anthracene	1380	81.4	1130	76	49 - 126
Benzo(a)pyrene	1380	126	1360	90	45 - 129
Benzo(b)fluoranthene	1380	175	1420	90	45 - 132
Benzo(k)fluoranthene	1380	67.8	1310	90	47 - 132
Benzo(g,h,i)perylene	1380	85.6	905	59	43 - 134
Chrysene	1380	109	1170	77	50 - 124
Dibenz(a,h)anthracene	1380	22.7	1020	72	45 - 134
Fluoranthene	1380	153	1170	73	50 - 127
Fluorene	1380	ND	1020	74	43 - 125
Indeno(1,2,3-cd)pyrene	1380	101	1010	66	45 - 133
1-Methylnaphthalene	1380	ND	893	65	40 - 120
2-Methylnaphthalene	1380	ND	900	65	38 - 122
Naphthalene	1380	ND	861	62	35 - 123
Phenanthrene	1380	55.4	1080	74	50 - 121
Pyrene	1380	156	1160	72	47 - 127

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9A30046	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9A30046-TUN2	E01301912.D	01/30/19 17:18
Initial Cal Blank	9A30046-ICB1	E01301913.D	01/30/19 18:24
Cal Standard	9A30046-CAL1	E01301914.D	01/30/19 19:00
Cal Standard	9A30046-CAL2	E01301915.D	01/30/19 19:37
Cal Standard	9A30046-CAL3	E01301916.D	01/30/19 20:13
Cal Standard	9A30046-CAL4	E01301917.D	01/30/19 20:50
Cal Standard	9A30046-CAL5	E01301918.D	01/30/19 21:26
Cal Standard	9A30046-CAL6	E01301919.D	01/30/19 22:02
Cal Standard	9A30046-CAL7	E01301920.D	01/30/19 22:39
Cal Standard	9A30046-CAL8	E01301921.D	01/30/19 23:15
Cal Standard	9A30046-CAL9	E01301922.D	01/30/19 23:51
Cal Standard	9A30046-CALA	E01301923.D	01/31/19 00:28
Initial Cal Check	9A30046-ICV1	E01301925.D	01/31/19 01:40

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

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D12042	Instrument:	SV-GCMS10
Matrix:	Water	Calibration:	A9D1505

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9D12042-TUN2	J04121913.D	04/12/19 17:47
Initial Cal Blank	9D12042-ICB1	J04121914.D	04/12/19 18:15
Cal Standard	9D12042-CAL1	J04121915.D	04/12/19 18:51
Cal Standard	9D12042-CAL2	J04121916.D	04/12/19 19:27
Cal Standard	9D12042-CAL3	J04121917.D	04/12/19 20:03
Cal Standard	9D12042-CAL4	J04121918.D	04/12/19 20:39
Cal Standard	9D12042-CAL5	J04121919.D	04/12/19 21:16
Cal Standard	9D12042-CAL6	J04121920.D	04/12/19 21:52
Cal Standard	9D12042-CAL7	J04121921.D	04/12/19 22:28
Cal Standard	9D12042-CAL8	J04121922.D	04/12/19 23:04
Cal Standard	9D12042-CAL9	J04121923.D	04/12/19 23:40
Cal Standard	9D12042-CALA	J04121924.D	04/13/19 00:15
Initial Cal Check	9D12042-ICV1	J04121926.D	04/13/19 01:26

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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23025	Instrument:	SV-GCMS5
Matrix:	Water	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9D23025-TUN2	E04231905.D	04/23/19 10:40
Calibration Check	9D23025-CCV2	E04231907.D	04/23/19 11:47
Calibration Blank	9D23025-CCB1	E04231908.D	04/23/19 12:24
Blank	9041150-BLK1	E04231909.D	04/23/19 13:02
LCS	9041150-BS1	E04231910.D	04/23/19 13:39
LCS Dup	9041150-BSD1	E04231911.D	04/23/19 14:17
RB-201904171558	A9D0674-01	E04231912.D	04/23/19 14:54

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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9D25002-TUN1	E04251901.D	04/25/19 07:35
Calibration Check	9D25002-CCV1	E04251903.D	04/25/19 08:42
Calibration Blank	9D25002-CCB1	E04251904.D	04/25/19 09:19
Blank	9041271-BLK1	E04251905.D	04/25/19 09:57
LCS	9041271-BS1	E04251906.D	04/25/19 10:34
T4-PDI2019-SG61-190416	A9D0674-24	E04251907.D	04/25/19 11:12
T4-PDI2019-SG11-190415	A9D0674-05	E04251908.D	04/25/19 11:49
T4-PDI2019-SG05-190417	A9D0674-02	E04251909.D	04/25/19 12:27
T4-PDI2019-SG05-190417 (Dup)	9041271-DUP1	E04251910.D	04/25/19 13:04
T4-PDI2019-SG06-190417	A9D0674-03	E04251913.D	04/25/19 14:57
T4-PDI2019-SG08-190415	A9D0674-04	E04251914.D	04/25/19 15:35
T4-PDI2019-SG13-190415	A9D0674-06	E04251915.D	04/25/19 16:18
T4-PDI2019-SG16-190416	A9D0674-08	E04251917.D	04/25/19 17:45
T4-PDI2019-SG59-190417	A9D0674-21RE2	E04251918.D	04/25/19 18:17
T4-PDI2019-SG59-190417 (MS)	9041271-MS1	E04251919.D	04/25/19 18:50
T4-PDI2019-SG59-190417 (MSD)	9041271-MSD1	E04251920.D	04/25/19 19:26

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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D29024	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9D29024-TUN1	E04291901.D	04/29/19 08:13
Calibration Check	9D29024-CCV1	E04291903.D	04/29/19 09:18
Calibration Blank	9D29024-CCB1	E04291904.D	04/29/19 09:54
FD-201904151441	A9D0674-13	E04291906.D	04/29/19 11:07
T4-PDI2019-SG15-190416	A9D0674-07RE1	E04291920.D	04/29/19 19:34

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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D30020	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9D30020-TUN1	J04301901.D	04/30/19 08:06
Calibration Check	9D30020-CCV1	J04301902.D	04/30/19 08:33
Calibration Blank	9D30020-CCB1	J04301904.D	04/30/19 09:46
T4-PDI2019-SG17-190416	A9D0674-12RE1	J04301910.D	04/30/19 13:21
T4-PDI2019-SG18-190415	A9D0674-14RE1	J04301914.D	04/30/19 15:49
T4-PDI2019-SG53-190416	A9D0674-17RE1	J04301917.D	04/30/19 17:36
T4-PDI2019-SG54-190416	A9D0674-18RE1	J04301918.D	04/30/19 18:08

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.

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01028	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E01028-TUN2	J05011903.D	05/01/19 09:20
Calibration Check	9E01028-CCV1	J05011904.D	05/01/19 09:48
Calibration Blank	9E01028-CCB1	J05011906.D	05/01/19 11:00
T4-PDI2019-SG60-190417	A9D0674-23RE1	J05011909.D	05/01/19 12:47
T4-PDI2019-SG51-190417	A9D0674-15RE2	J05011910.D	05/01/19 13:23

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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E01044-TUN1	E05011909.D	05/01/19 14:57
Calibration Check	9E01044-CCV1	E05011911.D	05/01/19 16:01
Calibration Blank	9E01044-CCB1	E05011912.D	05/01/19 16:38
Blank	9050375-BLK1	E05011915.D	05/01/19 18:26
LCS	9050375-BS1	E05011916.D	05/01/19 19:03
T4-PDI2019-SG52-190417	A9D0674-16RE2	E05011917.D	05/01/19 19:39
T4-PDI2019-SG52-190417 (Dup)	9050375-DUP1	E05011918.D	05/01/19 20:15
T4-PDI2019-SG57-190417	A9D0674-19RE2	E05011919.D	05/01/19 20:52
T4-PDI2019-SG58-190417	A9D0674-20RE2	E05011920.D	05/01/19 21:28
FD-201904171301	A9D0674-22RE2	E05011921.D	05/01/19 22:04
FD-201904171301 (MS)	9050375-MS1	E05011922.D	05/01/19 22:40

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

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E02011	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
MS Tune	9E02011-TUN2	E05021903.D	05/02/19 09:27
Calibration Check	9E02011-CCV1	E05021905.D	05/02/19 10:32
Calibration Blank	9E02011-CCB1	E05021906.D	05/02/19 11:08
T4-PDI2019-SG52-190417 (Dup)	9050375-DUP2	E05021908.D	05/02/19 12:33

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

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E01301912.D	Injection Date:	01/30/19
Instrument ID:	SV-GCMS5	Injection Time:	17:18
Sequence:	9A30046	Lab Sample ID:	9A30046-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	36.78	PASS
m/z 68	Less than 2% of m/z 69	1.15	PASS
m/z 69	Less than 100% of m/z 198	40.75	PASS
m/z 70	Less than 2% of m/z 69	0.51	PASS
m/z 127	10 - 80% of m/z 198	50.85	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.83	PASS
m/z 275	10 - 60% of m/z 198	25.85	PASS
m/z 365	1 - 100% of m/z 198	2.92	PASS
m/z 441	Less than 24% of m/z 442	15.56	PASS
m/z 442	50 - 200% of m/z 198	93.97	PASS
m/z 443	15 - 24% of m/z 442	19.37	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	J04121913.D	Injection Date:	04/12/19
Instrument ID:	SV-GCMS10	Injection Time:	17:47
Sequence:	9D12042	Lab Sample ID:	9D12042-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	29.89	PASS
m/z 68	Less than 2% of m/z 69	1.40	PASS
m/z 69	Less than 100% of m/z 198	34.77	PASS
m/z 70	Less than 2% of m/z 69	0.51	PASS
m/z 127	10 - 80% of m/z 198	53.48	PASS
m/z 197	Less than 2% of m/z 198	0.34	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.90	PASS
m/z 275	10 - 60% of m/z 198	26.49	PASS
m/z 365	1 - 100% of m/z 198	3.44	PASS
m/z 441	Less than 24% of m/z 442	14.91	PASS
m/z 442	50 - 200% of m/z 198	97.22	PASS
m/z 443	15 - 24% of m/z 442	20.19	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E04231905.D	Injection Date:	04/23/19
Instrument ID:	SV-GCMS5	Injection Time:	10:40
Sequence:	9D23025	Lab Sample ID:	9D23025-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	37.83	PASS
m/z 68	Less than 2% of m/z 69	0.49	PASS
m/z 69	Less than 100% of m/z 198	42.13	PASS
m/z 70	Less than 2% of m/z 69	0.55	PASS
m/z 127	10 - 80% of m/z 198	51.06	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.76	PASS
m/z 275	10 - 60% of m/z 198	26.67	PASS
m/z 365	1 - 100% of m/z 198	3.08	PASS
m/z 441	Less than 24% of m/z 442	15.33	PASS
m/z 442	50 - 200% of m/z 198	102.58	PASS
m/z 443	15 - 24% of m/z 442	19.46	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E04251901.D	Injection Date:	04/25/19
Instrument ID:	SV-GCMS5	Injection Time:	07:35
Sequence:	9D25002	Lab Sample ID:	9D25002-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	38.11	PASS
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Less than 100% of m/z 198	42.55	PASS
m/z 70	Less than 2% of m/z 69	0.49	PASS
m/z 127	10 - 80% of m/z 198	51.17	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.77	PASS
m/z 275	10 - 60% of m/z 198	26.34	PASS
m/z 365	1 - 100% of m/z 198	3.08	PASS
m/z 441	Less than 24% of m/z 442	15.06	PASS
m/z 442	50 - 200% of m/z 198	99.12	PASS
m/z 443	15 - 24% of m/z 442	19.27	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E04291901.D	Injection Date:	04/29/19
Instrument ID:	SV-GCMS5	Injection Time:	08:13
Sequence:	9D29024	Lab Sample ID:	9D29024-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	41.34	PASS
m/z 68	Less than 2% of m/z 69	0.30	PASS
m/z 69	Less than 100% of m/z 198	44.82	PASS
m/z 70	Less than 2% of m/z 69	0.38	PASS
m/z 127	10 - 80% of m/z 198	52.67	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.73	PASS
m/z 275	10 - 60% of m/z 198	26.00	PASS
m/z 365	1 - 100% of m/z 198	2.92	PASS
m/z 441	Less than 24% of m/z 442	15.14	PASS
m/z 442	50 - 200% of m/z 198	93.23	PASS
m/z 443	15 - 24% of m/z 442	19.14	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	J04301901.D	Injection Date:	04/30/19
Instrument ID:	SV-GCMS10	Injection Time:	08:06
Sequence:	9D30020	Lab Sample ID:	9D30020-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	29.53	PASS
m/z 68	Less than 2% of m/z 69	1.52	PASS
m/z 69	Less than 100% of m/z 198	34.91	PASS
m/z 70	Less than 2% of m/z 69	0.48	PASS
m/z 127	10 - 80% of m/z 198	54.56	PASS
m/z 197	Less than 2% of m/z 198	0.38	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.79	PASS
m/z 275	10 - 60% of m/z 198	27.19	PASS
m/z 365	1 - 100% of m/z 198	3.66	PASS
m/z 441	Less than 24% of m/z 442	14.97	PASS
m/z 442	50 - 200% of m/z 198	102.05	PASS
m/z 443	15 - 24% of m/z 442	19.74	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	J05011903.D	Injection Date:	05/01/19
Instrument ID:	SV-GCMS10	Injection Time:	09:20
Sequence:	9E01028	Lab Sample ID:	9E01028-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	29.91	PASS
m/z 68	Less than 2% of m/z 69	1.52	PASS
m/z 69	Less than 100% of m/z 198	34.81	PASS
m/z 70	Less than 2% of m/z 69	0.26	PASS
m/z 127	10 - 80% of m/z 198	55.49	PASS
m/z 197	Less than 2% of m/z 198	0.52	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.84	PASS
m/z 275	10 - 60% of m/z 198	26.35	PASS
m/z 365	1 - 100% of m/z 198	3.35	PASS
m/z 441	Less than 24% of m/z 442	15.27	PASS
m/z 442	50 - 200% of m/z 198	91.72	PASS
m/z 443	15 - 24% of m/z 442	19.87	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E05011909.D	Injection Date:	05/01/19
Instrument ID:	SV-GCMS5	Injection Time:	14:57
Sequence:	9E01044	Lab Sample ID:	9E01044-TUN1

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	38.84	PASS
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Less than 100% of m/z 198	43.24	PASS
m/z 70	Less than 2% of m/z 69	0.47	PASS
m/z 127	10 - 80% of m/z 198	51.56	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.79	PASS
m/z 275	10 - 60% of m/z 198	26.45	PASS
m/z 365	1 - 100% of m/z 198	3.06	PASS
m/z 441	Less than 24% of m/z 442	15.32	PASS
m/z 442	50 - 200% of m/z 198	102.73	PASS
m/z 443	15 - 24% of m/z 442	19.36	PASS

MASS SPECTROMETER INSTRUMENT PERFORMANCE CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Lab File ID:	E05021903.D	Injection Date:	05/02/19
Instrument ID:	SV-GCMS5	Injection Time:	09:27
Sequence:	9E02011	Lab Sample ID:	9E02011-TUN2

m/z	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
m/z 51	10 - 80% of m/z 198	38.97	PASS
m/z 68	Less than 2% of m/z 69	0.00	PASS
m/z 69	Less than 100% of m/z 198	43.05	PASS
m/z 70	Less than 2% of m/z 69	0.43	PASS
m/z 127	10 - 80% of m/z 198	51.08	PASS
m/z 197	Less than 2% of m/z 198	0.00	PASS
m/z 198	Base peak, 100% relative abundance	100.00	PASS
m/z 199	5 - 9% of m/z 198	6.73	PASS
m/z 275	10 - 60% of m/z 198	26.90	PASS
m/z 365	1 - 100% of m/z 198	3.19	PASS
m/z 441	Less than 24% of m/z 442	15.26	PASS
m/z 442	50 - 200% of m/z 198	106.53	PASS
m/z 443	15 - 24% of m/z 442	19.10	PASS

INITIAL CALIBRATION DATA (Summary)

EPA 8270D

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Calibration: A9A3103 Date: 01/31/19 12:46 Instrument: SV-GCMS5

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.320947	Ave	5.949628	9.9147	6.536659E-02			20	
Acenaphthylene	1.948127	Ave	6.974163	9.7362	6.674685E-02			20	
Anthracene	1.126296	Ave	6.714884	11.4772	5.207044E-02			20	
Benz(a)anthracene	1.128129	Ave	5.074536	15.3977	0.106993			20	
Benzo(a)pyrene	0.9593879	Ave	12.80263	18.8171	0.1495143			20	
Benzo(b)fluoranthene	1.056647	Ave	9.9883	18.0323	0.1288222			20	
Benzo(k)fluoranthene	1.038438	Ave	7.494547	18.1019	0.1396707			20	
Benzo(g,h,i)perylene	1.079251	Ave	6.879347	21.9071	0.1403967			20	
Chrysene	1.074697	Ave	1.516659	15.4833	0.1326285			20	
Dibenz(a,h)anthracene	1.003913	Ave	7.04009	21.4274	0.1198169			20	
Fluoranthene	1.138647	Ave	4.232687	12.7482	5.695524E-02			20	
Fluorene	1.375044	Ave	4.743735	10.4394	5.936047E-02			20	
Indeno(1,2,3-cd)pyrene	1.096233	Ave	4.600052	21.3646	0.1368844			20	
1-Methylnaphthalene	0.6426808	Ave	3.816017	8.9162	4.677698E-02			20	
2-Methylnaphthalene	0.6711103	Ave	3.334761	8.8152	0.0447606			20	
Naphthalene	1.066921	Ave	5.537751	8.1214	5.854596E-02			20	
Phenanthrene	1.097729	Ave	6.04717	11.4244	4.696862E-02			20	
Pyrene	1.156671	Ave	3.589047	13.0652	7.633489E-02			20	
Carbazole	1.054571	Ave	7.607666	11.6322	4.463845E-02			20	
Dibenzofuran	1.717298	Ave	3.286899	10.087	5.995257E-02			20	
Nitrobenzene-d5 (Surr)	1.495363	Ave	14.62468	7.381	0.0786081			20	
2-Fluorobiphenyl (Surr)	1.487403	Ave	4.929551	9.1815	4.062064E-02			20	
Phenol-d6 (Surr)	1.667801	Ave	8.616792	6.4784	0.1138408			20	
p-Terphenyl-d14 (Surr)	0.9344531	Ave	2.672287	13.2814	5.360748E-02			20	
2-Fluorophenol (Surr)	1.246855	Ave	9.113913	5.631	4.598658E-02			20	
2,4,6-Tribromophenol (Surr)	6.982892E-02	XXX	35.86959	10.6855	5.493493E-02				

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: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9A3103
Instrument: SV-GCMS5
Calibration Date: 01/31/19 12:46

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	1.414492	50	1.362869	100	1.367935	200	1.36516	500	1.381346	1000	1.33102
Acenaphthylene	20	1.642755	50	1.912026	100	1.983877	200	2.012928	500	2.105963	1000	2.031948
Anthracene	20	1.175119	50	1.189458	100	1.174634	200	1.168763	500	1.198241	1000	1.146571
Benz(a)anthracene	20	1.279933	50	1.159563	100	1.088704	200	1.102521	500	1.128764	1000	1.095893
Benzo(a)pyrene	20	0.7536824	50	0.8065926	100	0.8270754	200	0.9173605	500	1.016943	1000	1.015634
Benzo(b)fluoranthene	20	0.8736277	50	0.9317524	100	0.951542	200	1.030242	500	1.101928	1000	1.091363
Benzo(k)fluoranthene	20	0.9120518	50	0.9495578	100	0.967133	200	1.056704	500	1.105624	1000	1.108982
Benzo(b+k)fluoranthene(s)	40	1.017523	100	1.042987	200	1.041493	400	1.10316	1000	1.149849	2000	1.138413
Benzo(g,h,i)perylene	20	0.908517	50	1.020405	100	1.040625	200	1.089586	500	1.141035	1000	1.137596
Chrysene	20	1.075992	50	1.060422	100	1.069355	200	1.079554	500	1.107315	1000	1.079312
Dibenz(a,h)anthracene	20	0.8707706	50	0.9471764	100	0.9421022	200	0.9757685	500	1.019029	1000	0.9970825
Fluoranthene	20	1.178727	50	1.16041	100	1.159178	200	1.153889	500	1.204801	1000	1.137653
Fluorene	20	1.314987	50	1.327464	100	1.361314	200	1.393022	500	1.482833	1000	1.395764
Indeno(1,2,3-cd)pyrene	20	1.064709	50	1.040185	100	1.0502	200	1.054242	500	1.081652	1000	1.077653
1-Methylnaphthalene	20	0.6469142	50	0.6578996	100	0.6490979	200	0.6458848	500	0.6744765	1000	0.6442177
2-Methylnaphthalene	20	0.6573315	50	0.6810389	100	0.6725812	200	0.6759831	500	0.6999201	1000	0.6731325
Naphthalene	20	1.128572	50	1.152438	100	1.09352	200	1.084438	500	1.10054	1000	1.063222
Phenanthrene	20	1.135759	50	1.132074	100	1.15556	200	1.139531	500	1.161203	1000	1.114081
Pyrene	20	1.178289	50	1.172874	100	1.166489	200	1.175202	500	1.221973	1000	1.156787
Carbazole	20	1.208794	50	1.101245	100	1.089104	200	1.074805	500	1.100527	1000	1.037638
Dibenzofuran	20	1.741848	50	1.701815	100	1.712239	200	1.71099	500	1.81217	1000	1.697298
4-Chloro-3-methylphenol	20	~~8.475892E-02~~	50	0.1323962	100	0.1712205	200	0.1971278	500	0.2490133	1000	0.2503017
2-Chlorophenol	20	0.9978333	50	1.188985	100	1.259653	200	1.303138	500	1.378372	1000	1.346751
2,4-Dichlorophenol	20	~~0.1474521~~	50	0.1781507	100	0.1892775	200	0.2063044	500	0.2375979	1000	0.2361719
2,4-Dimethylphenol	20	~~0.1974552~~	50	0.2747145	100	0.2782608	200	0.2875913	500	0.3112944	1000	0.3065676
2,4-Dinitrophenol	20	~~0~~	50	~~0~~	100	~~0~~	200	1.378016E-02	500	0.0376782	1000	5.775572E-02
4,6-Dinitro-2-methylphenol	20	~~0~~	50	~~6.313131E-03~~	100	~~1.442329E-02~~	200	3.302418E-02	500	8.015737E-02	1000	0.1036798
2-Methylphenol	20	0.887627	50	0.9740345	100	1.079546	200	1.073927	500	1.156063	1000	1.106977
3+4-Methylphenol(s)	20	1.044904	50	1.257126	100	1.317308	200	1.32772	500	1.48438	1000	1.407121
2-Nitrophenol	20	~~0.0733946~~	50	0.0856681	100	9.913922E-02	200	0.1148399	500	0.1452879	1000	0.1532318
4-Nitrophenol	20	~~6.901468E-02~~	50	~~8.548321E-02~~	100	0.1015113	200	0.1361143	500	0.2174086	1000	0.2233945

INITIAL CALIBRATION DATA

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9A3103
Instrument: SV-GCMS5
Calibration Date: 01/31/19 12:46

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	~~3.444012E-02~~	50	~~0.0290484~~	100	3.392382E-02	200	5.019257E-02	500	7.777878E-02	1000	9.059143E-02
Phenol	20	1.353482	50	1.674651	100	1.793049	200	1.752244	500	1.819105	1000	1.763968
2,3,4,6-Tetrachlorophenol	20	~~0.1089814~~	50	0.1545864	100	0.1821046	200	0.1938463	500	0.2650104	1000	0.2619132
2,3,5,6-Tetrachlorophenol	20	~~7.004475E-02~~	50	8.625102E-02	100	0.1144585	200	0.1540526	500	0.224108	1000	0.2309256
2,4,5-Trichlorophenol	20	0.1446218	50	0.2225805	100	0.255191	200	0.260417	500	0.3175779	1000	0.3237182
2,4,6-Trichlorophenol	20	0.1553345	50	0.1821424	100	0.2282422	200	0.2543505	500	0.3104392	1000	0.3144928
Bis(2-ethylhexyl)phthalate	20	~~0.4644027~~	50	~~0.4958776~~	100	~~0.556937~~	200	0.7015704	500	0.8034163	1000	0.8181979
Butyl benzyl phthalate	20	~~0.3659644~~	50	~~0.4131545~~	100	0.4278984	200	0.5331004	500	0.5924328	1000	0.5999635
Diethylphthalate	20	1.136991	50	1.159398	100	1.179378	200	1.289209	500	1.43014	1000	1.336958
Dimethylphthalate	20	1.116596	50	1.112476	100	1.178661	200	1.266369	500	1.373305	1000	1.311957
Di-n-butylphthalate	20	1.680787	50	1.371939	100	1.30274	200	1.315452	500	1.361928	1000	1.289098
Di-n-octyl phthalate	20	~~0.5037963~~	50	0.6357778	100	0.6993076	200	0.9907836	500	1.291859	1000	1.337716
2,3,5-Trimethylnaphthalene	20	1.043461	50	1.069734	100	1.087567	200	1.102353	500	1.16764	1000	1.097233
2,6-Dimethylnaphthalene	20	1.142141	50	1.216216	100	1.238083	200	1.239612	500	1.268868	1000	1.234045
Benzo(e)pyrene	20	0.9927942	50	1.009888	100	1.02247	200	1.066479	500	1.112179	1000	1.101393
1,1'-Biphenyl	20	1.734432	50	1.799157	100	1.803839	200	1.777983	500	1.808703	1000	1.73437
Perylene	20	1.007593	50	1.107328	100	1.095424	200	1.092474	500	1.139745	1000	1.113997
Nitrobenzene-d5 (Surr)	20	~~1.121862~~	50	1.108041	100	1.261548	200	1.338825	500	1.655095	1000	1.4705
2-Fluorobiphenyl (Surr)	20	1.465171	50	1.543219	100	1.555522	200	1.550489	500	1.558785	1000	1.507404
Phenol-d6 (Surr)	20	1.308652	50	1.562268	100	1.660538	200	1.649723	500	1.76703	1000	1.705784
p-Terphenyl-d14 (Surr)	20	0.8913611	50	0.9262564	100	0.9345524	200	0.9673796	500	0.9632891	1000	0.9637374
2-Fluorophenol (Surr)	20	1.009788	50	1.105053	100	1.193471	200	1.229187	500	1.313395	1000	1.299271
2,4,6-Tribromophenol (Surr)	20	2.503742E-02	50	0.0391721	100	5.130313E-02	200	6.037912E-02	500	7.400232E-02	1000	7.888365E-02

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9A3103
Instrument: SV-GCMS5
Matrix:
Calibration Date: 01/31/19 12:46

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	1.314814	4000	1.293512	6000	1.217835	8000	1.160489				
Acenaphthylene	2000	2.041211	4000	2.028944	6000	1.903932	8000	1.817687				
Anthracene	2000	1.123437	4000	1.09019	6000	1.023647	8000	0.9729037				
Benz(a)anthracene	2000	1.104395	4000	1.120195	6000	1.106883	8000	1.094434				
Benzo(a)pyrene	2000	1.054769	4000	1.08259	6000	1.059411	8000	1.059821				
Benzo(b)fluoranthene	2000	1.116478	4000	1.136151	6000	1.1348	8000	1.198588				
Benzo(k)fluoranthene	2000	1.121339	4000	1.111683	6000	1.065441	8000	0.9858626				
Benzo(b+k)fluoranthene(s)	4000	1.14801	8000	1.165644	12000	1.146068	16000	1.143721				
Benzo(g,h,i)perylene	2000	1.131652	4000	1.141517	6000	1.116176	8000	1.065396				
Chrysene	2000	1.078768	4000	1.087363	6000	1.059509	8000	1.049385				
Dibenz(a,h)anthracene	2000	1.049774	4000	1.083182	6000	1.079948	8000	1.074301				
Fluoranthene	2000	1.150733	4000	1.12397	6000	1.075914	8000	1.041194				
Fluorene	2000	1.449961	4000	1.420573	6000	1.330397	8000	1.27413				
Indeno(1,2,3-cd)pyrene	2000	1.104696	4000	1.139298	6000	1.171385	8000	1.178312				
1-Methylnaphthalene	2000	0.6491472	4000	0.6554182	6000	0.6186805	8000	0.5850715				
2-Methylnaphthalene	2000	0.6850245	4000	0.6903095	6000	0.6550667	8000	0.6207151				
Naphthalene	2000	1.048774	4000	1.043041	6000	1.001759	8000	0.9529047				
Phenanthrene	2000	1.096232	4000	1.076913	6000	1.003821	8000	0.9621179				
Pyrene	2000	1.170984	4000	1.147648	6000	1.102756	8000	1.073706				
Carbazole	2000	1.03536	4000	1.015231	6000	0.9569949	8000	0.926012				
Dibenzofuran	2000	1.764425	4000	1.753937	6000	1.675065	8000	1.603195				
4-Chloro-3-methylphenol	2000	0.2822323	4000	0.3010981	6000	0.2980379	8000	0.2906565				
2-Chlorophenol	2000	1.380778	4000	1.424305	6000	1.415544	8000	1.390938				
2,4-Dichlorophenol	2000	0.2519616	4000	0.2628338	6000	0.2648526	8000	0.2600543				
2,4-Dimethylphenol	2000	0.3130697	4000	0.3117453	6000	0.3140256	8000	0.2962869				
2,4-Dinitrophenol	2000	0.1042387	4000	0.1445553	6000	0.1714022	8000	0.1843774				
4,6-Dinitro-2-methylphenol	2000	0.1600869	4000	0.1971057	6000	0.2171684	8000	0.2275118				
2-Methylphenol	2000	1.154267	4000	1.181838	6000	1.155456	8000	1.113556				
3+4-Methylphenol(s)	2000	1.494615	4000	1.526709	6000	1.471656	8000	1.415713				
2-Nitrophenol	2000	0.1637897	4000	0.1777603	6000	0.1797984	8000	0.1798254				
4-Nitrophenol	2000	0.290204	4000	0.3085269	6000	0.320978	8000	0.320162				

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9A3103
Instrument: SV-GCMS5
Matrix:
Calibration Date: 01/31/19 12:46

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	0.1068869	4000	0.1198472	6000	0.1262877	8000	0.1279752				
Phenol	2000	1.808085	4000	1.86865	6000	1.843413	8000	1.799074				
2,3,4,6-Tetrachlorophenol	2000	0.2965316	4000	0.3149755	6000	0.3178729	8000	0.3189439				
2,3,5,6-Tetrachlorophenol	2000	0.2752351	4000	0.2992908	6000	0.3080004	8000	0.3080888				
2,4,5-Trichlorophenol	2000	0.3474458	4000	0.3697569	6000	0.3665615	8000	0.3715641				
2,4,6-Trichlorophenol	2000	0.3514142	4000	0.358158	6000	0.3698613	8000	0.3567184				
Bis(2-ethylhexyl)phthalate	2000	0.867756	4000	0.8945474	6000	0.8858992	8000	0.8807067				
Butyl benzyl phthalate	2000	0.6248856	4000	0.6408075	6000	0.6343325	8000	0.6265528				
Diethylphthalate	2000	1.429074	4000	1.377548	6000	1.280995	8000	1.208511				
Dimethylphthalate	2000	1.368051	4000	1.406023	6000	1.362104	8000	1.340413				
Di-n-butylphthalate	2000	1.300973	4000	1.269109	6000	1.181391	8000	1.121755				
Di-n-octyl phthalate	2000	1.503973	4000	1.58944	6000	1.584655	8000	1.585199				
2,3,5-Trimethylnaphthalene	2000	1.118484	4000	1.06989	6000	0.9759315	8000	0.9233451				
2,6-Dimethylnaphthalene	2000	1.22374	4000	1.200066	6000	1.122438	8000	1.068758				
Benzo(e)pyrene	2000	1.098888	4000	1.124704	6000	1.100066	8000	1.099064				
1,1'-Biphenyl	2000	1.722088	4000	1.683444	6000	1.57332	8000	1.472836				
Perylene	2000	1.106588	4000	1.119207	6000	1.096078	8000	1.08676				
Nitrobenzene-d5 (Surr)	2000	1.717295	4000	1.629928	6000	1.735825	8000	1.541207				
2-Fluorobiphenyl (Surr)	2000	1.489536	4000	1.464818	6000	1.403919	8000	1.335166				
Phenol-d6 (Surr)	2000	1.760804	4000	1.793978	6000	1.751682	8000	1.717552				
p-Terphenyl-d14 (Surr)	2000	0.9322996	4000	0.9379354	6000	0.9188462	8000	0.9088737				
2-Fluorophenol (Surr)	2000	1.291093	4000	1.352435	6000	1.343054	8000	1.331807				
2,4,6-Tribromophenol (Surr)	2000	8.301903E-02	4000	9.248324E-02	6000	0.0955793	8000	9.842992E-02				

INITIAL CALIBRATION DATA (Summary)

EPA 8270D

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Calibration: A9D1505 Date: 04/15/19 14:53 Instrument: SV-GCMS10

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Acenaphthene	1.28667	Ave	10.97154	9.8995	5.839588E-02			20	
Acenaphthylene	2.000623	Ave	8.590469	9.720334	3.731059E-02			20	
Anthracene	1.056941	Ave	11.97015	11.4568	5.906968E-02			20	
Benz(a)anthracene	1.091349	Ave	3.455393	15.3374	7.238036E-02			20	
Benzo(a)pyrene	0.9699381	XXX	20.03122	18.74	0.124951				
Benzo(b)fluoranthene	1.087957	XXX	17.55607	17.9581	0.1164495				
Benzo(k)fluoranthene	1.045719	XXX	17.74867	18.0284	0.1148608				
Benzo(g,h,i)perylene	1.081412	Ave	8.424744	21.8226	0.1318572			20	
Chrysene	1.058934	Ave	2.949131	15.4228	0.1140267			20	
Dibenz(a,h)anthracene	1.00084	Ave	4.355	21.3401	0.1066938			20	
Fluoranthene	1.082262	Ave	10.69782	12.722	0.0484217			20	
Fluorene	1.316347	Ave	12.04043	10.4231	5.859306E-02			20	
Indeno(1,2,3-cd)pyrene	1.118845	Ave	5.308681	21.2786	0.1250806			20	
1-Methylnaphthalene	0.6584879	Ave	9.581506	8.903	4.608219E-02			20	
2-Methylnaphthalene	0.6788702	Ave	10.52969	8.800334	4.353128E-02			20	
Naphthalene	1.035252	Ave	10.71752	8.1056	5.874788E-02			20	
Phenanthrene	1.085248	Ave	12.23274	11.4067	5.409496E-02			20	
Pyrene	1.115312	Ave	10.02968	13.0343	6.155216E-02			20	
Carbazole	0.8944781	Ave	13.01088	8.705125	61.72134			20	
Dibenzofuran	1.680969	Ave	10.47771	10.0727	5.557058E-02			20	
Nitrobenzene-d5 (Surr)	1.406617	XXX	14.43767	7.358778	8.594122E-02				
2-Fluorobiphenyl (Surr)	1.411121	Ave	11.24503	9.169333	3.813388E-02			20	
Phenol-d6 (Surr)	1.672419	Ave	14.32085	6.441556	0.1105596			20	
p-Terphenyl-d14 (Surr)	0.9414444	Ave	5.989346	13.2467	3.941845E-02			20	
2-Fluorophenol (Surr)	1.300156	Ave	12.27825	5.5363	6.470345E-02			20	
2,4,6-Tribromophenol (Surr)	0.0888545	XXX	20.57089	10.669	5.382367E-02				

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: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9D1505
Instrument: SV-GCMS10
Calibration Date: 04/15/19 14:53

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	1.407537	50	1.318607	100	1.402616	200	1.408561	500	1.407188	1000	1.341761
Acenaphthylene	20	1.903158	50	1.943127	100	2.138559	200	2.108565	500	2.208351	1000	2.145042
Anthracene	20	0.9981684	50	1.082171	100	1.183458	200	1.181237	500	1.196563	1000	1.12605
Benz(a)anthracene	20	1.100877	50	1.023224	100	1.075788	200	1.127988	500	1.153062	1000	1.113308
Benzo(a)pyrene	20	0.5833412	50	0.6986363	100	0.8488289	200	0.9976045	500	1.096103	1000	1.108181
Benzo(b)fluoranthene	20	0.6991584	50	0.8330036	100	0.9840151	200	1.068095	500	1.197558	1000	1.192055
Benzo(k)fluoranthene	20	0.6268189	50	0.8533243	100	1.029425	200	1.118996	500	1.211419	1000	1.21117
Benzo(b+k)fluoranthene(s)	40	0.741341	100	0.8721357	200	1.038054	400	1.118338	1000	1.230479	2000	1.225398
Benzo(g,h,i)perylene	20	0.9036528	50	0.982206	100	1.005877	200	1.09576	500	1.174822	1000	1.179351
Chrysene	20	1.032687	50	1.014982	100	1.087538	200	1.089147	500	1.096461	1000	1.083692
Dibenz(a,h)anthracene	20	0.962609	50	0.9142935	100	1.001866	200	0.9987687	500	1.042878	1000	1.02648
Fluoranthene	20	0.9416683	50	0.9624752	100	1.129078	200	1.207544	500	1.237955	1000	1.175948
Fluorene	20	1.306897	50	1.353905	100	1.471751	200	1.488122	500	1.483045	1000	1.384838
Indeno(1,2,3-cd)pyrene	20	1.200077	50	1.053246	100	1.089032	200	1.086355	500	1.104676	1000	1.089045
1-Methylnaphthalene	20	0.6307203	50	0.6423631	100	0.684546	200	0.7320903	500	0.7481156	1000	0.6981849
2-Methylnaphthalene	20	0.5777526	50	0.5959154	100	0.6434083	200	0.7476714	500	0.7731555	1000	0.7399508
Naphthalene	20	1.039191	50	1.087569	100	1.129825	200	1.131105	500	1.147102	1000	1.091938
Phenanthrene	20	1.156024	50	1.17608	100	1.215486	200	1.197343	500	1.177029	1000	1.131256
Pyrene	20	1.015133	50	1.041664	100	1.181284	200	1.233764	500	1.27795	1000	1.200352
Carbazole	20	0.754341	50	0.8329661	100	0.9747962	200	1.00912	500	1.014369	1000	0.9724756
Dibenzofuran	20	1.700221	50	1.773831	100	1.78623	200	1.855744	500	1.87307	1000	1.746939
4-Chloro-3-methylphenol	20	~~7.229364E-02~~	50	~~0.1235332~~	100	0.1244964	200	0.1889564	500	0.2754519	1000	0.2897448
2-Chlorophenol	20	1.075855	50	1.143408	100	1.289471	200	1.343778	500	1.445379	1000	1.485893
2,4-Dichlorophenol	20	~~5.070098E-02~~	50	0.1018295	100	0.1183661	200	0.1561193	500	0.2240723	1000	0.244696
2,4-Dimethylphenol	20	~~0.1587836~~	50	0.1721793	100	0.2144464	200	0.2572861	500	0.3075341	1000	0.3154132
2,4-Dinitrophenol	20	~~0~~	50	~~0~~	100	~~4.301114E-03~~	200	1.376921E-02	500	2.934789E-02	1000	4.648092E-02
4,6-Dinitro-2-methylphenol	20	~~1.562877E-02~~	50	~~0.0134466~~	100	2.177722E-02	200	0.0454973	500	7.163797E-02	1000	8.957786E-02
2-Methylphenol	20	0.8385051	50	0.8133916	100	0.9166993	200	1.02536	500	1.127542	1000	1.185934
3+4-Methylphenol(s)	20	0.7387989	50	0.8172113	100	1.026387	200	1.178178	500	1.420886	1000	1.488649
2-Nitrophenol	20	~~5.750088E-02~~	50	~~7.530798E-02~~	100	7.517723E-02	200	0.1103898	500	0.1378061	1000	0.1613617
4-Nitrophenol	20	~~1.918077E-02~~	50	~~4.472863E-02~~	100	6.297737E-02	200	0.1114629	500	0.1535283	1000	0.1890583

INITIAL CALIBRATION DATA

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9D1505
Instrument: SV-GCMS10
Calibration Date: 04/15/19 14:53

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	~~0.1388781~~	50	6.789244E-02	100	7.413181E-02	200	9.638542E-02	500	0.1006502	1000	0.1045785
Phenol	20	1.023813	50	1.450316	100	1.505073	200	1.808779	500	1.940786	1000	1.767056
2,3,4,6-Tetrachlorophenol	20	0.1103486	50	0.170417	100	0.2155537	200	0.2622695	500	0.2752862	1000	0.2835067
2,3,5,6-Tetrachlorophenol	20	~~8.643185E-02~~	50	0.0964607	100	0.1340137	200	0.2016283	500	0.2417931	1000	0.2592075
2,4,5-Trichlorophenol	20	~~0.1349758~~	50	0.1808755	100	0.1904714	200	0.25221	500	0.3147115	1000	0.337543
2,4,6-Trichlorophenol	20	~~0.1508414~~	50	0.1537955	100	0.1608164	200	0.2474311	500	0.3273405	1000	0.3413524
Bis(2-ethylhexyl)phthalate	20	~~0.3214443~~	50	~~0.3816077~~	100	~~0.5155443~~	200	0.6508178	500	0.8078548	1000	0.8624217
Butyl benzyl phthalate	20	~~0.235551~~	50	0.2757728	100	0.3691949	200	0.4448589	500	0.5615709	1000	0.5991685
Diethylphthalate	20	1.299793	50	1.326265	100	1.516845	200	1.497898	500	1.521107	1000	1.419226
Dimethylphthalate	20	1.353547	50	1.382385	100	1.47981	200	1.488143	500	1.532492	1000	1.43415
Di-n-butylphthalate	20	~~0.9169406~~	50	~~0.9832994~~	100	1.117678	200	1.286755	500	1.376791	1000	1.33187
Di-n-octyl phthalate	20	~~0.354852~~	50	~~0.3994942~~	100	0.5663861	200	0.8329586	500	1.176041	1000	1.379003
2,3,5-Trimethylnaphthalene	20	1.053048	50	1.123819	100	1.202184	200	1.210774	500	1.203973	1000	1.115924
2,6-Dimethylnaphthalene	20	1.058731	50	1.207393	100	1.24841	200	1.32252	500	1.360596	1000	1.306092
Benzo(e)pyrene	20	0.8443924	50	0.8957328	100	1.052391	200	1.110091	500	1.217014	1000	1.203153
1,1'-Biphenyl	20	1.28819	50	1.494814	100	1.510053	200	1.783276	500	1.864254	1000	1.789293
Perylene	20	0.9707552	50	0.9544863	100	1.028055	200	1.104627	500	1.074625	1000	1.051602
Nitrobenzene-d5 (Surr)	20	~~1.037917~~	50	0.9478428	100	1.284594	200	1.307222	500	1.423927	1000	1.482348
2-Fluorobiphenyl (Surr)	20	~~1.174052~~	50	1.365204	100	1.35132	200	1.570824	500	1.630604	1000	1.556624
Phenol-d6 (Surr)	20	~~1.098714~~	50	1.196119	100	1.39741	200	1.567644	500	1.711503	1000	1.761661
p-Terphenyl-d14 (Surr)	20	0.8168062	50	0.8999245	100	0.9597296	200	0.9685109	500	1.012126	1000	0.9930516
2-Fluorophenol (Surr)	20	1.086068	50	1.024618	100	1.155766	200	1.272371	500	1.350448	1000	1.359638
2,4,6-Tribromophenol (Surr)	20	~~0.0552062~~	50	4.929333E-02	100	6.845792E-02	200	8.799316E-02	500	9.356845E-02	1000	9.755618E-02

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9D1505
Instrument: SV-GCMS10
Matrix:
Calibration Date: 04/15/19 14:53

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	1.275831	4000	1.193488	6000	1.089011	8000	1.022103				
Acenaphthylene	2000	2.003643	4000	1.898611	6000	1.656547	8000	~~1.494399~~				
Anthracene	2000	1.088237	4000	0.9914895	6000	0.8942322	8000	0.8278006				
Benz(a)anthracene	2000	1.10212	4000	1.097957	6000	1.062166	8000	1.056996				
Benzo(a)pyrene	2000	1.137055	4000	1.126645	6000	1.066126	8000	1.03686				
Benzo(b)fluoranthene	2000	1.221197	4000	1.257976	6000	1.207525	8000	1.218987				
Benzo(k)fluoranthene	2000	1.181608	4000	1.162057	6000	1.079397	8000	0.9829712				
Benzo(b+k)fluoranthene(s)	4000	1.222411	8000	1.228643	12000	1.162137	16000	1.142006				
Benzo(g,h,i)perylene	2000	1.157191	4000	1.137309	6000	1.094109	8000	1.083844				
Chrysene	2000	1.07383	4000	1.058982	6000	1.028745	8000	1.023281				
Dibenz(a,h)anthracene	2000	1.06317	4000	1.032341	6000	0.9930483	8000	0.9729436				
Fluoranthene	2000	1.158537	4000	1.08301	6000	0.990162	8000	0.9362458				
Fluorene	2000	1.329145	4000	1.216133	6000	1.094041	8000	1.035598				
Indeno(1,2,3-cd)pyrene	2000	1.089734	4000	1.120479	6000	1.107223	8000	1.248578				
1-Methylnaphthalene	2000	0.6795904	4000	0.6409036	6000	0.580747	8000	0.5476182				
2-Methylnaphthalene	2000	0.7255449	4000	0.6820757	6000	0.624357	8000	~~0.5897244~~				
Naphthalene	2000	1.052378	4000	0.9717272	6000	0.8811986	8000	0.8204817				
Phenanthrene	2000	1.077902	4000	0.9840685	6000	0.8927602	8000	0.8445283				
Pyrene	2000	1.167948	4000	1.08811	6000	0.999296	8000	0.9476153				
Carbazole	2000	0.879679	4000	0.7180782	6000	~~0.6522258~~	8000	~~0.5830367~~				
Dibenzofuran	2000	1.698649	4000	1.604292	6000	1.441695	8000	1.329021				
4-Chloro-3-methylphenol	2000	0.3087296	4000	0.3182331	6000	0.3075433	8000	0.2987976				
2-Chlorophenol	2000	1.466096	4000	1.479065	6000	1.467852	8000	1.399867				
2,4-Dichlorophenol	2000	0.2545735	4000	0.2576182	6000	0.2455748	8000	~~0.2355527~~				
2,4-Dimethylphenol	2000	0.3230022	4000	0.306268	6000	0.2889028	8000	0.2812126				
2,4-Dinitrophenol	2000	0.0704893	4000	0.1030754	6000	0.1183872	8000	0.1308858				
4,6-Dinitro-2-methylphenol	2000	0.1239136	4000	0.1593363	6000	0.1693465	8000	0.1762921				
2-Methylphenol	2000	1.179589	4000	1.192219	6000	1.152066	8000	1.100493				
3+4-Methylphenol(s)	2000	1.517967	4000	~~1.515359~~	6000	~~1.425723~~	8000	~~1.349224~~				
2-Nitrophenol	2000	0.1653728	4000	0.1777841	6000	0.1793081	8000	0.1790318				
4-Nitrophenol	2000	0.2262254	4000	0.2533685	6000	0.2571722	8000	0.2598746				

INITIAL CALIBRATION DATA (Continued)

EPA 8270D

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A9D1505
Instrument: SV-GCMS10
Matrix:
Calibration Date: 04/15/19 14:53

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	0.1196889	4000	0.1256196	6000	0.1245869	8000	0.1246499				
Phenol	2000	2.012487	4000	2.060627	6000	2.011084	8000	1.953591				
2,3,4,6-Tetrachlorophenol	2000	0.2939887	4000	0.2998435	6000	0.2932934	8000	0.2826404				
2,3,5,6-Tetrachlorophenol	2000	0.2756684	4000	0.2906511	6000	0.2792157	8000	0.277406				
2,4,5-Trichlorophenol	2000	0.3410959	4000	0.3598322	6000	0.3396843	8000	0.3348622				
2,4,6-Trichlorophenol	2000	0.364244	4000	0.367047	6000	0.358843	8000	0.3433958				
Bis(2-ethylhexyl)phthalate	2000	0.8855234	4000	0.9124573	6000	0.8857301	8000	0.8759984				
Butyl benzyl phthalate	2000	0.6418156	4000	0.6853113	6000	0.6757879	8000	0.6863196				
Diethylphthalate	2000	1.346538	4000	1.234029	6000	1.100482	8000	1.024322				
Dimethylphthalate	2000	1.402622	4000	1.355086	6000	1.26105	8000	1.221963				
Di-n-butylphthalate	2000	1.317355	4000	1.228718	6000	1.100526	8000	1.024014				
Di-n-octyl phthalate	2000	1.539104	4000	1.663901	6000	1.602667	8000	1.576793				
2,3,5-Trimethylnaphthalene	2000	1.063082	4000	0.9640403	6000	0.8726082	8000	0.8178874				
2,6-Dimethylnaphthalene	2000	1.237723	4000	1.137262	6000	1.038312	8000	0.9698444				
Benzo(e)pyrene	2000	1.19816	4000	1.193881	6000	1.133891	8000	1.118241				
1,1'-Biphenyl	2000	1.694202	4000	1.546002	6000	~~1.40092~~	8000	~~1.293293~~				
Perylene	2000	1.029392	4000	1.018288	6000	0.96584	8000	0.9546067				
Nitrobenzene-d5 (Surr)	2000	1.566706	4000	1.582496	6000	1.548876	8000	1.515539				
2-Fluorobiphenyl (Surr)	2000	1.472265	4000	1.359615	6000	1.23328	8000	1.160352				
Phenol-d6 (Surr)	2000	1.826101	4000	1.8938	6000	1.872366	8000	1.825167				
p-Terphenyl-d14 (Surr)	2000	0.9702531	4000	0.9625854	6000	0.9196357	8000	0.9118209				
2-Fluorophenol (Surr)	2000	1.389109	4000	1.463186	6000	1.464451	8000	1.435903				
2,4,6-Tribromophenol (Surr)	2000	0.1023306	4000	0.1038946	6000	0.1001372	8000	9.645912E-02				

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E01301925.D		
Sequence:	9A30046	Inject Date:	01/31/19
Lab Sample ID:	9A30046-ICV1	Inject Time:	01:40

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	1000	1030	3.3	70 - 130
Acenaphthylene	1000	1070	6.9	70 - 130
Anthracene	1000	1030	3.4	70 - 130
Benz(a)anthracene	1000	1060	5.6	70 - 130
Benzo(a)pyrene	1000	1090	9.4	70 - 130
Benzo(b)fluoranthene	1000	1080	8.1	70 - 130
Benzo(k)fluoranthene	1000	1080	8.3	70 - 130
Benzo(g,h,i)perylene	1000	1050	5.4	70 - 130
Chrysene	1000	1030	3.1	70 - 130
Dibenz(a,h)anthracene	1000	1030	2.6	70 - 130
Fluoranthene	1000	1040	4.0	70 - 130
Fluorene	1000	1110	10.5	70 - 130
Indeno(1,2,3-cd)pyrene	1000	995	-0.5	70 - 130
1-Methylnaphthalene	1000	1060	5.9	70 - 130
2-Methylnaphthalene	1000	1080	7.8	70 - 130
Naphthalene	1000	1020	1.7	70 - 130
Phenanthrene	1000	1040	3.7	70 - 130
Pyrene	1000	1050	4.8	70 - 130
Carbazole	1000	1000	0.2	70 - 130
Dibenzofuran	1000	1060	6.5	70 - 130
4-Chloro-3-methylphenol	1000	1060	6.0	70 - 130
2-Chlorophenol	1000	1050	5.2	70 - 130
2,4-Dichlorophenol	1000	1080	7.5	70 - 130
2,4-Dimethylphenol	1000	1010	0.9	70 - 130
2,4-Dinitrophenol	1000	1090	9.0	70 - 130
4,6-Dinitro-2-methylphenol	1000	1210	21.0	70 - 130
2-Methylphenol	1000	1050	4.7	70 - 130
3+4-Methylphenol(s)	1000	1080	8.0	70 - 130
2-Nitrophenol	1000	1120	12.0	70 - 130
4-Nitrophenol	1000	1090	8.8	70 - 130
Pentachlorophenol (PCP)	1000	1000	-0.04	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E01301925.D		
Sequence:	9A30046	Inject Date:	01/31/19
Lab Sample ID:	9A30046-ICV1	Inject Time:	01:40

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Phenol	1000	1020	2.1	70 - 130
2,3,4,6-Tetrachlorophenol	1000	1110	10.7	70 - 130
2,3,5,6-Tetrachlorophenol	1000	1150	15.1	70 - 130
2,4,5-Trichlorophenol	1000	1100	9.8	70 - 130
2,4,6-Trichlorophenol	1000	1100	10.2	70 - 130
Bis(2-ethylhexyl)phthalate	1000	1010	1.0	70 - 130
Butyl benzyl phthalate	1000	1060	5.5	70 - 130
Diethylphthalate	1000	1150	14.6	70 - 130
Dimethylphthalate	1000	1120	12.1	70 - 130
Di-n-butylphthalate	1000	1020	1.8	70 - 130
Di-n-octyl phthalate	1000	1060	6.3	70 - 130
Nitrobenzene-d5 (Surr)	1000	1060	6.1	70 - 130
2-Fluorobiphenyl (Surr)	1000	1020	1.9	70 - 130
Phenol-d6 (Surr)	1000	1040	3.9	70 - 130
p-Terphenyl-d14 (Surr)	1000	1050	5.0	70 - 130
2-Fluorophenol (Surr)	1000	1030	2.6	70 - 130
2,4,6-Tribromophenol (Surr)	1000	1140	13.8	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS10	Calibration:	A9D1505
Lab File ID:	J04121926.D		
Sequence:	9D12042	Inject Date:	04/13/19
Lab Sample ID:	9D12042-ICV1	Inject Time:	01:26

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Acenaphthene	1000	1030	3.0	70 - 130
Acenaphthylene	1000	1080	7.7	70 - 130
Anthracene	1000	1050	5.4	70 - 130
Benz(a)anthracene	1000	1040	4.0	70 - 130
Benzo(a)pyrene	1000	1040	3.5	70 - 130
Benzo(b)fluoranthene	1000	1030	3.0	70 - 130
Benzo(k)fluoranthene	1000	1020	1.6	70 - 130
Benzo(g,h,i)perylene	1000	1060	6.4	70 - 130
Chrysene	1000	1020	2.1	70 - 130
Dibenz(a,h)anthracene	1000	1020	1.9	70 - 130
Fluoranthene	1000	1100	9.9	70 - 130
Fluorene	1000	1070	7.1	70 - 130
Indeno(1,2,3-cd)pyrene	1000	957	-4.3	70 - 130
1-Methylnaphthalene	1000	1050	5.0	70 - 130
2-Methylnaphthalene	1000	1090	8.5	70 - 130
Naphthalene	1000	1050	4.9	70 - 130
Phenanthrene	1000	1040	3.7	70 - 130
Pyrene	1000	1090	9.3	70 - 130
Carbazole	1000	1060	6.5	70 - 130
Dibenzofuran	1000	1060	5.8	70 - 130
4-Chloro-3-methylphenol	1000	993	-0.7	70 - 130
2-Chlorophenol	1000	1070	7.4	70 - 130
2,4-Dichlorophenol	1000	1020	2.1	70 - 130
2,4-Dimethylphenol	1000	987	-1.3	70 - 130
2,4-Dinitrophenol	1000	962	-3.8	70 - 130
4,6-Dinitro-2-methylphenol	1000	1190	18.6	70 - 130
2-Methylphenol	1000	1080	7.8	70 - 130
3+4-Methylphenol(s)	1000	1050	5.3	70 - 130
2-Nitrophenol	1000	1120	12.2	70 - 130
4-Nitrophenol	1000	1080	7.7	70 - 130
Pentachlorophenol (PCP)	1000	1050	5.0	70 - 130

SECOND-SOURCE CALIBRATION VERIFICATION

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS10	Calibration:	A9D1505
Lab File ID:	J04121926.D		
Sequence:	9D12042	Inject Date:	04/13/19
Lab Sample ID:	9D12042-ICV1	Inject Time:	01:26

ANALYTE	EXPECTED (ng/mL)	FOUND (ng/mL)	% DRIFT	QC LIMIT
Phenol	1000	1050	5.1	70 - 130
2,3,4,6-Tetrachlorophenol	1000	1040	4.3	70 - 130
2,3,5,6-Tetrachlorophenol	1000	1030	3.5	70 - 130
2,4,5-Trichlorophenol	1000	1080	8.2	70 - 130
2,4,6-Trichlorophenol	1000	964	-3.6	70 - 130
Bis(2-ethylhexyl)phthalate	1000	1010	0.7	70 - 130
Butyl benzyl phthalate	1000	1010	1.2	70 - 130
Diethylphthalate	1000	1070	6.9	70 - 130
Dimethylphthalate	1000	1050	4.8	70 - 130
Di-n-butylphthalate	1000	1090	8.9	70 - 130
Di-n-octyl phthalate	1000	993	-0.7	70 - 130
Nitrobenzene-d5 (Surr)	1000	1010	1.0	70 - 130
2-Fluorobiphenyl (Surr)	1000	1100	9.5	70 - 130
Phenol-d6 (Surr)	1000	1020	1.8	70 - 130
p-Terphenyl-d14 (Surr)	1000	1050	4.6	70 - 130
2-Fluorophenol (Surr)	1000	1030	2.5	70 - 130
2,4,6-Tribromophenol (Surr)	1000	1000	0.4	70 - 130

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E04231907.D	Calibration Date:	01/31/19 12:46
Sequence:	9D23025	Injection Date:	04/23/19
Lab Sample ID:	9D23025-CCV2	Injection Time:	11:47

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		1.320947	1.354317	2.5	20
Acenaphthylene	Ave	1000	1060		1.948127	2.056081	5.5	20
Anthracene	Ave	1000	1030		1.126296	1.161657	3.1	20
Benz(a)anthracene	Ave	1000	987		1.128129	1.113082	-1.3	20
Benzo(a)pyrene	Ave	1000	1150		0.9593879	1.106695	15.4	20
Benzo(b)fluoranthene	Ave	1000	1120		1.056647	1.187002	12.3	20
Benzo(k)fluoranthene	Ave	1000	1160		1.038438	1.200578	15.6	20
Benzo(g,h,i)perylene	Ave	1000	982		1.079251	1.059706	-1.8	20
Chrysene	Ave	1000	1030		1.074697	1.109183	3.2	20
Dibenz(a,h)anthracene	Ave	1000	1070		1.003913	1.075729	7.2	20
Fluoranthene	Ave	1000	1090		1.138647	1.238398	8.8	20
Fluorene	Ave	1000	1120		1.375044	1.542445	12.2	20
Indeno(1,2,3-cd)pyrene	Ave	1000	975		1.096233	1.068995	-2.5	20
1-Methylnaphthalene	Ave	1000	1020		0.6426808	0.658226	2.4	20
2-Methylnaphthalene	Ave	1000	1030		0.6711103	0.6930487	3.3	20
Naphthalene	Ave	1000	999		1.066921	1.06545	-0.1	20
Phenanthrene	Ave	1000	1050		1.097729	1.148297	4.6	20
Pyrene	Ave	1000	1100		1.156671	1.276524	10.4	20
Carbazole	Ave	1000	1010		1.054571	1.065807	1.1	20
Dibenzofuran	Ave	1000	1070		1.717298	1.832963	6.7	20
Bis(2-ethylhexyl)phthalate	Ave	1000	875		0.8360134	0.7312637	-12.5	20
Butyl benzyl phthalate	Ave	1000	887		0.5849967	0.5188429	-11.3	20
Diethylphthalate	Ave	1000	1180		1.28282	1.510745	17.8	20
Dimethylphthalate	Ave	1000	1130		1.283596	1.453525	13.2	20
Di-n-butylphthalate	Ave	1000	968		1.319517	1.277744	-3.2	20
Di-n-octyl phthalate	XXX	1000	896	-10.4				20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E04251903.D	Calibration Date:	01/31/19 12:46
Sequence:	9D25002	Injection Date:	04/25/19
Lab Sample ID:	9D25002-CCV1	Injection Time:	08:42

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1020		1.320947	1.352365	2.4	20
Acenaphthylene	Ave	1000	1050		1.948127	2.036383	4.5	20
Anthracene	Ave	1000	1020		1.126296	1.147806	1.9	20
Benz(a)anthracene	Ave	1000	974		1.128129	1.098541	-2.6	20
Benzo(a)pyrene	Ave	1000	1100		0.9593879	1.05348	9.8	20
Benzo(b)fluoranthene	Ave	1000	1080		1.056647	1.137886	7.7	20
Benzo(k)fluoranthene	Ave	1000	1140		1.038438	1.180884	13.7	20
Benzo(g,h,i)perylene	Ave	1000	937		1.079251	1.011119	-6.3	20
Chrysene	Ave	1000	1020		1.074697	1.093895	1.8	20
Dibenz(a,h)anthracene	Ave	1000	1050		1.003913	1.055112	5.1	20
Fluoranthene	Ave	1000	1010		1.138647	1.150352	1.0	20
Fluorene	Ave	1000	1040		1.375044	1.426454	3.7	20
Indeno(1,2,3-cd)pyrene	Ave	1000	863		1.096233	0.9462214	-13.7	20
2-Methylnaphthalene	Ave	1000	995		0.6711103	0.6676686	-0.5	20
Naphthalene	Ave	1000	999		1.066921	1.065655	-0.1	20
Phenanthrene	Ave	1000	1040		1.097729	1.139202	3.8	20
Pyrene	Ave	1000	1030		1.156671	1.188086	2.7	20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E04291903.D	Calibration Date:	01/31/19 12:46
Sequence:	9D29024	Injection Date:	04/29/19
Lab Sample ID:	9D29024-CCV1	Injection Time:	09:18

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		1.320947	1.360432	3.0	20
Acenaphthylene	Ave	1000	1070		1.948127	2.074812	6.5	20
Anthracene	Ave	1000	1020		1.126296	1.154362	2.5	20
Benz(a)anthracene	Ave	1000	985		1.128129	1.111167	-1.5	20
Benzo(a)pyrene	Ave	1000	1130		0.9593879	1.08443	13.0	20
Benzo(b)fluoranthene	Ave	1000	1100		1.056647	1.161053	9.9	20
Benzo(k)fluoranthene	Ave	1000	1170		1.038438	1.21592	17.1	20
Benzo(g,h,i)perylene	Ave	1000	1080		1.079251	1.160226	7.5	20
Chrysene	Ave	1000	1030		1.074697	1.107129	3.0	20
Dibenz(a,h)anthracene	Ave	1000	1050		1.003913	1.050923	4.7	20
Fluoranthene	Ave	1000	1030		1.138647	1.171722	2.9	20
Fluorene	Ave	1000	1060		1.375044	1.453157	5.7	20
Indeno(1,2,3-cd)pyrene	Ave	1000	988		1.096233	1.082852	-1.2	20
2-Methylnaphthalene	Ave	1000	1060		0.6711103	0.7112677	6.0	20
Naphthalene	Ave	1000	1000		1.066921	1.069755	0.3	20
Phenanthrene	Ave	1000	1040		1.097729	1.140172	3.9	20
Pyrene	Ave	1000	1050		1.156671	1.210415	4.6	20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS10	Calibration:	A9D1505
Lab File ID:	J04301902.D	Calibration Date:	04/15/19 14:53
Sequence:	9D30020	Injection Date:	04/30/19
Lab Sample ID:	9D30020-CCV1	Injection Time:	08:33

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1050		1.28667	1.356998	5.5	20
Acenaphthylene	Ave	1000	1090		2.000623	2.176746	8.8	20
Anthracene	Ave	1000	1080		1.056941	1.143058	8.1	20
Benz(a)anthracene	Ave	1000	1060		1.091349	1.154206	5.8	20
Benzo(a)pyrene	XXX	1000	1080	7.6				20
Benzo(b)fluoranthene	XXX	1000	1080	7.7				20
Benzo(k)fluoranthene	XXX	1000	1070	7.5				20
Benzo(g,h,i)perylene	Ave	1000	1010		1.081412	1.087521	0.6	20
Chrysene	Ave	1000	1050		1.058934	1.108218	4.7	20
Dibenz(a,h)anthracene	Ave	1000	1040		1.00084	1.043054	4.2	20
Fluoranthene	Ave	1000	1090		1.082262	1.18377	9.4	20
Fluorene	Ave	1000	1090		1.316347	1.440322	9.4	20
Indeno(1,2,3-cd)pyrene	Ave	1000	949		1.118845	1.061333	-5.1	20
1-Methylnaphthalene	Ave	1000	1090		0.6584879	0.7204409	9.4	20
2-Methylnaphthalene	Ave	1000	1140		0.6788702	0.7717253	13.7	20
Naphthalene	Ave	1000	1070		1.035252	1.103693	6.6	20
Phenanthrene	Ave	1000	1060		1.085248	1.145849	5.6	20
Pyrene	Ave	1000	1060		1.115312	1.187037	6.4	20
Carbazole	Ave	1000	1110		0.8944781	0.9935738	11.1	20
Dibenzofuran	Ave	1000	1090		1.680969	1.836783	9.3	20
Bis(2-ethylhexyl)phthalate	Ave	1000	1120		0.8401148	0.9381638	11.7	20
Butyl benzyl phthalate	XXX	1000	1160	16.0				20
Diethylphthalate	Ave	1000	1100		1.32865	1.464778	10.2	20
Dimethylphthalate	Ave	1000	1080		1.391125	1.502584	8.0	20
Di-n-butylphthalate	Ave	1000	1130		1.222963	1.378476	12.7	20
Di-n-octyl phthalate	XXX	1000	1200	19.6				20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS10	Calibration:	A9D1505
Lab File ID:	J05011904.D	Calibration Date:	04/15/19 14:53
Sequence:	9E01028	Injection Date:	05/01/19
Lab Sample ID:	9E01028-CCV1	Injection Time:	09:48

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1050		1.28667	1.347548	4.7	20
Acenaphthylene	Ave	1000	1090		2.000623	2.176044	8.8	20
Anthracene	Ave	1000	1090		1.056941	1.15552	9.3	20
Benz(a)anthracene	Ave	1000	1050		1.091349	1.144123	4.8	20
Benzo(a)pyrene	XXX	1000	1090	8.8				20
Benzo(b)fluoranthene	XXX	1000	1100	9.8				20
Benzo(k)fluoranthene	XXX	1000	1040	3.6				20
Benzo(g,h,i)perylene	Ave	1000	1080		1.081412	1.165517	7.8	20
Chrysene	Ave	1000	1030		1.058934	1.087971	2.7	20
Dibenz(a,h)anthracene	Ave	1000	1040		1.00084	1.045537	4.5	20
Fluoranthene	Ave	1000	1140		1.082262	1.23456	14.1	20
Fluorene	Ave	1000	1080		1.316347	1.426785	8.4	20
Indeno(1,2,3-cd)pyrene	Ave	1000	978		1.118845	1.094582	-2.2	20
1-Methylnaphthalene	Ave	1000	1060		0.6584879	0.69718	5.9	20
2-Methylnaphthalene	Ave	1000	1100		0.6788702	0.7484338	10.2	20
Naphthalene	Ave	1000	1060		1.035252	1.094296	5.7	20
Phenanthrene	Ave	1000	1050		1.085248	1.138547	4.9	20
Pyrene	Ave	1000	1100		1.115312	1.231574	10.4	20
Carbazole	Ave	1000	1130		0.8944781	1.010056	12.9	20
Dibenzofuran	Ave	1000	1090		1.680969	1.831853	9.0	20
Bis(2-ethylhexyl)phthalate	Ave	1000	1040		0.8401148	0.8762034	4.3	20
Butyl benzyl phthalate	XXX	1000	1100	9.7				20
Diethylphthalate	Ave	1000	1090		1.32865	1.450992	9.2	20
Dimethylphthalate	Ave	1000	1070		1.391125	1.482081	6.5	20
Di-n-butylphthalate	Ave	1000	1130		1.222963	1.385257	13.3	20
Di-n-octyl phthalate	XXX	1000	1070	7.2				20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E05011911.D	Calibration Date:	01/31/19 12:46
Sequence:	9E01044	Injection Date:	05/01/19
Lab Sample ID:	9E01044-CCV1	Injection Time:	16:01

COMPOUND	Curve Fit	Calculated Concentration (ng/mL) [L/Q Fits]			Response Factors [Ave RF]			Limit
		STD	CCV	% DIFF	ICAL	CCV	% Drift	
Acenaphthene	Ave	1000	1020		1.320947	1.352729	2.4	20
Acenaphthylene	Ave	1000	1050		1.948127	2.046395	5.0	20
Anthracene	Ave	1000	1040		1.126296	1.167184	3.6	20
Benz(a)anthracene	Ave	1000	983		1.128129	1.108684	-1.7	20
Benzo(a)pyrene	Ave	1000	1160		0.9593879	1.1129	16.0	20
Benzo(b)fluoranthene	Ave	1000	1120		1.056647	1.18218	11.9	20
Benzo(k)fluoranthene	Ave	1000	1180		1.038438	1.222718	17.7	20
Benzo(g,h,i)perylene	Ave	1000	1090		1.079251	1.176931	9.1	20
Chrysene	Ave	1000	1020		1.074697	1.09433	1.8	20
Dibenz(a,h)anthracene	Ave	1000	1040		1.003913	1.040783	3.7	20
Fluoranthene	Ave	1000	1150		1.138647	1.312415	15.3	20
Fluorene	Ave	1000	1080		1.375044	1.487414	8.2	20
Indeno(1,2,3-cd)pyrene	Ave	1000	997		1.096233	1.09257	-0.3	20
1-Methylnaphthalene	Ave	1000	1040		0.6426808	0.6703445	4.3	20
2-Methylnaphthalene	Ave	1000	1040		0.6711103	0.6997888	4.3	20
Naphthalene	Ave	1000	1000		1.066921	1.068172	0.1	20
Phenanthrene	Ave	1000	1050		1.097729	1.148915	4.7	20
Pyrene	Ave	1000	1180		1.156671	1.368233	18.3	20

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

* = Values outside of QC limits

CONTINUING CALIBRATION CHECK

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Instrument ID:	SV-GCMS5	Calibration:	A9A3103
Lab File ID:	E05021905.D	Calibration Date:	01/31/19 12:46
Sequence:	9E02011	Injection Date:	05/02/19
Lab Sample ID:	9E02011-CCV1	Injection Time:	10:32

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		1.320947	1.359633	2.9	20
Acenaphthylene	Ave	1000	1060		1.948127	2.06349	5.9	20
Anthracene	Ave	1000	1030		1.126296	1.161035	3.1	20
Benz(a)anthracene	Ave	1000	985		1.128129	1.110938	-1.5	20
Benzo(a)pyrene	Ave	1000	1150		0.9593879	1.104902	15.2	20
Benzo(b)fluoranthene	Ave	1000	1120		1.056647	1.180383	11.7	20
Benzo(k)fluoranthene	Ave	1000	1160		1.038438	1.209136	16.4	20
Benzo(g,h,i)perylene	Ave	1000	1060		1.079251	1.141994	5.8	20
Chrysene	Ave	1000	1020		1.074697	1.097614	2.1	20
Dibenz(a,h)anthracene	Ave	1000	1040		1.003913	1.04271	3.9	20
Fluoranthene	Ave	1000	1040		1.138647	1.18599	4.2	20
Fluorene	Ave	1000	1090		1.375044	1.500353	9.1	20
Indeno(1,2,3-cd)pyrene	Ave	1000	1020		1.096233	1.121443	2.3	20
1-Methylnaphthalene	Ave	1000	1040		0.6426808	0.671231	4.4	20
2-Methylnaphthalene	Ave	1000	1050		0.6711103	0.707027	5.4	20
Naphthalene	Ave	1000	1000		1.066921	1.070067	0.3	20
Phenanthrene	Ave	1000	1040		1.097729	1.138754	3.7	20
Pyrene	Ave	1000	1060		1.156671	1.229214	6.3	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:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9A30046	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9A30046-ICV1)				Lab File ID: E01301925.D		Analyzed: 01/31/19 01:40		
Nitrobenzene-d5 (Surr)	1000	106	70 - 130	7.377	7.381	-0.0040	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	102	70 - 130	9.179	9.1815	-0.0025	+/-1.0	
Phenol-d6 (Surr)	1000	104	70 - 130	6.473	6.4784	-0.0054	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	105	70 - 130	13.277	13.2814	-0.0044	+/-1.0	
2-Fluorophenol (Surr)	1000	103	70 - 130	5.628	5.631	-0.0030	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	114	70 - 130	10.682	10.6855	-0.0035	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D12042	Instrument:	SV-GCMS10
Matrix:	Water	Calibration:	A9D1505

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Initial Cal Check (9D12042-ICV1)				Lab File ID: J04121926.D		Analyzed: 04/13/19 01:26		
Nitrobenzene-d5 (Surr)	1000	101	70 - 130	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	110	70 - 130	9.167	9.169333	-0.0023	+/-1.0	
Phenol-d6 (Surr)	1000	102	70 - 130	6.434	6.441556	-0.0076	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	105	70 - 130	13.243	13.2467	-0.0037	+/-1.0	
2-Fluorophenol (Surr)	1000	103	70 - 130	5.535	5.5363	-0.0013	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	100	70 - 130	10.665	10.669	-0.0040	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23025	Instrument:	SV-GCMS5
Matrix:	Water	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9D23025-CCV2)			Lab File ID: E04231907.D		Analyzed: 04/23/19 11:47			
Nitrobenzene-d5 (Surr)	1000	105	80 - 120	7.393	7.381	0.0120	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	105	80 - 120	9.19	9.1815	0.0085	+/-1.0	
Phenol-d6 (Surr)	1000	96	80 - 120	6.5	6.4784	0.0216	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	103	80 - 120	13.277	13.2814	-0.0044	+/-1.0	
2-Fluorophenol (Surr)	1000	101	80 - 120	5.655	5.631	0.0240	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	129	80 - 120	10.688	10.6855	0.0025	+/-1.0	*
Calibration Blank (9D23025-CCB1)			Lab File ID: E04231908.D		Analyzed: 04/23/19 12:24			
Nitrobenzene-d5 (Surr)			44 - 120	7.382	7.381	0.0010	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 120	0	9.1815	-9.1815	+/-1.0	
Phenol-d6 (Surr)			10 - 120	0	6.4784	-6.4784	+/-1.0	
p-Terphenyl-d14 (Surr)			50 - 133	0	13.2814	-13.2814	+/-1.0	
2-Fluorophenol (Surr)			19 - 120	0	5.631	-5.6310	+/-1.0	
2,4,6-Tribromophenol (Surr)			43 - 140	0	10.6855	-10.6855	+/-1.0	
Blank (9041150-BLK1)			Lab File ID: E04231909.D		Analyzed: 04/23/19 13:02			
Nitrobenzene-d5 (Surr)	4.55	76	44 - 120	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	4.55	73	44 - 120	9.19	9.1815	0.0085	+/-1.0	
Phenol-d6 (Surr)	4.55	25	10 - 120	6.505	6.4784	0.0266	+/-1.0	
p-Terphenyl-d14 (Surr)	4.55	84	50 - 133	13.282	13.2814	0.0006	+/-1.0	
2-Fluorophenol (Surr)	4.55	40	19 - 120	5.66	5.631	0.0290	+/-1.0	
2,4,6-Tribromophenol (Surr)	4.55	76	43 - 140	10.693	10.6855	0.0075	+/-1.0	
LCS (9041150-BS1)			Lab File ID: E04231910.D		Analyzed: 04/23/19 13:39			
Nitrobenzene-d5 (Surr)	5.00	52	44 - 120	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	5.00	54	44 - 120	9.19	9.1815	0.0085	+/-1.0	
Phenol-d6 (Surr)	5.00	18	10 - 120	6.505	6.4784	0.0266	+/-1.0	
p-Terphenyl-d14 (Surr)	5.00	78	50 - 133	13.276	13.2814	-0.0054	+/-1.0	
2-Fluorophenol (Surr)	5.00	28	19 - 120	5.665	5.631	0.0340	+/-1.0	
2,4,6-Tribromophenol (Surr)	5.00	87	43 - 140	10.693	10.6855	0.0075	+/-1.0	
LCS Dup (9041150-BSD1)			Lab File ID: E04231911.D		Analyzed: 04/23/19 14:17			
Nitrobenzene-d5 (Surr)	5.00	78	44 - 120	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	5.00	77	44 - 120	9.19	9.1815	0.0085	+/-1.0	
Phenol-d6 (Surr)	5.00	29	10 - 120	6.505	6.4784	0.0266	+/-1.0	
p-Terphenyl-d14 (Surr)	5.00	82	50 - 133	13.276	13.2814	-0.0054	+/-1.0	
2-Fluorophenol (Surr)	5.00	46	19 - 120	5.66	5.631	0.0290	+/-1.0	
2,4,6-Tribromophenol (Surr)	5.00	96	43 - 140	10.693	10.6855	0.0075	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23025	Instrument:	SV-GCMS5
Matrix:	Water	Calibration:	A9A3103

Surrogate Compound	Spike Level ug/L	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
RB-201904171558 (A9D0674-01)			Lab File ID: E04231912.D		Analyzed: 04/23/19 14:54			
Nitrobenzene-d5 (Surr)	5.43	48	44 - 120	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	5.43	45	44 - 120	9.19	9.1815	0.0085	+/-1.0	
Phenol-d6 (Surr)	5.43	17	10 - 120	6.505	6.4784	0.0266	+/-1.0	
p-Terphenyl-d14 (Surr)	5.43	81	50 - 133	13.282	13.2814	0.0006	+/-1.0	
2-Fluorophenol (Surr)	5.43	28	19 - 120	5.665	5.631	0.0340	+/-1.0	
2,4,6-Tribromophenol (Surr)	5.43	68	43 - 140	10.693	10.6855	0.0075	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9D25002-CCV1)			Lab File ID: E04251903.D		Analyzed: 04/25/19 08:42			
Nitrobenzene-d5 (Surr)	1000	91	80 - 120	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	106	80 - 120	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	105	80 - 120	13.276	13.2814	-0.0054	+/-1.0	
Calibration Blank (9D25002-CCB1)			Lab File ID: E04251904.D		Analyzed: 04/25/19 09:19			
Nitrobenzene-d5 (Surr)			44 - 120	7.404	7.381	0.0230	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 120	0	9.1815	-9.1815	+/-1.0	
p-Terphenyl-d14 (Surr)			50 - 133	0	13.2814	-13.2814	+/-1.0	
Blank (9041271-BLK1)			Lab File ID: E04251905.D		Analyzed: 04/25/19 09:57			
Nitrobenzene-d5 (Surr)	312	71	37 - 122	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	312	82	44 - 115	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	312	86	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
LCS (9041271-BS1)			Lab File ID: E04251906.D		Analyzed: 04/25/19 10:34			
Nitrobenzene-d5 (Surr)	333	75	37 - 122	7.398	7.381	0.0170	+/-1.0	
2-Fluorobiphenyl (Surr)	333	79	44 - 115	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	333	88	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
T4-PDI2019-SG61-190416 (A9D0674-24)			Lab File ID: E04251907.D		Analyzed: 04/25/19 11:12			
Nitrobenzene-d5 (Surr)	471	48	37 - 122	7.414	7.381	0.0330	+/-1.0	
p-Terphenyl-d14 (Surr)	471	74	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
T4-PDI2019-SG11-190415 (A9D0674-05)			Lab File ID: E04251908.D		Analyzed: 04/25/19 11:49			
Nitrobenzene-d5 (Surr)	625	48	37 - 122	7.414	7.381	0.0330	+/-1.0	
2-Fluorobiphenyl (Surr)	625	61	44 - 115	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	625	68	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
T4-PDI2019-SG05-190417 (A9D0674-02)			Lab File ID: E04251909.D		Analyzed: 04/25/19 12:27			
Nitrobenzene-d5 (Surr)	426	37	37 - 122	7.414	7.381	0.0330	+/-1.0	
2-Fluorobiphenyl (Surr)	426	60	44 - 115	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	426	83	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
Duplicate (9041271-DUP1)			Lab File ID: E04251910.D		Analyzed: 04/25/19 13:04			
Nitrobenzene-d5 (Surr)	427	36	37 - 122	7.42	7.381	0.0390	+/-1.0	*
2-Fluorobiphenyl (Surr)	427	55	44 - 115	9.195	9.1815	0.0135	+/-1.0	
p-Terphenyl-d14 (Surr)	427	74	54 - 127	13.276	13.2814	-0.0054	+/-1.0	
T4-PDI2019-SG06-190417 (A9D0674-03)			Lab File ID: E04251913.D		Analyzed: 04/25/19 14:57			
Nitrobenzene-d5 (Surr)	432	30	37 - 122	7.414	7.381	0.0330	+/-1.0	*
2-Fluorobiphenyl (Surr)	432	58	44 - 115	9.195	9.1815	0.0135	+/-1.0	
p-Terphenyl-d14 (Surr)	432	83	54 - 127	13.276	13.2814	-0.0054	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG08-190415 (A9D0674-04)			Lab File ID: E04251914.D		Analyzed: 04/25/19 15:35			
Nitrobenzene-d5 (Surr)	723	46	37 - 122	7.414	7.381	0.0330	+/-1.0	
2-Fluorobiphenyl (Surr)	723	39	44 - 115	9.195	9.1815	0.0135	+/-1.0	*
p-Terphenyl-d14 (Surr)	723	44	54 - 127	13.276	13.2814	-0.0054	+/-1.0	*
T4-PDI2019-SG13-190415 (A9D0674-06)			Lab File ID: E04251915.D		Analyzed: 04/25/19 16:18			
Nitrobenzene-d5 (Surr)	673	38	37 - 122	7.42	7.381	0.0390	+/-1.0	
2-Fluorobiphenyl (Surr)	673	44	44 - 115	9.195	9.1815	0.0135	+/-1.0	
p-Terphenyl-d14 (Surr)	673	55	54 - 127	13.282	13.2814	0.0006	+/-1.0	
T4-PDI2019-SG16-190416 (A9D0674-08)			Lab File ID: E04251917.D		Analyzed: 04/25/19 17:45			
Nitrobenzene-d5 (Surr)	653	38	37 - 122	7.409	7.381	0.0280	+/-1.0	
2-Fluorobiphenyl (Surr)	653	49	44 - 115	9.19	9.1815	0.0085	+/-1.0	
p-Terphenyl-d14 (Surr)	653	47	54 - 127	13.276	13.2814	-0.0054	+/-1.0	*
T4-PDI2019-SG59-190417 (A9D0674-21RE2)			Lab File ID: E04251918.D		Analyzed: 04/25/19 18:17			
Nitrobenzene-d5 (Surr)	970	56	37 - 122	7.393	7.381	0.0120	+/-1.0	
2-Fluorobiphenyl (Surr)	970	43	44 - 115	9.185	9.1815	0.0035	+/-1.0	*
p-Terphenyl-d14 (Surr)	970	44	54 - 127	13.276	13.2814	-0.0054	+/-1.0	*
Matrix Spike (9041271-MS1)			Lab File ID: E04251919.D		Analyzed: 04/25/19 18:50			
Nitrobenzene-d5 (Surr)	969	56	37 - 122	7.393	7.381	0.0120	+/-1.0	
2-Fluorobiphenyl (Surr)	969	56	44 - 115	9.185	9.1815	0.0035	+/-1.0	
p-Terphenyl-d14 (Surr)	969	62	54 - 127	13.271	13.2814	-0.0104	+/-1.0	
Matrix Spike Dup (9041271-MSD1)			Lab File ID: E04251920.D		Analyzed: 04/25/19 19:26			
Nitrobenzene-d5 (Surr)	968	59	37 - 122	7.393	7.381	0.0120	+/-1.0	
2-Fluorobiphenyl (Surr)	968	33	44 - 115	9.185	9.1815	0.0035	+/-1.0	*
p-Terphenyl-d14 (Surr)	968	31	54 - 127	13.277	13.2814	-0.0044	+/-1.0	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D29024	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9D29024-CCV1)			Lab File ID: E04291903.D		Analyzed: 04/29/19 09:18			
Nitrobenzene-d5 (Surr)	1000	100	80 - 120	7.366	7.381	-0.0150	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	107	80 - 120	9.158	9.1815	-0.0235	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	105	80 - 120	13.228	13.2814	-0.0534	+/-1.0	
Calibration Blank (9D29024-CCB1)			Lab File ID: E04291904.D		Analyzed: 04/29/19 09:54			
Nitrobenzene-d5 (Surr)			37 - 122	7.377	7.381	-0.0040	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 115	0	9.1815	-9.1815	+/-1.0	
p-Terphenyl-d14 (Surr)			54 - 127	0	13.2814	-13.2814	+/-1.0	
FD-201904151441 (A9D0674-13)			Lab File ID: E04291906.D		Analyzed: 04/29/19 11:07			
Nitrobenzene-d5 (Surr)	529	37	37 - 122	7.372	7.381	-0.0090	+/-1.0	
2-Fluorobiphenyl (Surr)	529	53	44 - 115	9.158	9.1815	-0.0235	+/-1.0	
p-Terphenyl-d14 (Surr)	529	67	54 - 127	13.228	13.2814	-0.0534	+/-1.0	
T4-PDI2019-SG15-190416 (A9D0674-07RE1)			Lab File ID: E04291920.D		Analyzed: 04/29/19 19:34			
Nitrobenzene-d5 (Surr)	428	65	37 - 122	7.366	7.381	-0.0150	+/-1.0	
2-Fluorobiphenyl (Surr)	428	77	44 - 115	9.158	9.1815	-0.0235	+/-1.0	
p-Terphenyl-d14 (Surr)	428	86	54 - 127	13.228	13.2814	-0.0534	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D30020	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9D30020-CCV1)			Lab File ID: J04301902.D		Analyzed: 04/30/19 08:33			
Nitrobenzene-d5 (Surr)	1000	114	80 - 120	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	114	80 - 120	9.162	9.169333	-0.0073	+/-1.0	
Phenol-d6 (Surr)	1000	119	80 - 120	6.439	6.441556	-0.0026	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	112	80 - 120	13.243	13.2467	-0.0037	+/-1.0	
2-Fluorophenol (Surr)	1000	110	80 - 120	5.53	5.5363	-0.0063	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	111	80 - 120	10.665	10.669	-0.0040	+/-1.0	
Calibration Blank (9D30020-CCB1)			Lab File ID: J04301904.D		Analyzed: 04/30/19 09:46			
Nitrobenzene-d5 (Surr)			44 - 120	0	7.358778	-7.3588	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 120	0	9.169333	-9.1693	+/-1.0	
Phenol-d6 (Surr)			10 - 120	0	6.441556	-6.4416	+/-1.0	
p-Terphenyl-d14 (Surr)			50 - 133	0	13.2467	-13.2467	+/-1.0	
2-Fluorophenol (Surr)			19 - 120	0	5.5363	-5.5363	+/-1.0	
2,4,6-Tribromophenol (Surr)			43 - 140	0	10.669	-10.6690	+/-1.0	
T4-PDI2019-SG17-190416 (A9D0674-12RE1)			Lab File ID: J04301910.D		Analyzed: 04/30/19 13:21			
Nitrobenzene-d5 (Surr)	459	62	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	459	68	44 - 115	9.162	9.169333	-0.0073	+/-1.0	
p-Terphenyl-d14 (Surr)	459	93	54 - 127	13.243	13.2467	-0.0037	+/-1.0	
T4-PDI2019-SG18-190415 (A9D0674-14RE1)			Lab File ID: J04301914.D		Analyzed: 04/30/19 15:49			
Nitrobenzene-d5 (Surr)	504	59	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	504	56	44 - 115	9.162	9.169333	-0.0073	+/-1.0	
p-Terphenyl-d14 (Surr)	504	74	54 - 127	13.243	13.2467	-0.0037	+/-1.0	
T4-PDI2019-SG53-190416 (A9D0674-17RE1)			Lab File ID: J04301917.D		Analyzed: 04/30/19 17:36			
Nitrobenzene-d5 (Surr)	980	68	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	980	54	44 - 115	9.162	9.169333	-0.0073	+/-1.0	
p-Terphenyl-d14 (Surr)	980	58	54 - 127	13.243	13.2467	-0.0037	+/-1.0	
T4-PDI2019-SG54-190416 (A9D0674-18RE1)			Lab File ID: J04301918.D		Analyzed: 04/30/19 18:08			
Nitrobenzene-d5 (Surr)	463	63	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	463	75	44 - 115	9.162	9.169333	-0.0073	+/-1.0	
p-Terphenyl-d14 (Surr)	463	83	54 - 127	13.243	13.2467	-0.0037	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01028	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9E01028-CCV1)			Lab File ID: J05011904.D		Analyzed: 05/01/19 09:48			
Nitrobenzene-d5 (Surr)	1000	105	80 - 120	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	113	80 - 120	9.167	9.169333	-0.0023	+/-1.0	
Phenol-d6 (Surr)	1000	111	80 - 120	6.439	6.441556	-0.0026	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	107	80 - 120	13.243	13.2467	-0.0037	+/-1.0	
2-Fluorophenol (Surr)	1000	109	80 - 120	5.535	5.5363	-0.0013	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	111	80 - 120	10.665	10.669	-0.0040	+/-1.0	
Calibration Blank (9E01028-CCB1)			Lab File ID: J05011906.D		Analyzed: 05/01/19 11:00			
Nitrobenzene-d5 (Surr)			37 - 122	7.407	7.358778	0.0482	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 115	0	9.169333	-9.1693	+/-1.0	
Phenol-d6 (Surr)			33 - 122	0	6.441556	-6.4416	+/-1.0	
p-Terphenyl-d14 (Surr)			54 - 127	0	13.2467	-13.2467	+/-1.0	
2-Fluorophenol (Surr)			35 - 115	0	5.5363	-5.5363	+/-1.0	
2,4,6-Tribromophenol (Surr)			39 - 132	0	10.669	-10.6690	+/-1.0	
T4-PDI2019-SG60-190417 (A9D0674-23RE1)			Lab File ID: J05011909.D		Analyzed: 05/01/19 12:47			
Nitrobenzene-d5 (Surr)	898	51	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	898	39	44 - 115	9.162	9.169333	-0.0073	+/-1.0	*
p-Terphenyl-d14 (Surr)	898	49	54 - 127	13.237	13.2467	-0.0097	+/-1.0	*
T4-PDI2019-SG51-190417 (A9D0674-15RE2)			Lab File ID: J05011910.D		Analyzed: 05/01/19 13:23			
Nitrobenzene-d5 (Surr)	835	66	37 - 122	7.354	7.358778	-0.0048	+/-1.0	
2-Fluorobiphenyl (Surr)	835	57	44 - 115	9.167	9.169333	-0.0023	+/-1.0	
p-Terphenyl-d14 (Surr)	835	50	54 - 127	13.243	13.2467	-0.0037	+/-1.0	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9E01044-CCV1)			Lab File ID: E05011911.D		Analyzed: 05/01/19 16:01			
Nitrobenzene-d5 (Surr)	1000	109	80 - 120	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	105	80 - 120	9.153	9.1815	-0.0285	+/-1.0	
Phenol-d6 (Surr)	1000	99	80 - 120	6.468	6.4784	-0.0104	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	102	80 - 120	13.228	13.2814	-0.0534	+/-1.0	
2-Fluorophenol (Surr)	1000	103	80 - 120	5.617	5.631	-0.0140	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	115	80 - 120	10.656	10.6855	-0.0295	+/-1.0	
Calibration Blank (9E01044-CCB1)			Lab File ID: E05011912.D		Analyzed: 05/01/19 16:38			
Nitrobenzene-d5 (Surr)			44 - 120	7.334	7.381	-0.0470	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 120	0	9.1815	-9.1815	+/-1.0	
Phenol-d6 (Surr)			10 - 120	0	6.4784	-6.4784	+/-1.0	
p-Terphenyl-d14 (Surr)			50 - 133	0	13.2814	-13.2814	+/-1.0	
2-Fluorophenol (Surr)			19 - 120	0	5.631	-5.6310	+/-1.0	
2,4,6-Tribromophenol (Surr)			43 - 140	0	10.6855	-10.6855	+/-1.0	
Blank (9050375-BLK1)			Lab File ID: E05011915.D		Analyzed: 05/01/19 18:26			
Nitrobenzene-d5 (Surr)	312	74	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	312	83	44 - 115	9.153	9.1815	-0.0285	+/-1.0	
Phenol-d6 (Surr)	312	74	33 - 122	6.473	6.4784	-0.0054	+/-1.0	
p-Terphenyl-d14 (Surr)	312	90	54 - 127	13.228	13.2814	-0.0534	+/-1.0	
2-Fluorophenol (Surr)	312	72	35 - 115	5.639	5.631	0.0080	+/-1.0	
2,4,6-Tribromophenol (Surr)	312	84	39 - 132	10.656	10.6855	-0.0295	+/-1.0	
LCS (9050375-BS1)			Lab File ID: E05011916.D		Analyzed: 05/01/19 19:03			
Nitrobenzene-d5 (Surr)	333	75	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	333	82	44 - 115	9.153	9.1815	-0.0285	+/-1.0	
Phenol-d6 (Surr)	333	78	33 - 122	6.473	6.4784	-0.0054	+/-1.0	
p-Terphenyl-d14 (Surr)	333	91	54 - 127	13.228	13.2814	-0.0534	+/-1.0	
2-Fluorophenol (Surr)	333	77	35 - 115	5.628	5.631	-0.0030	+/-1.0	
2,4,6-Tribromophenol (Surr)	333	107	39 - 132	10.656	10.6855	-0.0295	+/-1.0	
T4-PDI2019-SG52-190417 (A9D0674-16RE2)			Lab File ID: E05011917.D		Analyzed: 05/01/19 19:39			
Nitrobenzene-d5 (Surr)	901	54	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	901	43	44 - 115	9.153	9.1815	-0.0285	+/-1.0	*
p-Terphenyl-d14 (Surr)	901	52	54 - 127	13.228	13.2814	-0.0534	+/-1.0	*

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ug/kg dry	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Duplicate (9050375-DUP1)			Lab File ID: E05011918.D		Analyzed: 05/01/19 20:15			
Nitrobenzene-d5 (Surr)	899	50	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	899	59	44 - 115	9.153	9.1815	-0.0285	+/-1.0	
p-Terphenyl-d14 (Surr)	899	80	54 - 127	13.228	13.2814	-0.0534	+/-1.0	
T4-PDI2019-SG57-190417 (A9D0674-19RE2)			Lab File ID: E05011919.D		Analyzed: 05/01/19 20:52			
Nitrobenzene-d5 (Surr)	928	61	37 - 122	7.356	7.381	-0.0250	+/-1.0	
2-Fluorobiphenyl (Surr)	928	30	44 - 115	9.153	9.1815	-0.0285	+/-1.0	*
p-Terphenyl-d14 (Surr)	928	40	54 - 127	13.228	13.2814	-0.0534	+/-1.0	*
T4-PDI2019-SG58-190417 (A9D0674-20RE2)			Lab File ID: E05011920.D		Analyzed: 05/01/19 21:28			
Nitrobenzene-d5 (Surr)	935	40	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	935	20	44 - 115	9.153	9.1815	-0.0285	+/-1.0	*
p-Terphenyl-d14 (Surr)	935	33	54 - 127	13.228	13.2814	-0.0534	+/-1.0	*
FD-201904171301 (A9D0674-22RE2)			Lab File ID: E05011921.D		Analyzed: 05/01/19 22:04			
Nitrobenzene-d5 (Surr)	868	63	37 - 122	7.34	7.381	-0.0410	+/-1.0	
2-Fluorobiphenyl (Surr)	868	69	44 - 115	9.153	9.1815	-0.0285	+/-1.0	
p-Terphenyl-d14 (Surr)	868	74	54 - 127	13.223	13.2814	-0.0584	+/-1.0	
Matrix Spike (9050375-MS1)			Lab File ID: E05011922.D		Analyzed: 05/01/19 22:40			
Nitrobenzene-d5 (Surr)	863	60	37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	863	59	44 - 115	9.153	9.1815	-0.0285	+/-1.0	
Phenol-d6 (Surr)	863	68	33 - 122	6.468	6.4784	-0.0104	+/-1.0	
p-Terphenyl-d14 (Surr)	863	65	54 - 127	13.223	13.2814	-0.0584	+/-1.0	
2-Fluorophenol (Surr)	863	63	35 - 115	5.628	5.631	-0.0030	+/-1.0	
2,4,6-Tribromophenol (Surr)	863	96	39 - 132	10.65	10.6855	-0.0355	+/-1.0	

SURROGATE STANDARD RECOVERY AND RT SUMMARY

EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E02011	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Surrogate Compound	Spike Level ng/mL	% Recovery	Recovery Limits	RT	Calibration Mean RT	RT Diff	RT Diff Limit	Q
Calibration Check (9E02011-CCV1)			Lab File ID: E05021905.D		Analyzed: 05/02/19 10:32			
Nitrobenzene-d5 (Surr)	1000	102	80 - 120	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)	1000	103	80 - 120	9.153	9.1815	-0.0285	+/-1.0	
Phenol-d6 (Surr)	1000	102	80 - 120	6.468	6.4784	-0.0104	+/-1.0	
p-Terphenyl-d14 (Surr)	1000	102	80 - 120	13.228	13.2814	-0.0534	+/-1.0	
2-Fluorophenol (Surr)	1000	104	80 - 120	5.623	5.631	-0.0080	+/-1.0	
2,4,6-Tribromophenol (Surr)	1000	128	80 - 120	10.656	10.6855	-0.0295	+/-1.0	*
Calibration Blank (9E02011-CCB1)			Lab File ID: E05021906.D		Analyzed: 05/02/19 11:08			
Nitrobenzene-d5 (Surr)			37 - 122	7.361	7.381	-0.0200	+/-1.0	
2-Fluorobiphenyl (Surr)			44 - 115	0	9.1815	-9.1815	+/-1.0	
Phenol-d6 (Surr)			33 - 122	0	6.4784	-6.4784	+/-1.0	
p-Terphenyl-d14 (Surr)			54 - 127	0	13.2814	-13.2814	+/-1.0	
2-Fluorophenol (Surr)			35 - 115	0	5.631	-5.6310	+/-1.0	
2,4,6-Tribromophenol (Surr)			39 - 132	0	10.6855	-10.6855	+/-1.0	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23025	Instrument:	SV-GCMS5
Matrix:	Water	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9D23025-CCV2)			Lab File ID: E04231907.D			Analyzed: 04/23/19 11:47			
1,4-Dichlorobenzene-d4 (ISTD)	180966	6.858	286436	6.848	63	50 - 200	0.0100	+/-0.50	
Naphthalene-d8 (ISTD)	697420	8.11	1096117	8.099	64	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10 (ISTD)	330094	9.885	493423	9.88	67	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	669189	11.405	840808	11.399	80	50 - 200	0.0060	+/-0.50	
Chrysene-d12 (ISTD)	663777	15.416	707423	15.416	94	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	577187	18.946	630113	18.951	92	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	488530	21.342	502143	21.348	97	50 - 200	-0.0060	+/-0.50	
Calibration Blank (9D23025-CCB1)			Lab File ID: E04231908.D			Analyzed: 04/23/19 12:24			
1,4-Dichlorobenzene-d4 (ISTD)	192229	6.864	180966	6.858	106	50 - 200	0.0060	+/-0.50	
Naphthalene-d8 (ISTD)	744007	8.11	697420	8.11	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	339162	9.886	330094	9.885	103	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	622417	11.405	669189	11.405	93	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	540647	15.411	663777	15.416	81	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	461915	18.946	577187	18.946	80	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	364736	21.342	488530	21.342	75	50 - 200	0.0000	+/-0.50	
Blank (9041150-BLK1)			Lab File ID: E04231909.D			Analyzed: 04/23/19 13:02			
1,4-Dichlorobenzene-d4 (ISTD)	160974	6.863	180966	6.858	89	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	658528	8.11	697420	8.11	94	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	332490	9.885	330094	9.885	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	649763	11.404	669189	11.405	97	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	645737	15.411	663777	15.416	97	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	516462	18.946	577187	18.946	89	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	468382	21.342	488530	21.342	96	50 - 200	0.0000	+/-0.50	
LCS (9041150-BS1)			Lab File ID: E04231910.D			Analyzed: 04/23/19 13:39			
1,4-Dichlorobenzene-d4 (ISTD)	198567	6.863	180966	6.858	110	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	759889	8.115	697420	8.11	109	50 - 200	0.0050	+/-0.50	
Acenaphthene-d10 (ISTD)	359709	9.891	330094	9.885	109	50 - 200	0.0060	+/-0.50	
Phenanthrene-d10 (ISTD)	668523	11.404	669189	11.405	100	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	607066	15.421	663777	15.416	91	50 - 200	0.0050	+/-0.50	
Perylene-d12 (ISTD)	522290	18.946	577187	18.946	90	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	454685	21.348	488530	21.342	93	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23025	Instrument:	SV-GCMS5
Matrix:	Water	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
LCS Dup (9041150-BSD1)			Lab File ID: E04231911.D			Analyzed: 04/23/19 14:17			
1,4-Dichlorobenzene-d4 (ISTD)	194965	6.863	180966	6.858	108	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	764717	8.11	697420	8.11	110	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	357423	9.891	330094	9.885	108	50 - 200	0.0060	+/-0.50	
Phenanthrene-d10 (ISTD)	661993	11.404	669189	11.405	99	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	654824	15.416	663777	15.416	99	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	553174	18.946	577187	18.946	96	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	480306	21.348	488530	21.342	98	50 - 200	0.0060	+/-0.50	
RB-201904171558 (A9D0674-01)			Lab File ID: E04231912.D			Analyzed: 04/23/19 14:54			
1,4-Dichlorobenzene-d4 (ISTD)	190998	6.863	180966	6.858	106	50 - 200	0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	762561	8.11	697420	8.11	109	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	357424	9.885	330094	9.885	108	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	658201	11.404	669189	11.405	98	50 - 200	-0.0010	+/-0.50	
Chrysene-d12 (ISTD)	601647	15.41	663777	15.416	91	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	480474	18.941	577187	18.946	83	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	423963	21.342	488530	21.342	87	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9D25002-CCV1)			Lab File ID: E04251903.D			Analyzed: 04/25/19 08:42			
1,4-Dichlorobenzene-d4 (ISTD)	178755	6.863	286436	6.848	62	50 - 200	0.0150	+/-0.50	
Naphthalene-d8 (ISTD)	666726	8.11	1096117	8.099	61	50 - 200	0.0110	+/-0.50	
Acenaphthene-d10 (ISTD)	293375	9.885	493423	9.88	59	50 - 200	0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	514606	11.404	840808	11.399	61	50 - 200	0.0050	+/-0.50	
Chrysene-d12 (ISTD)	458000	15.411	707423	15.416	65	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	386724	18.941	630113	18.951	61	50 - 200	-0.0100	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	319458	21.342	502143	21.348	64	50 - 200	-0.0060	+/-0.50	
Calibration Blank (9D25002-CCB1)			Lab File ID: E04251904.D			Analyzed: 04/25/19 09:19			
1,4-Dichlorobenzene-d4 (ISTD)	184932	6.863	178755	6.863	103	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	715208	8.11	666726	8.11	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	301273	9.885	293375	9.885	103	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	532104	11.404	514606	11.404	103	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	450022	15.411	458000	15.411	98	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	366937	18.946	386724	18.941	95	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	293782	21.348	319458	21.342	92	50 - 200	0.0060	+/-0.50	
Blank (9041271-BLK1)			Lab File ID: E04251905.D			Analyzed: 04/25/19 09:57			
1,4-Dichlorobenzene-d4 (ISTD)	178196	6.863	178755	6.863	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	673965	8.11	666726	8.11	101	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	297181	9.885	293375	9.885	101	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	576574	11.404	514606	11.404	112	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	520600	15.411	458000	15.411	114	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	419004	18.946	386724	18.941	108	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	345247	21.342	319458	21.342	108	50 - 200	0.0000	+/-0.50	
LCS (9041271-BS1)			Lab File ID: E04251906.D			Analyzed: 04/25/19 10:34			
1,4-Dichlorobenzene-d4 (ISTD)	157254	6.863	178755	6.863	88	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	606070	8.11	666726	8.11	91	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	313725	9.891	293375	9.885	107	50 - 200	0.0060	+/-0.50	
Phenanthrene-d10 (ISTD)	609263	11.404	514606	11.404	118	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	552624	15.416	458000	15.411	121	50 - 200	0.0050	+/-0.50	
Perylene-d12 (ISTD)	451087	18.941	386724	18.941	117	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	403075	21.342	319458	21.342	126	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG61-190416 (A9D0674-24)			Lab File ID: E04251907.D			Analyzed: 04/25/19 11:12			
1,4-Dichlorobenzene-d4 (ISTD)	167847	6.863	178755	6.863	94	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	659945	8.11	666726	8.11	99	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	318377	9.885	293375	9.885	109	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	626585	11.404	514606	11.404	122	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	588534	15.411	458000	15.411	129	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	516026	18.946	386724	18.941	133	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	450002	21.337	319458	21.342	141	50 - 200	-0.0050	+/-0.50	
T4-PDI2019-SG11-190415 (A9D0674-05)			Lab File ID: E04251908.D			Analyzed: 04/25/19 11:49			
1,4-Dichlorobenzene-d4 (ISTD)	190270	6.863	178755	6.863	106	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	721983	8.11	666726	8.11	108	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	325280	9.885	293375	9.885	111	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	591119	11.399	514606	11.404	115	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	544066	15.411	458000	15.411	119	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	470674	18.941	386724	18.941	122	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	414805	21.337	319458	21.342	130	50 - 200	-0.0050	+/-0.50	
T4-PDI2019-SG05-190417 (A9D0674-02)			Lab File ID: E04251909.D			Analyzed: 04/25/19 12:27			
1,4-Dichlorobenzene-d4 (ISTD)	173331	6.863	178755	6.863	97	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	656862	8.11	666726	8.11	99	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	304626	9.885	293375	9.885	104	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	623360	11.399	514606	11.404	121	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	613910	15.411	458000	15.411	134	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	533019	18.941	386724	18.941	138	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	450344	21.342	319458	21.342	141	50 - 200	0.0000	+/-0.50	
Duplicate (9041271-DUP1)			Lab File ID: E04251910.D			Analyzed: 04/25/19 13:04			
1,4-Dichlorobenzene-d4 (ISTD)	189136	6.863	178755	6.863	106	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	710760	8.11	666726	8.11	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	301245	9.885	293375	9.885	103	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	547853	11.399	514606	11.404	106	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	489587	15.405	458000	15.411	107	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	420979	18.941	386724	18.941	109	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	357458	21.337	319458	21.342	112	50 - 200	-0.0050	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG06-190417 (A9D0674-03)			Lab File ID: E04251913.D			Analyzed: 04/25/19 14:57			
1,4-Dichlorobenzene-d4 (ISTD)	187425	6.863	178755	6.863	105	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	711198	8.11	666726	8.11	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	312814	9.885	293375	9.885	107	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	571215	11.399	514606	11.404	111	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	497125	15.411	458000	15.411	109	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	410218	18.941	386724	18.941	106	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	346859	21.342	319458	21.342	109	50 - 200	0.0000	+/-0.50	
T4-PDI2019-SG08-190415 (A9D0674-04)			Lab File ID: E04251914.D			Analyzed: 04/25/19 15:35			
1,4-Dichlorobenzene-d4 (ISTD)	186479	6.858	178755	6.863	104	50 - 200	-0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	711864	8.11	666726	8.11	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	309341	9.885	293375	9.885	105	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	562121	11.399	514606	11.404	109	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	485824	15.405	458000	15.411	106	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	415151	18.941	386724	18.941	107	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	359746	21.337	319458	21.342	113	50 - 200	-0.0050	+/-0.50	
T4-PDI2019-SG13-190415 (A9D0674-06)			Lab File ID: E04251915.D			Analyzed: 04/25/19 16:18			
1,4-Dichlorobenzene-d4 (ISTD)	189523	6.858	178755	6.863	106	50 - 200	-0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	755322	8.11	666726	8.11	113	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	330834	9.885	293375	9.885	113	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	583430	11.399	514606	11.404	113	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	480897	15.41	458000	15.411	105	50 - 200	-0.0010	+/-0.50	
Perylene-d12 (ISTD)	401441	18.941	386724	18.941	104	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	331886	21.342	319458	21.342	104	50 - 200	0.0000	+/-0.50	
T4-PDI2019-SG16-190416 (A9D0674-08)			Lab File ID: E04251917.D			Analyzed: 04/25/19 17:45			
1,4-Dichlorobenzene-d4 (ISTD)	186488	6.863	178755	6.863	104	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	742907	8.11	666726	8.11	111	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	348664	9.885	293375	9.885	119	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	707392	11.399	514606	11.404	137	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	714986	15.41	458000	15.411	156	50 - 200	-0.0010	+/-0.50	
Perylene-d12 (ISTD)	636946	18.946	386724	18.941	165	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	566834	21.342	319458	21.342	177	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D25002	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG59-190417 (A9D0674-21RE2)			Lab File ID: E04251918.D			Analyzed: 04/25/19 18:17			
1,4-Dichlorobenzene-d4 (ISTD)	162723	6.863	178755	6.863	91	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	618999	8.11	666726	8.11	93	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	285760	9.885	293375	9.885	97	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	521652	11.399	514606	11.404	101	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	485321	15.411	458000	15.411	106	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	424888	18.941	386724	18.941	110	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	349274	21.337	319458	21.342	109	50 - 200	-0.0050	+/-0.50	
Matrix Spike (9041271-MS1)			Lab File ID: E04251919.D			Analyzed: 04/25/19 18:50			
1,4-Dichlorobenzene-d4 (ISTD)	179452	6.864	178755	6.863	100	50 - 200	0.0010	+/-0.50	
Naphthalene-d8 (ISTD)	667865	8.11	666726	8.11	100	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	293576	9.886	293375	9.885	100	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	550727	11.399	514606	11.404	107	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	484602	15.411	458000	15.411	106	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	413744	18.941	386724	18.941	107	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	349993	21.342	319458	21.342	110	50 - 200	0.0000	+/-0.50	
Matrix Spike Dup (9041271-MSD1)			Lab File ID: E04251920.D			Analyzed: 04/25/19 19:26			
1,4-Dichlorobenzene-d4 (ISTD)	177827	6.858	178755	6.863	99	50 - 200	-0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	708956	8.11	666726	8.11	106	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	364908	9.886	293375	9.885	124	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	688349	11.405	514606	11.404	134	50 - 200	0.0010	+/-0.50	
Chrysene-d12 (ISTD)	696192	15.421	458000	15.411	152	50 - 200	0.0100	+/-0.50	
Perylene-d12 (ISTD)	614931	18.946	386724	18.941	159	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	537555	21.348	319458	21.342	168	50 - 200	0.0060	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D29024	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9D29024-CCV1)			Lab File ID: E04291903.D			Analyzed: 04/29/19 09:18			
1,4-Dichlorobenzene-d4 (ISTD)	187829	6.837	286436	6.848	66	50 - 200	-0.0110	+/-0.50	
Naphthalene-d8 (ISTD)	733555	8.083	1096117	8.099	67	50 - 200	-0.0160	+/-0.50	
Acenaphthene-d10 (ISTD)	346443	9.853	493423	9.88	70	50 - 200	-0.0270	+/-0.50	
Phenanthrene-d10 (ISTD)	615921	11.367	840808	11.399	73	50 - 200	-0.0320	+/-0.50	
Chrysene-d12 (ISTD)	560047	15.346	707423	15.416	79	50 - 200	-0.0700	+/-0.50	
Perylene-d12 (ISTD)	476018	18.877	630113	18.951	76	50 - 200	-0.0740	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	398819	21.267	502143	21.348	79	50 - 200	-0.0810	+/-0.50	
Calibration Blank (9D29024-CCB1)			Lab File ID: E04291904.D			Analyzed: 04/29/19 09:54			
1,4-Dichlorobenzene-d4 (ISTD)	178605	6.837	187829	6.837	95	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	709322	8.083	733555	8.083	97	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	315679	9.853	346443	9.853	91	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	629354	11.367	615921	11.367	102	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	629301	15.346	560047	15.346	112	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	526665	18.871	476018	18.877	111	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	453134	21.267	398819	21.267	114	50 - 200	0.0000	+/-0.50	
FD-201904151441 (A9D0674-13)			Lab File ID: E04291906.D			Analyzed: 04/29/19 11:07			
1,4-Dichlorobenzene-d4 (ISTD)	204552	6.837	187829	6.837	109	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	809537	8.083	733555	8.083	110	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	381207	9.853	346443	9.853	110	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	677319	11.372	615921	11.367	110	50 - 200	0.0050	+/-0.50	
Chrysene-d12 (ISTD)	621625	15.346	560047	15.346	111	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	529242	18.877	476018	18.877	111	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	463714	21.267	398819	21.267	116	50 - 200	0.0000	+/-0.50	
T4-PDI2019-SG15-190416 (A9D0674-07RE1)			Lab File ID: E04291920.D			Analyzed: 04/29/19 19:34			
1,4-Dichlorobenzene-d4 (ISTD)	192746	6.837	187829	6.837	103	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	753276	8.077	733555	8.083	103	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	347757	9.853	346443	9.853	100	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	589814	11.367	615921	11.367	96	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	547065	15.346	560047	15.346	98	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	467895	18.871	476018	18.877	98	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	405353	21.267	398819	21.267	102	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D30020	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9D30020-CCV1)			Lab File ID: J04301902.D			Analyzed: 04/30/19 08:33			
1,4-Dichlorobenzene-d4 (ISTD)	197538	6.808	207595	6.808	95	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	883856	8.081	870566	8.081	102	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	431952	9.862	408985	9.868	106	50 - 200	-0.0060	+/-0.50	
Phenanthrene-d10 (ISTD)	760322	11.376	701196	11.381	108	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	649652	15.355	609064	15.355	107	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	586554	18.875	550560	18.875	107	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	563388	21.266	510954	21.266	110	50 - 200	0.0000	+/-0.50	
Calibration Blank (9D30020-CCB1)			Lab File ID: J04301904.D			Analyzed: 04/30/19 09:46			
1,4-Dichlorobenzene-d4 (ISTD)	197499	6.808	197538	6.808	100	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	904006	8.081	883856	8.081	102	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	429878	9.862	431952	9.862	100	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	728046	11.376	760322	11.376	96	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	630285	15.35	649652	15.355	97	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	553337	18.87	586554	18.875	94	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	504840	21.26	563388	21.266	90	50 - 200	-0.0060	+/-0.50	
T4-PDI2019-SG17-190416 (A9D0674-12RE1)			Lab File ID: J04301910.D			Analyzed: 04/30/19 13:21			
1,4-Dichlorobenzene-d4 (ISTD)	214359	6.808	197538	6.808	109	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	917218	8.081	883856	8.081	104	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	441210	9.862	431952	9.862	102	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	739559	11.376	760322	11.376	97	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	628338	15.355	649652	15.355	97	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	570138	18.87	586554	18.875	97	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	538808	21.266	563388	21.266	96	50 - 200	0.0000	+/-0.50	
T4-PDI2019-SG18-190415 (A9D0674-14RE1)			Lab File ID: J04301914.D			Analyzed: 04/30/19 15:49			
1,4-Dichlorobenzene-d4 (ISTD)	209638	6.808	197538	6.808	106	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	953377	8.081	883856	8.081	108	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	465152	9.862	431952	9.862	108	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	784110	11.381	760322	11.376	103	50 - 200	0.0050	+/-0.50	
Chrysene-d12 (ISTD)	683362	15.355	649652	15.355	105	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	603413	18.875	586554	18.875	103	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	569621	21.266	563388	21.266	101	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D30020	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG53-190416 (A9D0674-17RE1)			Lab File ID: J04301917.D			Analyzed: 04/30/19 17:36			
1,4-Dichlorobenzene-d4 (ISTD)	217552	6.808	197538	6.808	110	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	960901	8.081	883856	8.081	109	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	467020	9.862	431952	9.862	108	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	773367	11.376	760322	11.376	102	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	673455	15.355	649652	15.355	104	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	598362	18.875	586554	18.875	102	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	561914	21.26	563388	21.266	100	50 - 200	-0.0060	+/-0.50	
T4-PDI2019-SG54-190416 (A9D0674-18RE1)			Lab File ID: J04301918.D			Analyzed: 04/30/19 18:08			
1,4-Dichlorobenzene-d4 (ISTD)	226848	6.808	197538	6.808	115	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	986832	8.081	883856	8.081	112	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	475856	9.863	431952	9.862	110	50 - 200	0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	791336	11.382	760322	11.376	104	50 - 200	0.0060	+/-0.50	
Chrysene-d12 (ISTD)	647023	15.356	649652	15.355	100	50 - 200	0.0010	+/-0.50	
Perylene-d12 (ISTD)	569838	18.88	586554	18.875	97	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	536896	21.266	563388	21.266	95	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01028	Instrument:	SV-GCMS10
Matrix:	Sediment	Calibration:	A9D1505

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9E01028-CCV1)			Lab File ID: J05011904.D			Analyzed: 05/01/19 09:48			
1,4-Dichlorobenzene-d4 (ISTD)	222998	6.808	207595	6.808	107	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	913064	8.081	870566	8.081	105	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	444992	9.863	408985	9.868	109	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	783014	11.376	701196	11.381	112	50 - 200	-0.0050	+/-0.50	
Chrysene-d12 (ISTD)	710488	15.361	609064	15.355	117	50 - 200	0.0060	+/-0.50	
Perylene-d12 (ISTD)	667303	18.88	550560	18.875	121	50 - 200	0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	637372	21.271	510954	21.266	125	50 - 200	0.0050	+/-0.50	
Calibration Blank (9E01028-CCB1)			Lab File ID: J05011906.D			Analyzed: 05/01/19 11:00			
1,4-Dichlorobenzene-d4 (ISTD)	229447	6.808	222998	6.808	103	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	1006848	8.081	913064	8.081	110	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	490524	9.862	444992	9.863	110	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	832337	11.376	783014	11.376	106	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	761379	15.356	710488	15.361	107	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	711226	18.875	667303	18.88	107	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	644713	21.26	637372	21.271	101	50 - 200	-0.0110	+/-0.50	
T4-PDI2019-SG60-190417 (A9D0674-23RE1)			Lab File ID: J05011909.D			Analyzed: 05/01/19 12:47			
1,4-Dichlorobenzene-d4 (ISTD)	243953	6.808	222998	6.808	109	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	981479	8.081	913064	8.081	107	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	481889	9.862	444992	9.863	108	50 - 200	-0.0010	+/-0.50	
Phenanthrene-d10 (ISTD)	814905	11.376	783014	11.376	104	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	744251	15.355	710488	15.361	105	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	696472	18.875	667303	18.88	104	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	656862	21.266	637372	21.271	103	50 - 200	-0.0050	+/-0.50	
T4-PDI2019-SG51-190417 (A9D0674-15RE2)			Lab File ID: J05011910.D			Analyzed: 05/01/19 13:23			
1,4-Dichlorobenzene-d4 (ISTD)	208589	6.808	222998	6.808	94	50 - 200	0.0000	+/-0.50	
Naphthalene-d8 (ISTD)	857536	8.081	913064	8.081	94	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	423606	9.863	444992	9.863	95	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	715027	11.382	783014	11.376	91	50 - 200	0.0060	+/-0.50	
Chrysene-d12 (ISTD)	651979	15.356	710488	15.361	92	50 - 200	-0.0050	+/-0.50	
Perylene-d12 (ISTD)	580859	18.875	667303	18.88	87	50 - 200	-0.0050	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	567644	21.271	637372	21.271	89	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
Calibration Check (9E01044-CCV1)			Lab File ID: E05011911.D			Analyzed: 05/01/19 16:01			
1,4-Dichlorobenzene-d4 (ISTD)	166667	6.815	286436	6.848	58	50 - 200	-0.0330	+/-0.50	
Naphthalene-d8 (ISTD)	650925	8.078	1096117	8.099	59	50 - 200	-0.0210	+/-0.50	
Acenaphthene-d10 (ISTD)	309388	9.853	493423	9.88	63	50 - 200	-0.0270	+/-0.50	
Phenanthrene-d10 (ISTD)	635497	11.367	840808	11.399	76	50 - 200	-0.0320	+/-0.50	
Chrysene-d12 (ISTD)	688297	15.352	707423	15.416	97	50 - 200	-0.0640	+/-0.50	
Perylene-d12 (ISTD)	585826	18.877	630113	18.951	93	50 - 200	-0.0740	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	512443	21.273	502143	21.348	102	50 - 200	-0.0750	+/-0.50	
Calibration Blank (9E01044-CCB1)			Lab File ID: E05011912.D			Analyzed: 05/01/19 16:38			
1,4-Dichlorobenzene-d4 (ISTD)	194025	6.831	166667	6.815	116	50 - 200	0.0160	+/-0.50	
Naphthalene-d8 (ISTD)	775015	8.078	650925	8.078	119	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	353121	9.853	309388	9.853	114	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	674719	11.367	635497	11.367	106	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	708590	15.346	688297	15.352	103	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	609069	18.877	585826	18.877	104	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	530009	21.267	512443	21.273	103	50 - 200	-0.0060	+/-0.50	
Blank (9050375-BLK1)			Lab File ID: E05011915.D			Analyzed: 05/01/19 18:26			
1,4-Dichlorobenzene-d4 (ISTD)	200006	6.837	166667	6.815	120	50 - 200	0.0220	+/-0.50	
Naphthalene-d8 (ISTD)	755188	8.078	650925	8.078	116	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	326675	9.853	309388	9.853	106	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	667305	11.367	635497	11.367	105	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	605892	15.346	688297	15.352	88	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	523144	18.871	585826	18.877	89	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	454132	21.262	512443	21.273	89	50 - 200	-0.0110	+/-0.50	
LCS (9050375-BS1)			Lab File ID: E05011916.D			Analyzed: 05/01/19 19:03			
1,4-Dichlorobenzene-d4 (ISTD)	211015	6.831	166667	6.815	127	50 - 200	0.0160	+/-0.50	
Naphthalene-d8 (ISTD)	801341	8.078	650925	8.078	123	50 - 200	0.0000	+/-0.50	
Acenaphthene-d10 (ISTD)	380004	9.853	309388	9.853	123	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	687267	11.367	635497	11.367	108	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	600991	15.352	688297	15.352	87	50 - 200	0.0000	+/-0.50	
Perylene-d12 (ISTD)	506105	18.871	585826	18.877	86	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	442710	21.273	512443	21.273	86	50 - 200	0.0000	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
T4-PDI2019-SG52-190417 (A9D0674-16RE2)			Lab File ID: E05011917.D			Analyzed: 05/01/19 19:39			
1,4-Dichlorobenzene-d4 (ISTD)	198796	6.826	166667	6.815	119	50 - 200	0.0110	+/-0.50	
Naphthalene-d8 (ISTD)	760688	8.072	650925	8.078	117	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	396345	9.848	309388	9.853	128	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	773424	11.367	635497	11.367	122	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	692056	15.346	688297	15.352	101	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	516347	18.877	585826	18.877	88	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	307390	21.267	512443	21.273	60	50 - 200	-0.0060	+/-0.50	
Duplicate (9050375-DUP1)			Lab File ID: E05011918.D			Analyzed: 05/01/19 20:15			
1,4-Dichlorobenzene-d4 (ISTD)	209662	6.831	166667	6.815	126	50 - 200	0.0160	+/-0.50	
Naphthalene-d8 (ISTD)	779549	8.072	650925	8.078	120	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	355947	9.848	309388	9.853	115	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	593364	11.367	635497	11.367	93	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	473210	15.341	688297	15.352	69	50 - 200	-0.0110	+/-0.50	
Perylene-d12 (ISTD)	378149	18.866	585826	18.877	65	50 - 200	-0.0110	+/-0.50	
T4-PDI2019-SG57-190417 (A9D0674-19RE2)			Lab File ID: E05011919.D			Analyzed: 05/01/19 20:52			
1,4-Dichlorobenzene-d4 (ISTD)	197666	6.826	166667	6.815	119	50 - 200	0.0110	+/-0.50	
Naphthalene-d8 (ISTD)	818768	8.072	650925	8.078	126	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	413632	9.848	309388	9.853	134	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	750672	11.367	635497	11.367	118	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	687639	15.346	688297	15.352	100	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	583843	18.871	585826	18.877	100	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	401288	21.267	512443	21.273	78	50 - 200	-0.0060	+/-0.50	
T4-PDI2019-SG58-190417 (A9D0674-20RE2)			Lab File ID: E05011920.D			Analyzed: 05/01/19 21:28			
1,4-Dichlorobenzene-d4 (ISTD)	212318	6.831	166667	6.815	127	50 - 200	0.0160	+/-0.50	
Naphthalene-d8 (ISTD)	816260	8.072	650925	8.078	125	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	366616	9.853	309388	9.853	118	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	617110	11.367	635497	11.367	97	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	535231	15.341	688297	15.352	78	50 - 200	-0.0110	+/-0.50	
Perylene-d12 (ISTD)	433061	18.871	585826	18.877	74	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	284399	21.262	512443	21.273	55	50 - 200	-0.0110	+/-0.50	

INTERNAL STANDARD AREA AND RT SUMMARY
EPA 8270D

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9E01044	Instrument:	SV-GCMS5
Matrix:	Sediment	Calibration:	A9A3103

Internal Standard	Response	RT	Reference Response	Reference RT	Area %	Area % Limits	RT Diff	RT Diff Limit	Q
FD-201904171301 (A9D0674-22RE2)			Lab File ID: E05011921.D			Analyzed: 05/01/19 22:04			
1,4-Dichlorobenzene-d4 (ISTD)	209953	6.81	166667	6.815	126	50 - 200	-0.0050	+/-0.50	
Naphthalene-d8 (ISTD)	825557	8.056	650925	8.078	127	50 - 200	-0.0220	+/-0.50	
Acenaphthene-d10 (ISTD)	377181	9.848	309388	9.853	122	50 - 200	-0.0050	+/-0.50	
Phenanthrene-d10 (ISTD)	659725	11.367	635497	11.367	104	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	722565	15.346	688297	15.352	105	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	620599	18.877	585826	18.877	106	50 - 200	0.0000	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	426092	21.267	512443	21.273	83	50 - 200	-0.0060	+/-0.50	
Matrix Spike (9050375-MS1)			Lab File ID: E05011922.D			Analyzed: 05/01/19 22:40			
1,4-Dichlorobenzene-d4 (ISTD)	213287	6.826	166667	6.815	128	50 - 200	0.0110	+/-0.50	
Naphthalene-d8 (ISTD)	827237	8.072	650925	8.078	127	50 - 200	-0.0060	+/-0.50	
Acenaphthene-d10 (ISTD)	387523	9.853	309388	9.853	125	50 - 200	0.0000	+/-0.50	
Phenanthrene-d10 (ISTD)	702781	11.367	635497	11.367	111	50 - 200	0.0000	+/-0.50	
Chrysene-d12 (ISTD)	609785	15.346	688297	15.352	89	50 - 200	-0.0060	+/-0.50	
Perylene-d12 (ISTD)	485520	18.871	585826	18.877	83	50 - 200	-0.0060	+/-0.50	
Dibenz(a,h)anthracene-d14 (ISTD)	301211	21.262	512443	21.273	59	50 - 200	-0.0110	+/-0.50	

HOLDING TIME SUMMARY

EPA 8270D

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

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
RB-201904171558	04/17/19 15:58	04/18/19 07:40	04/22/19 10:10	4.76	7.00	04/23/19 14:54	1.20	40.00	
T4-PDI2019-SG05-190417	04/17/19 11:35	04/18/19 07:40	04/24/19 12:22	7.03	14.00	04/25/19 12:27	1.00	40.00	
T4-PDI2019-SG06-190417	04/17/19 10:21	04/18/19 07:40	04/24/19 12:22	7.08	14.00	04/25/19 14:57	1.11	40.00	
T4-PDI2019-SG08-190415	04/15/19 12:29	04/18/19 07:40	04/24/19 12:22	9.00	14.00	04/25/19 15:35	1.13	40.00	
T4-PDI2019-SG11-190415	04/15/19 11:35	04/18/19 07:40	04/24/19 12:22	9.03	14.00	04/25/19 11:49	0.98	40.00	
T4-PDI2019-SG13-190415	04/15/19 15:34	04/18/19 07:40	04/24/19 12:22	8.87	14.00	04/25/19 16:18	1.16	40.00	
T4-PDI2019-SG15-190416	04/16/19 14:34	04/18/19 07:40	04/24/19 12:22	7.91	14.00	04/29/19 19:34	5.30	40.00	
T4-PDI2019-SG16-190416	04/16/19 10:13	04/18/19 07:40	04/24/19 12:22	8.09	14.00	04/25/19 17:45	1.22	40.00	
T4-PDI2019-SG17-190416	04/16/19 11:14	04/18/19 07:40	04/24/19 12:22	8.05	14.00	04/30/19 13:21	6.04	40.00	
FD-201904151441	04/15/19 14:41	04/18/19 07:40	04/24/19 12:22	8.90	14.00	04/29/19 11:07	4.95	40.00	
T4-PDI2019-SG18-190415	04/15/19 14:41	04/18/19 07:40	04/24/19 12:22	8.90	14.00	04/30/19 15:49	6.14	40.00	
T4-PDI2019-SG51-190417	04/17/19 15:25	04/18/19 07:40	04/24/19 12:22	6.87	14.00	05/01/19 13:23	7.04	40.00	
T4-PDI2019-SG52-190417	04/17/19 14:26	04/18/19 07:40	05/01/19 13:10	13.95	14.00	05/01/19 19:39	0.27	40.00	
T4-PDI2019-SG53-190416	04/16/19 16:27	04/18/19 07:40	04/24/19 12:22	7.83	14.00	04/30/19 17:36	6.22	40.00	
T4-PDI2019-SG54-190416	04/16/19 13:27	04/18/19 07:40	04/24/19 12:22	7.95	14.00	04/30/19 18:08	6.24	40.00	
T4-PDI2019-SG57-190417	04/17/19 15:49	04/18/19 07:40	05/01/19 13:10	13.89	14.00	05/01/19 20:52	0.32	40.00	
T4-PDI2019-SG58-190417	04/17/19 14:54	04/18/19 07:40	05/01/19 13:10	13.93	14.00	05/01/19 21:28	0.35	40.00	
T4-PDI2019-SG59-190417	04/17/19 13:50	04/18/19 07:40	04/24/19 12:22	6.94	14.00	04/25/19 18:17	1.25	40.00	
FD-201904171301	04/17/19 13:01	04/18/19 07:40	05/01/19 13:10	14.01	14.00	05/01/19 22:04	0.37	40.00	*
T4-PDI2019-SG60-190417	04/16/19 13:01	04/18/19 07:40	04/24/19 12:22	7.97	14.00	05/01/19 12:47	7.02	40.00	
T4-PDI2019-SG61-190416	04/16/19 15:09	04/18/19 07:40	04/24/19 12:22	7.88	14.00	04/25/19 11:12	0.95	40.00	

Apex Laboratories

SDG: A9D0674

CLASS: WET

METHOD: EPA 9060Amod

ANALYSES DATA PACKAGE COVER PAGE

EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI

Client Sample Id:	Lab Sample Id:	Matrix
T4-PDI2019-SG05-190417	A9D0674-02	Sediment
T4-PDI2019-SG06-190417	A9D0674-03	Sediment
T4-PDI2019-SG08-190415	A9D0674-04	Sediment
T4-PDI2019-SG11-190415	A9D0674-05	Sediment
T4-PDI2019-SG13-190415	A9D0674-06	Sediment
T4-PDI2019-SG15-190416	A9D0674-07	Sediment
T4-PDI2019-SG16-190416	A9D0674-08	Sediment
T4-PDI2019-SG17-190416	A9D0674-12	Sediment
FD-201904151441	A9D0674-13	Sediment
T4-PDI2019-SG18-190415	A9D0674-14	Sediment
T4-PDI2019-SG51-190417	A9D0674-15	Sediment
T4-PDI2019-SG52-190417	A9D0674-16	Sediment
T4-PDI2019-SG53-190416	A9D0674-17	Sediment
T4-PDI2019-SG54-190416	A9D0674-18	Sediment
T4-PDI2019-SG57-190417	A9D0674-19	Sediment
T4-PDI2019-SG58-190417	A9D0674-20	Sediment
T4-PDI2019-SG59-190417	A9D0674-21	Sediment
FD-201904171301	A9D0674-22	Sediment
T4-PDI2019-SG60-190417	A9D0674-23	Sediment
T4-PDI2019-SG61-190416	A9D0674-24	Sediment

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: 6/17/2019 10:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

EPA 9060Amod

Laboratory: Apex Laboratories **SDG:** A9D0674

Client: Anchor QEA, LLC **Project:** Port of Portland - T4 - PDI

Batch Matrix: Sediment

Analyte	MDL	MRL	Units
Total Organic Carbon	0.020	0.020	% by Weight

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

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG05-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-02

Sampled: 04/17/19 11:35 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 74.66 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.063	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG06-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-03

Sampled: 04/17/19 10:21 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 75.49 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.086	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG08-190415

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-04

Sampled: 04/15/19 12:29 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 45.87 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	1.7	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG11-190415

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-05

Sampled: 04/15/19 11:35 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 52.07 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	1.1	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG13-190415

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-06

Sampled: 04/15/19 15:34 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 49.23 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	1.4	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG15-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-07

Sampled: 04/16/19 14:34 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 75.84 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.064	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG16-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-08

Sampled: 04/16/19 10:13 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 50.61 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	1.1	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG17-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-12

Sampled: 04/16/19 11:14 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 71.40 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.11	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

FD-201904151441

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-13
Sampled: 04/15/19 14:41
Prepared: 04/19/19 09:17
Analyzed: 04/23/19 15:25
Solids: 62.36
Preparation: PSEP TOC
Initial/Final: 5 g / 5 g
Batch: 9041101
Sequence: 9D23028
Calibration: A8B0203
Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.59	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG18-190415

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-14

Sampled: 04/15/19 14:41 Prepared: 04/19/19 09:17 Analyzed: 04/23/19 15:25

Solids: 63.98 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041101 Sequence: 9D23028 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.47	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG51-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-15

Sampled: 04/17/19 15:25 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 39.02 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.1	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG52-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-16

Sampled: 04/17/19 14:26 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 35.19 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.2	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG53-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-17

Sampled: 04/16/19 16:27 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 33.09 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.4	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG54-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-18

Sampled: 04/16/19 13:27 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 70.63 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.50	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG57-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-19

Sampled: 04/17/19 15:49 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 34.62 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.3	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG58-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-20

Sampled: 04/17/19 14:54 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 34.16 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.4	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG59-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-21

Sampled: 04/17/19 13:50 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 33.79 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.4	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

FD-201904171301

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-22
Sampled: 04/17/19 13:01
Prepared: 04/19/19 10:30
Analyzed: 04/24/19 17:08
Solids: 37.04
Preparation: PSEP TOC
Initial/Final: 5 g / 5 g
Batch: 9041103
Sequence: 9D24032
Calibration: A8B0203
Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.3	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG60-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-23

Sampled: 04/16/19 13:01 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 36.70 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	2.3	1		EPA 9060Amod

INORGANIC ANALYSIS DATA SHEET

EPA 9060Amod

T4-PDI2019-SG61-190416

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-24

Sampled: 04/16/19 15:09 Prepared: 04/19/19 10:30 Analyzed: 04/24/19 17:08

Solids: 69.40 Preparation: PSEP TOC Initial/Final: 5 g / 5 g

Batch: 9041103 Sequence: 9D24032 Calibration: A8B0203 Instrument: TOC

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TOC	Total Organic Carbon	0.87	1		EPA 9060Amod

PREPARATION BATCH SUMMARY

EPA 9060Amod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041101 Batch Matrix: Sediment Preparation: PSEP TOC

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9041101-BLK1		04/19/19 09:17	
LCS	9041101-BS1		04/19/19 09:17	
T4-PDI2019-SG05-190417 (Dup)	9041101-DUP1		04/19/19 09:17	
T4-PDI2019-SG05-190417	A9D0674-02		04/19/19 09:17	
T4-PDI2019-SG06-190417	A9D0674-03		04/19/19 09:17	
T4-PDI2019-SG08-190415	A9D0674-04		04/19/19 09:17	
T4-PDI2019-SG11-190415	A9D0674-05		04/19/19 09:17	
T4-PDI2019-SG13-190415	A9D0674-06		04/19/19 09:17	
T4-PDI2019-SG15-190416	A9D0674-07		04/19/19 09:17	
T4-PDI2019-SG16-190416	A9D0674-08		04/19/19 09:17	
T4-PDI2019-SG17-190416	A9D0674-12		04/19/19 09:17	
FD-201904151441	A9D0674-13		04/19/19 09:17	
T4-PDI2019-SG18-190415	A9D0674-14		04/19/19 09:17	

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.

PREPARATION BATCH SUMMARY

EPA 9060Amod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041103 Batch Matrix: Sediment Preparation: PSEP TOC

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
Blank	9041103-BLK1		04/19/19 10:30	
LCS	9041103-BS1		04/19/19 10:30	
T4-PDI2019-SG59-190417 (Dup)	9041103-DUP1		04/19/19 10:30	
T4-PDI2019-SG51-190417	A9D0674-15		04/19/19 10:30	
T4-PDI2019-SG52-190417	A9D0674-16		04/19/19 10:30	
T4-PDI2019-SG53-190416	A9D0674-17		04/19/19 10:30	
T4-PDI2019-SG54-190416	A9D0674-18		04/19/19 10:30	
T4-PDI2019-SG57-190417	A9D0674-19		04/19/19 10:30	
T4-PDI2019-SG58-190417	A9D0674-20		04/19/19 10:30	
T4-PDI2019-SG59-190417	A9D0674-21		04/19/19 10:30	
FD-201904171301	A9D0674-22		04/19/19 10:30	
T4-PDI2019-SG60-190417	A9D0674-23		04/19/19 10:30	
T4-PDI2019-SG61-190416	A9D0674-24		04/19/19 10:30	

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 9060Amod

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	9041101-BLK1	File ID:	
Prepared:	04/19/19 09:17	Preparation:	PSEP TOC	Initial/Final:	5 g / 5 g
Analyzed:	04/23/19 15:25	Instrument:	TOC		
Batch:	9041101	Sequence:	9D23028	Calibration:	A8B0203

CAS NO.	COMPOUND	CONC. (% by Weight)	Q
TOC	Total Organic Carbon	0.020	U

METHOD BLANK DATA SHEET

EPA 9060Amod

Laboratory:	Apex Laboratories			SDG:	A9D0674
Client:	Anchor QEA, LLC			Project:	Port of Portland - T4 - PDI
Matrix:	Sediment	Laboratory ID:	9041103-BLK1	File ID:	
Prepared:	04/19/19 10:30	Preparation:	PSEP TOC	Initial/Final:	5 g / 5 g
Analyzed:	04/24/19 17:08	Instrument:	TOC		
Batch:	9041103	Sequence:	9D24032	Calibration:	A8B0203

CAS NO.	COMPOUND	CONC. (% by Weight)	Q
TOC	Total Organic Carbon	0.020	U

LCS / LCS DUPLICATE RECOVERY

EPA 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9041101	Laboratory ID:	9041101-BS1
Preparation:	PSEP TOC	Initial/Final:	5 g / 5 g

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Total Organic Carbon	10000	9600	96	90 - 110

* = Values outside of QC limits

LCS / LCS DUPLICATE RECOVERY

EPA 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Matrix:	Sediment		
Batch:	9041103	Laboratory ID:	9041103-BS1
Preparation:	PSEP TOC	Initial/Final:	5 g / 5 g

COMPOUND	SPIKE ADDED (mg/kg)	LCS CONCENTRATION (mg/kg)	LCS % REC. (*=Out)	QC LIMITS REC.
Total Organic Carbon	10000	9500	95	90 - 110

* = Values outside of QC limits

DUPLICATES

T4-PDI2019-SG05-190417

EPA 9060Amod

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9041101
Preparation: PSEP TOC
Source Sample Name: T4-PDI2019-SG05-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9041101-DUP1
Lab Source ID: A9D0674-02
Initial/Final: 5 g / 5 g
% Solids: 74.66

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (% by Weight)	C	DUPLICATE CONCENTRATION (% by Weight)	C	RPD %	Q	METHOD
Total Organic Carbon	20	0.063		0.11		51	*	EPA 9060Amod

* Values outside of QC limits

DUPLICATES

T4-PDI2019-SG59-190417

EPA 9060Amod

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9041103
Preparation: PSEP TOC
Source Sample Name: T4-PDI2019-SG59-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9041103-DUP1
Lab Source ID: A9D0674-21
Initial/Final: 5 g / 5 g
% Solids: 33.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (% by Weight)	C	DUPLICATE CONCENTRATION (% by Weight)	C	RPD %	Q	METHOD
Total Organic Carbon	20	2.4		2.4		0.9		EPA 9060Amod

* Values outside of QC limits

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	8B02022	Instrument:	TOC
Matrix:	Soil	Calibration:	A8B0203

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Cal Standard	8B02022-CAL2		02/02/18 17:35
Cal Standard	8B02022-CAL3		02/02/18 17:35
Cal Standard	8B02022-CAL4		02/02/18 17:35
Cal Standard	8B02022-CAL5		02/02/18 17:35
Cal Standard	8B02022-CAL6		02/02/18 17:35
Cal Standard	8B02022-CAL7		02/02/18 17:35
Cal Standard	8B02022-CAL8		02/02/18 17:35
Cal Standard	8B02022-CAL9		02/02/18 17:35
Cal Standard	8B02022-CALA		02/02/18 17:35
Cal Standard	8B02022-CALB		02/02/18 17:35
Initial Cal Check	8B02022-ICV2		02/02/18 17:35
Initial Cal Blank	8B02022-ICB2		02/02/18 17:35

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

ANALYSIS BATCH (SEQUENCE) SUMMARY

EPA 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D23028	Instrument:	TOC
Matrix:	Sediment	Calibration:	A8B0203

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	9D23028-CCV1		04/23/19 15:25
Calibration Blank	9D23028-CCB1		04/23/19 15:25
Blank	9041101-BLK1		04/23/19 15:25
LCS	9041101-BS1		04/23/19 15:25
T4-PDI2019-SG05-190417	A9D0674-02		04/23/19 15:25
T4-PDI2019-SG05-190417 (Dup)	9041101-DUP1		04/23/19 15:25
T4-PDI2019-SG06-190417	A9D0674-03		04/23/19 15:25
T4-PDI2019-SG08-190415	A9D0674-04		04/23/19 15:25
T4-PDI2019-SG11-190415	A9D0674-05		04/23/19 15:25
T4-PDI2019-SG13-190415	A9D0674-06		04/23/19 15:25
T4-PDI2019-SG15-190416	A9D0674-07		04/23/19 15:25
T4-PDI2019-SG16-190416	A9D0674-08		04/23/19 15:25
Calibration Check	9D23028-CCV2		04/23/19 15:25
Calibration Blank	9D23028-CCB2		04/23/19 15:25
T4-PDI2019-SG17-190416	A9D0674-12		04/23/19 15:25
FD-201904151441	A9D0674-13		04/23/19 15:25
T4-PDI2019-SG18-190415	A9D0674-14		04/23/19 15:25
Calibration Check	9D23028-CCV3		04/23/19 15:25
Calibration Blank	9D23028-CCB3		04/23/19 15:25

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 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Sequence:	9D24032	Instrument:	TOC
Matrix:	Sediment	Calibration:	A8B0203

Sample Name	Lab Sample ID	Lab File ID	Analysis Date/Time
Calibration Check	9D24032-CCV1		04/24/19 17:08
Calibration Blank	9D24032-CCB1		04/24/19 17:08
Blank	9041103-BLK1		04/24/19 17:08
LCS	9041103-BS1		04/24/19 17:08
T4-PDI2019-SG51-190417	A9D0674-15		04/24/19 17:08
T4-PDI2019-SG52-190417	A9D0674-16		04/24/19 17:08
T4-PDI2019-SG53-190416	A9D0674-17		04/24/19 17:08
T4-PDI2019-SG54-190416	A9D0674-18		04/24/19 17:08
T4-PDI2019-SG57-190417	A9D0674-19		04/24/19 17:08
T4-PDI2019-SG58-190417	A9D0674-20		04/24/19 17:08
T4-PDI2019-SG59-190417	A9D0674-21		04/24/19 17:08
T4-PDI2019-SG59-190417 (Dup)	9041103-DUP1		04/24/19 17:08
Calibration Check	9D24032-CCV2		04/24/19 17:08
Calibration Blank	9D24032-CCB2		04/24/19 17:08
FD-201904171301	A9D0674-22		04/24/19 17:08
T4-PDI2019-SG60-190417	A9D0674-23		04/24/19 17:08
T4-PDI2019-SG61-190416	A9D0674-24		04/24/19 17:08
Calibration Check	9D24032-CCV3		04/24/19 17:08
Calibration Blank	9D24032-CCB3		04/24/19 17:08

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.

INITIAL CALIBRATION DATA (Summary)

EPA 9060Amod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Calibration: A8B0203 Date: 02/02/18 15:56 Instrument: TOC

Compound	Mean RF	FIT	RF RSD	Mean RT	RT RSD	Linear r	Quad COD	LIMIT	Q
Total Organic Carbon		Lin				0.00000			

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 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Calibration: A8B0203
Instrument: TOC
Calibration Date: 02/02/18 15:56

Compound	Level 01		Level 02		Level 03		Level 04		Level 05		Level 06	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
Total Organic Carbon	1000		2500		5000		10000		15000		20000	

INITIAL CALIBRATION DATA (Continued)

EPA 9060Amod

Laboratory:	Apex Laboratories	SDG:	A9D0674
Client:	Anchor QEA, LLC	Project:	Port of Portland - T4 - PDI
Calibration:	A8B0203	Instrument:	TOC
Matrix:		Calibration Date:	02/02/18 15:56

Compound	Level 07		Level 08		Level 09		Level 10		Level 11		Level 12	
	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF	mg/kg	RF
Total Organic Carbon	25000		30000		35000		40000					

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Instrument ID: TOC
Calibration: A8B0203
Control Limt: +/- 10.00%
Sequence: 8B02022

Lab Sample ID	Analyte	True	Found	%R	Units	Method
8B02022-ICV2	Total Organic Carbon	10000	10000	104	mg/kg	EPA 9060Amod

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Instrument ID: TOC
Calibration: A8B0203
Control Limt: +/- 10.00%
Sequence: 9D23028

Lab Sample ID	Analyte	True	Found	%R	Units	Method
9D23028-CCV1	Total Organic Carbon	10000	9900	99	mg/kg	EPA 9060Amod
9D23028-CCV2	Total Organic Carbon	10000	9600	96	mg/kg	EPA 9060Amod
9D23028-CCV3	Total Organic Carbon	10000	9600	96	mg/kg	EPA 9060Amod

* Values outside of QC limits

INITIAL AND CONTINUING CALIBRATION CHECK

EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Instrument ID: TOC
Calibration: A8B0203
Control Limt: +/- 10.00%
Sequence: 9D24032

Lab Sample ID	Analyte	True	Found	%R	Units	Method
9D24032-CCV1	Total Organic Carbon	10000	9500	95	mg/kg	EPA 9060Amod
9D24032-CCV2	Total Organic Carbon	10000	9600	96	mg/kg	EPA 9060Amod
9D24032-CCV3	Total Organic Carbon	10000	9600	96	mg/kg	EPA 9060Amod

* Values outside of QC limits

INSTRUMENT BLANKS

EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Instrument ID: TOC
Project: Port of Portland - T4 - PDI
Sequence: 8B02022
Calibration: A8B0203

Lab Sample ID	Analyte	Found	RL	Units	C	Method
8B02022-ICB2	Total Organic Carbon	260	200 (Inst)	mg/kg	*	EPA 9060Amod

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

INSTRUMENT BLANKS
EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Instrument ID: TOC
Project: Port of Portland - T4 - PDI
Sequence: 9D23028
Calibration: A8B0203

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9D23028-CCB1	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod
9D23028-CCB2	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod
9D23028-CCB3	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod

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

INSTRUMENT BLANKS
EPA 9060Amod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Instrument ID: TOC
Project: Port of Portland - T4 - PDI
Sequence: 9D24032
Calibration: A8B0203

Lab Sample ID	Analyte	Found	RL	Units	C	Method
9D24032-CCB1	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod
9D24032-CCB2	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod
9D24032-CCB3	Total Organic Carbon	ND	200 (Inst)	mg/kg		EPA 9060Amod

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

HOLDING TIME SUMMARY

EPA 9060Amod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

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
T4-PDI2019-SG05-190417	04/17/19 11:35	04/18/19 07:40	04/19/19 09:17	1.90	28.00	04/23/19 15:25	6.16	28.00	
T4-PDI2019-SG06-190417	04/17/19 10:21	04/18/19 07:40	04/19/19 09:17	1.96	28.00	04/23/19 15:25	6.21	28.00	
T4-PDI2019-SG08-190415	04/15/19 12:29	04/18/19 07:40	04/19/19 09:17	3.87	28.00	04/23/19 15:25	8.12	28.00	
T4-PDI2019-SG11-190415	04/15/19 11:35	04/18/19 07:40	04/19/19 09:17	3.90	28.00	04/23/19 15:25	8.16	28.00	
T4-PDI2019-SG13-190415	04/15/19 15:34	04/18/19 07:40	04/19/19 09:17	3.74	28.00	04/23/19 15:25	7.99	28.00	
T4-PDI2019-SG15-190416	04/16/19 14:34	04/18/19 07:40	04/19/19 09:17	2.78	28.00	04/23/19 15:25	7.04	28.00	
T4-PDI2019-SG16-190416	04/16/19 10:13	04/18/19 07:40	04/19/19 09:17	2.96	28.00	04/23/19 15:25	7.22	28.00	
T4-PDI2019-SG17-190416	04/16/19 11:14	04/18/19 07:40	04/19/19 09:17	2.92	28.00	04/23/19 15:25	7.17	28.00	
FD-201904151441	04/15/19 14:41	04/18/19 07:40	04/19/19 09:17	3.78	28.00	04/23/19 15:25	8.03	28.00	
T4-PDI2019-SG18-190415	04/15/19 14:41	04/18/19 07:40	04/19/19 09:17	3.78	28.00	04/23/19 15:25	8.03	28.00	
T4-PDI2019-SG51-190417	04/17/19 15:25	04/18/19 07:40	04/19/19 10:30	1.80	28.00	04/24/19 17:08	7.07	28.00	
T4-PDI2019-SG52-190417	04/17/19 14:26	04/18/19 07:40	04/19/19 10:30	1.84	28.00	04/24/19 17:08	7.11	28.00	
T4-PDI2019-SG53-190416	04/16/19 16:27	04/18/19 07:40	04/19/19 10:30	2.75	28.00	04/24/19 17:08	8.03	28.00	
T4-PDI2019-SG54-190416	04/16/19 13:27	04/18/19 07:40	04/19/19 10:30	2.88	28.00	04/24/19 17:08	8.15	28.00	
T4-PDI2019-SG57-190417	04/17/19 15:49	04/18/19 07:40	04/19/19 10:30	1.78	28.00	04/24/19 17:08	7.06	28.00	
T4-PDI2019-SG58-190417	04/17/19 14:54	04/18/19 07:40	04/19/19 10:30	1.82	28.00	04/24/19 17:08	7.09	28.00	
T4-PDI2019-SG59-190417	04/17/19 13:50	04/18/19 07:40	04/19/19 10:30	1.86	28.00	04/24/19 17:08	7.14	28.00	
FD-201904171301	04/17/19 13:01	04/18/19 07:40	04/19/19 10:30	1.90	28.00	04/24/19 17:08	7.17	28.00	
T4-PDI2019-SG60-190417	04/16/19 13:01	04/18/19 07:40	04/19/19 10:30	2.90	28.00	04/24/19 17:08	8.17	28.00	
T4-PDI2019-SG61-190416	04/16/19 15:09	04/18/19 07:40	04/19/19 10:30	2.81	28.00	04/24/19 17:08	8.08	28.00	

Apex Laboratories

SDG: A9D0674

CLASS: WET

METHOD: PSEP 1986

ANALYSES DATA PACKAGE COVER PAGE

PSEP 1986

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI

Client Sample Id:	Lab Sample Id:	Matrix
T4-PDI2019-SG05-190417	A9D0674-02	Sediment
T4-PDI2019-SG06-190417	A9D0674-03	Sediment
T4-PDI2019-SG08-190415	A9D0674-04	Sediment
T4-PDI2019-SG11-190415	A9D0674-05	Sediment
T4-PDI2019-SG13-190415	A9D0674-06	Sediment
T4-PDI2019-SG15-190416	A9D0674-07	Sediment
T4-PDI2019-SG16-190416	A9D0674-08	Sediment
T4-PDI2019-SG17-190416	A9D0674-12	Sediment
FD-201904151441	A9D0674-13	Sediment
T4-PDI2019-SG18-190415	A9D0674-14	Sediment
T4-PDI2019-SG51-190417	A9D0674-15	Sediment
T4-PDI2019-SG52-190417	A9D0674-16	Sediment
T4-PDI2019-SG53-190416	A9D0674-17	Sediment
T4-PDI2019-SG54-190416	A9D0674-18	Sediment
T4-PDI2019-SG57-190417	A9D0674-19	Sediment
T4-PDI2019-SG58-190417	A9D0674-20	Sediment
T4-PDI2019-SG59-190417	A9D0674-21	Sediment
FD-201904171301	A9D0674-22	Sediment
T4-PDI2019-SG60-190417	A9D0674-23	Sediment
T4-PDI2019-SG61-190416	A9D0674-24	Sediment

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: 6/17/2019 10:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

PSEP 1986

Laboratory: Apex Laboratories **SDG:** A9D0674

Client: Anchor QEA, LLC **Project:** Port of Portland - T4 - PDI

Batch Matrix: Sediment

Analyte	MDL	MRL	Units
Total Solids	1.00	1.00	% by Weight

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

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG05-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-02
Sampled: 04/17/19 11:35
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 74.66
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	74.7	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG06-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-03
Sampled: 04/17/19 10:21
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 75.49
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	75.5	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG08-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-04
Sampled: 04/15/19 12:29
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 45.87
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	45.9	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG11-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-05
Sampled: 04/15/19 11:35
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 52.07
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	52.1	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG13-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-06
Sampled: 04/15/19 15:34
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 49.23
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	49.2	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG15-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-07
Sampled: 04/16/19 14:34
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 75.84
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	75.8	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG16-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-08
Sampled: 04/16/19 10:13
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 50.61
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	50.6	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG17-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-12
Sampled: 04/16/19 11:14
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 71.40
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	71.4	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

FD-201904151441

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-13
Sampled: 04/15/19 14:41
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 62.36
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	62.4	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG18-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-14
Sampled: 04/15/19 14:41
Prepared: 04/22/19 12:06
Analyzed: 04/23/19 15:34
Solids: 63.98
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041165
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	64.0	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG51-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-15
Sampled: 04/17/19 15:25
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 39.02
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	39.0	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG52-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-16
Sampled: 04/17/19 14:26
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 35.19
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	35.2	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG53-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-17
Sampled: 04/16/19 16:27
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 33.09
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	33.1	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG54-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-18
Sampled: 04/16/19 13:27
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 70.63
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	70.6	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG57-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-19
Sampled: 04/17/19 15:49
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 34.62
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	34.6	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG58-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-20
Sampled: 04/17/19 14:54
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 34.16
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	34.2	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG59-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-21
Sampled: 04/17/19 13:50
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 33.79
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	33.8	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

FD-201904171301

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-22
Sampled: 04/17/19 13:01
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 37.04
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	37.0	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG60-190417

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-23
Sampled: 04/16/19 13:01
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 36.70
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	36.7	1		PSEP 1986

INORGANIC ANALYSIS DATA SHEET

PSEP 1986

T4-PDI2019-SG61-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-24
Sampled: 04/16/19 15:09
Prepared: 04/29/19 10:50
Analyzed: 04/30/19 14:39
Solids: 69.40
Preparation: Total Solids (SM2540G/PSEP)
Initial/Final: 1 N/A / 1 N/A
Batch: 9041414
Calibration:
Instrument: Wet Chem Balance 1

CAS NO.	Analyte	Concentration (% by Weight)	Dilution Factor	Q	Method
TS	Total Solids	69.4	1		PSEP 1986

PREPARATION BATCH SUMMARY

PSEP 1986

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041165 Batch Matrix: Sediment Preparation: Total Solids (SM2540G/PSEP)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
T4-PDI2019-SG05-190417 (Dup)	9041165-DUP1		04/22/19 12:06	
T4-PDI2019-SG05-190417	A9D0674-02		04/22/19 12:06	
T4-PDI2019-SG06-190417	A9D0674-03		04/22/19 12:06	
T4-PDI2019-SG08-190415	A9D0674-04		04/22/19 12:06	
T4-PDI2019-SG11-190415	A9D0674-05		04/22/19 12:06	
T4-PDI2019-SG13-190415	A9D0674-06		04/22/19 12:06	
T4-PDI2019-SG15-190416	A9D0674-07		04/22/19 12:06	
T4-PDI2019-SG16-190416	A9D0674-08		04/22/19 12:06	
T4-PDI2019-SG17-190416	A9D0674-12		04/22/19 12:06	
FD-201904151441	A9D0674-13		04/22/19 12:06	
T4-PDI2019-SG18-190415	A9D0674-14		04/22/19 12:06	

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

PSEP 1986

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041414 Batch Matrix: Sediment Preparation: Total Solids (SM2540G/PSEP)

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
T4-PDI2019-SG59-190417 (Dup)	9041414-DUP1		04/29/19 10:50	
T4-PDI2019-SG51-190417	A9D0674-15		04/29/19 10:50	
T4-PDI2019-SG52-190417	A9D0674-16		04/29/19 10:50	
T4-PDI2019-SG53-190416	A9D0674-17		04/29/19 10:50	
T4-PDI2019-SG54-190416	A9D0674-18		04/29/19 10:50	
T4-PDI2019-SG57-190417	A9D0674-19		04/29/19 10:50	
T4-PDI2019-SG58-190417	A9D0674-20		04/29/19 10:50	
T4-PDI2019-SG59-190417	A9D0674-21		04/29/19 10:50	
FD-201904171301	A9D0674-22		04/29/19 10:50	
T4-PDI2019-SG60-190417	A9D0674-23		04/29/19 10:50	
T4-PDI2019-SG61-190416	A9D0674-24		04/29/19 10:50	

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.

DUPLICATES

PSEP 1986

T4-PDI2019-SG05-190417

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9041165
Preparation: Total Solids (SM2540G/PSEP)
Source Sample Name: T4-PDI2019-SG05-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9041165-DUP1
Lab Source ID: A9D0674-02
Initial/Final: 1 N/A / 1 N/A
% Solids: 74.66

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (% by Weight)	C	DUPLICATE CONCENTRATION (% by Weight)	C	RPD %	Q	METHOD
Total Solids	20	74.7		74.7		0.09		PSEP 1986

* Values outside of QC limits

DUPLICATES

PSEP 1986

T4-PDI2019-SG59-190417

Laboratory: Apex Laboratories
Client: Anchor QEA, LLC
Matrix: Sediment
Batch: 9041414
Preparation: Total Solids (SM2540G/PSEP)
Source Sample Name: T4-PDI2019-SG59-190417

SDG: A9D0674
Project: Port of Portland - T4 - PDI
Laboratory ID: 9041414-DUP1
Lab Source ID: A9D0674-21
Initial/Final: 1 N/A / 1 N/A
% Solids: 33.79

ANALYTE	CONTROL LIMIT	SAMPLE CONCENTRATION (% by Weight)	C	DUPLICATE CONCENTRATION (% by Weight)	C	RPD %	Q	METHOD
Total Solids	20	33.8		33.7		0.3		PSEP 1986

* Values outside of QC limits

HOLDING TIME SUMMARY

PSEP 1986

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

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
T4-PDI2019-SG05-190417	04/17/19 11:35	04/18/19 07:40	04/22/19 12:06	5.02	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG06-190417	04/17/19 10:21	04/18/19 07:40	04/22/19 12:06	5.07	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG08-190415	04/15/19 12:29	04/18/19 07:40	04/22/19 12:06	6.98	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG11-190415	04/15/19 11:35	04/18/19 07:40	04/22/19 12:06	7.02	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG13-190415	04/15/19 15:34	04/18/19 07:40	04/22/19 12:06	6.86	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG15-190416	04/16/19 14:34	04/18/19 07:40	04/22/19 12:06	5.90	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG16-190416	04/16/19 10:13	04/18/19 07:40	04/22/19 12:06	6.08	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG17-190416	04/16/19 11:14	04/18/19 07:40	04/22/19 12:06	6.04	180.00	04/23/19 15:34	1.14		
FD-201904151441	04/15/19 14:41	04/18/19 07:40	04/22/19 12:06	6.89	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG18-190415	04/15/19 14:41	04/18/19 07:40	04/22/19 12:06	6.89	180.00	04/23/19 15:34	1.14		
T4-PDI2019-SG51-190417	04/17/19 15:25	04/18/19 07:40	04/29/19 10:50	11.81	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG52-190417	04/17/19 14:26	04/18/19 07:40	04/29/19 10:50	11.85	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG53-190416	04/16/19 16:27	04/18/19 07:40	04/29/19 10:50	12.77	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG54-190416	04/16/19 13:27	04/18/19 07:40	04/29/19 10:50	12.89	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG57-190417	04/17/19 15:49	04/18/19 07:40	04/29/19 10:50	11.79	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG58-190417	04/17/19 14:54	04/18/19 07:40	04/29/19 10:50	11.83	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG59-190417	04/17/19 13:50	04/18/19 07:40	04/29/19 10:50	11.88	180.00	04/30/19 14:39	1.16		
FD-201904171301	04/17/19 13:01	04/18/19 07:40	04/29/19 10:50	11.91	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG60-190417	04/16/19 13:01	04/18/19 07:40	04/29/19 10:50	12.91	180.00	04/30/19 14:39	1.16		
T4-PDI2019-SG61-190416	04/16/19 15:09	04/18/19 07:40	04/29/19 10:50	12.82	180.00	04/30/19 14:39	1.16		

Apex Laboratories

SDG: A9D0674

CLASS: WET

METHOD: D422mod

ANALYSES DATA PACKAGE COVER PAGE

D422mod

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI

Client Sample Id:	Lab Sample Id:	Matrix
T4-PDI2019-SG05-190417	A9D0674-02	Sediment
T4-PDI2019-SG06-190417	A9D0674-03	Sediment
T4-PDI2019-SG08-190415	A9D0674-04	Sediment
T4-PDI2019-SG11-190415	A9D0674-05	Sediment
T4-PDI2019-SG13-190415	A9D0674-06	Sediment
T4-PDI2019-SG15-190416	A9D0674-07	Sediment
T4-PDI2019-SG16-190416	A9D0674-08	Sediment
T4-PDI2019-SG17-190416	A9D0674-12	Sediment
FD-201904151441	A9D0674-13	Sediment
T4-PDI2019-SG18-190415	A9D0674-14	Sediment
T4-PDI2019-SG51-190417	A9D0674-15	Sediment
T4-PDI2019-SG52-190417	A9D0674-16	Sediment
T4-PDI2019-SG53-190416	A9D0674-17	Sediment
T4-PDI2019-SG54-190416	A9D0674-18	Sediment
T4-PDI2019-SG57-190417	A9D0674-19	Sediment
T4-PDI2019-SG58-190417	A9D0674-20	Sediment
T4-PDI2019-SG59-190417	A9D0674-21	Sediment
FD-201904171301	A9D0674-22	Sediment
T4-PDI2019-SG60-190417	A9D0674-23	Sediment
T4-PDI2019-SG61-190416	A9D0674-24	Sediment
FD-201904171350	A9D0674-25	Sediment

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: 6/17/2019 10:23PM
Title: Technical Manager

METHOD DETECTION AND REPORTING LIMITS

D422mod

Laboratory: Apex Laboratories **SDG:** A9D0674

Client: Anchor QEA, LLC **Project:** Port of Portland - T4 - PDI

Batch Matrix: Soil

Analyte	MDL	MRL	Units
Gravel (>2.00mm)	0.01	0.01	% of Total
Percent Retained 4.75 mm sieve (#4)	0.01	0.01	% of Total
Percent Retained 2.00 mm sieve (#10)	0.01	0.01	% of Total
Sand (0.063mm - 2.00mm)	0.01	0.01	% of Total
Percent Retained 0.85 mm sieve (#20)	0.01	0.01	% of Total
Percent Retained 0.425 mm sieve (#40)	0.01	0.01	% of Total
Percent Retained 0.250 mm sieve (#60)	0.01	0.01	% of Total
Percent Retained 0.150 mm sieve (#100)	0.01	0.01	% of Total
Percent Retained 0.106 mm sieve (#140)	0.01	0.01	% of Total
Percent Retained 0.075 mm sieve (#200)	0.01	0.01	% of Total
Percent Retained 0.063 mm sieve (#230)	0.01	0.01	% of Total
Silt (0.005mm < 0.063mm)	0.01	0.01	% of Total
Clay (< 0.005 mm)	0.01	0.01	% of Total

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

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG05-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-02

Sampled: 04/17/19 11:35 | Prepared: 04/24/19 08:46 | Analyzed: 05/20/19 12:29

Solids: 74.66 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	4.94	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	2.38	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	2.56	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	92.3	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	7.65	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	46.9	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	33.9	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	3.33	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.29	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.19	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.10	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	1.90	1		D422mod
GS-Clay	Clay (< 0.005 mm)	0.90	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG06-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-03

Sampled: 04/17/19 10:21 | Prepared: 05/06/19 09:19 | Analyzed: 05/20/19 12:29

Solids: 75.49 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	7.98	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	5.02	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	2.96	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	89.2	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	7.42	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	41.6	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	35.3	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	4.10	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.40	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.29	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.16	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	2.00	1		D422mod
GS-Clay	Clay (< 0.005 mm)	0.80	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG08-190415

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-04

Sampled: 04/15/19 12:29 | Prepared: 04/24/19 09:03 | Analyzed: 05/15/19 18:17

Solids: 45.87 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.68	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.40	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.29	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	53.1	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.18	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	6.51	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	27.2	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	11.1	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	3.05	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	3.43	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.63	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	31.4	1		D422mod
GS-Clay	Clay (< 0.005 mm)	14.8	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG11-190415

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-05

Sampled: 04/15/19 11:35 | Prepared: 05/15/19 08:20 | Analyzed: 05/20/19 12:29

Solids: 52.07 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.33	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.05	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.28	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	66.0	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.56	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	9.71	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	33.2	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	15.2	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	3.40	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	2.65	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.31	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	28.8	1		D422mod
GS-Clay	Clay (< 0.005 mm)	4.90	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG13-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-06
Sampled: 04/15/19 15:34
Prepared: 05/15/19 08:42
Analyzed: 05/20/19 12:29
Solids: 49.23
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.20	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.20	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	58.8	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.31	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	7.57	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	28.8	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	14.0	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	3.49	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	2.99	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.61	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	29.7	1		D422mod
GS-Clay	Clay (< 0.005 mm)	11.3	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG15-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-07
Sampled: 04/16/19 14:34
Prepared: 04/24/19 09:41
Analyzed: 05/15/19 18:17
Solids: 75.84
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	2.97	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	1.78	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	1.18	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	93.8	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	4.06	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	40.7	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	40.9	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	6.93	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.65	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.39	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.23	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	2.80	1		D422mod
GS-Clay	Clay (< 0.005 mm)	0.40	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG16-190416

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-08
Sampled: 04/16/19 10:13
Prepared: 05/15/19 09:03
Analyzed: 05/20/19 12:29
Solids: 50.61
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.27	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.15	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.12	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	66.5	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.24	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	12.2	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	35.3	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	13.9	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	2.16	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	1.66	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.93	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	22.2	1		D422mod
GS-Clay	Clay (< 0.005 mm)	11.0	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG17-190416

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-12

Sampled: 04/16/19 11:14 | Prepared: 04/24/19 09:58 | Analyzed: 05/15/19 18:17

Solids: 71.40 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.40	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.08	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.32	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	94.7	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	1.27	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	29.6	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	50.9	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	11.6	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.84	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.36	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.18	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	4.10	1		D422mod
GS-Clay	Clay (< 0.005 mm)	0.80	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

FD-201904151441

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-13
Sampled: 04/15/19 14:41
Prepared: 05/15/19 09:26
Analyzed: 05/20/19 12:29
Solids: 62.36
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.08	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.08	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	82.0	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.98	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	26.2	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	42.1	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	10.0	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	1.36	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.92	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.46	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	12.3	1		D422mod
GS-Clay	Clay (< 0.005 mm)	5.60	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG18-190415

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-14
Sampled: 04/15/19 14:41
Prepared: 04/24/19 09:20
Analyzed: 05/15/19 18:17
Solids: 63.98
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.57	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.41	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.16	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	81.2	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.85	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	24.5	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	43.6	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	9.47	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	1.24	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	1.04	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.51	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	7.40	1		D422mod
GS-Clay	Clay (< 0.005 mm)	10.8	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG51-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-15

Sampled: 04/17/19 15:25 | Prepared: 04/30/19 08:43 | Analyzed: 05/15/19 18:17

Solids: 39.02 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.22	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.19	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.04	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	3.24	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.01	1	U	D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.11	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.30	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.75	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.50	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.82	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.77	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	65.3	1		D422mod
GS-Clay	Clay (< 0.005 mm)	31.2	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG52-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-16

Sampled: 04/17/19 14:26 | Prepared: 04/30/19 09:01 | Analyzed: 05/15/19 18:17

Solids: 35.19 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	1.39	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.01	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.03	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.30	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.25	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.23	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.29	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.28	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	63.2	1		D422mod
GS-Clay	Clay (< 0.005 mm)	35.4	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG53-190416

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-17

Sampled: 04/16/19 16:27 | Prepared: 05/02/19 09:40 | Analyzed: 05/15/19 18:17

Solids: 33.09 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	3.09	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.06	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.75	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.56	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.47	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.34	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.54	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.38	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	64.8	1		D422mod
GS-Clay	Clay (< 0.005 mm)	32.1	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG54-190416

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-18

Sampled: 04/16/19 13:27 | Prepared: 04/30/19 09:56 | Analyzed: 05/15/19 18:17

Solids: 70.63 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	2.96	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	1.12	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	1.84	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	87.1	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	3.04	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	23.6	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	39.5	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	14.1	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	3.72	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	2.27	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.83	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	7.20	1		D422mod
GS-Clay	Clay (< 0.005 mm)	2.70	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG57-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-19

Sampled: 04/17/19 15:49 Prepared: 04/30/19 08:50 Analyzed: 05/15/19 18:17

Solids: 34.62 Preparation: ASTM D 421 Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	2.47	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.12	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.66	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.46	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.29	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.21	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.39	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.35	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	67.2	1		D422mod
GS-Clay	Clay (< 0.005 mm)	30.4	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG58-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-20

Sampled: 04/17/19 14:54 | Prepared: 04/30/19 09:10 | Analyzed: 05/15/19 18:17

Solids: 34.16 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	2.53	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.06	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.53	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.34	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.32	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.31	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.52	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.44	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	65.1	1		D422mod
GS-Clay	Clay (< 0.005 mm)	32.3	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG59-190417

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-21

Sampled: 04/17/19 13:50 | Prepared: 05/02/19 09:55 | Analyzed: 05/15/19 18:17

Solids: 33.79 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	3.97	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.07	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.56	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.67	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.63	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.54	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	0.89	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.62	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	65.2	1		D422mod
GS-Clay	Clay (< 0.005 mm)	30.8	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

FD-201904171301

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-22
Sampled: 04/17/19 13:01
Prepared: 04/30/19 10:10
Analyzed: 05/15/19 18:17
Solids: 37.04
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041136
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	10.6	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.21	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	1.05	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	2.99	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	2.32	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	1.16	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	1.70	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.12	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	58.2	1		D422mod
GS-Clay	Clay (< 0.005 mm)	31.2	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG60-190417

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Matrix: Sediment Laboratory ID: A9D0674-23

Sampled: 04/16/19 13:01 Prepared: 05/02/19 10:25 Analyzed: 05/15/19 18:17

Solids: 36.70 Preparation: ASTM D 421 Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 Calibration: Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	10.8	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.05	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	1.00	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	2.93	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	2.44	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	1.24	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	1.82	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.30	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	60.5	1		D422mod
GS-Clay	Clay (< 0.005 mm)	28.7	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

T4-PDI2019-SG61-190416

Laboratory: Apex Laboratories | SDG: A9D0674

Client: Anchor QEA, LLC | Project: Port of Portland - T4 - PDI

Matrix: Sediment | Laboratory ID: A9D0674-24

Sampled: 04/16/19 15:09 | Prepared: 04/30/19 10:21 | Analyzed: 05/15/19 18:17

Solids: 69.40 | Preparation: ASTM D 421 | Initial/Final: 1 N/A / 1 N/A

Batch: 9041136 | Calibration: | Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	1.83	1		D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.68	1		D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	1.15	1		D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	89.3	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	2.01	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	20.4	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	37.8	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	17.6	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	6.84	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	3.65	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	1.01	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	7.00	1		D422mod
GS-Clay	Clay (< 0.005 mm)	1.80	1		D422mod

INORGANIC ANALYSIS DATA SHEET

D422mod

FD-201904171350

Laboratory: Apex Laboratories
SDG: A9D0674
Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI
Matrix: Sediment
Laboratory ID: A9D0674-25
Sampled: 04/17/19 13:50
Prepared: 05/02/19 10:13
Analyzed: 05/20/19 12:50
Solids: N/A
Preparation: ASTM D 421
Initial/Final: 1 N/A / 1 N/A
Batch: 9041137
Calibration:
Instrument: Inst

CAS NO.	Analyte	Concentration (% of Total)	Dilution Factor	Q	Method
GS-Gravel	Gravel (>2.00mm)	0.01	1	U	D422mod
GS-4.75	Percent Retained 4.75 mm sieve (#4)	0.01	1	U	D422mod
GS-2.00	Percent Retained 2.00 mm sieve (#10)	0.01	1	U	D422mod
GS-Sand	Sand (0.063mm - 2.00mm)	2.91	1		D422mod
GS-0.850	Percent Retained 0.85 mm sieve (#20)	0.03	1		D422mod
GS-0.425	Percent Retained 0.425 mm sieve (#40)	0.14	1		D422mod
GS-0.250	Percent Retained 0.250 mm sieve (#60)	0.14	1		D422mod
GS-0.150	Percent Retained 0.150 mm sieve (#100)	0.23	1		D422mod
GS-0.106	Percent Retained 0.106 mm sieve (#140)	0.59	1		D422mod
GS-0.075	Percent Retained 0.075 mm sieve (#200)	1.07	1		D422mod
GS-0.063	Percent Retained 0.063 mm sieve (#230)	0.71	1		D422mod
GS-SILT	Silt (0.005mm < 0.063mm)	65.7	1		D422mod
GS-Clay	Clay (< 0.005 mm)	31.4	1		D422mod

PREPARATION BATCH SUMMARY

D422mod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

Batch: 9041136 Batch Matrix: Soil Preparation: ASTM D 421

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
T4-PDI2019-SG05-190417	A9D0674-02		04/24/19 08:46	
T4-PDI2019-SG06-190417	A9D0674-03		05/06/19 09:19	
T4-PDI2019-SG08-190415	A9D0674-04		04/24/19 09:03	
T4-PDI2019-SG11-190415	A9D0674-05		05/15/19 08:20	
T4-PDI2019-SG13-190415	A9D0674-06		05/15/19 08:42	
T4-PDI2019-SG15-190416	A9D0674-07		04/24/19 09:41	
T4-PDI2019-SG16-190416	A9D0674-08		05/15/19 09:03	
T4-PDI2019-SG17-190416	A9D0674-12		04/24/19 09:58	
FD-201904151441	A9D0674-13		05/15/19 09:26	
T4-PDI2019-SG18-190415	A9D0674-14		04/24/19 09:20	
T4-PDI2019-SG51-190417	A9D0674-15		04/30/19 08:43	
T4-PDI2019-SG52-190417	A9D0674-16		04/30/19 09:01	
T4-PDI2019-SG53-190416	A9D0674-17		05/02/19 09:40	
T4-PDI2019-SG54-190416	A9D0674-18		04/30/19 09:56	
T4-PDI2019-SG57-190417	A9D0674-19		04/30/19 08:50	
T4-PDI2019-SG58-190417	A9D0674-20		04/30/19 09:10	
T4-PDI2019-SG59-190417	A9D0674-21		05/02/19 09:55	
FD-201904171301	A9D0674-22		04/30/19 10:10	
T4-PDI2019-SG60-190417	A9D0674-23		05/02/19 10:25	
T4-PDI2019-SG61-190416	A9D0674-24		04/30/19 10:21	

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

D422mod

Laboratory: Apex Laboratories
SDG: A9D0674

Client: Anchor QEA, LLC
Project: Port of Portland - T4 - PDI

Batch: 9041137 Batch Matrix: Soil Preparation: ASTM D 421

SAMPLE NAME	LAB SAMPLE ID	LAB FILE ID	DATE PREPARED	OBSERVATIONS
FD-201904171350	A9D0674-25		05/02/19 10:13	

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.

HOLDING TIME SUMMARY

D422mod

Laboratory: Apex Laboratories SDG: A9D0674

Client: Anchor QEA, LLC Project: Port of Portland - T4 - PDI

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
T4-PDI2019-SG05-190417	04/17/19 11:35	04/18/19 07:40	04/24/19 08:46	6.88	180.00	05/20/19 12:29	33.04	180.00	
T4-PDI2019-SG06-190417	04/17/19 10:21	04/18/19 07:40	05/06/19 09:19	18.96	180.00	05/20/19 12:29	33.09	180.00	
T4-PDI2019-SG08-190415	04/15/19 12:29	04/18/19 07:40	04/24/19 09:03	8.86	180.00	05/15/19 18:17	30.24	180.00	
T4-PDI2019-SG11-190415	04/15/19 11:35	04/18/19 07:40	05/15/19 08:20	29.86	180.00	05/20/19 12:29	35.04	180.00	
T4-PDI2019-SG13-190415	04/15/19 15:34	04/18/19 07:40	05/15/19 08:42	29.71	180.00	05/20/19 12:29	34.87	180.00	
T4-PDI2019-SG15-190416	04/16/19 14:34	04/18/19 07:40	04/24/19 09:41	7.80	180.00	05/15/19 18:17	29.16	180.00	
T4-PDI2019-SG16-190416	04/16/19 10:13	04/18/19 07:40	05/15/19 09:03	28.95	180.00	05/20/19 12:29	34.09	180.00	
T4-PDI2019-SG17-190416	04/16/19 11:14	04/18/19 07:40	04/24/19 09:58	7.95	180.00	05/15/19 18:17	29.29	180.00	
FD-201904151441	04/15/19 14:41	04/18/19 07:40	05/15/19 09:26	29.78	180.00	05/20/19 12:29	34.91	180.00	
T4-PDI2019-SG18-190415	04/15/19 14:41	04/18/19 07:40	04/24/19 09:20	8.78	180.00	05/15/19 18:17	30.15	180.00	
T4-PDI2019-SG51-190417	04/17/19 15:25	04/18/19 07:40	04/30/19 08:43	12.72	180.00	05/15/19 18:17	28.12	180.00	
T4-PDI2019-SG52-190417	04/17/19 14:26	04/18/19 07:40	04/30/19 09:01	12.77	180.00	05/15/19 18:17	28.16	180.00	
T4-PDI2019-SG53-190416	04/16/19 16:27	04/18/19 07:40	05/02/19 09:40	15.72	180.00	05/15/19 18:17	29.08	180.00	
T4-PDI2019-SG54-190416	04/16/19 13:27	04/18/19 07:40	04/30/19 09:56	13.85	180.00	05/15/19 18:17	29.20	180.00	
T4-PDI2019-SG57-190417	04/17/19 15:49	04/18/19 07:40	04/30/19 08:50	12.71	180.00	05/15/19 18:17	28.10	180.00	
T4-PDI2019-SG58-190417	04/17/19 14:54	04/18/19 07:40	04/30/19 09:10	12.76	180.00	05/15/19 18:17	28.14	180.00	
T4-PDI2019-SG59-190417	04/17/19 13:50	04/18/19 07:40	05/02/19 09:55	14.84	180.00	05/15/19 18:17	28.19	180.00	
FD-201904171301	04/17/19 13:01	04/18/19 07:40	04/30/19 10:10	12.88	180.00	05/15/19 18:17	28.22	180.00	
T4-PDI2019-SG60-190417	04/16/19 13:01	04/18/19 07:40	05/02/19 10:25	15.89	180.00	05/15/19 18:17	29.22	180.00	
T4-PDI2019-SG61-190416	04/16/19 15:09	04/18/19 07:40	04/30/19 10:21	13.80	180.00	05/15/19 18:17	29.13	180.00	
FD-201904171350	04/17/19 13:50	04/18/19 07:40	05/02/19 10:13	14.85	180.00	05/20/19 12:50	32.96	180.00	

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
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Raw Data

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
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Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (water)

Batch 9041150
Sequence 9D23025 (A9D0674-01)

APEX LABORATORIES

Apex Laboratories

PREPARATION BENCH SHEET

JUN 0 3 2019

BATCH #: 9041150 (Water)

Prep Method: EPA 3510C (Acid Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9041150-BLK1		QC	04/22/19 10:10	1100	1				100					
	9041150-BSD1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	9041150-BS1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	A9D0674-01	A	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	920	1				100	RB-20190417155 8	PAHs Only			
	A9D0705-59	H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1060	1				100	EQ-041619	PAH/Phthalates only			
	A9D0705-60	H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1060	1				100	EQ-041719	PAH/Phthalates only			
	A9D0775-01	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1060	1				100	LL-C-40	PAH only			
	A9D0775-02	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1060	1				100	SL-E-32-01	PAH only			
	A9D0775-03	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1060	1				100	SL-E-32-01A	PAH only			
	A9D0775-04	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1050	1				100	SL-E-32-01B	PAH only			
	A9D0775-05	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1050	1				100	SL-W-32-01	PAH only			
	A9D0775-06	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	1060	1				100	LC-30	PAH only			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A18K311	12/31/20	Glass Wool
A19B083	08/10/19	Conc. HCl - Omnitrace
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

Prepared By: Date

AMS 4/22/19

Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041150 (Water)

Prep Method: EPA 3510C (Acid Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11

3x rinse

Witness: _____

Bottle Check: _____

Prepared By: _____ Date _____

Reviewed By: _____ Date _____

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041150 (Water)

Prep Method: EPA 3510C (Acid Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9041150-BLK1		QC	04/22/19 10:10	1000	1				100					
	9041150-BSD1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	9041150-BS1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	A9D0674-01	A	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000	1				100	RB-20190417155 8	PAHs Only			
	A9D0705-59	H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000	1				100	EQ-041619	PAH/Phthalates only			
	A9D0705-60	H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000	1				100	EQ-041719	PAH/Phthalates only			
	A9D0775-01	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1060	1 ✓				100	LL-C-40 ✓	PAH only	✓		
	A9D0775-02	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1060	1 ✓				100	SL-E-32-01 ✓	PAH only	✓		
	A9D0775-03	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1060	1 ✓				100	SL-E-32-01A ✓	PAH only	✓		
	A9D0775-04	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1050	1 ✓				100	SL-E-32-01B ✓	PAH only	✓		
	A9D0775-05	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1050	1 ✓				100	SL-W-32-01 ✓	PAH only	✓		
	A9D0775-06	E	8270D LL PAH/PHTH/Phenols	04/22/19 15:24	~~1000~~ 1060	1 ✓				100	LC-30 ✓	PAH only	✓		

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A18K311	12/31/20	Glass Wool
A19B083	08/10/19	Conc. HCl - Omnitrace
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

JC

JC 4.22.19
Prepared By: Date

CAS 4/22/19
Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041150 (Water)

Prep Method: EPA 3510C (Acid Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
3x rinse															

Witness: _____

Bottle Check: Cwt 4/22/19

Prepared By: _____ Date _____

Reviewed By: _____ Date _____

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041150 (Water)

Prep Method: EPA 3510C (Acid Extraction)

#	Lab Number		Analysis	Prepared	Initial (mL)	Final (mL)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9041150-BLK1		QC	04/22/19 10:10	1000/100	1				100					
	9041150-BSD1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	9041150-BS1		QC	04/22/19 10:10	1000	1	A19D163		50	100					
	A9D0674-01	A	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000/920	1				100	RB-20190417155 8	PAHs Only			
	A9D0705-59	G H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000/1060	1				100	EQ-041619	PAH/Phthalates only			
	A9D0705-60	G H	8270D LL PAH/PHTH/Phenols	04/22/19 10:10	1000/1060	1				100	EQ-041719	PAH/Phthalates only			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A18K311	12/31/20	Glass Wool
A19B083	08/10/19	Conc. HCl - Omnitrace
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s) 4/22/19

Std ID	Exp. Date	Description
A19C241 DC36	09/11/19 10/17/19	PAH Soil and Water Surr. (50ppm)

3x rinse

Witness: JC 4·22·19

Bottle Check: JC 4·22·19

Prepared By: 4/22/19 Date

Reviewed By: JRA 04/22/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D23025**	Instrument:	**SV-GCMS5**
Date:	**04/23/19 07:28**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D23025-TUN1	Water	QC	QC			A19D031	A19D089
2	9D23025-IBL1	Water	QC	QC			A19D031	
3	9D23025-CCV1	Water	QC	QC			A19D031	A19C237
4	9D23025-IBL2	Water	QC	QC			A19D031	
5	9D23025-TUN2	Water	QC	QC			A19D031	A19D089
6	9D23025-IBL3	Water	QC	QC			A19D031	
7	9D23025-CCV2	Water	QC	QC			A19D031	A19C237
8	9D23025-CCB1	Water	QC	QC			A19D031	
9	9041150-BLK1	Water	QC	QC		9041150	A19D031	
10	9041150-BS1	Water	QC	QC		9041150	A19D031	
11	9041150-BSD1	Water	QC	QC		9041150	A19D031	
12	A9D0674-01	Water	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041150	A19D031	
13	A9D0705-59	Water	8270D LL PAH/PHTH/Phenols		05/01/19	9041150	A19D031	
14	A9D0705-60	Water	8270D LL PAH/PHTH/Phenols		05/01/19	9041150	A19D031	
15	A9D0775-01	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
16	A9D0775-02	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
17	A9D0775-03	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
18	A9D0733-01RE1	Water	625 Full List (Scan)		05/02/19	9041130	A19D031	
19	A9D0775-04	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
20	A9D0775-05	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
21	A9D0775-06	Water	8270D LL PAH/PHTH/Phenols		04/26/19	9041150	A19D031	
22	A9D0733-01RE2	Water	625 Full List (Scan)		05/02/19	9041130	A19D031	
23	9D23025-IBL4	Water	QC	QC			A19D031	

Data Entered By: TEM 04/24/19

Data Reviewed By: 4/29/19

Comments:

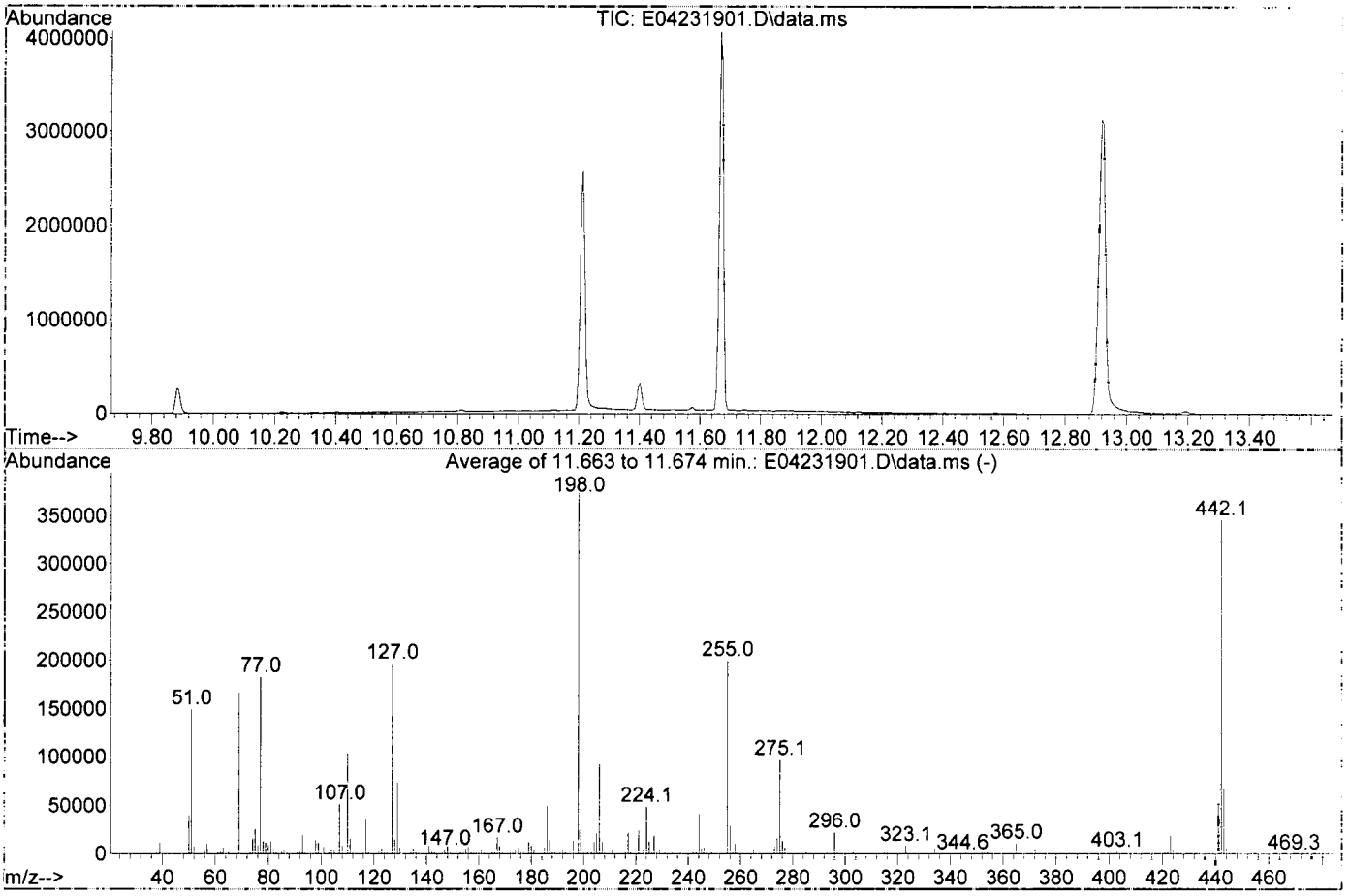
Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231901.D
Acq On : 23 Apr 2019 8:09 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

jem 04/24/19

Q 14



AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.9	149920	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.4	167055	PASS
70	69	0.00	2	0.4	751	PASS
127	198	10	80	52.4	196944	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	375989	PASS
199	198	5	9	6.8	25448	PASS
275	198	10	60	25.9	97248	PASS
365	198	1	100	2.8	10714	PASS
441	442	0.01	24	15.2	52605	PASS
442	198	50	200	92.3	347136	PASS
443	442	15	24	19.5	67528	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231901.D
Acq On : 23 Apr 2019 8:09 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 08:55:07 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

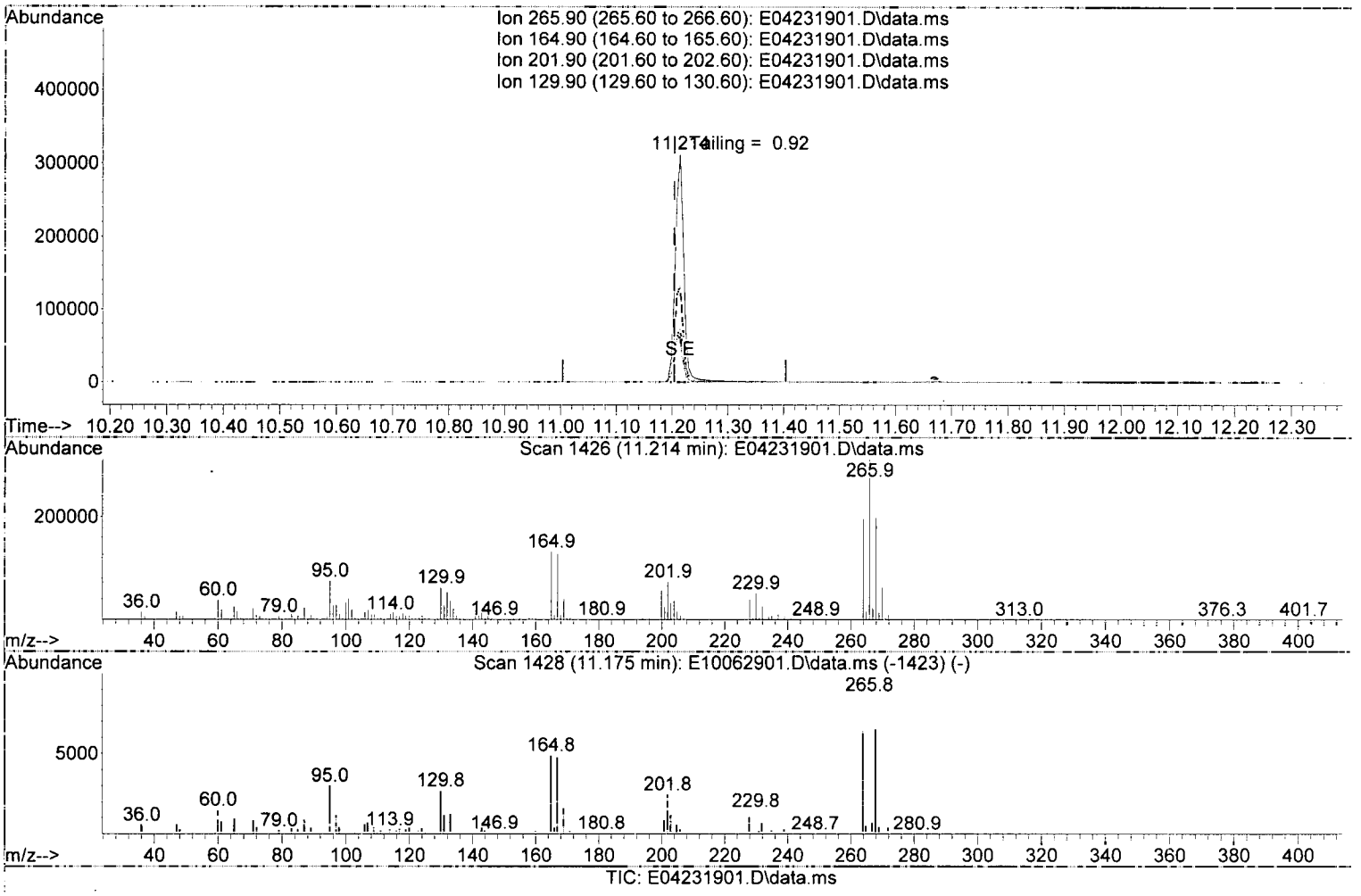
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.860	150	48638	2.00	ug/mL	0.02
2) Naphthalene-d8	8.112	136	119360	2.00	ug/mL	0.02
3) Acenaphthene-d10	9.882	162	63353	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.401	188	112042	2.00	ug/mL	0.00
11) Chrysene-d12	15.231	240	96374	2.00	ug/mL	0.00
12) Perylene-d12	17.188	264	75853	2.00	ug/mL	0.01
13) Dibenz(a,h)anthracene-...	18.525	292	50468	2.00	ug/mL	0.03
Target Compounds						Qvalue
4) Pentachlorophenol	11.214	266	335785	56.13	ug/mL	92
6) DFTPP	11.674	442	425853	47.08	ug/mL	80
7) Benzidine	12.925	184	1984171	49.78	ug/mL	95
8) 4,4-DDE	13.193	TIC	48422	No Calib		
9) 4,4-DDD	13.754	TIC	23946	No Calib		
10) 4,4-DDT	14.364	TIC	5387929	46.89	ug/mL	96

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231901.D
Acq On : 23 Apr 2019 8:09 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 08:55:07 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(4) Pentachlorophenol

11.214min (+ 0.011) 56.13 ug/mL

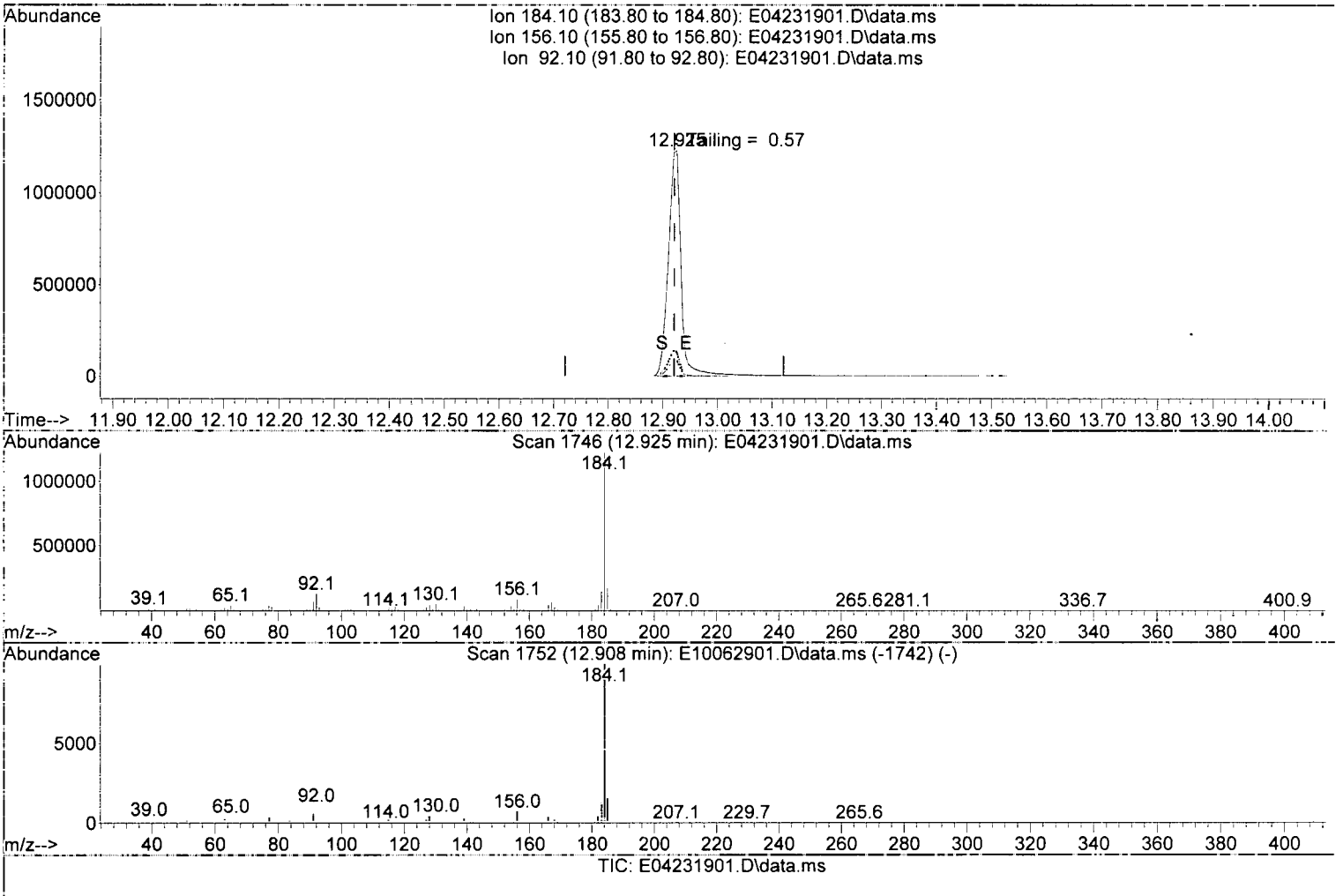
response 335785

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	42.31
201.90	23.20	23.60
129.90	27.10	19.97

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231901.D
Acq On : 23 Apr 2019 8:09 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 08:55:07 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(7) Benzidine

12.925min (+ 0.005) 49.78 ug/mL

response 1984171

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.22
92.10	8.20	10.69
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9D23025-TUN1
SV-GCMS5

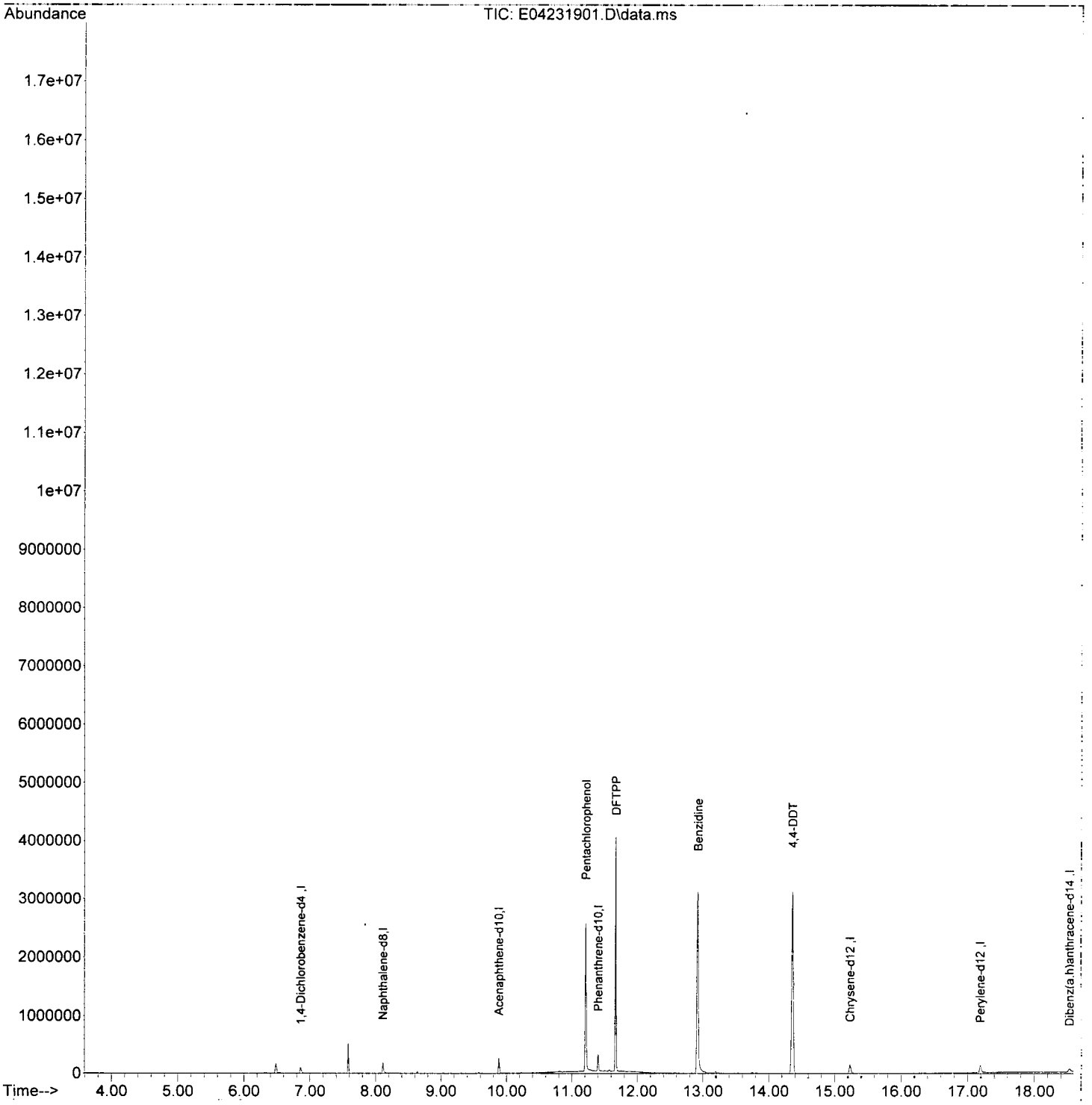
First Column Area Counts		Percent Breakdown
DDE	48422	
DDD	23946	
DDT	5387929	1.33 PASS

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231901.D
Acq On : 23 Apr 2019 8:09 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 08:55:07 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231903.D
Acq On : 23 Apr 2019 9:17 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 08:59:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

HEML 04/24/19

Q14

Replaced liner after this run

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	190177	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	743273	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	360271	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	666289	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	625956	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	546799	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	486831	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.655	112	118684	1001.03	ng/ml	0.00
5) Phenol-d6(Surr)	6.500	99	157471	992.95	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.393	82	139744	982.79	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	278161	1038.17	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	32961	1332.03	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	299377	1023.64	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.408	74	81864	912.21	ng/ml	88
3) Pyridine	4.435	79	137567	946.51	ng/ml	97
6) Phenol	6.516	94	157948	950.50	ng/ml	93
7) Aniline	6.548	93	188405	870.05	ng/ml	97
8) Bis(2-chloroethyl) ether	6.596	93	137091	1009.34	ng/ml	97
9) 2-Chlorophenol	6.666	128	131382	1055.82	ng/ml	97
10) 1,3-Dichlorobenzene	6.810	146	143291	1007.35	ng/ml	96
11) 1,4-Dichlorobenzene	6.879	146	146548	1019.66	ng/ml	98
12) Benzyl alcohol	6.986	108	71553	907.91	ng/ml	91
13) 1,2-Dichlorobenzene	7.029	146	139484	1024.58	ng/ml	97
14) 2-Methylphenol	7.088	107	104983	1014.45	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.109	45	207149	961.77	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.238	70	99476	977.10	ng/ml	94
17) 3+4-Methylphenol	7.238	107	131382	1005.06	ng/ml	93
18) Hexachloroethane	7.356	117	53331	1005.18	ng/ml	84
20) Nitrobenzene	7.414	77	138620	1009.39	ng/ml	90
22) Isophorone	7.639	82	250319	986.81	ng/ml	96
23) 2-Nitrophenol	7.730	139	65630	1175.99	ng/ml	85
24) 2,4-Dimethylphenol	7.757	122	114678	1031.05	ng/ml	94
25) Bis(2-chloroethoxy) me...	7.842	93	155030	971.36	ng/ml	99
26) Benzoic acid	7.842	105	75542	2098.47	ng/ml	92
27) 2,4-Dichlorophenol	7.965	162	94298	1094.11	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.051	180	111964	1084.37	ng/ml	95
29) Naphthalene	8.131	128	395950	998.60	ng/ml	99
30) 4-Chloroaniline	8.179	127	125356	917.99	ng/ml	96
31) Hexachlorobutadiene	8.254	225	57050	1131.22	ng/ml	98
32) 4-Chloro-3-methylphenol	8.655	107	97301	1028.78	ng/ml	97
33) 2-Methylnaphthalene	8.826	142	263027	1054.60	ng/ml	96
34) 1-Methylnaphthalene	8.923	142	249038	1042.68	ng/ml	96
36) Hexachlorocyclopentadiene	8.987	237	54655	1182.64	ng/ml	97
37) 2,4,6-Trichlorophenol	9.110	196	63628	1169.64	ng/ml	99
38) 2,4,5-Trichlorophenol	9.147	196	64969	1145.47	ng/ml	98
39) 1,1'-Biphenyl	9.292	154	314702	1021.05	ng/ml	98
41) 2-Chloronaphthalene	9.318	162	226829	1019.34	ng/ml	98
42) 2-Nitroaniline	9.415	138	71456	1051.26	ng/ml	90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231903.D
Acq On : 23 Apr 2019 9:17 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 08:59:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

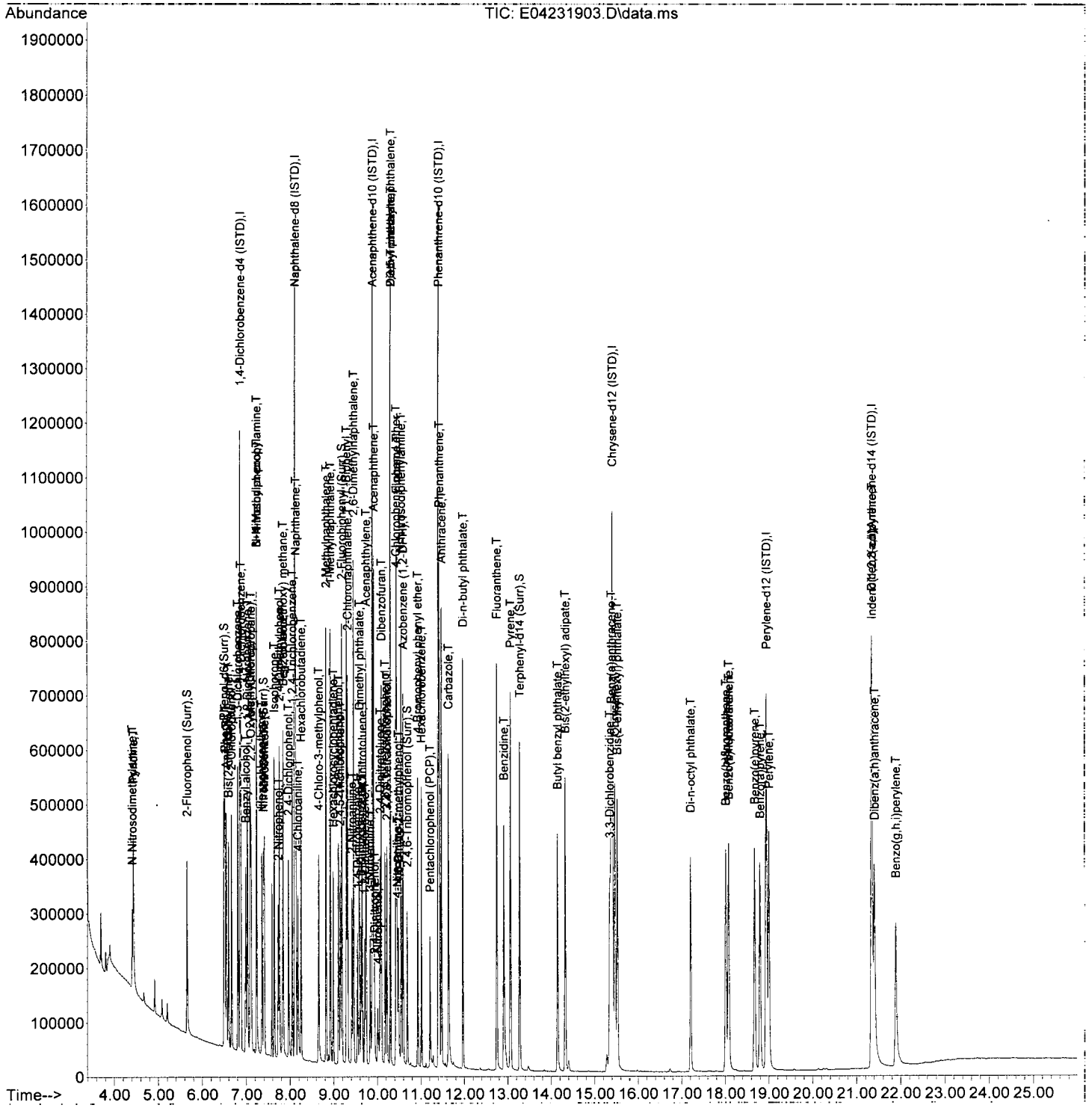
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	224177	1041.07	ng/ml	95
44) 1,4-Dinitrobenzene	9.543	168	34006	1277.74	ng/ml	88
45) Dimethyl phthalate	9.591	163	255044	1103.03	ng/ml	100
46) 1,3-Dinitrobenzene	9.629	168	39786	1174.99	ng/ml	86
47) 2,6-Dinitrotoluene	9.655	165	59821	1177.47	ng/ml	77
48) 1,2-Dinitrobenzene	9.714	168	27508	1202.61	ng/ml#	66
49) Acenaphthylene	9.741	152	372245	1060.75	ng/ml	99
50) 3-Nitroaniline	9.832	138	55716	961.07	ng/ml	97
51) Acenaphthene	9.918	153	244681	1028.29	ng/ml	100
52) 2,4-Dinitrophenol	9.939	184	20586	1409.05	ng/ml	80
53) 4-Nitrophenol	10.008	139	33546	792.50	ng/ml	80
54) 2,4-Dinitrotoluene	10.067	165	77064	1179.46	ng/ml	85
55) Dibenzofuran	10.094	168	324306	1048.36	ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.174	232	52673	1242.46	ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	10.222	232	57085	1193.16	ng/ml	88
58) Diethyl phthalate	10.303	149	256322	1109.23	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.303	170	212857	1108.94	ng/ml	94
60) Fluorene	10.442	166	266397	1075.51	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.431	204	118982	1084.87	ng/ml	87
62) 4-Nitroaniline	10.458	138	56375	862.32	ng/ml	78
63) 4,6-Dinitro-2-methylph...	10.484	198	35531	1469.04	ng/ml	83
65) N-Nitrosodiphenylamine	10.549	169	224963	1068.76	ng/ml	97
66) Azobenzene (1,2-DPH)	10.591	77	276541	961.57	ng/ml	95
68) 4-Bromophenyl phenyl e...	10.928	248	67410	1093.58	ng/ml	91
69) Hexachlorobenzene	11.014	284	71009	1145.14	ng/ml	95
70) Pentachlorophenol (PCP)	11.212	266	33536	1089.81	ng/ml	97
71) Phenanthrene	11.426	178	382411	1045.69	ng/ml	99
72) Anthracene	11.479	178	390072	1039.58	ng/ml	98
73) Carbazole	11.634	167	333215	948.45	ng/ml	99
74) Di-n-butyl phthalate	11.971	149	411766	936.70	ng/ml	99
75) Fluoranthene	12.747	202	396795	1046.03	ng/ml	98
76) Benzidine	12.913	184	288398	2357.31	ng/ml	100
77) Pyrene	13.063	202	409253	1062.06	ng/ml	98
80) Butyl benzyl phthalate	14.148	149	163037	890.47	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.325	129	152813	838.73	ng/ml	97
82) 3,3-Dichlorobenzidine	15.346	252	174404	1695.75	ng/ml	98
83) Benz(a)anthracene	15.384	228	345061	977.29	ng/ml	98
84) Chrysene	15.469	228	342408	1017.99	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.523	149	226638	866.18	ng/ml	95
87) Di-n-octyl phthalate	17.208	149	332727	930.15	ng/ml	99
88) Benzo(b)fluoranthene	18.015	252	319386	1105.57	ng/ml	99
89) Benzo(k)fluoranthene	18.085	252	328695	1157.75	ng/ml	99
90) Benzo(b+k)fluoranthene	18.085	252	669108	2205.45	ng/ml	99
91) Benzo(e)pyrene	18.679	252	319846	1090.50	ng/ml	99
92) Benzo(a)pyrene	18.802	252	299442	1141.62	ng/ml	99
93) Perylene	19.005	252	338627	1129.56	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	21.348	276	256653	961.82	ng/ml	100
96) Dibenz(a,h)anthracene	21.406	278	262264	1073.23	ng/ml	98
97) Benzo(g,h,i)perylene	21.888	276	250153	952.22	ng/ml	81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231903.D
Acq On : 23 Apr 2019 9:17 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 08:59:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

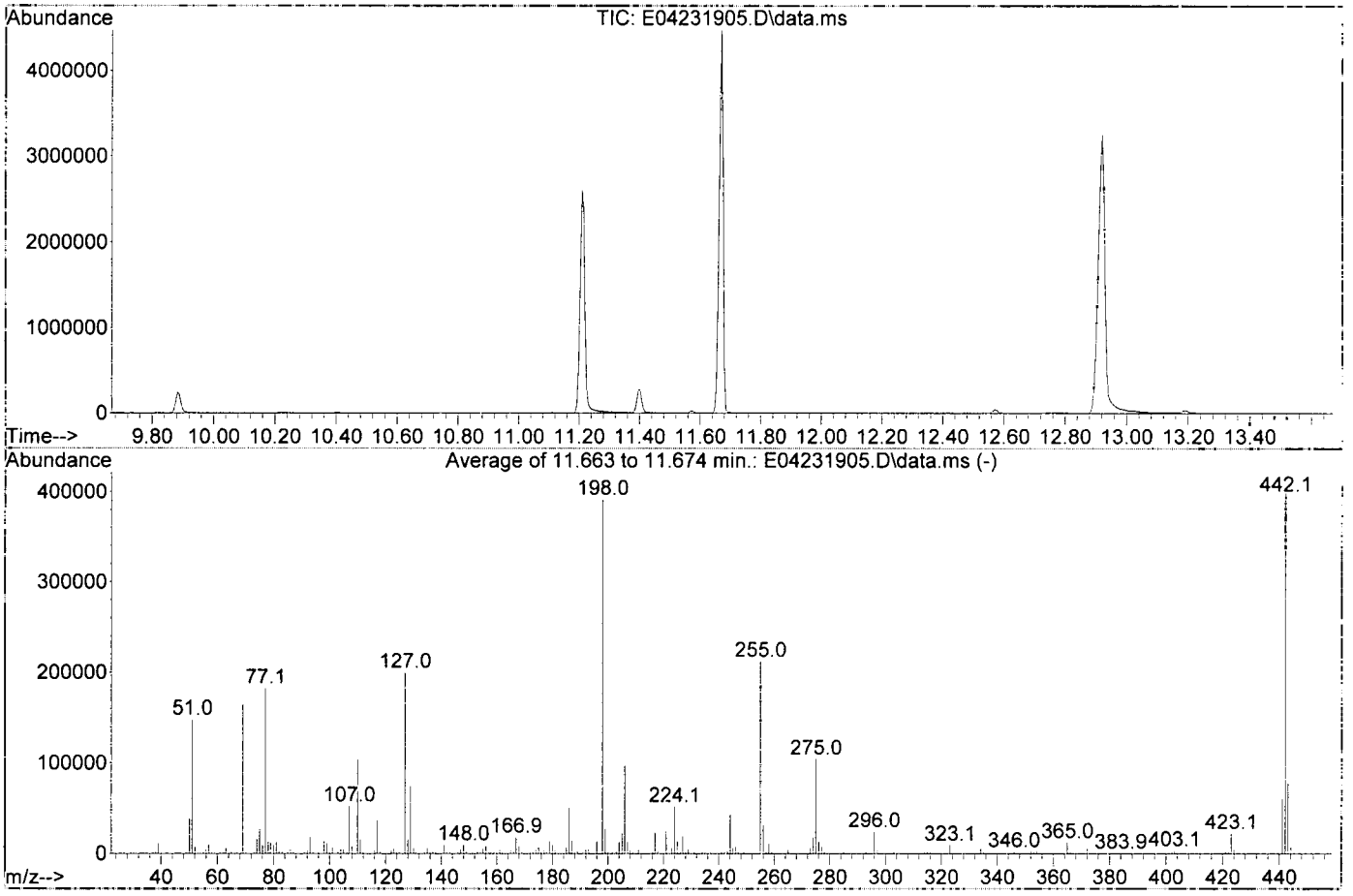


Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Jean 04/24/19

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019



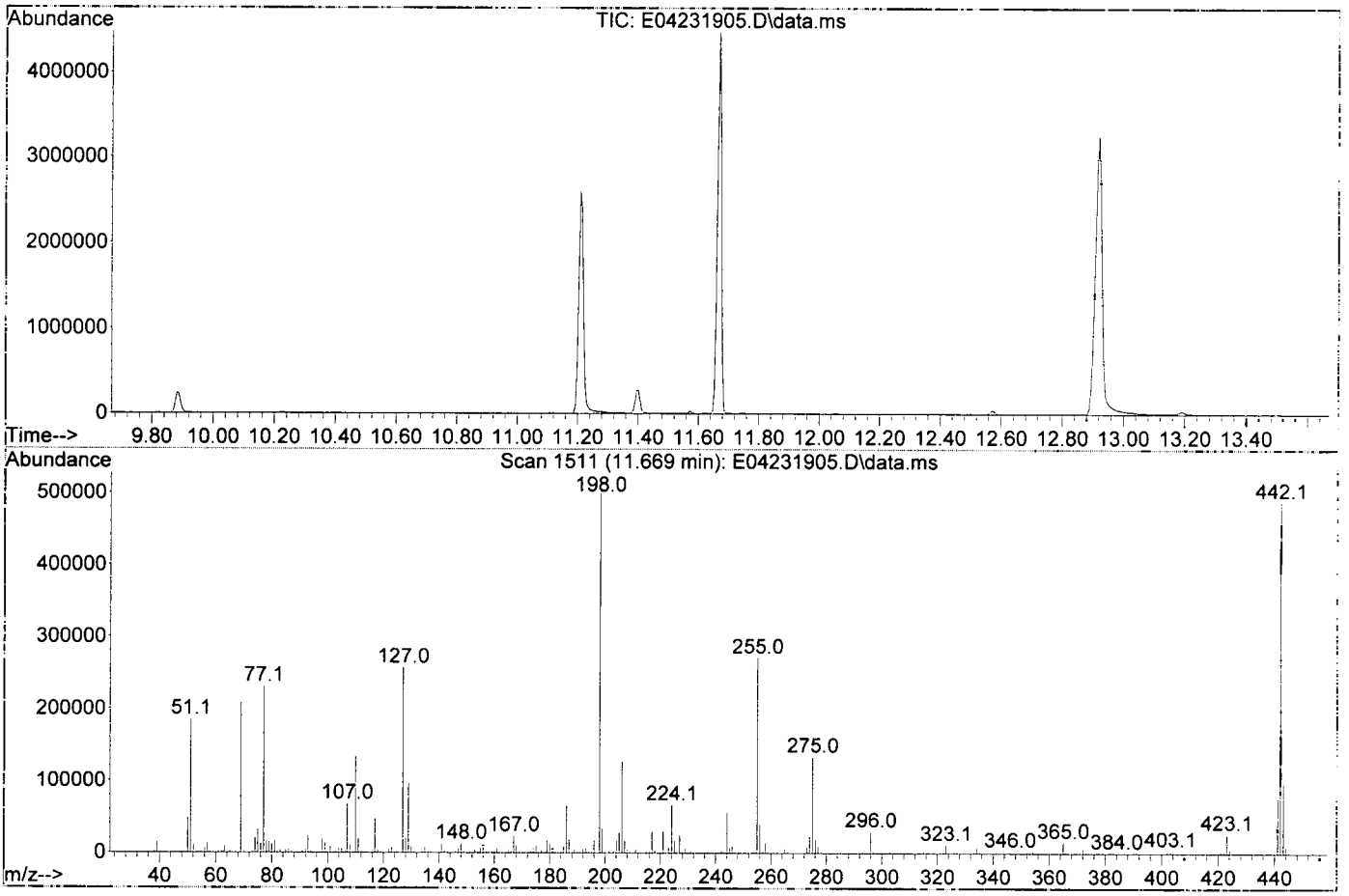
AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	37.8	148170	PASS
68	69	0.00	2	0.5	806	PASS
69	198	0.00	100	42.1	165018	PASS
70	69	0.00	2	0.5	906	PASS
127	198	10	80	51.1	200021	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	391701	PASS
199	198	5	9	6.8	26464	PASS
275	198	10	60	26.7	104448	PASS
365	198	1	100	3.1	12064	PASS
441	442	0.01	24	15.3	61581	PASS
442	198	50	200	102.6	401813	PASS
443	442	15	24	19.5	78200	PASS

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Wed Apr 17 13:14:03 2019



Spectrum Information: Scan 1511

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.8	185024	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	41.6	209088	PASS
70	69	0.00	2	0.5	1127	PASS
127	198	40	60	51.0	256576	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	502784	PASS
199	198	5	9	6.8	34016	PASS
275	198	10	30	26.6	133696	PASS
365	198	1	100	3.0	14835	PASS
441	443	0.01	100	77.0	74784	PASS
442	198	40	100	97.2	488832	PASS
443	442	17	23	19.9	97152	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 09:02:21 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

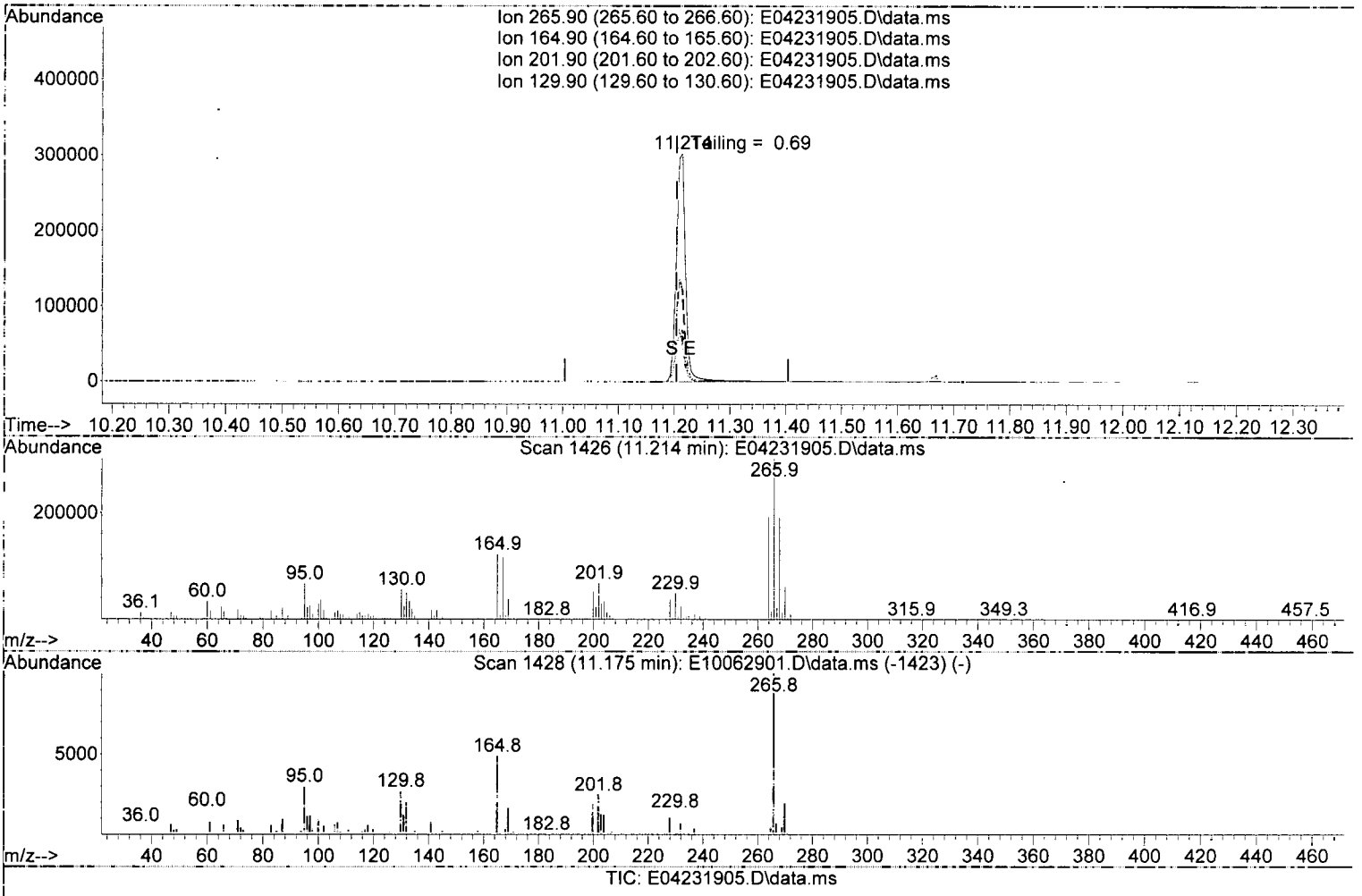
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.860	150	57512	2.00	ug/mL	0.02
2) Naphthalene-d8	8.117	136	118164	2.00	ug/mL	0.02
3) Acenaphthene-d10	9.882	162	62941	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.401	188	114680	2.00	ug/mL	0.00
11) Chrysene-d12	15.226	240	98321	2.00	ug/mL	0.00
12) Perylene-d12	17.189	264	75882	2.00	ug/mL	0.01
13) Dibenz(a,h)anthracene-...	18.526	292	46756	2.00	ug/mL	0.03
Target Compounds						Qvalue
4) Pentachlorophenol	11.214	266	348691	58.67	ug/mL	90
6) DFTPP	11.674	442	452698	48.90	ug/mL	70
7) Benzidine	12.920	184	2026234	49.67	ug/mL	94
8) 4,4-DDE	13.188	TIC	49932	No Calib		
9) 4,4-DDD	13.749	TIC	12815	No Calib		
10) 4,4-DDT	14.359	TIC	5927372	50.40	ug/mL	96

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 09:02:21 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04231905.D\data.ms

(4) Pentachlorophenol

11.214min (+ 0.011) 58.67 ug/mL

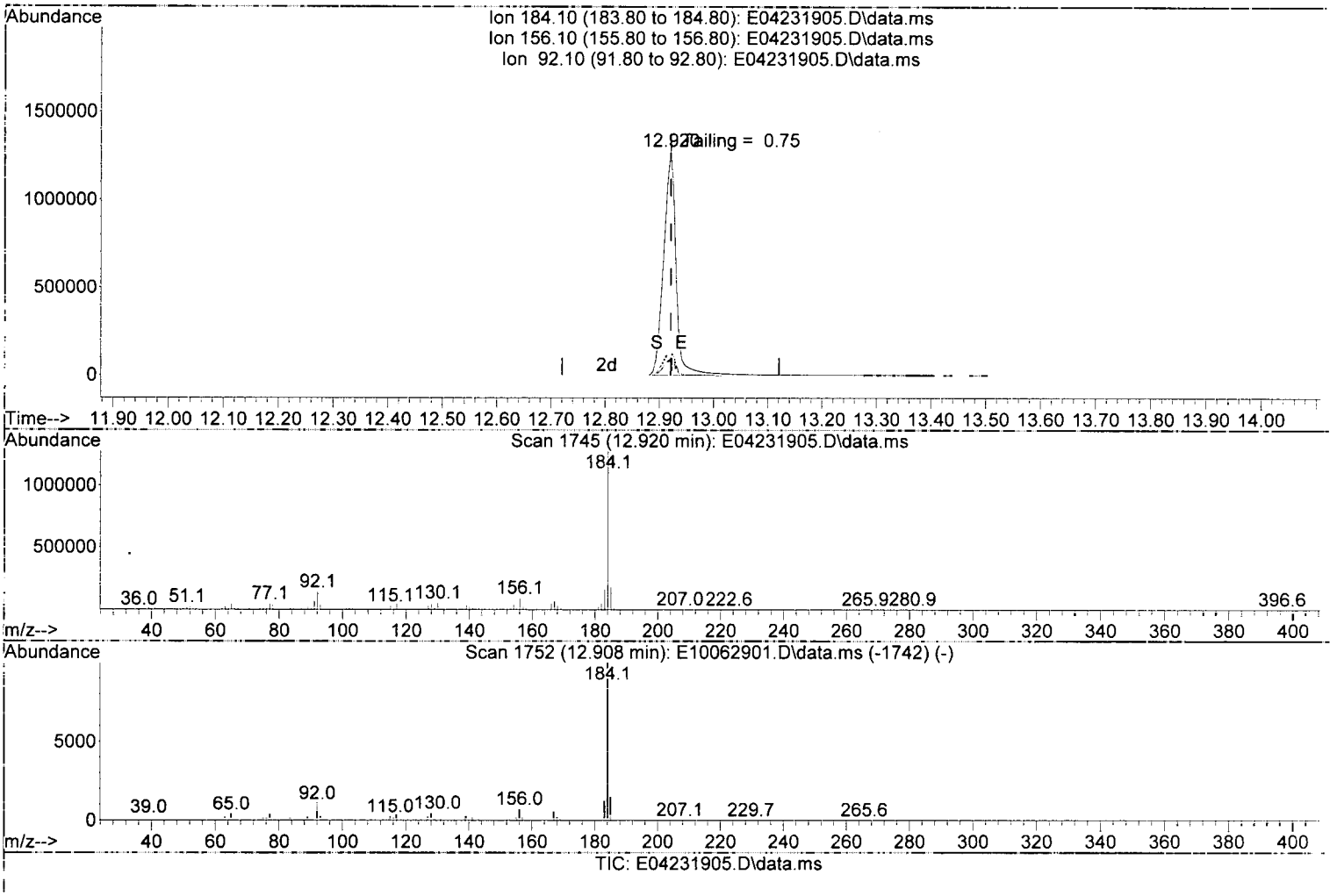
response 348691

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	40.61
201.90	23.20	22.63
129.90	27.10	18.69

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 09:02:21 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(7) Benzidine

12.920min (-0.000) 49.67 ug/mL

response 2026234

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.17
92.10	8.20	10.96
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9D23025-TUN2
SV-GCMS5

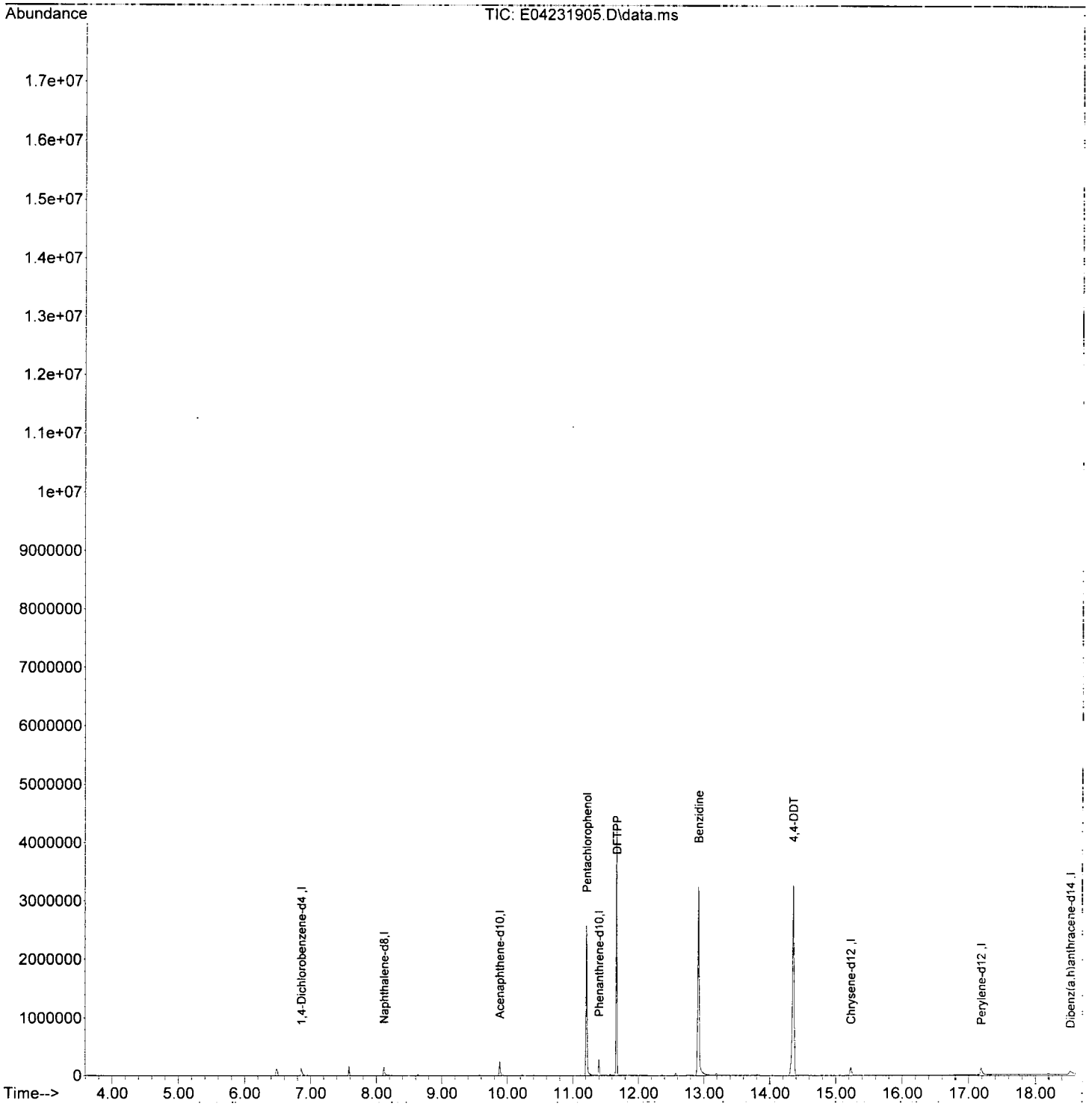
First Column Area Counts		Percent Breakdown	
DDE	49932		
DDD	12815		
DDT	592372	1.05	PASS

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231905.D
Acq On : 23 Apr 2019 10:40 am
Operator : JK/ AMS /DTH
Sample : 9D23025-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 24 09:02:21 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JAM 04/24/19

Quant Time: Apr 24 09:06:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	63	-0.01
2	T	N-Nitrosodimethylamine	1000.000	909.857	9.0	57	-0.02
3	T	Pyridine	1000.000	908.567	9.1	57	-0.03
4	S	2-Fluorophenol (Surr)	1000.000	1006.681	-0.7	61	0.00
5	S	Phenol-d6(Surr)	1000.000	964.464	3.6	60	0.00
6	T	Phenol	1000.000	1032.363	-3.2	65	0.00
7	T	Aniline	1000.000	902.109	9.8	59	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	966.723	3.3	61	0.00
9	T	2-Chlorophenol	1000.000	1041.933	-4.2	64	0.00
10	T	1,3-Dichlorobenzene	1000.000	1000.710	-0.1	64	-0.02
11	T	1,4-Dichlorobenzene	1000.000	1006.995	-0.7	64	-0.01
12	T	Benzyl alcohol	1000.000	909.663	9.0	57	0.00
13	T	1,2-Dichlorobenzene	1000.000	1015.706	-1.6	65	-0.01
14	T	2-Methylphenol	1000.000	997.986	0.2	62	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	944.335	5.6	59	-0.01
16	T	N-Nitrosodi-n-propylamine	1000.000	944.564	5.5	59	0.00
17	T	3+4-Methylphenol	1000.000	987.698	1.2	61	0.00
18	T	Hexachloroethane	1000.000	985.808	1.4	62	-0.01
19	S	Nitrobenzene-d5 (Surr)	1000.000	1049.489	-4.9	67	0.00
20	T	Nitrobenzene	1000.000	985.771	1.4	60	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	64	0.00
22	T	Isophorone	1000.000	965.288	3.5	59	0.00
23	T	2-Nitrophenol	1000.000	1204.909	-20.5#	75	0.00
24	T	2,4-Dimethylphenol	1000.000	981.734	1.8	61	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	966.149	3.4	61	0.00
26	T	Benzoic acid	2000.000	2134.682	-6.7	74	0.01
27	T	2,4-Dichlorophenol	1000.000	1075.987	-7.6	67	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1073.967	-7.4	69	0.00
29	T	Naphthalene	1000.000	998.621	0.1	64	0.00
30	T	4-Chloroaniline	1000.000	883.068	11.7	58	0.00
31	T	Hexachlorobutadiene	1000.000	1127.300	-12.7	70	0.00
32	T	4-Chloro-3-methylphenol	1000.000	993.806	0.6	64	0.00
33	T	2-Methylnaphthalene	1000.000	1032.690	-3.3	66	-0.01
34	T	1-Methylnaphthalene	1000.000	1024.188	-2.4	65	-0.01
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	67	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1244.329	-24.4#	77	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1133.948	-13.4	73	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1116.196	-11.6	73	0.01
39	T	1,1'-Biphenyl	1000.000	1022.400	-2.2	67	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1045.979	-4.6	69	0.00
41	T	2-Chloronaphthalene	1000.000	1022.211	-2.2	69	0.00
42	T	2-Nitroaniline	1000.000	1078.113	-7.8	75	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1040.296	-4.0	67	0.00
44	T	1,4-Dinitrobenzene	1000.000	1327.716	-32.8#	99	0.00
45	T	Dimethyl phthalate	1000.000	1132.386	-13.2	74	0.00
46	T	1,3-Dinitrobenzene	1000.000	1225.876	-22.6#	88	0.00
47	T	2,6-Dinitrotoluene	1000.000	1193.323	-19.3	80	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:06:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
48	T	1,2-Dinitrobenzene	1000.000	1248.713	-24.9#	86	0.00
49	T	Acenaphthylene	1000.000	1055.414	-5.5	68	0.00
50	T	3-Nitroaniline	1000.000	1084.747	-8.5	76	0.00
51	T	Acenaphthene	1000.000	1025.262	-2.5	68	0.00
52	T	2,4-Dinitrophenol	1000.000	1549.116	-54.9#	151	0.00
53	T	4-Nitrophenol	1000.000	928.448	7.2	67	0.03
54	T	2,4-Dinitrotoluene	1000.000	1260.117	-26.0#	91	0.00
55	T	Dibenzofuran	1000.000	1067.353	-6.7	72	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1294.278	-29.4#	89	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1216.843	-21.7#	83	0.00
58	T	Diethyl phthalate	1000.000	1177.675	-17.8	76	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1119.509	-12.0	73	0.00
60	T	Fluorene	1000.000	1121.742	-12.2	74	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1150.762	-15.1	79	0.00
62	T	4-Nitroaniline	1000.000	1071.677	-7.2	80	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1602.886	-60.3#	142	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	80	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1058.688	-5.9	80	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	927.540	7.2	68	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1288.874	-28.9#	96	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1078.838	-7.9	85	0.00
69	T	Hexachlorobenzene	1000.000	1102.079	-10.2	87	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1089.322	-8.9	88	0.00
71	T	Phenanthrene	1000.000	1046.066	-4.6	82	0.00
72	T	Anthracene	1000.000	1031.395	-3.1	81	0.00
73	T	Carbazole	1000.000	1010.654	-1.1	82	0.00
74	T	Di-n-butyl phthalate	1000.000	968.342	3.2	79	0.00
75	T	Fluoranthene	1000.000	1087.605	-8.8	87	0.00
76	T	Benzidine	2000.000	2909.666	-45.5#	141	0.00
77	T	Pyrene	1000.000	1103.619	-10.4	88	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	94	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1034.974	-3.5	94	0.00
80	T	Butyl benzyl phthalate	1000.000	886.916	11.3	81	-0.02
81	T	Bis(2-ethylhexyl) adipate	1000.000	1224.420	-22.4#	120	-0.02
82	T	3,3-Dichlorobenzidine	2000.000	2018.054	-0.9	96	0.00
83	T	Benz(a)anthracene	1000.000	986.662	1.3	95	0.00
84	T	Chrysene	1000.000	1032.088	-3.2	96	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	874.703	12.5	84	-0.02
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	92	-0.01
87	T	Di-n-octyl phthalate	1000.000	896.284	10.4	80	-0.03
88	T	Benzo(b)fluoranthene	1000.000	1123.366	-12.3	100	0.00
89	T	Benzo(k)fluoranthene	1000.000	1156.139	-15.6	99	-0.01
90	T	Benzo(b+k)fluoranthene	2000.000	2216.517	-10.8	99	-0.01
91	T	Benzo(e)pyrene	1000.000	1105.388	-10.5	99	0.00
92	T	Benzo(a)pyrene	1000.000	1153.543	-15.4	100	0.00
93	T	Perylene	1000.000	1124.563	-12.5	101	-0.01

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:06:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	97	-0.01
95	T	Indeno(1,2,3-cd)pyrene	1000.000	975.153	2.5	97	0.00
96	T	Dibenz(a,h)anthracene	1000.000	1071.536	-7.2	105	-0.01
97	T	Benzo(g,h,i)perylene	1000.000	981.890	1.8	91	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JRM 04/24/19

Quant Time: Apr 24 09:04:31 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.858	152	180966	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.110	136	697420	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	330094	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.405	188	669189	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	663777	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	577187	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	488530	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.655	112	113573	1006.68	ng/ml	0.00
5) Phenol-d6(Surr)	6.500	99	145545	964.46	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.393	82	142001	1049.49	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	256779	1045.98	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	31940	1288.87	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	320981	1034.97	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.419	74	77698	909.86	ng/ml	87
3) Pyridine	4.457	79	125656	908.57	ng/ml	95
6) Phenol	6.516	94	163243	1032.36	ng/ml	93
7) Aniline	6.548	93	185886	902.11	ng/ml	96
8) Bis(2-chloroethyl) ether	6.596	93	124943	966.72	ng/ml	96
9) 2-Chlorophenol	6.666	128	123374	1041.93	ng/ml	95
10) 1,3-Dichlorobenzene	6.805	146	135452	1000.71	ng/ml	96
11) 1,4-Dichlorobenzene	6.874	146	137718	1007.00	ng/ml	97
12) Benzyl alcohol	6.987	108	68219	909.66	ng/ml	94
13) 1,2-Dichlorobenzene	7.024	146	131579	1015.71	ng/ml	96
14) 2-Methylphenol	7.088	107	98277	997.99	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.110	45	193543	944.33	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.238	70	91506	944.56	ng/ml	93
17) 3+4-Methylphenol	7.238	107	122859	987.70	ng/ml	94
18) Hexachloroethane	7.356	117	49770	985.81	ng/ml	83
20) Nitrobenzene	7.414	77	128819	985.77	ng/ml	91
22) Isophorone	7.639	82	229753	965.29	ng/ml	95
23) 2-Nitrophenol	7.730	139	63190	1204.91	ng/ml	85
24) 2,4-Dimethylphenol	7.757	122	102457	981.73	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.842	93	144686	966.15	ng/ml	99
26) Benzoic acid	7.842	105	72615	2134.68	ng/ml	94
27) 2,4-Dichlorophenol	7.971	162	87015	1075.99	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.051	180	104049	1073.97	ng/ml	98
29) Naphthalene	8.131	128	371533	998.62	ng/ml	99
30) 4-Chloroaniline	8.179	127	113148	883.07	ng/ml	96
31) Hexachlorobutadiene	8.254	225	53345	1127.30	ng/ml	97
32) 4-Chloro-3-methylphenol	8.655	107	88032	993.81	ng/ml	98
33) 2-Methylnaphthalene	8.821	142	241673	1032.69	ng/ml	96
34) 1-Methylnaphthalene	8.923	142	229530	1024.19	ng/ml	96
36) Hexachlorocyclopentadiene	8.987	237	52689	1244.33	ng/ml	97
37) 2,4,6-Trichlorophenol	9.110	196	56424	1133.95	ng/ml	98
38) 2,4,5-Trichlorophenol	9.153	196	57935	1116.20	ng/ml	98
39) 1,1'-Biphenyl	9.292	154	288724	1022.40	ng/ml	97
41) 2-Chloronaphthalene	9.319	162	208414	1022.21	ng/ml	97
42) 2-Nitroaniline	9.420	138	67295	1078.11	ng/ml	81

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:04:31 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

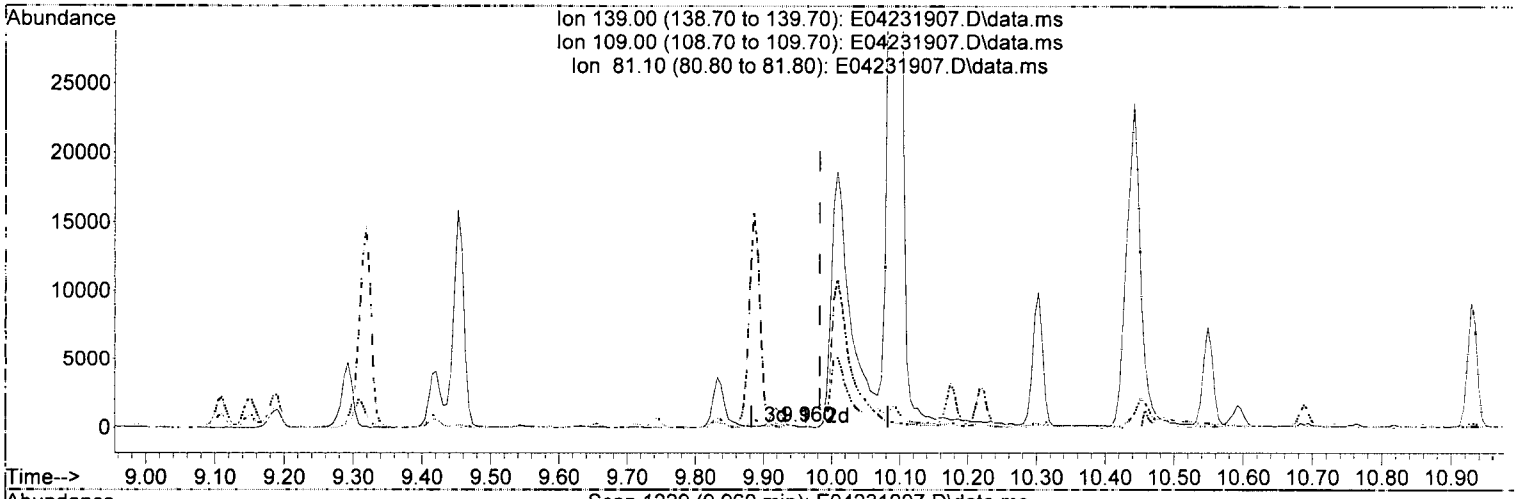
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	205247	1040.30	ng/ml	95
44) 1,4-Dinitrobenzene	9.543	168	32565	1327.72	ng/ml	88
45) Dimethyl phthalate	9.591	163	239900	1132.39	ng/ml	100
46) 1,3-Dinitrobenzene	9.629	168	38208	1225.88	ng/ml	87
47) 2,6-Dinitrotoluene	9.656	165	55594	1193.32	ng/ml	77
48) 1,2-Dinitrobenzene	9.714	168	26245	1248.71	ng/ml#	67
49) Acenaphthylene	9.741	152	339350	1055.41	ng/ml	100
50) 3-Nitroaniline	9.832	138	58049	1084.75	ng/ml	95
51) Acenaphthene	9.918	153	223526	1025.26	ng/ml	100
52) 2,4-Dinitrophenol	9.939	184	21534	1549.12	ng/ml	80
53) 4-Nitrophenol	~~9.960~~	~~139~~	~~12~~	~~674.34~~	~~ng/ml#~~	~~37~~ MI
54) 2,4-Dinitrotoluene	10.067	165	75866	1260.12	ng/ml	87
55) Dibenzofuran	10.094	168	302525	1067.35	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.174	232	50475	1294.28	ng/ml	92
57) 2,3,4,6-Tetrachlorophenol	10.222	232	53407	1216.84	ng/ml	89
58) Diethyl phthalate	10.303	149	249344	1177.68	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.303	170	196886	1119.51	ng/ml	96
60) Fluorene	10.442	166	254576	1121.74	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.431	204	115637	1150.76	ng/ml	88
62) 4-Nitroaniline	10.458	138	64193	1071.68	ng/ml	74
63) 4,6-Dinitro-2-methylph...	10.485	198	36349	1602.89	ng/ml	84
65) N-Nitrosodiphenylamine	10.549	169	223812	1058.69	ng/ml	97
66) Azobenzene (1,2-DPH)	10.592	77	267914	927.54	ng/ml	95
68) 4-Bromophenyl phenyl e...	10.934	248	66791	1078.84	ng/ml	86
69) Hexachlorobenzene	11.014	284	68636	1102.08	ng/ml	95
70) Pentachlorophenol (PCP)	11.212	266	33665	1089.32	ng/ml	96
71) Phenanthrene	11.426	178	384214	1046.07	ng/ml	98
72) Anthracene	11.479	178	388684	1031.40	ng/ml	99
73) Carbazole	11.634	167	356613	1010.65	ng/ml	98
74) Di-n-butyl phthalate	11.971	149	427526	968.34	ng/ml	98
75) Fluoranthene	12.747	202	414361	1087.60	ng/ml	98
76) Benzidine	12.913	184	382895	2909.67	ng/ml	100
77) Pyrene	13.063	202	427118	1103.62	ng/ml	99
80) Butyl benzyl phthalate	14.148	149	172198	886.92	ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.325	129	236562	1224.42	ng/ml	99
82) 3,3-Dichlorobenzidine	15.352	252	221987	2018.05	ng/ml	99
83) Benz(a)anthracene	15.389	228	369419	986.66	ng/ml	98
84) Chrysene	15.475	228	368125	1032.09	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	242698	874.70	ng/ml	96
87) Di-n-octyl phthalate	17.213	149	337605	896.28	ng/ml	98
88) Benzo(b)fluoranthene	18.021	252	342561	1123.37	ng/ml	98
89) Benzo(k)fluoranthene	18.085	252	346479	1156.14	ng/ml	99
90) Benzo(b+k)fluoranthene	18.085	252	709836	2216.52	ng/ml	99
91) Benzo(e)pyrene	18.679	252	342229	1105.39	ng/ml	98
92) Benzo(a)pyrene	18.802	252	319385	1153.54	ng/ml	99
93) Perylene	19.005	252	355866	1124.56	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.353	276	261118	975.15	ng/ml	97
96) Dibenz(a,h)anthracene	21.406	278	262763	1071.54	ng/ml	97
97) Benzo(g,h,i)perylene	21.893	276	258849	981.89	ng/ml	79

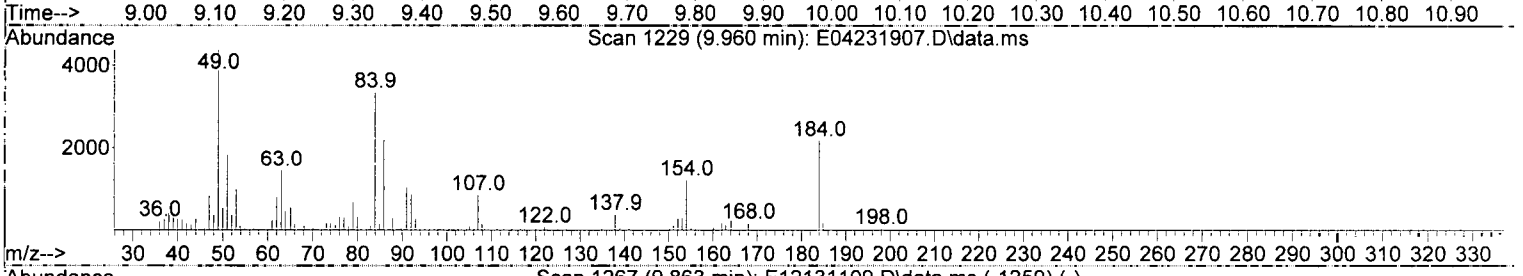
(#) = qualifier out of range (m) = manual integration (+) = signals summed

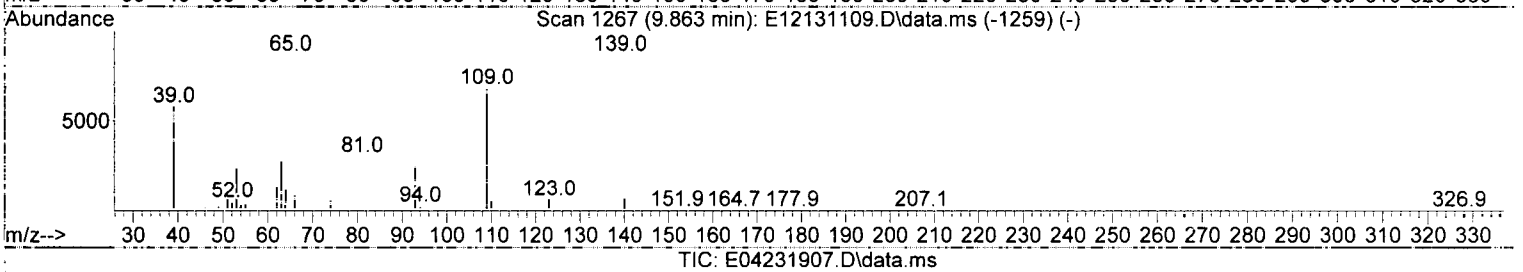
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:04:31 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04231907.D\data.ms

(53) 4-Nitrophenol (T)

9.960min (-0.021) 67.34 ng/ml

response 72

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	74.20	0.00#
81.10	37.00	44.44
0.00	0.00	0.00

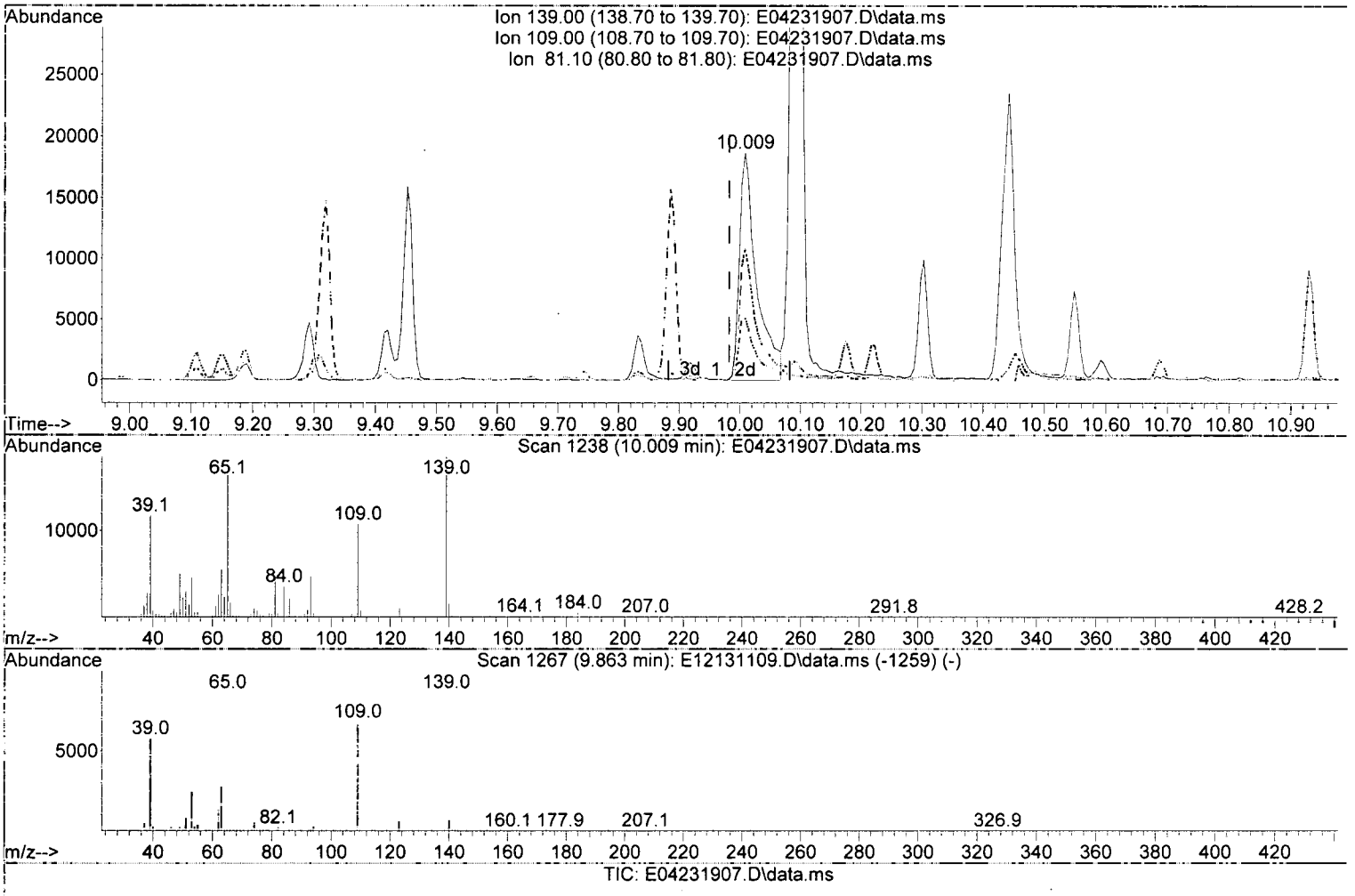
JLM 04/24/19

J

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:04:31 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04231907.D\data.ms

(53) 4-Nitrophenol (T)

10.009min (+ 0.027) 928.45 ng/ml (m) JAM 04/24/19

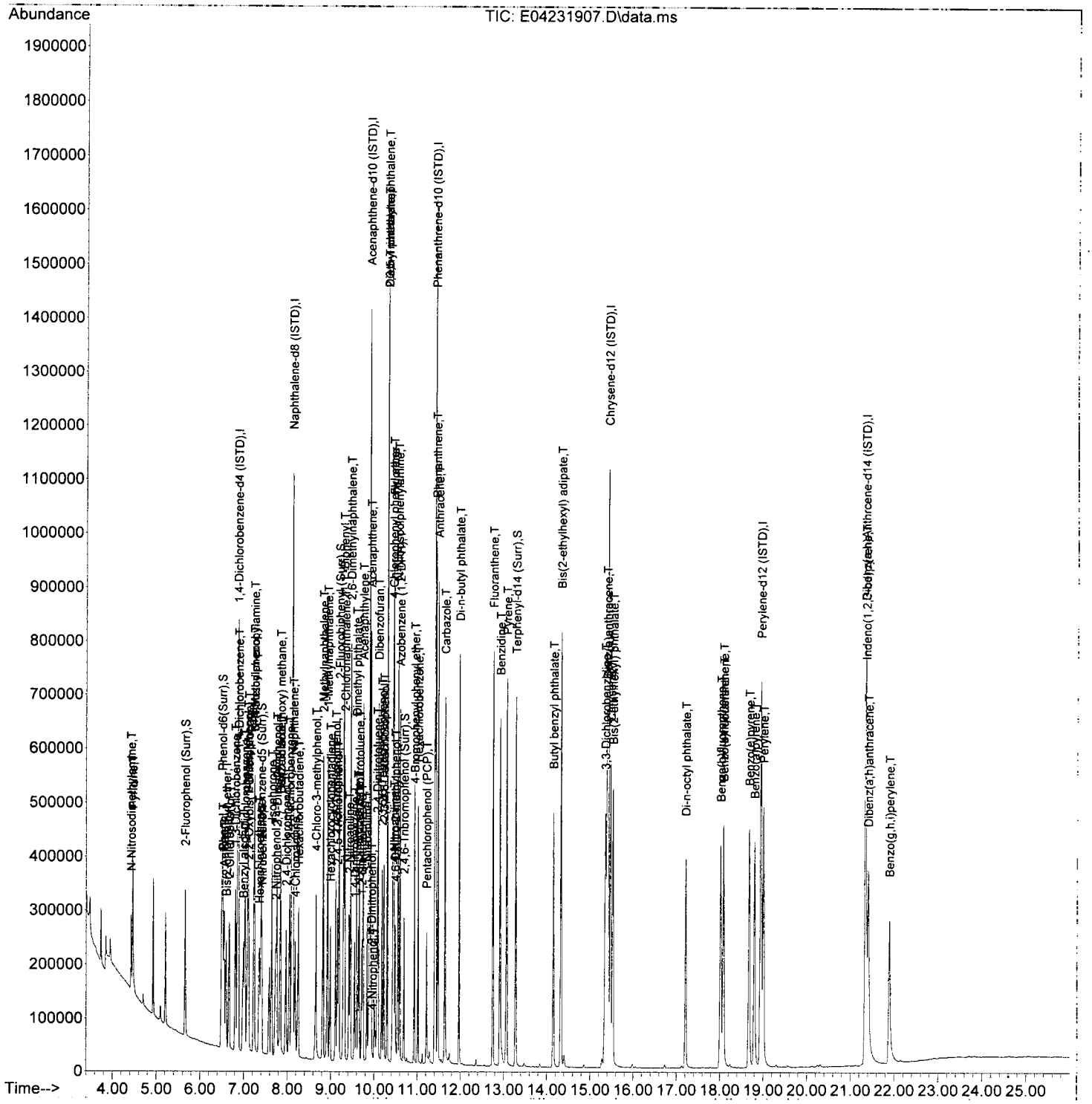
response 36714

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	74.20	57.90
81.10	37.00	27.53
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231907.D
Acq On : 23 Apr 2019 11:47 am
Operator : JK/ AMS /DTH
Sample : 9D23025-CCV2
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:04:31 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231908.D
Acq On : 23 Apr 2019 12:24 pm
Operator : JK/ AMS /DTH
Sample : 9D23025-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JRM 04/24/19

Quant Time: Apr 24 09:09:44 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.864	152	192229	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	744007	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.886	162	339162	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.405	188	622417	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	540647	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	461915	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	364736	2000.00 ng/ml	-0.01
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)	7.382	82	126	0.88 ng/ml	-0.02
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	0.000		0	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	0.000		0	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.206	70	59	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.623	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	8.137	128	151	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.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231908.D
Acq On : 23 Apr 2019 12:24 pm
Operator : JK/ AMS /DTH
Sample : 9D23025-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:44 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

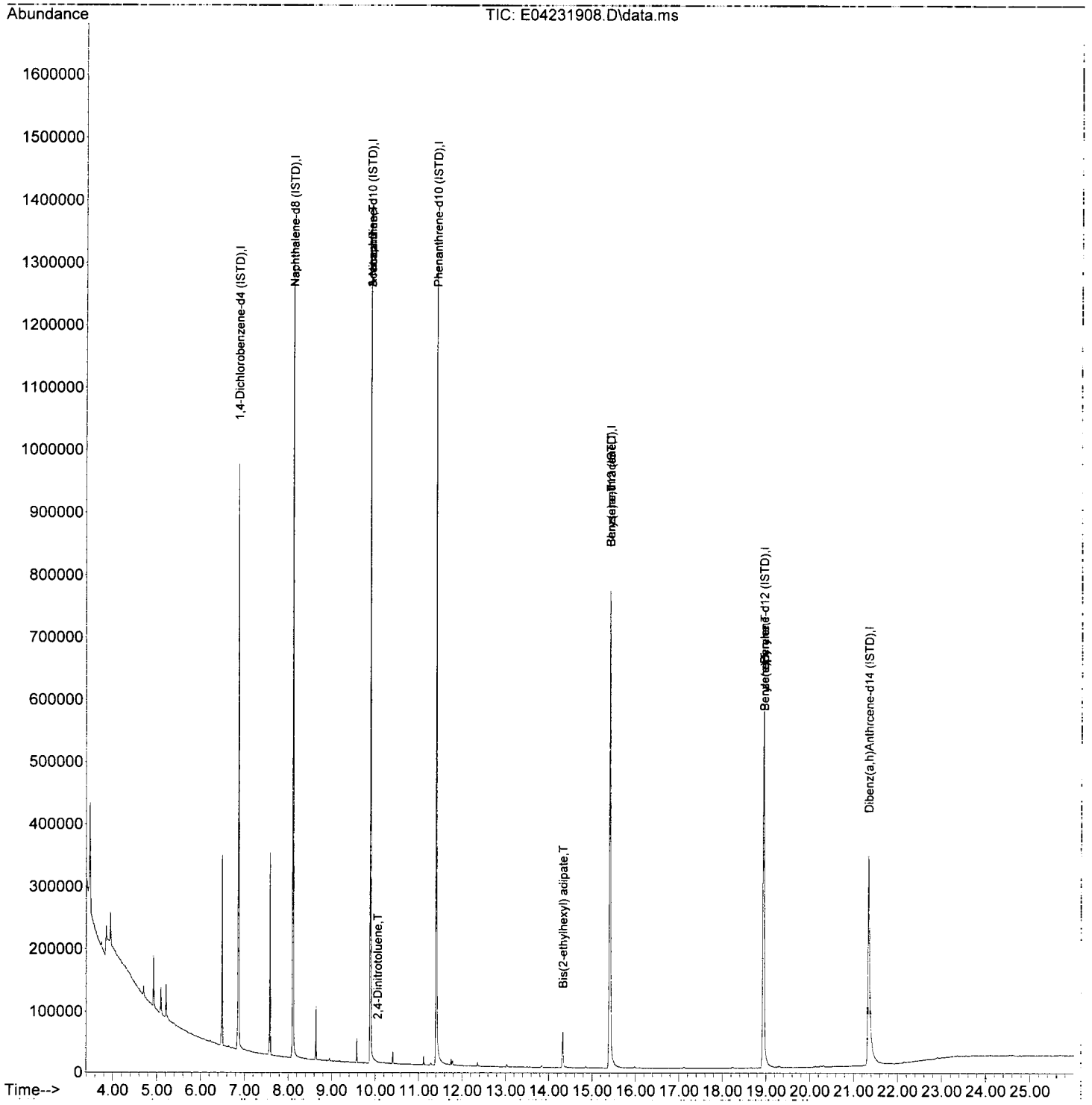
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	9.891	138	56	30.15 ng/ml#	1
51) Acenaphthene	9.896	153	63	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.051	165	144	63.32 ng/ml#	15
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.399	178	213	N.D.	
72) Anthracene	11.399	178	213	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.988	149	55	N.D.	
75) Fluoranthene	0.000		0	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.325	129	16454	104.56 ng/ml	99
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.411	228	1331	4.36 ng/ml	78
84) Chrysene	15.411	228	1303	4.49 ng/ml	76
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	18.951	252	1503	6.07 ng/ml#	7
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.951	252	1503	5.93 ng/ml	71
95) Indeno(1,2,3-cd)pyrene	0.000		0	N.D.	
96) Dibenz(a,h)anthracene	21.348	278	77	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 : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231908.D
Acq On : 23 Apr 2019 12:24 pm
Operator : JK/ AMS /DTH
Sample : 9D23025-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:44 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

B

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231909.D
Acq On : 23 Apr 2019 1:02 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BLK1
Misc : 1x, 8270D LL PAH/PHTH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JEHL 04/24/19

Quant Time: Apr 24 09:09:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	160974	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	658528	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	332490	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	649763	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	645737	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	516462	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	468382	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.660	112	202350	2016.33 ng/ml	0.01
5) Phenol-d6(Surr)	6.505	99	165977	1236.45 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	459467	3817.53 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	904610	3658.34 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	105003	3782.75 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.282	244	1269579	4208.01 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.425	74	74	N.D.	
3) Pyridine	4.462	79	134	N.D.	
6) Phenol	6.516	94	2088	14.84 ng/ml#	1
7) Aniline	6.527	93	52	N.D.	
8) Bis(2-chloroethyl) ether	6.596	93	1254	10.91 ng/ml#	44
9) 2-Chlorophenol	6.671	128	175	N.D.	
10) 1,3-Dichlorobenzene	6.880	146	307	2.55 ng/ml#	1
11) 1,4-Dichlorobenzene	6.880	146	344	2.83 ng/ml#	1
12) Benzyl alcohol	6.997	108	1120	16.79 ng/ml#	71
13) 1,2-Dichlorobenzene	7.035	146	218	N.D.	
14) 2-Methylphenol	7.083	107	204	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.120	45	164	N.D.	
16) N-Nitrosodi-n-propylamine	7.259	70	1513	17.56 ng/ml	68
17) 3+4-Methylphenol	7.233	107	161	N.D.	
18) Hexachloroethane	7.372	117	2020	44.98 ng/ml#	18
20) Nitrobenzene	7.398	77	1712	14.73 ng/ml#	53
22) Isophorone	7.639	82	3703	16.48 ng/ml#	1
23) 2-Nitrophenol	7.730	139	398	32.36 ng/ml#	1
24) 2,4-Dimethylphenol	7.778	122	607	6.16 ng/ml#	69
25) Bis(2-chloroethoxy) me...	7.848	93	109	N.D.	
26) Benzoic acid	7.826	105	3737	507.36 ng/ml#	33
27) 2,4-Dichlorophenol	7.949	162	128	N.D.	
28) 1,2,4-Trichlorobenzene	8.040	180	52	N.D.	
29) Naphthalene	8.131	128	19682	56.03 ng/ml	99
30) 4-Chloroaniline	8.217	127	238	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.623	107	147	28.33 ng/ml#	1
33) 2-Methylnaphthalene	8.826	142	3572	16.16 ng/ml	93
34) 1-Methylnaphthalene	8.928	142	1615	7.63 ng/ml	87
36) Hexachlorocyclopentadiene	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	9.115	196	66	12.42 ng/ml#	79
38) 2,4,5-Trichlorophenol	9.115	196	66	12.59 ng/ml#	78
39) 1,1'-Biphenyl	9.292	154	1849	6.50 ng/ml	89
41) 2-Chloronaphthalene	9.313	162	111	N.D.	
42) 2-Nitroaniline	9.468	138	59	55.05 ng/ml#	26

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B

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231909.D
Acq On : 23 Apr 2019 1:02 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BLK1
Misc : 1x, 8270D LL PAH/PHTH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

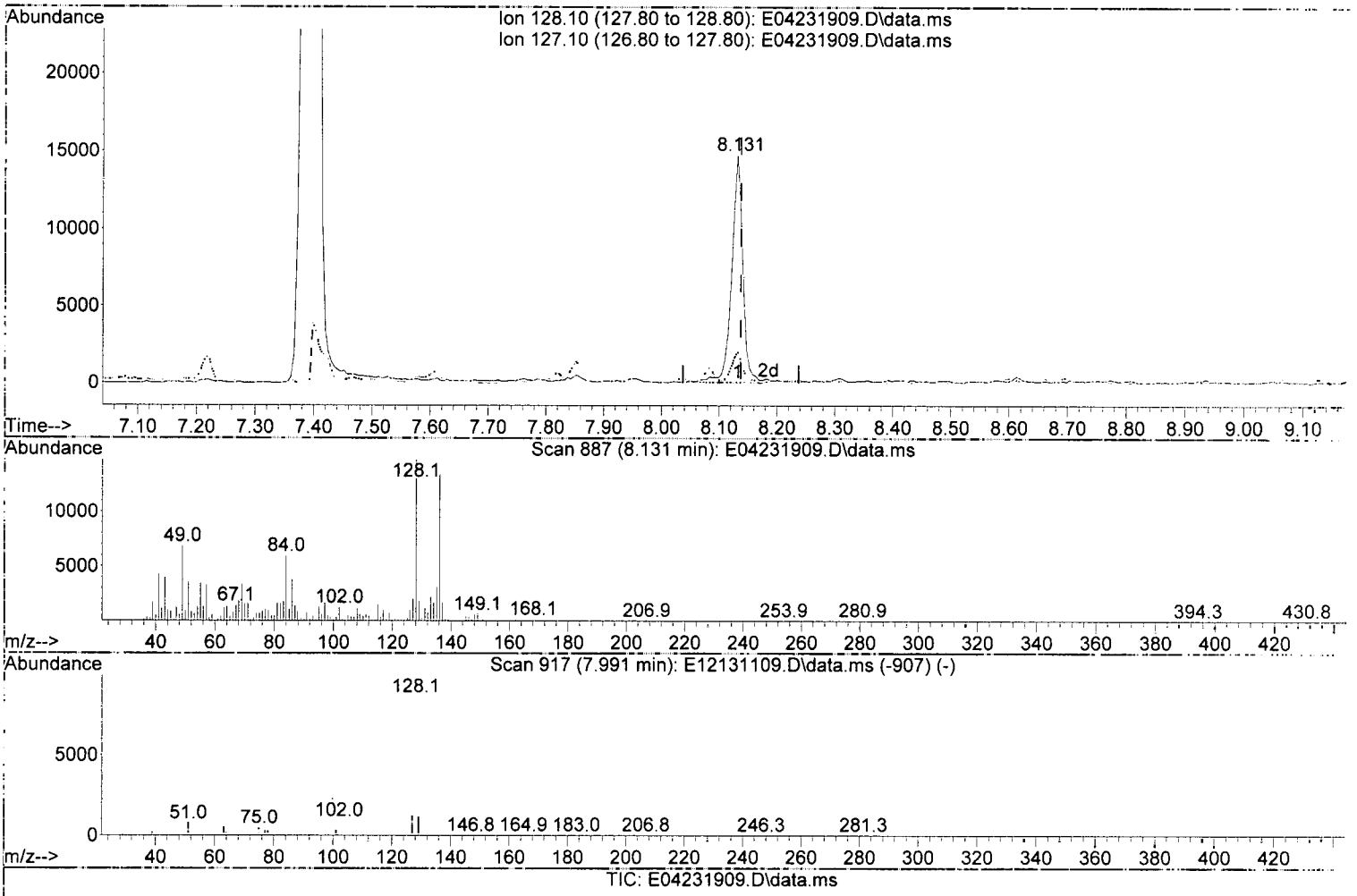
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.463	156	378	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	9.591	163	111	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	9.639	165	100	33.87 ng/ml#	63
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.746	152	219	N.D.	
50) 3-Nitroaniline	9.880	138	146	31.85 ng/ml#	1
51) Acenaphthene	9.918	153	775	3.53 ng/ml#	70
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	10.019	139	56	66.94 ng/ml#	1
54) 2,4-Dinitrotoluene	10.046	165	85	62.41 ng/ml#	63
55) Dibenzofuran	10.099	168	258	N.D.	
56) 2,3,5,6-Tetrachlorophenol	10.228	232	59	37.46 ng/ml#	31
57) 2,3,4,6-Tetrachlorophenol	10.228	232	59	24.72 ng/ml#	49
58) Diethyl phthalate	10.303	149	817	3.83 ng/ml	80
59) 2,3,5-Trimethylnaphtha...	10.308	170	94	N.D.	
60) Fluorene	10.447	166	241	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	10.554	169	125	N.D.	
66) Azobenzene (1,2-DPH)	10.613	77	406	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.228	266	281	79.25 ng/ml#	77
71) Phenanthrene	11.426	178	1139	3.19 ng/ml	94
72) Anthracene	11.479	178	110	N.D.	
73) Carbazole	11.650	167	109	N.D.	
74) Di-n-butyl phthalate	11.971	149	5816	13.57 ng/ml	98
75) Fluoranthene	12.758	202	253	N.D.	
76) Benzidine	12.940	184	90	39.36 ng/ml#	1
77) Pyrene	13.073	202	177	N.D.	
80) Butyl benzyl phthalate	14.148	149	8766	46.41 ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.325	129	35012	186.28 ng/ml	97
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.411	228	1582	4.34 ng/ml	60
84) Chrysene	15.411	228	1573	4.53 ng/ml	58
85) Bis(2-ethylhexyl) phth...	15.528	149	18701	69.28 ng/ml	96
87) Di-n-octyl phthalate	17.224	149	315	31.60 ng/ml#	1
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	18.946	252	1697	6.13 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.946	252	1697	5.99 ng/ml	61
95) Indeno(1,2,3-cd)pyrene	21.353	276	196	N.D.	
96) Dibenz(a,h)anthracene	21.342	278	82	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231909.D
Acq On : 23 Apr 2019 1:02 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BLK1
Misc : 1x, 8270D LL PAH/PHTH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04231909.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 56.03 ng/ml

response 19682

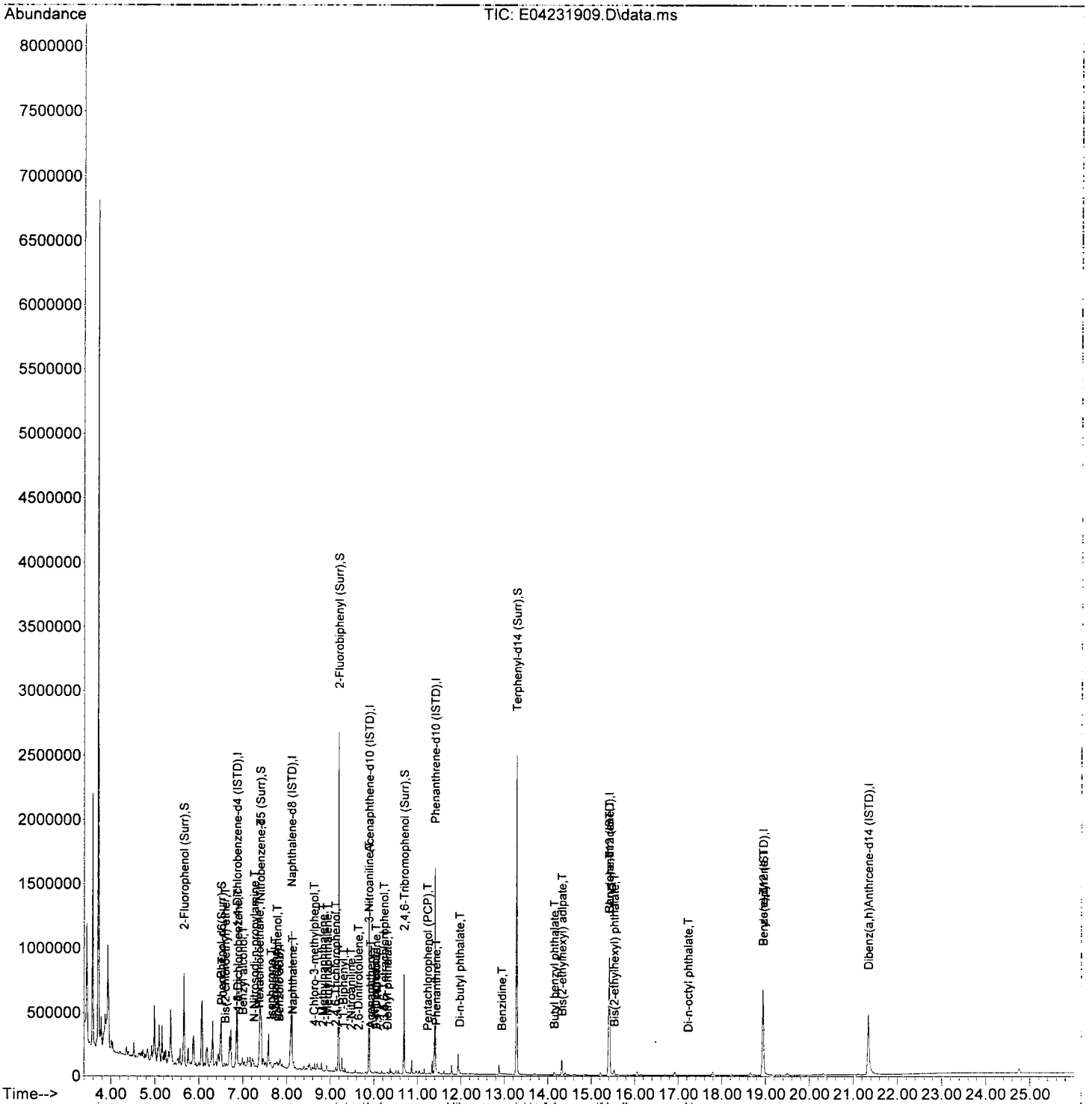
Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	13.84
0.00	0.00	0.00
0.00	0.00	0.00

B JEML 04/29/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231909.D
Acq On : 23 Apr 2019 1:02 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BLK1
Misc : 1x, 8270D LL PAH/PHTH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231910.D
Acq On : 23 Apr 2019 1:39 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BS1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JRM 04/24/19

Quant Time: Apr 24 09:09:52 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	198567	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.115	136	759889	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.891	162	359709	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	668523	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.421	240	607066	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	522290	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.348	292	454685	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.665	112	87729	708.68	ng/ml	0.02
5) Phenol-d6(Surr)	6.505	99	73762	445.46	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	191992	1293.18	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	358504	1340.12	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	56968	2177.89	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	556014	1960.30	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.435	74	36197	386.30	ng/ml	91
3) Pyridine	4.531	79	579	3.82	ng/ml#	1
6) Phenol	6.521	94	70629	407.07	ng/ml	92
7) Aniline	6.553	93	1657	7.33	ng/ml	72
8) Bis(2-chloroethyl) ether	6.601	93	157432	1110.13	ng/ml	96
9) 2-Chlorophenol	6.671	128	147696	1136.78	ng/ml	96
10) 1,3-Dichlorobenzene	6.815	146	99762	671.70	ng/ml	98
11) 1,4-Dichlorobenzene	6.885	146	104002	693.06	ng/ml	98
12) Benzyl alcohol	6.992	108	52384	636.60	ng/ml	92
13) 1,2-Dichlorobenzene	7.035	146	102847	723.54	ng/ml	98
14) 2-Methylphenol	7.093	107	107364	993.62	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.115	45	222330	988.64	ng/ml	93
16) N-Nitrosodi-n-propylamine	7.238	70	123040	1157.49	ng/ml	95
17) 3+4-Methylphenol	7.238	107	122494	897.47	ng/ml	92
18) Hexachloroethane	7.361	117	35331	637.78	ng/ml	81
20) Nitrobenzene	7.414	77	164462	1146.97	ng/ml	93
22) Isophorone	7.644	82	319553	1232.20	ng/ml	95
23) 2-Nitrophenol	7.730	139	81861	1417.85	ng/ml	85
24) 2,4-Dimethylphenol	7.762	122	131427	1155.80	ng/ml	94
25) Bis(2-chloroethoxy) me...	7.848	93	196882	1206.61	ng/ml	99
26) Benzoic acid	7.837	105	49128	1534.39	ng/ml	94
27) 2,4-Dichlorophenol	7.971	162	117690	1335.66	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.056	180	88120	834.78	ng/ml	94
29) Naphthalene	8.136	128	372097	917.92	ng/ml	99
30) 4-Chloroaniline	8.185	127	8668	62.09	ng/ml	96
31) Hexachlorobutadiene	8.254	225	39416	764.47	ng/ml	97
32) 4-Chloro-3-methylphenol	8.661	107	135949	1383.61	ng/ml	98
33) 2-Methylnaphthalene	8.826	142	249568	978.76	ng/ml	96
34) 1-Methylnaphthalene	8.928	142	237620	973.12	ng/ml	96
36) Hexachlorocyclopentadiene	8.992	237	47177	1022.43	ng/ml	96
37) 2,4,6-Trichlorophenol	9.110	196	84814	1536.16	ng/ml	98
38) 2,4,5-Trichlorophenol	9.153	196	92044	1597.17	ng/ml	98
39) 1,1'-Biphenyl	9.297	154	1157	3.76	ng/ml	94
41) 2-Chloronaphthalene	9.318	162	232776	1047.70	ng/ml	98
42) 2-Nitroaniline	9.420	138	110247	1568.42	ng/ml	85

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231910.D
Acq On : 23 Apr 2019 1:39 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BS1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:52 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

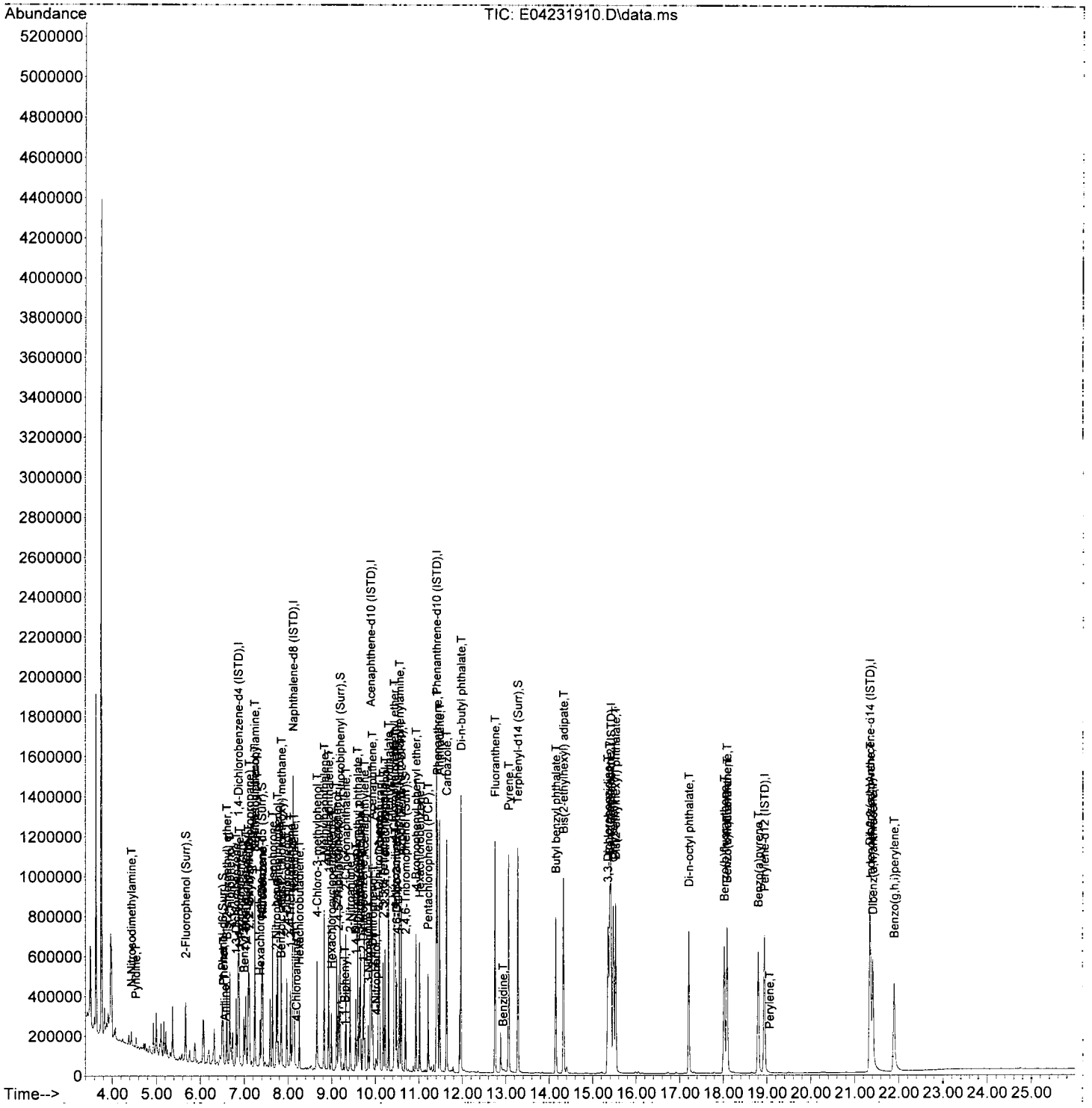
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	212	N.D.		
44) 1,4-Dinitrobenzene	9.548	168	54681	1927.34	ng/ml#	79
45) Dimethyl phthalate	9.591	163	380354	1647.55	ng/ml	99
46) 1,3-Dinitrobenzene	9.629	168	63610	1796.70	ng/ml	88
47) 2,6-Dinitrotoluene	9.655	165	88478	1703.59	ng/ml	83
48) 1,2-Dinitrobenzene	9.720	168	41535	1763.77	ng/ml#	63
49) Acenaphthylene	9.746	152	432533	1234.47	ng/ml	100
50) 3-Nitroaniline	9.837	138	49598	862.62	ng/ml	90
51) Acenaphthene	9.923	153	278493	1172.22	ng/ml	99
52) 2,4-Dinitrophenol	9.939	184	45625	2473.63	ng/ml	79
53) 4-Nitrophenol	10.014	139	22169	552.13	ng/ml	79
54) 2,4-Dinitrotoluene	10.067	165	123638	1827.28	ng/ml	89
55) Dibenzofuran	10.094	168	388310	1257.22	ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.180	232	80706	1830.27	ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	10.222	232	84442	1724.55	ng/ml	90
58) Diethyl phthalate	10.303	149	399716	1732.46	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.313	170	149	N.D.		
60) Fluorene	10.447	166	338041	1366.88	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.431	204	148444	1355.62	ng/ml	89
62) 4-Nitroaniline	10.458	138	102480	1570.01	ng/ml	78
63) 4,6-Dinitro-2-methylph...	10.490	198	73831	2612.36	ng/ml	81
65) N-Nitrosodiphenylamine	10.554	169	323039	1529.58	ng/ml	98
66) Azobenzene (1,2-DPH)	10.597	77	367111	1272.23	ng/ml	92
68) 4-Bromophenyl phenyl e...	10.934	248	89974	1454.75	ng/ml	88
69) Hexachlorobenzene	11.019	284	97227	1562.72	ng/ml	92
70) Pentachlorophenol (PCP)	11.212	266	64946	1950.04	ng/ml	94
71) Phenanthrene	11.426	178	535574	1459.61	ng/ml	99
72) Anthracene	11.479	178	544521	1446.36	ng/ml	99
73) Carbazole	11.640	167	580364	1646.41	ng/ml	98
74) Di-n-butyl phthalate	11.971	149	723247	1639.78	ng/ml	99
75) Fluoranthene	12.752	202	624354	1640.42	ng/ml	99
76) Benzidine	12.934	184	354	42.29	ng/ml#	1
77) Pyrene	13.068	202	642272	1661.20	ng/ml	99
80) Butyl benzyl phthalate	14.154	149	308009	1734.62	ng/ml	89
81) Bis(2-ethylhexyl) adipate	14.330	129	294249	1665.28	ng/ml	99
82) 3,3-Dichlorobenzidine	15.352	252	314400	3050.16	ng/ml	98
83) Benz(a)anthracene	15.394	228	587445	1715.55	ng/ml	98
84) Chrysene	15.480	228	580340	1779.06	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	419384	1652.69	ng/ml	96
87) Di-n-octyl phthalate	17.213	149	628176	1759.54	ng/ml	98
88) Benzo(b)fluoranthene	18.026	252	558548	2024.18	ng/ml	98
89) Benzo(k)fluoranthene	18.090	252	554237	2043.78	ng/ml	98
90) Benzo(b+k)fluoranthene	18.090	252	1145734	3953.68	ng/ml	98
91) Benzo(e)pyrene	18.684	252	71	N.D.		
92) Benzo(a)pyrene	18.807	252	508100	2028.02	ng/ml	99
93) Perylene	19.058	252	1107	3.87	ng/ml	93
95) Indeno(1,2,3-cd)pyrene	21.358	276	437657	1756.10	ng/ml	98
96) Dibenz(a,h)anthracene	21.412	278	425174	1862.90	ng/ml	97
97) Benzo(g,h,i)perylene	21.898	276	431632	1759.18	ng/ml	81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231910.D
Acq On : 23 Apr 2019 1:39 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BS1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:52 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Q19

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231911.D
Acq On : 23 Apr 2019 2:17 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BSD1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JDM 04/24/19

Quant Time: Apr 24 09:09:56 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	194965	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	764717	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.891	162	357423	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	661993	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	654824	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	553174	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.348	292	480306	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.660	112	138360	1138.33	ng/ml	0.01
5) Phenol-d6(Surr)	6.505	99	115857	712.61	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	286037	1962.23	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	509846	1918.04	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	63297	2411.05	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	628432	2054.03	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.419	74	58901	640.22	ng/ml	92
3) Pyridine	4.526	79	509	3.42	ng/ml#	1
6) Phenol	6.516	94	111402	653.93	ng/ml	93
7) Aniline	6.516	93	639	2.88	ng/ml#	1
8) Bis(2-chloroethyl) ether	6.601	93	223493	1605.07	ng/ml	94
9) 2-Chlorophenol	6.671	128	208570	1634.96	ng/ml	95
10) 1,3-Dichlorobenzene	6.810	146	182980	1254.78	ng/ml	97
11) 1,4-Dichlorobenzene	6.880	146	189921	1288.99	ng/ml	99
12) Benzyl alcohol	6.987	108	81001	1002.55	ng/ml	96
13) 1,2-Dichlorobenzene	7.029	146	182609	1308.41	ng/ml	97
14) 2-Methylphenol	7.093	107	154481	1456.09	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.110	45	327523	1483.31	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.238	70	171051	1638.88	ng/ml	95
17) 3+4-Methylphenol	7.238	107	177824	1326.93	ng/ml	93
18) Hexachloroethane	7.356	117	68115	1252.30	ng/ml	83
20) Nitrobenzene	7.414	77	229701	1631.55	ng/ml	91
22) Isophorone	7.644	82	433655	1661.63	ng/ml	94
23) 2-Nitrophenol	7.730	139	114291	1924.84	ng/ml	85
24) 2,4-Dimethylphenol	7.757	122	172565	1507.99	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.848	93	267576	1629.51	ng/ml	99
26) Benzoic acid	7.842	105	76202	2069.38	ng/ml	94
27) 2,4-Dichlorophenol	7.971	162	162720	1835.05	ng/ml	97
28) 1,2,4-Trichlorobenzene	8.051	180	153074	1440.95	ng/ml	95
29) Naphthalene	8.131	128	608692	1492.09	ng/ml	99
30) 4-Chloroaniline	8.185	127	10381	73.89	ng/ml	94
31) Hexachlorobutadiene	8.254	225	74379	1433.47	ng/ml	97
32) 4-Chloro-3-methylphenol	8.655	107	167908	1679.34	ng/ml	99
33) 2-Methylnaphthalene	8.826	142	396176	1543.92	ng/ml	95
34) 1-Methylnaphthalene	8.928	142	371507	1511.82	ng/ml	96
36) Hexachlorocyclopentadiene	8.987	237	87551	1909.55	ng/ml	99
37) 2,4,6-Trichlorophenol	9.110	196	111540	1994.79	ng/ml	98
38) 2,4,5-Trichlorophenol	9.147	196	111830	1929.80	ng/ml	99
39) 1,1'-Biphenyl	9.292	154	2116	6.92	ng/ml	96
41) 2-Chloronaphthalene	9.319	162	352765	1597.92	ng/ml	98
42) 2-Nitroaniline	9.420	138	125715	1779.77	ng/ml	83

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231911.D
Acq On : 23 Apr 2019 2:17 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BSD1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:56 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.463	156	528	N.D.	
44) 1,4-Dinitrobenzene	9.548	168	61348	2137.07 ng/ml#	78
45) Dimethyl phthalate	9.597	163	424734	1851.55 ng/ml	100
46) 1,3-Dinitrobenzene	9.629	168	69195	1949.03 ng/ml	89
47) 2,6-Dinitrotoluene	9.655	165	100427	1929.34 ng/ml	80
48) 1,2-Dinitrobenzene	9.720	168	45304	1921.58 ng/ml#	61
49) Acenaphthylene	9.746	152	601884	1728.79 ng/ml	99
50) 3-Nitroaniline	9.832	138	60839	1051.94 ng/ml	99
51) Acenaphthene	9.923	153	393579	1667.22 ng/ml	99
52) 2,4-Dinitrophenol	9.939	184	51092	2685.39 ng/ml	81
53) 4-Nitrophenol	10.008	139	28884	699.20 ng/ml	83
54) 2,4-Dinitrotoluene	10.073	165	130339	1929.82 ng/ml	81
55) Dibenzofuran	10.094	168	526046	1714.06 ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.180	232	93365	2096.20 ng/ml	88
57) 2,3,4,6-Tetrachlorophenol	10.222	232	95677	1948.29 ng/ml	90
58) Diethyl phthalate	10.303	149	433171	1889.47 ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.313	170	112	N.D.	
60) Fluorene	10.447	166	434550	1768.36 ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.431	204	194052	1783.45 ng/ml	89
62) 4-Nitroaniline	10.458	138	113913	1756.32 ng/ml	78
63) 4,6-Dinitro-2-methylph...	10.490	198	78362	2748.68 ng/ml	81
65) N-Nitrosodiphenylamine	10.554	169	373624	1786.55 ng/ml	97
66) Azobenzene (1,2-DPH)	10.597	77	456664	1598.19 ng/ml	91
68) 4-Bromophenyl phenyl e...	10.934	248	113601	1854.88 ng/ml	88
69) Hexachlorobenzene	11.019	284	117069	1900.20 ng/ml	91
70) Pentachlorophenol (PCP)	11.212	266	71104	2129.34 ng/ml	95
71) Phenanthrene	11.426	178	650678	1790.80 ng/ml	99
72) Anthracene	11.479	178	659071	1767.89 ng/ml	98
73) Carbazole	11.640	167	634823	1818.67 ng/ml	98
74) Di-n-butyl phthalate	11.971	149	785549	1798.60 ng/ml	99
75) Fluoranthene	12.752	202	730659	1938.66 ng/ml	98
76) Benzidine	12.918	184	55	38.95 ng/ml#	1
77) Pyrene	13.068	202	753280	1967.54 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	338778	1768.75 ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.330	129	342832	1798.72 ng/ml	99
82) 3,3-Dichlorobenzidine	15.352	252	363003	3250.49 ng/ml	98
83) Benz(a)anthracene	15.395	228	677061	1833.05 ng/ml	97
84) Chrysene	15.480	228	655261	1862.23 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	474498	1733.51 ng/ml	95
87) Di-n-octyl phthalate	17.213	149	717662	1887.65 ng/ml	98
88) Benzo(b)fluoranthene	18.026	252	612867	2097.03 ng/ml	98
89) Benzo(k)fluoranthene	18.090	252	629668	2192.30 ng/ml	99
90) Benzo(b+k)fluoranthene	18.090	252	1277084	4160.90 ng/ml	99
91) Benzo(e)pyrene	18.663	252	88	N.D.	
92) Benzo(a)pyrene	18.807	252	575120	2167.37 ng/ml	99
93) Perylene	18.941	252	12774	42.12 ng/ml	88
95) Indeno(1,2,3-cd)pyrene	21.358	276	471388	1790.55 ng/ml	99
96) Dibenz(a,h)anthracene	21.412	278	472552	1960.04 ng/ml	98
97) Benzo(g,h,i)perylene	21.898	276	479933	1851.70 ng/ml	80

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

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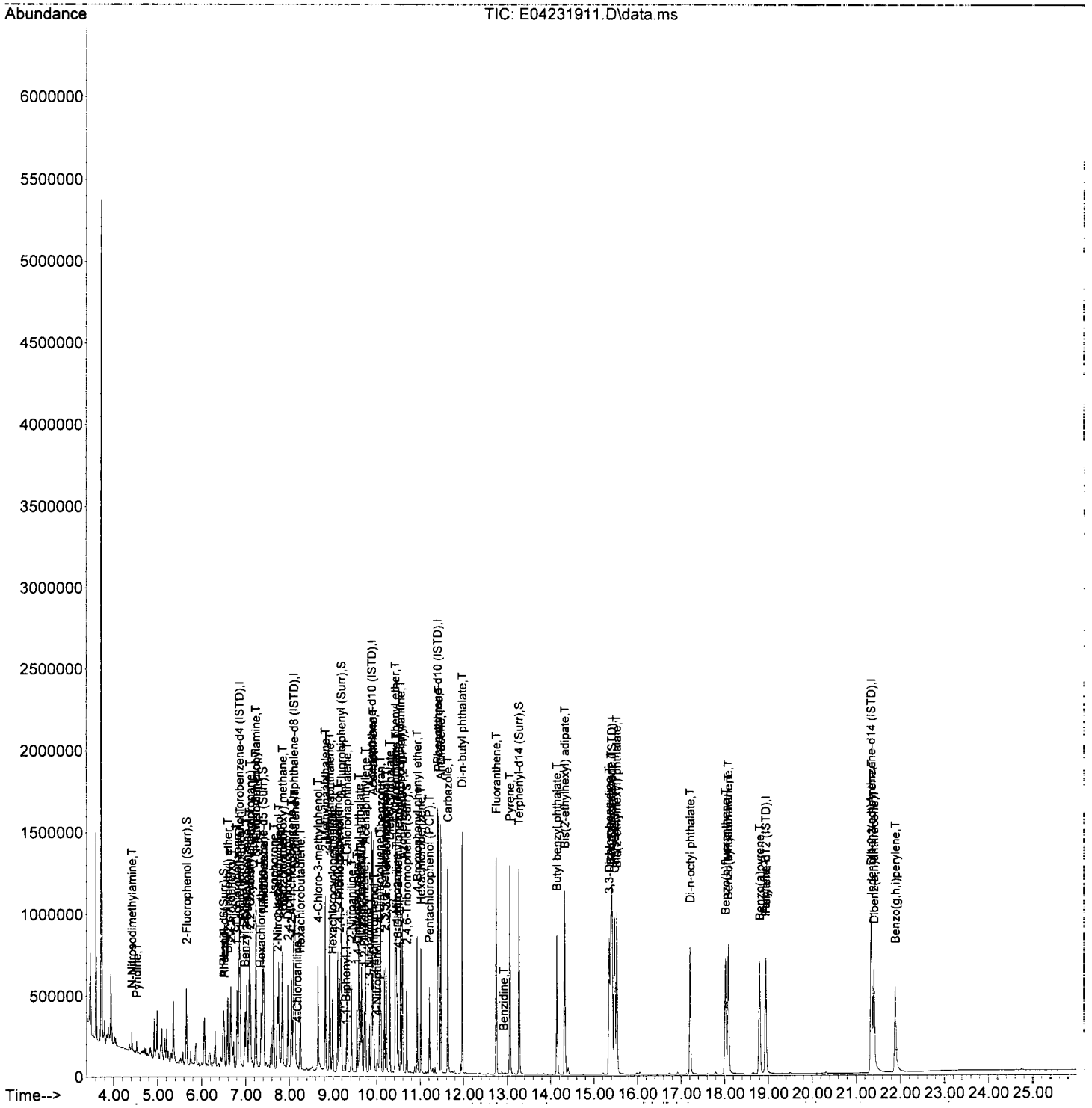
Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231911.D
Acq On : 23 Apr 2019 2:17 pm
Operator : JK/ AMS /DTH
Sample : 9041150-BSD1@2
Misc : 2x, 8270D LL PAH/PHTH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:09:56 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231912.D
Acq On : 23 Apr 2019 2:54 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-01
Misc : 1x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JEM 04/24/19

Quant Time: Apr 24 09:10:00 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	190998	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	762561	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	357424	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	658201	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.410	240	601647	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	480474	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	423963	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.665	112	164428	1380.90 ng/ml	0.02
5) Phenol-d6(Surr)	6.505	99	138354	868.66 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	342715	2399.87 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	592546	2229.15 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	94045	3410.45 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.282	244	1139573	4053.90 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.435	74	215	N.D.	
3) Pyridine	4.462	79	90	N.D.	
6) Phenol	6.521	94	19829	118.81 ng/ml	95
7) Aniline	6.521	93	450	N.D.	
8) Bis(2-chloroethyl) ether	6.596	93	7761	56.90 ng/ml#	26
9) 2-Chlorophenol	6.671	128	181	N.D.	
10) 1,3-Dichlorobenzene	6.810	146	120	N.D.	
11) 1,4-Dichlorobenzene	6.879	146	949	6.57 ng/ml#	46
12) Benzyl alcohol	6.992	108	3873	48.93 ng/ml#	65
13) 1,2-Dichlorobenzene	7.029	146	724	5.30 ng/ml#	1
14) 2-Methylphenol	7.093	107	813	7.82 ng/ml	78
15) 2,2'-Oxybis(1-Chloropr...	7.120	45	148	N.D.	
16) N-Nitrosodi-n-propylamine	7.254	70	1828	17.88 ng/ml	67
17) 3+4-Methylphenol	7.243	107	3126	23.81 ng/ml#	1
18) Hexachloroethane	7.371	117	1971	36.99 ng/ml#	18
20) Nitrobenzene	7.393	77	1767	12.81 ng/ml#	45
22) Isophorone	7.644	82	4374	16.81 ng/ml#	27
23) 2-Nitrophenol	7.735	139	630	35.37 ng/ml#	10
24) 2,4-Dimethylphenol	7.767	122	544	4.77 ng/ml#	65
25) Bis(2-chloroethoxy) me...	7.853	93	775	4.73 ng/ml#	1
26) Benzoic acid	7.826	105	6687	566.33 ng/ml#	64
27) 2,4-Dichlorophenol	7.954	162	64	N.D.	
28) 1,2,4-Trichlorobenzene	8.051	180	57	N.D.	
29) Naphthalene	8.131	128	9774	(24.03) ng/ml	100
30) 4-Chloroaniline	8.136	127	1315	9.39 ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.666	107	4176	69.58 ng/ml#	1
33) 2-Methylnaphthalene	8.826	142	2690	10.51 ng/ml	93
34) 1-Methylnaphthalene	8.928	142	1832	7.48 ng/ml	90
36) Hexachlorocyclopentadiene	0.000		0	N.D.	
37) 2,4,6-Trichlorophenol	9.120	196	176	14.44 ng/ml#	60
38) 2,4,5-Trichlorophenol	9.120	196	176	14.51 ng/ml#	60
39) 1,1'-Biphenyl	9.292	154	1583	5.18 ng/ml	97
41) 2-Chloronaphthalene	9.313	162	308	N.D.	
42) 2-Nitroaniline	9.393	138	68	55.12 ng/ml#	15

J

Raise Due to B

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231912.D
Acq On : 23 Apr 2019 2:54 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-01
Misc : 1x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:10:00 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

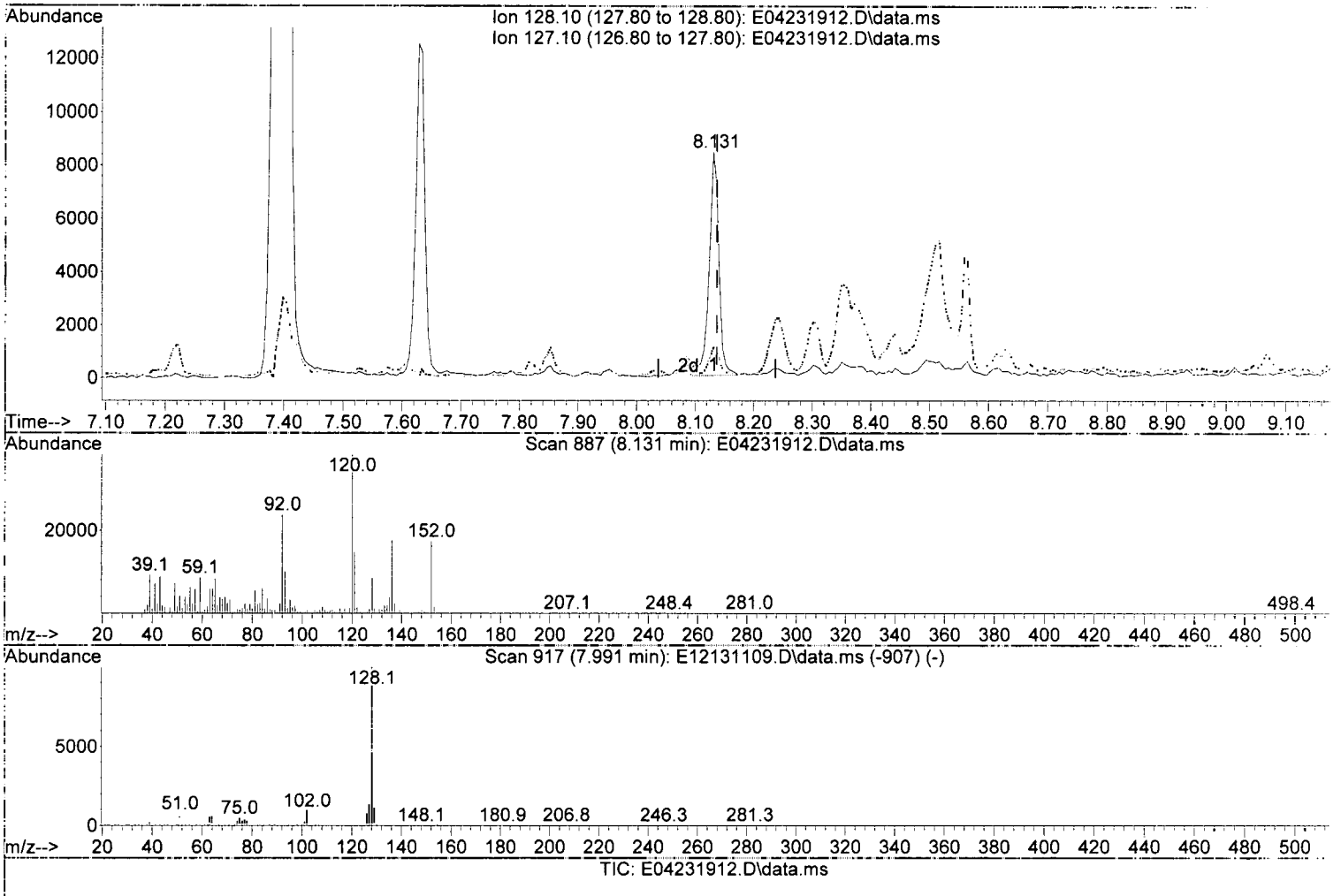
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)	
43) 2,6-Dimethylnaphthalene	9.452	156	652	3.05 ng/ml#	1	
44) 1,4-Dinitrobenzene	9.538	168	172	77.36 ng/ml#	1	
45) Dimethyl phthalate	9.586	163	1489	6.49 ng/ml	84	
46) 1,3-Dinitrobenzene	9.623	168	181	72.45 ng/ml#	1	
47) 2,6-Dinitrotoluene	9.634	165	1736	66.35 ng/ml#	34	
48) 1,2-Dinitrobenzene	9.687	168	111	39.83 ng/ml#	1	
49) Acenaphthylene	9.741	152	416	N.D.		
50) 3-Nitroaniline	9.848	138	76	30.45 ng/ml#	25	
51) Acenaphthene	9.912	153	12149	↑51.46 ng/ml#	22	R02
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.955	139	90	67.61 ng/ml#	1	
54) 2,4-Dinitrotoluene	10.062	165	167	63.55 ng/ml#	65	
55) Dibenzofuran	10.094	168	559	N.D.		
56) 2,3,5,6-Tetrachlorophenol	10.185	232	199	40.81 ng/ml#	1	
57) 2,3,4,6-Tetrachlorophenol	10.228	232	196	27.58 ng/ml#	53	
58) Diethyl phthalate	10.303	149	13141	57.32 ng/ml	96	
59) 2,3,5-Trimethylnaphtha...	10.308	170	248	N.D.		
60) Fluorene	10.442	166	492	N.D.		
61) 4-Chlorophenyl phenyl ...	10.431	204	56	N.D.		
62) 4-Nitroaniline	10.431	138	121	N.D.		
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.554	169	820	3.94 ng/ml#	69	
66) Azobenzene (1,2-DPH)	10.607	77	165210	581.52 ng/ml#	1	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.217	266	284	79.23 ng/ml	99	
71) Phenanthrene	11.426	178	1068	2.96 ng/ml	85	
72) Anthracene	11.474	178	359	N.D.		
73) Carbazole	11.645	167	367	N.D.		
74) Di-n-butyl phthalate	11.966	149	25637	59.04 ng/ml	99	
75) Fluoranthene	12.747	202	375	N.D.		
76) Benzidine	0.000		0	N.D.		
77) Pyrene	13.062	202	356	N.D.		
80) Butyl benzyl phthalate	14.148	149	17259	98.07 ng/ml	89	
81) Bis(2-ethylhexyl) adipate	14.325	129	21557	123.10 ng/ml	98	
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.410	228	1609	4.74 ng/ml	67	
84) Chrysene	15.410	228	1567	4.85 ng/ml	66	
85) Bis(2-ethylhexyl) phth...	15.528	149	10464	41.61 ng/ml	97	
87) Di-n-octyl phthalate	17.192	149	122	31.06 ng/ml#	1	
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	18.946	252	1584	6.15 ng/ml#	1	
92) Benzo(a)pyrene	0.000		0	N.D.		
93) Perylene	18.946	252	1584	6.01 ng/ml	62	
95) Indeno(1,2,3-cd)pyrene	21.331	276	205	N.D.		
96) Dibenz(a,h)anthracene	0.000		0	N.D.		
97) Benzo(g,h,i)perylene	0.000		0	N.D.		

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231912.D
Acq On : 23 Apr 2019 2:54 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-01
Misc : 1x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:10:00 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(29) Naphthalene (T)

8.131min (-0.006) 24.03 ng/ml

J - raised due to B

J

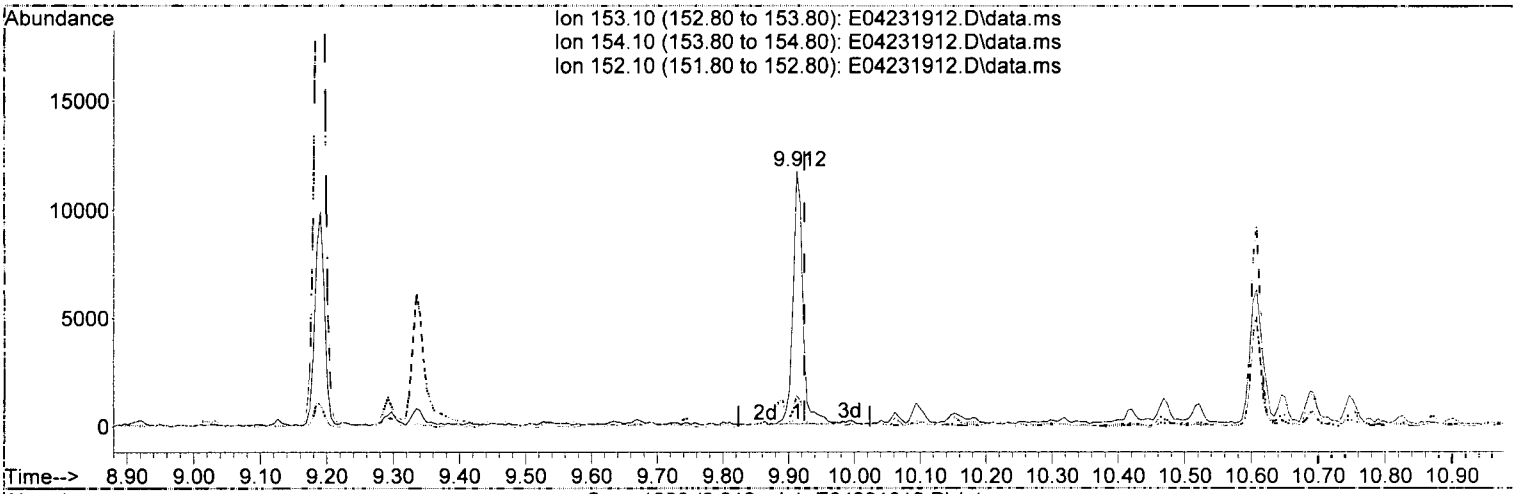
response 9774

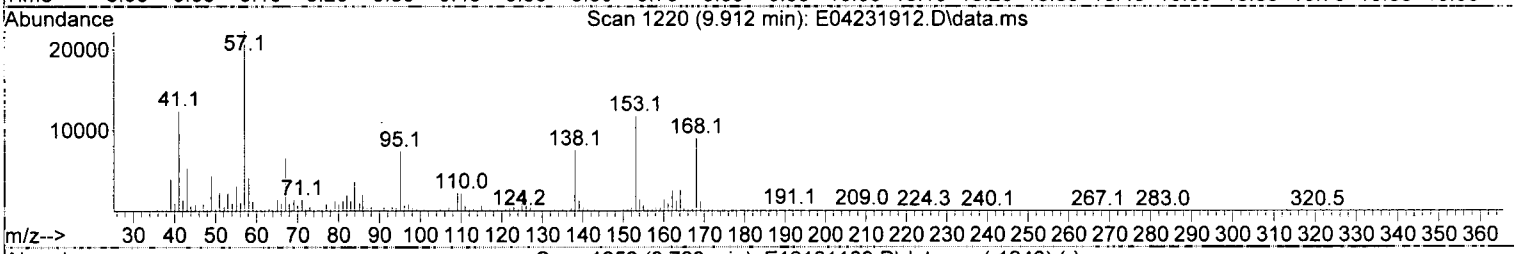
Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	13.44
0.00	0.00	0.00
0.00	0.00	0.00

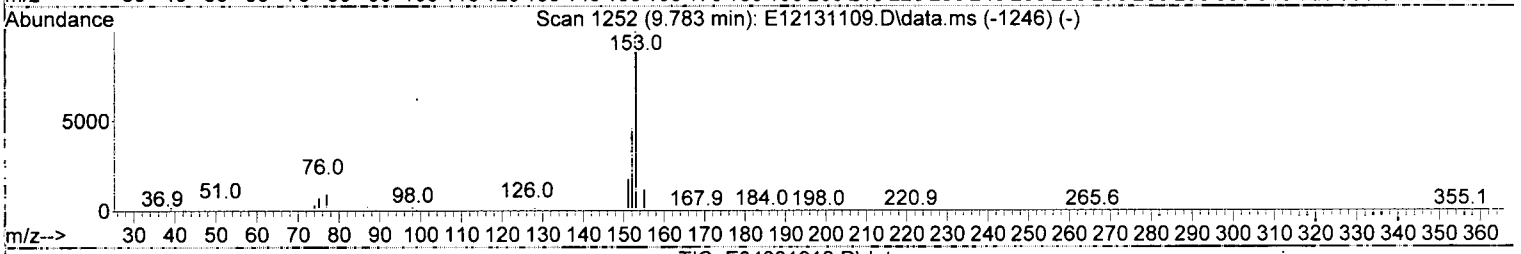
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231912.D
Acq On : 23 Apr 2019 2:54 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-01
Misc : 1x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:10:00 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04231912.D\data.ms

(51) Acenaphthene (T)

9.912min (-0.011) 51.46 ng/ml

response 12149

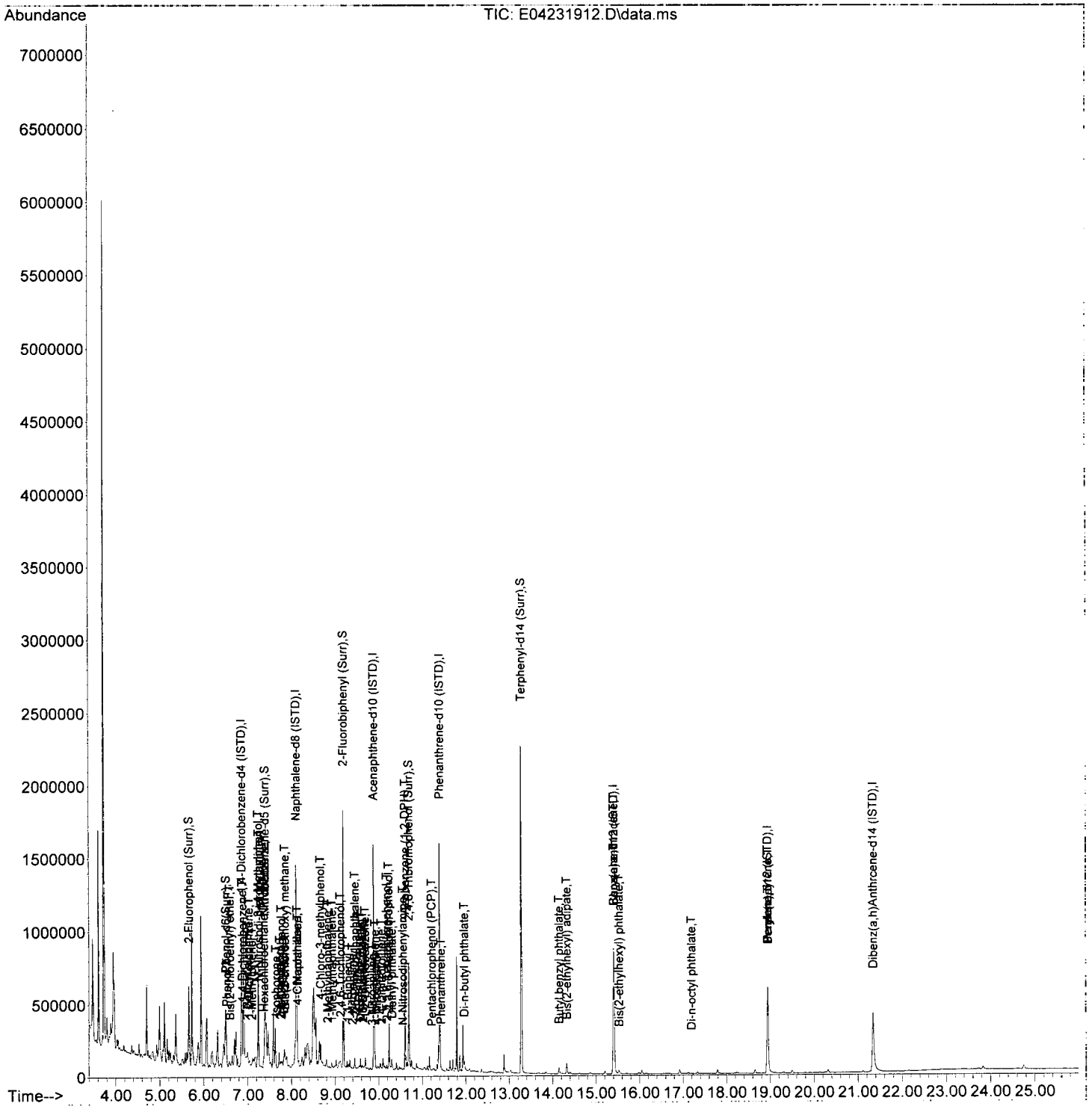
Ion	Exp%	Act%
153.10	100.00	100.00
154.10	92.00	11.99#
152.10	47.10	3.38#
0.00	0.00	0.00

R02

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D23025\
Data File : E04231912.D
Acq On : 23 Apr 2019 2:54 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-01
Misc : 1x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 24 09:10:00 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
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Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Batch 9041271
Sequence 9D25002 (A9D0674-02,03,04,05,06,08,21RE2,24)

APEX LABORATORIES

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JUN 0 3 2019

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
	9041271-BLK1		QC	04/24/19 12:22	16	2				100					
	9041271-BS1		QC	04/24/19 12:22	15	2	A19D163		100	100					
	A9D0674-02	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.72	2				100	T4-PDI2019-SG05-190417	PAHs Only			
	9041271-DUP1		QC	04/24/19 12:22	15.69	2		A9D0674-02		100					
	A9D0674-03	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.35	2				100	T4-PDI2019-SG06-190417	PAHs Only			
	A9D0674-04	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.07	2				100	T4-PDI2019-SG08-190415	PAHs Only			
	A9D0674-05	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.37	2				100	T4-PDI2019-SG11-190415	PAHs Only			
	A9D0674-06	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.09	2				100	T4-PDI2019-SG13-190415	PAHs Only			
	A9D0674-07	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.39	2				100	T4-PDI2019-SG15-190416	PAHs Only			
	A9D0674-07RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.39	2				100	T4-PDI2019-SG15-190416	Added 4/26/2019 By hml			
	A9D0674-08	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.12	2				100	T4-PDI2019-SG16-190416	PAHs Only			
	A9D0674-12	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.26	2				100	T4-PDI2019-SG17-190416	PAHs Only			
	A9D0674-12RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.26	2				100	T4-PDI2019-SG17-190416	Added 4/30/2019 By DTH			
	A9D0674-13	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.17	2				100	FD-201904151441	PAHs Only			
	A9D0674-14	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.5	2				100	T4-PDI2019-SG18-190415	PAHs Only			
	A9D0674-14RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.5	2				100	T4-PDI2019-SG18-190415	Added 4/30/2019 By DTH			
	A9D0674-15	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	T4-PDI2019-SG51-190417	PAHs Only			
	A9D0674-15RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	T4-PDI2019-SG51-190417	Added 4/30/2019 By DTH			
	A9D0674-15RE2	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	T4-PDI2019-SG51-190417	Added 5/1/2019 By ams			

Prepared By: Date

AMS 5/2/19

Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
	A9D0674-16	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.18	2				100	T4-PDI2019-SG52-190417	PAHs Only			
	A9D0674-16RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.18	2				100	T4-PDI2019-SG52-190417	Added 4/30/2019 By DTH			
	A9D0674-17	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.42	2				100	T4-PDI2019-SG53-190416	PAHs Only			
	A9D0674-17RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.42	2				100	T4-PDI2019-SG53-190416	Added 4/30/2019 By DTH			
	A9D0674-18	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.29	2				100	T4-PDI2019-SG54-190416	PAHs Only			
	A9D0674-18RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.29	2				100	T4-PDI2019-SG54-190416	Added 4/30/2019 By DTH			
	A9D0674-19	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.4	2				100	T4-PDI2019-SG57-190417	PAHs Only			
	A9D0674-19RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.4	2				100	T4-PDI2019-SG57-190417	Added 4/30/2019 By DTH			
	A9D0674-20	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.89	2				100	T4-PDI2019-SG58-190417	PAHs Only			
	A9D0674-20RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.89	2				100	T4-PDI2019-SG58-190417	Added 4/30/2019 By DTH			
	A9D0674-21	D	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.25	2				100	T4-PDI2019-SG59-190417	MS/MSD this sample, PAHs Only			
	A9D0674-21RE1	D	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.25	2				100	T4-PDI2019-SG59-190417	Added 4/26/2019 by hml			
	A9D0674-21RE2	D	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.25	2				100	T4-PDI2019-SG59-190417	Added 4/26/2019 by hml			
	9041271-MS1		QC	04/24/19 12:22	15.27	2	A19D163	A9D0674-21RE2	100	100					
	9041271-MSD1		QC	04/24/19 12:22	15.29	2	A19D163	A9D0674-21RE2	100	100					
	A9D0674-22	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	FD-20190417130 1	PAHs Only			
	A9D0674-22RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	FD-20190417130 1	Added 4/30/2019 By DTH			
	A9D0674-23	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.17	2				100	T4-PDI2019-SG60-190417	PAHs only			
	A9D0674-23RE1	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.17	2				100	T4-PDI2019-SG60-190417	Added 4/30/2019 By DTH			

Prepared By: Date

Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
	A9D0674-24	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.28	5				100	T4-PDI2019-SG6 1-190416	PAHs only			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

Method 3546 digestion time and temperture achieved.
Initial:

Witness:_____

Prepared By: Date

Reviewed By: Date

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PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
	9041271-BLK1		QC	04/24/19 12:22	16	2				100					
	9041271-BS1		QC	04/24/19 12:22	15	2	A19D163		100	100					
	A9D0674-02	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.72	2				100	T4-PDI2019-SG05-190417	PAHs Only			
	9041271-DUP1		QC	04/24/19 12:22	15.69	2		A9D0674-02		100					
	A9D0674-03	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.35	2				100	T4-PDI2019-SG06-190417	PAHs Only			
	A9D0674-04	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.07	2				100	T4-PDI2019-SG08-190415	PAHs Only			
	A9D0674-05	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.37	2				100	T4-PDI2019-SG11-190415	PAHs Only			
	A9D0674-06	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.09	2				100	T4-PDI2019-SG13-190415	PAHs Only			
	A9D0674-07	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.39	2				100	T4-PDI2019-SG15-190416	PAHs Only			
	A9D0674-08	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.12	2				100	T4-PDI2019-SG16-190416	PAHs Only			
	A9D0674-12	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.26	2				100	T4-PDI2019-SG17-190416	PAHs Only			
	A9D0674-13	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.17	2				100	FD-20190415144 1	PAHs Only			
	A9D0674-14	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15.38~~ 15.50	2 /				100	T4-PDI2019-SG18-190415	PAHs Only MUd			
	A9D0674-15	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	T4-PDI2019-SG51-190417	PAHs Only			
	A9D0674-16	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.18	2				100	T4-PDI2019-SG52-190417	PAHs Only			
	A9D0674-17	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.42	2				100	T4-PDI2019-SG53-190416	PAHs Only			
	A9D0674-18	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.29	2				100	T4-PDI2019-SG54-190416	PAHs Only			
	A9D0674-19	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.4	2				100	T4-PDI2019-SG57-190417	PAHs Only			
	A9D0674-20	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.89	2				100	T4-PDI2019-SG58-190417	PAHs Only			

JC 4-24-19
Prepared By: Date

JRA 04/24/19
Reviewed By: Date

cm 4-24-19
cas 4/24/19

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
	A9D0674-21	D	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.25	2				100	T4-PDI2019-SG59-190417	MS/MSD this sample, PAHs Only			
	9041271-MS1		QC	04/24/19 12:22	15.27	2	A19D163	A9D0674-21	100	100					
	9041271-MSD1		QC	04/24/19 12:22	15.29	2	A19D163	A9D0674-21	100	100					
	A9D0674-22	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.34	2				100	FD-20190417130 1	PAHs Only			
	A9D0674-23	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.17	2				100	T4-PDI2019-SG60-190417	PAHs only			
	A9D0674-24	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	15.28	2				100	T4-PDI2019-SG61-190416	PAHs only			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

Method 3546 digestion time and temperture achieved.
Initial: CAS

Witness: _____

Prepared By: _____ Date _____

Reviewed By: _____ Date _____

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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	9041271-BLK1		QC	04/24/19 12:22	~~15~~ 16	2 ✓				100					
2	9041271-BS1		QC	04/24/19 12:22	15	2 ✓	A19D163		100	100					
3	A9D0674-02	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.72	2 ✓				100	T4-PDI2019-SG05-190417	PAHs Only wet sand, rocks #			
4	9041271-DUP1		QC	04/24/19 12:22	~~15~~ 15.69	2 ✓		A9D0674-02		100		wet sand, rocks #			
5	A9D0674-03	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.35	2 ✓				100	T4-PDI2019-SG06-190417	PAHs Only wet sand, rocks #			
6	A9D0674-04	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.07	2 ✓				100	T4-PDI2019-SG08-190415	PAHs Only MLD			
7	A9D0674-05	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.37	2 ✓				100	T4-PDI2019-SG11-190415	PAHs Only MLD #			
8	A9D0674-06	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.09	2 ✓				100	T4-PDI2019-SG13-190415	PAHs Only MLD #			
9	A9D0674-07	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.39	2 ✓				100	T4-PDI2019-SG15-190416	PAHs Only Sand			
10	A9D0674-08	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.12	2 ✓				100	T4-PDI2019-SG16-190416	PAHs Only MLD #			
11	A9D0674-12	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.26	2 ✓				100	T4-PDI2019-SG17-190416	PAHs Only Sand			
12	A9D0674-13	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.17	2 ✓				100	FD-20190415144 1	PAHs Only MLD #			
13	A9D0674-14	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ JC 4.24.19 ~~15.38~~	2 ✓				100	T4-PDI2019-SG18-190415	PAHs Only MLD ☆			
14	A9D0674-15	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.34	2 ✓				100	T4-PDI2019-SG5 1-190417	PAHs Only MLD			
15	A9D0674-16	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.18	2 ✓				100	T4-PDI2019-SG5 2-190417	PAHs Only MLD			
16	A9D0674-17	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.42	2 ✓				100	T4-PDI2019-SG5 3-190416	PAHs Only MLD			
17	A9D0674-18	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.29	2 ✓				100	T4-PDI2019-SG5 4-190416	PAHs Only Sand/MLD			
18	A9D0674-19	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.40	2 ✓				100	T4-PDI2019-SG5 7-190417	PAHs Only MLD			
19	A9D0674-20	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.89	2 ✓				100	T4-PDI2019-SG5 8-190417	PAHs Only MLD			

JC 4-24-19
Prepared By: Date

JRA 04/24/19
Reviewed By: Date

Printed: 4/24/2019 12:23:53PM

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9041271 (Sediment)

Prep Method: EPA 3546

#	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
20	A9D0674-21	D	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.25	2				100	T4-PDI2019-SG59-190417	MS/MSD this sample, PAHs Only MUD			
21	9041271-MS1		QC	04/24/19 12:22	~~15~~ 15.27	2	A19D163	A9D0674-21	100	100		MUD			
22	9041271-MSD1		QC	04/24/19 12:22	~~15~~ 15.29	2	A19D163	A9D0674-21	100	100		MUD			
23	A9D0674-22	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.34	2				100	FD-201904171301	PAHs Only MUD			
24	A9D0674-23	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.17	2				100	T4-PDI2019-SG60-190417	PAHs only MUD			
25	A9D0674-24	B	8270D LL PAH/PHTH/Phenols	04/24/19 12:22	~~15~~ 15.28	~~2~~ 5				100	T4-PDI2019-SG61-190416	PAHs only Sand			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19C178	09/09/19	DCM CHEM PROD. 186642

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

JC

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

JC

Method 3546 digestion time and temperture achieved.
Initial: JC

Witness: [signature] 4/24/19

#= Turbo Vap staining.

*= Dry-out during microwave run. ~~To be re-extracted~~ JC 4.24.19 ~~Added 30mL DCM to vessel and extracted as normal. Also~~ sample to be re-extracted.

Prepared By: Date

Reviewed By: Date

Printed: 4/24/2019 12:23:53PM

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D25002**	Instrument:	**SV-GCMS5**
Date:	**04/25/19 07:26**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D25002-TUN1	Water	QC	QC			A19B027	A19D323
2	9D25002-IBL1	Water	QC	QC			A19B027	
3	9D25002-CCV1	Water	QC	QC			A19B027	A19C237
4	9D25002-CCB1	Water	QC	QC			A19B027	
5	9041271-BLK1	Sediment	QC	QC		9041271	A19B027	
6	9041271-BS1	Sediment	QC	QC		9041271	A19B027	
7	A9D0674-24	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
8	A9D0674-05	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
9	A9D0674-02	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
10	9041271-DUP1	Sediment	QC	QC		9041271	A19B027	
11	A9D0674-21	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
12	A9D0674-21RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
13	A9D0674-03	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
14	A9D0674-04	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
15	A9D0674-06	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
16	A9D0674-07	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
17	A9D0674-08	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
18	A9D0674-21RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
19	9041271-MS1	Sediment	QC	QC		9041271	A19B027	
20	9041271-MSD1	Sediment	QC	QC		9041271	A19B027	
21	9D25002-IBL2	Water	QC	QC			A19B027	

DNT 4/26/19

Data Entered By: Jean 04/26/19

Data Reviewed By: DNT 4/26/19

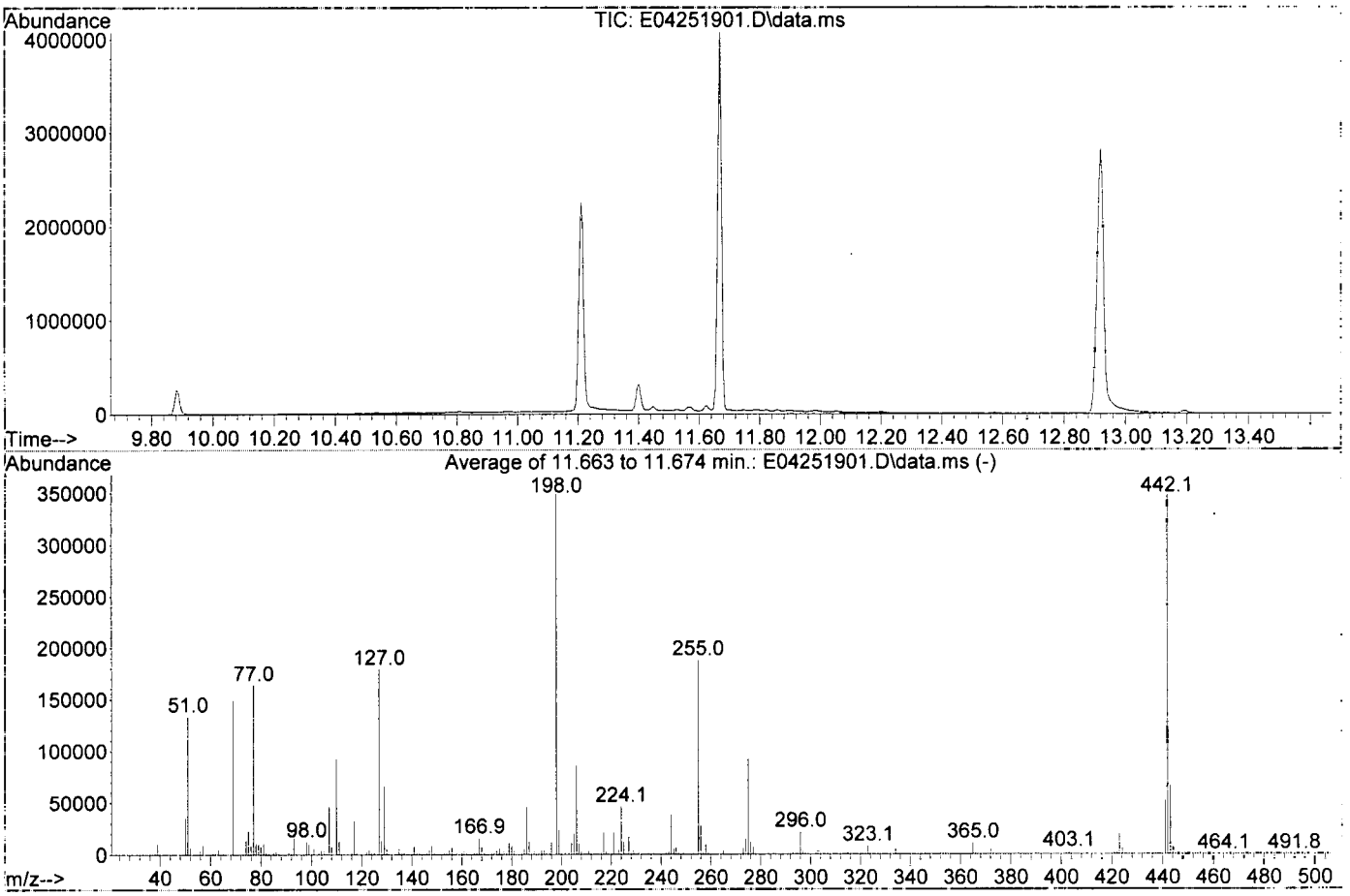
Comments:

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251901.D
Acq On : 25 Apr 2019 7:35 am
Operator : JK/ AMS /DTH
Sample : 9D25002-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

DTH 4/25/19

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019



AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.1	133791	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	42.5	149366	PASS
70	69	0.00	2	0.5	725	PASS
127	198	10	80	51.2	179630	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	351061	PASS
199	198	5	9	6.8	23773	PASS
275	198	10	60	26.3	92459	PASS
365	198	1	100	3.1	10814	PASS
441	442	0.01	24	15.1	52387	PASS
442	198	50	200	99.1	347968	PASS
443	442	15	24	19.3	67051	PASS

✓

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251901.D
Acq On : 25 Apr 2019 7:35 am
Operator : JK/ AMS /DTH
Sample : 9D25002-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 25 11:55:17 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DMT 4/25/19

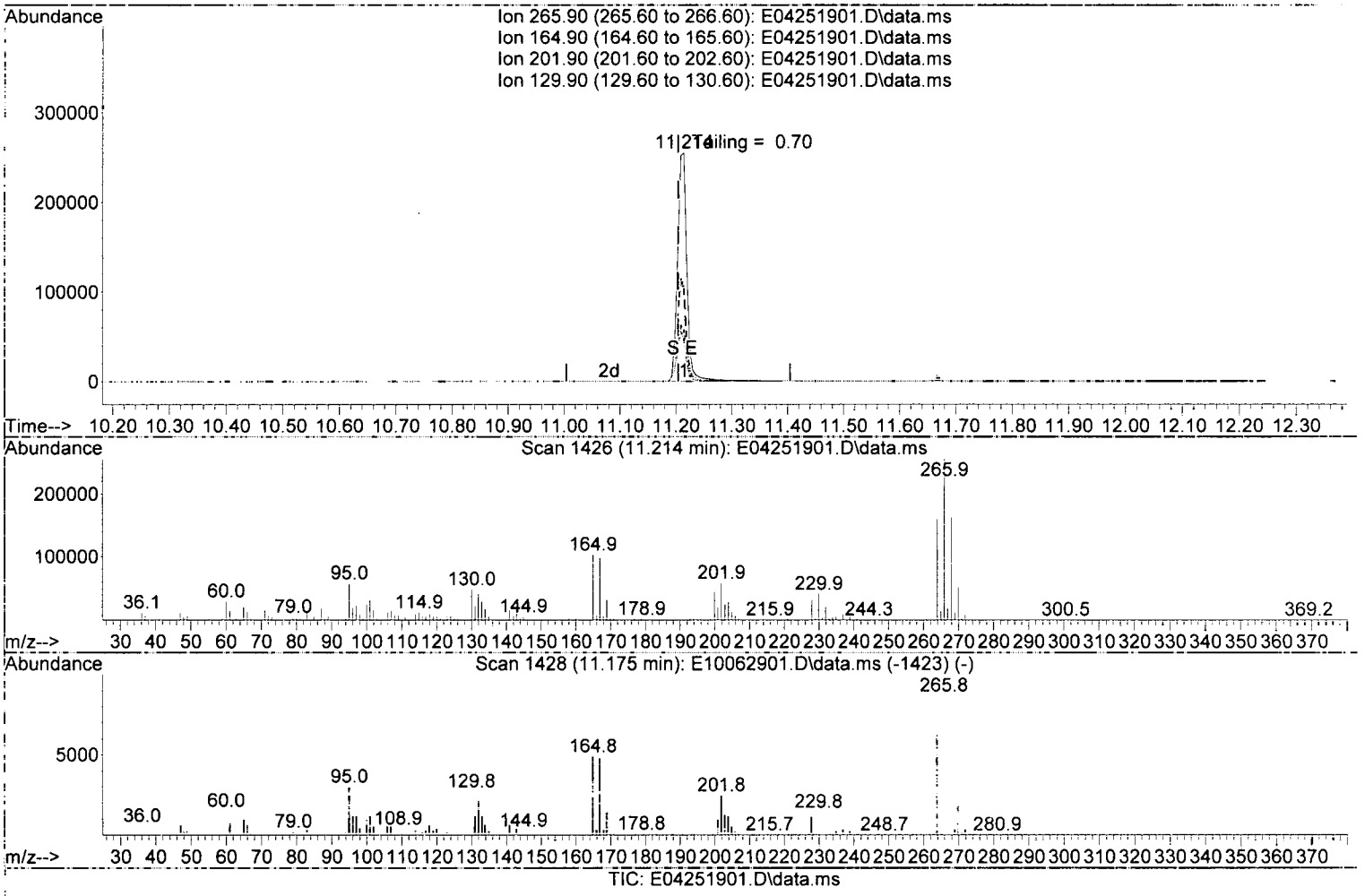
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.850	150	59978	2.00	ug/mL	0.01
2) Naphthalene-d8	8.112	136	118886	2.00	ug/mL	0.02
3) Acenaphthene-d10	9.882	162	64795	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.401	188	114768	2.00	ug/mL	0.00
11) Chrysene-d12	15.231	240	96796	2.00	ug/mL	0.00
12) Perylene-d12	17.194	264	71344	2.00	ug/mL	0.02
13) Dibenz(a,h)anthracene-...	18.536	292	36243	2.00	ug/mL	0.04
Target Compounds						Qvalue
4) Pentachlorophenol	11.214	266	299733	48.99	ug/mL	90
6) DFTPP	11.669	442	386573	41.72	ug/mL	91
7) Benzidine	12.920	184	1792776	43.91	ug/mL	94
8) 4,4-DDE	13.193	TIC	45761	No Calib		
9) 4,4-DDD	13.755	TIC	12557	No Calib		
10) 4,4-DDT	14.359	TIC	4911102	41.73	ug/mL	97

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251901.D
Acq On : 25 Apr 2019 7:35 am
Operator : JK/ AMS /DTH
Sample : 9D25002-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 25 11:55:17 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(4) Pentachlorophenol

11.214min (+ 0.011) 48.99 ug/mL

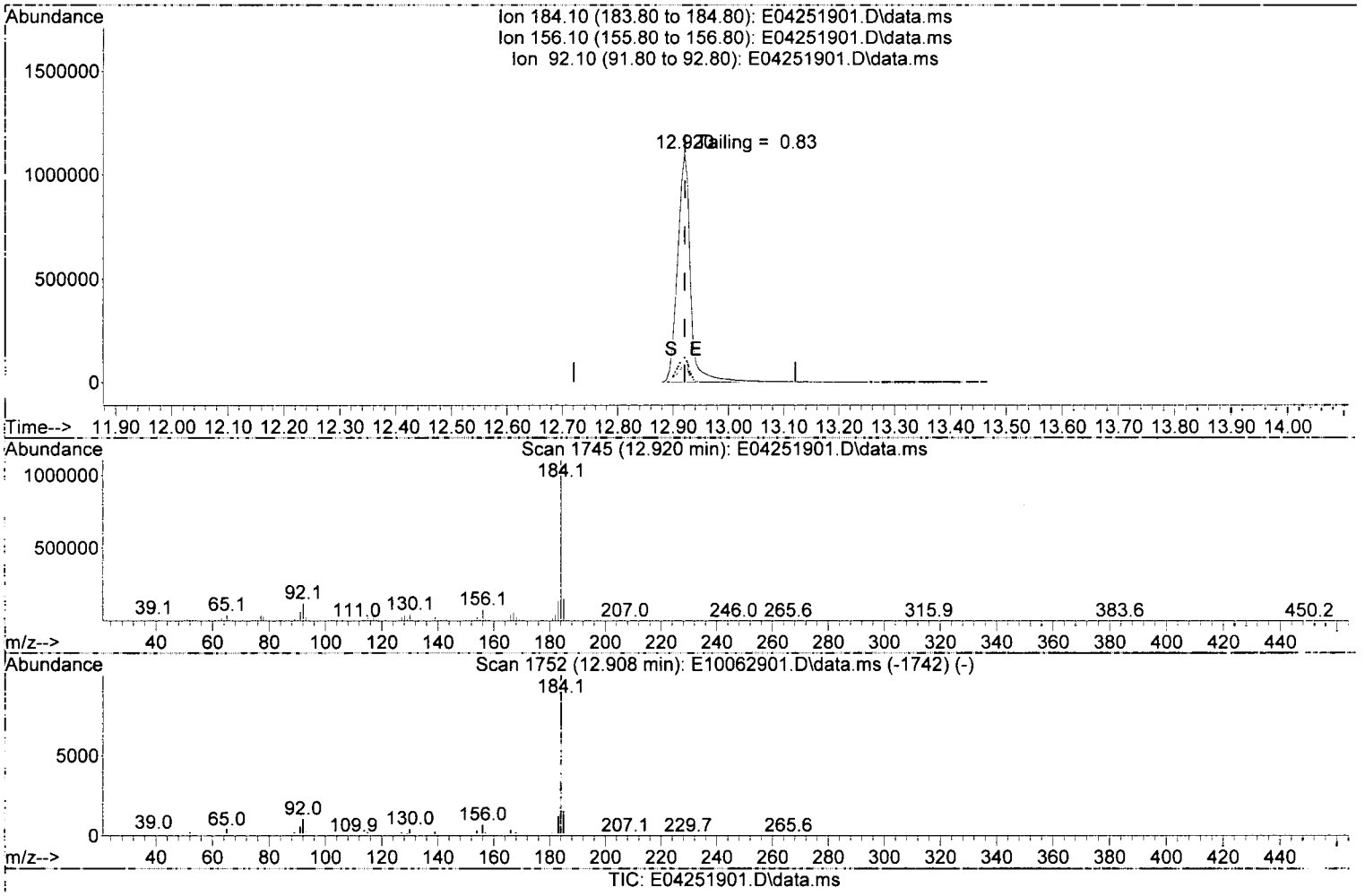
response 299733

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	40.39
201.90	23.20	22.90
129.90	27.10	18.87

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251901.D
Acq On : 25 Apr 2019 7:35 am
Operator : JK/ AMS /DTH
Sample : 9D25002-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 25 11:55:17 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(7) Benzidine

12.920min (-0.000) 43.91 ug/mL

response 1792776

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.13
92.10	8.20	11.07
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9D25002-TUN1
SV-GCMS5

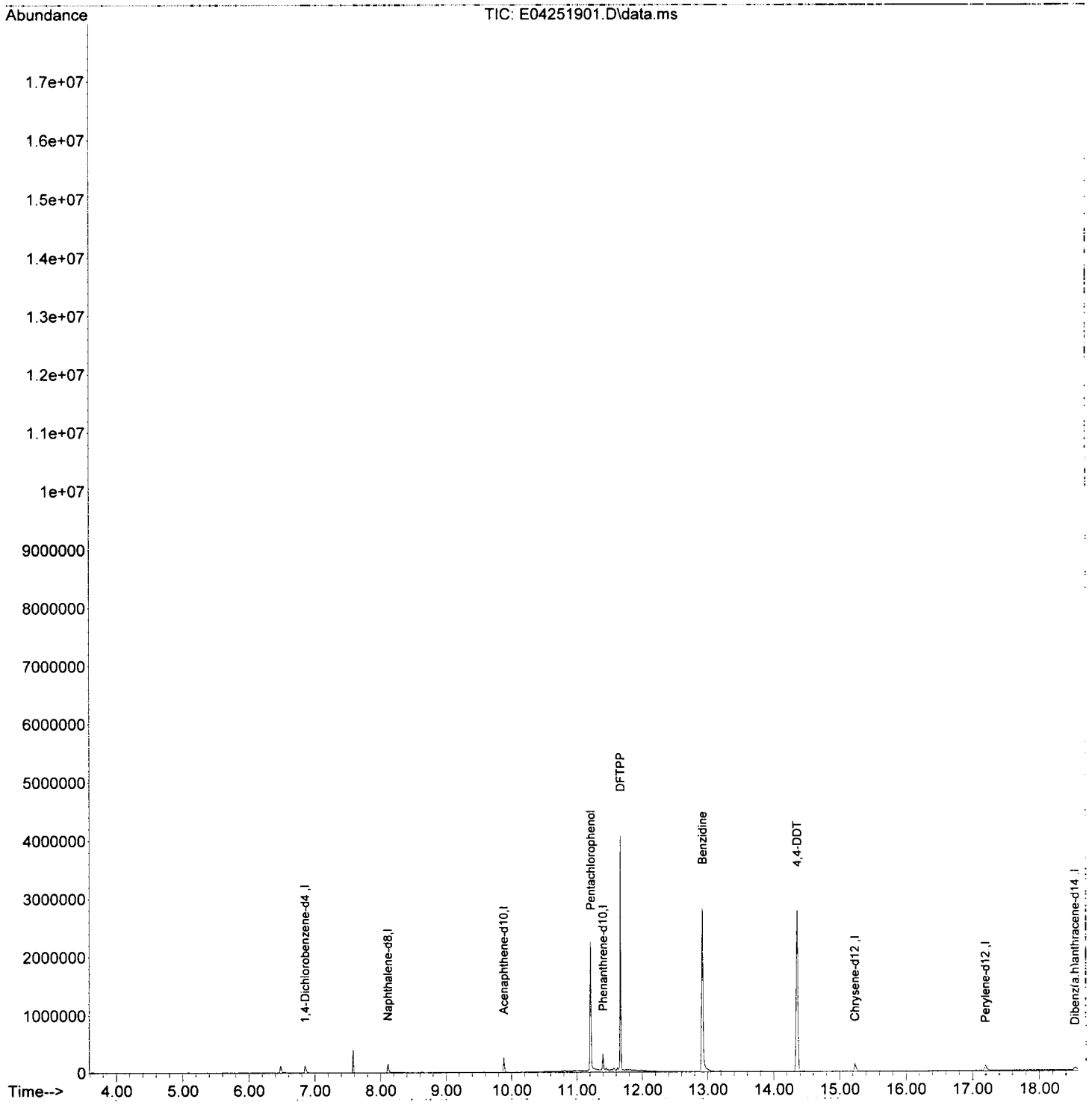
First Column Area Counts		Percent Breakdown	
DDE	45761		
DDD	12557		
DDT	491102	1.17	PASS

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251901.D
Acq On : 25 Apr 2019 7:35 am
Operator : JK/ AMS /DTH
Sample : 9D25002-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 25 11:55:17 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:00:22 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	62	0.00
2	T	N-Nitrosodimethylamine	1000.000	900.993	9.9	56	0.00
3	T	Pyridine	1000.000	911.065	8.9	57	-0.01
4	S	2-Fluorophenol (Surr)	1000.000	986.909	1.3	59	0.00
5	S	Phenol-d6(Surr)	1000.000	950.807	4.9	58	0.01
6	T	Phenol	1000.000	945.051	5.5	58	0.00
7	T	Aniline	1000.000	922.283	7.8	59	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	880.251	12.0	55	0.00
9	T	2-Chlorophenol	1000.000	1026.615	-2.7	62	0.00
10	T	1,3-Dichlorobenzene	1000.000	1009.745	-1.0	63	0.00
11	T	1,4-Dichlorobenzene	1000.000	1004.831	-0.5	63	0.00
12	T	Benzyl alcohol	1000.000	814.877	18.5	50	0.00
13	T	1,2-Dichlorobenzene	1000.000	1013.452	-1.3	64	0.00
14	T	2-Methylphenol	1000.000	933.731	6.6	57	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	946.842	5.3	59	-0.01
16	T	N-Nitrosodi-n-propylamine	1000.000	884.319	11.6	54	0.00
17	T	3+4-Methylphenol	1000.000	942.073	5.8	57	0.00
18	T	Hexachloroethane	1000.000	970.450	3.0	60	-0.01
19	S	Nitrobenzene-d5 (Surr)	1000.000	908.510	9.1	58	0.00
20	T	Nitrobenzene	1000.000	952.326	4.8	58	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	61	0.00
22	T	Isophorone	1000.000	928.871	7.1	54	0.00
23	T	2-Nitrophenol	1000.000	1099.746	-10.0	65	0.00
24	T	2,4-Dimethylphenol	1000.000	1002.273	-0.2	60	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	924.062	7.6	56	0.00
26	T	Benzoic acid	2000.000	1781.489	10.9	55	0.01
27	T	2,4-Dichlorophenol	1000.000	1047.112	-4.7	63	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1095.326	-9.5	67	0.00
29	T	Naphthalene	1000.000	998.814	0.1	61	0.00
30	T	4-Chloroaniline	1000.000	828.597	17.1	52	0.00
31	T	Hexachlorobutadiene	1000.000	1155.014	-15.5	69	0.00
32	T	4-Chloro-3-methylphenol	1000.000	911.095	8.9	56	0.01
33	T	2-Methylnaphthalene	1000.000	994.872	0.5	60	0.00
34	T	1-Methylnaphthalene	1000.000	989.344	1.1	60	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	59	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1288.812	-28.9#	71	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1124.579	-12.5	64	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1084.845	-8.5	63	0.01
39	T	1,1'-Biphenyl	1000.000	1028.867	-2.9	60	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1058.307	-5.8	62	0.00
41	T	2-Chloronaphthalene	1000.000	1031.590	-3.2	62	0.00
42	T	2-Nitroaniline	1000.000	960.437	4.0	59	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1043.748	-4.4	60	0.00
44	T	1,4-Dinitrobenzene	1000.000	1137.907	-13.8	74	0.00
45	T	Dimethyl phthalate	1000.000	1046.092	-4.6	61	0.00
46	T	1,3-Dinitrobenzene	1000.000	1070.700	-7.1	68	0.00
47	T	2,6-Dinitrotoluene	1000.000	1114.425	-11.4	66	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:00:22 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
48	T	1,2-Dinitrobenzene	1000.000	1130.196	-13.0	69	0.00
49	T	Acenaphthylene	1000.000	1045.303	-4.5	60	0.00
50	T	3-Nitroaniline	1000.000	881.626	11.8	55	0.00
51	T	Acenaphthene	1000.000	1023.784	-2.4	60	0.00
52	T	2,4-Dinitrophenol	1000.000	1248.897	-24.9#	99	0.00
53	T	4-Nitrophenol	1000.000	683.994	31.6#	42	0.03
54	T	2,4-Dinitrotoluene	1000.000	1080.691	-8.1	69	0.00
55	T	Dibenzofuran	1000.000	1015.275	-1.5	61	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1141.737	-14.2	69	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1079.835	-8.0	65	0.00
58	T	Diethyl phthalate	1000.000	1034.539	-3.5	59	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1068.732	-6.9	62	0.00
60	T	Fluorene	1000.000	1037.388	-3.7	61	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1051.043	-5.1	64	0.00
62	T	4-Nitroaniline	1000.000	793.967	20.6#	53	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1276.278	-27.6#	95	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	61	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1060.525	-6.1	62	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	951.906	4.8	54	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1269.104	-26.9#	73	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1106.286	-10.6	67	0.00
69	T	Hexachlorobenzene	1000.000	1162.923	-16.3	70	0.00
70	T	Pentachlorophenol (PCP)	1000.000	974.306	2.6	60	0.00
71	T	Phenanthrene	1000.000	1037.780	-3.8	63	0.00
72	T	Anthracene	1000.000	1019.098	-1.9	61	0.00
73	T	Carbazole	1000.000	926.343	7.4	58	0.00
74	T	Di-n-butyl phthalate	1000.000	880.778	11.9	55	-0.01
75	T	Fluoranthene	1000.000	1010.280	-1.0	62	0.00
76	T	Benzidine	2000.000	2470.140	-23.5#	87	0.00
77	T	Pyrene	1000.000	1027.160	-2.7	63	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	65	-0.01
79	S	Terphenyl-d14 (Surr)	1000.000	1052.167	-5.2	66	0.00
80	T	Butyl benzyl phthalate	1000.000	787.076	21.3#	50	-0.02
81	T	Bis(2-ethylhexyl) adipate	1000.000	744.941	25.5#	50	-0.02
82	T	3,3-Dichlorobenzidine	2000.000	1775.984	11.2	58	0.00
83	T	Benz(a)anthracene	1000.000	973.773	2.6	65	0.00
84	T	Chrysene	1000.000	1017.863	-1.8	66	-0.01
85	T	Bis(2-ethylhexyl) phthalate	1000.000	766.818	23.3#	51	-0.03
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	61	-0.02
87	T	Di-n-octyl phthalate	1000.000	744.016	25.6#	44	-0.03
88	T	Benzo(b)fluoranthene	1000.000	1076.884	-7.7	64	0.00
89	T	Benzo(k)fluoranthene	1000.000	1137.173	-13.7	65	-0.01
90	T	Benzo(b+k)fluoranthene	2000.000	2183.405	-9.2	65	-0.01
91	T	Benzo(e)pyrene	1000.000	1086.049	-8.6	65	-0.01
92	T	Benzo(a)pyrene	1000.000	1098.075	-9.8	64	0.00
93	T	Perylene	1000.000	1097.723	-9.8	66	-0.02

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:00:22 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	64	-0.01
95	T	Indeno(1,2,3-cd)pyrene	1000.000	863.157	13.7	56	0.00
96	T	Dibenz(a,h)anthracene	1000.000	1050.999	-5.1	67	-0.01
97	T	Benzo(g,h,i)perylene	1000.000	936.871	6.3	57	-0.01

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	178755	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	666726	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	293375	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	514606	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	458000	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	386724	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	319458	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.655	112	109982	986.91	ng/ml	0.00
5) Phenol-d6(Surr)	6.505	99	141731	950.81	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	121424	908.51	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	230905	1058.31	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	24153	1269.10	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	225153	1052.17	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.435	74	76001	900.99	ng/ml	89
3) Pyridine	4.473	79	124462	911.07	ng/ml	96
6) Phenol	6.516	94	147611	945.05	ng/ml	95
7) Aniline	6.553	93	187721	922.28	ng/ml	96
8) Bis(2-chloroethyl) ether	6.601	93	112377	880.25	ng/ml	95
9) 2-Chlorophenol	6.671	128	120075	1026.61	ng/ml	94
10) 1,3-Dichlorobenzene	6.815	146	135005	1009.74	ng/ml	97
11) 1,4-Dichlorobenzene	6.879	146	135743	1004.83	ng/ml	99
12) Benzyl alcohol	6.986	108	60364	814.88	ng/ml	94
13) 1,2-Dichlorobenzene	7.029	146	129683	1013.45	ng/ml	98
14) 2-Methylphenol	7.088	107	90826	933.73	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.109	45	191686	946.84	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.238	70	84623	884.32	ng/ml	93
17) 3+4-Methylphenol	7.238	107	115752	942.07	ng/ml	93
18) Hexachloroethane	7.355	117	48396	970.45	ng/ml	84
20) Nitrobenzene	7.414	77	122928	952.33	ng/ml	92
22) Isophorone	7.639	82	211355	928.87	ng/ml	96
23) 2-Nitrophenol	7.730	139	54830	1099.75	ng/ml	85
24) 2,4-Dimethylphenol	7.757	122	99997	1002.27	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.842	93	132293	924.06	ng/ml	99
26) Benzoic acid	7.842	105	53639	1781.49	ng/ml	93
27) 2,4-Dichlorophenol	7.971	162	80953	1047.11	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.051	180	101448	1095.33	ng/ml	95
29) Naphthalene	8.131	128	355250	998.81	ng/ml	100
30) 4-Chloroaniline	8.179	127	101496	828.60	ng/ml	96
31) Hexachlorobutadiene	8.254	225	52251	1155.01	ng/ml	98
32) 4-Chloro-3-methylphenol	8.661	107	76794	911.09	ng/ml	97
33) 2-Methylnaphthalene	8.826	142	222576	994.87	ng/ml	96
34) 1-Methylnaphthalene	8.928	142	211963	989.34	ng/ml	96
36) Hexachlorocyclopentadiene	8.987	237	48502	1288.81	ng/ml	98
37) 2,4,6-Trichlorophenol	9.110	196	49711	1124.58	ng/ml	99
38) 2,4,5-Trichlorophenol	9.153	196	49978	1084.84	ng/ml	99
39) 1,1'-Biphenyl	9.292	154	258230	1028.87	ng/ml	98
41) 2-Chloronaphthalene	9.318	162	186930	1031.59	ng/ml	97
42) 2-Nitroaniline	9.420	138	52725	960.44	ng/ml	82

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

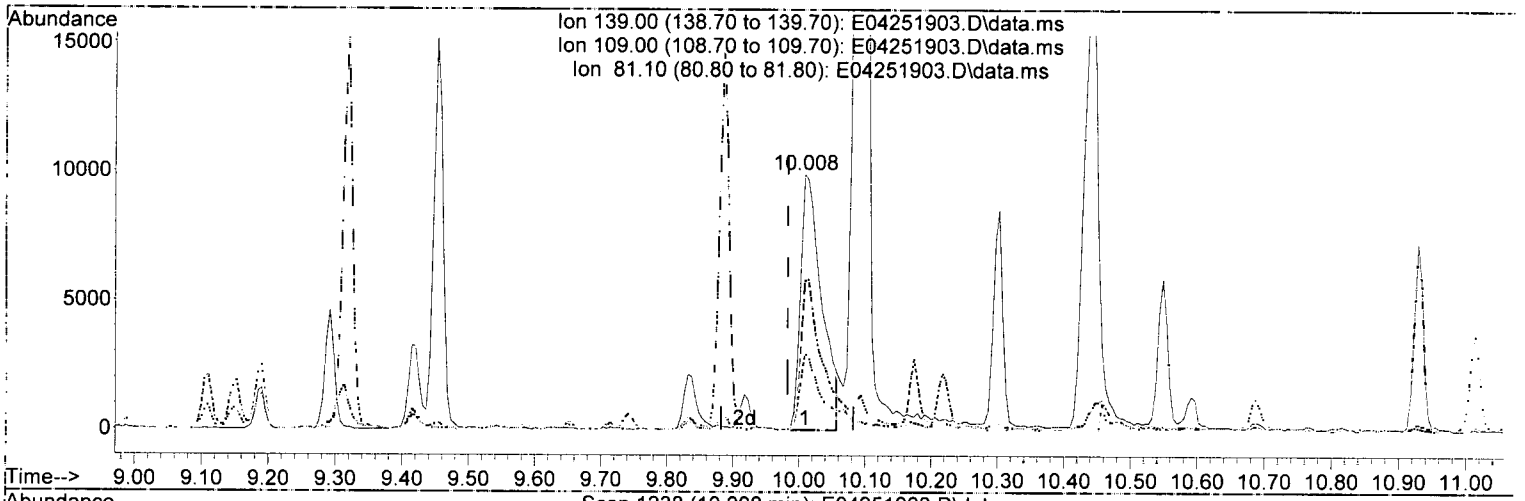
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	183021	1043.75	ng/ml	96
44) 1,4-Dinitrobenzene	9.543	168	24236	1137.91	ng/ml	88
45) Dimethyl phthalate	9.591	163	196966	1046.09	ng/ml	99
46) 1,3-Dinitrobenzene	9.629	168	29222	1070.70	ng/ml	85
47) 2,6-Dinitrotoluene	9.655	165	45949	1114.43	ng/ml	77
48) 1,2-Dinitrobenzene	9.714	168	20953	1130.20	ng/ml#	64
49) Acenaphthylene	9.741	152	298712	1045.30	ng/ml	99
50) 3-Nitroaniline	9.832	138	41399	881.63	ng/ml	100
51) Acenaphthene	9.917	153	198375	1023.78	ng/ml	100
52) 2,4-Dinitrophenol	9.939	184	14165	1248.90	ng/ml	80
53) 4-Nitrophenol	~~10.008~~	~~139~~	~~21968~~	~~653.93~~	~~ng/ml~~	~~83~~ MT
54) 2,4-Dinitrotoluene	10.067	165	57060	1080.69	ng/ml	86
55) Dibenzofuran	10.094	168	255754	1015.27	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.174	232	39097	1141.74	ng/ml	92
57) 2,3,4,6-Tetrachlorophenol	10.222	232	41814	1079.83	ng/ml	89
58) Diethyl phthalate	10.303	149	194673	1034.54	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.303	170	167048	1068.73	ng/ml	95
60) Fluorene	10.442	166	209243	1037.39	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.431	204	93868	1051.04	ng/ml	87
62) 4-Nitroaniline	10.458	138	42268	793.97	ng/ml	76
63) 4,6-Dinitro-2-methylph...	10.484	198	24212	1276.28	ng/ml	87
65) N-Nitrosodiphenylamine	10.549	169	172410	1060.53	ng/ml	97
66) Azobenzene (1,2-DPH)	10.591	77	211438	951.91	ng/ml	94
68) 4-Bromophenyl phenyl e...	10.928	248	52669	1106.29	ng/ml	93
69) Hexachlorobenzene	11.014	284	55695	1162.92	ng/ml	94
70) Pentachlorophenol (PCP)	11.212	266	22823	974.31	ng/ml	96
71) Phenanthrene	11.426	178	293120	1037.78	ng/ml	100
72) Anthracene	11.479	178	295334	1019.10	ng/ml	98
73) Carbazole	11.634	167	251358	926.34	ng/ml	98
74) Di-n-butyl phthalate	11.966	149	299038	880.78	ng/ml	99
75) Fluoranthene	12.747	202	295989	1010.28	ng/ml	98
76) Benzidine	12.913	184	236807	2470.14	ng/ml	100
77) Pyrene	13.062	202	305698	1027.16	ng/ml	99
80) Butyl benzyl phthalate	14.148	149	105440	787.08	ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.325	129	99307	744.94	ng/ml	98
82) 3,3-Dichlorobenzidine	15.352	252	133941	1775.98	ng/ml	98
83) Benz(a)anthracene	15.389	228	251566	973.77	ng/ml	96
84) Chrysene	15.469	228	250502	1017.86	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.523	149	146805	766.82	ng/ml	96
87) Di-n-octyl phthalate	17.208	149	185439	744.02	ng/ml	99
88) Benzo(b)fluoranthene	18.015	252	220024	1076.88	ng/ml	98
89) Benzo(k)fluoranthene	18.085	252	228338	1137.17	ng/ml	99
90) Benzo(b+k)fluoranthene	18.085	252	468496	2183.41	ng/ml	99
91) Benzo(e)pyrene	18.673	252	225287	1086.05	ng/ml	98
92) Benzo(a)pyrene	18.802	252	203703	1098.08	ng/ml	99
93) Perylene	18.999	252	232745	1097.72	ng/ml	99
95) ~~Indeno(1,2,3-cd)pyrene~~	~~21.353~~	~~276~~	~~195004~~	~~1113.67~~	~~ng/ml~~	98 MT
96) Dibenz(a,h)anthracene	21.406	278	168532	1051.00	ng/ml	96
97) Benzo(g,h,i)perylene	21.888	276	161505	936.87	ng/ml	81

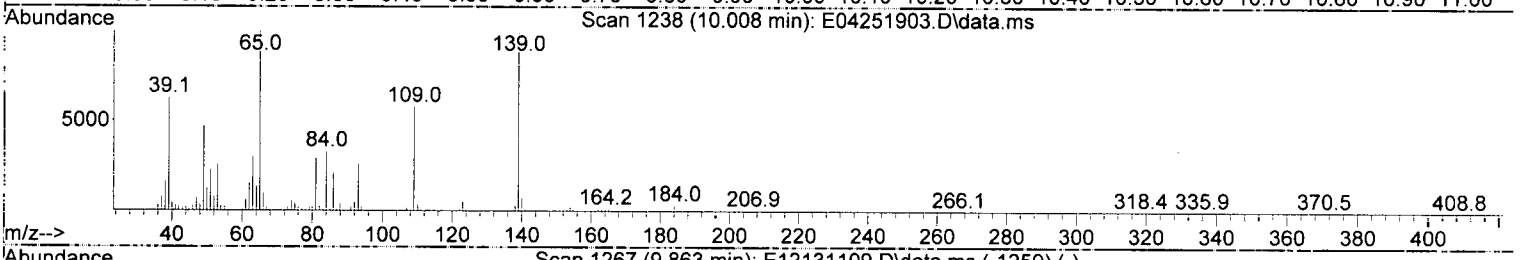
(#) = qualifier out of range (m) = manual integration (+) = signals summed

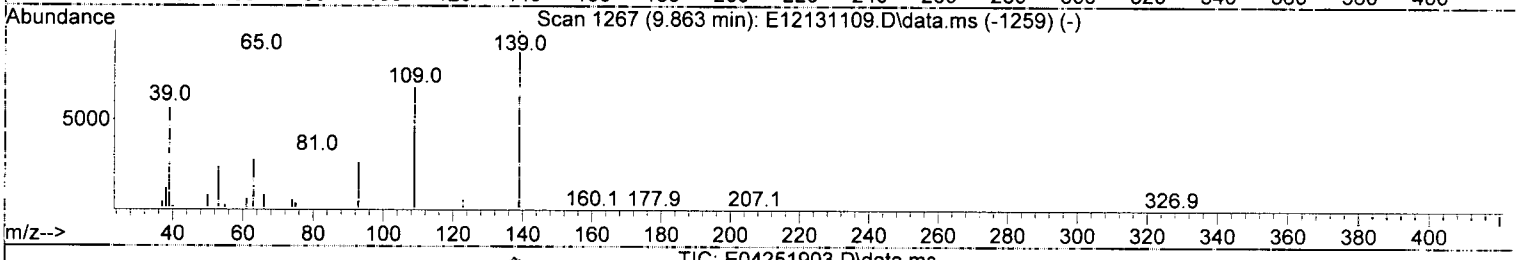
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04251903.D\data.ms

(53) 4-Nitrophenol (T)

10.008min (+ 0.027) 653.93 ng/ml

response 21968

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	74.20	58.45
81.10	37.00	29.56
0.00	0.00	0.00

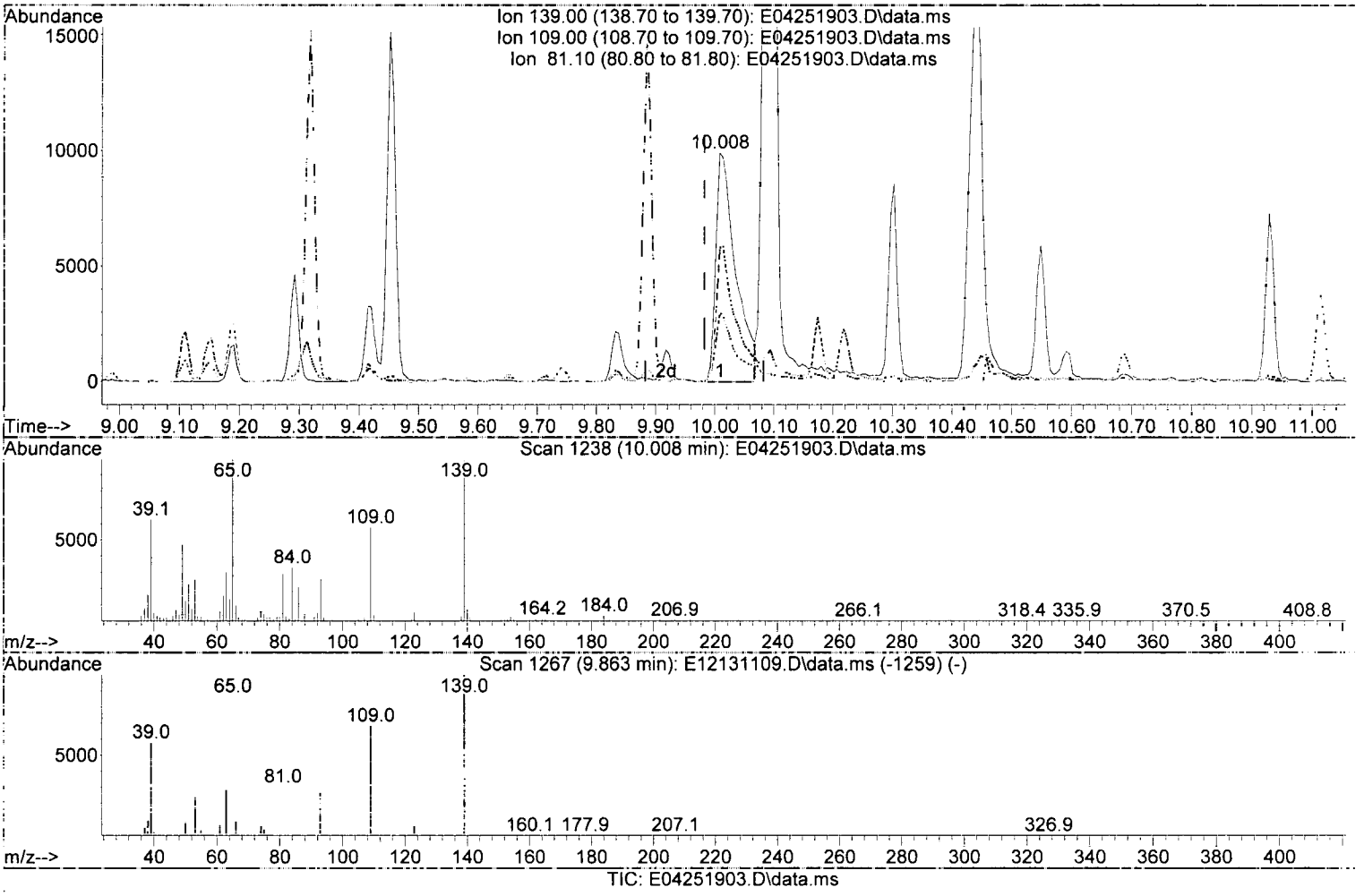
MI

J

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251903.D\data.ms

(53) 4-Nitrophenol (T)

10.008min (+ 0.027) 683.99 ng/ml m

response 23123

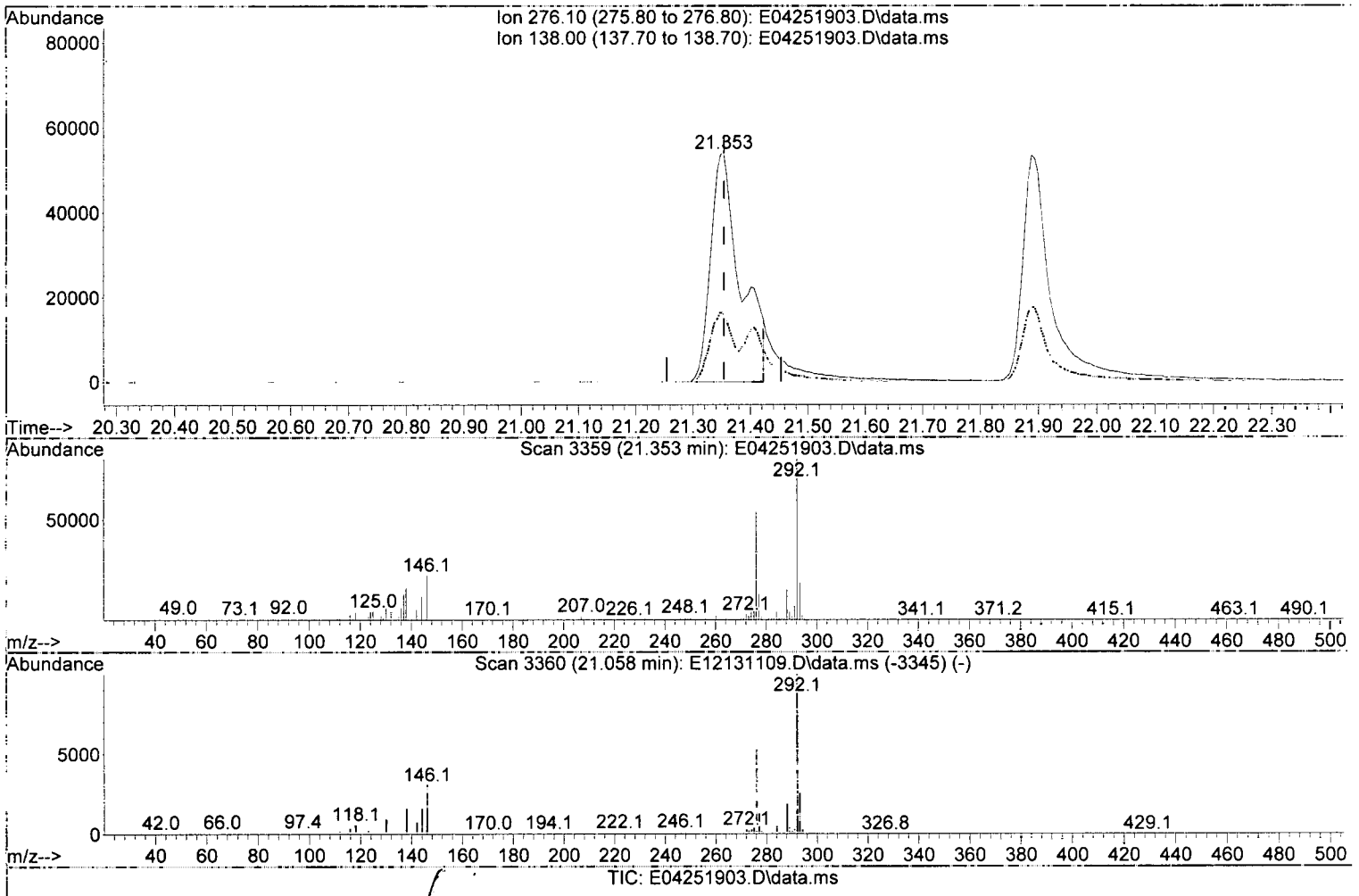
Ion	Exp%	Act%
139.00	100.00	100.00
109.00	74.20	58.45
81.10	37.00	29.56
0.00	0.00	0.00

DTH 4/25/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.353min (-0.000) 1113.67 ng/ml

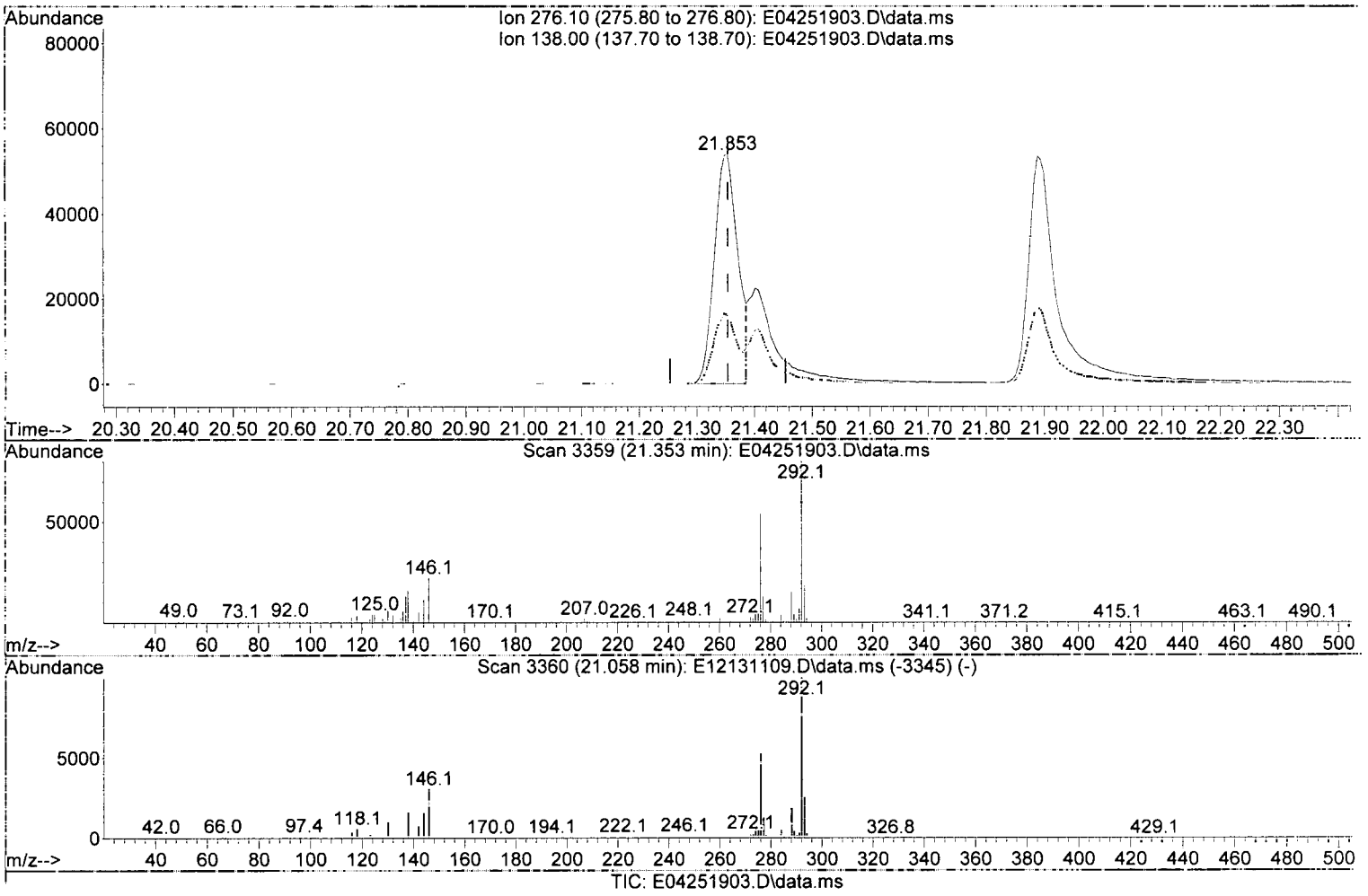
response 195004

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	29.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.353min (-0.000) 863.16 ng/ml m

DTH 4/25/19

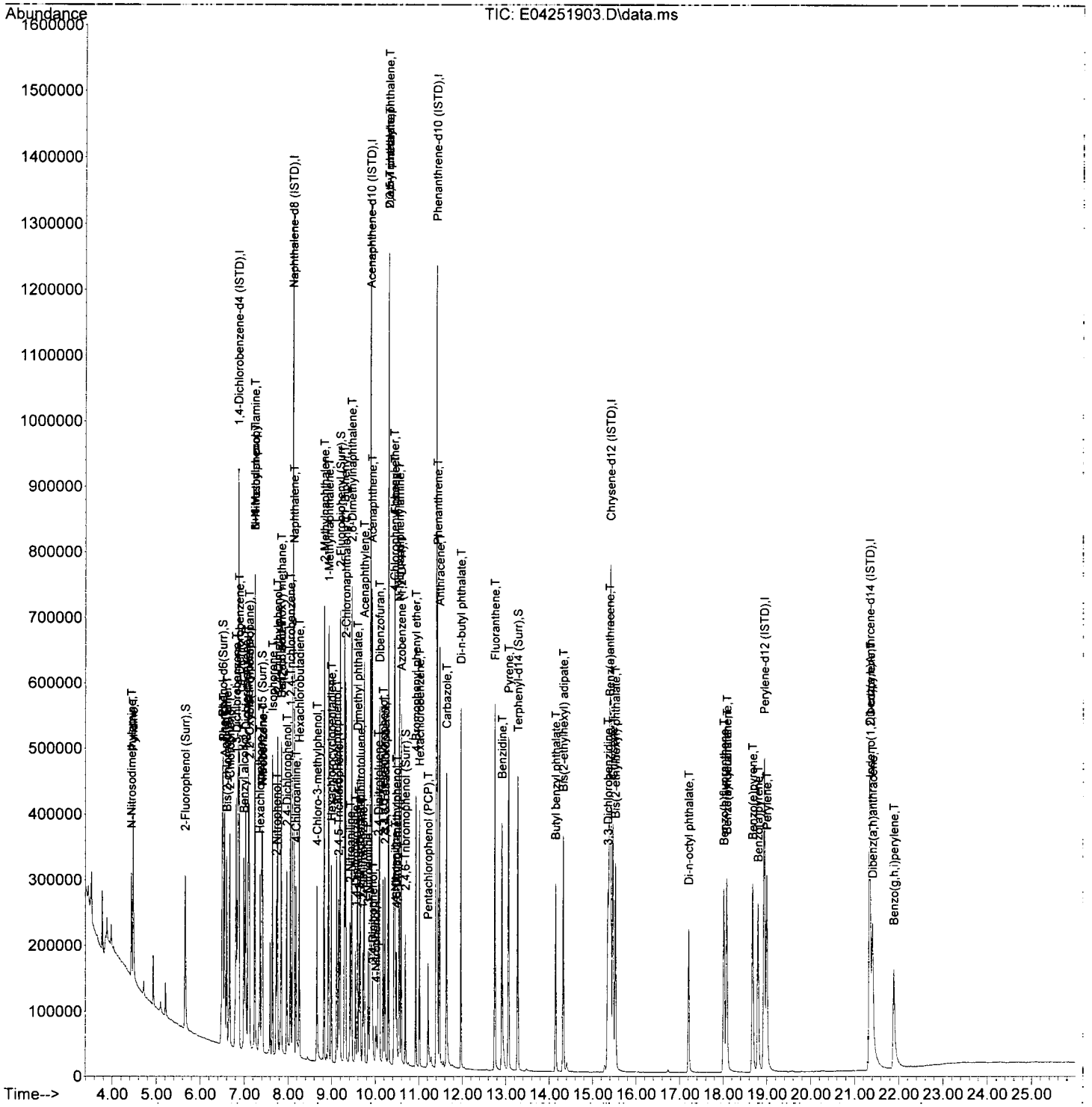
response 151139

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	29.62
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251903.D
Acq On : 25 Apr 2019 8:42 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 11:58:29 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251904.D
Acq On : 25 Apr 2019 9:19 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:39 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	184932	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	715208	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	301273	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	532104	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	450022	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	366937	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.348	292	293782	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)	7.404	82	132	0.95	ng/ml	0.00
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	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.259	70	54	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.602	82	214	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	8.136	128	94	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251904.D
Acq On : 25 Apr 2019 9:19 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:39 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

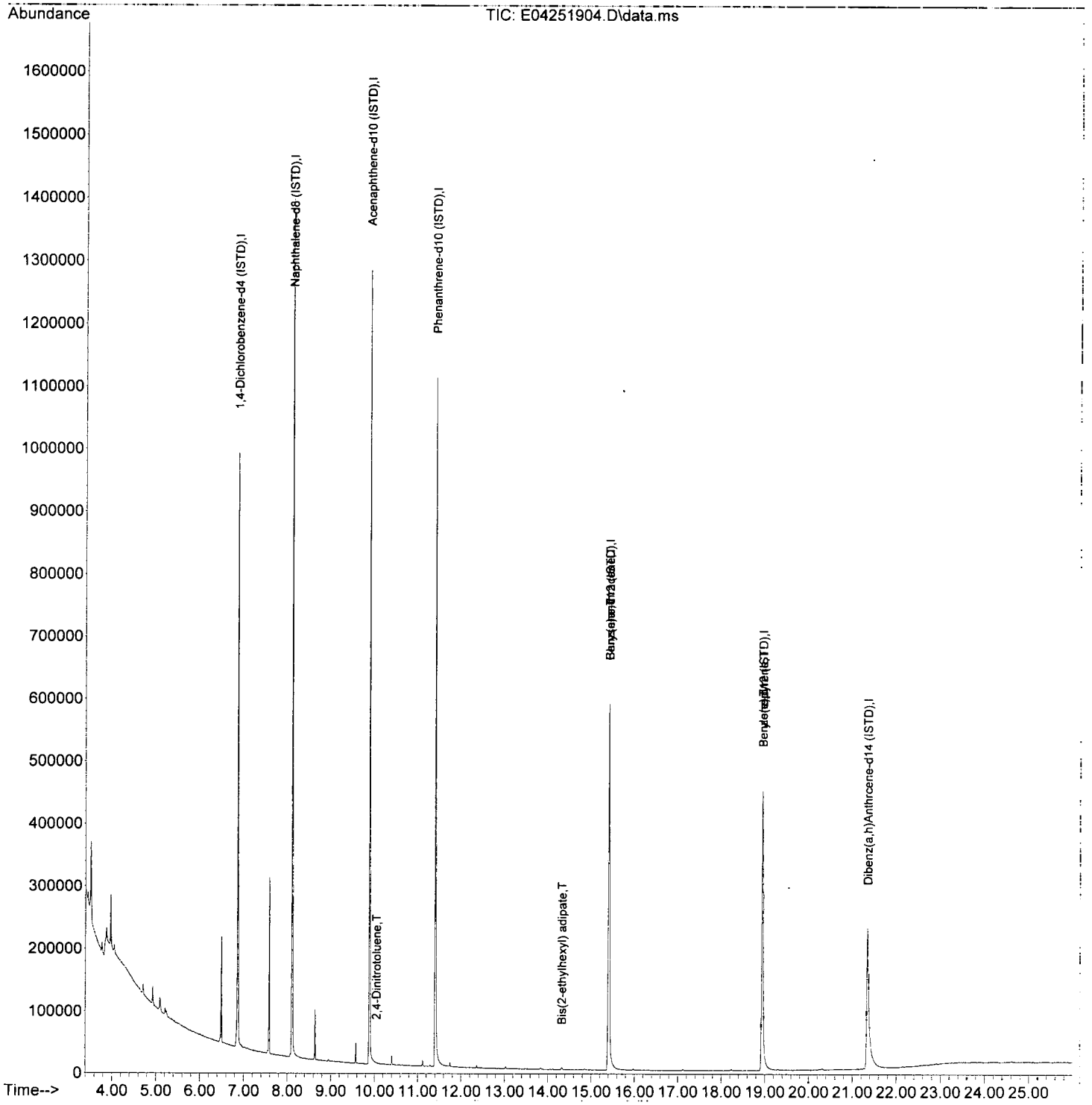
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.896	153	59	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.046	165	155	63.80 ng/ml#	15
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.404	178	242	N.D.	
72) Anthracene	11.404	178	234	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	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.325	129	1036	7.91 ng/ml	92
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.411	228	1065	4.20 ng/ml	64
84) Chrysene	15.411	228	1065	4.40 ng/ml	62
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	18.946	252	1058	5.38 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.946	252	1058	5.26 ng/ml#	60
95) Indeno(1,2,3-cd)pyrene	21.364	276	52	N.D.	
96) Dibenz(a,h)anthracene	0.000		0	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 : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251904.D
Acq On : 25 Apr 2019 9:19 am
Operator : JK/ AMS /DTH
Sample : 9D25002-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:39 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251905.D
Acq On : 25 Apr 2019 9:57 am
Operator : JK/ AMS /DTH
Sample : 9041271-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DMT 4/25/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	178196	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	673965	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	297181	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	576574	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	520600	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	419004	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	345247	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.660	112	198299	1784.99 ng/ml	0.01
5) Phenol-d6(Surr)	6.505	99	250647	1686.75 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	237650	1783.71 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	453003	2049.66 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	39524	1792.68 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	521326	2143.27 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.515	74	55	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.516	94	409	2.63 ng/ml#	1
7) Aniline	6.596	93	54	N.D.	
8) Bis(2-chloroethyl) ether	6.596	93	54	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.970	108	96	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.067	107	54	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.109	45	61	N.D.	
16) N-Nitrosodi-n-propylamine	7.216	70	103	N.D.	
17) 3+4-Methylphenol	7.297	107	224	N.D.	
18) Hexachloroethane	7.409	117	72	N.D.	
20) Nitrobenzene	7.398	77	859	6.68 ng/ml#	38
22) Isophorone	7.644	82	184	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	7.922	105	92	400.08 ng/ml#	8
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.131	128	616	N.D.	
30) 4-Chloroaniline	0.000		0	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.671	107	142	28.23 ng/ml#	1
33) 2-Methylnaphthalene	8.832	142	159	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	9.292	154	670	2.64 ng/ml	83
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251905.D
Acq On : 25 Apr 2019 9:57 am
Operator : JK/ AMS /DTH
Sample : 9041271-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

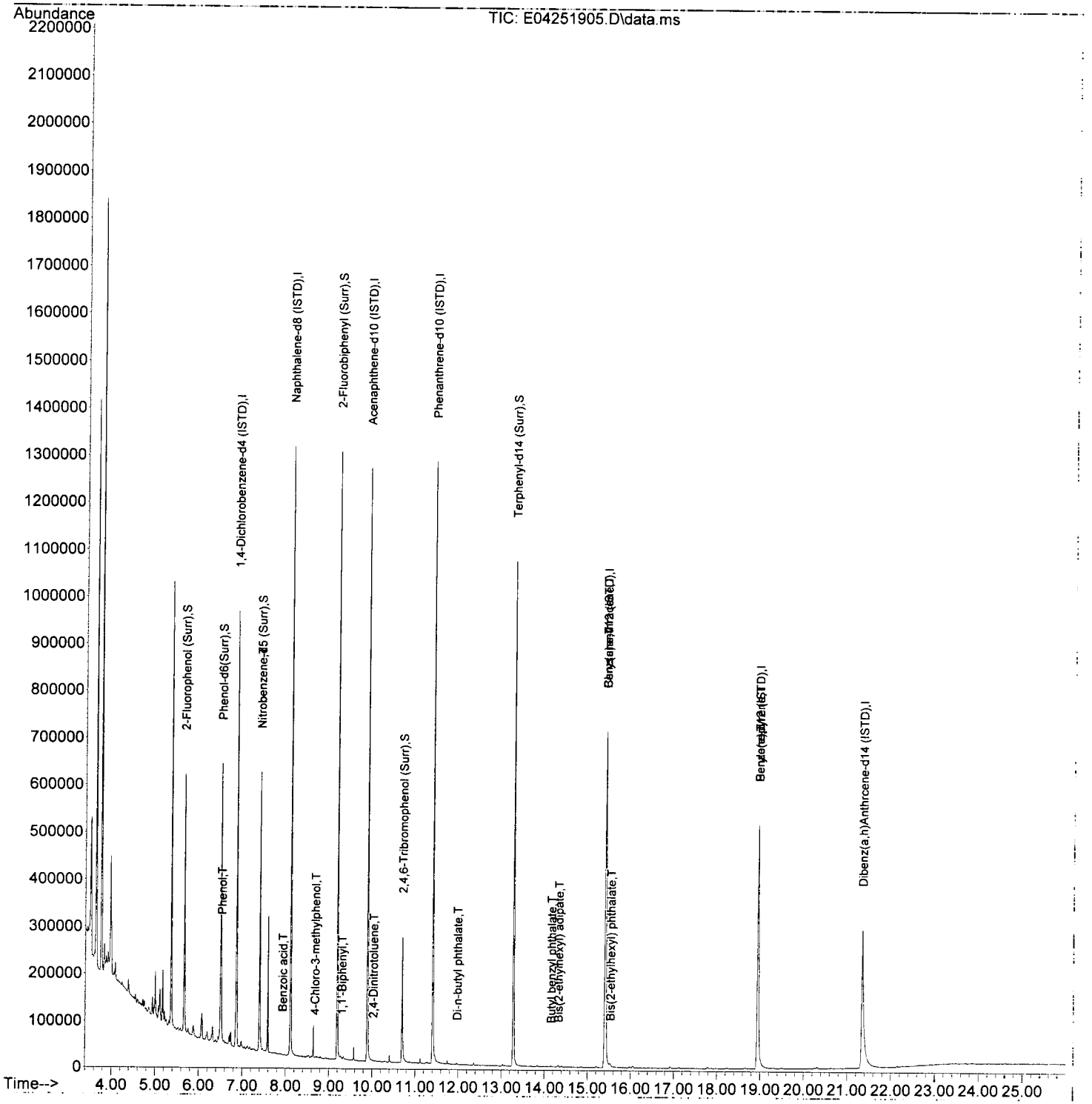
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.896	153	57	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.019	165	56	62.04 ng/ml#	15
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	10.308	149	208	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.426	178	253	N.D.	
72) Anthracene	11.426	178	253	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.971	149	1641	4.31 ng/ml	91
75) Fluoranthene	12.763	202	96	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.079	202	65	N.D.	
80) Butyl benzyl phthalate	14.154	149	904	5.94 ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.319	129	1223	8.07 ng/ml	95
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.411	228	1303	4.44 ng/ml	63
84) Chrysene	15.411	228	1264	4.52 ng/ml	61
85) Bis(2-ethylhexyl) phth...	15.528	149	1923	8.84 ng/ml	96
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	18.946	252	1382	6.15 ng/ml#	5
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.946	252	1382	6.02 ng/ml	73
95) Indeno(1,2,3-cd)pyrene	21.337	276	55	N.D.	
96) Dibenz(a,h)anthracene	0.000		0	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 : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251905.D
Acq On : 25 Apr 2019 9:57 am
Operator : JK/ AMS /DTH
Sample : 9041271-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:43 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251906.D
Acq On : 25 Apr 2019 10:34 am
Operator : JK/ AMS /DTH
Sample : 9041271-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:47 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	157254	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	606070	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.891	162	313725	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	609263	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	552624	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.941	264	451087	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	403075	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.660	112	94872	967.72	ng/ml	0.01
5) Phenol-d6(Surr)	6.505	99	124818	951.83	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.398	82	110393	938.91	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	231565	992.49	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	30083	1329.72	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	282932	1095.78	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.424	74	118064	1591.02	ng/ml	91
3) Pyridine	4.462	79	163061	1356.81	ng/ml	96
6) Phenol	6.516	94	227999	1659.30	ng/ml	93
7) Aniline	6.553	93	267240	1492.48	ng/ml	96
8) Bis(2-chloroethyl) ether	6.601	93	187848	1672.60	ng/ml	95
9) 2-Chlorophenol	6.671	128	184696	1795.02	ng/ml	95
10) 1,3-Dichlorobenzene	6.815	146	198553	1688.09	ng/ml	97
11) 1,4-Dichlorobenzene	6.879	146	204685	1722.34	ng/ml	98
12) Benzyl alcohol	6.986	108	104240	1599.58	ng/ml	94
13) 1,2-Dichlorobenzene	7.029	146	192979	1714.30	ng/ml	98
14) 2-Methylphenol	7.093	107	149495	1747.01	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.109	45	286018	1605.97	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.238	70	144913	1721.41	ng/ml	94
17) 3+4-Methylphenol	7.238	107	188921	1747.80	ng/ml	94
18) Hexachloroethane	7.361	117	75189	1713.86	ng/ml	81
20) Nitrobenzene	7.414	77	193545	1704.41	ng/ml	92
22) Isophorone	7.644	82	369332	1785.60	ng/ml	95
23) 2-Nitrophenol	7.730	139	91698	1946.88	ng/ml	86
24) 2,4-Dimethylphenol	7.757	122	164247	1811.01	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.848	93	225065	1729.41	ng/ml	98
26) Benzoic acid	7.858	105	107212	3120.05	ng/ml	95
27) 2,4-Dichlorophenol	7.971	162	134772	1917.72	ng/ml	97
28) 1,2,4-Trichlorobenzene	8.051	180	152859	1815.58	ng/ml	97
29) Naphthalene	8.131	128	552511	1708.90	ng/ml	100
30) 4-Chloroaniline	8.179	127	155248	1394.26	ng/ml	96
31) Hexachlorobutadiene	8.254	225	80199	1950.23	ng/ml	98
32) 4-Chloro-3-methylphenol	8.655	107	147258	1847.60	ng/ml	99
33) 2-Methylnaphthalene	8.826	142	368720	1813.05	ng/ml	96
34) 1-Methylnaphthalene	8.928	142	349653	1795.35	ng/ml	96
36) Hexachlorocyclopentadiene	8.992	237	81829	2033.35	ng/ml	96
37) 2,4,6-Trichlorophenol	9.110	196	94527	1930.98	ng/ml	99
38) 2,4,5-Trichlorophenol	9.147	196	97554	1918.68	ng/ml	97
39) 1,1'-Biphenyl	9.292	154	908	3.38	ng/ml	85
41) 2-Chloronaphthalene	9.318	162	326139	1683.08	ng/ml	98
42) 2-Nitroaniline	9.420	138	114081	1834.94	ng/ml	83

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251906.D
Acq On : 25 Apr 2019 10:34 am
Operator : JK/ AMS /DTH
Sample : 9041271-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:47 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

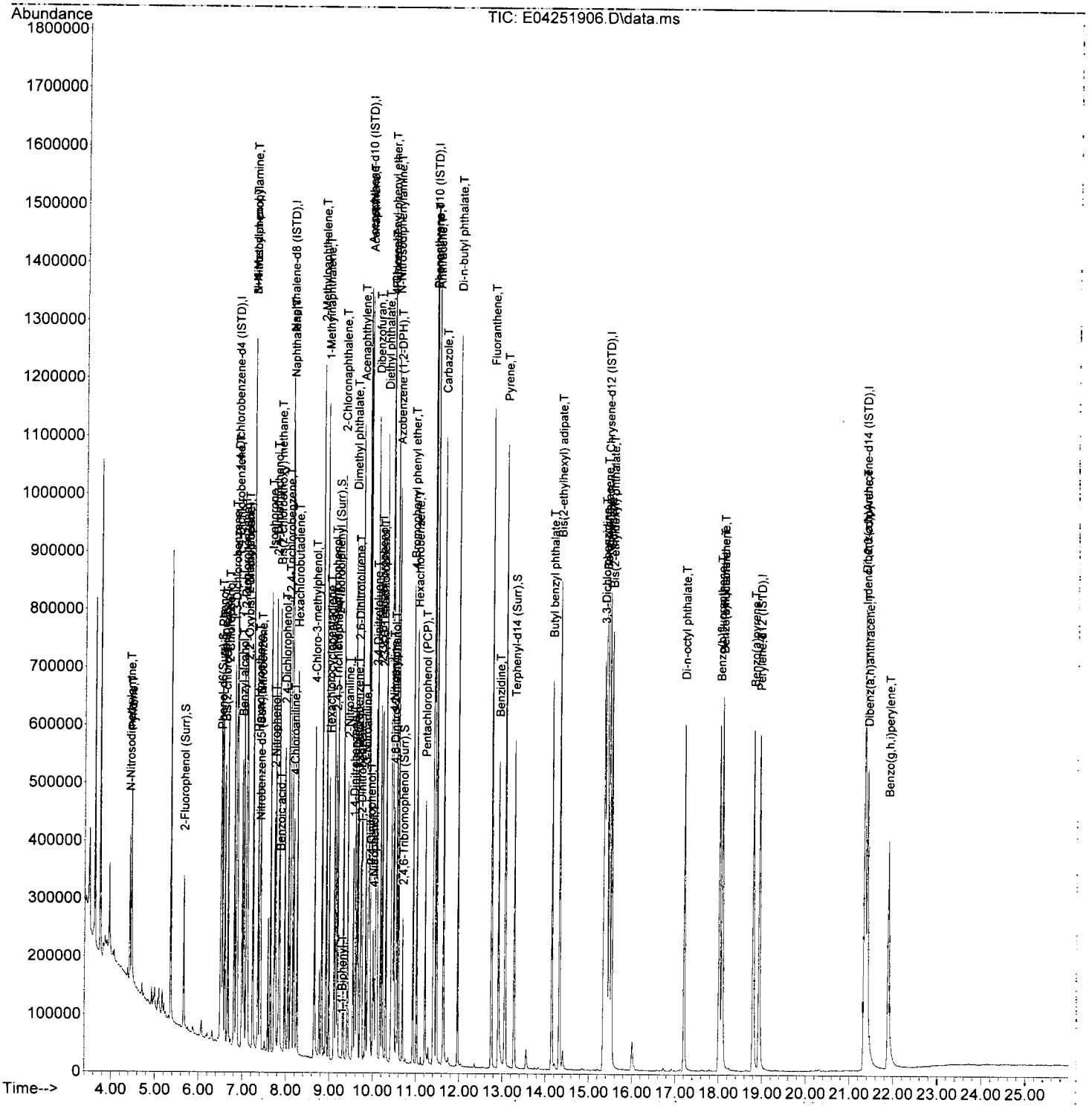
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.463	156	50	N.D.	
44) 1,4-Dinitrobenzene	9.548	168	55419	2189.76 ng/ml#	75
45) Dimethyl phthalate	9.591	163	397656	1974.97 ng/ml	99
46) 1,3-Dinitrobenzene	9.629	168	64980	2070.78 ng/ml	89
47) 2,6-Dinitrotoluene	9.655	165	94956	2067.90 ng/ml	80
48) 1,2-Dinitrobenzene	9.720	168	43473	2085.04 ng/ml#	64
49) Acenaphthylene	9.746	152	564274	1846.52 ng/ml	99
50) 3-Nitroaniline	9.832	138	85776	1642.14 ng/ml	96
51) Acenaphthene	9.923	153	367364	1772.93 ng/ml	100
52) 2,4-Dinitrophenol	9.939	184	40247	2493.09 ng/ml	79
53) 4-Nitrophenol	10.003	139	64251	1606.41 ng/ml	82
54) 2,4-Dinitrotoluene	10.067	165	123317	2068.07 ng/ml	89
55) Dibenzofuran	10.094	168	492200	1827.16 ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.174	232	86501	2199.07 ng/ml	92
57) 2,3,4,6-Tetrachlorophenol	10.222	232	88773	2050.99 ng/ml	89
58) Diethyl phthalate	10.303	149	404886	2012.09 ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.303	170	127	N.D.	
60) Fluorene	10.442	166	414803	1923.12 ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.431	204	187473	1962.98 ng/ml	87
62) 4-Nitroaniline	10.458	138	105562	1854.27 ng/ml	77
63) 4,6-Dinitro-2-methylph...	10.490	198	68853	2750.87 ng/ml	79
65) N-Nitrosodiphenylamine	10.549	169	361024	1875.71 ng/ml	97
66) Azobenzene (1,2-DPH)	10.591	77	432600	1645.01 ng/ml	95
68) 4-Bromophenyl phenyl e...	10.934	248	107957	1915.28 ng/ml	86
69) Hexachlorobenzene	11.019	284	111412	1964.88 ng/ml	91
70) Pentachlorophenol (PCP)	11.212	266	60108	1976.59 ng/ml	95
71) Phenanthrene	11.426	178	604101	1806.51 ng/ml	99
72) Anthracene	11.479	178	617291	1799.13 ng/ml	99
73) Carbazole	11.634	167	555229	1728.31 ng/ml	99
74) Di-n-butyl phthalate	11.971	149	670680	1668.50 ng/ml	99
75) Fluoranthene	12.752	202	633694	1826.90 ng/ml	99
76) Benzidine	12.913	184	323734	2753.43 ng/ml	99
77) Pyrene	13.068	202	654507	1857.50 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	259692	1606.59 ng/ml	93
81) Bis(2-ethylhexyl) adipate	14.325	129	241137	1499.14 ng/ml	99
82) 3,3-Dichlorobenzidine	15.346	252	309764	3284.31 ng/ml	98
83) Benz(a)anthracene	15.389	228	553408	1775.36 ng/ml	98
84) Chrysene	15.475	228	539680	1817.40 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	363830	1575.02 ng/ml	95
87) Di-n-octyl phthalate	17.208	149	530390	1722.89 ng/ml	99
88) Benzo(b)fluoranthene	18.021	252	489037	2052.02 ng/ml	96
89) Benzo(k)fluoranthene	18.090	252	494559	2111.58 ng/ml	100
90) Benzo(b+k)fluoranthene	18.090	252	1018483	4069.33 ng/ml	100
91) Benzo(e)pyrene	18.700	252	134	N.D.	
92) Benzo(a)pyrene	18.802	252	460823	2129.66 ng/ml	100
93) Perylene	18.941	252	10916	44.14 ng/ml	91
95) Indeno(1,2,3-cd)pyrene	21.353	276	367796	1664.75 ng/ml	97
96) Dibenz(a,h)anthracene	21.412	278	385421	1904.95 ng/ml	97
97) Benzo(g,h,i)perylene	21.893	276	374157	1720.19 ng/ml	81

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251906.D
Acq On : 25 Apr 2019 10:34 am
Operator : JK/ AMS /DTH
Sample : 9041271-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:47 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	167847	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	659945	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	318377	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	626585	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	588534	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	516026	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.337	292	450002	2000.00 ng/ml	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.671	112	1164	11.12 ng/ml	0.03
5) Phenol-d6(Surr)	~~6.532~~	~~99~~	~~1149~~	~~8.21 ng/ml~~	0.01
19) Nitrobenzene-d5 (Surr)	7.414	82	1500	11.95 ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.195	172	4048	17.10 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.704	330	288	27.71 ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.276	244	5104	18.56 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.387	74	82	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.537	94	155	N.D.	
7) Aniline	6.537	93	512	2.68 ng/ml	63
8) Bis(2-chloroethyl) ether	6.591	93	167	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	7.040	108	245	3.52 ng/ml#	40
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.045	107	57	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.147	45	83	N.D.	
16) N-Nitrosodi-n-propylamine	7.227	70	184	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	7.334	77	90	N.D.	
22) Isophorone	7.634	82	74	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	7.880	105	503	412.31 ng/ml#	68
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.131	128	738	N.D.	
30) 4-Chloroaniline	8.131	127	102	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.703	107	56	27.24 ng/ml#	1
33) 2-Methylnaphthalene	8.837	142	254	N.D.	
34) 1-Methylnaphthalene	8.933	142	94	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	9.308	154	79	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

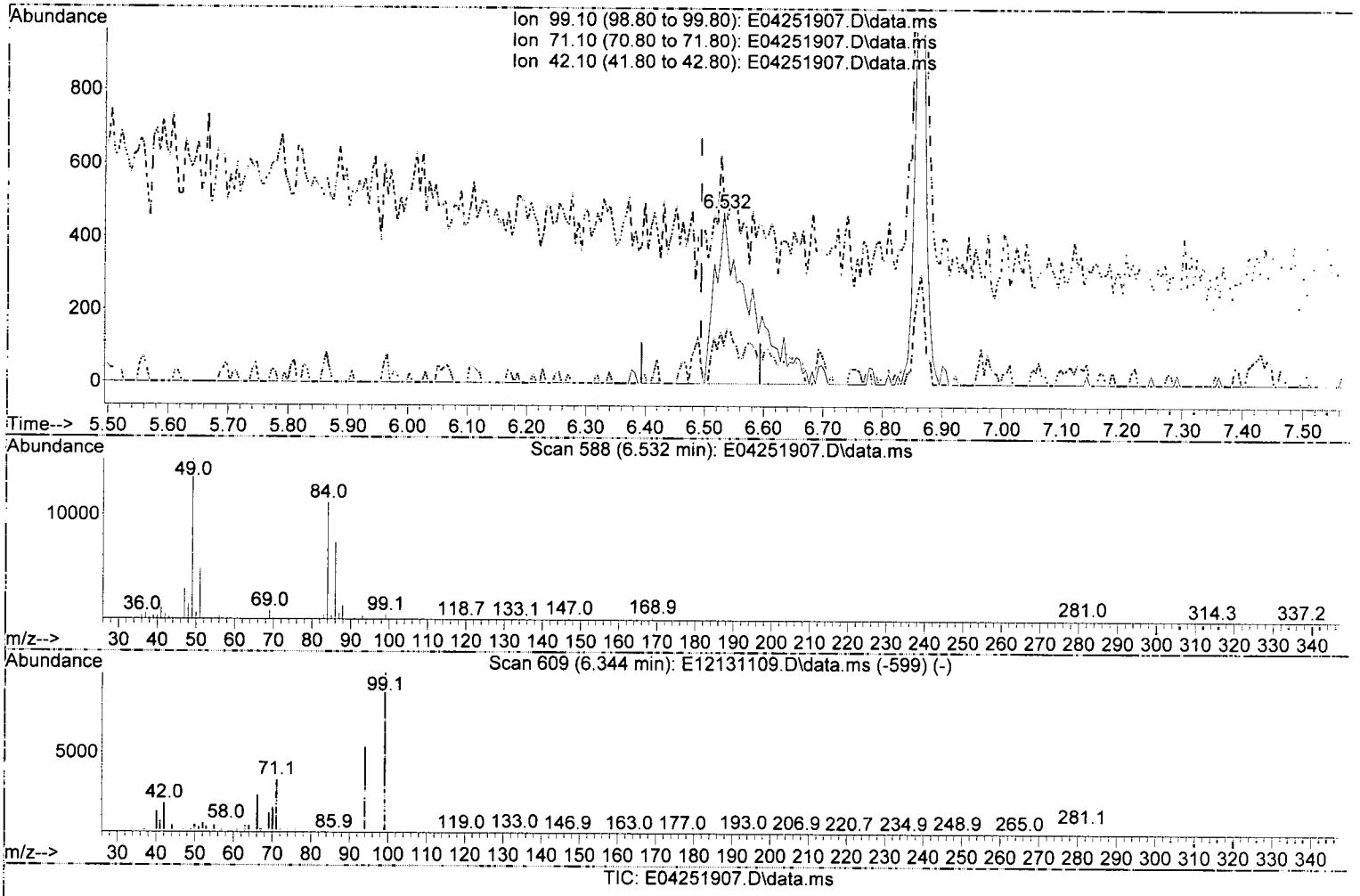
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.468	156	54	N.D.		
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	9.602	163	218	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	9.741	152	79	N.D.		
50) 3-Nitroaniline	9.853	138	125	31.56	ng/ml#	23
51) Acenaphthene	9.917	153	1201	5.71	ng/ml	90
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	10.046	165	83	62.43	ng/ml#	15
55) Dibenzofuran	10.105	168	363	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	0.000		0	N.D.		
59) 2,3,5-Trimethylnaphtha...	0.000		0	N.D.		
60) Fluorene	10.447	166	607	2.77	ng/ml	91
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)	10.613	77	115	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.223	266	103	73.50	ng/ml	76
71) Phenanthrene	11.426	178	7352	21.38	ng/ml	99
72) Anthracene	11.479	178	1510	4.28	ng/ml	91
73) Carbazole	11.650	167	1032	3.12	ng/ml	93
74) Di-n-butyl phthalate	11.971	149	492	N.D.		
75) Fluoranthene	12.752	202	14479	40.59	ng/ml	97
76) Benzidine	12.939	184	83	39.32	ng/ml	68
77) Pyrene	13.068	202	14386	39.70	ng/ml	94
80) Butyl benzyl phthalate	14.143	149	282	N.D.		
81) Bis(2-ethylhexyl) adipate	14.319	129	3215	18.77	ng/ml	97
82) 3,3-Dichlorobenzidine	15.357	252	124	22.35	ng/ml#	59
83) Benz(a)anthracene	15.389	228	10307	31.05	ng/ml MOS	96
84) Chrysene	15.464	228	9686	30.63	ng/ml MOS	95
85) Bis(2-ethylhexyl) phth...	15.528	149	3265	13.27	ng/ml	94
87) Di-n-octyl phthalate	17.213	149	1522	35.17	ng/ml#	26
88) Benzo(b)fluoranthene	18.021	252	12731	46.70	ng/ml MOS	94
89) Benzo(k)fluoranthene	~~18.021~~	~~252~~	~~15940~~	~~59.49~~	~~ng/ml~~ mI	95 Hit J
90) Benzo(b+k)fluoranthene	18.021	252	18632	65.08	ng/ml	95
91) Benzo(e)pyrene	18.673	252	7303	26.38	ng/ml	96
92) Benzo(a)pyrene	18.796	252	8932	36.08	ng/ml	100
93) Perylene	18.999	252	3605	12.74	ng/ml	89
95) Indeno(1,2,3-cd)pyrene	21.348	276	7123	28.88	ng/ml	77
96) Dibenz(a,h)anthracene	21.390	278	1349	5.87	ng/ml	76
97) Benzo(g,h,i)perylene	21.893	276	6115	25.18	ng/ml	83

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(5) Phenol-d6(Surr) (S)

6.532min (+ 0.039) 13.65 ng/ml m

response 1910

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	22.13
42.10	21.30	103.83#
0.00	0.00	0.00

DTH 4/25/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
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Operator : JK/ AMS /DTH
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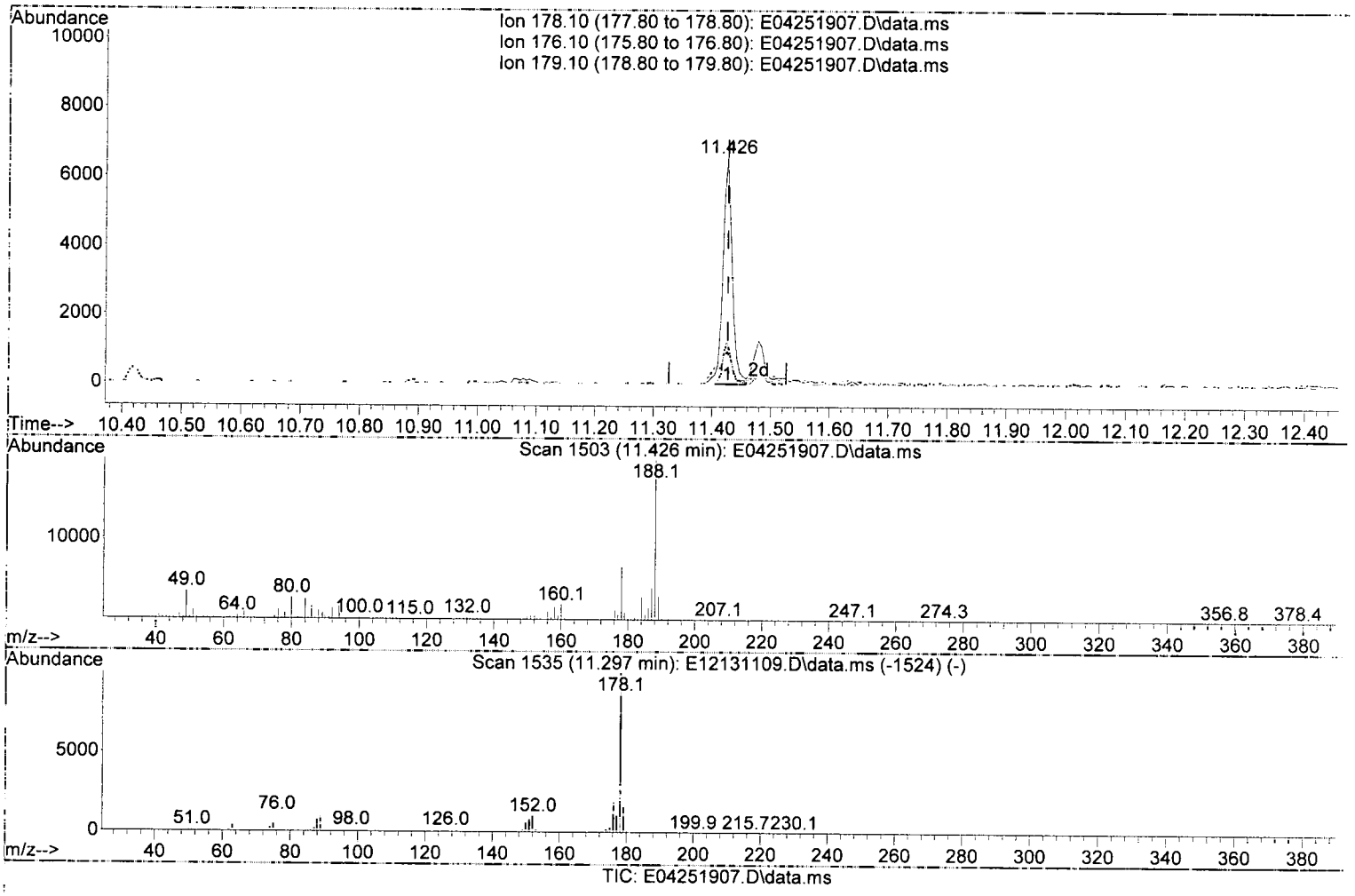
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 21.38 ng/ml

response 7352

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.63
179.10	15.00	14.25
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
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Quant Time: Apr 25 12:24:51 2019
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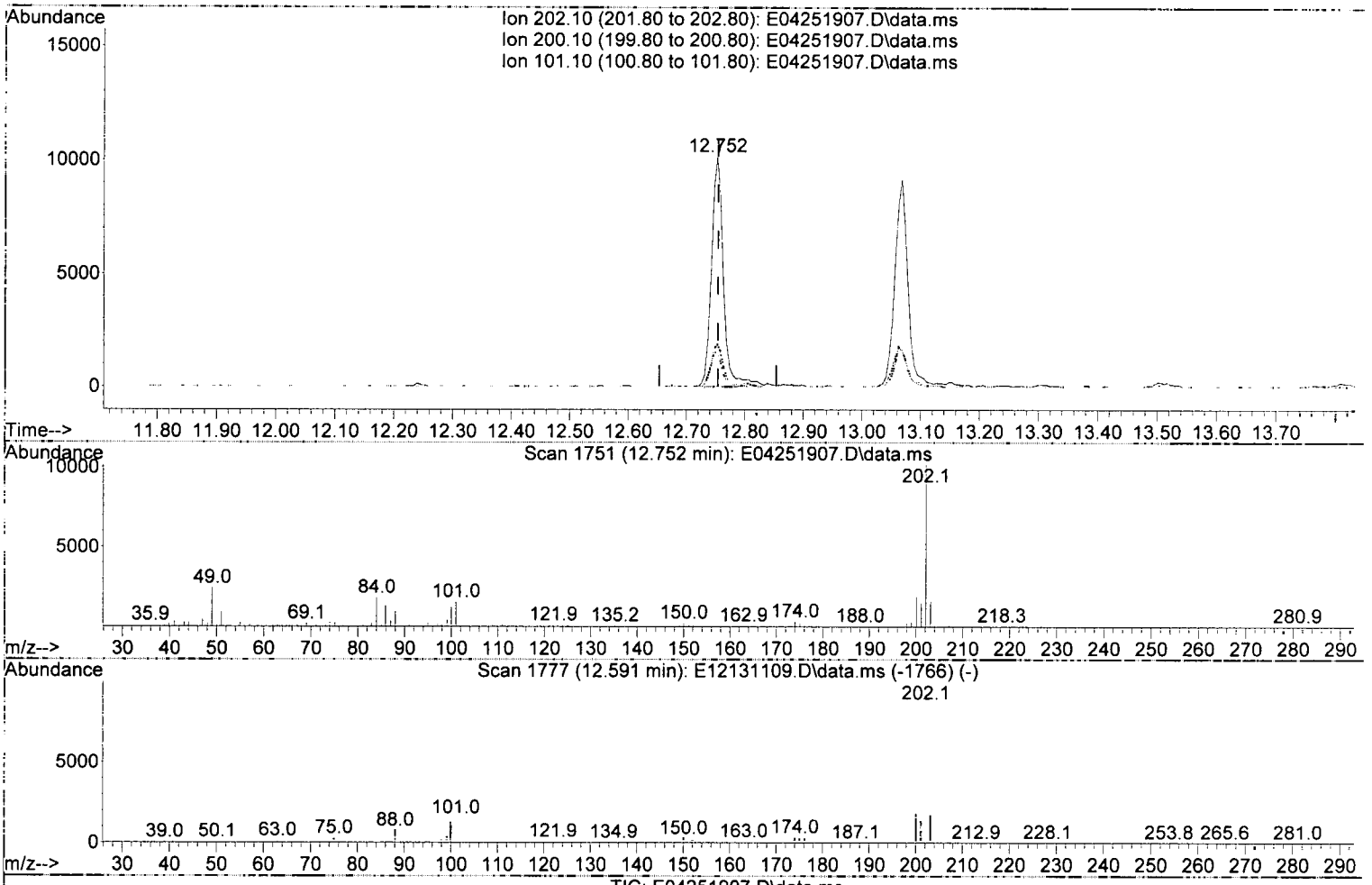
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(75) Fluoranthene (T)

12.752min (-0.001) 40.59 ng/ml

response 14479

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	18.60
101.10	15.70	15.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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DataAcq Meth:SV5_AQUISITION.M

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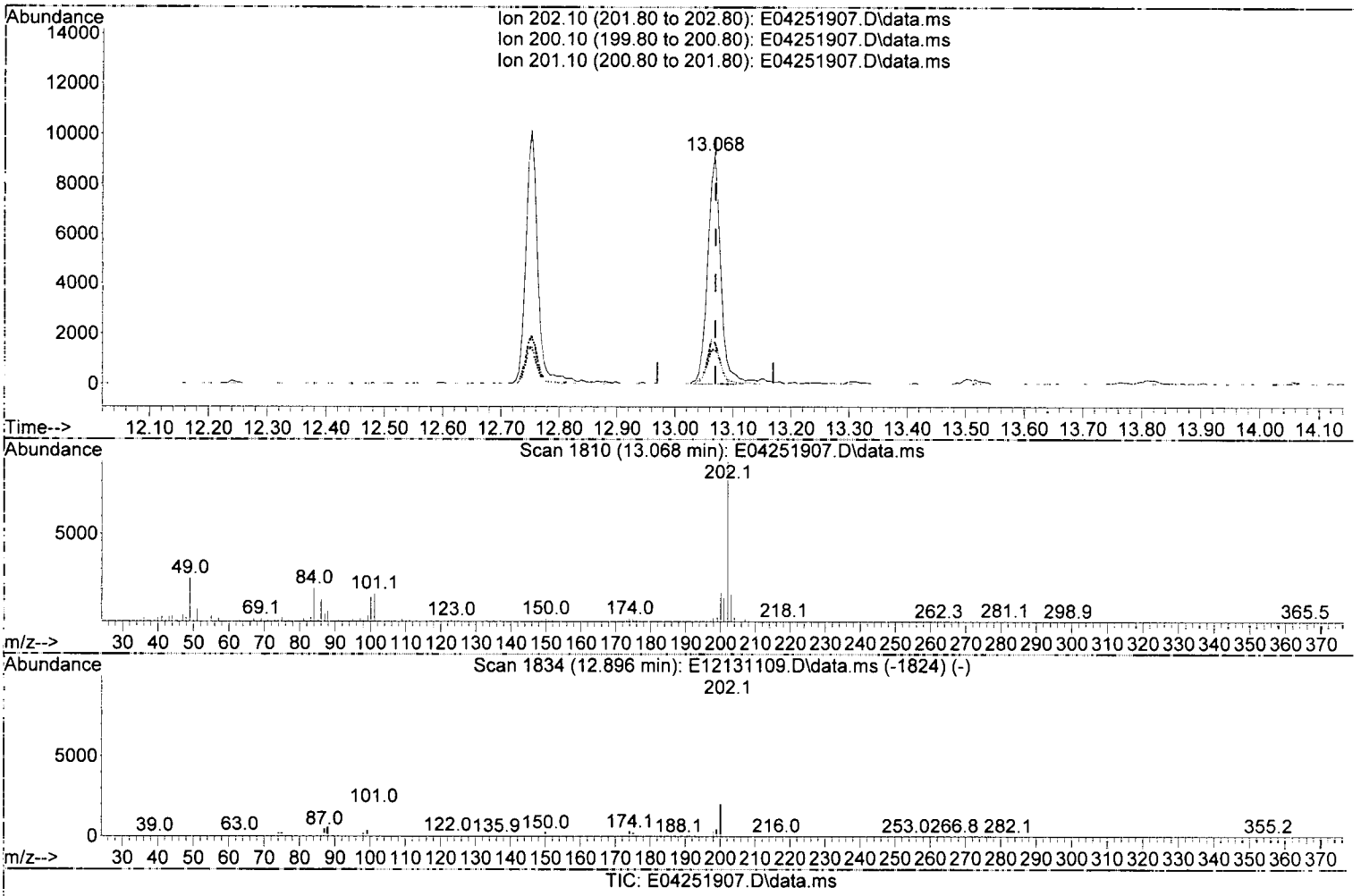
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(77) Pyrene (T)

13.068min (-0.001) 39.70 ng/ml

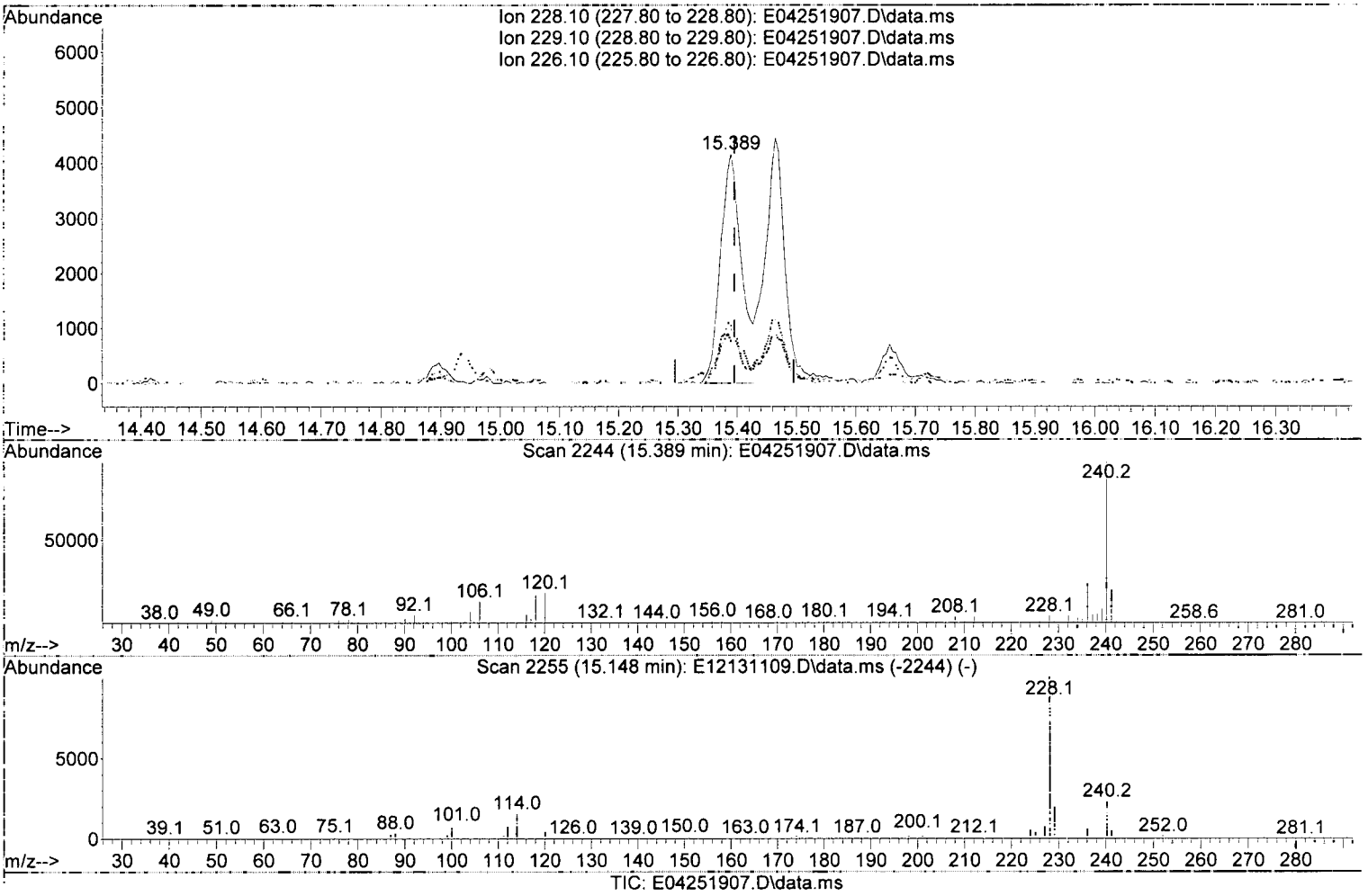
response 14386

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	18.15
201.10	17.50	15.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(83) Benz(a)anthracene (T)

15.389min (-0.005) 31.05 ng/ml MS

response 10307

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	18.28
226.10	27.80	25.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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Acq On : 25 Apr 2019 11:12 am
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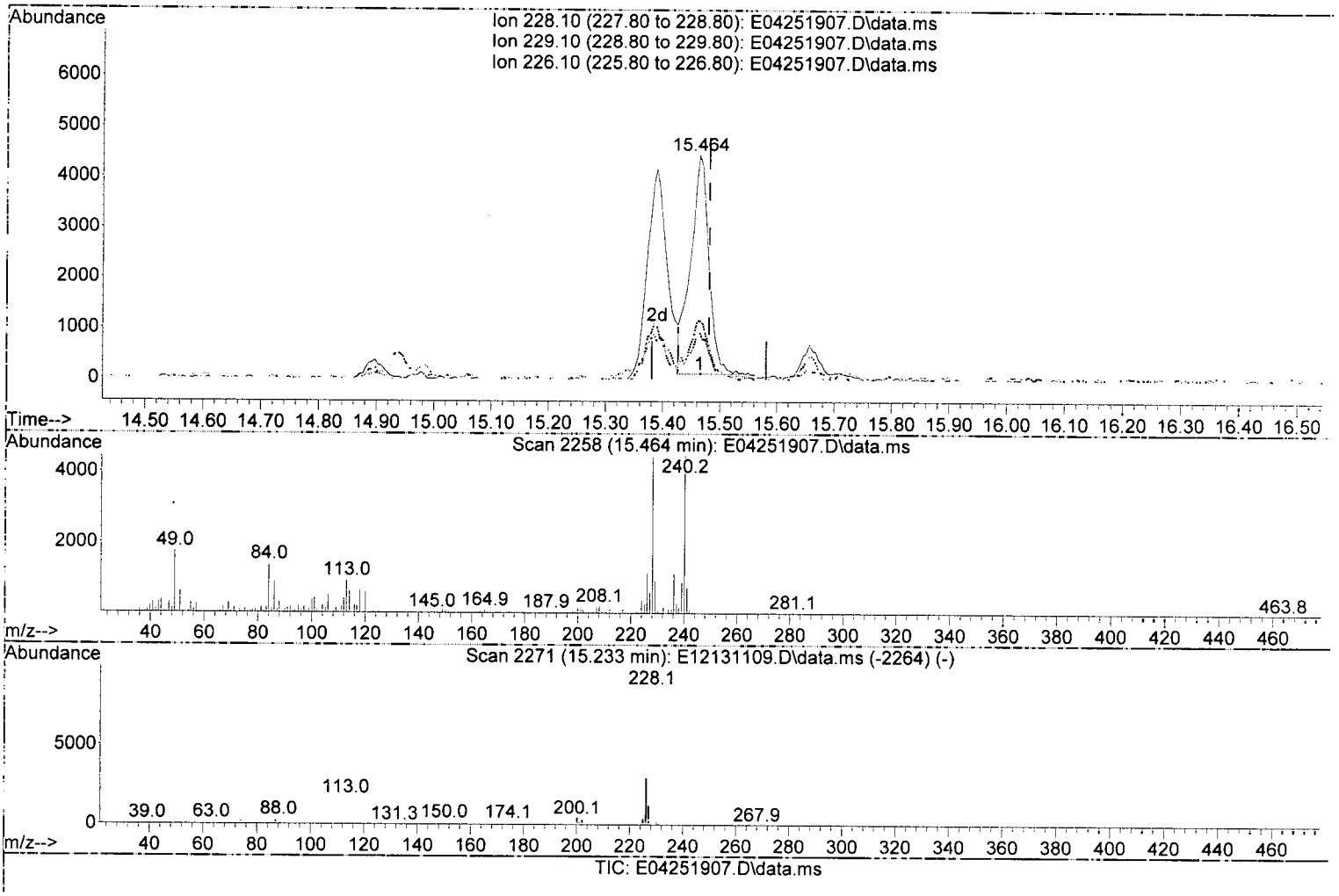
Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 30.63 ng/ml MOS

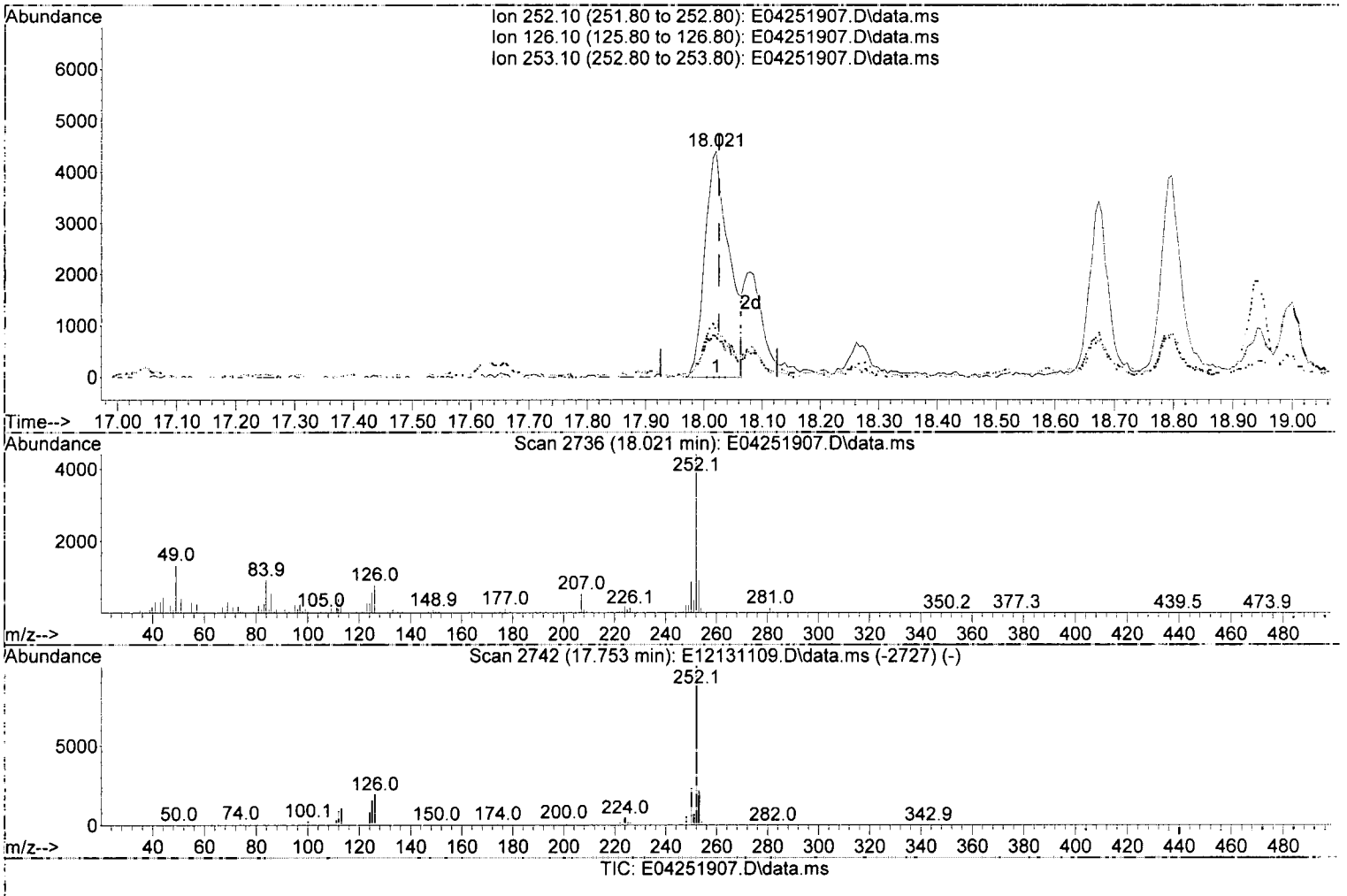
response 9686

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	20.88
226.10	29.80	26.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(88) Benzo(b)fluoranthene (T)

18.021min (-0.004) 46.70 ng/ml MOS

response 12731

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	17.94
253.10	22.40	20.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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Sample : A9D0674-24@40
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ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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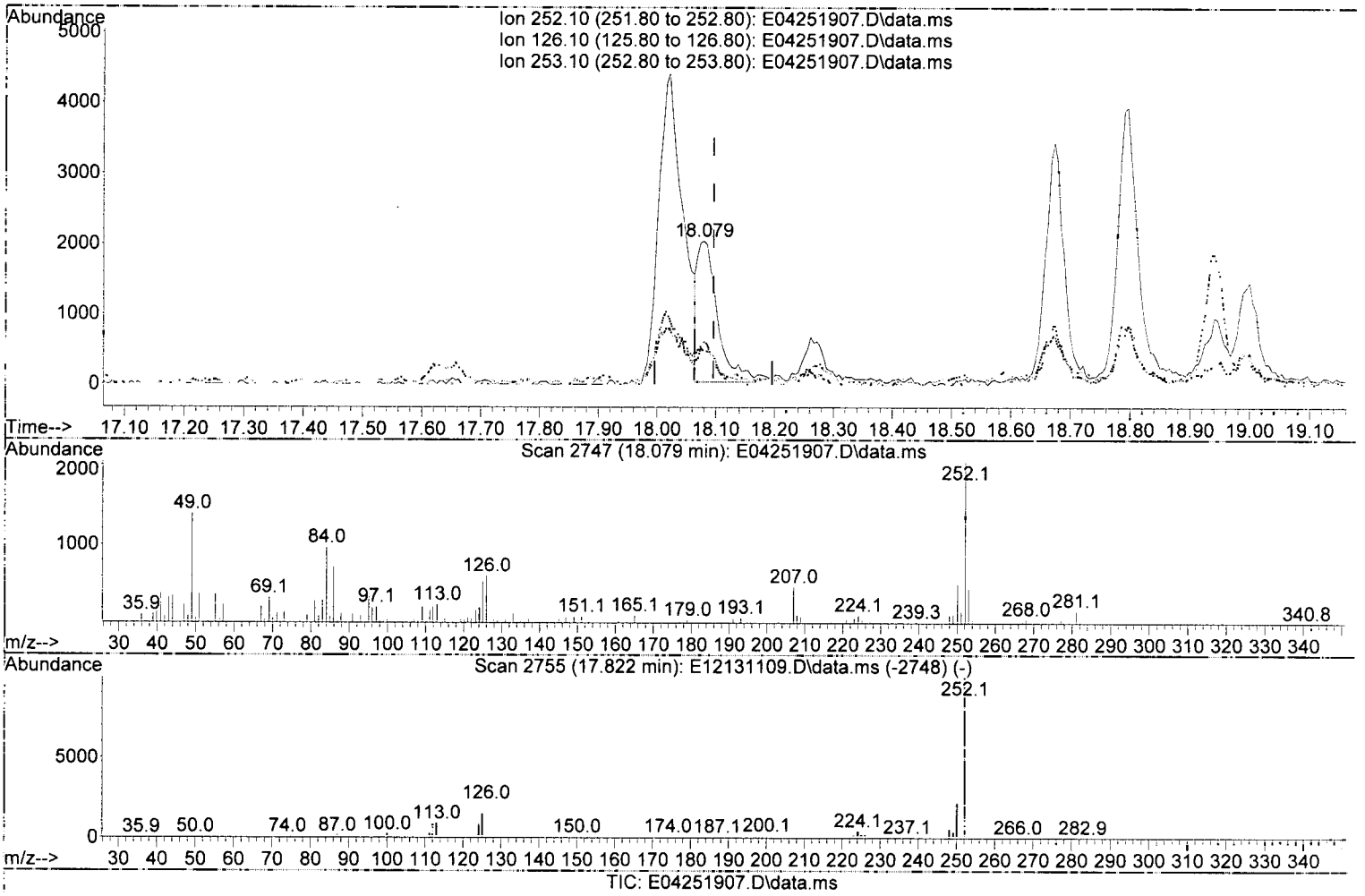
InstName : SV-GCMS5



(89) Benzo(k)fluoranthene (T)

18.079min (-0.016) 17.81 ng/ml m J

response 4771

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	29.91
253.10	21.80	22.32
0.00	0.00	0.00

DTH 4/26/19

J

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
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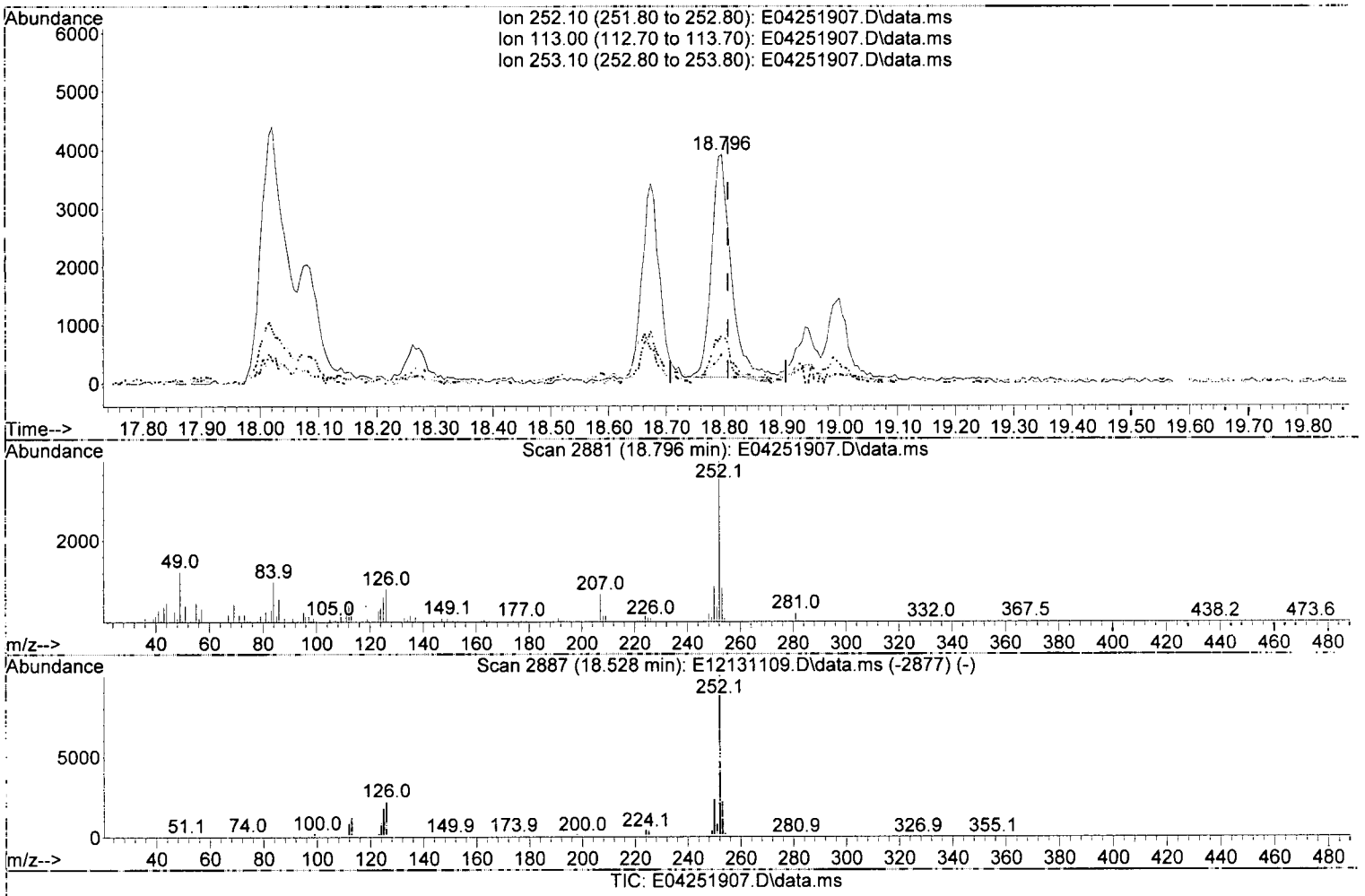
Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(92) Benzo(a)pyrene (T)

18.796min (-0.010) 36.08 ng/ml

response 8932

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	12.65
253.10	21.70	21.48
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
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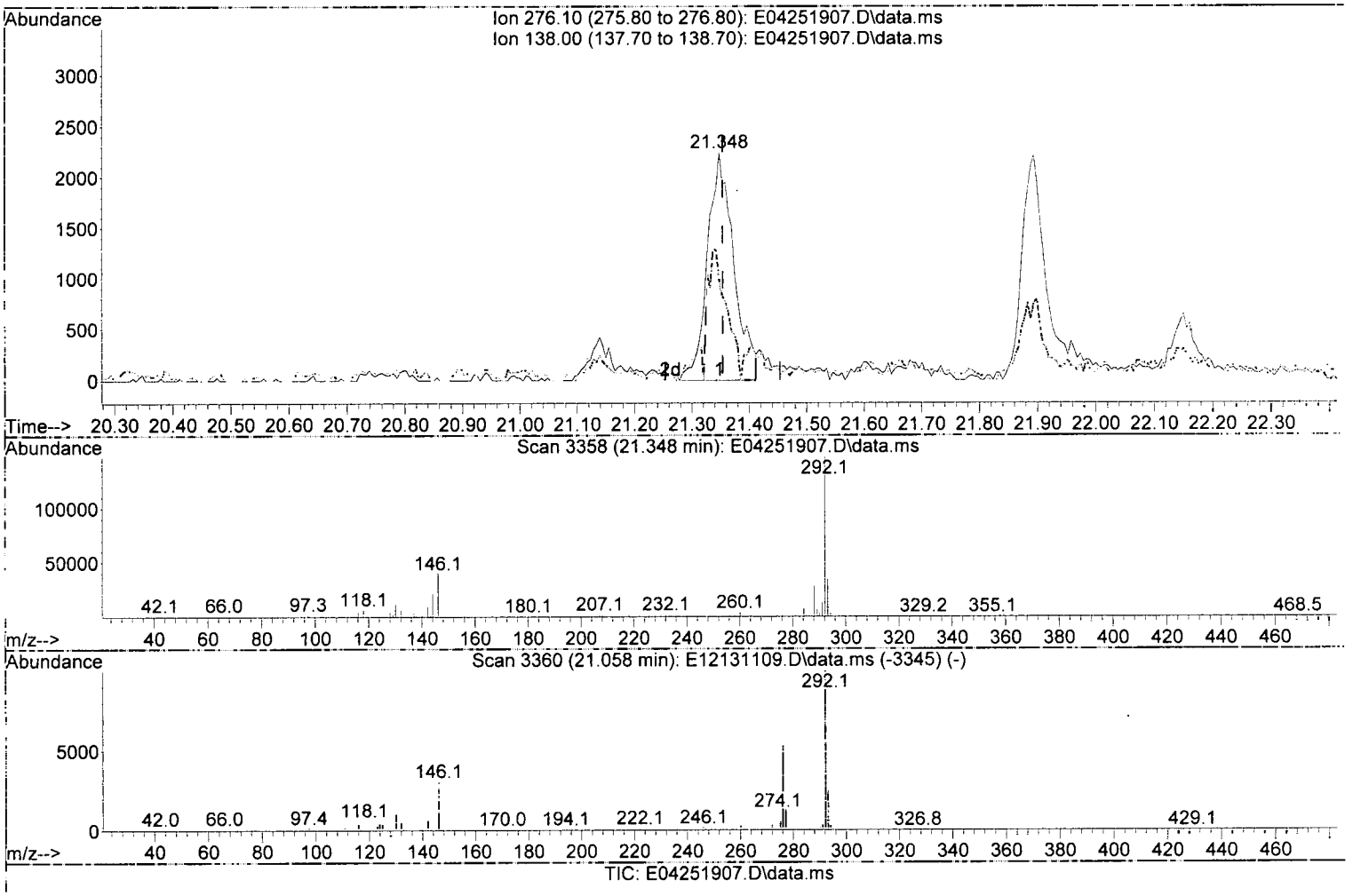
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.348min (-0.006) 28.88 ng/ml

response 7123

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	43.46
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
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DataAcq Meth:SV5_AQUISITION.M

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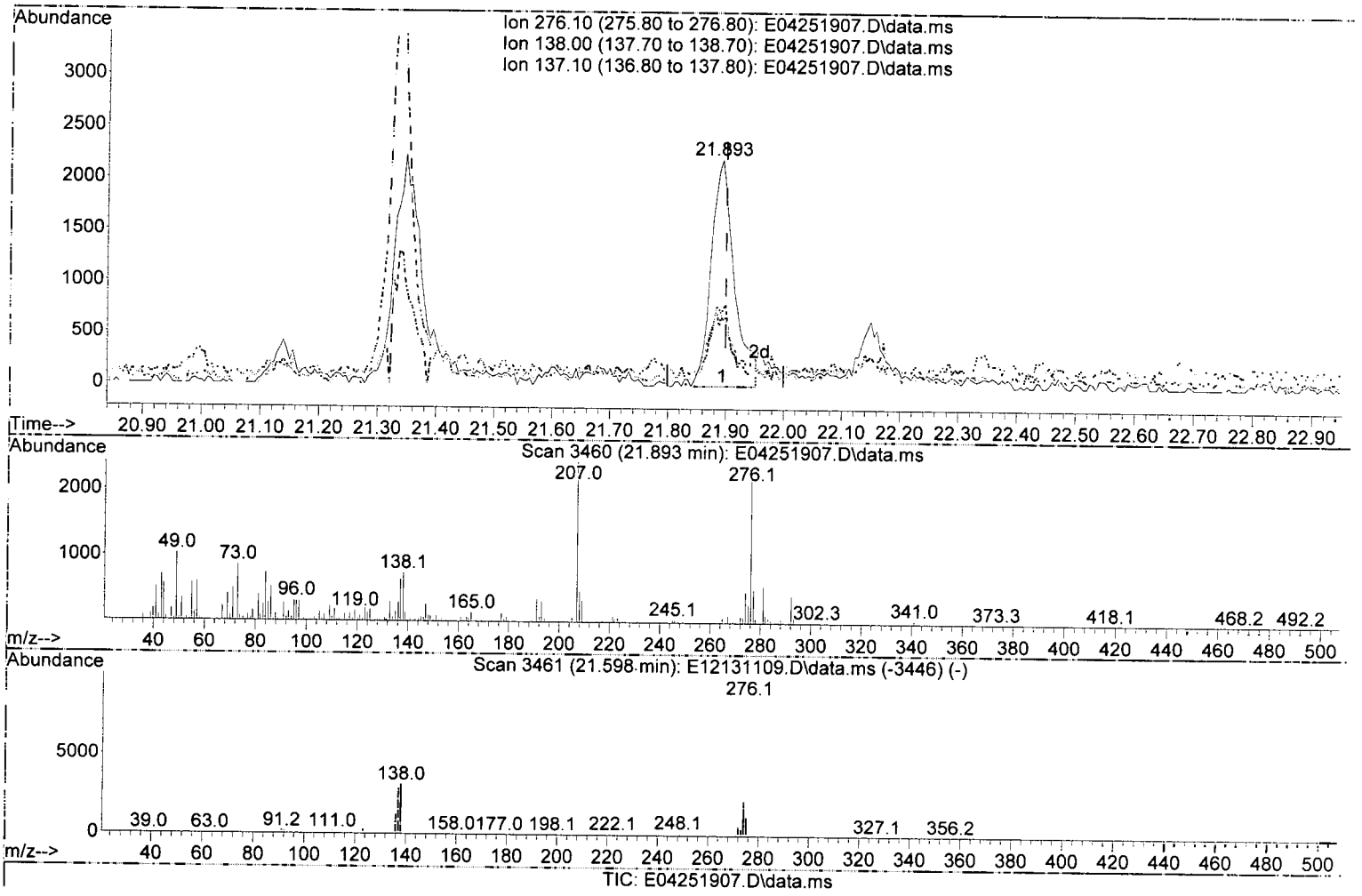
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251907.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.893min (-0.006) 25.18 ng/ml

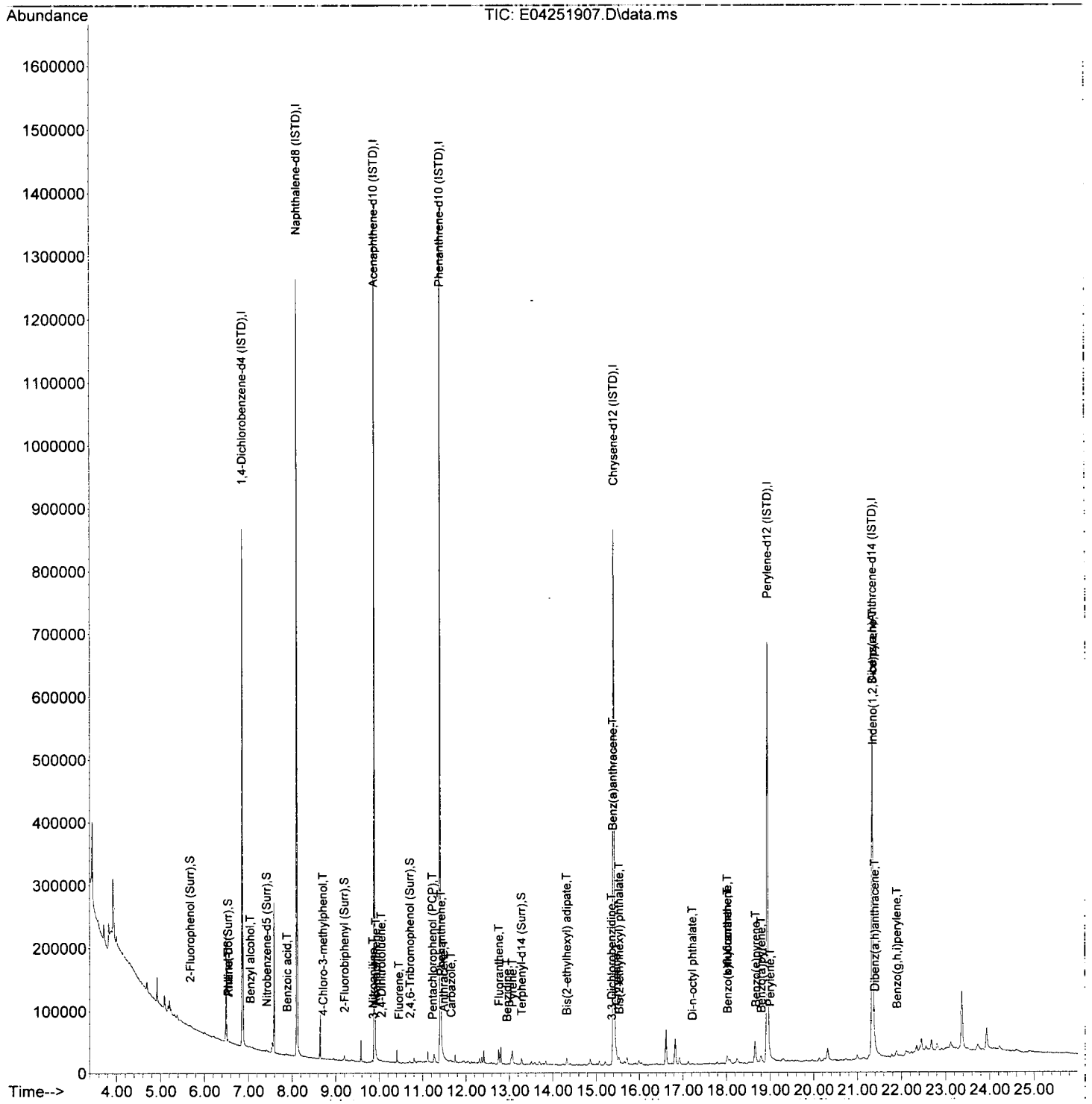
response 6115

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	33.89
137.10	39.00	29.72
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251907.D
Acq On : 25 Apr 2019 11:12 am
Operator : JK/ AMS /DTH
Sample : A9D0674-24@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:51 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	190270	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	721983	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	325280	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	591119	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	544066	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	470674	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.337	292	414805	2000.00 ng/ml	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.671	112	3702	31.21 ng/ml	0.03
5) Phenol-d6(Surr)	~~6.516~~	~~99~~	~~3894~~	~~24.54 ng/ml~~	~~0.02~~ MT
19) Nitrobenzene-d5 (Surr)	7.414	82	4264	29.97 ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.190	172	9229	38.15 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	956	60.97 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	10881	42.80 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	4.521	79	50	N.D.	
6) Phenol	6.526	94	69	N.D.	
7) Aniline	6.537	93	113	N.D.	
8) Bis(2-chloroethyl) ether	6.537	93	113	N.D.	
9) 2-Chlorophenol	0.000		0	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	7.109	107	65	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.190	70	51	N.D.	
17) 3+4-Methylphenol	7.270	107	69	N.D.	
18) Hexachloroethane	7.409	117	72	N.D.	
20) Nitrobenzene	7.430	77	84	N.D.	
22) Isophorone	7.634	82	249	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	7.901	105	51	398.79 ng/ml#	8
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.131	128	71097	184.60 ng/ml	99
30) 4-Chloroaniline	8.131	127	9289	70.03 ng/ml#	28
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.826	142	7977	32.93 ng/ml J	95
34) 1-Methylnaphthalene	8.928	142	4996	21.53 ng/ml J	99
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	9.292	154	8997	32.33 ng/ml	99
41) 2-Chloronaphthalene	9.372	162	449	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.463	156	5893	30.31	ng/ml	97
44)	1,4-Dinitrobenzene	9.575	168	105	75.14	ng/ml#	1
45)	Dimethyl phthalate	9.597	163	50	N.D.		
46)	1,3-Dinitrobenzene	9.575	168	105	70.52	ng/ml#	1
47)	2,6-Dinitrotoluene	9.645	165	92	33.74	ng/ml#	58
48)	1,2-Dinitrobenzene	0.000		0	N.D.		
49)	Acenaphthylene	9.741	152	24978	78.83	ng/ml	99
50)	3-Nitroaniline	9.885	138	114	31.30	ng/ml#	1
51)	Acenaphthene	9.917	153	5422	25.24	ng/ml	97
52)	2,4-Dinitrophenol	0.000		0	N.D.		
53)	4-Nitrophenol	9.998	139	133	68.88	ng/ml#	1
54)	2,4-Dinitrotoluene	10.046	165	239	64.99	ng/ml#	30
55)	Dibenzofuran	10.094	168	6044	21.64	ng/ml#	59
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	10.303	149	171	N.D.		
59)	2,3,5-Trimethylnaphtha...	10.292	170	6003	34.64	ng/ml	91
60)	Fluorene	10.442	166	46798	209.26	ng/ml	99
61)	4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62)	4-Nitroaniline	10.442	138	595	10.08	ng/ml#	25
63)	4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65)	N-Nitrosodiphenylamine	10.554	169	512	2.74	ng/ml#	75
66)	Azobenzene (1,2-DPH)	10.602	77	210	N.D.		
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
69)	Hexachlorobenzene	0.000		0	N.D.		
70)	Pentachlorophenol (PCP)	0.000		0	N.D.		
71)	Phenanthrene	11.426	178	624379	1924.46	ng/ml	99
72)	Anthracene	11.474	178	212023	636.92	ng/ml	99
73)	Carbazole	11.634	167	16906	54.24	ng/ml	99
74)	Di-n-butyl phthalate	11.966	149	274	N.D.		
75)	Fluoranthene	12.752	202	857774	2548.82	ng/ml	97
76)	Benzidine	12.902	184	68	39.19	ng/ml#	51
77)	Pyrene	13.068	202	1060347	3101.65	ng/ml	99
80)	Butyl benzyl phthalate	14.154	149	77	N.D.		
81)	Bis(2-ethylhexyl) adipate	14.319	129	2439	15.40	ng/ml	95
82)	3,3-Dichlorobenzidine	0.000		0	N.D.		
83)	Benz(a)anthracene	15.384	228	275652	898.22	ng/ml	80
84)	Chrysene	15.469	228	300134	1026.61	ng/ml	98
85)	Bis(2-ethylhexyl) phth...	15.534	149	906	3.98	ng/ml	97
87)	Di-n-octyl phthalate	17.234	149	163	31.20	ng/ml#	1
88)	Benzo(b)fluoranthene	18.021	252	271987	1093.77	ng/ml	97
89)	Benzo(k)fluoranthene	~~18.021~~	~~252~~	~~352673~~	~~1443.12~~	~~ng/ml~~	~~96~~
90)	Benzo(b+k)fluoranthene	18.021	252	390463	1495.17	ng/ml	96
91)	Benzo(e)pyrene	18.673	252	169281	670.51	ng/ml	98
92)	Benzo(a)pyrene	18.796	252	278537	1233.67	ng/ml	99
93)	Perylene	18.994	252	72753	281.93	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.342	276	157029	690.66	ng/ml	100
96)	Dibenz(a,h)anthracene	21.396	278	21493	103.23	ng/ml	88
97)	Benzo(g,h,i)perylene	21.888	276	175678	784.84	ng/ml	80

mos

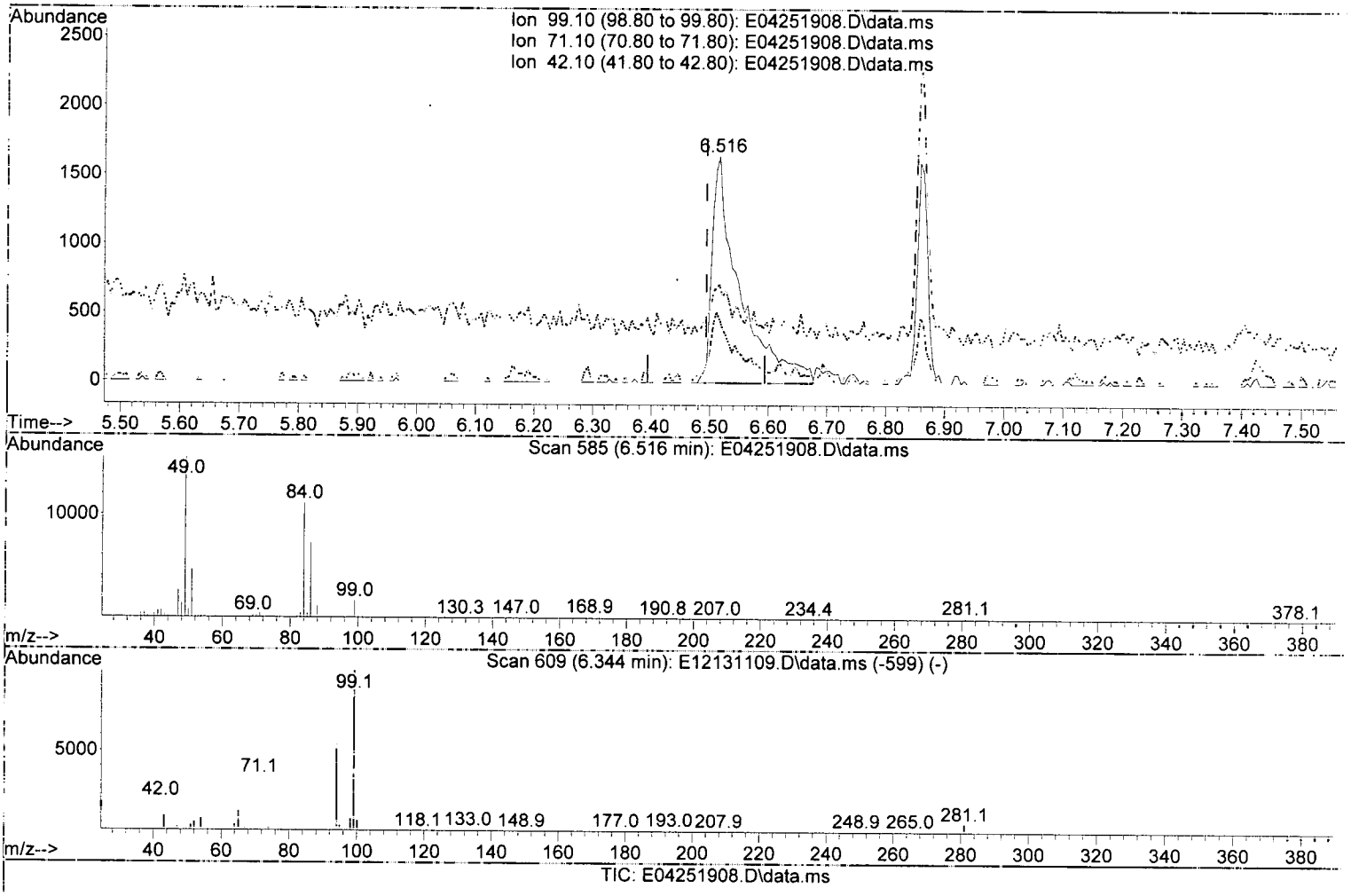
not H.t mos

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(5) Phenol-d6(Surr) (S)

6.516min (+ 0.023) 34.19 ng/ml m DTH 4/25/19

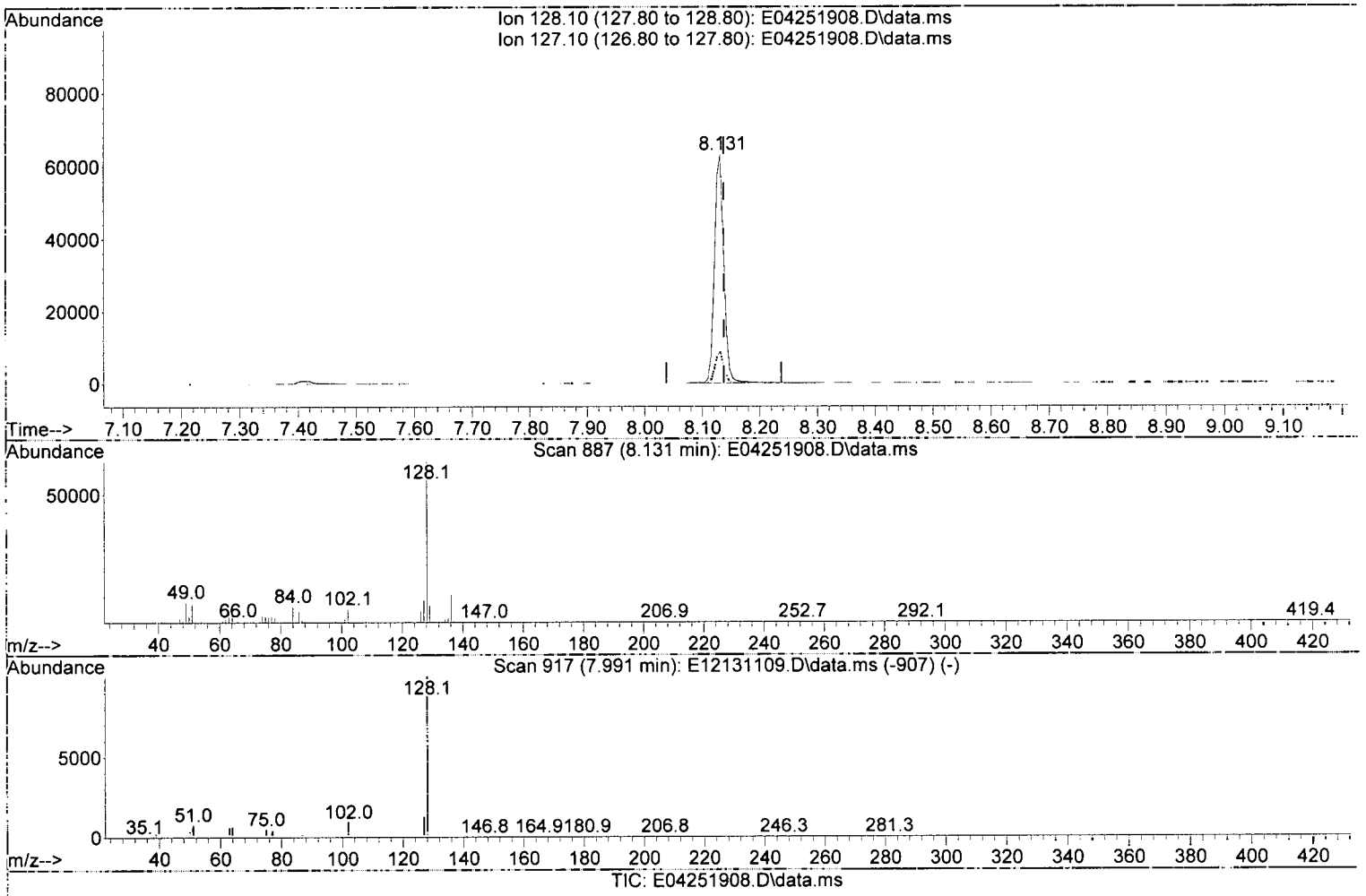
response 5425

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	28.07
42.10	21.30	43.13
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 184.60 ng/ml

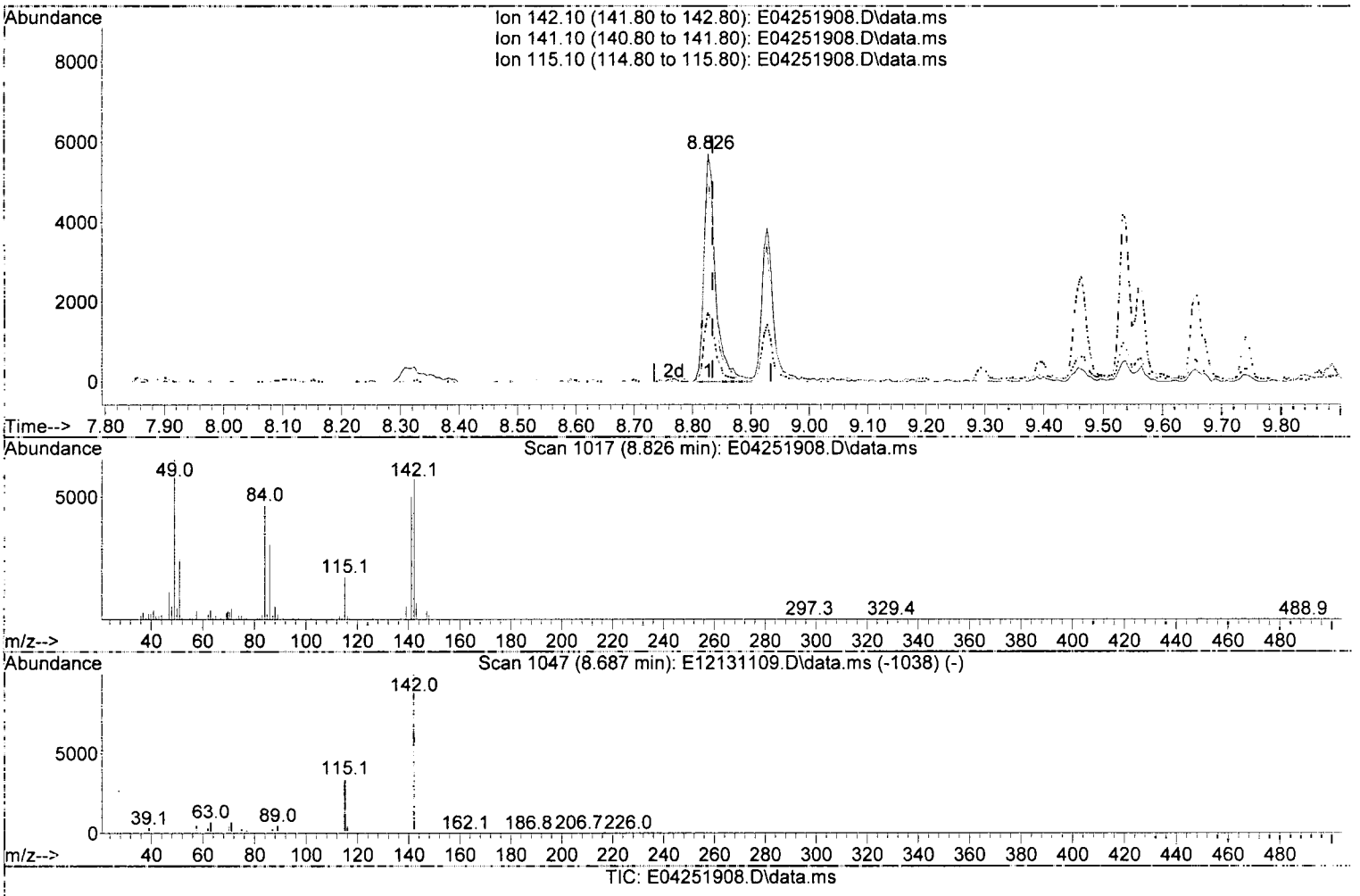
response 71097

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	13.72
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(33) 2-Methylnaphthalene (T)

8.826min (-0.007) 32.93 ng/ml

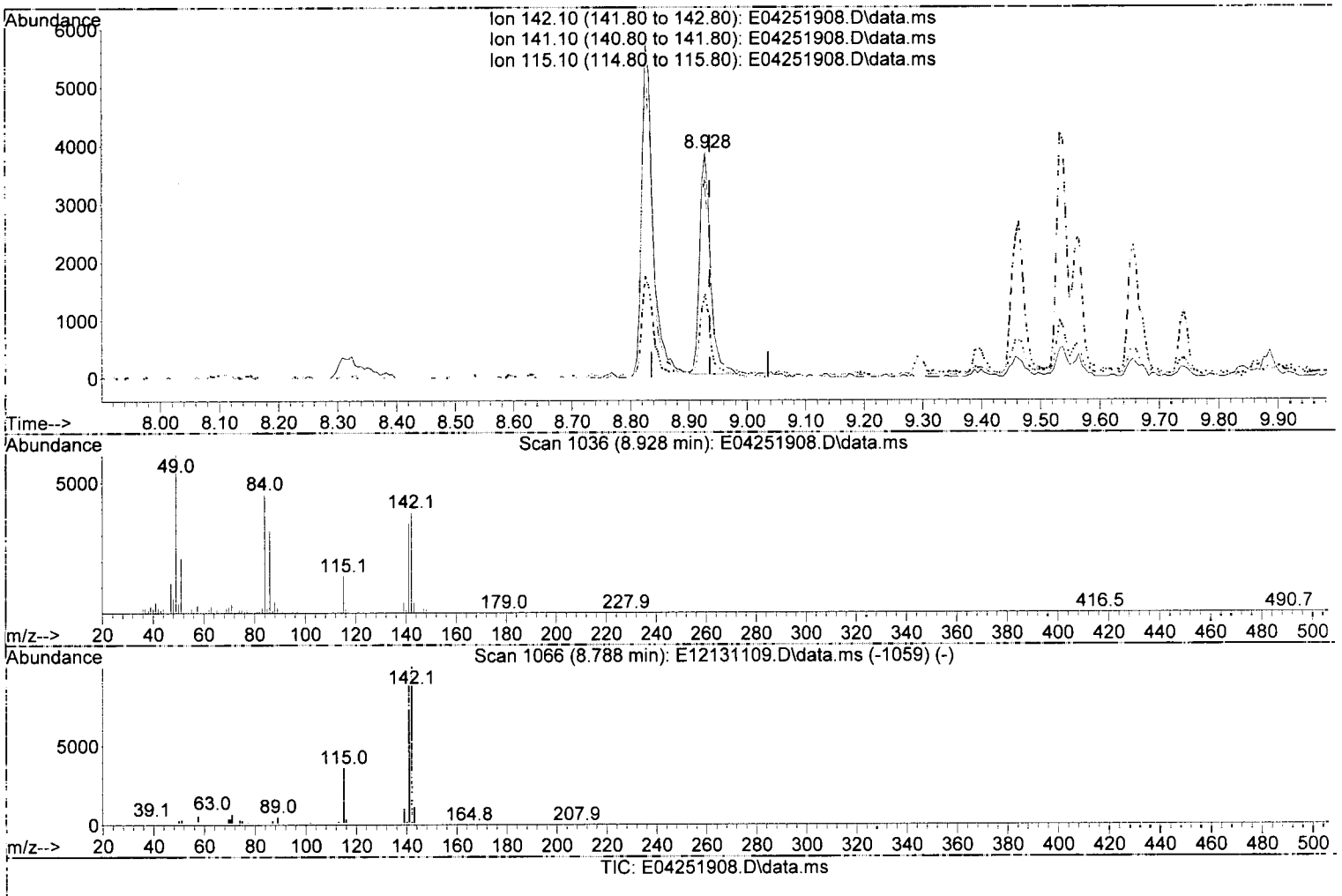
response 7977

Ion	Exp%	Act%
142.10	100.00	100.00
141.10	84.80	88.00
115.10	35.80	30.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(34) 1-Methylnaphthalene (T)

8.928min (-0.007) 21.53 ng/ml J

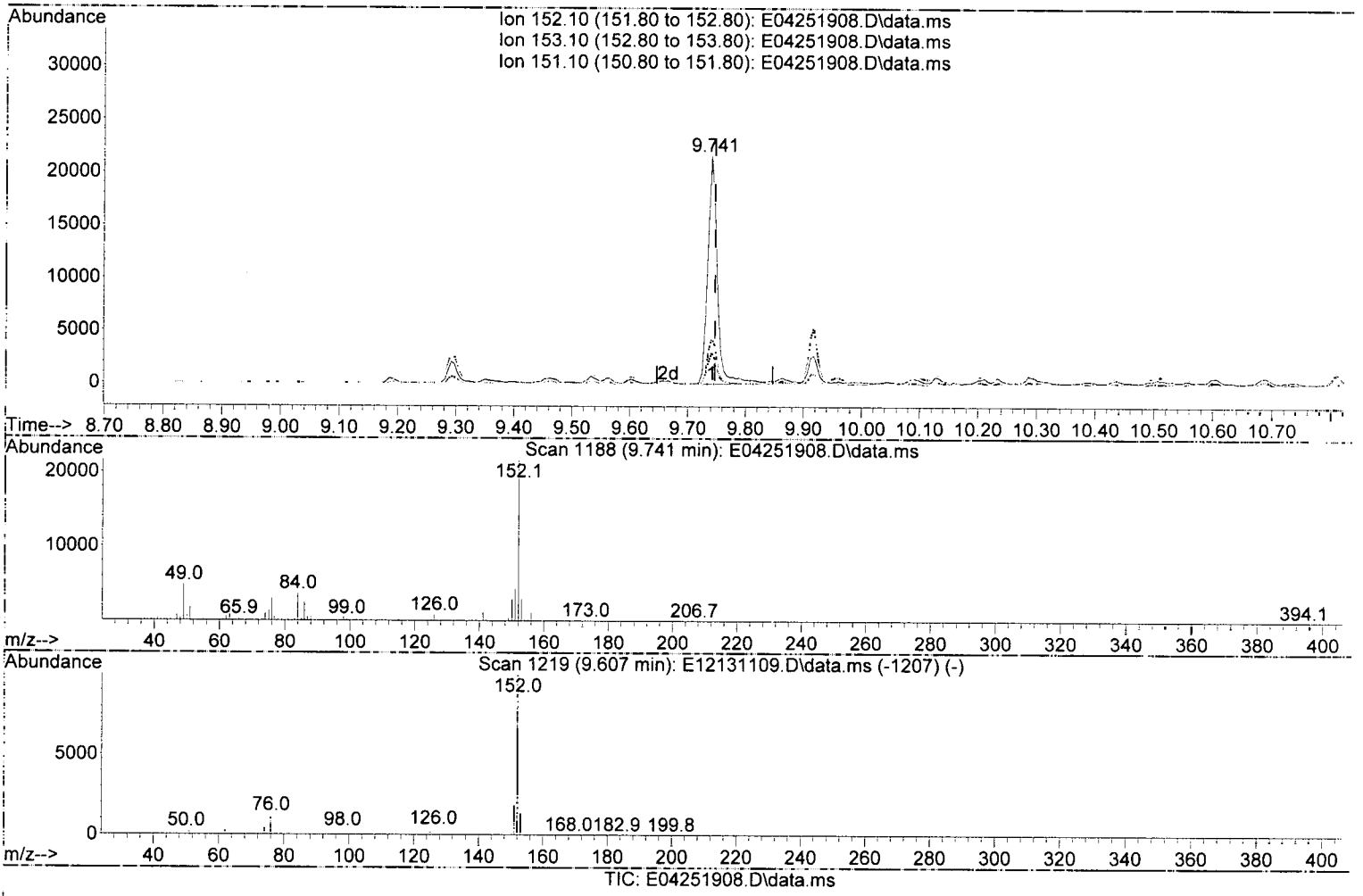
response 4996

Ion	Exp%	Act%
142.10	100.00	100.00
141.10	88.70	89.27
115.10	37.60	37.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(49) Acenaphthylene (T)

9.741min (-0.005) 78.83 ng/ml

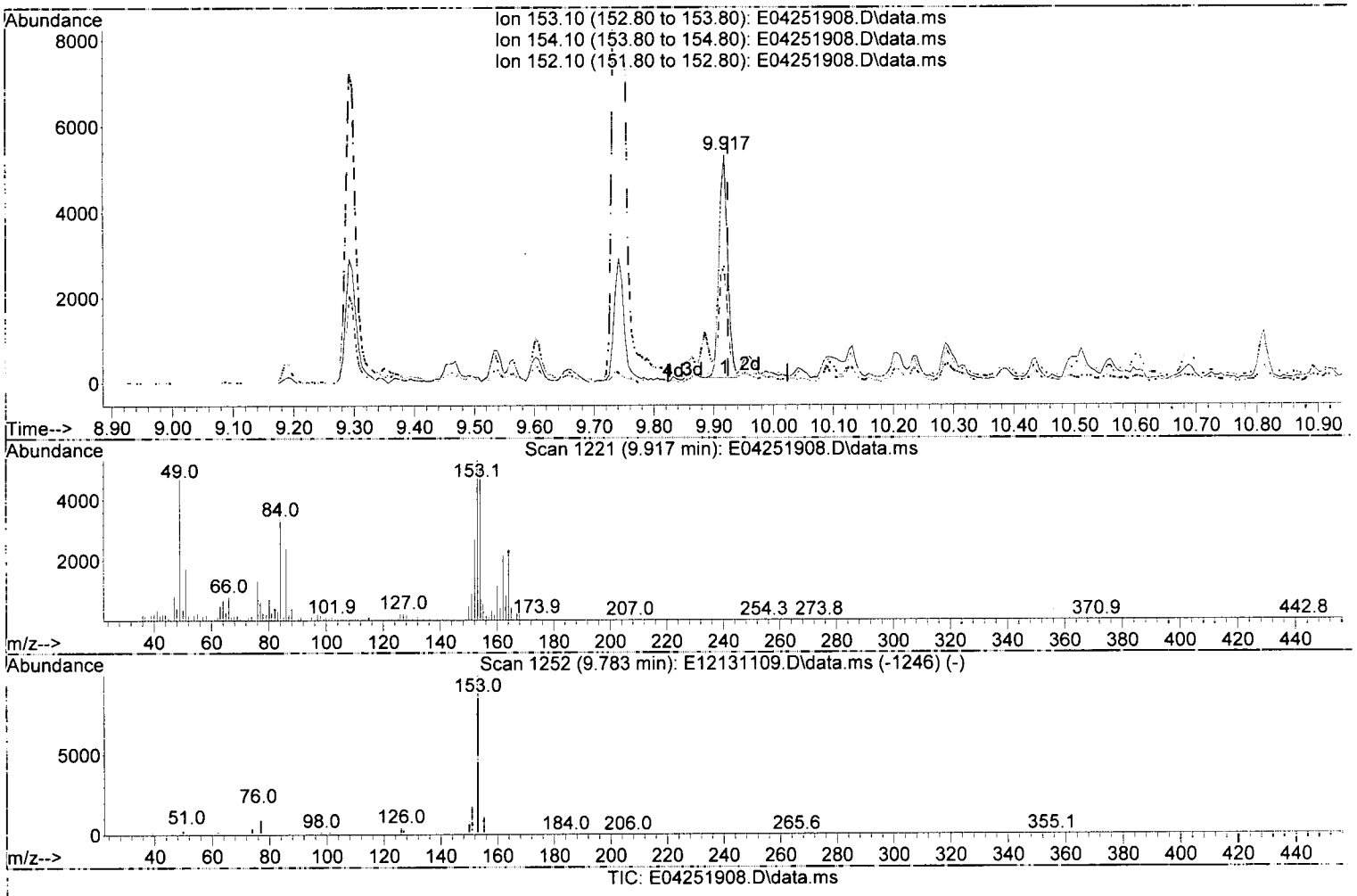
response 24978

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	12.90	13.52
151.10	19.50	19.94
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(51) Acenaphthene (T)

9.917min (-0.006) 25.24 ng/ml

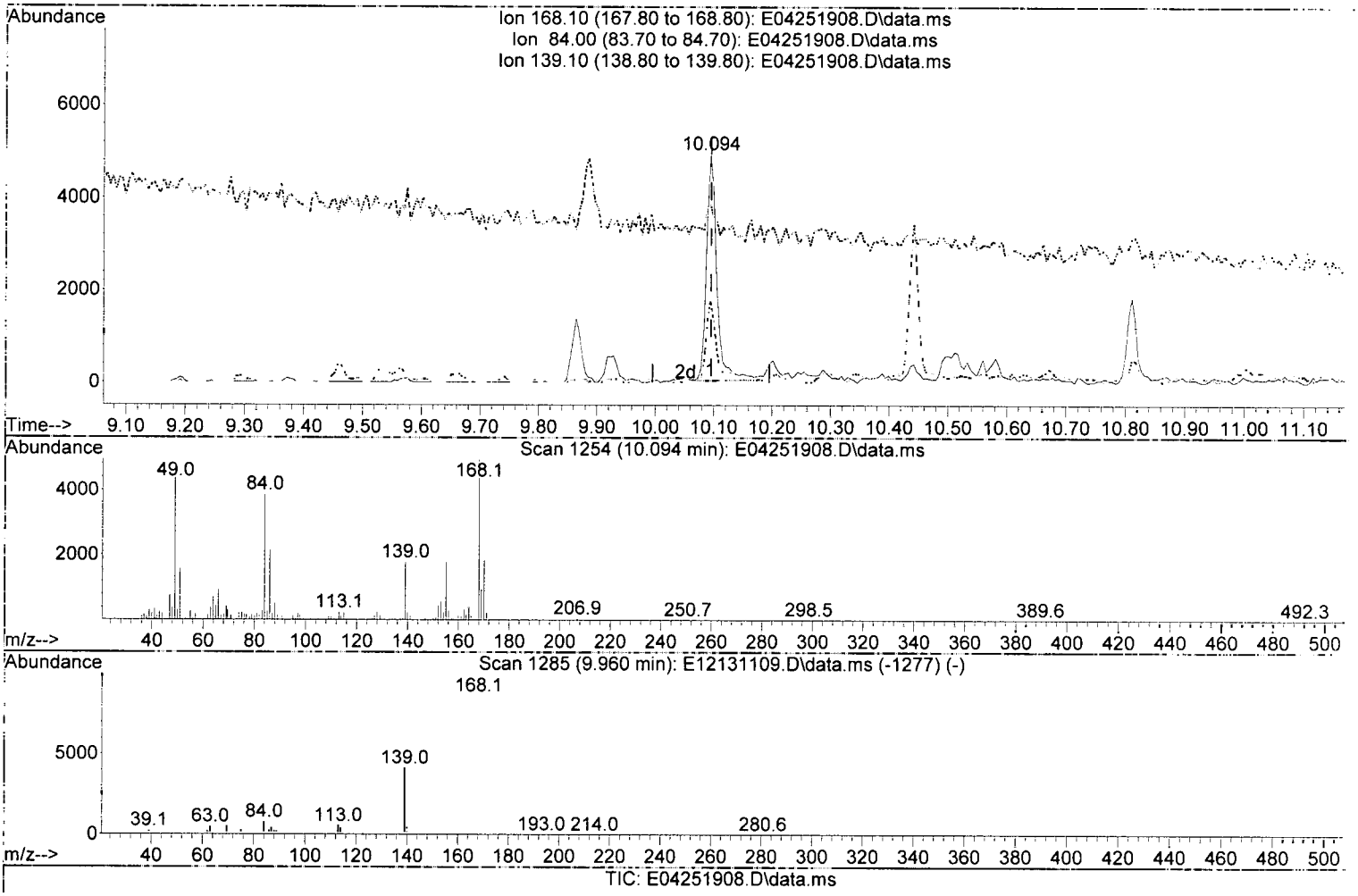
response 5422

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	92.00	94.28
152.10	47.10	50.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(55) Dibenzofuran (T)

10.094min (-0.000) 21.64 ng/ml

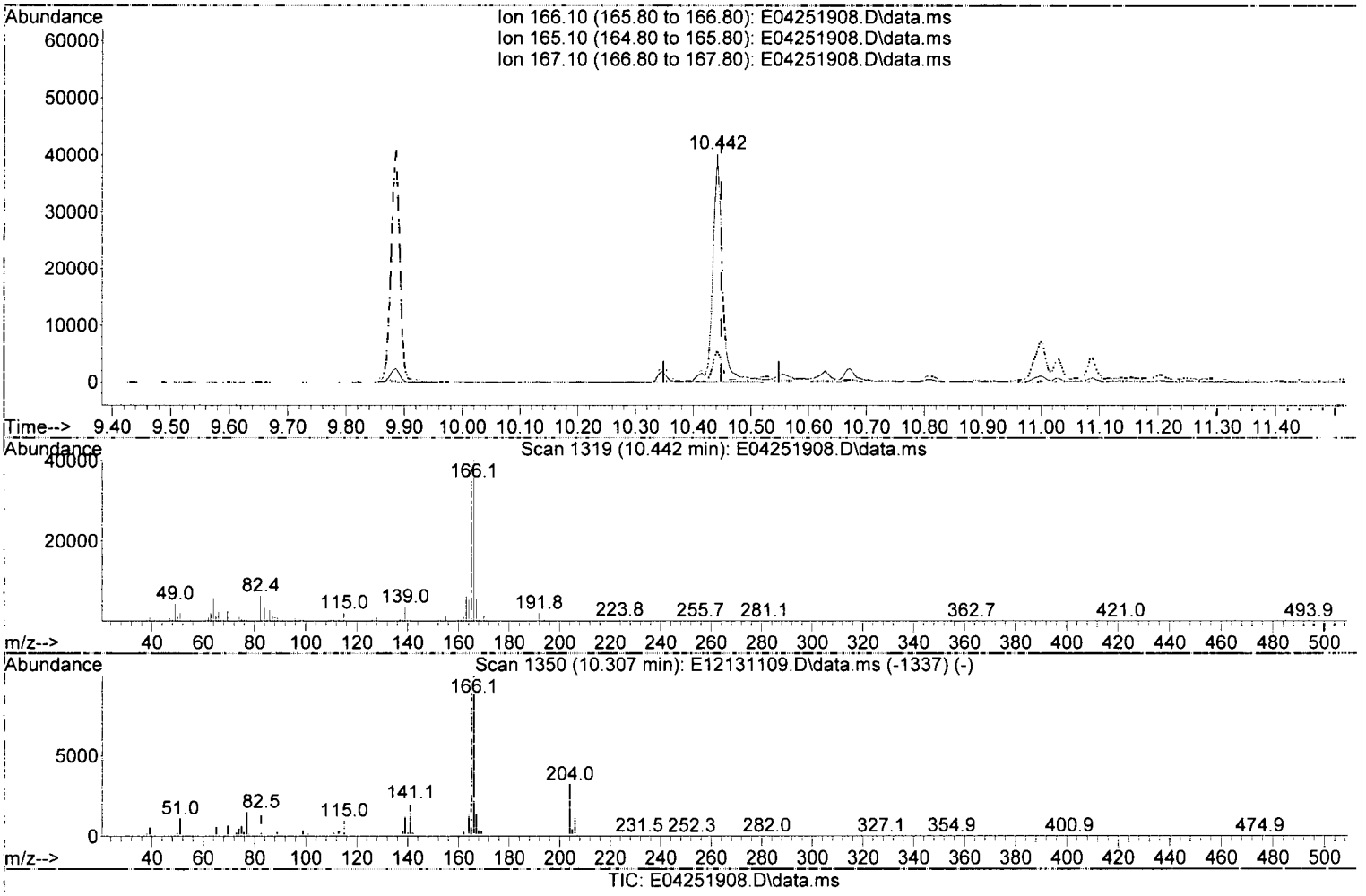
response 6044

Ion	Exp%	Act%
168.10	100.00	100.00
84.00	8.30	78.34#
139.10	42.60	36.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(60) Fluorene (T)

10.442min (-0.006) 209.26 ng/ml

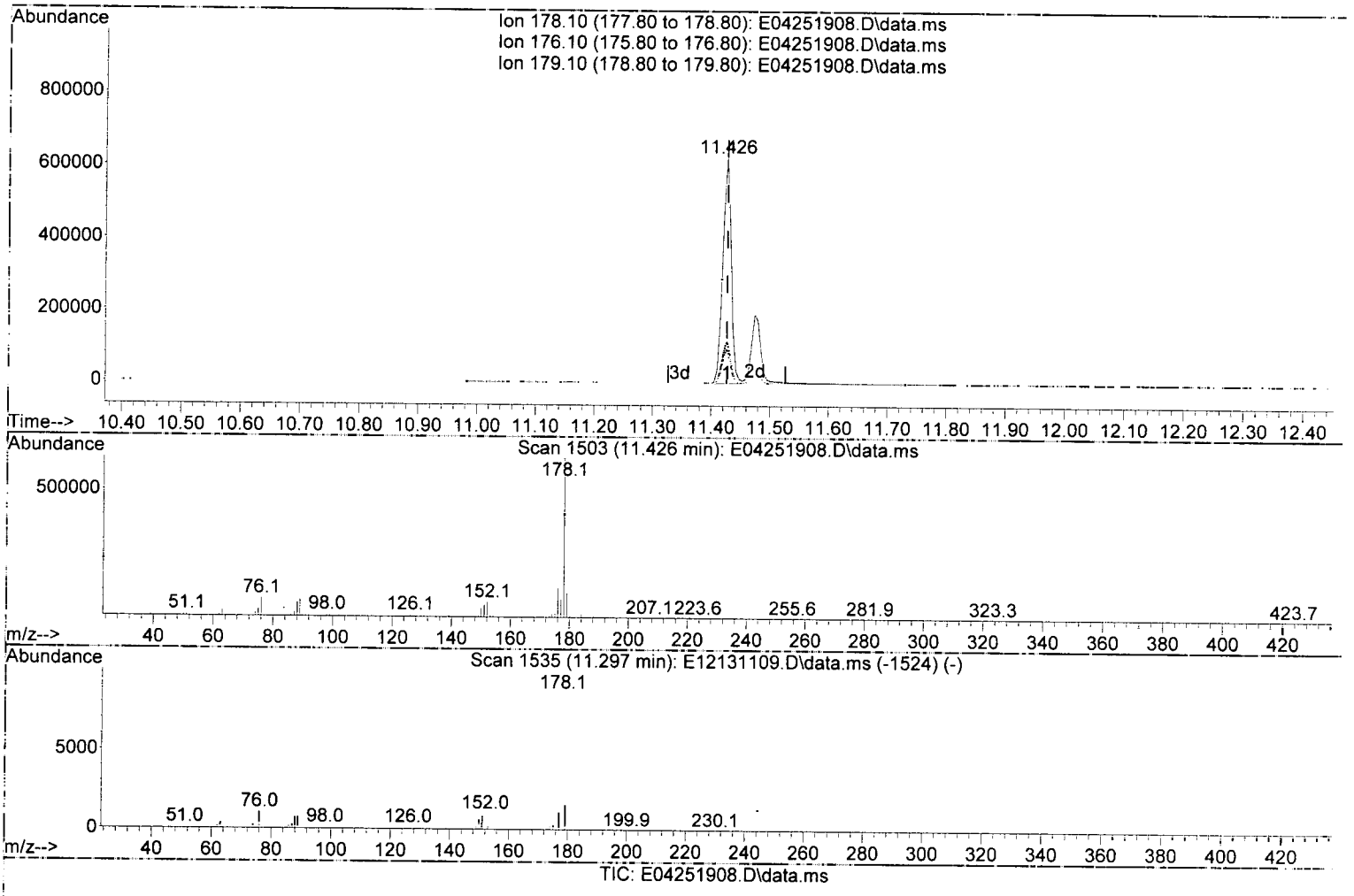
response 46798

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	94.68
167.10	13.60	13.81
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(71) Phenanthrene (T)

11.426min (-0.000) 1924.46 ng/ml

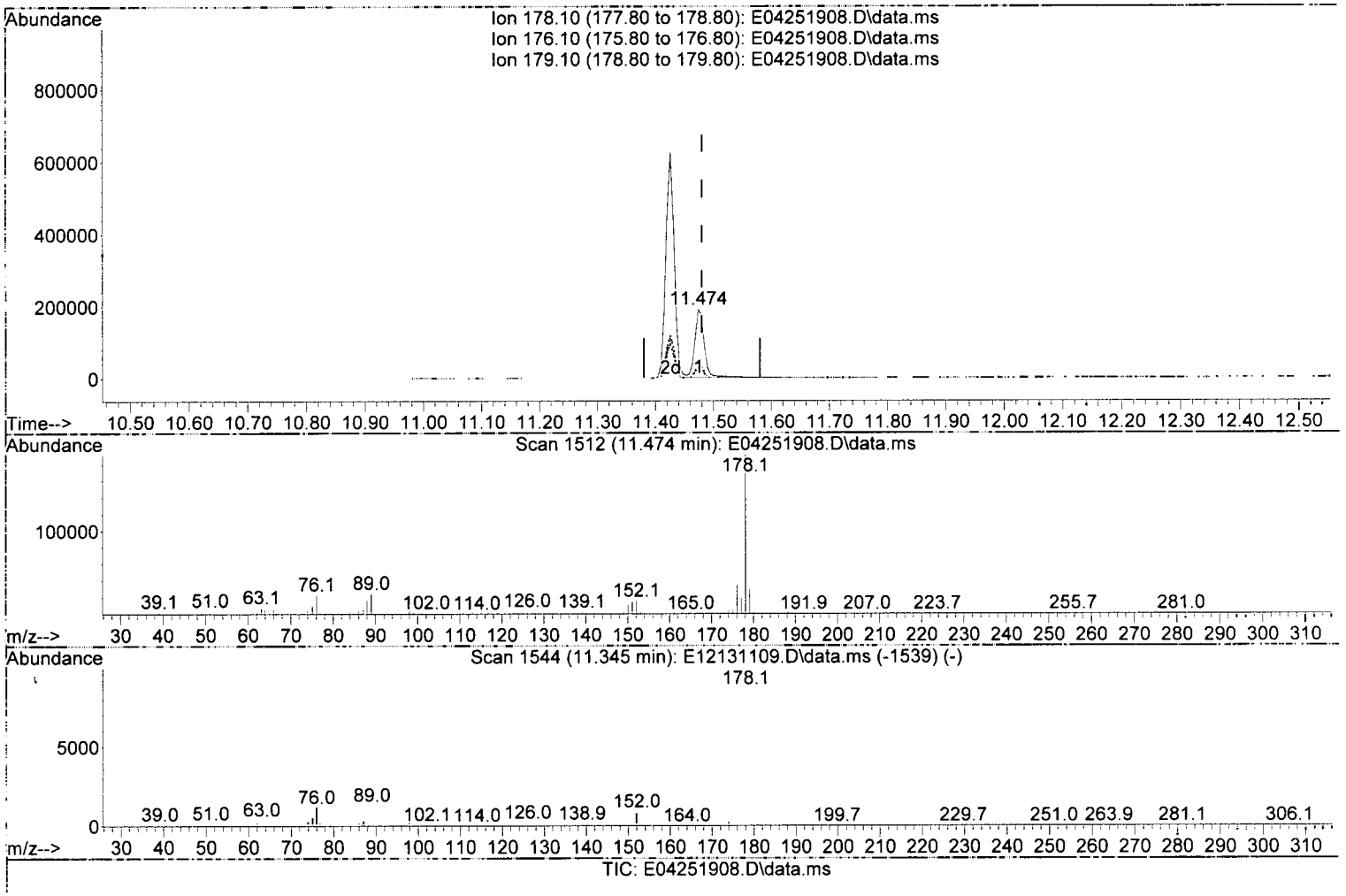
response 624379

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.65
179.10	15.00	15.25
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(72) Anthracene (T)

11.474min (-0.006) 636.92 ng/ml

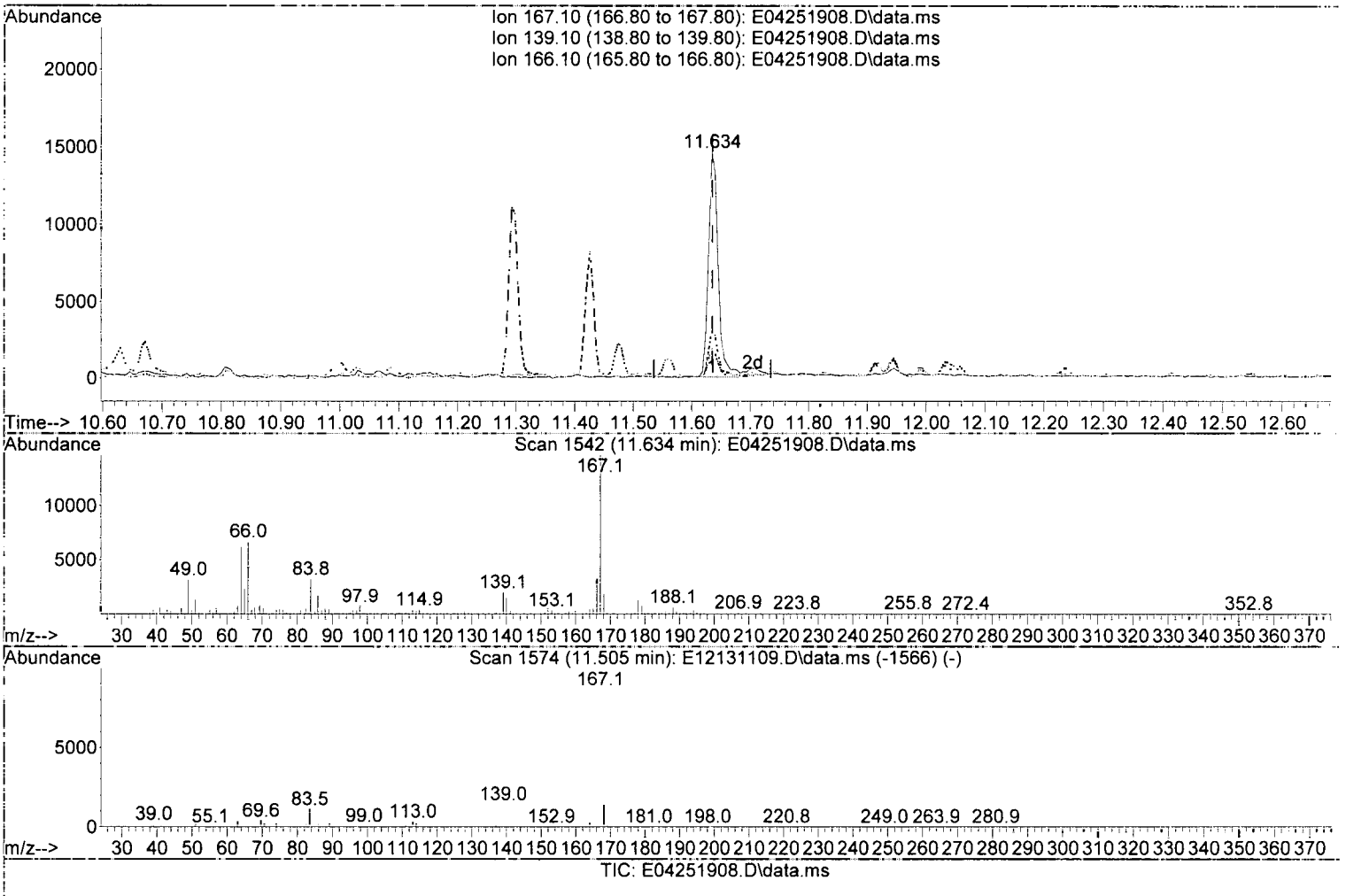
response 212023

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.20
179.10	15.50	15.43
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(73) Carbazole (T)

11.634min (-0.000) 54.24 ng/ml

response 16906

Ion	Exp%	Act%
167.10	100.00	100.00
139.10	14.00	13.77
166.10	21.10	22.02
0.00	0.00	0.00

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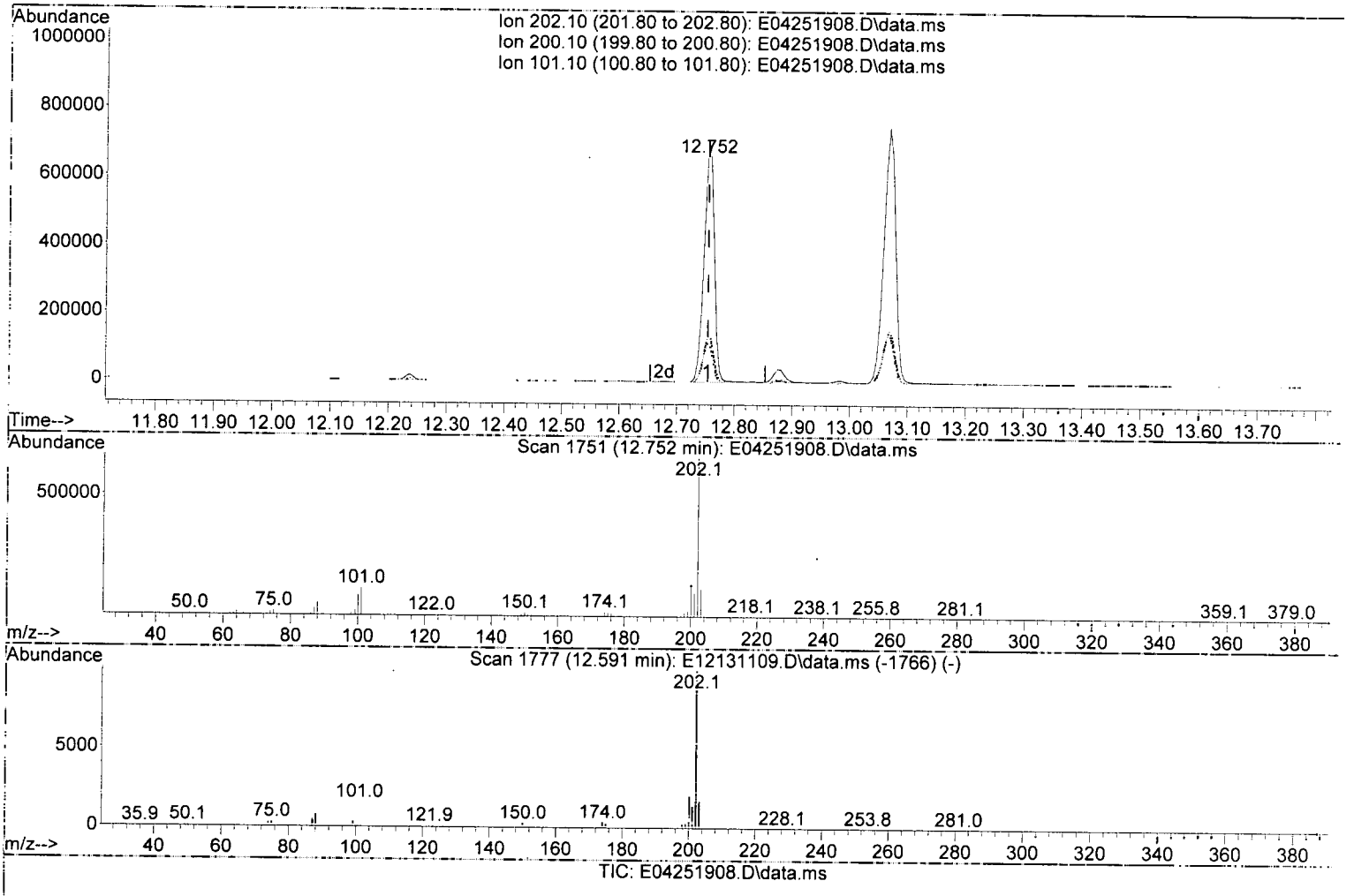
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(75) Fluoranthene (T)

12.752min (-0.001) 2548.82 ng/ml

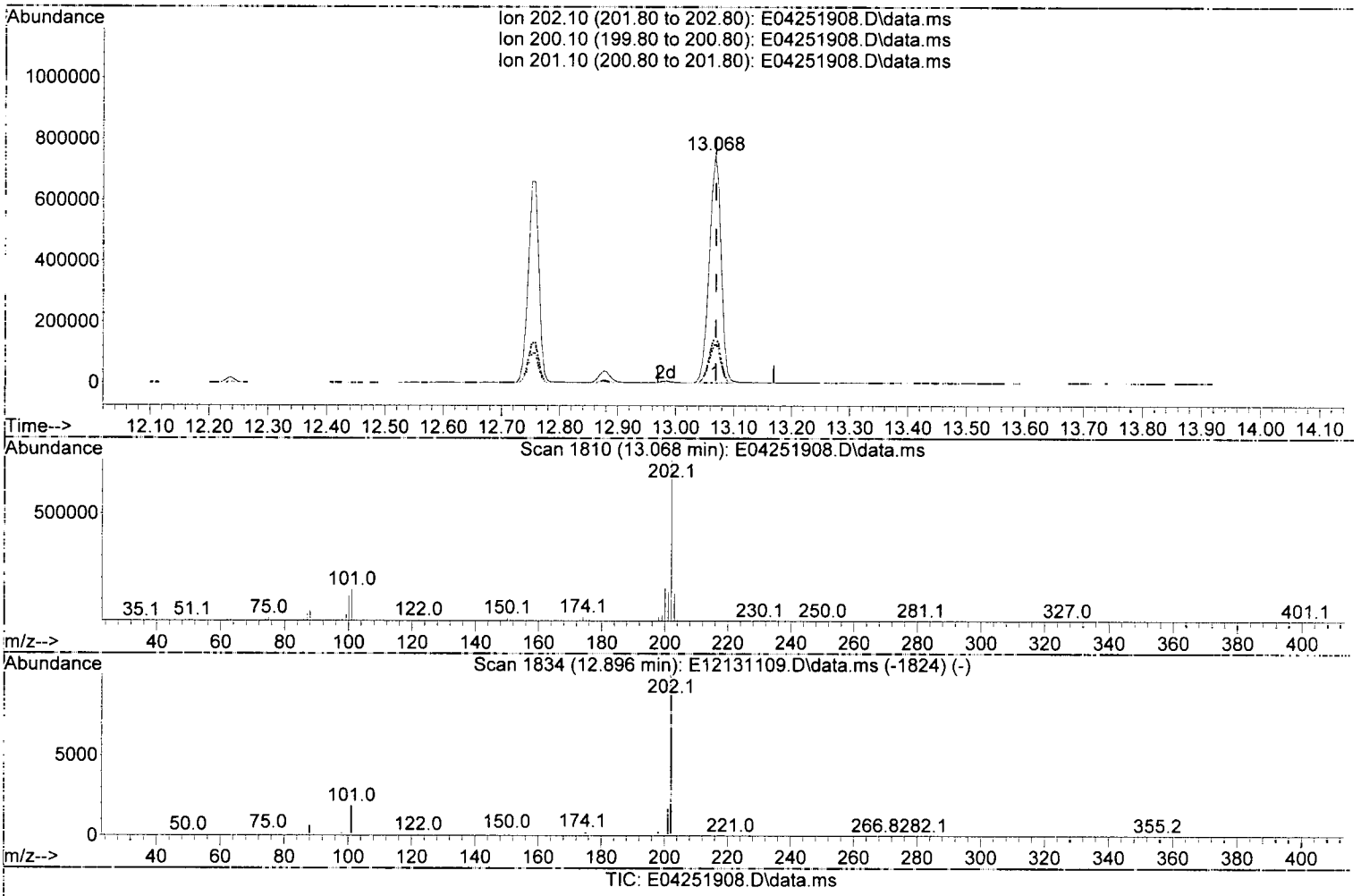
response 857774

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.99
101.10	15.70	17.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(77) Pyrene (T)

13.068min (-0.001) 3101.65 ng/ml

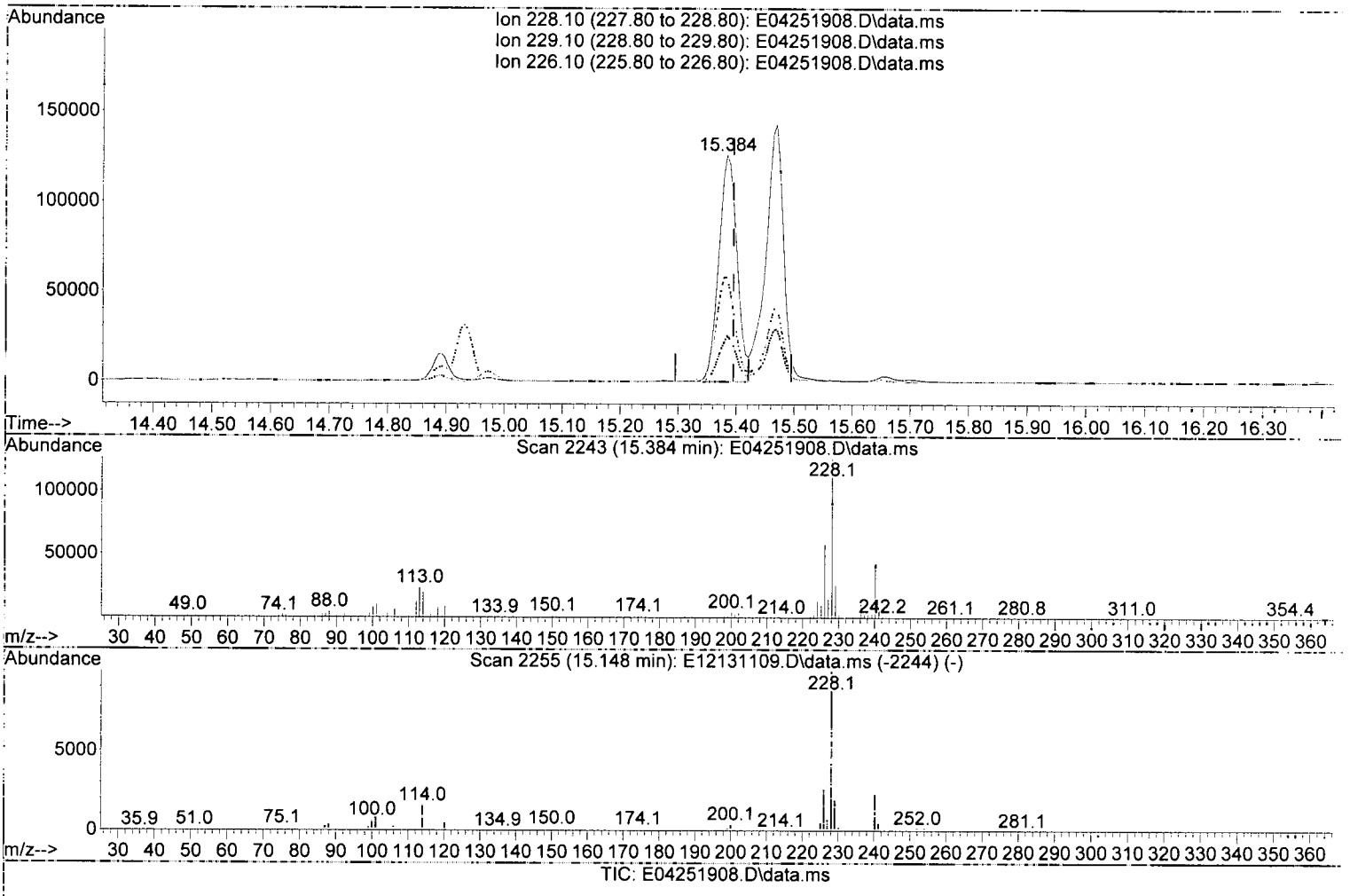
response 1060347

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.59
201.10	17.50	17.61
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(83) Benz(a)anthracene (T)

15.384min (-0.011) 898.22 ng/ml

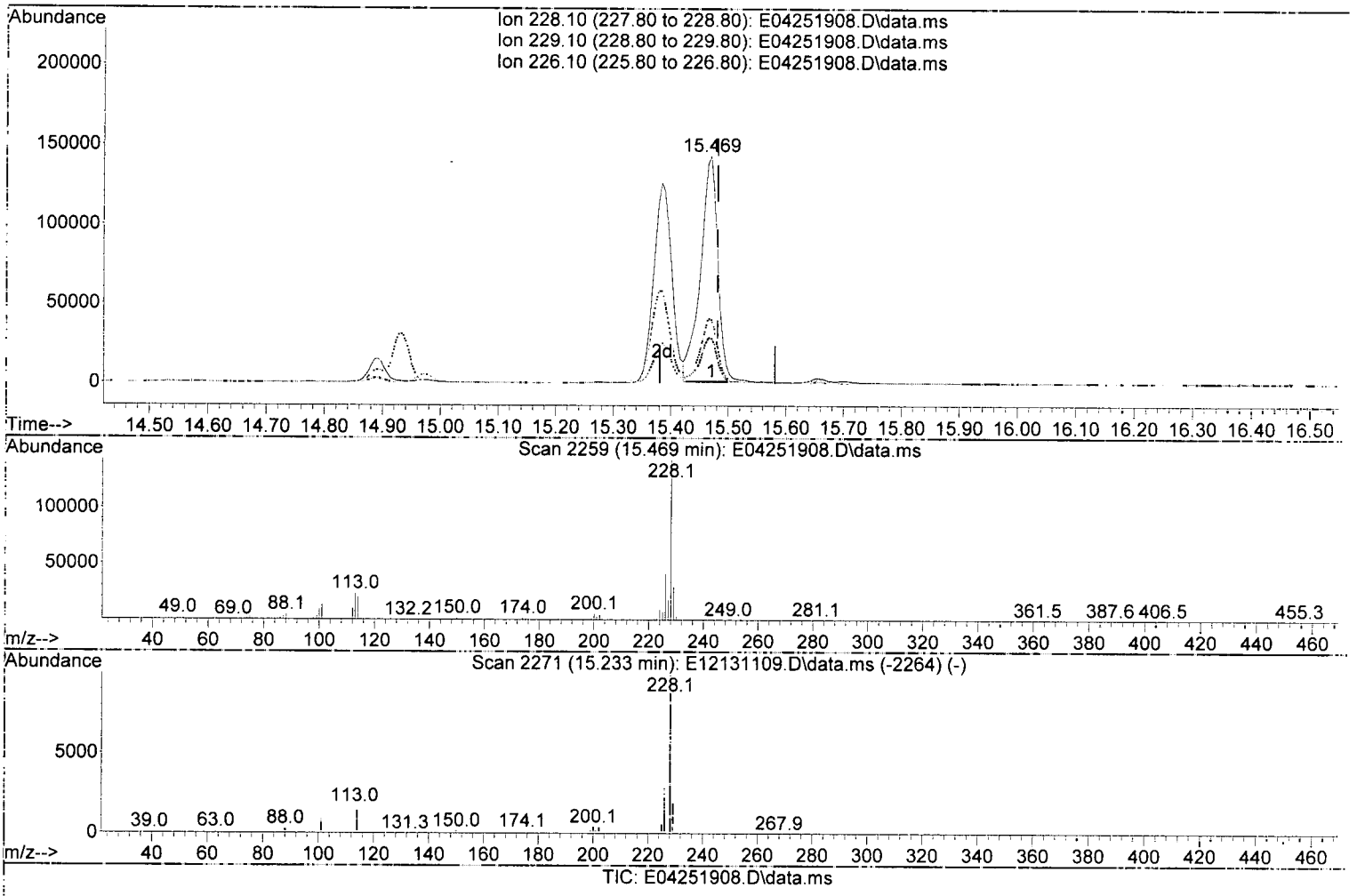
response 275652

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	20.30
226.10	27.80	46.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(84) Chrysene (T)

15.469min (-0.011) 1026.61 ng/ml

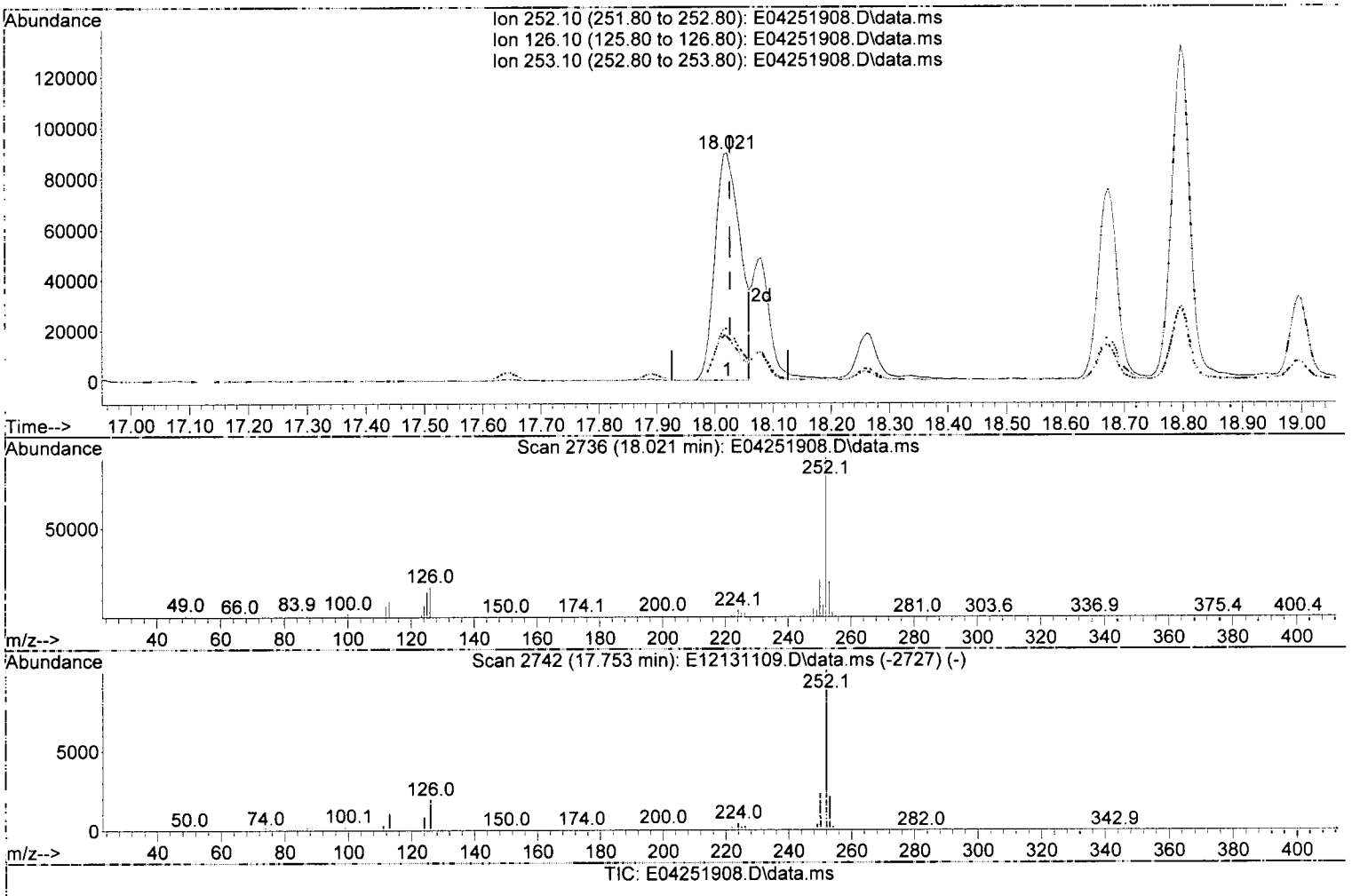
response 300134

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	20.59
226.10	29.80	28.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(88) Benzo(b)fluoranthene (T)

18.021min (-0.004) 1093.77 ng/ml MB

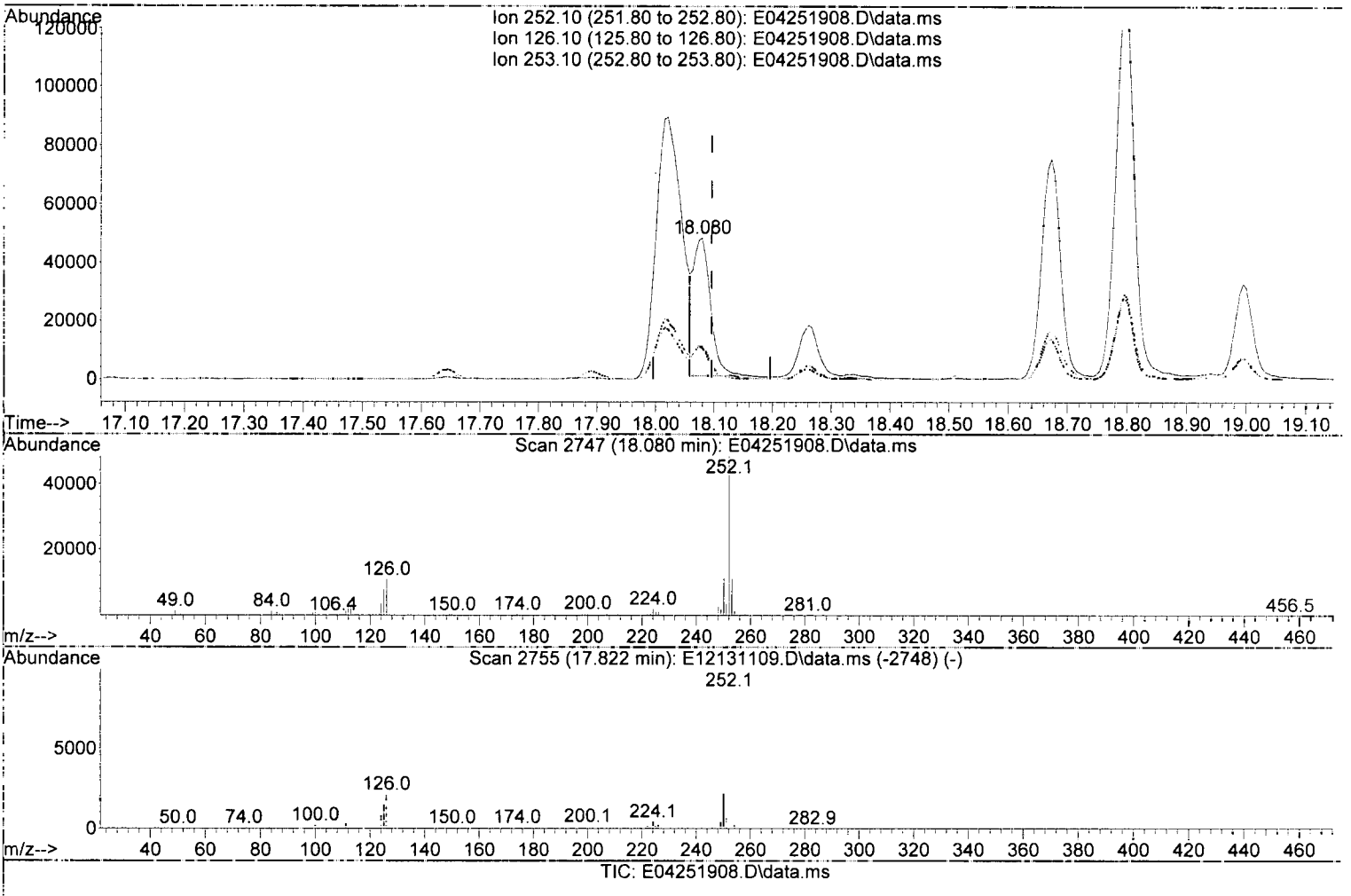
response 271987

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	19.27
253.10	22.40	22.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.080min (-0.016) 390.86 ng/ml (m) MOS DTH 4/25/19

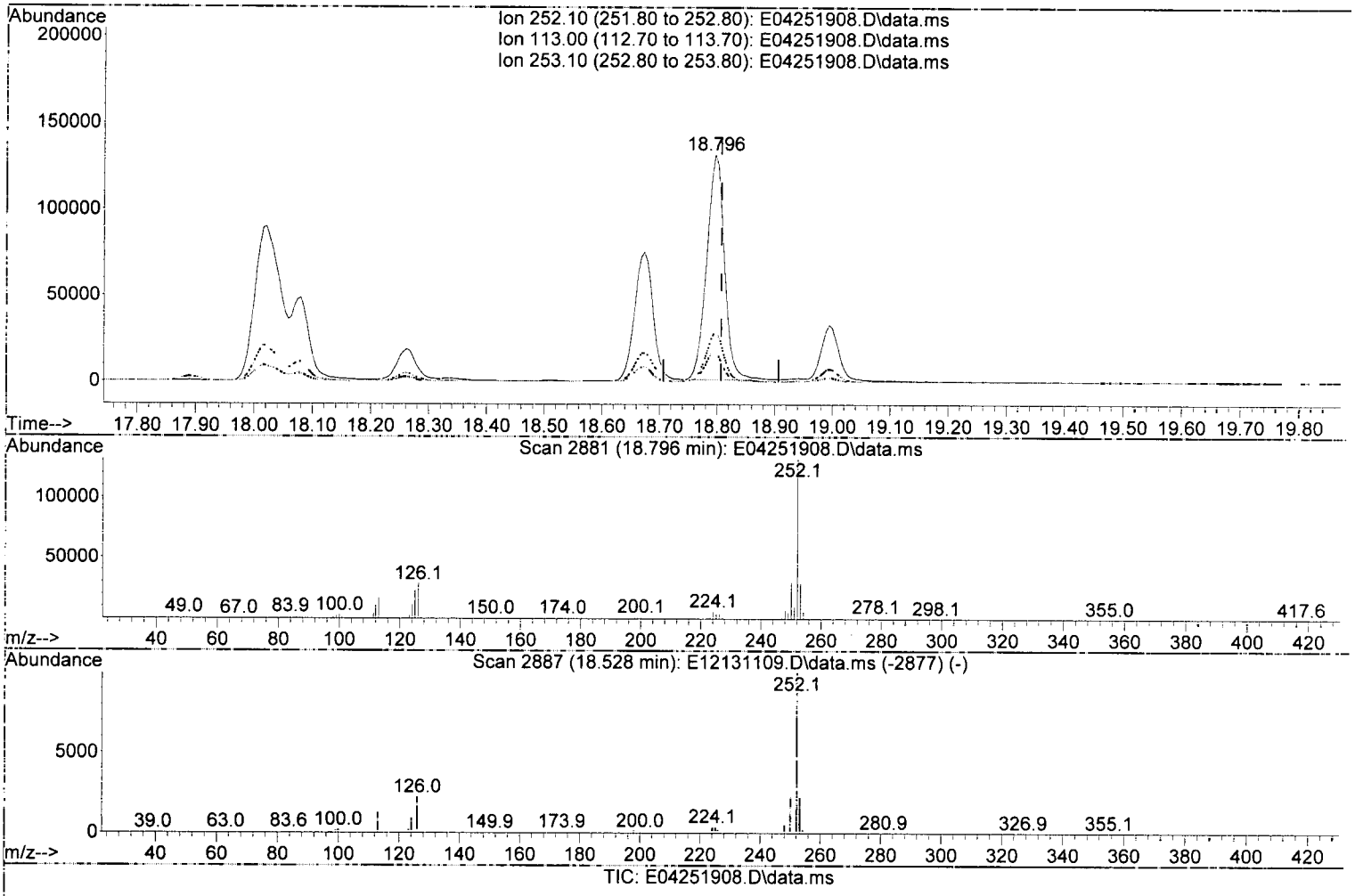
response 95519

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.45
253.10	21.80	23.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(92) Benzo(a)pyrene (T)

18.796min (-0.010) 1233.67 ng/ml

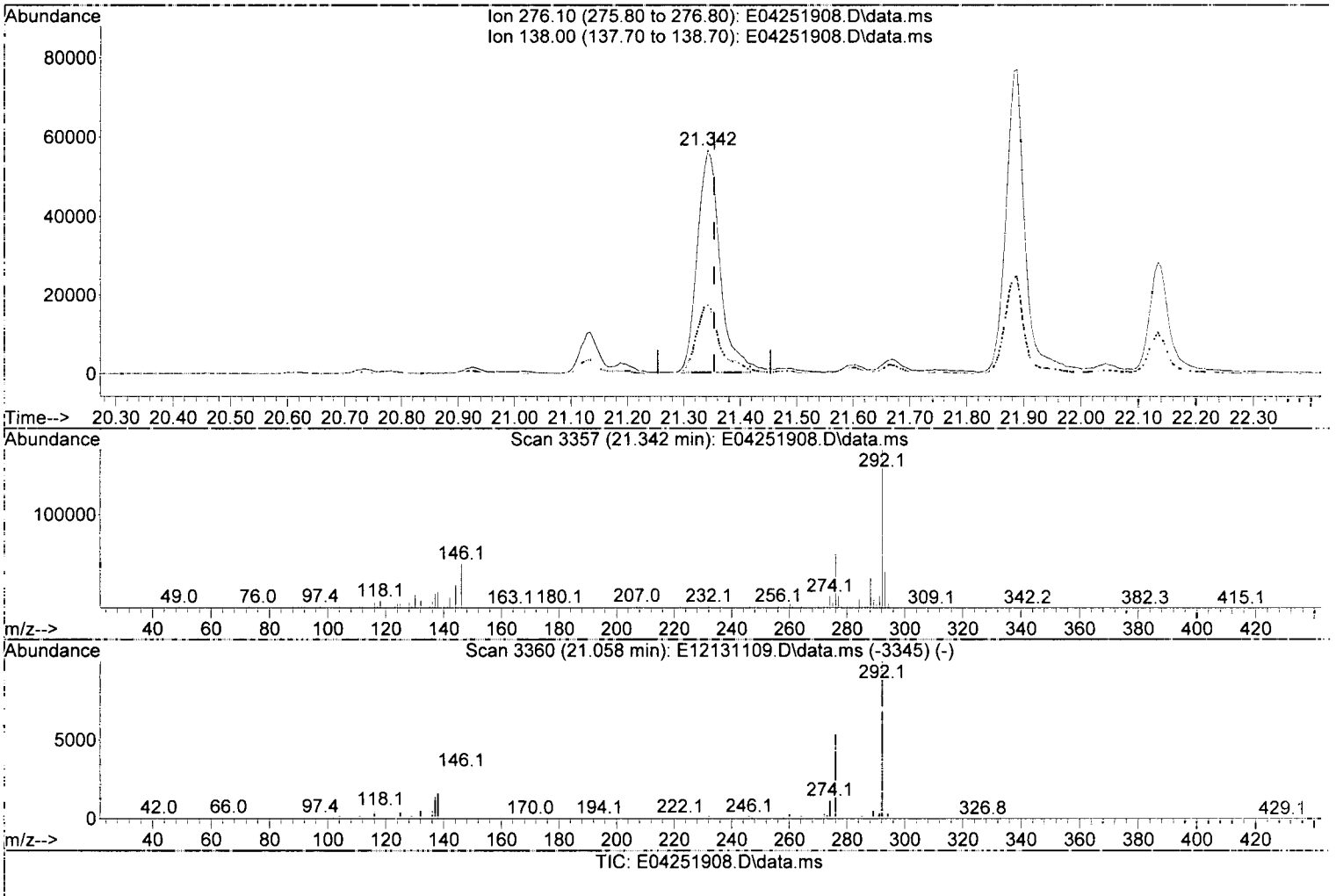
response 278537

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	13.15
253.10	21.70	22.28
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.342min (-0.011) 690.66 ng/ml

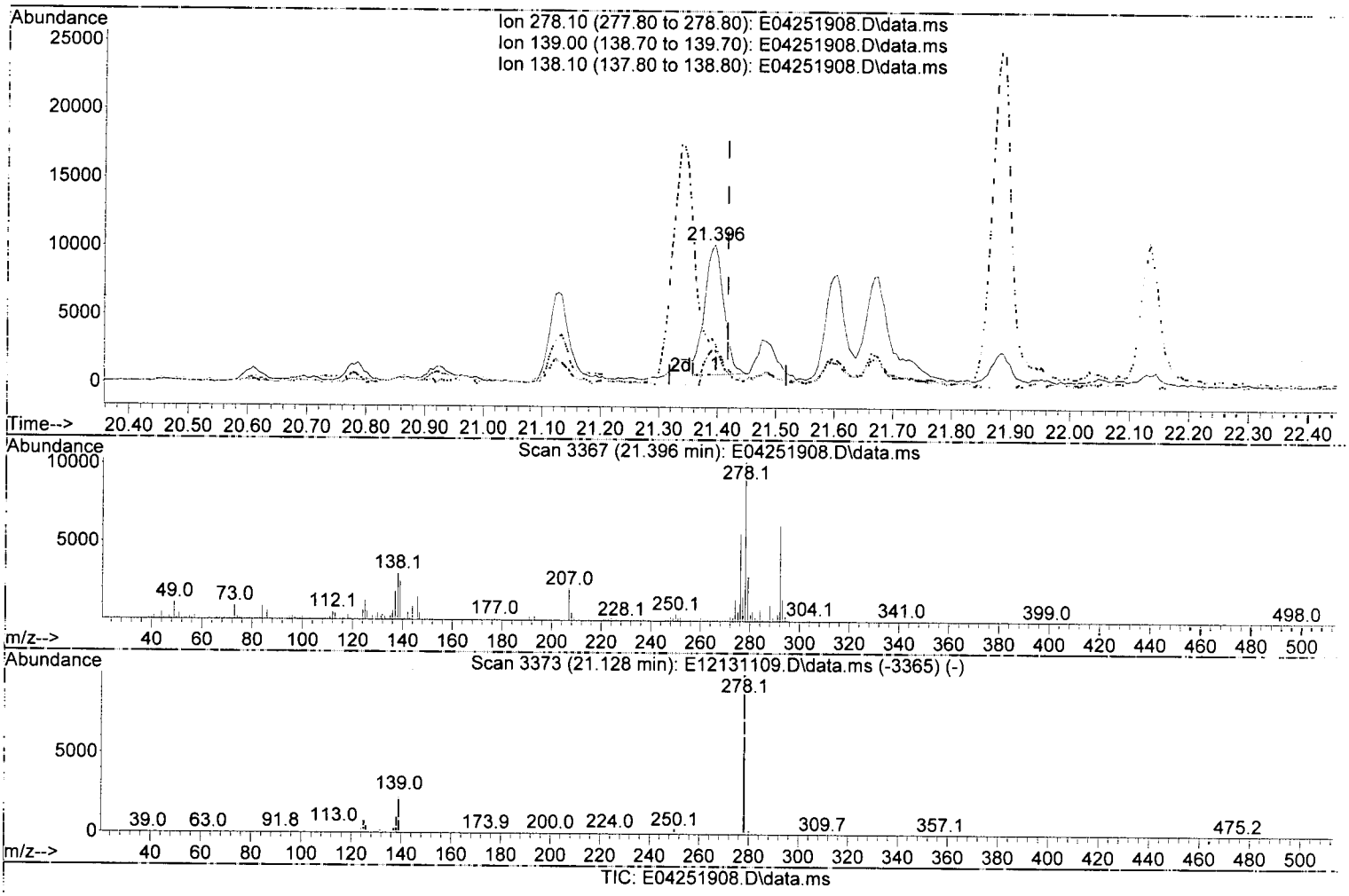
response 157029

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	30.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.396min (-0.022) 103.23 ng/ml

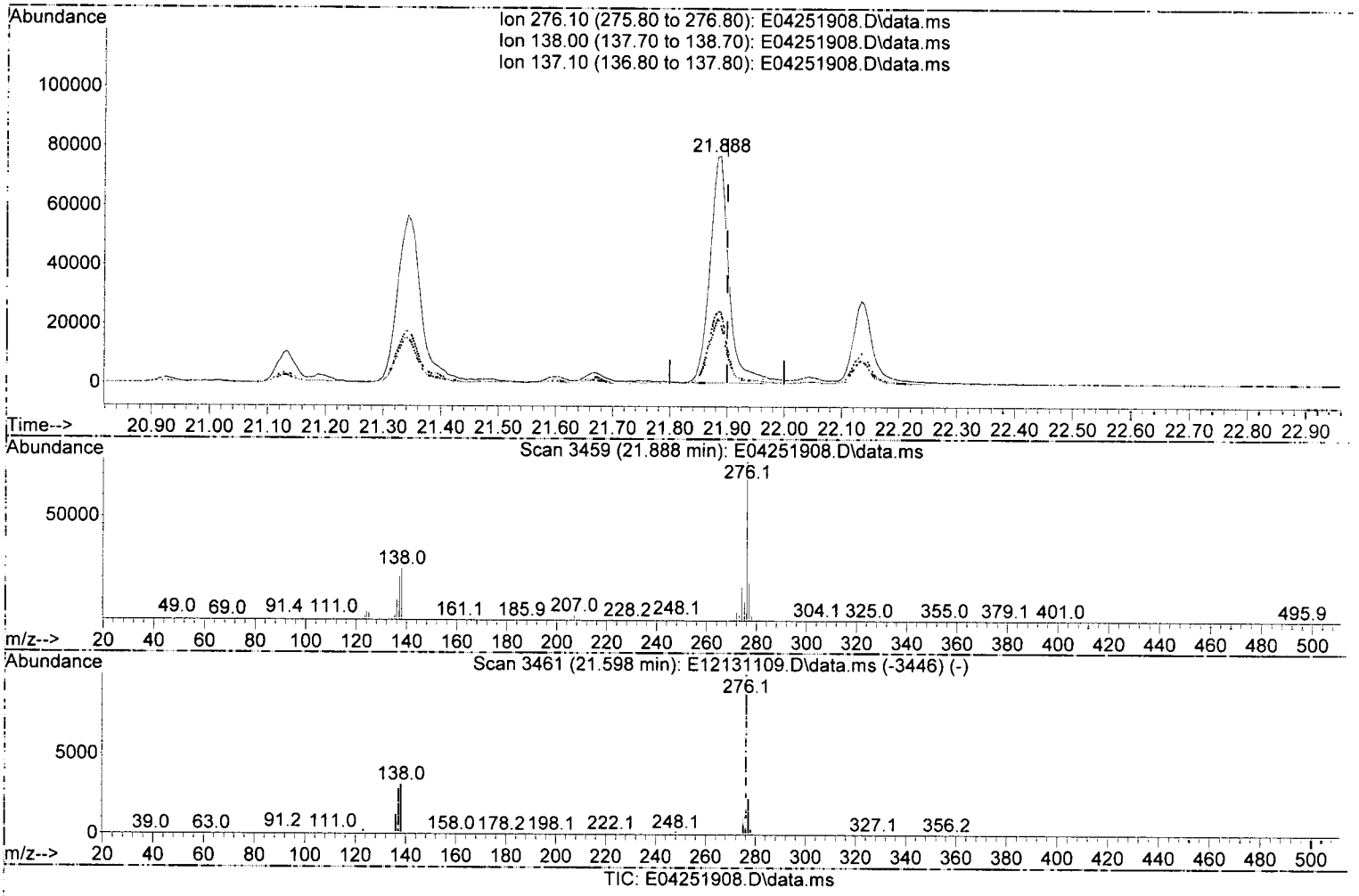
response 21493

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	24.49
138.10	17.70	29.25
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251908.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.888min (-0.011) 784.84 ng/ml

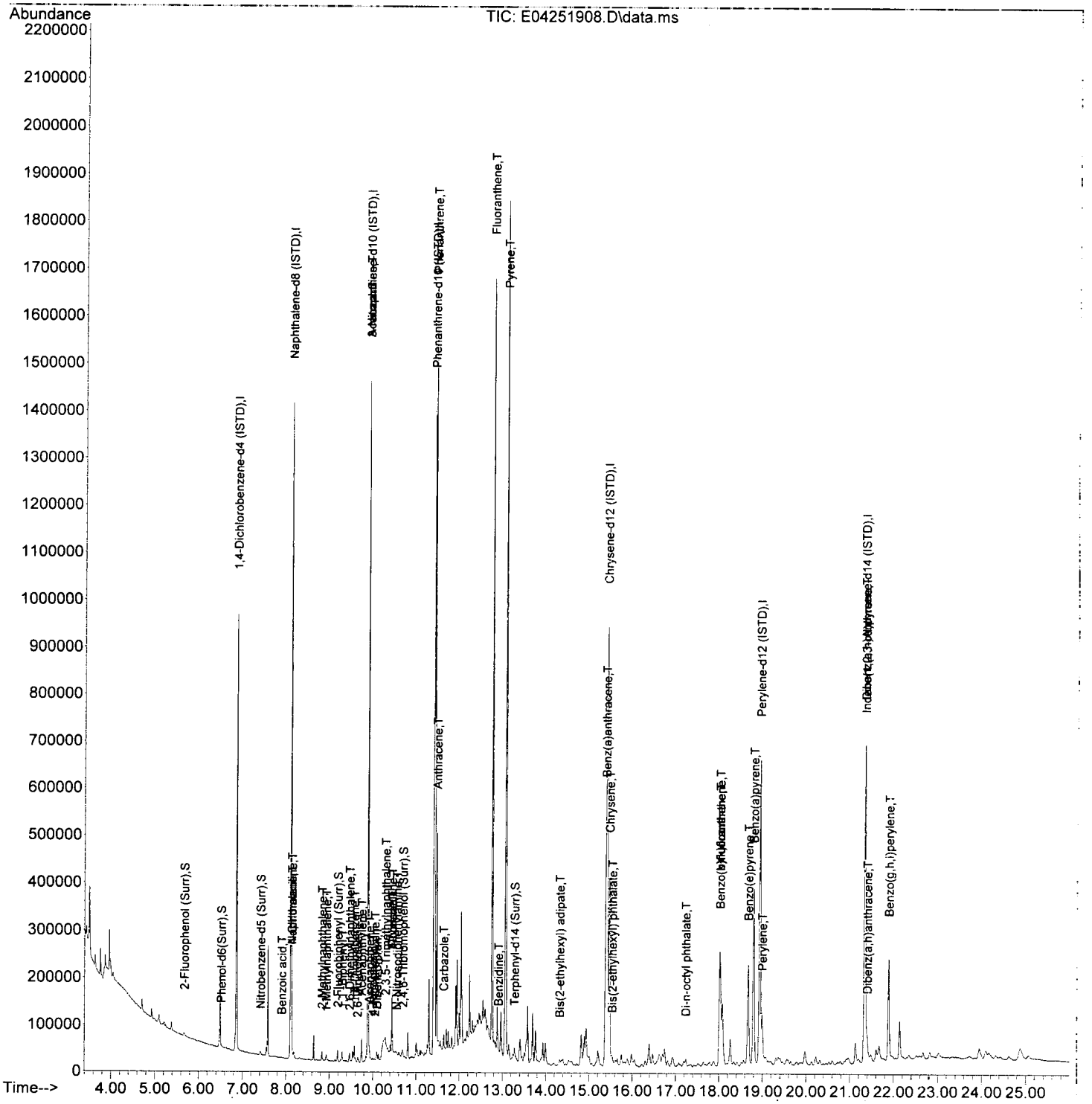
response 175678

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	32.08
137.10	39.00	26.92
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251908.D
Acq On : 25 Apr 2019 11:49 am
Operator : JK/ AMS /DTH
Sample : A9D0674-05@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 12:24:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	173331	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	656862	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	304626	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	623360	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	613910	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	533019	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	450344	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.671	112	2813	26.03 ng/ml	0.03
5) Phenol-d6(Surr)	~~6.516~~	~~99~~	~~1948~~	~~13.48 ng/ml~~	~~0.02~~ MI
19) Nitrobenzene-d5 (Surr)	7.414	82	2961	22.85 ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.190	172	8467	37.37 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.698	330	846	53.51 ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.276	244	14855	51.79 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.392	74	68	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	0.000		0	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.254	70	61	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	7.398	117	56	N.D.	
20) Nitrobenzene	7.409	77	126	N.D.	
22) Isophorone	7.650	82	195	N.D.	
23) 2-Nitrophenol	0.000		0	N.D.	
24) 2,4-Dimethylphenol	0.000		0	N.D.	
25) Bis(2-chloroethoxy) me...	7.815	93	53	N.D.	
26) Benzoic acid	7.922	105	100	400.38 ng/ml#	51
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.131	128	6624	18.90 ng/ml	93
30) 4-Chloroaniline	8.131	127	1010	8.37 ng/ml	58
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.612	107	75	27.47 ng/ml#	1
33) 2-Methylnaphthalene	8.832	142	939	4.26 ng/ml	79
34) 1-Methylnaphthalene	8.928	142	645	3.06 ng/ml#	67
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	9.297	154	666	2.56 ng/ml	95
41) 2-Chloronaphthalene	9.372	162	90	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

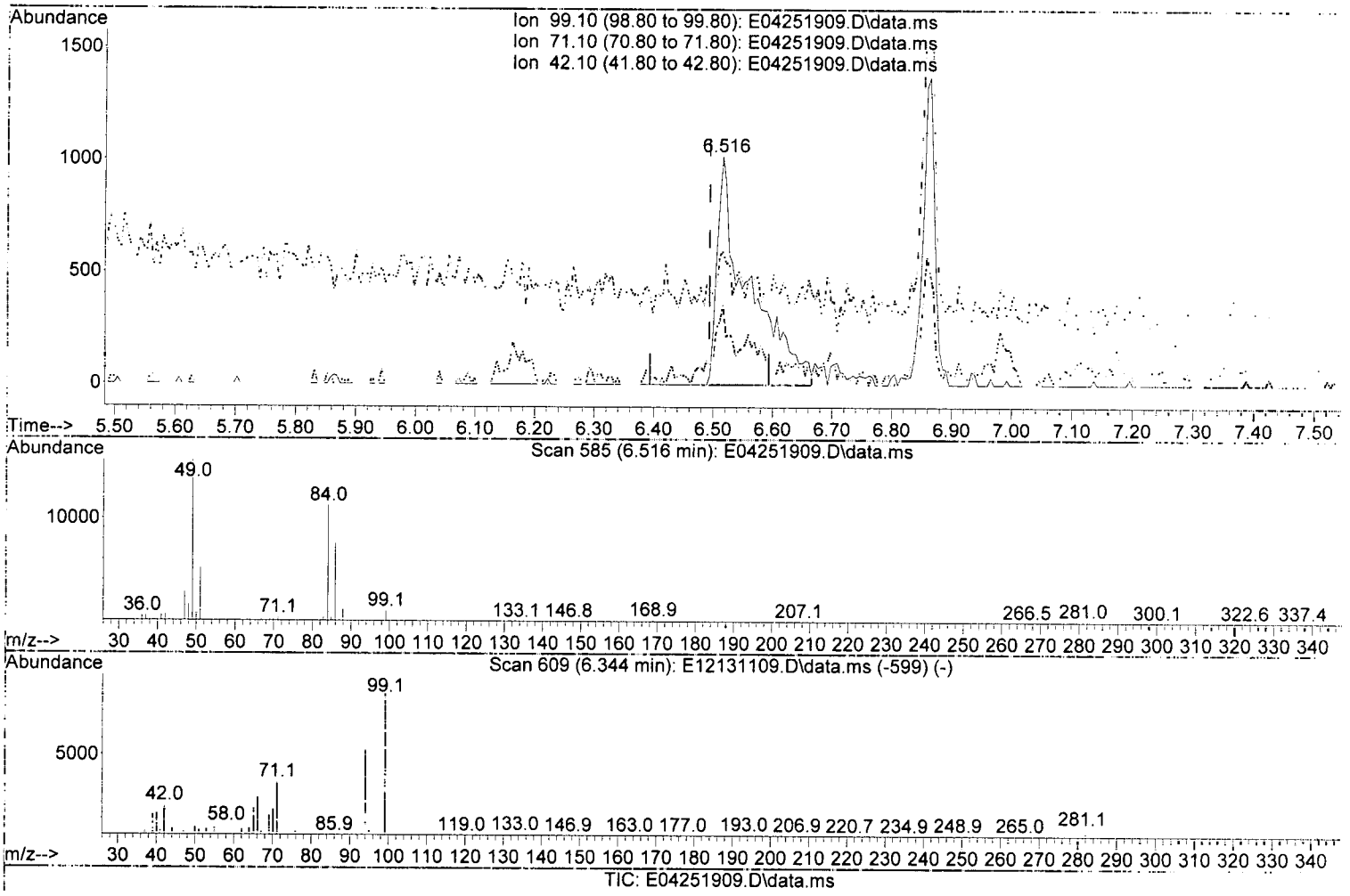
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.463	156	923	5.07 ng/ml	85
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	9.570	163	85	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	9.650	165	142	35.05 ng/ml	77
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.741	152	2693	9.08 ng/ml	92
50) 3-Nitroaniline	9.875	138	68	30.51 ng/ml#	1
51) Acenaphthene	9.918	153	2846	14.15 ng/ml	95
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.987	139	461	77.80 ng/ml#	47
54) 2,4-Dinitrotoluene	10.041	165	88	62.58 ng/ml#	47
55) Dibenzofuran	10.094	168	592	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	10.303	149	211	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.292	170	4507	27.77 ng/ml	97
60) Fluorene	10.447	166	2164	10.33 ng/ml	91
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.474	138	67	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.554	169	2509	12.74 ng/ml#	45
66) Azobenzene (1,2-DPH)	10.613	77	300	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.426	178	30257	88.43 ng/ml	98
72) Anthracene	11.479	178	8475	24.14 ng/ml	93
73) Carbazole	11.645	167	1510	4.59 ng/ml	71
74) Di-n-butyl phthalate	11.971	149	371	N.D.	
75) Fluoranthene	12.752	202	65668	185.04 ng/ml	97
76) Benzidine	12.870	184	160	40.25 ng/ml#	1
77) Pyrene	13.063	202	85832	238.08 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	150	N.D.	
81) Bis(2-ethylhexyl) adipate	14.319	129	3504	19.61 ng/ml	89
82) 3,3-Dichlorobenzidine	15.346	252	85	21.90 ng/ml#	28
83) Benz(a)anthracene	15.384	228	25318	73.11 ng/ml	85
84) Chrysene	15.464	228	28673	86.92 ng/ml	94
85) Bis(2-ethylhexyl) phth...	15.523	149	555	N.D.	
87) Di-n-octyl phthalate	17.250	149	98	30.95 ng/ml#	1
88) Benzo(b)fluoranthene	18.015	252	25098	89.12 ng/ml MOS	99
89) Benzo(k)fluoranthene	~~18.015~~	~~252~~	~~31873~~	~~115.17 ng/ml~~	~~99~~ MI H.T MOS
90) Benzo(b+k)fluoranthene	18.015	252	37642	127.28 ng/ml	99
91) Benzo(e)pyrene	18.673	252	16769	58.65 ng/ml	97
92) Benzo(a)pyrene	18.791	252	24802	97.00 ng/ml	99
93) Perylene	18.994	252	7570	25.90 ng/ml	96
95) Indeno(1,2,3-cd)pyrene	21.348	276	15690	63.56 ng/ml	88
96) Dibenz(a,h)anthracene	21.401	278	2171	9.60 ng/ml	85
97) Benzo(g,h,i)perylene	21.888	276	16377	67.39 ng/ml	84

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(5) Phenol-d6(Surr) (S)

6.516min (+ 0.023) 25.71 ng/ml (m) DTH 4/25/19

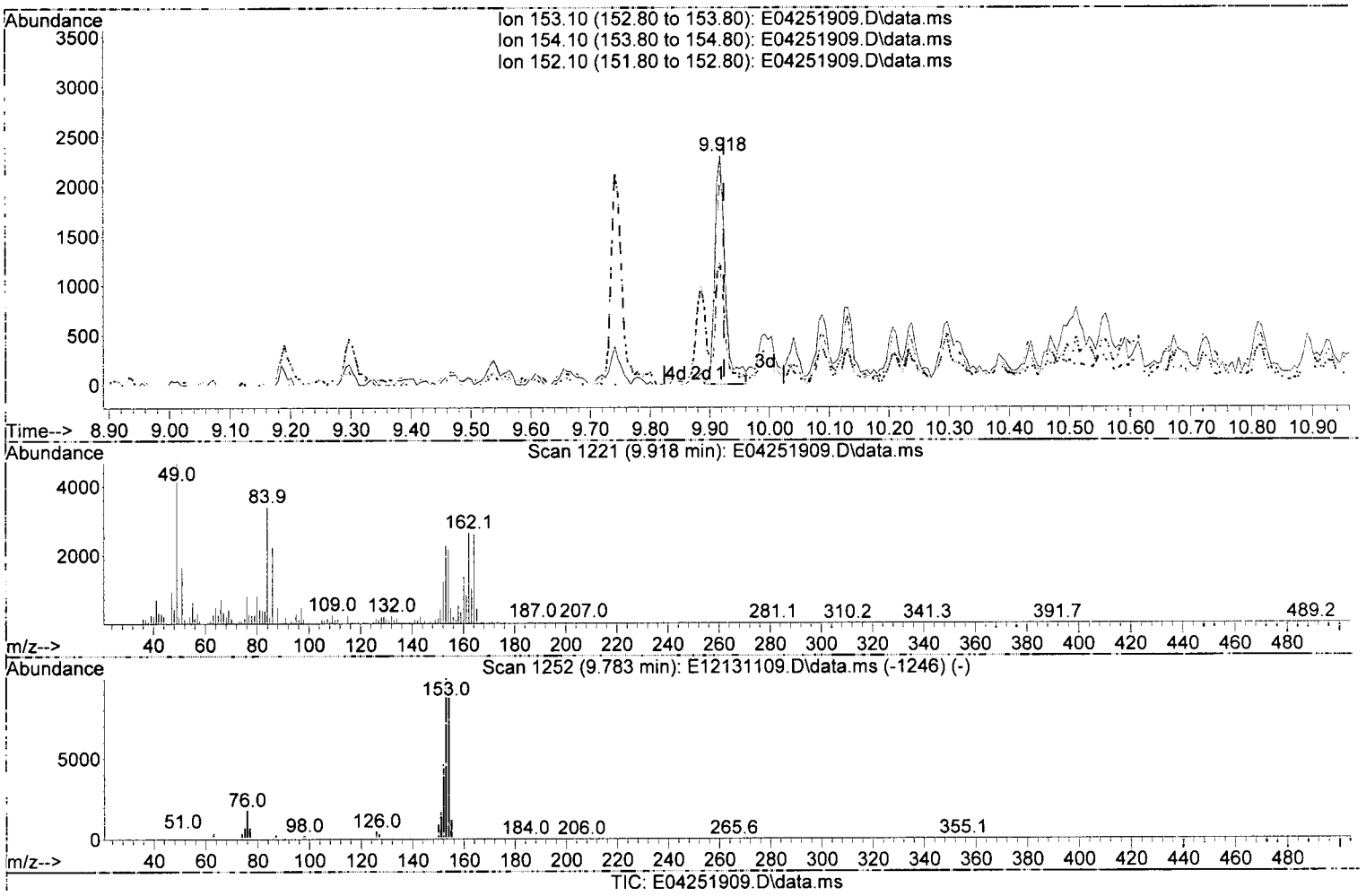
response 3716

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	35.23
42.10	21.30	58.49#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(51) Acenaphthene (T)

9.918min (-0.006) 14.15 ng/ml J

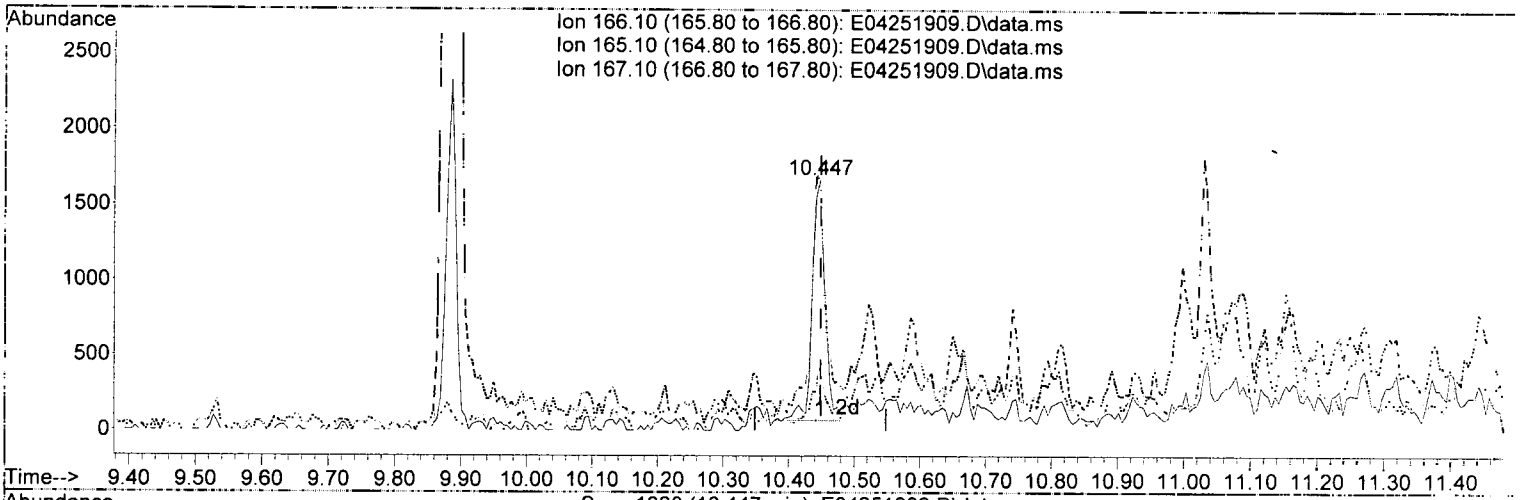
response 2846

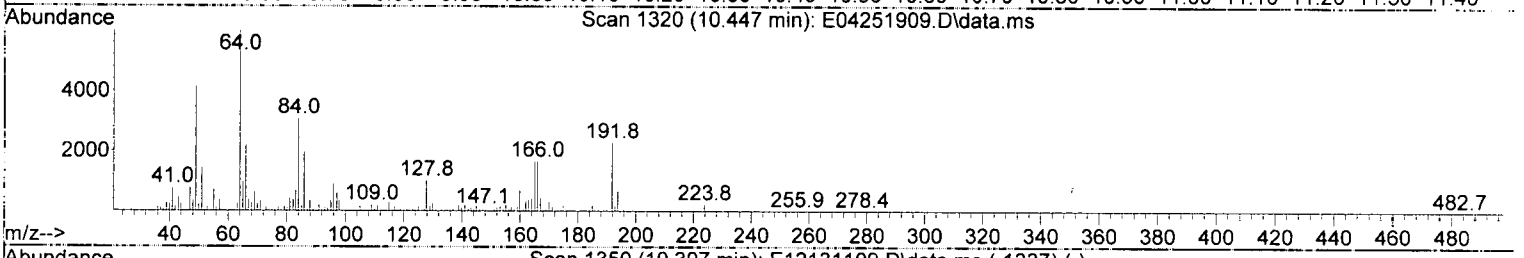
Ion	Exp%	Act%
153.10	100.00	100.00
154.10	92.00	94.10
152.10	47.10	53.71
0.00	0.00	0.00

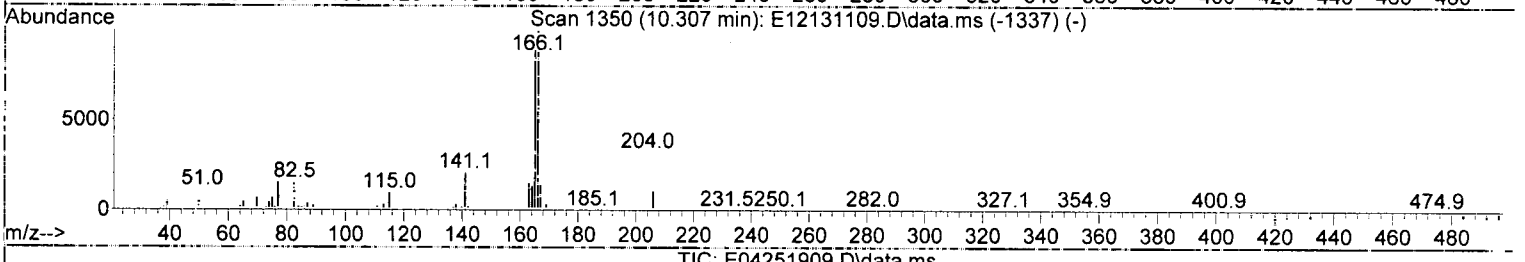
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04251909.D\data.ms

(60) Fluorene (T)

10.447min (-0.001) 10.33 ng/ml J

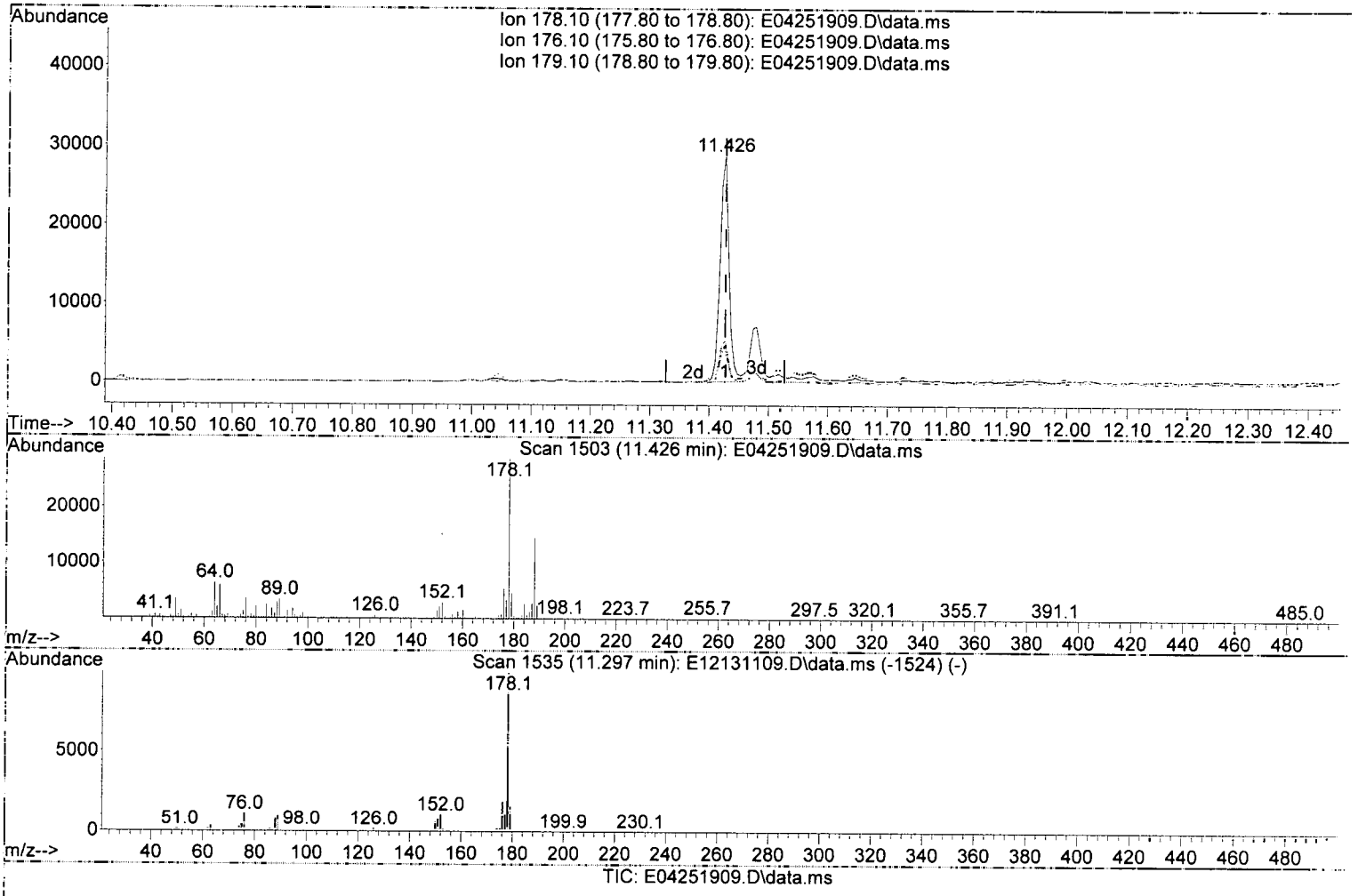
response 2164

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	98.92
167.10	13.60	27.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(71) Phenanthrene (T)

11.426min (-0.000) 88.43 ng/ml

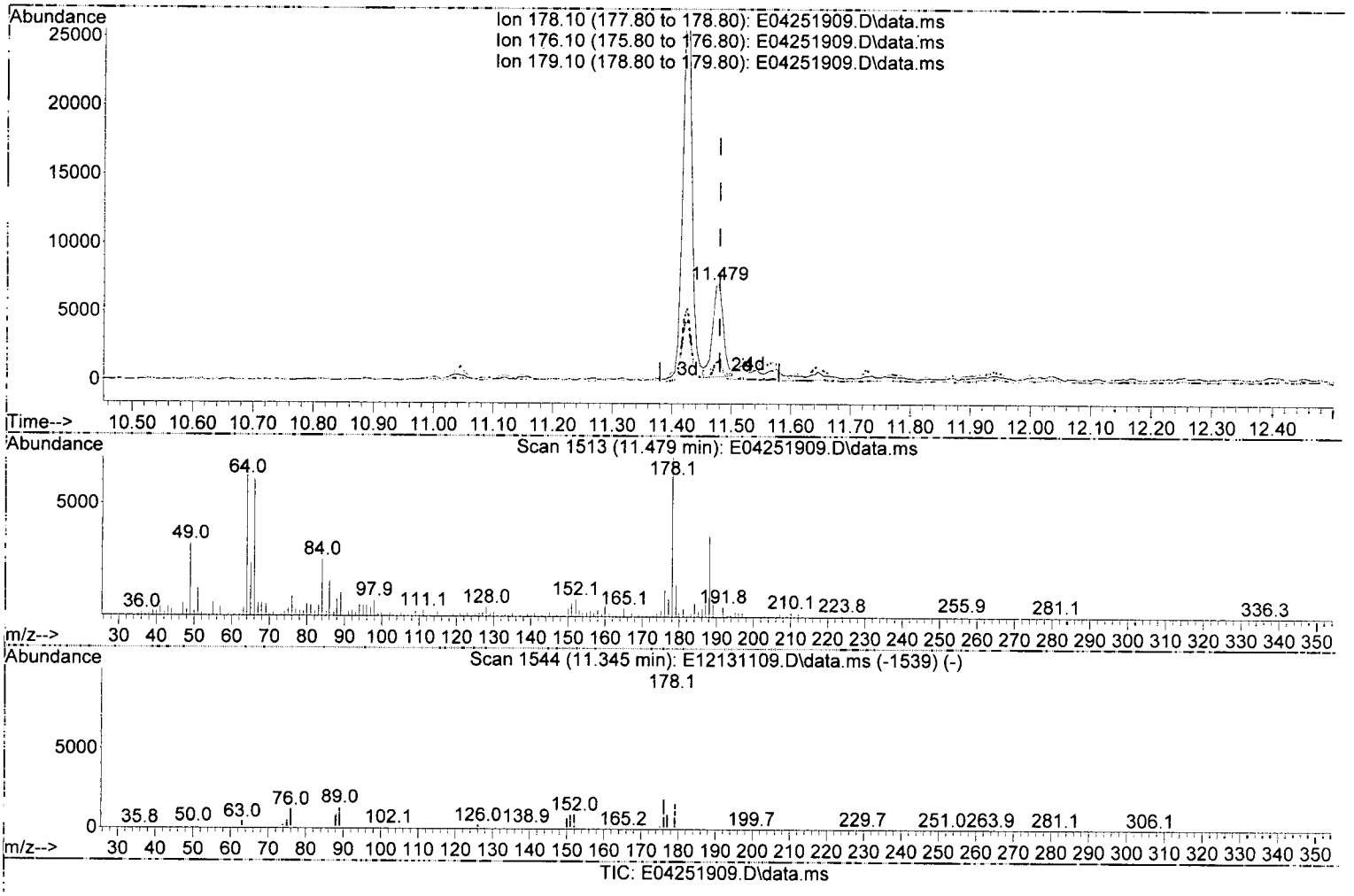
response 30257

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.52
179.10	15.00	16.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(72) Anthracene (T)

11.479min (-0.000) 24.14 ng/ml

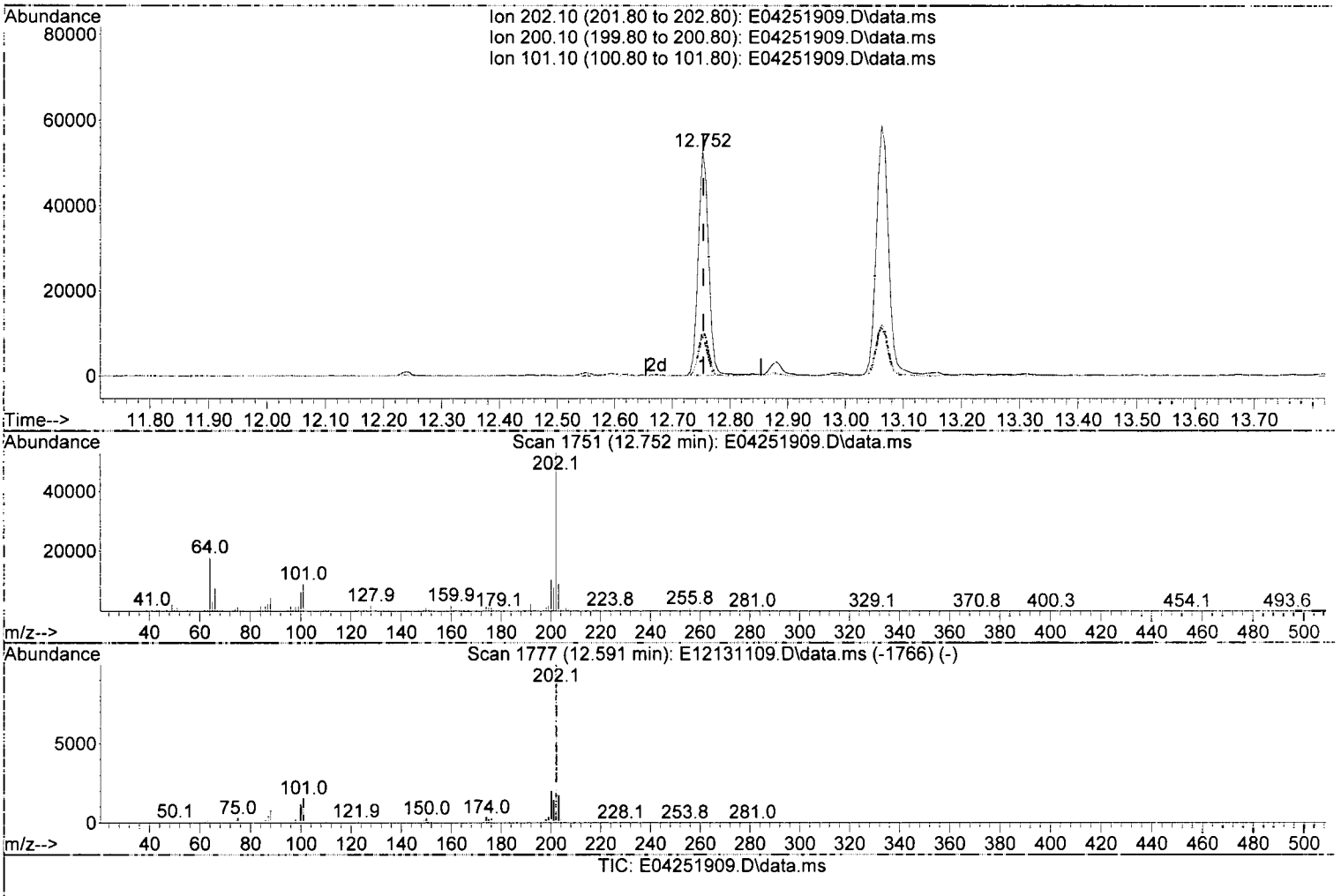
response 8475

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.56
179.10	15.50	20.29
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(75) Fluoranthene (T)

12.752min (-0.001) 185.04 ng/ml

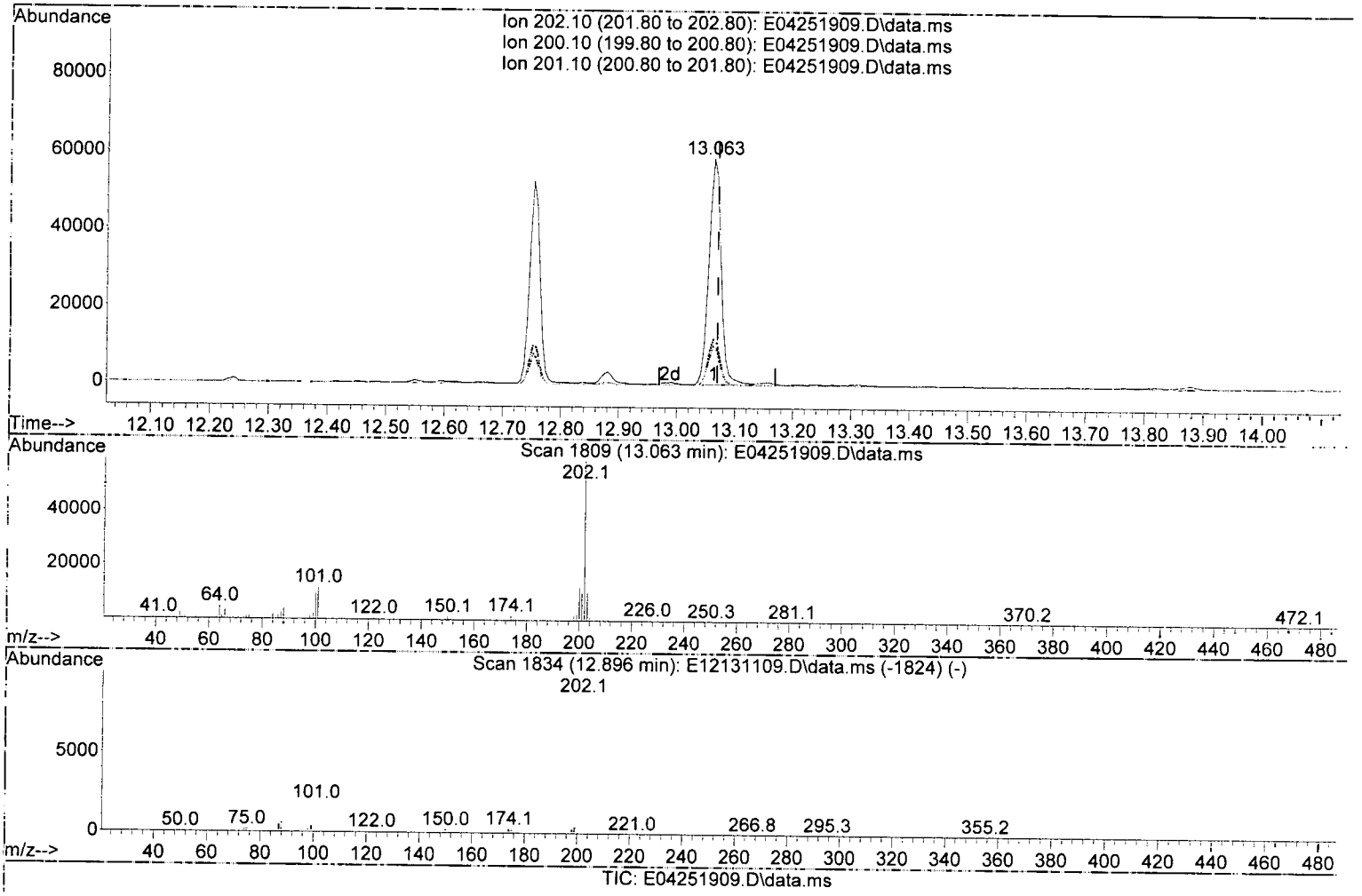
response 65668

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.90
101.10	15.70	17.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(77) Pyrene (T)

13.063min (-0.006) 238.08 ng/ml

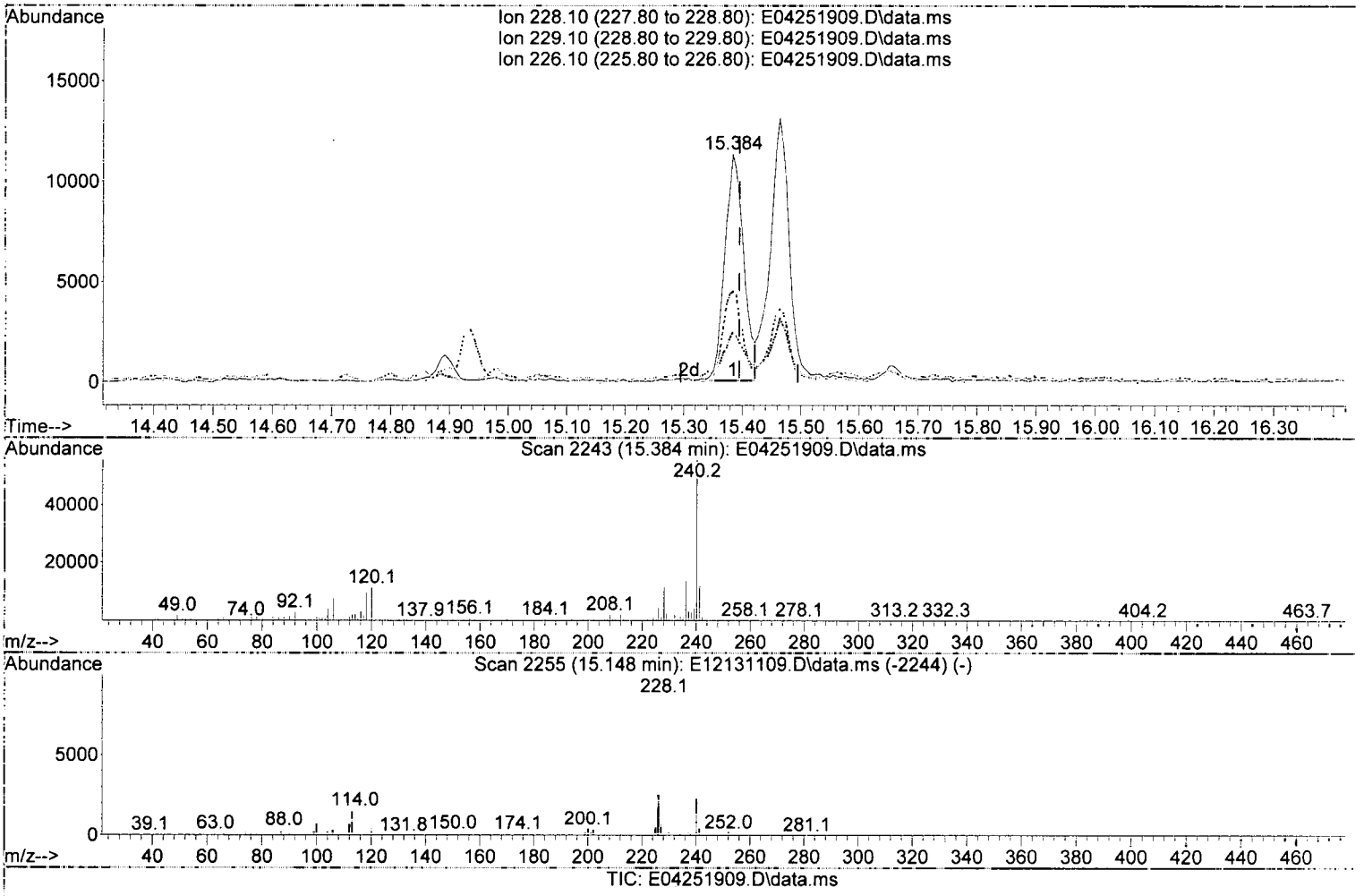
response 85832

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.71
201.10	17.50	17.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH .
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(83) Benz(a)anthracene (T)

15.384min (-0.011) 73.11 ng/ml

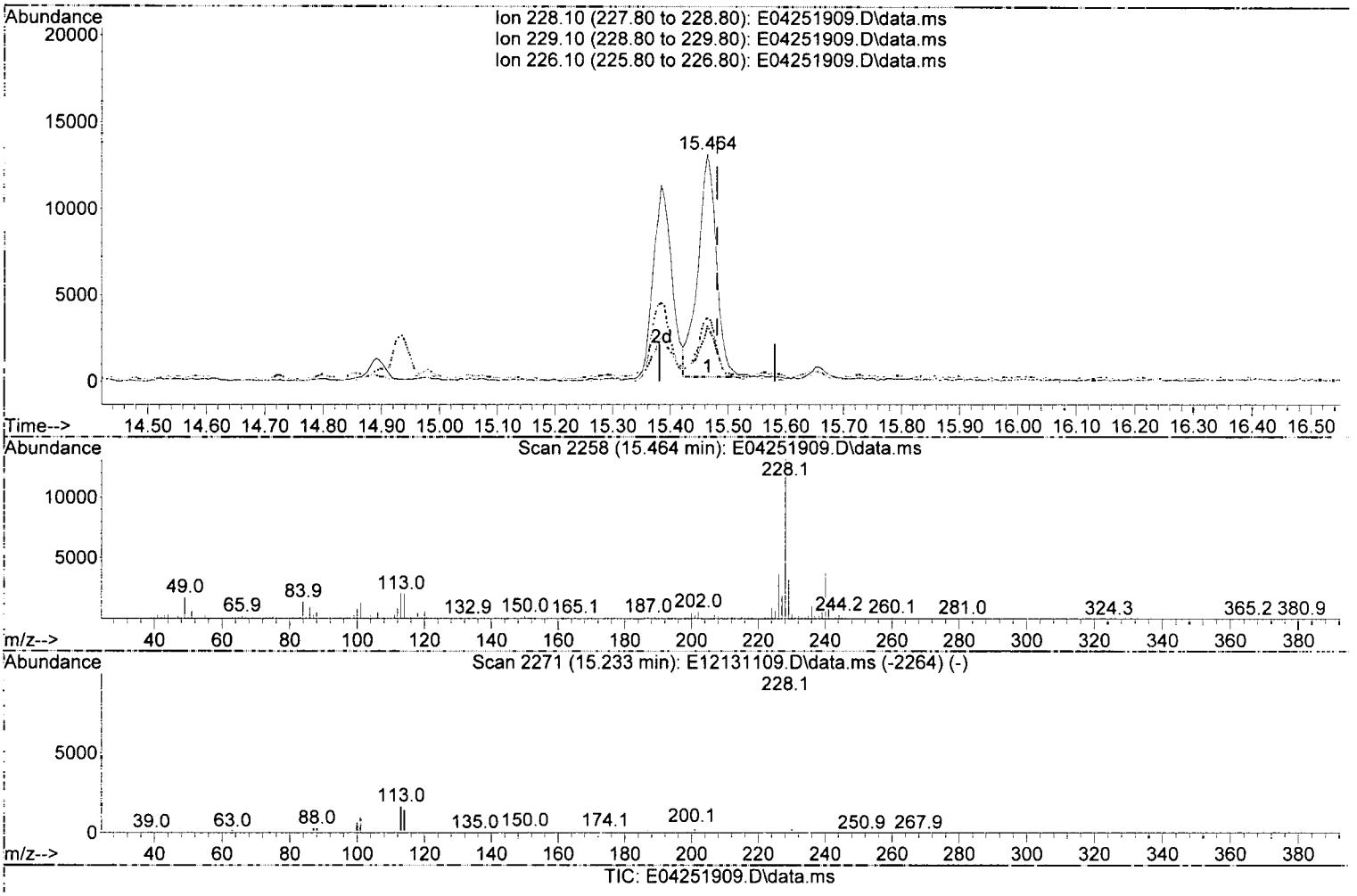
response 25318

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	22.01
226.10	27.80	39.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 86.92 ng/ml

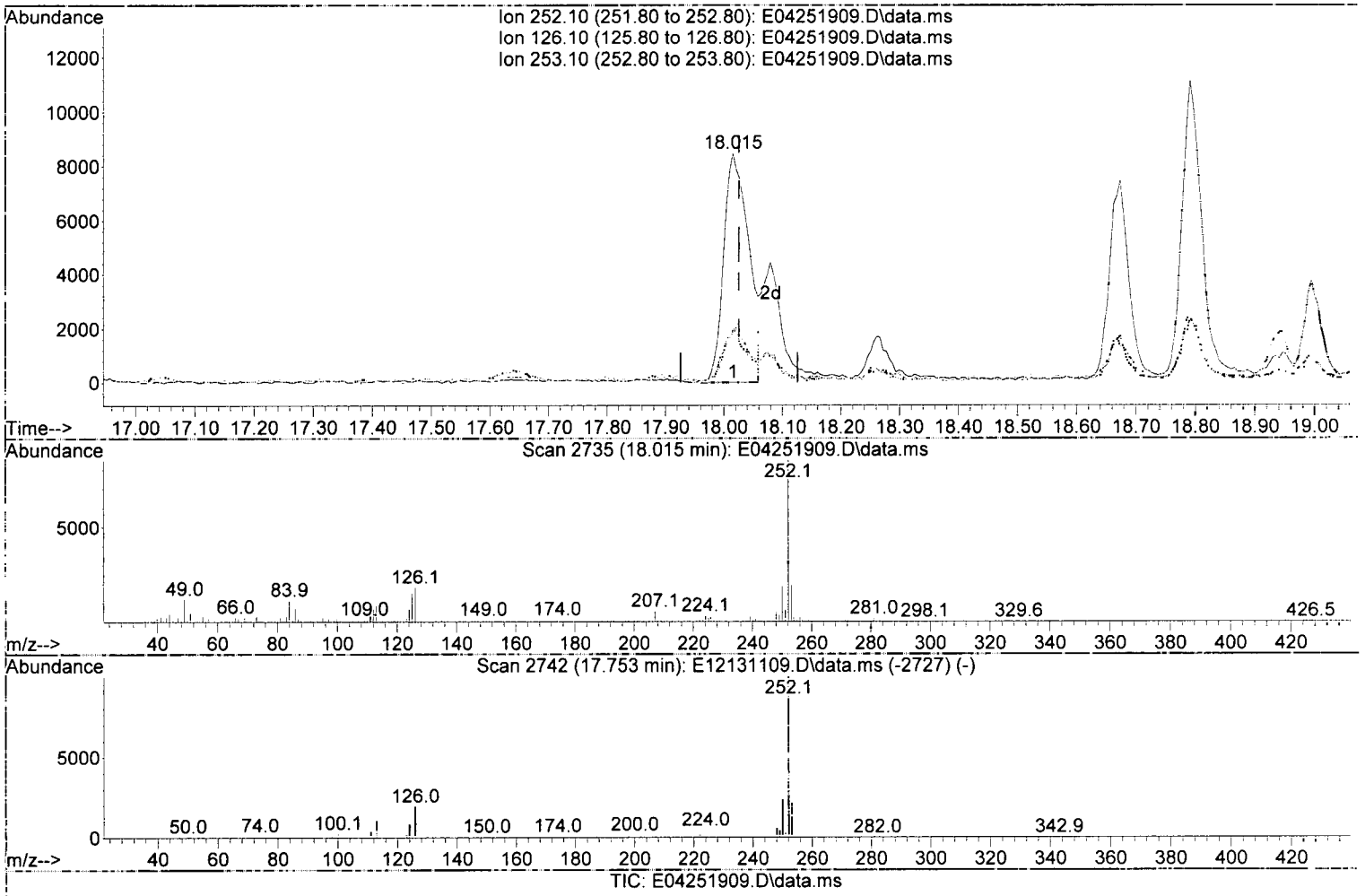
response 28673

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	24.37
226.10	29.80	27.75
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(88) Benzo(b)fluoranthene (T)

18.015min (-0.010) 89.12 ng/ml MOS

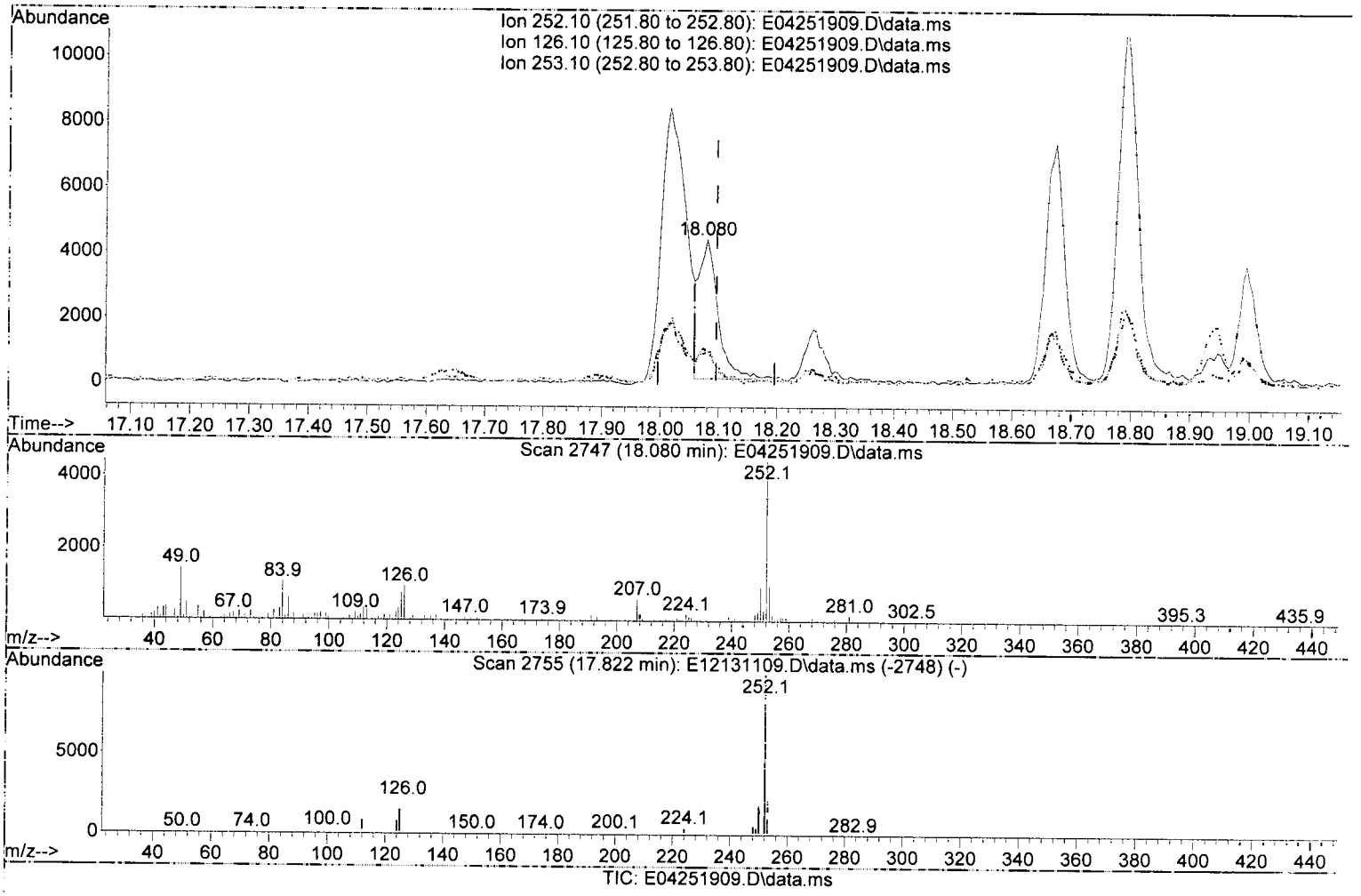
response 25098

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.50
253.10	22.40	22.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(89) Benzo(k)fluoranthene (T)

18.080min (-0.016) 34.05 ng/ml (m) MOS

response 9424

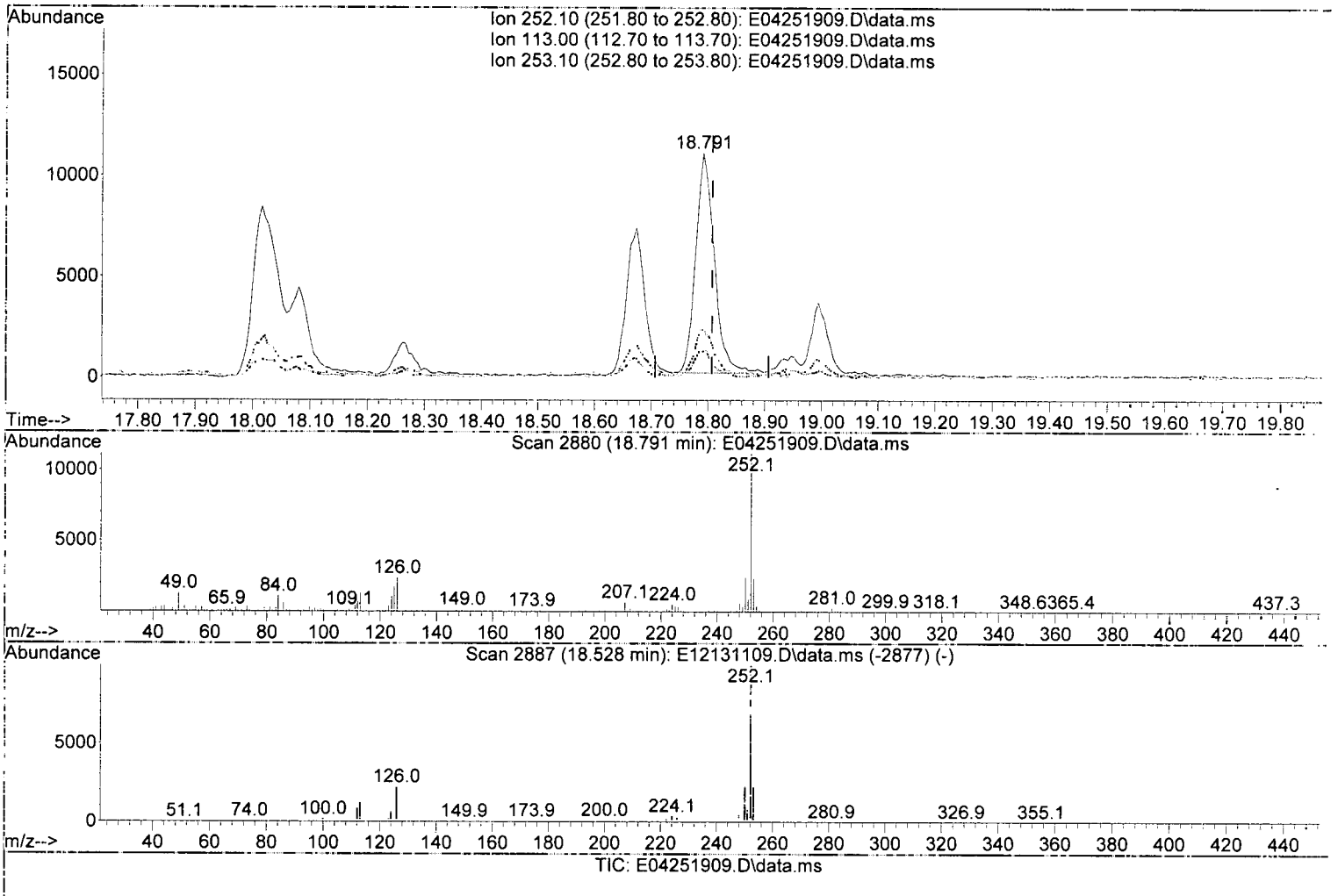
DTH 4/25/19 ✓

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.61
253.10	21.80	22.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(92) Benzo(a)pyrene (T)

18.791min (-0.015) 97.00 ng/ml

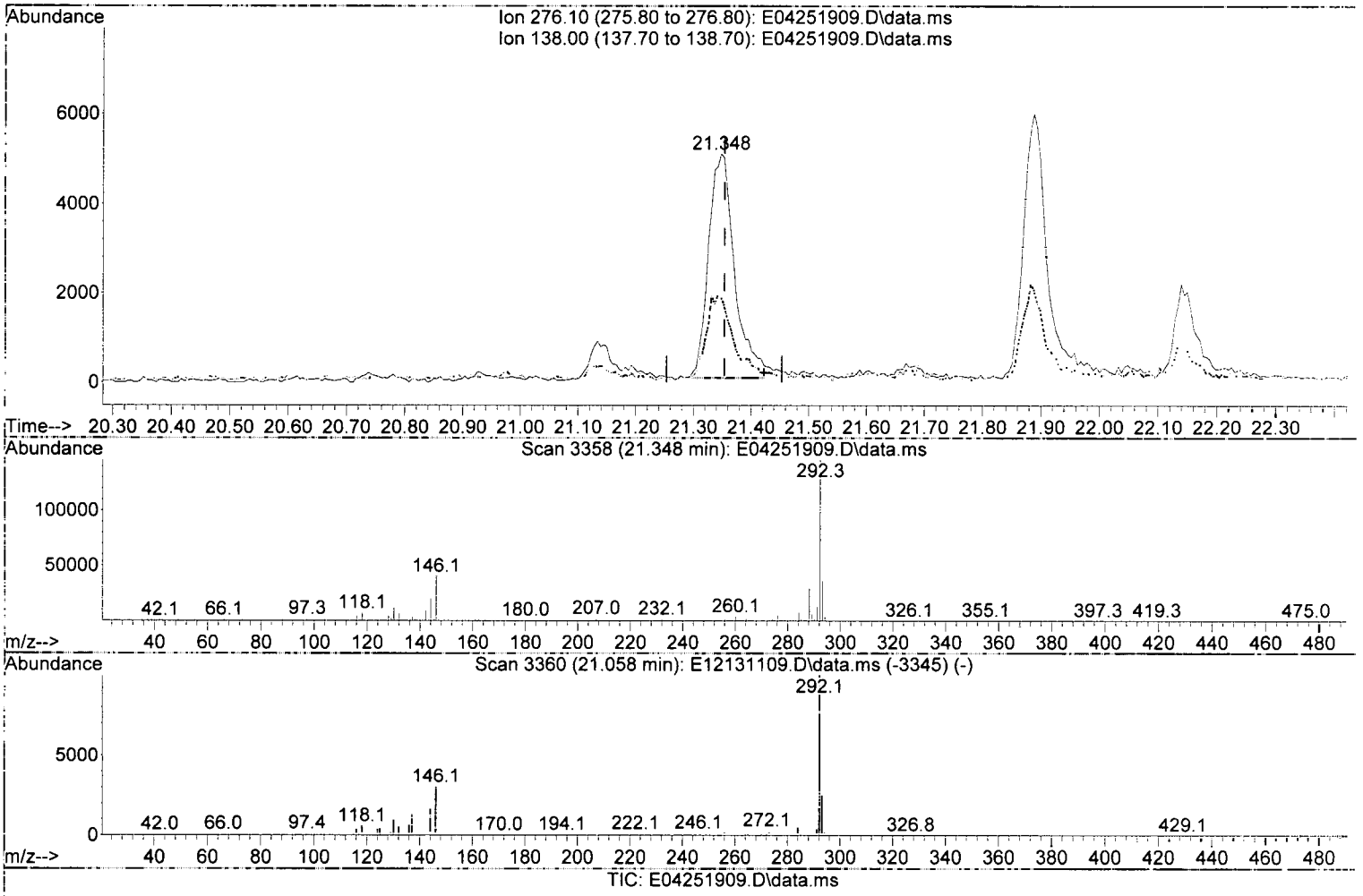
response 24802

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	11.68
253.10	21.70	21.39
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.348min (-0.006) 63.56 ng/ml

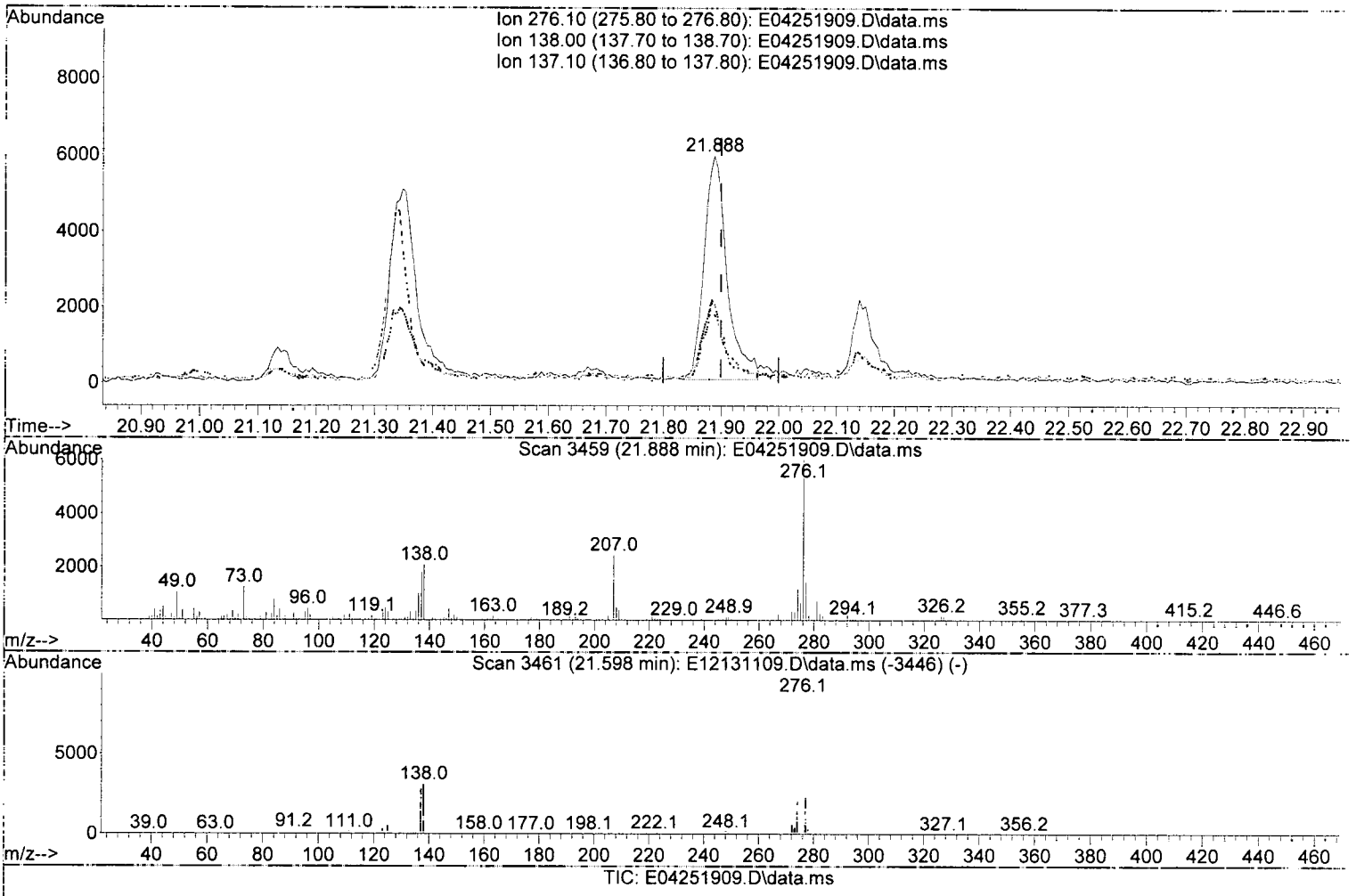
response 15690

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	37.38
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251909.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.888min (-0.011) 67.39 ng/ml

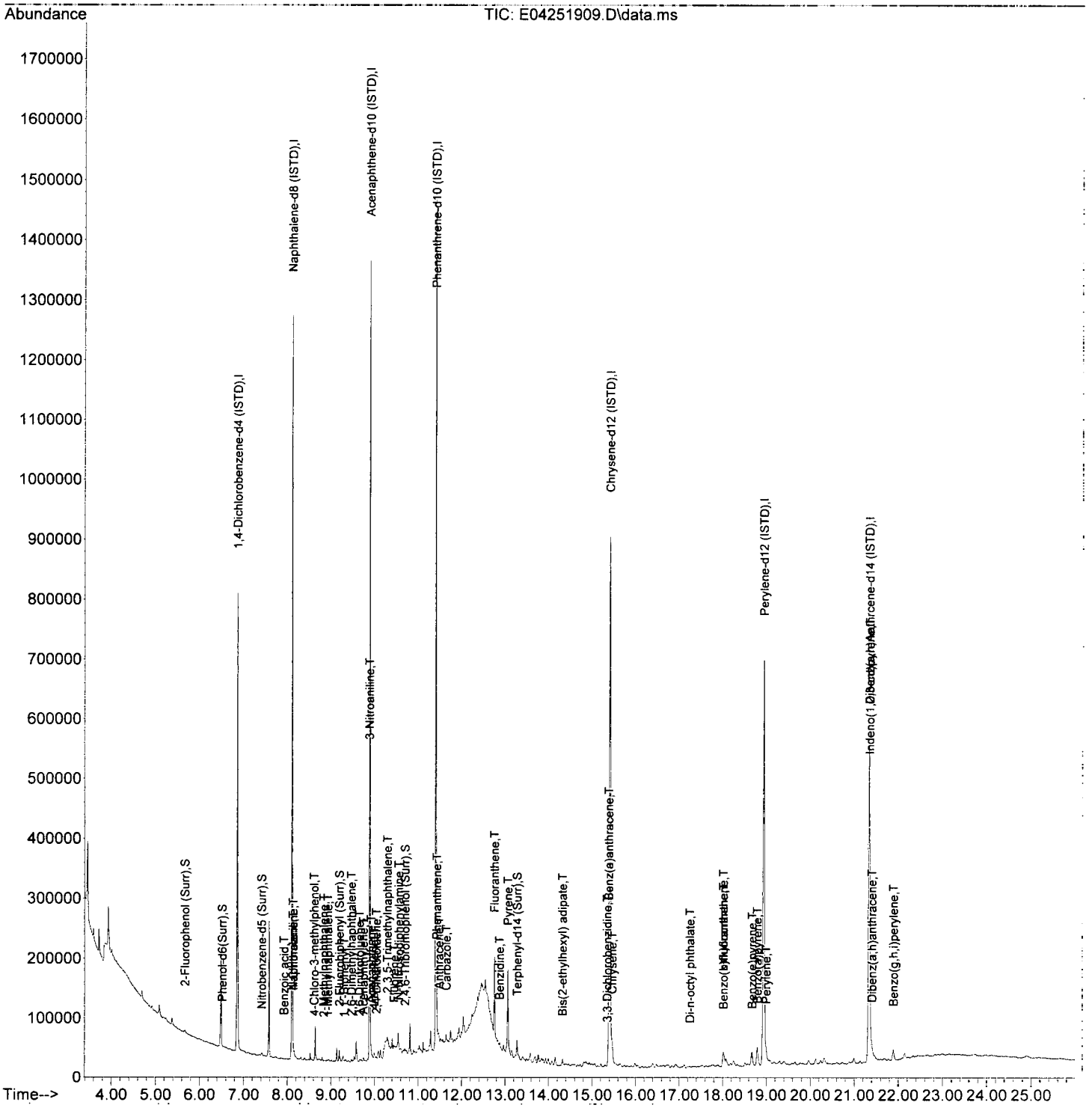
response 16377

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	34.92
137.10	39.00	30.20
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251909.D
Acq On : 25 Apr 2019 12:27 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-02@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:41 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	189136	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	710760	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	301245	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	547853	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.405	240	489587	2000.00	ng/ml	-0.02
86) Perylene-d12 (ISTD)	18.941	264	420979	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.337	292	357458	2000.00	ng/ml	-0.02
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.671	112	3366	28.55	ng/ml	0.03
5) Phenol-d6(Surr)	~~6.521~~	~~99~~	~~1877~~	~~11.90~~	~~ng/ml~~	~~0.03~~ MI
19) Nitrobenzene-d5 (Surr)	7.420	82	3214	22.73	ng/ml	0.02
40) 2-Fluorobiphenyl (Surr)	9.195	172	7767	34.67	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.698	330	620	47.04	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.276	244	10531	46.04	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.222	70	70	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.479	77	73	N.D.		
22) Isophorone	7.564	82	121	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	8.131	128	15715	41.45	ng/ml	100
30) 4-Chloroaniline	8.131	127	1961	15.02	ng/ml#	31
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	0.000		0	N.D.		
33) 2-Methylnaphthalene	8.837	142	1698	7.12	ng/ml	93
34) 1-Methylnaphthalene	8.933	142	943	4.13	ng/ml	89
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	9.302	154	1211	4.70	ng/ml	97
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	0.000		0	N.D.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.468	156	556	3.09	ng/ml	88
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	9.741	152	5306	18.08	ng/ml	98
50) 3-Nitroaniline	0.000		0	N.D.		
51) Acenaphthene	9.918	153	1311	6.59	ng/ml	80
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	10.051	165	103	62.87	ng/ml#	15
55) Dibenzofuran	10.105	168	612	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	10.313	149	130	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.292	170	1562	9.73	ng/ml	77
60) Fluorene	10.447	166	3615	17.45	ng/ml	93
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	10.559	169	184	N.D.		
66) Azobenzene (1,2-DPH)	10.570	77	117	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	0.000		0	N.D.		
71) Phenanthrene	11.426	178	61735	205.31	ng/ml	99
72) Anthracene	11.474	178	17960	58.21	ng/ml	98
73) Carbazole	11.645	167	1592	5.51	ng/ml	96
74) Di-n-butyl phthalate	11.966	149	285	N.D.		
75) Fluoranthene	12.752	202	130853	419.53	ng/ml	97
76) Benzidine	0.000		0	N.D.		
77) Pyrene	13.063	202	163242	515.21	ng/ml	99
80) Butyl benzyl phthalate	0.000		0	N.D.		
81) Bis(2-ethylhexyl) adipate	14.325	129	1470	10.32	ng/ml	91
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.384	228	41154	149.02	ng/ml	73
84) Chrysene	15.464	228	44140	167.78	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.518	149	101	N.D.		
87) Di-n-octyl phthalate	17.218	149	59	30.89	ng/ml#	1
88) Benzo(b)fluoranthene	18.015	252	41589	186.99	ng/ml	96
89) Benzo(k)fluoranthene	~~18.015~~	~~252~~	~~52973~~	~~242.35~~	~~ng/ml~~	~~97~~
90) Benzo(b+k)fluoranthene	18.015	252	61317	262.51	ng/ml	97
91) Benzo(e)pyrene	18.673	252	28834	127.69	ng/ml	95
92) Benzo(a)pyrene	18.791	252	43380	214.82	ng/ml	99
93) Perylene	18.994	252	13360	57.88	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	21.348	276	27322	139.45	ng/ml	97
96) Dibenz(a,h)anthracene	21.401	278	2888	16.10	ng/ml#	61
97) Benzo(g,h,i)perylene	21.893	276	31150	161.49	ng/ml	78

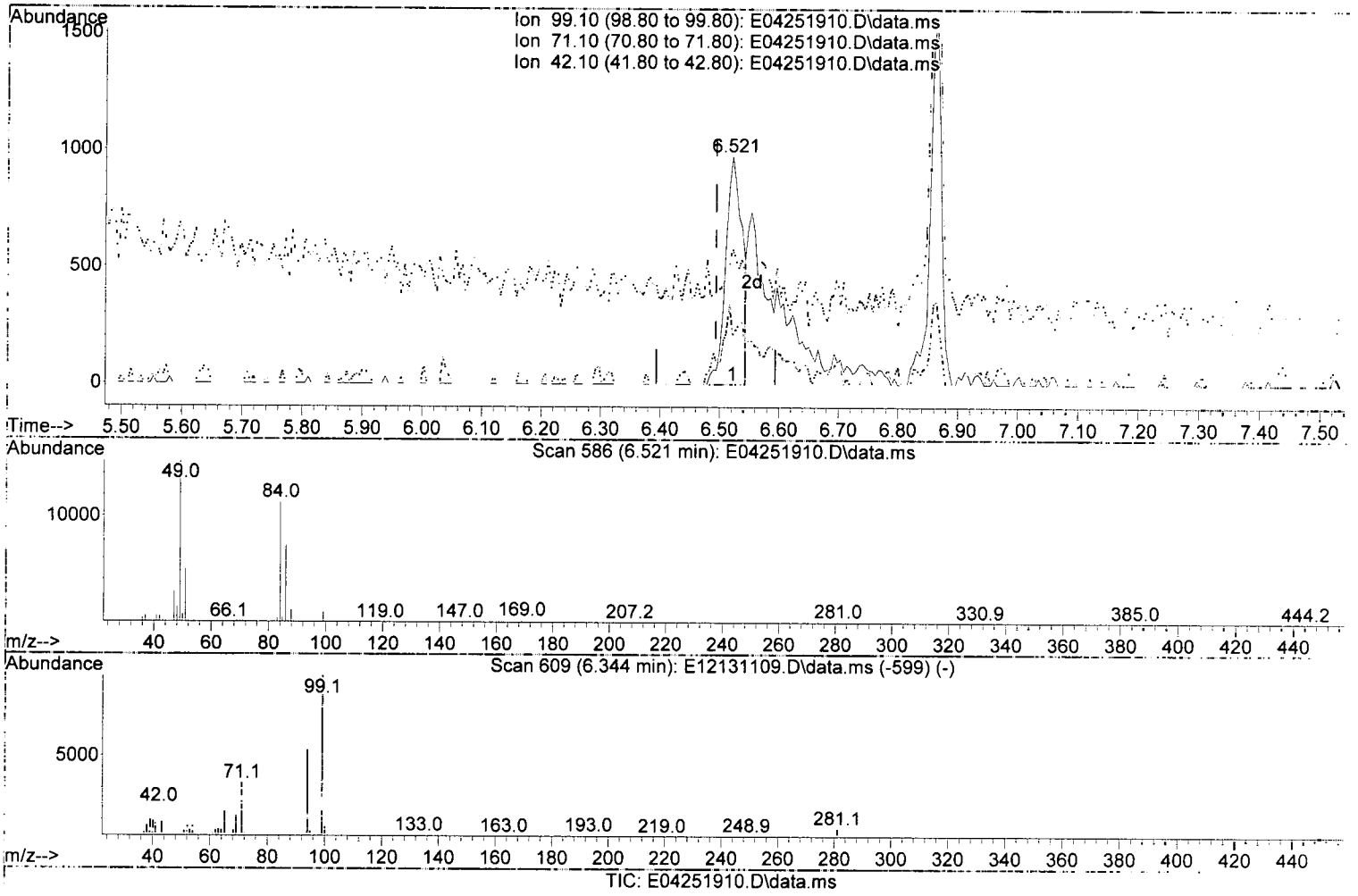
MQS Hit MQS

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(5) Phenol-d6(Surr) (S)

6.521min (+ 0.028) 11.90 ng/ml

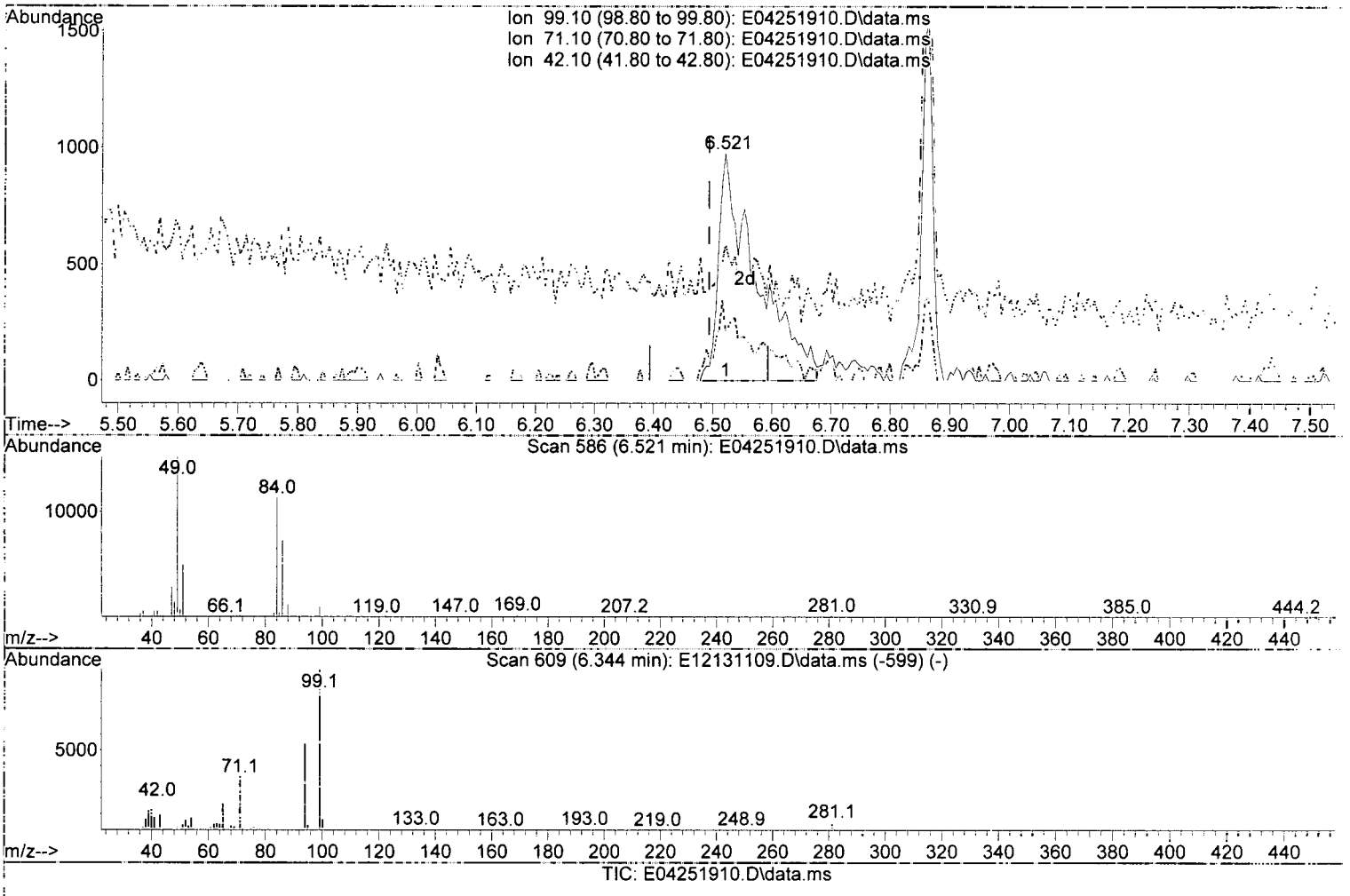
response 1877

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	21.82
42.10	21.30	60.04#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(5) Phenol-d6(Surr) (S)

6.521min (+ 0.028) 27.69 ng/ml (m)

DTH 4/25/19

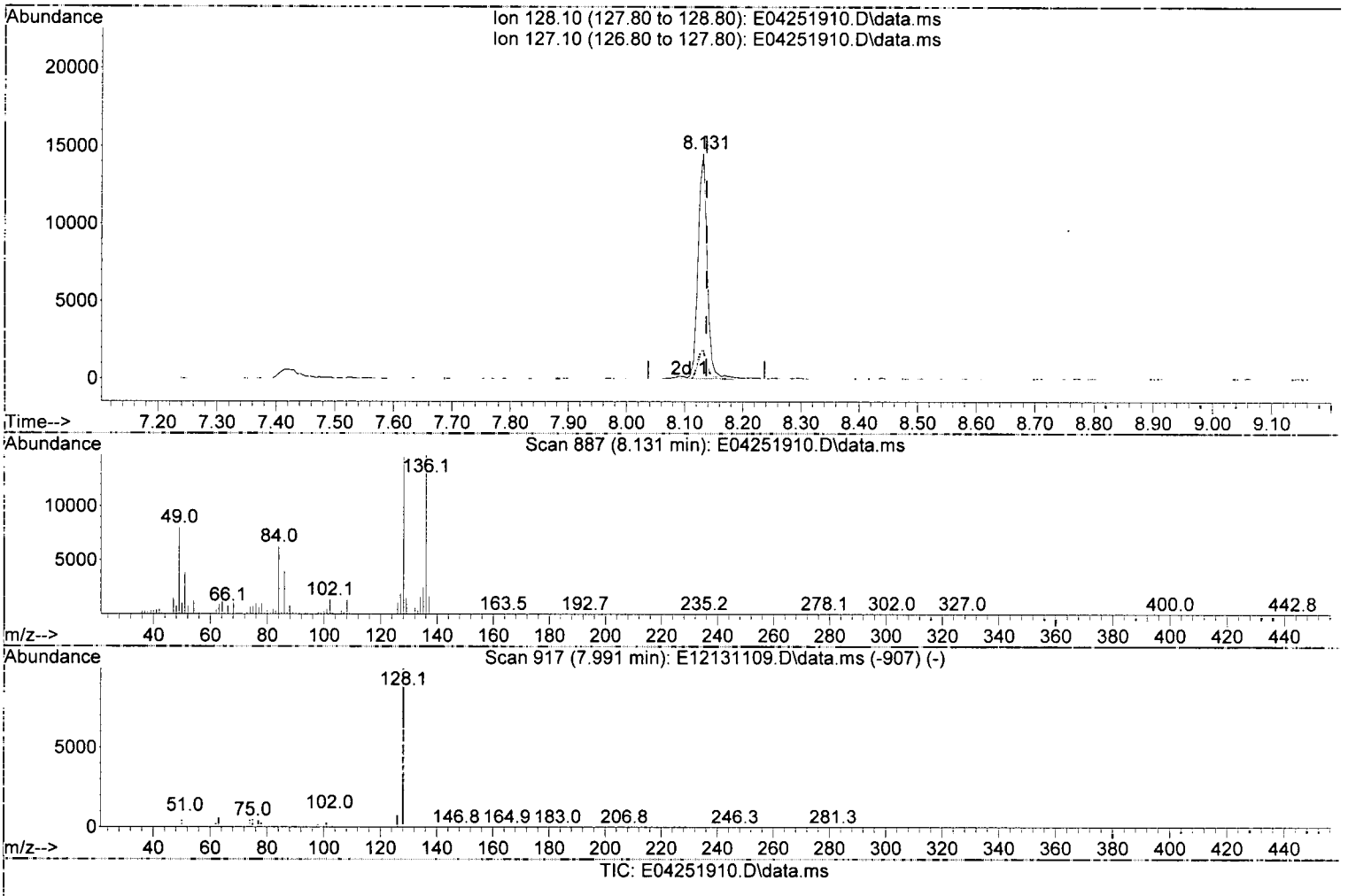
response 4368

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	21.82
42.10	21.30	60.04#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 41.45 ng/ml

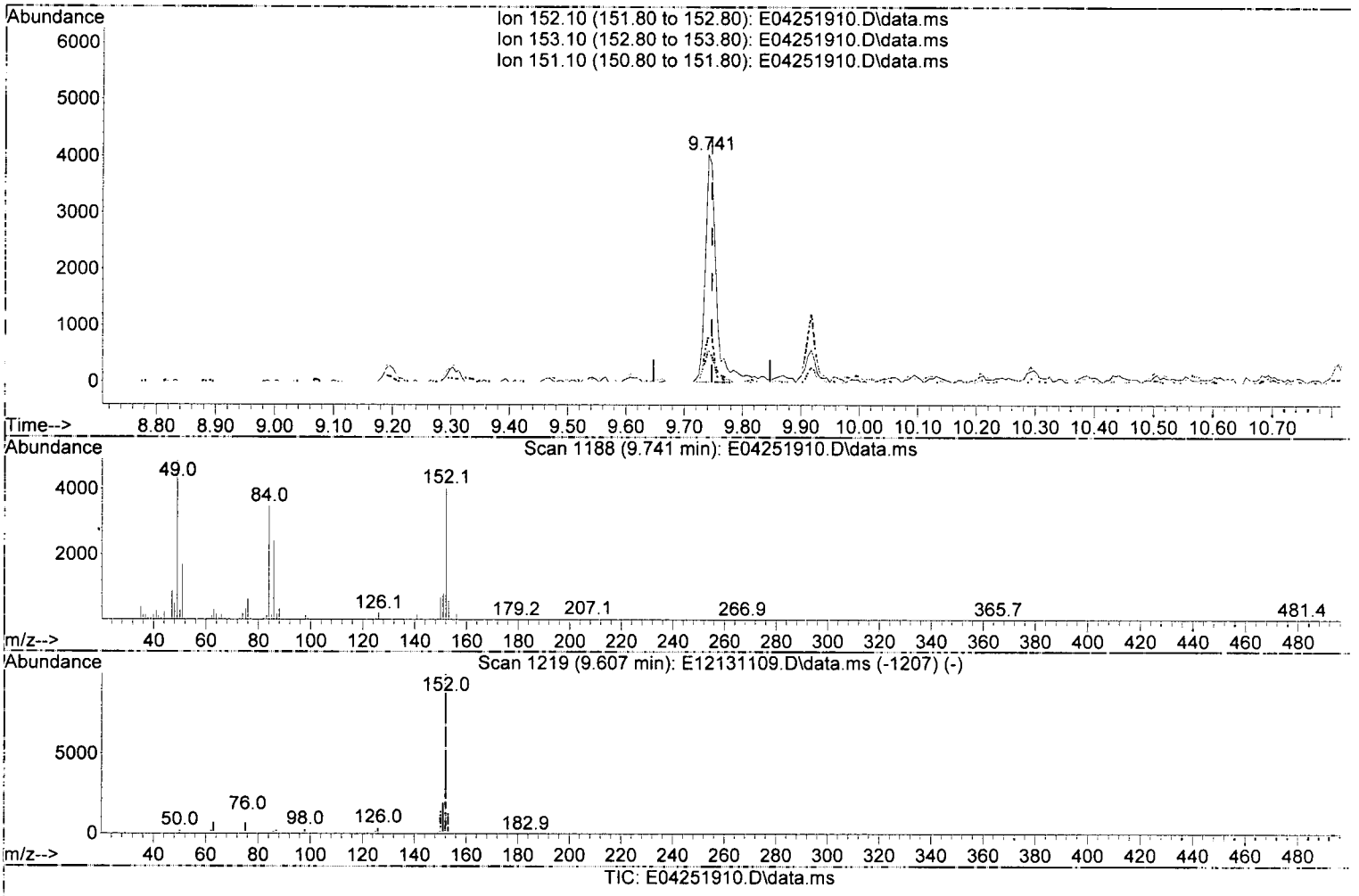
response 15715

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	13.19
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(49) Acenaphthylene (T)

9.741min (-0.005) 18.08 ng/ml J

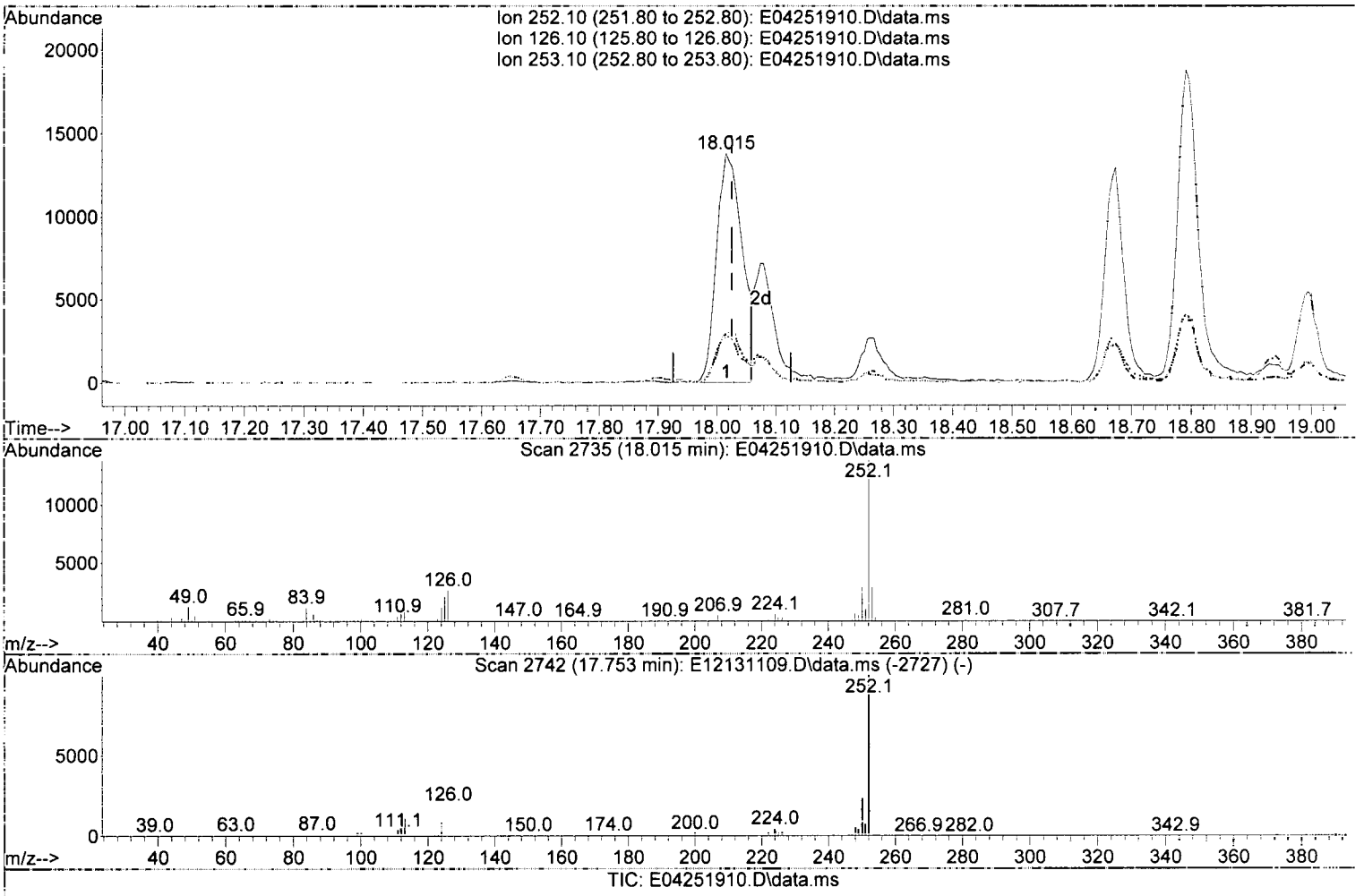
response 5306

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	12.90	14.26
151.10	19.50	20.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(88) Benzo(b)fluoranthene (T)

MOS

18.015min (-0.010) 186.99 ng/ml

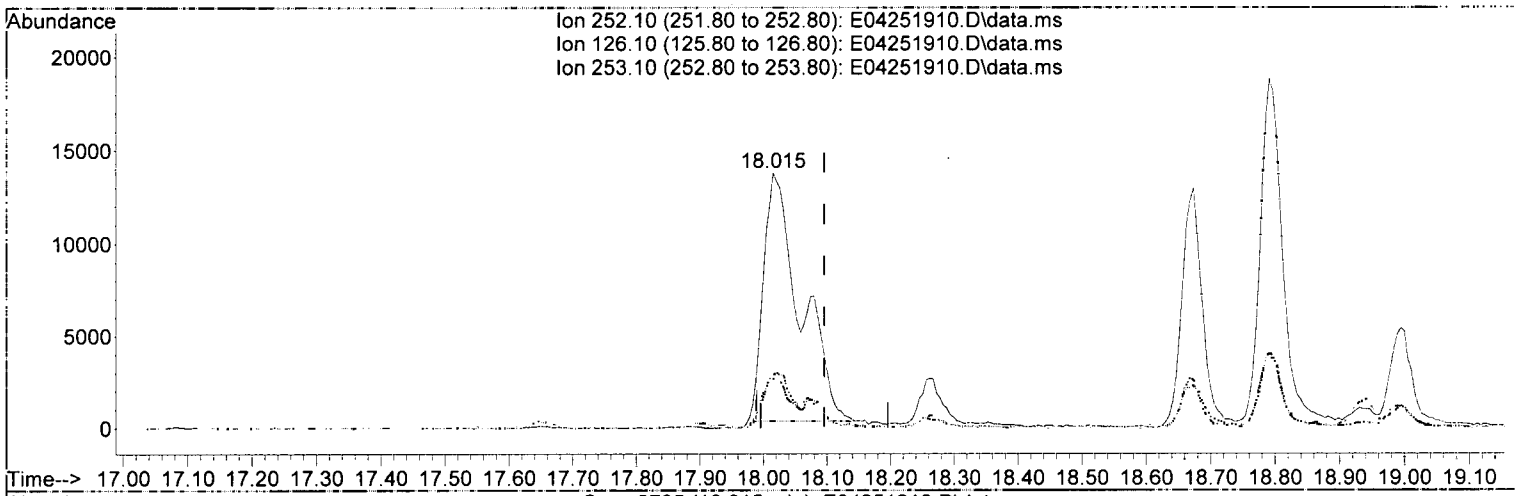
response 41589

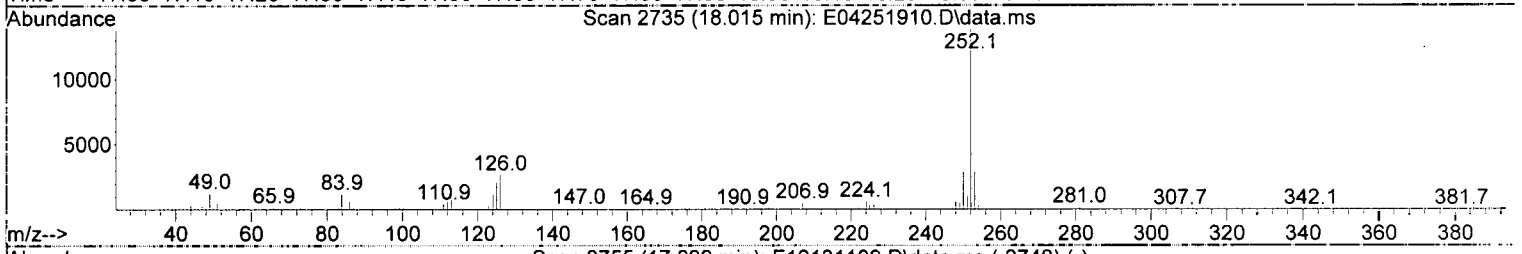
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	19.40
253.10	22.40	21.13
0.00	0.00	0.00

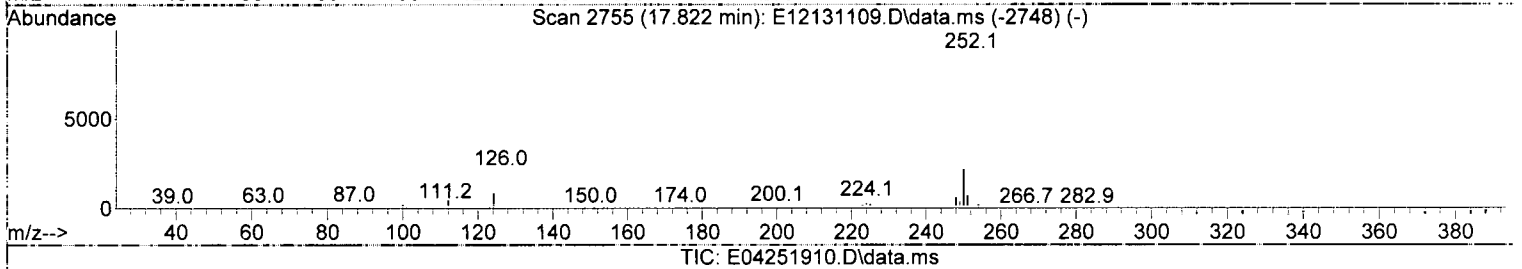
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04251910.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.015min (-0.080) 242.35 ng/ml

response 52973

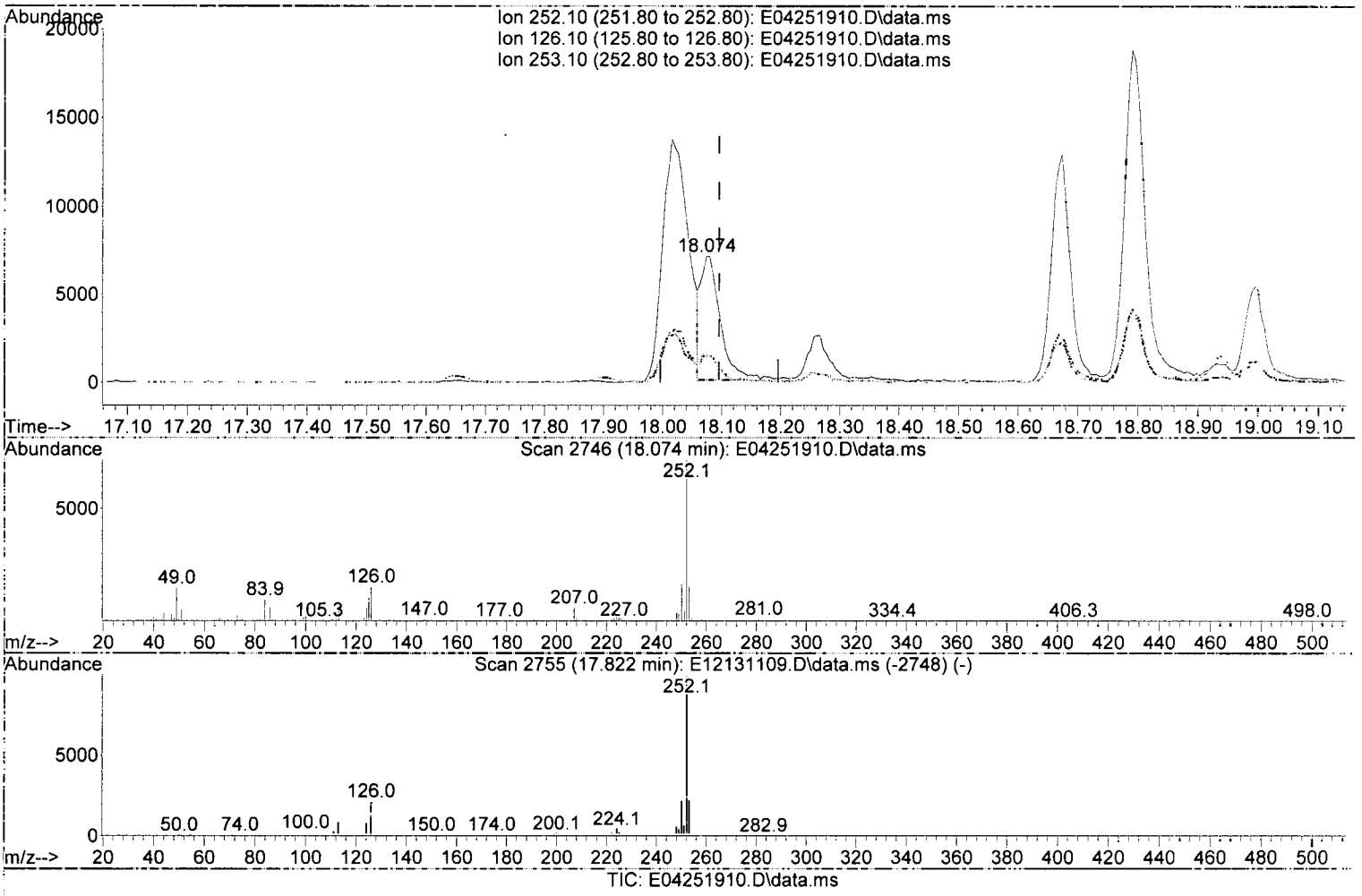
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	19.40
253.10	21.80	21.13
0.00	0.00	0.00

MI

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251910.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.074min (-0.021) 72.50 ng/ml (m) DTH 4/25/19

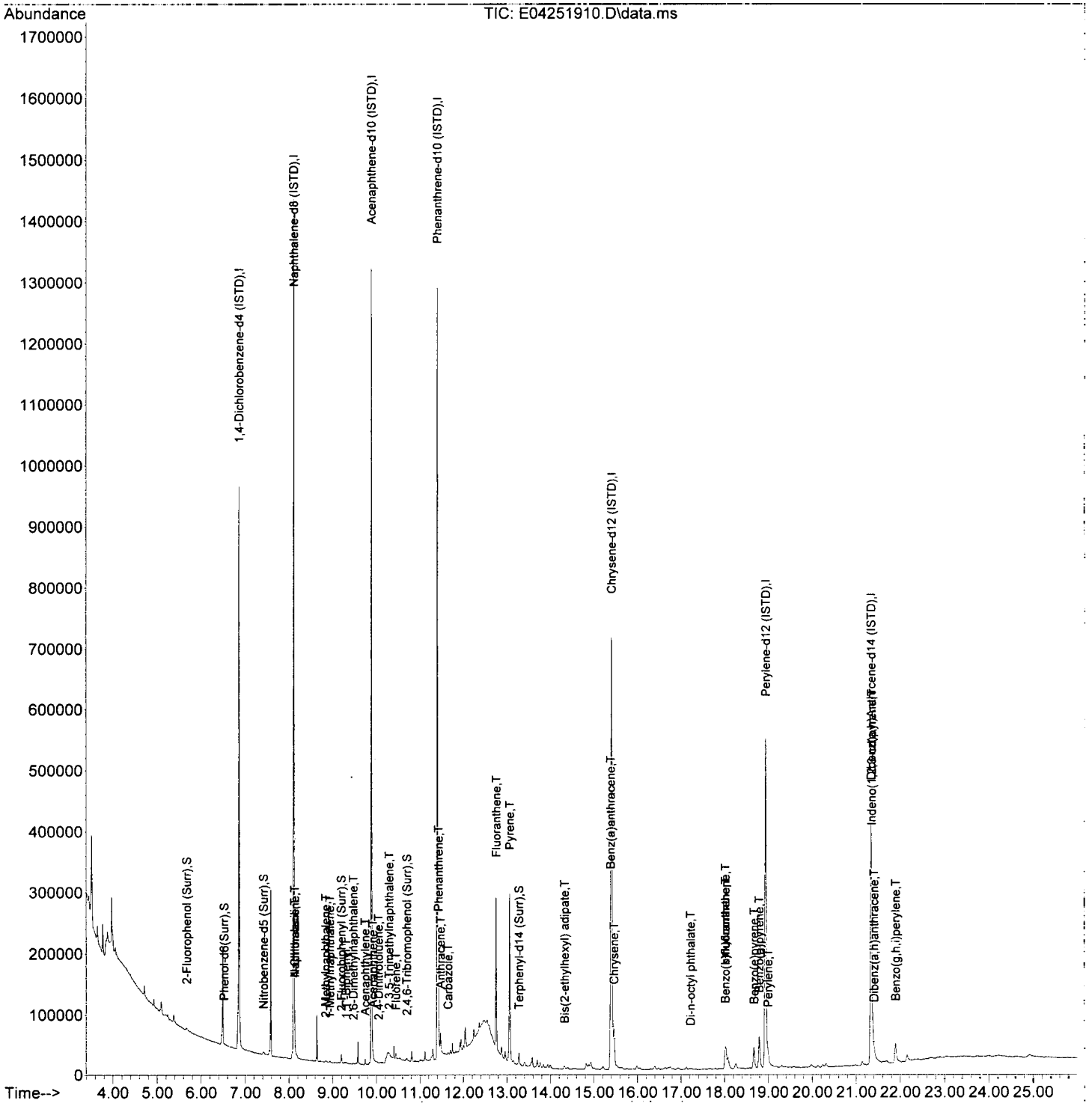
response 15847

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.63
253.10	21.80	21.88
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251910.D
Acq On : 25 Apr 2019 1:04 pm
Operator : JK/ AMS /DTH
Sample : 9041271-DUP1@40
Misc : 40x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 13:42:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251911.D
Acq On : 25 Apr 2019 1:41 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21@40
Misc : 40x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RP1

AMS
4/25/19

Quant Time: Apr 25 14:08:09 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	196393	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	763281	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	333898	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	598007	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	516806	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	439516	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	370677	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.671	112	3445	28.14	ng/ml	0.03
5) Phenol-d6(Surr)	6.516	99	3397	20.74	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.414	82	3264	22.23	ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.195	172	5238	21.09	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.709	330	386	33.06	ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.282	244	5003	20.72	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.414	74	50	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	6.569	93	91	N.D.		
8) Bis(2-chloroethyl) ether	6.569	93	91	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	7.056	108	81	N.D.		
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.056	107	85	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.120	45	51	N.D.		
16) N-Nitrosodi-n-propylamine	7.275	70	58	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.644	82	101	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	8.131	128	299	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251911.D
Acq On : 25 Apr 2019 1:41 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21@40
Misc : 40x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 14:08:09 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

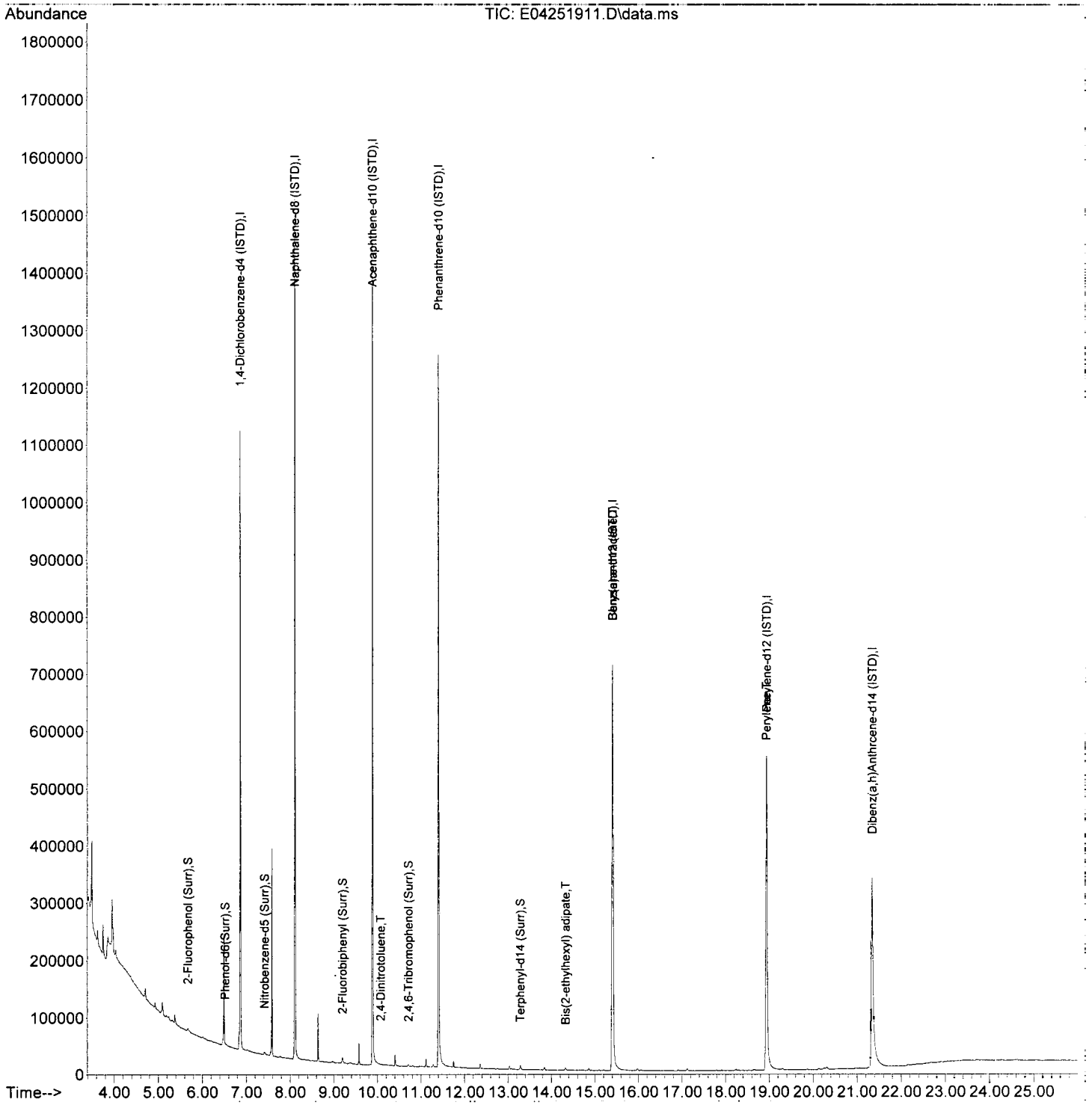
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.741	152	88	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	10.073	165	68	62.12 ng/ml#	15
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	10.607	77	76	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.426	178	676	N.D.	
72) Anthracene	11.479	178	170	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.977	149	104	N.D.	
75) Fluoranthene	12.763	202	844	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.073	202	807	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.325	129	1151	7.65 ng/ml	86
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.411	228	1503	5.16 ng/ml	64
84) Chrysene	15.469	228	478	N.D.	
85) Bis(2-ethylhexyl) phth...	15.534	149	149	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	18.021	252	182	N.D.	
89) Benzo(k)fluoranthene	18:090	252	101	N.D.	
90) Benzo(b+k)fluoranthene	18.090	252	101	N.D.	
91) Benzo(e)pyrene	18.673	252	443	N.D.	
92) Benzo(a)pyrene	18.796	252	249	N.D.	
93) Perylene	18.935	252	1405	5.83 ng/ml	69
95) Indeno(1,2,3-cd)pyrene	21.348	276	261	N.D.	
96) Dibenz(a,h)anthracene	0.000		0	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 : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251911.D
Acq On : 25 Apr 2019 1:41 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21@40
Misc : 40x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 14:08:09 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251912.D
Acq On : 25 Apr 2019 2:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RR1
AMS
4/25/19

Quant Time: Apr 25 14:47:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.858	152	174098	2000.00 ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.110	136	650352	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	311568	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	582173	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	547785	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	474552	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.337	292	412066	2000.00 ng/ml	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.655	112	41865	385.72 ng/ml	0.00
5) Phenol-d6(Surr)	6.500	99	54605	376.12 ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.393	82	42554	326.91 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	62229	268.56 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	11350	558.13 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	70784	276.57 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.446	74	71	N.D.	
3) Pyridine	4.505	79	1381	10.38 ng/ml#	1
6) Phenol	6.516	94	1818	11.95 ng/ml#	62
7) Aniline	6.553	93	766	3.86 ng/ml	77
8) Bis(2-chloroethyl) ether	6.596	93	107	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.992	108	3597	49.86 ng/ml	99
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.072	107	127	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.072	45	138	N.D.	
16) N-Nitrosodi-n-propylamine	7.265	70	323	3.47 ng/ml	62
17) 3+4-Methylphenol	7.243	107	935	7.81 ng/ml#	36
18) Hexachloroethane	7.404	117	78	N.D.	
20) Nitrobenzene	7.425	77	78	N.D.	
22) Isophorone	7.639	82	522	N.D.	
23) 2-Nitrophenol	0.000		0	N.D.	
24) 2,4-Dimethylphenol	7.773	122	108	N.D.	
25) Bis(2-chloroethoxy) me...	7.773	93	78	N.D.	
26) Benzoic acid	7.816	105	2578	474.46 ng/ml	83
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.131	128	1757	5.06 ng/ml	93
30) 4-Chloroaniline	8.126	127	282	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.618	107	50	27.18 ng/ml#	1
33) 2-Methylnaphthalene	8.821	142	361	N.D.	
34) 1-Methylnaphthalene	8.923	142	193	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	9.292	154	326	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	9.431	138	120	56.13 ng/ml#	75

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Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251912.D
Acq On : 25 Apr 2019 2:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 14:47:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

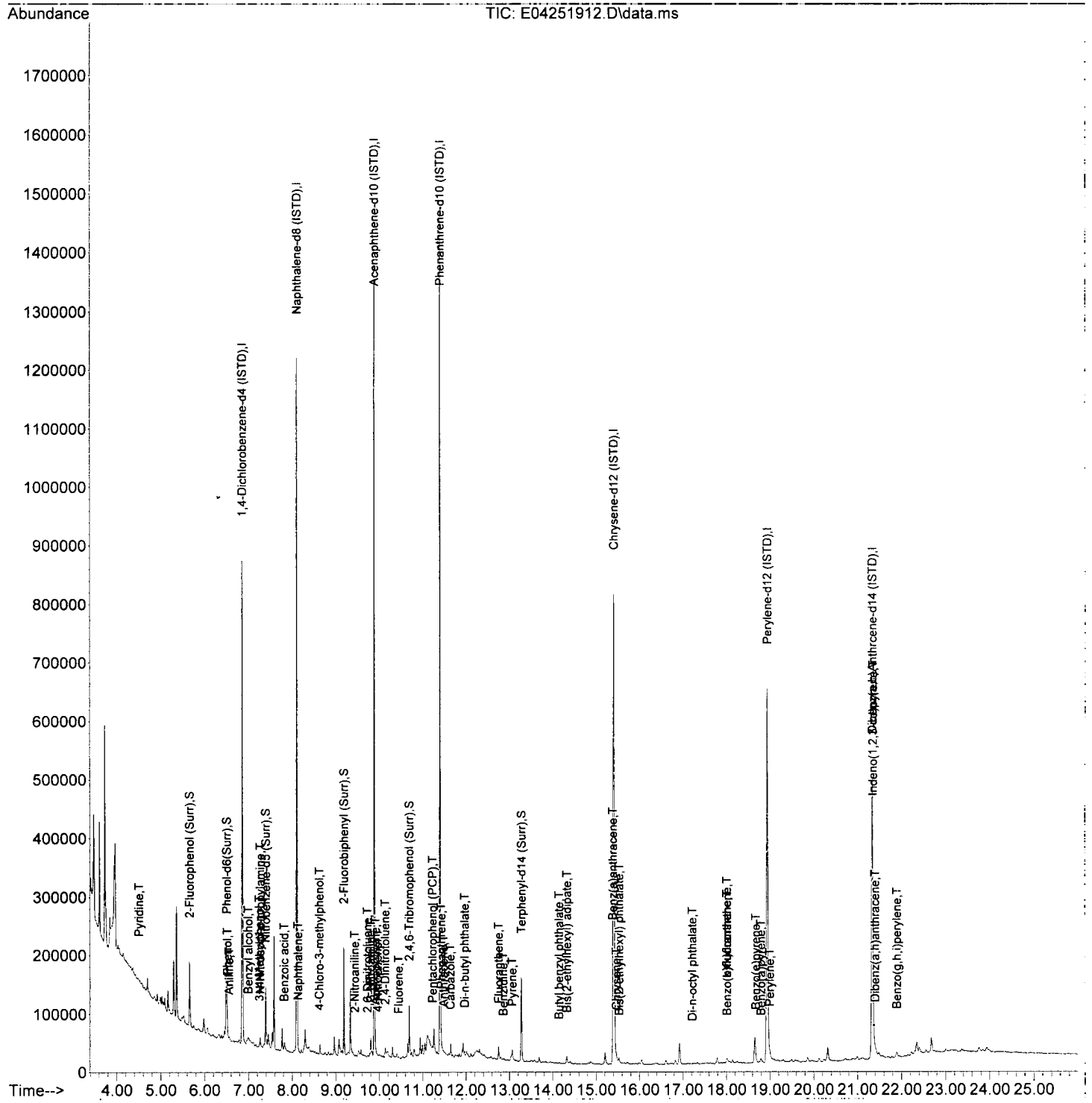
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.458	156	250	N.D.	
44)	1,4-Dinitrobenzene	0.000		0	N.D.	
45)	Dimethyl phthalate	9.586	163	219	N.D.	
46)	1,3-Dinitrobenzene	0.000		0	N.D.	
47)	2,6-Dinitrotoluene	9.725	165	61	33.12 ng/ml#	31
48)	1,2-Dinitrobenzene	0.000		0	N.D.	
49)	Acenaphthylene	9.741	152	734	N.D.	
50)	3-Nitroaniline	9.795	138	90	30.92 ng/ml#	1
51)	Acenaphthene	9.912	153	649	3.15 ng/ml	93
52)	2,4-Dinitrophenol	0.000		0	N.D.	
53)	4-Nitrophenol	9.960	139	156	69.62 ng/ml#	1
54)	2,4-Dinitrotoluene	10.131	165	81	62.43 ng/ml#	1
55)	Dibenzofuran	10.089	168	313	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	10.303	149	274	N.D.	
59)	2,3,5-Trimethylnaphtha...	10.292	170	87	N.D.	
60)	Fluorene	10.442	166	659	3.08 ng/ml	94
61)	4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62)	4-Nitroaniline	10.468	138	53	N.D.	
63)	4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65)	N-Nitrosodiphenylamine	10.538	169	104	N.D.	
66)	Azobenzene (1,2-DPH)	10.597	77	185	N.D.	
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.	
69)	Hexachlorobenzene	0.000		0	N.D.	
70)	Pentachlorophenol (PCP)	11.223	266	367	83.49 ng/ml	69
71)	Phenanthrene	11.426	178	4196	13.13 ng/ml	98
72)	Anthracene	11.479	178	1859	5.67 ng/ml	93
73)	Carbazole	11.634	167	1970	6.42 ng/ml	97
74)	Di-n-butyl phthalate	11.966	149	1024	2.67 ng/ml	96
75)	Fluoranthene	12.747	202	11279	34.03 ng/ml	96
76)	Benzidine	12.854	184	56	39.05 ng/ml#	11
77)	Pyrene	13.063	202	10795	32.06 ng/ml	99
80)	Butyl benzyl phthalate	14.143	149	773	4.82 ng/ml	94
81)	Bis(2-ethylhexyl) adipate	14.325	129	3578	22.44 ng/ml	95
82)	3,3-Dichlorobenzidine	0.000		0	N.D.	
83)	Benz(a)anthracene	15.384	228	6248	20.22 ng/ml	89
84)	Chrysene	15.464	228	6861	23.31 ng/ml	98
85)	Bis(2-ethylhexyl) phth...	15.528	149	2526	11.03 ng/ml	94
87)	Di-n-octyl phthalate	17.213	149	98	30.99 ng/ml#	1
88)	Benzo(b)fluoranthene	18.010	252	7987	31.86 ng/ml	94
89)	Benzo(k)fluoranthene	18.010	252	10185	41.34 ng/ml	94
90)	Benzo(b+k)fluoranthene	18.010	252	11354	43.12 ng/ml	94
91)	Benzo(e)pyrene	18.673	252	6028	23.68 ng/ml	96
92)	Benzo(a)pyrene	18.791	252	4382	19.25 ng/ml	99
93)	Perylene	18.994	252	4473	17.19 ng/ml	95
95)	Indeno(1,2,3-cd)pyrene	21.348	276	4645	20.57 ng/ml	62
96)	Dibenz(a,h)anthracene	21.396	278	992	4.80 ng/ml	79
97)	Benzo(g,h,i)perylene	21.893	276	4088	18.38 ng/ml	78

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251912.D
Acq On : 25 Apr 2019 2:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 14:47:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	187425	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	711198	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	312814	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	571215	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	497125	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	410218	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	346859	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	~~5.671~~	~~112~~	~~2675~~	~~22.89 ng/ml~~	~~0.03~~ MI
5) Phenol-d6(Surr)	~~6.521~~	~~99~~	~~1833~~	~~11.73 ng/ml~~	~~0.03~~ MI
19) Nitrobenzene-d5 (Surr)	7.414	82	2602	18.57 ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.195	172	8447	36.31 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.698	330	795	54.50 ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.276	244	12019	51.75 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	0.000		0	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.254	70	93	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.618	82	51	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	8.131	128	8245	21.73 ng/ml	100
30) 4-Chloroaniline	8.131	127	1009	7.72 ng/ml#	32
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.837	142	1012	4.24 ng/ml	95
34) 1-Methylnaphthalene	8.939	142	473	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	9.297	154	833	3.11 ng/ml	95
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.474	156	317	N.D.	
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	9.746	152	2876	9.44 ng/ml	99
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.918	153	1638	7.93 ng/ml	99
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.046	165	105	62.84 ng/ml#	15
55) Dibenzofuran	10.105	168	396	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	10.303	149	79	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.292	170	612	3.67 ng/ml	82
60) Fluorene	10.447	166	3142	14.61 ng/ml	97
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	0.000		0	N.D.	
63) 4,6-Dinitro-2-methylph...	10.415	198	52	162.19 ng/ml#	47
65) N-Nitrosodiphenylamine	10.554	169	138	N.D.	
66) Azobenzene (1,2-DPH)	10.602	77	124	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.426	178	26961	85.99 ng/ml	98
72) Anthracene	11.479	178	10096	31.39 ng/ml	96
73) Carbazole	11.645	167	1096	3.64 ng/ml	84
74) Di-n-butyl phthalate	11.966	149	342	N.D.	
75) Fluoranthene	12.774	202	78427	241.16 ng/ml	98
76) Benzidine	12.827	184	68	39.22 ng/ml#	1
77) Pyrene	13.068	202	100338	303.73 ng/ml	99
80) Butyl benzyl phthalate	14.138	149	89	N.D.	
81) Bis(2-ethylhexyl) adipate	14.319	129	1570	10.85 ng/ml	93
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.384	228	29283	104.43 ng/ml	82
84) Chrysene	15.464	228	31765	118.91 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.518	149	230	N.D.	
87) Di-n-octyl phthalate	17.240	149	162	31.27 ng/ml#	1
88) Benzo(b)fluoranthene	18.026	252	28056	129.45 ng/ml	95
89) Benzo(k)fluoranthene	18.026	252	34780	163.29 ng/ml	96
90) Benzo(b+k)fluoranthene	18.026	252	40117	176.26 ng/ml	96
91) Benzo(e)pyrene	18.673	252	18441	83.81 ng/ml	99
92) Benzo(a)pyrene	18.796	252	26815	136.27 ng/ml	97
93) Perylene	18.994	252	8939	39.75 ng/ml	94
95) Indeno(1,2,3-cd)pyrene	21.353	276	16727	87.98 ng/ml	100
96) Dibenz(a,h)anthracene	21.401	278	1911	10.98 ng/ml#	69
97) Benzo(g,h,i)perylene	21.893	276	17521	93.61 ng/ml	80

MOS

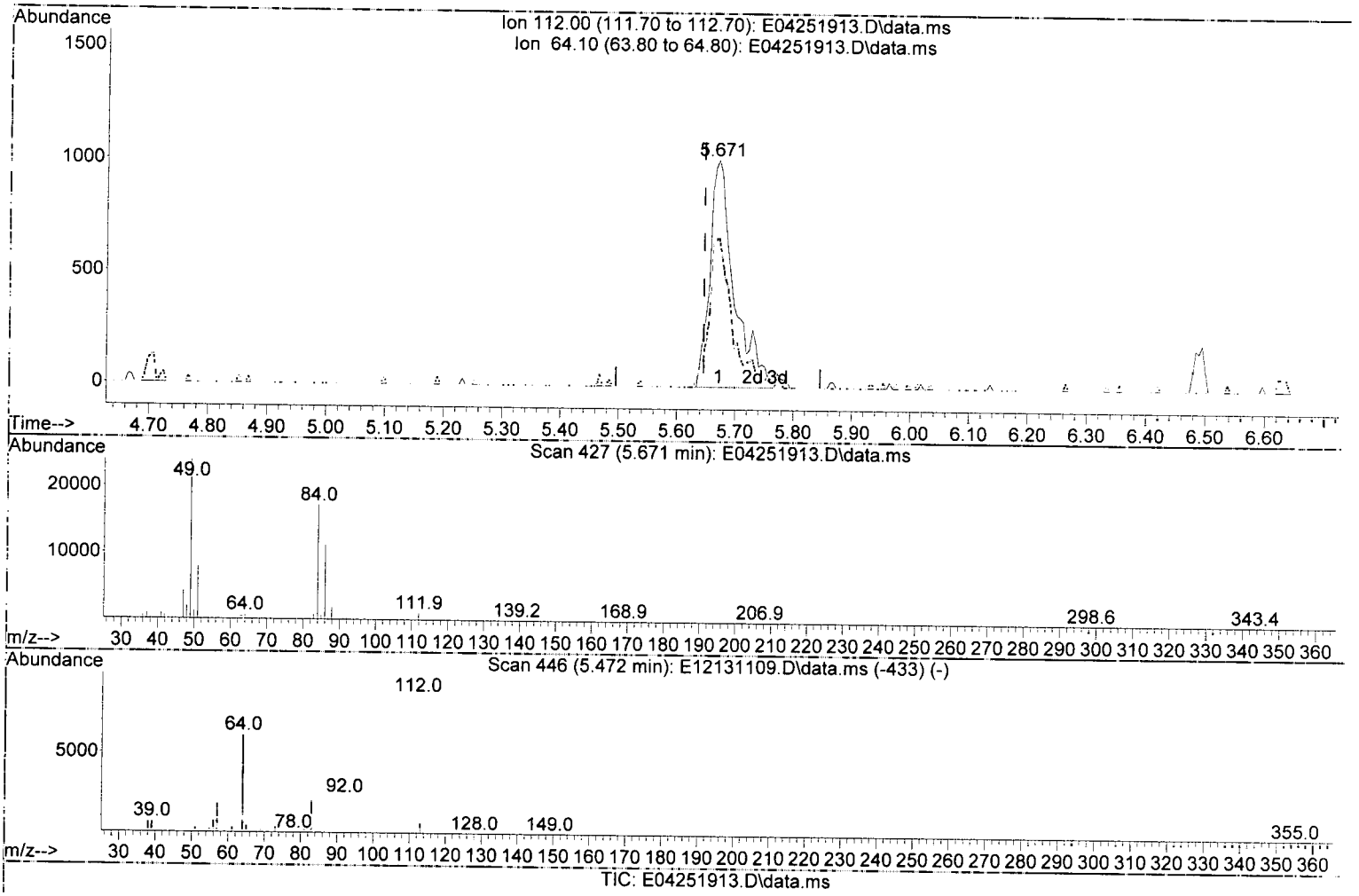
NO Hit MOS

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(4) 2-Fluorophenol (Surr) (S)

5.671min (+ 0.025) 25.13 ng/ml (m) DTH 4/25/19

response 2936

Ion	Exp%	Act%
112.00	100.00	100.00
64.10	63.30	66.60
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
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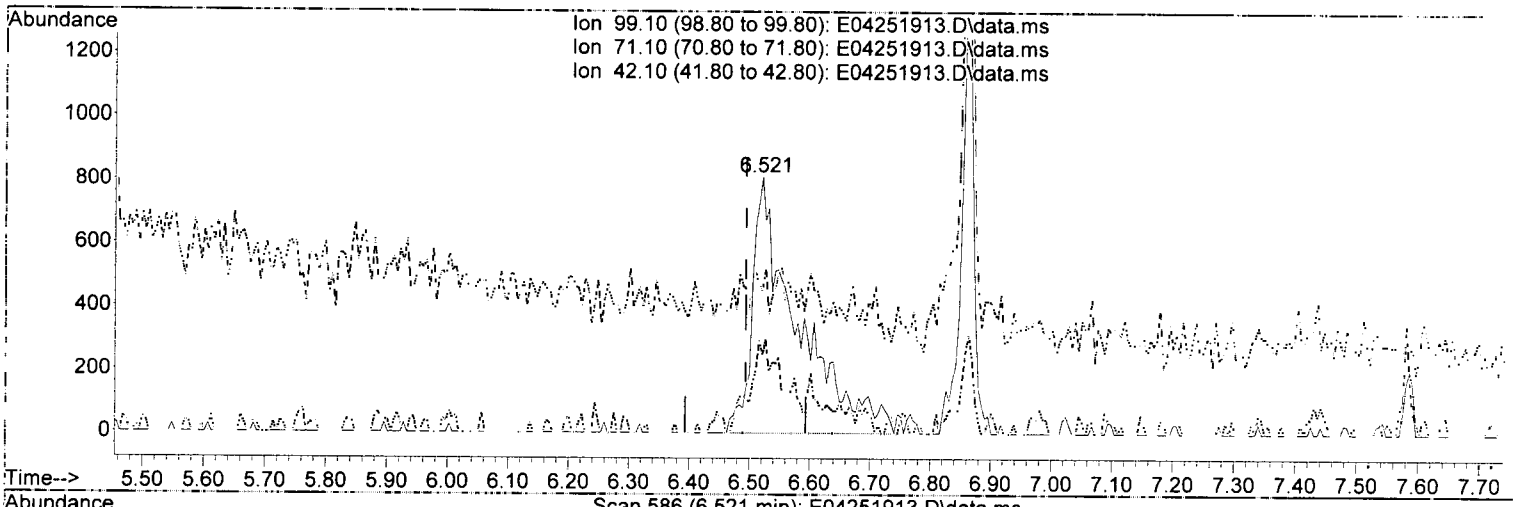
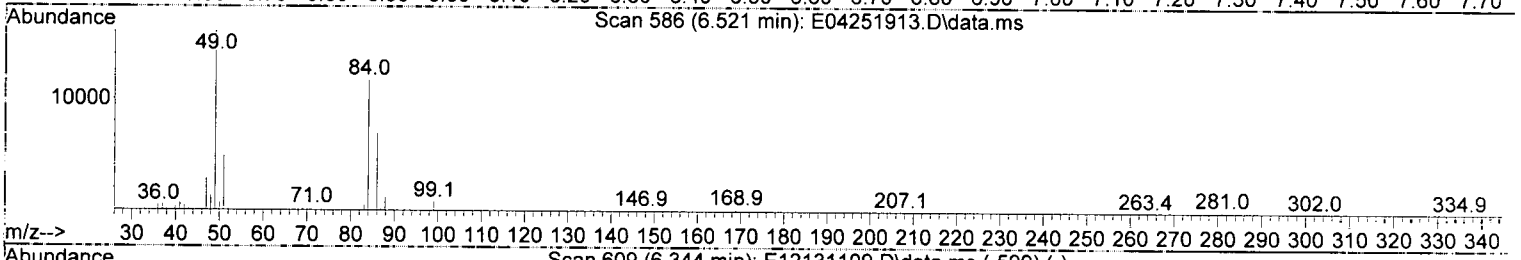
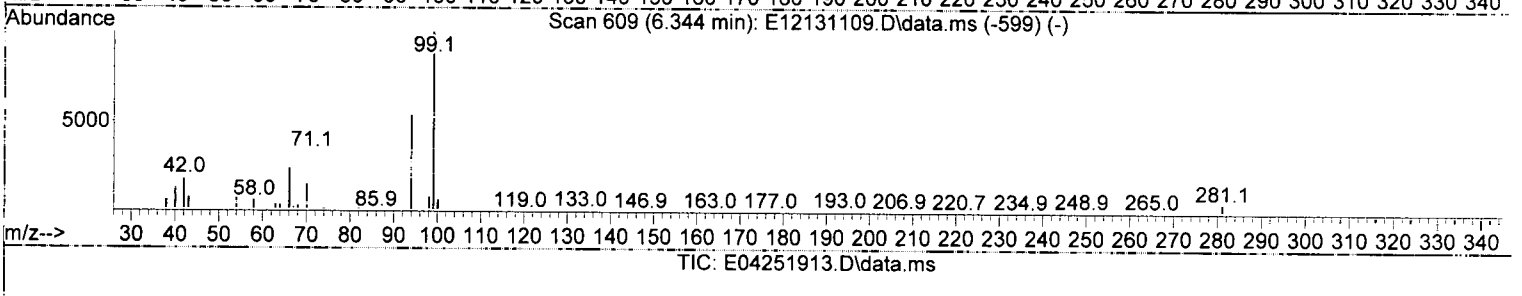
Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04251913.D\data.ms

(5) Phenol-d6(Surr) (S)

6.521min (+ 0.028) 26.83 ng/ml (m)

response 4193

DTH 4/25/19 ✓

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	30.67
42.10	21.30	55.67#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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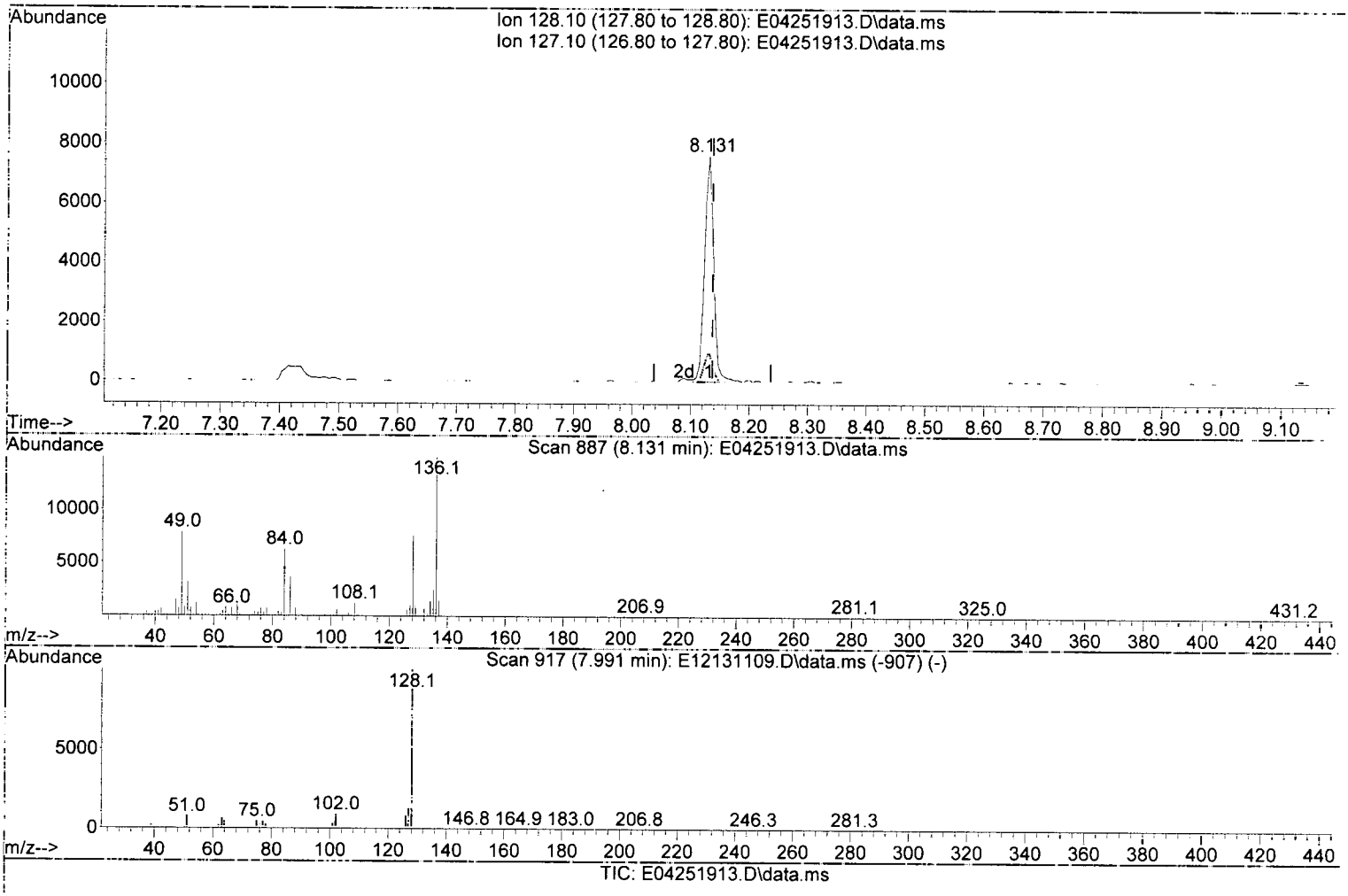
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 21.73 ng/ml

J

response 8245

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	13.33
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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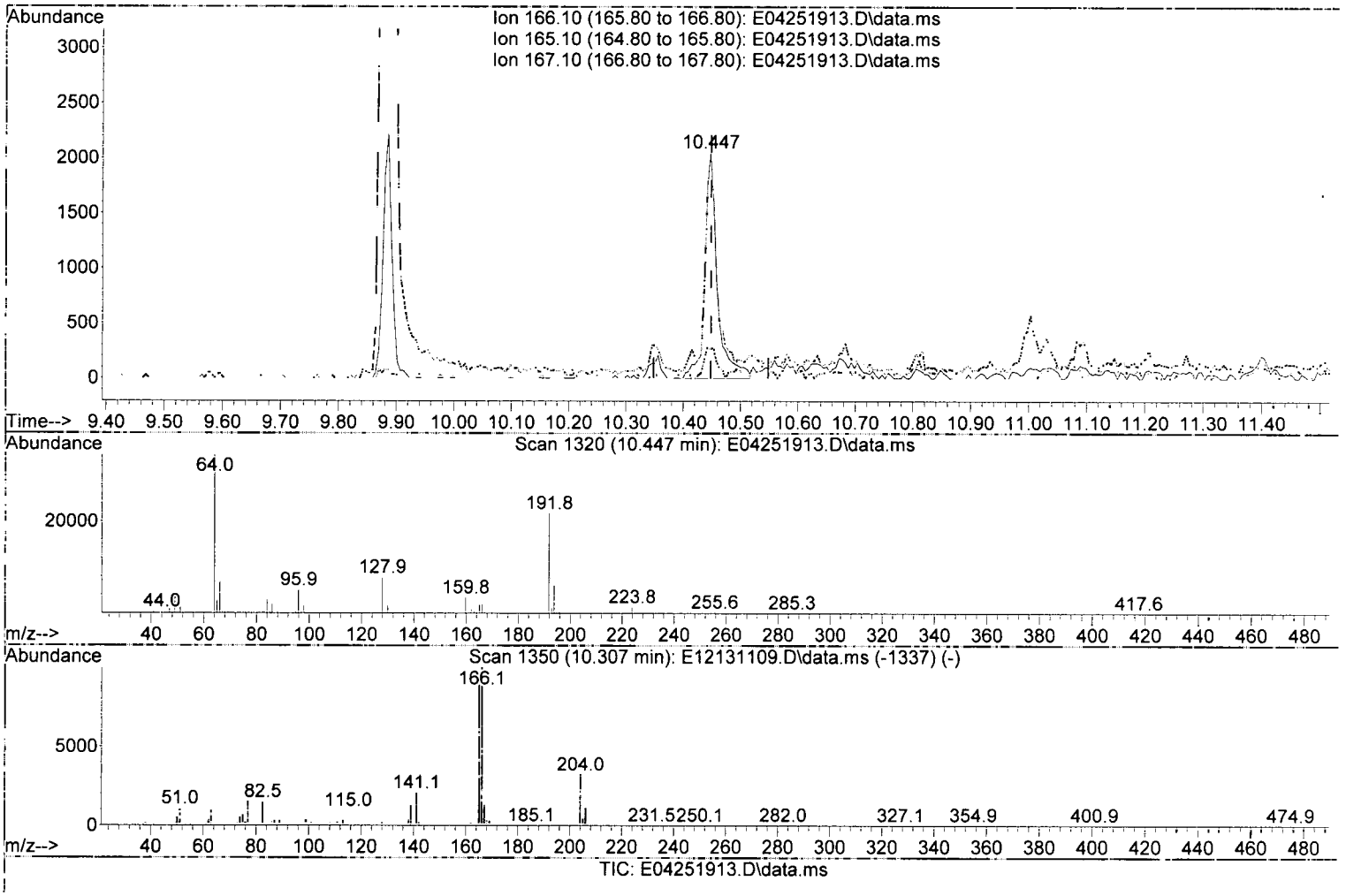
InstName : SV-GCMS5



(60) Fluorene (T)

10.447min (-0.001) 14.61 ng/ml J

response 3142

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	90.44
167.10	13.60	12.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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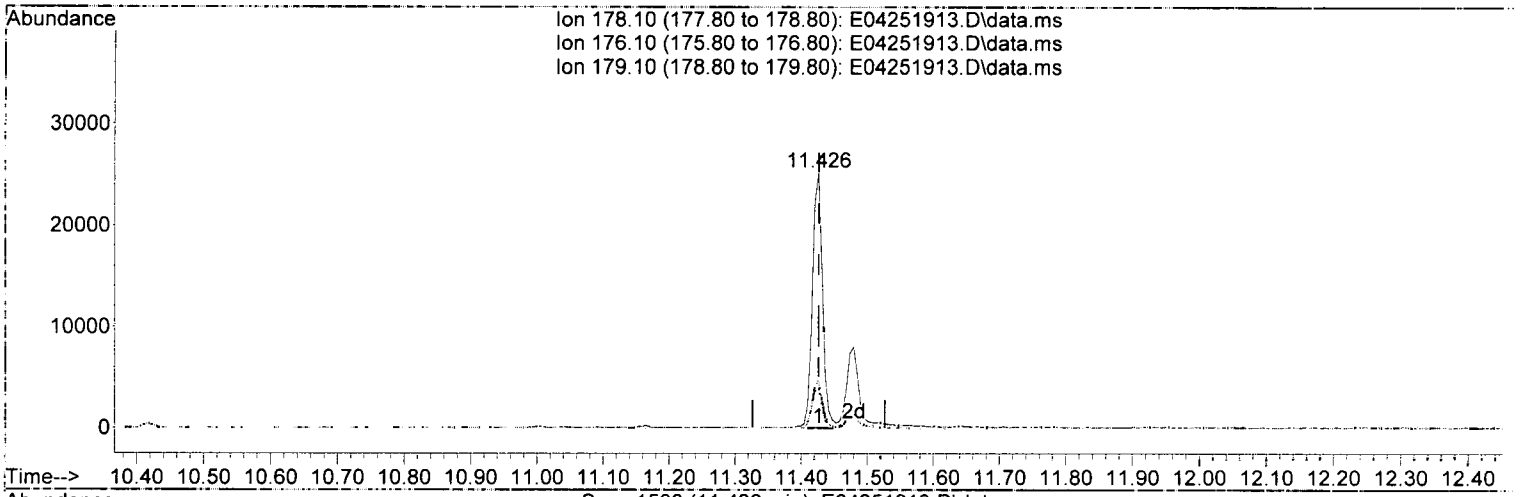

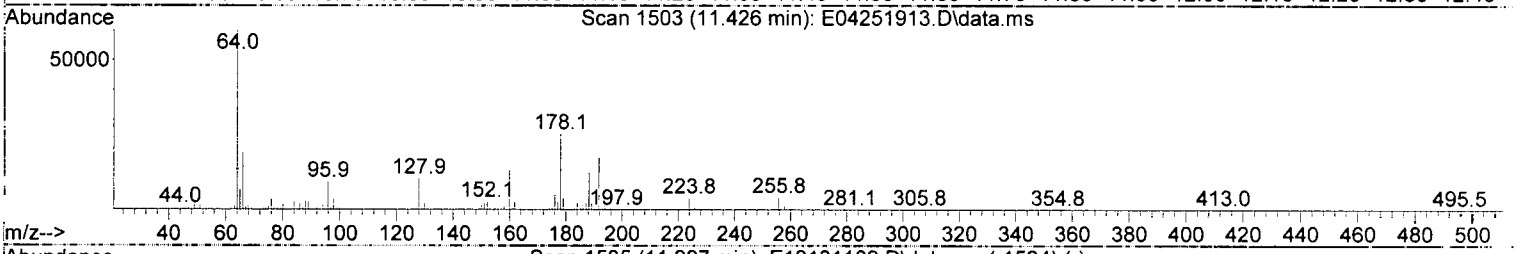

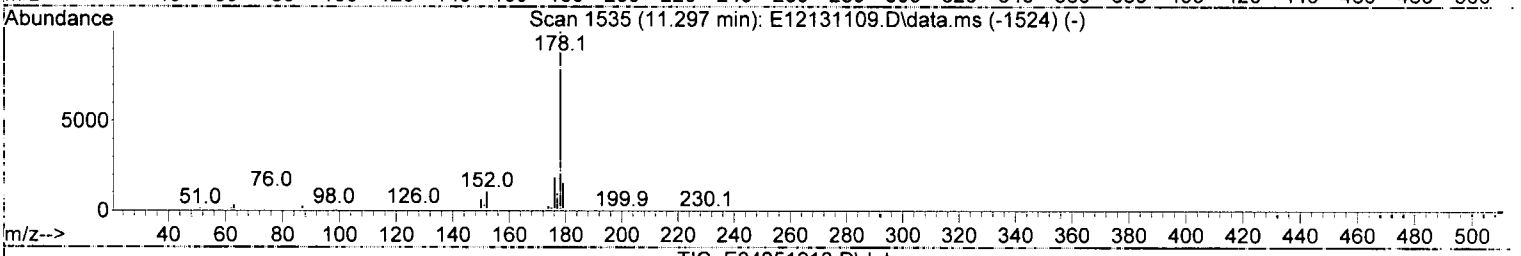

TIC: E04251913.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 85.99 ng/ml

response 26961

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.35
179.10	15.00	16.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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DataAcq Meth:SV5_AQUISITION.M

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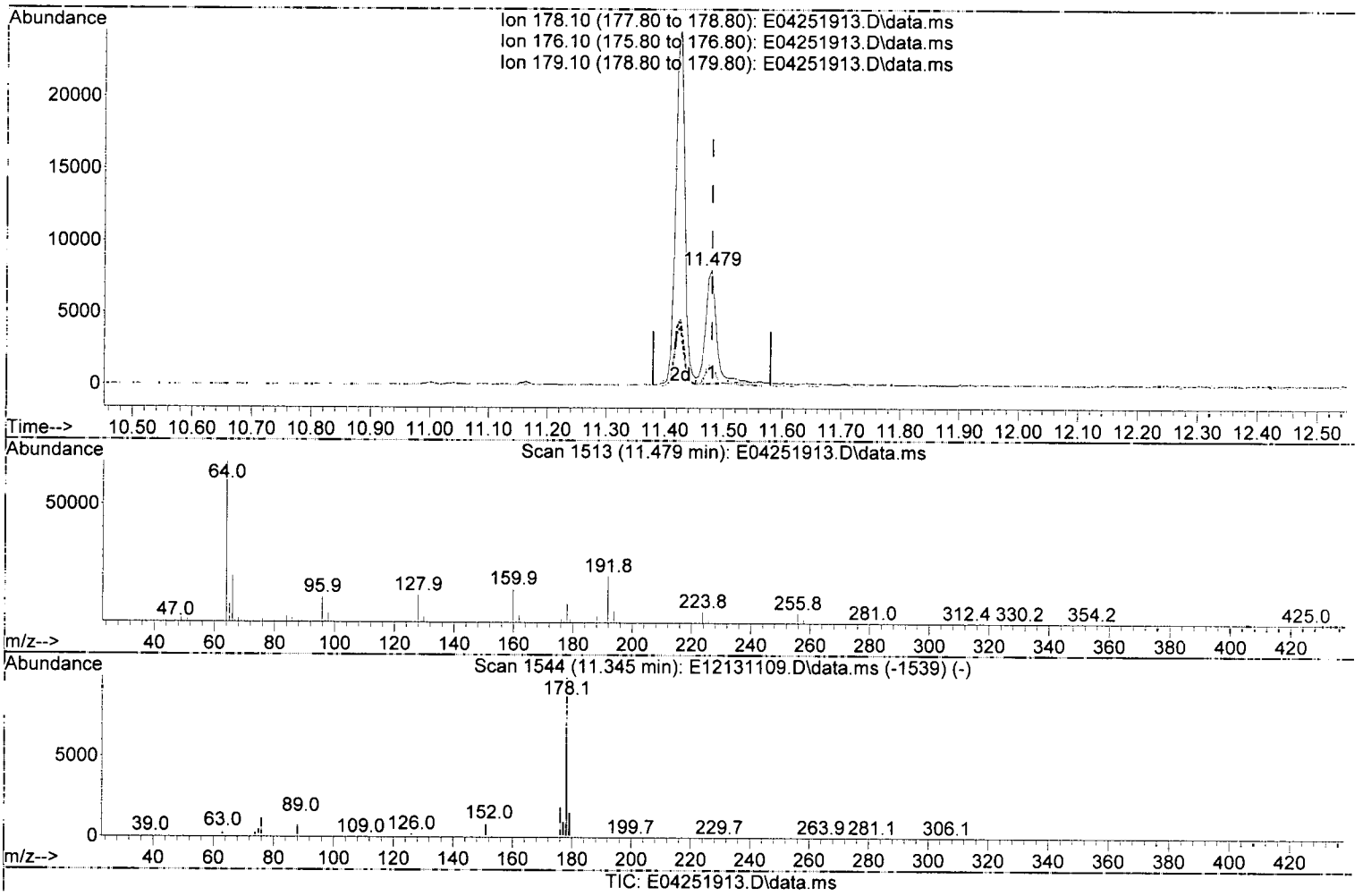
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(72) Anthracene (T)

11.479min (-0.000) 31.39 ng/ml

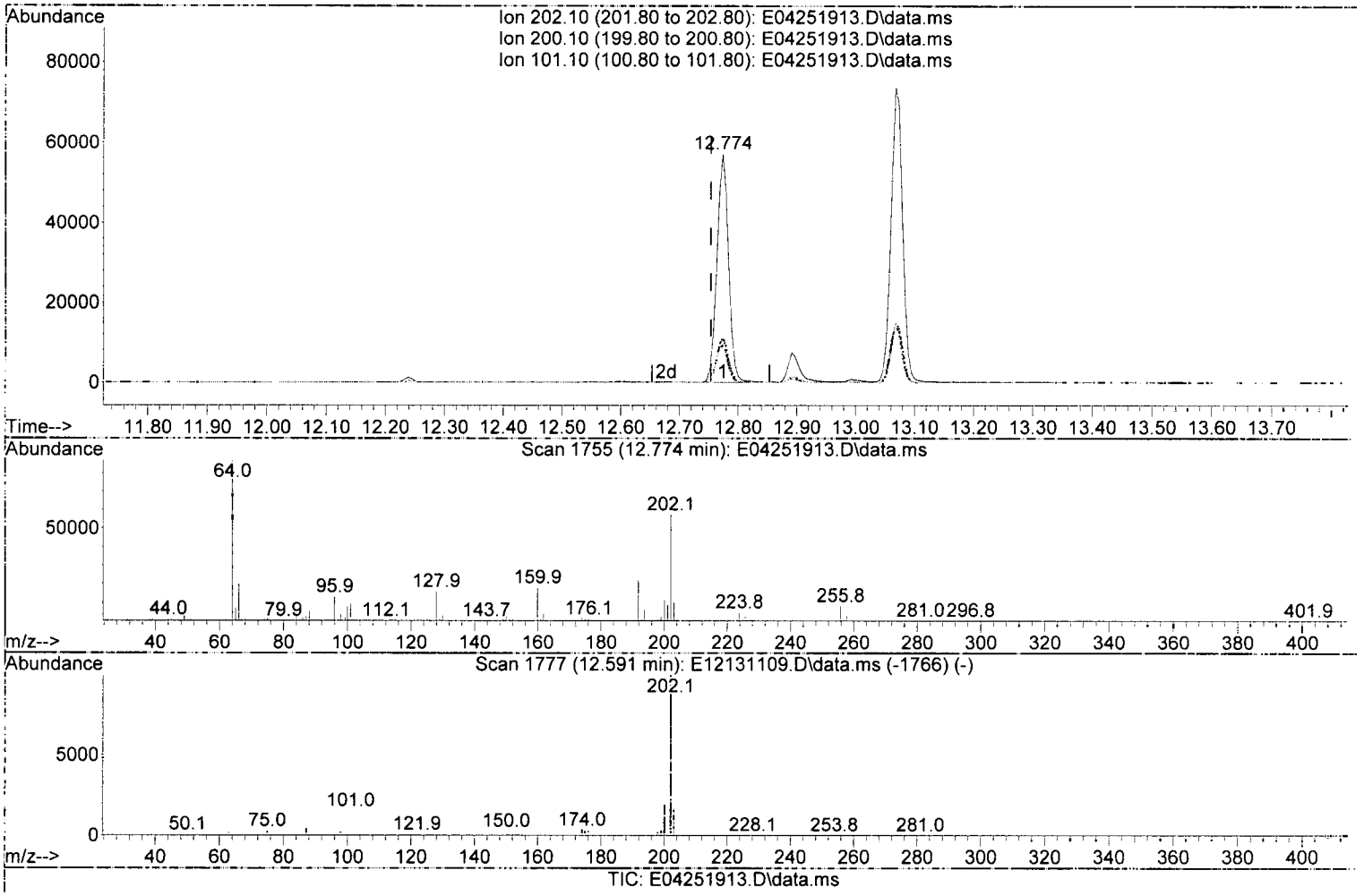
response 10096

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.03
179.10	15.50	16.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(75) Fluoranthene (T)

12.774min (+ 0.021) 241.16 ng/ml

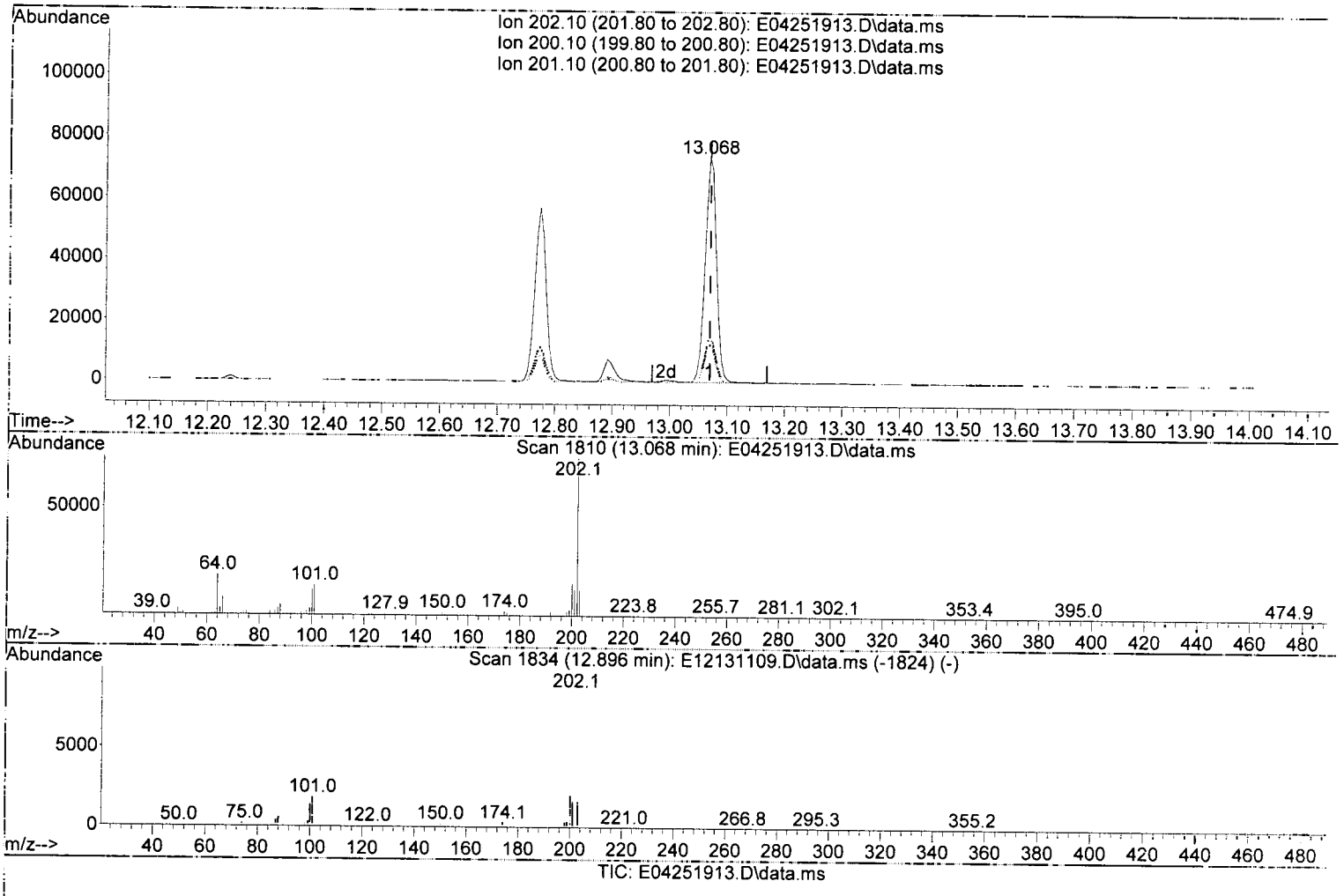
response 78427

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.75
101.10	15.70	16.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(77) Pyrene (T)

13.068min (-0.001) 303.73 ng/ml

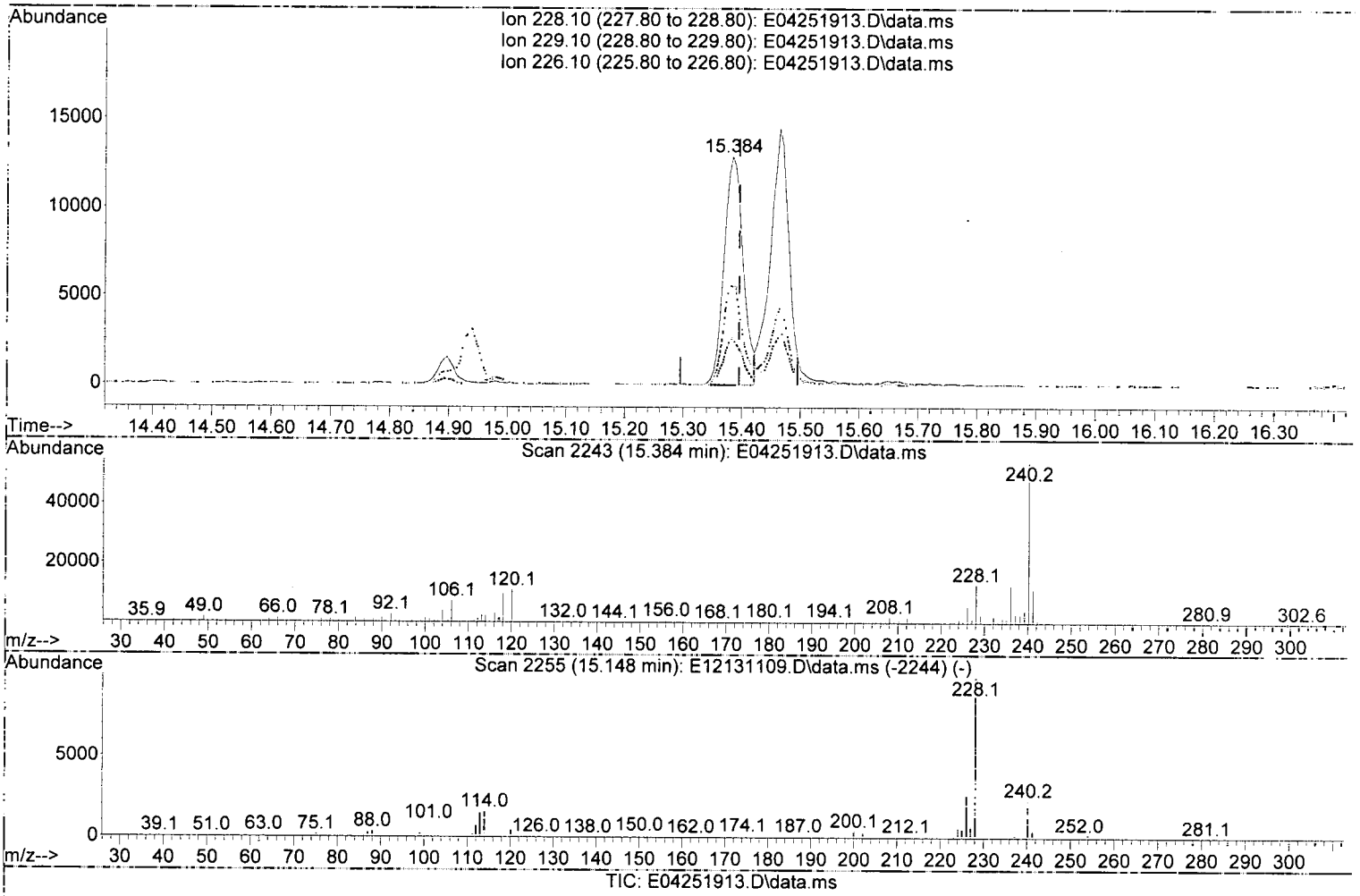
response 100338

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.55
201.10	17.50	16.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(83) Benz(a)anthracene (T)

15.384min (-0.011) 104.43 ng/ml

response 29283

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	21.10
226.10	27.80	42.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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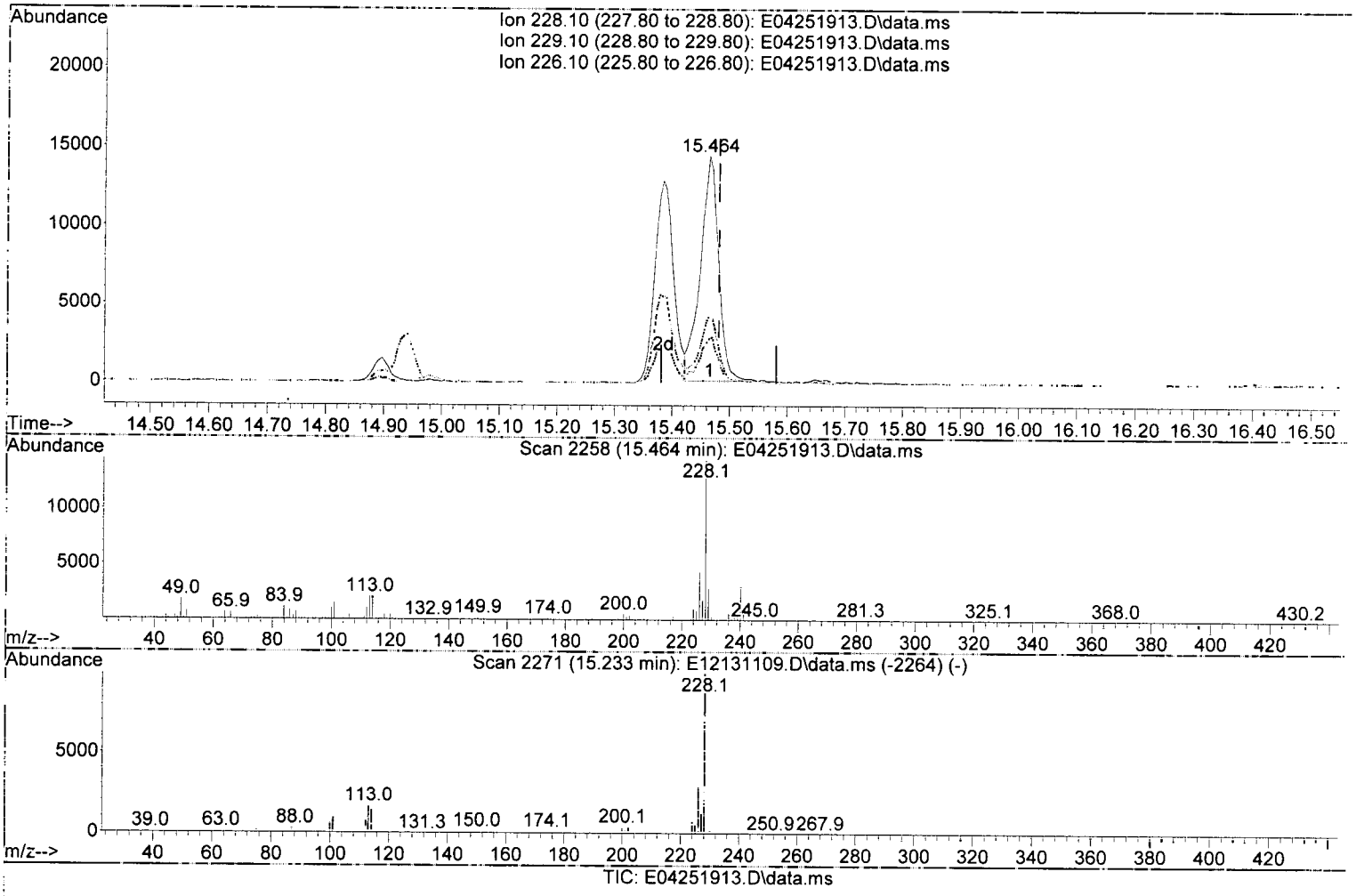
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 118.91 ng/ml

response 31765

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	19.73
226.10	29.80	30.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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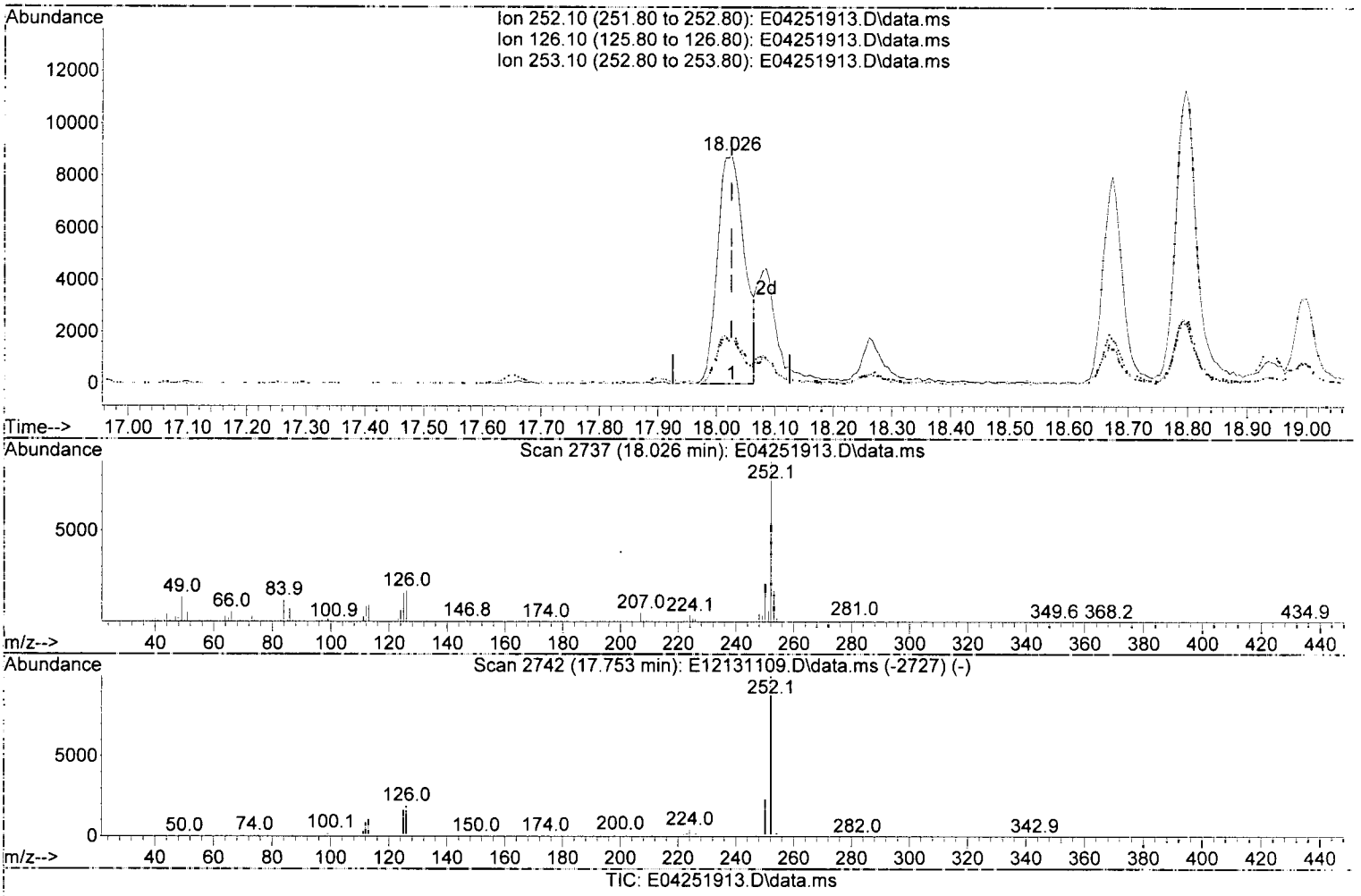
InstName : SV-GCMS5



(88) Benzo(b)fluoranthene (T)

18.026min (+ 0.001) 129.45 ng/ml MOS

response 28056

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	19.69
253.10	22.40	19.84
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
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DataAcq Meth:SV5_AQUISITION.M

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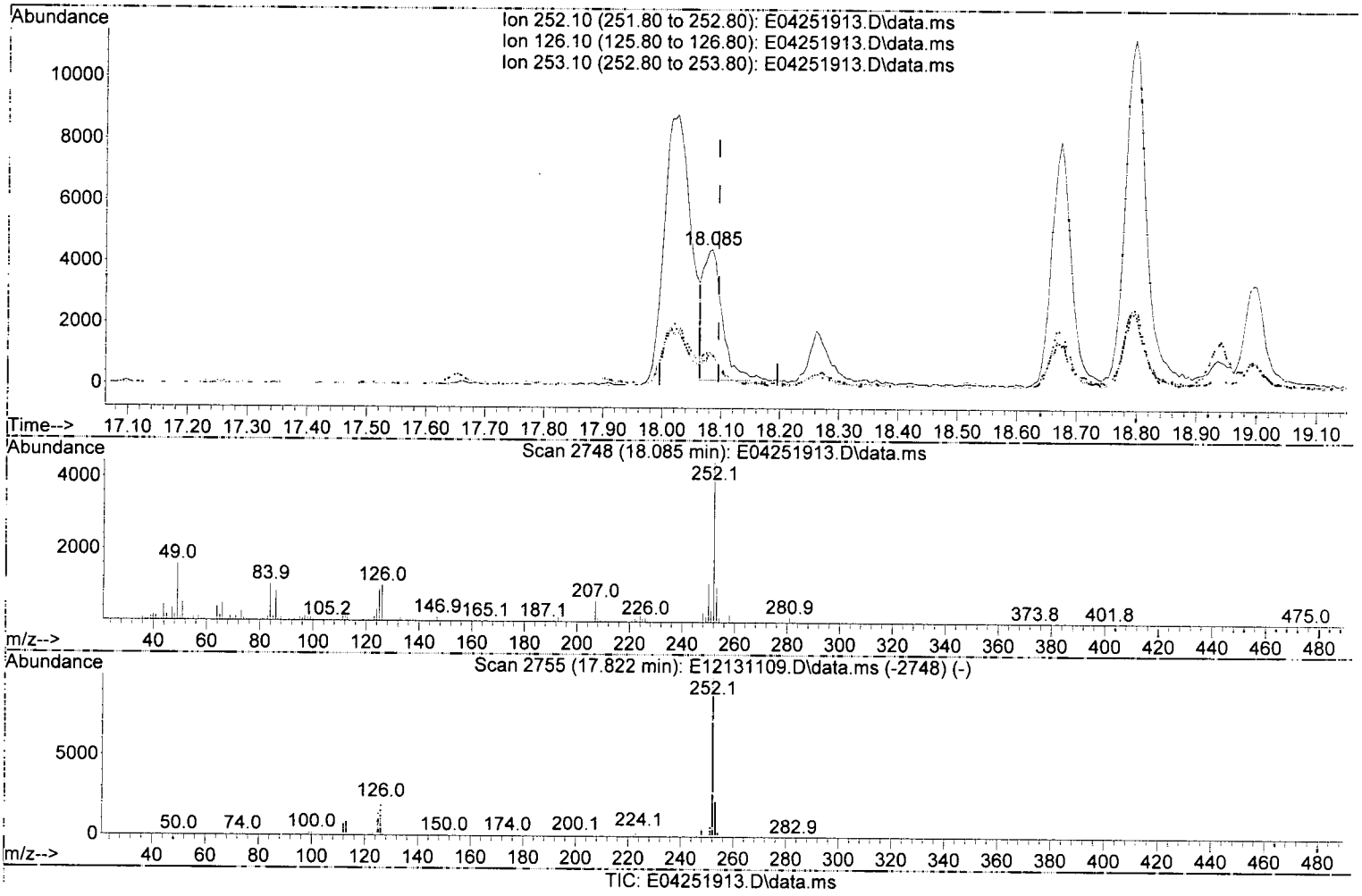
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.085min (-0.010) 44.33 ng/ml (m) MOS

response 9441

DTH

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.82
253.10	21.80	22.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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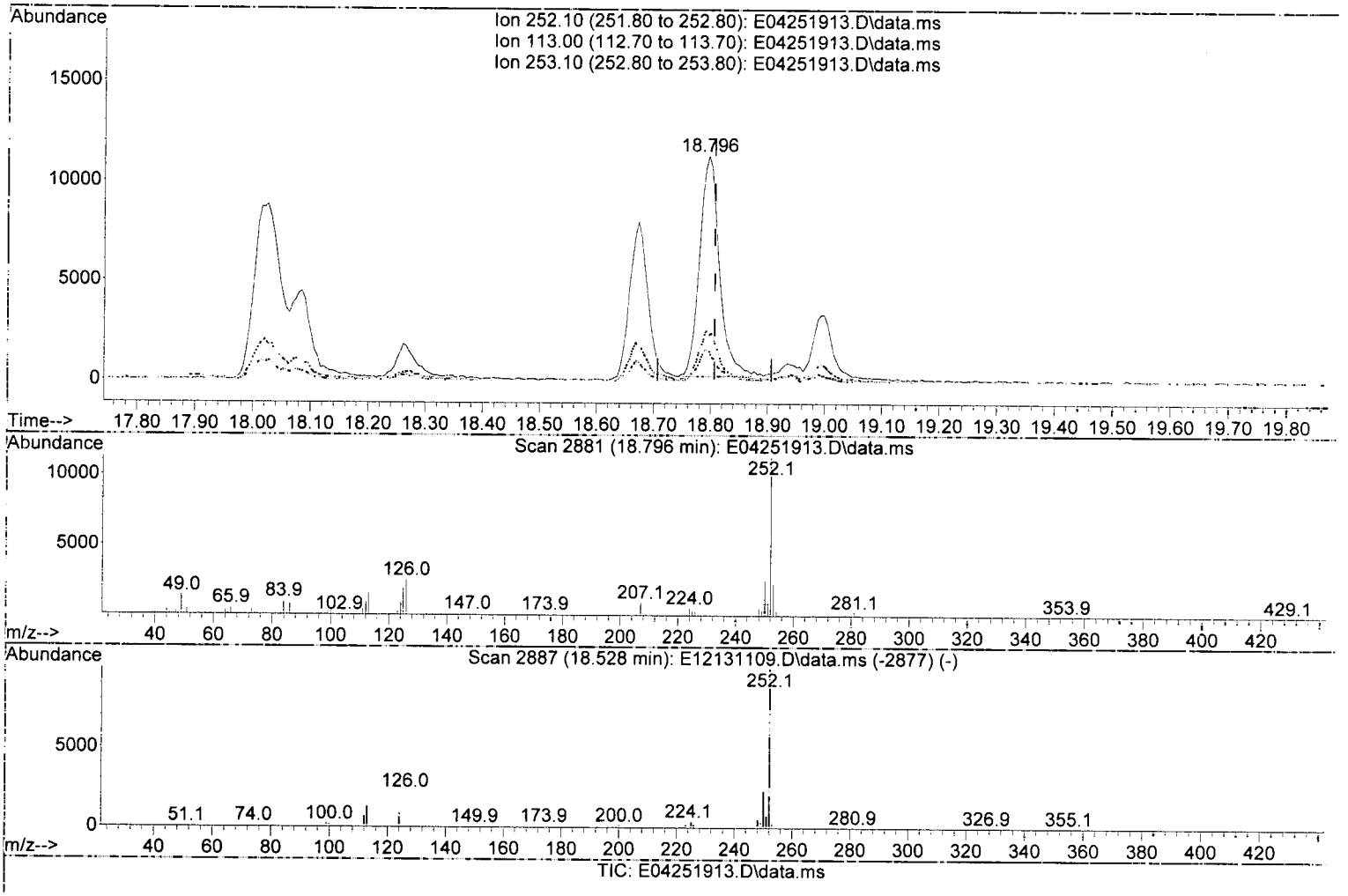
InstName : SV-GCMS5



(92) Benzo(a)pyrene (T)

18.796min (-0.010) 136.27 ng/ml

response 26815

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	13.91
253.10	21.70	20.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
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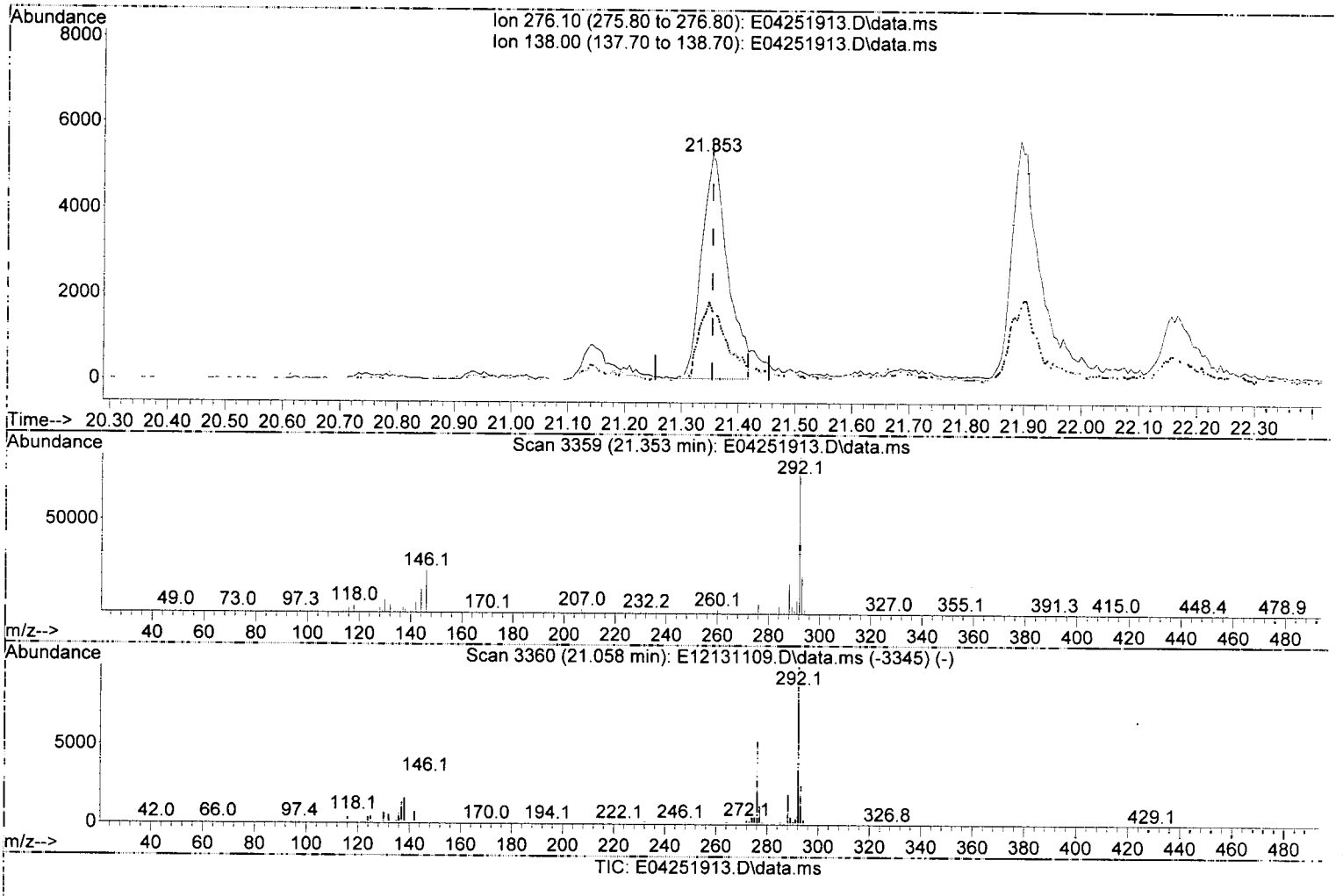
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.353min (-0.000) 87.98 ng/ml

response 16727

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	31.05
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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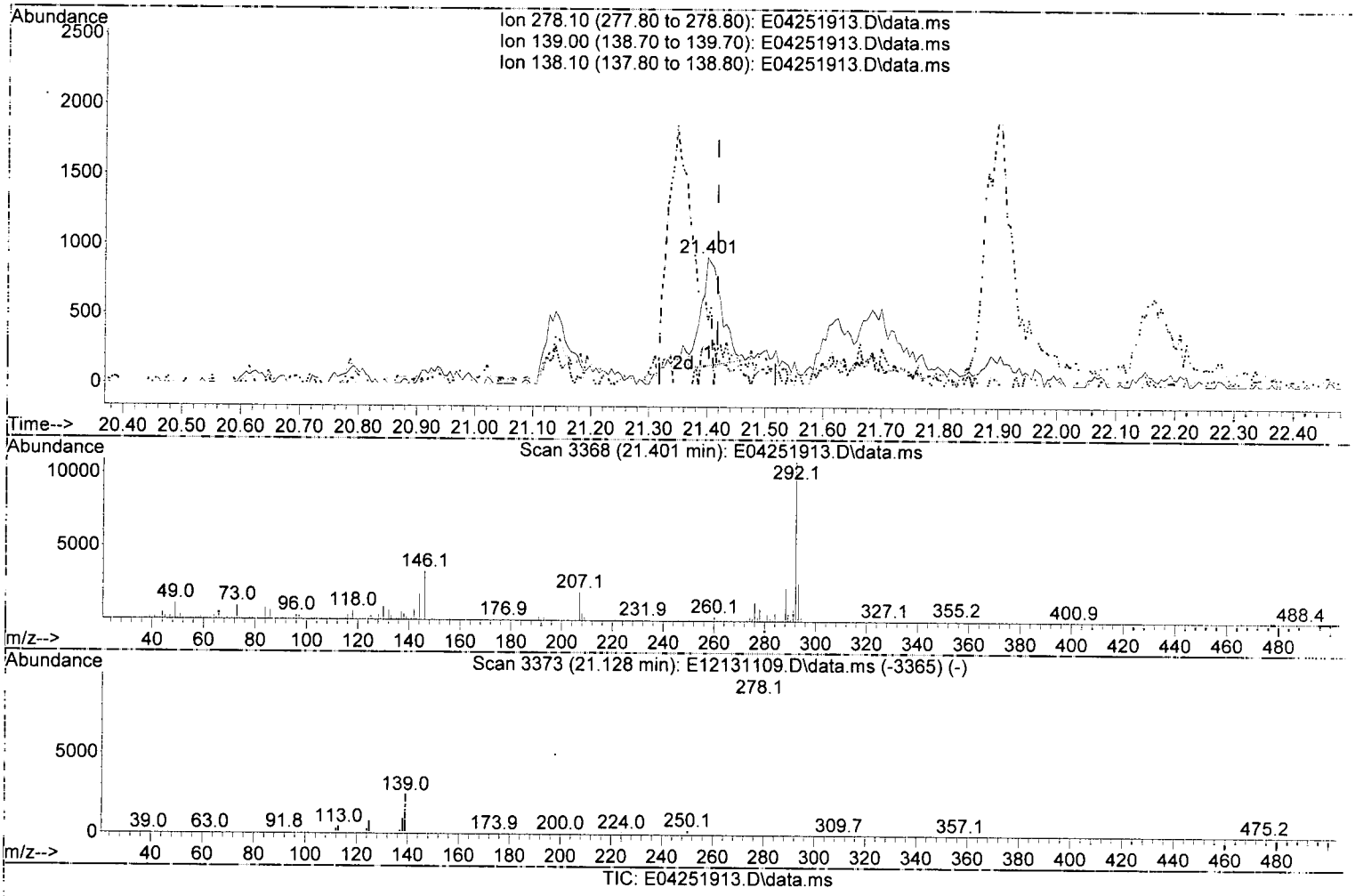
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251913.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.401min (-0.016) 10.98 ng/ml J

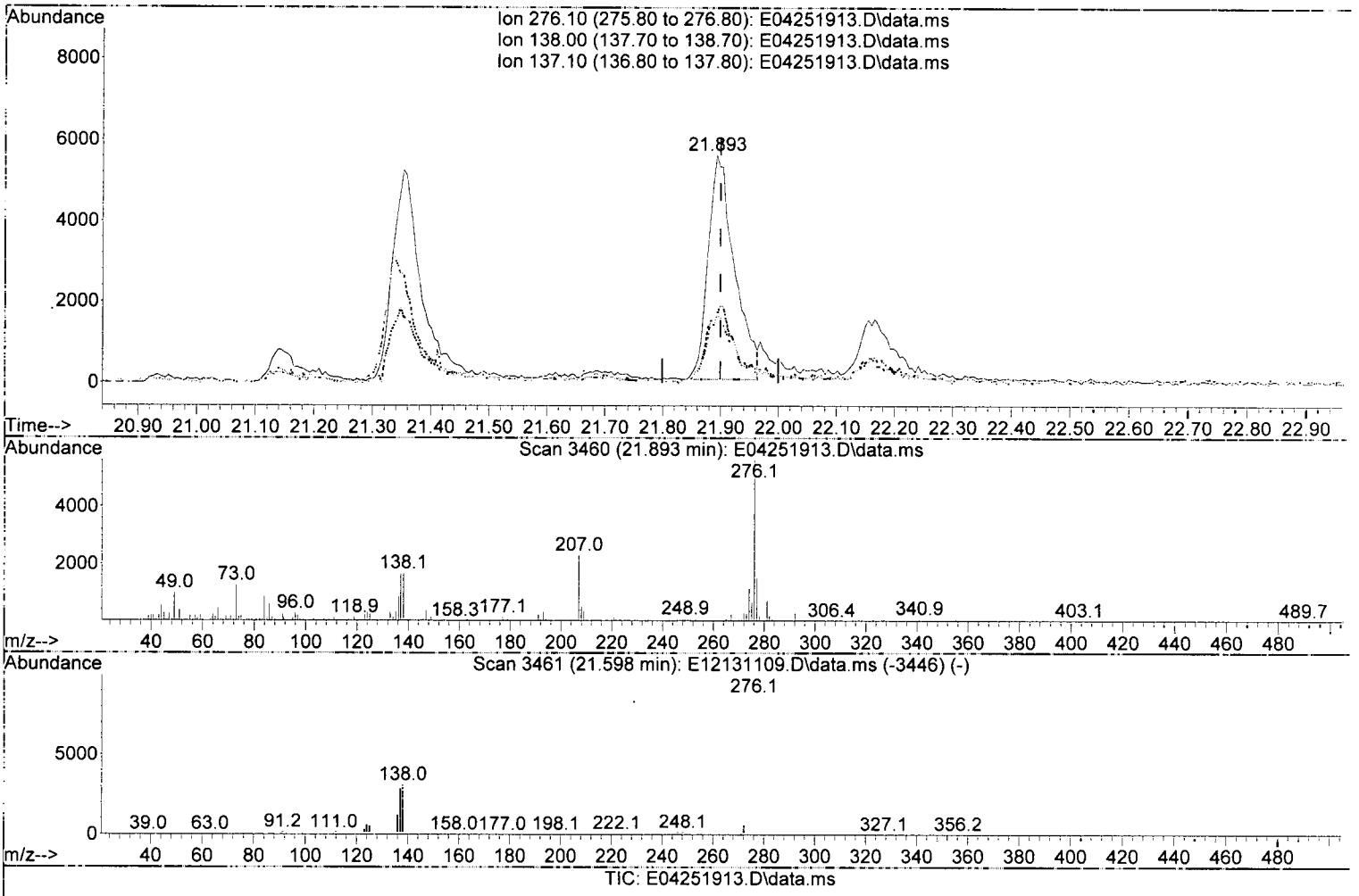
response 1911

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	24.86
138.10	17.70	50.27#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(97) Benzo(g,h,i)perylene (T)

21.893min (-0.006) 93.61 ng/ml

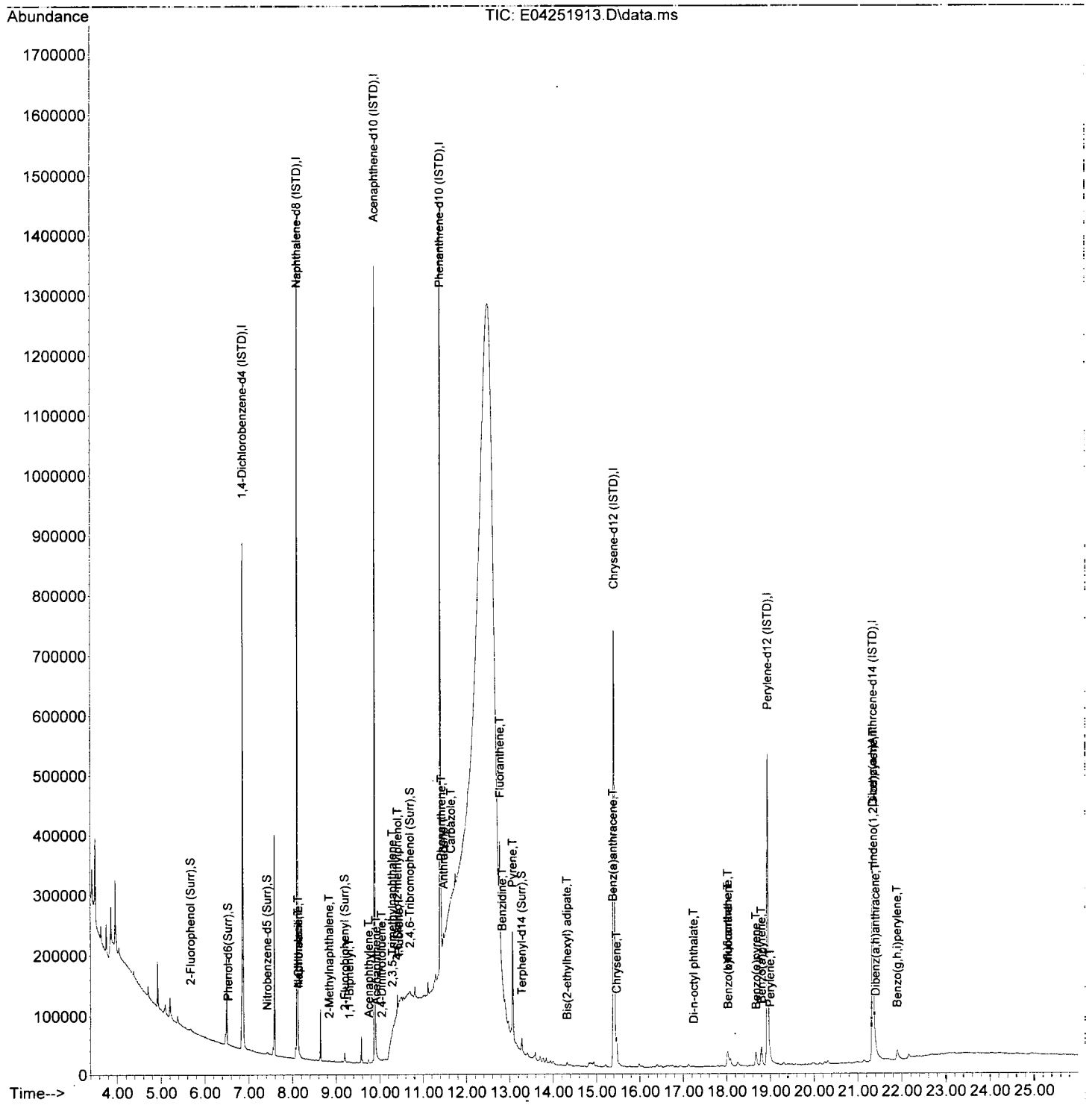
response 17521

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	29.99
137.10	39.00	29.30
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251913.D
Acq On : 25 Apr 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-03@40
Misc : 40x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 15:59:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.858	152	186479	2000.00 ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.110	136	711864	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	309341	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	562121	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.405	240	485824	2000.00 ng/ml	-0.02
86) Perylene-d12 (ISTD)	18.941	264	415151	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.337	292	359746	2000.00 ng/ml	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	~~5.660~~	~~112~~	~~3248~~	~~27.94 ng/ml~~	~~0.01~~ MI
5) Phenol-d6(Surr)	~~6.510~~	~~99~~	~~3291~~	~~21.16 ng/ml~~	~~0.02~~ MI
19) Nitrobenzene-d5 (Surr)	~~7.372~~	~~82~~	~~60~~	~~0.43 ng/ml~~	~~-0.03~~ MI
40) 2-Fluorobiphenyl (Surr)	9.195	172	5604	24.36 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.704	330	275	28.56 ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.276	244	6172	27.19 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.371	74	66	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	0.000		0	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.259	70	225	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.634	82	120	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	8.131	128	7625	20.08 ng/ml	96
30) 4-Chloroaniline	8.131	127	959	7.33 ng/ml#	26
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.682	107	101	27.69 ng/ml#	1
33) 2-Methylnaphthalene	8.837	142	1076	4.50 ng/ml	91
34) 1-Methylnaphthalene	8.933	142	694	3.03 ng/ml	85
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	9.302	154	654	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

J

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

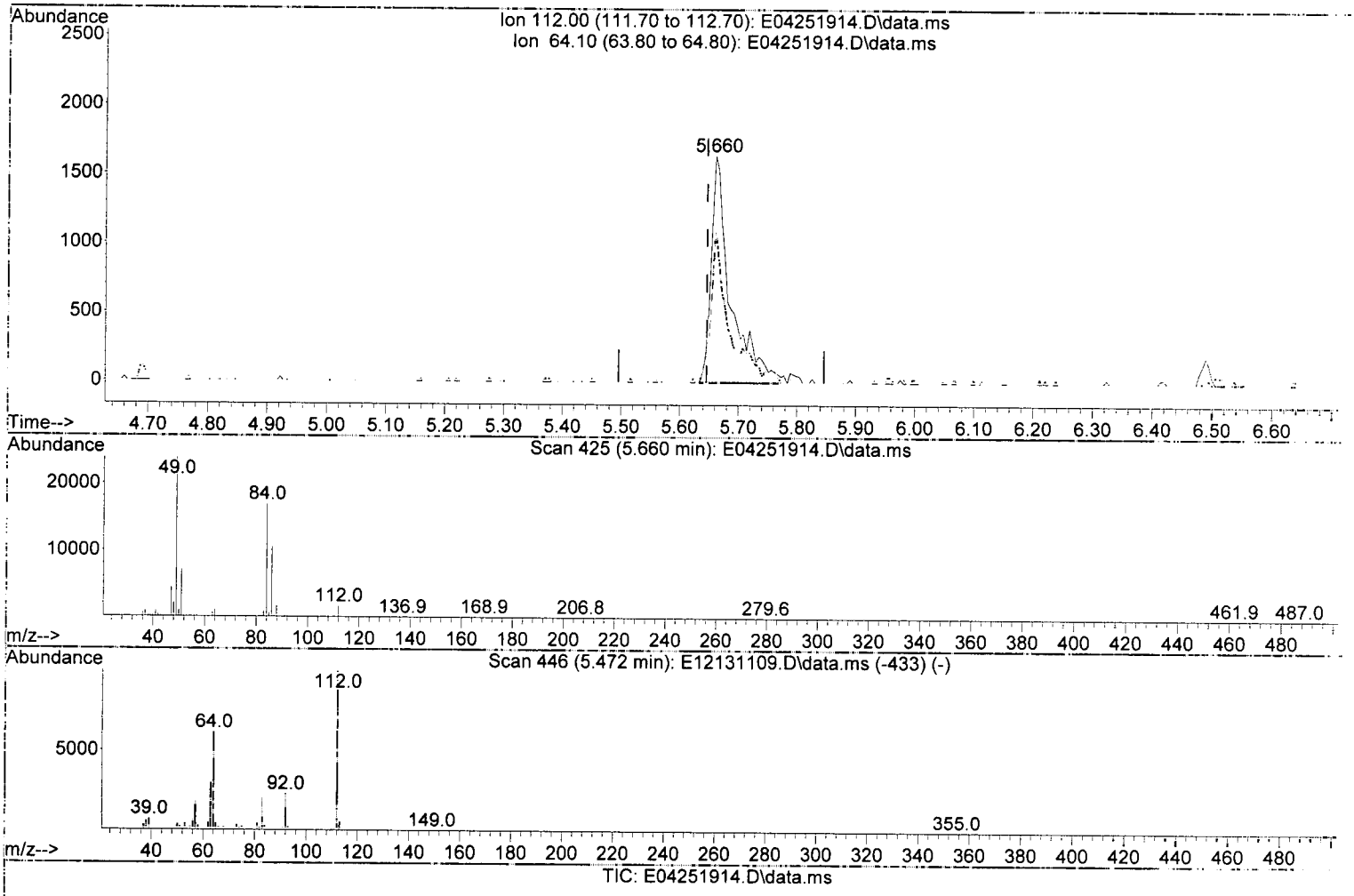
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.468	156	535	2.89	ng/ml	96
44)	1,4-Dinitrobenzene	0.000		0	N.D.		
45)	Dimethyl phthalate	9.511	163	51	N.D.		
46)	1,3-Dinitrobenzene	0.000		0	N.D.		
47)	2,6-Dinitrotoluene	9.671	165	89	33.78	ng/ml#	34
48)	1,2-Dinitrobenzene	0.000		0	N.D.		
49)	Acenaphthylene	9.746	152	1835	6.09	ng/ml	97
50)	3-Nitroaniline	0.000		0	N.D.		
51)	Acenaphthene	9.917	153	1811	8.86	ng/ml	90
52)	2,4-Dinitrophenol	0.000		0	N.D.		
53)	4-Nitrophenol	9.992	139	52	66.94	ng/ml#	1
54)	2,4-Dinitrotoluene	10.040	165	163	63.87	ng/ml#	31
55)	Dibenzofuran	10.099	168	940	3.54	ng/ml#	1
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	10.308	149	133	N.D.		
59)	2,3,5-Trimethylnaphtha...	10.292	170	1257	7.63	ng/ml	85
60)	Fluorene	10.447	166	2021	9.50	ng/ml	84
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	10.554	169	461	2.60	ng/ml	66
66)	Azobenzene (1,2-DPH)	10.607	77	62	N.D.		
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
69)	Hexachlorobenzene	0.000		0	N.D.		
70)	Pentachlorophenol (PCP)	0.000		0	N.D.		
71)	Phenanthrene	11.426	178	23985	77.74	ng/ml	99
72)	Anthracene	11.479	178	6718	21.22	ng/ml	97
73)	Carbazole	11.645	167	1365	4.61	ng/ml	84
74)	Di-n-butyl phthalate	11.971	149	147	N.D.		
75)	Fluoranthene	12.747	202	52816	165.04	ng/ml	98
76)	Benzidine	0.000		0	N.D.		
77)	Pyrene	13.062	202	67327	207.10	ng/ml	99
80)	Butyl benzyl phthalate	0.000		0	N.D.		
81)	Bis(2-ethylhexyl) adipate	14.319	129	1156	8.17	ng/ml	92
82)	3,3-Dichlorobenzidine	0.000		0	N.D.		
83)	Benz(a)anthracene	15.384	228	20605	75.19	ng/ml	82
84)	Chrysene	15.464	228	23567	90.28	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.523	149	289	N.D.		
87)	Di-n-octyl phthalate	17.234	149	70	30.93	ng/ml#	1
88)	Benzo(b)fluoranthene	18.015	252	24304	110.81	ng/ml MOS	97
89)	Benzo(k)fluoranthene	18.079	252	7681	35.63	ng/ml MOS	97
90)	Benzo(b+k)fluoranthene	18.015	252	34939	151.68	ng/ml	98
91)	Benzo(e)pyrene	18.668	252	15570	69.92	ng/ml	98
92)	Benzo(a)pyrene	18.791	252	20963	105.26	ng/ml	99
93)	Perylene	18.994	252	6940	30.49	ng/ml	96
95)	Indeno(1,2,3-cd)pyrene	21.348	276	14762	74.86	ng/ml	100
96)	Dibenz(a,h)anthracene	21.396	278	2110	11.68	ng/ml	74
97)	Benzo(g,h,i)perylene	21.893	276	14845	76.47	ng/ml	78

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(4) 2-Fluorophenol (Surr) (S)

5.660min (+ 0.015) 32.62 ng/ml m

DTH 4/25/19

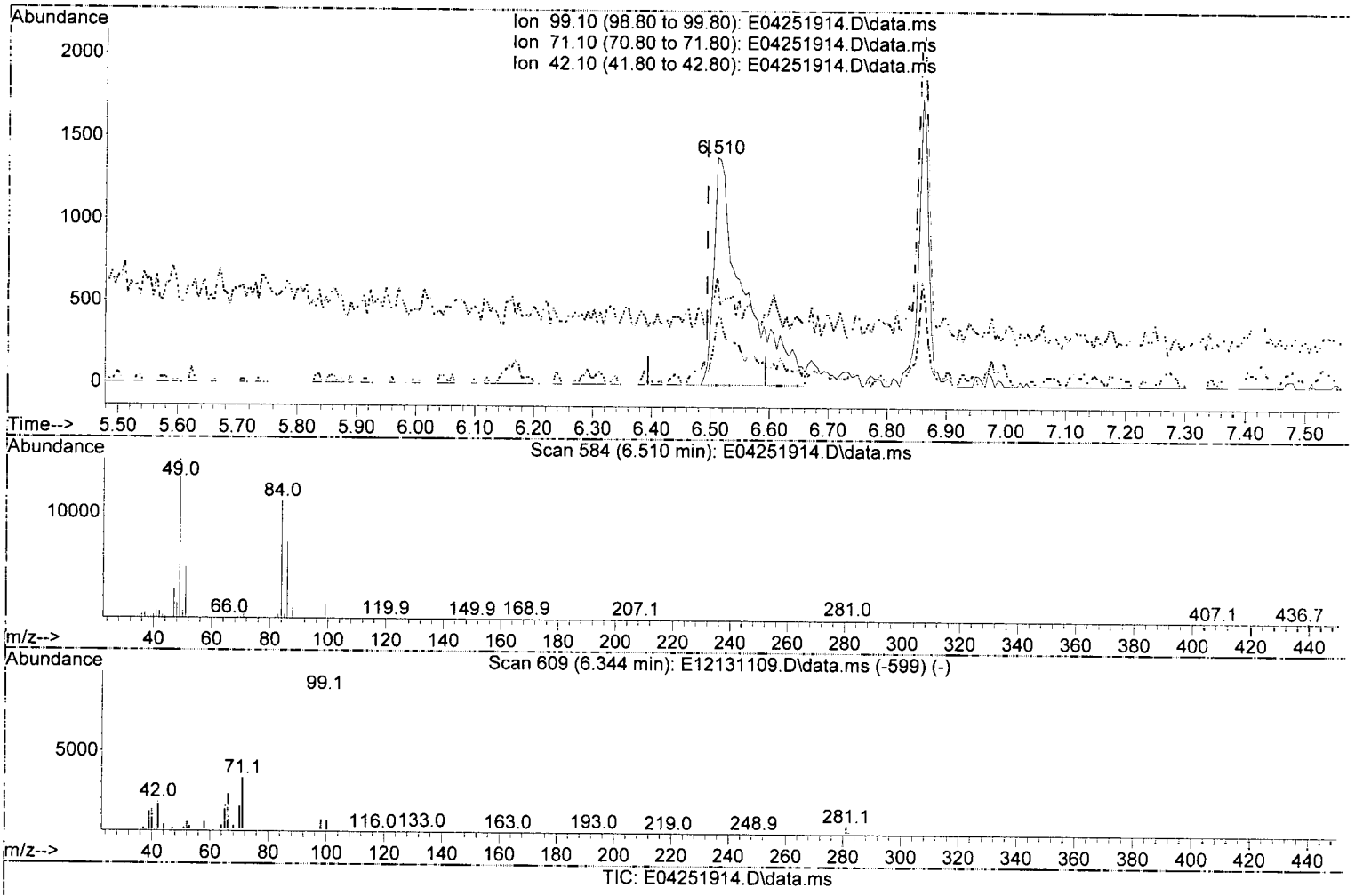
response 3792

Ion	Exp%	Act%
112.00	100.00	100.00
64.10	63.30	66.71
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(5) Phenol-d6(Surr) (S)

6.510min (+ 0.018) 32.08 ng/ml m DTH 4/25/19

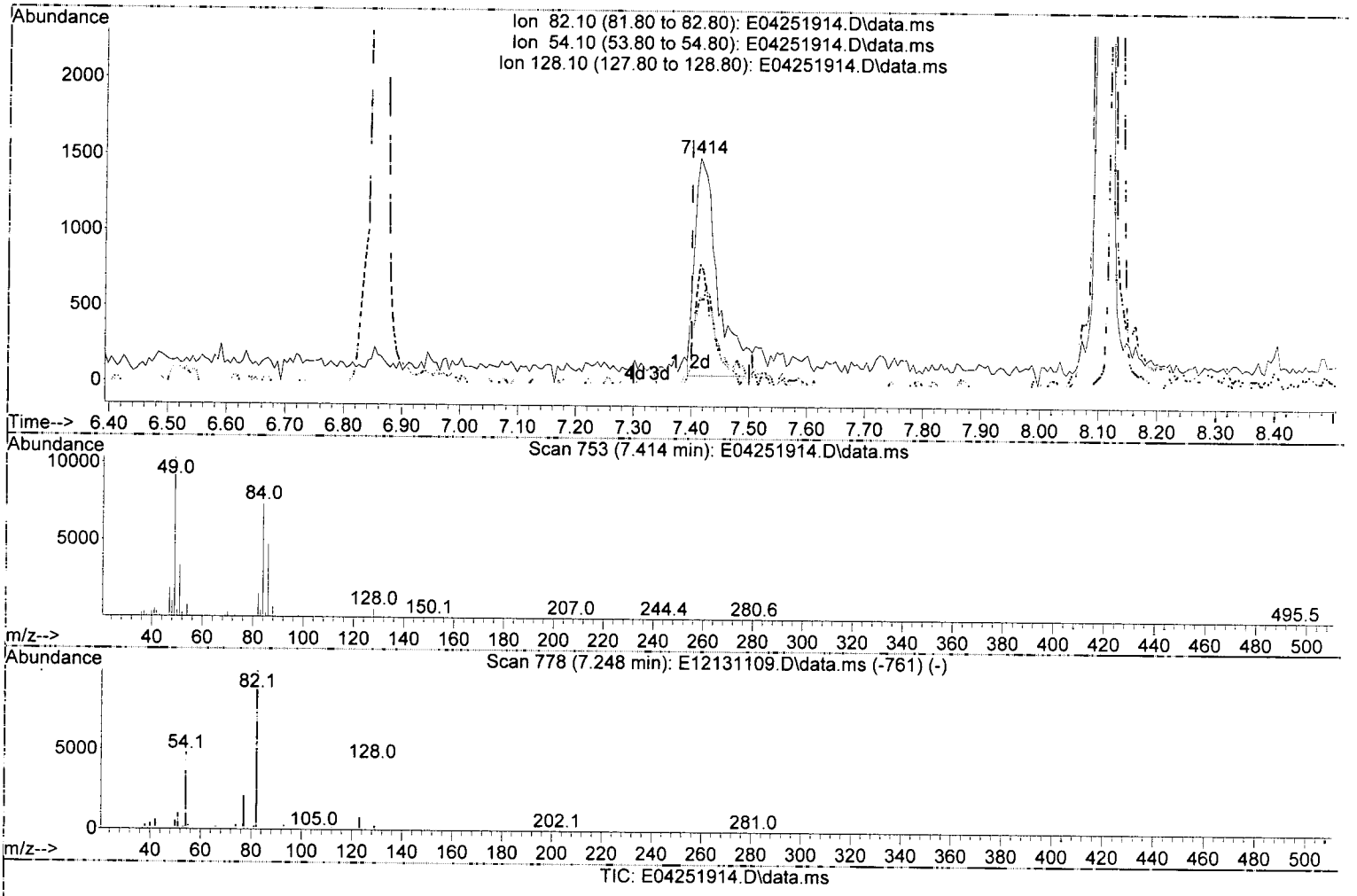
response 4989

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	28.71
42.10	21.30	47.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(19) Nitrobenzene-d5 (Surr) (S)

7.414min (+ 0.015) 28.95 ng/ml m

DTH 4/25/19

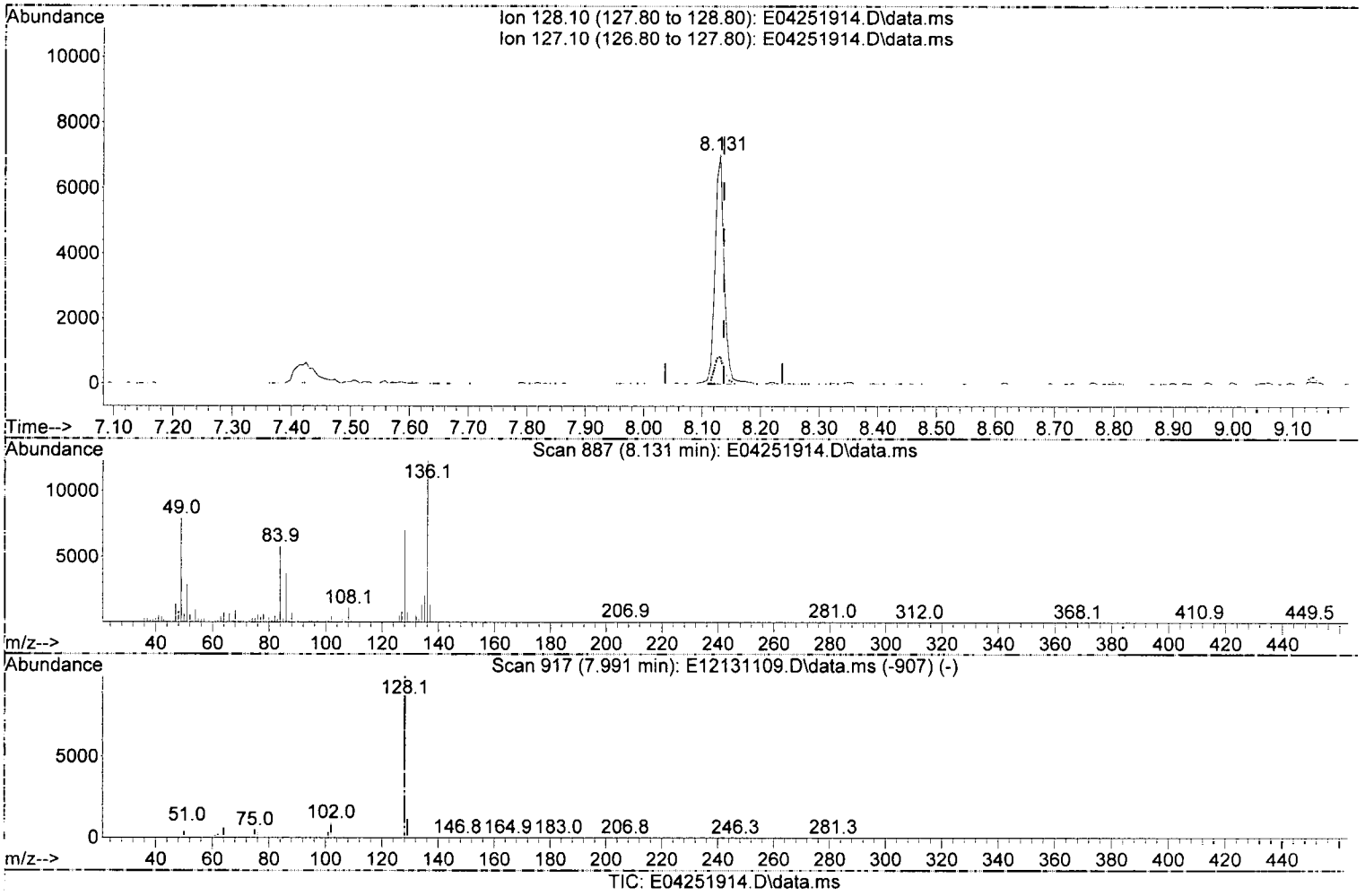
response 4036

Ion	Exp%	Act%
82.10	100.00	100.00
54.10	50.90	52.54
128.10	39.70	38.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 20.08 ng/ml J

response 7625

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	11.80
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
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DataAcq Meth:SV5_AQUISITION.M

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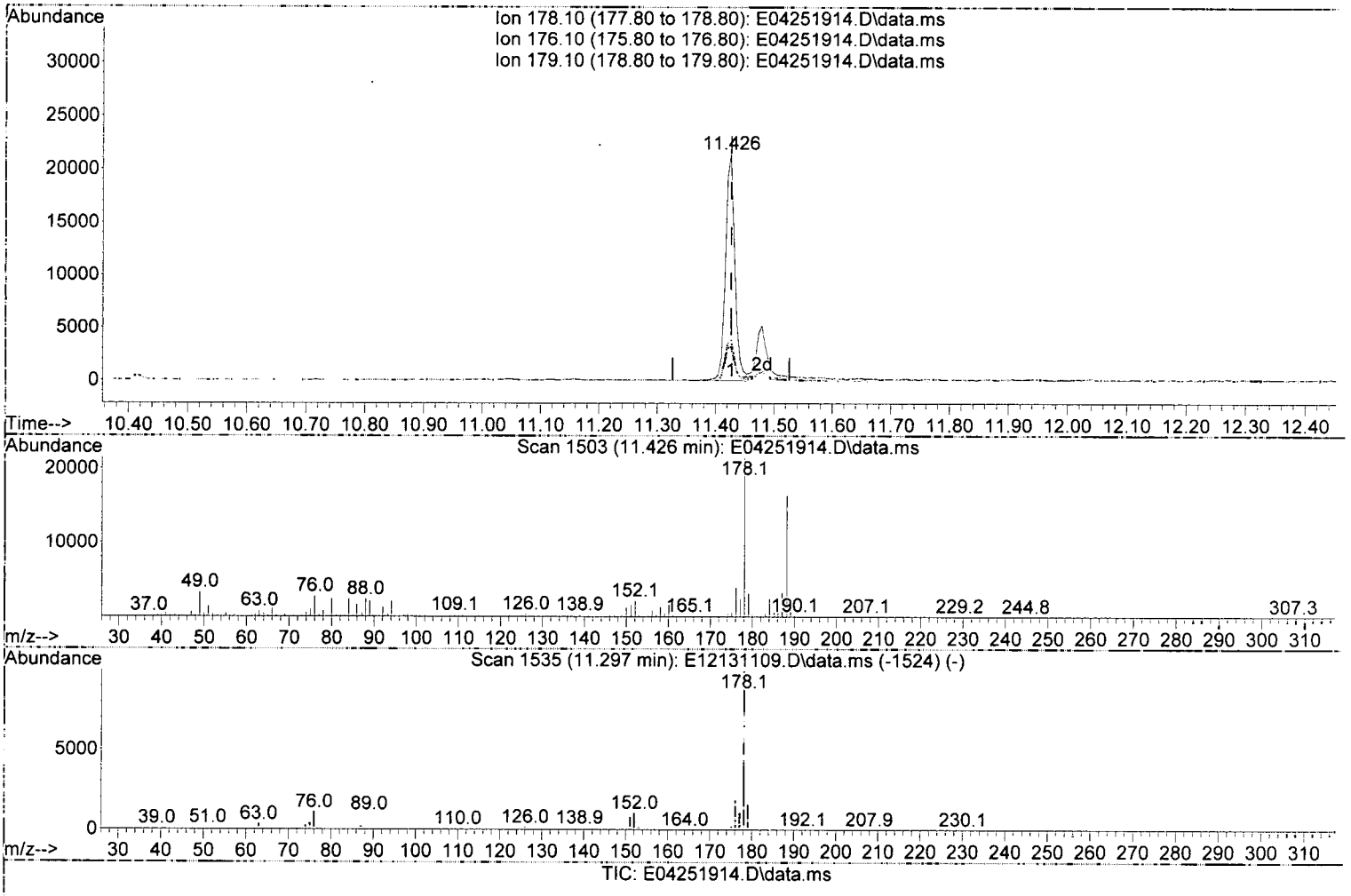
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 77.74 ng/ml

response 23985

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.56
179.10	15.00	15.04
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
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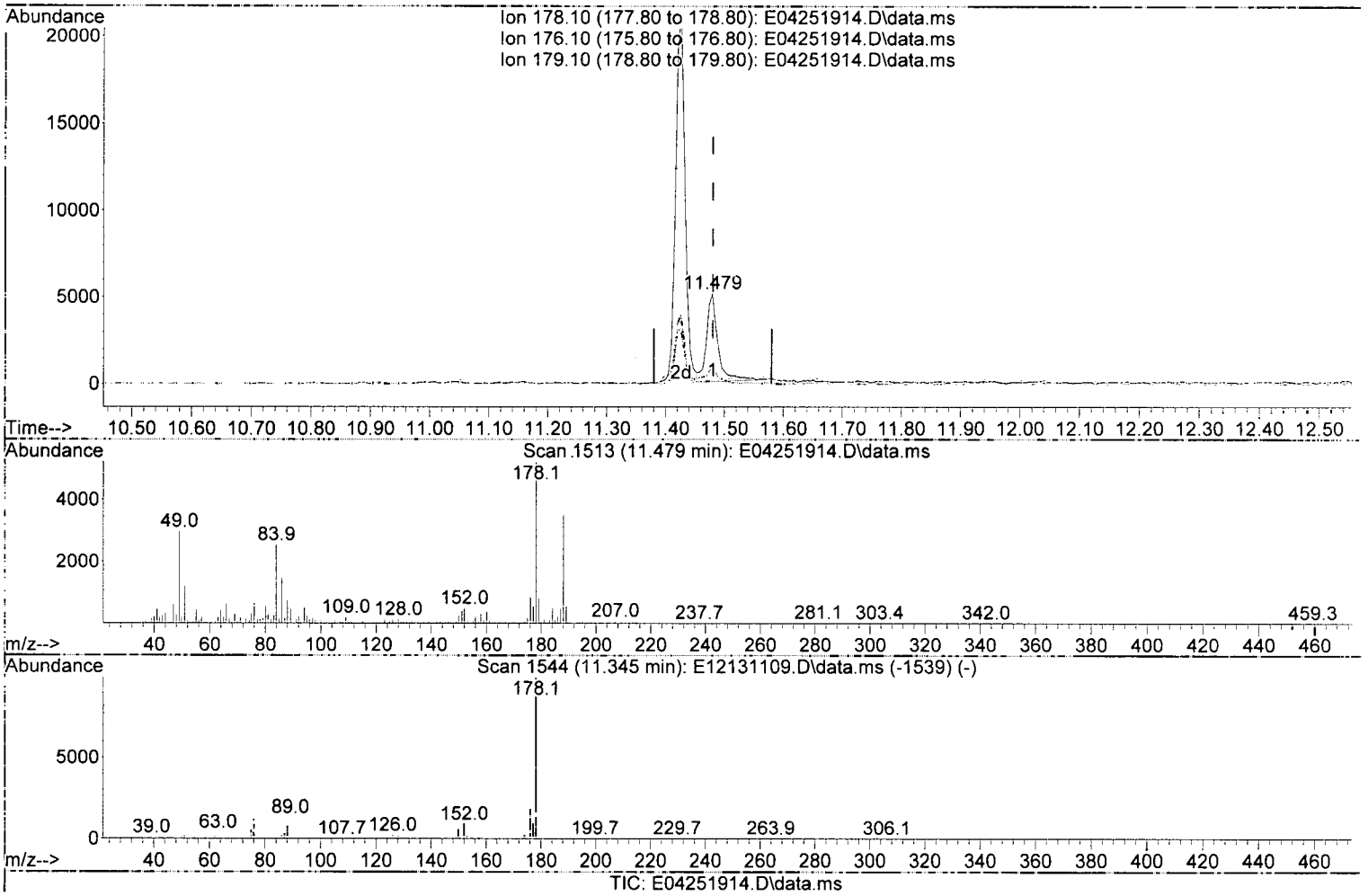
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(72) Anthracene (T)

11.479min (-0.000) 21.22 ng/ml

response 6718

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	16.91
179.10	15.50	15.93
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
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DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
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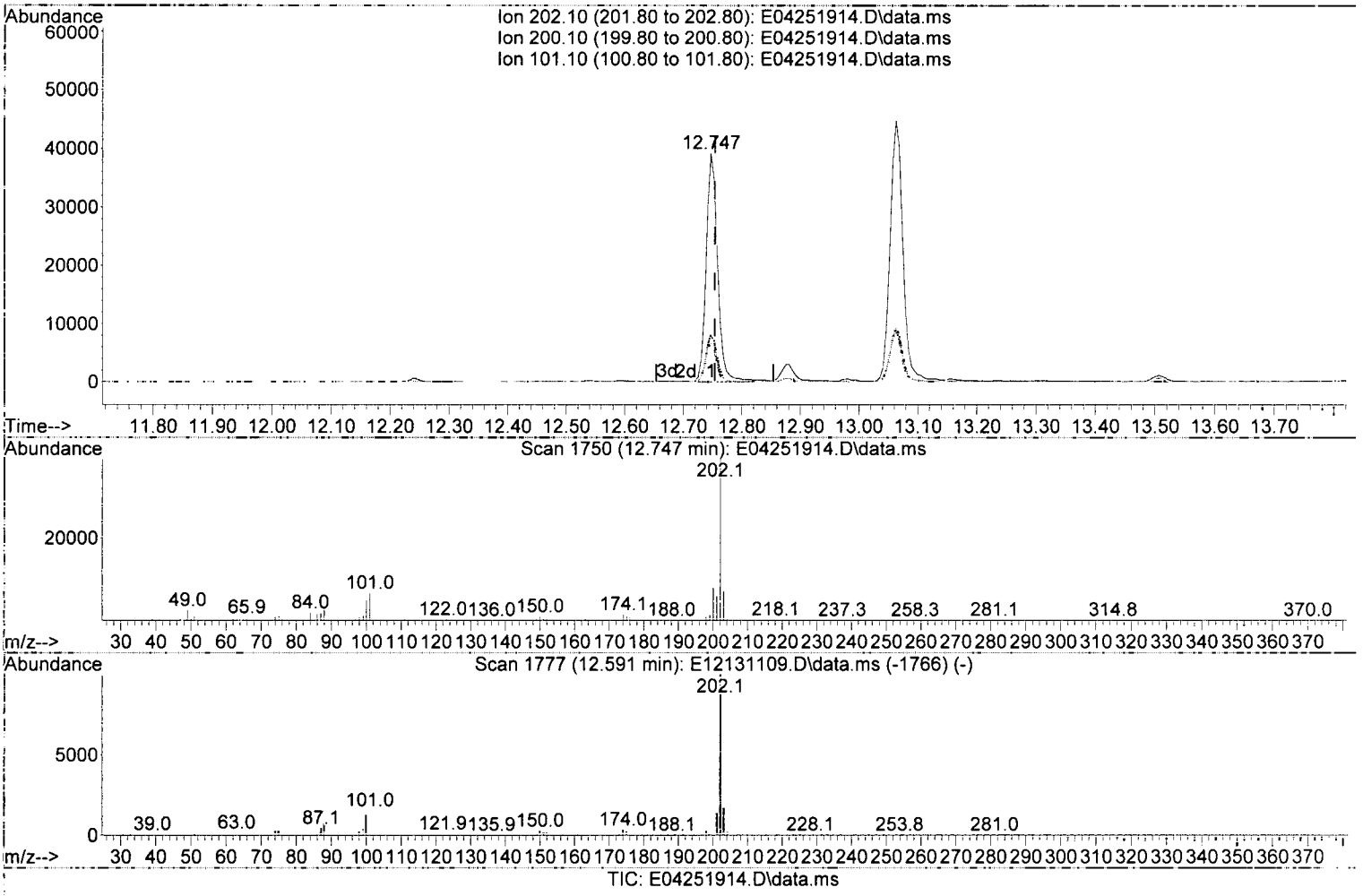
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(75) Fluoranthene (T)

12.747min (-0.006) 165.04 ng/ml

response 52816

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	20.70
101.10	15.70	17.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
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DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
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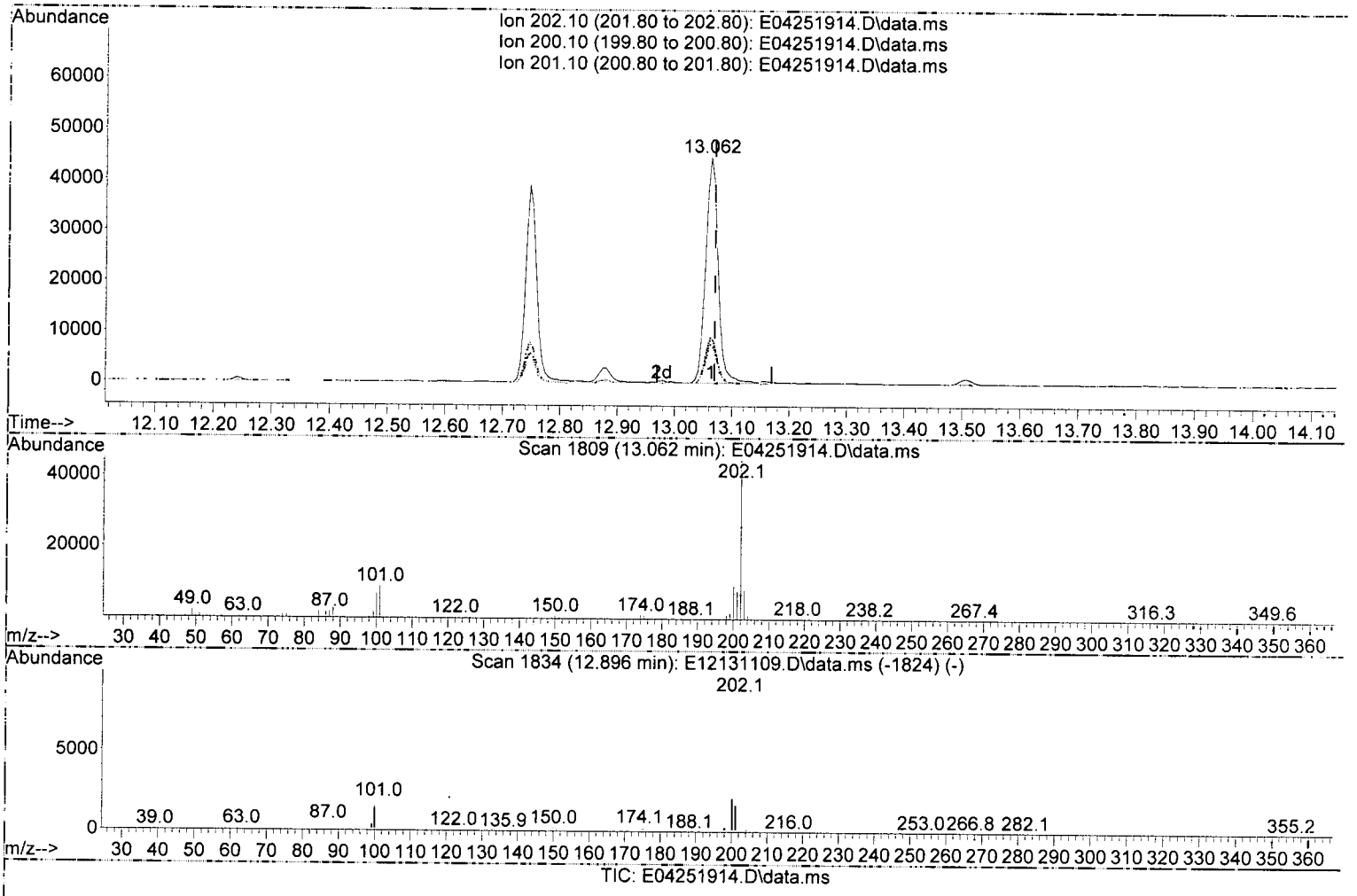
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(77) Pyrene (T)

13.062min (-0.006) 207.10 ng/ml

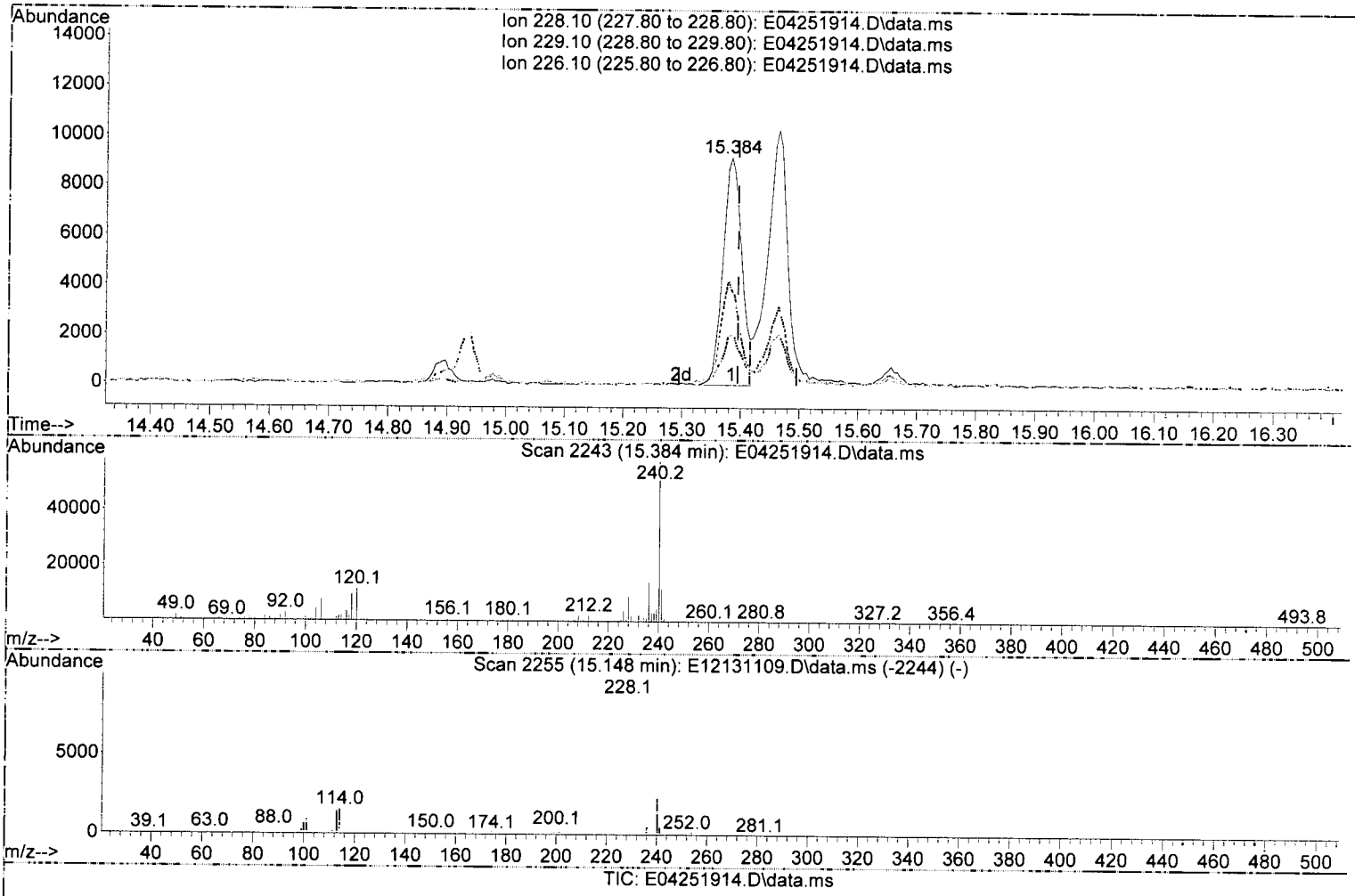
response 67327

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.67
201.10	17.50	17.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(83) Benz(a)anthracene (T)

15.384min (-0.011) 75.19 ng/ml

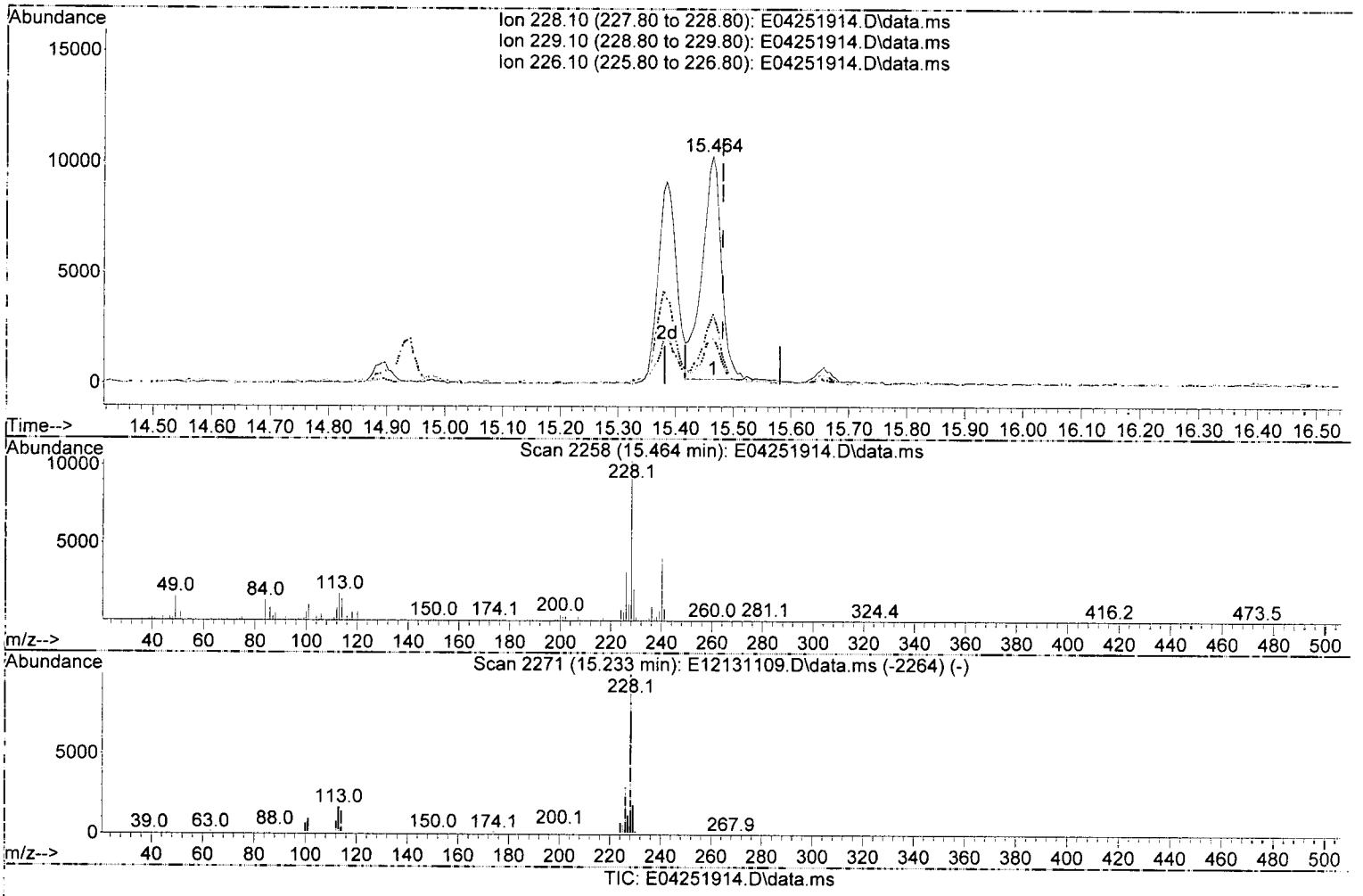
response 20605

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	22.33
226.10	27.80	42.03
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 90.28 ng/ml

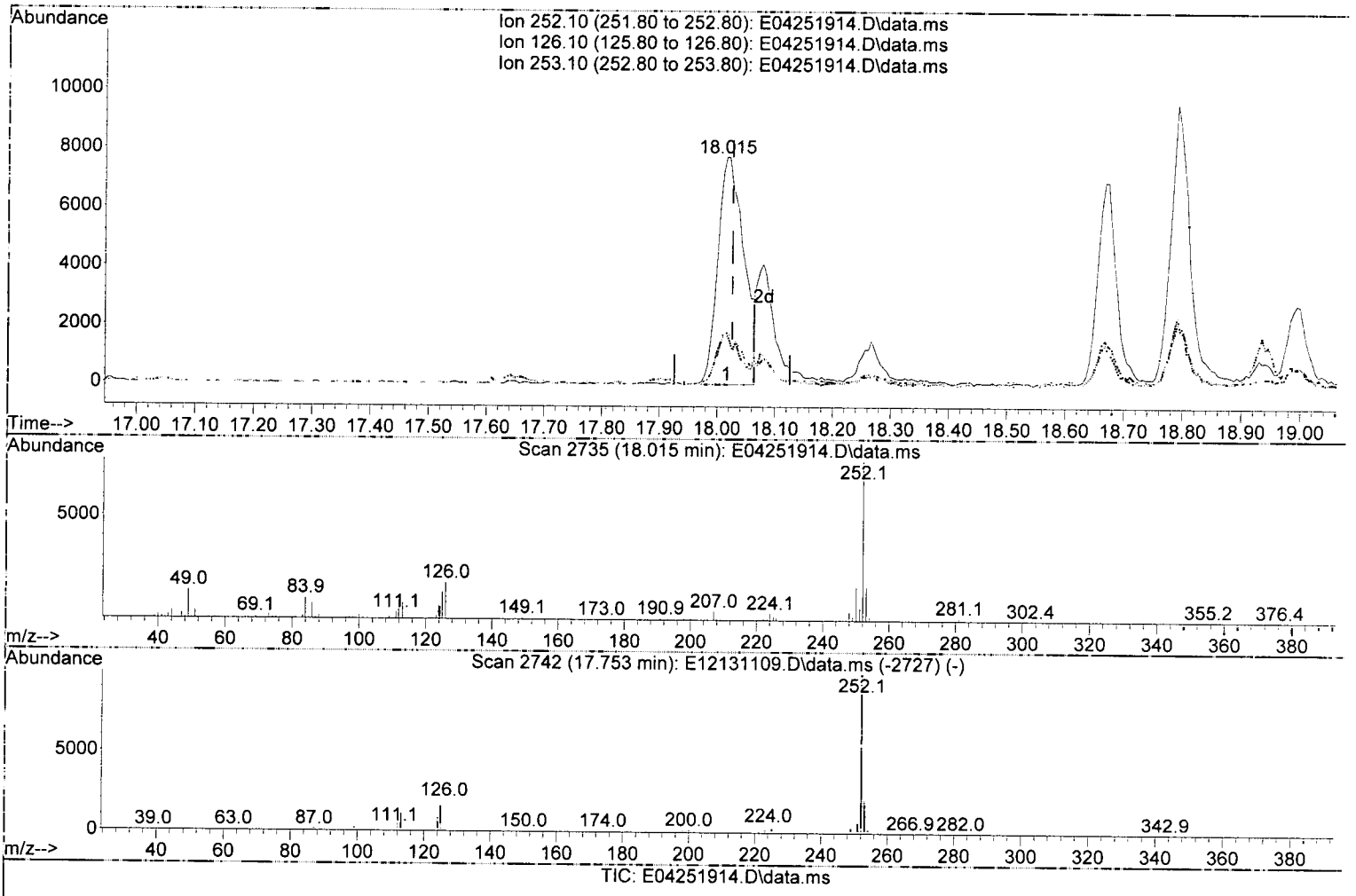
response 23567

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	20.23
226.10	29.80	30.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(88) Benzo(b)fluoranthene (T)

18.015min (-0.010) 110.81 ng/ml

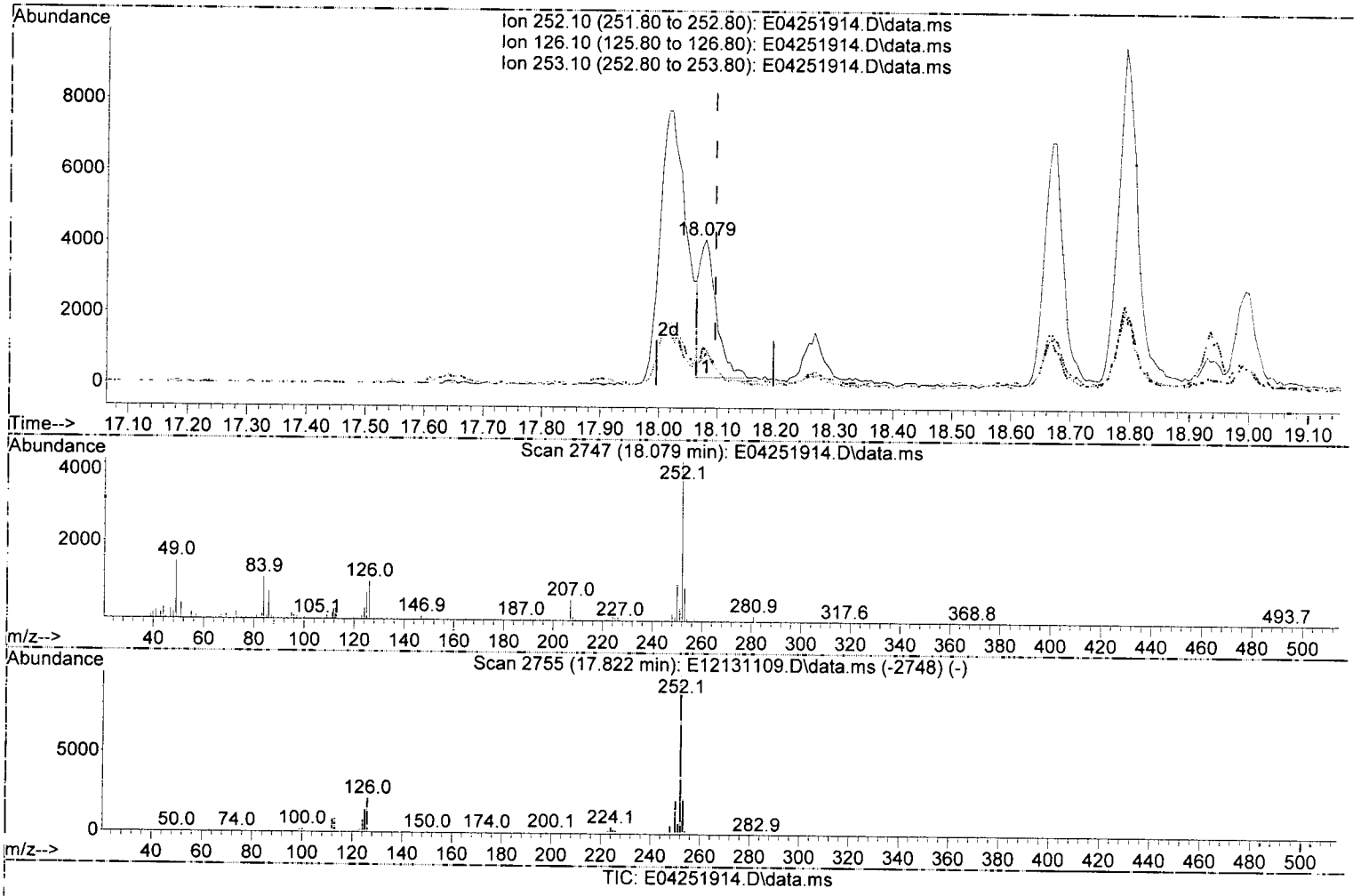
response 24304

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	23.10
253.10	22.40	21.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.079min (-0.016) 35.63 ng/ml MM5

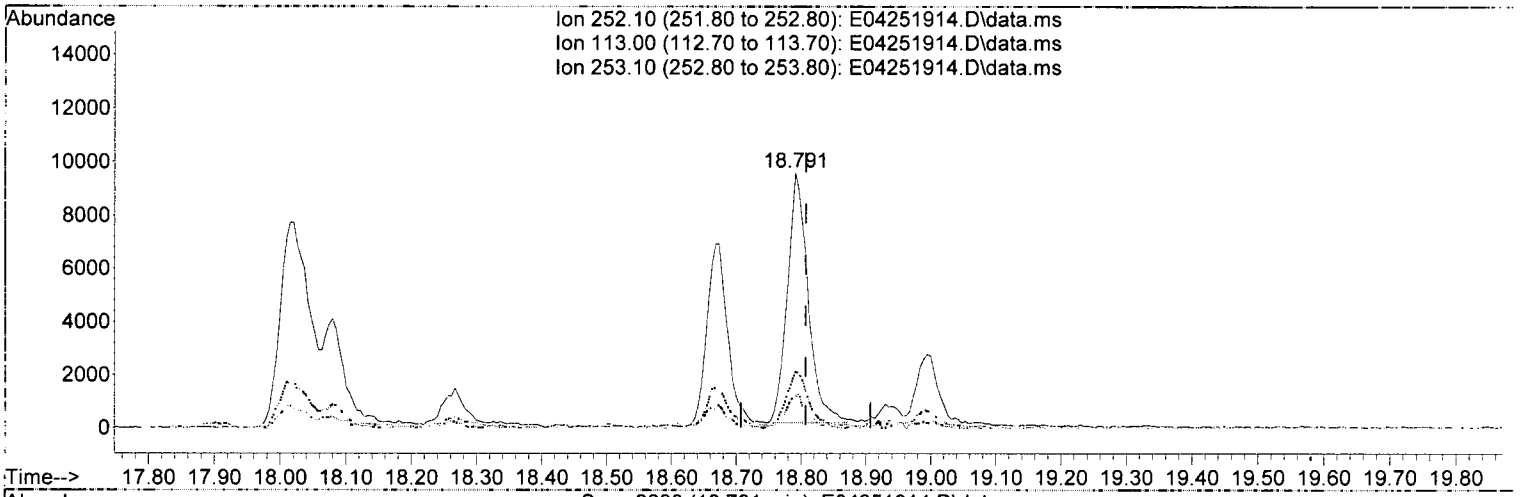
response 7681

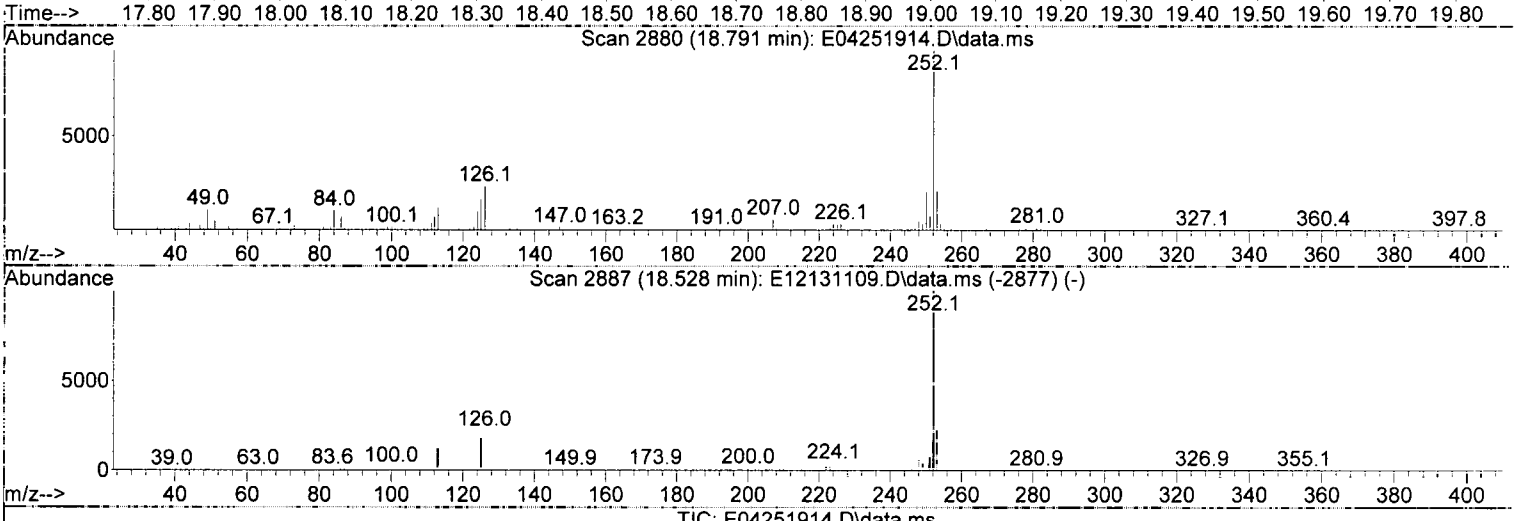
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	24.37
253.10	21.80	21.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5





TIC: E04251914.D\data.ms

(92) Benzo(a)pyrene (T)

18.791min (-0.015) 105.26 ng/ml

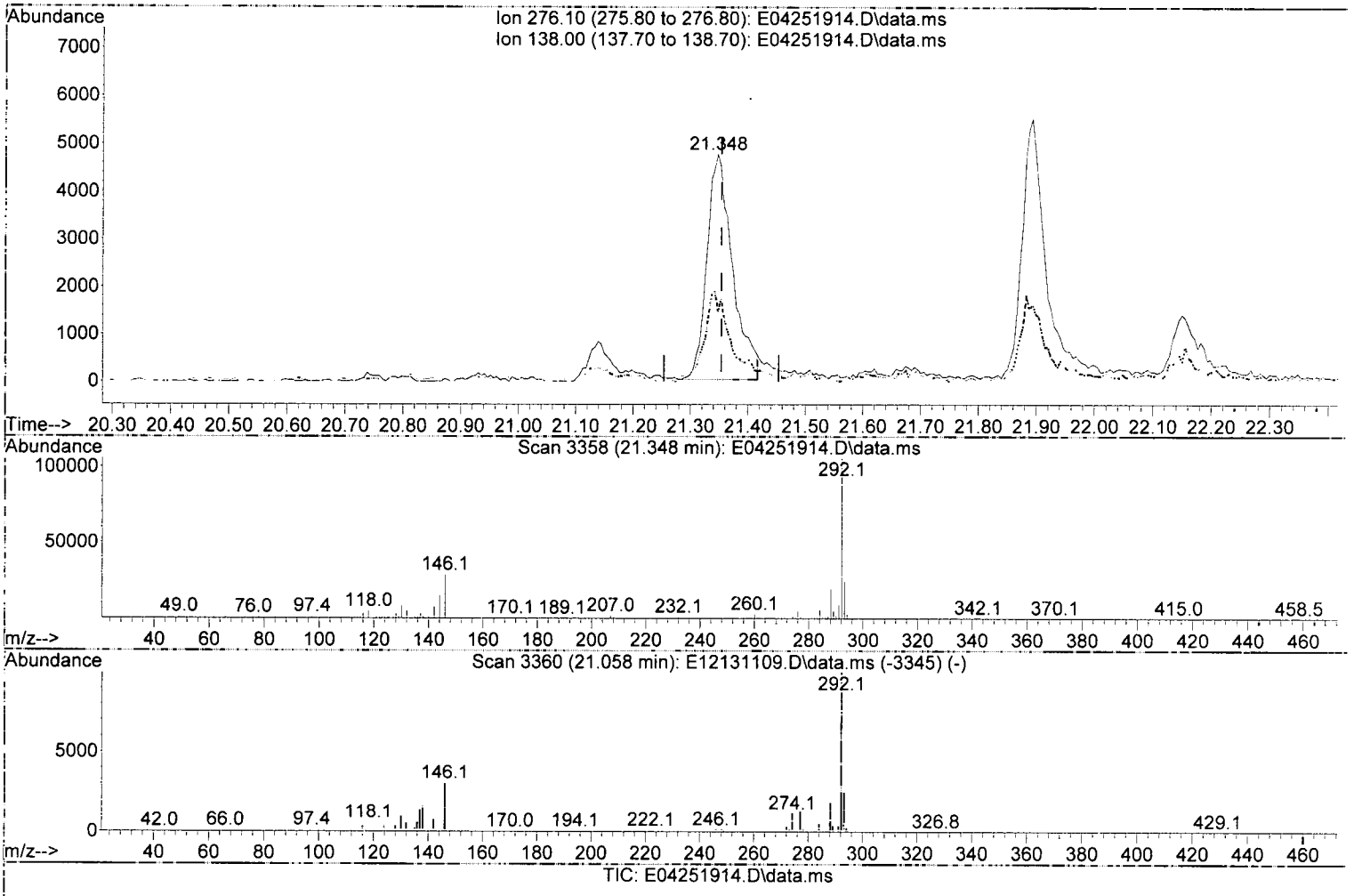
response 20963

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	12.31
253.10	21.70	22.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.348min (-0.006) 74.86 ng/ml

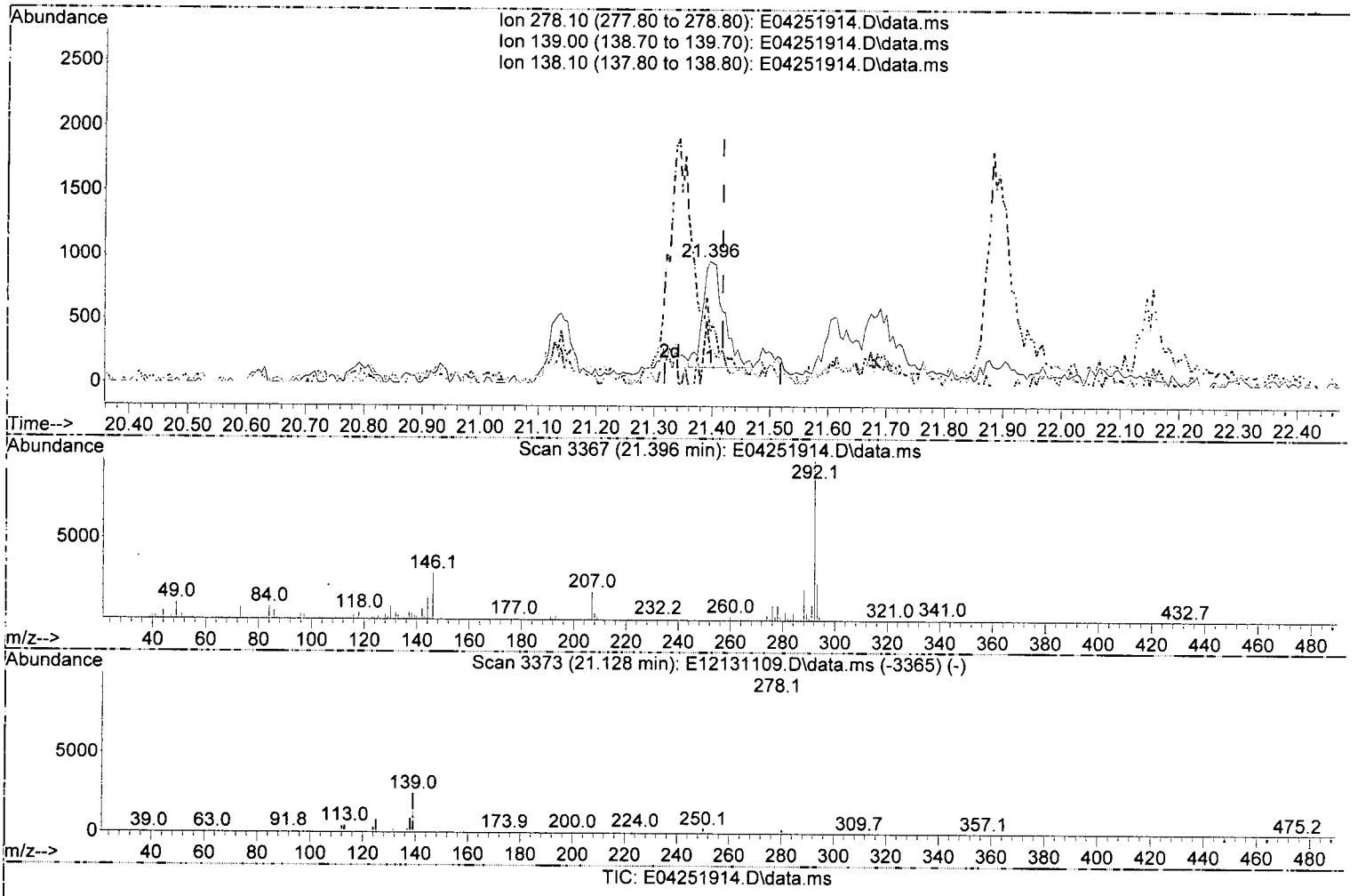
response 14762

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	31.04
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251914.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.396min (-0.022) 11.68 ng/ml J

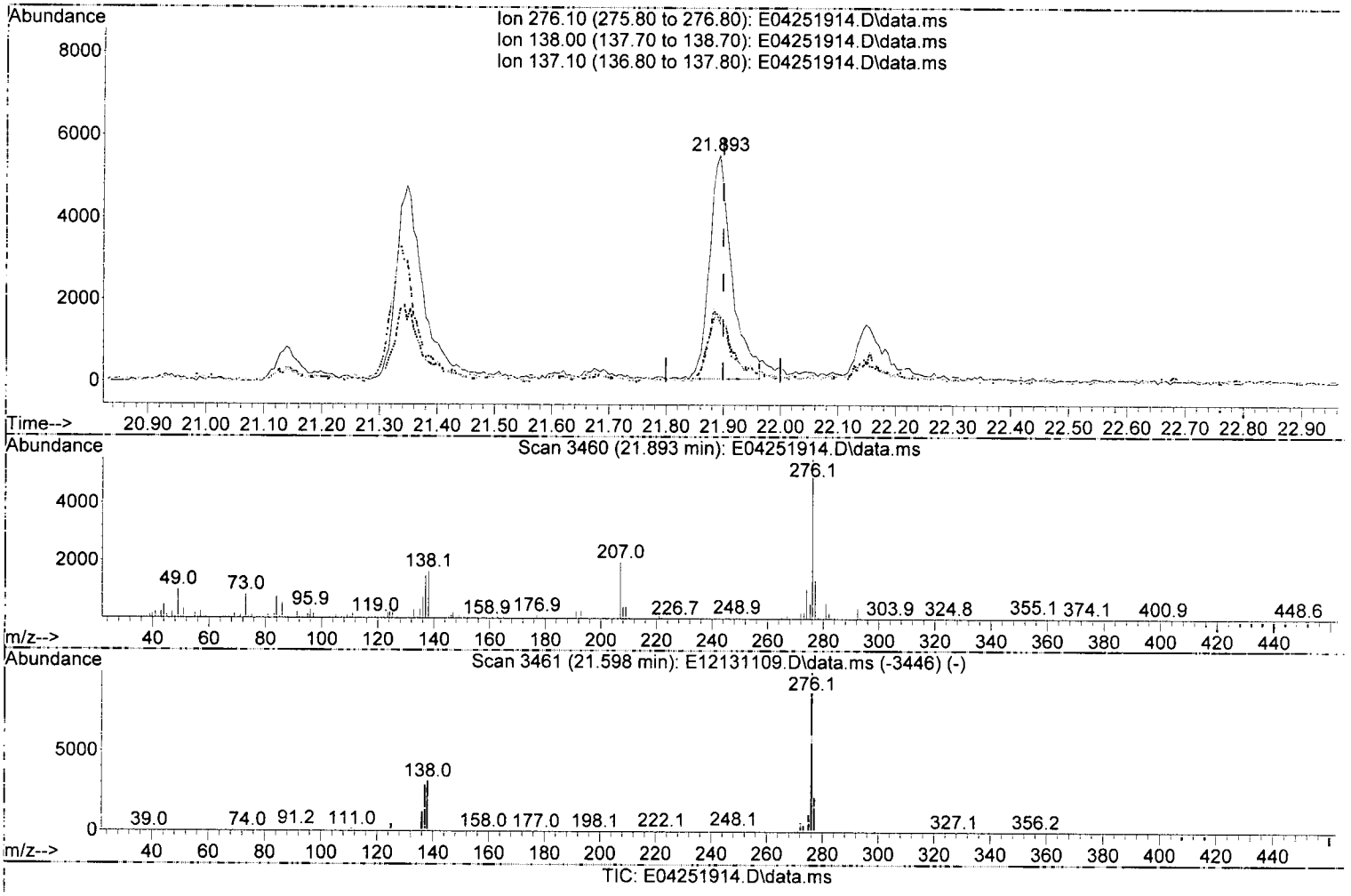
response 2110

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	27.67
138.10	17.70	42.56
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(97) Benzo(g,h,i)perylene (T)

21.893min (-0.006) 76.47 ng/ml

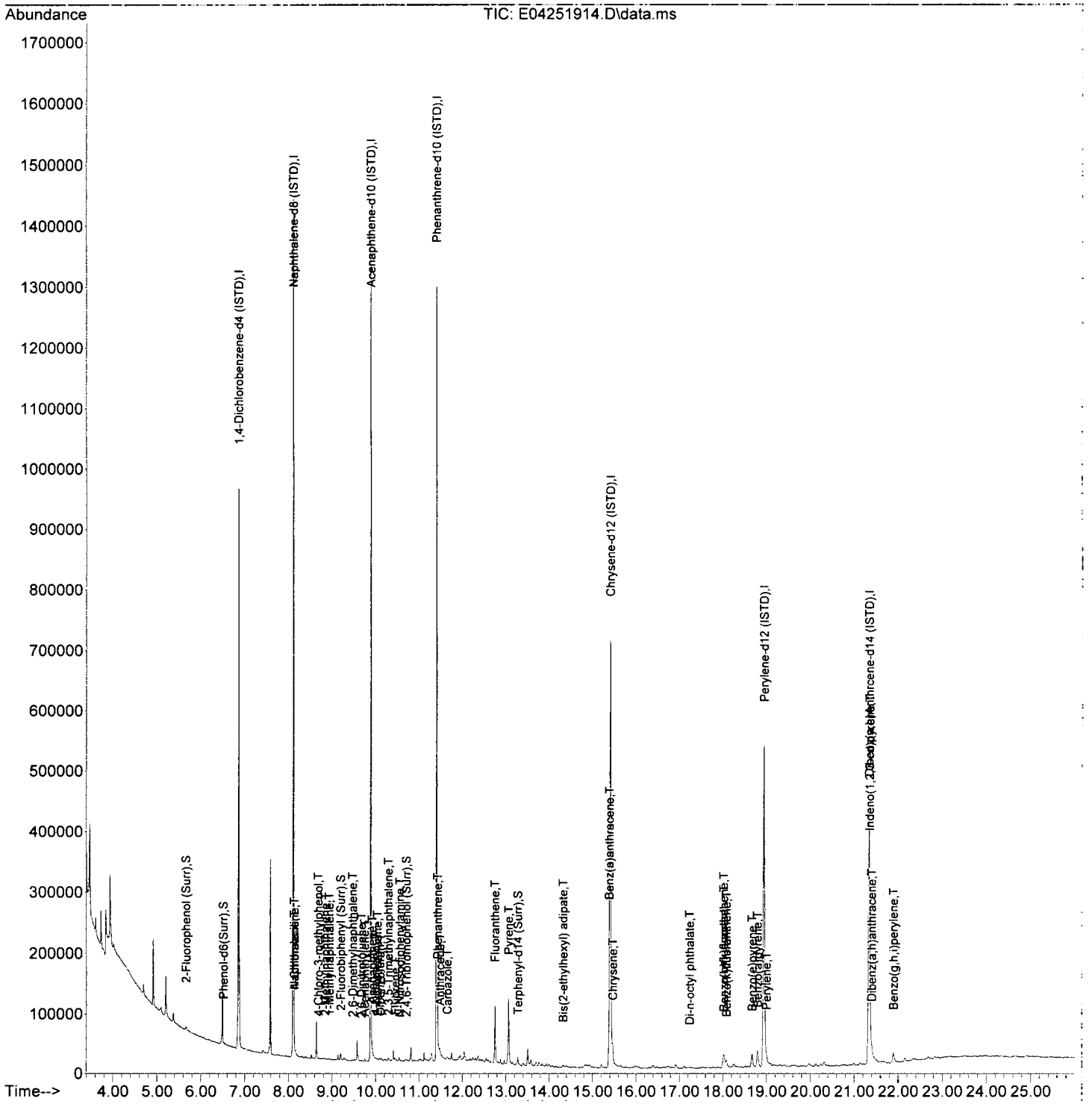
response 14845

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	29.71
137.10	39.00	27.04
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251914.D
Acq On : 25 Apr 2019 3:35 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-04@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 16:11:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.858	152	189523	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.110	136	755322	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	330834	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	583430	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.410	240	480897	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	401441	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	331886	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.649	112	3345	28.31	ng/ml	0.00
5) Phenol-d6(Surr)	~~6.510~~	~~99~~	~~1788~~	~~11.31~~	~~ng/ml~~	~~0.02~~ MI
19) Nitrobenzene-d5 (Surr)	7.420	82	3395	23.96	ng/ml	0.02
40) 2-Fluorobiphenyl (Surr)	9.195	172	6773	27.53	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.704	330	319	30.22	ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.282	244	7658	34.08	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.548	94	52	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	7.067	45	55	N.D.		
16) N-Nitrosodi-n-propylamine	7.243	70	79	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.436	77	51	N.D.		
22) Isophorone	7.660	82	67	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	8.131	128	6873	17.06	ng/ml	97
30) 4-Chloroaniline	8.131	127	953	6.87	ng/ml#	43
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	0.000		0	N.D.		
33) 2-Methylnaphthalene	8.837	142	1030	4.06	ng/ml	96
34) 1-Methylnaphthalene	8.933	142	765	3.15	ng/ml	97
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	9.302	154	653	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	0.000		0	N.D.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

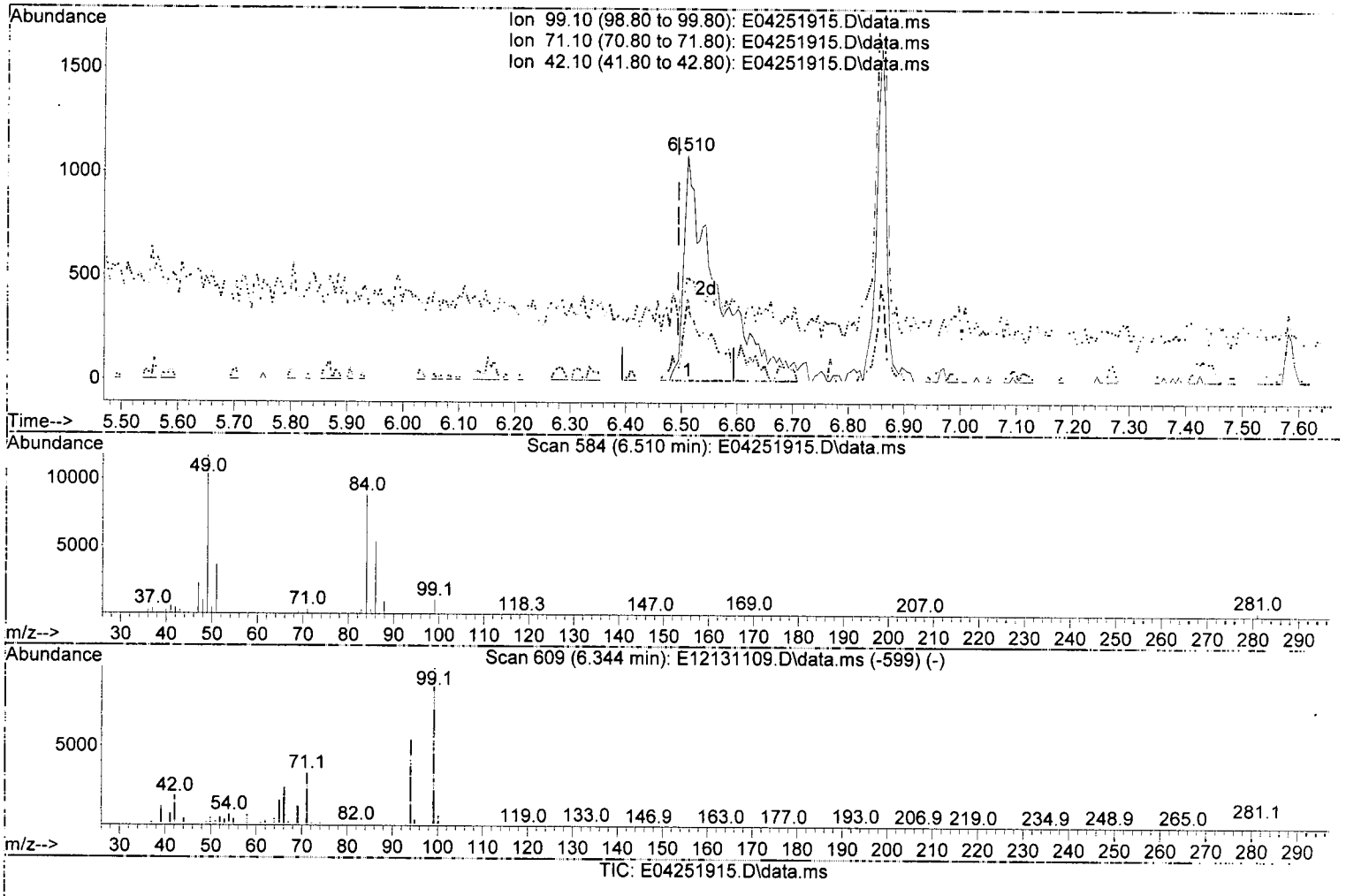
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.468	156	542	2.74 ng/ml	96
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.741	152	1600	4.97 ng/ml	93
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.917	153	2137	9.78 ng/ml	94
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.030	165	133	63.19 ng/ml#	28
55) Dibenzofuran	10.099	168	807	2.84 ng/ml#	1
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	10.297	149	90	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.292	170	1246	7.07 ng/ml	94
60) Fluorene	10.447	166	2265	9.96 ng/ml	95
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	10.538	169	60	N.D.	
66) Azobenzene (1,2-DPH)	10.607	77	128	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	~~N.D.~~	
71) Phenanthrene	11.426	178	25168	78.59 ng/ml	98
72) Anthracene	11.479	178	7502	22.83 ng/ml	95
73) Carbazole	11.645	167	1626	5.29 ng/ml	97
74) Di-n-butyl phthalate	11.971	149	198	~~N.D.~~	
75) Fluoranthene	12.752	202	48252	145.27 ng/ml	98
76) Benzidine	0.000		0	~~N.D.~~	
77) Pyrene	13.068	202	56678	167.98 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	59	N.D.	
81) Bis(2-ethylhexyl) adipate	14.325	129	999	7.14 ng/ml	99
82) 3,3-Dichlorobenzidine	0.000		0	~~N.D.~~	
83) Benz(a)anthracene	15.389	228	19447	71.69 ng/ml	86
84) Chrysene	15.464	228	21871	84.64 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	250	N.D.	
87) Di-n-octyl phthalate	0.000		0	~~N.D.~~	
88) Benzo(b)fluoranthene	18.021	252	22439	105.80 ng/ml MOS	97
89) Benzo(k)fluoranthene	~~18.021~~	~~252~~	~~29169~~	~~139.94 ng/ml~~	~~97~~ MI Hit MOS
90) Benzo(b+k)fluoranthene	18.021	252	33453	150.19 ng/ml	97
91) Benzo(e)pyrene	18.673	252	14221	66.04 ng/ml	96
92) Benzo(a)pyrene	18.796	252	19215	99.78 ng/ml	98
93) Perylene	18.999	252	7296	33.15 ng/ml	95
95) Indeno(1,2,3-cd)pyrene	21.347	276	13178	72.44 ng/ml	89
96) Dibenz(a,h)anthracene	21.401	278	1908	11.45 ng/ml	70
97) Benzo(g,h,i)perylene	21.898	276	13347	74.53 ng/ml	79

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(5) Phenol-d6(Surr) (S)

6.510min (+ 0.017) 29.21 ng/ml (m)

response 4616

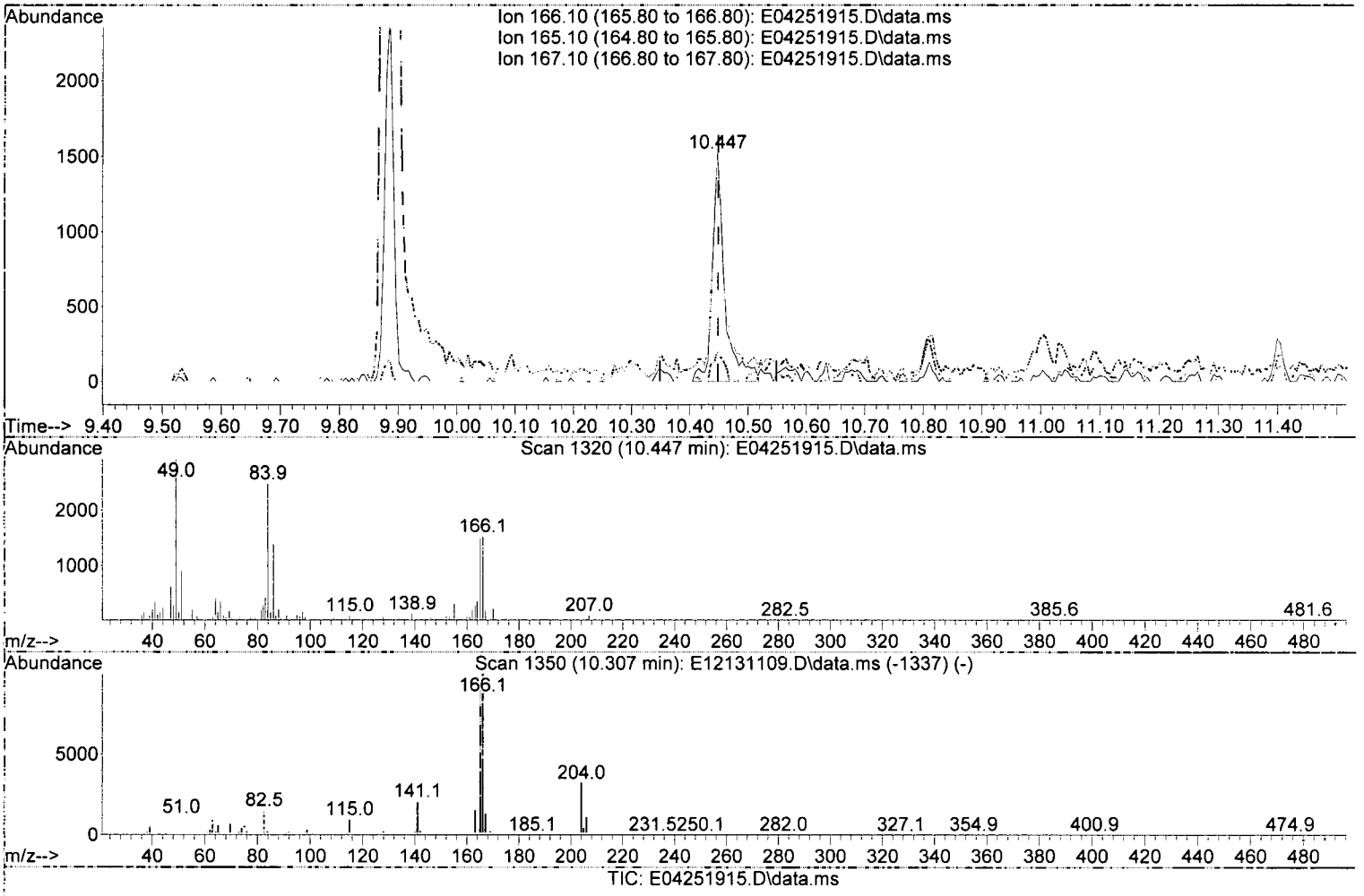
Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	36.21
42.10	21.30	45.96
0.00	0.00	0.00

RH 4/25/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(60) Fluorene (T)

10.447min (-0.001) 9.96 ng/ml J

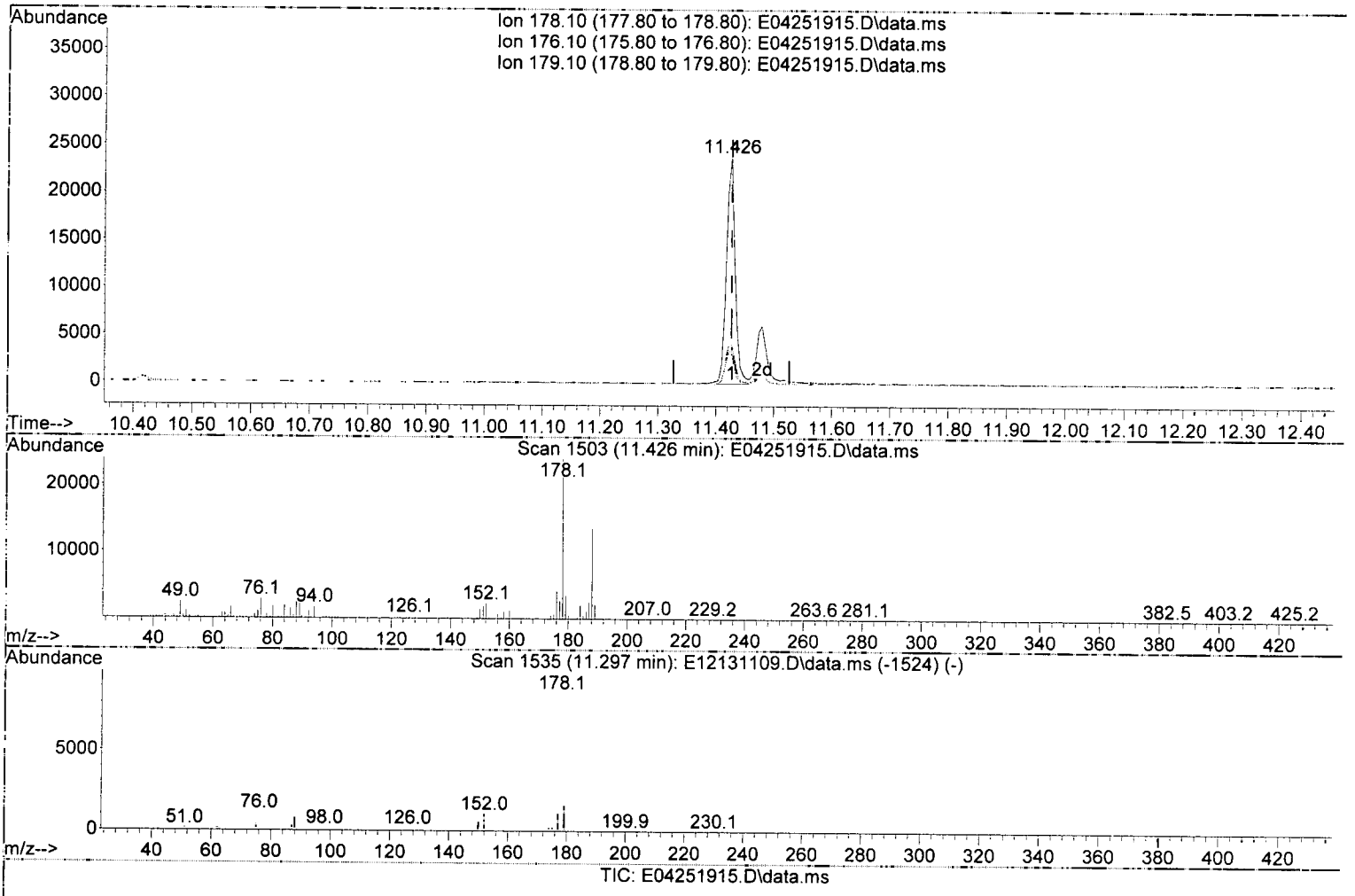
response 2265

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	98.23
167.10	13.60	12.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 78.59 ng/ml

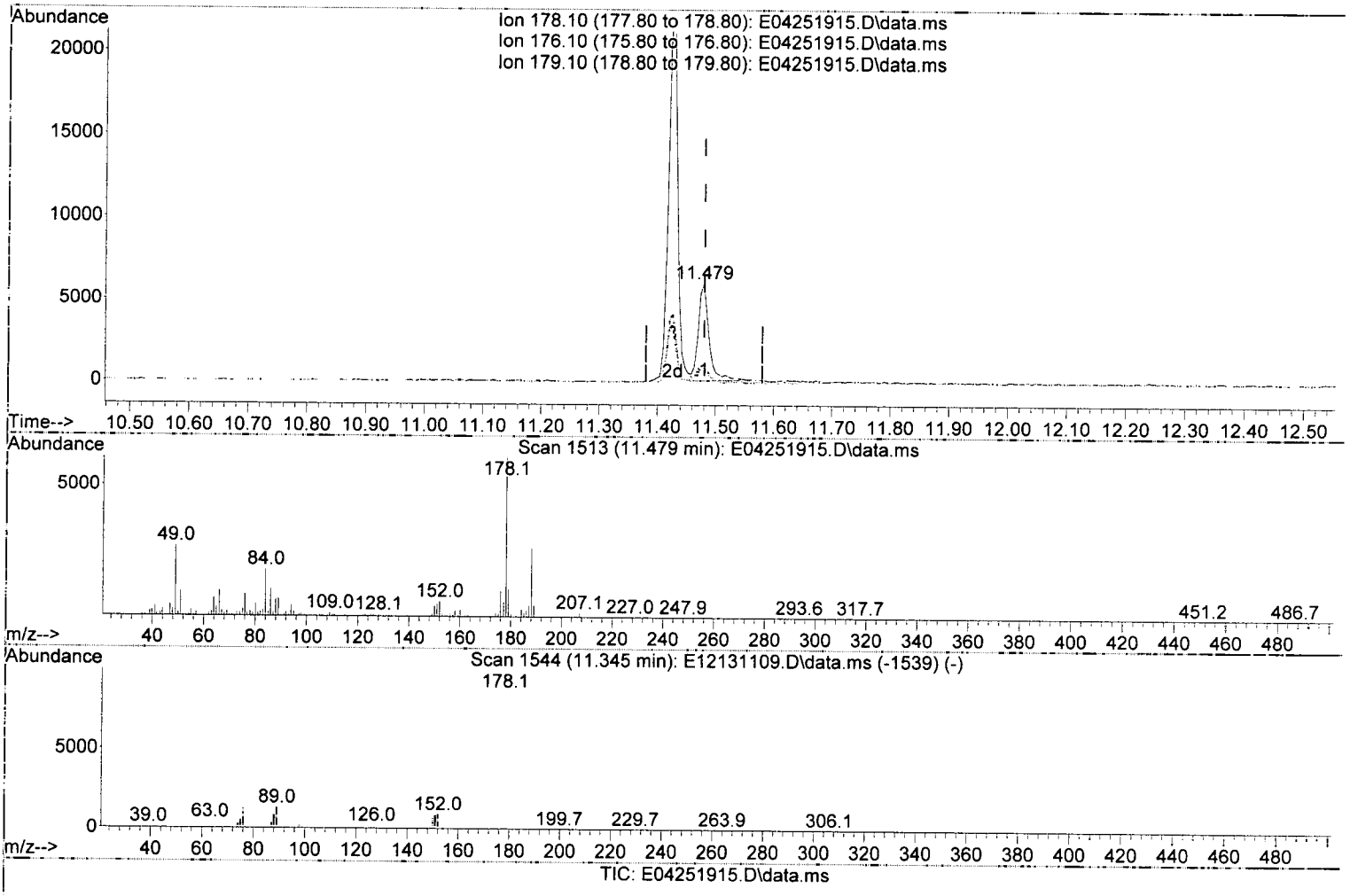
response 25168

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.60
179.10	15.00	14.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(72) Anthracene (T)

11.479min (-0.000) 22.83 ng/ml

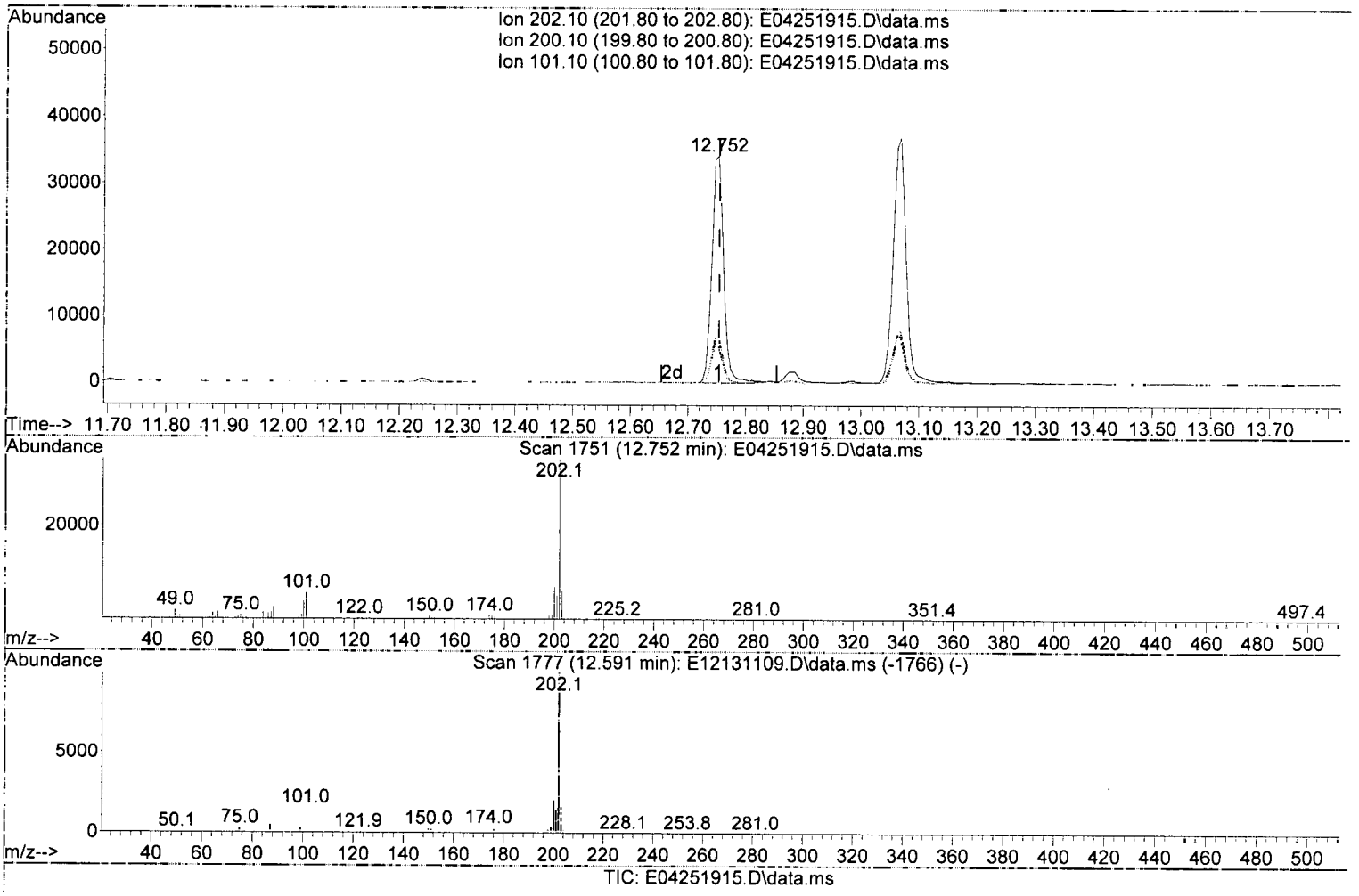
response 7502

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	16.84
179.10	15.50	17.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(75) Fluoranthene (T)

12.752min (-0.001) 145.27 ng/ml

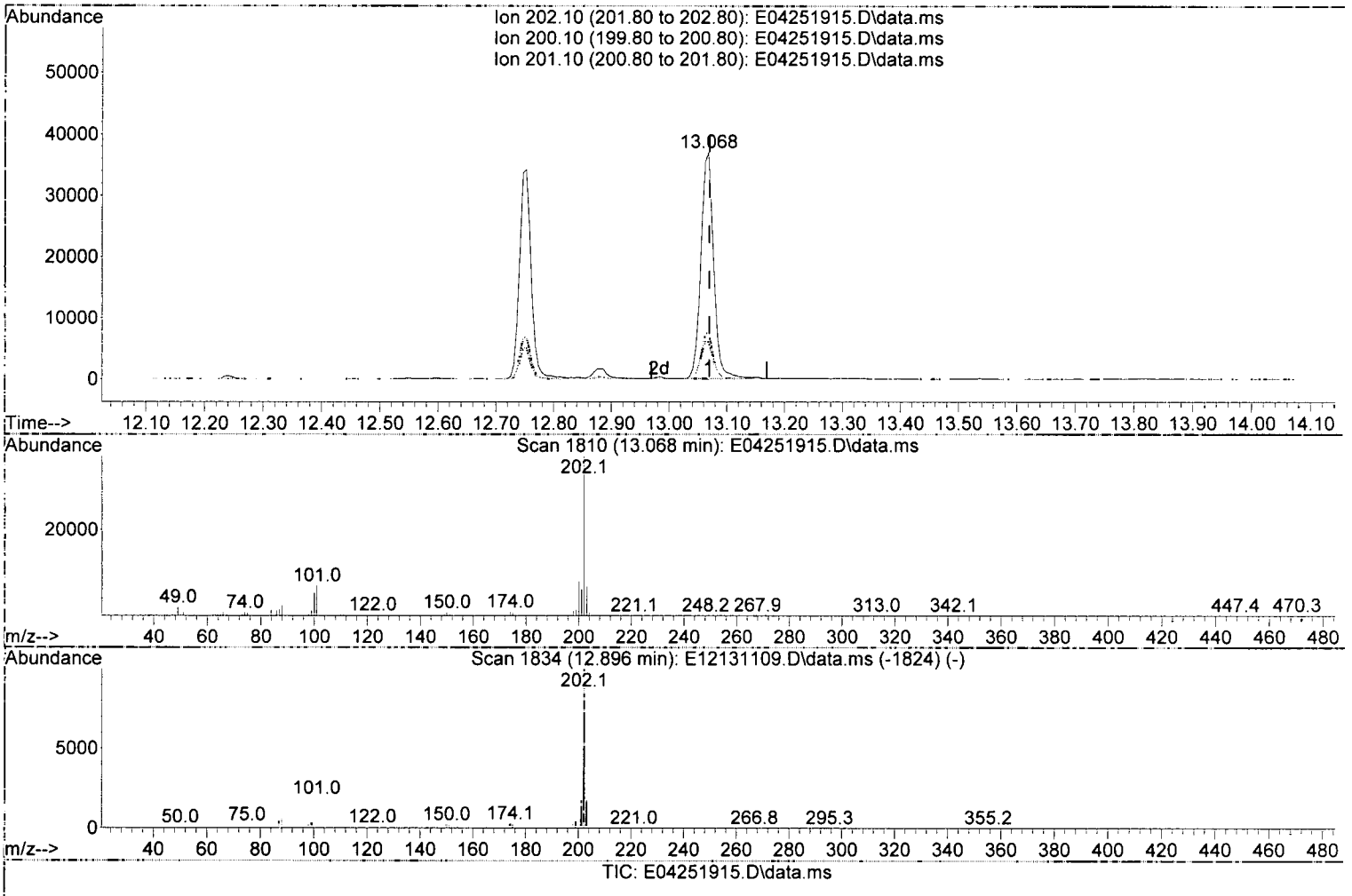
response 48252

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	20.49
101.10	15.70	16.60
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(77) Pyrene (T)

13.068min (-0.001) 167.98 ng/ml

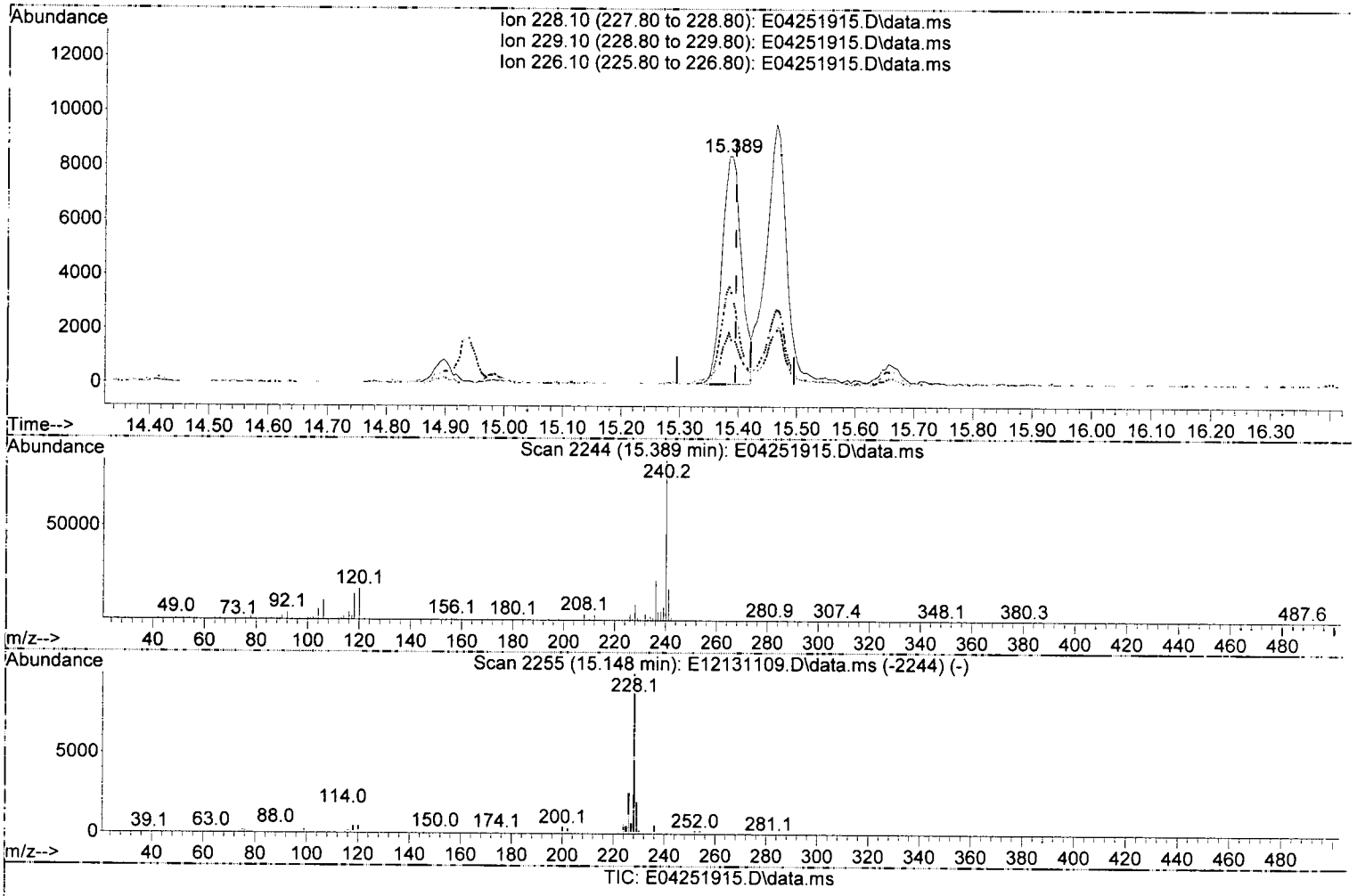
response 56678

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	21.30
201.10	17.50	16.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(83) Benz(a)anthracene (T)

15.389min (-0.006) 71.69 ng/ml

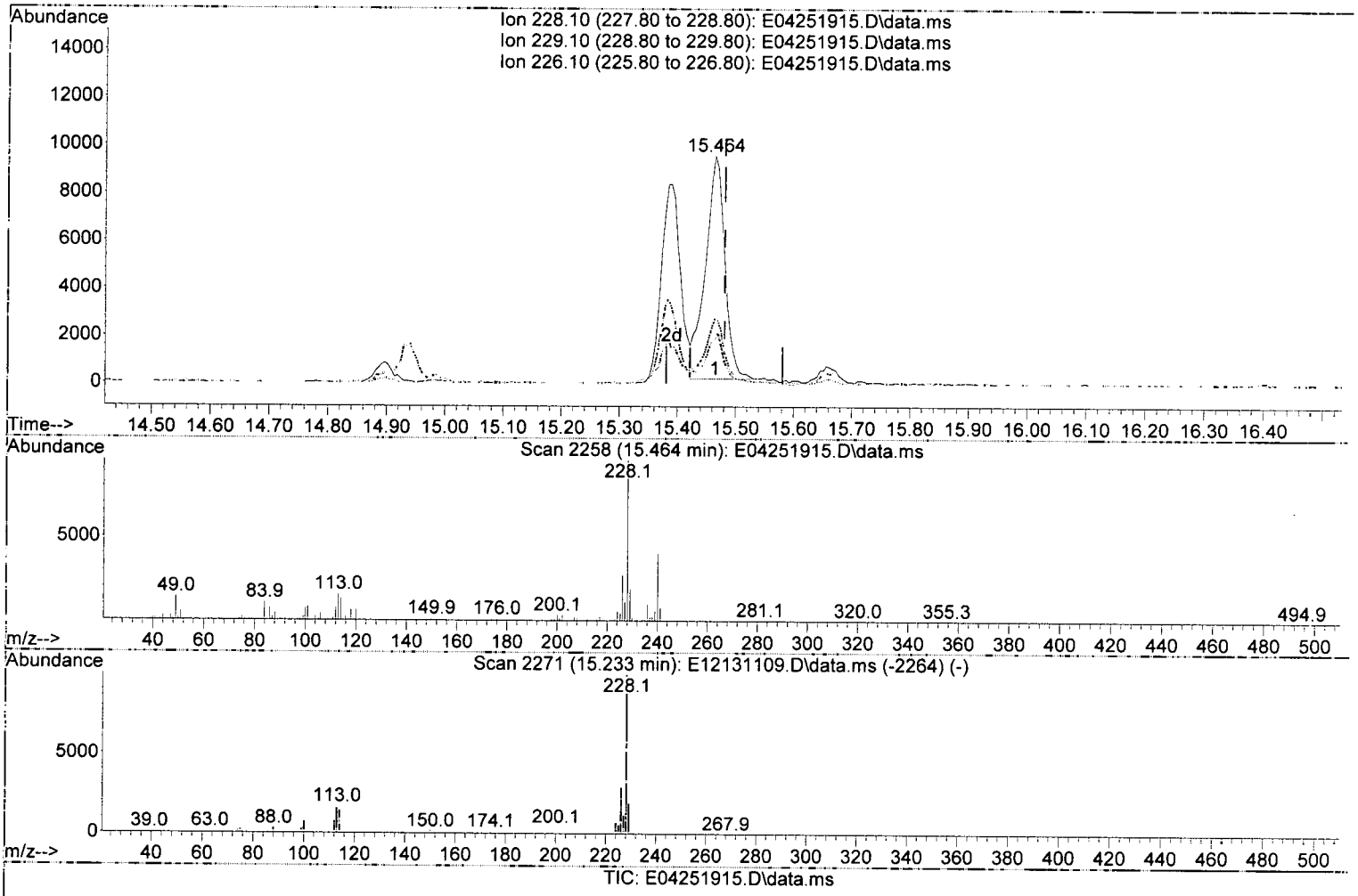
response 19447

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	18.00
226.10	27.80	38.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 84.64 ng/ml

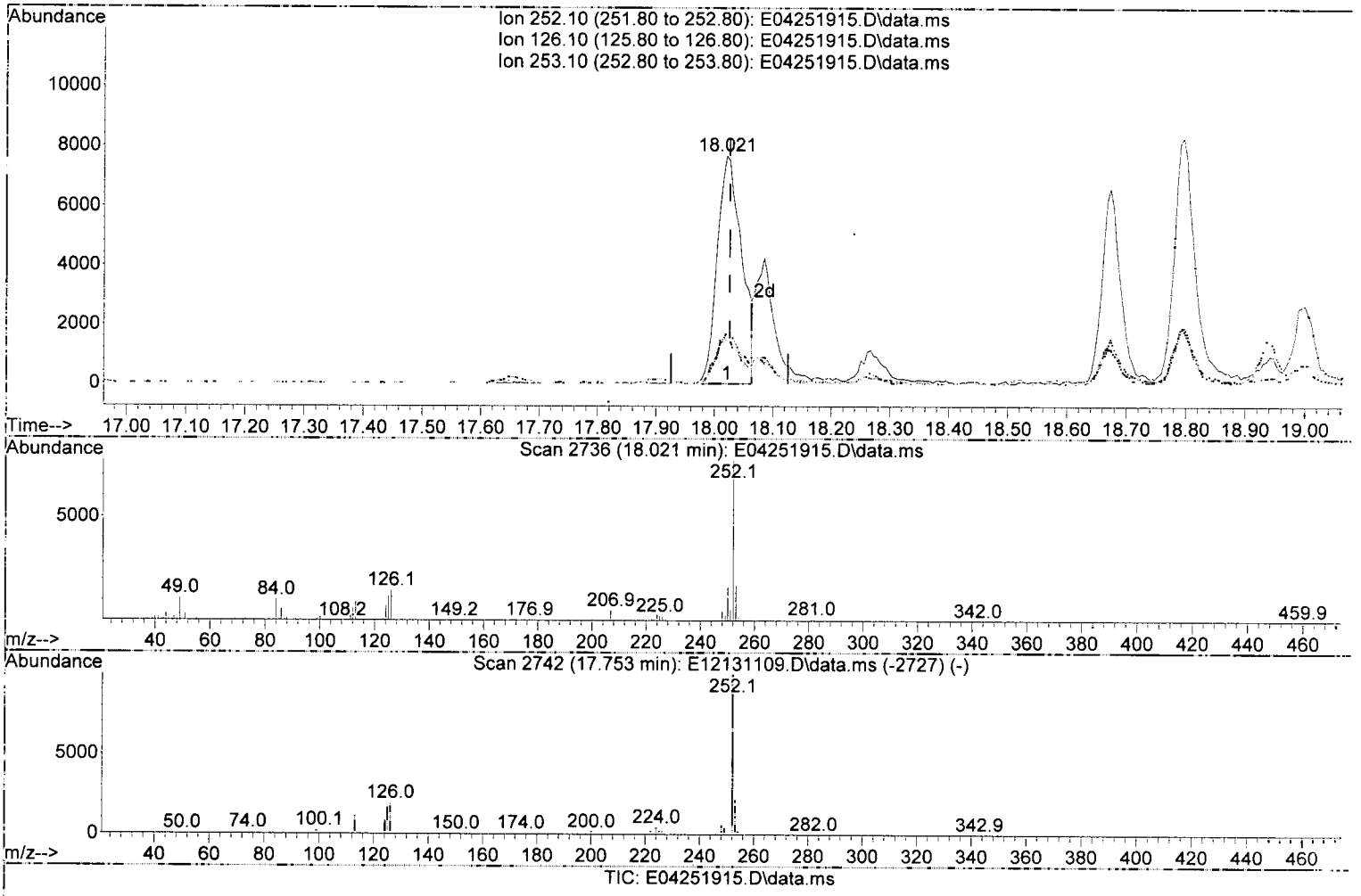
response 21871

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	19.90
226.10	29.80	28.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(88) Benzo(b)fluoranthene (T)

18.021min (-0.004) 105.80 ng/ml MDS

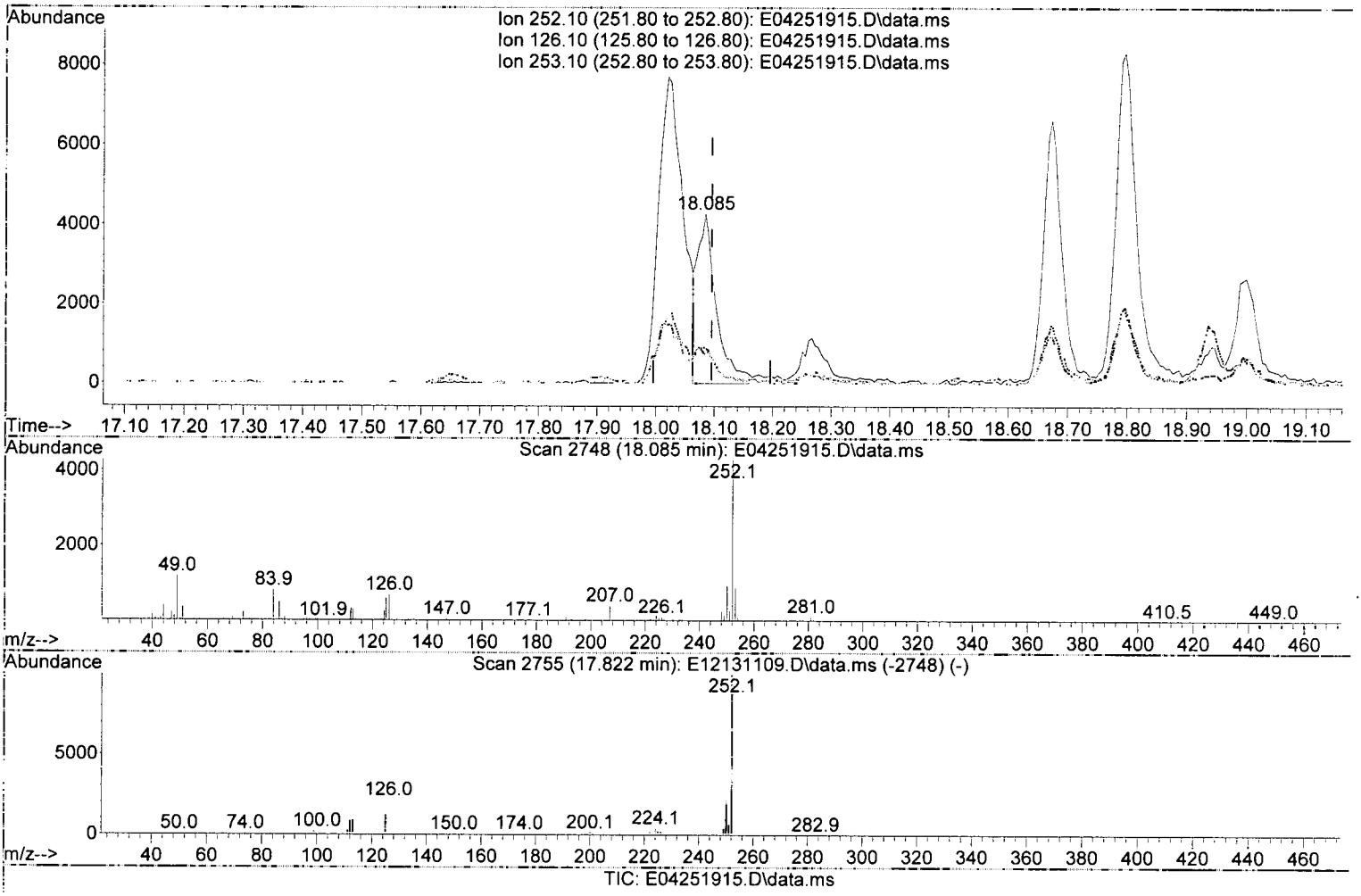
response 22439

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	19.17
253.10	22.40	22.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.085min (-0.010) 45.89 ng/ml (m) MDS

response 9566

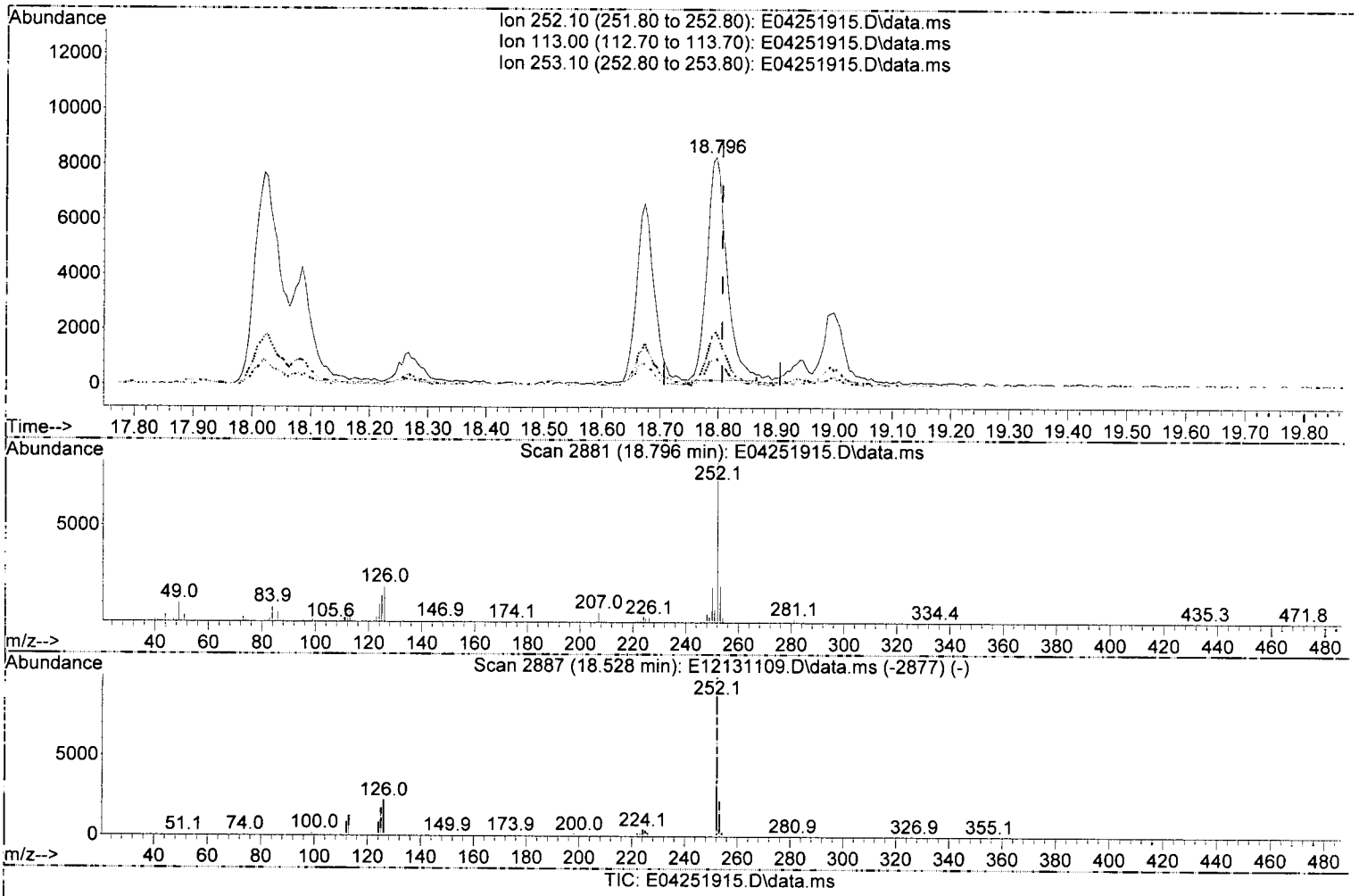
DTH 4/25/19 ✓

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	16.48
253.10	21.80	20.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(92) Benzo(a)pyrene (T)

18.796min (-0.010) 99.78 ng/ml

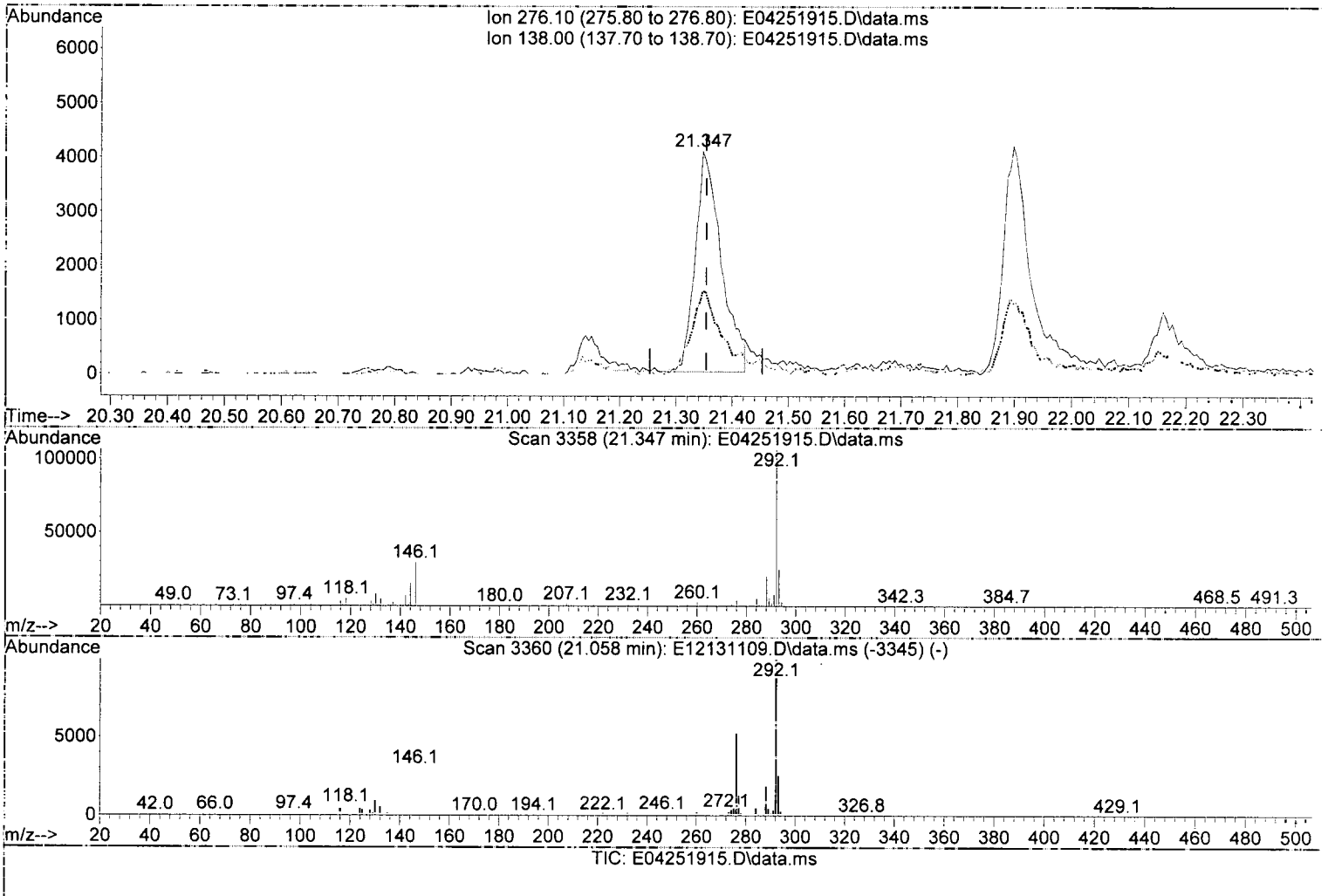
response 19215

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	12.34
253.10	21.70	23.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.347min (-0.006) 72.44 ng/ml

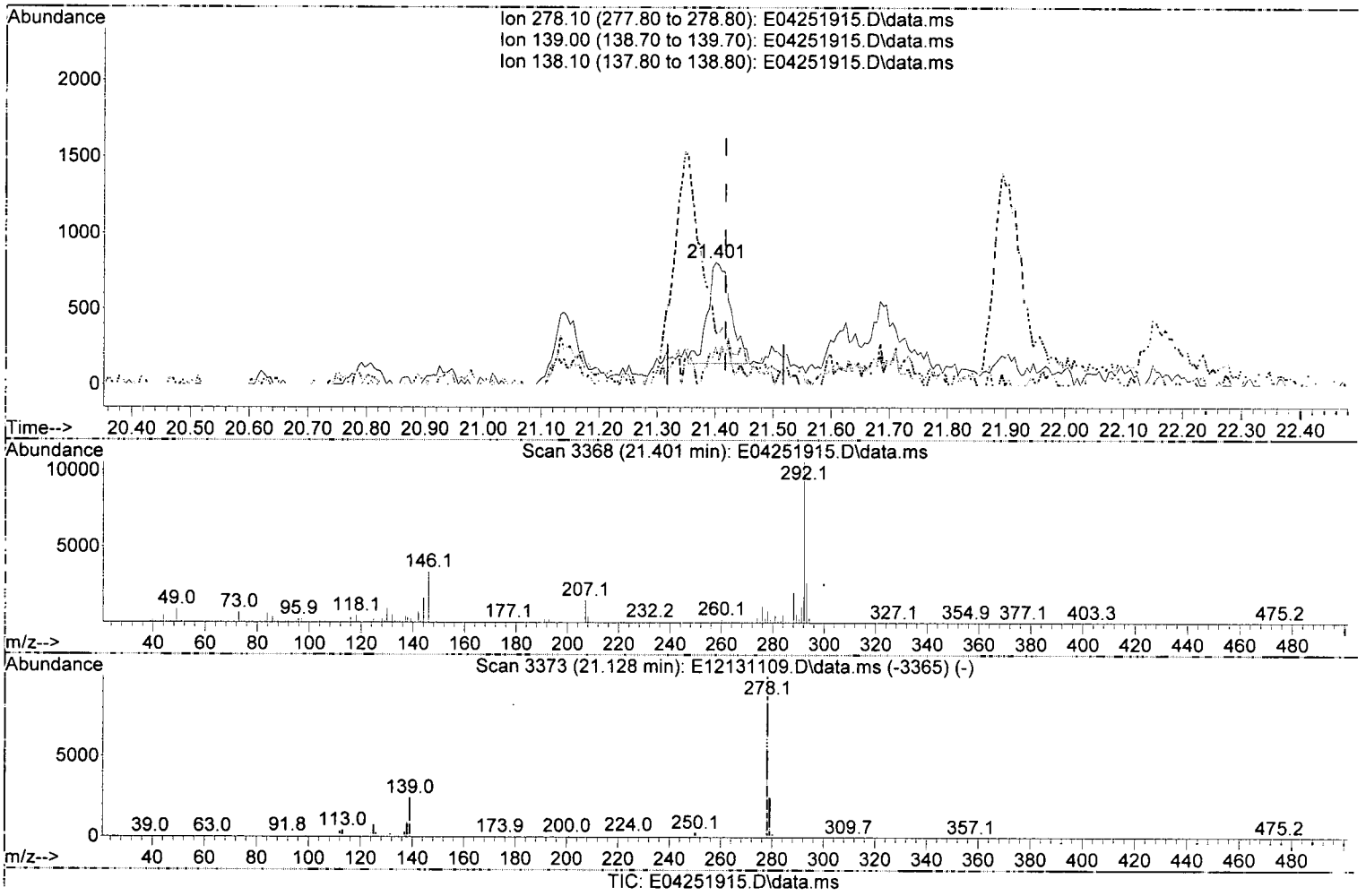
response 13178

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	37.21
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.401min (-0.016) 11.45 ng/ml J

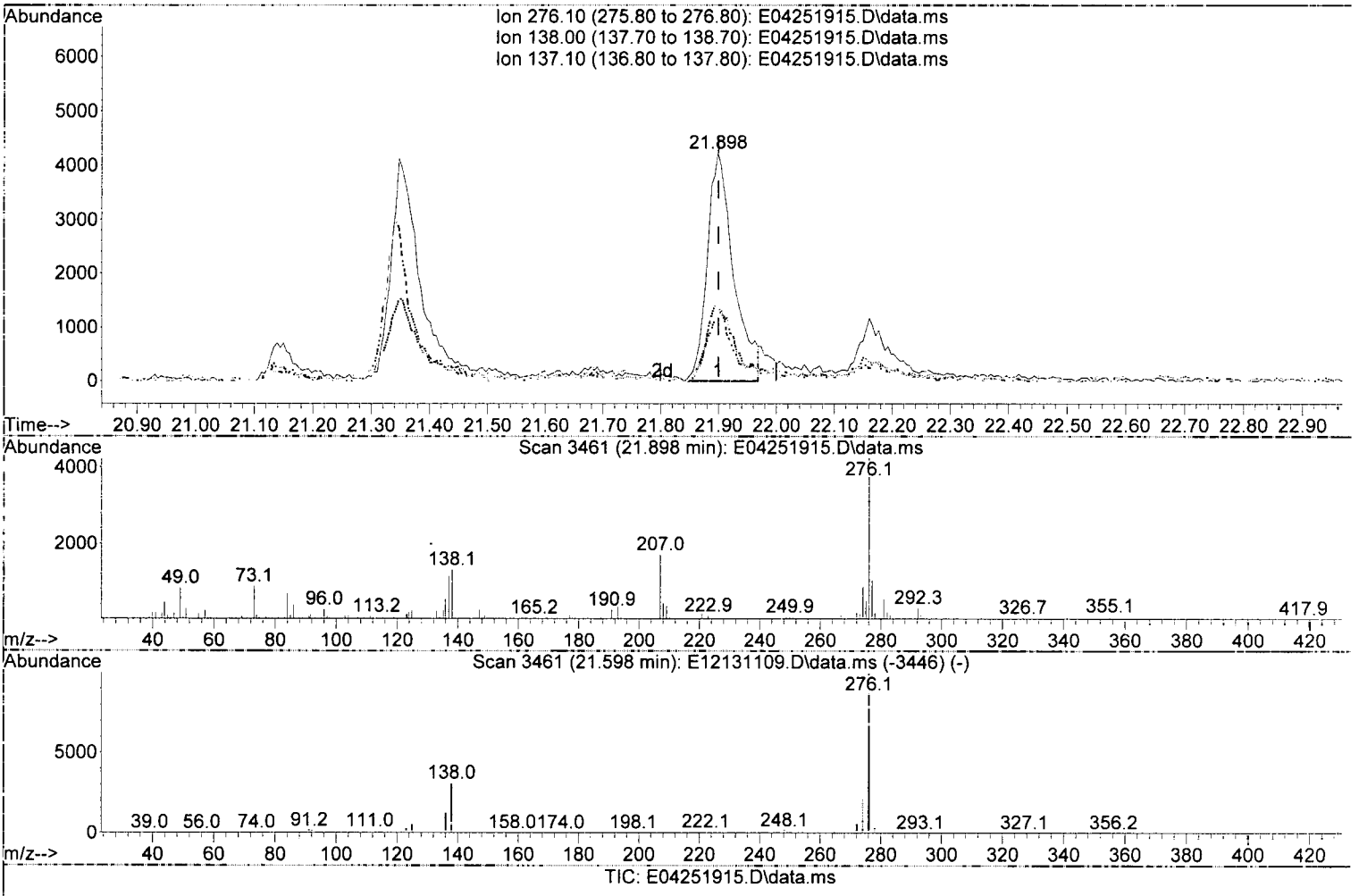
response 1908

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	31.47
138.10	17.70	42.38
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251915.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.898min (-0.000) 74.53 ng/ml

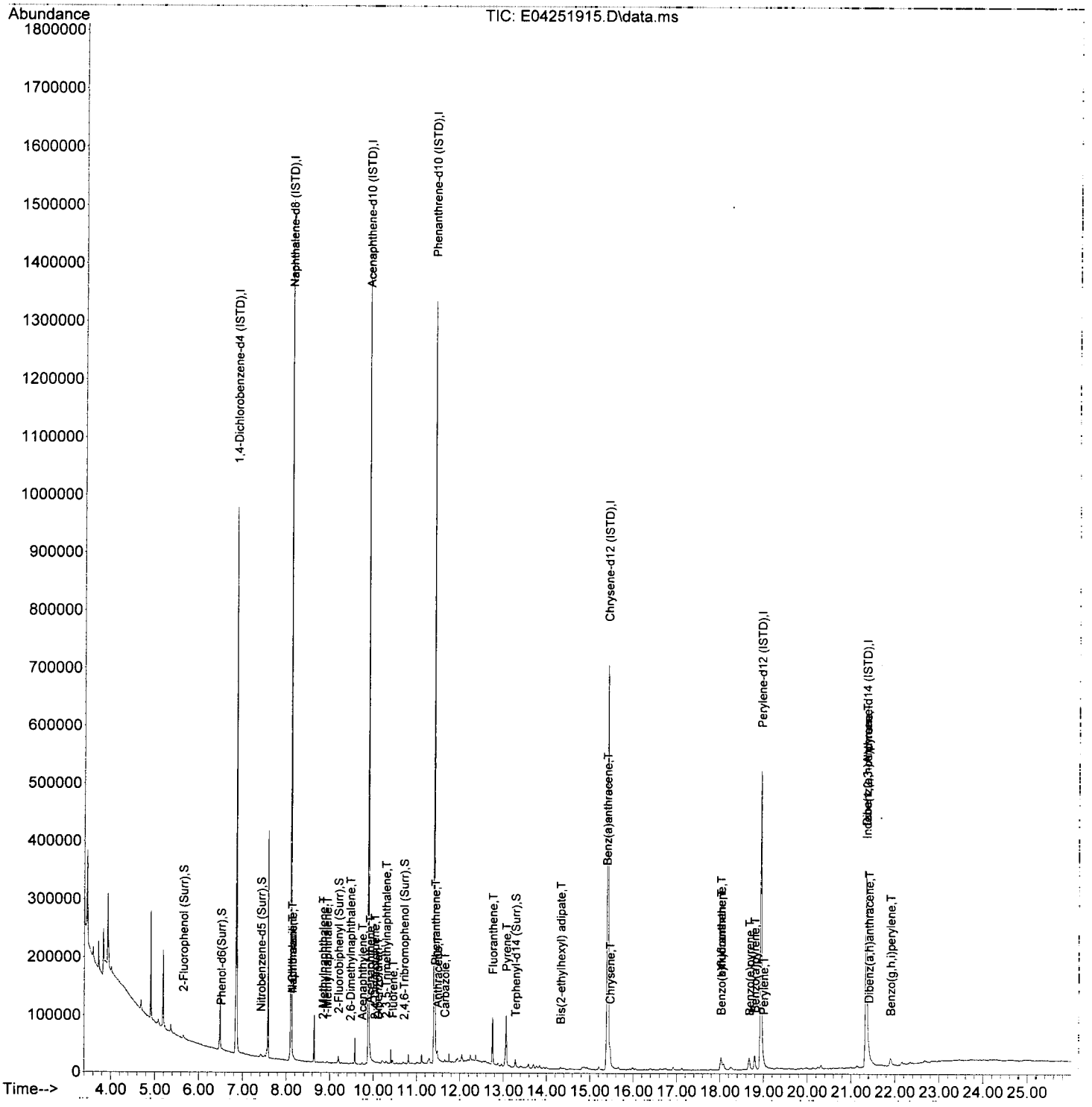
response 13347

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	31.08
137.10	39.00	27.18
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251915.D
Acq On : 25 Apr 2019 4:18 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-06@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 17:27:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251916.D
Acq On : 25 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPV

Quant Time: Apr 25 18:01:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DAH 4/25/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.863	152	196963	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	745096	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	321044	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	569866	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	521953	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	443500	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.348	292	361225	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.671	112	3347	27.26	ng/ml	0.03
5) Phenol-d6(Surr)	6.527	99	2212	13.47	ng/ml	0.03
19) Nitrobenzene-d5 (Surr)	7.425	82	3121	21.19	ng/ml	0.03
40) 2-Fluorobiphenyl (Surr)	9.201	172	8741	36.61	ng/ml	0.01
67) 2,4,6-Tribromophenol (...	10.714	330	97	19.37	ng/ml	0.03
79) Terphenyl-d14 (Surr)	13.282	244	9002	36.91	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.243	70	57	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.655	82	63	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	8.131	128	926	N.D.		
30) 4-Chloroaniline	8.136	127	125	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	0.000		0	N.D.		
33) 2-Methylnaphthalene	8.853	142	128	N.D.		
34) 1-Methylnaphthalene	8.944	142	54	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251916.D
Acq On : 25 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:01:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

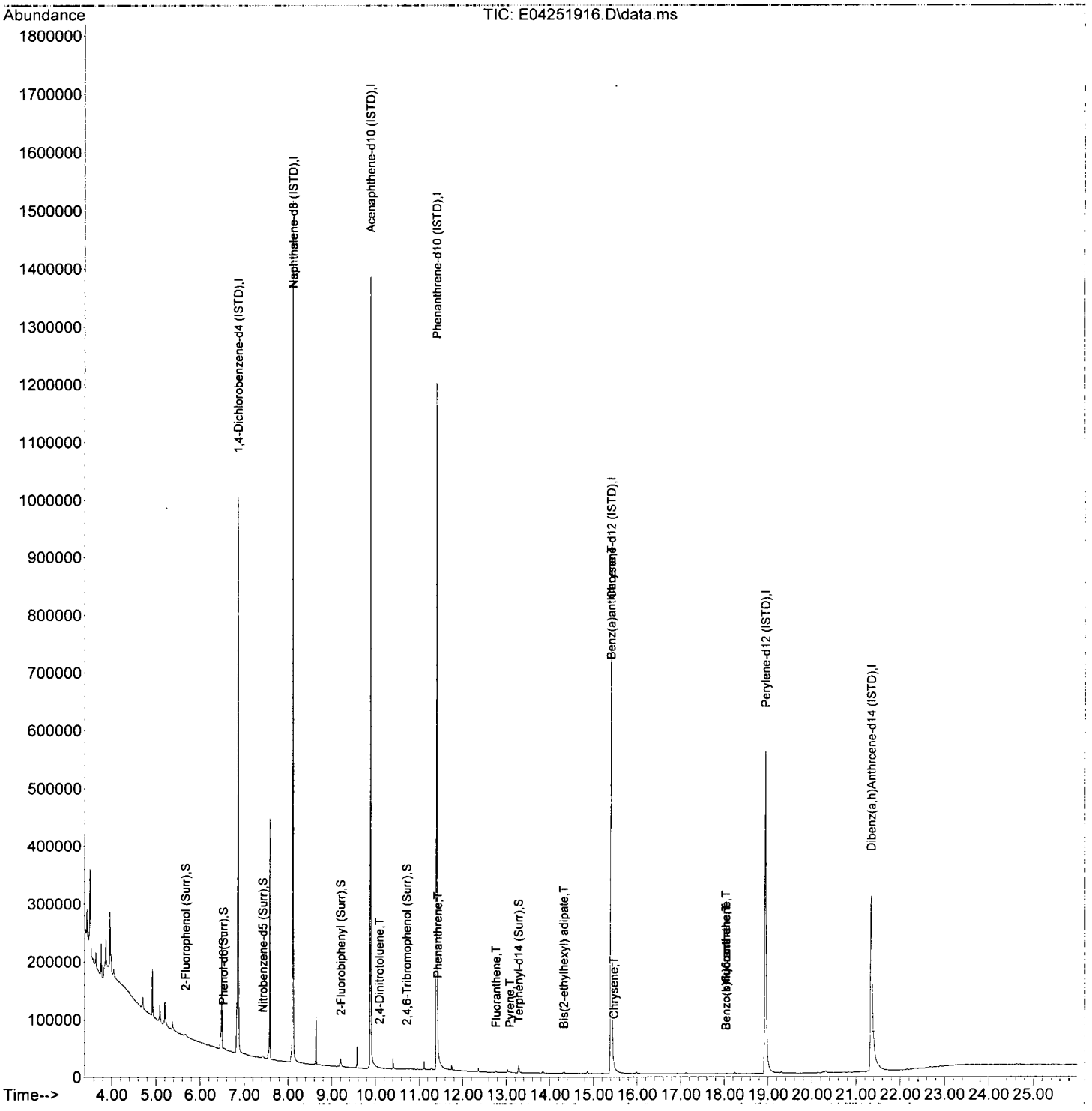
	Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.549	156	101	N.D.	
44)	1,4-Dinitrobenzene	0.000		0	N.D.	
45)	Dimethyl phthalate	0.000		0	N.D.	
46)	1,3-Dinitrobenzene	0.000		0	N.D.	
47)	2,6-Dinitrotoluene	0.000		0	N.D.	
48)	1,2-Dinitrobenzene	0.000		0	N.D.	
49)	Acenaphthylene	0.000		0	N.D.	
50)	3-Nitroaniline	0.000		0	N.D.	
51)	Acenaphthene	9.918	153	139	N.D.	
52)	2,4-Dinitrophenol	0.000		0	N.D.	
53)	4-Nitrophenol	0.000		0	N.D.	
54)	2,4-Dinitrotoluene	10.089	165	249	65.21 ng/ml#	15
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	0.000		0	N.D.	
59)	2,3,5-Trimethylnaphtha...	0.000		0	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)	10.608	77	121	N.D.	
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.	
69)	Hexachlorobenzene	0.000		0	N.D.	
70)	Pentachlorophenol (PCP)	0.000		0	N.D.	
71)	Phenanthrene	11.426	178	1065	3.40 ng/ml	97
72)	Anthracene	11.485	178	275	N.D.	
73)	Carbazole	0.000		0	N.D.	
74)	Di-n-butyl phthalate	11.982	149	273	N.D.	
75)	Fluoranthene	12.763	202	1756	5.41 ng/ml	92
76)	Benzidine	0.000		0	N.D.	
77)	Pyrene	13.079	202	2219	6.73 ng/ml	90
80)	Butyl benzyl phthalate	0.000		0	N.D.	
81)	Bis(2-ethylhexyl) adipate	14.319	129	688	4.53 ng/ml	95
82)	3,3-Dichlorobenzidine	0.000		0	N.D.	
83)	Benz(a)anthracene	15.405	228	2115	7.18 ng/ml	83
84)	Chrysene	15.469	228	1061	3.78 ng/ml	98
85)	Bis(2-ethylhexyl) phth...	15.528	149	143	N.D.	
87)	Di-n-octyl phthalate	0.000		0	N.D.	
88)	Benzo(b)fluoranthene	18.037	252	653	2.79 ng/ml	64
89)	Benzo(k)fluoranthene	18.037	252	969	4.21 ng/ml	65
90)	Benzo(b+k)fluoranthene	18.037	252	969	3.94 ng/ml	65
91)	Benzo(e)pyrene	18.673	252	444	N.D.	
92)	Benzo(a)pyrene	18.802	252	519	N.D.	
93)	Perylene	19.005	252	462	N.D.	
95)	Indeno(1,2,3-cd)pyrene	21.364	276	425	N.D.	
96)	Dibenz(a,h)anthracene	0.000		0	N.D.	
97)	Benzo(g,h,i)perylene	21.915	276	157	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251916.D
Acq On : 25 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:01:05 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/25/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	186488	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	742907	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	348664	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	707392	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.410	240	714986	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.946	264	636946	2000.00 ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.342	292	566834	2000.00 ng/ml	-0.01
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.671	112	3159	27.17 ng/ml	0.03
5) Phenol-d6(Surr)	~~6.516~~	~~99~~	~~3127~~	~~20.11 ng/ml~~	~~0.02~~ MT
19) Nitrobenzene-d5 (Surr)	7.409	82	3311	23.75 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.190	172	8007	30.88 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.698	330	524	35.80 ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.276	244	9820	29.40 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.537	94	64	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	7.104	45	51	N.D.	
16) N-Nitrosodi-n-propylamine	7.259	70	286	2.86 ng/ml	62
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.612	82	86	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	8.131	128	9504	23.98 ng/ml	99
30) 4-Chloroaniline	8.131	127	1196	8.76 ng/ml#	33
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.832	142	1208	4.85 ng/ml	97
34) 1-Methylnaphthalene	8.933	142	634	2.66 ng/ml	94
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	9.297	154	796	2.67 ng/ml	98
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

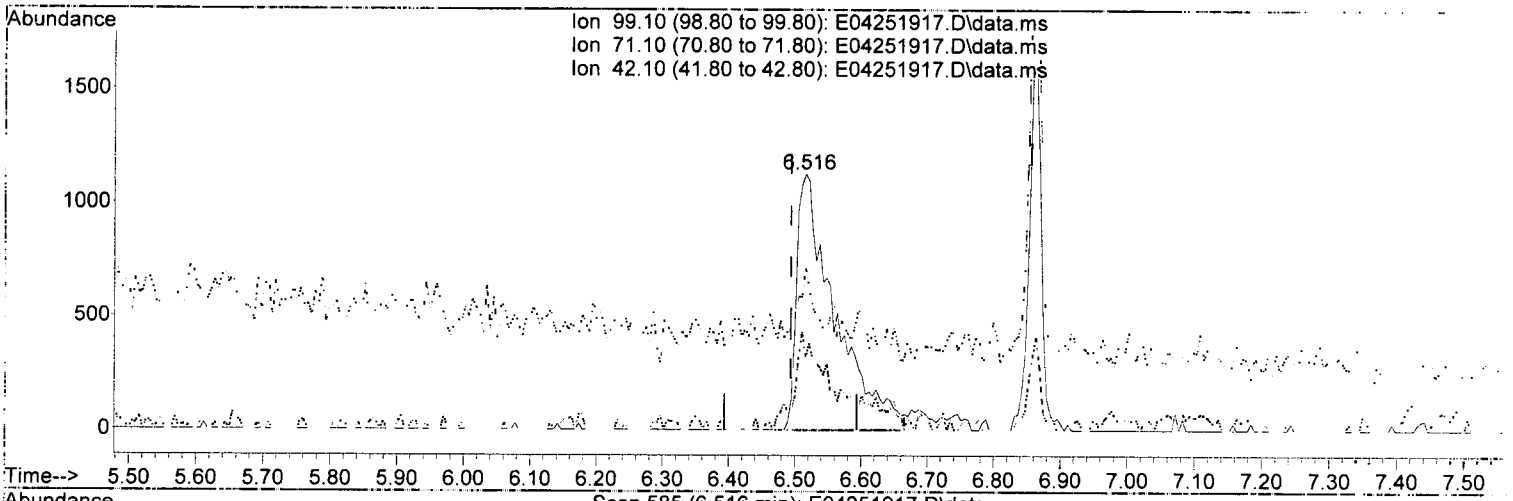
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.473	156	474	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.746	152	2375	6.99 ng/ml	95
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.917	153	1550	6.73 ng/ml	92
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.062	165	70	62.11 ng/ml#	30
55) Dibenzofuran	10.099	168	627	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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.292	170	1043	5.61 ng/ml	90
60) Fluorene	10.447	166	1816	7.58 ng/ml	98
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	10.533	169	54	N.D.	
66) Azobenzene (1,2-DPH)	10.618	77	129	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.426	178	27392	70.55 ng/ml	98
72) Anthracene	11.479	178	6952	17.45 ng/ml	95
73) Carbazole	11.645	167	1464	3.92 ng/ml	97
74) Di-n-butyl phthalate	11.966	149	229	N.D.	
75) Fluoranthene	12.747	202	79311	196.93 ng/ml	97
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.062	202	98667	241.17 ng/ml	98
80) Butyl benzyl phthalate	14.143	149	54	N.D.	
81) Bis(2-ethylhexyl) adipate	14.325	129	1382	6.64 ng/ml	96
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.389	228	31912	79.13 ng/ml	81
84) Chrysene	15.464	228	34731	90.40 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.517	149	546	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	18.015	252	37536	111.54 ng/ml MOS	98
89) Benzo(k)fluoranthene	~~18.015~~	~~252~~	~~46535~~	~~140.71 ng/ml~~	~~98~~ MOS Hit MOS
90) Benzo(b+k)fluoranthene	18.015	252	55096	155.90 ng/ml	98
91) Benzo(e)pyrene	18.673	252	23912	69.99 ng/ml	99
92) Benzo(a)pyrene	18.791	252	32396	106.03 ng/ml	100
93) Perylene	18.994	252	10737	~~30.75~~ ng/ml	96
95) Indeno(1,2,3-cd)pyrene	21.347	276	25519	82.14 ng/ml	91
96) Dibenz(a,h)anthracene	21.401	278	3414	~~12.00~~ ng/ml	74
97) Benzo(g,h,i)perylene	21.888	276	25833	84.46 ng/ml	81

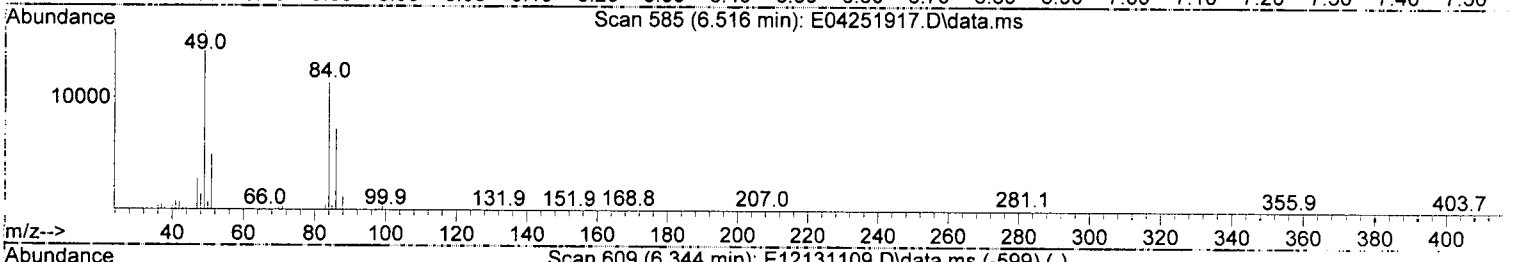
(#) = qualifier out of range (m) = manual integration (+) = signals summed

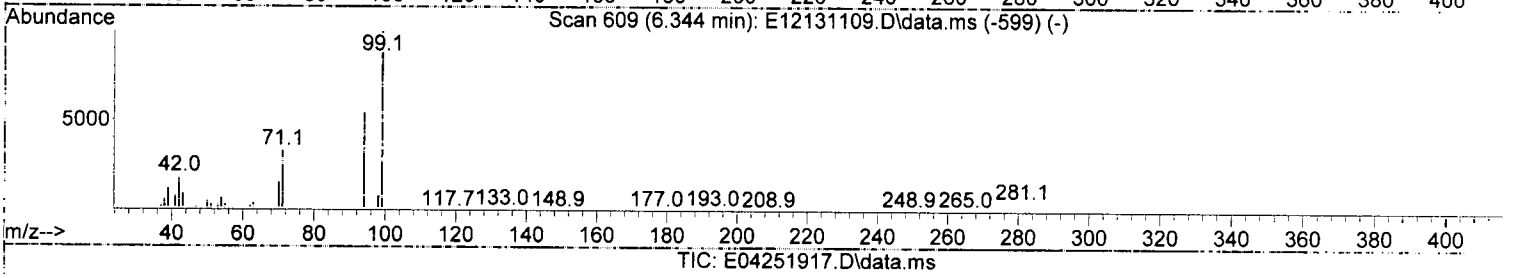
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04251917.D\data.ms

(5) Phenol-d6(Surr) (S)

6.516min (+ 0.023) 29.12 ng/ml m

response 4528

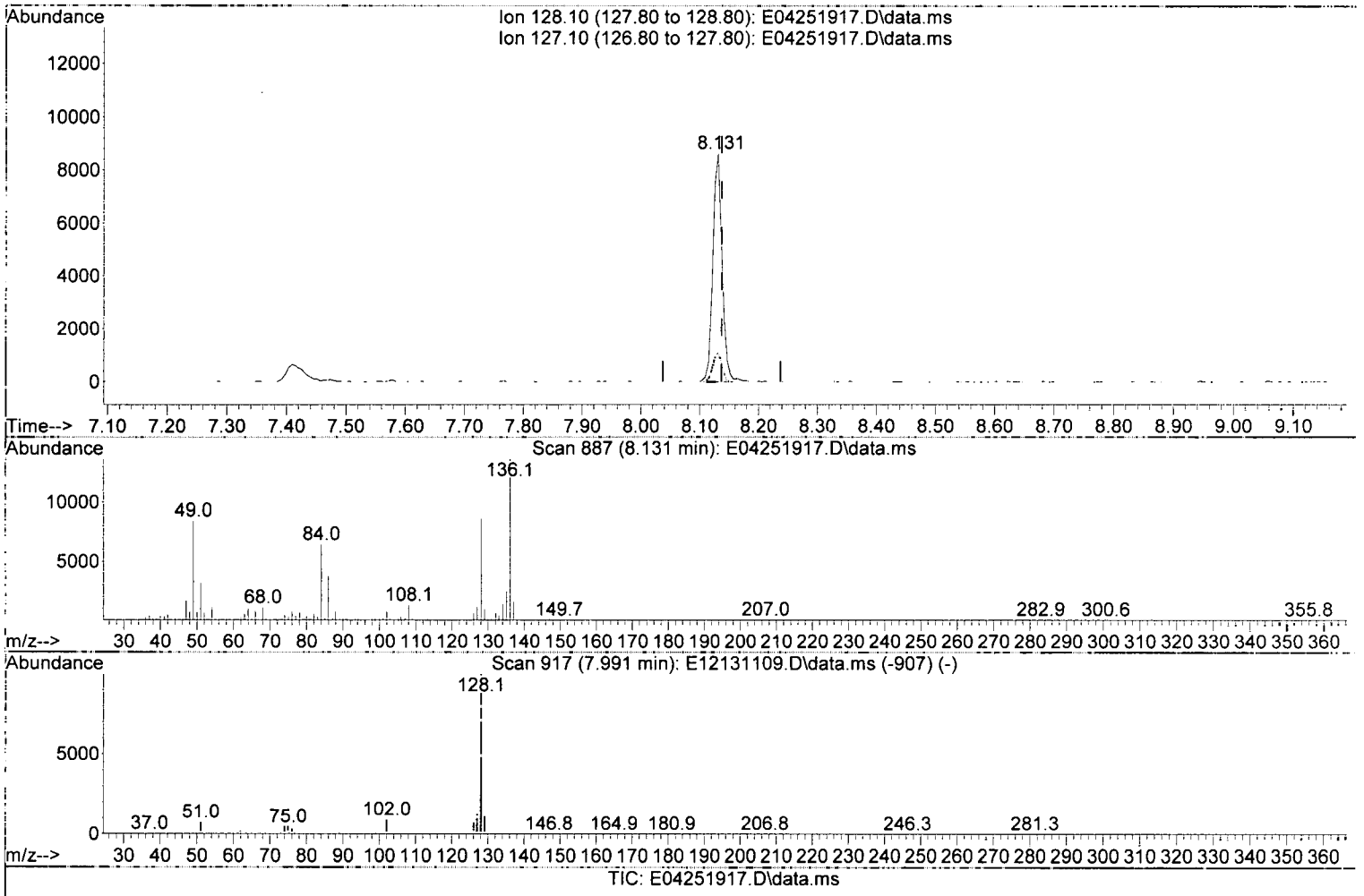
DTH 4/25/19

Ion	Exp%	Act%
99.10	100.00	100.00
71.10	35.50	28.72
42.10	21.30	64.18#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(29) Naphthalene (T)

8.131min (-0.006) 23.98 ng/ml

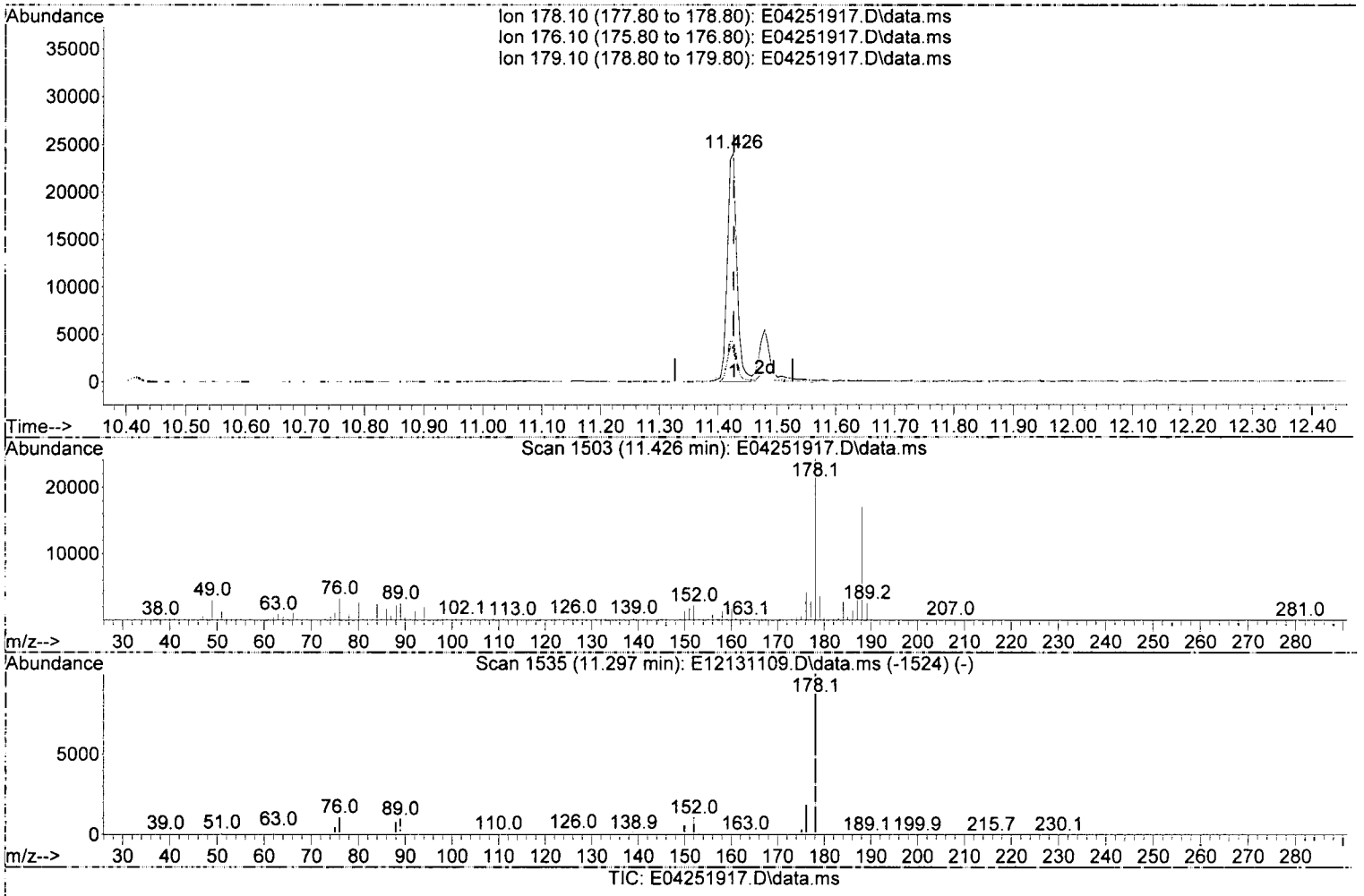
response 9504

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	13.30	12.91
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 70.55 ng/ml

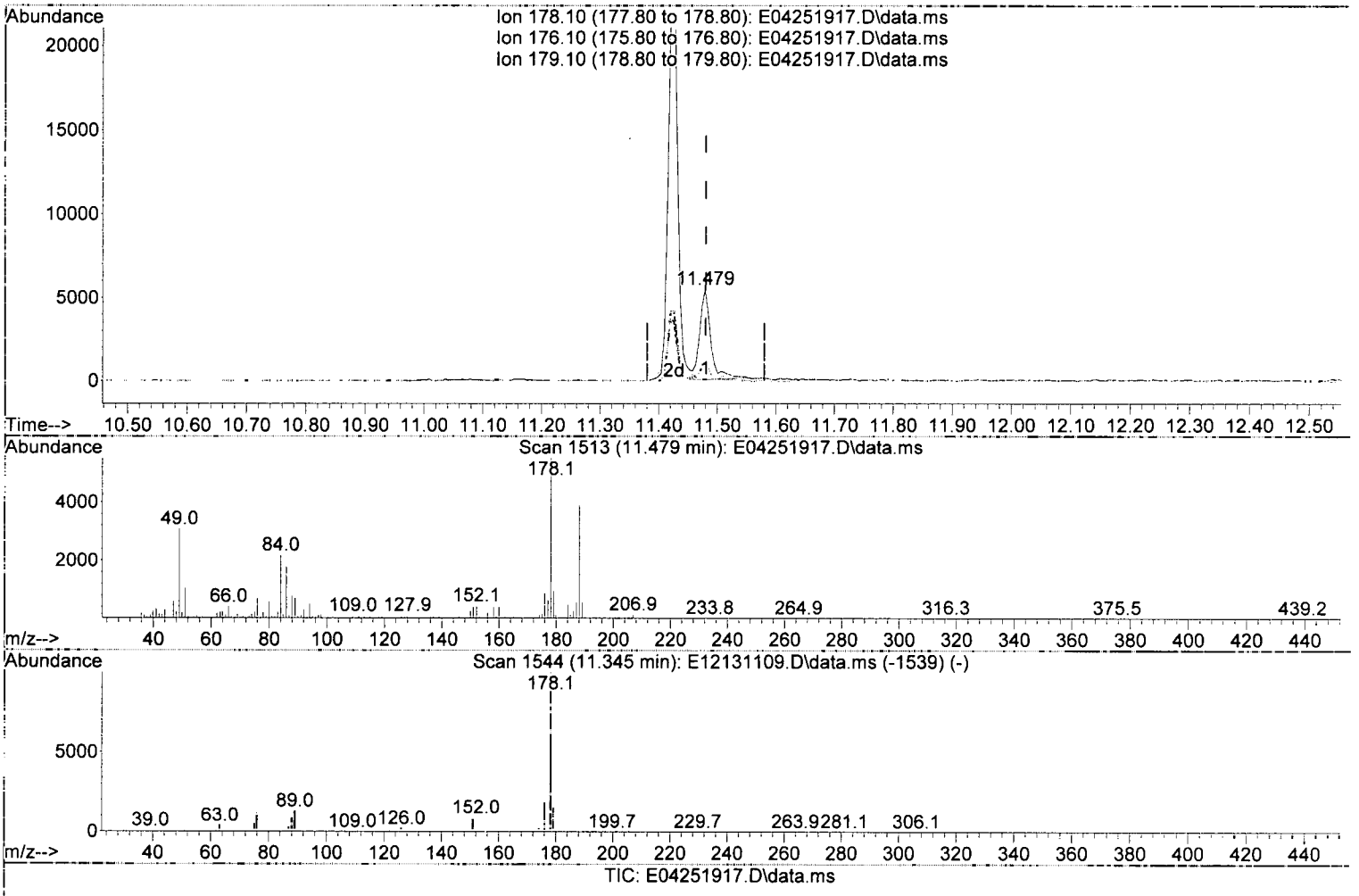
response 27392

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.52
179.10	15.00	14.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(72) Anthracene (T)

11.479min (-0.000) 17.45 ng/ml J

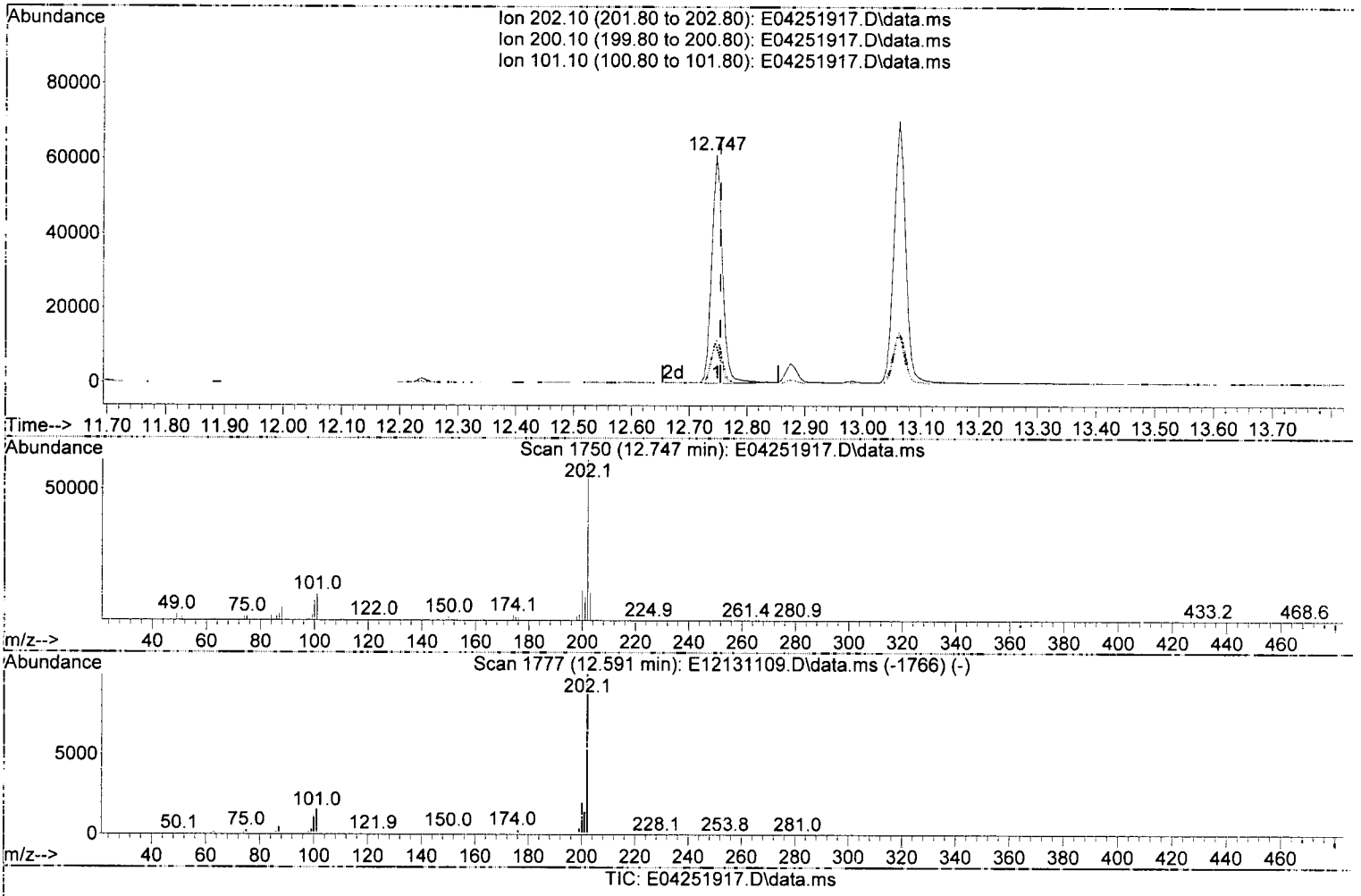
response 6952

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	16.38
179.10	15.50	17.41
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(75) Fluoranthene (T)

12.747min (-0.006) 196.93 ng/ml

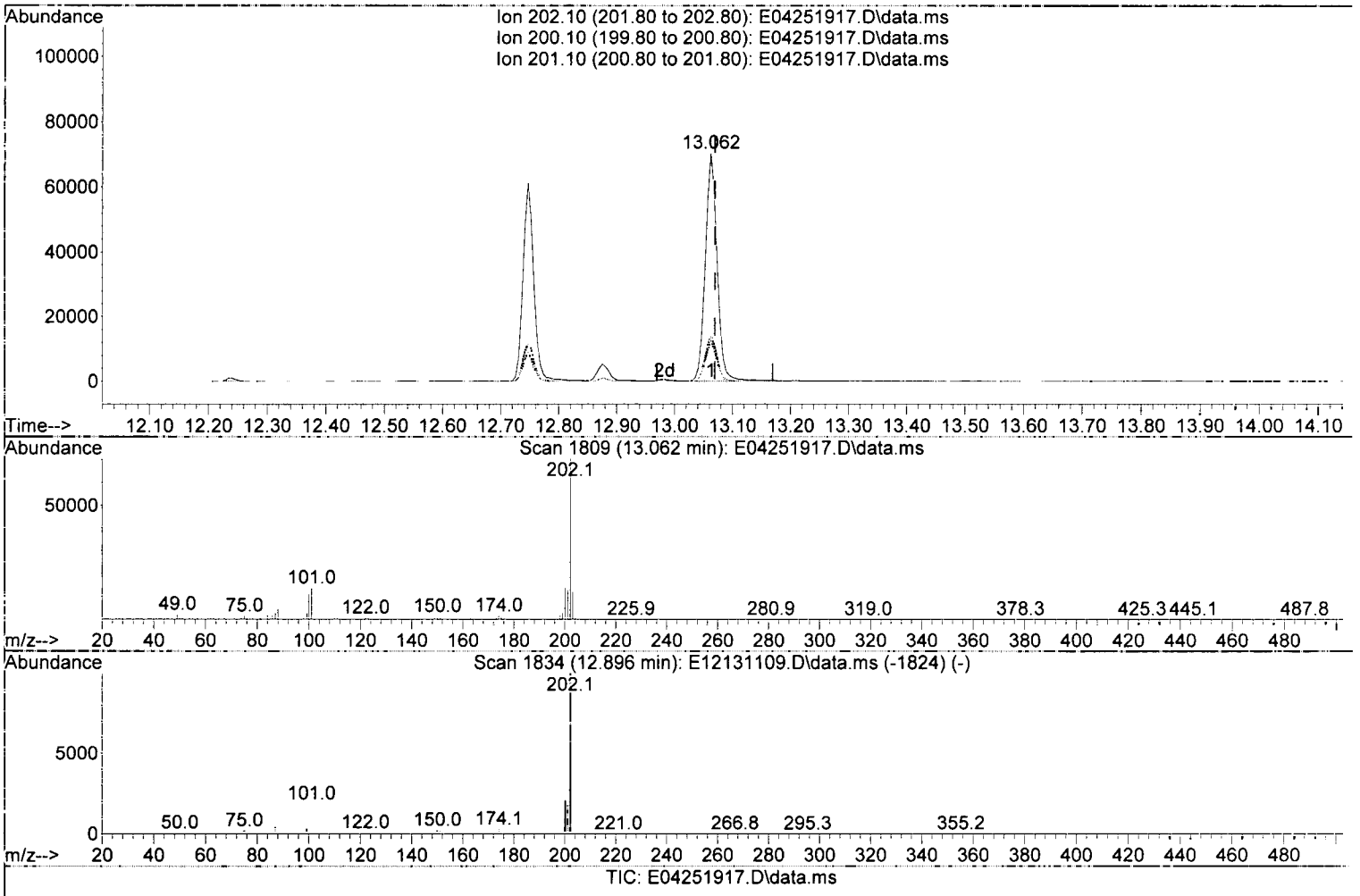
response 79311

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	18.94
101.10	15.70	16.36
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(77) Pyrene (T)

13.062min (-0.006) 241.17 ng/ml

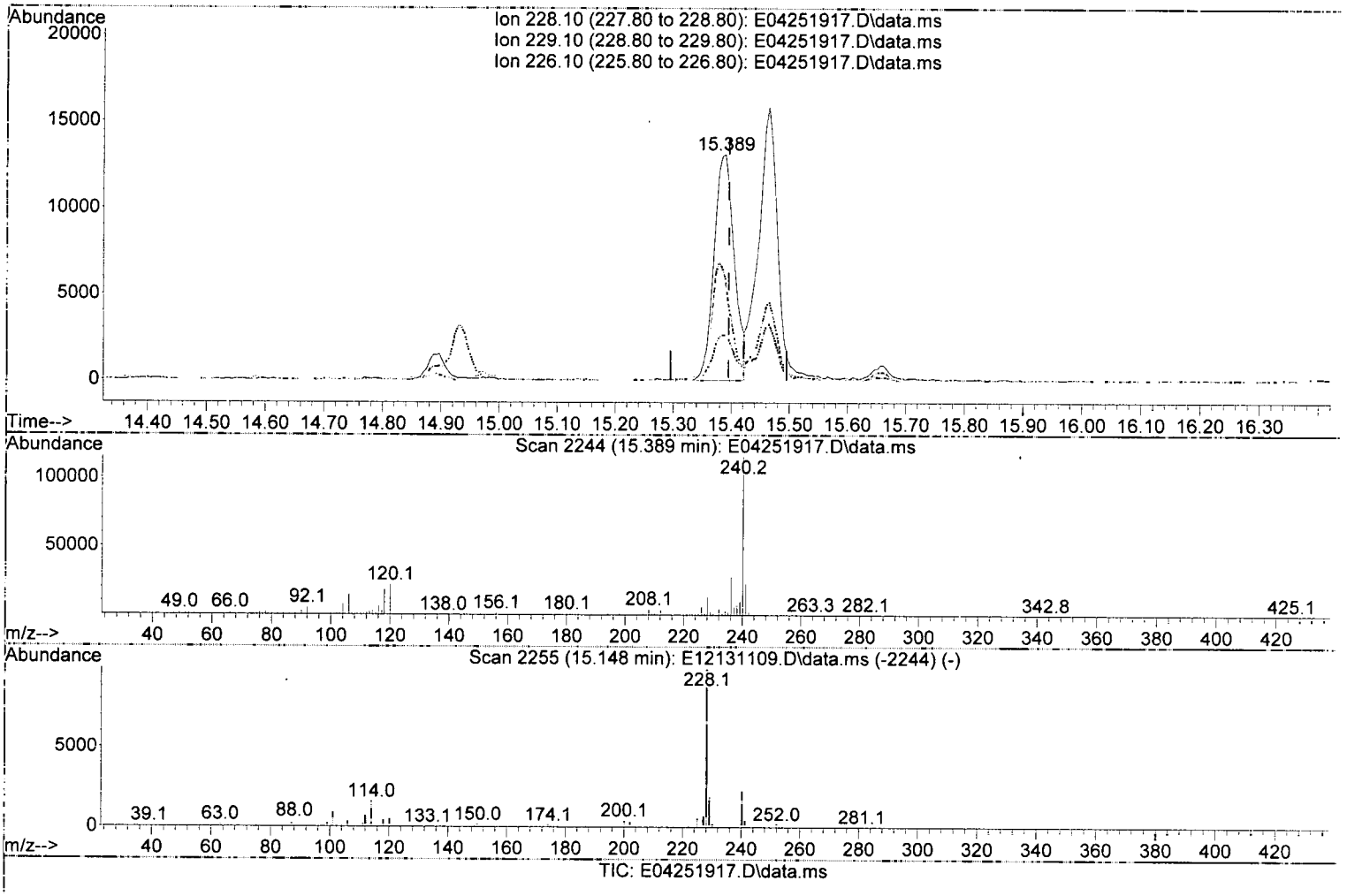
response 98667

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	19.79
201.10	17.50	18.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(83) Benz(a)anthracene (T)

15.389min (-0.006) 79.13 ng/ml

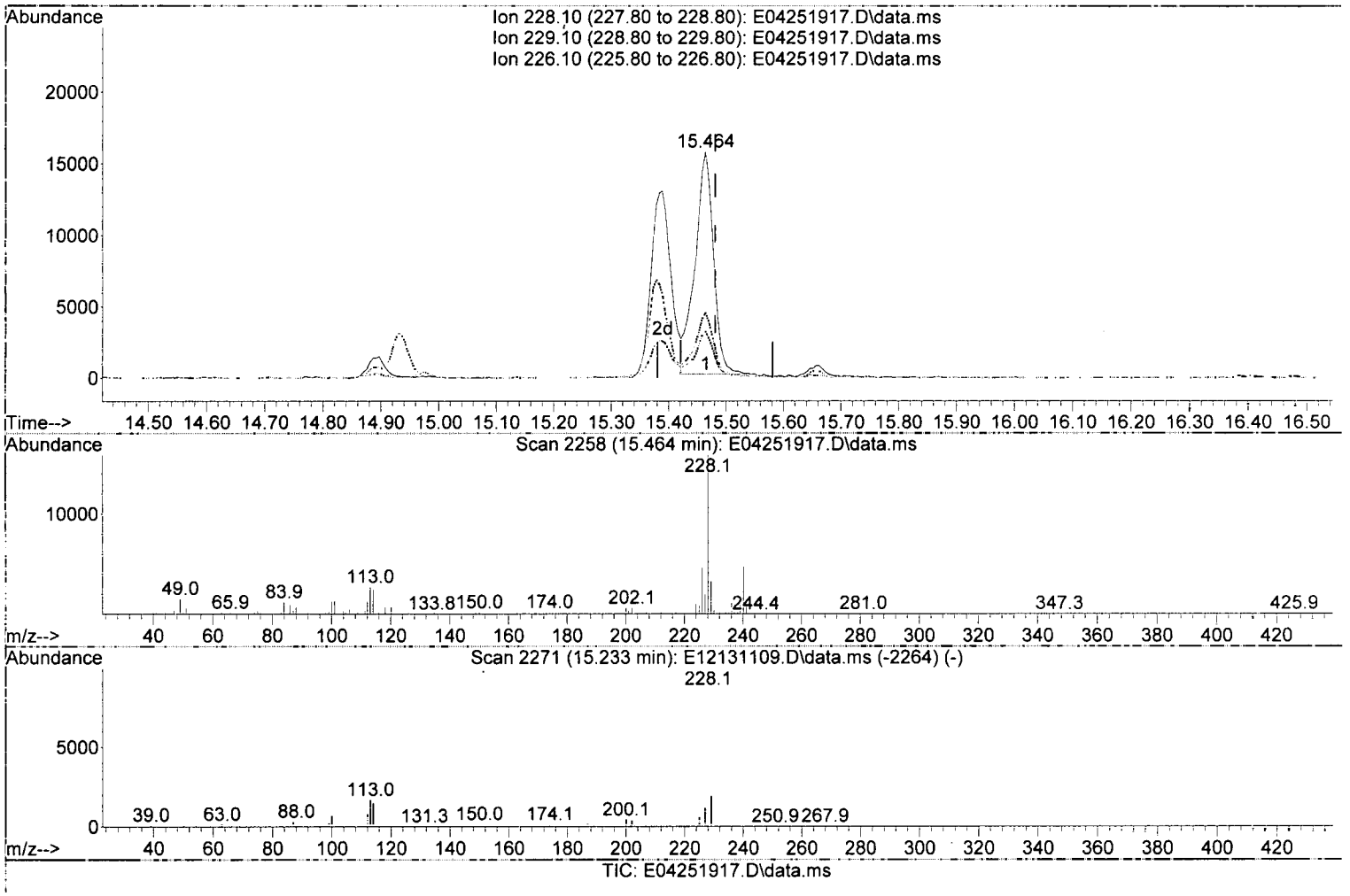
response 31912

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	19.83
226.10	27.80	44.95
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 90.40 ng/ml

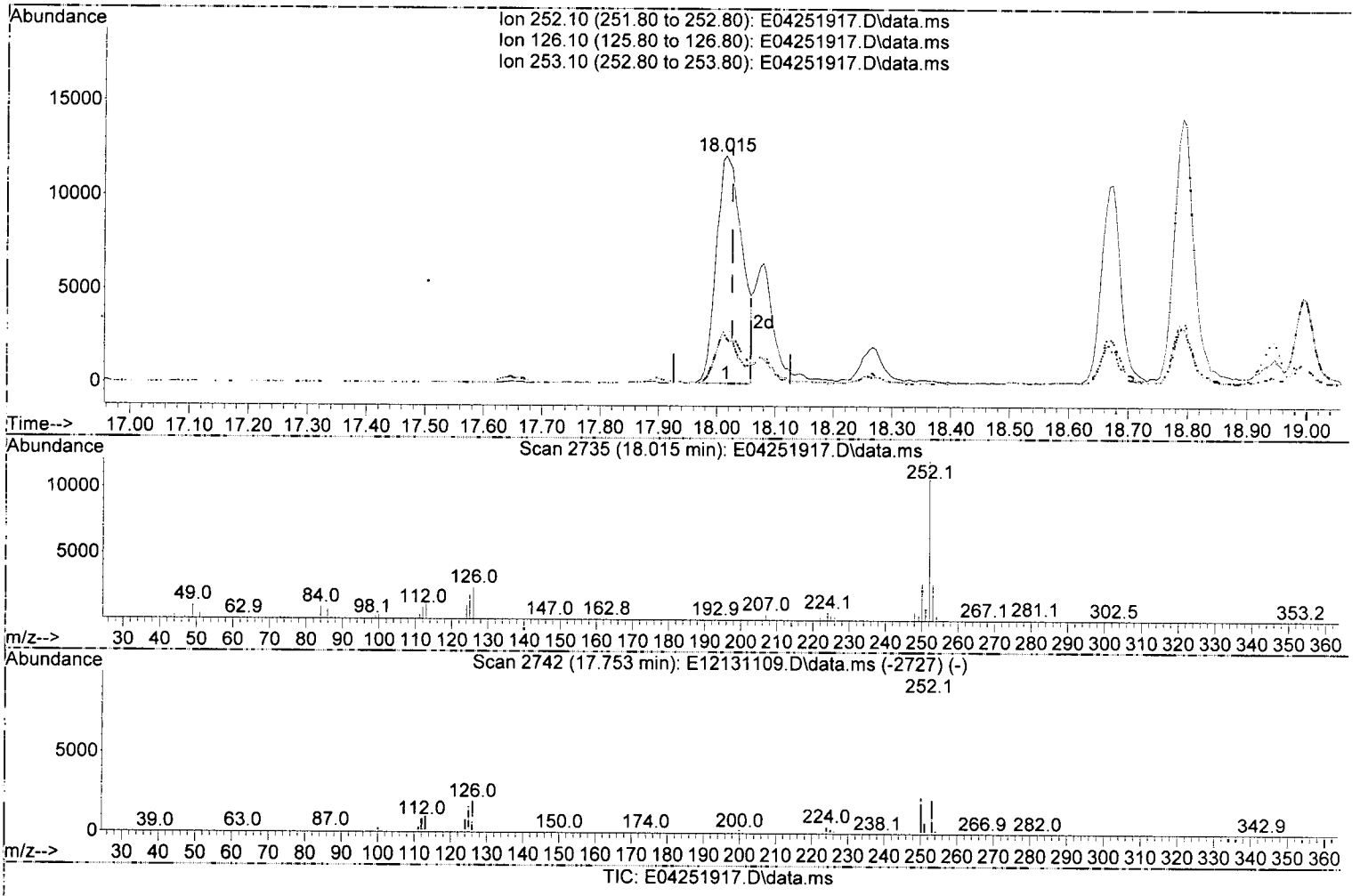
response 34731

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	20.80
226.10	29.80	29.11
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(88) Benzo(b)fluoranthene (T)

18.015min (-0.010) 111.54 ng/ml MDS

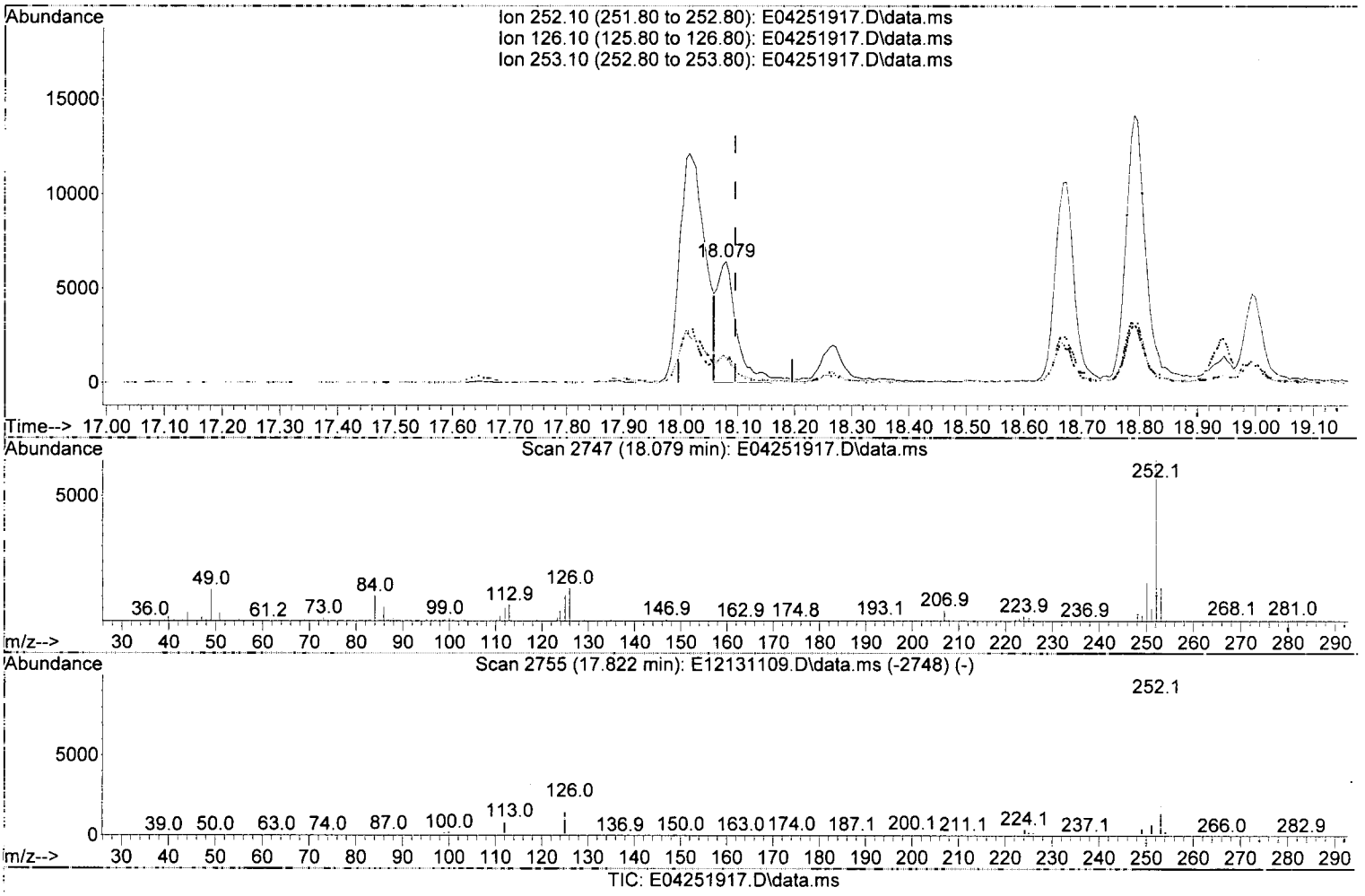
response 37536

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	20.06
253.10	22.40	22.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(89) Benzo(k)fluoranthene (T)

18.079min (-0.016) 45.10 ng/ml m

MOS
DTH 4/25/19

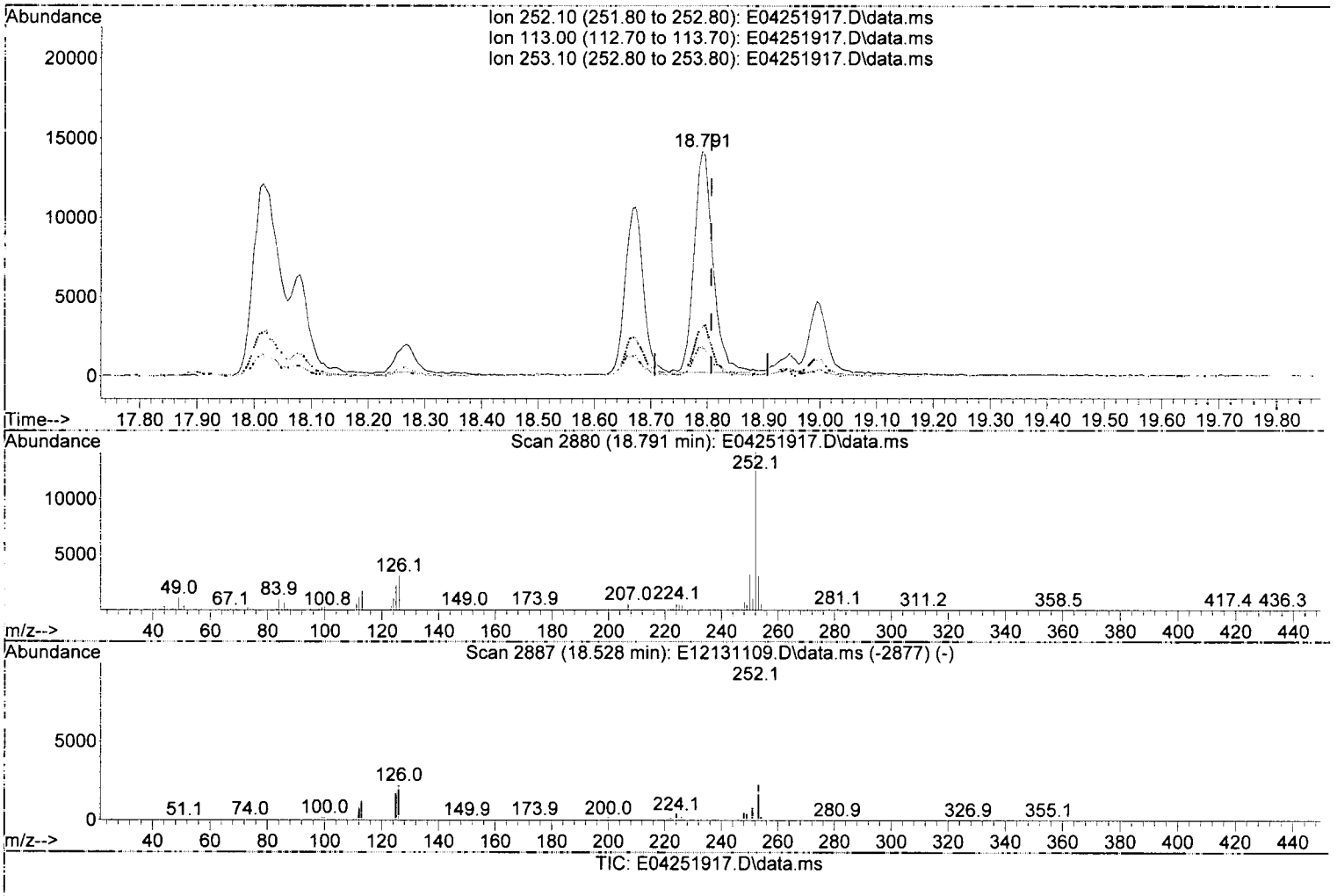
response 14915

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	20.62
253.10	21.80	21.35
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(92) Benzo(a)pyrene (T)

18.791min (-0.016) 106.03 ng/ml

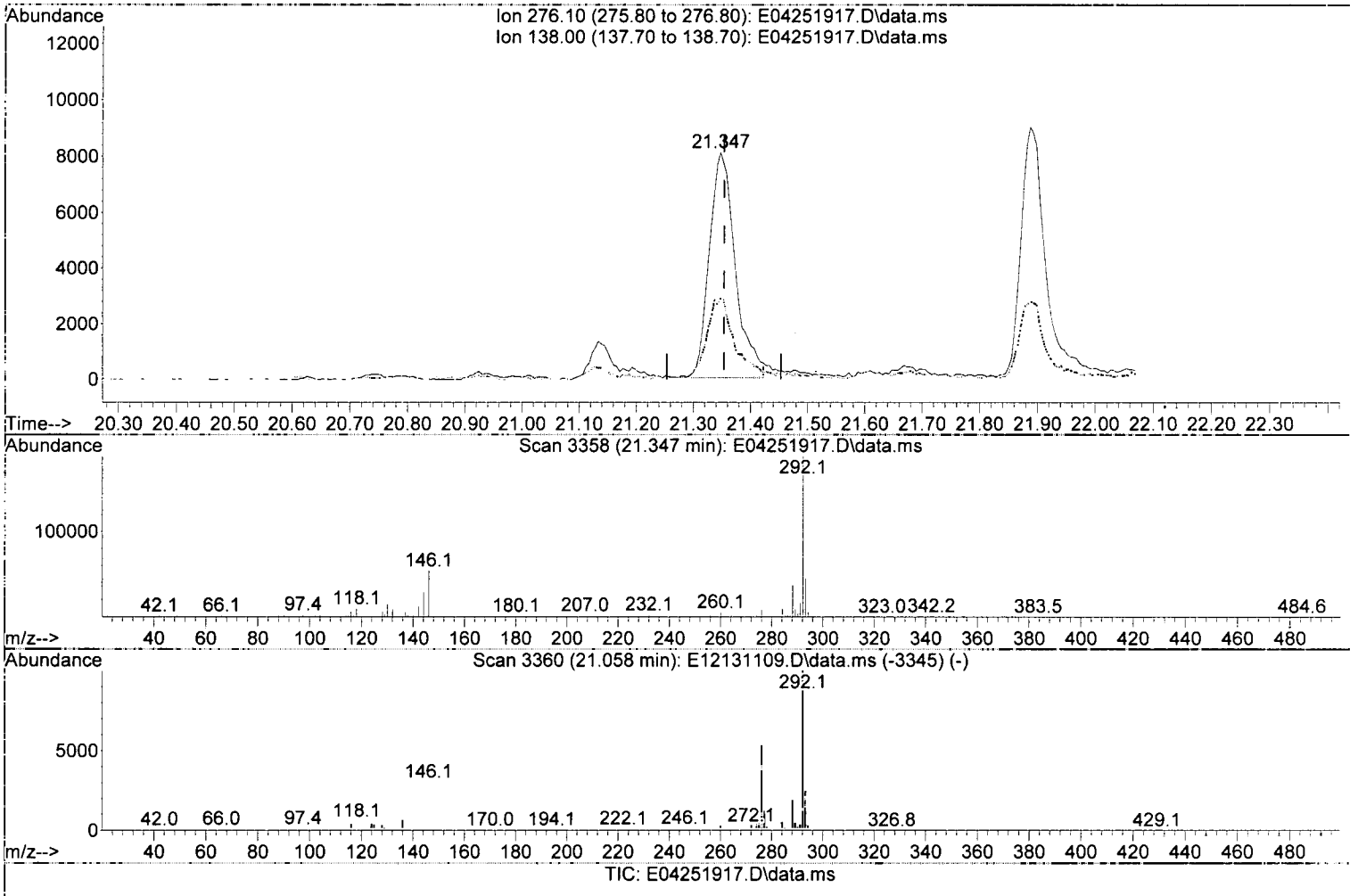
response 32396

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	12.56
253.10	21.70	21.72
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.347min (-0.006) 82.14 ng/ml

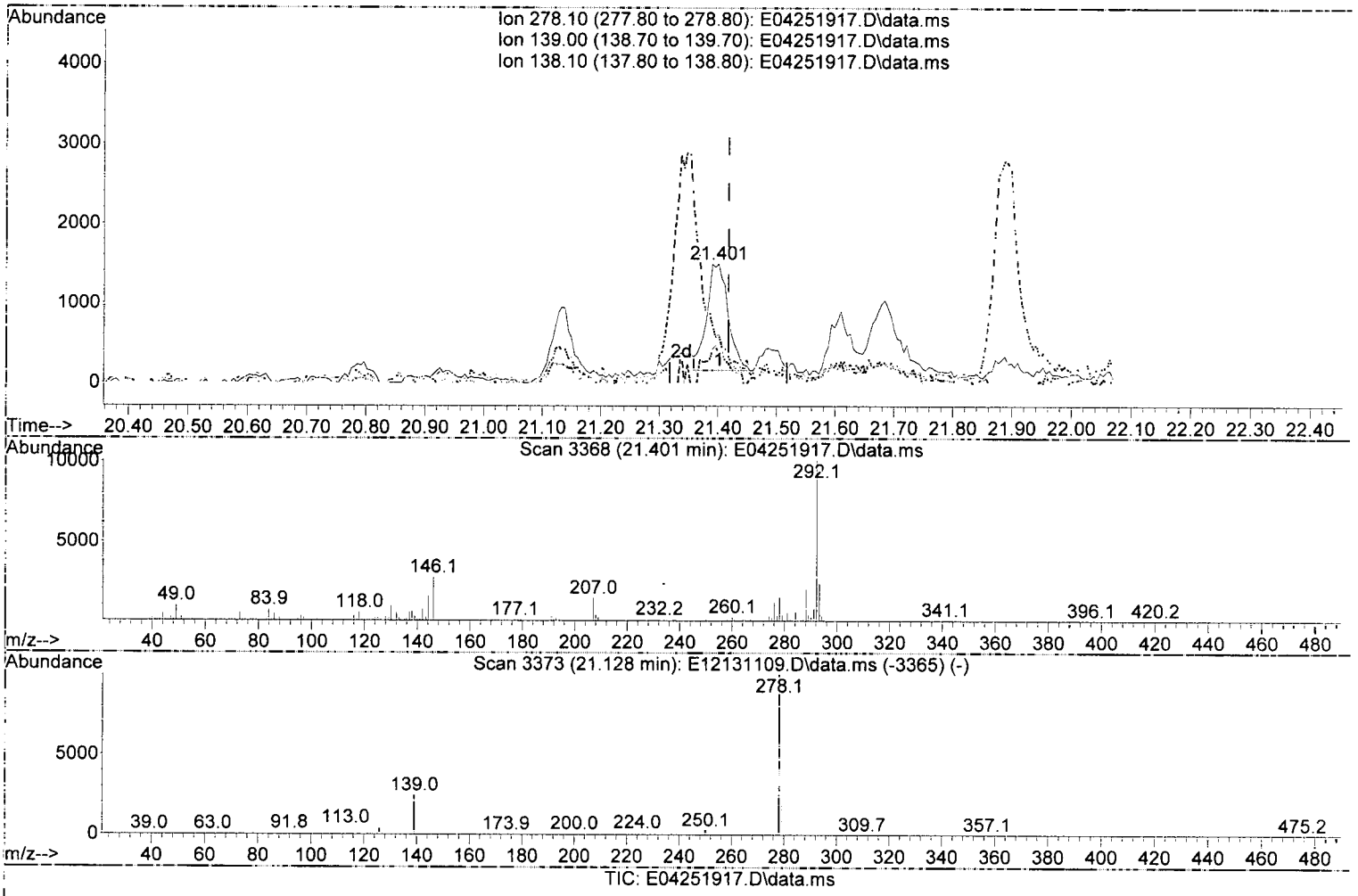
response 25519

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	35.77
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.401min (-0.016) 12.00 ng/ml

J

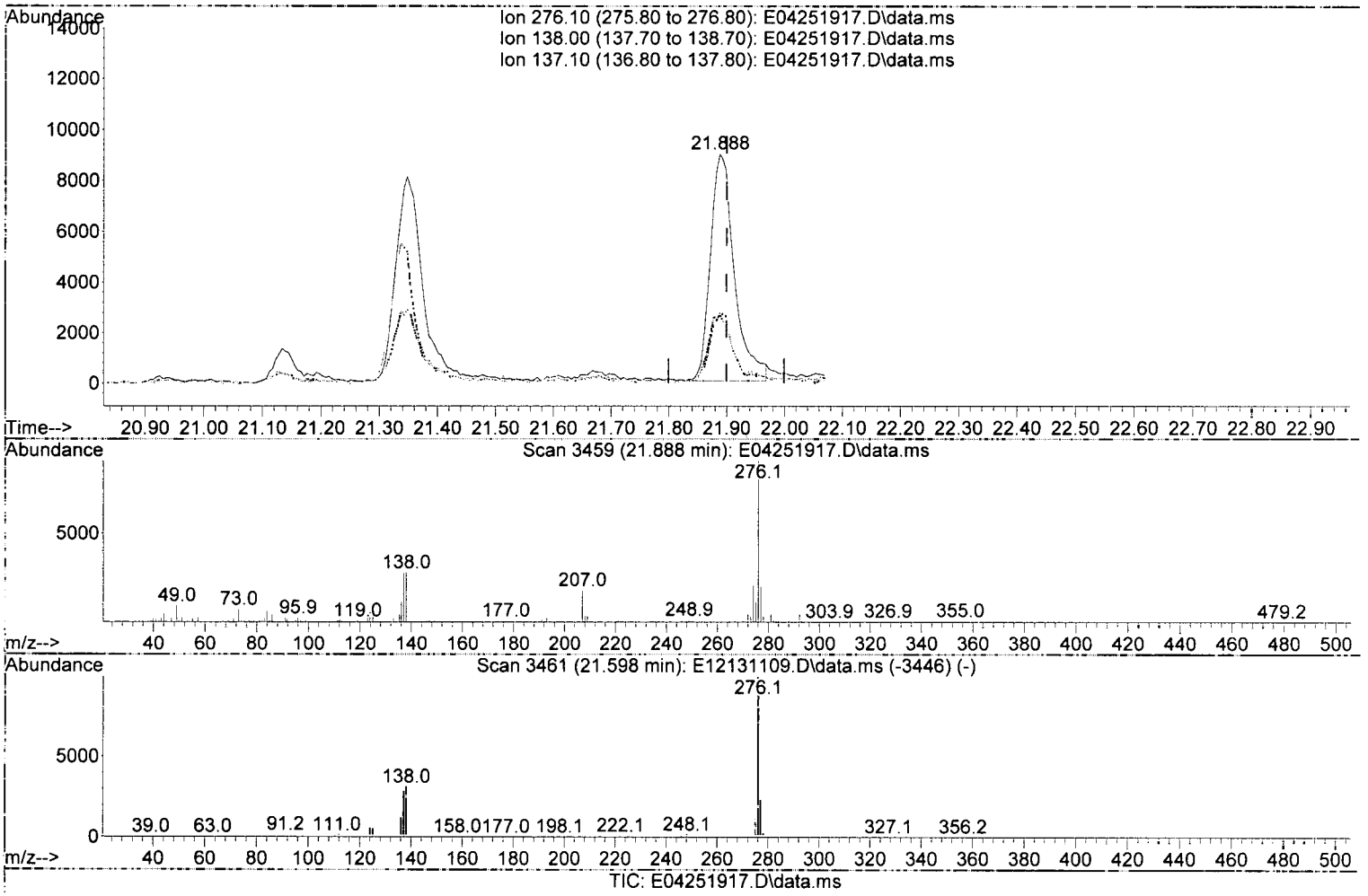
response 3414

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	21.70
138.10	17.70	41.05
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251917.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.888min (-0.011) 84.46 ng/ml

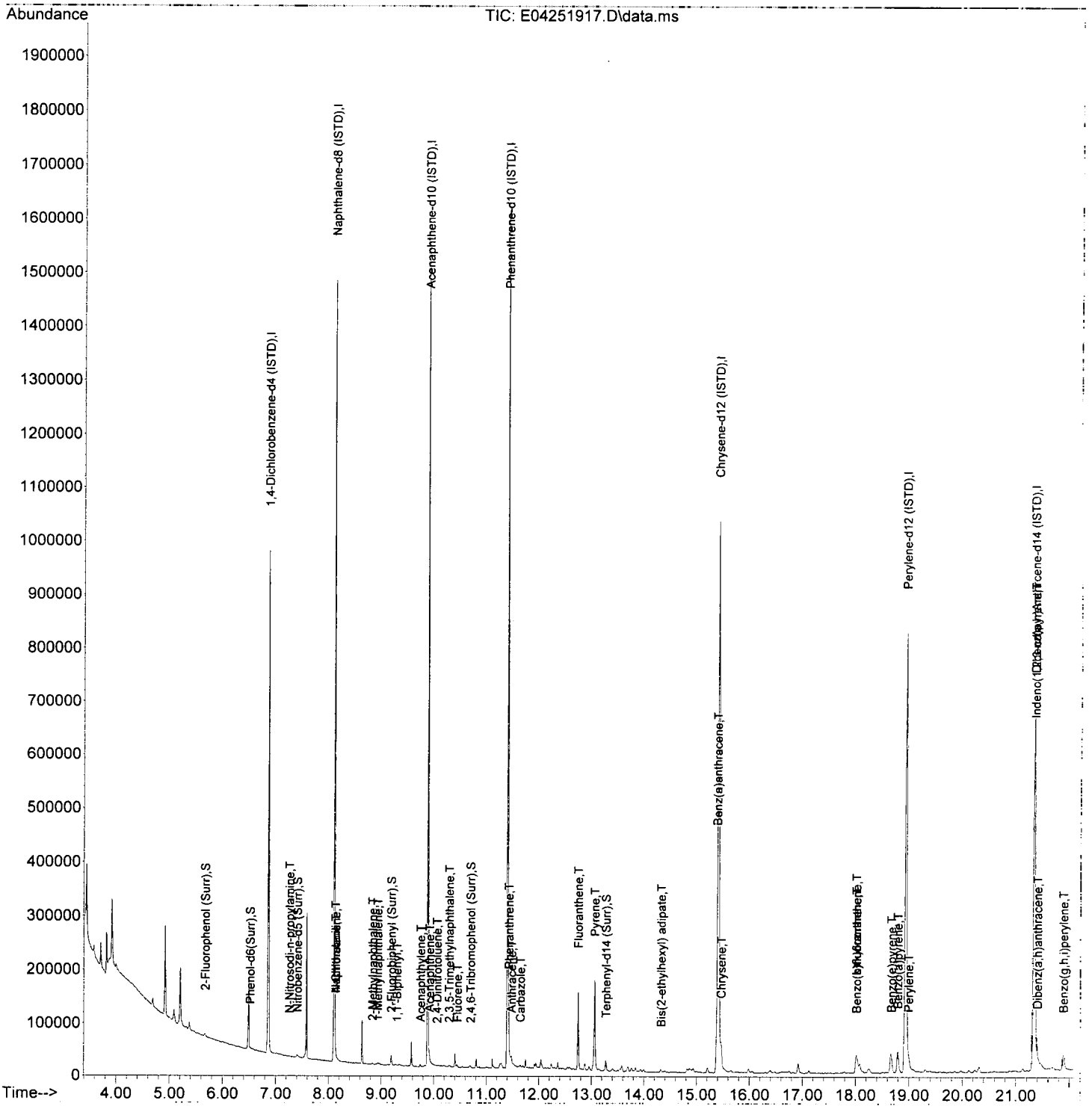
response 25833

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	30.78
137.10	39.00	30.55
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251917.D
Acq On : 25 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-08@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 25 18:08:19 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

jem 04/26/19
MDS

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.863	152	162723	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	618999	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	285760	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	521652	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	485321	2000.00 ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	424888	2000.00 ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.337	292	349274	2000.00 ng/ml	-0.02
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.665	112	162192	1598.80 ng/ml	0.02
5) Phenol-d6(Surr)	6.505	99	213771	1575.38 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.393	82	170657	1402.68 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	229513	1079.96 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	46673	2273.96 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	251745	1110.21 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.440	74	68	N.D.	
3) Pyridine	4.526	79	4541	36.52 ng/ml#	65
6) Phenol	6.516	94	6651	46.78 ng/ml#	54
7) Aniline	6.537	93	992	5.35 ng/ml	82
8) Bis(2-chloroethyl) ether	6.596	93	107	N.D.	
9) 2-Chlorophenol	6.612	128	78	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.992	108	15480	229.56 ng/ml	92
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.088	107	1096	12.38 ng/ml	94
15) 2,2'-Oxybis(1-Chloropr...	7.125	45	350	N.D.	
16) N-Nitrosodi-n-propylamine	7.259	70	692	7.94 ng/ml	68
17) 3+4-Methylphenol	7.238	107	4144	37.05 ng/ml#	57
18) Hexachloroethane	7.366	117	76	N.D.	
20) Nitrobenzene	7.393	77	547	4.66 ng/ml#	35
22) Isophorone	7.639	82	861	4.08 ng/ml#	70
23) 2-Nitrophenol	7.762	139	114	26.66 ng/ml#	1
24) 2,4-Dimethylphenol	7.762	122	468	5.05 ng/ml#	1
25) Bis(2-chloroethoxy) me...	7.837	93	93	N.D.	
26) Benzoic acid	7.826	105	18422	949.84 ng/ml	94
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	8.120	180	88	N.D.	
29) Naphthalene	8.126	128	5329	16.14 ng/ml	98
30) 4-Chloroaniline	8.174	127	77	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.666	107	377	31.36 ng/ml#	1
33) 2-Methylnaphthalene	8.821	142	1103	5.31 ng/ml	82
34) 1-Methylnaphthalene	8.923	142	618	3.11 ng/ml#	58
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	9.286	154	1339	5.48 ng/ml	75
41) 2-Chloronaphthalene	9.297	162	76	N.D.	
42) 2-Nitroaniline	9.420	138	213	58.01 ng/ml#	43

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

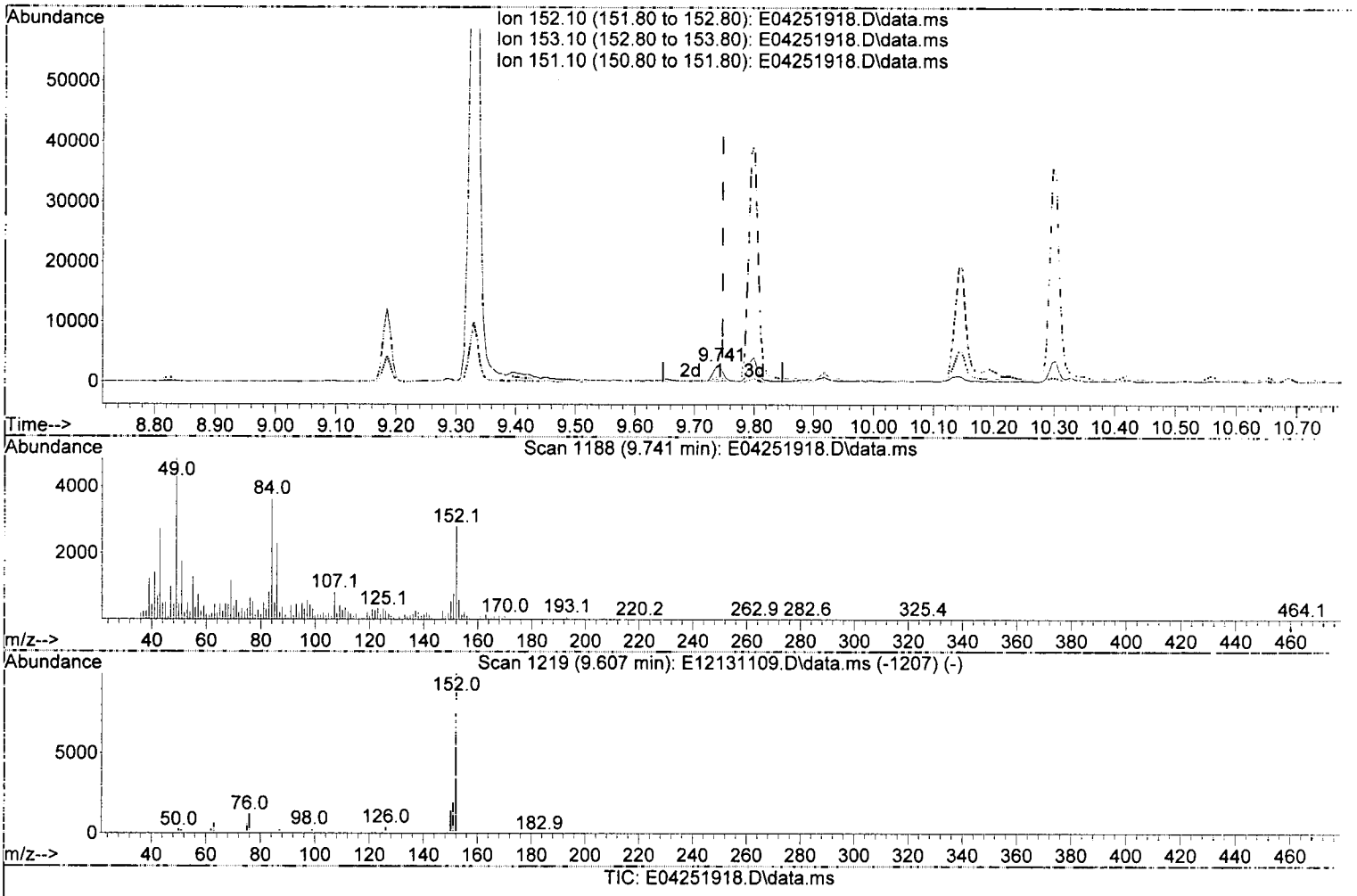
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)	
43)	2,6-Dimethylnaphthalene	9.452	156	981	5.74	ng/ml	70	
44)	1,4-Dinitrobenzene	9.543	168	204	80.61	ng/ml#	1	
45)	Dimethyl phthalate	9.586	163	752	4.10	ng/ml	25	
46)	1,3-Dinitrobenzene	9.602	168	99	70.77	ng/ml#	1	
47)	2,6-Dinitrotoluene	9.634	165	110	34.47	ng/ml#	1	
48)	1,2-Dinitrobenzene	9.725	168	384	56.35	ng/ml#	1	
49)	Acenaphthylene	9.741	152	2931	(10.53)	ng/ml	80	J
50)	3-Nitroaniline	9.832	138	101	31.32	ng/ml#	29	
51)	Acenaphthene	9.917	153	1693	8.97	ng/ml	93	
52)	2,4-Dinitrophenol	0.000		0	N.D.			
53)	4-Nitrophenol	9.998	139	371	76.06	ng/ml#	1	
54)	2,4-Dinitrotoluene	10.041	165	160	64.05	ng/ml#	26	
55)	Dibenzofuran	10.089	168	1208	4.92	ng/ml#	1	
56)	2,3,5,6-Tetrachlorophenol	10.174	232	260	43.92	ng/ml#	61	
57)	2,3,4,6-Tetrachlorophenol	10.217	232	171	27.96	ng/ml#	81	
58)	Diethyl phthalate	10.297	149	423	N.D.			
59)	2,3,5-Trimethylnaphtha...	10.297	170	341	N.D.			
60)	Fluorene	10.442	166	2951	(15.02)	ng/ml	86	J
61)	4-Chlorophenyl phenyl ...	0.000		0	N.D.			
62)	4-Nitroaniline	10.436	138	277	5.34	ng/ml	97	
63)	4,6-Dinitro-2-methylph...	0.000		0	N.D.			
65)	N-Nitrosodiphenylamine	10.543	169	323	N.D.			
66)	Azobenzene (1,2-DPH)	10.591	77	291	N.D.			
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.			
69)	Hexachlorobenzene	0.000		0	N.D.			
70)	Pentachlorophenol (PCP)	11.212	266	1747	141.54	ng/ml	97	
71)	Phenanthrene	11.426	178	14445	50.45	ng/ml	94	
72)	Anthracene	11.474	178	7542	25.67	ng/ml	94	
73)	Carbazole	11.634	167	6341	(23.05)	ng/ml	90	J
74)	Di-n-butyl phthalate	11.966	149	3405	9.89	ng/ml	89	
75)	Fluoranthene	12.747	202	41007	138.08	ng/ml	99	
76)	Benzidine	12.923	184	69	39.32	ng/ml#	1	
77)	Pyrene	13.062	202	38925	129.02	ng/ml	99	
80)	Butyl benzyl phthalate	14.148	149	3596	25.33	ng/ml	90	
81)	Bis(2-ethylhexyl) adipate	14.325	129	2471	17.49	ng/ml	84	
82)	3,3-Dichlorobenzidine	15.352	252	78	22.04	ng/ml#	1	
83)	Benz(a)anthracene	15.378	228	18602	67.95	ng/ml	95	MQS
84)	Chrysene	15.464	228	25155	96.46	ng/ml	98	MQS
85)	Bis(2-ethylhexyl) phth...	15.523	149	14139	69.70	ng/ml	99	
87)	Di-n-octyl phthalate	17.218	149	190	31.35	ng/ml#	1	
88)	Benzo(b)fluoranthene	18.015	252	31453	140.12	ng/ml	97	MQS
89)	Benzo(k)fluoranthene	18.080	252	10099	45.78	ng/ml	96	MQS
90)	Benzo(b+k)fluoranthene	18.015	252	44629	189.31	ng/ml	96	
91)	Benzo(e)pyrene	18.668	252	21358	93.71	ng/ml	92	NR
92)	Benzo(a)pyrene	18.791	252	17813	87.40	ng/ml	93	
93)	Perylene	18.999	252	16325	70.08	ng/ml	96	
95)	Indeno(1,2,3-cd)pyrene	21.342	276	14778	77.19	ng/ml	84	
96)	Dibenz(a,h)anthracene	21.396	278	2576	(14.69)	ng/ml#	46	J
97)	Benzo(g,h,i)perylene	21.888	276	13428	71.24	ng/ml	87	

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(49) Acenaphthylene (T)

9.741min (-0.005) 10.53 ng/ml J

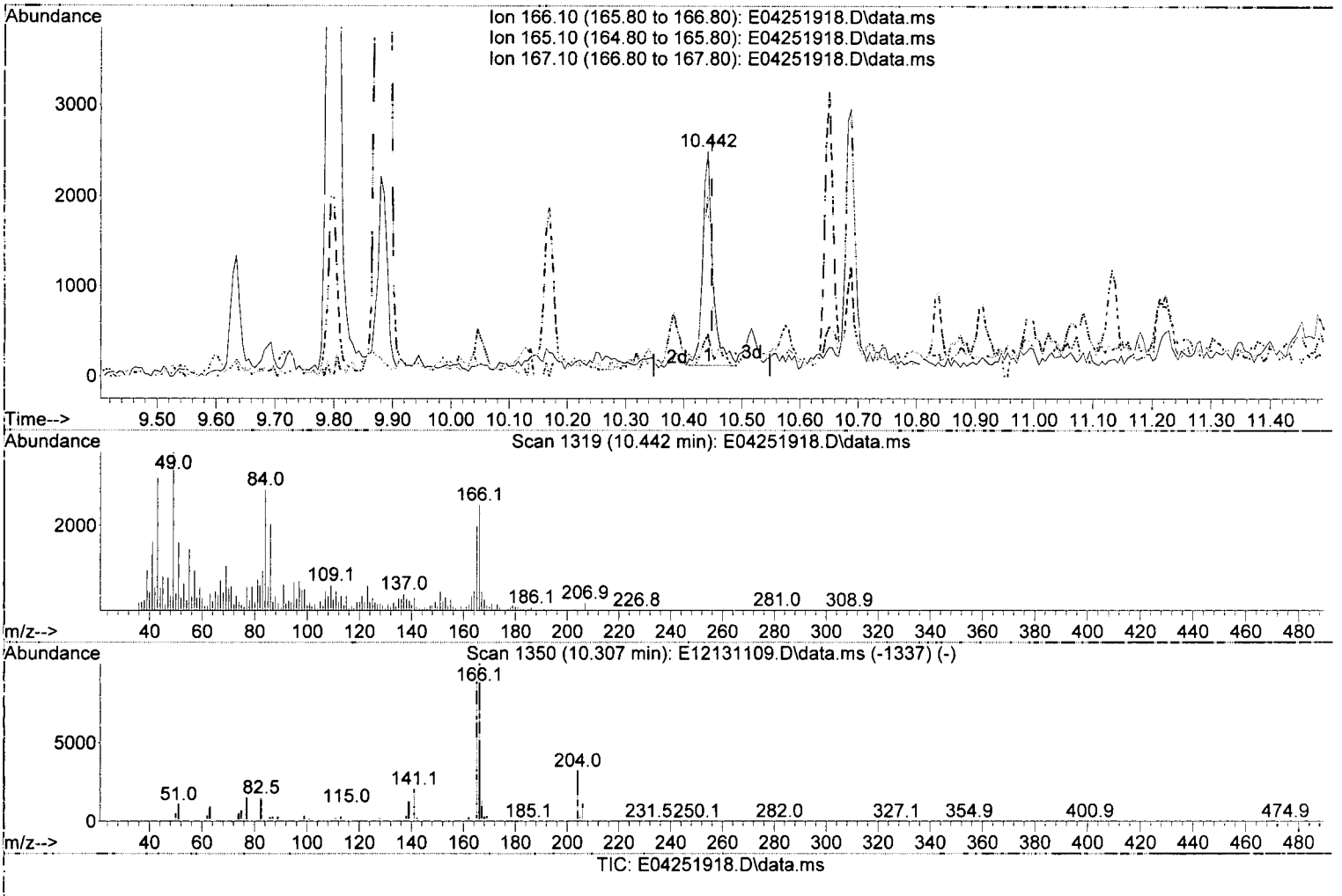
response 2931

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	12.90	21.80
151.10	19.50	28.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(60) Fluorene (T)

10.442min (-0.006) 15.02 ng/ml

response 2951

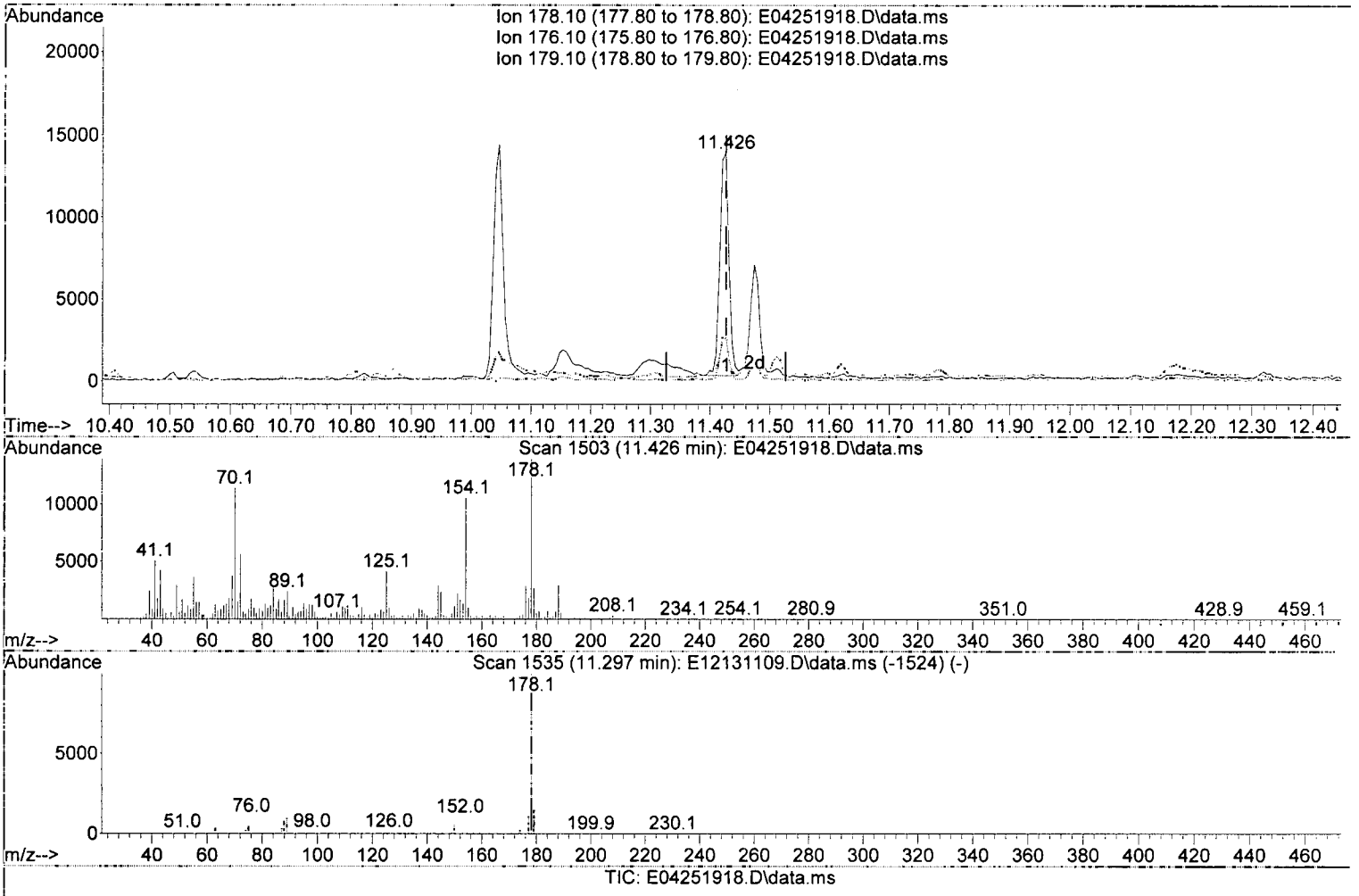
Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	79.87
167.10	13.60	18.52
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(71) Phenanthrene (T)

11.426min (-0.000) 50.45 ng/ml

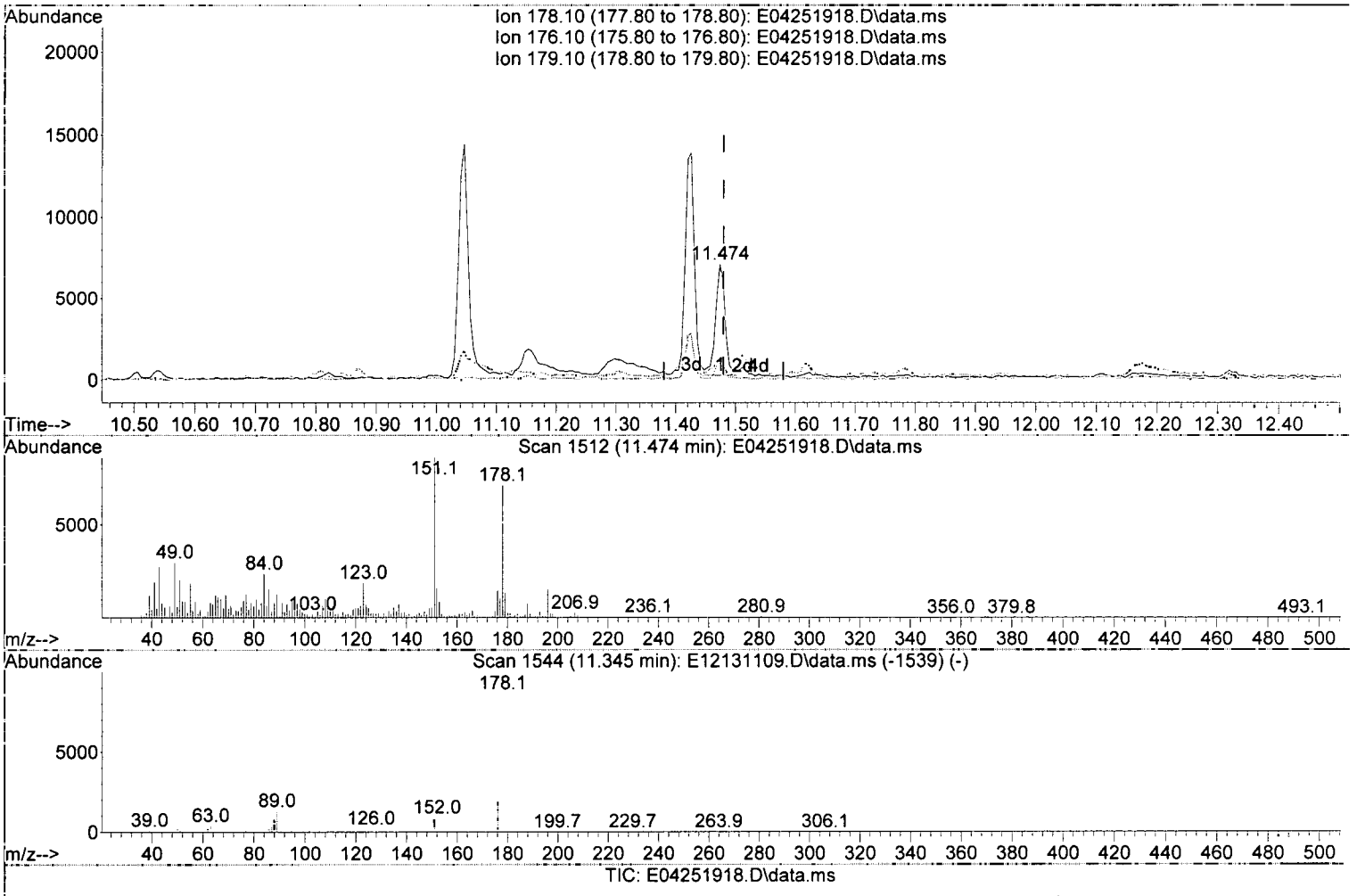
response 14445

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	20.59
179.10	15.00	19.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(72) Anthracene (T)

11.474min (-0.006) 25.67 ng/ml

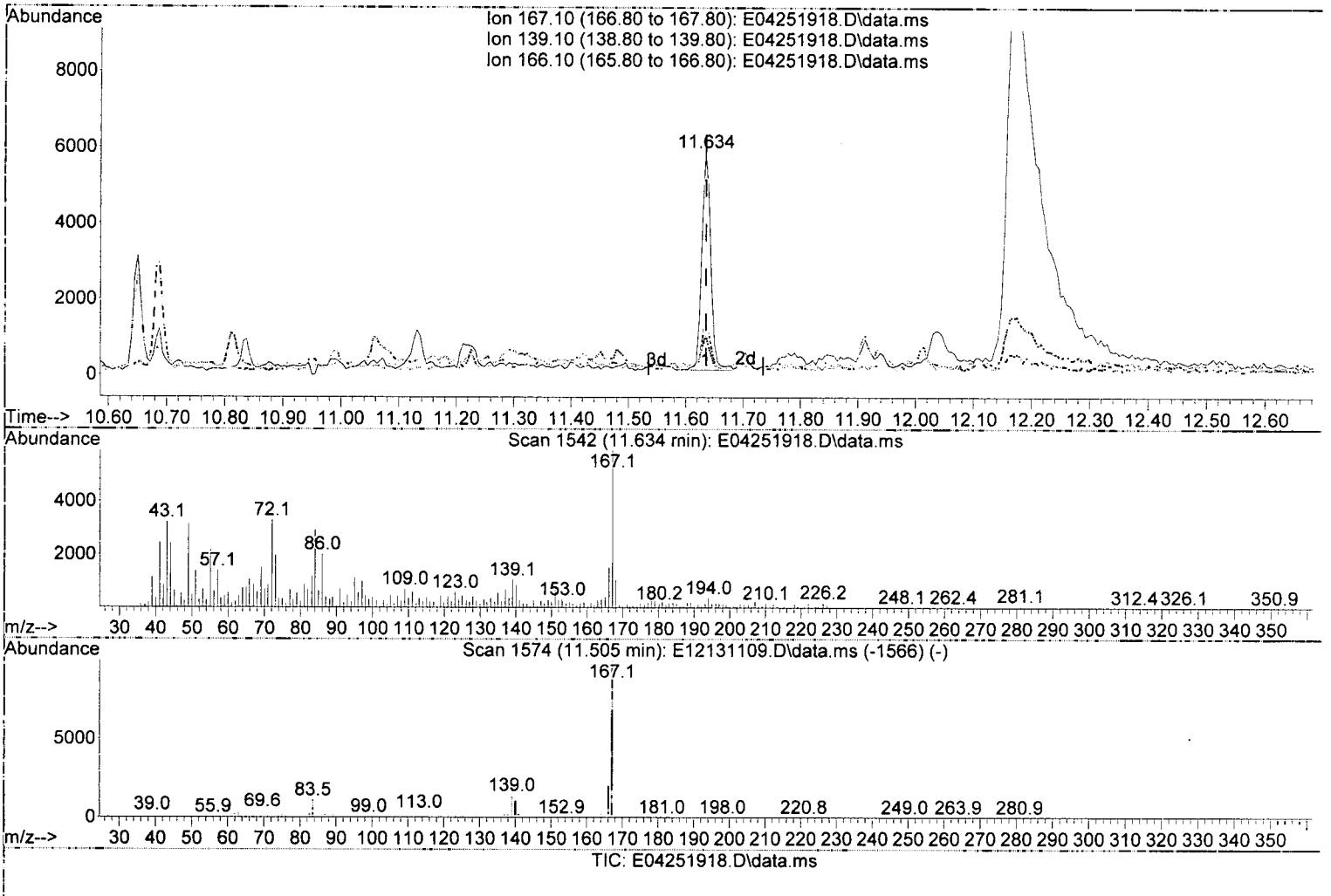
response 7542

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	20.99
179.10	15.50	19.39
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(73) Carbazole (T)

11.634min (-0.000) 23.05 ng/ml

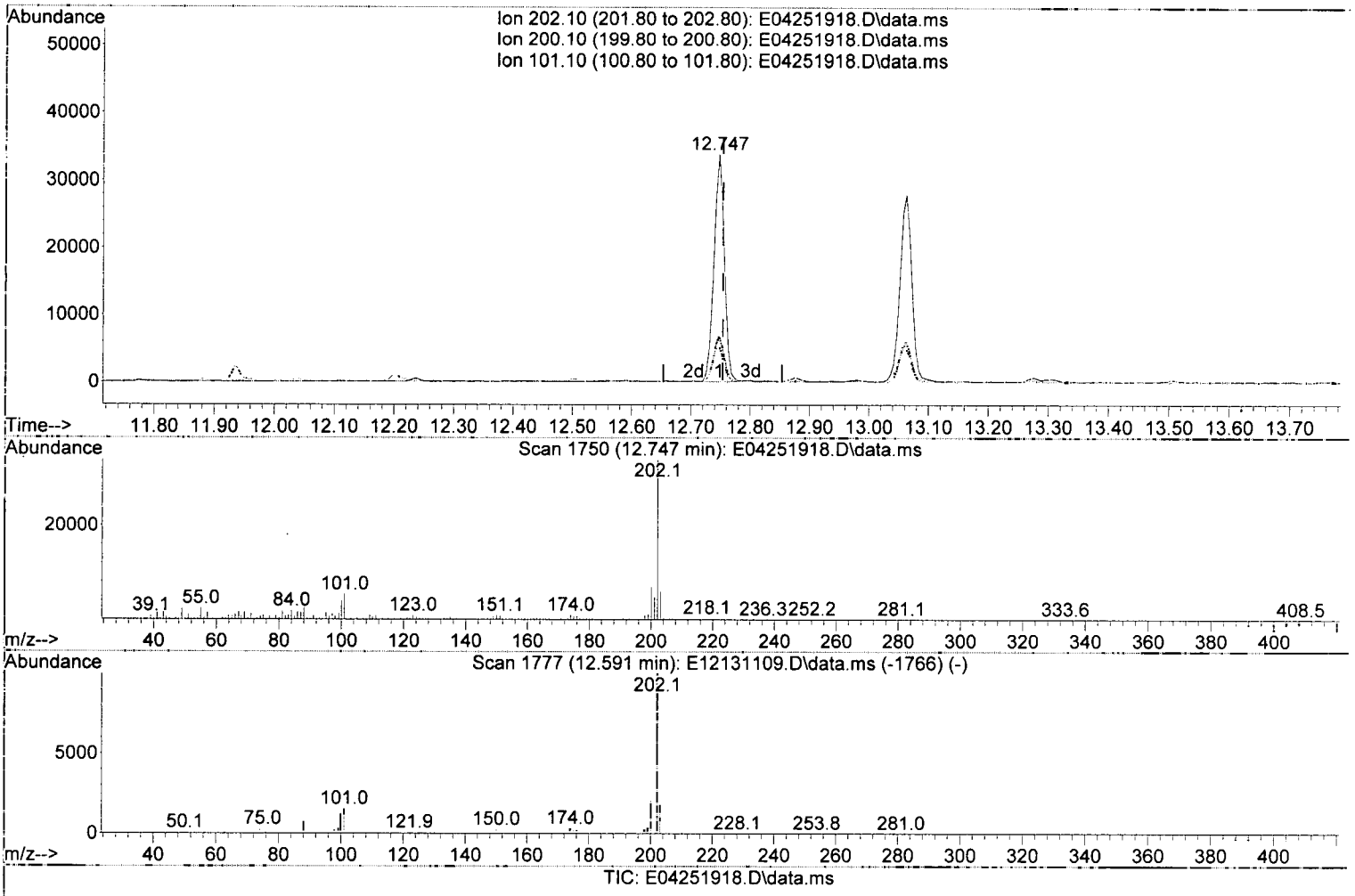
response 6341

Ion	Exp%	Act%
167.10	100.00	100.00
139.10	14.00	17.97
166.10	21.10	25.70
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(75) Fluoranthene (T)

12.747min (-0.006) 138.08 ng/ml

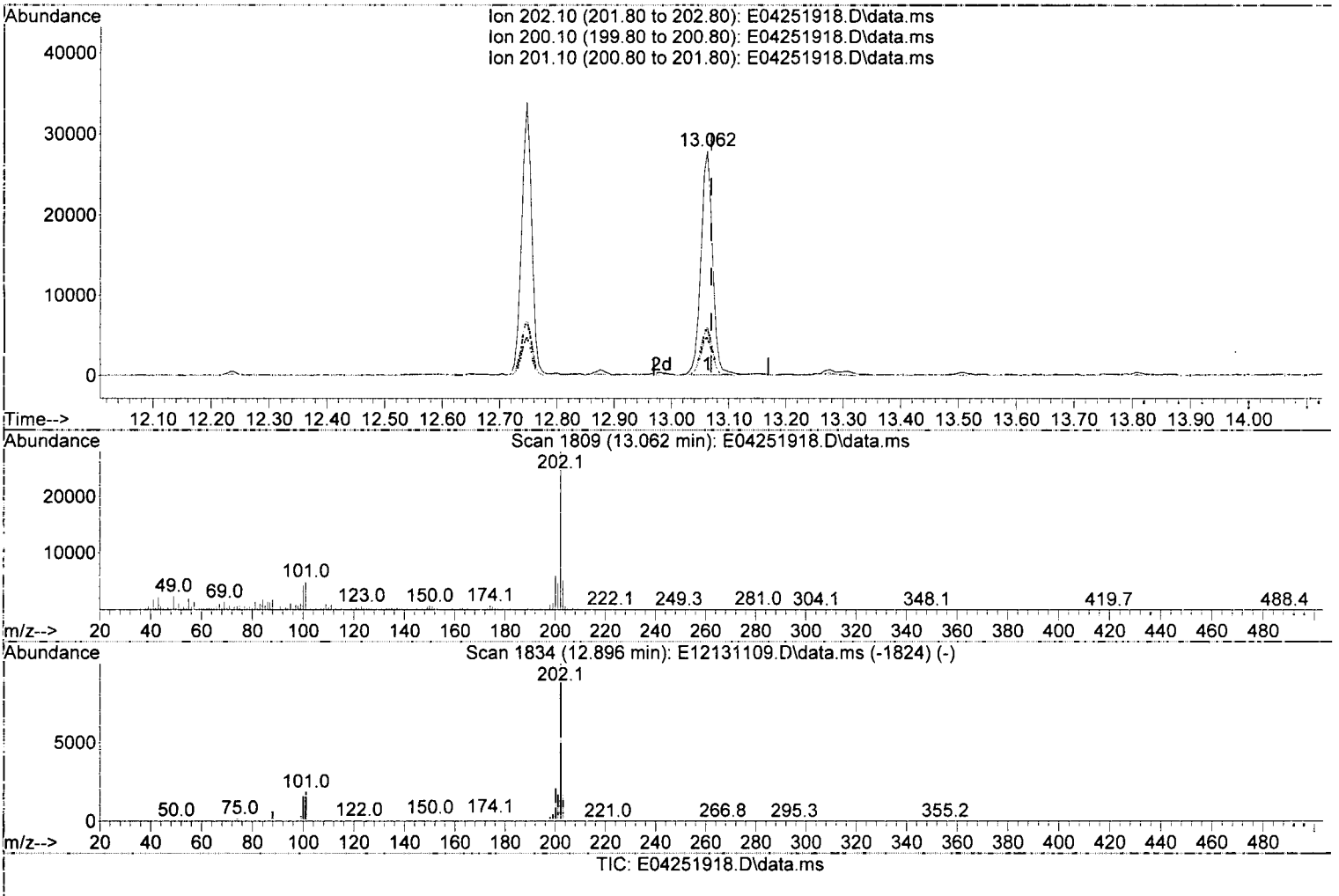
response 41007

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	20.22
101.10	15.70	15.75
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(77) Pyrene (T)

13.062min (-0.006) 129.02 ng/ml

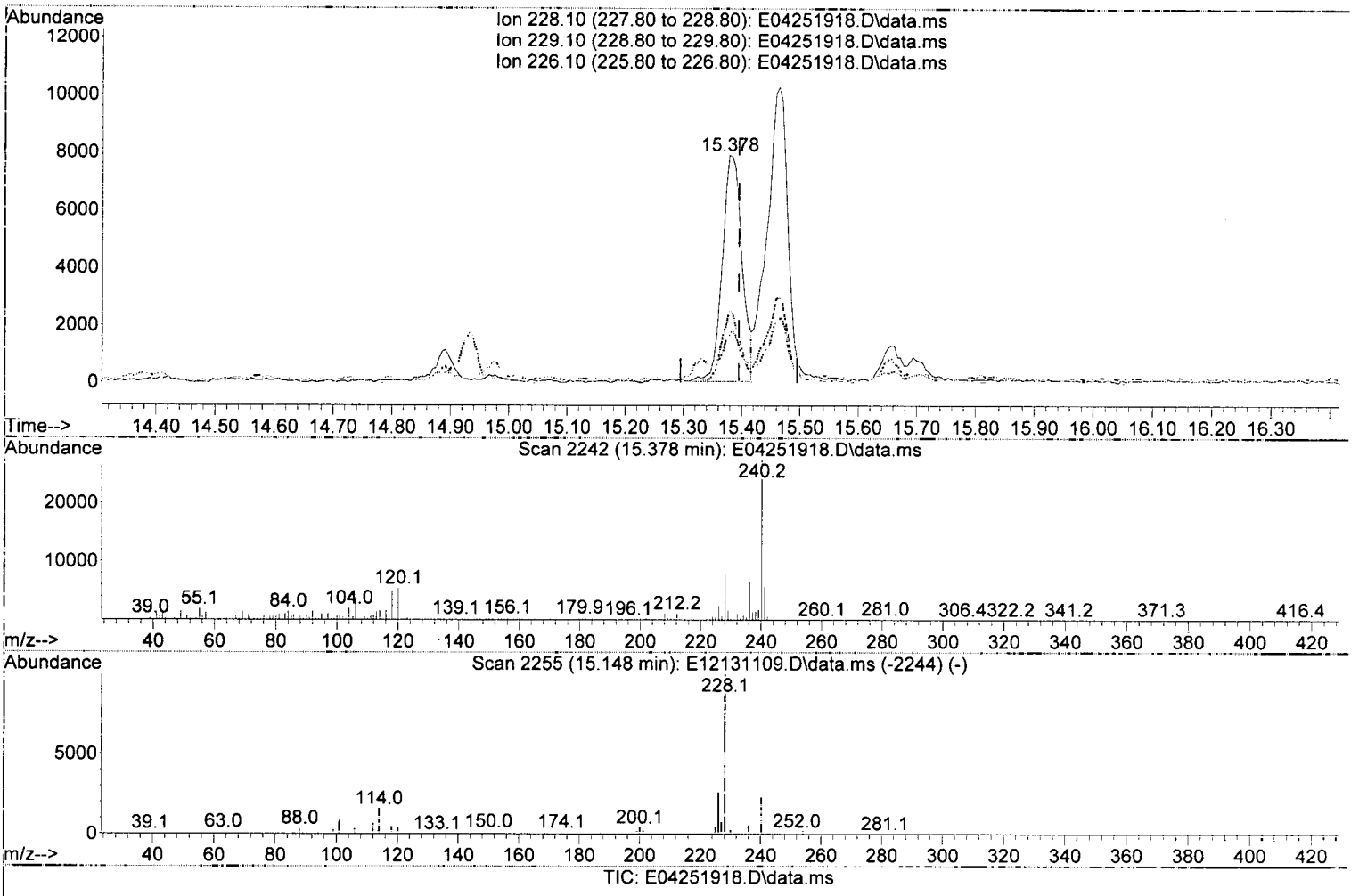
response 38925

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	21.73
201.10	17.50	16.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(83) Benz(a)anthracene (T)

15.378min (-0.016) 67.95 ng/ml

MDS

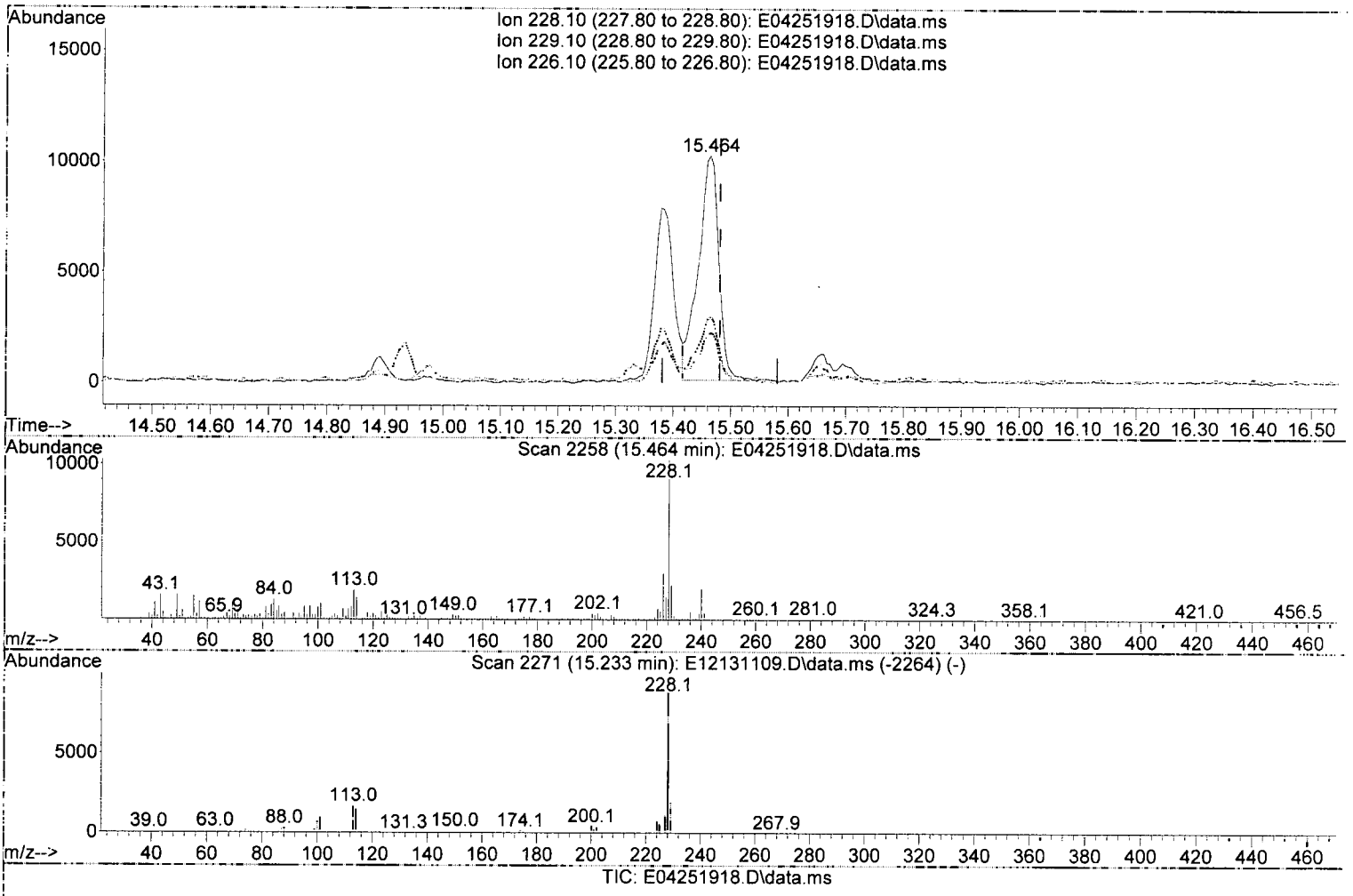
response 18602

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	20.77
226.10	27.80	31.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(84) Chrysene (T)

15.464min (-0.016) 96.46 ng/ml

M05

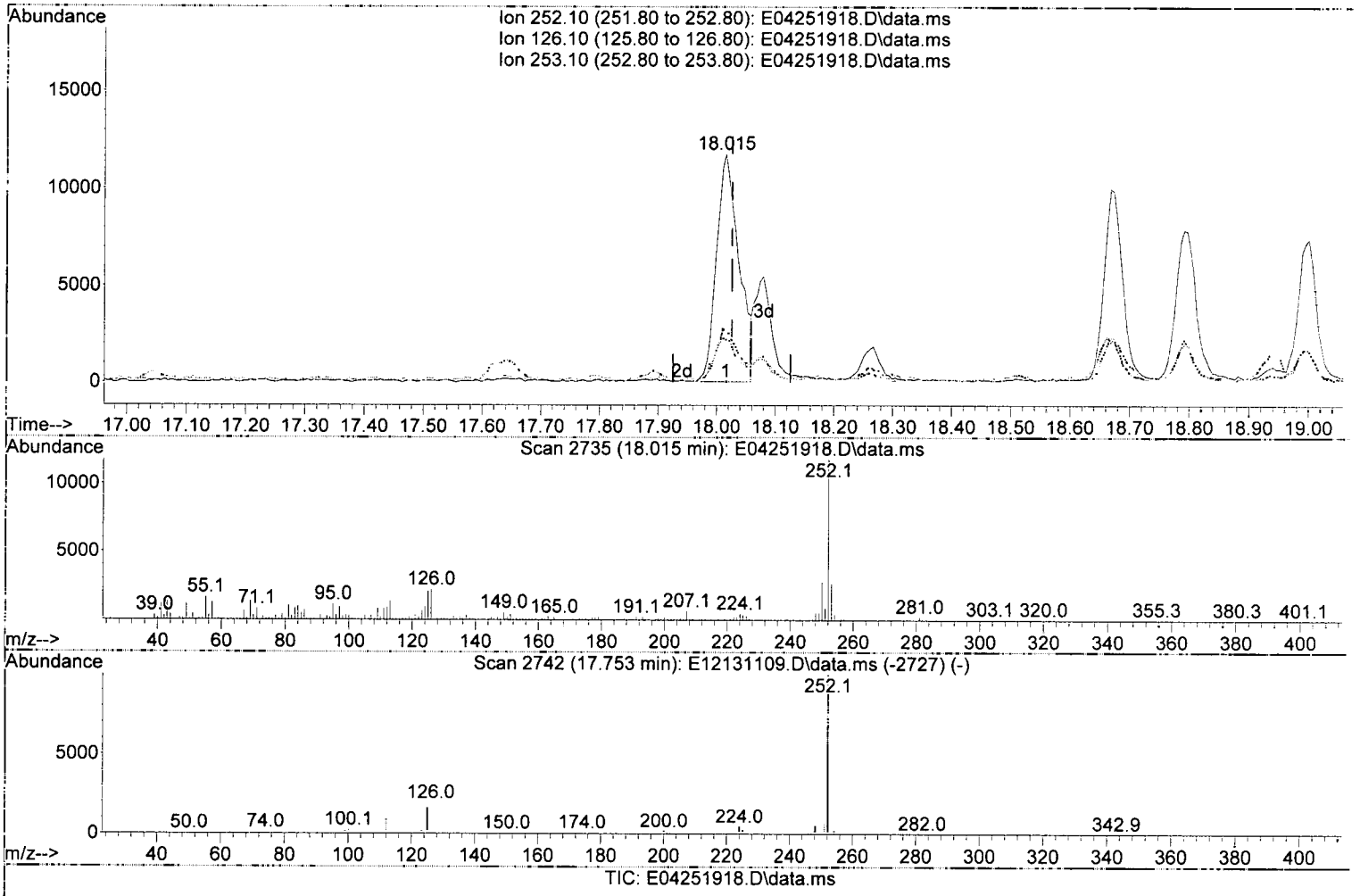
response 25155

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	21.99
226.10	29.80	29.26
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(88) Benzo(b)fluoranthene (T)

18.015min (-0.010) 140.12 ng/ml

M05

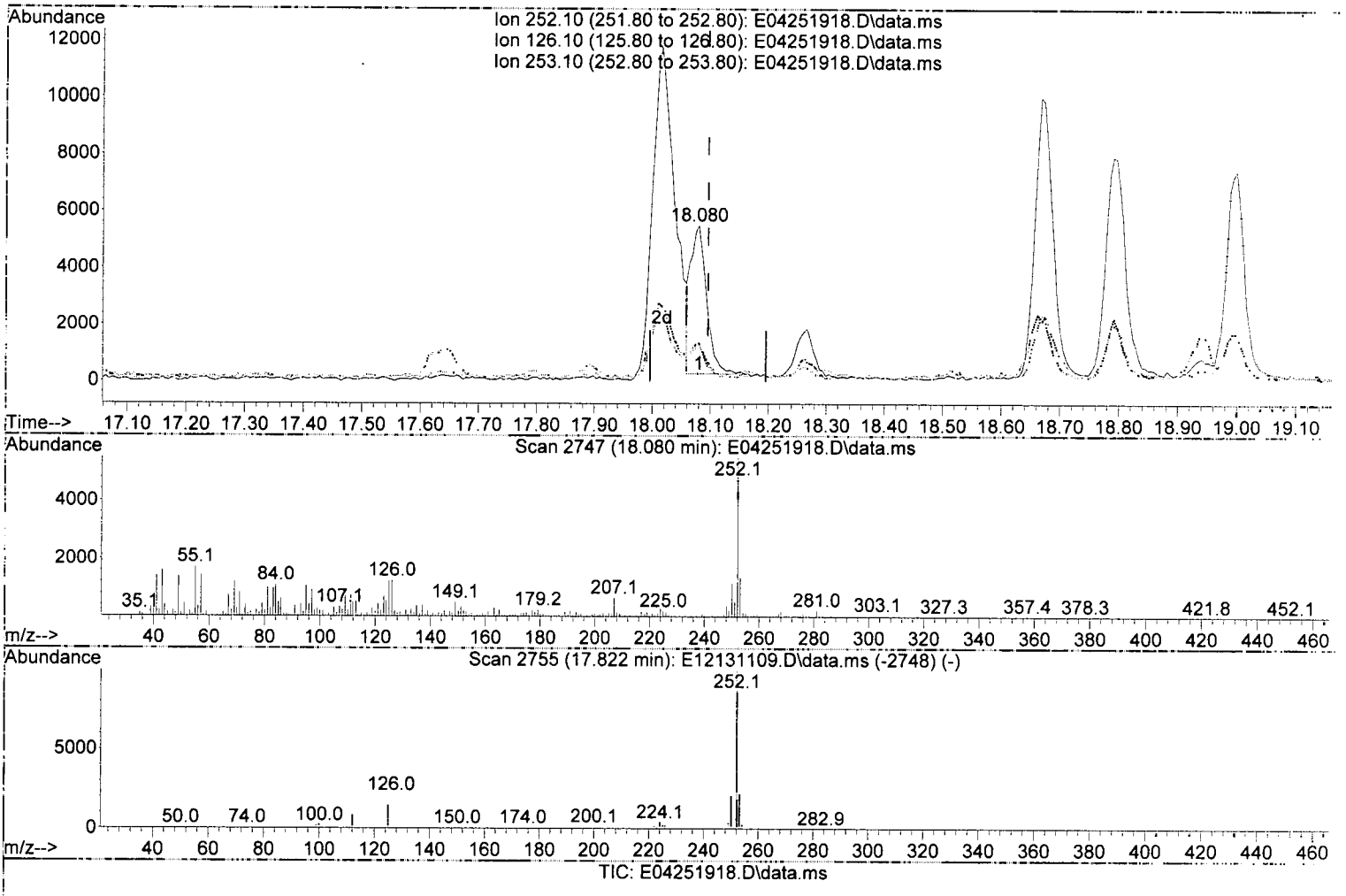
response 31453

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	18.92
253.10	22.40	22.55
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.080min (-0.016) 45.78 ng/ml

MOS

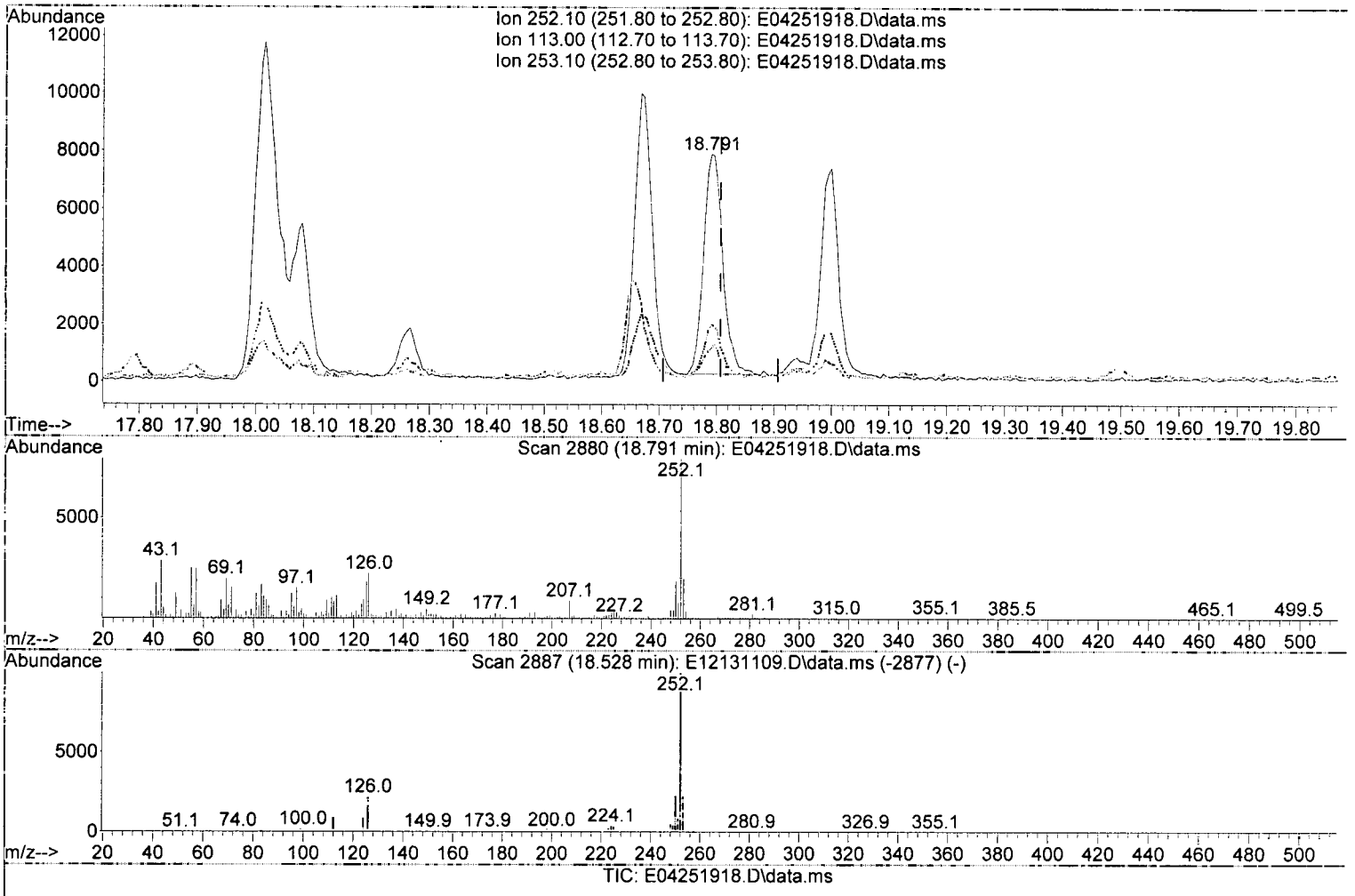
response 10099

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.81
253.10	21.80	24.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(92) Benzo(a)pyrene (T)

18.791min (-0.015) 87.40 ng/ml

response 17813

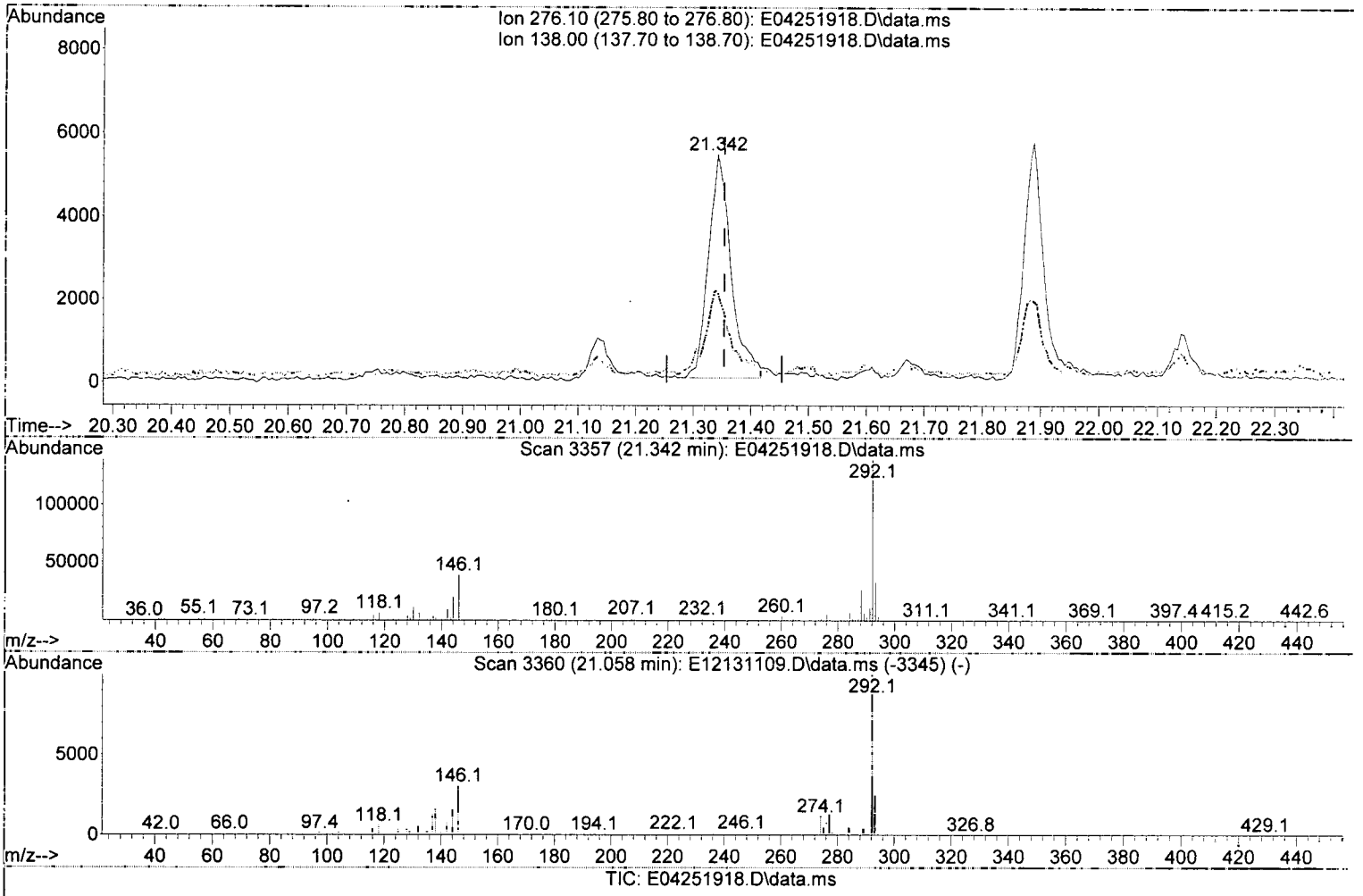
Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	14.93
253.10	21.70	25.12
0.00	0.00	0.00

~~MOS~~ JEM 04/26/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.342min (-0.011) 77.19 ng/ml

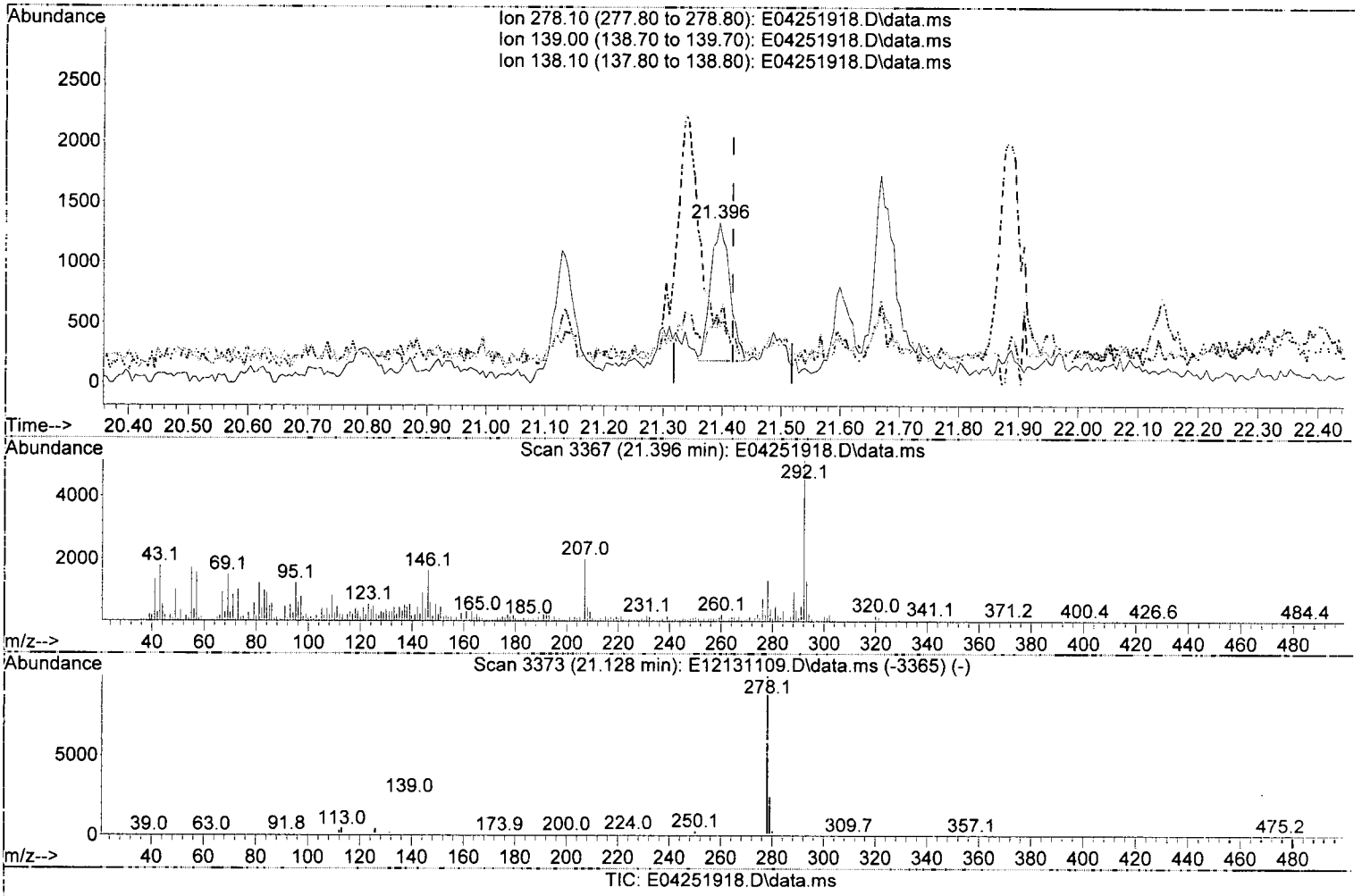
response 14778

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	39.85
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.396min (-0.022) 14.69 ng/ml

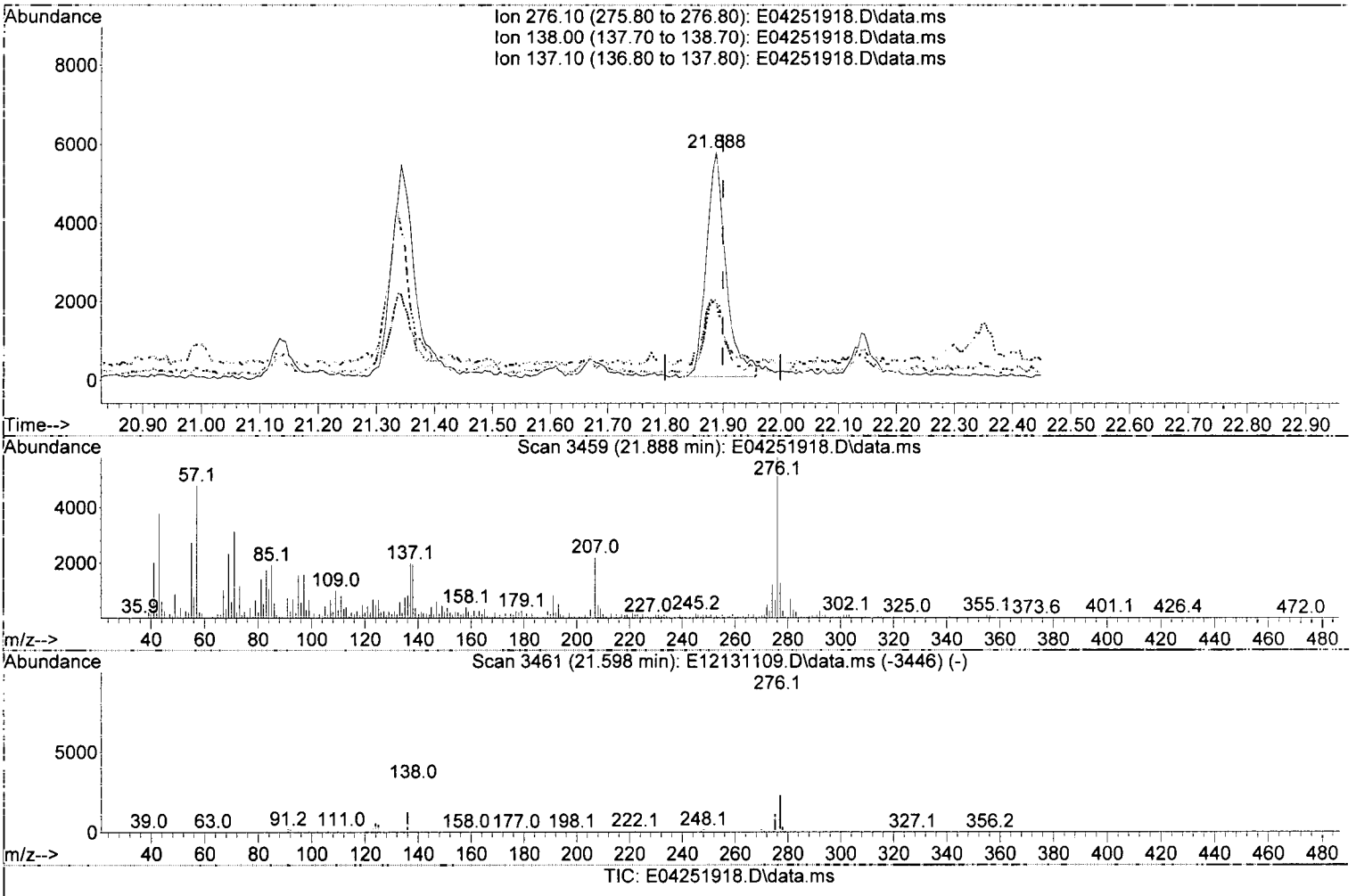
response 2576

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	57.11#
138.10	17.70	35.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04251918.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.888min (-0.011) 71.24 ng/ml

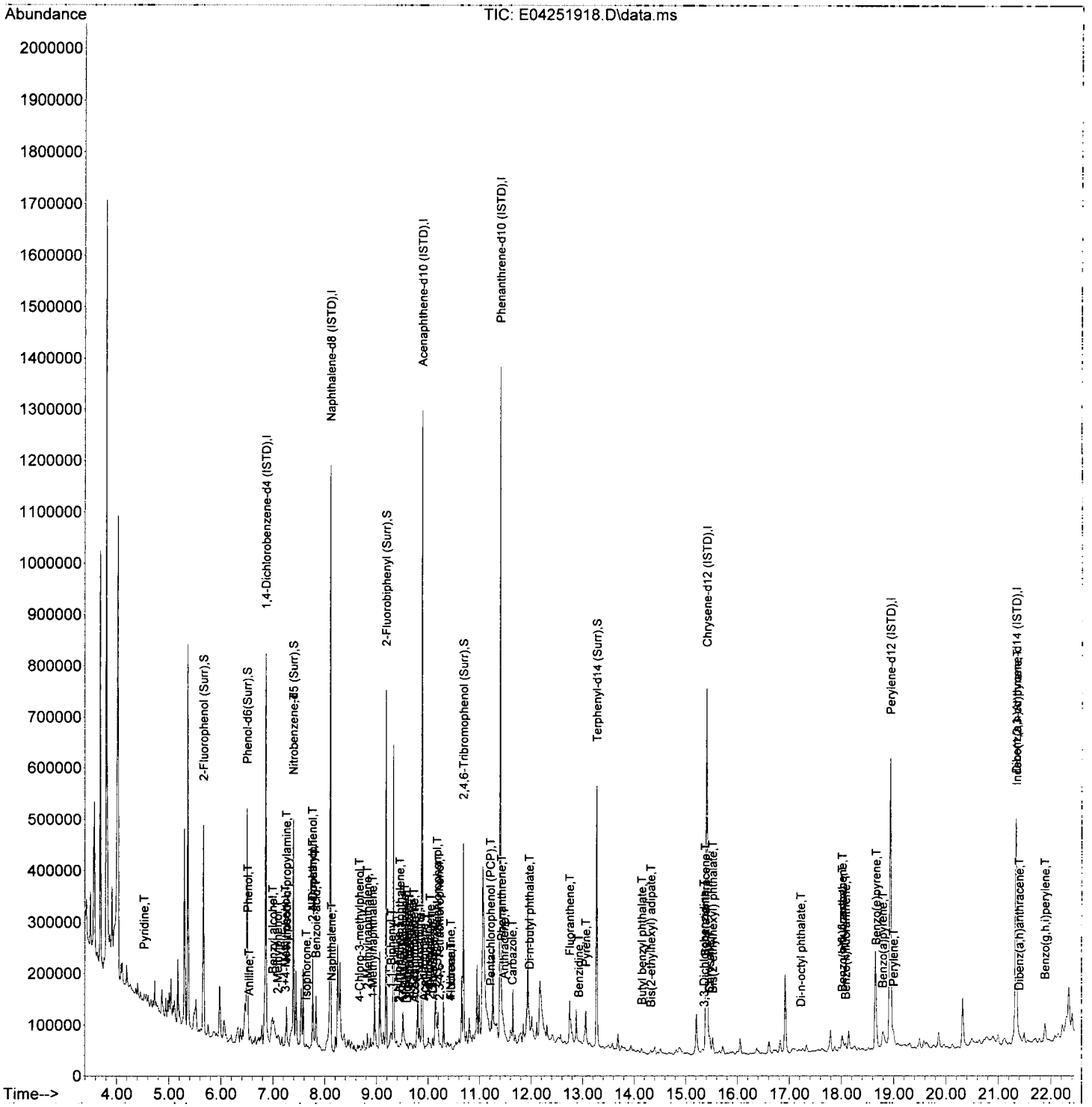
response 13428

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	33.91
137.10	39.00	34.34
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251918.D
Acq On : 25 Apr 2019 6:17 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-21RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:12:27 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251919.D
Acq On : 25 Apr 2019 6:50 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

HMM 04/26/19

Quant Time: Apr 26 09:49:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.864	152	179452	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.110	136	667865	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.886	162	293576	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	550727	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	484602	2000.00	ng/ml	-0.01
86) Perylene-d12 (ISTD)	18.941	264	413744	2000.00	ng/ml	-0.02
94) Dibenz(a,h)Anthrcene-d...	21.342	292	349993	2000.00	ng/ml	-0.01
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.665	112	84475	755.08	ng/ml	0.02
5) Phenol-d6(Surr)	6.505	99	107827	720.55	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.393	82	93419	696.26	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	154000	705.34	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	23217	1149.30	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.271	244	174480	770.61	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.441	74	100720	1189.40	ng/ml	92
3) Pyridine	4.483	79	139424	1016.62	ng/ml	96
6) Phenol	6.516	94	195304	1245.54	ng/ml	95
7) Aniline	6.553	93	216462	1059.36	ng/ml	97
8) Bis(2-chloroethyl) ether	6.601	93	156379	1220.16	ng/ml	94
9) 2-Chlorophenol	6.671	128	163964	1396.41	ng/ml	96
10) 1,3-Dichlorobenzene	6.815	146	170845	1272.84	ng/ml	96
11) 1,4-Dichlorobenzene	6.880	146	174554	1287.11	ng/ml	99
12) Benzyl alcohol	6.987	108	96066	1291.80	ng/ml	92
13) 1,2-Dichlorobenzene	7.029	146	165295	1286.74	ng/ml	97
14) 2-Methylphenol	7.094	107	135690	1389.53	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.110	45	247861	1219.57	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.238	70	123189	1282.34	ng/ml	94
17) 3+4-Methylphenol	7.238	107	168330	1364.67	ng/ml	92
18) Hexachloroethane	7.356	117	53711	1072.84	ng/ml	85
20) Nitrobenzene	7.414	77	165052	1273.70	ng/ml	90
22) Isophorone	7.639	82	313163	1373.95	ng/ml	97
23) 2-Nitrophenol	7.730	139	75657	1486.30	ng/ml	85
24) 2,4-Dimethylphenol	7.757	122	153249	1533.40	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.842	93	193055	1346.18	ng/ml	99
26) Benzoic acid	7.858	105	133962	3414.63	ng/ml	95
27) 2,4-Dichlorophenol	7.965	162	123924	1600.20	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.051	180	128797	1388.24	ng/ml	95
29) Naphthalene	8.131	128	468028	1313.65	ng/ml	100
30) 4-Chloroaniline	8.179	127	105634	860.91	ng/ml	96
31) Hexachlorobutadiene	8.254	225	66039	1457.31	ng/ml	99
32) 4-Chloro-3-methylphenol	8.655	107	131982	1520.23	ng/ml	98
33) 2-Methylnaphthalene	8.821	142	298340	1331.25	ng/ml	96
34) 1-Methylnaphthalene	8.923	142	282822	1317.83	ng/ml	97
36) Hexachlorocyclopentadiene	8.987	237	12226	324.65	ng/ml	95
37) 2,4,6-Trichlorophenol	9.110	196	81503	1789.54	ng/ml	100
38) 2,4,5-Trichlorophenol	9.147	196	87651	1846.89	ng/ml	99
39) 1,1'-Biphenyl	9.292	154	803	3.20	ng/ml	96
41) 2-Chloronaphthalene	9.319	162	256468	1414.37	ng/ml	98
42) 2-Nitroaniline	9.415	138	100493	1735.99	ng/ml	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251919.D
Acq On : 25 Apr 2019 6:50 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:49:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

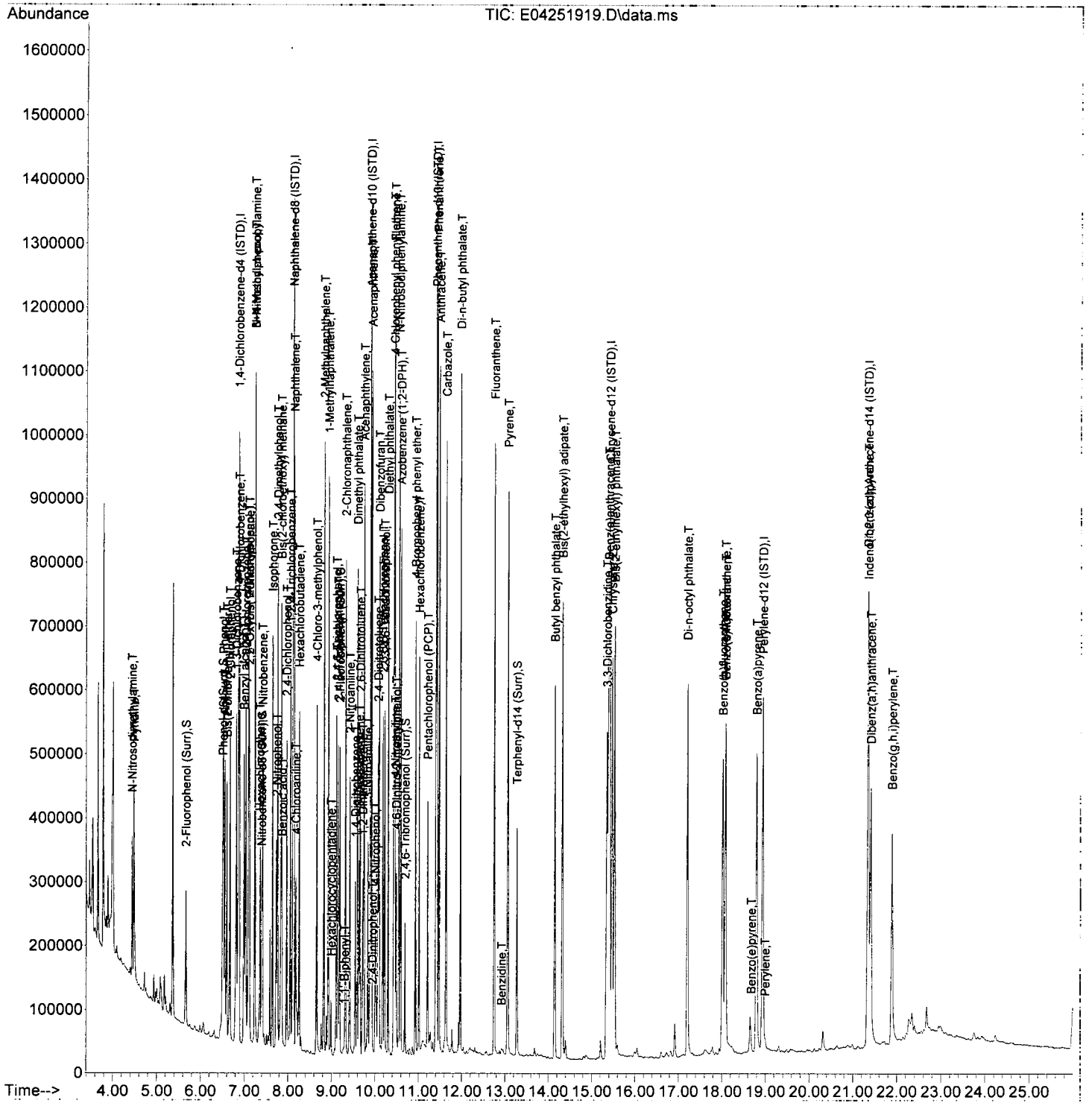
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	300	N.D.	
44) 1,4-Dinitrobenzene	9.543	168	37526	1661.15 ng/ml	83
45) Dimethyl phthalate	9.591	163	329163	1747.00 ng/ml	100
46) 1,3-Dinitrobenzene	9.629	168	47910	1671.36 ng/ml	86
47) 2,6-Dinitrotoluene	9.656	165	74837	1761.54 ng/ml	76
48) 1,2-Dinitrobenzene	9.714	168	30911	1619.92 ng/ml#	69
49) Acenaphthylene	9.741	152	436416	1526.13 ng/ml	99
50) 3-Nitroaniline	9.832	138	64390	1335.44 ng/ml	99
51) Acenaphthene	9.918	153	284251	1465.97 ng/ml	99
52) 2,4-Dinitrophenol	9.939	184	5062	611.34 ng/ml	84
53) 4-Nitrophenol	10.003	139	54714	1475.95 ng/ml	82
54) 2,4-Dinitrotoluene	10.067	165	96719	1757.13 ng/ml	84
55) Dibenzofuran	10.094	168	380587	1509.79 ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.174	232	72201	1986.75 ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	10.217	232	74786	1860.74 ng/ml	91
58) Diethyl phthalate	10.303	149	318528	1691.58 ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.303	170	323	N.D.	
60) Fluorene	10.442	166	322124	1595.94 ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.431	204	143676	1607.64 ng/ml	85
62) 4-Nitroaniline	10.458	138	87667	1645.62 ng/ml	78
63) 4,6-Dinitro-2-methylph...	10.485	198	38585	1843.40 ng/ml	83
65) N-Nitrosodiphenylamine	10.549	169	281900	1620.29 ng/ml	98
66) Azobenzene (1,2-DPH)	10.592	77	334775	1408.32 ng/ml	95
68) 4-Bromophenyl phenyl e...	10.928	248	84873	1665.79 ng/ml	90
69) Hexachlorobenzene	11.014	284	88442	1725.57 ng/ml	94
70) Pentachlorophenol (PCP)	11.212	266	53772	1958.66 ng/ml	95
71) Phenanthrene	11.426	178	480943	1591.08 ng/ml	99
72) Anthracene	11.479	178	491286	1584.07 ng/ml	99
73) Carbazole	11.635	167	465411	1602.71 ng/ml	98
74) Di-n-butyl phthalate	11.966	149	544382	1498.24 ng/ml	99
75) Fluoranthene	12.747	202	515389	1643.77 ng/ml	97
76) Benzidine	12.918	184	8957	157.57 ng/ml	92
77) Pyrene	13.063	202	522575	1640.71 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	225006	1587.40 ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.325	129	213839	1516.04 ng/ml	99
82) 3,3-Dichlorobenzidine	15.346	252	225530	2758.90 ng/ml	98
83) Benz(a)anthracene	15.389	228	434234	1588.58 ng/ml	98
84) Chrysene	15.469	228	419340	1610.37 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	333747	1647.59 ng/ml	96
87) Di-n-octyl phthalate	17.208	149	529783	1864.85 ng/ml	99
88) Benzo(b)fluoranthene	18.021	252	403387	1845.40 ng/ml	98
89) Benzo(k)fluoranthene	18.085	252	394258	1835.26 ng/ml	100
90) Benzo(b+k)fluoranthene	18.085	252	824153	3590.09 ng/ml	100
91) Benzo(e)pyrene	18.673	252	7193	32.41 ng/ml	97
92) Benzo(a)pyrene	18.802	252	379489	1912.07 ng/ml	99
93) Perylene	18.994	252	8281	36.51 ng/ml	96
95) Indeno(1,2,3-cd)pyrene	21.348	276	286638	1494.17 ng/ml	98
96) Dibenz(a,h)anthracene	21.406	278	291926	1661.68 ng/ml	98
97) Benzo(g,h,i)perylene	21.888	276	274765	1454.82 ng/ml	83

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251919.D
Acq On : 25 Apr 2019 6:50 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:49:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251920.D
Acq On : 25 Apr 2019 7:26 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MSD1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

JRW 04/26/19

Quant Time: Apr 26 09:56:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.858	152	177827	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.110	136	708956	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.886	162	364908	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.405	188	688349	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.421	240	696192	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	614931	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.348	292	537555	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.655	112	95217	858.88	ng/ml	0.00
5) Phenol-d6(Surr)	6.500	99	127368	858.91	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.393	82	97721	734.98	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	110505	407.19	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	23561	946.93	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	125251	385.06	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.419	74	114562	1365.22	ng/ml	92
3) Pyridine	4.457	79	158405	1165.58	ng/ml	96
6) Phenol	6.516	94	249735	1607.22	ng/ml	91
7) Aniline	6.548	93	263605	1301.86	ng/ml	97
8) Bis(2-chloroethyl) ether	6.596	93	187476	1476.17	ng/ml	95
9) 2-Chlorophenol	6.666	128	186530	1603.11	ng/ml	98
10) 1,3-Dichlorobenzene	6.810	146	187797	1411.92	ng/ml	97
11) 1,4-Dichlorobenzene	6.874	146	192849	1435.00	ng/ml	99
12) Benzyl alcohol	6.987	108	118760	1611.55	ng/ml	91
13) 1,2-Dichlorobenzene	7.024	146	184074	1446.02	ng/ml	98
14) 2-Methylphenol	7.088	107	156280	1615.01	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.110	45	281139	1395.95	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.238	70	151161	1587.89	ng/ml	92
17) 3+4-Methylphenol	7.238	107	201696	1650.11	ng/ml	93
18) Hexachloroethane	7.356	117	63247	1274.86	ng/ml	81
20) Nitrobenzene	7.415	77	192529	1499.31	ng/ml	90
22) Isophorone	7.639	82	391823	1619.42	ng/ml	96
23) 2-Nitrophenol	7.725	139	87036	1602.48	ng/ml	88
24) 2,4-Dimethylphenol	7.757	122	181714	1712.84	ng/ml	94
25) Bis(2-chloroethoxy) me...	7.842	93	235545	1547.27	ng/ml	99
26) Benzoic acid	7.864	105	177500	4000.96	ng/ml	93
27) 2,4-Dichlorophenol	7.965	162	147014	1788.33	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.051	180	148790	1510.78	ng/ml	95
29) Naphthalene	8.131	128	546886	1446.02	ng/ml	100
30) 4-Chloroaniline	8.179	127	151503	1163.17	ng/ml	95
31) Hexachlorobutadiene	8.254	225	76388	1587.98	ng/ml	99
32) 4-Chloro-3-methylphenol	8.655	107	164712	1771.27	ng/ml	99
33) 2-Methylnaphthalene	8.821	142	368388	1548.54	ng/ml	96
34) 1-Methylnaphthalene	8.923	142	348546	1529.94	ng/ml	97
36) Hexachlorocyclopentadiene	8.987	237	32798	700.68	ng/ml	98
37) 2,4,6-Trichlorophenol	9.110	196	103286	1822.06	ng/ml	99
38) 2,4,5-Trichlorophenol	9.147	196	111505	1887.52	ng/ml	99
39) 1,1'-Biphenyl	9.292	154	1526	4.89	ng/ml	80
41) 2-Chloronaphthalene	9.319	162	330583	1466.72	ng/ml	98
42) 2-Nitroaniline	9.420	138	129388	1793.00	ng/ml	82

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251920.D
Acq On : 25 Apr 2019 7:26 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MSD1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:56:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5

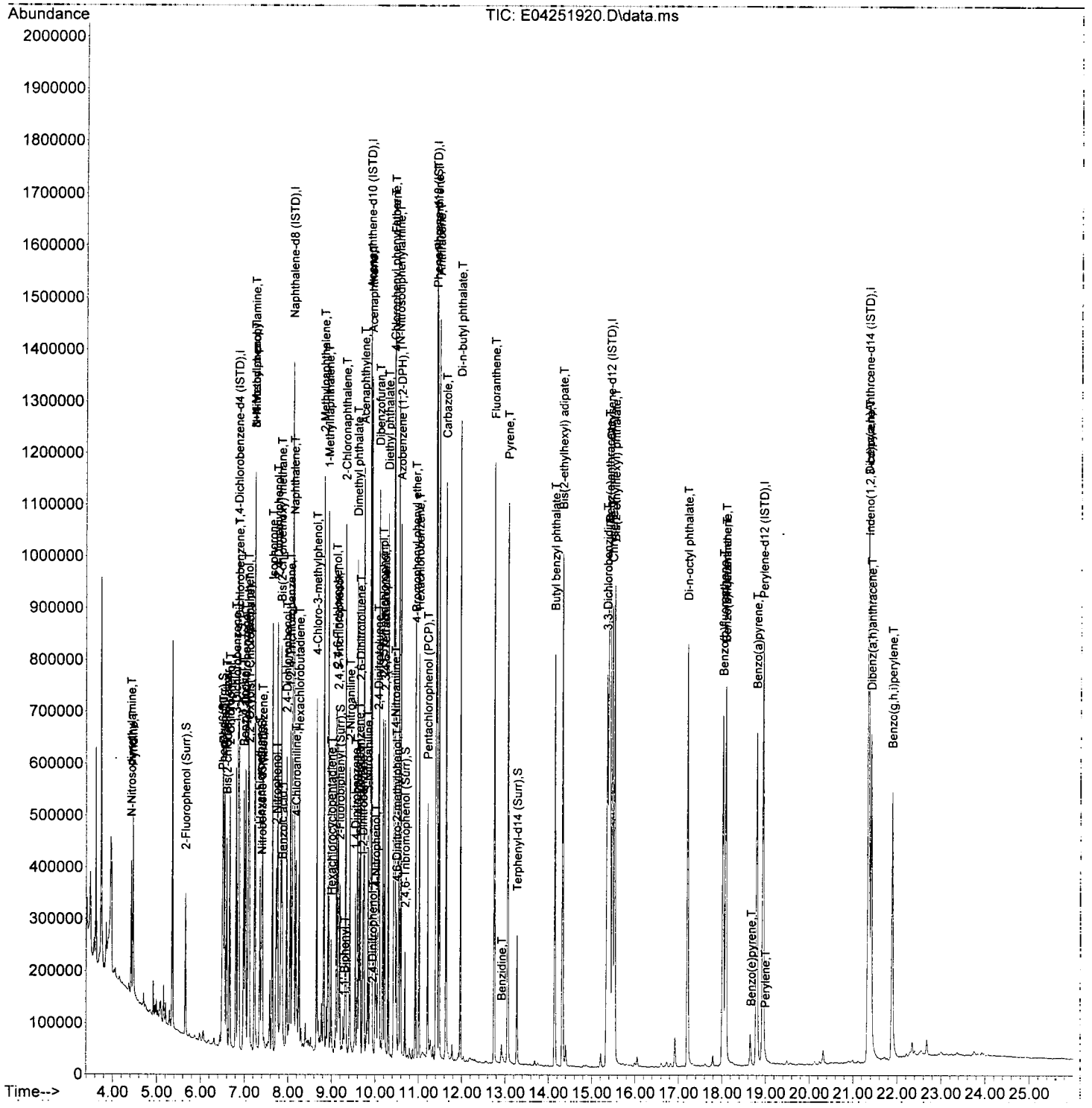
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	444	N.D.	
44) 1,4-Dinitrobenzene	9.543	168	43691	1570.08 ng/ml	87
45) Dimethyl phthalate	9.591	163	398960	1703.52 ng/ml	99
46) 1,3-Dinitrobenzene	9.629	168	57040	1607.70 ng/ml	89
47) 2,6-Dinitrotoluene	9.656	165	89612	1701.02 ng/ml	80
48) 1,2-Dinitrobenzene	9.714	168	34864	1480.72 ng/ml#	71
49) Acenaphthylene	9.741	152	563210	1584.53 ng/ml	99
50) 3-Nitroaniline	9.832	138	81793	1362.98 ng/ml	93
51) Acenaphthene	9.918	153	366244	1519.61 ng/ml	99
52) 2,4-Dinitrophenol	9.939	184	4848	518.51 ng/ml	99
53) 4-Nitrophenol	10.009	139	64388	1405.13 ng/ml	81
54) 2,4-Dinitrotoluene	10.067	165	113886	1671.45 ng/ml	88
55) Dibenzofuran	10.094	168	498711	1591.66 ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.174	232	89553	1982.97 ng/ml	92
57) 2,3,4,6-Tetrachlorophenol	10.223	232	91583	1835.17 ng/ml	90
58) Diethyl phthalate	10.303	149	382692	1635.05 ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.303	170	406	N.D.	
60) Fluorene	10.442	166	410376	1635.73 ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.431	204	187974	1692.16 ng/ml	86
62) 4-Nitroaniline	10.458	138	110002	1661.23 ng/ml	76
63) 4,6-Dinitro-2-methylph...	10.490	198	40507	1613.11 ng/ml	78
65) N-Nitrosodiphenylamine	10.549	169	356588	1639.80 ng/ml	97
66) Azobenzene (1,2-DPH)	10.592	77	433943	1460.53 ng/ml	96
68) 4-Bromophenyl phenyl e...	10.934	248	108711	1707.07 ng/ml	85
69) Hexachlorobenzene	11.014	284	114143	1781.76 ng/ml	94
70) Pentachlorophenol (PCP)	11.212	266	64251	1882.72 ng/ml	96
71) Phenanthrene	11.426	178	601349	1591.67 ng/ml	99
72) Anthracene	11.479	178	612753	1580.72 ng/ml	99
73) Carbazole	11.635	167	556262	1532.59 ng/ml	99
74) Di-n-butyl phthalate	11.972	149	681223	1500.01 ng/ml	99
75) Fluoranthene	12.752	202	646353	1649.31 ng/ml	99
76) Benzidine	12.918	184	28306	331.30 ng/ml	98
77) Pyrene	13.068	202	663962	1667.84 ng/ml	99
80) Butyl benzyl phthalate	14.148	149	304929	1497.43 ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.325	129	293191	1446.87 ng/ml	98
82) 3,3-Dichlorobenzidine	15.352	252	324818	2765.43 ng/ml	98
83) Benz(a)anthracene	15.395	228	605924	1542.98 ng/ml	98
84) Chrysene	15.480	228	587137	1569.47 ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.528	149	450662	1548.60 ng/ml	96
87) Di-n-octyl phthalate	17.213	149	756322	1796.47 ng/ml	98
88) Benzo(b)fluoranthene	18.026	252	563092	1733.22 ng/ml	97
89) Benzo(k)fluoranthene	18.090	252	572690	1793.67 ng/ml	99
90) Benzo(b+k)fluoranthene	18.090	252	1170282	3430.00 ng/ml	99
91) Benzo(e)pyrene	18.668	252	5236	15.87 ng/ml	95
92) Benzo(a)pyrene	18.802	252	545755	1850.15 ng/ml	100
93) Perylene	18.994	252	7017	20.81 ng/ml	97
95) Indeno(1,2,3-cd)pyrene	21.358	276	445784	1512.96 ng/ml	98
96) Dibenz(a,h)anthracene	21.412	278	445905	1652.54 ng/ml	98
97) Benzo(g,h,i)perylene	21.893	276	422785	1457.49 ng/ml	82

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D25002\
Data File : E04251920.D
Acq On : 25 Apr 2019 7:26 pm
Operator : JK/ AMS /DTH
Sample : 9041271-MSD1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 26 09:56:37 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R1.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Fri Apr 12 10:21:11 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Sequence 9D29024 (A9D0674-07RE1,13)

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D29024**	Instrument:	**SV-GCMS5**
Date:	**04/29/19 08:03**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D29024-TUN1	Sediment	QC	QC			A19B027	A19D323
2	9D29024-IBL1	Sediment	QC	QC			A19B027	
3	9D29024-CCV1	Sediment	QC	QC			A19B027	A19C237
4	9D29024-CCB1	Sediment	QC	QC			A19B027	
5	A9D0674-12	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
6	A9D0674-13	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
7	A9D0674-14	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
8	A9D0674-15	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
9	A9D0674-16	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
10	9041393-BLK1	Sediment	QC	QC		9041393	A19B027	
11	9041393-BS1	Sediment	QC	QC		9041393	A19B027	
12	A9D0735-01	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
13	A9D0735-05	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
14	A9D0674-17	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
15	A9D0674-18	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
16	A9D0674-19	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
17	A9D0674-20	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
18	A9D0674-22	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
19	A9D0674-23	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
20	A9D0674-07RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
21	9D29024-IBL2	Sediment	QC	QC			A19B027	

Data Entered By: DTH 4/30/19

Data Reviewed By: GJK 5/1/19

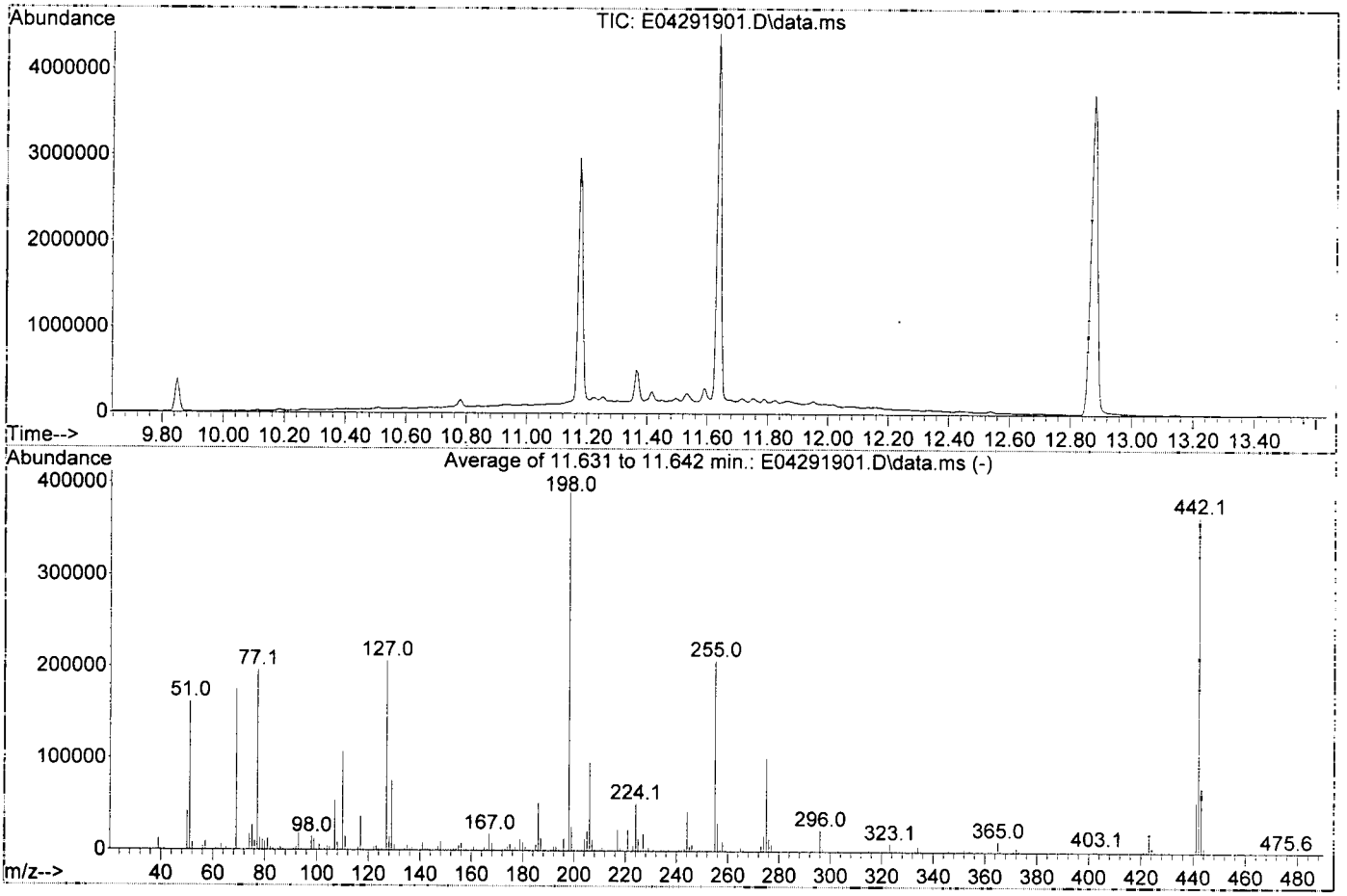
Comments:

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291901.D
Acq On : 29 Apr 2019 8:13 am
Operator : JK/ AMS /DTH
Sample : 9D29024-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

DTH 4/29/19

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019



AutoFind: Scans 1504, 1505, 1506; Background Corrected with Scan 1499

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	41.3	162039	PASS
68	69	0.00	2	0.3	531	PASS
69	198	0.00	100	44.8	175656	PASS
70	69	0.00	2	0.4	666	PASS
127	198	10	80	52.7	206443	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	391940	PASS
199	198	5	9	6.7	26367	PASS
275	198	10	60	26.0	101885	PASS
365	198	1	100	2.9	11442	PASS
441	442	0.01	24	15.1	55312	PASS
442	198	50	200	93.2	365419	PASS
443	442	15	24	19.1	69949	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291901.D
Acq On : 29 Apr 2019 8:13 am
Operator : JK/ AMS /DTH
Sample : 9D29024-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 29 19:42:58 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/29/19

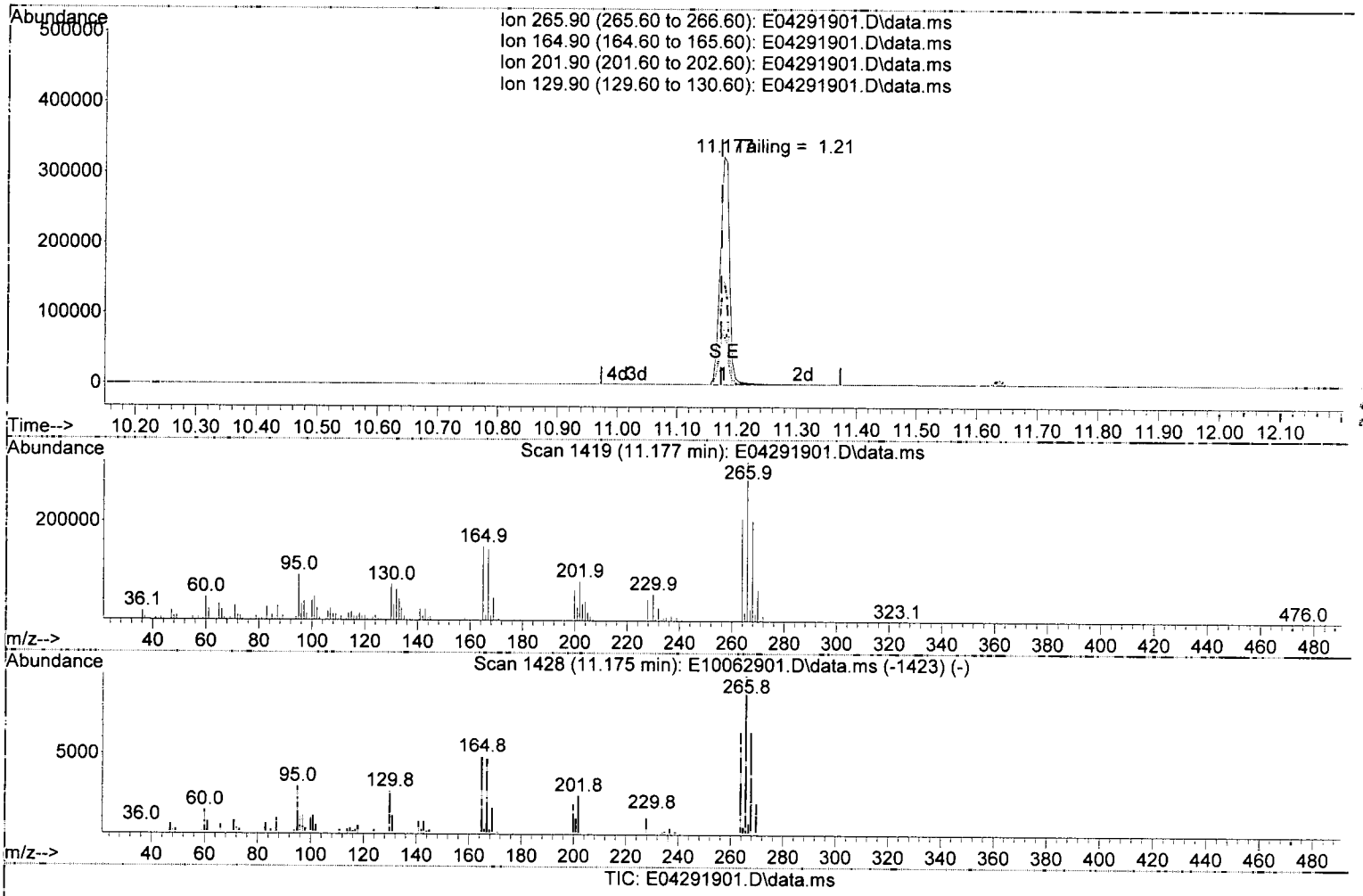
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.817	150	72732	2.00	ug/mL	0.00
2) Naphthalene-d8	8.074	136	167083	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.850	162	80242	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.364	188	136153	2.00	ug/mL	0.00
11) Chrysene-d12	15.177	240	116400	2.00	ug/mL	0.00
12) Perylene-d12	17.135	264	91887	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.440	292	77593	2.00	ug/mL	-0.06
Target Compounds						Qvalue
4) Pentachlorophenol	11.177	266	345699	45.62	ug/mL	96
6) DFTPP	11.642	442	442152	40.23	ug/mL	78
7) Benzidine	12.877	184	2132342	44.02	ug/mL	94
8) 4,4-DDE	13.145	TIC	18810	No Calib		
9) 4,4-DDD	13.701	TIC	7081	No Calib		
10) 4,4-DDT	14.306	TIC	5636969	40.37	ug/mL	97

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291901.D
Acq On : 29 Apr 2019 8:13 am
Operator : JK/ AMS /DTH
Sample : 9D29024-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 29 19:42:58 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291901.D\data.ms

(4) Pentachlorophenol

11.177min (+ 0.004) 45.62 ug/mL

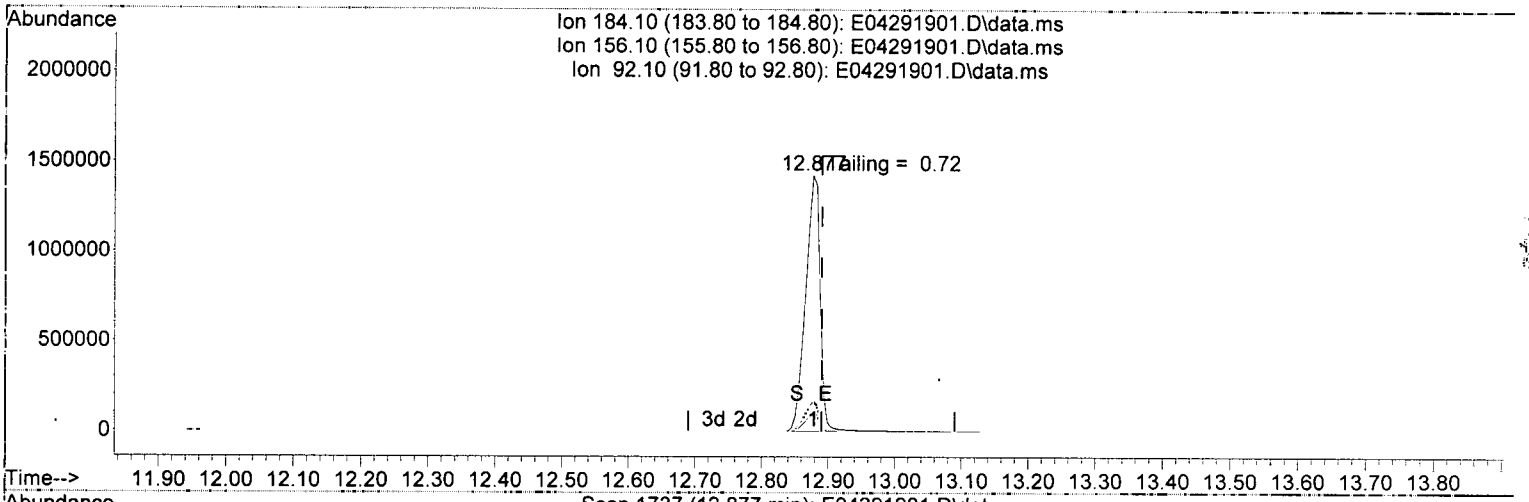
response 345699

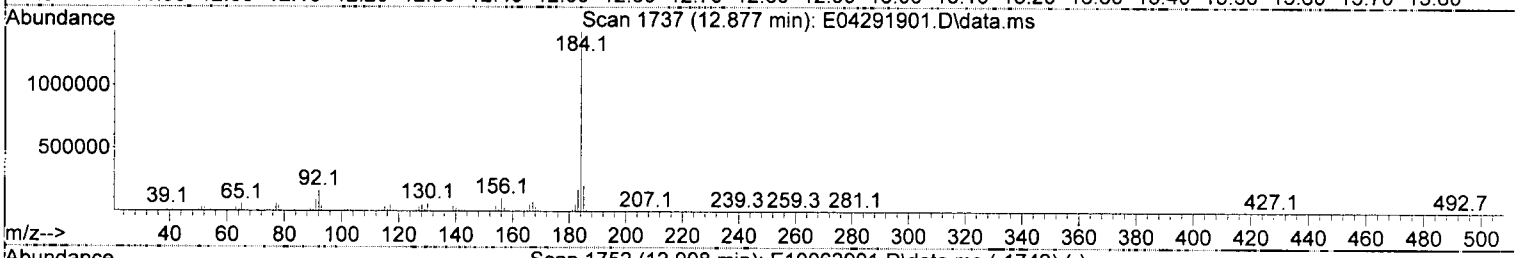
Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	46.39
201.90	23.20	24.78
129.90	27.10	22.58

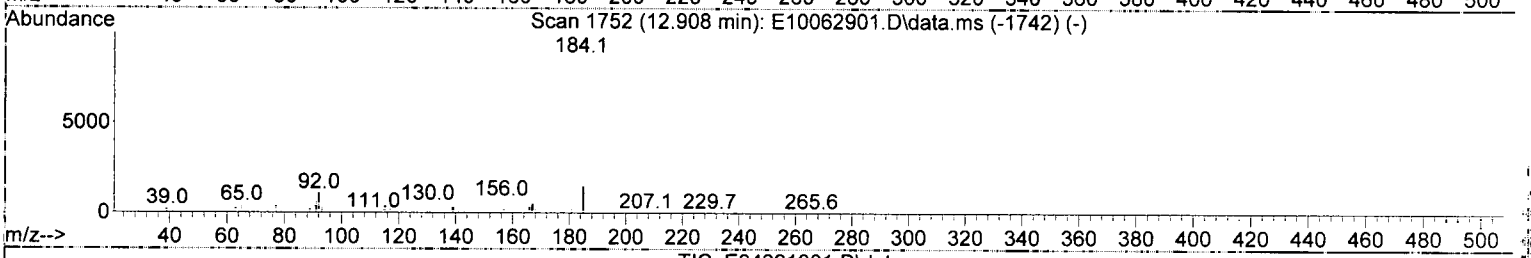
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291901.D
Acq On : 29 Apr 2019 8:13 am
Operator : JK/ AMS /DTH
Sample : 9D29024-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 29 19:42:58 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04291901.D\data.ms

(7) Benzidine

12.877min (-0.012) 44.02 ug/mL

response 2132342

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.29
92.10	8.20	11.51
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9D29024-TUN1
SV-GCMS5

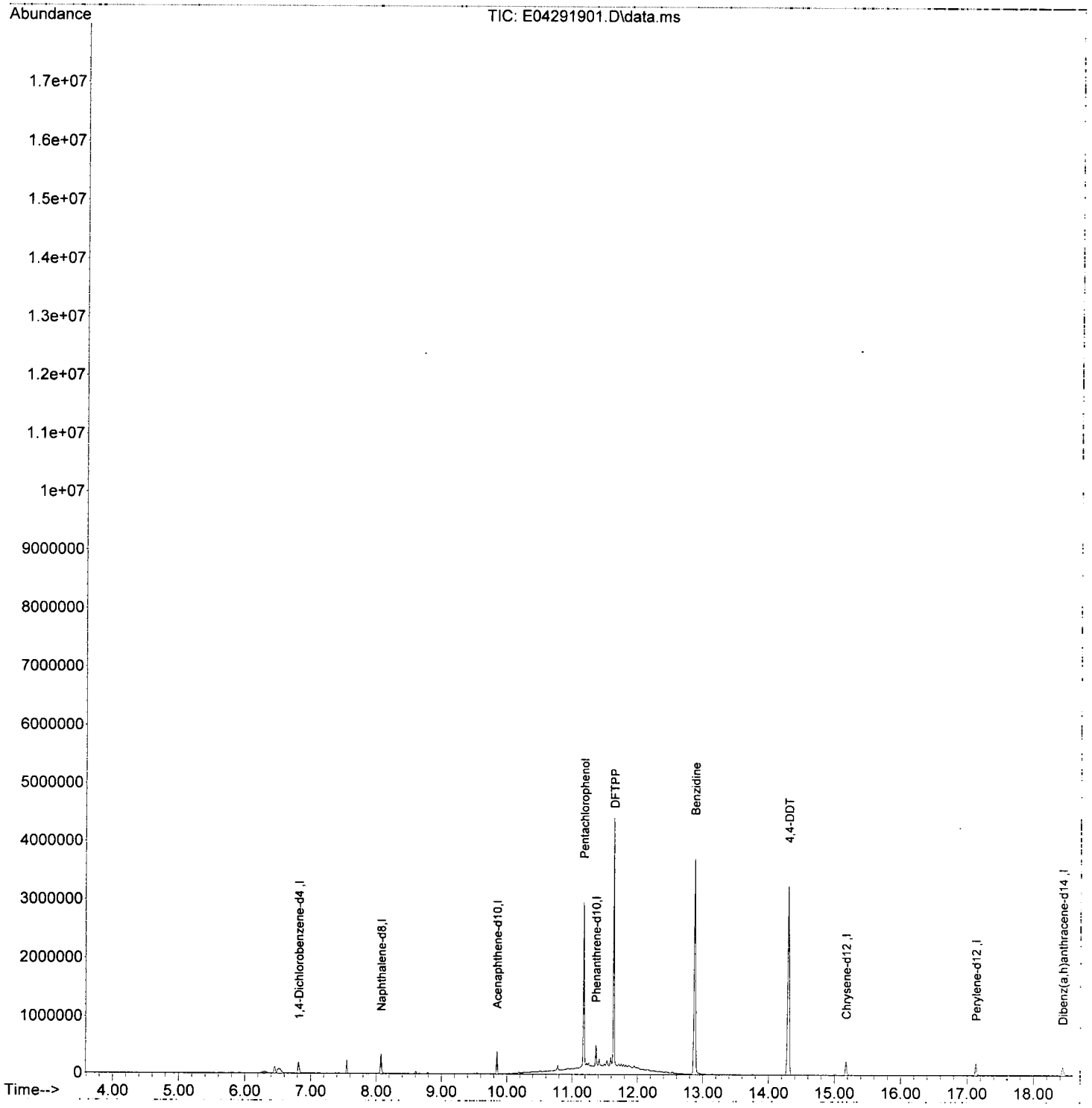
First Column Area Counts		Percent Breakdown	
DDE	18810		
DDD	7081		
DDT	5636969	0.46	PASS

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291901.D
Acq On : 29 Apr 2019 8:13 am
Operator : JK/ AMS /DTH
Sample : 9D29024-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 29 19:42:58 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/29/19

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	66	0.00
2	T	N-Nitrosodimethylamine	1000.000	952.068	4.8	62	0.00
3	T	Pyridine	1000.000	958.088	4.2	62	0.00
4	S	2-Fluorophenol (Surr)	1000.000	1022.889	-2.3	64	0.00
5	S	Phenol-d6(Surr)	1000.000	1002.243	-0.2	64	0.00
6	T	Phenol	1000.000	984.327	1.6	64	0.00
7	T	Aniline	1000.000	956.167	4.4	65	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	969.106	3.1	63	0.00
9	T	2-Chlorophenol	1000.000	1048.598	-4.9	67	0.00
10	T	1,3-Dichlorobenzene	1000.000	1012.285	-1.2	67	0.00
11	T	1,4-Dichlorobenzene	1000.000	1013.111	-1.3	67	0.00
12	T	Benzyl alcohol	1000.000	986.192	1.4	64	0.00
13	T	1,2-Dichlorobenzene	1000.000	1017.431	-1.7	67	0.00
14	T	2-Methylphenol	1000.000	1022.357	-2.2	66	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	1001.221	-0.1	65	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	990.558	0.9	64	0.00
17	T	3+4-Methylphenol	1000.000	1046.406	-4.6	67	0.00
18	T	Hexachloroethane	1000.000	972.860	2.7	64	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	997.079	0.3	66	0.00
20	T	Nitrobenzene	1000.000	1040.452	-4.0	66	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	67	0.00
22	T	Isophorone	1000.000	999.373	0.1	64	0.00
23	T	2-Nitrophenol	1000.000	1191.705	-19.2	78	0.00
24	T	2,4-Dimethylphenol	1000.000	1057.159	-5.7	69	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	999.755	0.0	66	0.00
26	T	Benzoic acid	2000.000	1854.733	7.3	64	0.00
27	T	2,4-Dichlorophenol	1000.000	1117.047	-11.7	73	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1074.467	-7.4	72	0.00
29	T	Naphthalene	1000.000	1002.656	-0.3	67	0.00
30	T	4-Chloroaniline	1000.000	1041.691	-4.2	72	0.00
31	T	Hexachlorobutadiene	1000.000	1114.262	-11.4	73	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1045.773	-4.6	71	0.00
33	T	2-Methylnaphthalene	1000.000	1059.837	-6.0	71	0.00
34	T	1-Methylnaphthalene	1000.000	1052.172	-5.2	70	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	70	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1357.883	-35.8#	88	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1186.291	-18.6	80	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1173.725	-17.4	80	0.00
39	T	1,1'-Biphenyl	1000.000	1043.683	-4.4	72	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1072.702	-7.3	74	0.00
41	T	2-Chloronaphthalene	1000.000	1046.547	-4.7	74	0.00
42	T	2-Nitroaniline	1000.000	1051.719	-5.2	77	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1058.457	-5.8	72	0.00
44	T	1,4-Dinitrobenzene	1000.000	1265.244	-26.5#	98	0.00
45	T	Dimethyl phthalate	1000.000	1055.408	-5.5	73	0.00
46	T	1,3-Dinitrobenzene	1000.000	1163.608	-16.4	88	0.00
47	T	2,6-Dinitrotoluene	1000.000	1136.823	-13.7	80	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 6/25/19

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)
48	T	1,2-Dinitrobenzene	1000.000	1184.971	-18.5	85	0.00
49	T	Acenaphthylene	1000.000	1065.029	-6.5	72	0.00
50	T	3-Nitroaniline	1000.000	990.540	0.9	73	0.00
51	T	Acenaphthene	1000.000	1029.891	-3.0	72	0.00
52	T	2,4-Dinitrophenol	1000.000	1242.941	-24.3#	117	0.00
53	T	4-Nitrophenol	1000.000	1000.538	-0.1	76	0.00
54	T	2,4-Dinitrotoluene	1000.000	1120.476	-12.0	84	0.00
55	T	Dibenzofuran	1000.000	1044.915	-4.5	74	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1197.527	-19.8	85	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1149.548	-15.0	82	0.00
58	T	Diethyl phthalate	1000.000	1035.938	-3.6	70	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1078.858	-7.9	74	0.00
60	T	Fluorene	1000.000	1056.807	-5.7	73	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1079.711	-8.0	78	0.00
62	T	4-Nitroaniline	1000.000	907.004	9.3	71	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1363.218	-36.3#	122	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	73	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1072.562	-7.3	75	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	991.460	0.9	67	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1286.228	-28.6#	88	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1088.536	-8.9	79	0.00
69	T	Hexachlorobenzene	1000.000	1147.551	-14.8	83	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1063.196	-6.3	79	0.00
71	T	Phenanthrene	1000.000	1038.664	-3.9	75	0.00
72	T	Anthracene	1000.000	1024.919	-2.5	74	0.00
73	T	Carbazole	1000.000	977.811	2.2	73	0.00
74	T	Di-n-butyl phthalate	1000.000	880.270	12.0	66	0.00
75	T	Fluoranthene	1000.000	1029.048	-2.9	75	0.00
76	T	Benzidine	2000.000	2961.096	-48.1#	133	0.00
77	T	Pyrene	1000.000	1046.465	-4.6	77	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	79	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1046.303	-4.6	80	0.00
80	T	Butyl benzyl phthalate	1000.000	786.477	21.4#	61	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	711.302	28.9#	59	0.00
82	T	3,3-Dichlorobenzidine	2000.000	1392.096	30.4#	55	0.00
83	T	Benz(a)anthracene	1000.000	984.965	1.5	80	0.00
84	T	Chrysene	1000.000	1030.177	-3.0	81	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	801.855	19.8	65	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	76	0.00
87	T	Di-n-octyl phthalate	1000.000	737.970	26.2#	54	0.00
88	T	Benzo(b)fluoranthene	1000.000	1098.808	-9.9	80	0.00
89	T	Benzo(k)fluoranthene	1000.000	1170.913	-17.1	83	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2204.169	-10.2	81	0.00
91	T	Benzo(e)pyrene	1000.000	1095.392	-9.5	81	0.00
92	T	Benzo(a)pyrene	1000.000	1130.335	-13.0	81	0.00
93	T	Perylene	1000.000	1089.897	-9.0	81	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	79	0.00
95	T	Indeno(1,2,3-cd)pyrene	1000.000	987.794	1.2	80	0.00
96	T	Dibenz(a,h)anthracene	1000.000	1046.826	-4.7	84	0.00
97	T	Benzo(g,h,i)perylene	1000.000	1075.029	-7.5	81	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/29/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.837	152	187829	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.083	136	733555	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	346443	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	615921	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	560047	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	476018	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	398819	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	119778	1022.89	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	156982	1002.24	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.366	82	140026	997.08	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	276382	1072.70	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	29332	1286.23	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	273785	1046.30	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.403	74	84386	952.07	ng/ml	89
3) Pyridine	4.441	79	137530	958.09	ng/ml	95
6) Phenol	6.484	94	161550	984.33	ng/ml	95
7) Aniline	6.527	93	204497	956.17	ng/ml	96
8) Bis(2-chloroethyl) ether	6.569	93	130001	969.11	ng/ml	98
9) 2-Chlorophenol	6.639	128	128872	1048.60	ng/ml	98
10) 1,3-Dichlorobenzene	6.789	146	142215	1012.28	ng/ml	96
11) 1,4-Dichlorobenzene	6.853	146	143809	1013.11	ng/ml	98
12) Benzyl alcohol	6.960	108	76763	986.19	ng/ml	91
13) 1,2-Dichlorobenzene	7.003	146	136801	1017.43	ng/ml	97
14) 2-Methylphenol	7.061	107	104495	1022.36	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.083	45	212984	1001.22	ng/ml	97
16) N-Nitrosodi-n-propylamine	7.211	70	99601	990.56	ng/ml	93
17) 3+4-Methylphenol	7.206	107	135098	1046.41	ng/ml	94
18) Hexachloroethane	7.329	117	50979	972.86	ng/ml	82
20) Nitrobenzene	7.382	77	141121	1040.45	ng/ml	94
22) Isophorone	7.612	82	250190	999.37	ng/ml	96
23) 2-Nitrophenol	7.698	139	65691	1191.71	ng/ml	88
24) 2,4-Dimethylphenol	7.725	122	116045	1057.16	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.816	93	157476	999.75	ng/ml	99
26) Benzoic acid	7.810	105	62539	1854.73	ng/ml	95
27) 2,4-Dichlorophenol	7.933	162	95016	1117.05	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.024	180	109491	1074.47	ng/ml	96
29) Naphthalene	8.099	128	392362	1002.66	ng/ml	100
30) 4-Chloroaniline	8.147	127	140388	1041.69	ng/ml	96
31) Hexachlorobutadiene	8.227	225	55460	1114.26	ng/ml	98
32) 4-Chloro-3-methylphenol	8.623	107	97701	1045.77	ng/ml	99
33) 2-Methylnaphthalene	8.794	142	260877	1059.84	ng/ml	96
34) 1-Methylnaphthalene	8.896	142	248019	1052.17	ng/ml	96
36) Hexachlorocyclopentadiene	8.960	237	60345	1357.88	ng/ml	97
37) 2,4,6-Trichlorophenol	9.078	196	62105	1186.29	ng/ml	100
38) 2,4,5-Trichlorophenol	9.115	196	64091	1173.73	ng/ml	98
39) 1,1'-Biphenyl	9.260	154	309332	1043.68	ng/ml	98
41) 2-Chloronaphthalene	9.286	162	223944	1046.55	ng/ml	98
42) 2-Nitroaniline	9.383	138	68746	1051.72	ng/ml	88

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

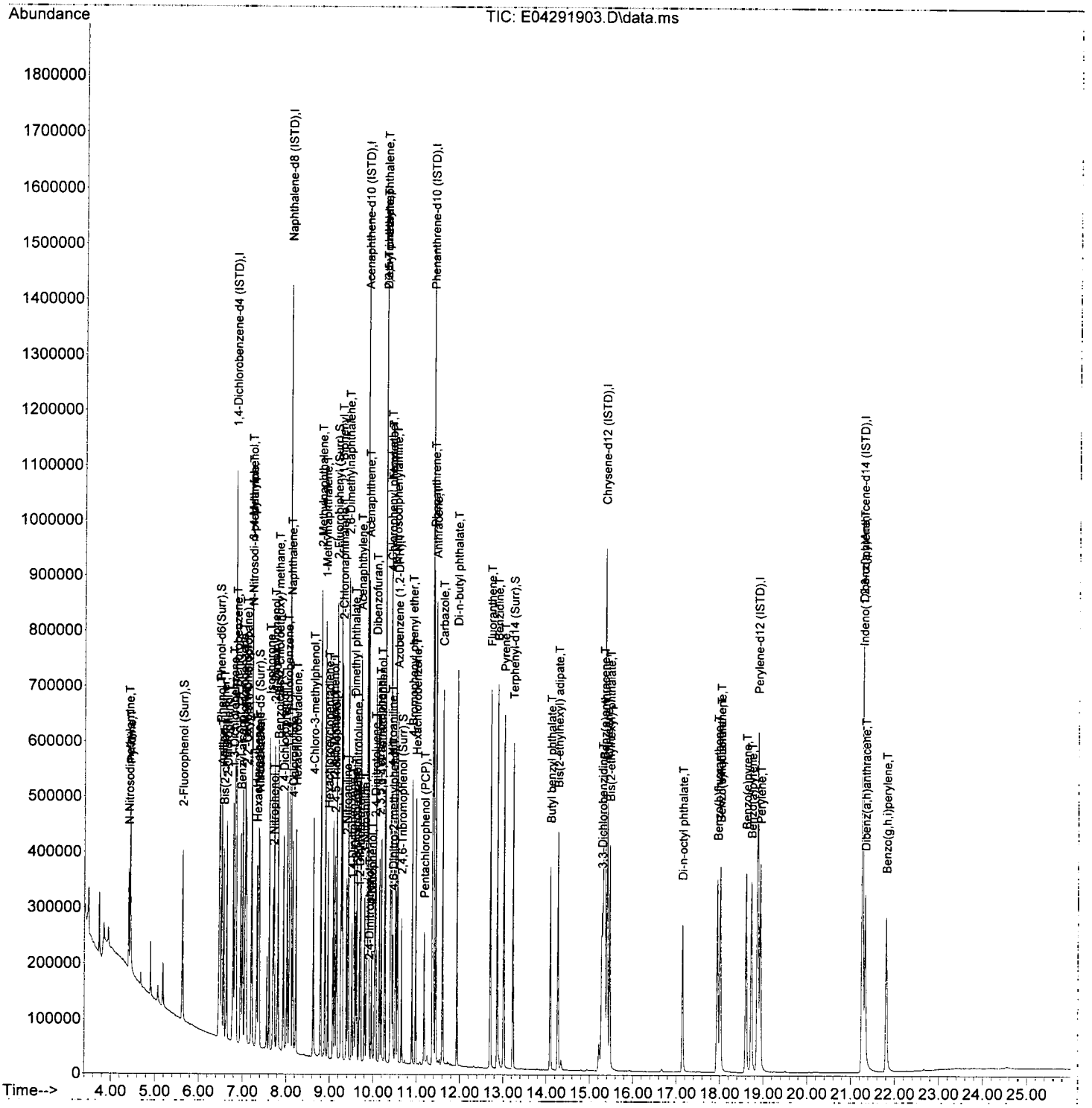
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.420	156	219173	1058.46	ng/ml	96
44) 1,4-Dinitrobenzene	9.511	168	32333	1265.24	ng/ml	90
45) Dimethyl phthalate	9.559	163	234666	1055.41	ng/ml	100
46) 1,3-Dinitrobenzene	9.591	168	37848	1163.61	ng/ml	92
47) 2,6-Dinitrotoluene	9.623	165	55419	1136.82	ng/ml	81
48) 1,2-Dinitrobenzene	9.682	168	26035	1184.97	ng/ml#	69
49) Acenaphthylene	9.709	152	359402	1065.03	ng/ml	100
50) 3-Nitroaniline	9.800	138	55323	990.54	ng/ml	96
51) Acenaphthene	9.886	153	235656	1029.89	ng/ml	99
52) 2,4-Dinitrophenol	9.907	184	16616	1242.94	ng/ml	80
53) 4-Nitrophenol	9.960	139	41890	1000.54	ng/ml	82
54) 2,4-Dinitrotoluene	10.035	165	70086	1120.48	ng/ml	87
55) Dibenzofuran	10.062	168	310834	1044.92	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.142	232	48646	1197.53	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	10.185	232	52766	1149.55	ng/ml	93
58) Diethyl phthalate	10.271	149	230198	1035.94	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.271	170	199134	1078.86	ng/ml	96
60) Fluorene	10.410	166	251718	1056.81	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.399	204	113871	1079.71	ng/ml	88
62) 4-Nitroaniline	10.420	138	57020	907.00	ng/ml	78
63) 4,6-Dinitro-2-methylph...	10.452	198	31083	1363.22	ng/ml	86
65) N-Nitrosodiphenylamine	10.517	169	208696	1072.56	ng/ml	97
66) Azobenzene (1,2-DPH)	10.559	77	263581	991.46	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.896	248	62027	1088.54	ng/ml	93
69) Hexachlorobenzene	10.982	284	65779	1147.55	ng/ml	94
70) Pentachlorophenol (PCP)	11.180	266	30148	1063.20	ng/ml	96
71) Phenanthrene	11.394	178	351128	1038.66	ng/ml	99
72) Anthracene	11.442	178	355498	1024.92	ng/ml	99
73) Carbazole	11.602	167	317560	977.81	ng/ml	99
74) Di-n-butyl phthalate	11.934	149	357706	880.27	ng/ml	99
75) Fluoranthene	12.704	202	360844	1029.05	ng/ml	97
76) Benzidine	12.865	184	360844	2961.10	ng/ml	99
77) Pyrene	13.020	202	372760	1046.46	ng/ml	99
80) Butyl benzyl phthalate	14.095	149	128835	786.48	ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.266	129	115950	711.30	ng/ml	98
82) 3,3-Dichlorobenzidine	15.282	252	126955	1392.10	ng/ml	99
83) Benz(a)anthracene	15.320	228	311153	984.97	ng/ml	97
84) Chrysene	15.405	228	310022	1030.18	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.464	149	187717	801.86	ng/ml	95
87) Di-n-octyl phthalate	17.144	149	226275	737.97	ng/ml	100
88) Benzo(b)fluoranthene	17.951	252	276341	1098.81	ng/ml	96
89) Benzo(k)fluoranthene	18.015	252	289400	1170.91	ng/ml	99
90) Benzo(b+k)fluoranthene	18.015	252	582155	2204.17	ng/ml	99
91) Benzo(e)pyrene	18.609	252	279691	1095.39	ng/ml	98
92) Benzo(a)pyrene	18.727	252	258104	1130.33	ng/ml	99
93) Perylene	18.935	252	284443	1089.90	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.273	276	215931	987.79	ng/ml	98
96) Dibenz(a,h)anthracene	21.332	278	209564	1046.83	ng/ml	97
97) Benzo(g,h,i)perylene	21.813	276	231360	1075.03	ng/ml	79

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291903.D
Acq On : 29 Apr 2019 9:18 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:45:26 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291904.D
Acq On : 29 Apr 2019 9:54 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DNT 4/29/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.837	152	178605	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.083	136	709322	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	315679	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	629354	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	629301	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	526665	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	453134	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)	7.377	82	191	1.43	ng/ml	0.01
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	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.222	70	90	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.628	82	78	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	8.104	128	96	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291904.D
Acq On : 29 Apr 2019 9:54 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

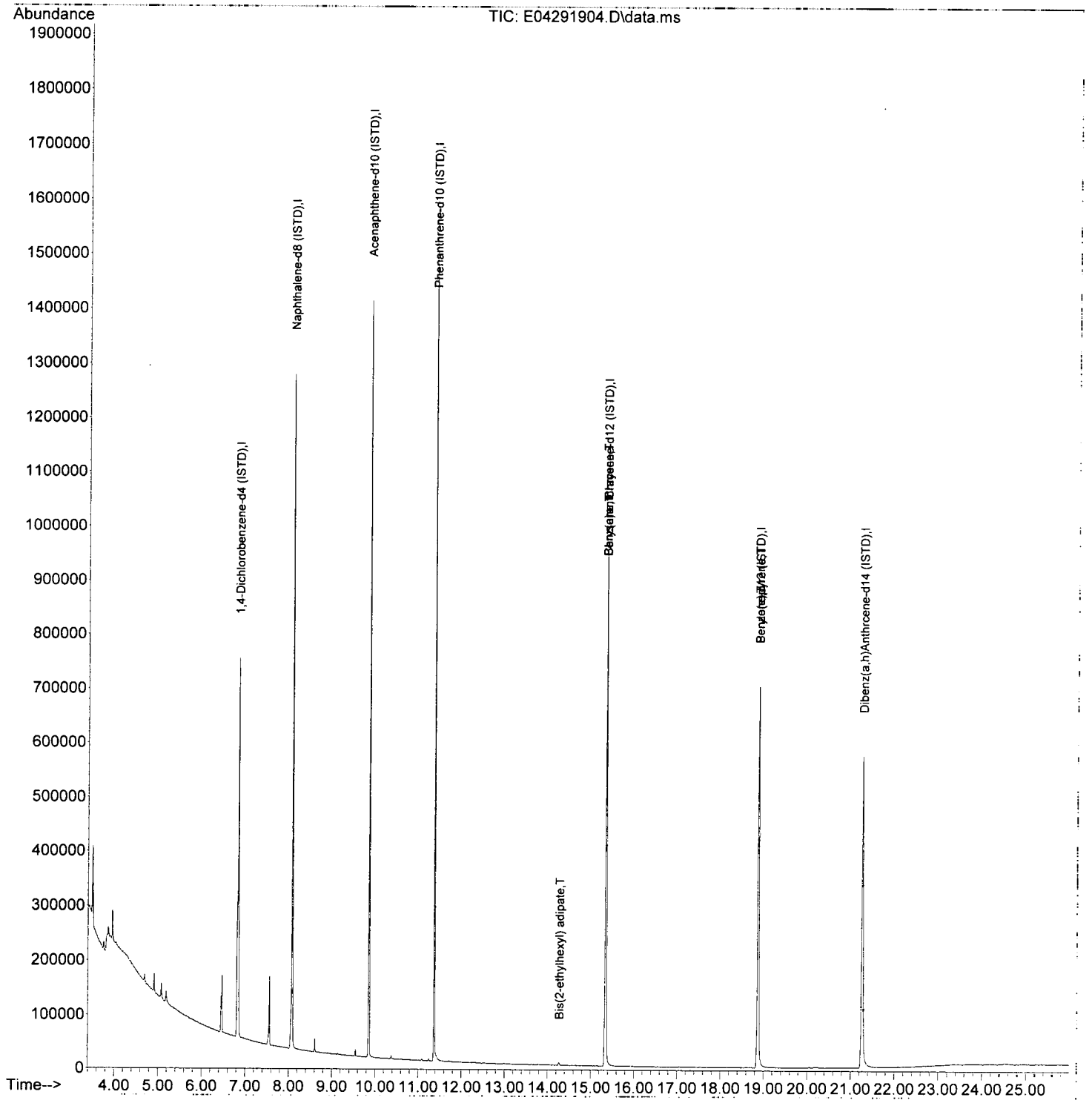
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.864	153	82	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.367	178	201	N.D.	
72) Anthracene	11.367	178	201	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	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	1408	7.69 ng/ml	95
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.341	228	1460	4.11 ng/ml	61
84) Chrysene	15.341	228	1432	4.23 ng/ml	60
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	18.871	252	1823	6.45 ng/ml#	13
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.871	252	1823	6.31 ng/ml	72
95) Indeno(1,2,3-cd)pyrene	21.267	276	185	N.D.	
96) Dibenz(a,h)anthracene	21.273	278	64	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 : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291904.D
Acq On : 29 Apr 2019 9:54 am
Operator : JK/ AMS /DTH
Sample : 9D29024-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291905.D
Acq On : 29 Apr 2019 10:30 am
Operator : JK/ AMS /DTH
Sample : A9D0674-12@40
Misc : 40x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:58 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

R2.1
DTH 4/29/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	207771	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.083	136	760649	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	368359	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	637219	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	552995	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	451931	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	391870	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.644	112	3188	24.61 ng/ml	0.01
5) Phenol-d6(Surr)	6.484	99	3181	18.36 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.377	82	3409	21.94 ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.158	172	10021	36.58 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.666	330	407	32.86 ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.228	244	12039	46.60 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.333	74	51	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	0.000		0	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.206	70	142	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.618	82	53	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	8.104	128	1612	3.97 ng/ml	91
30) 4-Chloroaniline	8.099	127	164	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.810	142	297	N.D.	
34) 1-Methylnaphthalene	8.901	142	88	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	9.265	154	126	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291905.D
Acq On : 29 Apr 2019 10:30 am
Operator : JK/ AMS /DTH
Sample : A9D0674-12@40
Misc : 40x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:58 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

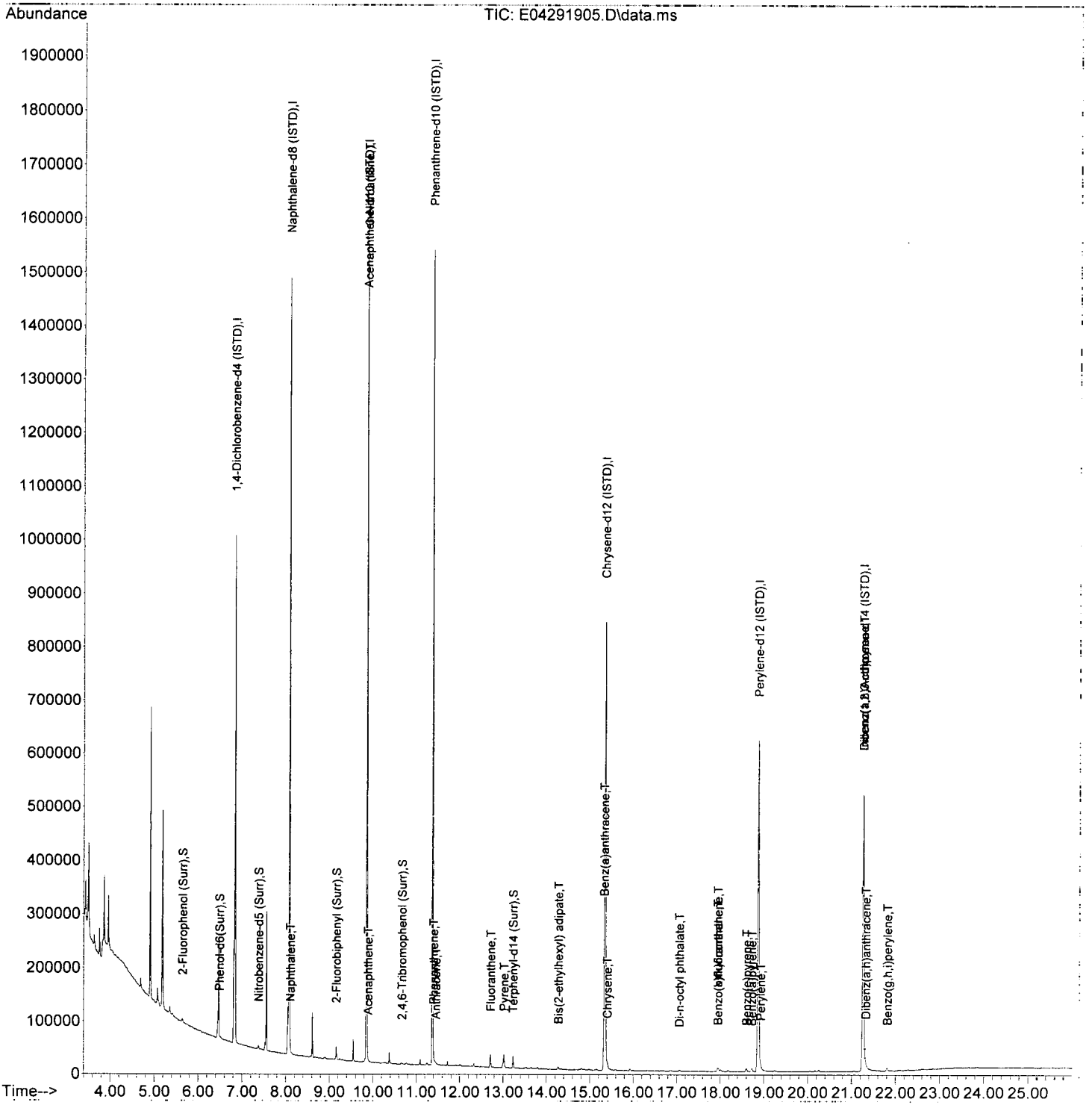
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.436	156	135	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.714	152	233	N.D.	
50) 3-Nitroaniline	9.859	138	90	30.64 ng/ml#	1
51) Acenaphthene	9.885	153	1022	4.20 ng/ml	94
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
55) Dibenzofuran	10.073	168	206	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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.260	170	100	N.D.	
60) Fluorene	10.415	166	454	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)	10.511	77	73	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	7140	20.41 ng/ml	98
72) Anthracene	11.447	178	1495	4.17 ng/ml	99
73) Carbazole	11.613	167	460	N.D.	
74) Di-n-butyl phthalate	11.939	149	190	N.D.	
75) Fluoranthene	12.709	202	13703	37.77 ng/ml	97
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	15456	41.94 ng/ml	98
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	1128	7.01 ng/ml	89
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.325	228	7543	24.18 ng/ml	96
84) Chrysene	15.400	228	7905	26.60 ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.464	149	222	N.D.	
87) Di-n-octyl phthalate	17.058	149	59	30.87 ng/ml	71
88) Benzo(b)fluoranthene	17.946	252	7250	30.36 ng/ml	95
89) Benzo(k)fluoranthene	17.946	252	9435	40.21 ng/ml	96
90) Benzo(b+k)fluoranthene	17.946	252	10212	40.73 ng/ml	96
91) Benzo(e)pyrene	18.604	252	4557	18.80 ng/ml	91
92) Benzo(a)pyrene	18.721	252	4690	21.63 ng/ml	97
93) Perylene	18.925	252	2611	10.54 ng/ml	95
95) Indeno(1,2,3-cd)pyrene	21.262	276	5549	25.83 ng/ml	56
96) Dibenz(a,h)anthracene	21.321	278	982	4.99 ng/ml	70
97) Benzo(g,h,i)perylene	21.813	276	4239	20.05 ng/ml	77

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291905.D
Acq On : 29 Apr 2019 10:30 am
Operator : JK/ AMS /DTH
Sample : A9D0674-12@40
Misc : 40x, 8270D LL PAH
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:46:58 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	204552	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.083	136	809537	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	381207	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.372	188	677319	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	621625	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	529242	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	463714	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.644	112	2918	22.88 ng/ml	0.01
5) Phenol-d6(Surr)	6.484	99	4192	24.58 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.372	82	3505	22.92 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	9347	32.97 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	635	41.46 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	12234	42.12 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.451	74	100	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.510	94	207	N.D.	
7) Aniline	6.510	93	1257	5.40 ng/ml#	53
8) Bis(2-chloroethyl) ether	6.569	93	676	4.63 ng/ml#	19
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.981	108	151	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	6.992	107	50	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.115	45	123	N.D.	
16) N-Nitrosodi-n-propylamine	7.222	70	84	N.D.	
17) 3+4-Methylphenol	7.227	107	54	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.612	82	464	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	8.104	128	3249	7.52 ng/ml	96
30) 4-Chloroaniline	8.104	127	445	2.99 ng/ml#	33
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.794	142	682	2.51 ng/ml	79
34) 1-Methylnaphthalene	8.901	142	404	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	9.265	154	361	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

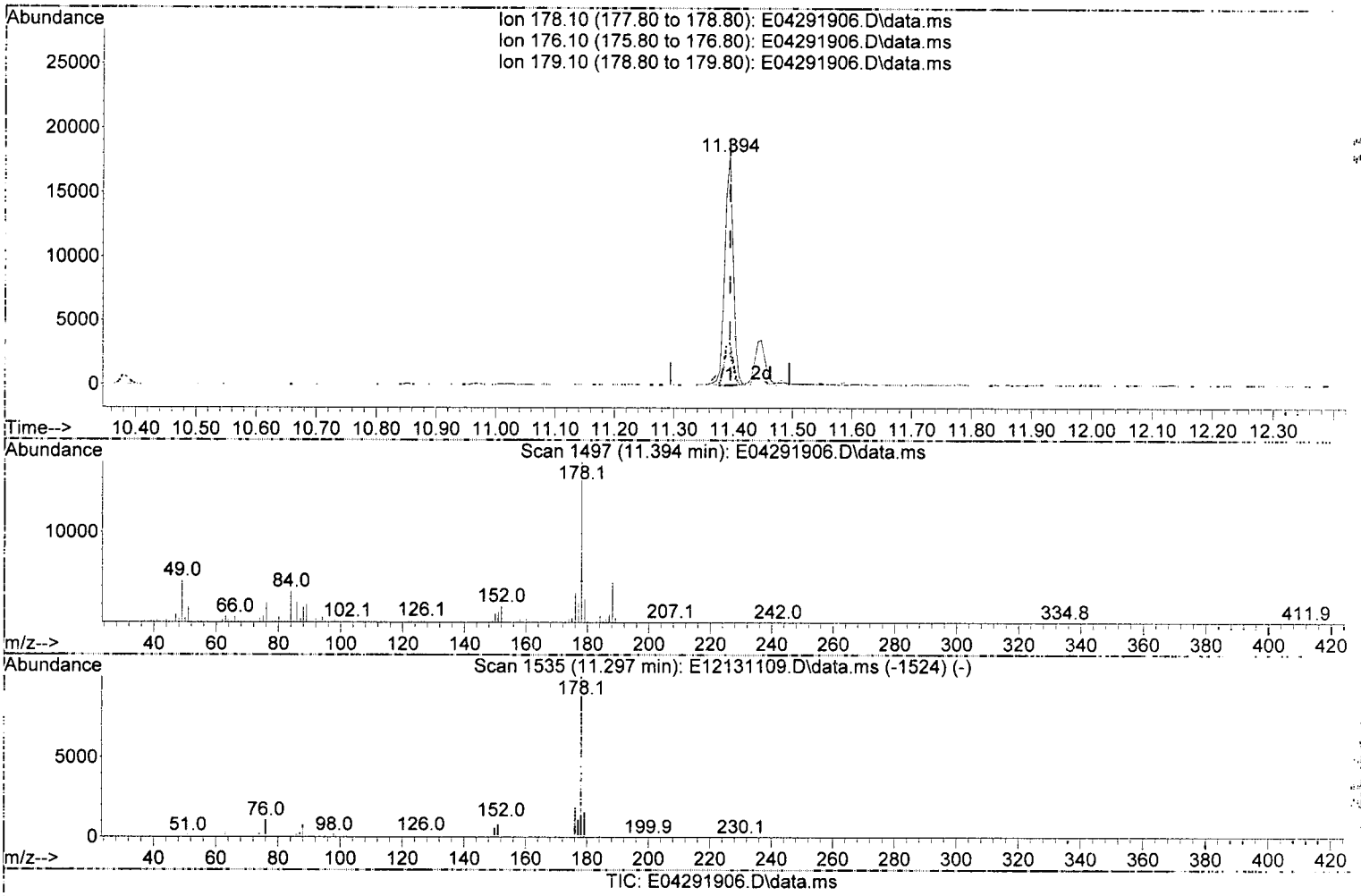
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.425	156	341	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.709	152	613	N.D.	
50) 3-Nitroaniline	9.848	138	84	30.50 ng/ml#	1
51) Acenaphthene	9.885	153	1705	6.77 ng/ml	93
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
55) Dibenzofuran	10.067	168	567	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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.260	170	828	4.08 ng/ml	96
60) Fluorene	10.410	166	1459	5.57 ng/ml	98
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	10.527	169	144	N.D.	
66) Azobenzene (1,2-DPH)	10.570	77	172	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	17749	47.74 ng/ml	99
72) Anthracene	11.447	178	4137	10.85 ng/ml	99
73) Carbazole	11.608	167	1383	3.87 ng/ml	96
74) Di-n-butyl phthalate	11.934	149	213	N.D.	
75) Fluoranthene	12.704	202	34179	88.64 ng/ml	96
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	38482	98.24 ng/ml	98
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	1024	5.66 ng/ml	92
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.325	228	15085	43.02 ng/ml MOS	92
84) Chrysene	15.405	228	17890	53.56 ng/ml MOS	97
85) Bis(2-ethylhexyl) phth...	15.475	149	247	N.D.	
87) Di-n-octyl phthalate	17.063	149	65	30.86 ng/ml#	1
88) Benzo(b)fluoranthene	17.946	252	17488	62.54 ng/ml MOS	95
89) Benzo(k)fluoranthene	~~17.946~~	~~252~~	~~21849~~	~~79.51 ng/ml~~	~~94~~ mI Hit J
90) Benzo(b+k)fluoranthene	17.946	252	24901	84.80 ng/ml	94
91) Benzo(e)pyrene	18.604	252	11436	40.28 ng/ml	99
92) Benzo(a)pyrene	18.721	252	12759	50.26 ng/ml	96
93) Perylene	18.925	252	5451	~~18.79~~ ng/ml	98
95) Indeno(1,2,3-cd)pyrene	21.267	276	11636	45.78 ng/ml	79
96) Dibenz(a,h)anthracene	21.326	278	1828	~~7.85~~ ng/ml	85
97) Benzo(g,h,i)perylene	21.808	276	10615	42.42 ng/ml	80

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(71) Phenanthrene (T)

11.394min (-0.000) 47.74 ng/ml

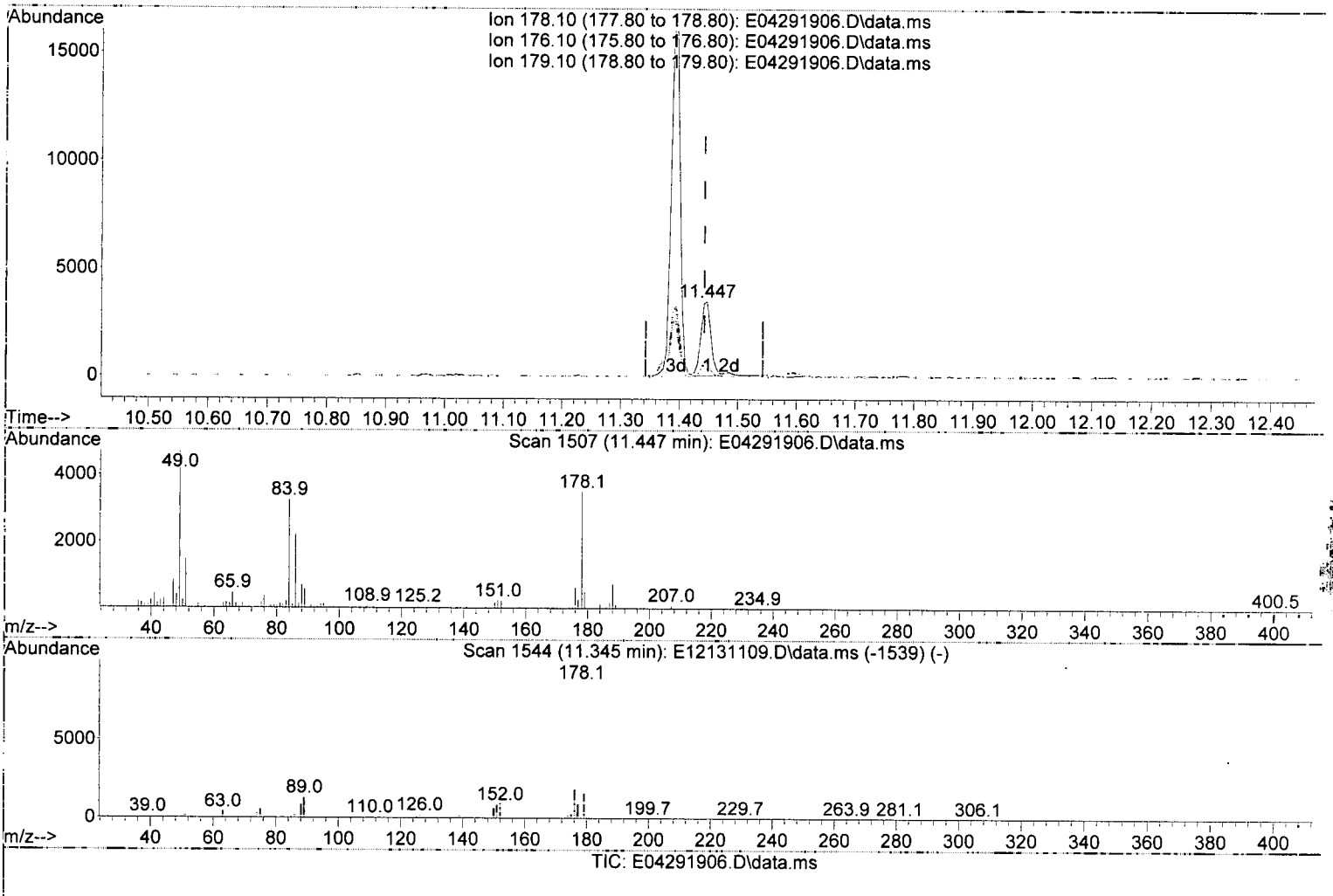
response 17749

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.50
179.10	15.00	14.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(72) Anthracene (T)

11.447min (+ 0.005) 10.85 ng/ml J

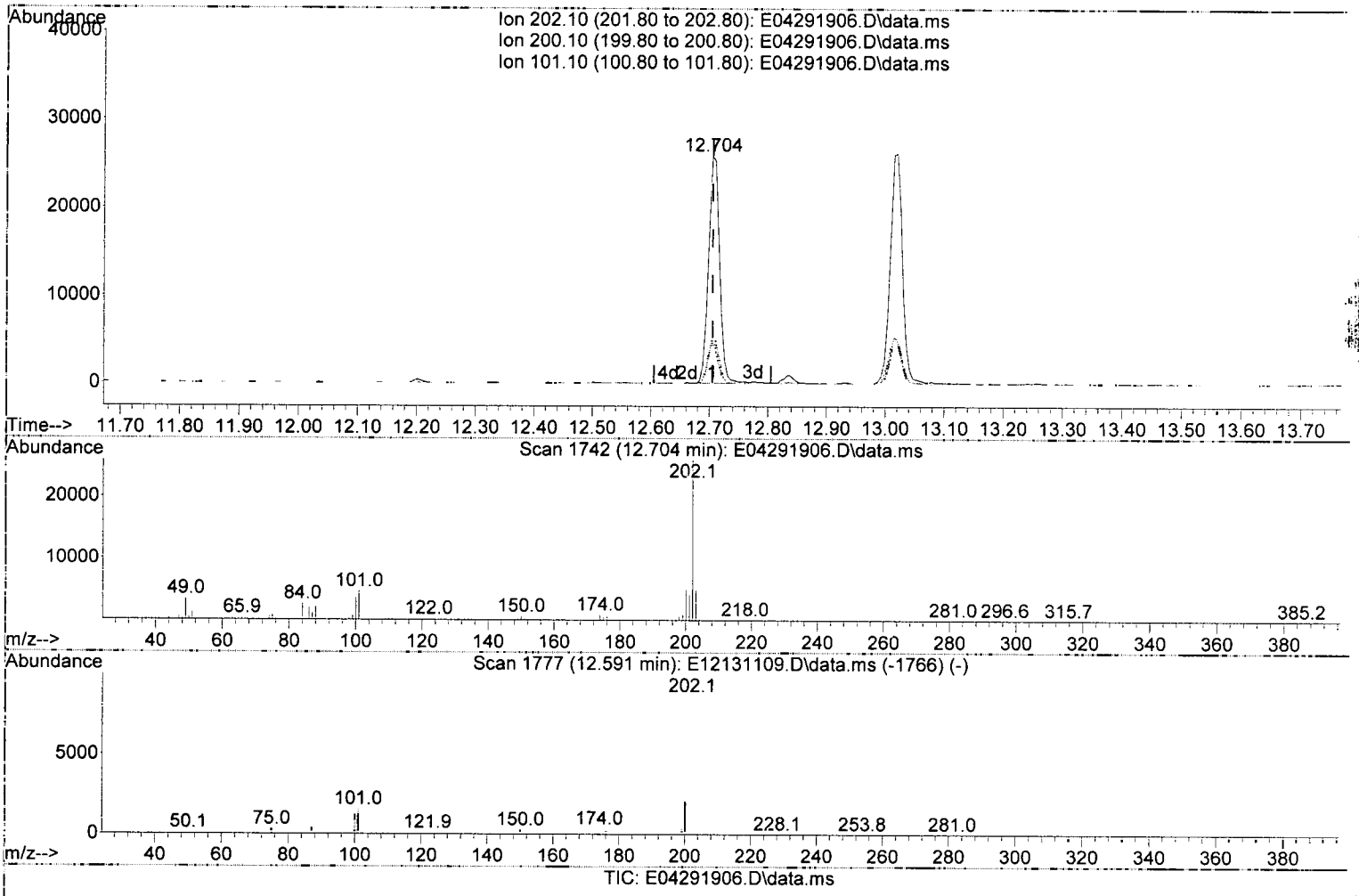
response 4137

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.48
179.10	15.50	14.98
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 88.64 ng/ml

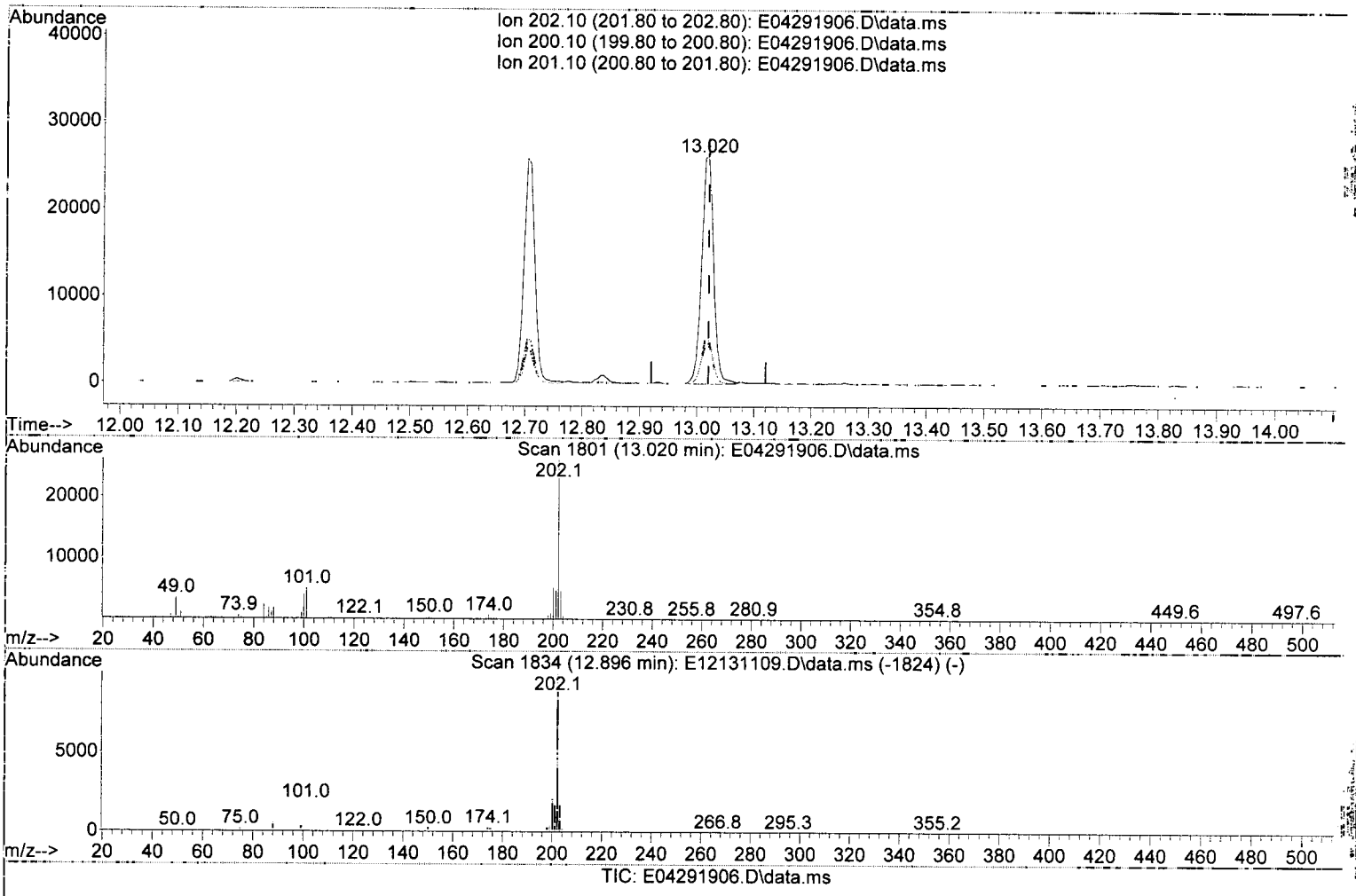
response 34179

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.27
101.10	15.70	18.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(77) Pyrene (T)

13.020min (-0.000) 98.24 ng/ml

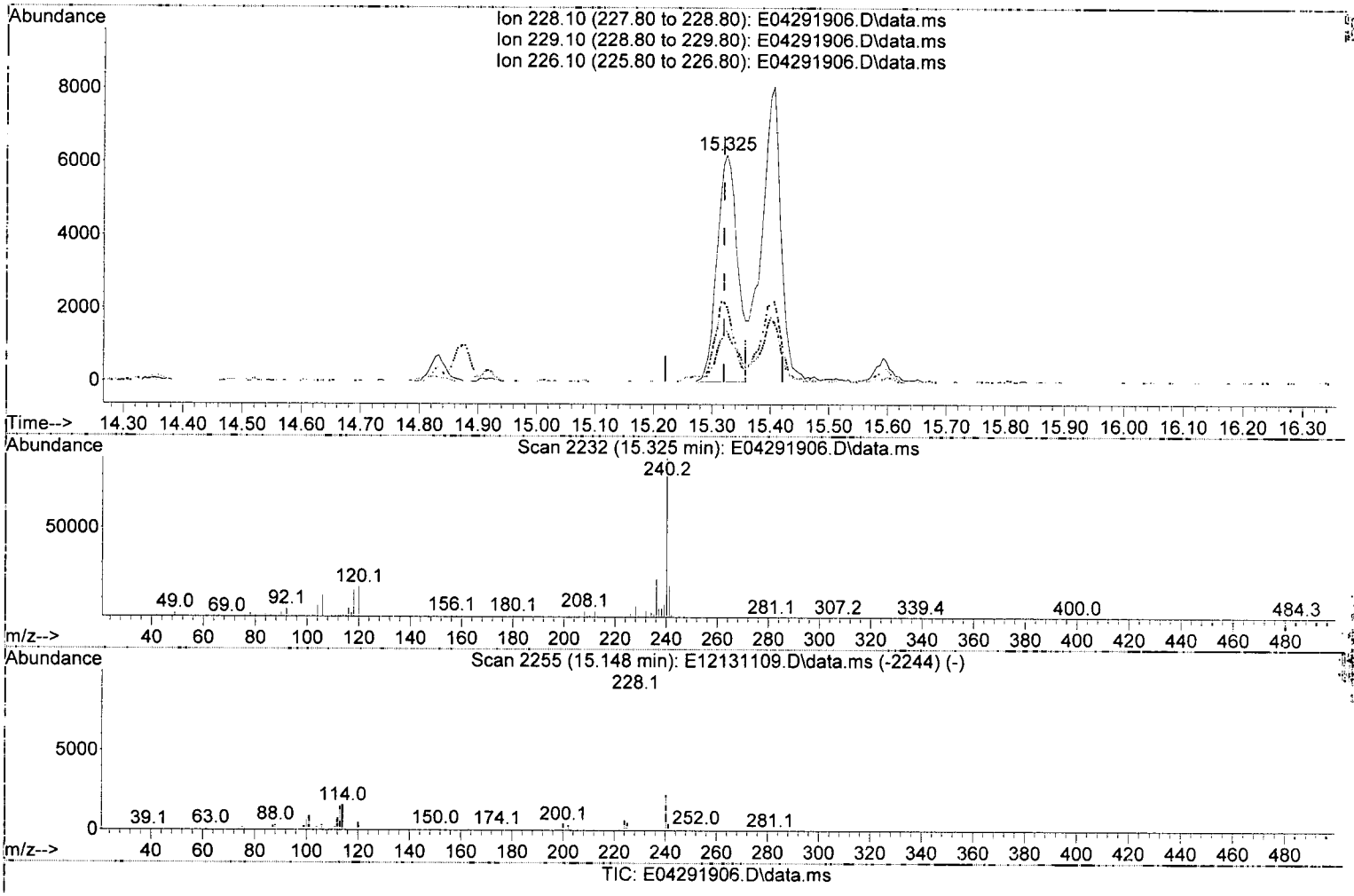
response 38482

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	19.59
201.10	17.50	17.86
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(83) Benz(a)anthracene (T)

15.325min (+ 0.005) 43.02 ng/ml MOS

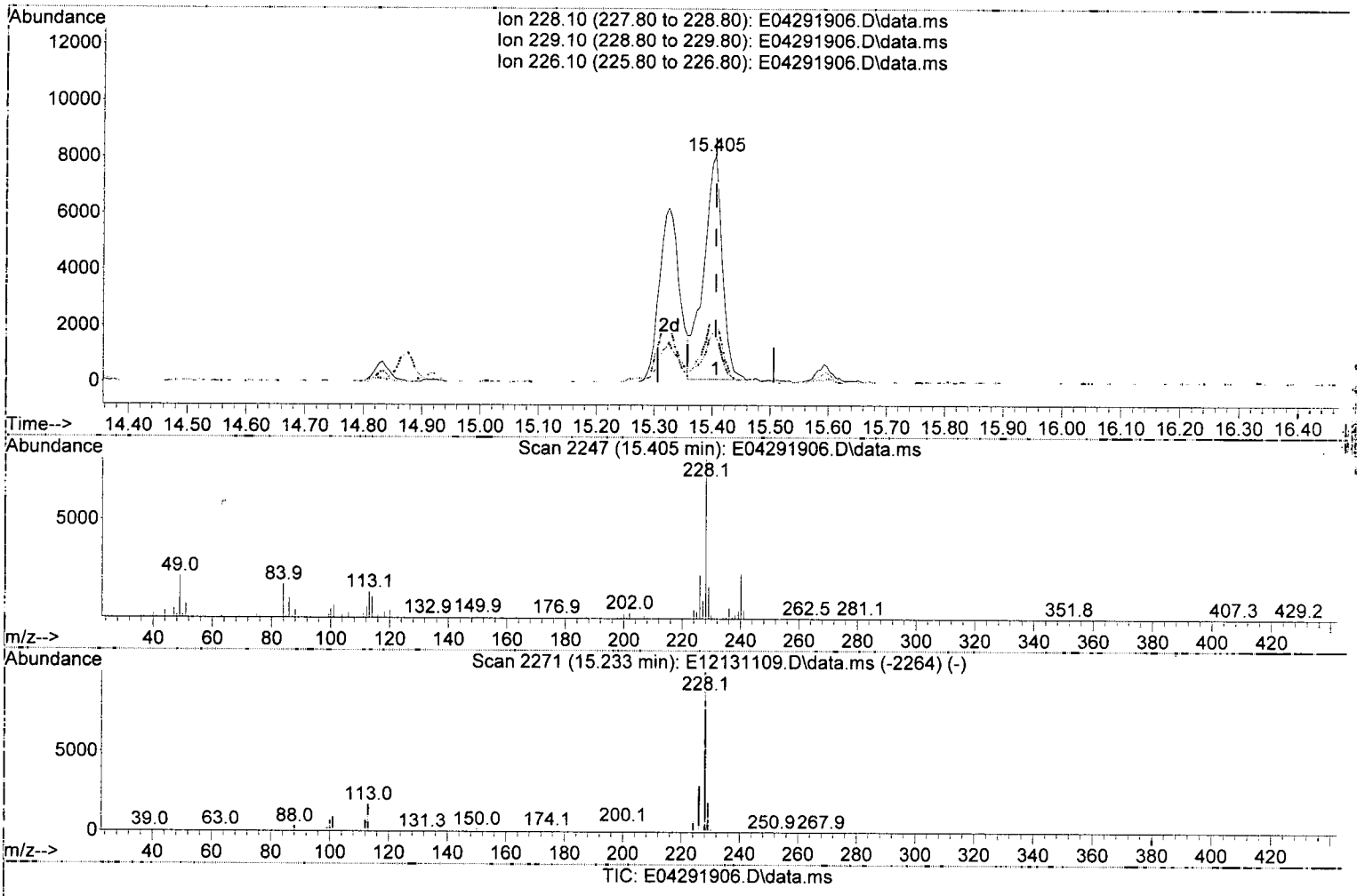
response 15085

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	22.68
226.10	27.80	32.92
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(84) Chrysene (T)

15.405min (-0.000) 53.56 ng/ml MOS

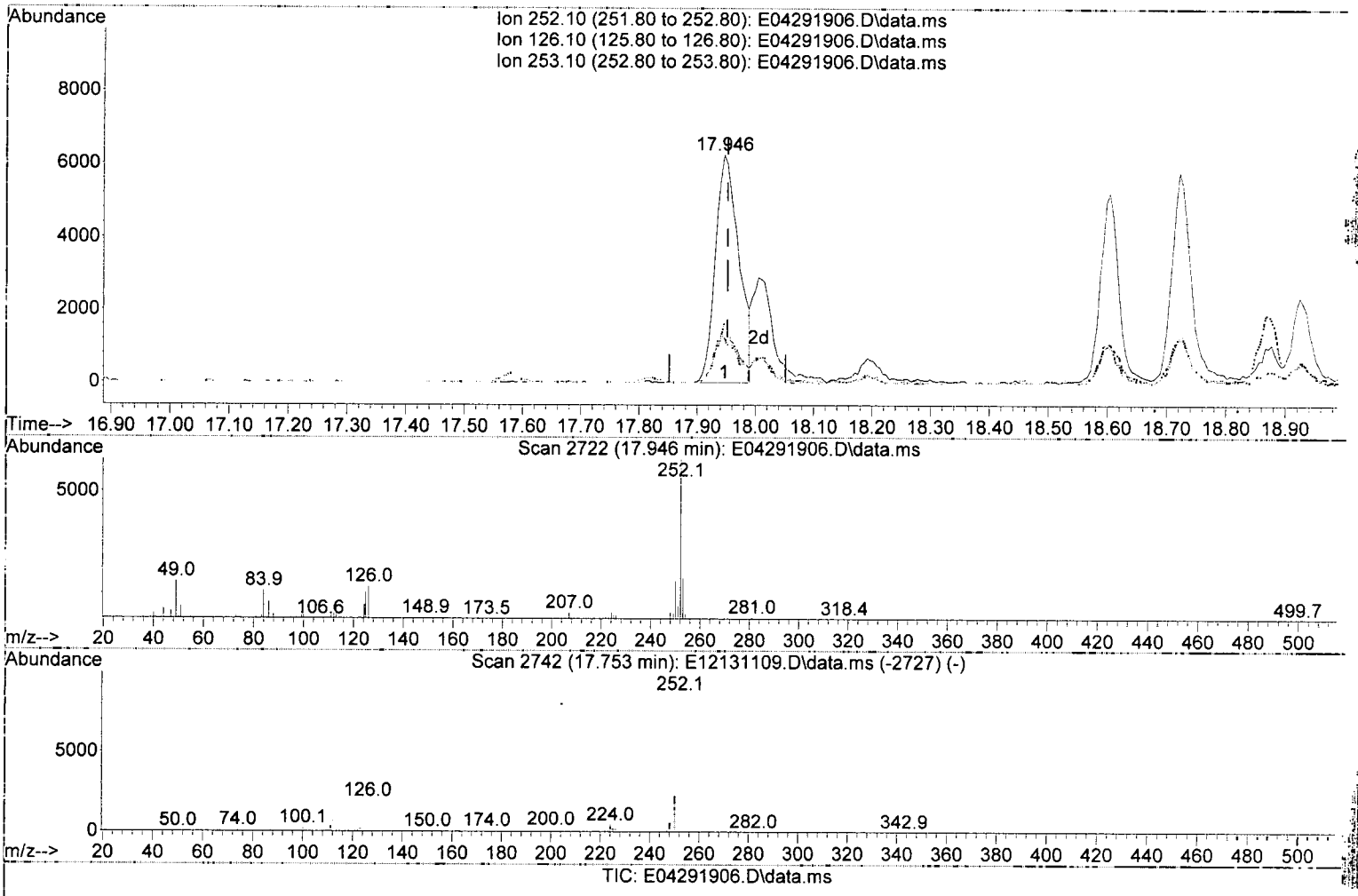
response 17890

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	20.26
226.10	29.80	27.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(88) Benzo(b)fluoranthene (T)

17.946min (-0.005) 62.54 ng/ml MOS

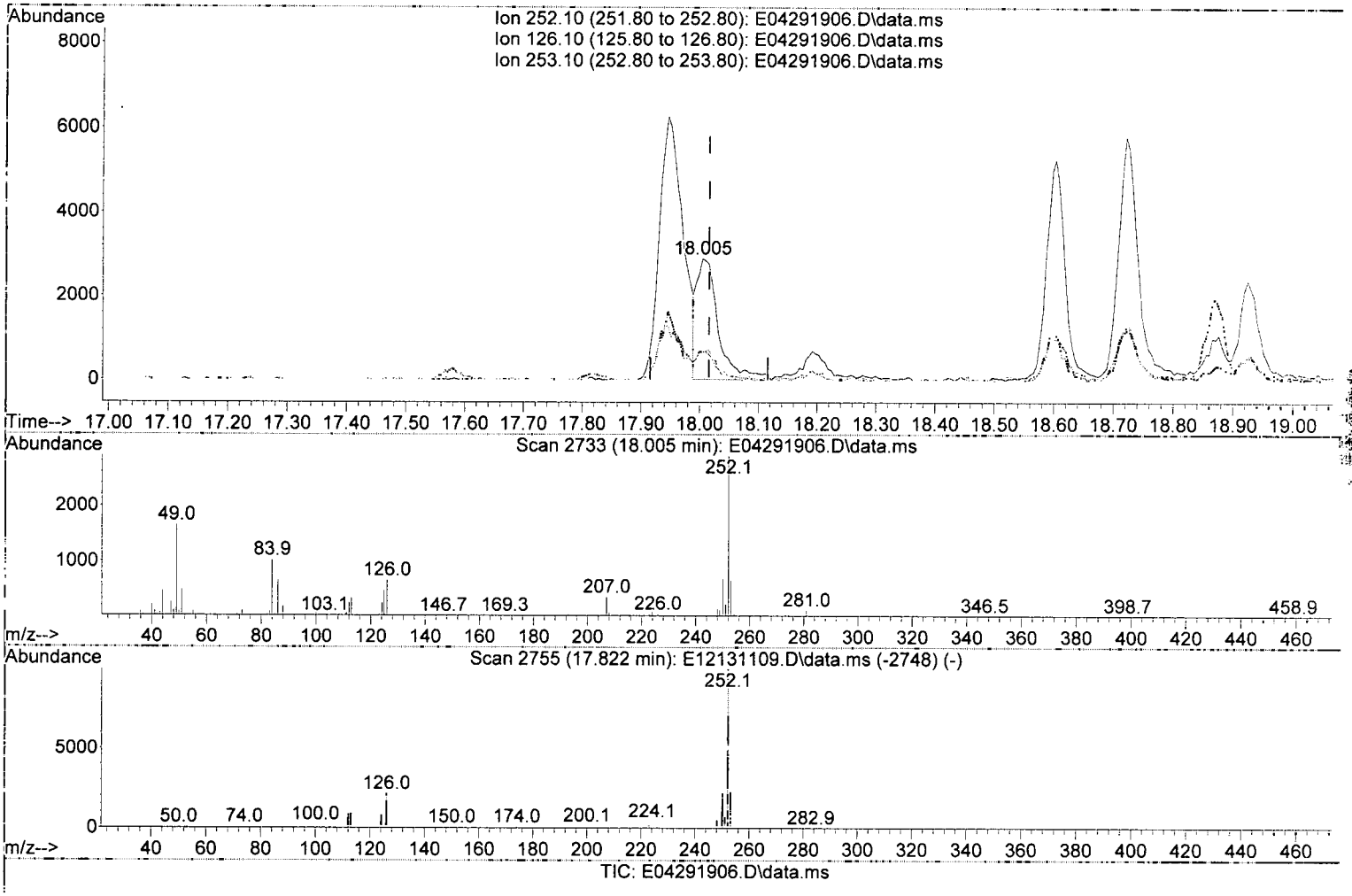
response 17488

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	20.58
253.10	22.40	25.99
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.005min (-0.011) 25.10 ng/ml (m) J

DM 4/30/19

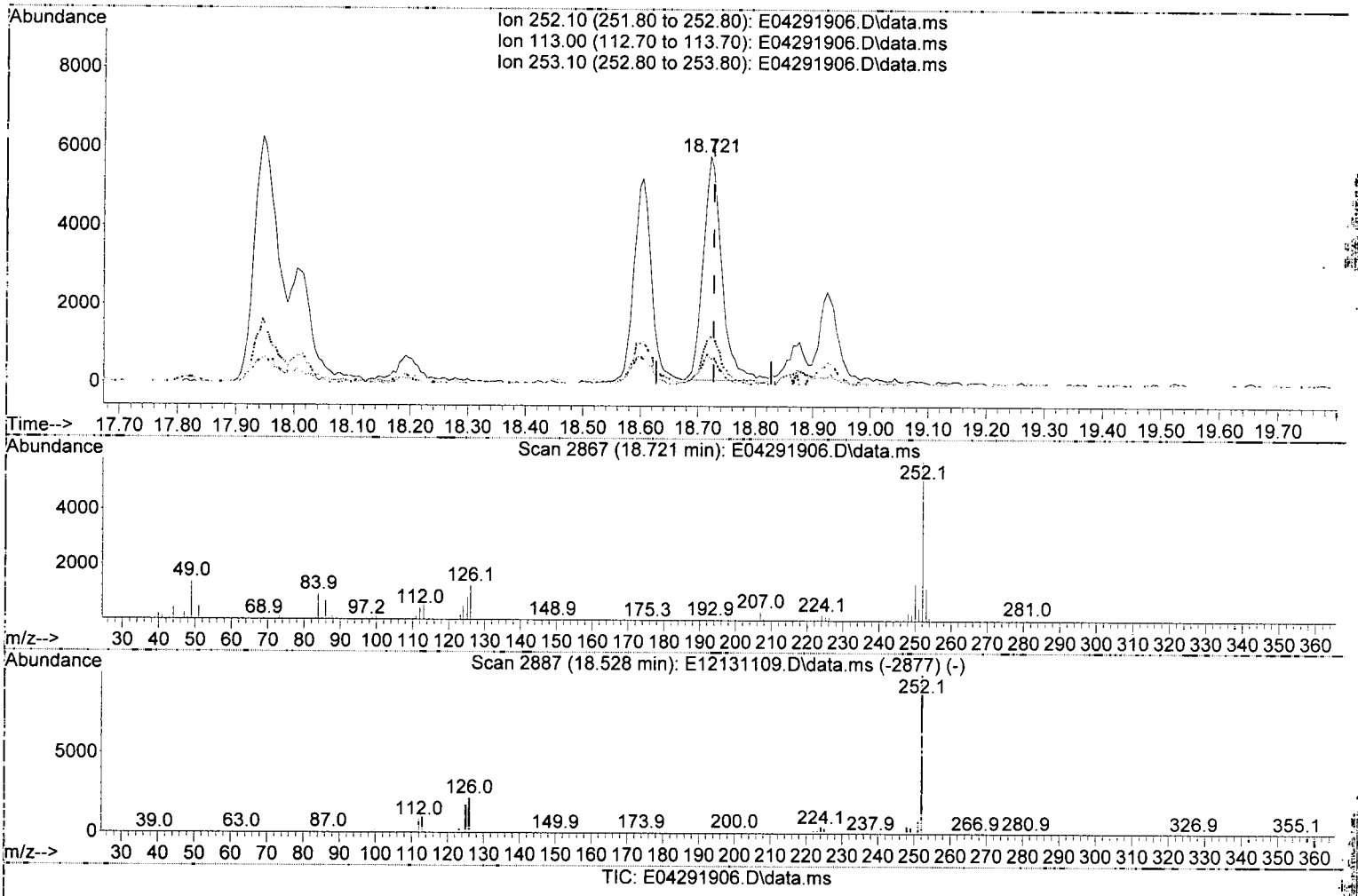
response 6898

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.81
253.10	21.80	22.95
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(92) Benzo(a)pyrene (T)

18.721min (-0.005) 50.26 ng/ml

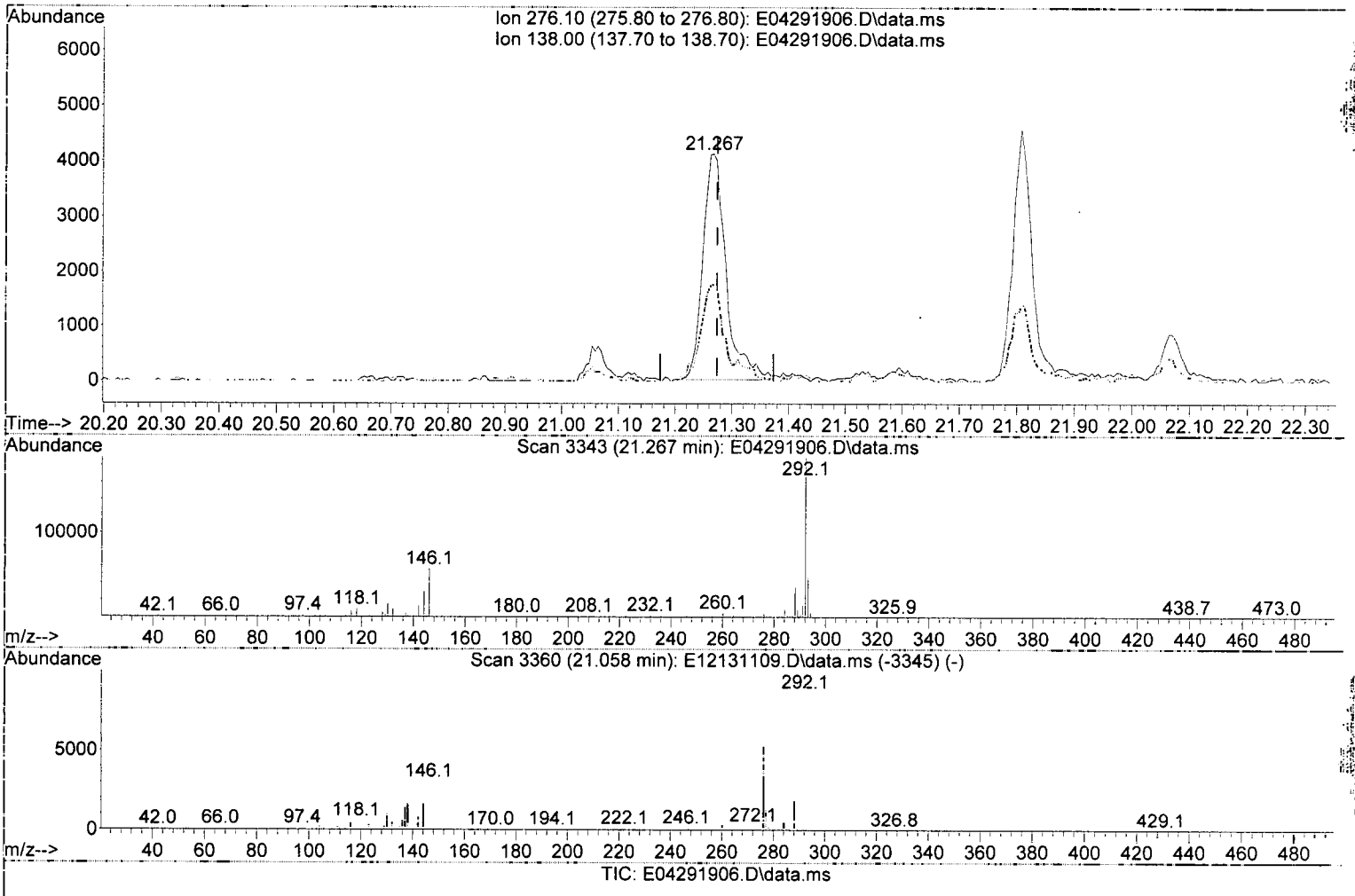
response 12759

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	10.61
253.10	21.70	20.41
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.267min (-0.005) 45.78 ng/ml

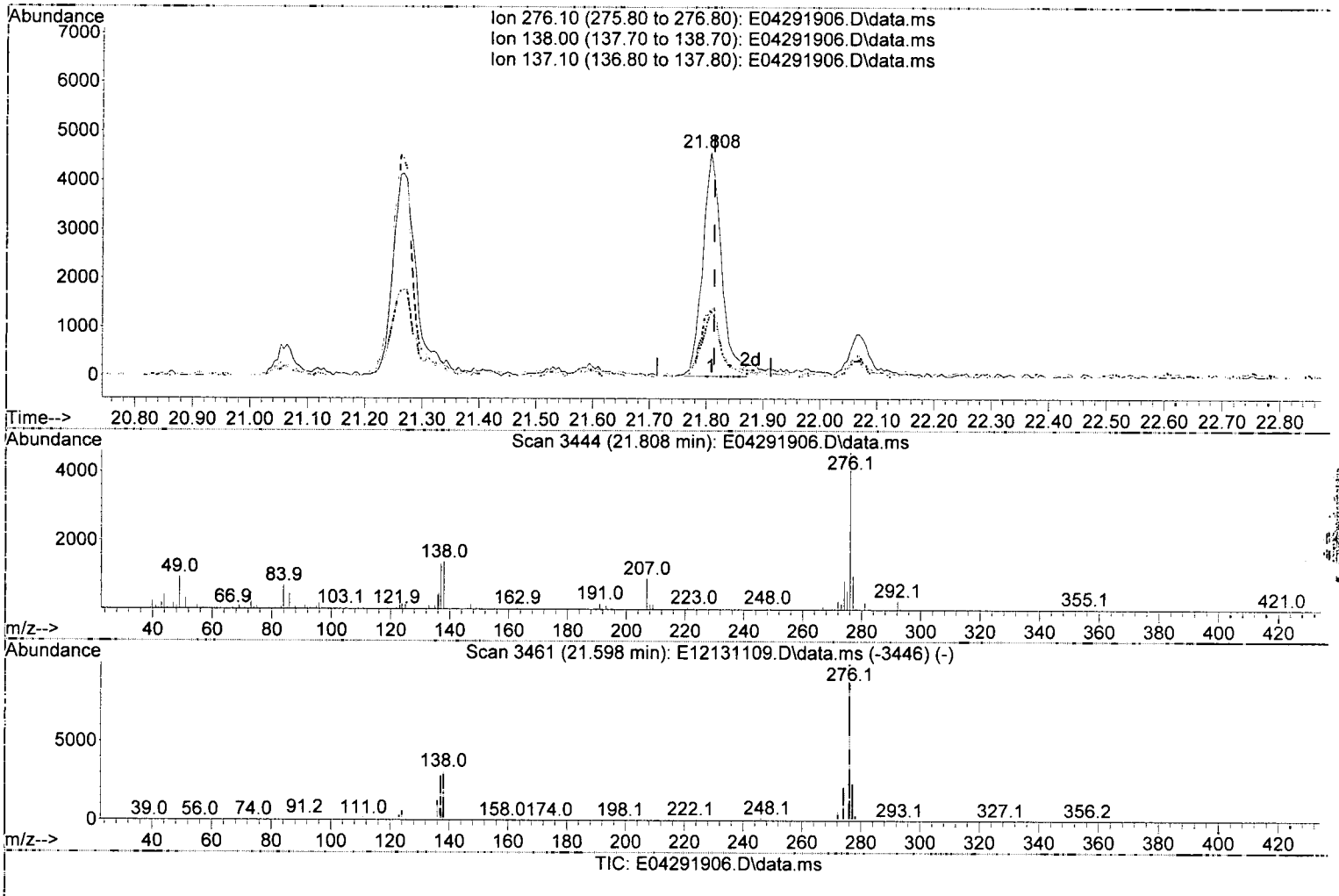
response 11636

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	42.67
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291906.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.808min (-0.005) 42.42 ng/ml

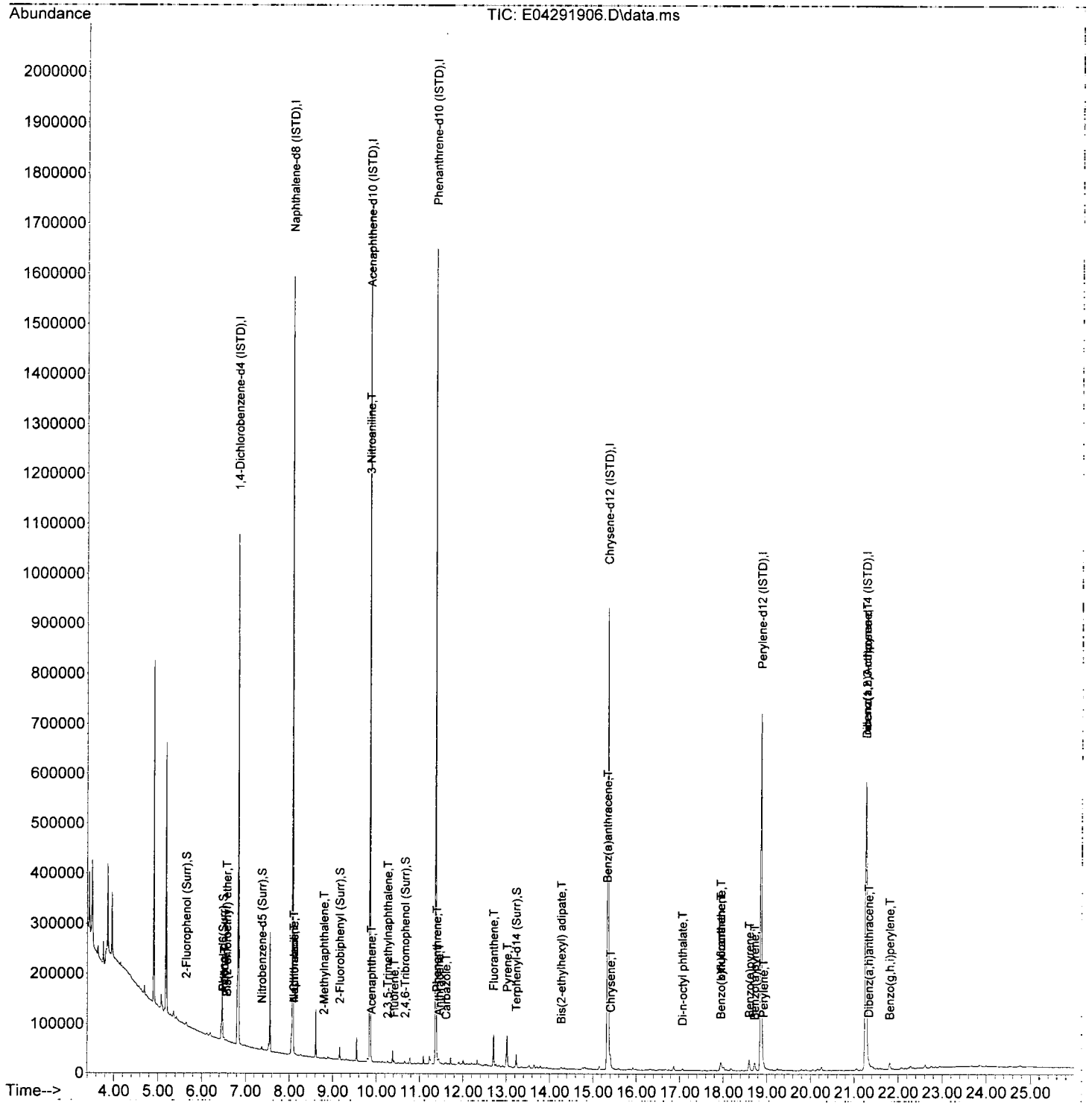
response 10615

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	30.19
137.10	39.00	28.97
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291906.D
Acq On : 29 Apr 2019 11:07 am
Operator : JK/ AMS /DTH
Sample : A9D0674-13@40
Misc : 40x, 8270D LL PAH
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291907.D
Acq On : 29 Apr 2019 11:43 am
Operator : JK/ AMS /DTH
Sample : A9D0674-14@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RR1

Quant Time: Apr 29 19:47:06 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	197602	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	769135	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	371495	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	656031	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	592264	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	503056	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	438923	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.639	112	3326	27.00 ng/ml	0.00
5) Phenol-d6(Surr)	6.484	99	4116	24.98 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.372	82	3995	27.04 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	8838	31.99 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	656	43.25 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	11601	41.92 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.344	74	58	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.510	94	95	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.976	108	145	N.D.	
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	6.981	107	60	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.104	45	102	N.D.	
16) N-Nitrosodi-n-propylamine	7.152	70	119	N.D.	
17) 3+4-Methylphenol	0.000		0	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.634	82	53	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	8.099	128	2851	6.95 ng/ml	97
30) 4-Chloroaniline	8.104	127	390	2.76 ng/ml#	46
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.800	142	529	N.D.	
34) 1-Methylnaphthalene	8.896	142	256	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	9.265	154	246	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291907.D
Acq On : 29 Apr 2019 11:43 am
Operator : JK/ AMS /DTH
Sample : A9D0674-14@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:06 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

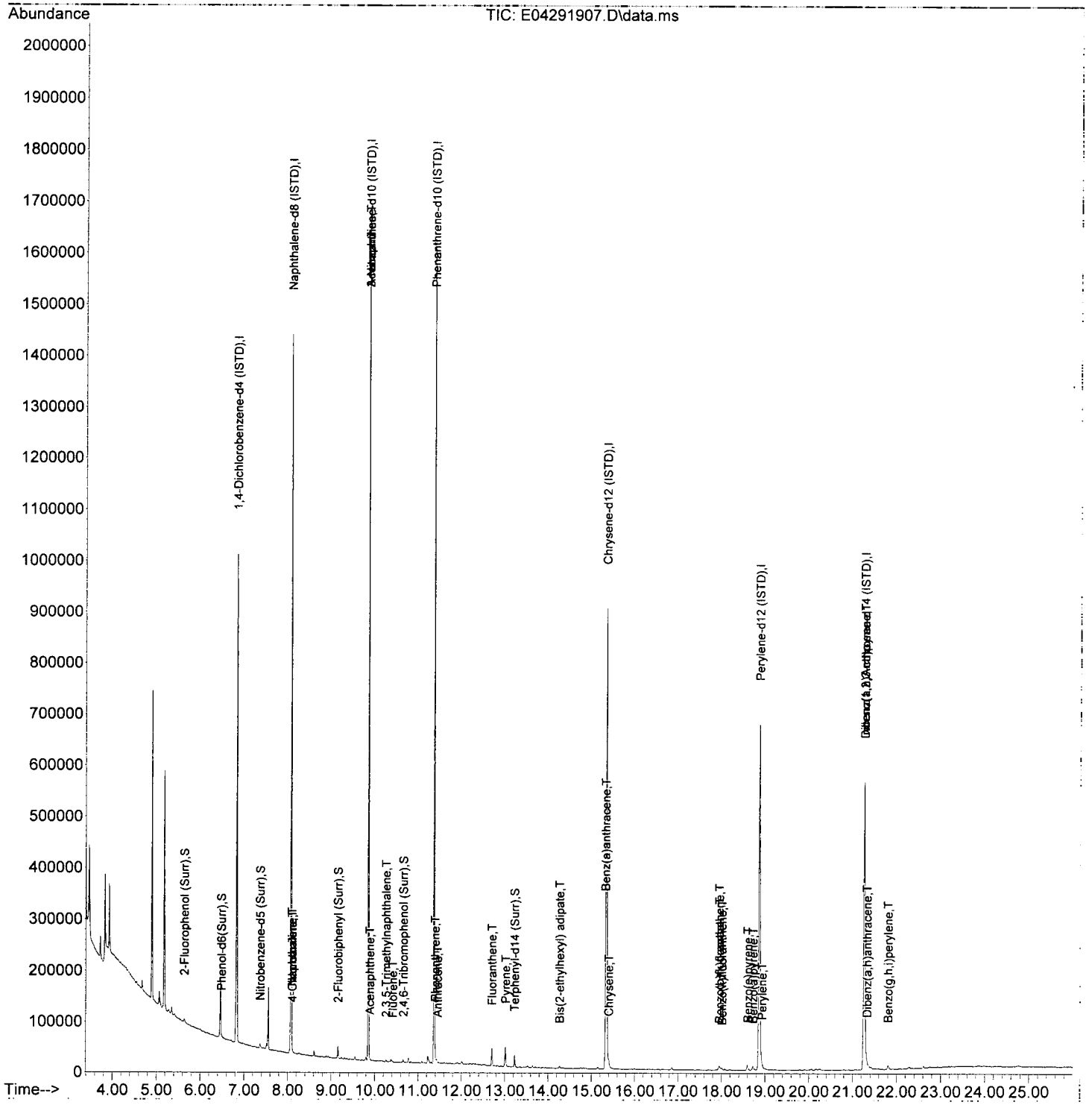
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.431	156	246	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.709	152	624	N.D.	
50) 3-Nitroaniline	9.853	138	66	30.23 ng/ml#	1
51) Acenaphthene	9.885	153	654	2.67 ng/ml	80
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
55) Dibenzofuran	10.067	168	288	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	10.265	149	64	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.260	170	697	3.52 ng/ml	77
60) Fluorene	10.415	166	854	3.34 ng/ml	94
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)	10.565	77	120	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	10060	27.94 ng/ml	96
72) Anthracene	11.447	178	2557	6.92 ng/ml	97
73) Carbazole	11.608	167	701	N.D.	
74) Di-n-butyl phthalate	11.939	149	165	N.D.	
75) Fluoranthene	12.704	202	19474	52.14 ng/ml	99
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	23665	62.37 ng/ml	98
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	957	5.55 ng/ml	94
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.325	228	9057	27.11 ng/ml	88
84) Chrysene	15.400	228	8853	27.82 ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.475	149	190	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.951	252	8805	33.13 ng/ml	98
89) Benzo(k)fluoranthene	18.010	252	2745	10.51 ng/ml	91
90) Benzo(b+k)fluoranthene	17.951	252	12516	44.84 ng/ml	97
91) Benzo(e)pyrene	18.604	252	5982	22.17 ng/ml	98
92) Benzo(a)pyrene	18.721	252	6287	26.05 ng/ml	95
93) Perylene	18.930	252	2996	10.86 ng/ml	94
95) Indeno(1,2,3-cd)pyrene	21.267	276	6922	28.77 ng/ml	64
96) Dibenz(a,h)anthracene	21.326	278	937	4.25 ng/ml	96
97) Benzo(g,h,i)perylene	21.808	276	6529	27.57 ng/ml	75

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291907.D
Acq On : 29 Apr 2019 11:43 am
Operator : JK/ AMS /DTH
Sample : A9D0674-14@40
Misc : 40x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:06 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291908.D
Acq On : 29 Apr 2019 12:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-15@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPV

Quant Time: Apr 29 19:47:10 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	193396	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	761977	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	371639	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	681349	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	611513	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.876	264	524560	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	463839	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.639	112	4045	33.55 ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	5668	35.15 ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	4912	33.97 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	9268	33.53 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	771	47.03 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	7715	27.00 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.430	74	50	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.489	94	406	N.D.	
7) Aniline	0.000		0	N.D.	
8) Bis(2-chloroethyl) ether	0.000		0	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.965	108	761	9.50 ng/ml	94
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.061	107	52	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.104	45	152	N.D.	
16) N-Nitrosodi-n-propylamine	7.200	70	75	N.D.	
17) 3+4-Methylphenol	7.222	107	126	N.D.	
18) Hexachloroethane	7.377	117	62	N.D.	
20) Nitrobenzene	7.345	77	76	N.D.	
22) Isophorone	7.607	82	158	N.D.	
23) 2-Nitrophenol	0.000		0	N.D.	
24) 2,4-Dimethylphenol	7.783	122	67	N.D.	
25) Bis(2-chloroethoxy) me...	0.000		0	N.D.	
26) Benzoic acid	7.805	105	167	401.69 ng/ml#	31
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.104	128	377	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	8.794	142	175	N.D.	
34) 1-Methylnaphthalene	8.891	142	73	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.	

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291908.D
Acq On : 29 Apr 2019 12:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-15@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:10 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

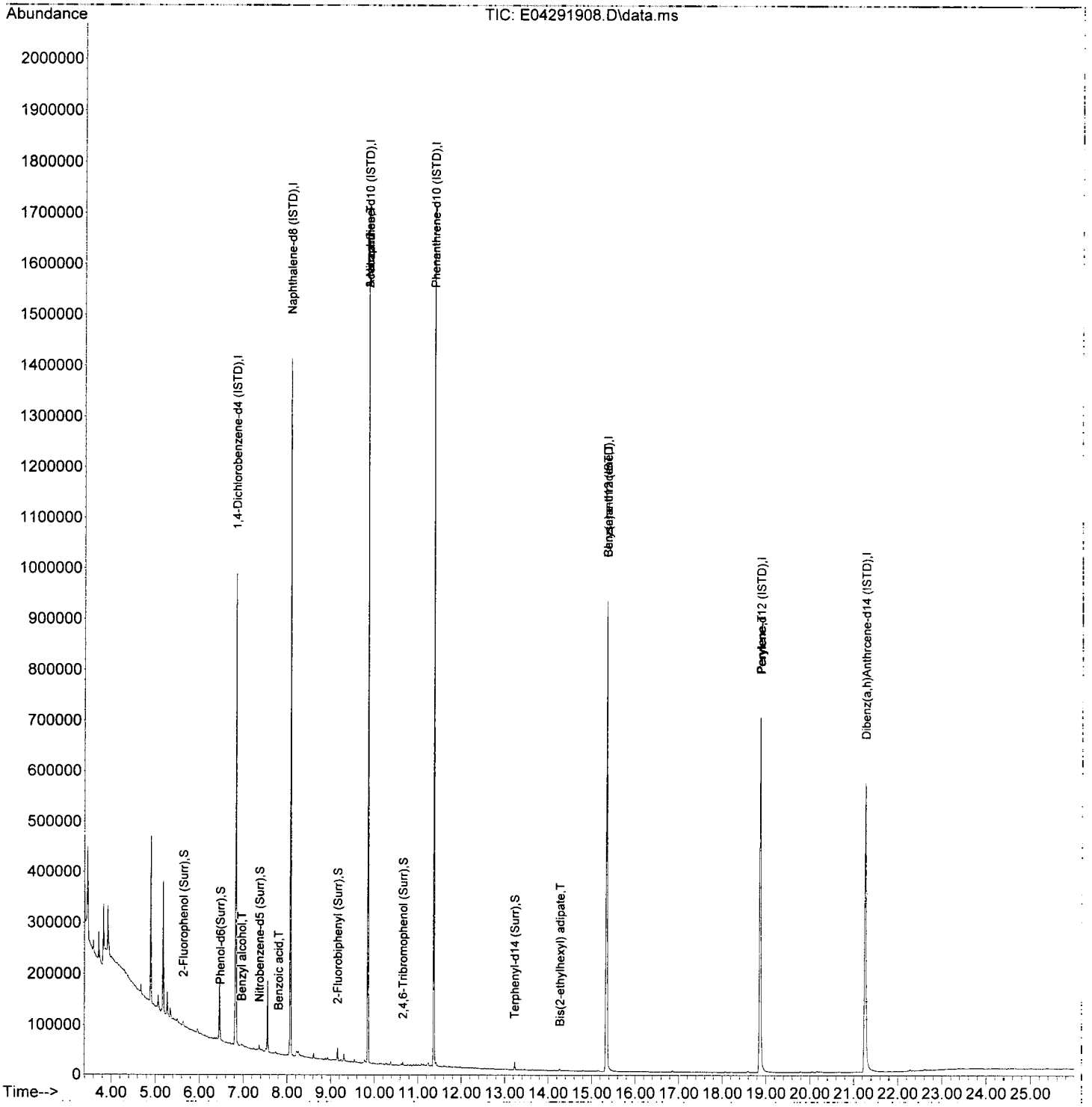
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.431	156	92	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.768	152	173	N.D.	
50) 3-Nitroaniline	9.853	138	80	30.46 ng/ml#	1
51) Acenaphthene	9.859	153	109	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	10.265	149	51	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.164	170	136	N.D.	
60) Fluorene	10.404	166	78	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)	10.575	77	102	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	694	N.D.	
72) Anthracene	11.442	178	74	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.939	149	149	N.D.	
75) Fluoranthene	12.704	202	683	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	655	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	909	5.11 ng/ml	79
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	1732	5.02 ng/ml	56
84) Chrysene	15.400	228	268	N.D.	
85) Bis(2-ethylhexyl) phth...	15.464	149	57	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.956	252	187	N.D.	
89) Benzo(k)fluoranthene	17.956	252	177	N.D.	
90) Benzo(b+k)fluoranthene	17.956	252	187	N.D.	
91) Benzo(e)pyrene	18.609	252	166	N.D.	
92) Benzo(a)pyrene	18.727	252	81	N.D.	
93) Perylene	18.871	252	1772	6.16 ng/ml	66
95) Indeno(1,2,3-cd)pyrene	21.267	276	332	N.D.	
96) Dibenz(a,h)anthracene	21.321	278	59	N.D.	
97) Benzo(g,h,i)perylene	21.818	276	160	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291908.D
Acq On : 29 Apr 2019 12:19 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-15@40
Misc : 40x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:10 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291909.D
Acq On : 29 Apr 2019 12:55 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RR1

DTH 4/30/19

Quant Time: Apr 29 19:47:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	193784	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	768633	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	378336	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.372	188	706996	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.352	240	650999	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	558002	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.273	292	488234	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	4322	35.78	ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	5585	34.56	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	4707	32.49	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.163	172	5927	21.06	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	345	28.53	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.234	244	5211	17.13	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.425	74	123	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.195	70	193	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.596	82	65	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	8.099	128	186	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291909.D
Acq On : 29 Apr 2019 12:55 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

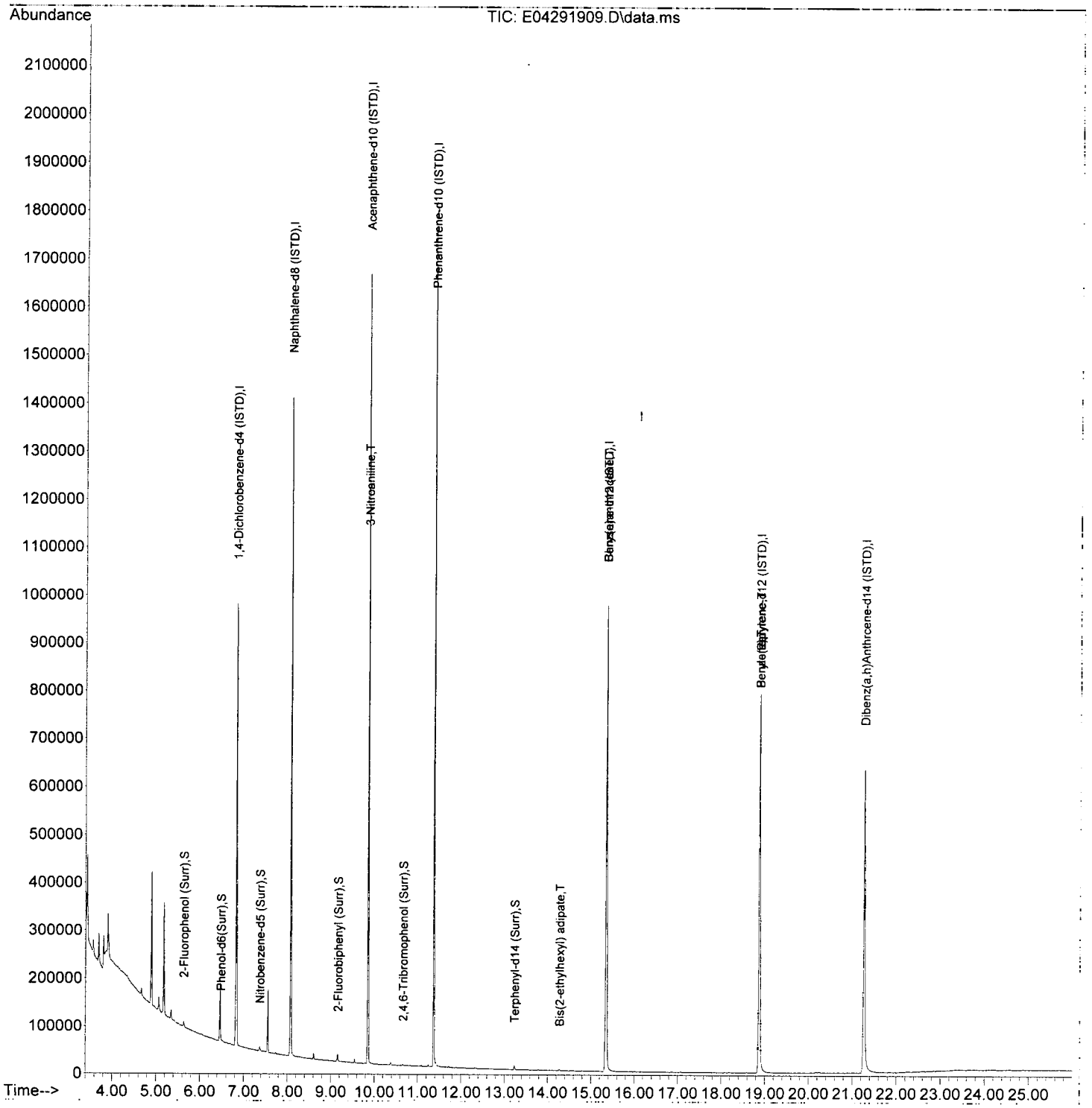
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	9.848	138	57	30.06 ng/ml#	1
51) Acenaphthene	9.864	153	114	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	170	N.D.	
72) Anthracene	11.394	178	170	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.934	149	108	N.D.	
75) Fluoranthene	12.715	202	232	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	288	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	707	3.73 ng/ml	79
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.352	228	1748	4.76 ng/ml	68
84) Chrysene	15.400	228	217	N.D.	
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	18.871	252	1867	6.24 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.871	252	1867	6.10 ng/ml	69
95) Indeno(1,2,3-cd)pyrene	21.267	276	290	N.D.	
96) Dibenz(a,h)anthracene	21.273	278	80	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 : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291909.D
Acq On : 29 Apr 2019 12:55 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16@40
Misc : 40x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:14 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291914.D
Acq On : 29 Apr 2019 3:56 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-17@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPM

Quant Time: Apr 29 19:47:34 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.815	152	191651	2000.00	ng/ml	-0.02
21) Naphthalene-d8 (ISTD)	8.056	136	335335	2000.00	ng/ml	-0.03
35) Acenaphthene-d10 (ISTD)	9.853	162	345632	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.372	188	614824	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.352	240	657635	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.876	264	560109	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	469834	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	4006	33.53	ng/ml	0.00
5) Phenol-d6(Surr)	6.457	99	2921	18.28	ng/ml	-0.02
19) Nitrobenzene-d5 (Surr)	7.345	82	2350	16.40	ng/ml	-0.02
40) 2-Fluorobiphenyl (Surr)	9.158	172	8051	31.32	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.666	330	378	32.18	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.234	244	8970	29.19	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.473	94	53	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.981	108	100	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.163	70	112	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.569	82	77	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	8.078	128	100	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	8.805	142	50	N.D.		
34) 1-Methylnaphthalene	8.805	142	50	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291914.D
Acq On : 29 Apr 2019 3:56 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-17@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:34 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

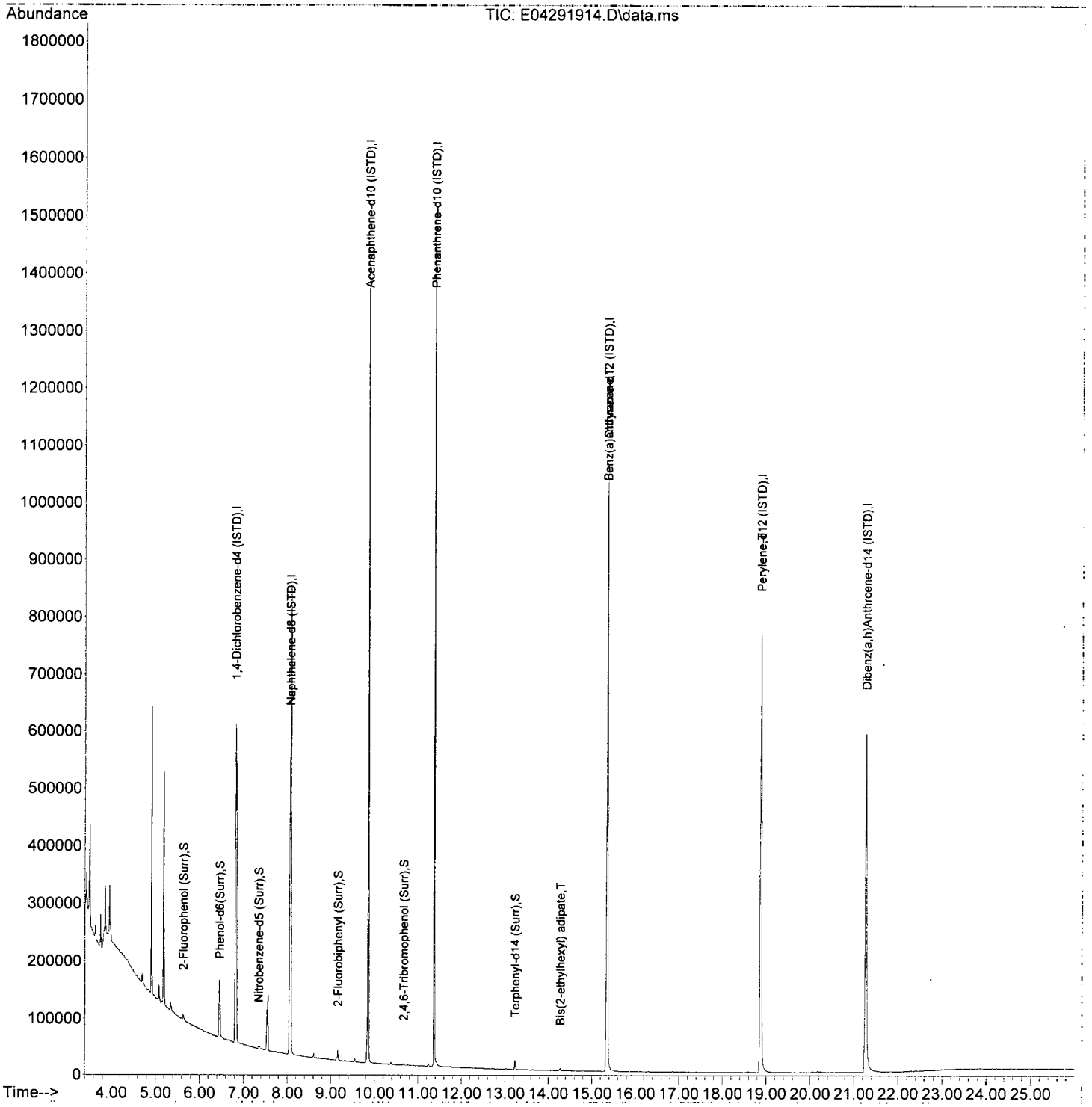
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.859	153	55	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.399	178	611	N.D.	
72) Anthracene	11.453	178	75	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.939	149	152	N.D.	
75) Fluoranthene	12.709	202	699	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	670	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	1163	6.08 ng/ml	99
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	2260	6.09 ng/ml	67
84) Chrysene	15.416	228	850	N.D.	
85) Bis(2-ethylhexyl) phth...	15.475	149	160	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.967	252	580	N.D.	
89) Benzo(k)fluoranthene	18.010	252	177	N.D.	
90) Benzo(b+k)fluoranthene	17.967	252	757	N.D.	
91) Benzo(e)pyrene	18.620	252	344	N.D.	
92) Benzo(a)pyrene	18.737	252	292	N.D.	
93) Perylene	18.876	252	1878	6.12 ng/ml	70
95) Indeno(1,2,3-cd)pyrene	21.278	276	598	N.D.	
96) Dibenz(a,h)anthracene	21.273	278	82	N.D.	
97) Benzo(g,h,i)perylene	21.808	276	193	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291914.D
Acq On : 29 Apr 2019 3:56 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-17@40
Misc : 40x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:34 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291915.D
Acq On : 29 Apr 2019 4:33 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-18@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPI
DTH 4/30/19

Quant Time: Apr 29 19:47:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	202322	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	805093	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	400757	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.372	188	757126	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.352	240	698040	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.882	264	615534	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.273	292	544611	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.639	112	3369	26.71 ng/ml	0.00
5) Phenol-d6(Surr)	6.484	99	5051	29.94 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.372	82	4618	30.53 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	12399	41.60 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	694	40.86 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	14377	44.08 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.360	74	74	N.D.	
3) Pyridine	0.000		0	N.D.	
6) Phenol	6.505	94	391	N.D.	
7) Aniline	6.510	93	1756	7.62 ng/ml#	53
8) Bis(2-chloroethyl) ether	6.575	93	218	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.986	108	76	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...	7.072	45	52	N.D.	
16) N-Nitrosodi-n-propylamine	7.243	70	124	N.D.	
17) 3+4-Methylphenol	7.216	107	57	N.D.	
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	0.000		0	N.D.	
22) Isophorone	7.586	82	160	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	8.104	128	2682	6.24 ng/ml	95
30) 4-Chloroaniline	8.099	127	373	2.52 ng/ml#	29
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	0.000		0	N.D.	
33) 2-Methylnaphthalene	8.800	142	486	N.D.	
34) 1-Methylnaphthalene	8.896	142	303	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	9.270	154	138	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	0.000		0	N.D.	

J

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291915.D
Acq On : 29 Apr 2019 4:33 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-18@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

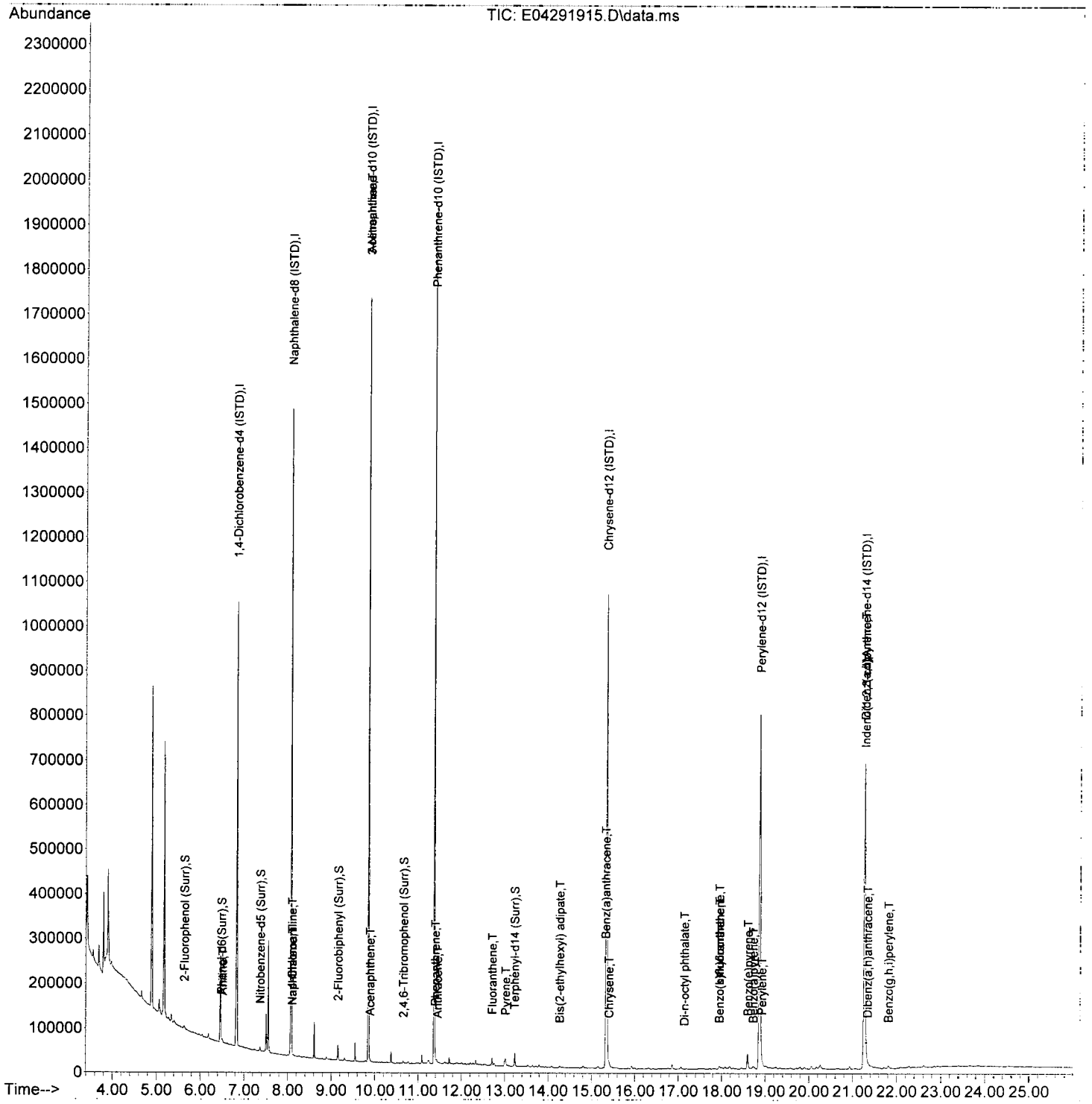
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.431	156	263	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.709	152	262	N.D.	
50) 3-Nitroaniline	9.859	138	84	30.43 ng/ml#	1
51) Acenaphthene	9.891	153	941	3.56 ng/ml	97
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
55) Dibenzofuran	10.067	168	378	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	10.271	149	133	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.276	170	109	N.D.	
60) Fluorene	10.415	166	510	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)	10.570	77	81	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	6562	15.79 ng/ml	99
72) Anthracene	11.447	178	1437	3.37 ng/ml	97
73) Carbazole	11.613	167	504	N.D.	
74) Di-n-butyl phthalate	11.934	149	337	N.D.	
75) Fluoranthene	12.710	202	9409	21.83 ng/ml	96
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	10053	22.96 ng/ml	97
80) Butyl benzyl phthalate	14.100	149	355	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	1030	5.07 ng/ml	93
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.325	228	6116	15.53 ng/ml	96
84) Chrysene	15.405	228	5397	14.39 ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.469	149	485	N.D.	
87) Di-n-octyl phthalate	17.144	149	75	30.86 ng/ml#	1
88) Benzo(b)fluoranthene	17.951	252	6072	18.67 ng/ml	95
89) Benzo(k)fluoranthene	17.951	252	7913	24.76 ng/ml	94
90) Benzo(b+k)fluoranthene	17.951	252	8728	25.56 ng/ml	94
91) Benzo(e)pyrene	18.609	252	4059	12.29 ng/ml	95
92) Benzo(a)pyrene	18.727	252	4804	16.27 ng/ml	88
93) Perylene	18.925	252	2336	6.92 ng/ml	92
95) Indeno(1,2,3-cd)pyrene	21.278	276	4255	14.25 ng/ml#	44
96) Dibenz(a,h)anthracene	21.337	278	739	2.70 ng/ml	77
97) Benzo(g,h,i)perylene	21.813	276	3579	12.18 ng/ml	93

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291915.D
Acq On : 29 Apr 2019 4:33 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-18@40
Misc : 40x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291916.D
Acq On : 29 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPI

Quant Time: Apr 29 19:47:42 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.837	152	197964	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	774234	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	368352	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	601220	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	560158	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	467293	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	403899	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.644	112	3970	32.17	ng/ml	0.01
5) Phenol-d6(Surr)	6.478	99	5342	32.36	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	4135	27.94	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.163	172	4813	17.57	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	312	29.42	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.234	244	4152	15.86	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.992	108	75	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...	7.109	45	64	N.D.		
16) N-Nitrosodi-n-propylamine	7.216	70	79	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.329	77	56	N.D.		
22) Isophorone	7.596	82	263	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	8.094	128	237	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291916.D
Acq On : 29 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:42 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

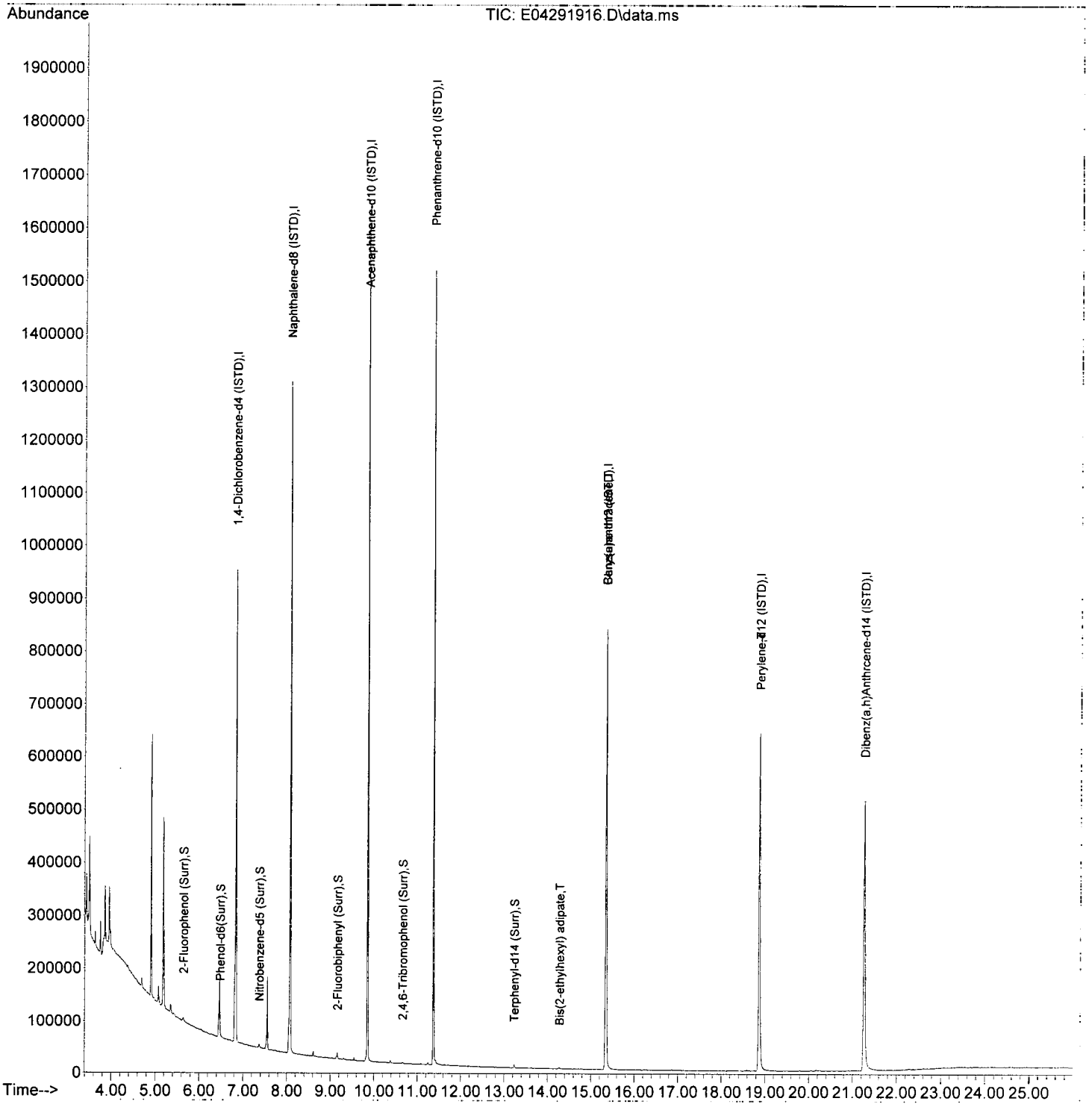
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.859	153	60	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.388	178	134	N.D.	
72) Anthracene	11.388	178	134	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.939	149	140	N.D.	
75) Fluoranthene	12.715	202	185	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	239	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.277	129	558	3.42 ng/ml	91
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	1431	4.53 ng/ml	68
84) Chrysene	15.400	228	174	N.D.	
85) Bis(2-ethylhexyl) phth...	15.464	149	81	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	18.598	252	60	N.D.	
92) Benzo(a)pyrene	18.721	252	66	N.D.	
93) Perylene	18.877	252	1580	6.17 ng/ml	72
95) Indeno(1,2,3-cd)pyrene	21.262	276	226	N.D.	
96) Dibenz(a,h)anthracene	21.262	278	100	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 : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291916.D
Acq On : 29 Apr 2019 5:09 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19@40
Misc : 40x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:42 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291917.D
Acq On : 29 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPM

Quant Time: Apr 29 19:47:46 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	193419	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	758741	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	356233	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	632209	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	598406	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	506422	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	436590	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.639	112	4150	34.42	ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	5587	34.64	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	4697	32.48	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	5112	19.30	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.666	330	346	30.23	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.234	244	4269	15.27	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.489	94	82	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.179	70	85	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.596	82	64	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	8.099	128	194	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	8.794	142	90	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291917.D
Acq On : 29 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:46 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

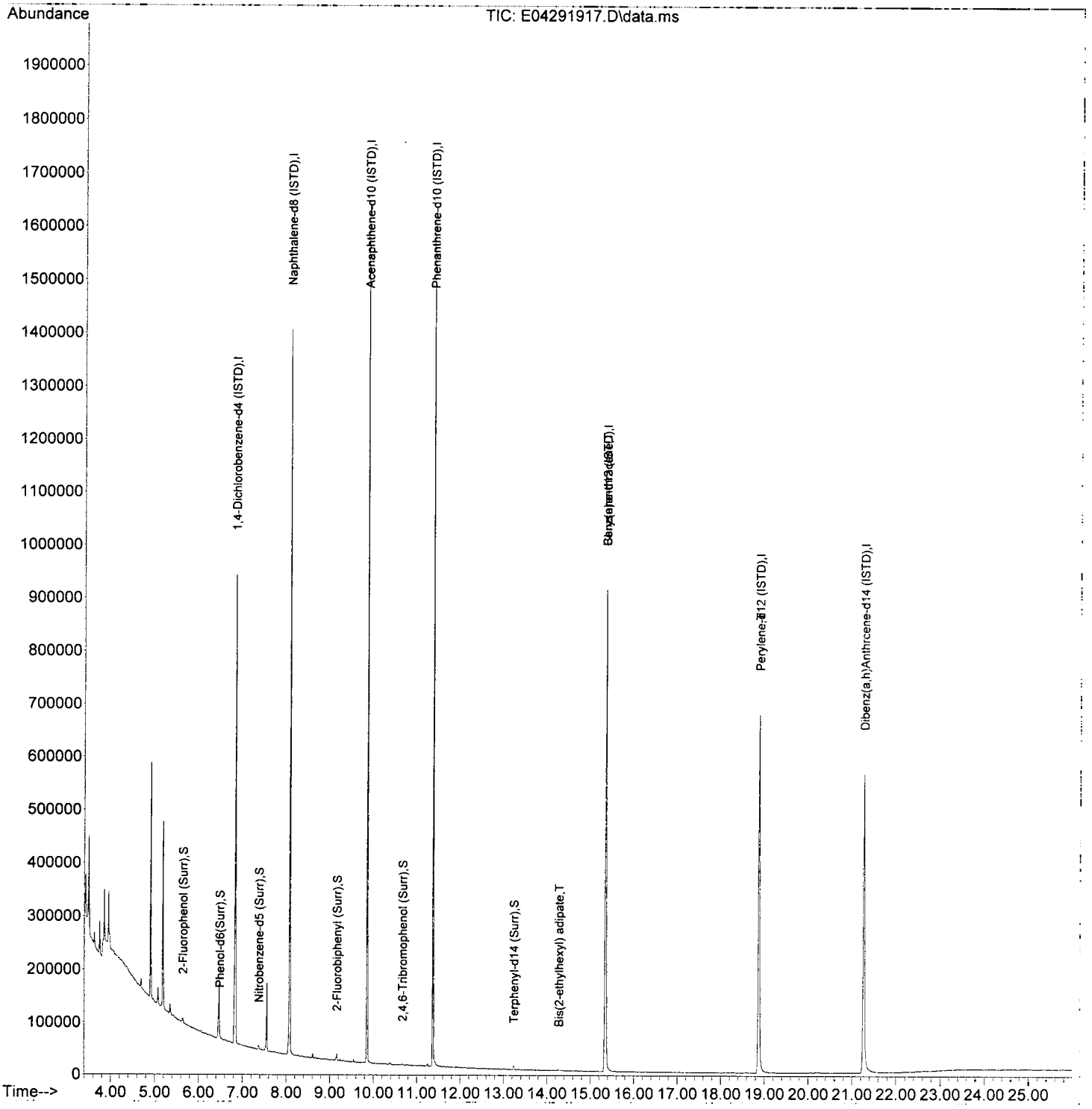
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.859	153	89	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.388	170	62	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)	10.533	77	51	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	232	N.D.	
72) Anthracene	11.447	178	81	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.939	149	108	N.D.	
75) Fluoranthene	12.715	202	454	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	411	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	532	3.05 ng/ml	84
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	1608	4.76 ng/ml	70
84) Chrysene	15.400	228	382	N.D.	
85) Bis(2-ethylhexyl) phth...	15.475	149	90	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.962	252	107	N.D.	
89) Benzo(k)fluoranthene	17.962	252	107	N.D.	
90) Benzo(b+k)fluoranthene	17.962	252	107	N.D.	
91) Benzo(e)pyrene	18.598	252	112	N.D.	
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.877	252	1525	5.49 ng/ml	68
95) Indeno(1,2,3-cd)pyrene	21.278	276	300	N.D.	
96) Dibenz(a,h)anthracene	0.000		0	N.D.	
97) Benzo(g,h,i)perylene	21.808	276	68	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291917.D
Acq On : 29 Apr 2019 5:45 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20@40
Misc : 40x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:46 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291918.D
Acq On : 29 Apr 2019 6:22 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22@40
Misc : 40x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

RPI

Quant Time: Apr 29 19:47:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DRH 4/30/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	197647	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	770441	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	367964	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	661788	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	621641	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	528922	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	464729	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.639	112	3680	29.87	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	4749	28.81	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	3949	26.72	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	5937	21.70	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.666	330	309	27.92	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.228	244	6741	23.21	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.419	74	52	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	7.110	45	65	N.D.		
16) N-Nitrosodi-n-propylamine	7.179	70	255	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.586	82	83	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	8.099	128	221	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	8.800	142	130	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291918.D
Acq On : 29 Apr 2019 6:22 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22@40
Misc : 40x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

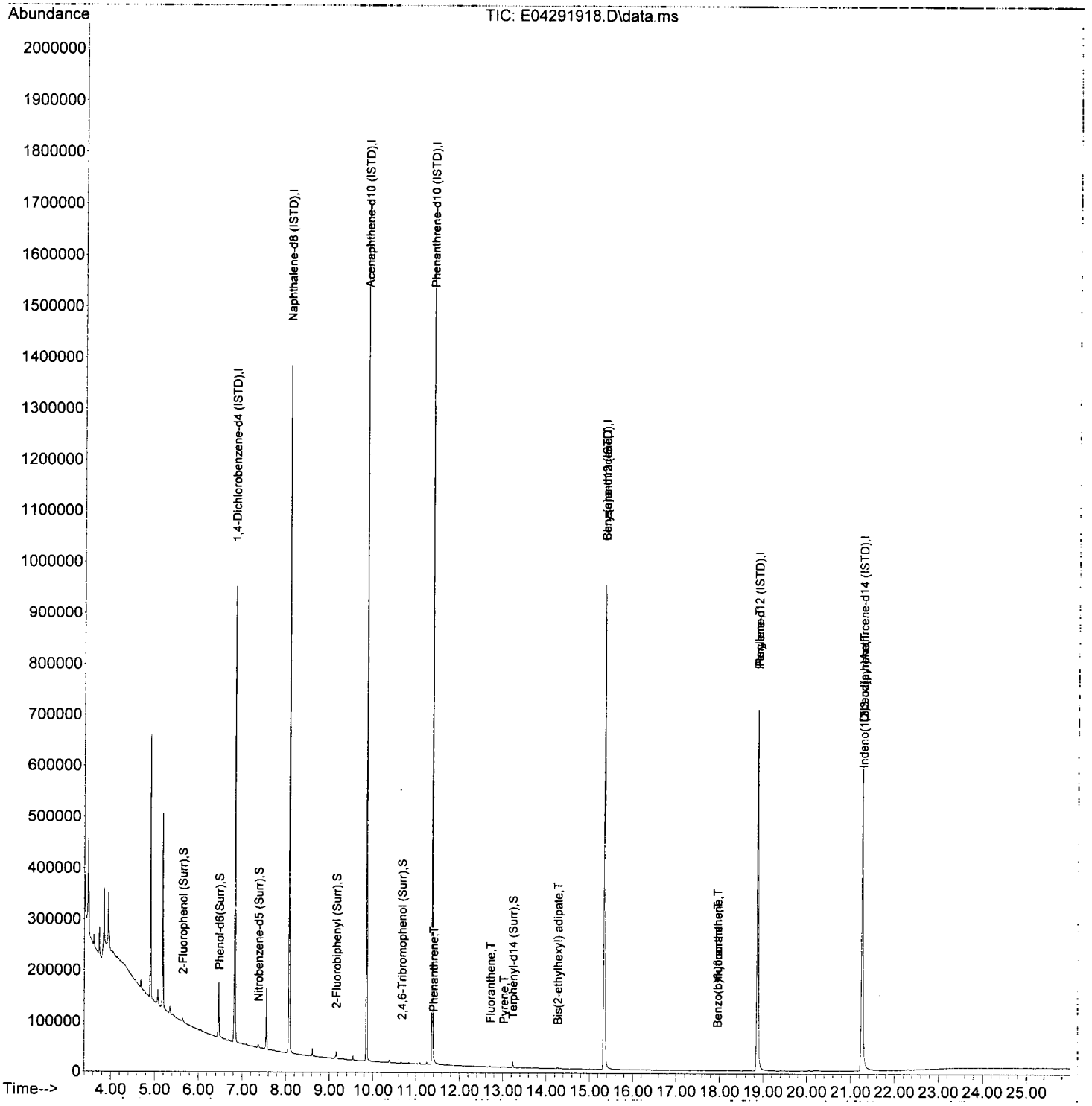
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.714	152	56	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.859	153	89	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	960	2.64 ng/ml	89
72) Anthracene	11.442	178	196	N.D.	
73) Carbazole	11.618	167	87	N.D.	
74) Di-n-butyl phthalate	11.934	149	83	N.D.	
75) Fluoranthene	12.710	202	1065	2.83 ng/ml	95
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.020	202	1110	2.90 ng/ml	83
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	512	2.83 ng/ml	83
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	2290	6.53 ng/ml	74
84) Chrysene	15.405	228	688	N.D.	
85) Bis(2-ethylhexyl) phth...	15.464	149	349	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.951	252	721	2.58 ng/ml	87
89) Benzo(k)fluoranthene	18.010	252	230	N.D.	
90) Benzo(b+k)fluoranthene	17.951	252	951	3.24 ng/ml	86
91) Benzo(e)pyrene	18.598	252	505	N.D.	
92) Benzo(a)pyrene	18.721	252	446	N.D.	
93) Perylene	18.871	252	1653	5.70 ng/ml	69
95) Indeno(1,2,3-cd)pyrene	21.273	276	867	3.40 ng/ml#	44
96) Dibenz(a,h)anthracene	21.321	278	51	N.D.	
97) Benzo(g,h,i)perylene	21.818	276	531	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291918.D
Acq On : 29 Apr 2019 6:22 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22@40
Misc : 40x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291919.D
Acq On : 29 Apr 2019 6:58 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-23@40
Misc : 40x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	195410	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	758168	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	361621	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	681635	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.347	240	657541	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	569931	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	493769	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.639	112	3529	28.97	ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	4491	27.56	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	3390	23.20	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	6179	22.98	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.661	330	420	32.22	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.234	244	8116	26.42	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.500	94	74	N.D.		
7) Aniline	6.527	93	50	N.D.		
8) Bis(2-chloroethyl) ether	6.527	93	50	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.201	70	96	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.618	82	65	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	8.099	128	222	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291919.D
Acq On : 29 Apr 2019 6:58 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-23@40
Misc : 40x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

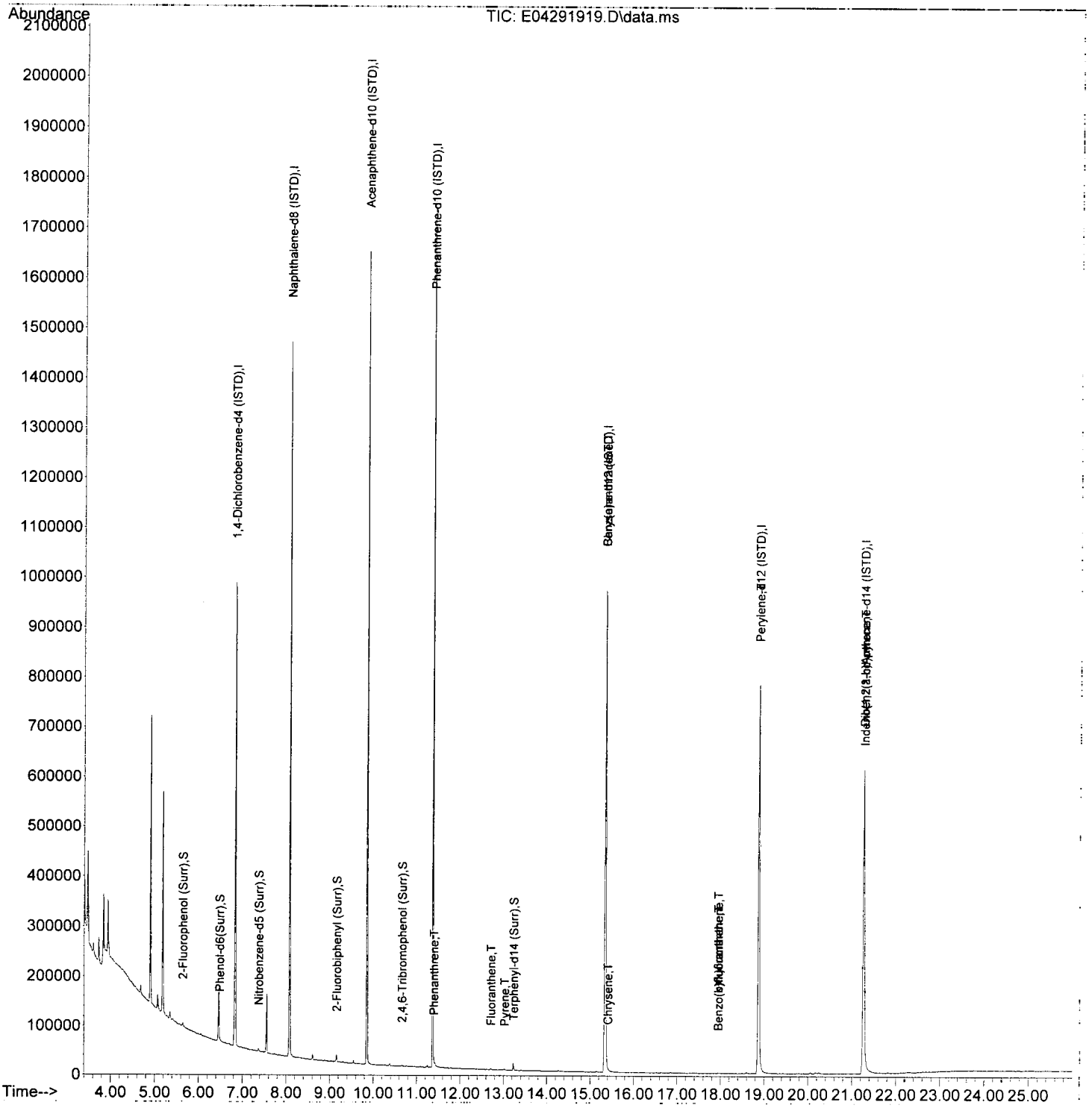
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.859	153	62	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.394	178	1255	3.35 ng/ml	97
72) Anthracene	11.447	178	191	N.D.	
73) Carbazole	11.608	167	108	N.D.	
74) Di-n-butyl phthalate	11.934	149	101	N.D.	
75) Fluoranthene	12.710	202	1715	4.42 ng/ml	91
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	1547	3.92 ng/ml	91
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.271	129	458	N.D.	
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.347	228	2457	6.62 ng/ml	73
84) Chrysene	15.405	228	1194	3.38 ng/ml	83
85) Bis(2-ethylhexyl) phth...	15.459	149	179	N.D.	
87) Di-n-octyl phthalate	0.000		0	N.D.	
88) Benzo(b)fluoranthene	17.946	252	999	3.32 ng/ml	88
89) Benzo(k)fluoranthene	17.946	252	1324	4.47 ng/ml	87
90) Benzo(b+k)fluoranthene	17.946	252	1376	4.35 ng/ml	87
91) Benzo(e)pyrene	18.598	252	750	N.D.	
92) Benzo(a)pyrene	18.727	252	490	N.D.	
93) Perylene	18.877	252	2010	6.43 ng/ml	71
95) Indeno(1,2,3-cd)pyrene	21.273	276	1036	3.83 ng/ml#	44
96) Dibenz(a,h)anthracene	21.321	278	66	N.D.	
97) Benzo(g,h,i)perylene	21.813	276	659	N.D.	

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291919.D
Acq On : 29 Apr 2019 6:58 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-23@40
Misc : 40x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 29 19:47:54 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

DTH 4/30/19 MOS

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.837	152	192746	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.077	136	753276	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	347757	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	589814	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	547065	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	467895	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	405353	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.633	112	47225	393.01 ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	64703	402.55 ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.366	82	58653	406.99 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.158	172	124491	481.35 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	10393	507.36 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	137721	538.81 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.424	74	72	N.D.	
3) Pyridine	4.483	79	1871	12.70 ng/ml#	1
6) Phenol	6.484	94	593	3.52 ng/ml#	1
7) Aniline	6.510	93	736	3.35 ng/ml	95
8) Bis(2-chloroethyl) ether	6.510	93	713	5.18 ng/ml#	19
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.970	108	223	2.79 ng/ml	84
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	0.000		0	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	7.104	45	52	N.D.	
16) N-Nitrosodi-n-propylamine	7.243	70	326	3.16 ng/ml	62
17) 3+4-Methylphenol	7.232	107	181	N.D.	
18) Hexachloroethane	7.382	117	66	N.D.	
20) Nitrobenzene	7.366	77	269	N.D.	
22) Isophorone	7.596	82	82	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	7.901	105	51	398.73 ng/ml#	8
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.099	128	7437	18.51 ng/ml	99
30) 4-Chloroaniline	8.099	127	1012	7.31 ng/ml#	31
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.650	107	57	27.17 ng/ml#	1
33) 2-Methylnaphthalene	8.794	142	1363	5.39 ng/ml	91
34) 1-Methylnaphthalene	8.896	142	631	2.61 ng/ml	91
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	9.265	154	626	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	9.308	138	55	54.95 ng/ml#	65

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

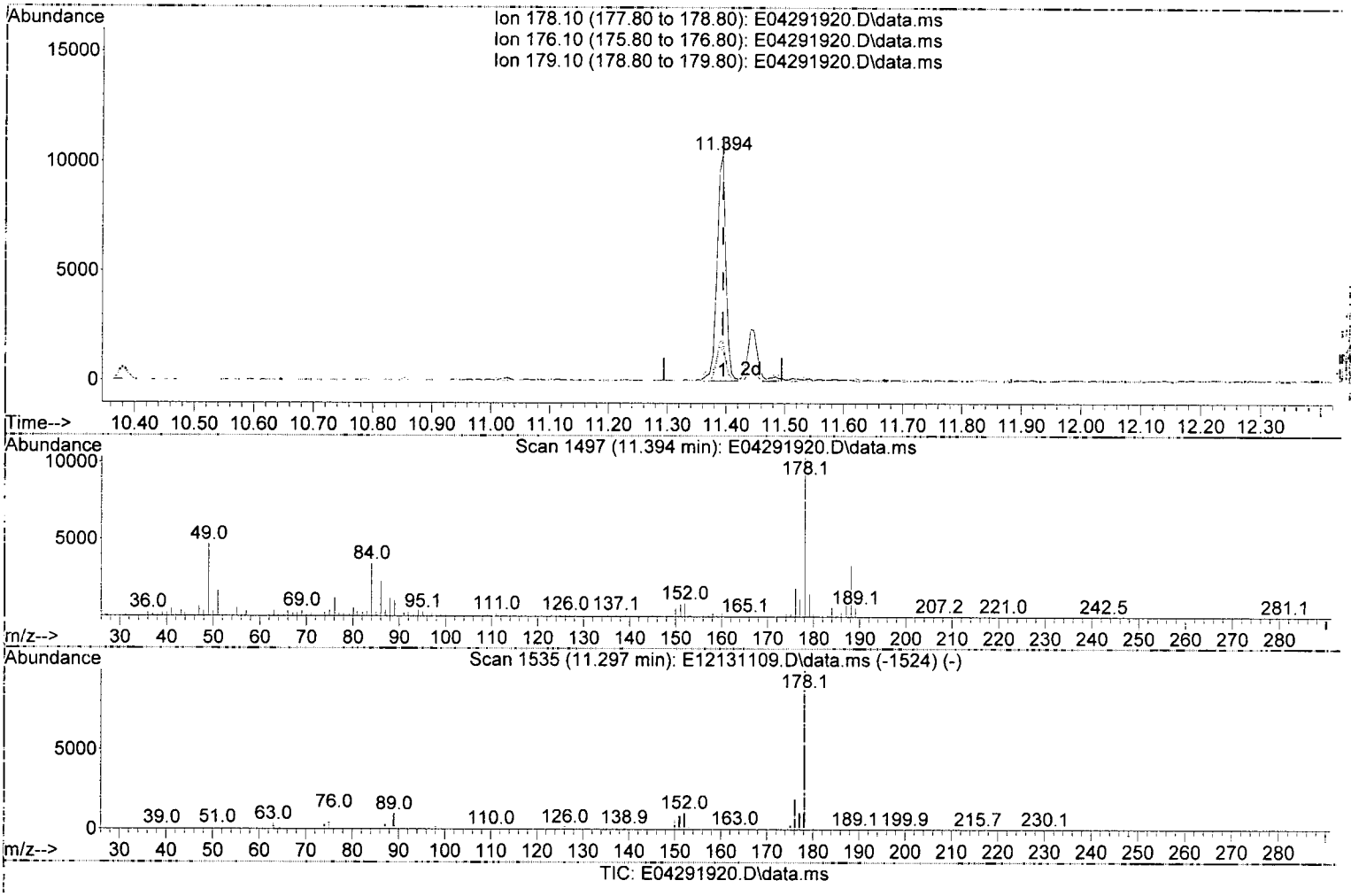
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.436	156	470	N.D.		
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	0.000		0	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	9.709	152	602	N.D.		
50) 3-Nitroaniline	9.853	138	69	30.36	ng/ml#	1
51) Acenaphthene	9.885	153	1451	6.32	ng/ml	95
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	0.000		0	N.D.		
55) Dibenzofuran	10.062	168	693	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	10.270	149	171	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.260	170	533	2.88	ng/ml	100
60) Fluorene	10.409	166	1092	4.57	ng/ml	95
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	10.516	169	131	N.D.		
66) Azobenzene (1,2-DPH)	10.575	77	178	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	0.000		0	~~N.D.~~		
71) Phenanthrene	11.394	178	10792	33.34	ng/ml	98
72) Anthracene	11.442	178	2544	7.66	ng/ml	94
73) Carbazole	11.602	167	862	2.77	ng/ml	90
74) Di-n-butyl phthalate	11.934	149	1626	~~4.18~~	ng/ml	81
75) Fluoranthene	12.704	202	25341	75.47	ng/ml	98
76) Benzidine	0.000		0	~~N.D.~~		
77) Pyrene	13.020	202	30137	88.35	ng/ml	95
80) Butyl benzyl phthalate	14.089	149	560	3.50	ng/ml	95
81) Bis(2-ethylhexyl) adipate	14.266	129	751	4.72	ng/ml	85
82) 3,3-Dichlorobenzidine	0.000		0	~~N.D.~~		
83) Benz(a)anthracene	15.320	228	11888	38.52	ng/ml mos	77
84) Chrysene	15.400	228	13662	46.47	ng/ml mos	95
85) Bis(2-ethylhexyl) phth...	15.464	149	1724	7.54	ng/ml	94
87) Di-n-octyl phthalate	17.165	149	50	30.84	ng/ml#	1
88) Benzo(b)fluoranthene	17.946	252	13507	54.64	ng/ml mos	97
89) Benzo(k)fluoranthene	~~17.946~~	~~252~~	17806	~~73.29~~	~~ng/ml~~	~~96~~ Not Hits
90) Benzo(b+k)fluoranthene	17.946	252	19938	76.80	ng/ml	96
91) Benzo(e)pyrene	18.598	252	8826	35.17	ng/ml	95
92) Benzo(a)pyrene	18.721	252	10442	46.52	ng/ml	99
93) Perylene	18.930	252	4911	19.14	ng/ml	96
95) Indeno(1,2,3-cd)pyrene	21.267	276	8751	39.39	ng/ml	70
96) Dibenz(a,h)anthracene	21.321	278	1292	6.35	ng/ml	91
97) Benzo(g,h,i)perylene	21.807	276	8342	38.14	ng/ml	84

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(71) Phenanthrene (T)

11.394min (-0.000) 33.34 ng/ml

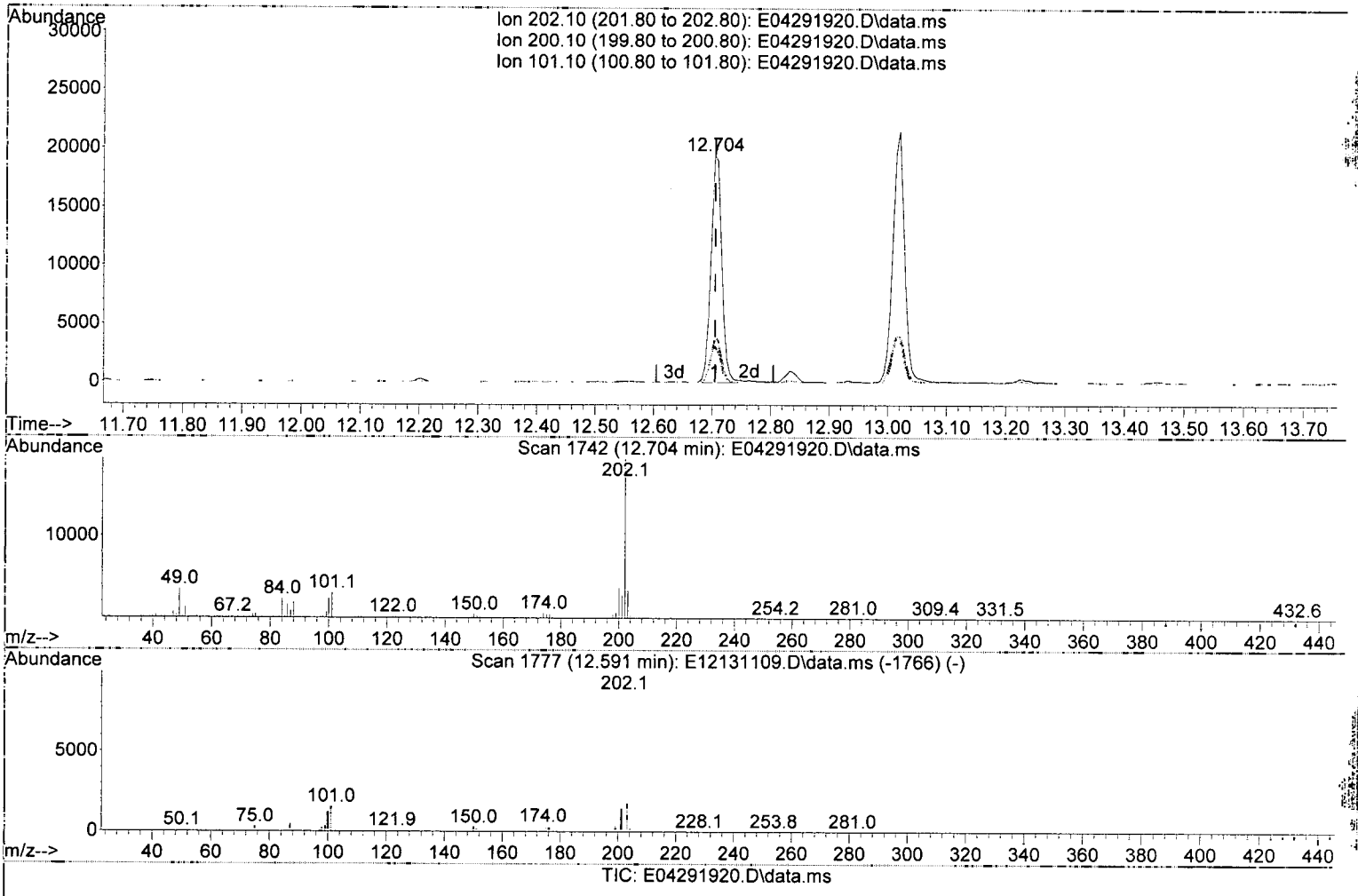
response 10792

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.94
179.10	15.00	14.52
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 75.47 ng/ml

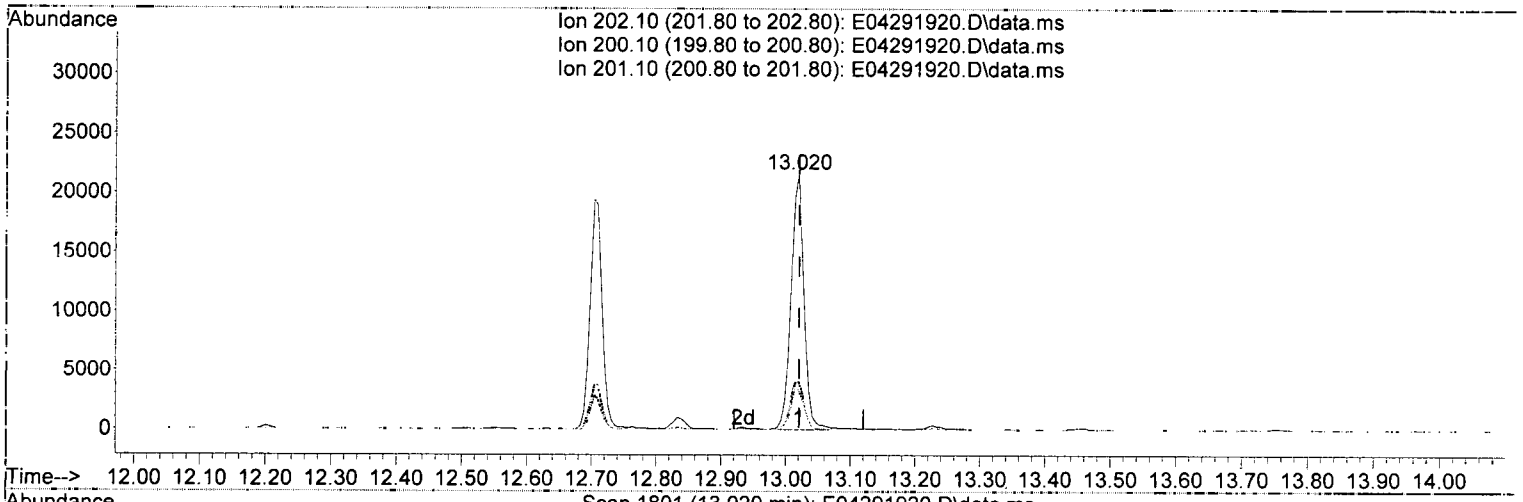
response 25341

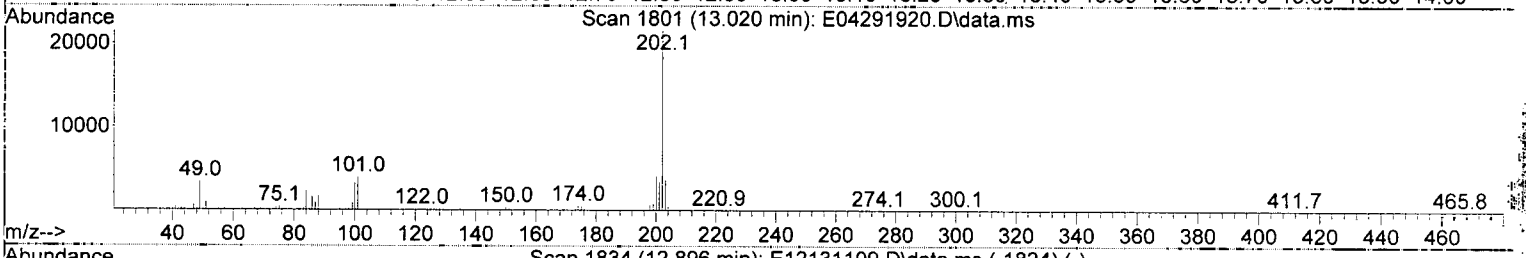
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.18
101.10	15.70	15.96
0.00	0.00	0.00

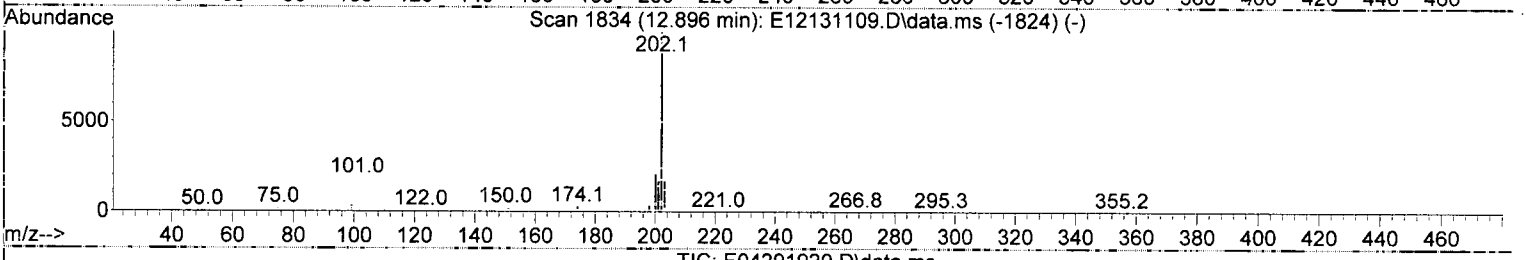
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E04291920.D\data.ms

(77) Pyrene (T)

13.020min (-0.000) 88.35 ng/ml

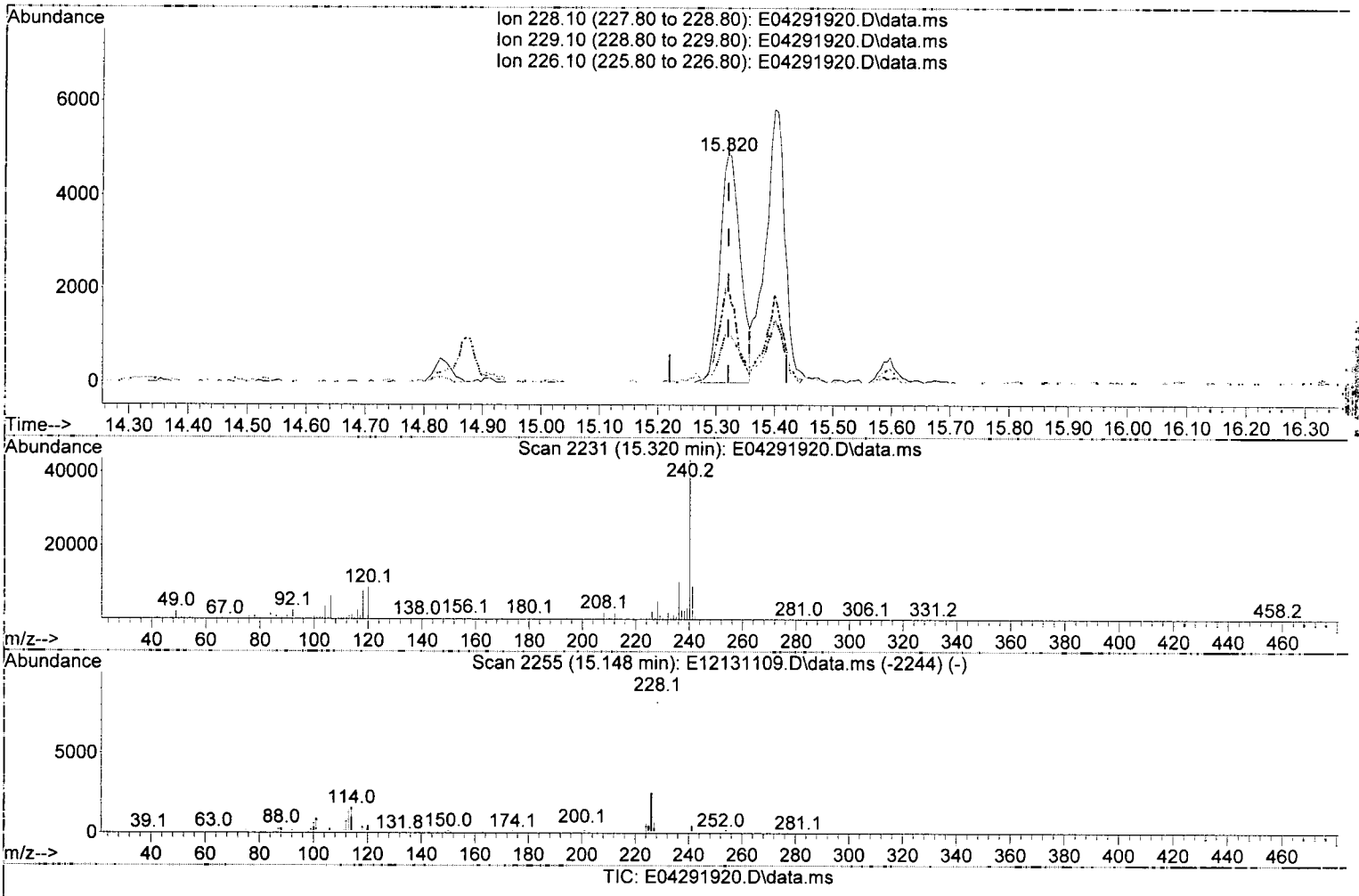
response 30137

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	18.93
201.10	17.50	15.68
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(83) Benz(a)anthracene (T)

15.320min (-0.000) 38.52 ng/ml MDS

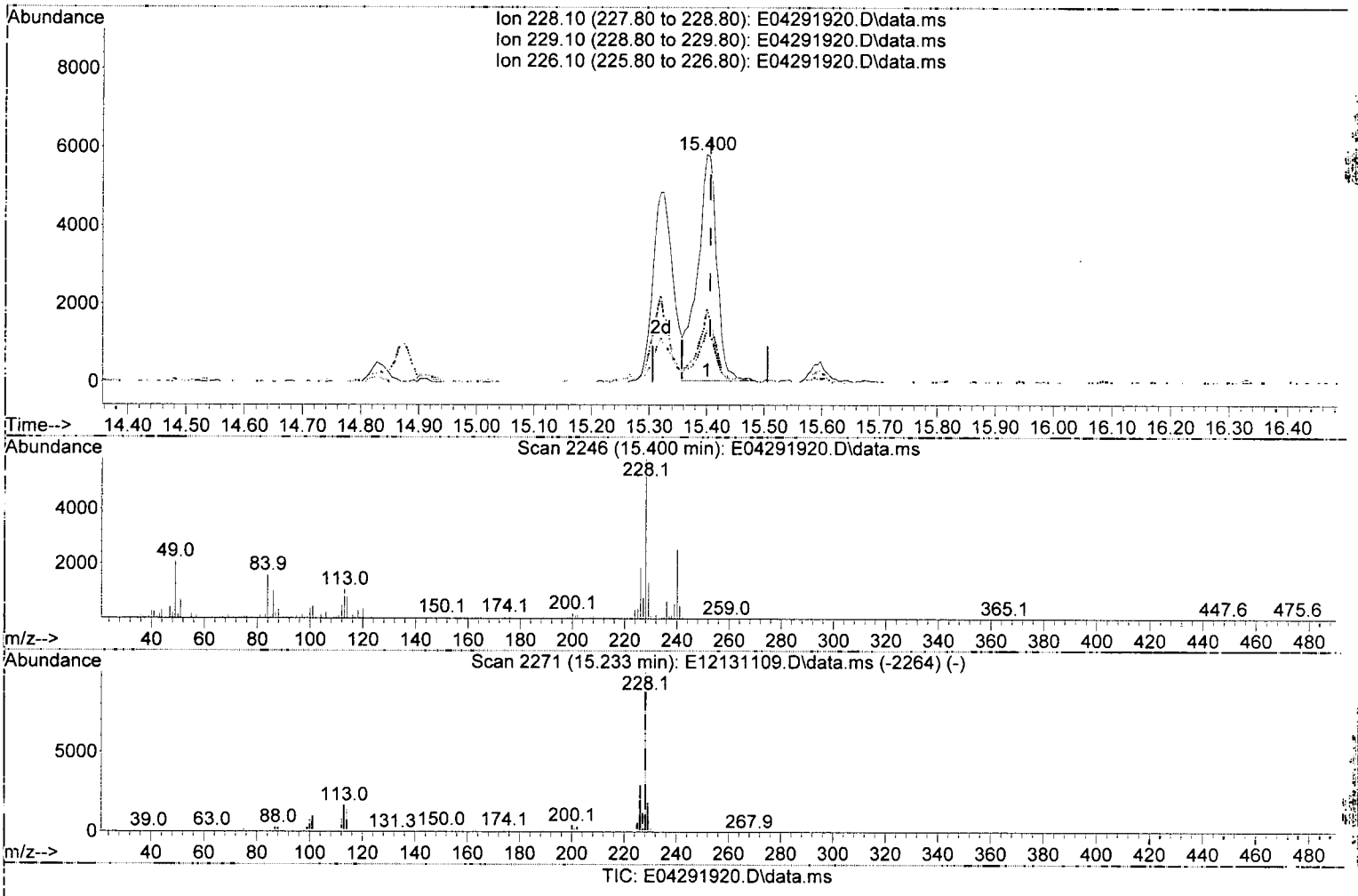
response 11888

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	23.24
226.10	27.80	45.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(84) Chrysene (T)

15.400min (-0.006) 46.47 ng/ml

MOS

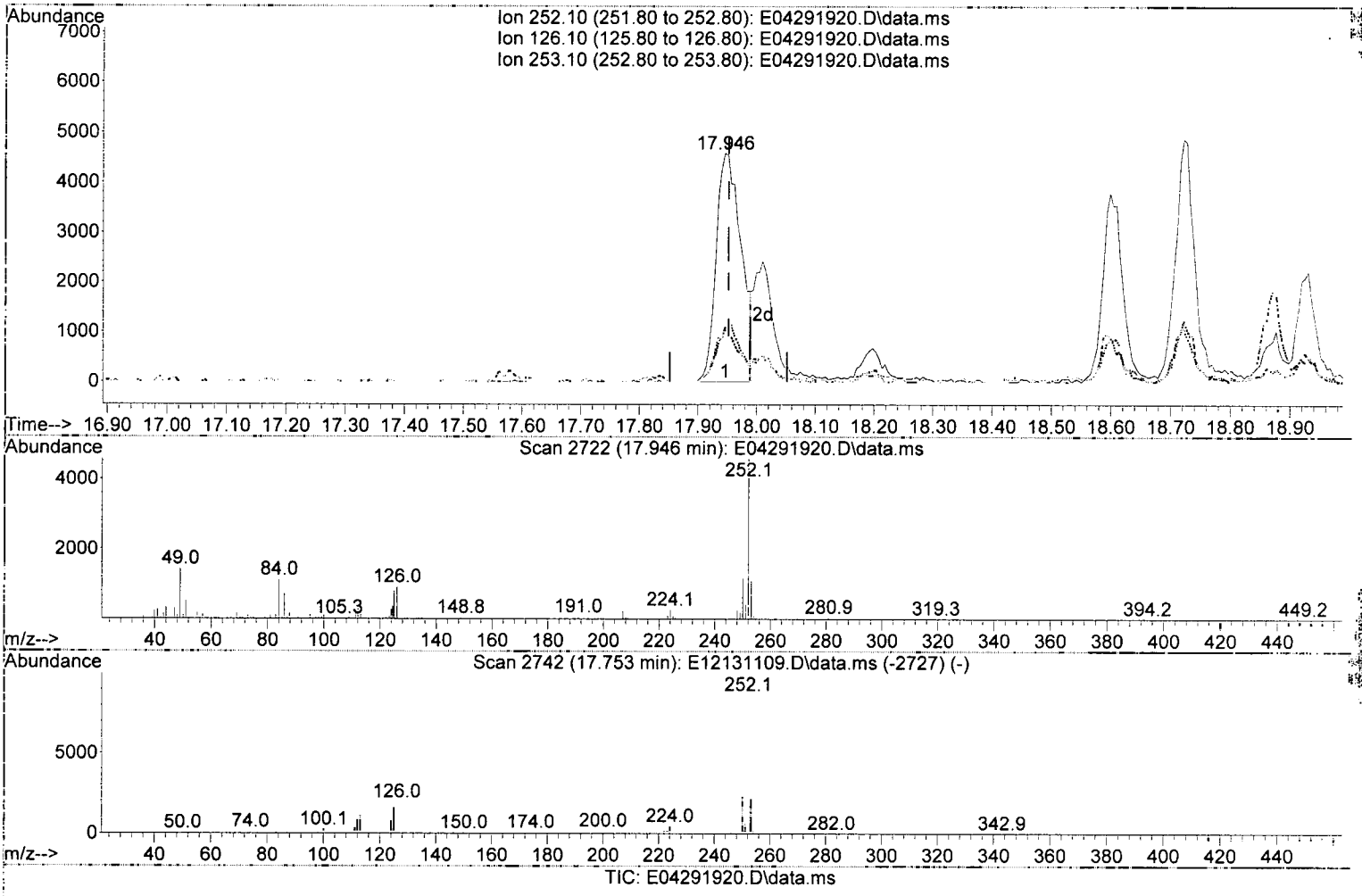
response 13662

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	22.91
226.10	29.80	32.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.946min (-0.006) 54.64 ng/ml

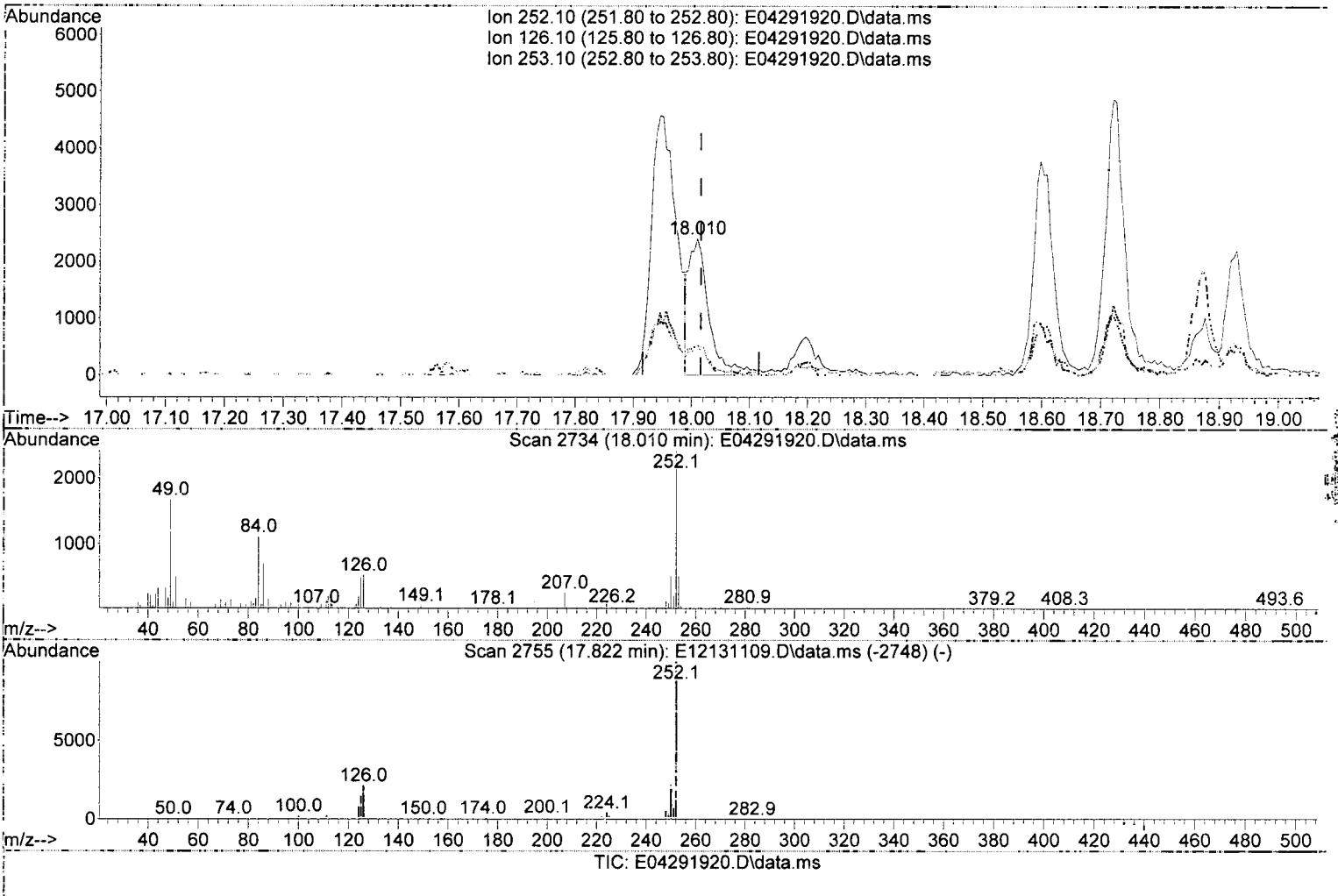
response 13507

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	20.24
253.10	22.40	24.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(89) Benzo(k)fluoranthene (T)

18.010min (-0.006) 22.68 ng/ml (m)

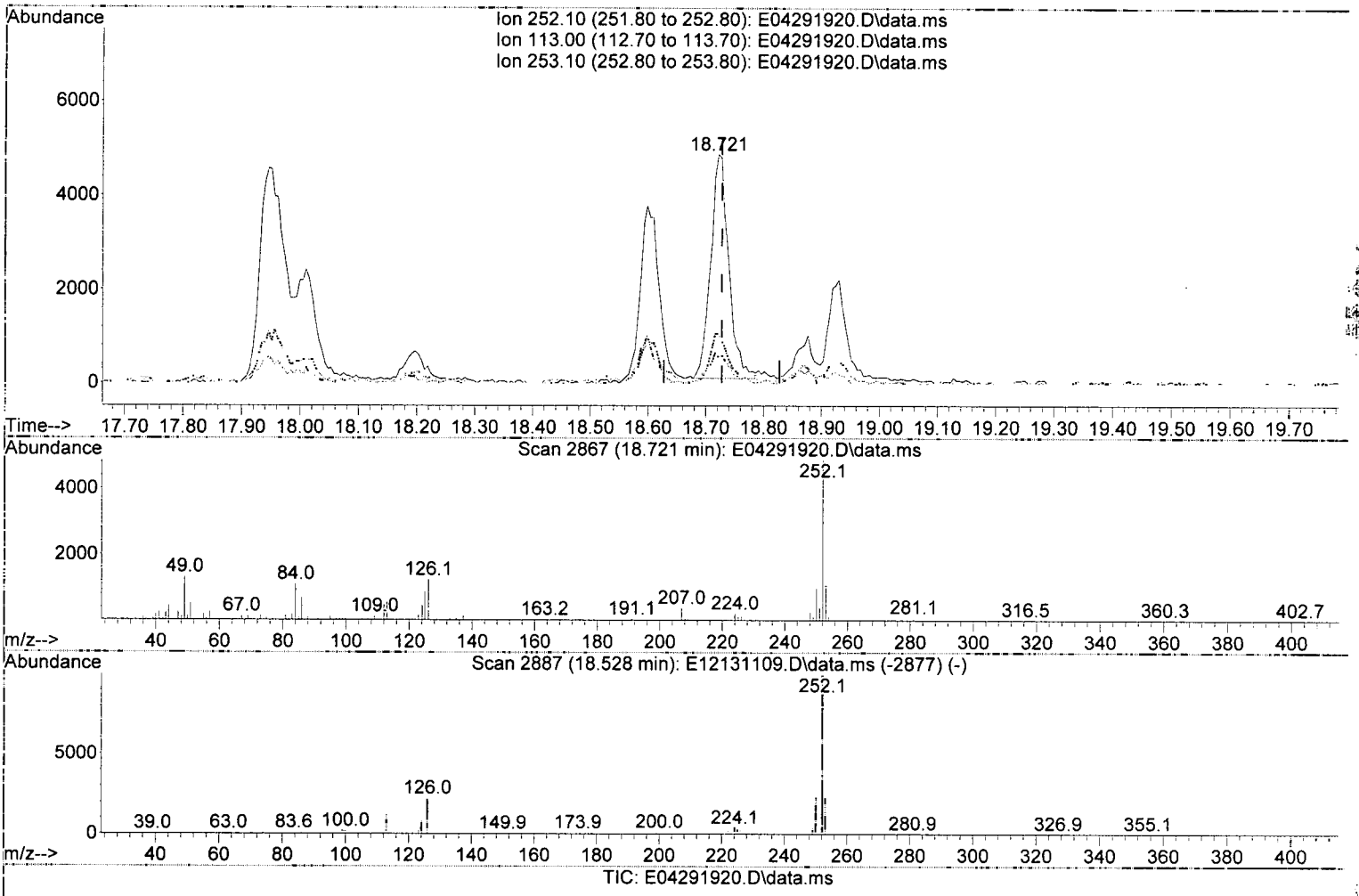
response 5510

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.76
253.10	21.80	21.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(92) Benzo(a)pyrene (T)

18.721min (-0.006) 46.52 ng/ml

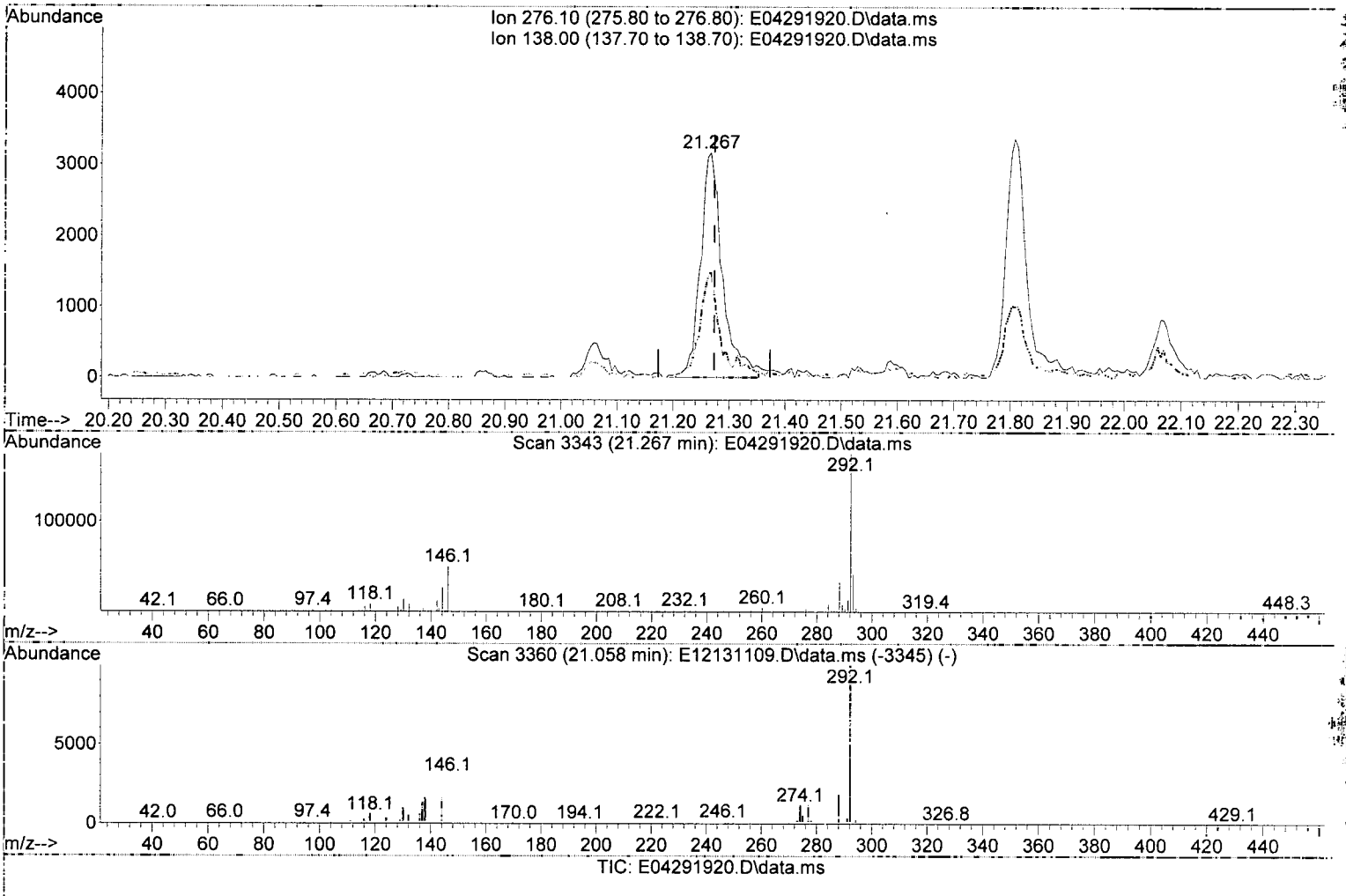
response 10442

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	11.50
253.10	21.70	21.75
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(95) Indeno(1,2,3-cd)pyrene (T)

21.267min (-0.006) 39.39 ng/ml

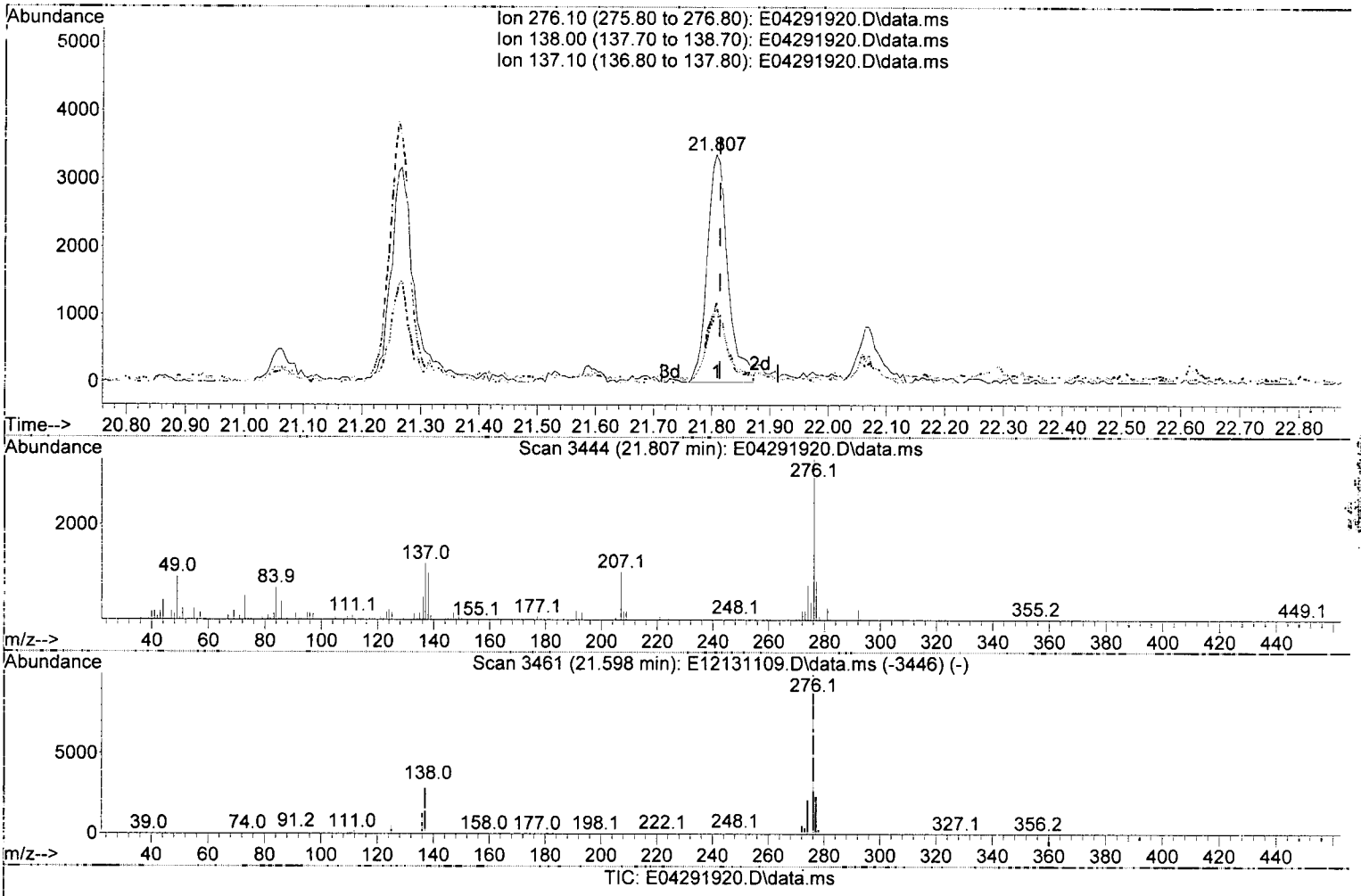
response 8751

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	47.59
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E04291920.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.807min (-0.006) 38.14 ng/ml

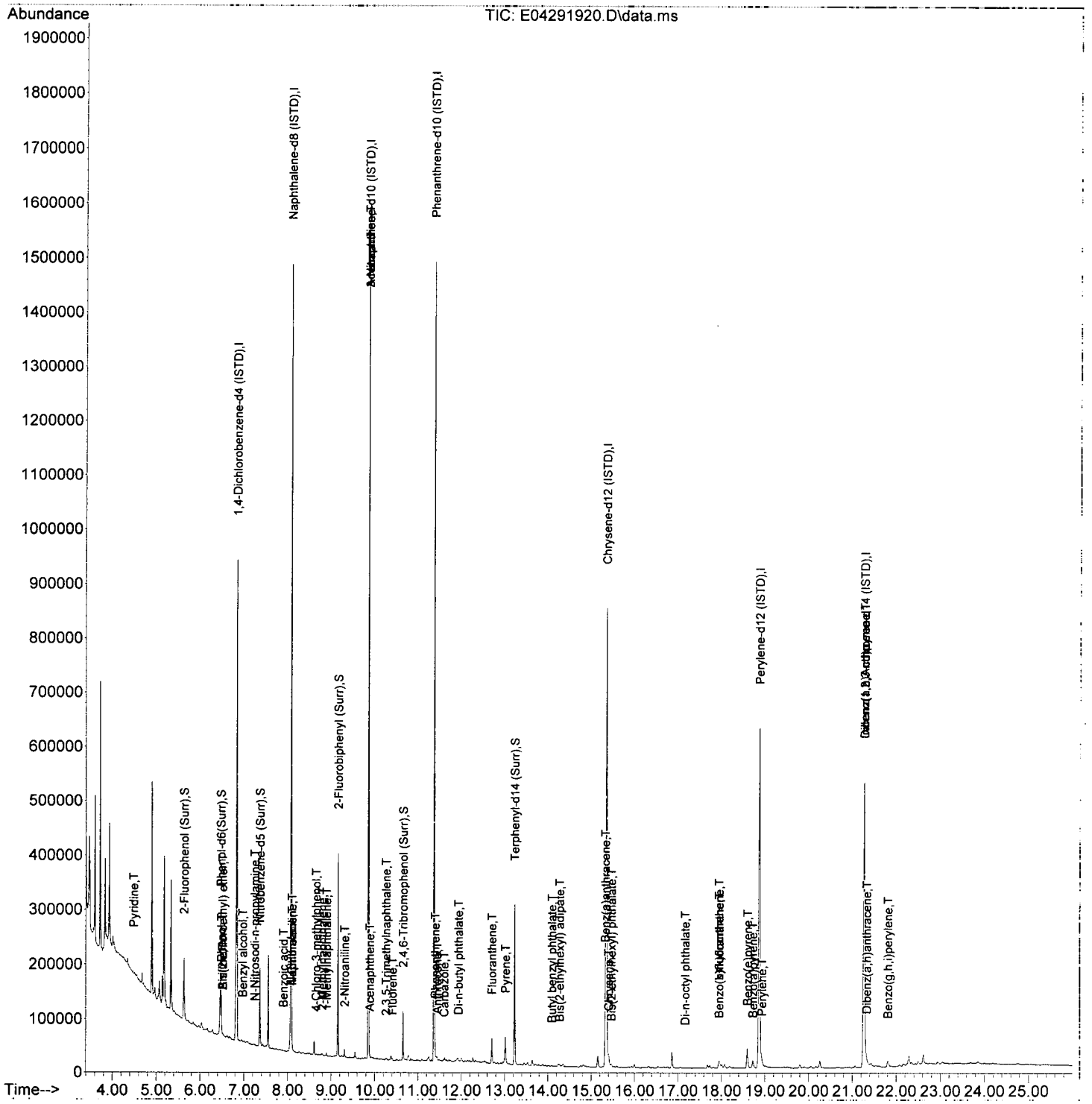
response 8342

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	29.72
137.10	39.00	35.48
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-04\9D29024\
Data File : E04291920.D
Acq On : 29 Apr 2019 7:34 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-07RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Apr 30 07:16:32 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Sequence 9D30020 (A9D0674-12RE1,14RE1,17RE1,18RE1)

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence: **9D30020** Instrument: **SV-GCMS10**

Date: **04/30/19 07:35** Calibration: **A9D1505** x A9D1606 (Homologs)

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D30020-TUN1	Water	QC	QC			A19B027	A19D323
2	9D30020-CCV1	Water	QC	QC			A19B027	A19C237
3	9D30020-CCV2	Water	QC	QC			A19B027	A19D083
4	9D30020-CCB1	Water	QC	QC			A19B027	
5	A9D0896-01	Water	8270D LL Full List		05/08/19	9041410	A19B027	
6	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
7	A9D0927-01	Water	8270D LL Full List		05/09/19	9041410	A19B027	
8	"	Water	8270D PAH Homologs (Low Level)		05/09/19	9041410	A19B027	
9	A9D0896-01RE1	Water	8270D LL Full List		05/08/19	9041410	A19B027	
10	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
11	A9D0896-02	Water	8270D LL Full List		05/08/19	9041410	A19B027	
12	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
13	A9D0927-01RE1	Water	8270D LL Full List		05/09/19	9041410	A19B027	
14	"	Water	8270D PAH Homologs (Low Level)		05/09/19	9041410	A19B027	
15	A9D0674-12RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
16	A9D0705-43RE1	Soil	8270D LL PAH/PHTH/Phenols		05/01/19	9041316	A19B027	
17	A9D0877-01RE1	Water	8270D LL Full List		05/08/19	9041410	A19B027	
18	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
19	A9D0927-01RE2	Water	8270D LL Full List		05/09/19	9041410	A19B027	
20	"	Water	8270D PAH Homologs (Low Level)		05/09/19	9041410	A19B027	
21	A9D0674-14RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
22	A9D0674-15RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
23	A9D0674-16RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
24	A9D0674-17RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
25	A9D0674-18RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
26	A9D0674-19RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
27	A9D0674-20RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
28	A9D0674-22RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
29	9D30020-IBL1	Water	QC	QC			A19B027	

Data Entered By: AMS 5/1/19

Comments:

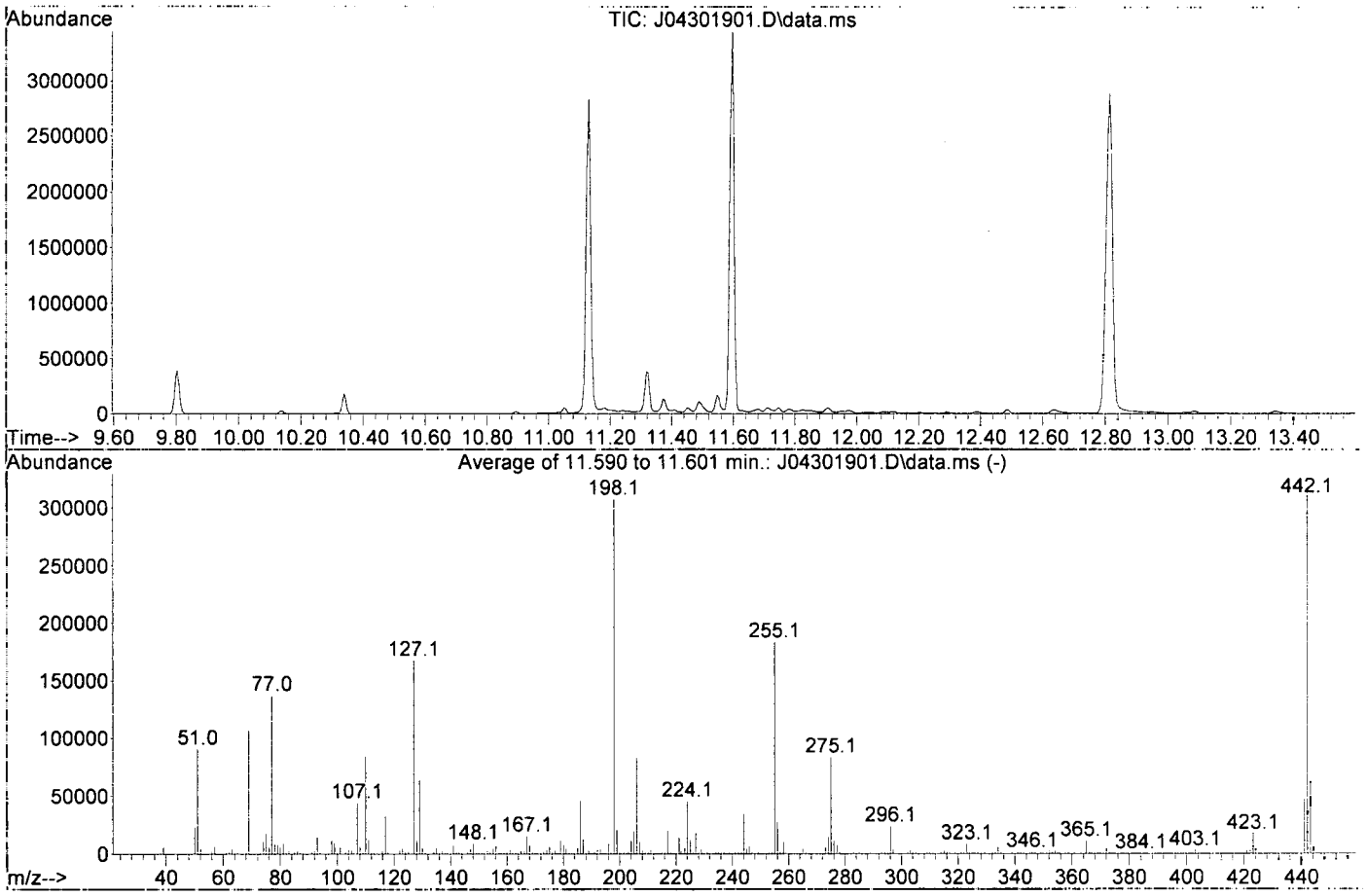
Data Reviewed By: 5/1/19

Data Path : T:\data\2019-04\9D30020\
Data File : J04301901.D
Acq On : 30 Apr 2019 8:06 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

AMS 4/30/19

Integration File: rteint.p

Method : T:\methods\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Apr 16 11:00:01 2019



AutoFind: Scans 1515, 1516, 1517; Background Corrected with Scan 1510

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.5	90817	PASS
68	69	0.00	2	1.5	1633	PASS
69	198	0.00	100	34.9	107340	PASS
70	69	0.00	2	0.5	520	PASS
127	198	10	80	54.6	167770	PASS
197	198	0.00	2	0.4	1173	PASS
198	198	100	100	100.0	307520	PASS
199	198	5	9	6.8	20888	PASS
275	198	10	60	27.2	83616	PASS
365	198	1	100	3.7	11269	PASS
441	442	0.01	24	15.0	46981	PASS
442	198	50	200	102.0	313813	PASS
443	442	15	24	19.7	61939	PASS

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301901.D
Acq On : 30 Apr 2019 8:06 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 30 15:39:53 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10

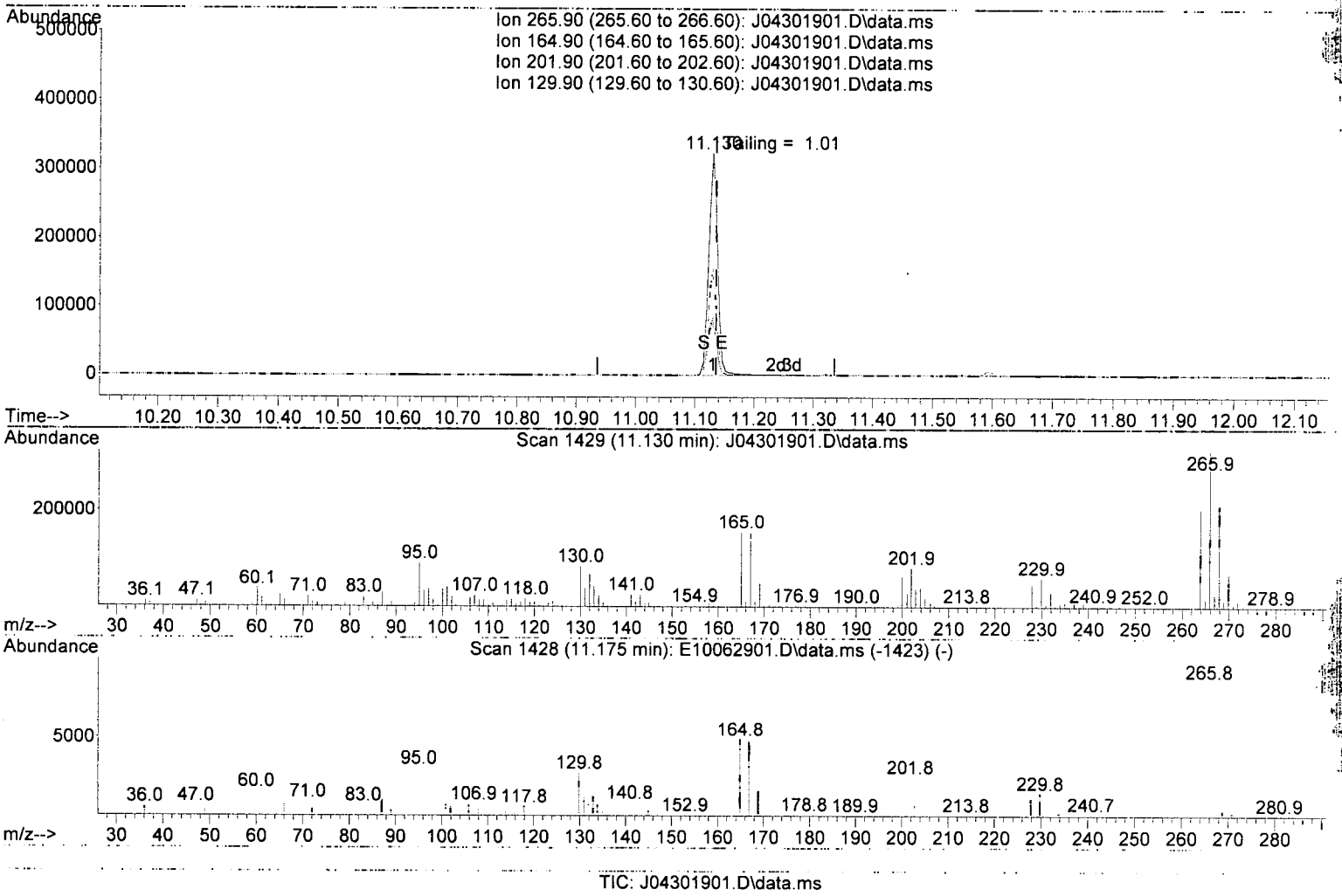
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.749	150	56262	2.00	ug/mL	0.00
2) Naphthalene-d8	8.022	136	177558	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.803	162	84545	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.317	188	139352	2.00	ug/mL	0.00
11) Chrysene-d12	15.104	240	106325	2.00	ug/mL	0.00
12) Perylene-d12	17.078	264	94300	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.372	292	90989	2.00	ug/mL	0.00
Target Compounds						Qvalue
4) Pentachlorophenol	11.130	266	332364	41.63	ug/mL	97
6) DFTPP	11.601	442	368711	32.77	ug/mL	76
7) Benzidine	12.815	184	1640533	33.09	ug/mL	96
8) 4,4-DDE	13.082	TIC	22214	No Calib		
9) 4,4-DDD	13.628	TIC	348310	No Calib		
10) 4,4-DDT	14.221	TIC	4564250	31.94	ug/mL	98

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301901.D
Acq On : 30 Apr 2019 8:06 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 30 15:39:53 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301901.D\data.ms

(4) Pentachlorophenol

11.130min (-0.006) 41.63 ug/mL

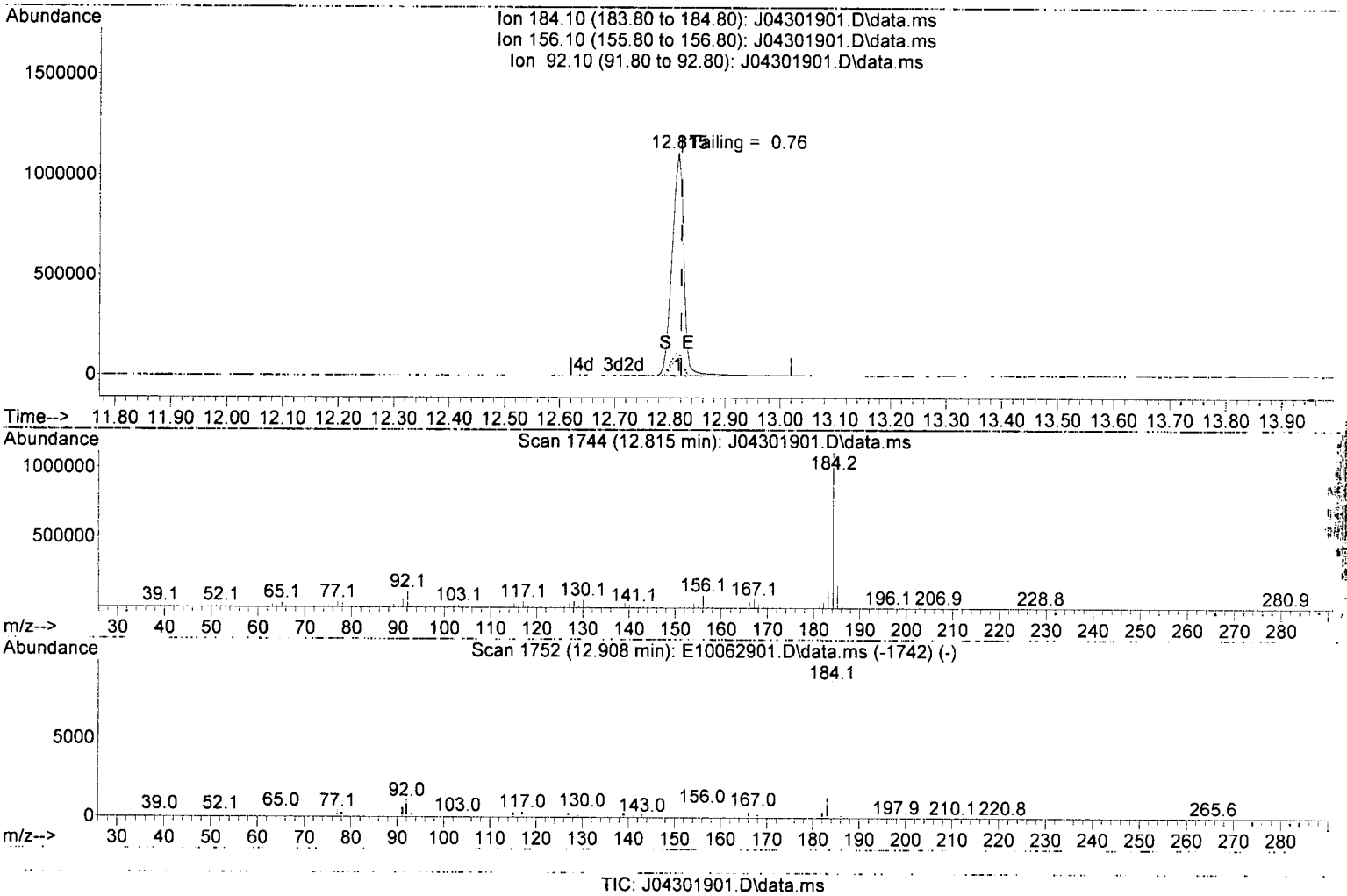
response 332364

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	50.60	47.80
201.90	25.80	24.82
129.90	27.30	25.77

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301901.D
Acq On : 30 Apr 2019 8:06 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 30 15:39:53 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301901.D\data.ms

(7) Benzidine

12.815min (-0.006) 33.09 ug/mL

response 1640533

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.92
92.10	8.20	10.20
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

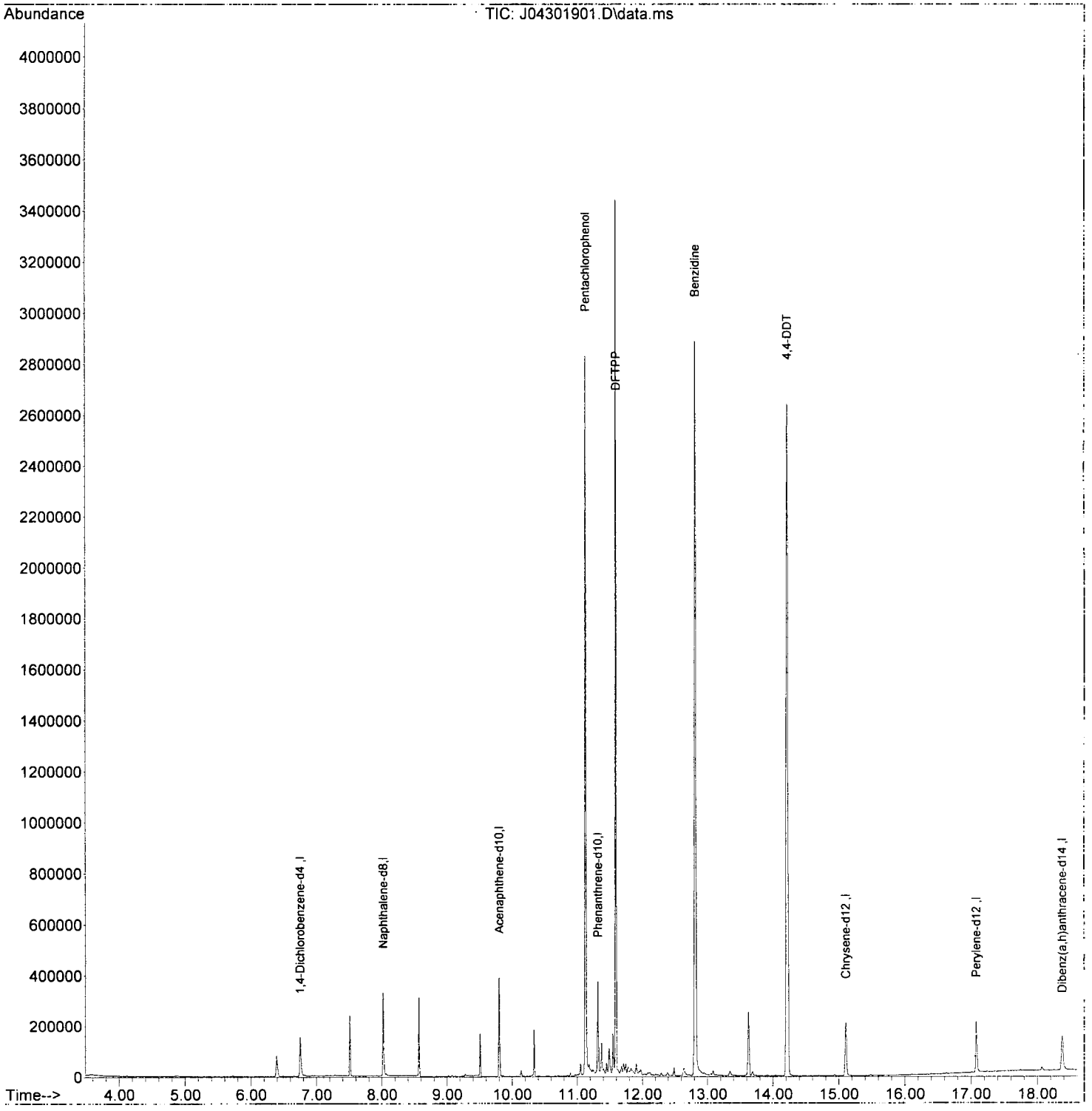
From:
9D30020-TUN1
SV-GCMS10

First Column Area Counts		Percent Breakdown	
DDE	22214		
DDD	348310		
DDT	4564250	7.51	PASS

Breakdown must be less than 20% to accept sample data.

Data Path : T:\data\2019-04\9D30020\
Data File : J04301901.D
Acq On : 30 Apr 2019 8:06 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 30 15:39:53 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Evaluate Continuing Calibration Report

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 4/30/19

Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	95	0.00
2	TG	N-Nitrosodimethylamine	1000.000	968.818	3.1	90	0.00
3	TG	Pyridine	1000.000	989.406	1.1	89	-0.02
4	S	2-Fluorophenol (Surr)	1000.000	1103.982	-10.4	100	0.00
5	S	Phenol-d6(Surr)	1000.000	1193.990	-19.4	108	0.00
6	T	Phenol	1000.000	1170.465	-17.0	118	0.00
7	T	Aniline	1000.000	788.560	21.1#	68	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	1186.148	-18.6	112	0.00
9	T	2-Chlorophenol	1000.000	1145.452	-14.5	100	0.00
10	T	1,3-Dichlorobenzene	1000.000	1045.856	-4.6	97	0.00
11	T	1,4-Dichlorobenzene	1000.000	1028.939	-2.9	98	0.00
12	T	Benzyl alcohol	1000.000	1268.497	-26.8#	118	0.00
13	T	1,2-Dichlorobenzene	1000.000	1059.381	-5.9	98	0.00
14	T	2-Methylphenol	1000.000	1313.949	-31.4#	111	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	1006.189	-0.6	92	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1130.989	-13.1	98	0.00
17	T	3+4-Methylphenol	1000.000	1222.916	-22.3#	112	0.00
18	T	Hexachloroethane	1000.000	1023.677	-2.4	97	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1142.923	-14.3	110	0.00
20	T	Nitrobenzene	1000.000	1188.732	-18.9	105	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	102	0.00
22	T	Isophorone	1000.000	995.268	0.5	97	0.00
23	T	2-Nitrophenol	1000.000	1174.609	-17.5	117	0.00
24	T	2,4-Dimethylphenol	1000.000	1109.669	-11.0	110	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1109.697	-11.0	102	0.00
26	T	Benzoic acid	2000.000	2080.617	-4.0	121	0.00
27	T	2,4-Dichlorophenol	1000.000	1125.516	-12.6	116	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1085.641	-8.6	106	0.00
29	T	Naphthalene	1000.000	1066.111	-6.6	103	0.00
30	T	4-Chloroaniline	1000.000	949.421	5.1	92	0.00
31	T	Hexachlorobutadiene	1000.000	998.151	0.2	100	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1095.003	-9.5	113	0.00
33	T	2-Methylnaphthalene	1000.000	1136.779	-13.7	106	0.00
34	T	1-Methylnaphthalene	1000.000	1094.084	-9.4	105	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	106	0.00
36	T	Hexachlorocyclopentadiene	1000.000	806.864	19.3	80	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1083.981	-8.4	120	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1227.126	-22.7#	123	0.00
39	T	1,1'-Biphenyl	1000.000	1135.708	-13.6	109	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1136.952	-13.7	109	0.00
41	T	2-Chloronaphthalene	1000.000	1162.394	-16.2	112	0.00
42	T	2-Nitroaniline	1000.000	1167.887	-16.8	127	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1072.695	-7.3	103	0.00
44	T	1,4-Dinitrobenzene	1000.000	1329.930	-33.0#	161	0.00
45	T	Dimethyl phthalate	1000.000	1080.121	-8.0	111	0.00
46	T	1,3-Dinitrobenzene	1000.000	1226.611	-22.7#	136	0.00
47	T	2,6-Dinitrotoluene	1000.000	1143.315	-14.3	118	0.00
48	T	1,2-Dinitrobenzene	1000.000	1118.982	-11.9	117	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
49	T	Acenaphthylene	1000.000	1088.035	-8.8	107	0.00
50	T	3-Nitroaniline	1000.000	1117.849	-11.8	108	0.00
51	T	Acenaphthene	1000.000	1054.659	-5.5	107	0.00
52	T	2,4-Dinitrophenol	1000.000	1332.231	-33.2#	174	0.00
53	T	4-Nitrophenol	1000.000	1201.278	-20.1#	132	0.00
54	T	2,4-Dinitrotoluene	1000.000	1186.555	-18.7	129	0.00
55	T	Dibenzofuran	1000.000	1092.693	-9.3	111	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1180.320	-18.0	123	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1150.365	-15.0	118	0.00
58	T	Diethyl phthalate	1000.000	1102.456	-10.2	109	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1084.614	-8.5	109	0.00
60	T	Fluorene	1000.000	1094.181	-9.4	110	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1100.472	-10.0	113	0.00
62	T	4-Nitroaniline	1000.000	1173.586	-17.4	116	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1384.273	-38.4#	169	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	108	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1096.509	-9.7	110	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1035.040	-3.5	103	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1106.641	-10.7	121	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1086.117	-8.6	110	0.00
69	T	Hexachlorobenzene	1000.000	1012.688	-1.3	108	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1091.982	-9.2	122	0.00
71	T	Phenanthrene	1000.000	1055.841	-5.6	110	0.00
72	T	Anthracene	1000.000	1081.478	-8.1	110	0.00
73	T	Carbazole	1000.000	1110.786	-11.1	111	0.00
74	T	Di-n-butyl phthalate	1000.000	1127.161	-12.7	112	0.00
75	T	Fluoranthene	1000.000	1093.792	-9.4	109	0.00
76	T	Benzidine	2000.000	957.446	52.1#	46	0.00
77	T	Pyrene	1000.000	1064.309	-6.4	107	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	107	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1115.509	-11.6	113	0.00
80	T	Butyl benzyl phthalate	1000.000	1160.026	-16.0	121	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	1121.829	-12.2	120	0.00
82	T	3,3-Dichlorobenzidine	2000.000	2150.083	-7.5	97	0.00
83	T	Benz(a)anthracene	1000.000	1057.596	-5.8	111	0.00
84	T	Chrysene	1000.000	1046.541	-4.7	109	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	1116.709	-11.7	116	-0.01
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	107	0.00
87	T	Di-n-octyl phthalate	1000.000	1196.195	-19.6	129	0.00
88	T	Benzo(b)fluoranthene	1000.000	1077.495	-7.7	111	0.00
89	T	Benzo(k)fluoranthene	1000.000	1074.599	-7.5	111	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2156.178	-7.8	111	0.00
91	T	Benzo(e)pyrene	1000.000	1102.065	-10.2	107	0.00
92	T	Benzo(a)pyrene	1000.000	1076.206	-7.6	109	0.00
93	T	Perylene	1000.000	1171.228	-17.1	120	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	110	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
95 T	Indeno(1,2,3-cd)pyrene	1000.000	948.597	5.1	107	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1042.179	-4.2	112	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1005.648	-0.6	102	0.00

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	197538	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	883856	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	431952	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	760322	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	649652	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	586554	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	563388	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.530	112	141768	1103.98	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	197227	1193.99	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	169025	1142.92	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	346507	1136.95	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	41397	1106.64	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	341129	1115.51	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.145	74	94301	968.82	ng/ml	89
3) Pyridine	4.161	79	157136	989.41	ng/ml	90
6) Phenol	6.455	94	216626	1170.46	ng/ml	95
7) Aniline	6.482	93	153148	788.56	ng/ml	96
8) Bis(2-chloroethyl) ether	6.536	93	198386	1186.15	ng/ml	91
9) 2-Chlorophenol	6.605	128	153826	1145.45	ng/ml	93
10) 1,3-Dichlorobenzene	6.755	146	158034	1045.86	ng/ml	96
11) 1,4-Dichlorobenzene	6.824	146	155110	1028.94	ng/ml	98
12) Benzyl alcohol	6.937	108	102389	1268.50	ng/ml	92
13) 1,2-Dichlorobenzene	6.979	146	155429	1059.38	ng/ml	98
14) 2-Methylphenol	7.044	107	136679	1313.95	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	190437	1006.19	ng/ml	87
16) N-Nitrosodi-n-propylamine	7.199	70	123790	1130.99	ng/ml	97
17) 3+4-Methylphenol	7.193	107	173257	1222.92	ng/ml	98
18) Hexachloroethane	7.316	201	41591	1023.68	ng/ml	94
20) Nitrobenzene	7.370	77	167041	1188.73	ng/ml	96
22) Isophorone	7.605	82	327629	995.27	ng/ml	97
23) 2-Nitrophenol	7.691	139	81964	1174.61	ng/ml	95
24) 2,4-Dimethylphenol	7.723	122	150629	1109.67	ng/ml	99
25) Bis(2-chloroethoxy) me...	7.814	93	195924	1109.70	ng/ml	99
26) Benzoic acid	7.809	105	116706	2080.62	ng/ml	93
27) 2,4-Dichlorophenol	7.932	162	123145	1125.52	ng/ml	97
28) 1,2,4-Trichlorobenzene	8.017	180	136290	1085.64	ng/ml	99
29) Naphthalene	8.097	128	487753	1066.11	ng/ml	100
30) 4-Chloroaniline	8.151	127	140352	949.42	ng/ml	97
31) Hexachlorobutadiene	8.226	225	68082	998.15	ng/ml	99
32) 4-Chloro-3-methylphenol	8.627	107	142176	1095.00	ng/ml	96
33) 2-Methylnaphthalene	8.798	142	341047	1136.78	ng/ml	99
34) 1-Methylnaphthalene	8.900	142	318383	1094.08	ng/ml	99
36) Hexachlorocyclopentadiene	8.964	237	47556	806.86	ng/ml	95
37) 2,4,6-Trichlorophenol	9.082	196	83665	1083.98	ng/ml	99
38) 2,4,5-Trichlorophenol	9.119	198	84939	1227.13	ng/ml	94
39) 1,1'-Biphenyl	9.269	154	397672	1135.71	ng/ml	99
41) 2-Chloronaphthalene	9.290	162	287834	1162.39	ng/ml	99
42) 2-Nitroaniline	9.392	138	94833	1167.89	ng/ml	89
43) 2,6-Dimethylnaphthalene	9.429	156	275391	1072.69	ng/ml	98

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

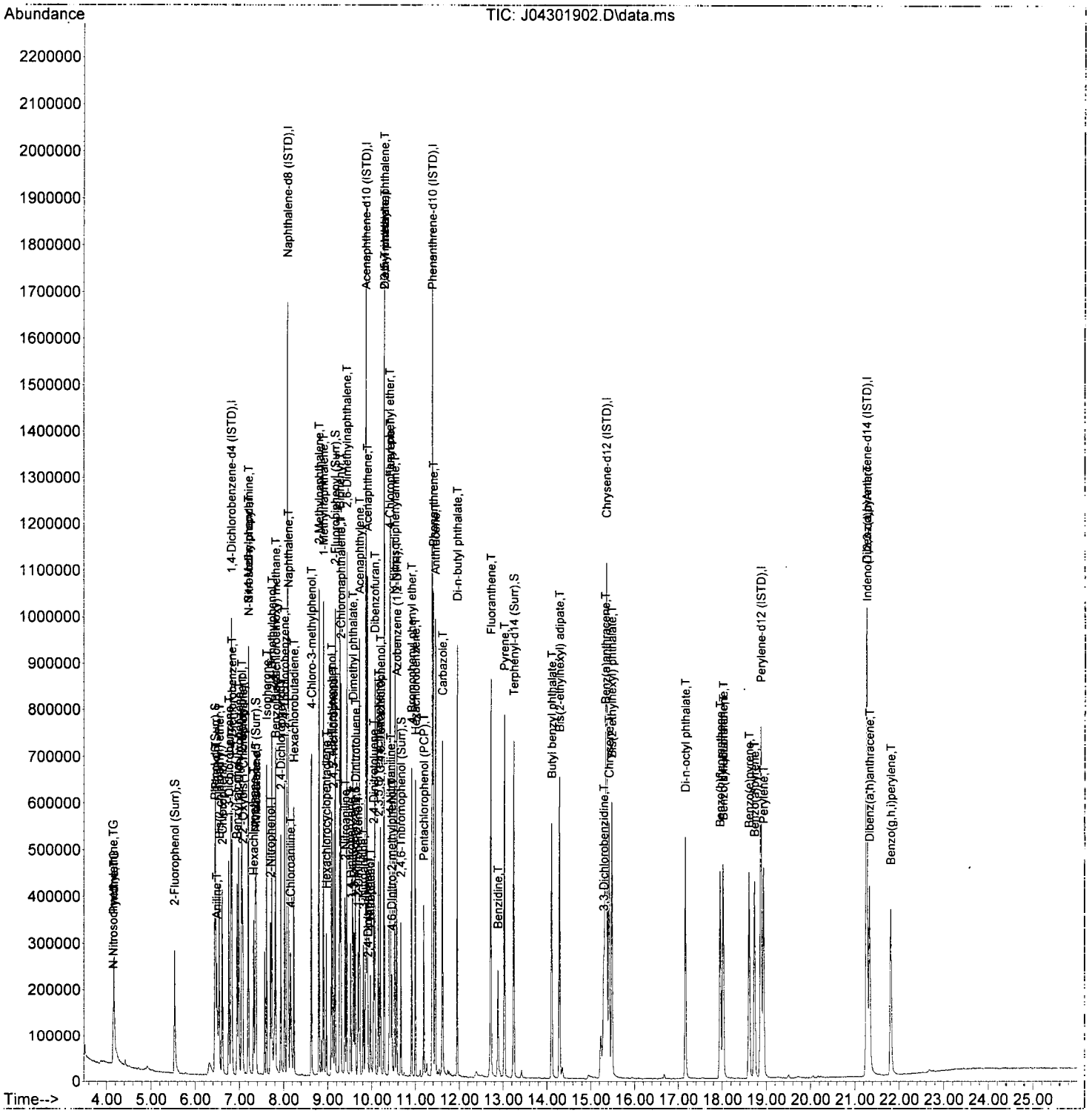
Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	9.515	168	39472	1329.93	ng/ml	99
45)	Dimethyl phthalate	9.568	163	324522	1080.12	ng/ml	100
46)	1,3-Dinitrobenzene	9.600	168	46047	1226.61	ng/ml	94
47)	2,6-Dinitrotoluene	9.627	165	72699	1143.31	ng/ml	92
48)	1,2-Dinitrobenzene	9.686	168	32393	1118.98	ng/ml	88
49)	Acenaphthylene	9.718	152	470125	1088.03	ng/ml	99
50)	3-Nitroaniline	9.809	138	66012	1117.85	ng/ml	92
51)	Acenaphthene	9.895	153	293079	1054.66	ng/ml	99
52)	2,4-Dinitrophenol	9.911	184	16520	1332.23	ng/ml	95
53)	4-Nitrophenol	9.964	139	50873	1201.28	ng/ml	99
54)	2,4-Dinitrotoluene	10.039	165	92760	1186.55	ng/ml	93
55)	Dibenzofuran	10.066	168	396701	1092.69	ng/ml	97
56)	2,3,5,6-Tetrachlorophenol	10.151	232	64934	1180.32	ng/ml	95
57)	2,3,4,6-Tetrachlorophenol	10.194	232	68291	1150.37	ng/ml	95
58)	Diethyl phthalate	10.280	149	316357	1102.46	ng/ml	98
59)	2,3,5-Trimethylnaphtha...	10.280	170	248946	1084.61	ng/ml	99
60)	Fluorene	10.419	166	311075	1094.18	ng/ml	100
61)	4-Chlorophenyl phenyl ...	10.408	204	143170	1100.47	ng/ml	99
62)	4-Nitroaniline	10.429	138	63759	1173.59	ng/ml	92
63)	4,6-Dinitro-2-methylph...	10.456	198	30947	1384.27	ng/ml	95
65)	N-Nitrosodiphenylamine	10.526	169	256680	1096.51	ng/ml	99
66)	Azobenzene (1,2-DPH)	10.568	77	327927	1035.04	ng/ml	93
68)	4-Bromophenyl phenyl e...	10.905	248	81285	1086.12	ng/ml	94
69)	Hexachlorobenzene	10.991	284	92410	1012.69	ng/ml	96
70)	Pentachlorophenol (PCP)	11.184	266	44760	1091.98	ng/ml	96
71)	Phenanthrene	11.403	178	435607	1055.84	ng/ml	100
72)	Anthracene	11.451	178	434546	1081.48	ng/ml	99
73)	Carbazole	11.611	167	377718	1110.79	ng/ml	98
74)	Di-n-butyl phthalate	11.948	149	524043	1127.16	ng/ml	99
75)	Fluoranthene	12.719	202	450023	1093.79	ng/ml	97
76)	Benzidine	12.879	184	137917	957.45	ng/ml	99
77)	Pyrene	13.029	202	451265	1064.31	ng/ml	99
80)	Butyl benzyl phthalate	14.109	149	221233	1160.03	ng/ml	98
81)	Bis(2-ethylhexyl) adipate	14.286	129	207670	1121.83	ng/ml	97
82)	3,3-Dichlorobenzidine	15.297	252	121828	2150.08	ng/ml	96
83)	Benz(a)anthracene	15.334	228	374916	1057.60	ng/ml	98
84)	Chrysene	15.414	228	359978	1046.54	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.478	149	304740	1116.71	ng/ml	99
87)	Di-n-octyl phthalate	17.158	149	489488	1196.19	ng/ml	96
88)	Benzo(b)fluoranthene	17.950	252	364952	1077.49	ng/ml	96
89)	Benzo(k)fluoranthene	18.019	252	368983	1074.60	ng/ml	97
90)	Benzo(b+k)fluoranthene	18.019	252	747966	2156.18	ng/ml	97
91)	Benzo(e)pyrene	18.607	252	354463	1102.06	ng/ml	96
92)	Benzo(a)pyrene	18.730	252	333065	1076.21	ng/ml	99
93)	Perylene	18.934	252	348725	1171.23	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.271	276	298971	948.60	ng/ml	92
96)	Dibenz(a,h)anthracene	21.330	278	293822	1042.18	ng/ml	94
97)	Benzo(g,h,i)perylene	21.811	276	306348	1005.65	ng/ml	96

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301902.D
Acq On : 30 Apr 2019 8:33 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:40:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Evaluate Continuing Calibration Report

Data Path : T:\data\2019-04\9D30020\
Data File : J04301903.D
Acq On : 30 Apr 2019 9:10 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 4/30/19

Quant Time: Apr 30 15:41:26 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	99	0.00
2	S	Nitrobenzene-d5 (Surr)	1000.000	1264.844	-26.5#	116	0.00
3	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	111	0.00
4	T	Decalin	1000.000	960.138	4.0	98	0.00
5	T	C-1 Decalin	1000.000	0.000	100.0#	0	-7.78#
6	T	C-2 Decalin	1000.000	0.000	100.0#	0	-8.28#
7	T	C-3 Decalin	1000.000	0.000	100.0#	0	-8.98#
8	T	C-4 Decalin	1000.000	0.000	100.0#	0	-9.55#
9	T	Naphthalene	1000.000	1055.124	-5.5	108	0.00
10	T	2-Methylnaphthalene	1000.000	1138.900	-13.9	113	0.00
11	T	C-1 Naphthalenes	1000.000	1031.896	-3.2	102	0.05
12	T	1-Methylnaphthalene	1000.000	1052.793	-5.3	104	0.00
13	T	1,1'-Biphenyl	1000.000	1128.023	-12.8	108	0.00
14	T	2,6-Dimethylnaphthalene	1000.000	1073.758	-7.4	104	0.00
15	T	C-2 Naphthalenes	1000.000	168.067	83.2#	16	0.16
16	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	102	0.00
17	S	2-Fluorobiphenyl (Surr)	1000.000	1214.165	-21.4#	110	0.00
18	S	Acenaphthylene d-8 (Surr)	1000.000	1137.750	-13.8	104	0.00
19	T	Acenaphthylene	1000.000	1119.312	-11.9	102	0.00
20	T	Acenaphthene	1000.000	1065.178	-6.5	102	0.00
21	T	Dibenzofuran	1000.000	1106.169	-10.6	103	0.00
22	T	1,6,7-Trimethylnaphthalene	1000.000	1095.373	-9.5	103	0.00
23	T	C-3 Naphthalenes	1000.000	1101.273	-10.1	104	0.05
24	T	C-4 Naphthalenes	1000.000	0.309	100.0#	0	0.12
25	T	Fluorene	1000.000	1127.412	-12.7	104	0.00
26	T	C-1 Fluorenes	1000.000	1.022	99.9#	0	-0.11
27	T	C-2 Fluorenes	1000.000	0.000	100.0#	0	-11.58#
28	T	C-3 Fluorenes	1000.000	1.275	99.9#	0	-0.20
29	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	102	0.00
30	T	Dibenzothiopene	1000.000	1080.811	-8.1	103	0.00
31		C-1 Dibenzothiophene	1000.000	0.000	100.0#	0	-11.85#
32		C-2 Dibenzothiophene	1000.000	0.000	100.0#	0	-12.35#
33		C-3 Dibenzothiophene	1000.000	0.000	100.0#	0	-12.90#
34		C-4 Dibenzothiophene	1000.000	0.000	100.0#	0	-13.68#
35	T	Phenanthrene	1000.000	1042.553	-4.3	101	0.00
36	T	Anthracene	1000.000	1080.604	-8.1	101	0.00
37	T	1-Methylphenanthrene	1000.000	1092.848	-9.3	101	0.00
38	T	C-1 Phenanthrene/anthracene	1000.000	1093.470	-9.3	101	-0.02
39	T	C-2 Phenanthrene/anthracene	1000.000	0.000	100.0#	0	-12.55#
40	T	C-3 Phenanthrene/anthracene	1000.000	0.000	100.0#	0	-13.21#
41	T	C-4 Phenanthrene/anthracene	1000.000	0.000	100.0#	0	-13.87#
42	T	Fluoranthene	1000.000	1100.453	-10.0	100	0.00
43	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	100	0.00
44	T	Pyrene	1000.000	1086.308	-8.6	99	0.00
45	T	C-1 Fluoranthene/pyrenes	1000.000	2.552	99.7#	0	-0.01
46	S	Terphenyl-d14 (Surr)	1000.000	1080.357	-8.0	101	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-04\9D30020\
Data File : J04301903.D
Acq On : 30 Apr 2019 9:10 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:41:26 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
47	T	Benz(a)anthracene	1000.000	1055.786	-5.6	103	0.00
48	T	Chrysene	1000.000	1019.526	-2.0	99	0.00
49	T	C-1 Benz(a)anthracene/Chrys	1000.000	0.589	99.9#	0	0.26
50	T	C-2 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-17.55#
51	T	C-3 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-18.42#
52		C-4 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-20.01#
53	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	96	-0.01
54	T	Benzo(b)fluoranthene	1000.000	1134.115	-13.4	101	0.00
55	T	Benzo(k)fluoranthene	1000.000	1113.376	-11.3	99	0.00
56	T	Benzo(b+k)fluoranthene	2000.000	2221.692	-11.1	100	0.00
57	S	Benzo(a)pyrene d-12 (Surr)	1000.000	1071.102	-7.1	99	0.00
58	T	Benzo(e)pyrene	1000.000	1075.875	-7.6	98	0.00
59	T	Benzo(a)pyrene	1000.000	1104.365	-10.4	99	0.00
60	T	Perylene	1000.000	1061.704	-6.2	96	0.00
61	I	Dibenz(a,h)Anthrcene-d14(IS	2000.000	2000.000	0.0	100	-0.01
62	T	Indeno(1,2,3-cd)Pyrene	1000.000	983.374	1.7	97	0.00
63	T	Dibenz(a,h)anthracene	1000.000	1096.334	-9.6	103	0.00
64	T	Benzo(g,h,i)perylene	1000.000	974.348	2.6	93	0.00

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301903.D
Acq On : 30 Apr 2019 9:10 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 4/30/19

Quant Time: Apr 30 15:41:26 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Titlę : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	199546	2000.00	ng/ml	0.00
3) Naphthalene-d8 (ISTD)	8.081	136	890270	2000.00	ng/ml	0.00
16) Acenaphthene-d10 (ISTD)	9.862	162	405279	2000.00	ng/ml	0.00
29) Phenanthrene-d10 (ISTD)	11.376	188	686211	2000.00	ng/ml	0.00
43) Chrysene-d12 (ISTD)	15.355	240	582334	2000.00	ng/ml	0.00
53) Perylene-d12 (ISTD)	18.870	264	507250	2000.00	ng/ml	-0.01
61) Dibenz(a,h)Anthrcene-d...	21.260	292	481479	2000.00	ng/ml	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5 (Surr)	7.354	82	155256	1264.84	ng/ml	0.00
17) 2-Fluorobiphenyl (Surr)	9.162	172	320869	1214.17	ng/ml	0.00
18) Acenaphthylene d-8 (Surr)	9.702	160	406747	1137.75	ng/ml	0.00
46) Terphenyl-d14 (Surr)	13.243	244	289971	1080.36	ng/ml	0.00
57) Benzo(a)pyrene d-12 (S...	18.672	264	236894	1071.10	ng/ml	0.00
Target Compounds						Qvalue
4) Decalin	7.536	138	59782	960.14	ng/ml	90
5) C-1 Decalin	0.000		0	N.D.		
6) C-2 Decalin	0.000		0	N.D.		
7) C-3 Decalin	0.000		0	N.D.		
8) C-4 Decalin	0.000		0	N.D.		
9) Naphthalene	8.103	128	490522	1055.12	ng/ml	98
10) 2-Methylnaphthalene	8.798	142	319253	1138.90	ng/ml	98
11) C-1 Naphthalenes	8.900	142	289258	1031.90	ng/ml	97
12) 1-Methylnaphthalene	8.900	142	292583	1052.79	ng/ml	99
13) 1,1'-Biphenyl	9.269	154	363714	1128.02	ng/ml	99
14) 2,6-Dimethylnaphthalene	9.429	156	264326	1073.76	ng/ml	97
15) C-2 Naphthalenes	9.702	156	41373	168.07	ng/ml	63
19) Acenaphthylene	9.718	152	450017	1119.31	ng/ml	99
20) Acenaphthene	9.895	153	294603	1065.18	ng/ml	99
21) Dibenzofuran	10.066	168	369590	1106.17	ng/ml	100
22) 1,6,7-Trimethylnaphtha...	10.280	170	234112	1095.37	ng/ml	98
23) C-3 Naphthalenes	10.280	170	235373	1101.27	ng/ml	88
24) C-4 Naphthalenes	10.975	184	66	N.D.		
25) Fluorene	10.419	166	303398	1127.41	ng/ml	99
26) C-1 Fluorenes	10.857	180	275	N.D.		
27) C-2 Fluorenes	0.000		0	N.D.		
28) C-3 Fluorenes	12.237	208	343	N.D.		
30) Dibenzothiopene	11.275	184	374172	1080.81	ng/ml	99
31) C-1 Dibenzothiophene	0.000		0	N.D.		
32) C-2 Dibenzothiophene	0.000		0	N.D.		
33) C-3 Dibenzothiophene	0.000		0	N.D.		
34) C-4 Dibenzothiophene	0.000		0	N.D.		
35) Phenanthrene	11.403	178	399136	1042.55	ng/ml	98
36) Anthracene	11.451	178	384419	1080.60	ng/ml	99
37) 1-Methylphenanthrene	12.034	192	279548	1092.85	ng/ml	98
38) C-1 Phenanthrene/anthr...	12.034	192	279707	1093.47	ng/ml#	100
39) C-2 Phenanthrene/anthr...	0.000		0	N.D.		
40) C-3 Phenanthrene/anthr...	0.000		0	N.D.		
41) C-4 Phenanthrene/anthr...	0.000		0	N.D.		
42) Fluoranthene	12.719	202	404769	1100.45	ng/ml	98
44) Pyrene	13.029	202	415091	1086.31	ng/ml	98
45) C-1 Fluoranthene/pyrenes	13.660	216	975	2.55	ng/ml#	100

Data Path : T:\data\2019-04\9D30020\
Data File : J04301903.D
Acq On : 30 Apr 2019 9:10 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

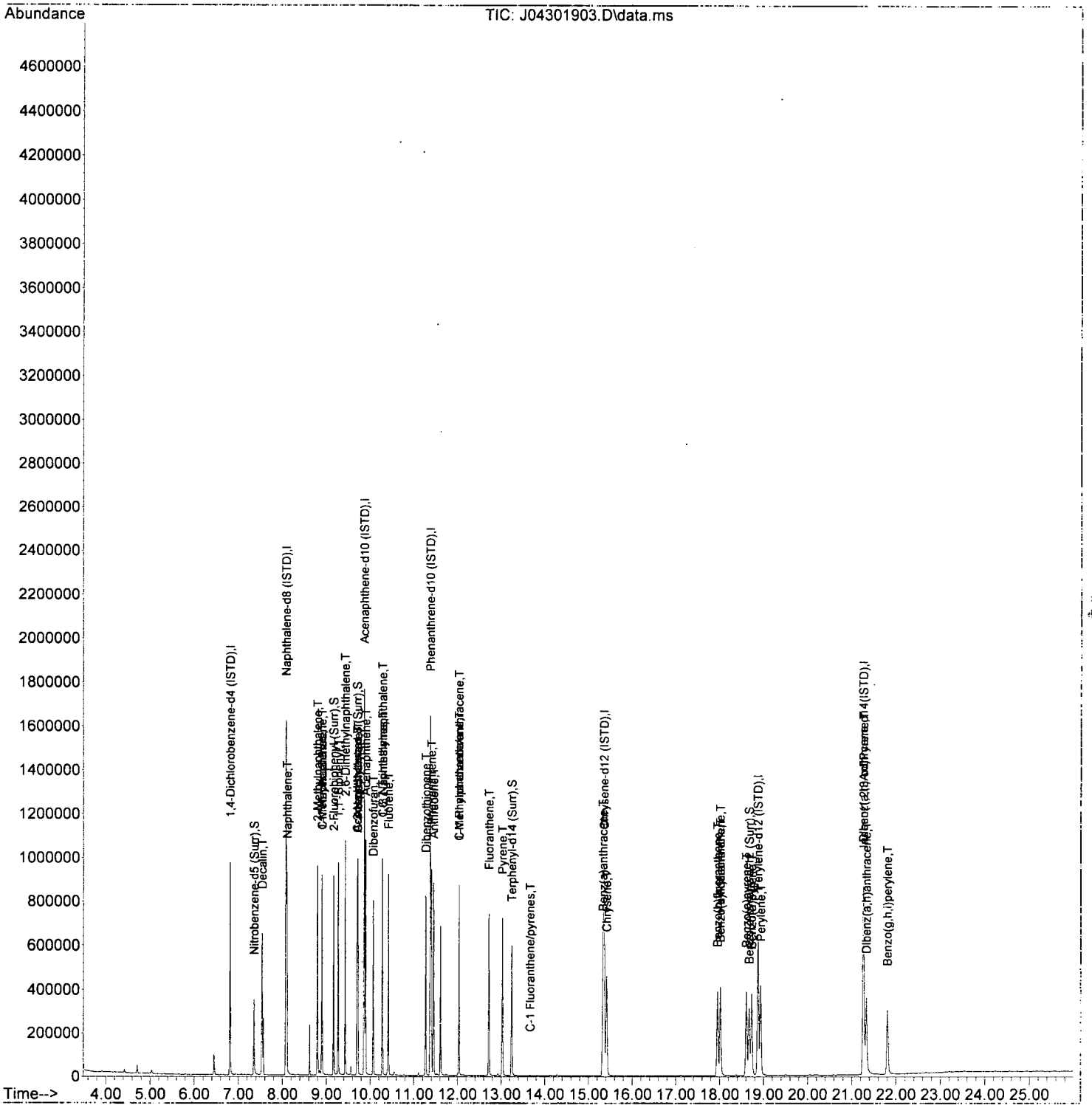
Quant Time: Apr 30 15:41:26 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47) Benz(a)anthracene	15.329	228	334077	1055.79	ng/ml	98
48) Chrysene	15.414	228	315219	1019.53	ng/ml	98
49) C-1 Benz(a)anthracene/...	16.639	242	182	N.D.		
50) C-2 Benz(a)anthracene/...	0.000		0	N.D.		
51) C-3 Benz(a)anthracene/...	0.000		0	N.D.		
52) C-4 Benz(a)anthracene/...	0.000		0	N.D.		
54) Benzo(b)fluoranthene	17.950	252	315923	1134.12	ng/ml	99
55) Benzo(k)fluoranthene	18.014	252	321544	1113.38	ng/ml	99
56) Benzo(b+k)fluoranthene	18.014	252	653737	2221.69	ng/ml	99
58) Benzo(e)pyrene	18.607	252	305657	1075.87	ng/ml	97
59) Benzo(a)pyrene	18.730	252	280460	1104.37	ng/ml	99
60) Perylene	18.934	252	318360	1061.70	ng/ml	96
62) Indeno(1,2,3-cd)Pyrene	21.266	276	252346	983.37	ng/ml	96
63) Dibenz(a,h)anthracene	21.330	278	260661	1096.33	ng/ml	94
64) Benzo(g,h,i)perylene	21.806	276	261628	974.35	ng/ml	97

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301903.D
Acq On : 30 Apr 2019 9:10 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:41:26 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 4/30/19

Quant Time: Apr 30 15:49:12 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	197499	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	904006	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	429878	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	728046	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.350	240	630285	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	553337	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	504840	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
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.129	79	53	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	6.985	45	64	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	7.333	77	91	N.D.		
22) Isophorone	7.563	82	120	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	0.000		0	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.		

Data Path : T:\data\2019-04\9D30020\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

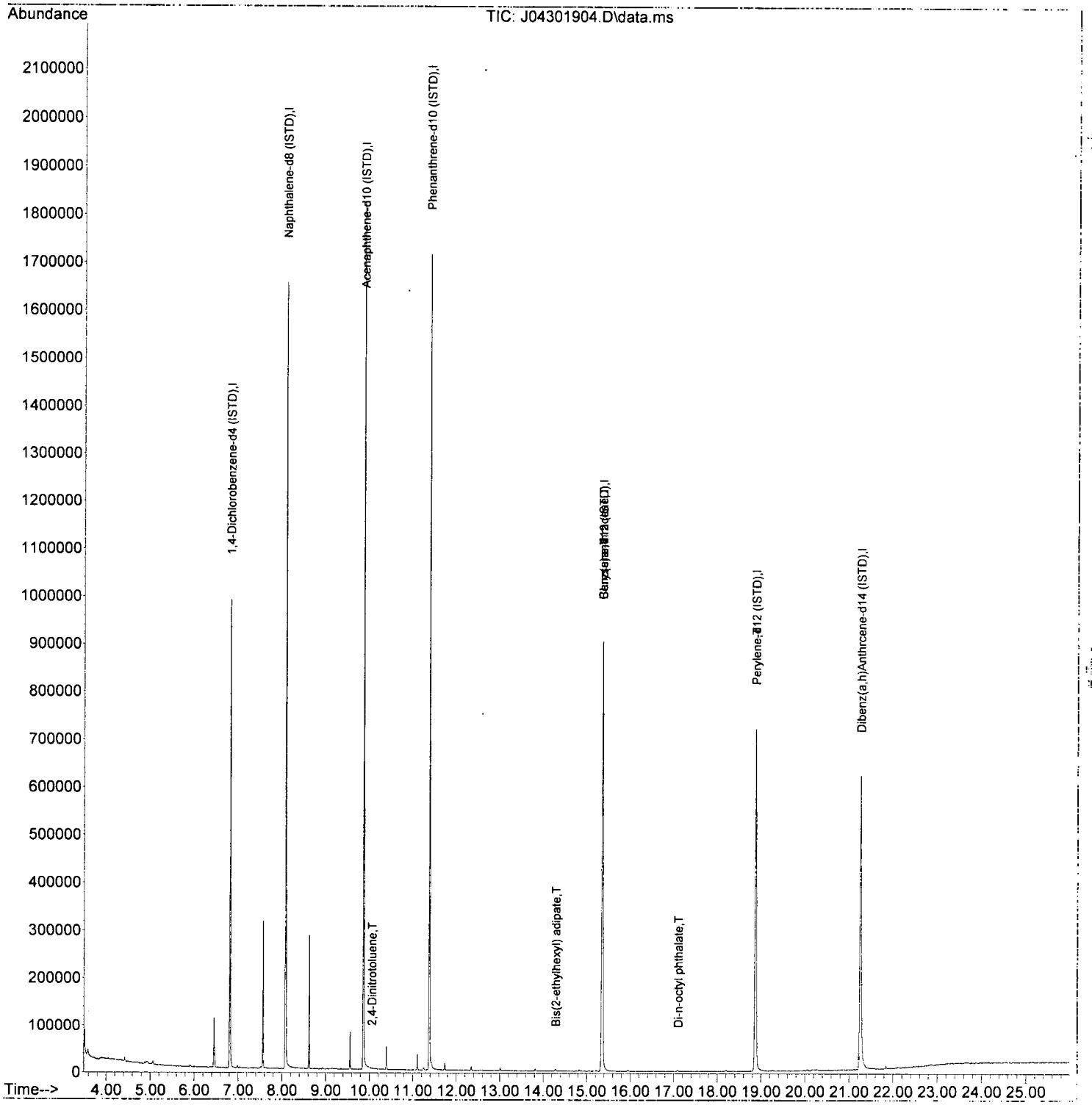
Quant Time: Apr 30 15:49:12 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	9.862	153	88	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.055	165	54	60.78 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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.392	170	179	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)	10.510	77	55	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.381	178	338	N.D.	
72) Anthracene	11.381	178	309	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	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.286	129	1229	6.84 ng/ml	82
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.350	228	1556	4.52 ng/ml	72
84) Chrysene	15.350	228	1556	4.66 ng/ml	70
85) Bis(2-ethylhexyl) phth...	0.000		0	N.D.	
87) Di-n-octyl phthalate	17.099	149	63	66.38 ng/ml	73
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	18.870	252	1767	6.29 ng/ml#	54
95) Indeno(1,2,3-cd)pyrene	21.255	276	200	N.D.	
96) Dibenz(a,h)anthracene	21.255	278	121	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:12 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (QT Reviewed)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19

Quant Time: May 01 11:50:50 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	197499	2000.00	ng/ml	0.00
3) Naphthalene-d8 (ISTD)	8.081	136	904006	2000.00	ng/ml	0.00
16) Acenaphthene-d10 (ISTD)	9.862	162	429878	2000.00	ng/ml	0.00
29) Phenanthrene-d10 (ISTD)	11.376	188	728046	2000.00	ng/ml	0.00
43) Chrysene-d12 (ISTD)	15.350	240	630285	2000.00	ng/ml	-0.01
53) Perylene-d12 (ISTD)	18.870	264	553337	2000.00	ng/ml	-0.01
61) Dibenz(a,h)Anthrcene-d...	21.260	292	504840	2000.00	ng/ml	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5 (Surr)	7.504	82	81	9.75	ng/ml	0.15
17) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
18) Acenaphthylene d-8 (Surr)	9.702	160	184	0.49	ng/ml	0.00
46) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
57) Benzo(a)pyrene d-12 (S...	0.000	264	0	0.00	ng/ml	
Target Compounds						Qvalue
4) Decalin	0.000		0	N.D.		
5) C-1 Decalin	0.000		0	N.D.		
6) C-2 Decalin	0.000		0	N.D.		
7) C-3 Decalin	0.000		0	N.D.		
8) C-4 Decalin	0.000		0	N.D.		
9) Naphthalene	0.000		0	N.D.		
10) 2-Methylnaphthalene	0.000		0	N.D.		
11) C-1 Naphthalenes	0.000		0	N.D.		
12) 1-Methylnaphthalene	0.000		0	N.D.		
13) 1,1'-Biphenyl	0.000		0	N.D.		
14) 2,6-Dimethylnaphthalene	0.000		0	N.D.		
15) C-2 Naphthalenes	9.558	156	19	N.D.		
19) Acenaphthylene	0.000		0	N.D.		
20) Acenaphthene	9.862	153	88	N.D.		
21) Dibenzofuran	0.000		0	N.D.		
22) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.		
23) C-3 Naphthalenes	10.392	170	179	N.D.		
24) C-4 Naphthalenes	11.344	184	8	N.D.		
25) Fluorene	0.000		0	N.D.		
26) C-1 Fluorenes	10.579		0	N.D.		
27) C-2 Fluorenes	11.248	194	209	N.D.		
28) C-3 Fluorenes	12.633	208	1032m	3.62	ng/ml	
30) Dibenzothiopene	0.000		0	N.D.		
31) C-1 Dibenzothiophene	0.000		0	N.D.		
32) C-2 Dibenzothiophene	0.000		0	N.D.		
33) C-3 Dibenzothiophene	0.000		0	N.D.		
34) C-4 Dibenzothiophene	0.000		0	N.D.		
35) Phenanthrene	11.381	178	338	N.D.		
36) Anthracene	11.381	178	309	N.D.		
37) 1-Methylphenanthrene	0.000		0	N.D.		
38) C-1 Phenanthrene/anthr...	11.740	192	131	N.D.		
39) C-2 Phenanthrene/anthr...	13.007	206	9	N.D.		
40) C-3 Phenanthrene/anthr...	12.654		0	N.D.		
41) C-4 Phenanthrene/anthr...	13.328		0	N.D.		
42) Fluoranthene	0.000		0	N.D.		
44) Pyrene	0.000		0	N.D.		
45) C-1 Fluoranthene/pyrenes	13.200		0	N.D.		

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:50:50 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

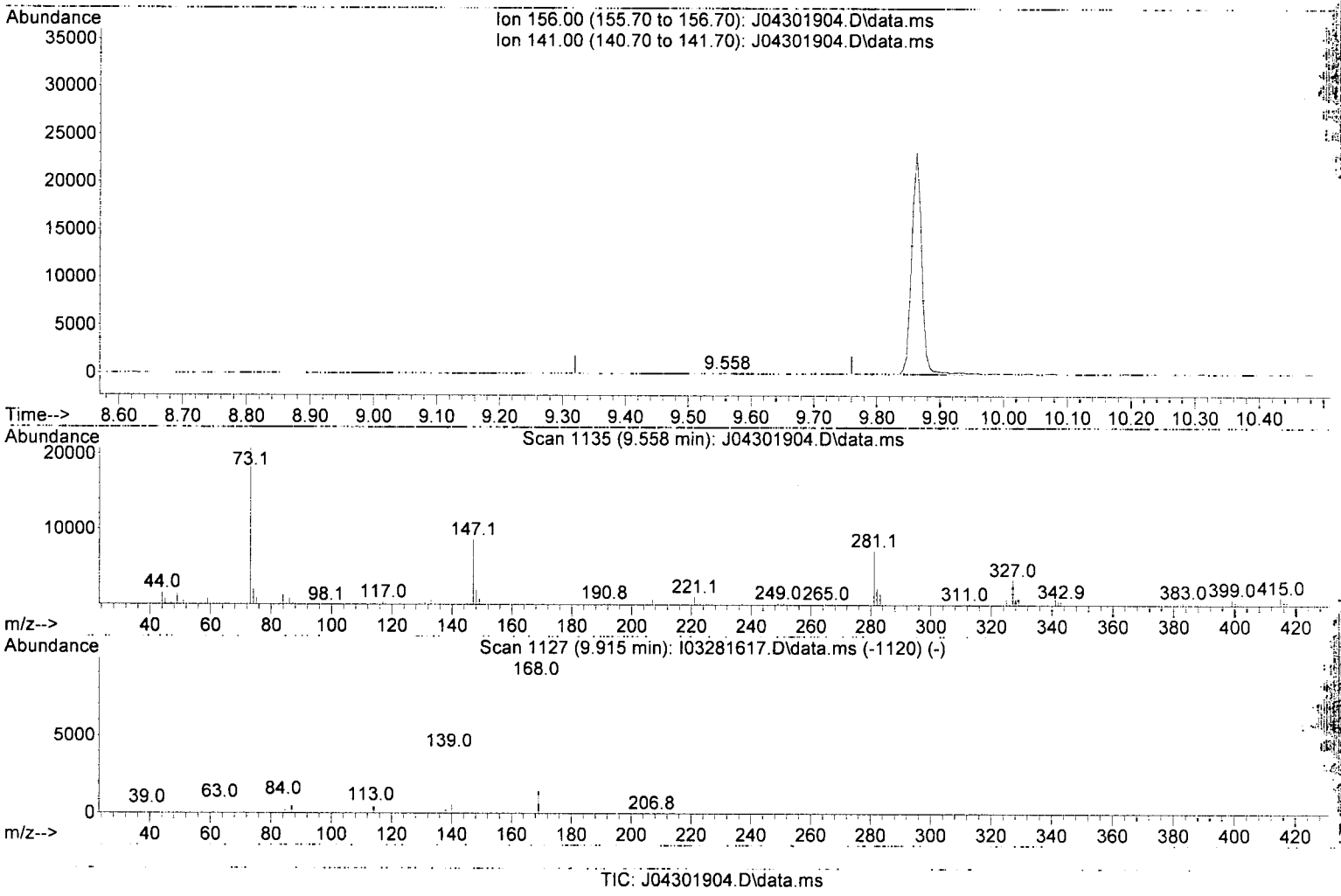
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Benz(a)anthracene	15.350	228	1568	4.58 ng/ml	72
48) Chrysene	15.350	228	1568	4.69 ng/ml	69
49) C-1 Benz(a)anthracene/...	16.505	242	8	N.D.	
50) C-2 Benz(a)anthracene/...	16.848		0	N.D.	
51) C-3 Benz(a)anthracene/...	17.195		0	N.D.	
52) C-4 Benz(a)anthracene/...	18.779	284	443	N.D.	
54) Benzo(b)fluoranthene	0.000		0	N.D.	
55) Benzo(k)fluoranthene	0.000		0	N.D.	
56) Benzo(b+k)fluoranthene	0.000		0	N.D.	
58) Benzo(e)pyrene	18.870	252	1418	13.30 ng/ml#	14
59) Benzo(a)pyrene	0.000		0	N.D.	
60) Perylene	18.870	252	1767	5.40 ng/ml	71
62) Indeno(1,2,3-cd)Pyrene	21.255	276	200	N.D.	
63) Dibenz(a,h)anthracene	21.255	278	121	N.D.	
64) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(15) C-2 Naphthalenes (T)

9.558min (+ 0.018) 0.08 ng/ml m

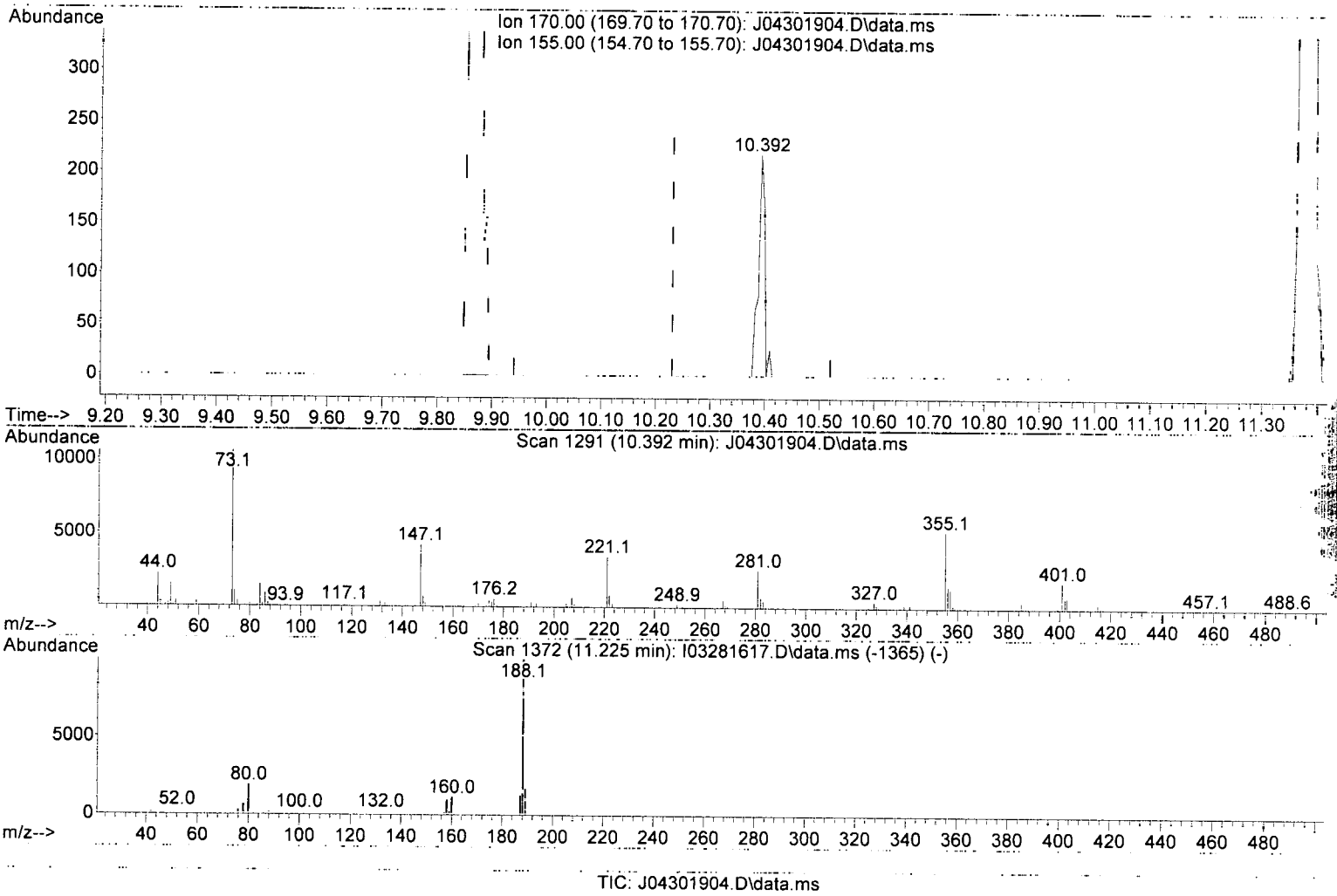
response 19

Ion	Exp%	Act%
156.00	100.00	100.00
141.00	16.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(23) C-3 Naphthalenes (T)

10.392min (+ 0.162) 0.79 ng/ml m

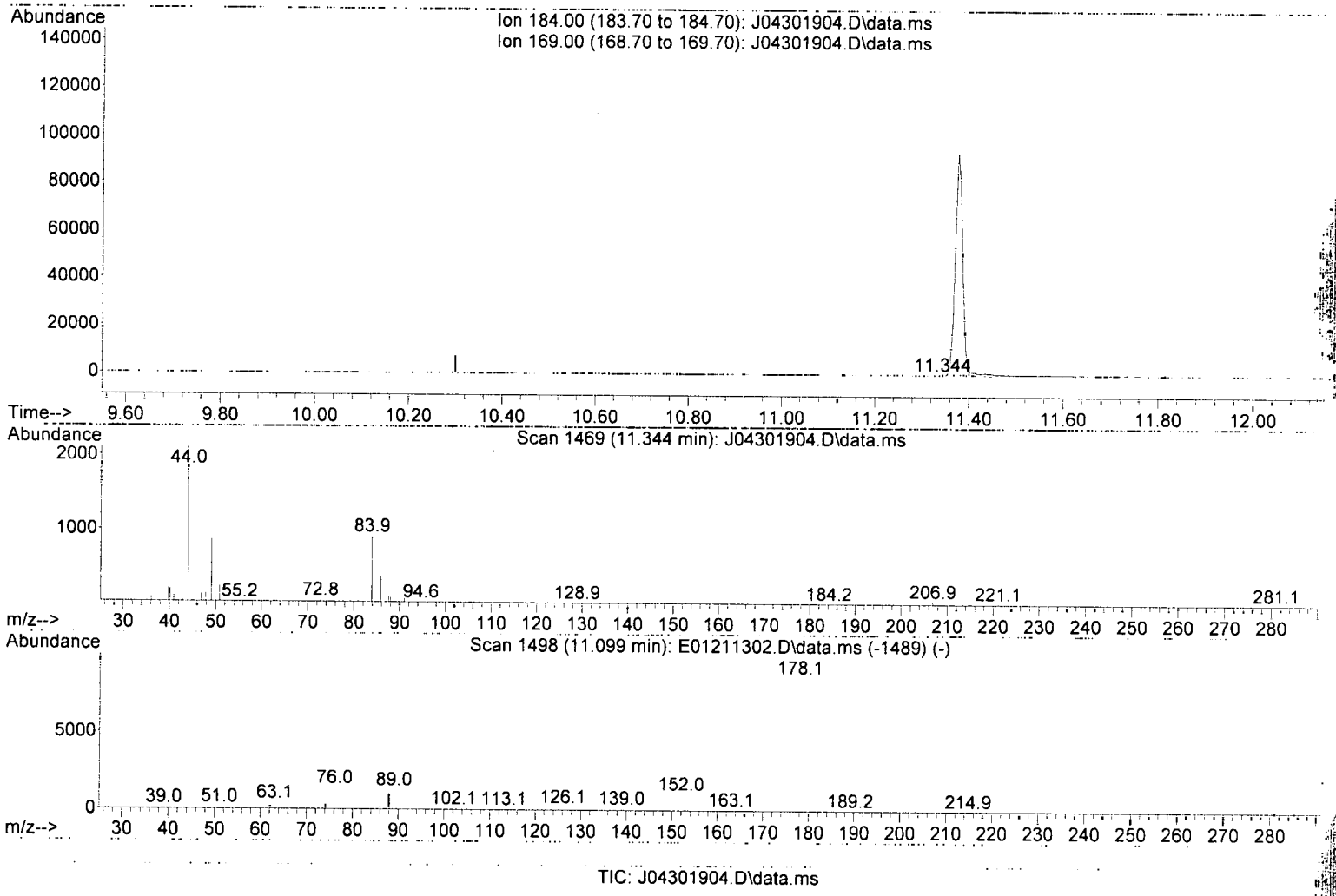
response 179

Ion	Exp%	Act%
170.00	100.00	100.00
155.00	83.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(24) C-4 Naphthalenes (T)

11.344min (+ 0.494) 0.04 ng/ml m

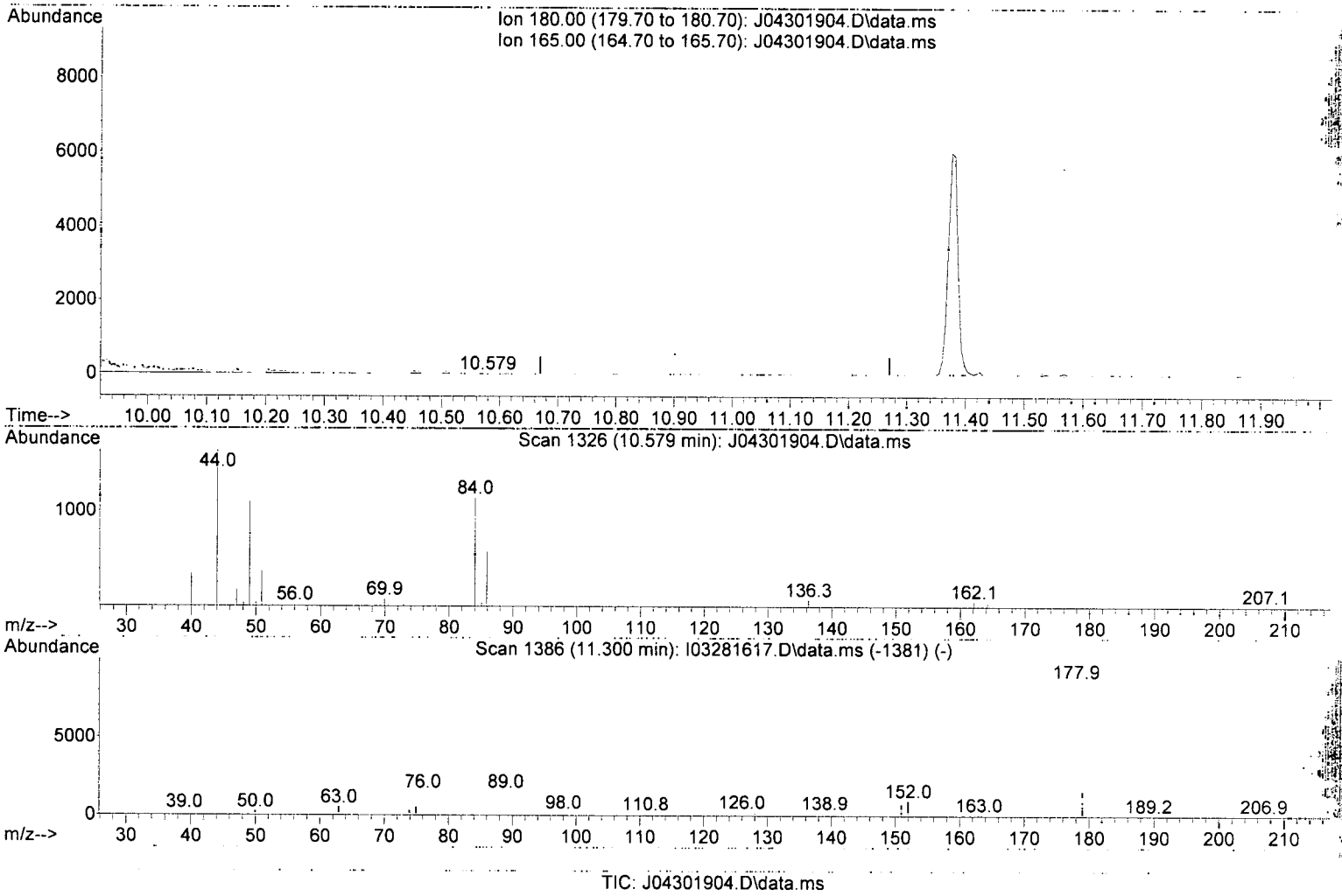
response 8

Ion	Exp%	Act%
184.00	100.00	100.00
169.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(26) C-1 Fluorenes (T)

10.579min (-0.391) 0.00 ng/ml m

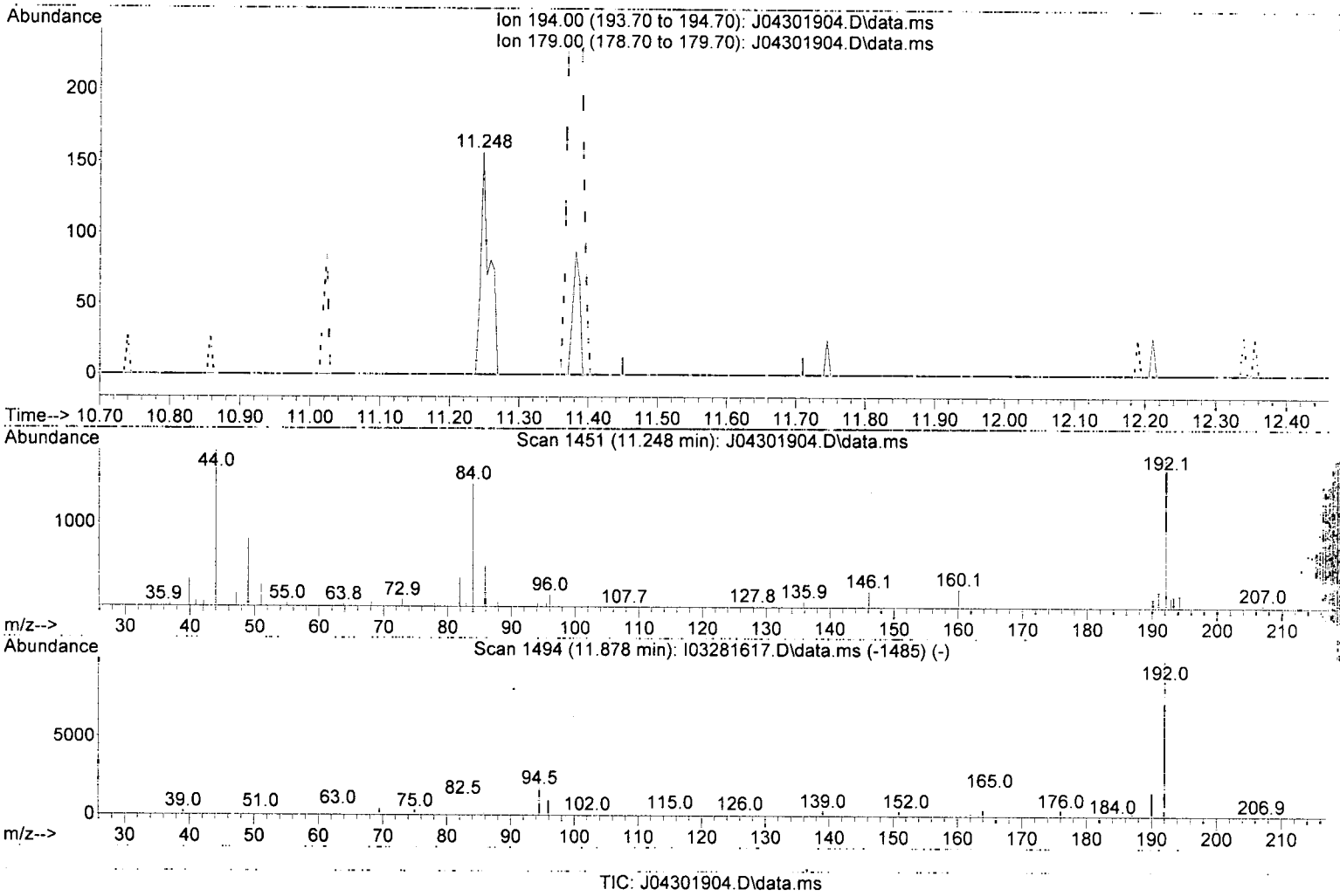
response 0

Ion	Exp%	Act%
180.00	100.00	0.00
165.00	135.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(27) C-2 Fluorenes (T)

11.248min (-0.332) 0.73 ng/ml m

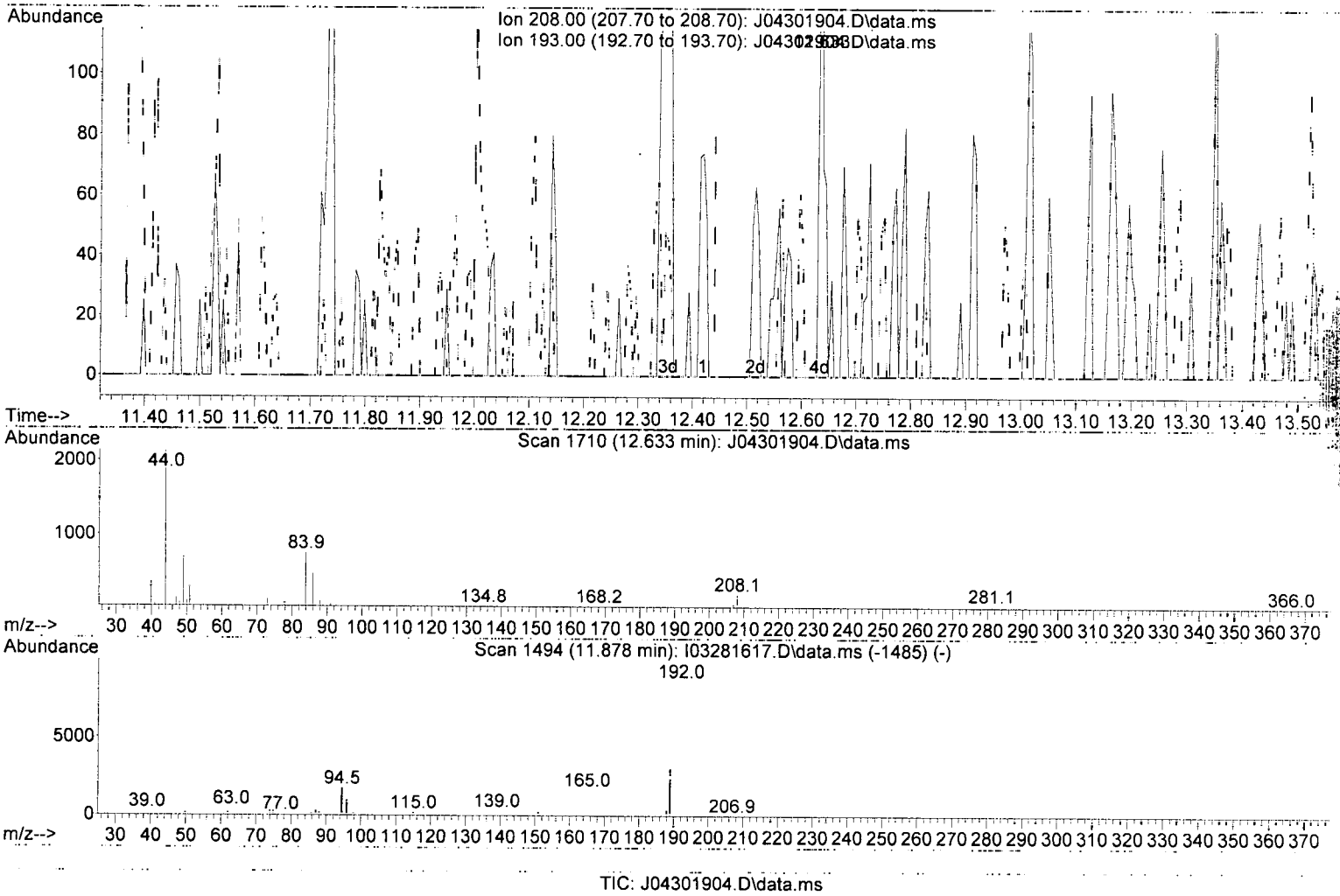
response 209

Ion	Exp%	Act%
194.00	100.00	100.00
179.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(28) C-3 Fluorenes (T)

12.633min (+ 0.193) 3.62 ng/ml m

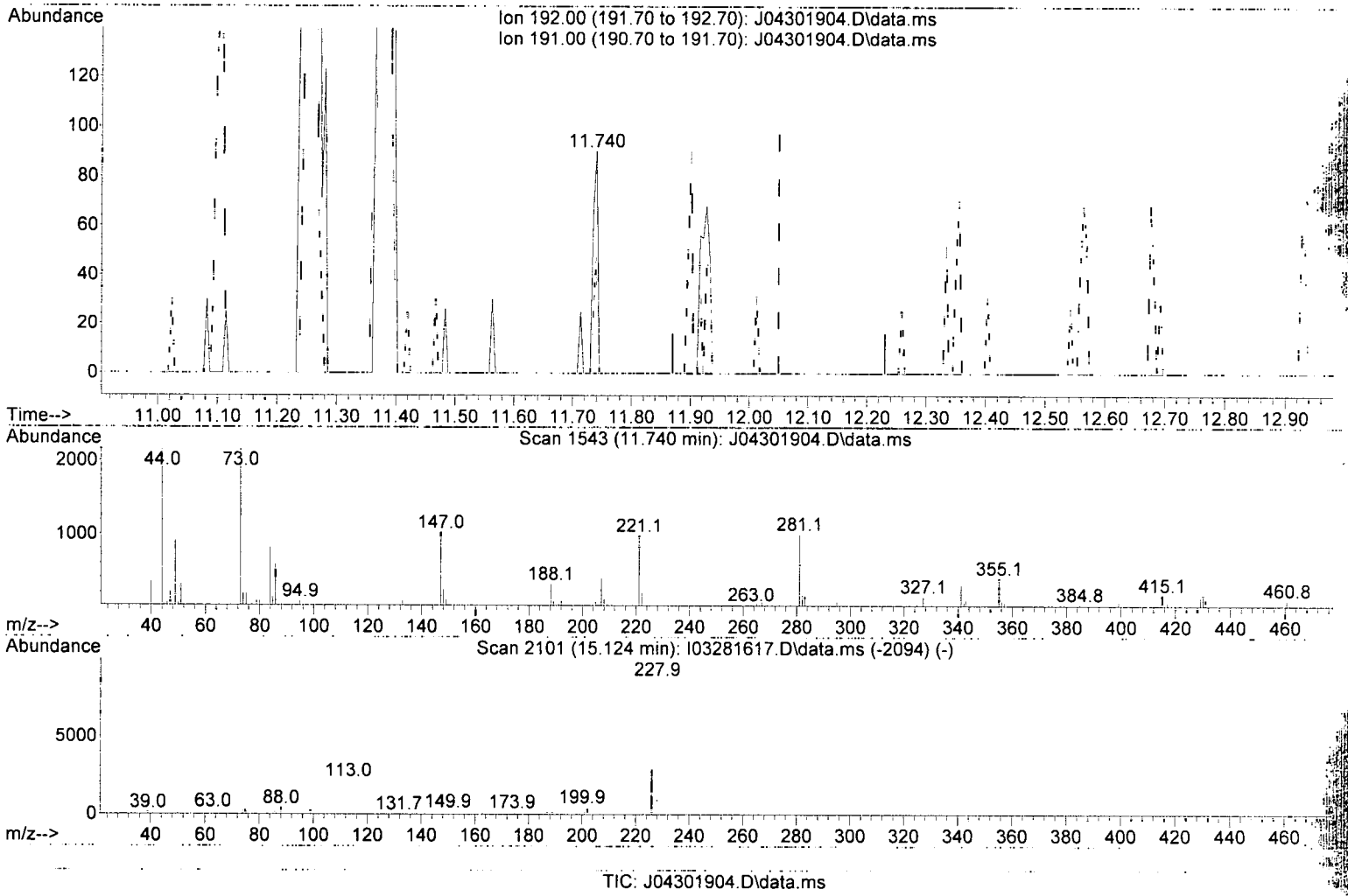
response 1032

Ion	Exp%	Act%
208.00	100.00	100.00
193.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(38) C-1 Phenanthrene/anthracene (T)

11.740min (-0.310) 0.48 ng/ml m

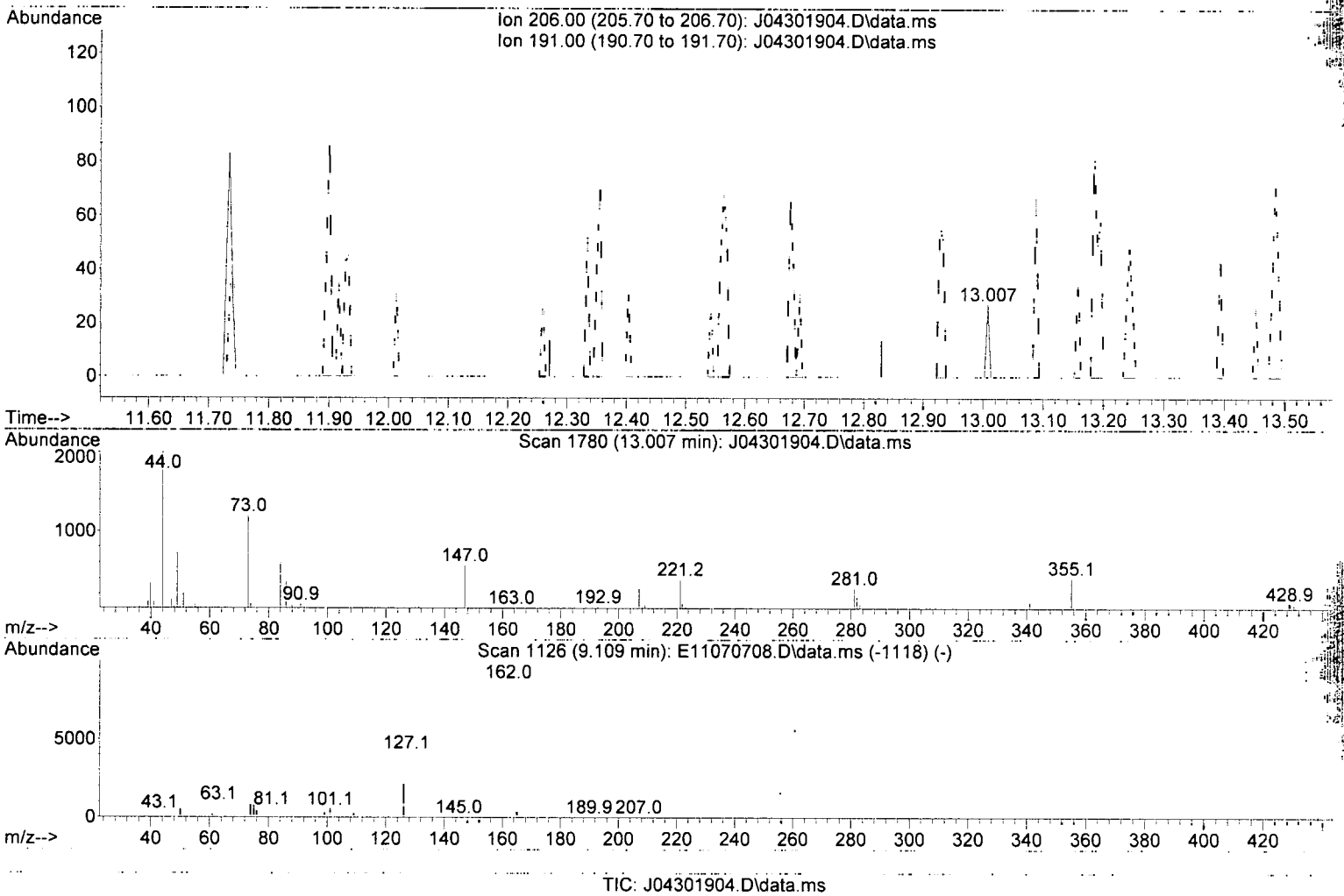
response 131

Ion	Exp%	Act%
192.00	100.00	100.00
191.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(39) C-2 Phenanthrene/anthracene (T)

13.007min (+ 0.457) 0.03 ng/ml m

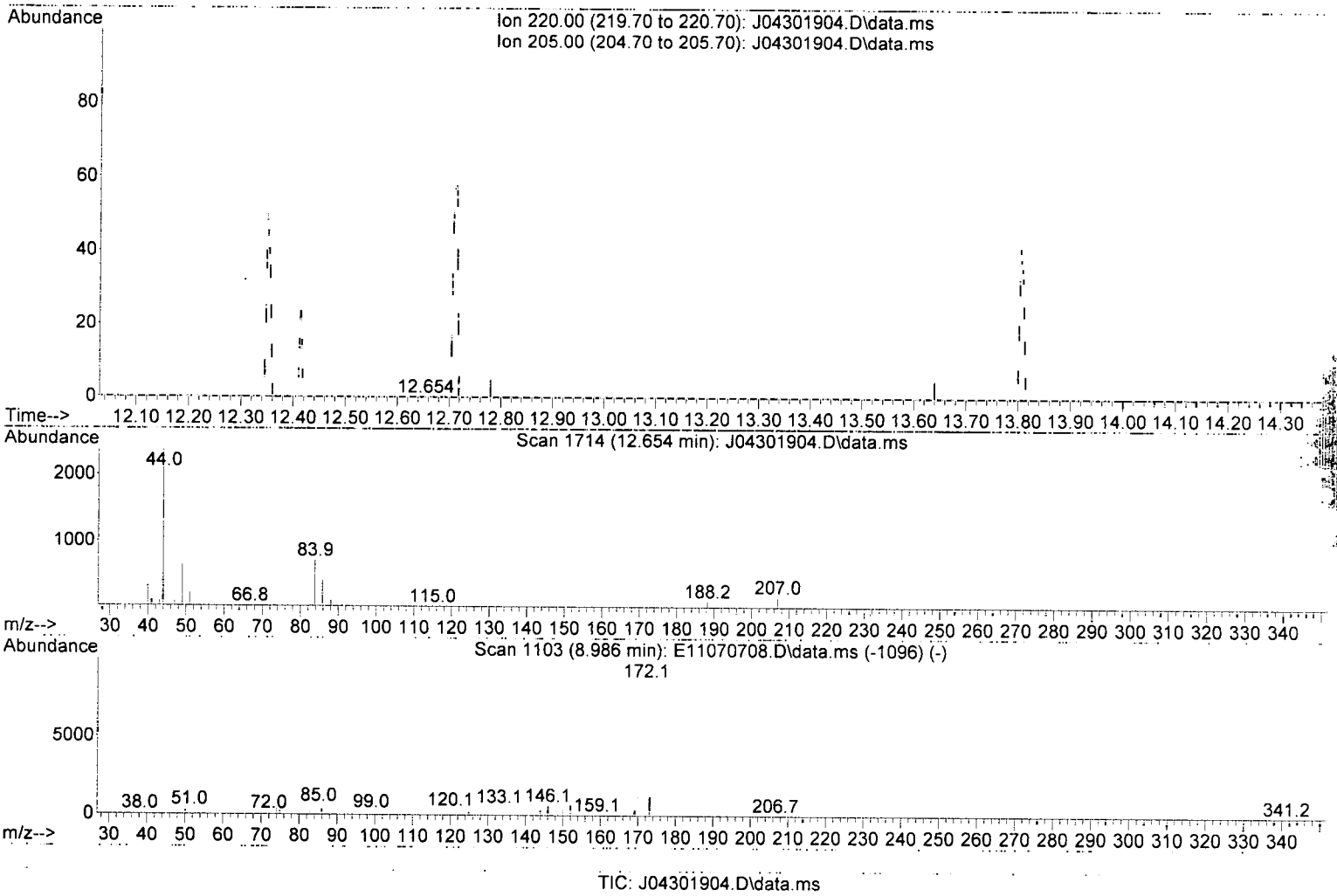
response 9

Ion	Exp%	Act%
206.00	100.00	100.00
191.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(40) C-3 Phenanthrene/anthracene (T)

12.654min (-0.556) 0.00 ng/ml m

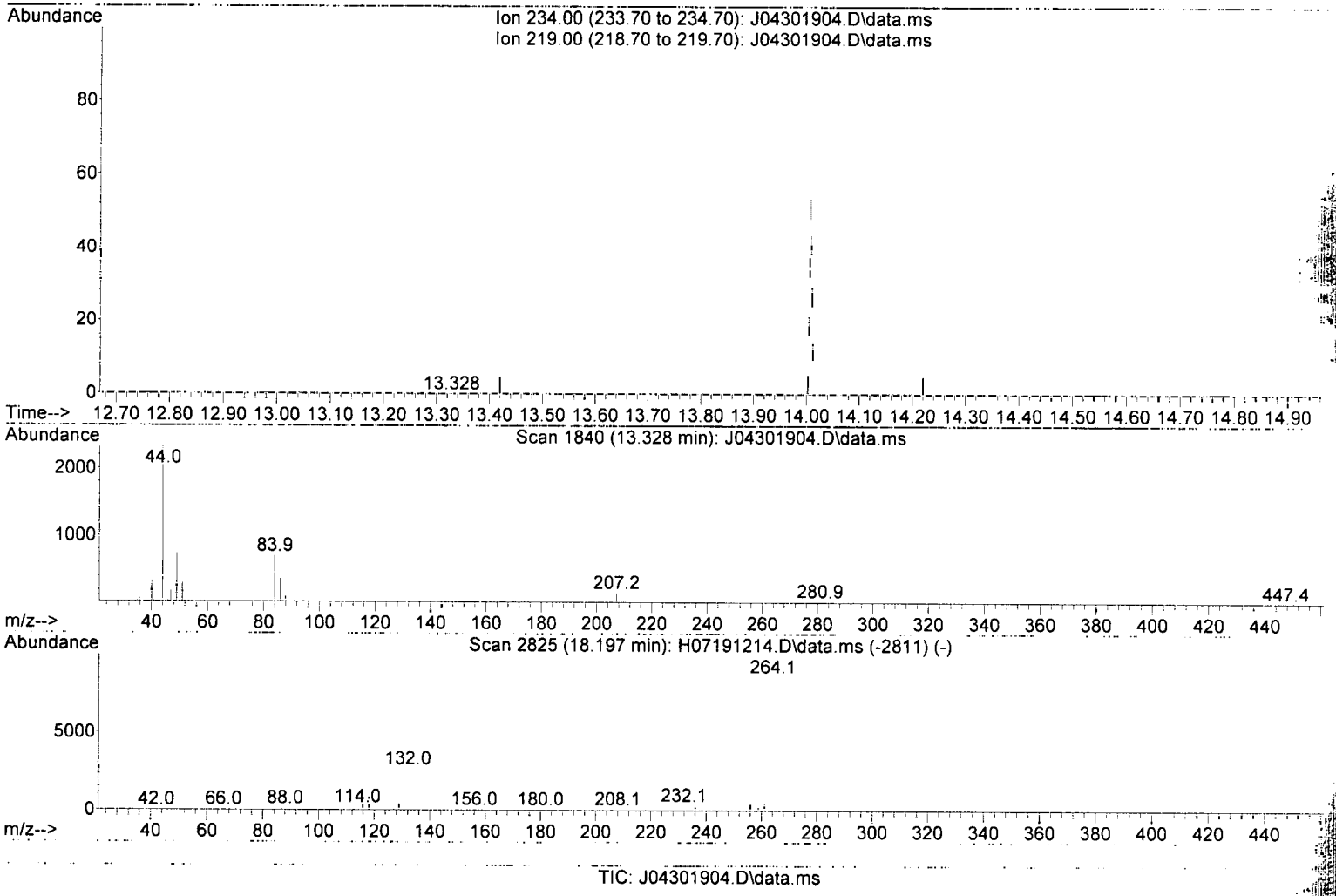
response 0

Ion	Exp%	Act%
220.00	100.00	0.00
205.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(41) C-4 Phenanthrene/anthracene (T)

13.328min (-0.542) 0.00 ng/ml m

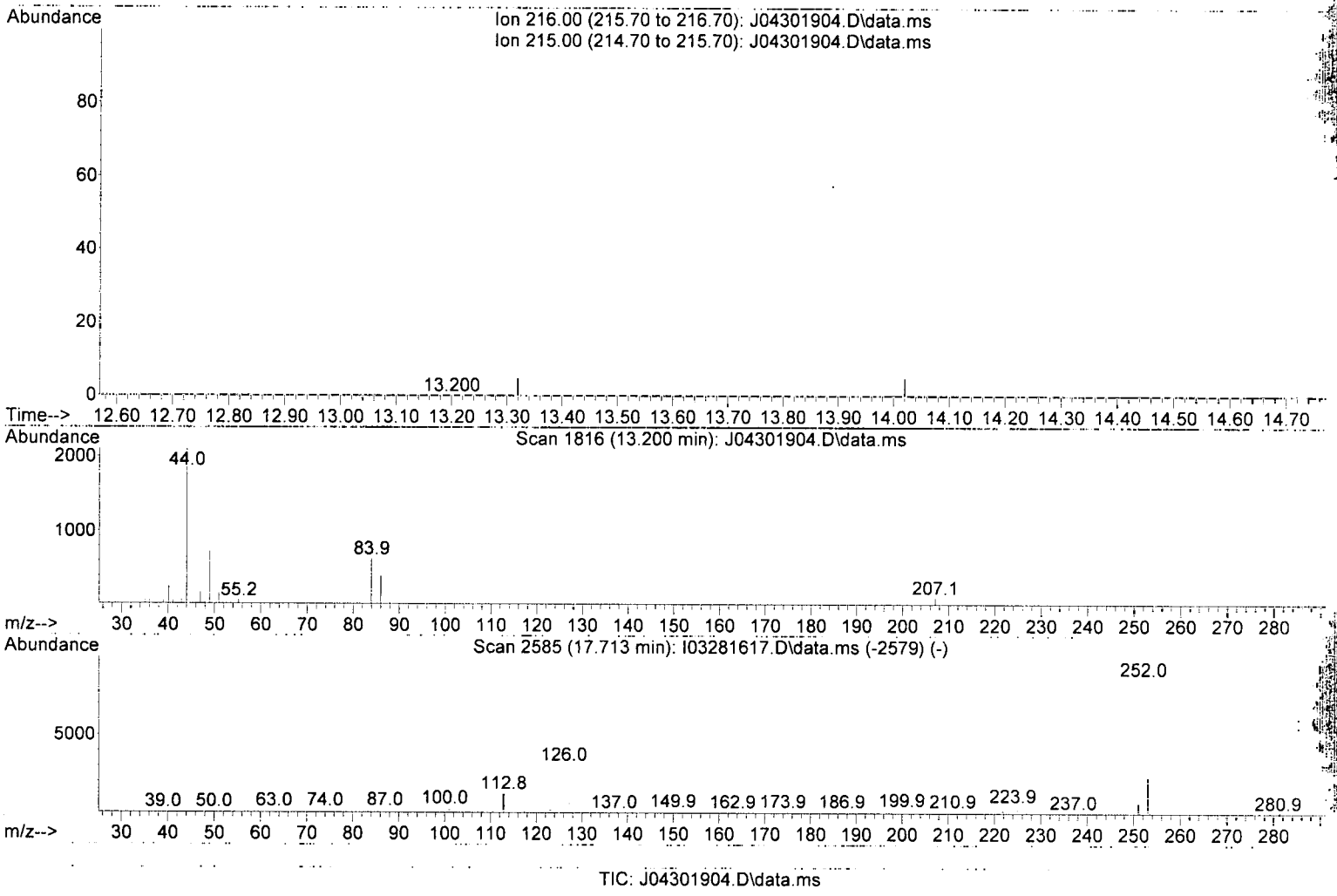
response 0

Ion	Exp%	Act%
234.00	100.00	0.00
219.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(45) C-1 Fluoranthene/pyrenes (T)

13.200min (-0.470) 0.00 ng/ml m

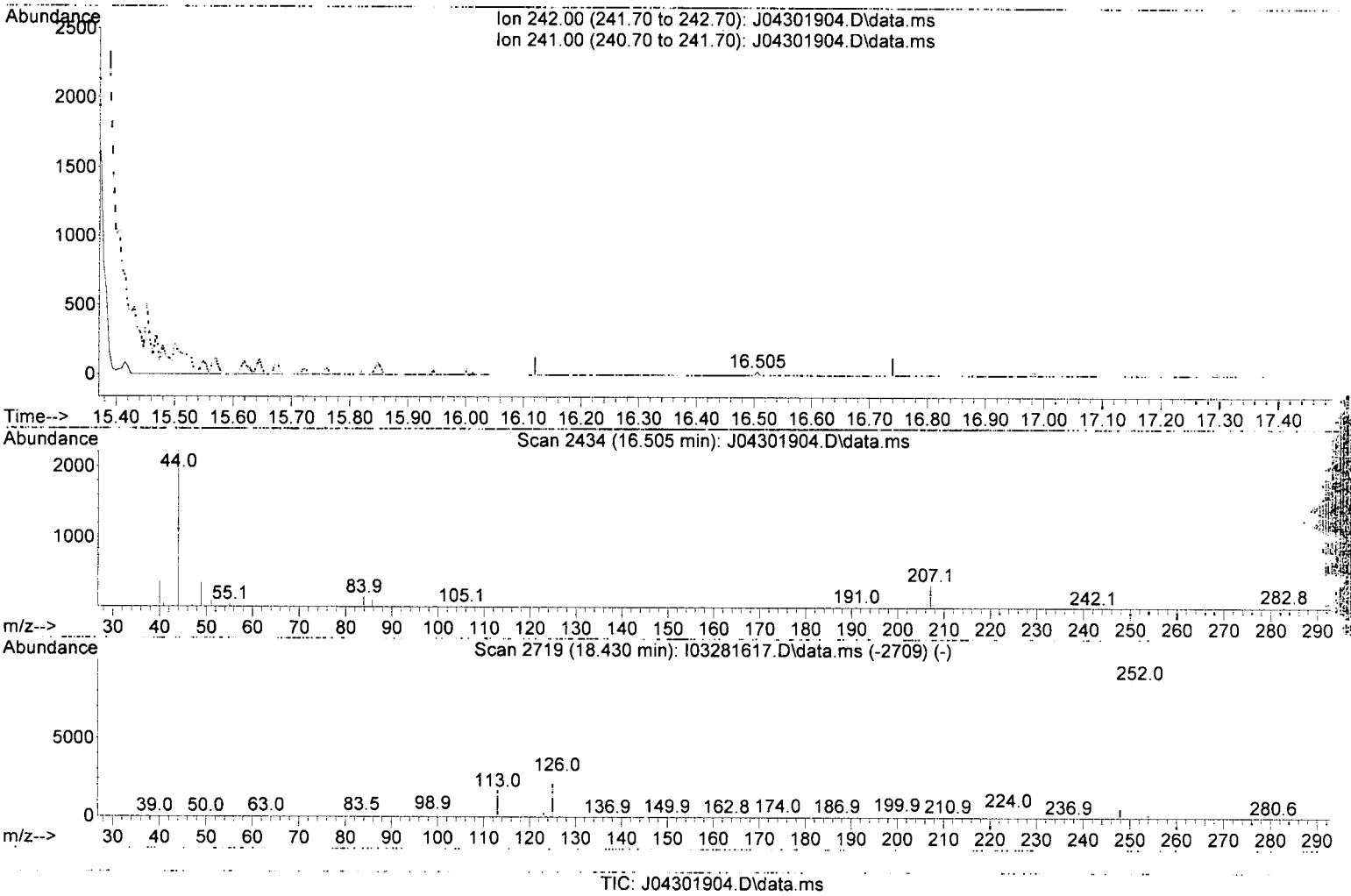
response 0

Ion	Exp%	Act%
216.00	100.00	0.00
215.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(49) C-1 Benz(a)anthracene/Chrysenes (T)

16.505min (+ 0.125) 0.02 ng/ml m

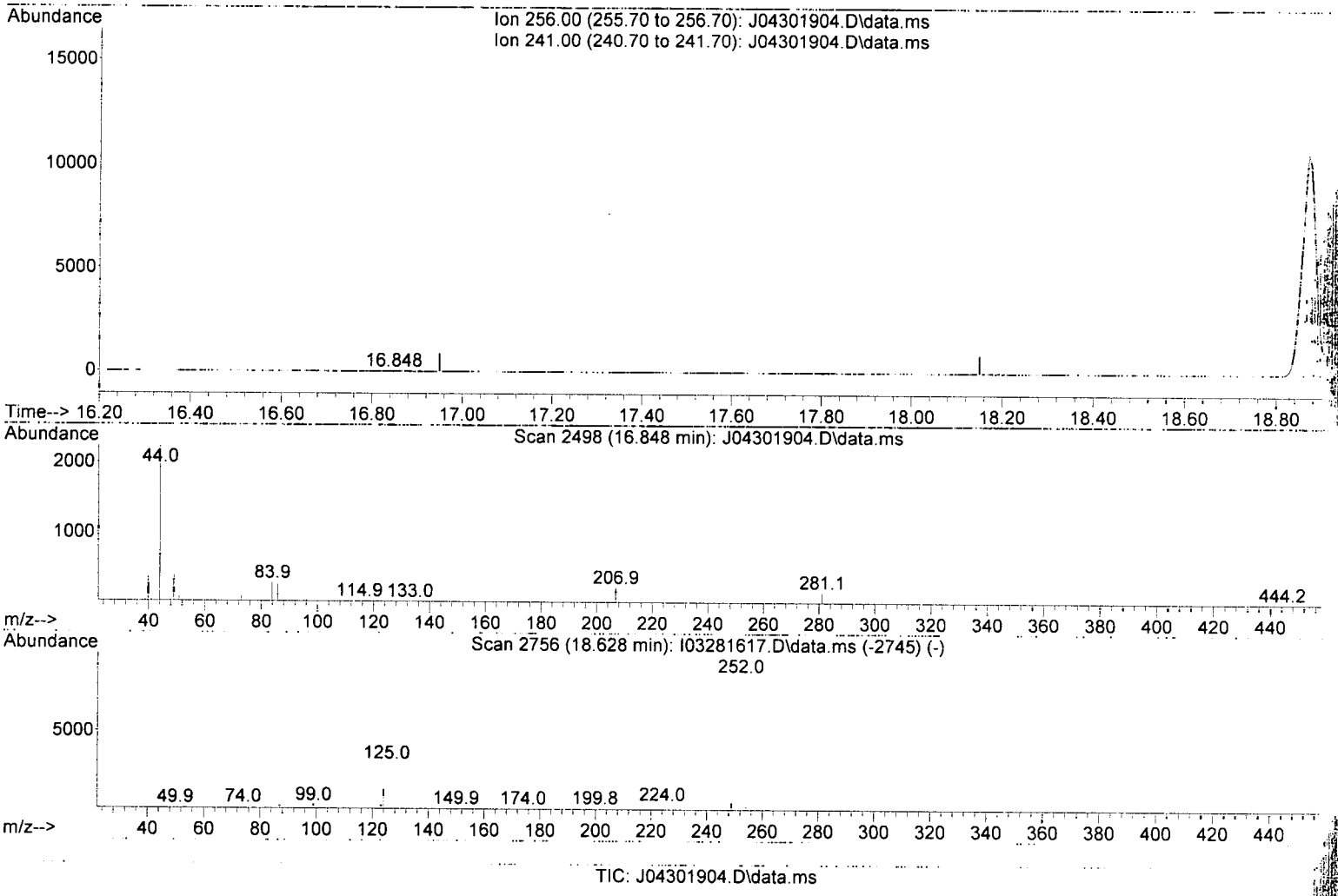
response 8

Ion	Exp%	Act%
242.00	100.00	100.00
241.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(50) C-2 Benz(a)anthracene/Chrysenes (T)

16.848min (-0.702) 0.00 ng/ml m

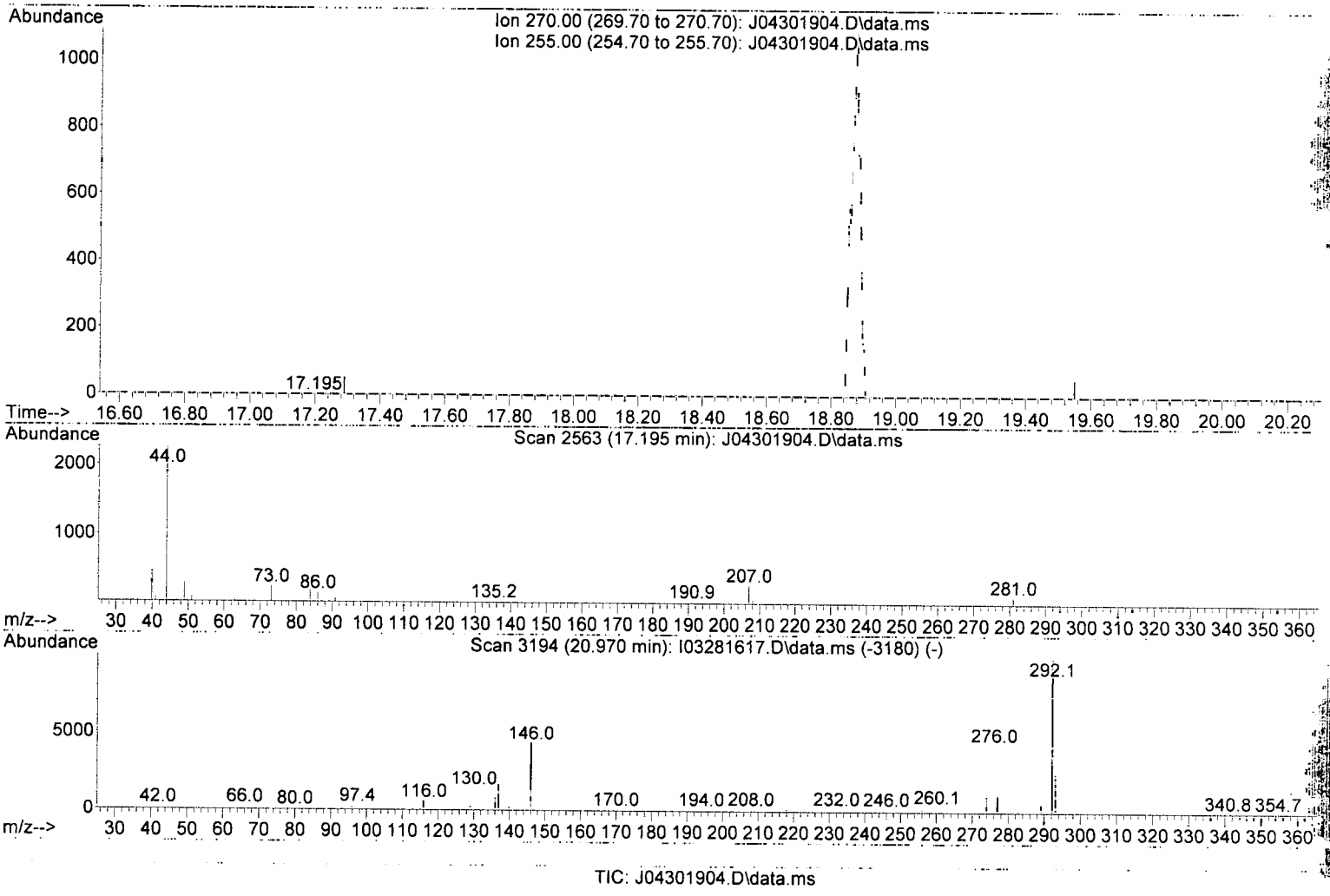
response 0

Ion	Exp%	Act%
256.00	100.00	0.00
241.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(51) C-3 Benz(a)anthracene/Chrysenes (T)

17.195min (-1.225) 0.00 ng/ml m

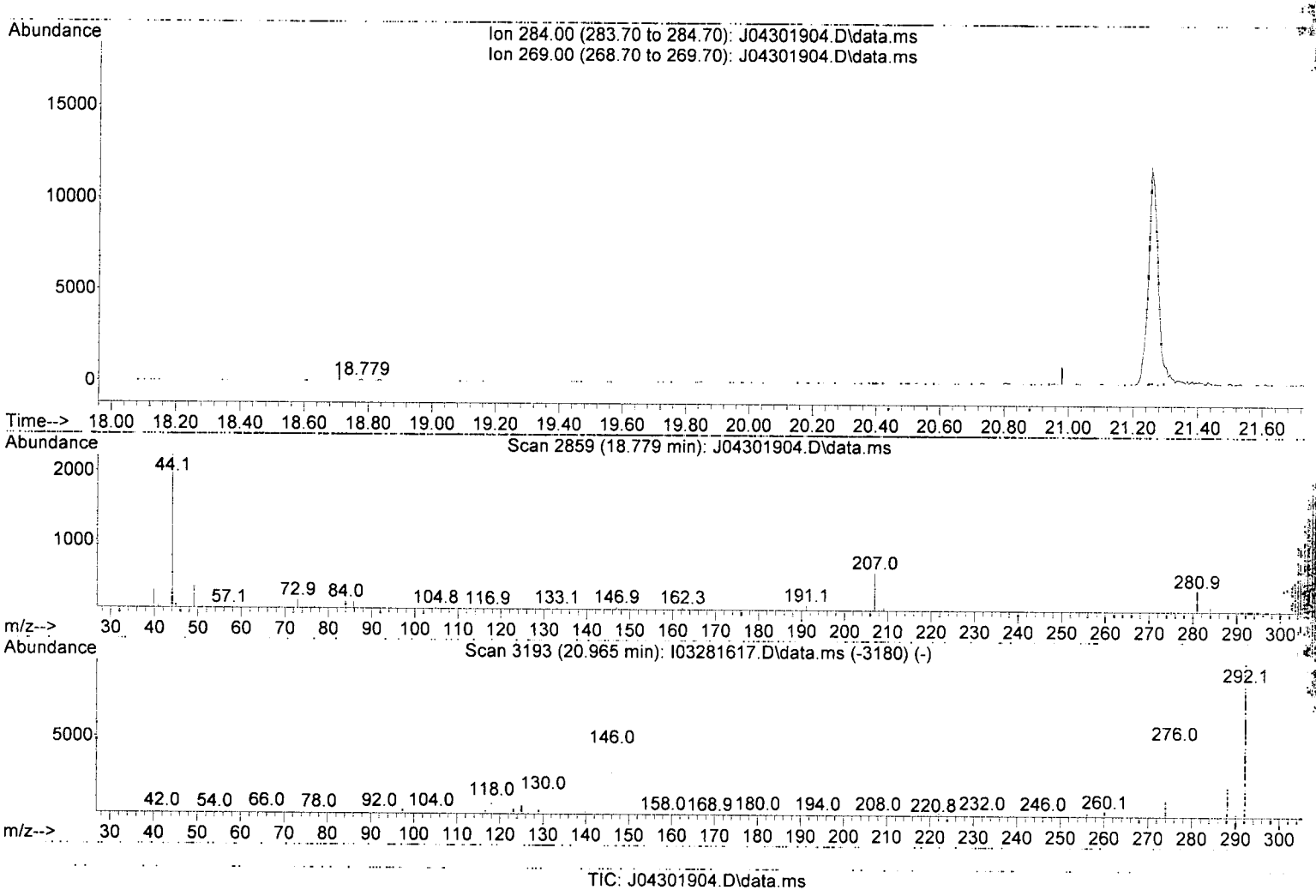
response 0

Ion	Exp%	Act%
270.00	100.00	0.00
255.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:49:18 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301904.D\data.ms

(52) C-4 Benz(a)anthracene/Chrysenes

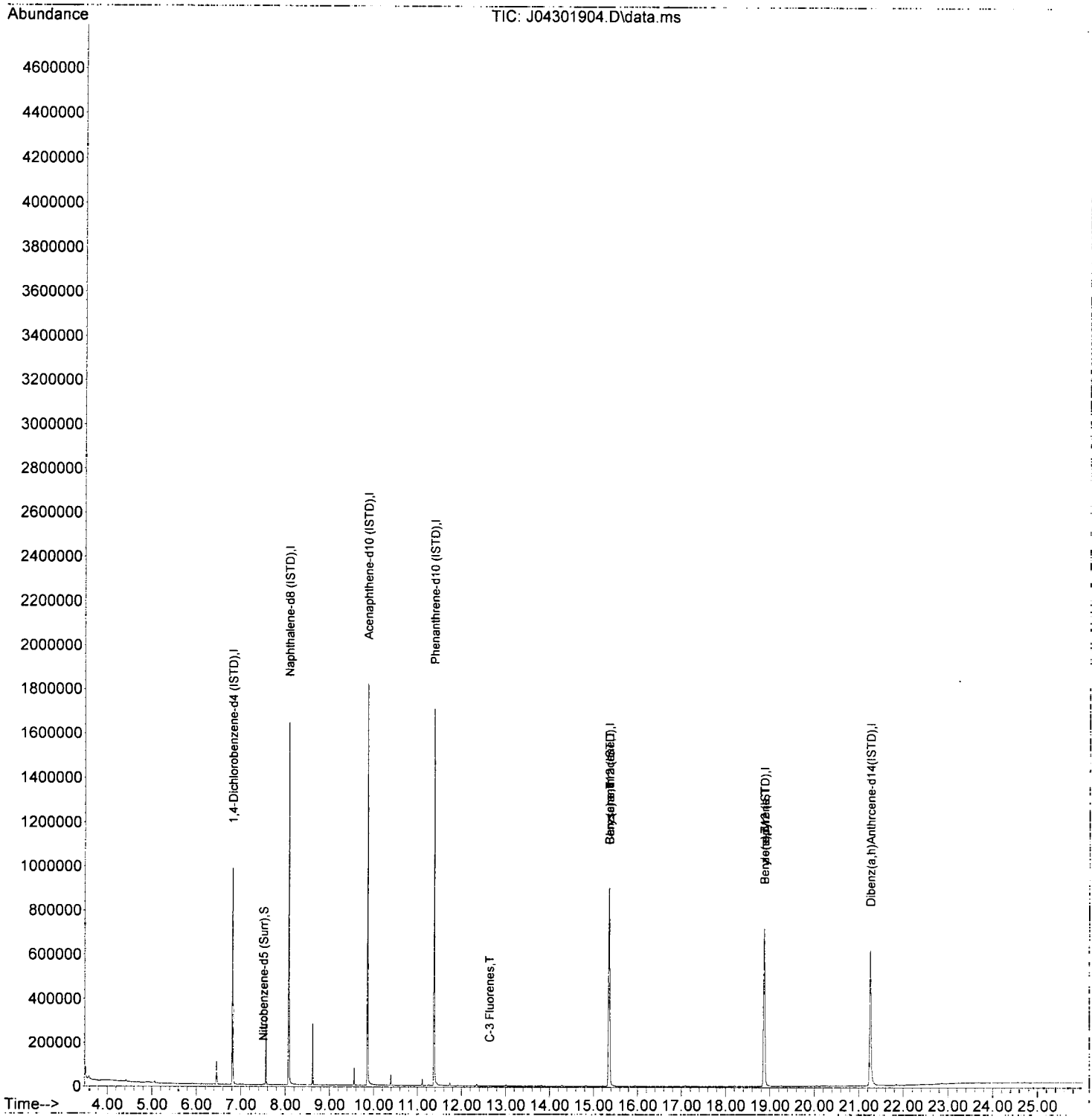
18.779min (-1.231) 1.32 ng/ml m

response 443

Ion	Exp%	Act%
284.00	100.00	100.00
269.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Data Path : T:\data\2019-04\9D30020\Homologs\
Data File : J04301904.D
Acq On : 30 Apr 2019 9:46 am
Operator : JK/ AMS/ DTH
Sample : 9D30020-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 11:50:50 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 MOS

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	214359	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	917218	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	441210	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	739559	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	628338	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	570138	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	538808	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	50994	365.94	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	66491	370.94	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	59650	385.20	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	132985	427.19	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	19961	561.70	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	171489	579.80	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.262	79	775m	4.50	ng/ml#	
6) Phenol	6.461	94	557	12.36	ng/ml#	1
7) Aniline	6.482	93	449	N.D.		
8) Bis(2-chloroethyl) ether	6.514	93	191	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.942	108	371	36.51	ng/ml	88
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.044	107	161	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	113	N.D.		
16) N-Nitrosodi-n-propylamine	7.204	70	124	N.D.		
17) 3+4-Methylphenol	7.210	107	453	12.45	ng/ml#	18
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.397	77	153	N.D.		
22) Isophorone	7.605	82	356	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.712	122	63	25.80	ng/ml#	4
25) Bis(2-chloroethoxy) me...	7.814	93	60	N.D.		
26) Benzoic acid	7.798	105	998	763.41	ng/ml#	56
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.103	128	18836	39.67	ng/ml	93
30) 4-Chloroaniline	8.135	127	56	14.79	ng/ml#	8
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.638	107	286	65.66	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	3584	11.51	ng/ml	90
34) 1-Methylnaphthalene	8.905	142	2266	7.50	ng/ml	89
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	9.263	154	2346	6.56	ng/ml	90
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.365	138	134	66.61	ng/ml#	45
43) 2,6-Dimethylnaphthalene	9.435	156	2016	7.69	ng/ml	95

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.552	168	152	126.21 ng/ml#	1
45) Dimethyl phthalate	9.579	163	105	N.D.	
46) 1,3-Dinitrobenzene	9.595	168	71	66.64 ng/ml#	1
47) 2,6-Dinitrotoluene	9.632	165	112	34.17 ng/ml#	45
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.718	152	5769	13.07 ng/ml	95
50) 3-Nitroaniline	9.777	138	75	N.D.	
51) Acenaphthene	9.895	153	12828	45.19 ng/ml	96
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.975	139	206	77.93 ng/ml#	1
54) 2,4-Dinitrotoluene	10.039	165	67	60.92 ng/ml#	28
55) Dibenzofuran	10.071	168	3223	8.69 ng/ml#	74
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	10.274	149	395	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.264	170	2264	9.66 ng/ml	72
60) Fluorene	10.419	166	7965	27.43 ng/ml	97
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.413	138	214	3.86 ng/ml#	23
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.510	169	299	N.D.	
66) Azobenzene (1,2-DPH)	10.590	77	207	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.194	266	81	22.80 ng/ml#	19
71) Phenanthrene	11.398	178	90983	226.72 ng/ml	98
72) Anthracene	11.451	178	24311	62.20 ng/ml	98
73) Carbazole	11.611	167	10426	31.52 ng/ml	96
74) Di-n-butyl phthalate	11.948	149	2375	5.25 ng/ml	79
75) Fluoranthene	12.719	202	200816	501.79 ng/ml	97
76) Benzidine	12.879	184	58	80.76 ng/ml#	1
77) Pyrene	13.029	202	225398	546.53 ng/ml	100
80) Butyl benzyl phthalate	14.109	149	1858	39.40 ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.280	129	2442	13.64 ng/ml	68
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.329	228	102919	300.17 ng/ml	81
84) Chrysene	15.414	228	101923	306.37 ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.479	149	9866	37.38 ng/ml	94
87) Di-n-octyl phthalate	17.169	149	296	66.94 ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	143725	444.90 ng/ml MoS	95
89) Benzo(k)fluoranthene	18.008	252	44964	141.52 ng/ml MoS	94
90) Benzo(b+k)fluoranthene	17.950	252	213040	642.78 ng/ml	94
91) Benzo(e)pyrene	18.602	252	82251	263.09 ng/ml	99
92) Benzo(a)pyrene	18.725	252	119942	405.96 ng/ml	97
93) Perylene	18.923	252	36586	126.42 ng/ml	96
95) Indeno(1,2,3-cd)pyrene	21.260	276	81028	268.82 ng/ml	100
96) Dibenz(a,h)anthracene	21.319	278	14192	52.64 ng/ml	89
97) Benzo(g,h,i)perylene	21.806	276	83495	286.59 ng/ml	97

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

Quantitation Report (Qedit)

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Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
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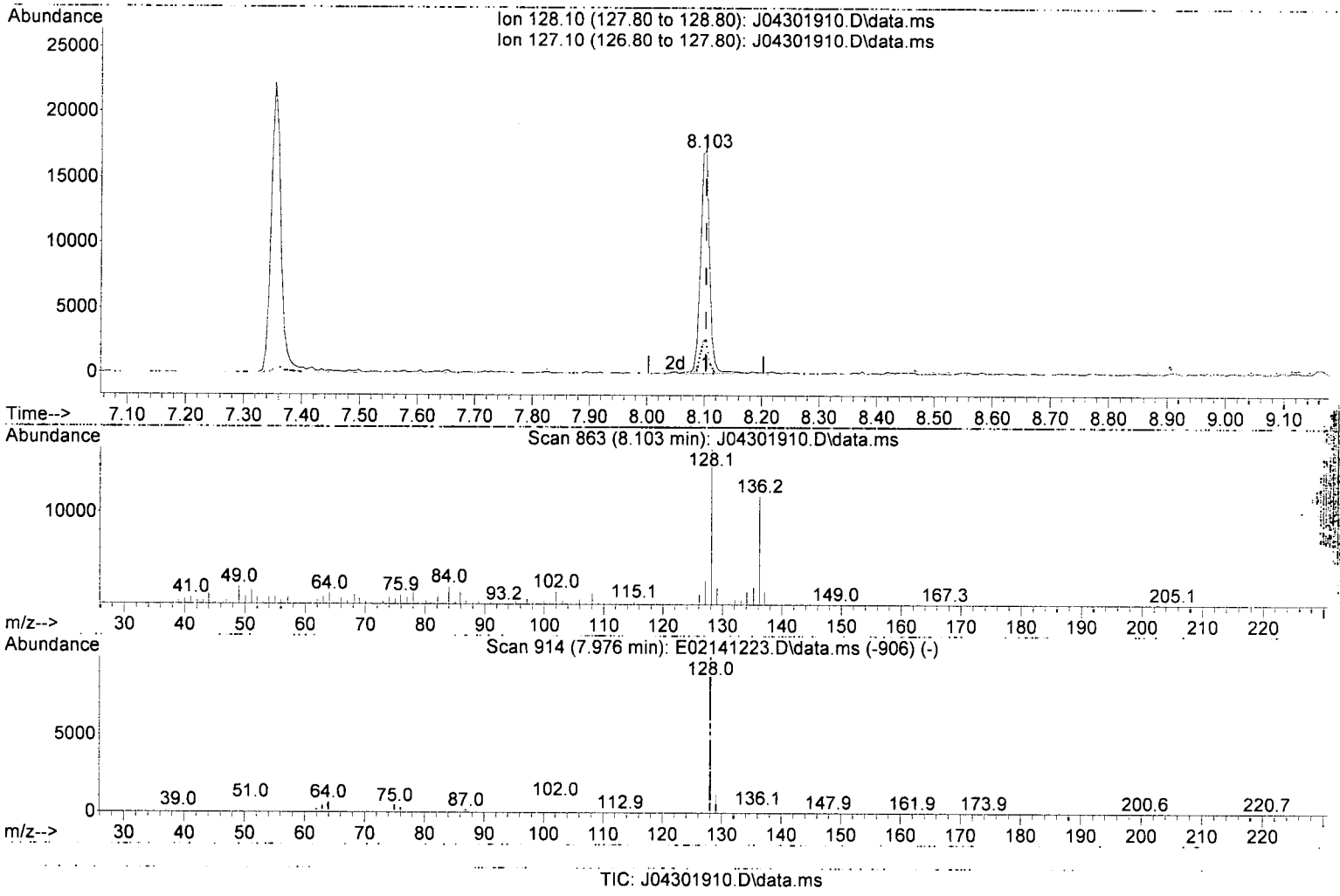
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(29) Naphthalene (T)

8.103min (+ 0.000) 39.67 ng/ml

response 18836

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	15.31
0.00	0.00	0.00
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
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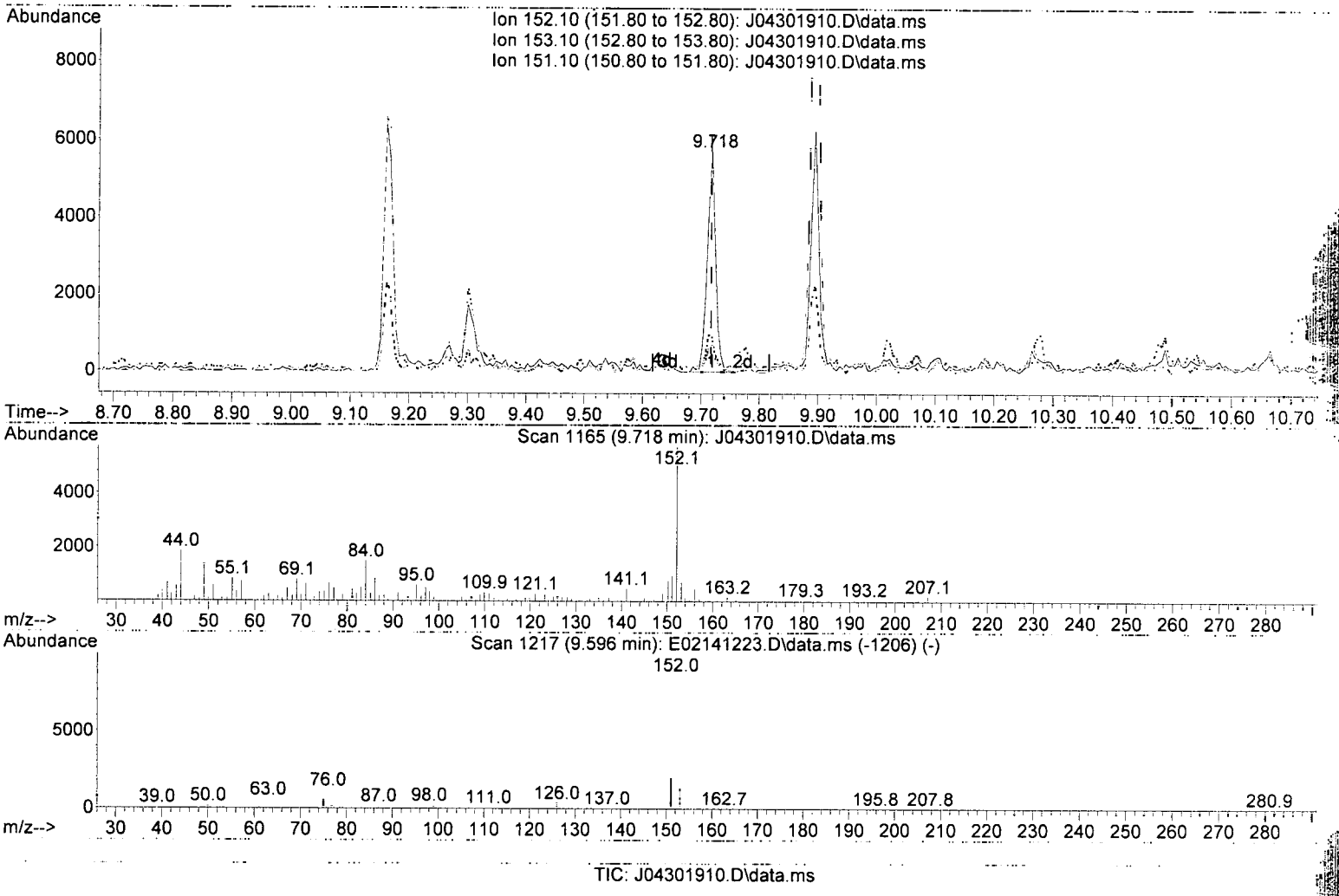

TIC: J04301910.D\data.ms

(49) Acenaphthylene (T)

9.718min (+ 0.001) 13.07 ng/ml

response 5769

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	12.48
151.10	20.00	16.54
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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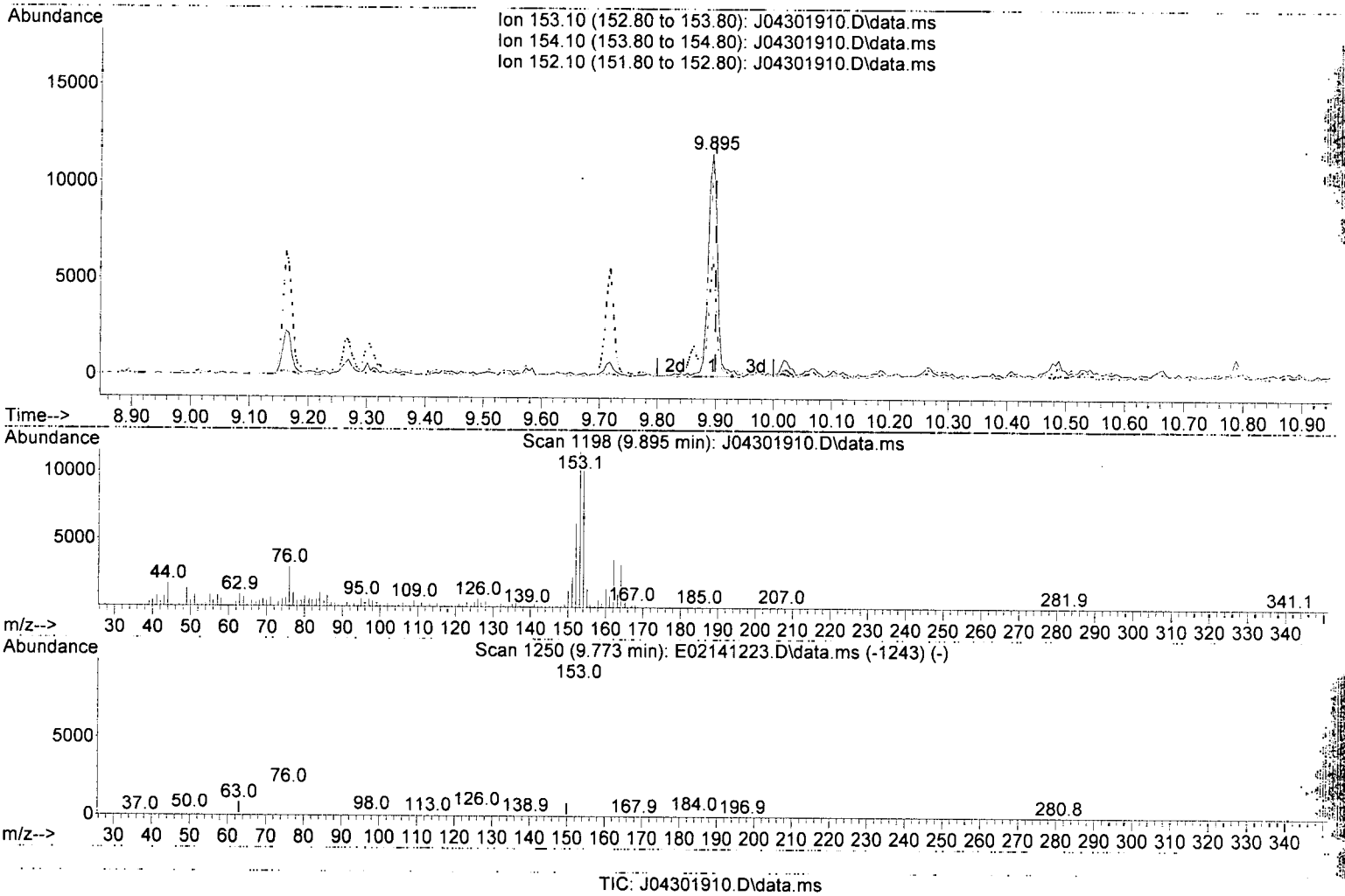

TIC: J04301910.D\data.ms

(51) Acenaphthene (T)

9.895min (-0.005) 45.19 ng/ml

response 12828

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	92.86
152.10	47.70	54.14
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
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Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
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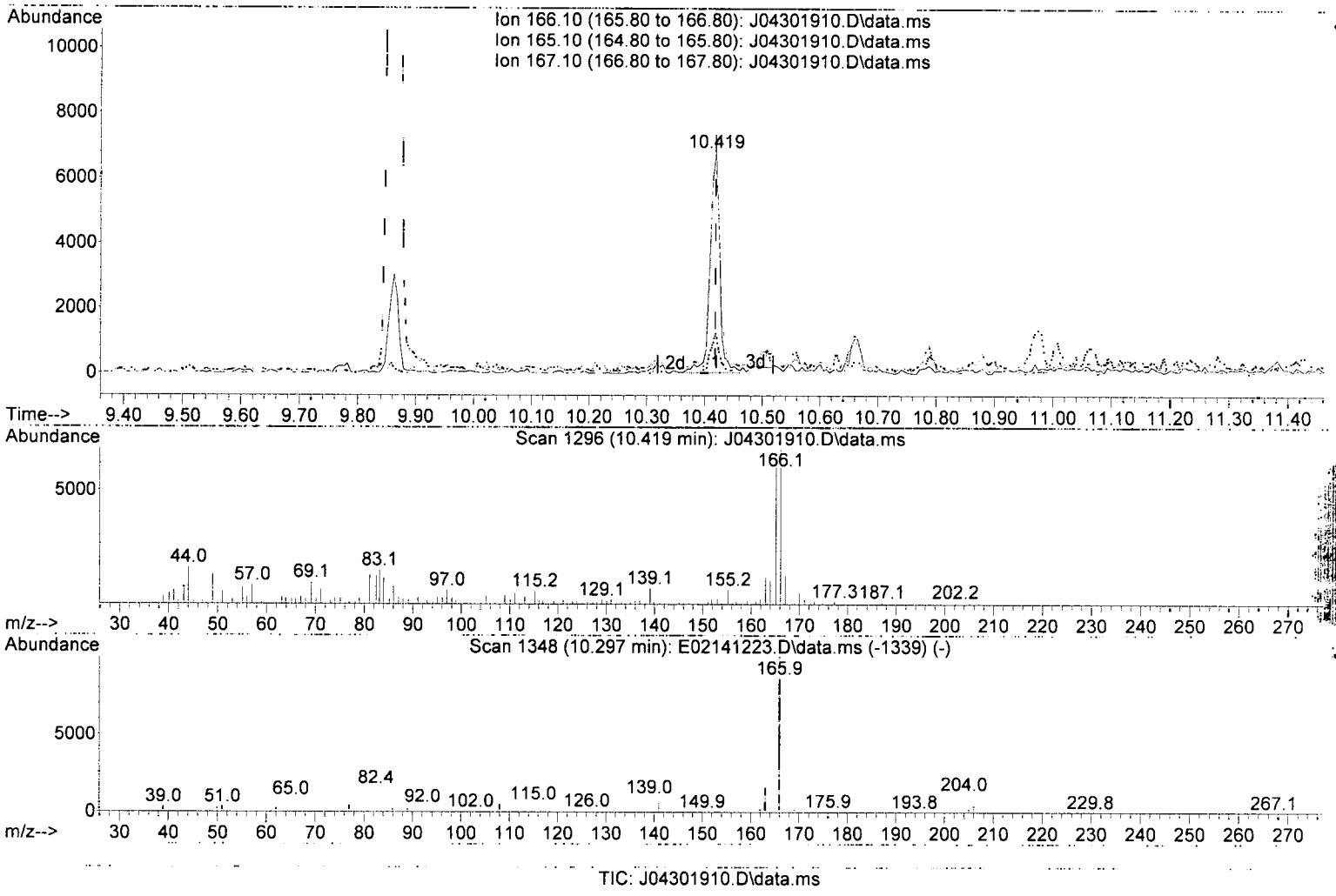

TIC: J04301910.D\data.ms

(60) Fluorene (T)

10.419min (+ 0.000) 27.43 ng/ml

response 7965

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	92.07
167.10	13.50	18.49
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
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Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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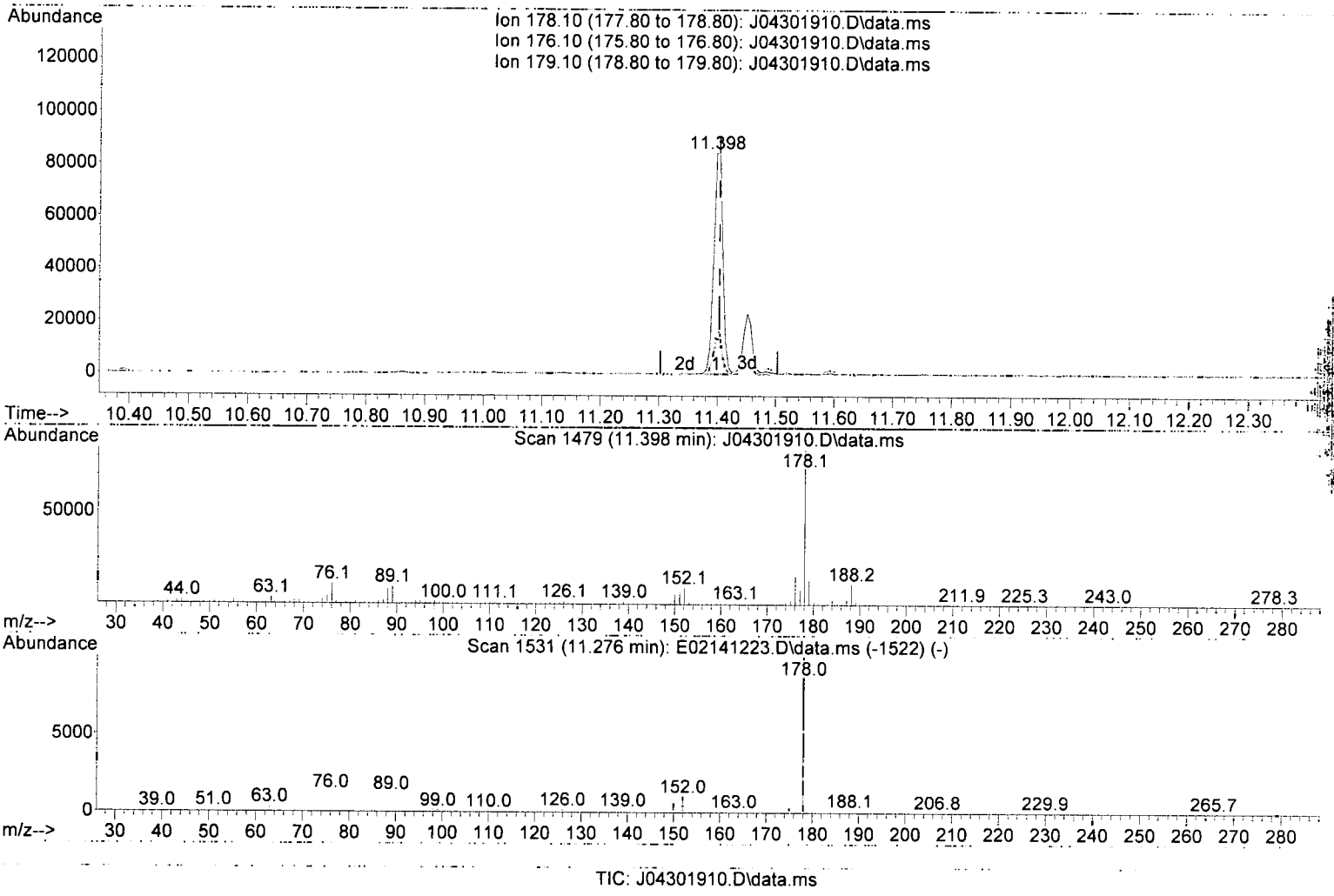
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(71) Phenanthrene (T)

11.398min (-0.005) 226.72 ng/ml

response 90983

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	18.47
179.10	15.20	15.82
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
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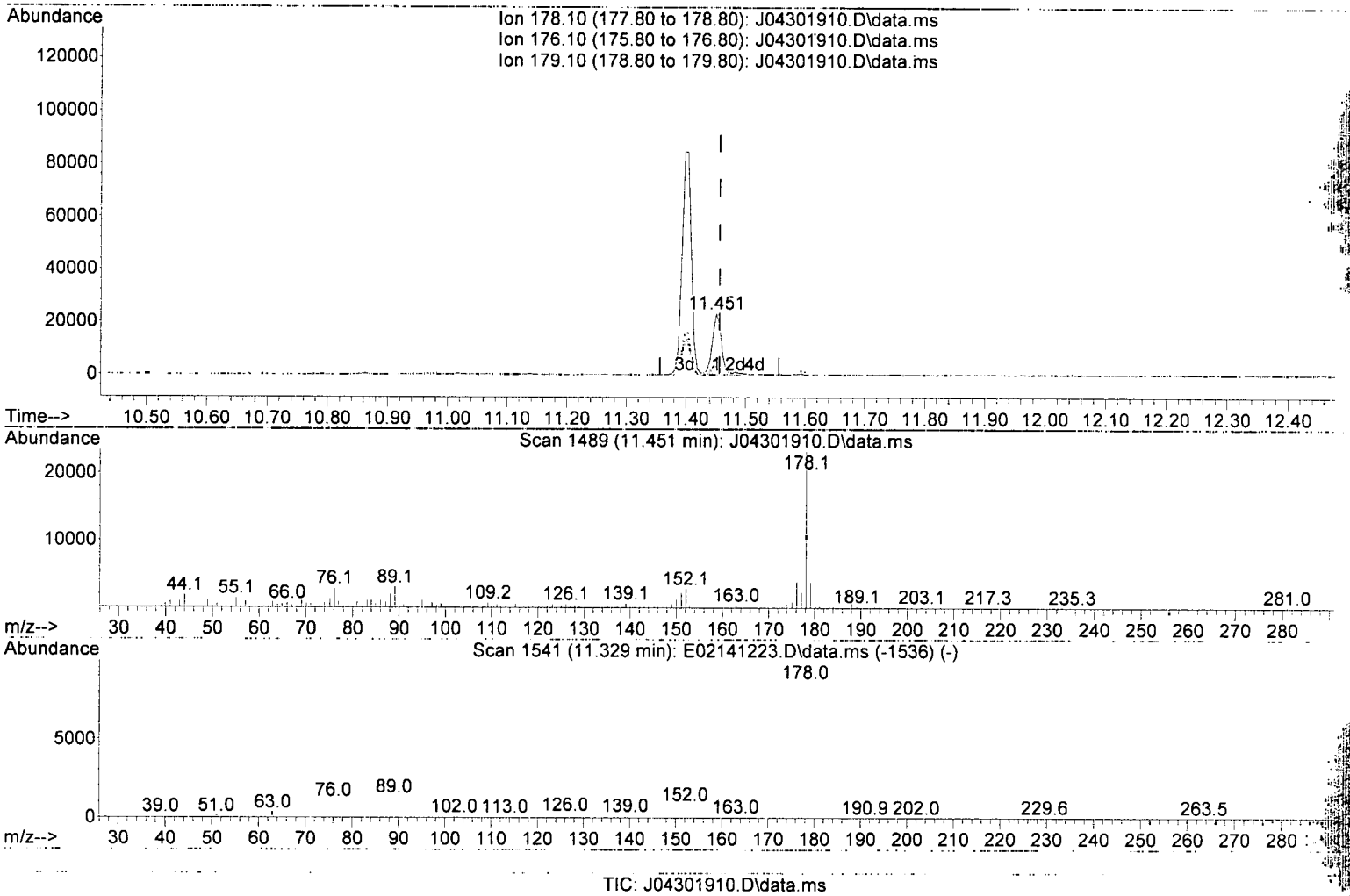
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(72) Anthracene (T)

11.451min (-0.005) 62.20 ng/ml

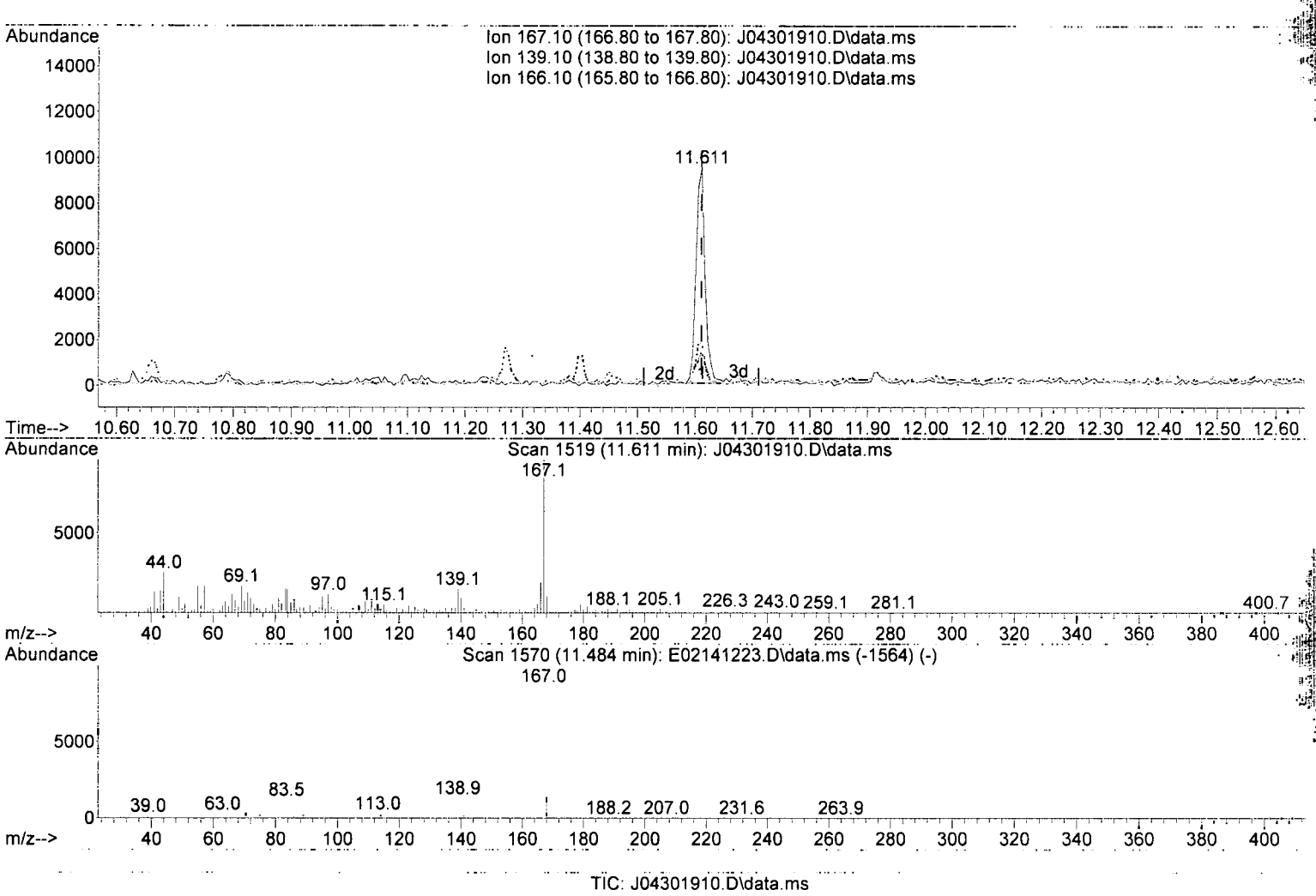
response 24311

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	17.30
179.10	15.90	16.40
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(73) Carbazole (T)

11.611min (+ 0.000) 31.52 ng/ml

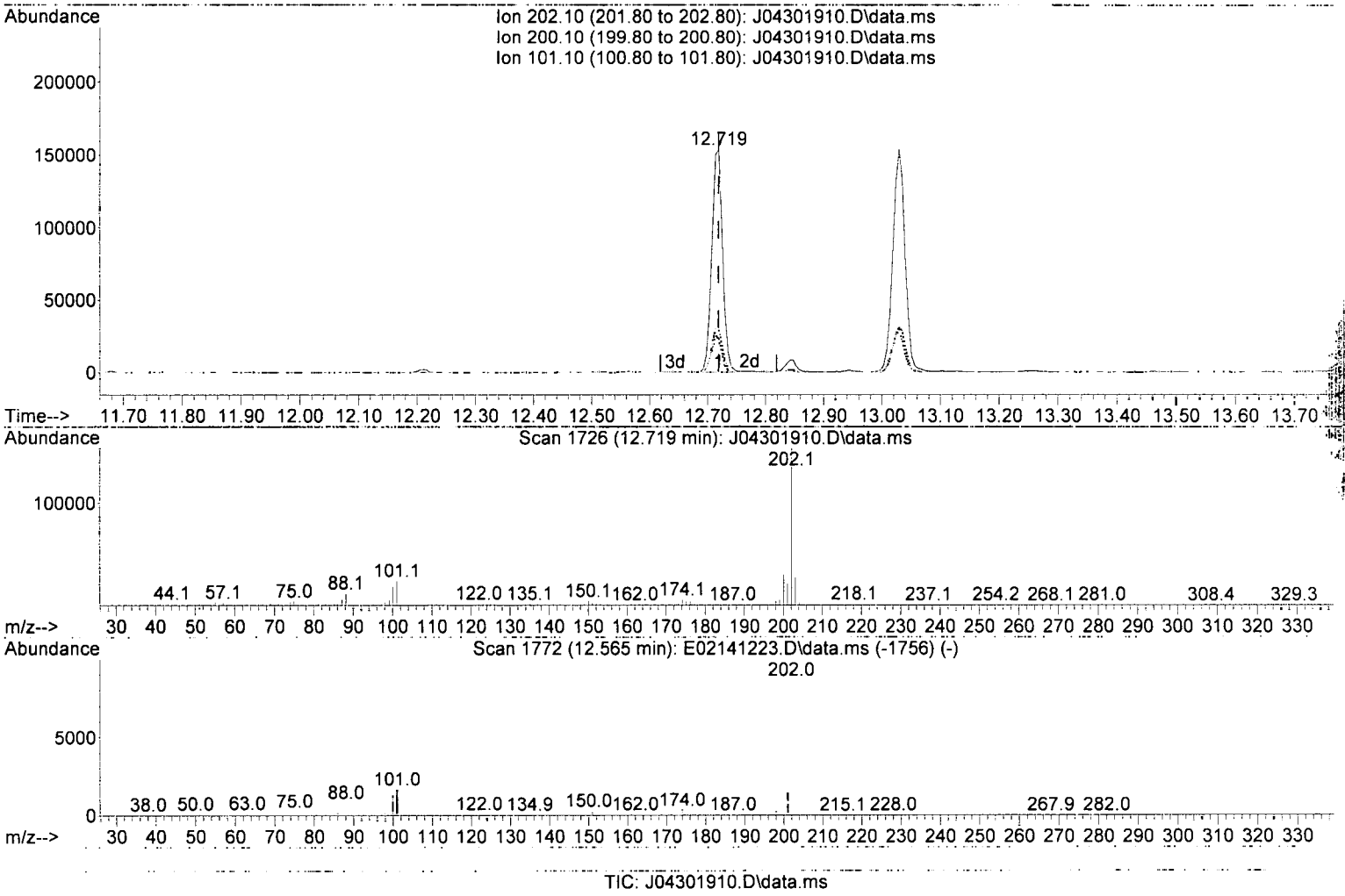
response 10426

Ion	Exp%	Act%
167.10	100.00	100.00
139.10	13.50	15.63
166.10	21.10	19.63
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(75) Fluoranthene (T)

12.719min (+ 0.000) 501.79 ng/ml

response 200816

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	19.32
101.10	17.00	15.26
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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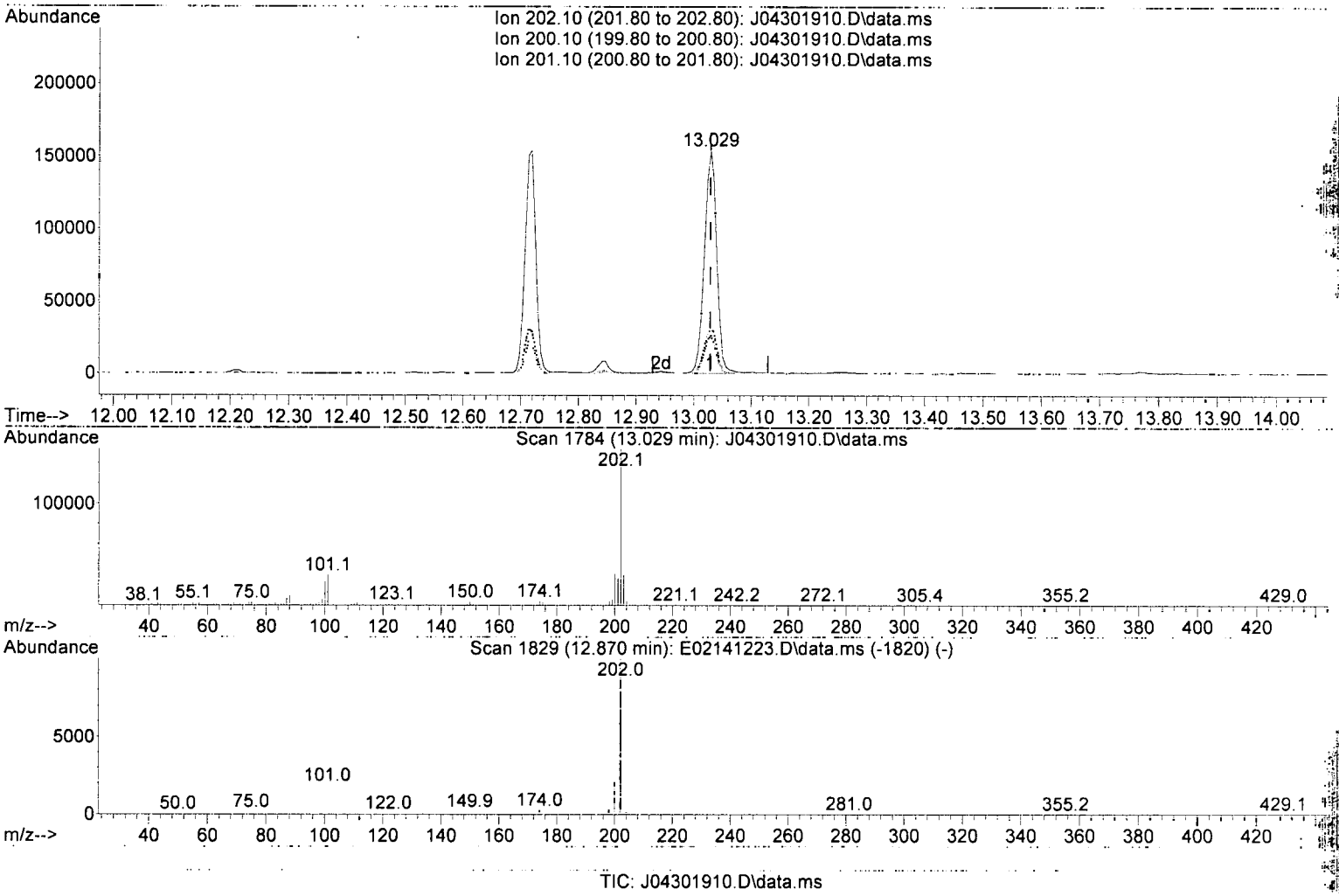
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 546.53 ng/ml

response 225398

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	20.30
201.10	17.30	17.30
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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Sample : A9D0674-12RE1@4
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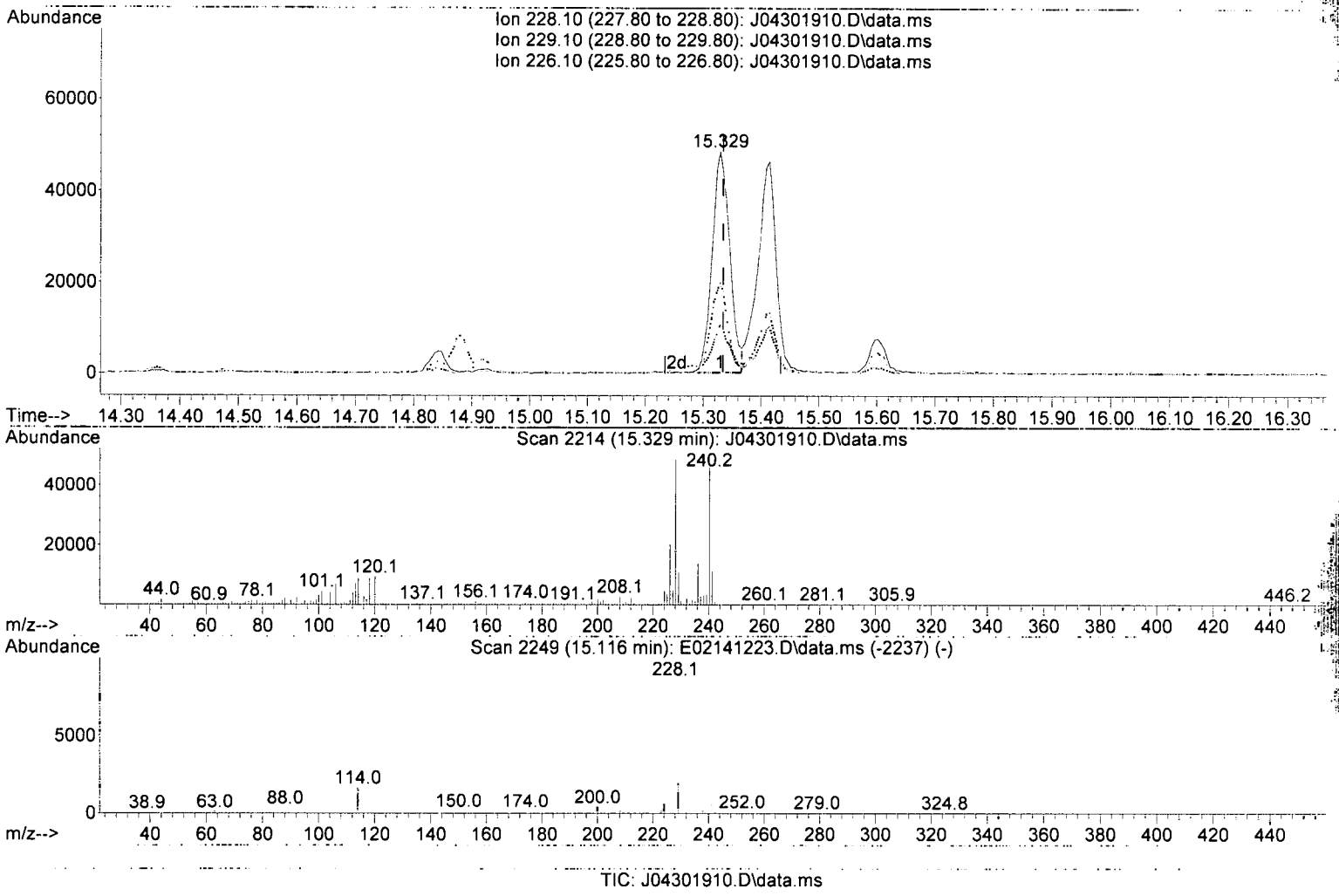

TIC: J04301910.D\data.ms

(83) Benz(a)anthracene (T)

15.329min (-0.005) 300.17 ng/ml

response 102919

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	22.24
226.10	26.50	41.46
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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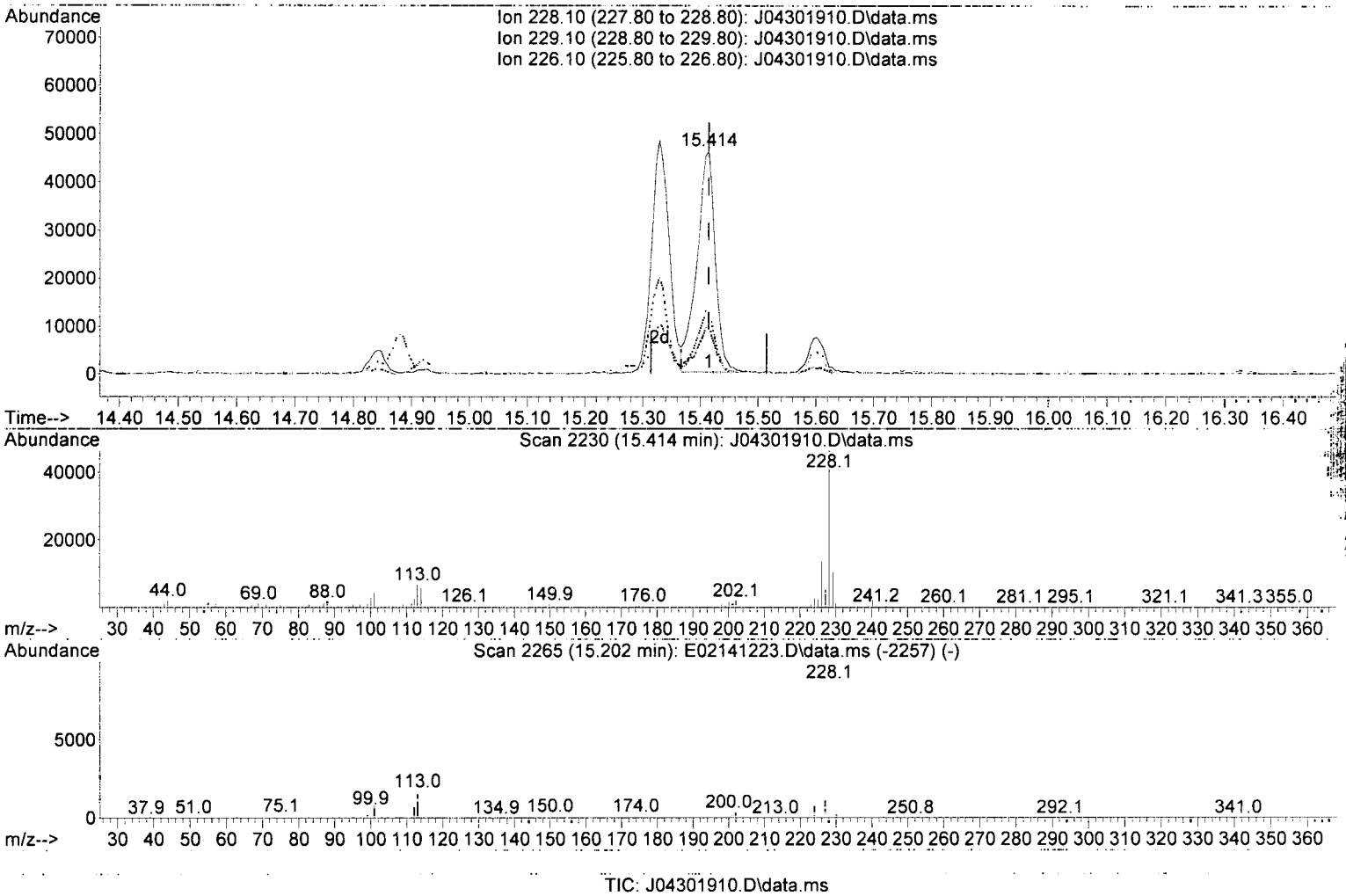
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(84) Chrysene (T)

15.414min (+ 0.000) 306.37 ng/ml

response 101923

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	22.55
226.10	29.30	29.22
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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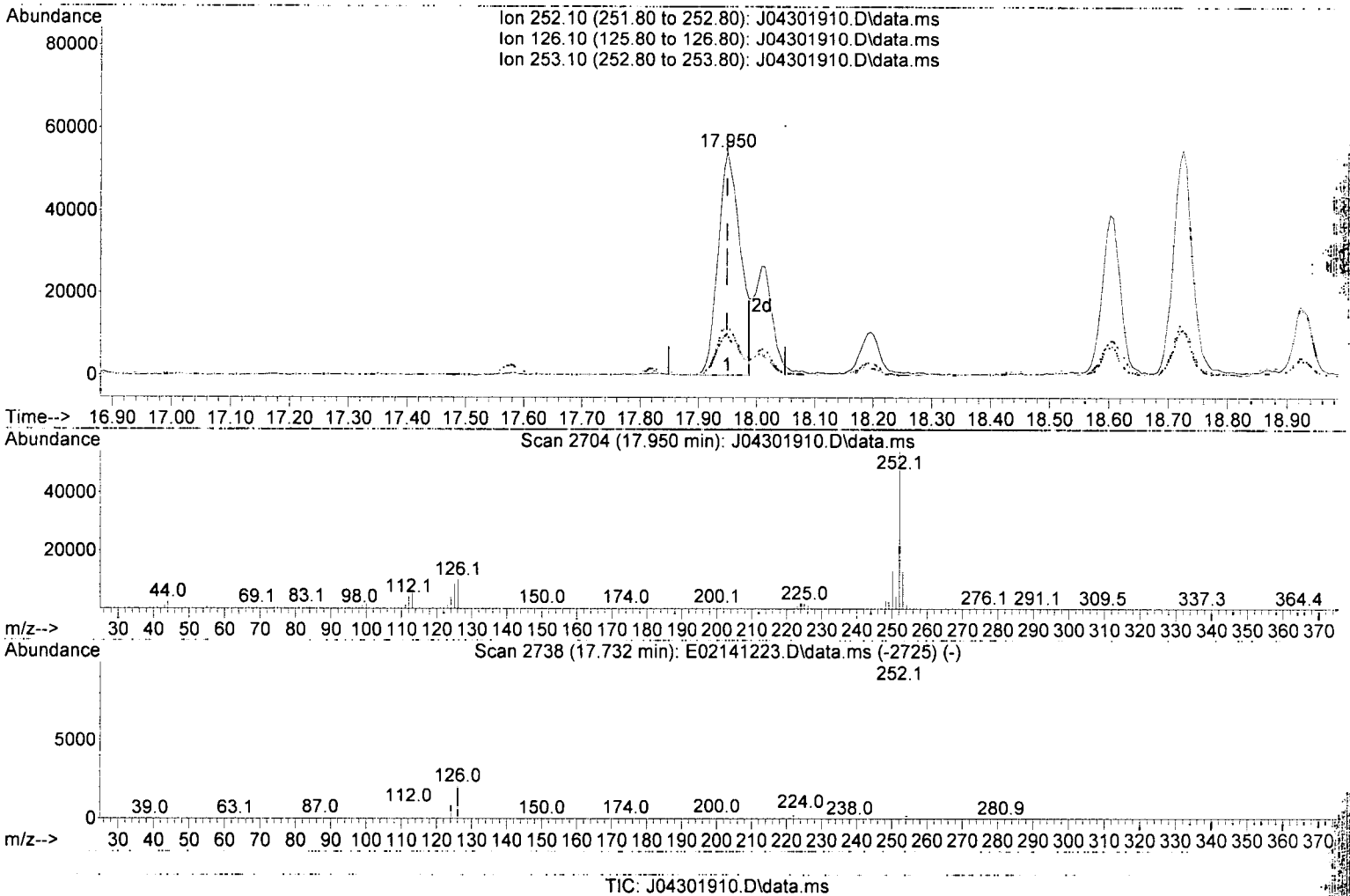
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.950min (+ 0.001) 444.90 ng/ml

response 143725

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	18.40
253.10	22.00	22.84
0.00	0.00	0.00

MQ5

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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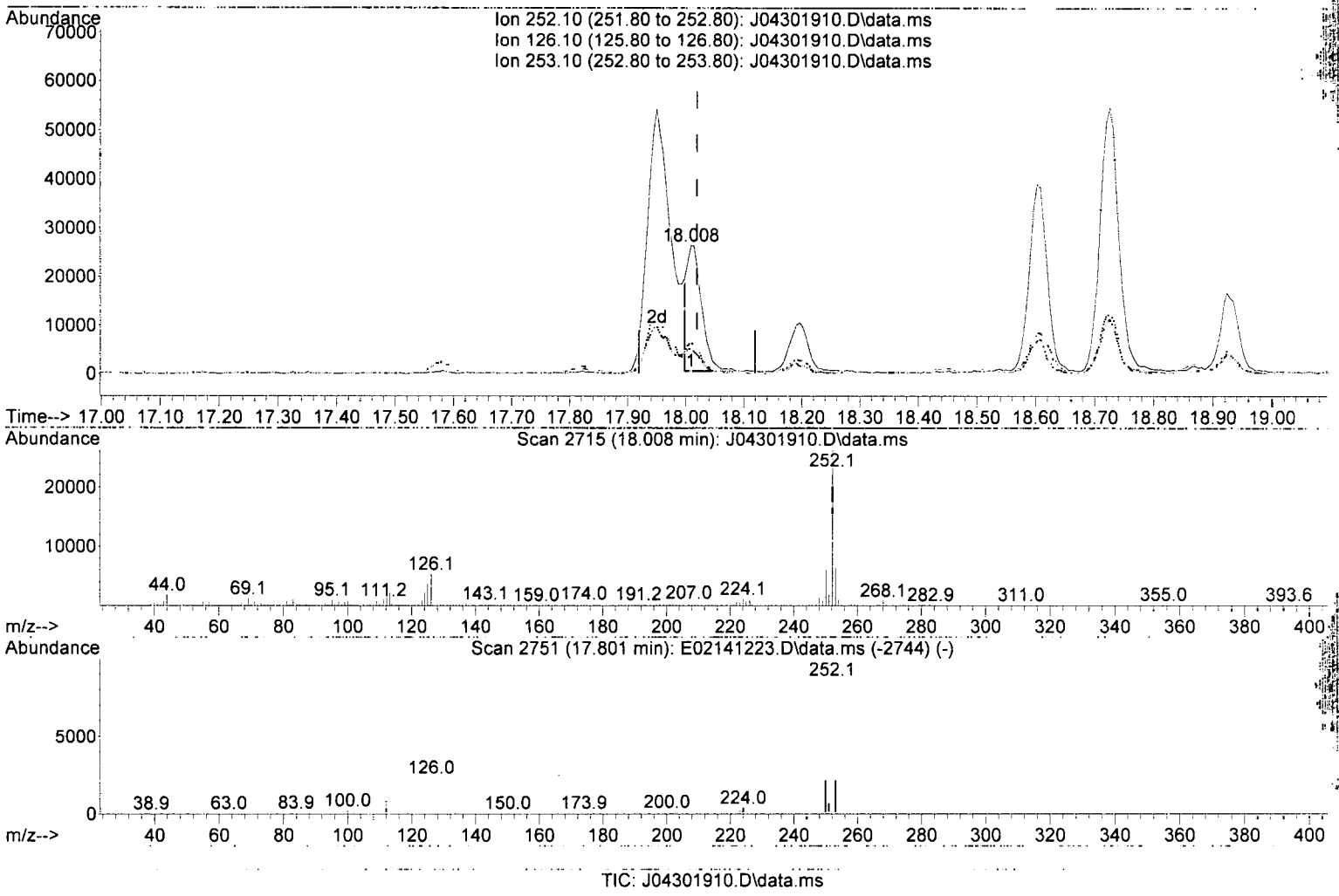
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.008min (-0.011) 141.52 ng/ml

response 44964

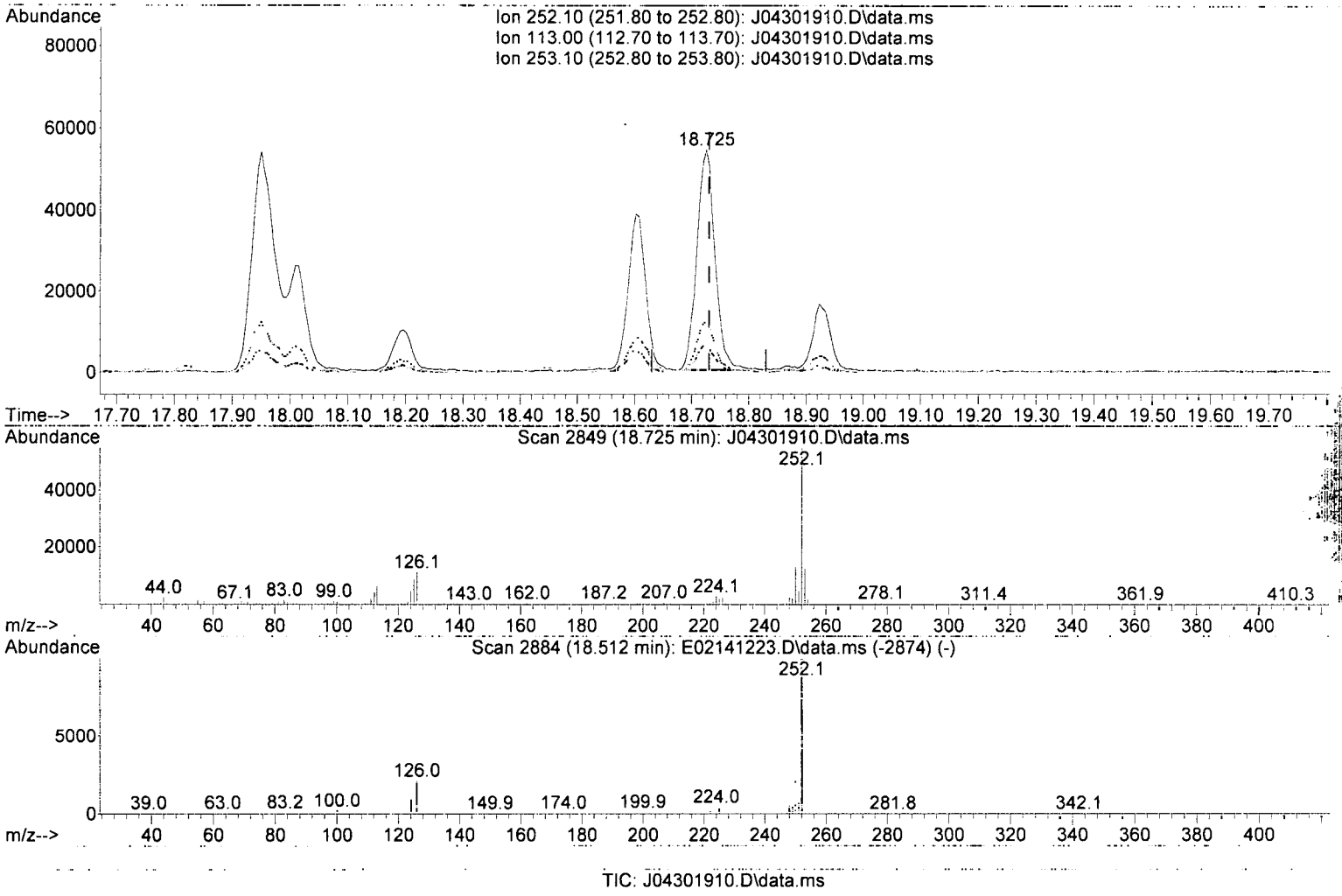
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	20.06
253.10	21.70	24.35
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(92) Benzo(a)pyrene (T)

18.725min (-0.005) 405.96 ng/ml

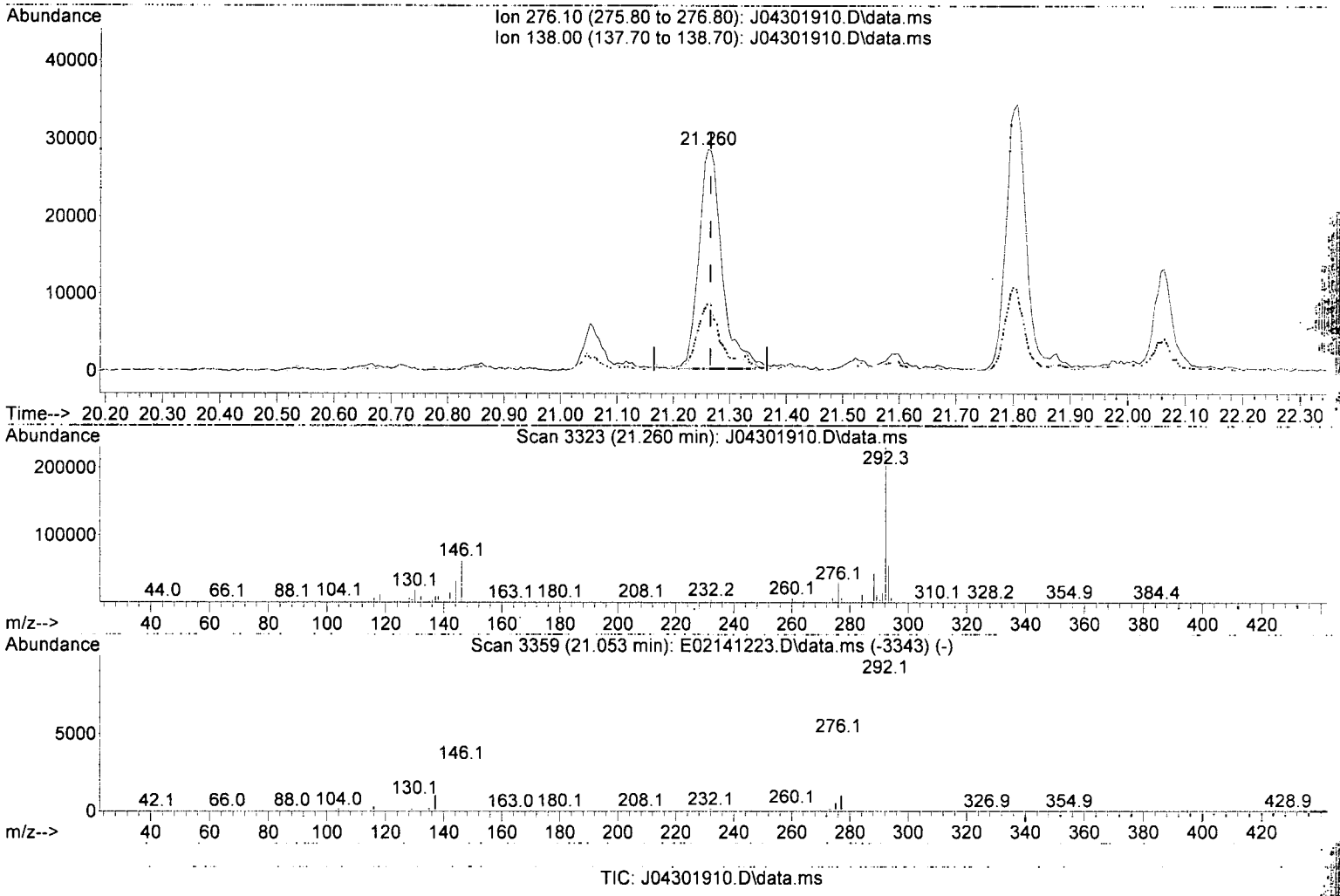
response 119942

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	11.83
253.10	21.60	22.64
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.260min (-0.005) 268.82 ng/ml

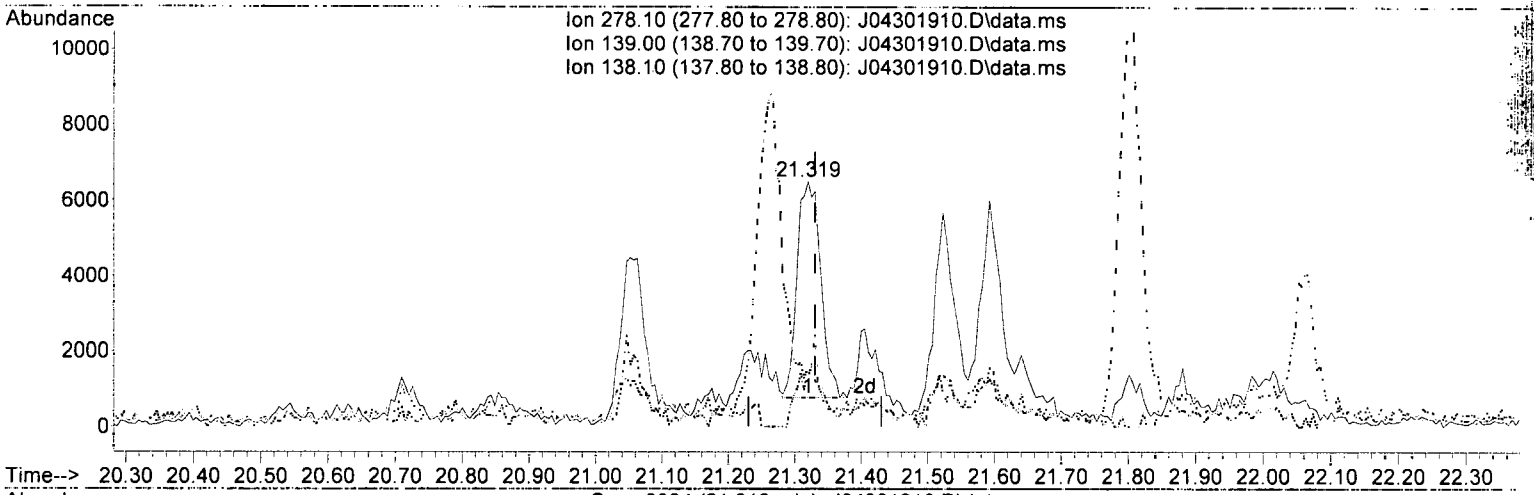
response 81028

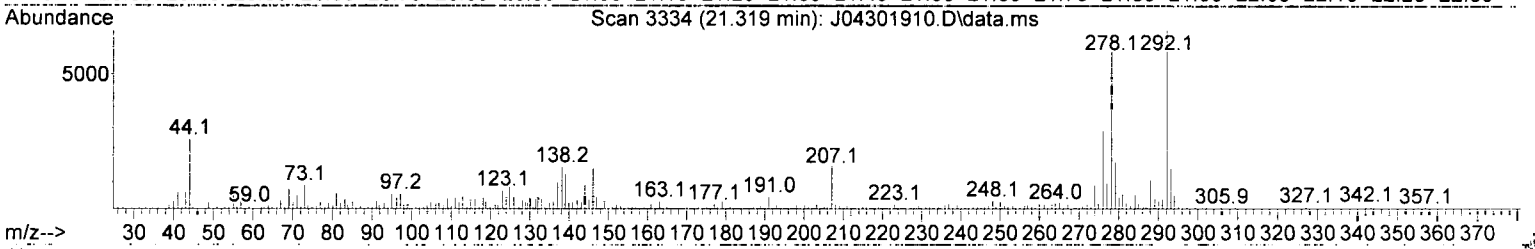
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	30.65
0.00	0.00	0.00
0.00	0.00	0.00

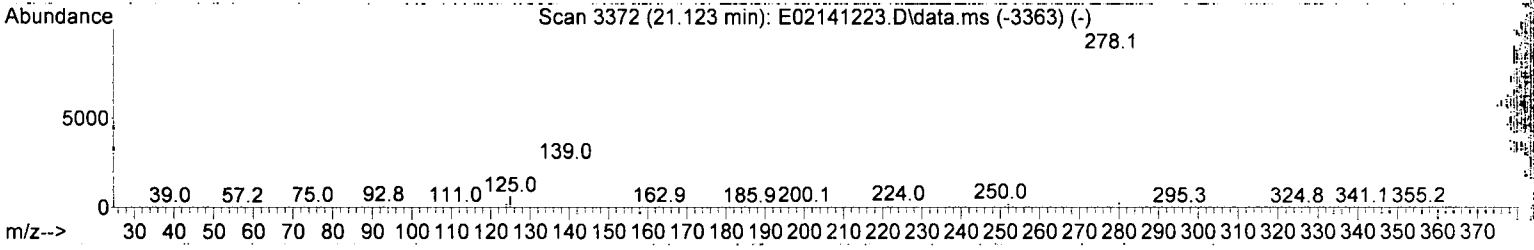
Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04301910.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.319min (-0.011) 52.64 ng/ml

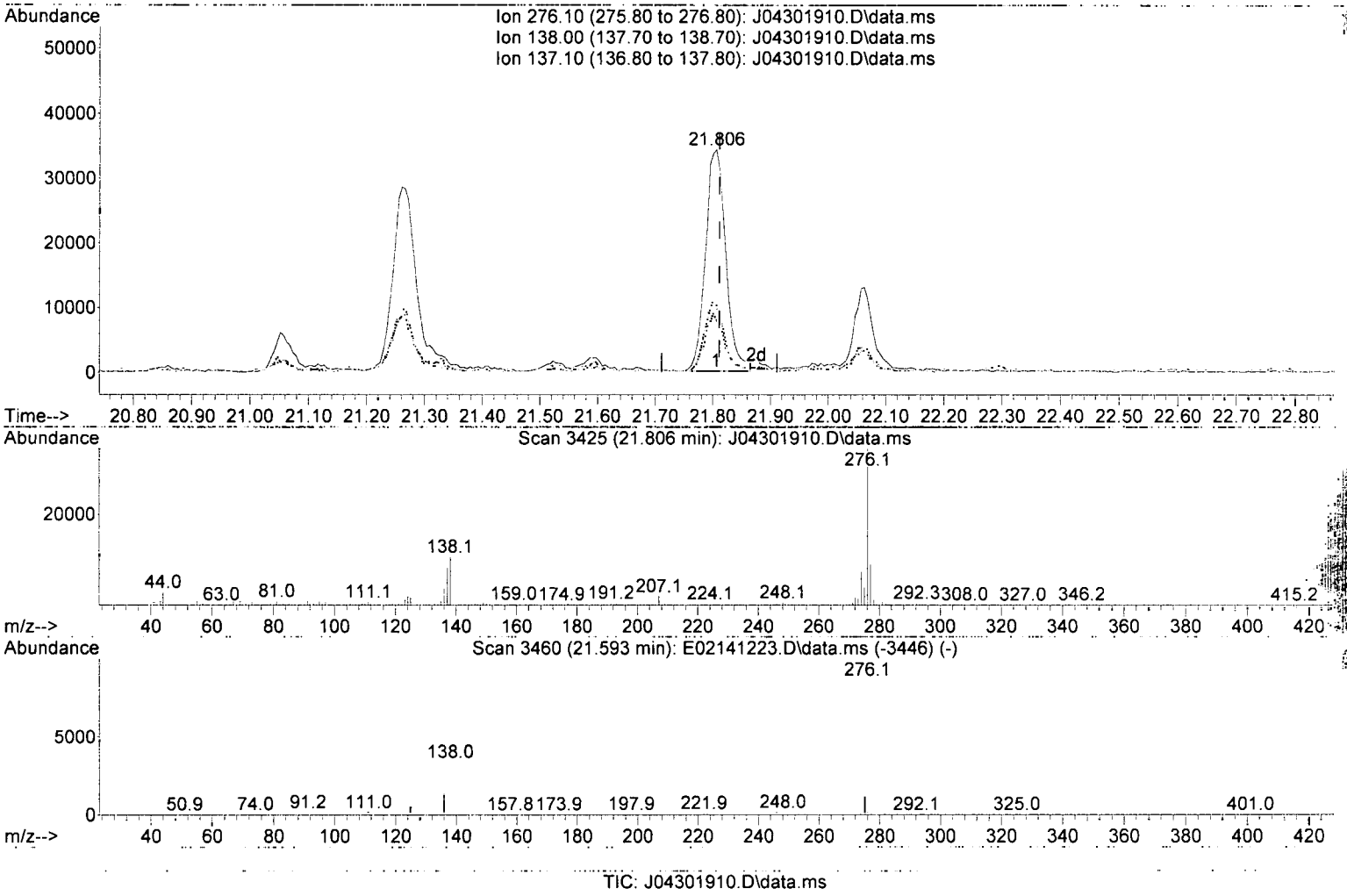
response 14192

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.20	20.12
138.10	18.50	24.23
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301910.D\data.ms

(97) Benzo(g,h,i)perylene (T)

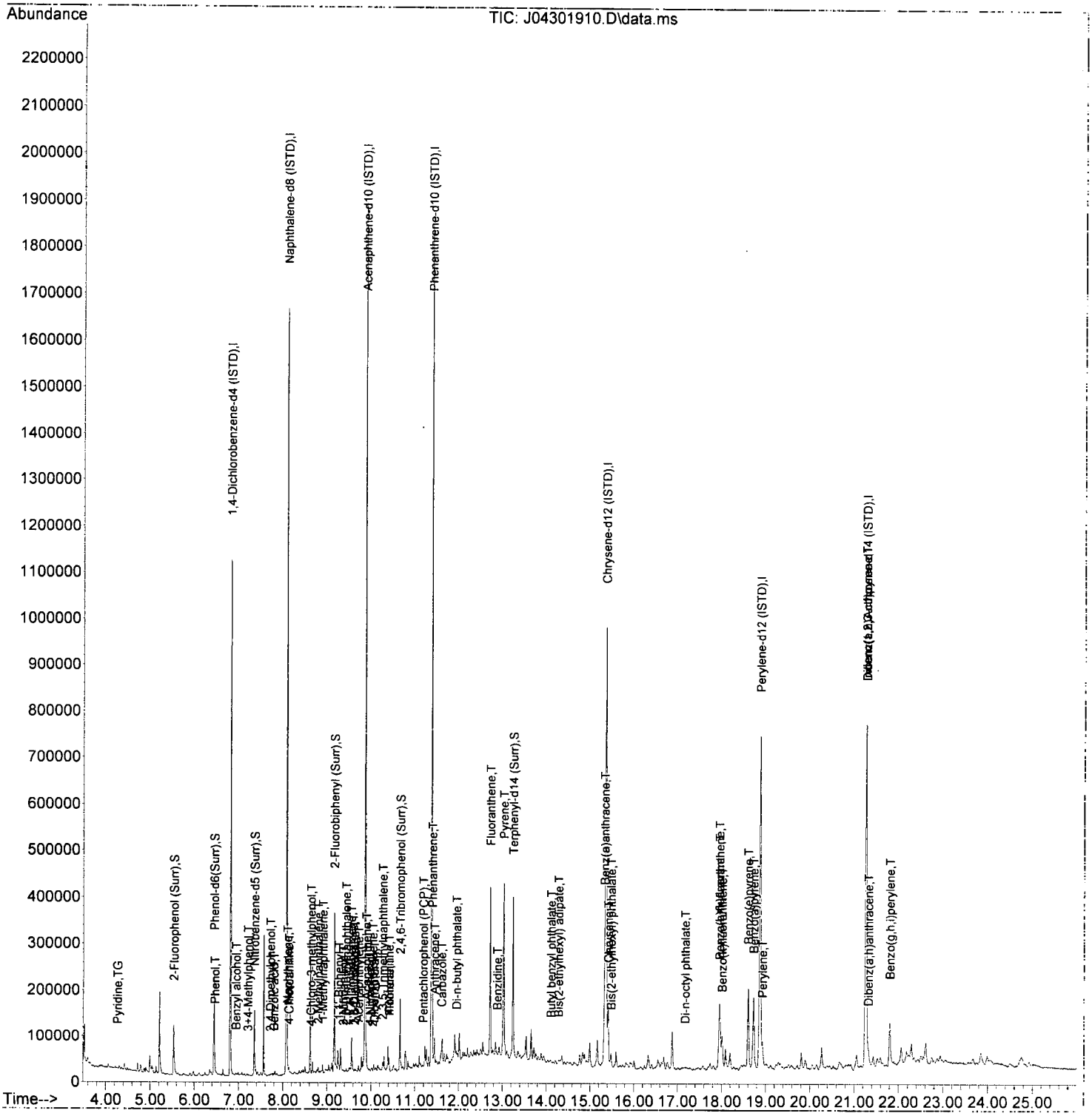
21.806min (-0.005) 286.59 ng/ml

response 83495

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	30.77
137.10	23.10	23.67
0.00	0.00	0.00

Data Path : T:\data\2019-04\9D30020\
Data File : J04301910.D
Acq On : 30 Apr 2019 1:21 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-12RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 30 15:49:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 MOS

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	209638	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	953377	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	465152	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	784110	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	683362	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	603413	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	569621	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	45914	336.91	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	63764	363.74	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	55291	366.08	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	115474	351.85	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	21163	561.69	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	148887	462.85	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.230	79	1390m	8.25	ng/ml#	
6) Phenol	6.455	94	1471	17.10	ng/ml#	40
7) Aniline	6.487	93	405	N.D.		
8) Bis(2-chloroethyl) ether	6.525	93	274	N.D.		
9) 2-Chlorophenol	6.557	128	63	N.D.		
10) 1,3-Dichlorobenzene	6.824	146	51	N.D.		
11) 1,4-Dichlorobenzene	6.824	146	51	N.D.		
12) Benzyl alcohol	6.942	108	3174	70.23	ng/ml	89
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.049	107	572	5.18	ng/ml#	66
15) 2,2'-Oxybis(1-Chloropr...	7.065	45	64	N.D.		
16) N-Nitrosodi-n-propylamine	7.183	70	316	2.72	ng/ml	59
17) 3+4-Methylphenol	7.199	107	1670	22.24	ng/ml#	61
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.375	77	142	N.D.		
22) Isophorone	7.605	82	723	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.734	122	300	27.34	ng/ml#	73
25) Bis(2-chloroethoxy) me...	7.819	93	167	N.D.		
26) Benzoic acid	7.846	105	492	757.45	ng/ml#	70
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.097	128	33630	68.15	ng/ml	98
30) 4-Chloroaniline	8.162	127	62	14.82	ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.638	107	533	67.25	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	6878	21.25	ng/ml	96
34) 1-Methylnaphthalene	8.900	142	3705	11.80	ng/ml	85
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	9.263	154	4073	10.80	ng/ml	90
41) 2-Chloronaphthalene	9.349	162	303	N.D.		
42) 2-Nitroaniline	9.386	138	224	67.52	ng/ml#	67
43) 2,6-Dimethylnaphthalene	9.435	156	4169	15.08	ng/ml	97

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

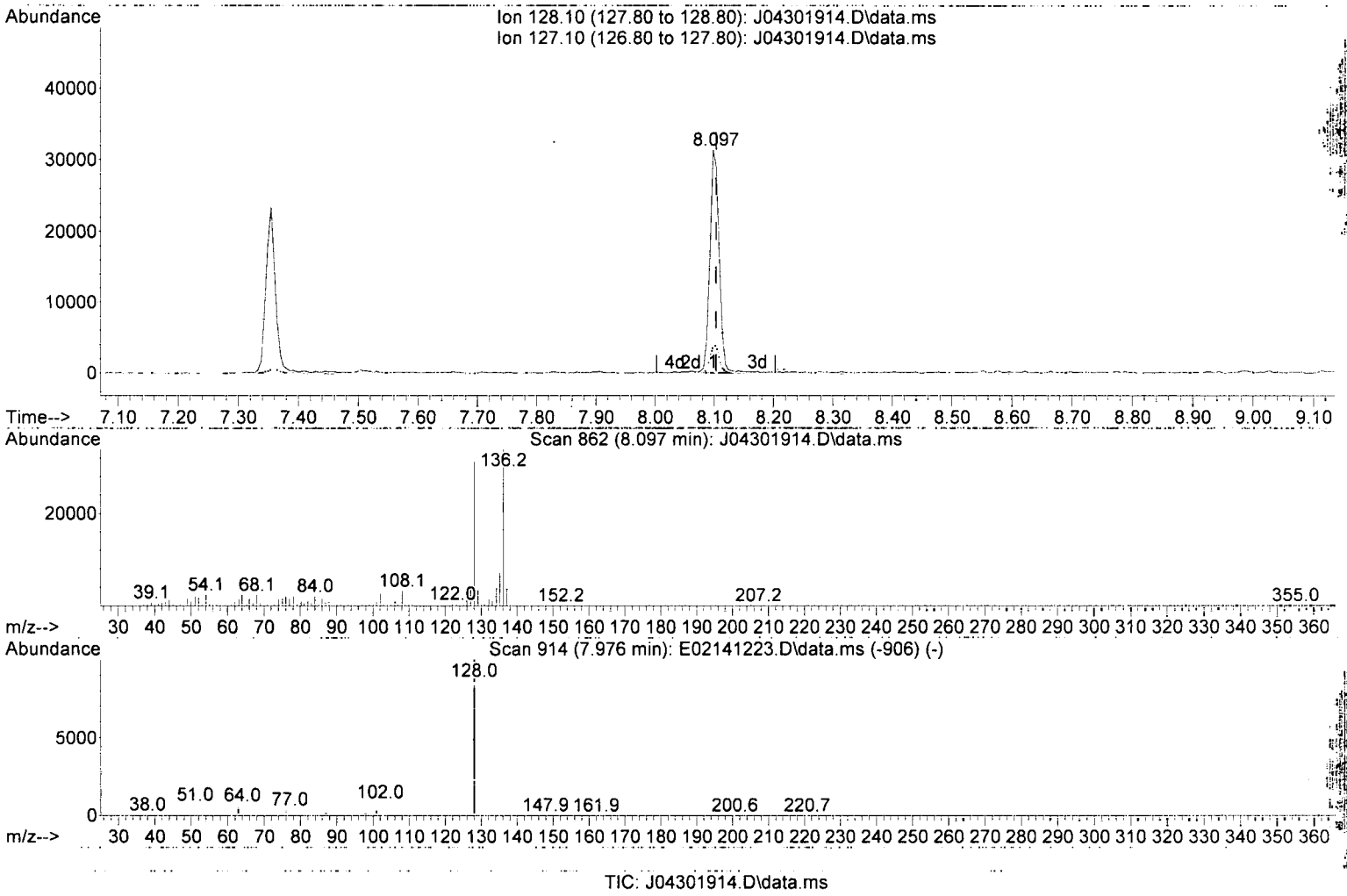
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.536	168	194	127.23	ng/ml#	73
45) Dimethyl phthalate	9.552	163	461	N.D.		
46) 1,3-Dinitrobenzene	9.600	168	73	66.59	ng/ml#	1
47) 2,6-Dinitrotoluene	9.622	165	369	37.72	ng/ml	93
48) 1,2-Dinitrobenzene	9.665	168	139	4.46	ng/ml#	74
49) Acenaphthylene	9.718	152	11504	24.72	ng/ml	98
50) 3-Nitroaniline	9.809	138	235	3.70	ng/ml#	15
51) Acenaphthene	9.895	153	7316	24.45	ng/ml	96
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.953	139	244	78.51	ng/ml#	1
54) 2,4-Dinitrotoluene	10.023	165	235	62.79	ng/ml#	63
55) Dibenzofuran	10.066	168	4597	11.76	ng/ml	74
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	10.280	149	347	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.264	170	10028	40.57	ng/ml	92
60) Fluorene	10.419	166	12827	41.90	ng/ml	99
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.413	138	491	8.39	ng/ml	88
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.515	169	529	N.D.		
66) Azobenzene (1,2-DPH)	10.585	77	555	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.189	266	152	24.38	ng/ml#	58
71) Phenanthrene	11.403	178	110125	258.83	ng/ml	97
72) Anthracene	11.451	178	33051	79.76	ng/ml	97
73) Carbazole	11.611	167	10327	29.45	ng/ml	96
74) Di-n-butyl phthalate	11.948	149	2894	6.04	ng/ml	83
75) Fluoranthene	12.719	202	239505	564.46	ng/ml	97
76) Benzidine	12.884	184	271	82.06	ng/ml#	1
77) Pyrene	13.029	202	290839	665.13	ng/ml	99
80) Butyl benzyl phthalate	14.104	149	1917	38.88	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.280	129	2833	14.55	ng/ml	87
82) 3,3-Dichlorobenzidine	15.345	252	74	Below Cal	#	1
83) Benz(a)anthracene	15.334	228	100251	268.85	ng/ml	79
84) Chrysene	15.409	228	104315	288.31	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.479	149	7244	25.24	ng/ml	95
87) Di-n-octyl phthalate	17.185	149	650	67.71	ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	135490	397.45	ng/ml MQS	95
89) Benzo(k)fluoranthene	~~18.008~~	~~252~~	~~42748~~	~~128.16~~	~~ng/ml~~	~~97~~ MI-MQS
90) Benzo(b+k)fluoranthene	17.950	252	196467	562.24	ng/ml	93
91) Benzo(e)pyrene	18.602	252	80999	244.80	ng/ml	98
92) Benzo(a)pyrene	18.725	252	119245	382.00	ng/ml	98
93) Perylene	18.928	252	34534	112.75	ng/ml	94
95) Indeno(1,2,3-cd)pyrene	21.266	276	79801	250.43	ng/ml	94
96) Dibenz(a,h)anthracene	21.319	278	12582	44.14	ng/ml	97
97) Benzo(g,h,i)perylene	21.806	276	86530	280.94	ng/ml	100

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(29) Naphthalene (T)

8.097min (-0.005) 68.15 ng/ml

response 33630

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	12.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
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ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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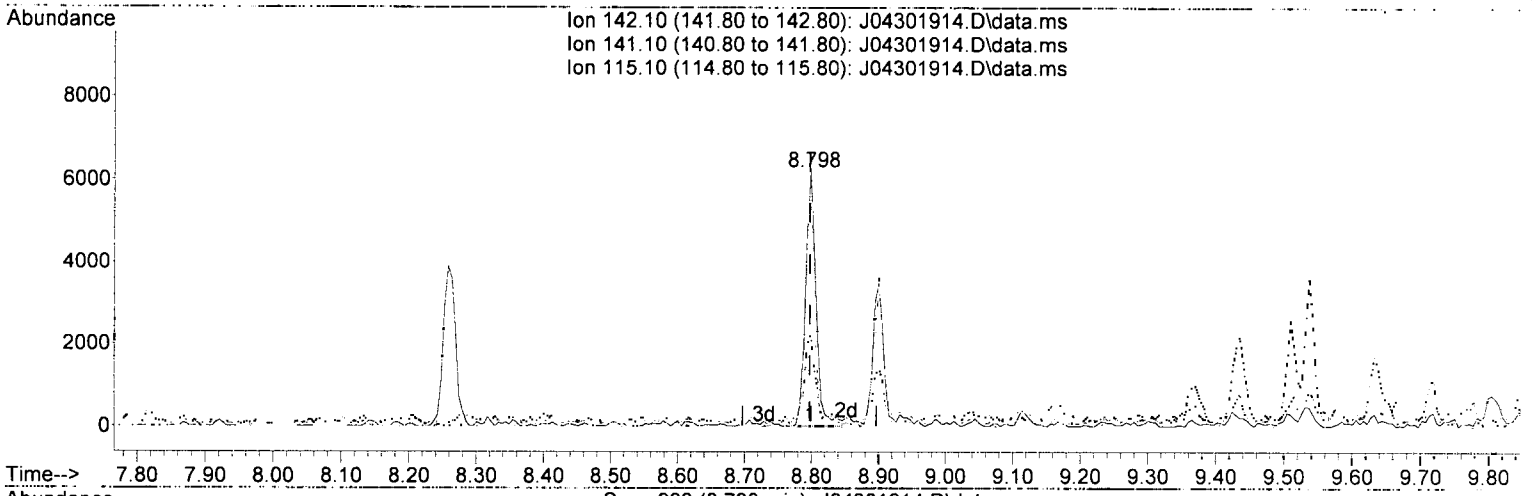
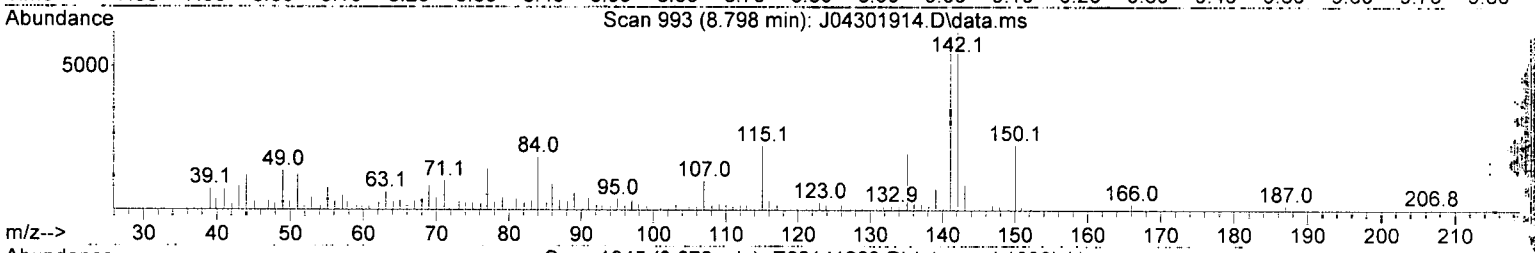
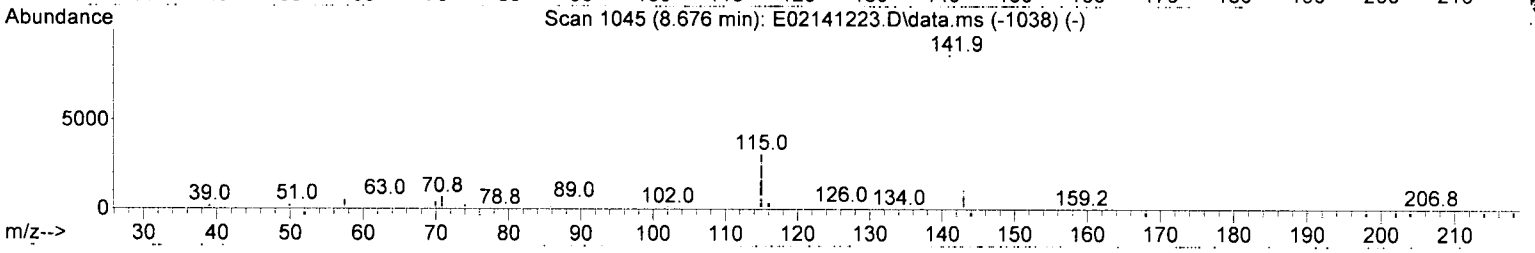
InstName : SV-GCMS10







TIC: J04301914.D\data.ms

(33) 2-Methylnaphthalene (T)

8.798min (+ 0.001) 21.25 ng/ml

response 6878

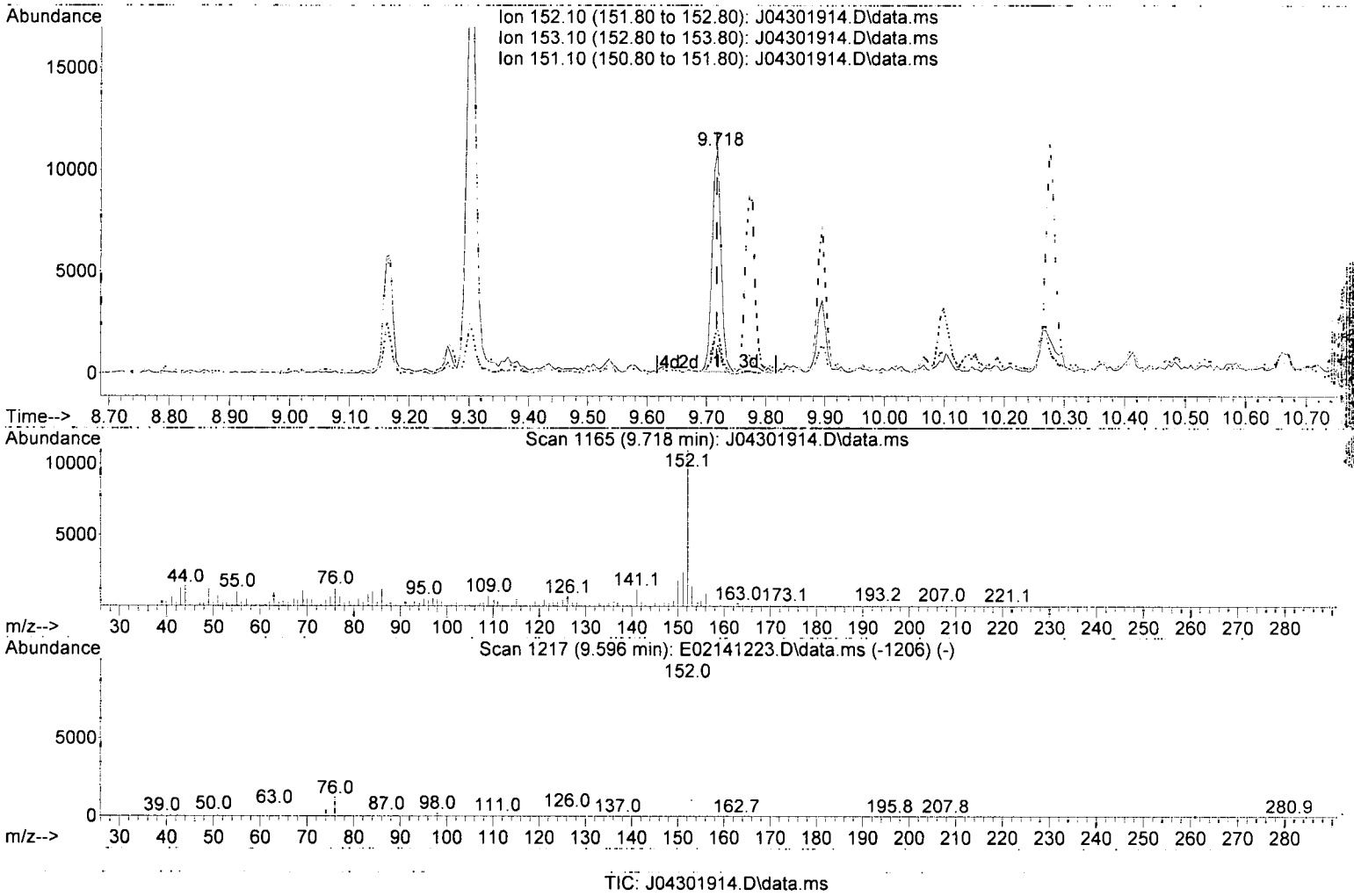
Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	90.27
115.10	33.70	35.83
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(49) Acenaphthylene (T)

9.718min (+ 0.001) 24.72 ng/ml

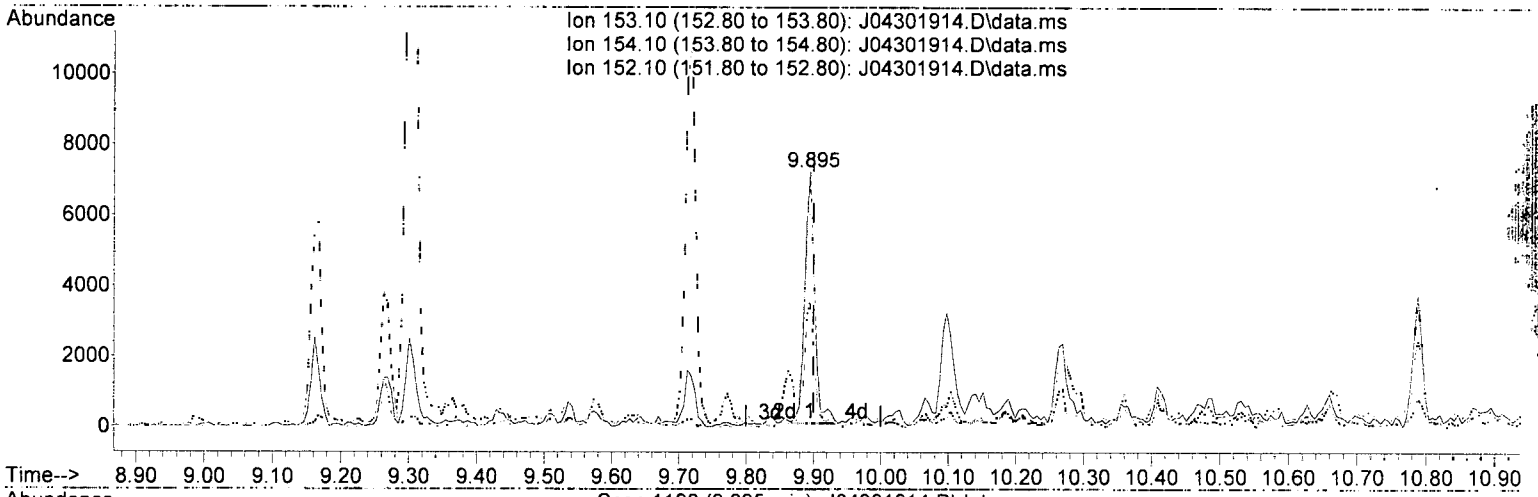
response 11504

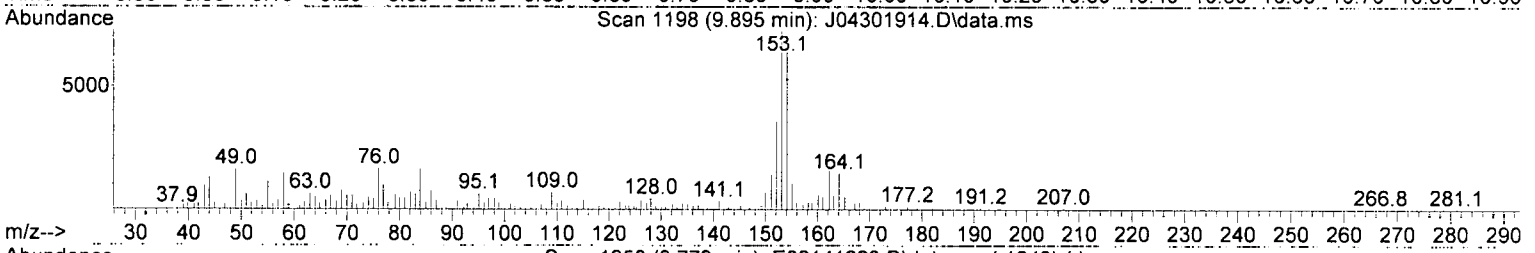
Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	13.10
151.10	20.00	21.76
0.00	0.00	0.00

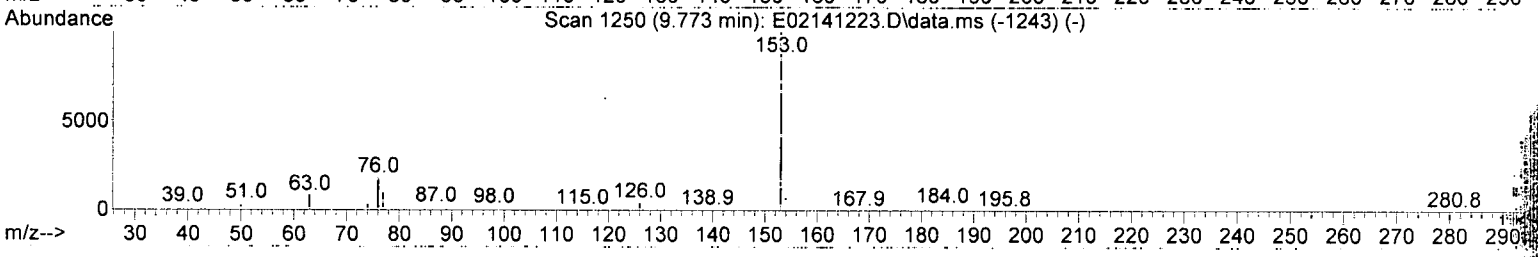
Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04301914.D\data.ms

(51) Acenaphthene (T)

9.895min (-0.005) 24.45 ng/ml

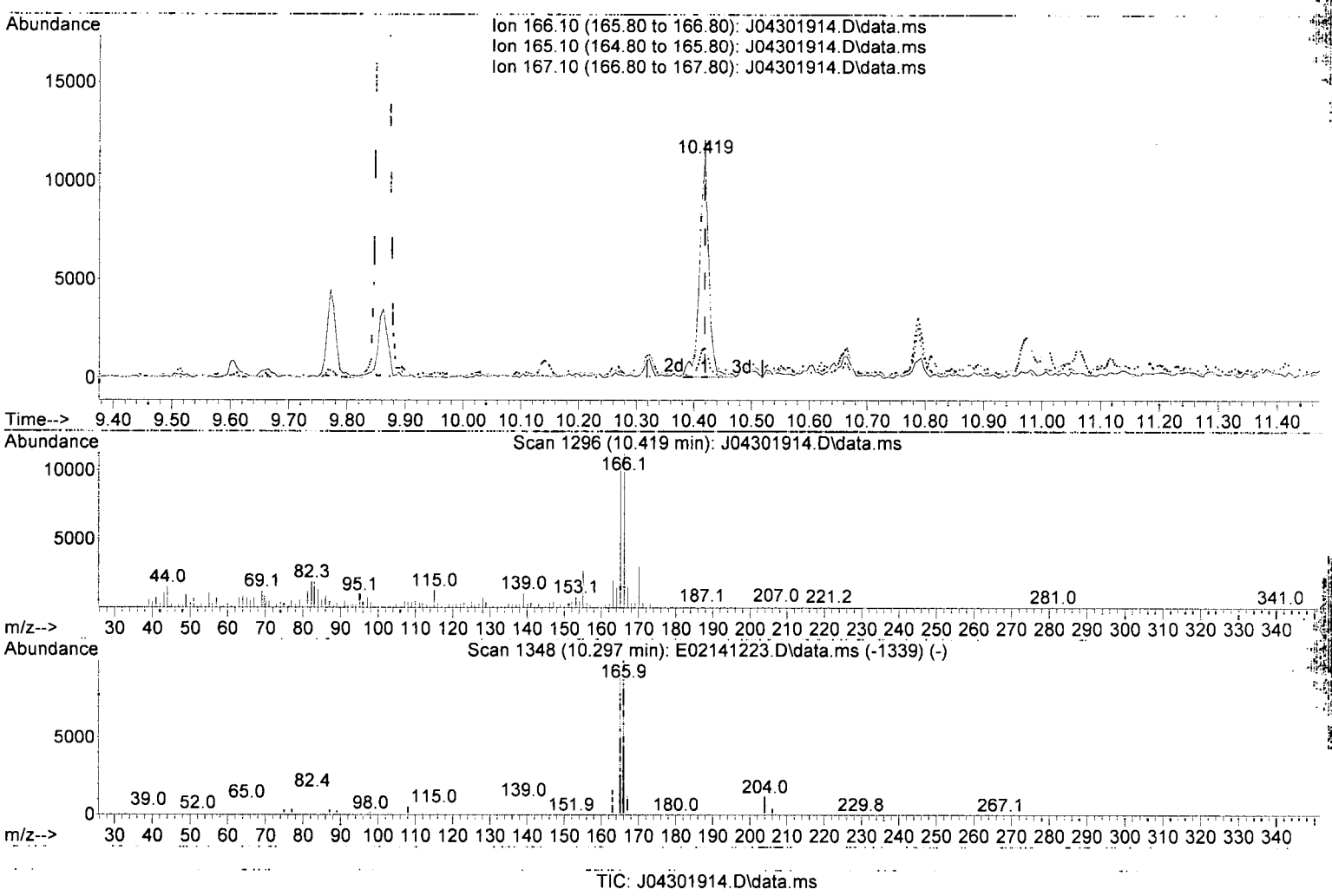
response 7316

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	97.26
152.10	47.70	49.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(60) Fluorene (T)

10.419min (+ 0.000) 41.90 ng/ml

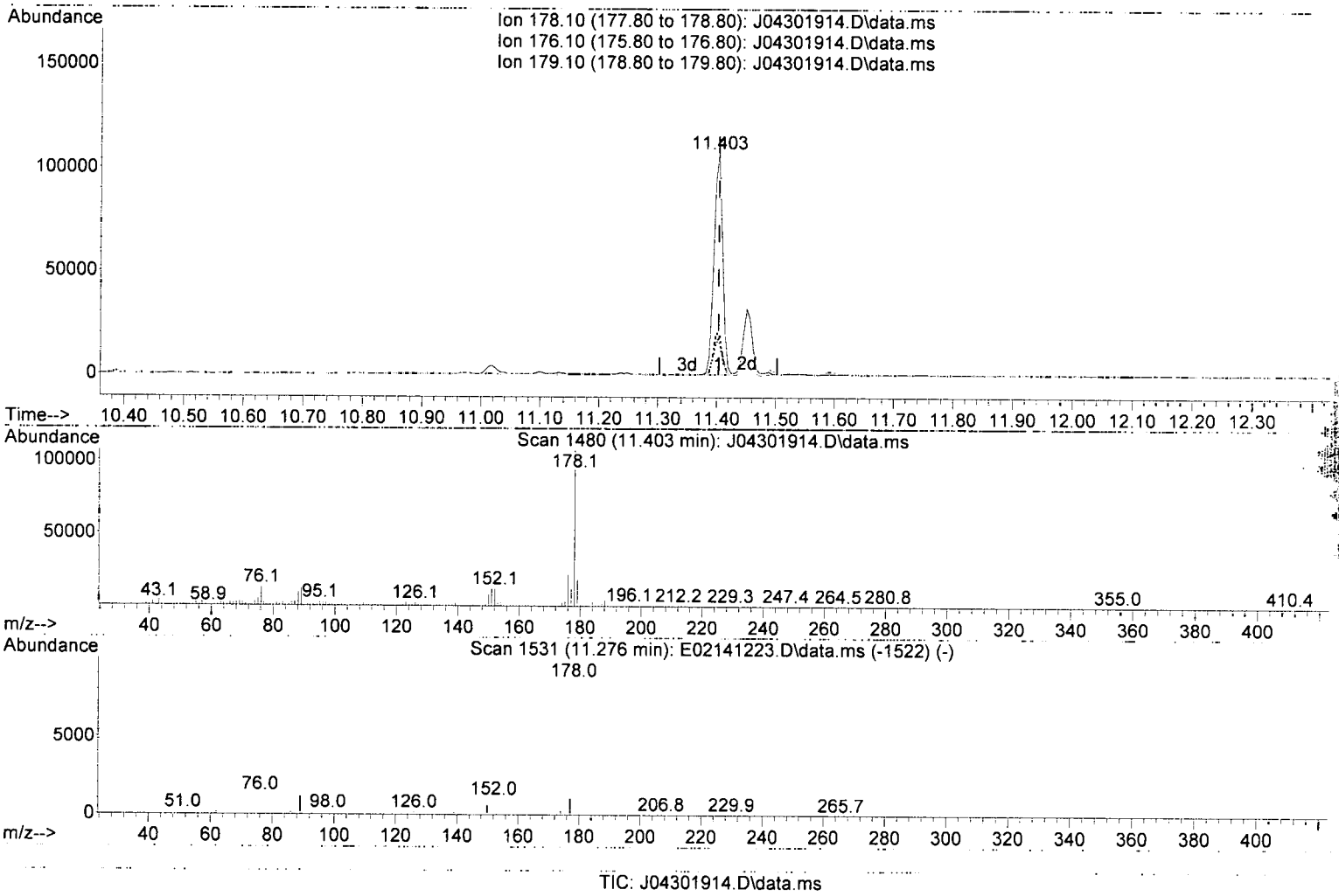
response 12827

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	93.04
167.10	13.50	13.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(71) Phenanthrene (T)

11.403min (+ 0.000) 258.83 ng/ml

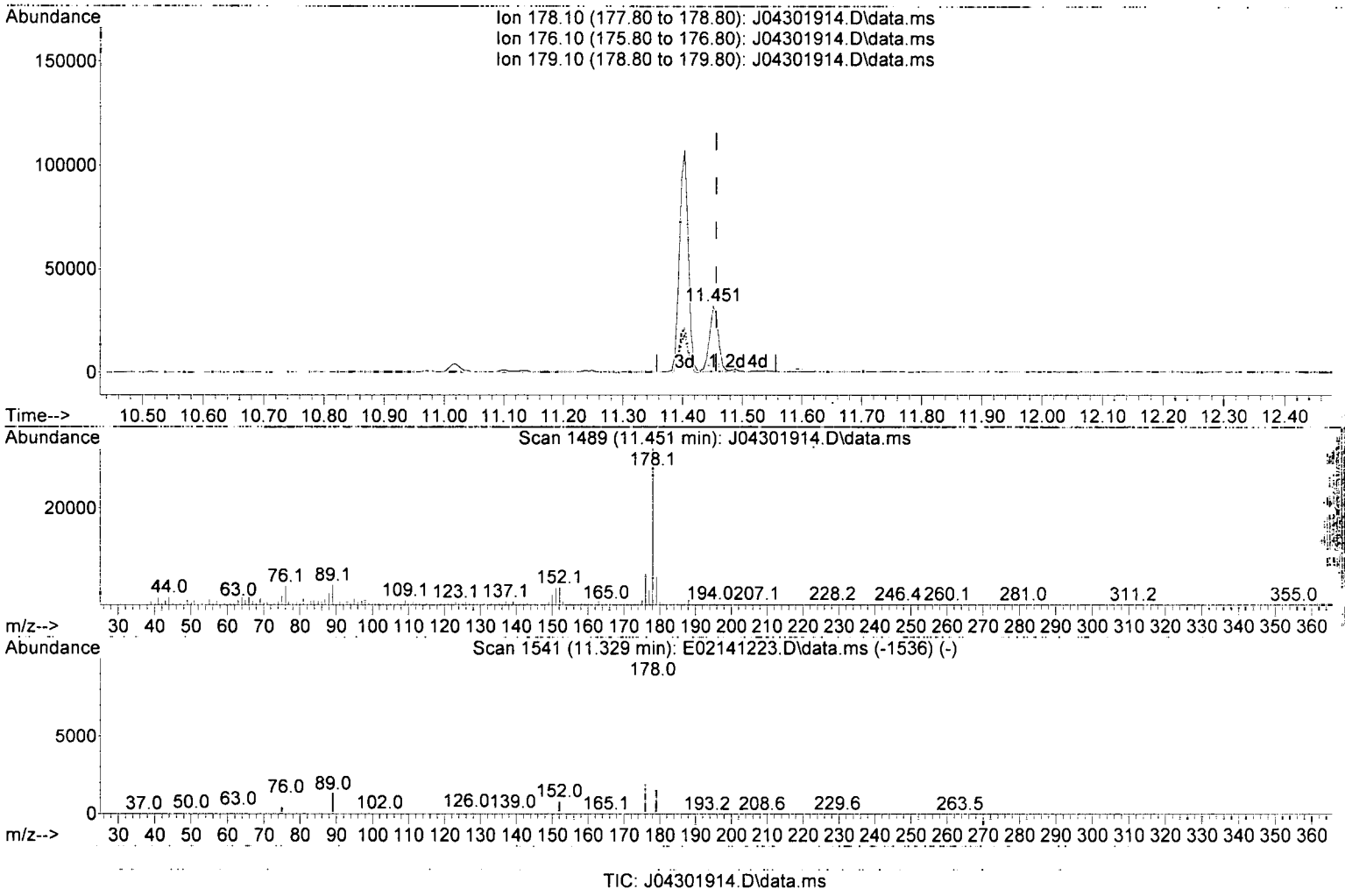
response 110125

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	20.46
179.10	15.20	17.03
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 09:46:48 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(72) Anthracene (T)

11.451min (-0.005) 79.76 ng/ml

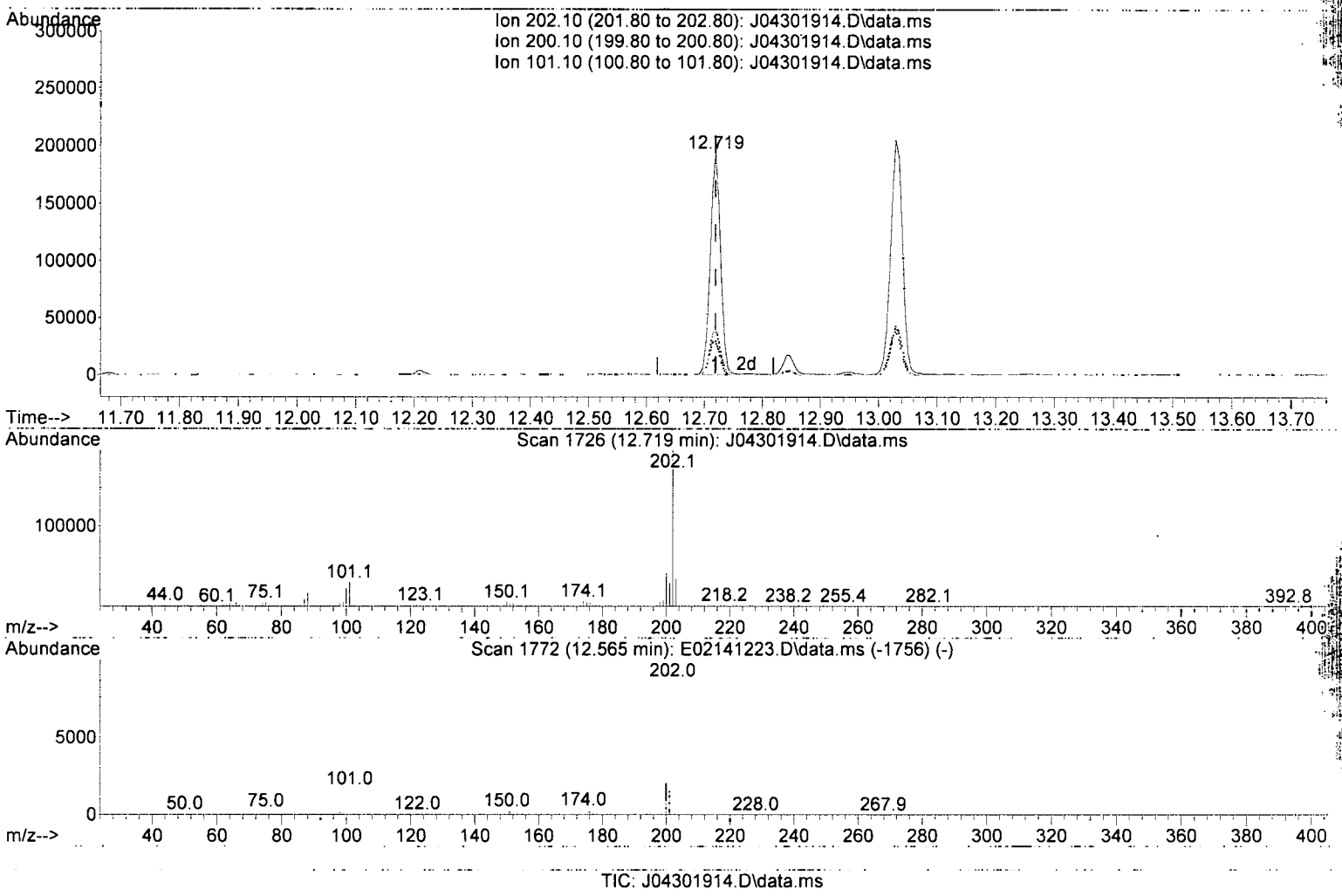
response 33051

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	19.72
179.10	15.90	17.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(75) Fluoranthene (T)

12.719min (+ 0.000) 564.46 ng/ml

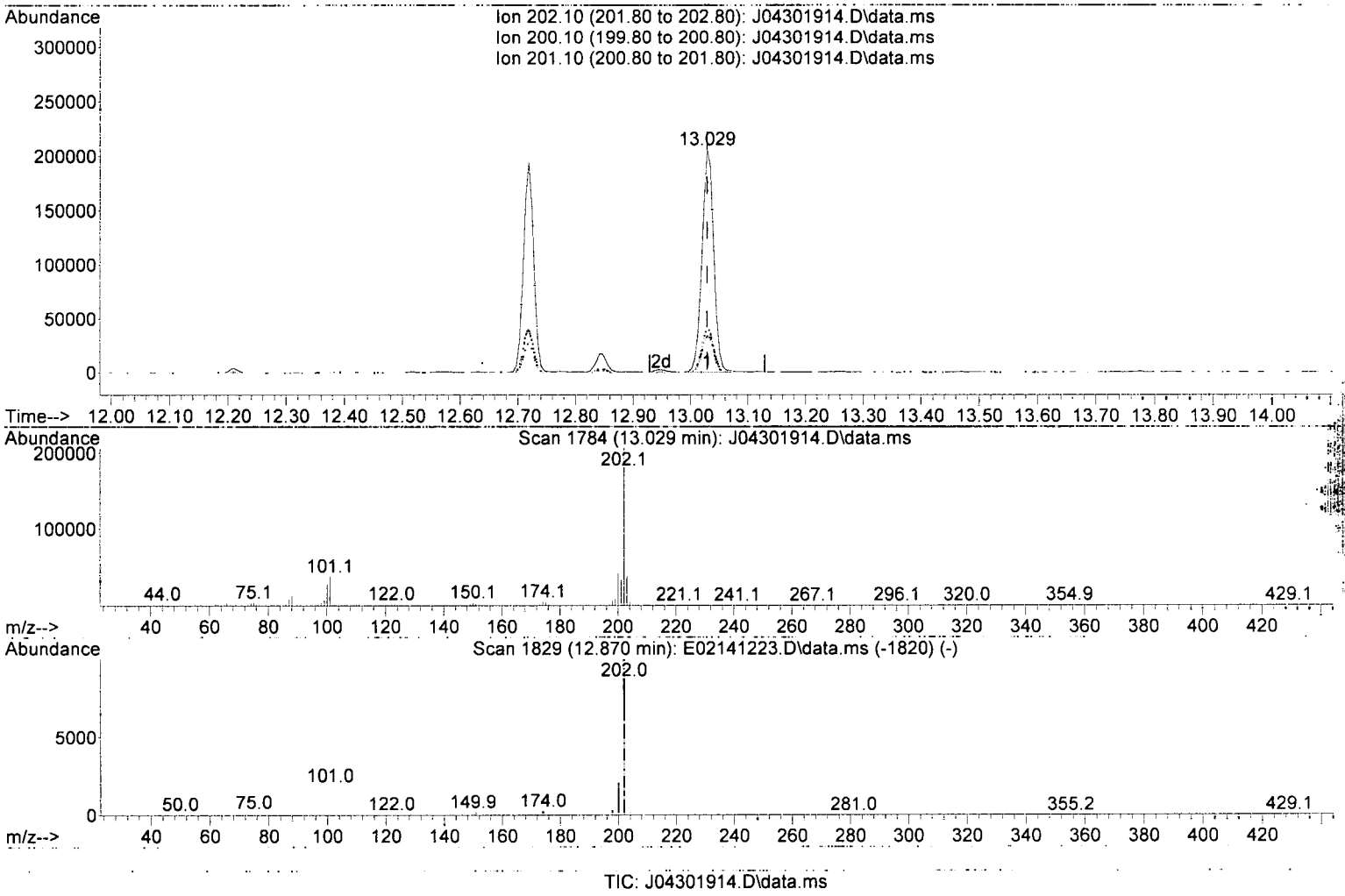
response 239505

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	21.19
101.10	17.00	15.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 665.13 ng/ml

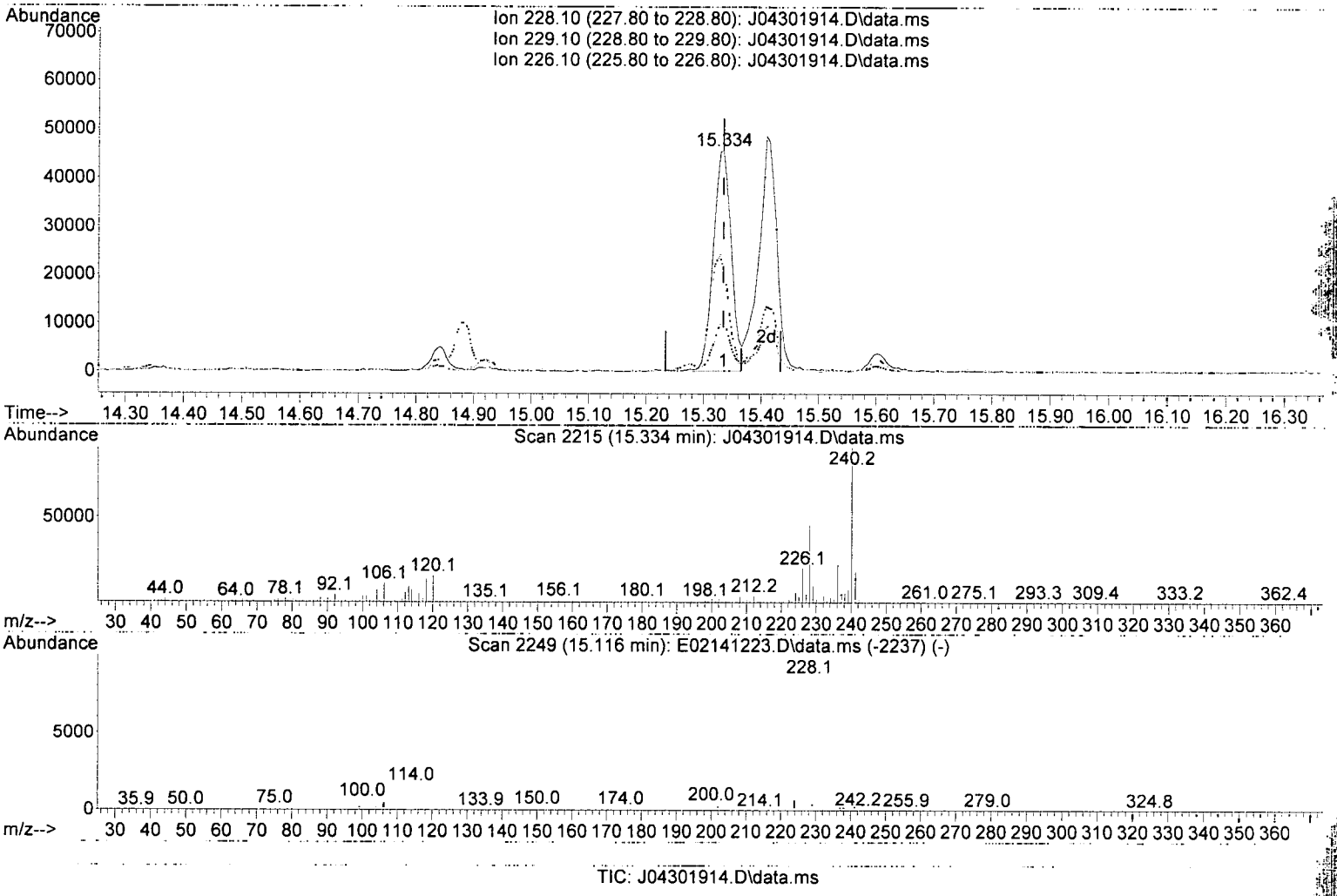
response 290839

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	20.75
201.10	17.30	16.34
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(83) Benz(a)anthracene (T)

15.334min (+ 0.000) 268.85 ng/ml

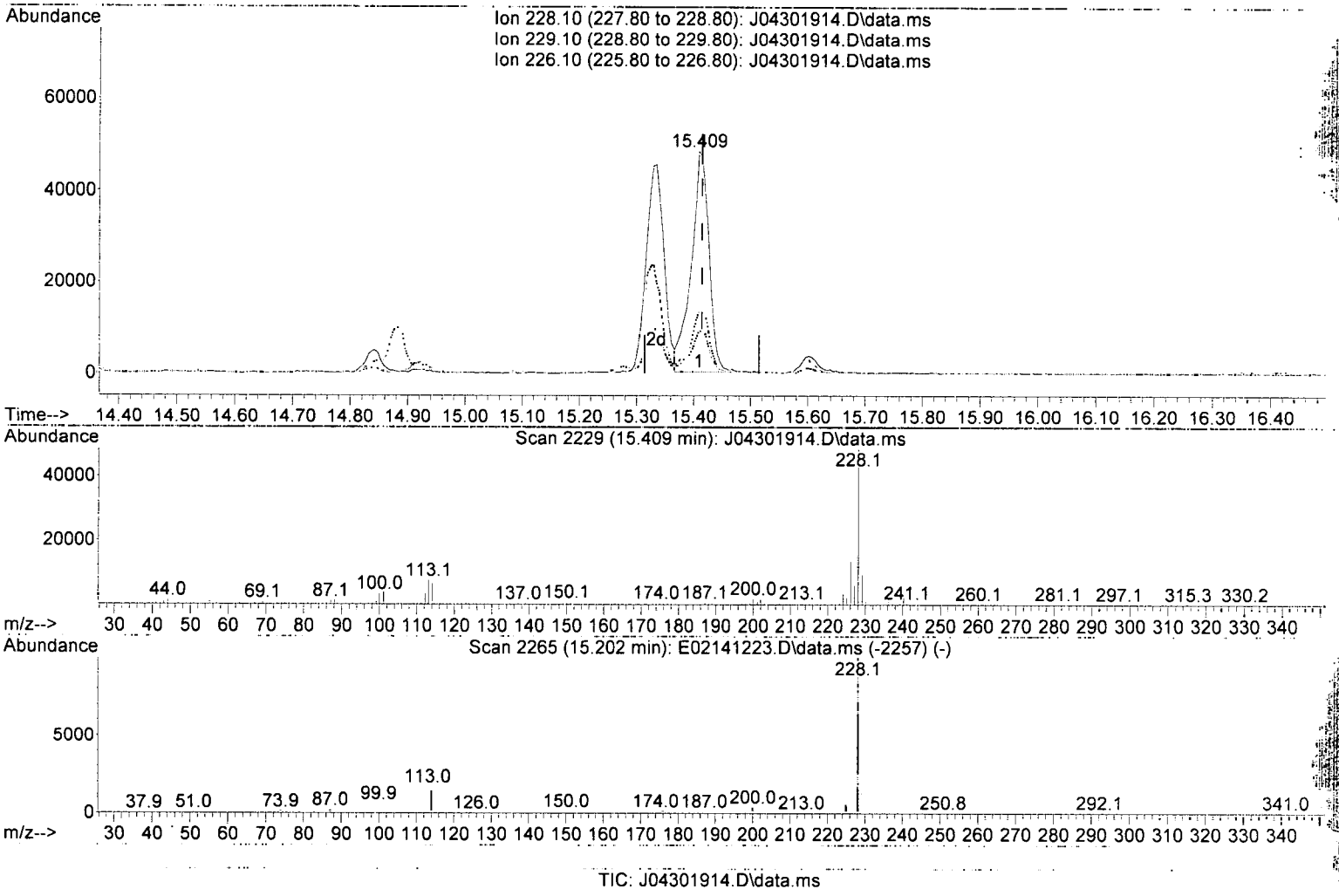
response 100251

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	21.23
226.10	26.50	43.95
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(84) Chrysene (T)

15.409min (-0.005) 288.31 ng/ml

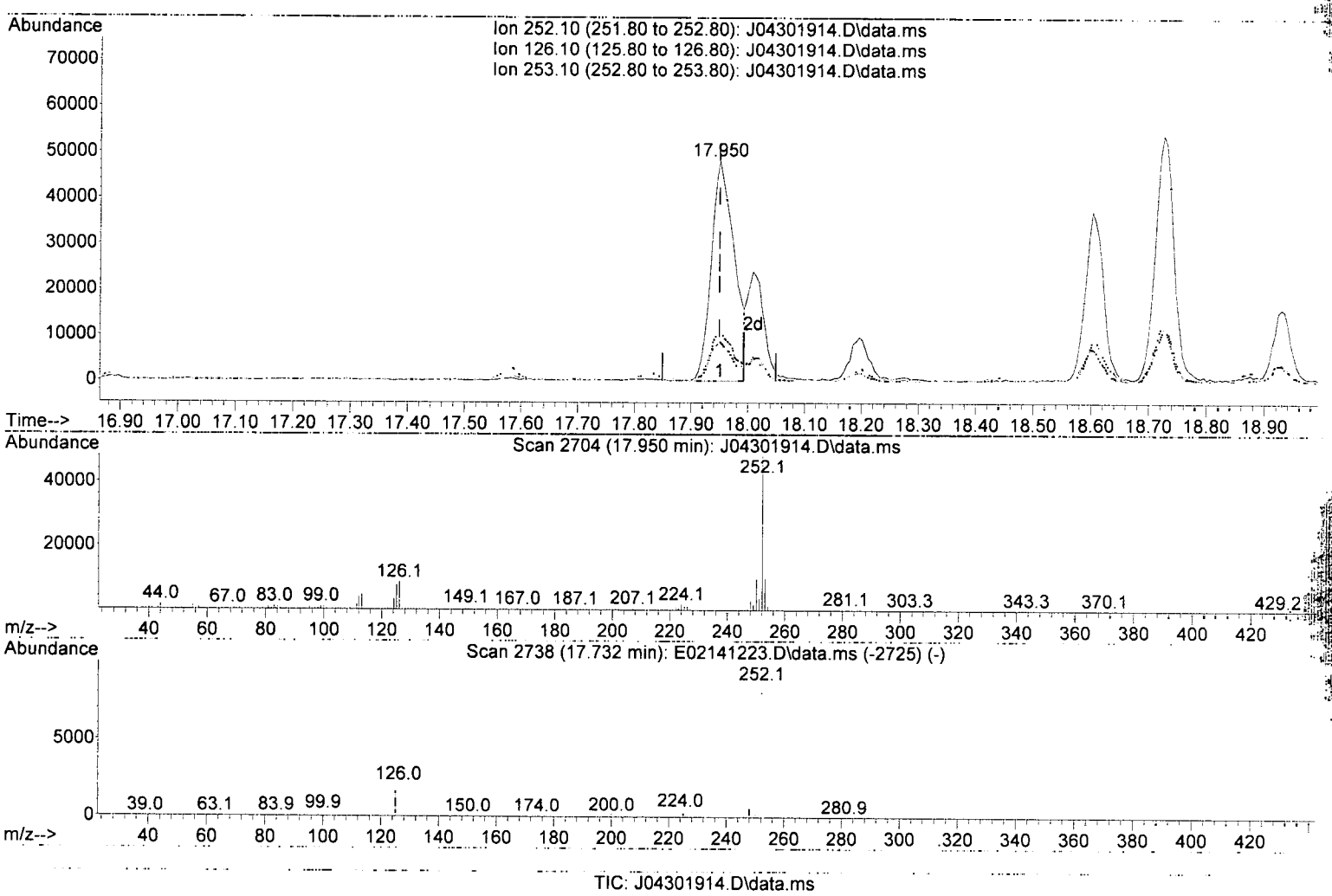
response 104315

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	19.08
226.10	29.30	27.99
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.950min (+ 0.001) 397.45 ng/ml

response 135490

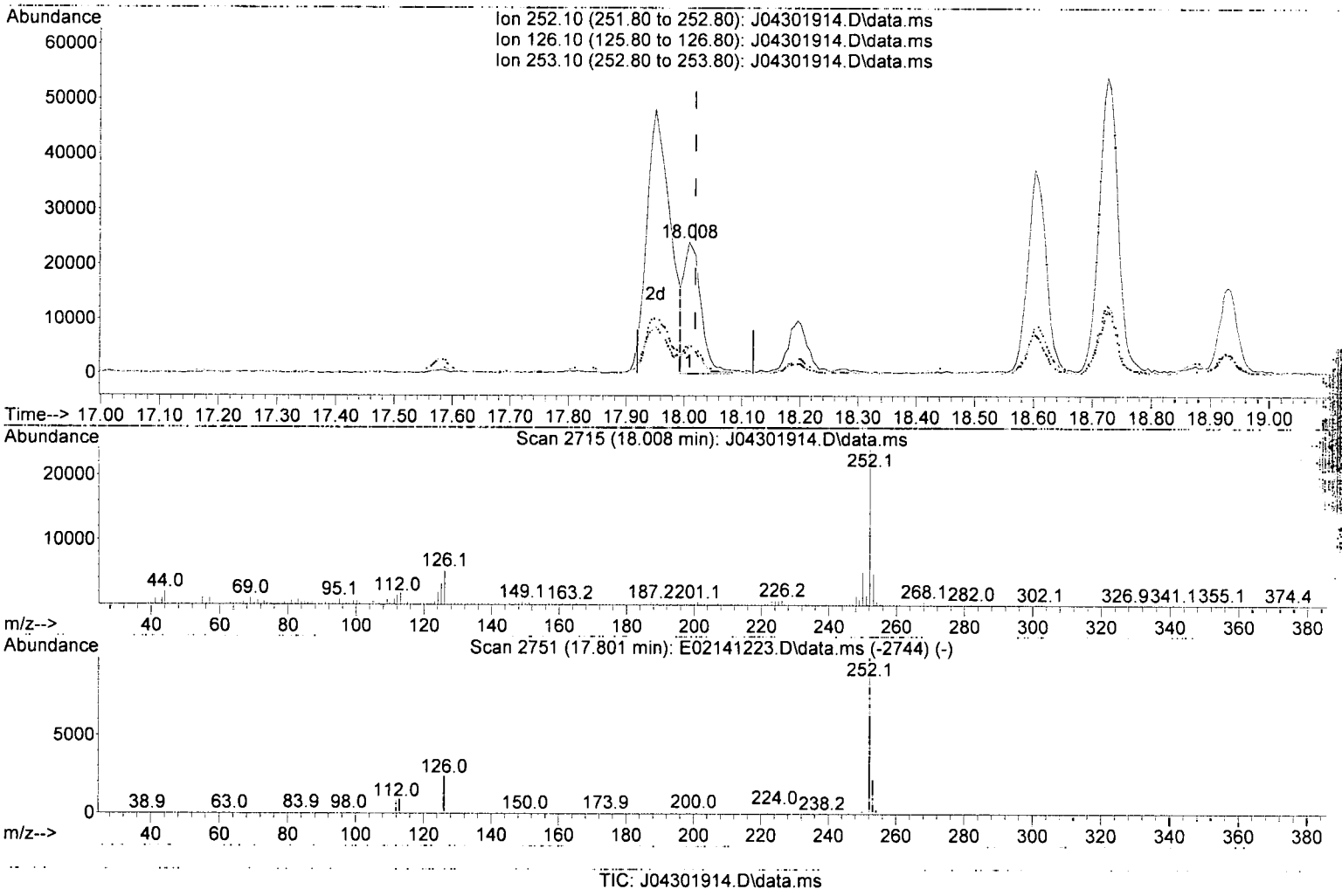
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	18.02
253.10	22.00	20.70
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.008min (-0.011) 147.53 ng/mL m

response 49762

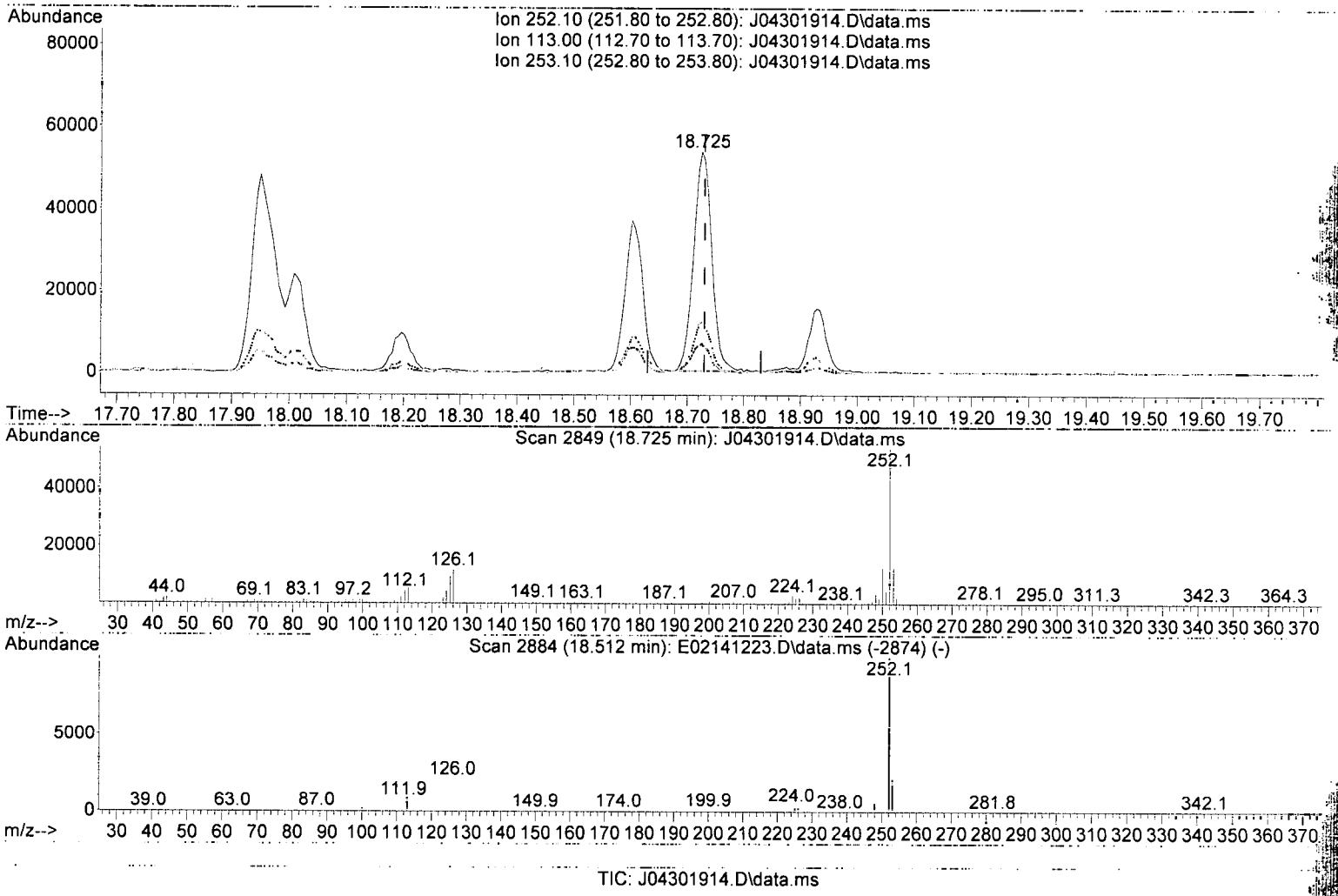
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	21.92
253.10	21.70	20.30
0.00	0.00	0.00

AMS 5/1/19 MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(92) Benzo(a)pyrene (T)

18.725min (-0.005) 382.00 ng/ml

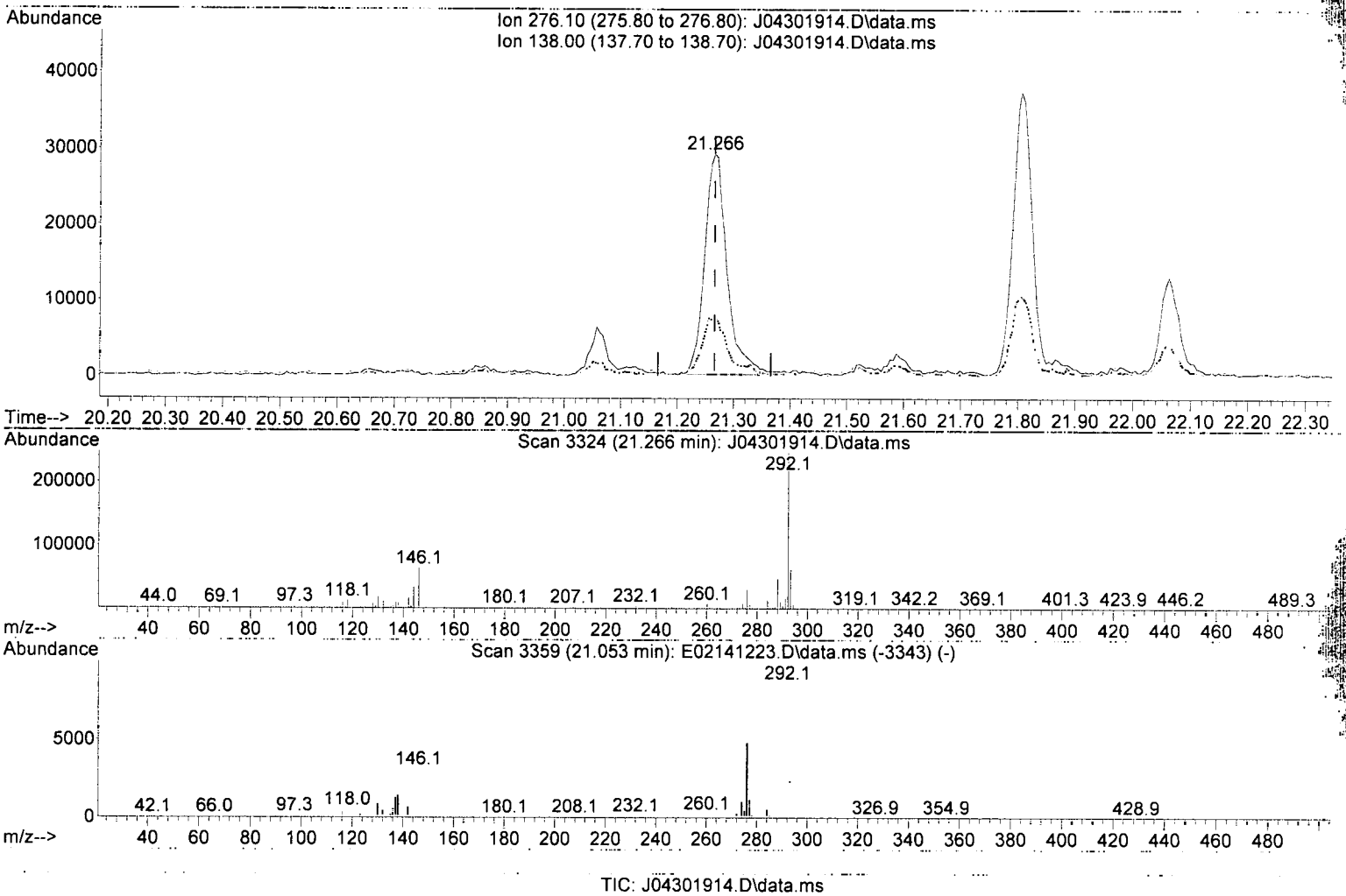
response 119245

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	13.19
253.10	21.60	23.17
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.266min (+ 0.000) 250.43 ng/ml

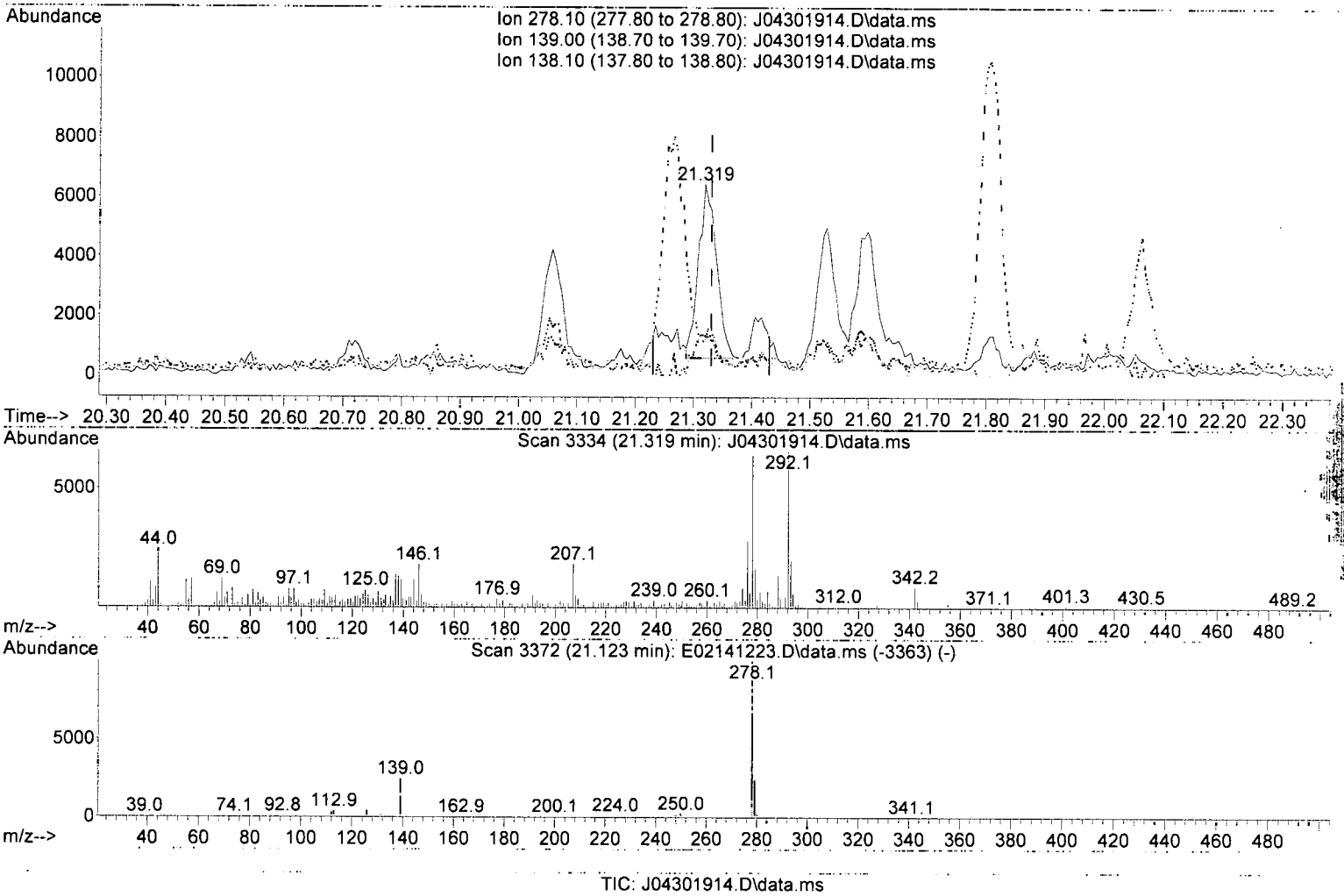
response 79801

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	27.50
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.319min (-0.011) 44.14 ng/ml

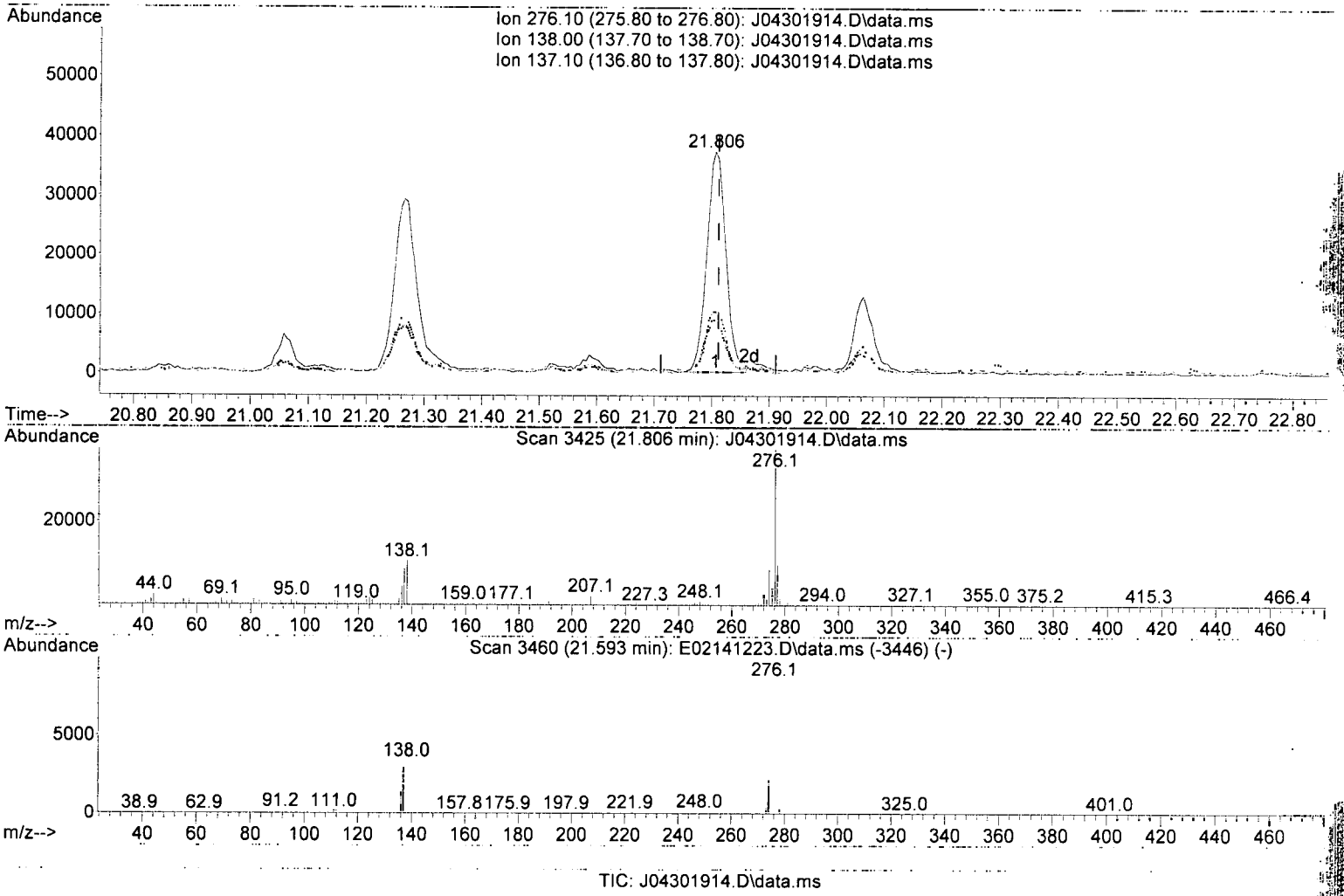
response 12582

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.20	24.70
138.10	18.50	20.69
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301914.D\data.ms

(97) Benzo(g,h,i)perylene (T)

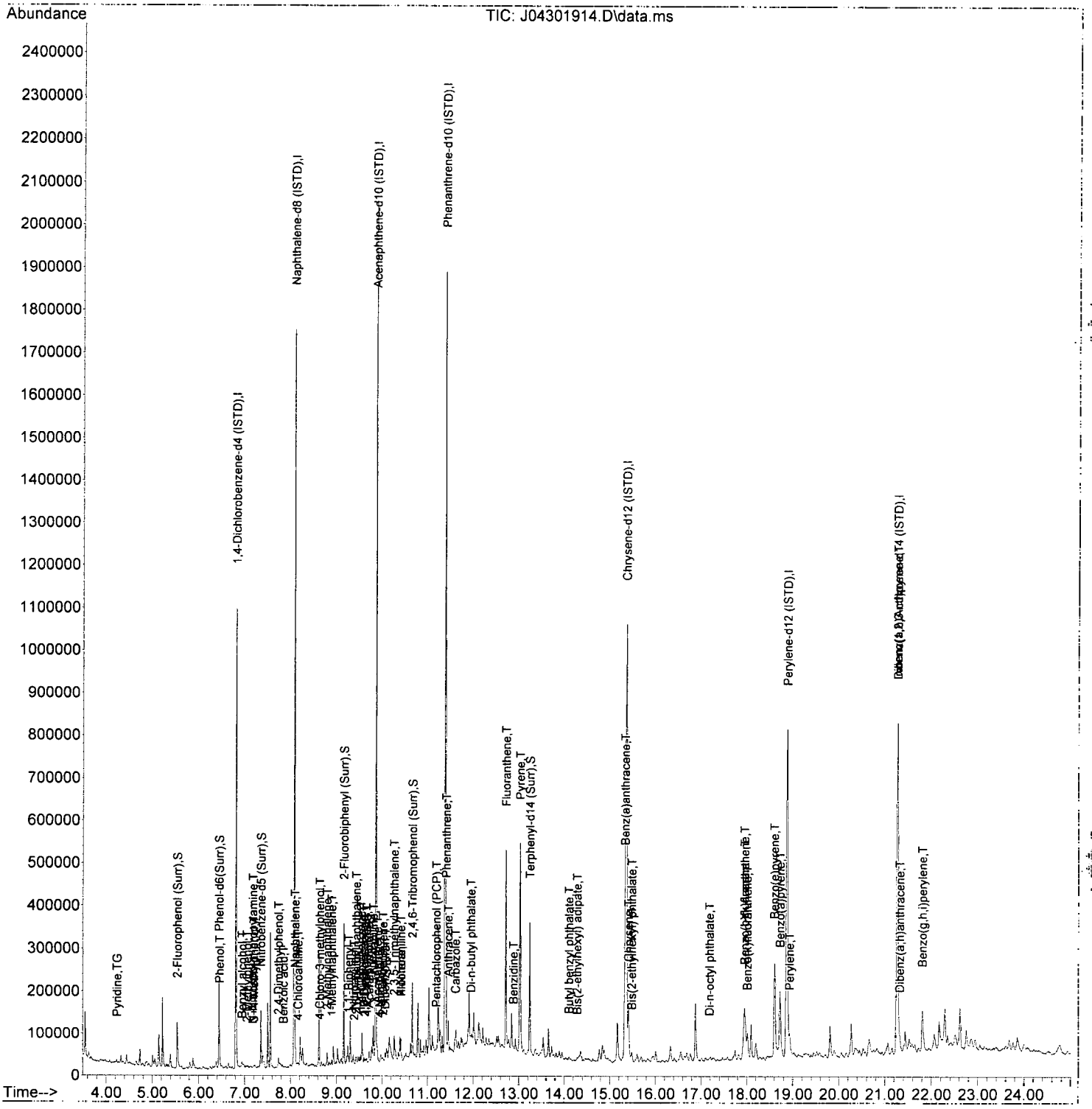
21.806min (-0.005) 280.94 ng/ml

response 86530

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	28.16
137.10	23.10	23.01
0.00	0.00	0.00

Data Path : T:\data\2019-04\9D30020\
Data File : J04301914.D
Acq On : 30 Apr 2019 3:49 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-14RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 14 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:14 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301915.D
Acq On : 30 Apr 2019 4:24 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

RR1

Quant Time: May 01 07:34:21 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

AMS 5/1/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	207949	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	939497	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	455116	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	767366	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	670927	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	597136	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	564605	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	57184	423.01	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	83365	479.42	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	66101	437.29	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	118359	368.59	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	19972	542.59	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.237	244	101176	320.36	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.209	74	59	N.D.		
3) Pyridine	4.214	79	2326m	13.91	ng/ml#	
6) Phenol	6.450	94	5540	38.16	ng/ml#	46
7) Aniline	6.477	93	1136	5.56	ng/ml	75
8) Bis(2-chloroethyl) ether	6.530	93	309	N.D.		
9) 2-Chlorophenol	6.594	128	59	N.D.		
10) 1,3-Dichlorobenzene	6.824	146	60	N.D.		
11) 1,4-Dichlorobenzene	6.824	146	60	N.D.		
12) Benzyl alcohol	6.937	108	17298	239.74	ng/ml	96
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.044	107	298	2.72	ng/ml#	46
15) 2,2'-Oxybis(1-Chloropr...	7.071	45	131	N.D.		
16) N-Nitrosodi-n-propylamine	7.188	70	930	8.07	ng/ml	59
17) 3+4-Methylphenol	7.199	107	2325	27.60	ng/ml#	34
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.381	77	57	N.D.		
22) Isophorone	7.605	82	1551	4.43	ng/ml#	35
23) 2-Nitrophenol	7.712	139	56	57.11	ng/ml#	1
24) 2,4-Dimethylphenol	7.723	122	135	26.27	ng/ml#	68
25) Bis(2-chloroethoxy) me...	7.809	93	146	N.D.		
26) Benzoic acid	7.782	105	19337	965.27	ng/ml	94
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.097	128	3445	7.08	ng/ml	97
30) 4-Chloroaniline	8.135	127	105	15.11	ng/ml#	35
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.616	107	185	64.93	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	1859	5.83	ng/ml	85
34) 1-Methylnaphthalene	8.900	142	1019	3.29	ng/ml#	29
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	9.060	196	98	45.47	ng/ml#	11
38) 2,4,5-Trichlorophenol	0.000		0	N.D.		
39) 1,1'-Biphenyl	9.263	154	891	N.D.		
41) 2-Chloronaphthalene	9.328	162	61	N.D.		
42) 2-Nitroaniline	9.354	138	57	65.69	ng/ml#	1
43) 2,6-Dimethylnaphthalene	9.429	156	1241	4.59	ng/ml	77

Data Path : T:\data\2019-04\9D30020\
Data File : J04301915.D
Acq On : 30 Apr 2019 4:24 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

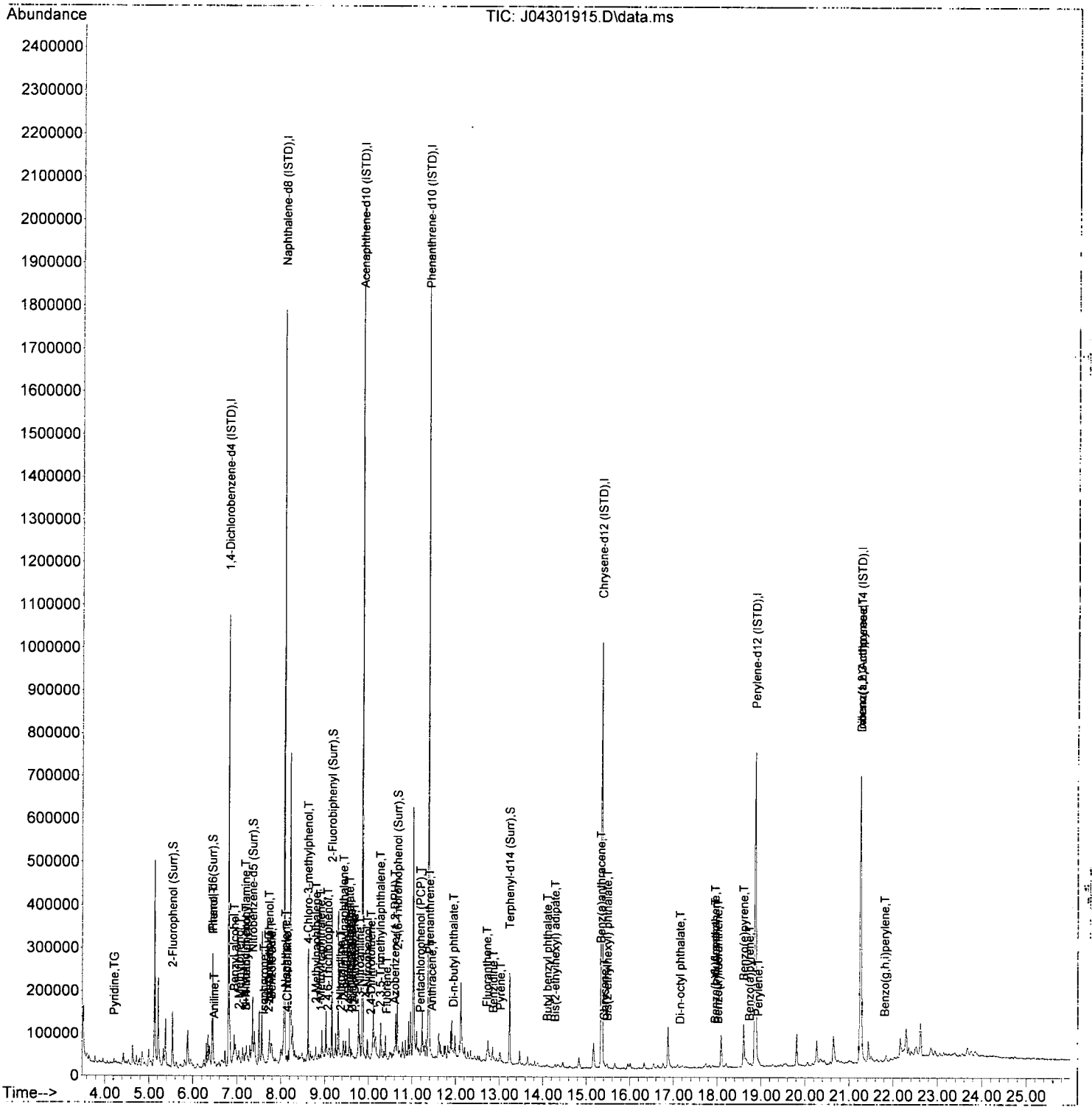
Quant Time: May 01 07:34:21 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.547	168	106	124.64 ng/ml#	8
45) Dimethyl phthalate	9.563	163	936	2.96 ng/ml#	1
46) 1,3-Dinitrobenzene	9.600	168	73	66.63 ng/ml#	1
47) 2,6-Dinitrotoluene	9.622	165	191	35.26 ng/ml#	46
48) 1,2-Dinitrobenzene	9.670	168	459	15.05 ng/ml#	47
49) Acenaphthylene	9.718	152	1030	N.D.	
50) 3-Nitroaniline	9.798	138	723	11.62 ng/ml#	16
51) Acenaphthene	9.895	153	614	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.969	139	202	77.70 ng/ml#	1
54) 2,4-Dinitrotoluene	10.050	165	252	63.05 ng/ml#	62
55) Dibenzofuran	10.066	168	509	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	10.280	149	465	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.264	170	761	3.15 ng/ml#	57
60) Fluorene	10.413	166	1728	5.77 ng/ml	72
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.424	138	134	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.531	169	548	N.D.	
66) Azobenzene (1,2-DPH)	10.601	77	2762	8.64 ng/ml#	1
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.184	266	267	27.27 ng/ml#	59
71) Phenanthrene	11.398	178	5136	12.33 ng/ml	96
72) Anthracene	11.451	178	1874	4.62 ng/ml	95
73) Carbazole	11.606	167	848	N.D.	
74) Di-n-butyl phthalate	11.943	149	2145	4.57 ng/ml	87
75) Fluoranthene	12.713	202	9030	21.75 ng/ml	94
76) Benzidine	12.858	184	112	81.09 ng/ml#	1
77) Pyrene	13.029	202	9291	21.71 ng/ml	95
80) Butyl benzyl phthalate	14.104	149	1603	37.45 ng/ml#	68
81) Bis(2-ethylhexyl) adipate	14.280	129	2169	11.35 ng/ml	88
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.329	228	5106	13.95 ng/ml	90
84) Chrysene	15.409	228	4482	12.62 ng/ml	82
85) Bis(2-ethylhexyl) phth...	15.479	149	5059	17.95 ng/ml	93
87) Di-n-octyl phthalate	17.147	149	356	67.05 ng/ml#	1
88) Benzo(b)fluoranthene	~~17.950~~	~~252~~	~~4940~~	~~23.24 ng/ml~~	~~87~~ MD-J
89) Benzo(k)fluoranthene	~~18.014~~	~~252~~	~~1970~~	~~15.89 ng/ml~~	~~96~~ MD-J
90) Benzo(b+k)fluoranthene	17.950	252	6910	36.47 ng/ml	85
91) Benzo(e)pyrene	18.602	252	3504	10.70 ng/ml#	60
92) Benzo(a)pyrene	18.731	252	3520	21.52 ng/ml	98
93) Perylene	18.928	252	7077	23.35 ng/ml	98
95) Indeno(1,2,3-cd)pyrene	21.266	276	3054	9.67 ng/ml#	1
96) Dibenz(a,h)anthracene	21.330	278	535	N.D.	
97) Benzo(g,h,i)perylene	21.806	276	3041	9.96 ng/ml	69

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301915.D
Acq On : 30 Apr 2019 4:24 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 15 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:21 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301916.D
Acq On : 30 Apr 2019 5:00 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-16RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

RR1

AMS 5/1/19

Quant Time: May 01 07:34:26 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	216974	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	959907	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	463793	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	794175	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	698297	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	630042	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	585885	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	64244	455.47	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	83611	460.83	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	63173	402.15	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	76962	235.19	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	15832	421.82	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	74092	225.41	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.225	74	64	N.D.		
3) Pyridine	4.225	79	1448m	8.30	ng/ml#	
6) Phenol	6.455	94	1302	16.01	ng/ml#	1
7) Aniline	6.487	93	779	3.65	ng/ml#	35
8) Bis(2-chloroethyl) ether	6.546	93	100	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.942	108	2805	64.67	ng/ml	94
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.044	107	320	2.80	ng/ml#	39
15) 2,2'-Oxybis(1-Chloropr...	7.076	45	76	N.D.		
16) N-Nitrosodi-n-propylamine	7.188	70	248	N.D.		
17) 3+4-Methylphenol	7.199	107	1004	16.66	ng/ml#	75
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.381	77	98	N.D.		
22) Isophorone	7.616	82	295	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.766	122	1619	35.95	ng/ml#	4
25) Bis(2-chloroethoxy) me...	7.819	93	100	N.D.		
26) Benzoic acid	7.851	105	361	755.99	ng/ml#	70
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.103	128	1352	2.72	ng/ml	94
30) 4-Chloroaniline	8.103	127	132	15.27	ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.606	107	102	64.35	ng/ml#	1
33) 2-Methylnaphthalene	8.803	142	243	N.D.		
34) 1-Methylnaphthalene	8.905	142	246	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	9.269	154	167	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.429	138	620	71.90	ng/ml#	46
43) 2,6-Dimethylnaphthalene	9.429	156	162	N.D.		

Data Path : T:\data\2019-04\9D30020\
Data File : J04301916.D
Acq On : 30 Apr 2019 5:00 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-16RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

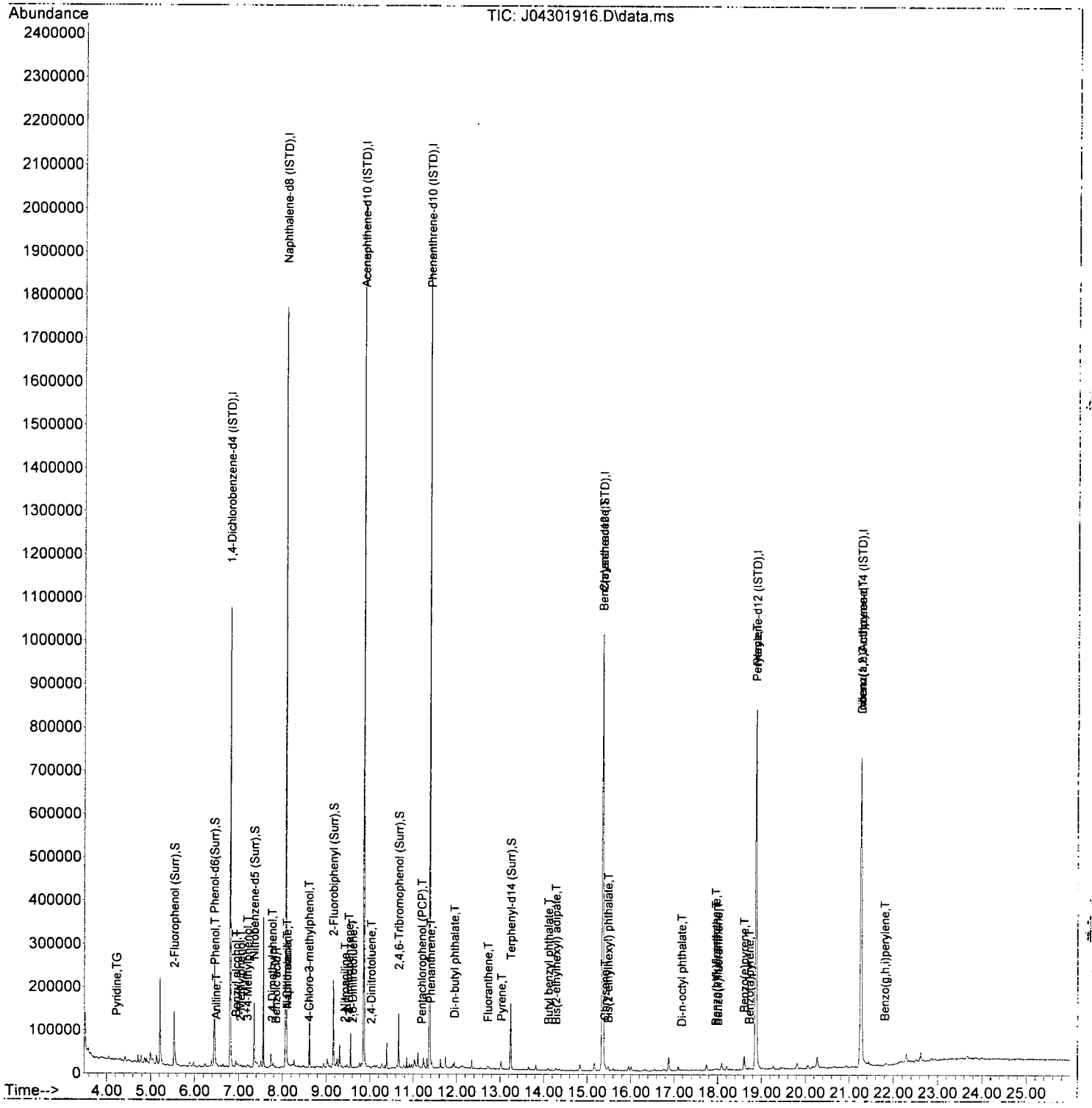
Quant Time: May 01 07:34:26 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	60	123.19 ng/ml#	1
45) Dimethyl phthalate	9.563	163	212	N.D.	
46) 1,3-Dinitrobenzene	9.515	168	60	66.28 ng/ml#	1
47) 2,6-Dinitrotoluene	9.606	165	76	33.57 ng/ml#	57
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.723	152	407	N.D.	
50) 3-Nitroaniline	9.793	138	120	N.D.	
51) Acenaphthene	9.895	153	340	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.028	165	90	61.15 ng/ml#	38
55) Dibenzofuran	10.066	168	183	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	10.274	149	269	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.173	170	162	N.D.	
60) Fluorene	10.413	166	447	N.D.	
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.413	138	65	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)	10.563	77	176	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.194	266	84	22.73 ng/ml#	19
71) Phenanthrene	11.398	178	1922	4.46 ng/ml	93
72) Anthracene	11.451	178	796	N.D.	
73) Carbazole	11.611	167	458	N.D.	
74) Di-n-butyl phthalate	11.943	149	1865	3.84 ng/ml	95
75) Fluoranthene	12.713	202	3775	8.78 ng/ml	93
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.029	202	3741	8.45 ng/ml	95
80) Butyl benzyl phthalate	14.109	149	1951	38.84 ng/ml	87
81) Bis(2-ethylhexyl) adipate	14.280	129	1936	9.73 ng/ml	94
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.350	228	3946	10.36 ng/ml	80
84) Chrysene	15.404	228	2055	5.56 ng/ml	89
85) Bis(2-ethylhexyl) phth...	15.479	149	3895	13.28 ng/ml	82
87) Di-n-octyl phthalate	17.169	149	183	66.62 ng/ml#	1
88) Benzo(b)fluoranthene	17.955	252	3435	18.34 ng/ml	83
89) Benzo(k)fluoranthene	18.003	252	1335	13.93 ng/ml	64
90) Benzo(b+k)fluoranthene	17.955	252	4771	29.78 ng/ml	81
91) Benzo(e)pyrene	18.602	252	2012	5.82 ng/ml	87
92) Benzo(a)pyrene	18.720	252	1991	16.37 ng/ml	86
93) Perylene	18.870	252	2290	7.16 ng/ml	61
95) Indeno(1,2,3-cd)pyrene	21.266	276	1623	4.95 ng/ml#	1
96) Dibenz(a,h)anthracene	21.319	278	273	N.D.	
97) Benzo(g,h,i)perylene	21.801	276	1490	4.70 ng/ml#	46

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301916.D
Acq On : 30 Apr 2019 5:00 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-16RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 16 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:26 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 RA MOS

AMS 5/1/19

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	217552	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	960901	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	467020	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	773367	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	673455	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	598362	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	561914	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	60665	428.95	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	80662	443.40	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	66803	423.08	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	110615	335.69	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	19065	515.33	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	114747	361.97	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.230	79	1498m	8.56	ng/ml#	
6) Phenol	6.461	94	1667	17.80	ng/ml	63
7) Aniline	6.487	93	947	4.43	ng/ml	95
8) Bis(2-chloroethyl) ether	6.536	93	54	N.D.		
9) 2-Chlorophenol	6.552	128	63	N.D.		
10) 1,3-Dichlorobenzene	6.819	146	54	N.D.		
11) 1,4-Dichlorobenzene	6.819	146	54	N.D.		
12) Benzyl alcohol	6.942	108	3676	74.64	ng/ml	88
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.054	107	297	2.59	ng/ml	80
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	214	N.D.		
16) N-Nitrosodi-n-propylamine	7.204	70	205	N.D.		
17) 3+4-Methylphenol	7.199	107	1139	17.68	ng/ml#	51
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.359	77	429	2.77	ng/ml#	26
22) Isophorone	7.611	82	209	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.766	122	2678	42.86	ng/ml#	4
25) Bis(2-chloroethoxy) me...	7.830	93	85	N.D.		
26) Benzoic acid	7.825	105	494	757.43	ng/ml#	72
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.103	128	1389	2.79	ng/ml	97
30) 4-Chloroaniline	8.162	127	70	14.87	ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.632	107	224	65.16	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	320	N.D.		
34) 1-Methylnaphthalene	8.894	142	286	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	9.269	154	365	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.381	138	82	65.95	ng/ml#	16
43) 2,6-Dimethylnaphthalene	9.435	156	301	N.D.		

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

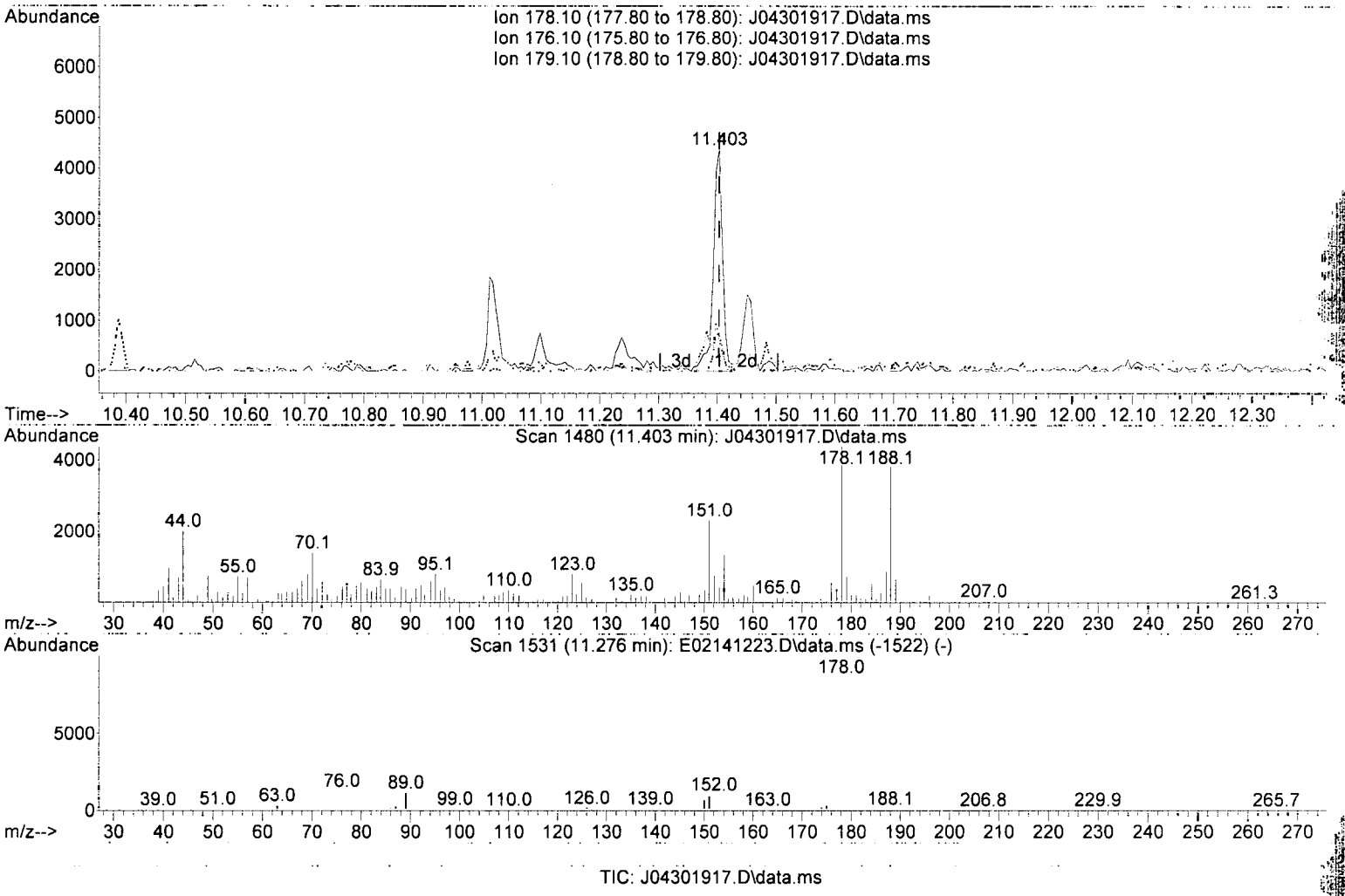
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	9.563	163	307	N.D.		
46) 1,3-Dinitrobenzene	9.670	168	116	67.62	ng/ml#	1
47) 2,6-Dinitrotoluene	9.659	165	54	33.26	ng/ml#	1
48) 1,2-Dinitrobenzene	9.697	168	66	N.D.		
49) Acenaphthylene	9.713	152	701	N.D.		
50) 3-Nitroaniline	9.782	138	198	3.10	ng/ml#	1
51) Acenaphthene	9.895	153	658	N.D.		
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.959	139	80	74.93	ng/ml#	1
54) 2,4-Dinitrotoluene	10.023	165	178	62.14	ng/ml#	60
55) Dibenzofuran	10.066	168	371	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	10.285	149	304	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.274	170	73	N.D.		
60) Fluorene	10.413	166	826	2.69	ng/ml#	66
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.392	138	117	N.D.		
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.526	169	61	N.D.		
66) Azobenzene (1,2-DPH)	10.558	77	72	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.178	266	159	24.60	ng/ml#	53
71) Phenanthrene	11.403	178	4883	11.64	ng/ml	90
72) Anthracene	11.451	178	1817	4.45	ng/ml	90
73) Carbazole	11.611	167	1165	3.37	ng/ml	92
74) Di-n-butyl phthalate	11.943	149	2076	4.39	ng/ml	96
75) Fluoranthene	12.719	202	11746	28.07	ng/ml	98
76) Benzidine	12.826	184	58	80.74	ng/ml	70
77) Pyrene	13.029	202	11157	25.87	ng/ml	96
80) Butyl benzyl phthalate	14.104	149	2055	39.72	ng/ml	95
81) Bis(2-ethylhexyl) adipate	14.286	129	2183	11.38	ng/ml	90
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.334	228	9615	26.16	ng/ml MO5	93
84) Chrysene	15.414	228	9558	26.81	ng/ml MO5	91
85) Bis(2-ethylhexyl) phth...	15.479	149	5708	20.18	ng/ml	94
87) Di-n-octyl phthalate	17.163	149	167	66.61	ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	10541	39.47	ng/ml MO5	94
89) Benzo(k)fluoranthene	~~18.019~~	~~252~~	~~3879~~	~~21.17~~	~~ng/ml~~	~~92~~ MI-5
90) Benzo(b+k)fluoranthene	17.950	252	15171	59.53	ng/ml	93
91) Benzo(e)pyrene	18.607	252	6258	19.07	ng/ml	91
92) Benzo(a)pyrene	18.725	252	7541	34.14	ng/ml	98
93) Perylene	18.928	252	4052	13.34	ng/ml	93
95) Indeno(1,2,3-cd)pyrene	21.255	276	5311	16.90	ng/ml	68
96) Dibenz(a,h)anthracene	21.330	278	1283	4.56	ng/ml	95
97) Benzo(g,h,i)perylene	21.795	276	4450	14.65	ng/ml	83

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(71) Phenanthrene (T)

11.403min (+ 0.000) 11.64 ng/ml

response 4883

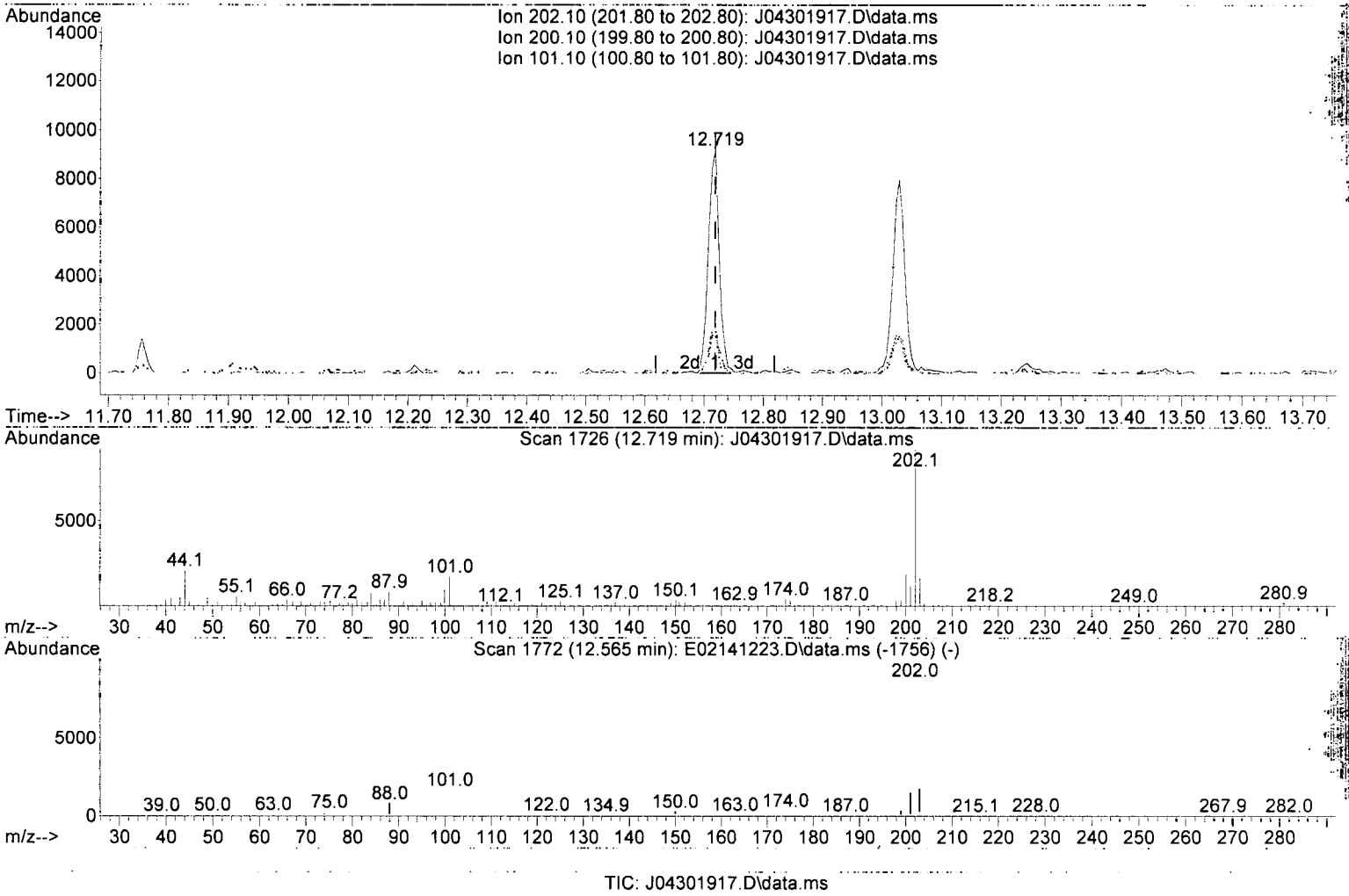
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	13.34
179.10	15.20	17.13
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(75) Fluoranthene (T)

12.719min (+ 0.000) 28.07 ng/ml

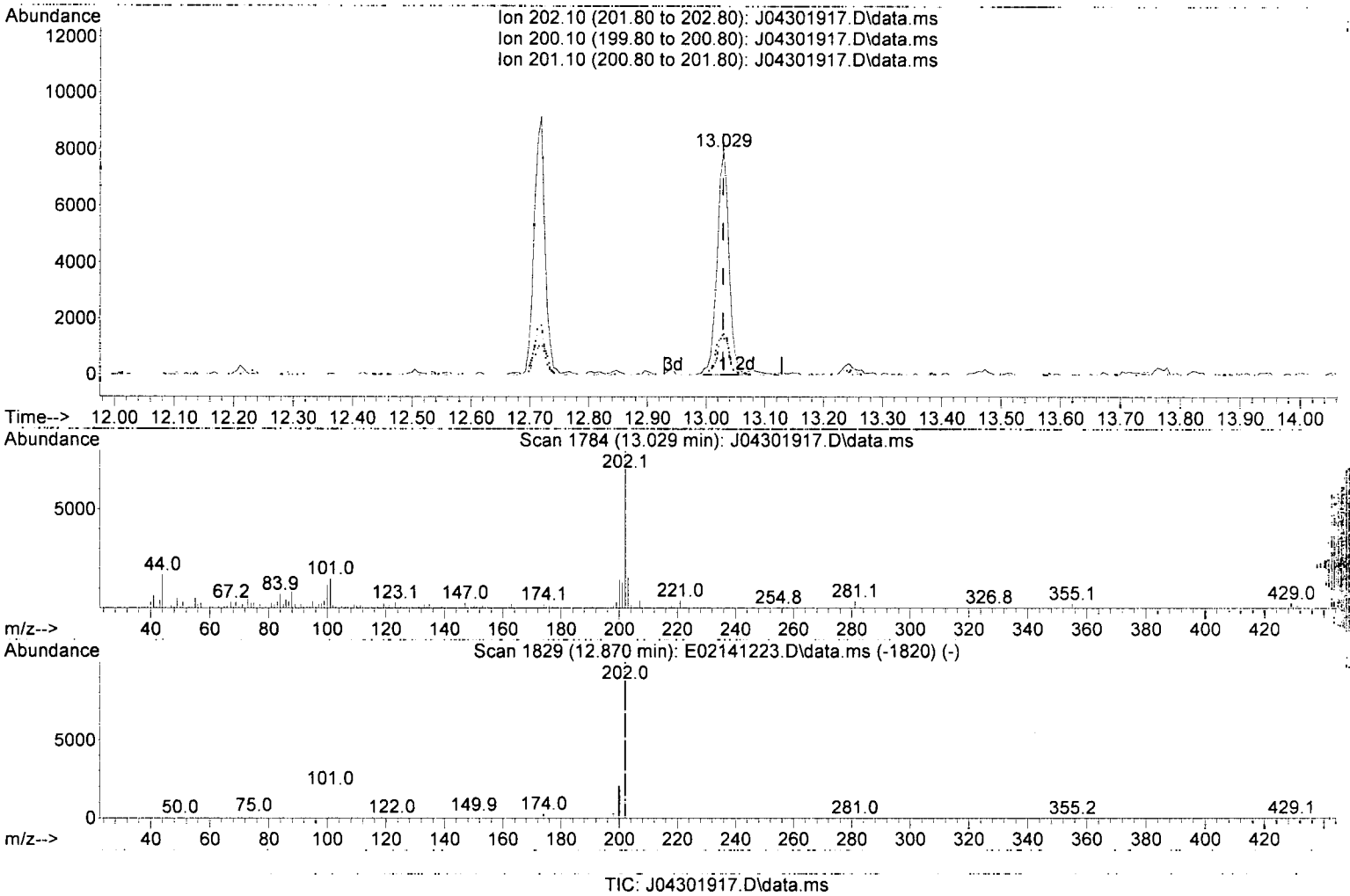
response 11746

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	20.54
101.10	17.00	18.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 25.87 ng/ml

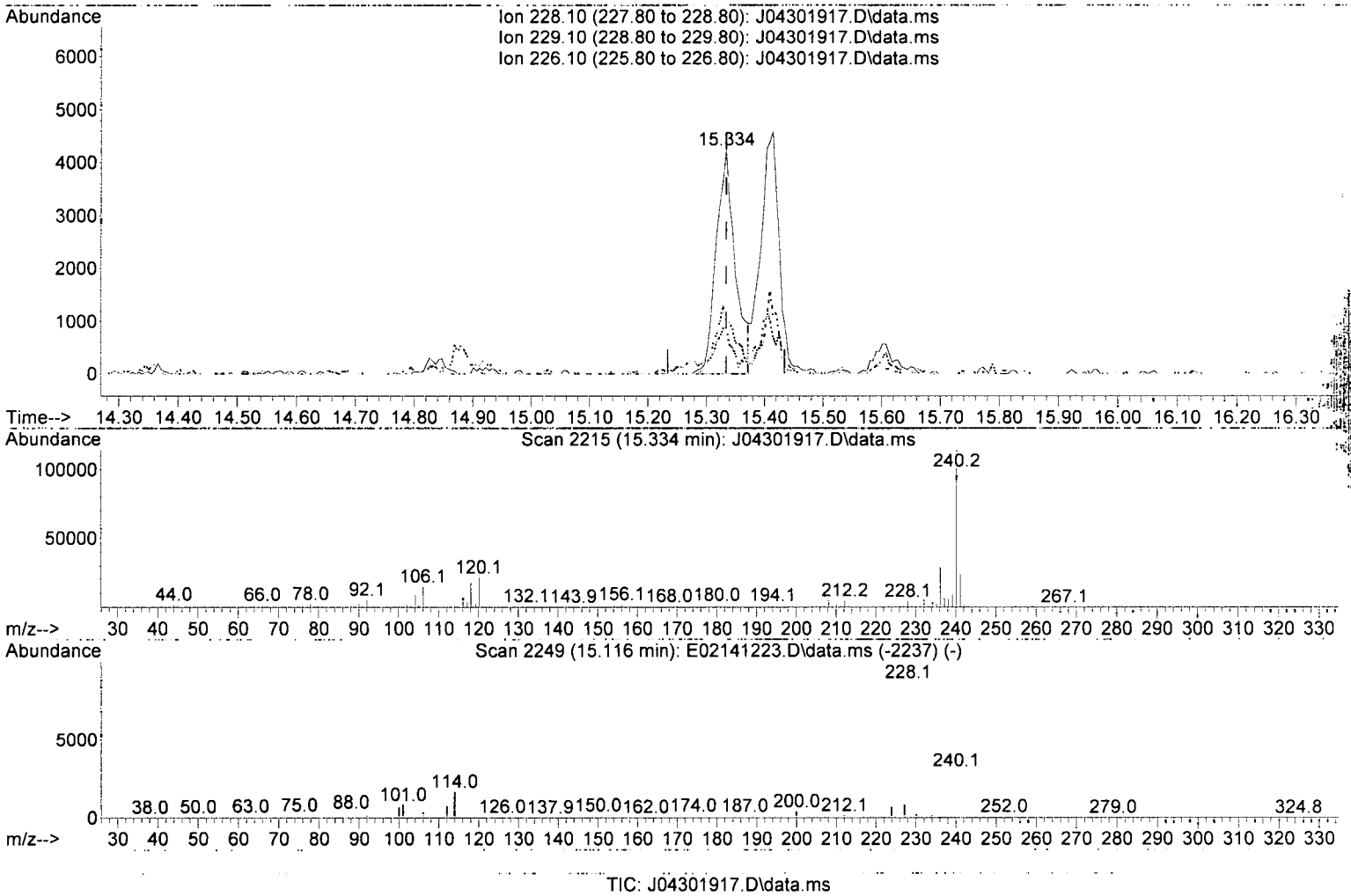
response 11157

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	18.28
201.10	17.30	16.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(83) Benz(a)anthracene (T)

15.334min (+ 0.000) 26.16 ng/ml

response 9615

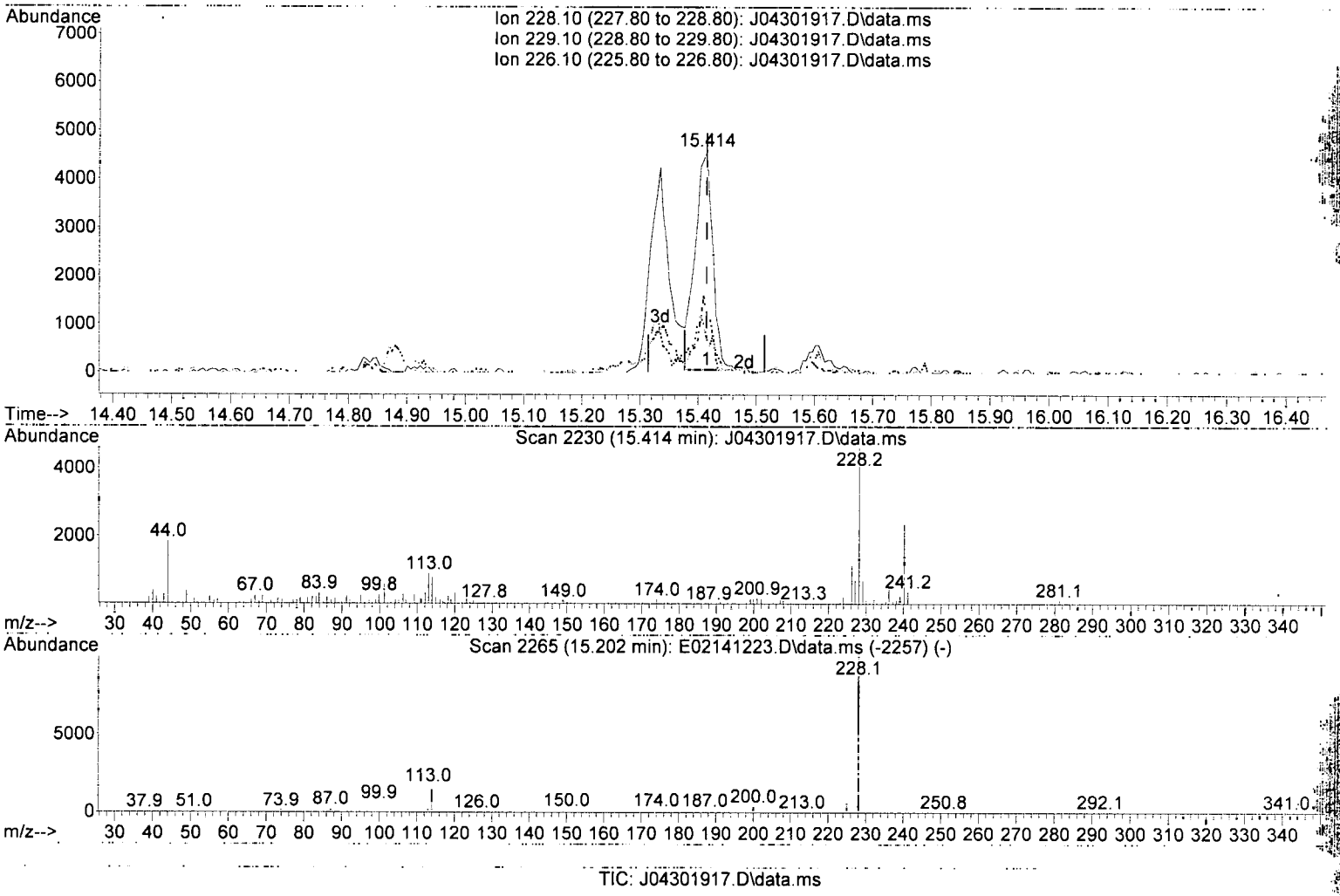
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	19.83
226.10	26.50	20.28
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(84) Chrysene (T)

15.414min (+ 0.000) 26.81 ng/ml

response 9558

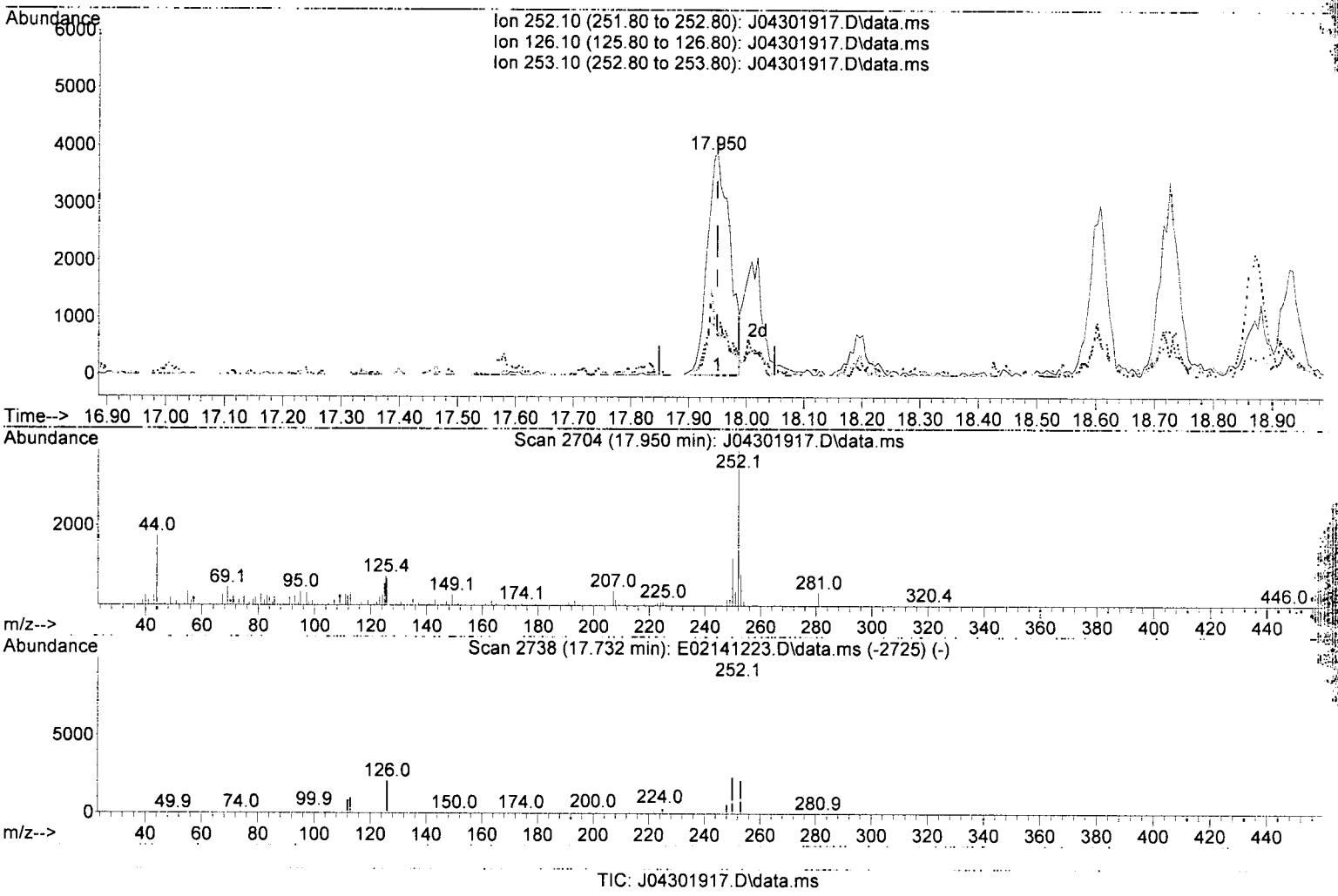
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	15.25
226.10	29.30	24.31
0.00	0.00	0.00

M05

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.950min (+ 0.001) 39.47 ng/ml

response 10541

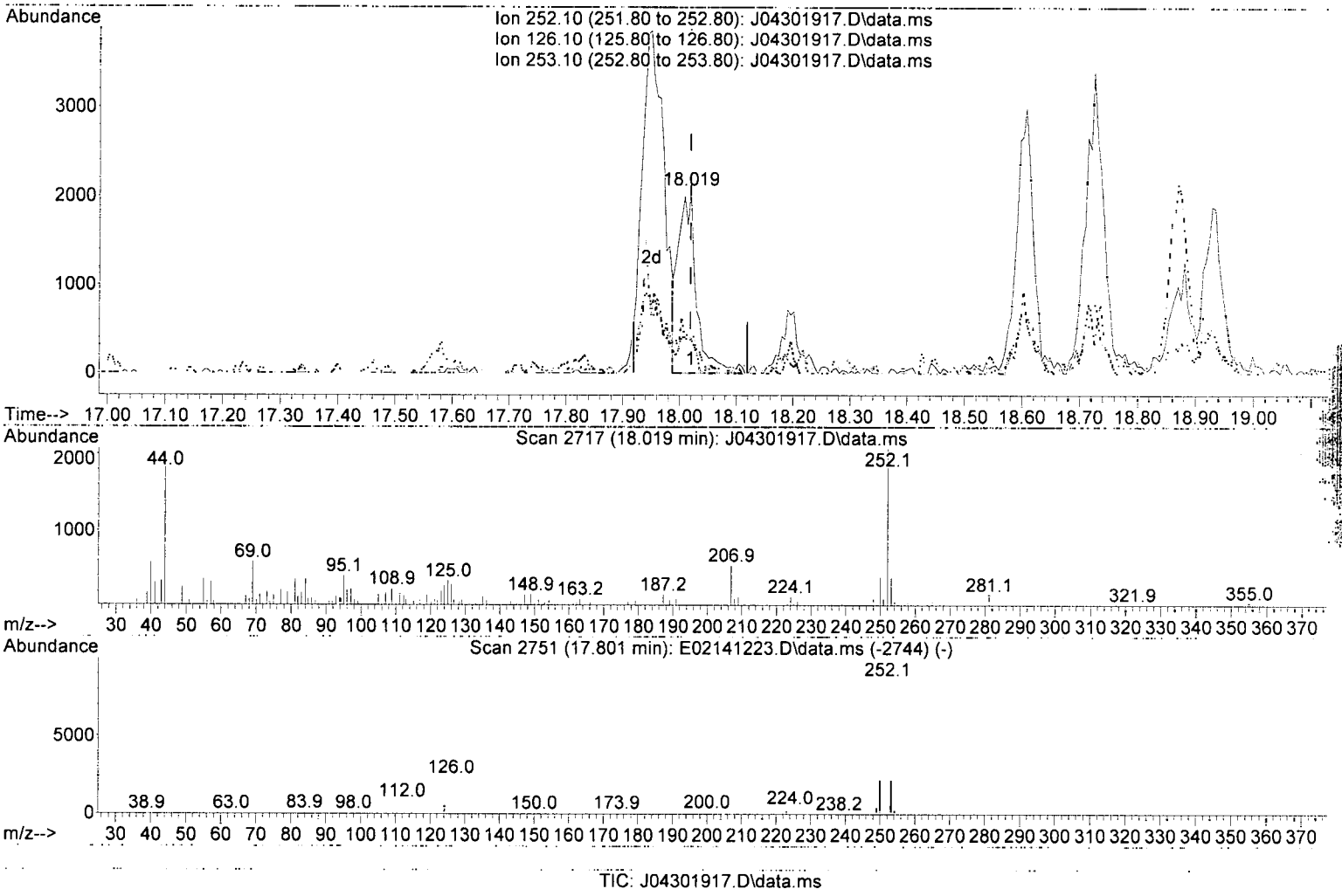
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	17.28
253.10	22.00	20.66
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.019min (+ 0.000) 23.31 ng/ml m

response 4650

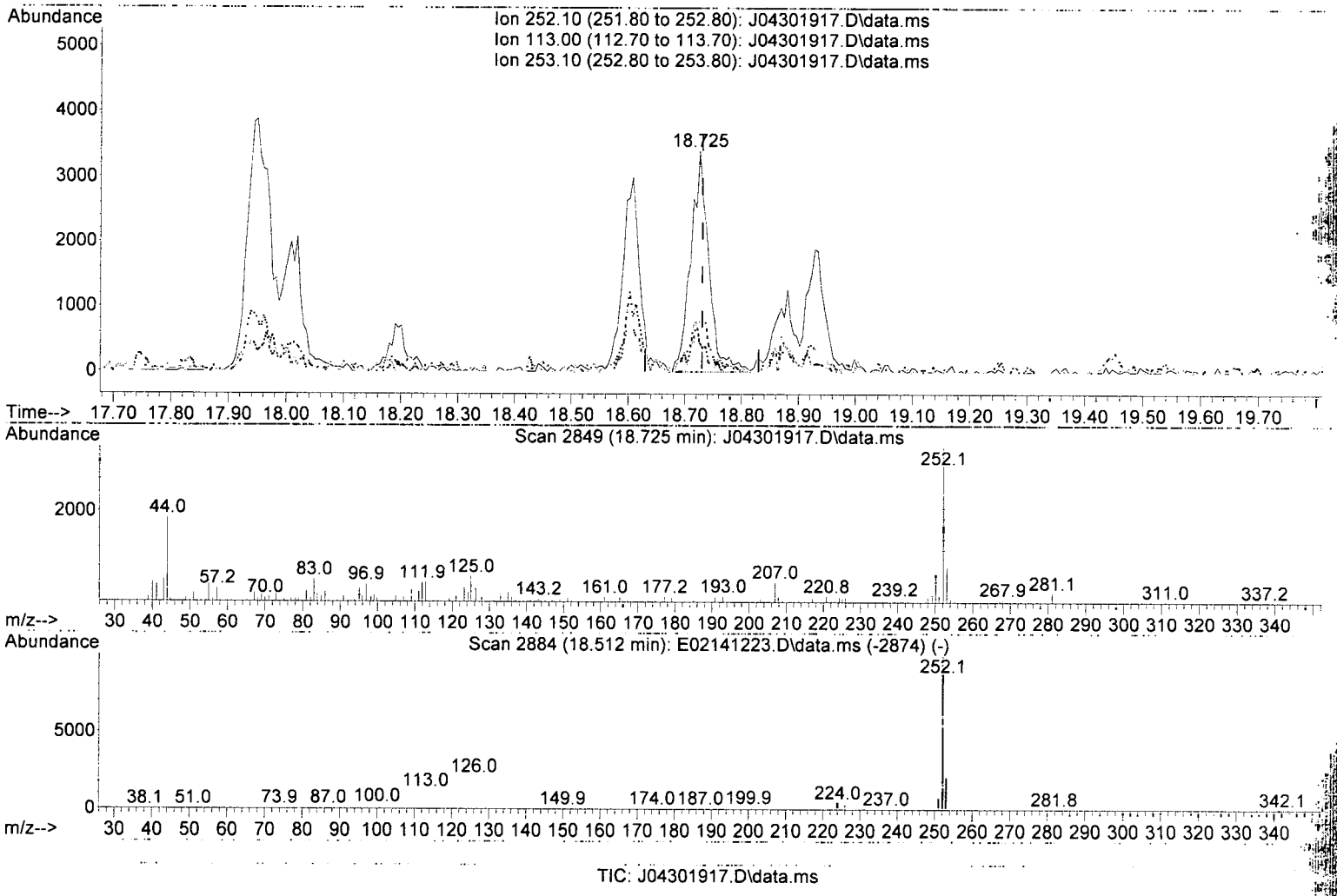
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	14.09
253.10	21.70	18.73
0.00	0.00	0.00

AMS 5/1/19

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(92) Benzo(a)pyrene (T)

18.725min (-0.005) 34.14 ng/ml

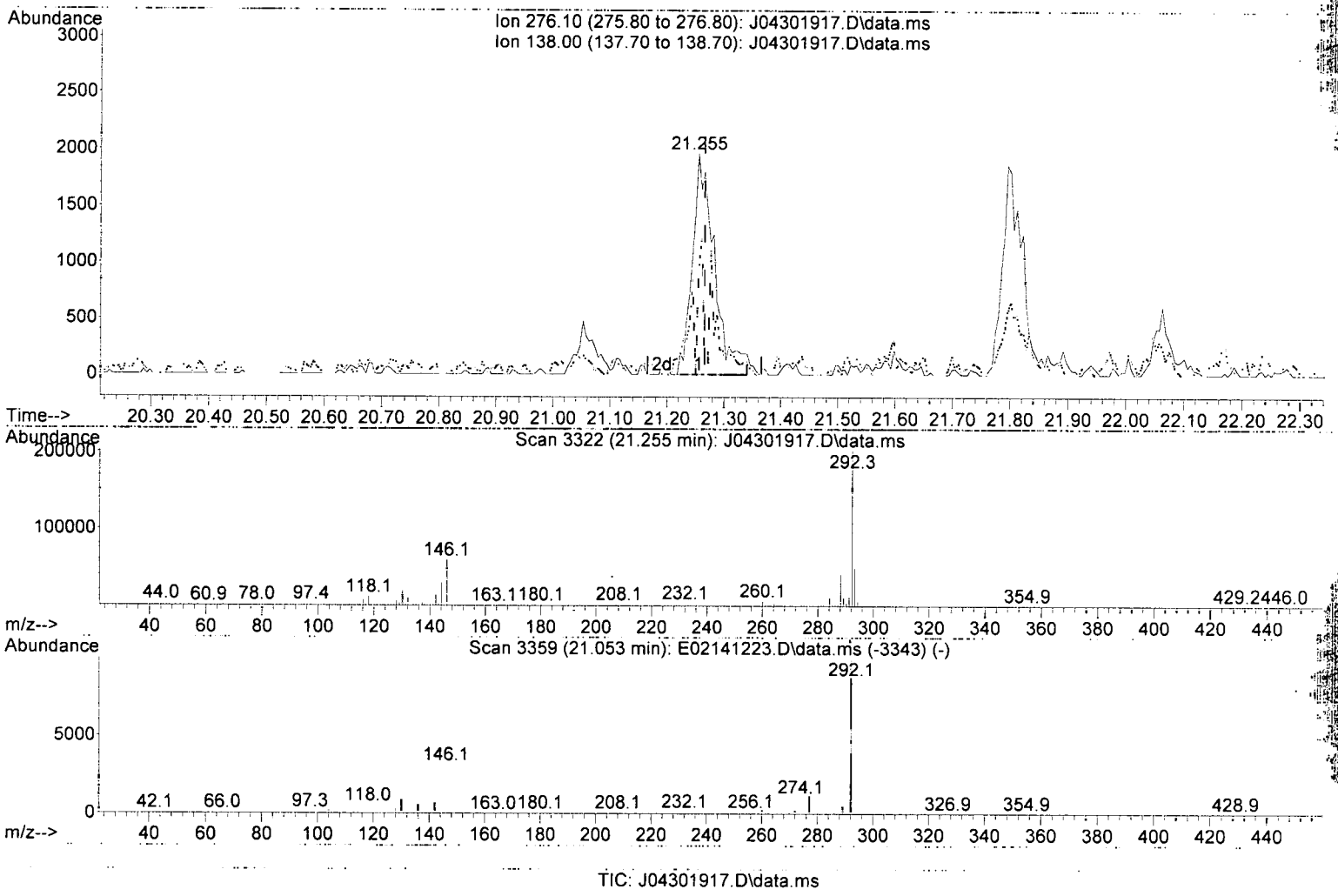
response 7541

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	13.10
253.10	21.60	23.20
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.255min (-0.011) 16.90 ng/ml

response 5311

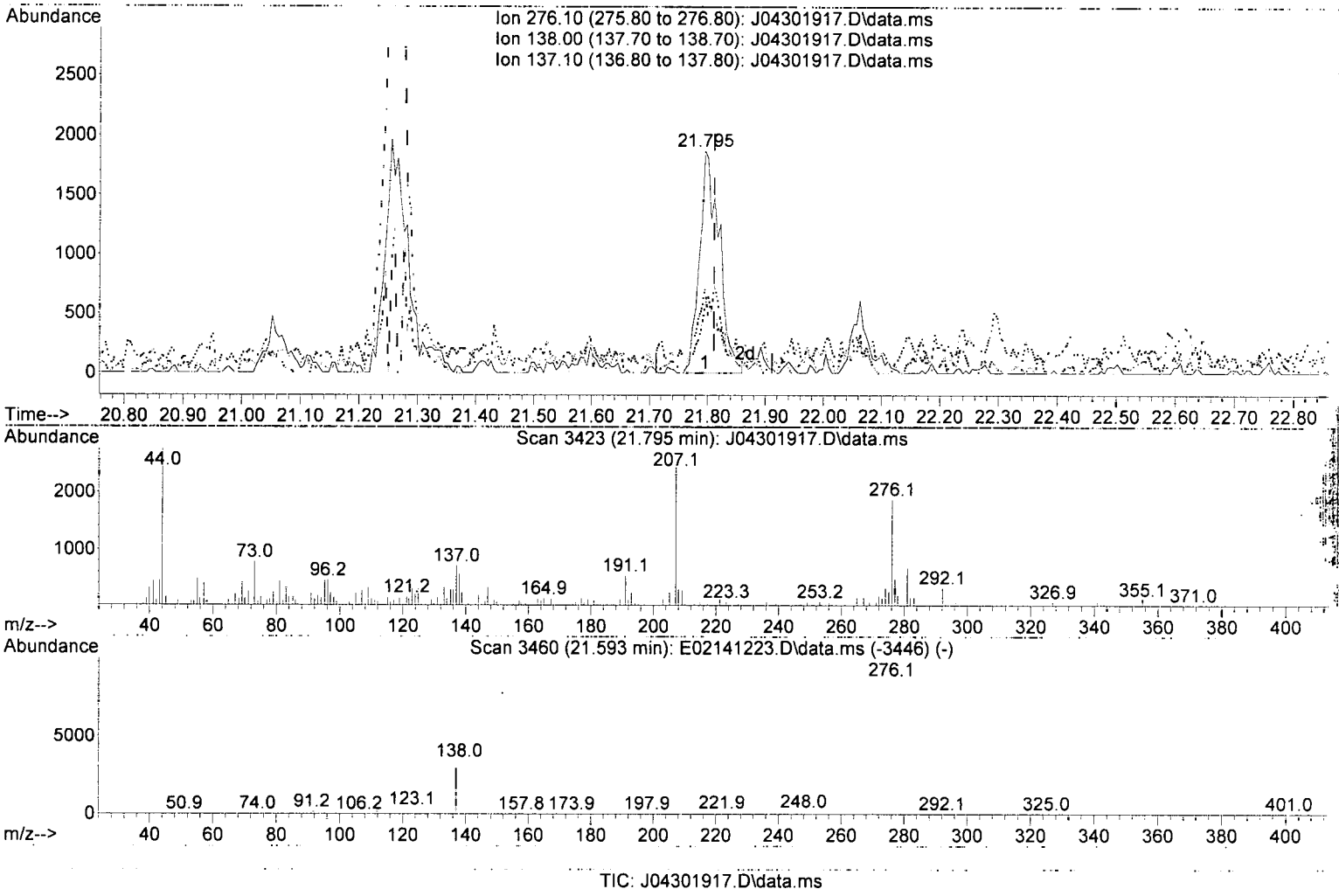
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	48.20
0.00	0.00	0.00
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301917.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.795min (-0.016) 14.65 ng/ml

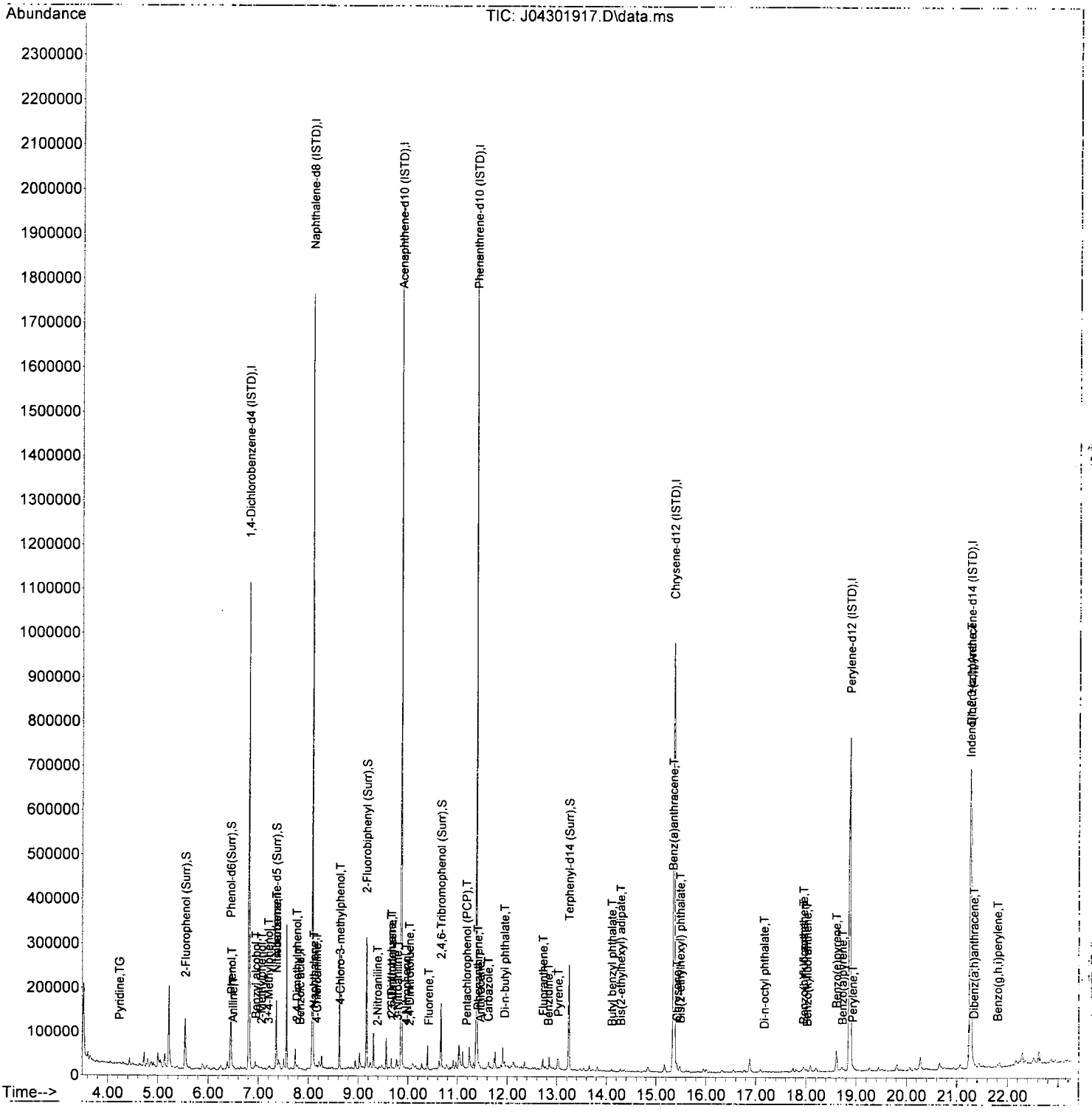
response 4450

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	30.71
137.10	23.10	38.10
0.00	0.00	0.00

J

Data Path : T:\data\2019-04\9D30020\
Data File : J04301917.D
Acq On : 30 Apr 2019 5:36 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-17RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 17 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:32 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



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Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 MOS

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.808	152	226848	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	986832	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	475856	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.382	188	791336	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	647023	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.880	264	569838	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	536896	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.541	112	58294	395.30 ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	82118	432.90 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	64374	392.44 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	156607	466.45 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	22077	579.71 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	158888	521.68 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	4.241	79	1973m	10.82 ng/ml#	
6) Phenol	6.471	94	4836	32.45 ng/ml	70
7) Aniline	6.471	93	22513	100.94 ng/ml#	55
8) Bis(2-chloroethyl) ether	6.536	93	1891	9.85 ng/ml#	36
9) 2-Chlorophenol	6.664	128	66	N.D.	
10) 1,3-Dichlorobenzene	6.824	146	517	2.98 ng/ml#	1
11) 1,4-Dichlorobenzene	6.824	146	550	3.18 ng/ml#	1
12) Benzyl alcohol	6.937	108	1590	49.79 ng/ml#	67
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.060	107	567	4.75 ng/ml#	11
15) 2,2'-Oxybis(1-Chloropr...	7.060	45	120	N.D.	
16) N-Nitrosodi-n-propylamine	7.204	70	316	2.51 ng/ml	59
17) 3+4-Methylphenol	7.199	107	2740	29.09 ng/ml#	78
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	7.397	77	81	N.D.	
22) Isophorone	7.584	82	2147	5.84 ng/ml#	1
23) 2-Nitrophenol	7.616	139	50	57.00 ng/ml#	1
24) 2,4-Dimethylphenol	7.766	122	2886	43.72 ng/ml#	7
25) Bis(2-chloroethoxy) me...	7.825	93	387	N.D.	
26) Benzoic acid	7.830	105	410	756.41 ng/ml#	66
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.103	128	35127	68.77 ng/ml	99
30) 4-Chloroaniline	8.140	127	108	15.09 ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.606	107	147	64.62 ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	7687	22.95 ng/ml	94
34) 1-Methylnaphthalene	8.900	142	4048	12.46 ng/ml	95
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	9.263	154	2102	5.45 ng/ml	88
41) 2-Chloronaphthalene	9.344	162	289	N.D.	
42) 2-Nitroaniline	9.376	138	204	67.25 ng/ml#	67
43) 2,6-Dimethylnaphthalene	9.435	156	4001	14.15 ng/ml	99

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

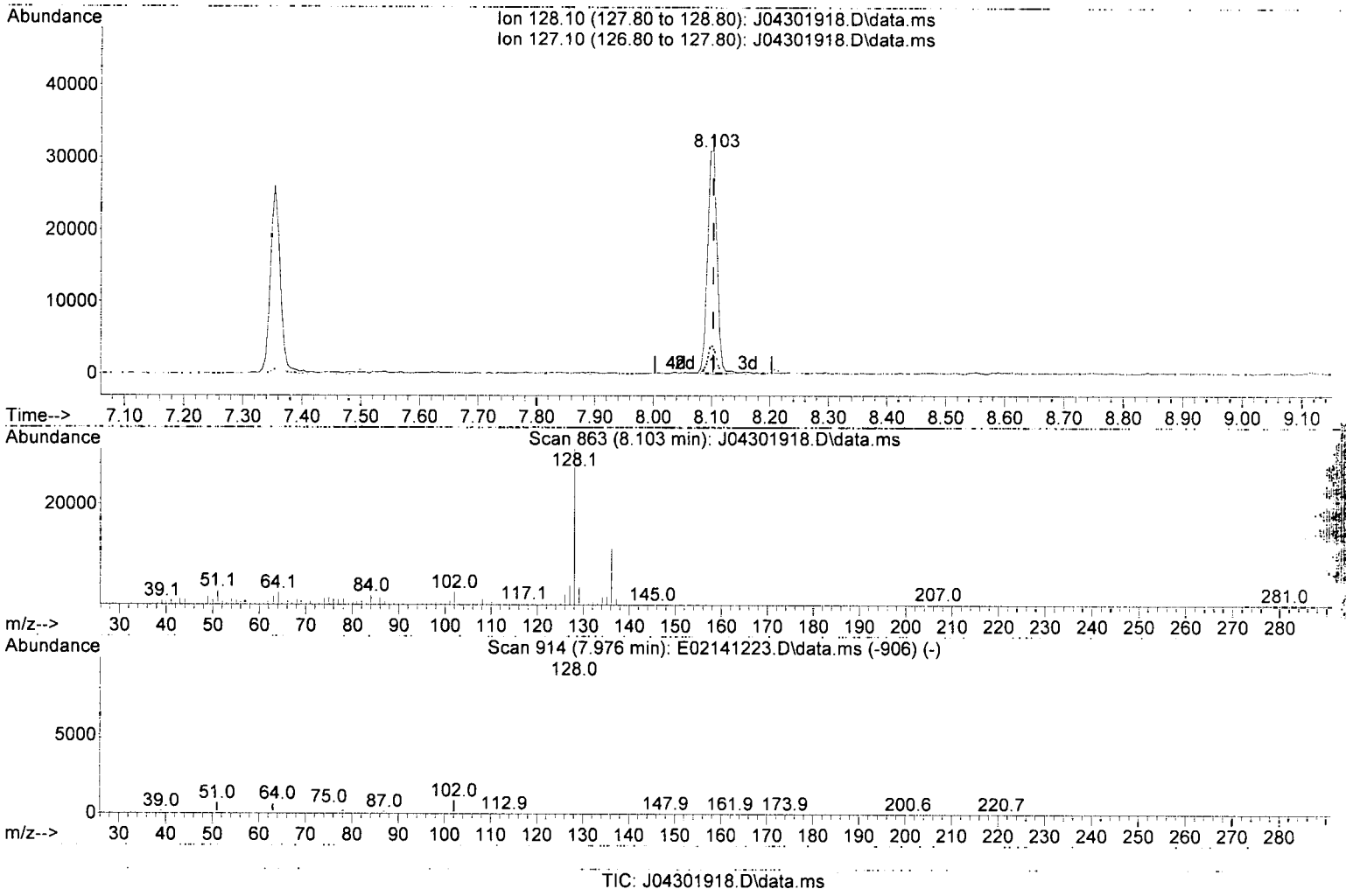
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.558	168	118	124.85	ng/ml#	1
45) Dimethyl phthalate	9.568	163	266	N.D.		
46) 1,3-Dinitrobenzene	9.584	168	61	66.27	ng/ml#	1
47) 2,6-Dinitrotoluene	9.616	165	336	37.14	ng/ml	78
48) 1,2-Dinitrobenzene	9.659	168	140	4.39	ng/ml#	56
49) Acenaphthylene	9.718	152	5236	11.00	ng/ml	92
50) 3-Nitroaniline	9.777	138	326	5.01	ng/ml#	1
51) Acenaphthene	9.895	153	10513	34.34	ng/ml	93
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.964	139	209	77.65	ng/ml#	1
54) 2,4-Dinitrotoluene	10.028	165	215	62.51	ng/ml	94
55) Dibenzofuran	10.071	168	4555	11.39	ng/ml	82
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	10.296	149	1981	6.27	ng/ml	85
59) 2,3,5-Trimethylnaphtha...	10.264	170	2165	8.56	ng/ml#	66
60) Fluorene	10.419	166	7042	22.48	ng/ml	84
61) 4-Chlorophenyl phenyl ...	10.408	204	94	N.D.		
62) 4-Nitroaniline	10.424	138	210	3.51	ng/ml	83
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.531	169	831	3.41	ng/ml	92
66) Azobenzene (1,2-DPH)	10.569	77	689	N.D.		
68) 4-Bromophenyl phenyl e...	10.895	248	115	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.189	266	329	28.54	ng/ml#	59
71) Phenanthrene	11.403	178	67524	157.25	ng/ml	98
72) Anthracene	11.451	178	18143	43.38	ng/ml	94
73) Carbazole	11.612	167	7182	20.29	ng/ml	88
74) Di-n-butyl phthalate	11.948	149	3169	6.55	ng/ml	60
75) Fluoranthene	12.719	202	106555	248.83	ng/ml	96
76) Benzidine	12.874	184	340	82.47	ng/ml#	1
77) Pyrene	13.029	202	114206	258.80	ng/ml	97
80) Butyl benzyl phthalate	14.115	149	3677	48.73	ng/ml#	62
81) Bis(2-ethylhexyl) adipate	14.280	129	3369	18.27	ng/ml	75
82) 3,3-Dichlorobenzidine	15.281	252	215	Below Cal	#	1
83) Benz(a)anthracene	15.334	228	50270	142.38	ng/ml	92
84) Chrysene	15.414	228	53951	157.49	ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.484	149	12501	46.00	ng/ml	99
87) Di-n-octyl phthalate	17.163	149	281	66.90	ng/ml#	1
88) Benzo(b)fluoranthene	17.955	252	74282	234.87	ng/ml MO5	93
89) Benzo(k)fluoranthene	18.014	252	23245	78.15	ng/ml MO5	94
90) Benzo(b+k)fluoranthene	17.955	252	100939	313.59	ng/ml	91
91) Benzo(e)pyrene	18.608	252	39846	127.52	ng/ml	86
92) Benzo(a)pyrene	18.731	252	57763	201.11	ng/ml	96
93) Perylene	18.934	252	23425	80.98	ng/ml	97
95) Indeno(1,2,3-cd)pyrene	21.271	276	38237	127.31	ng/ml	99
96) Dibenz(a,h)anthracene	21.330	278	8094	30.13	ng/ml	94
97) Benzo(g,h,i)perylene	21.811	276	40221	138.55	ng/ml	95

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(29) Naphthalene (T)

8.103min (+ 0.000) 68.77 ng/ml

response 35127

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	12.31
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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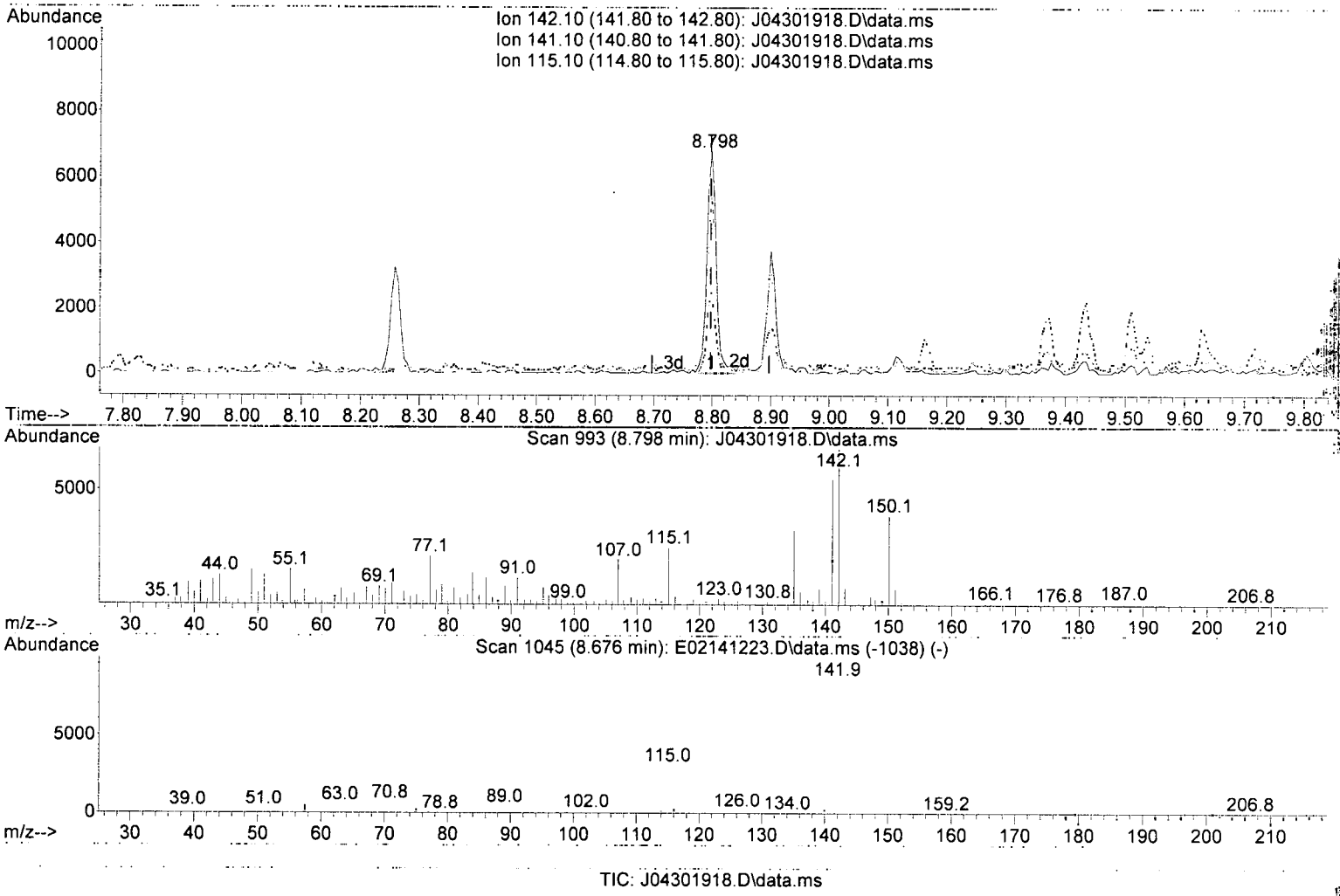
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(33) 2-Methylnaphthalene (T)

8.798min (+ 0.001) 22.95 ng/ml

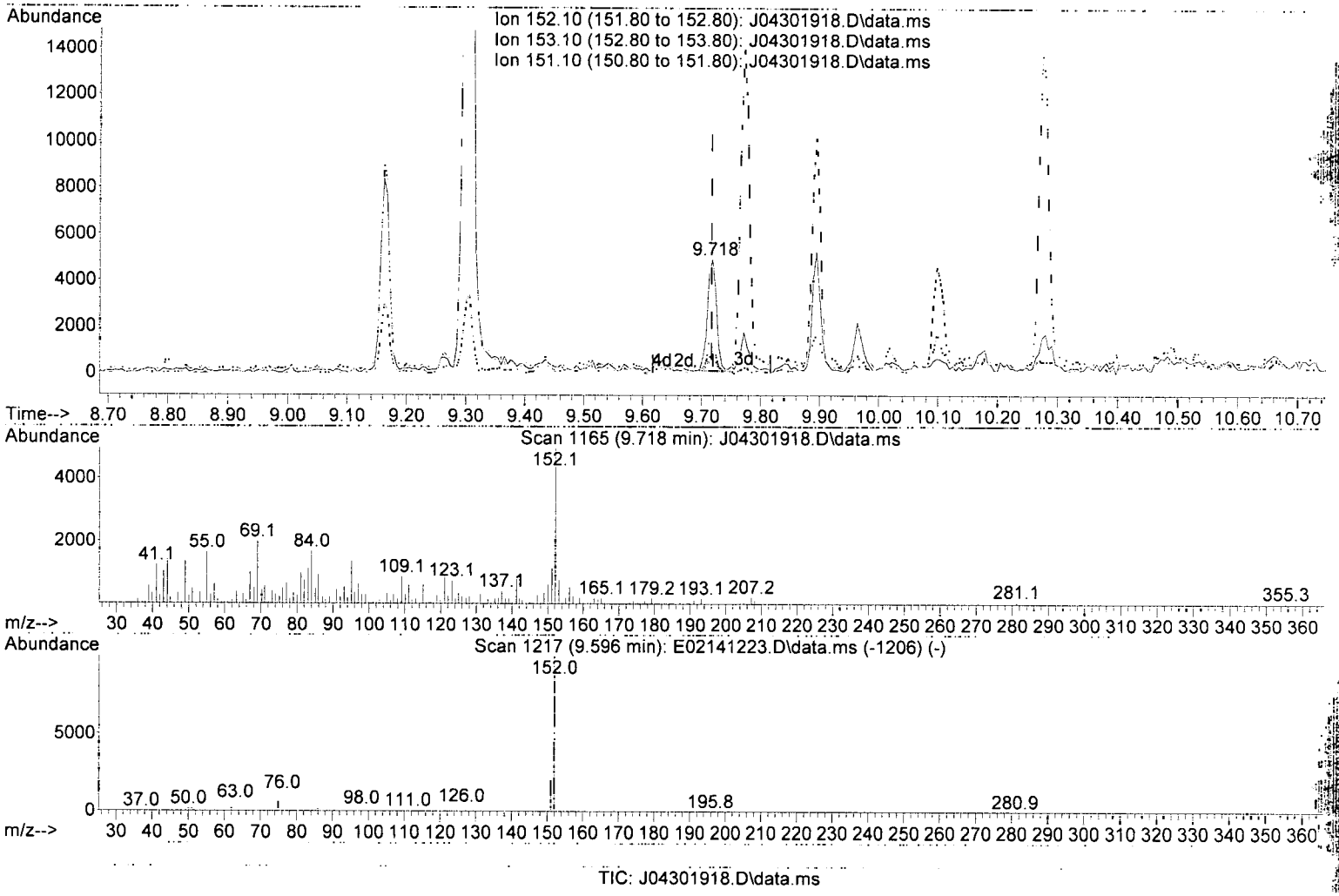
response 7687

Ion	Exp%	Act%
142.10	100.00	100.00
141.10	86.30	80.40
115.10	33.70	36.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(49) Acenaphthylene (T)

9.718min (+ 0.001) 11.00 ng/ml

response 5236

Ion	Exp%	Act%
152.10	100.00	100.00
153.10	13.00	16.66
151.10	20.00	23.21
0.00	0.00	0.00

5

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
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ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
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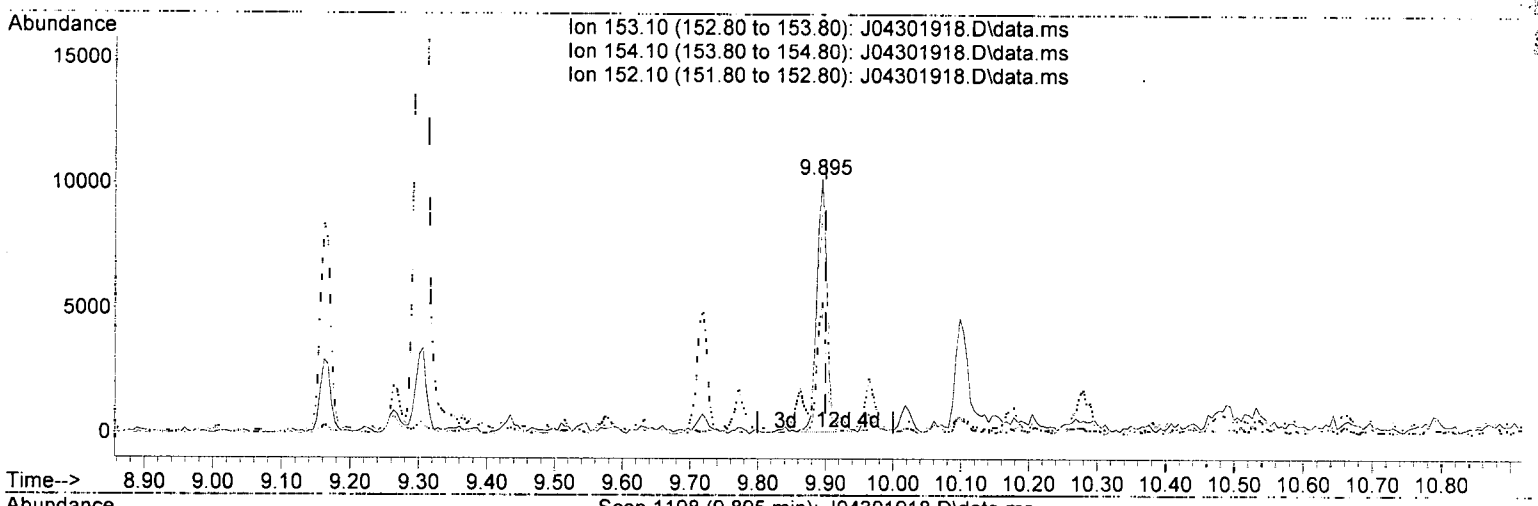
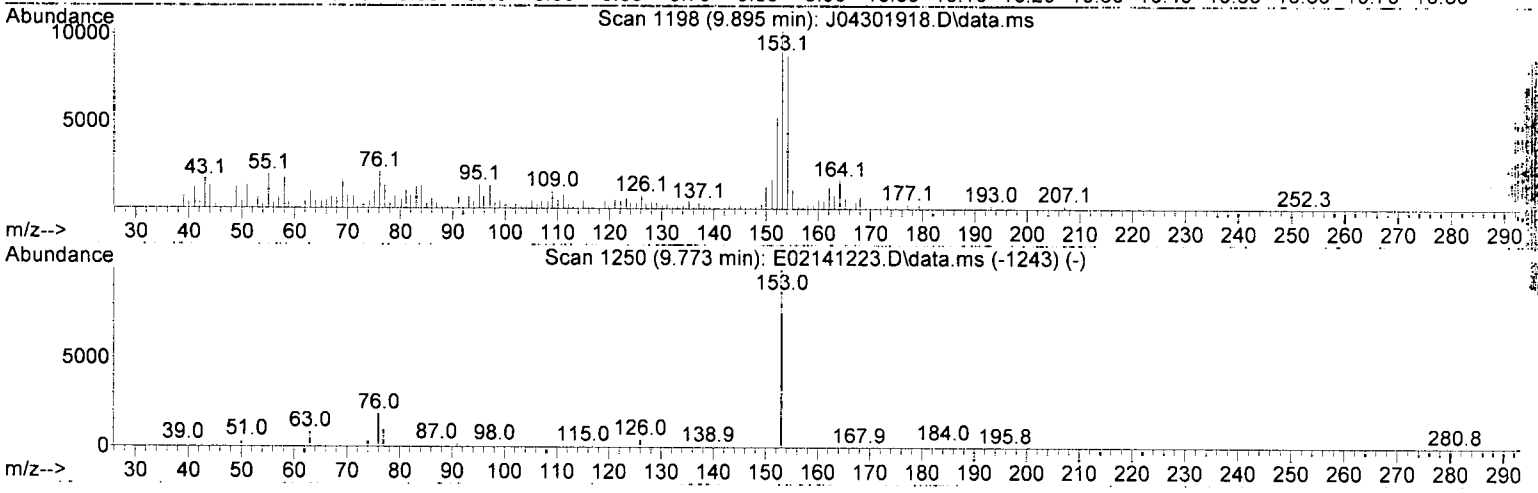
InstName : SV-GCMS10





TIC: J04301918.D\data.ms

(51) Acenaphthene (T)

9.895min (-0.005) 34.34 ng/ml

response 10513

Ion	Exp%	Act%
153.10	100.00	100.00
154.10	93.50	86.02
152.10	47.70	51.58
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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Sample : A9D0674-18RE1@4
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ALS Vial : 18 Sample Multiplier: 1
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QLast Update : Mon Apr 15 09:10:15 2019
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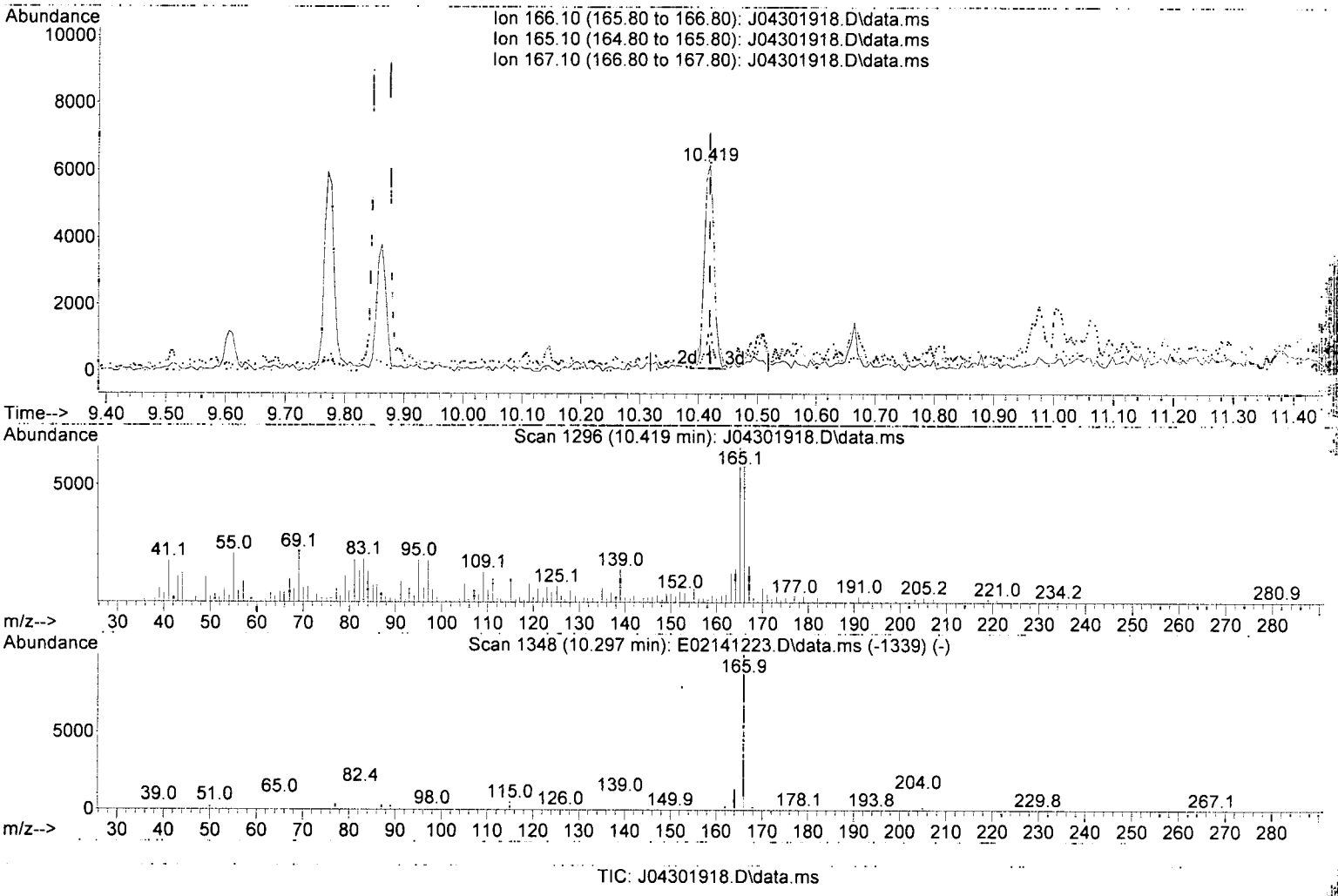

TIC: J04301918.D\data.ms

(60) Fluorene (T)

10.419min (+ 0.000) 22.48 ng/ml

response 7042

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	107.10
167.10	13.50	25.64
0.00	0.00	0.00

Quantitation Report (Qedit)

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ALS Vial : 18 Sample Multiplier: 1
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QLast Update : Mon Apr 15 09:10:15 2019
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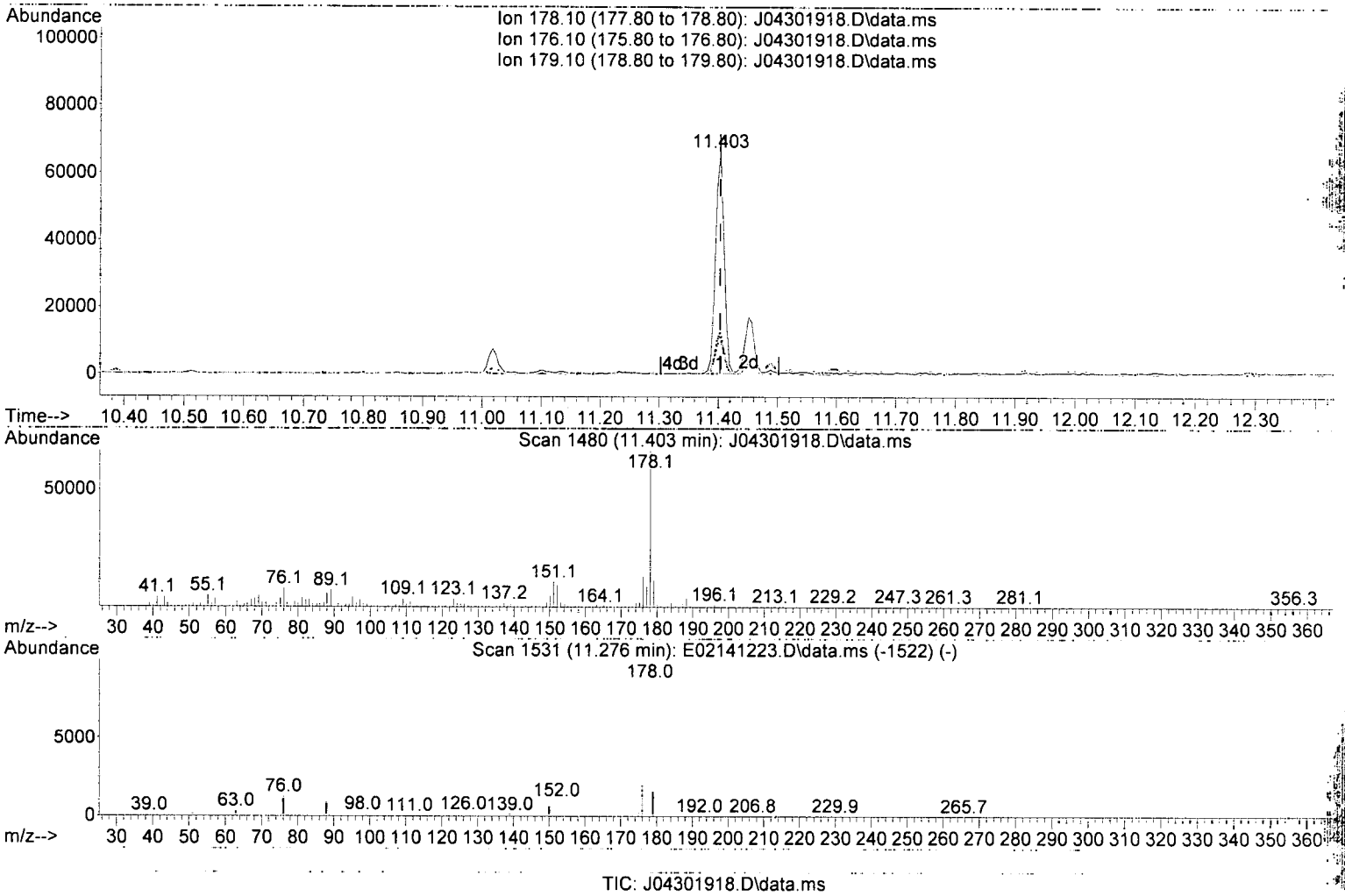

TIC: J04301918.D\data.ms

(71) Phenanthrene (T)

11.403min (+ 0.000) 157.25 ng/ml

response 67524

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	19.27
179.10	15.20	16.80
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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ALS Vial : 18 Sample Multiplier: 1
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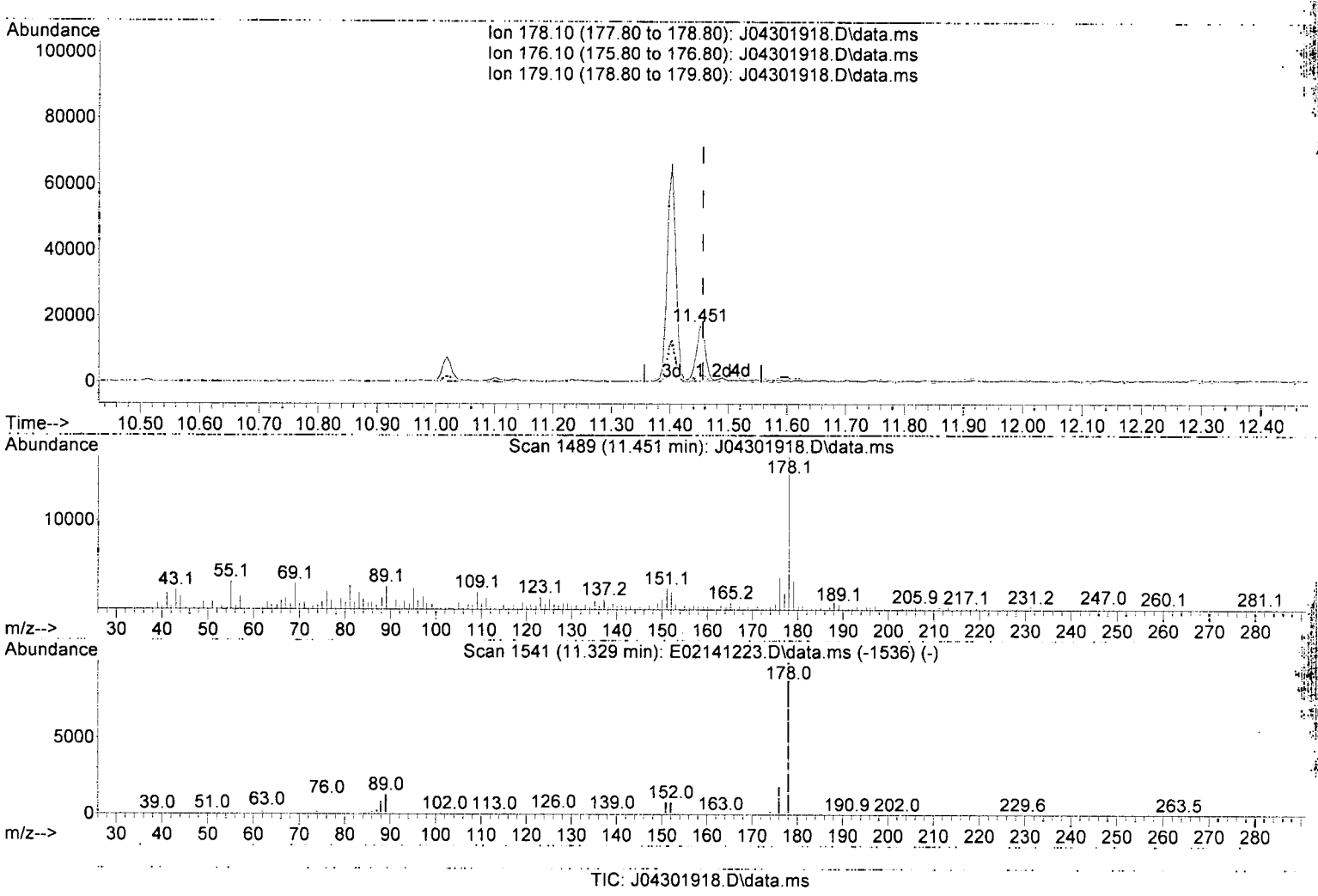
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(72) Anthracene (T)

11.451min (-0.005) 43.38 ng/ml

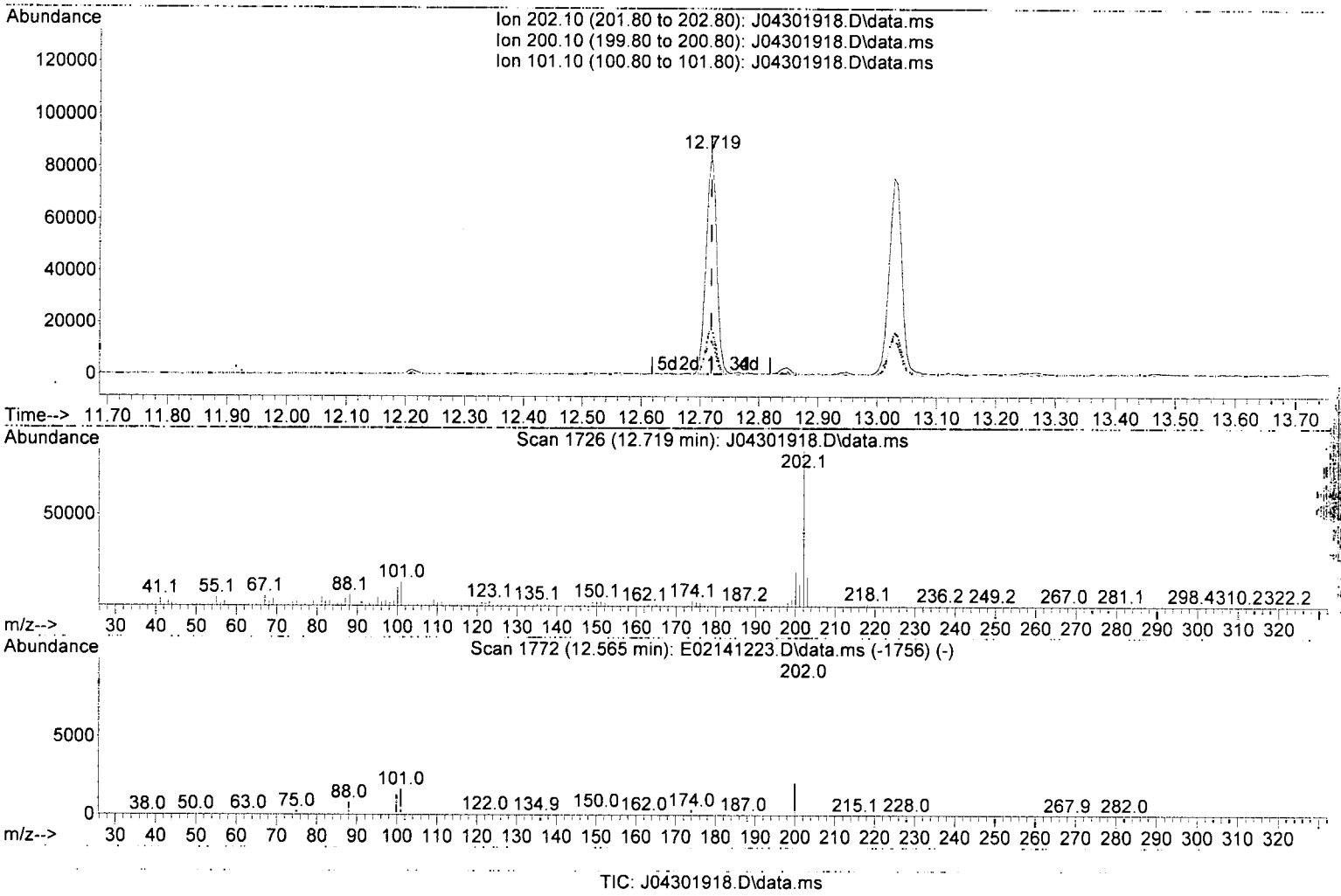
response 18143

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	21.16
179.10	15.90	18.62
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(75) Fluoranthene (T)

12.719min (+ 0.000) 248.83 ng/ml

response 106555

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	21.66
101.10	17.00	15.29
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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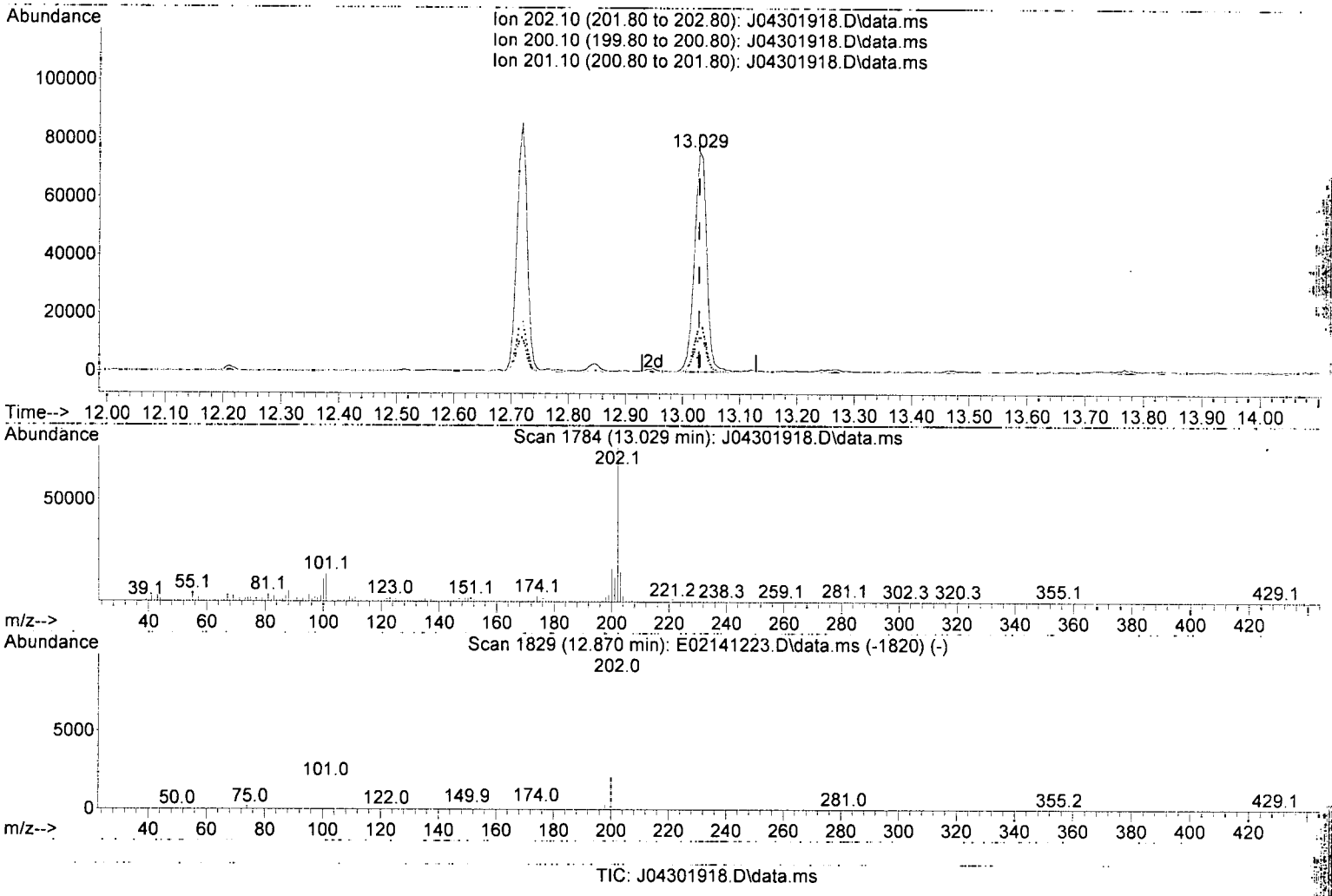
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 258.80 ng/ml

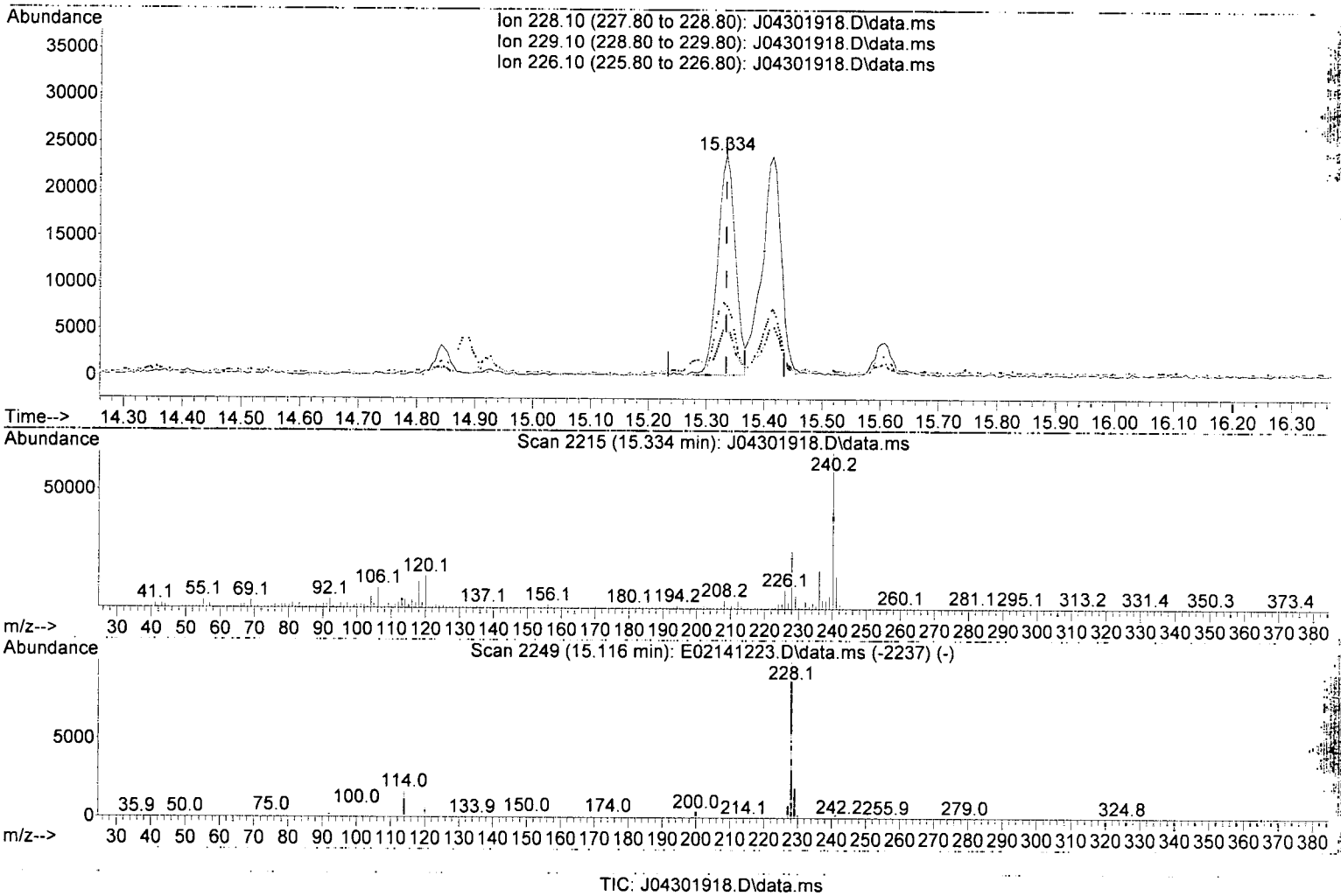
response 114206

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	21.53
201.10	17.30	15.74
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(83) Benz(a)anthracene (T)

15.334min (+ 0.000) 142.38 ng/ml

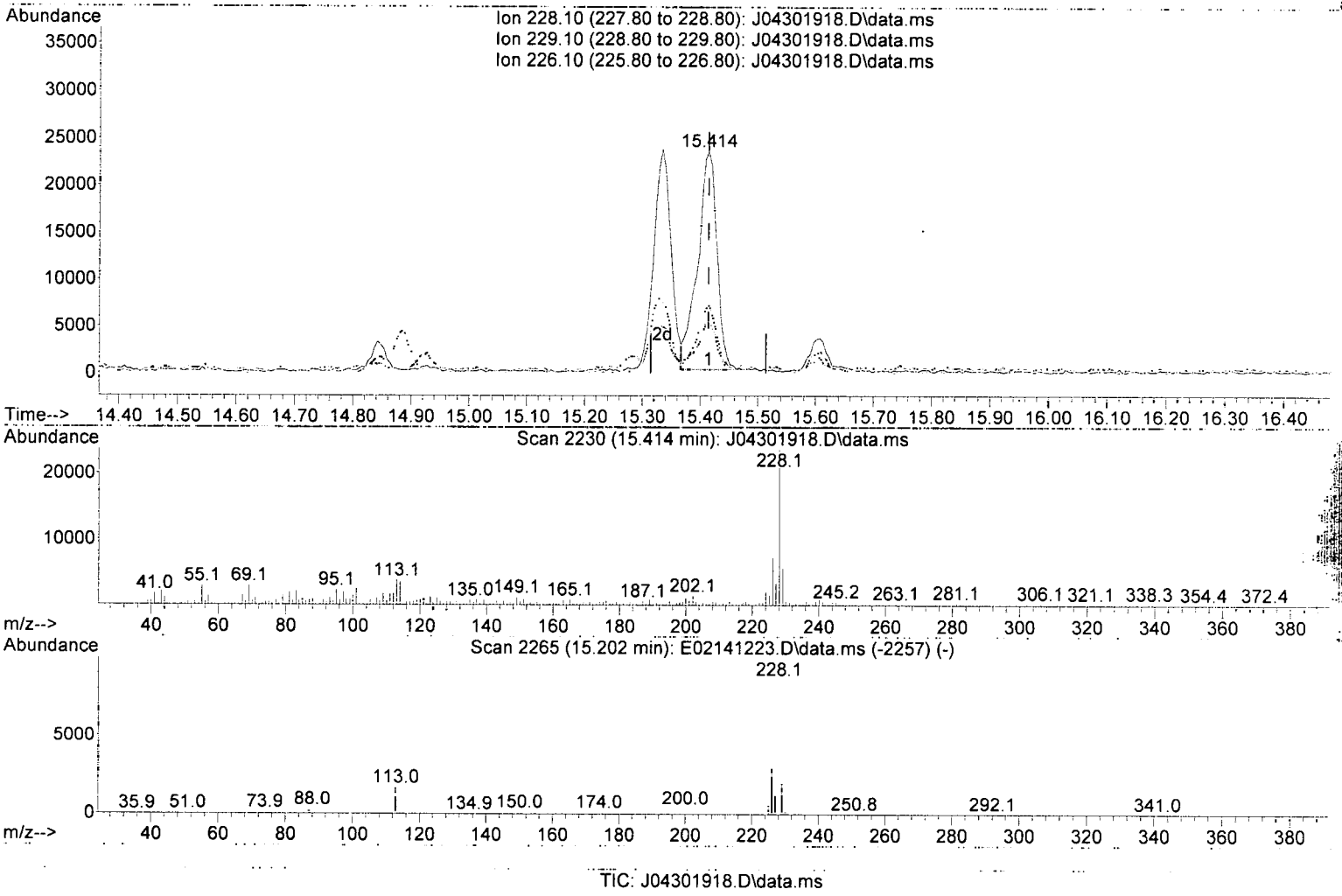
response 50270

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	20.87
226.10	26.50	32.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(84) Chrysene (T)

15.414min (+ 0.000) 157.49 ng/ml

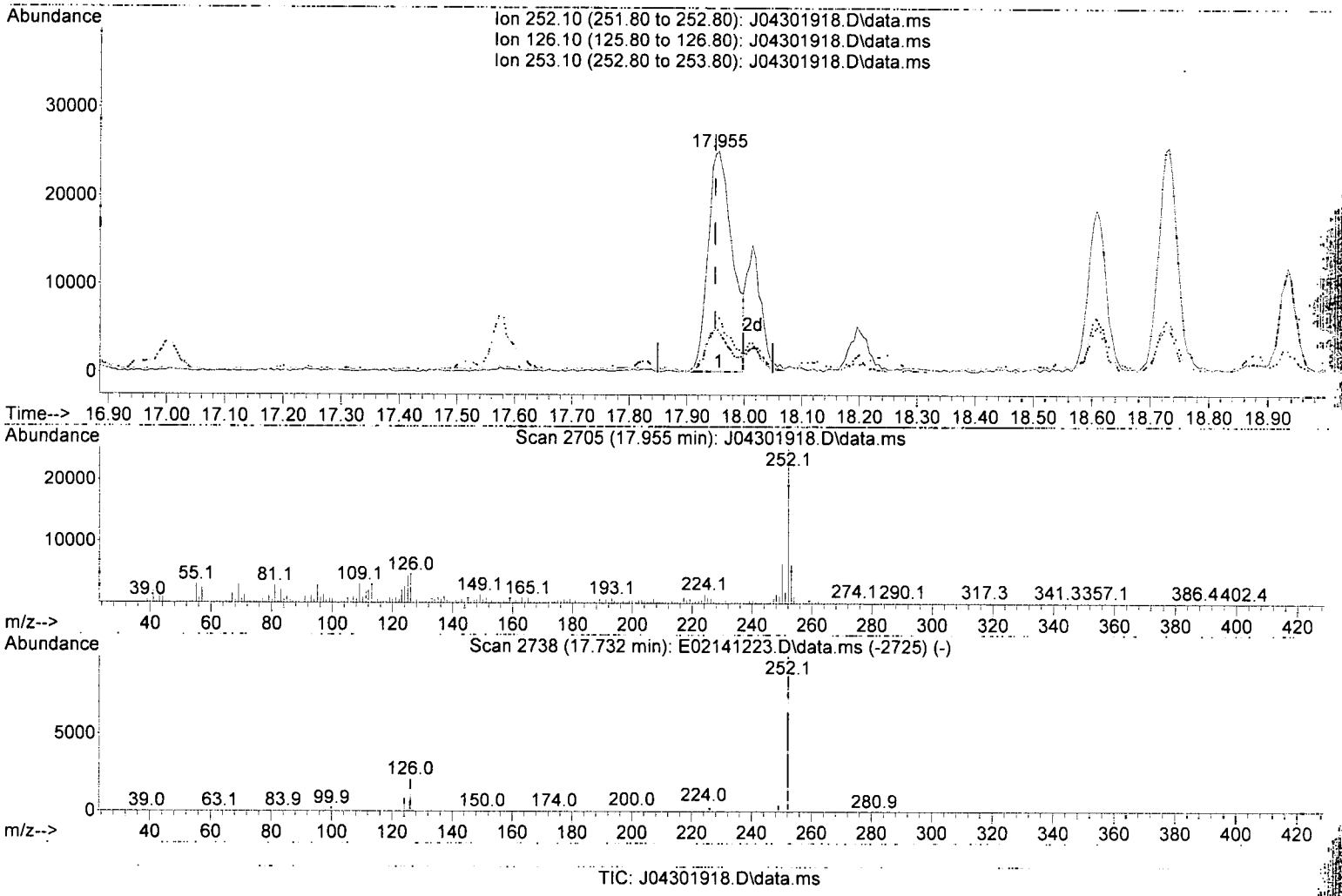
response 53951

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	23.48
226.10	29.30	30.89
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.955min (+ 0.006) 234.87 ng/ml

response 74282

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	18.47
253.10	22.00	25.28
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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DataAcq Meth:SV10_AQUISITION.M

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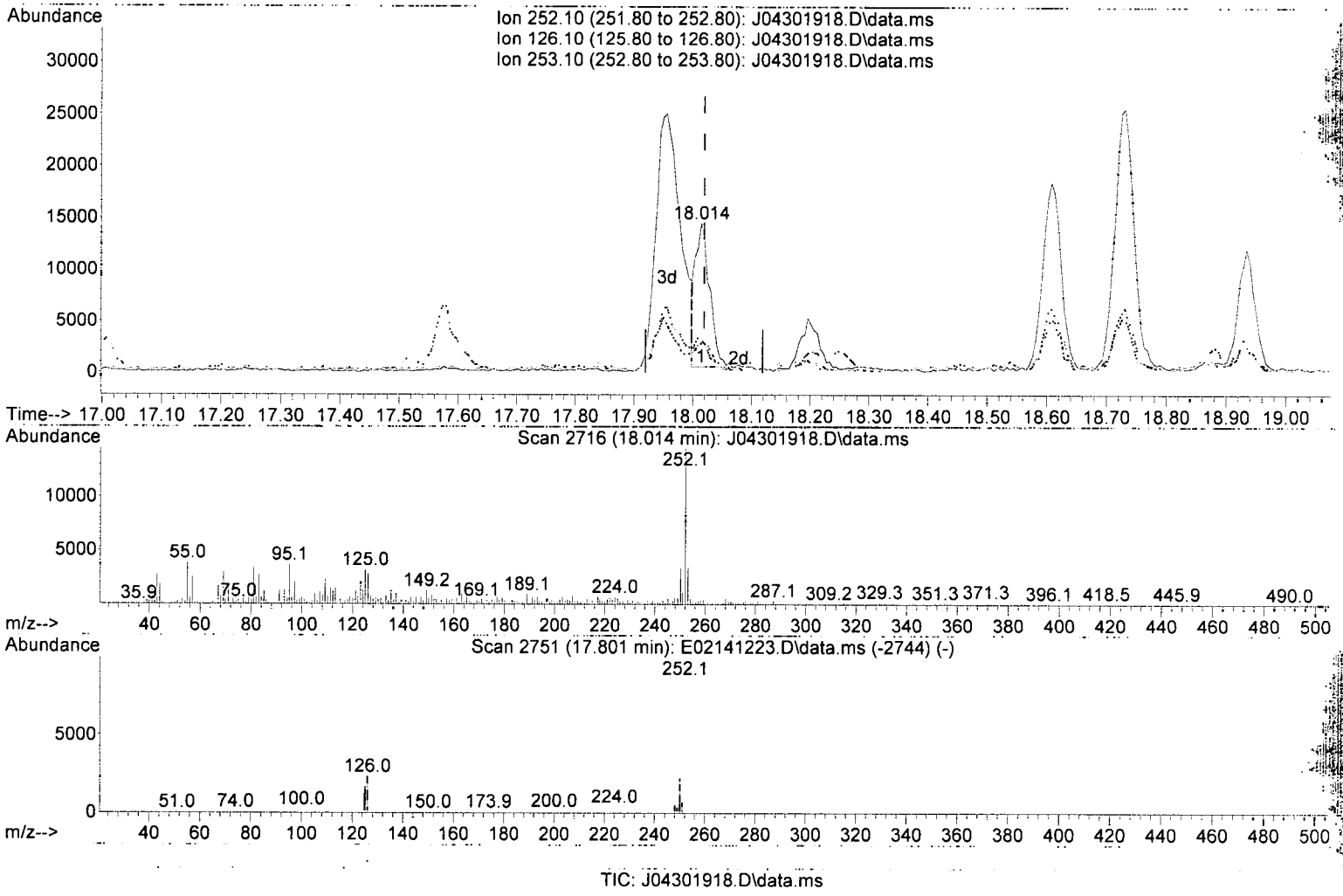
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.014min (-0.005) 78.15 ng/ml

response 23245

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	19.39
253.10	21.70	23.49
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

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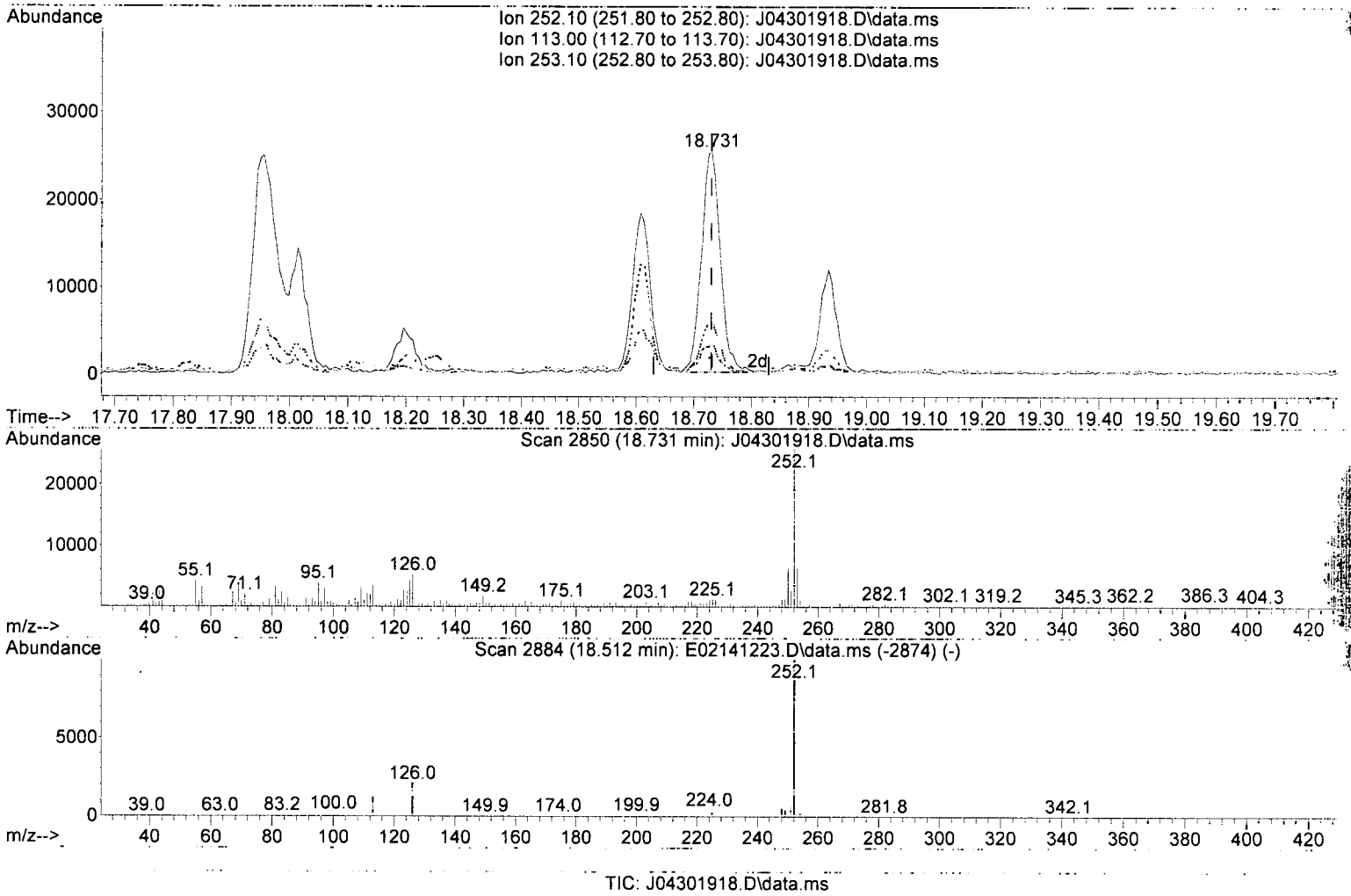
InstName : SV-GCMS10



(92) Benzo(a)pyrene (T)

18.731min (+ 0.001) 201.11 ng/ml

response 57763

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	13.39
253.10	21.60	24.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
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Operator : JK/ AMS/ DTH
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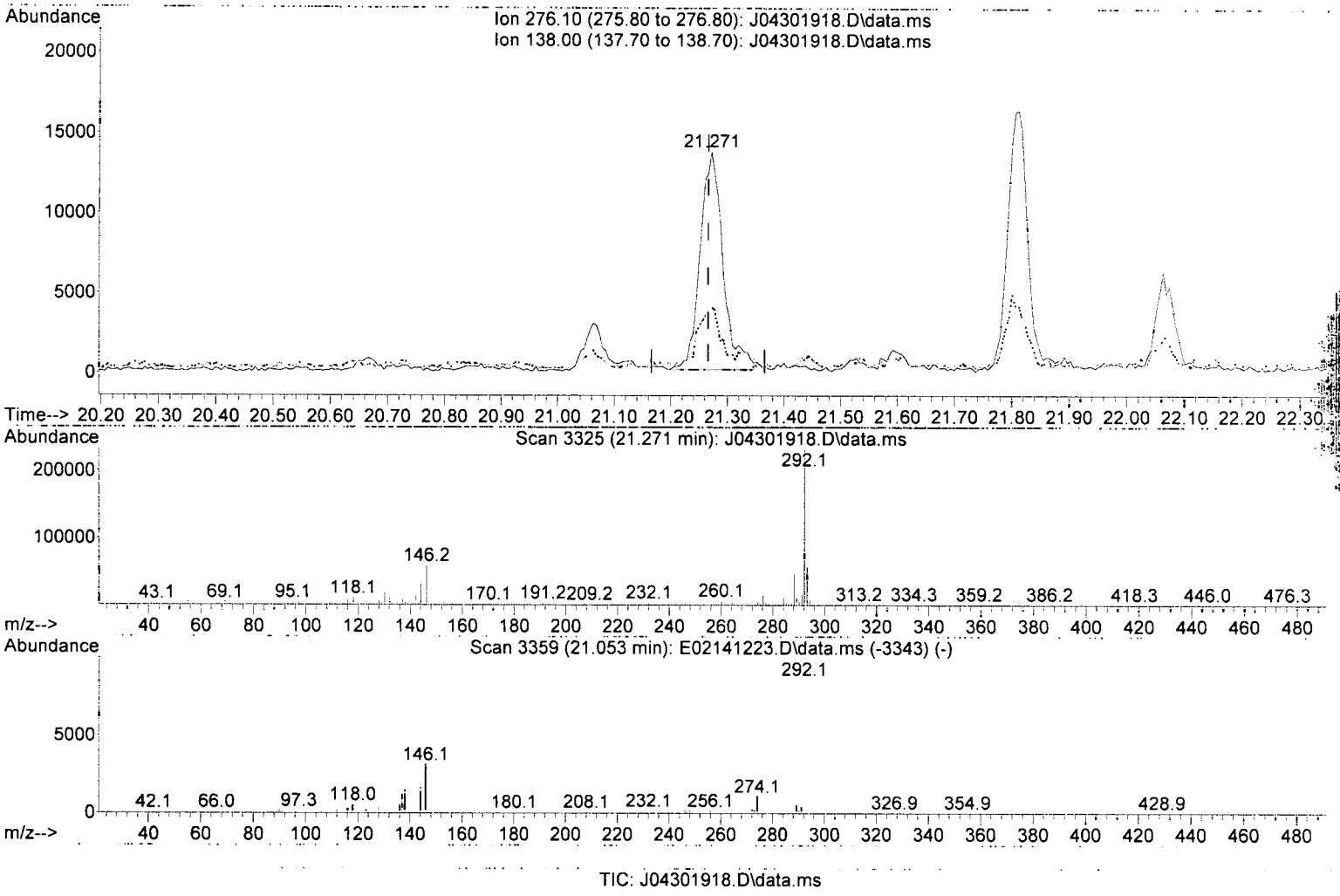
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.271min (+ 0.006) 127.31 ng/ml

response 38237

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	29.94
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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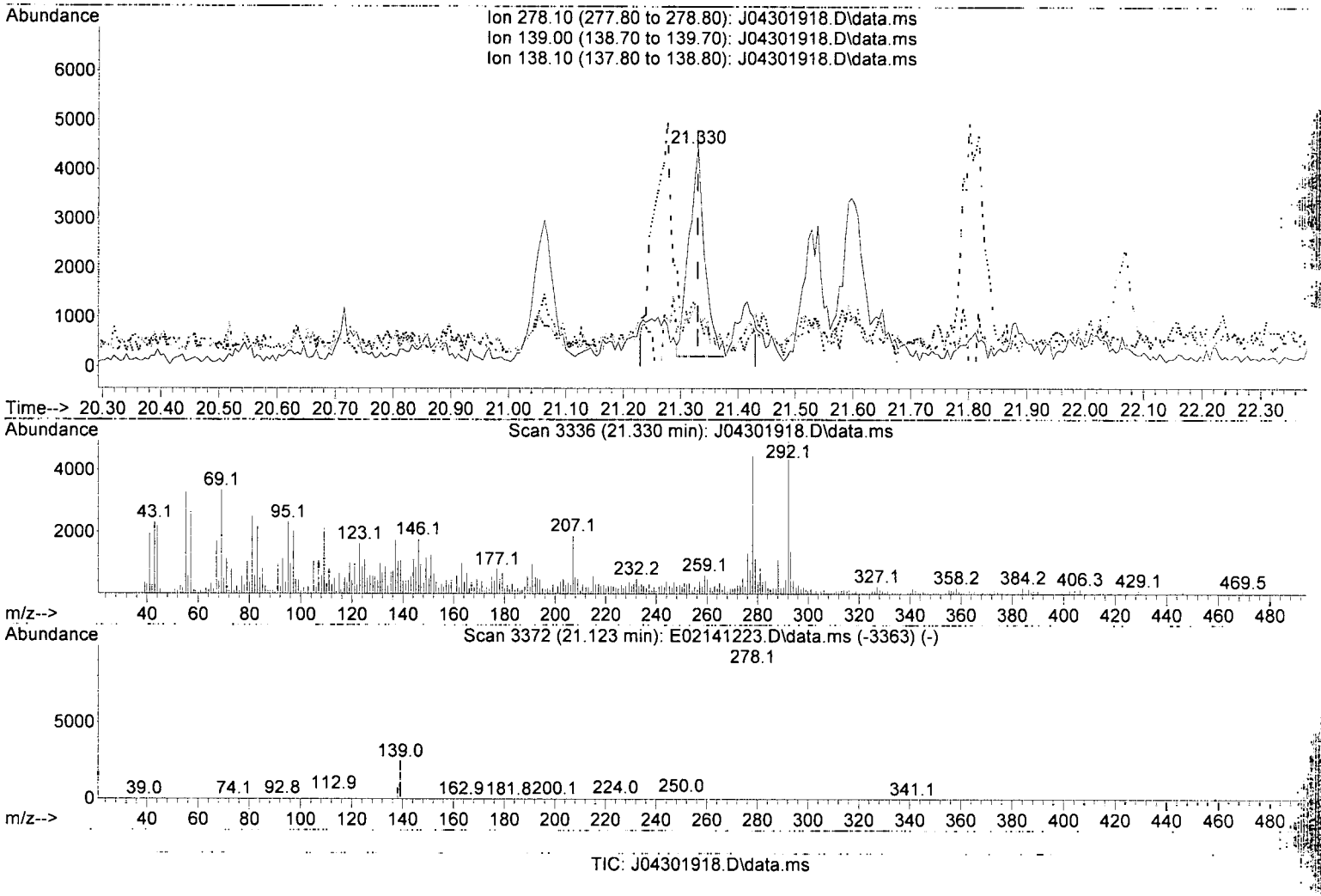

TIC: J04301918.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.330min (+ 0.000) 30.13 ng/ml

response 8094

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.20	24.45
138.10	18.50	23.73
0.00	0.00	0.00

Quantitation Report (Qedit)

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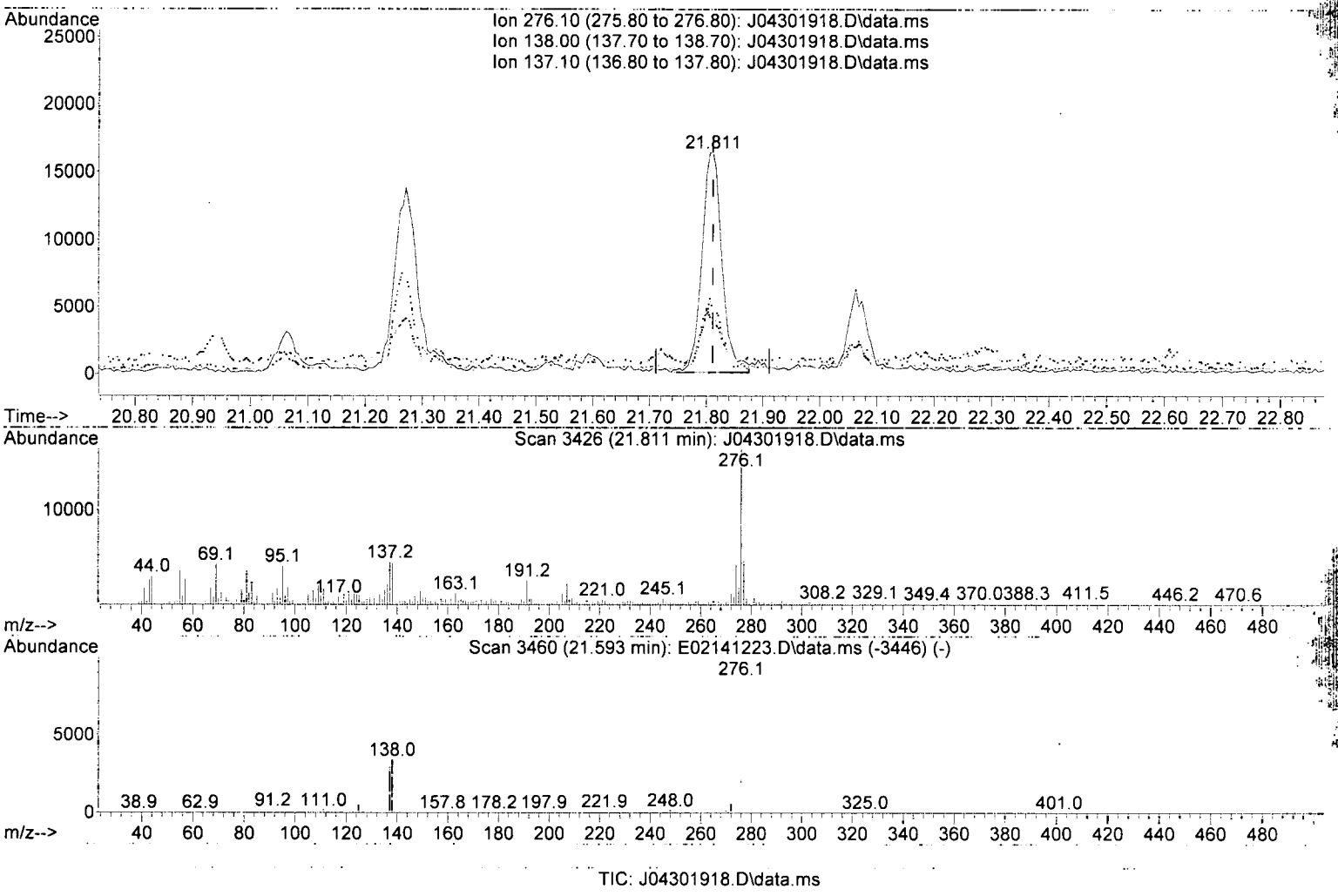
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301918.D\data.ms

(97) Benzo(g,h,i)perylene (T)

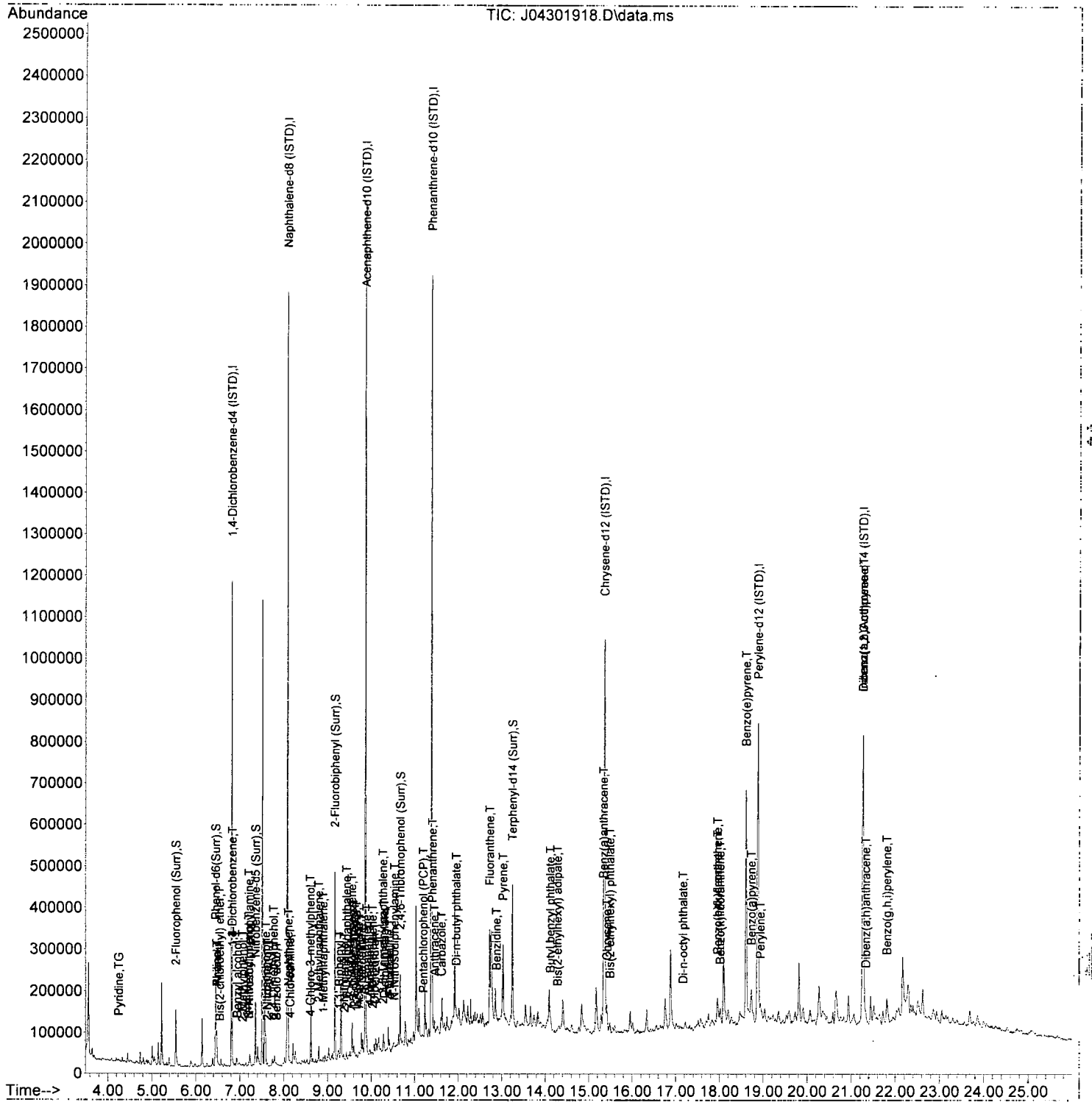
21.811min (+ 0.000) 138.55 ng/ml

response 40221

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	26.73
137.10	23.10	27.46
0.00	0.00	0.00

Data Path : T:\data\2019-04\9D30020\
Data File : J04301918.D
Acq On : 30 Apr 2019 6:08 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-18RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 18 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:38 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301919.D
Acq On : 30 Apr 2019 6:44 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-19RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

RR1

AMS 5/1/19

Quant Time: May 01 07:34:44 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.808	152	218832	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	972873	2000.00 ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	484512	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	814334	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	713131	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	635154	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	586767	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.541	112	60738	426.96 ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	79554	434.75 ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	60637	383.65 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	69270	202.63 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	16818	436.04 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	68764	204.85 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	4.230	79	1825m	10.37 ng/ml#	
6) Phenol	6.455	94	1477	16.82 ng/ml#	1
7) Aniline	6.487	93	1070	4.97 ng/ml	62
8) Bis(2-chloroethyl) ether	6.487	93	1070	5.77 ng/ml#	30
9) 2-Chlorophenol	6.552	128	110	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.947	108	3077	67.52 ng/ml	80
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.054	107	413	3.58 ng/ml#	41
15) 2,2'-Oxybis(1-Chloropr...	7.054	45	178	N.D.	
16) N-Nitrosodi-n-propylamine	7.199	70	279	N.D.	
17) 3+4-Methylphenol	7.199	107	1040	16.87 ng/ml#	65
18) Hexachloroethane	0.000		0	N.D.	
20) Nitrobenzene	7.381	77	132	N.D.	
22) Isophorone	7.611	82	345	N.D.	
23) 2-Nitrophenol	7.680	139	50	57.01 ng/ml#	33
24) 2,4-Dimethylphenol	7.766	122	2455	41.20 ng/ml#	7
25) Bis(2-chloroethoxy) me...	7.830	93	90	N.D.	
26) Benzoic acid	7.771	105	3790	792.61 ng/ml	79
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.103	128	1295	2.57 ng/ml	87
30) 4-Chloroaniline	8.140	127	77	14.91 ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.638	107	295	65.61 ng/ml#	1
33) 2-Methylnaphthalene	8.793	142	291	N.D.	
34) 1-Methylnaphthalene	8.900	142	310	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	9.258	154	233	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	9.376	138	134	66.47 ng/ml#	53
43) 2,6-Dimethylnaphthalene	9.429	156	176	N.D.	

Data Path : T:\data\2019-04\9D30020\
Data File : J04301919.D
Acq On : 30 Apr 2019 6:44 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-19RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

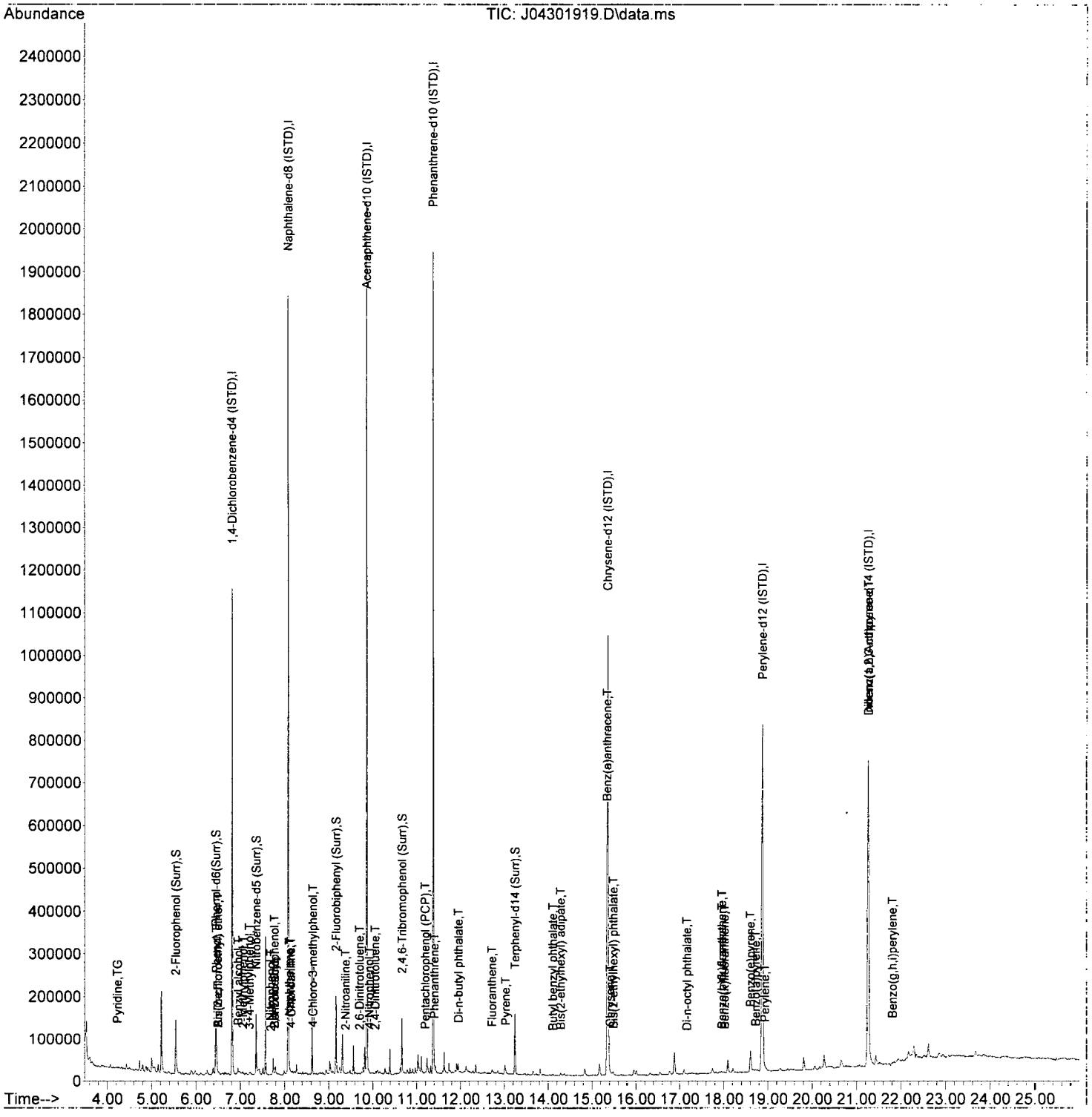
Quant Time: May 01 07:34:44 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	9.563	163	177	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	9.697	165	112	34.02 ng/ml#	49
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.718	152	627	N.D.	
50) 3-Nitroaniline	9.798	138	103	N.D.	
51) Acenaphthene	9.895	153	191	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.916	139	61	74.47 ng/ml#	1
54) 2,4-Dinitrotoluene	10.050	165	135	61.59 ng/ml#	32
55) Dibenzofuran	10.071	168	223	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	10.274	149	370	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.285	170	62	N.D.	
60) Fluorene	10.413	166	536	N.D.	
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.381	138	99	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.526	169	91	N.D.	
66) Azobenzene (1,2-DPH)	10.579	77	97	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.189	266	145	24.09 ng/ml#	68
71) Phenanthrene	11.403	178	2566	5.81 ng/ml	94
72) Anthracene	11.456	178	1022	N.D.	
73) Carbazole	11.611	167	534	N.D.	
74) Di-n-butyl phthalate	11.948	149	2586	5.19 ng/ml	94
75) Fluoranthene	12.713	202	4644	10.54 ng/ml	90
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.029	202	4572	10.07 ng/ml	94
80) Butyl benzyl phthalate	14.104	149	1102	34.56 ng/ml	75
81) Bis(2-ethylhexyl) adipate	14.280	129	2076	10.22 ng/ml	95
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.339	228	3984	10.24 ng/ml	87
84) Chrysene	15.409	228	2849	7.55 ng/ml	87
85) Bis(2-ethylhexyl) phth...	15.484	149	3639	12.15 ng/ml	93
87) Di-n-octyl phthalate	17.158	149	144	66.54 ng/ml#	1
88) Benzo(b)fluoranthene	17.955	252	3782	19.21 ng/ml	92
89) Benzo(k)fluoranthene	18.014	252	1287	13.78 ng/ml	82
90) Benzo(b+k)fluoranthene	17.955	252	5069	30.46 ng/ml	91
91) Benzo(e)pyrene	18.602	252	2219	6.37 ng/ml#	76
92) Benzo(a)pyrene	18.720	252	2393	17.52 ng/ml	55
93) Perylene	18.928	252	2643	8.20 ng/ml	82
95) Indeno(1,2,3-cd)pyrene	21.266	276	2481	7.56 ng/ml#	1
96) Dibenz(a,h)anthracene	21.335	278	265	N.D.	
97) Benzo(g,h,i)perylene	21.806	276	2229	7.03 ng/ml#	39

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301919.D
Acq On : 30 Apr 2019 6:44 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-19RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 19 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:44 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301920.D
Acq On : 30 Apr 2019 7:20 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-20RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 RM

Quant Time: May 01 07:34:50 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	217138	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	974590	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	475883	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	806731	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	725361	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	647548	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	596322	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	63466	449.61	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	85361	470.12	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	65424	415.50	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	69064	205.69	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	16716	437.39	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.237	244	65404	191.55	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.236	79	1960m	11.23	ng/ml#	
6) Phenol	6.461	94	1526	17.12	ng/ml#	33
7) Aniline	6.493	93	1041	4.88	ng/ml	74
8) Bis(2-chloroethyl) ether	6.568	93	145	N.D.		
9) 2-Chlorophenol	6.536	128	58	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.942	108	3477	72.42	ng/ml	84
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.049	107	142	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.092	45	178	N.D.		
16) N-Nitrosodi-n-propylamine	7.188	70	280	N.D.		
17) 3+4-Methylphenol	7.199	107	1249	18.54	ng/ml#	55
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.354	77	534	3.46	ng/ml#	27
22) Isophorone	7.600	82	473	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.728	122	74	25.84	ng/ml#	45
25) Bis(2-chloroethoxy) me...	7.819	93	80	N.D.		
26) Benzoic acid	7.841	105	346	755.78	ng/ml	79
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.097	128	1447	2.87	ng/ml	87
30) 4-Chloroaniline	8.156	127	242	15.96	ng/ml#	49
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.616	107	85	64.23	ng/ml#	1
33) 2-Methylnaphthalene	8.793	142	490	N.D.		
34) 1-Methylnaphthalene	8.905	142	361	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	9.269	154	392	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.365	138	105	66.18	ng/ml	99
43) 2,6-Dimethylnaphthalene	9.435	156	367	N.D.		

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301920.D
Acq On : 30 Apr 2019 7:20 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-20RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

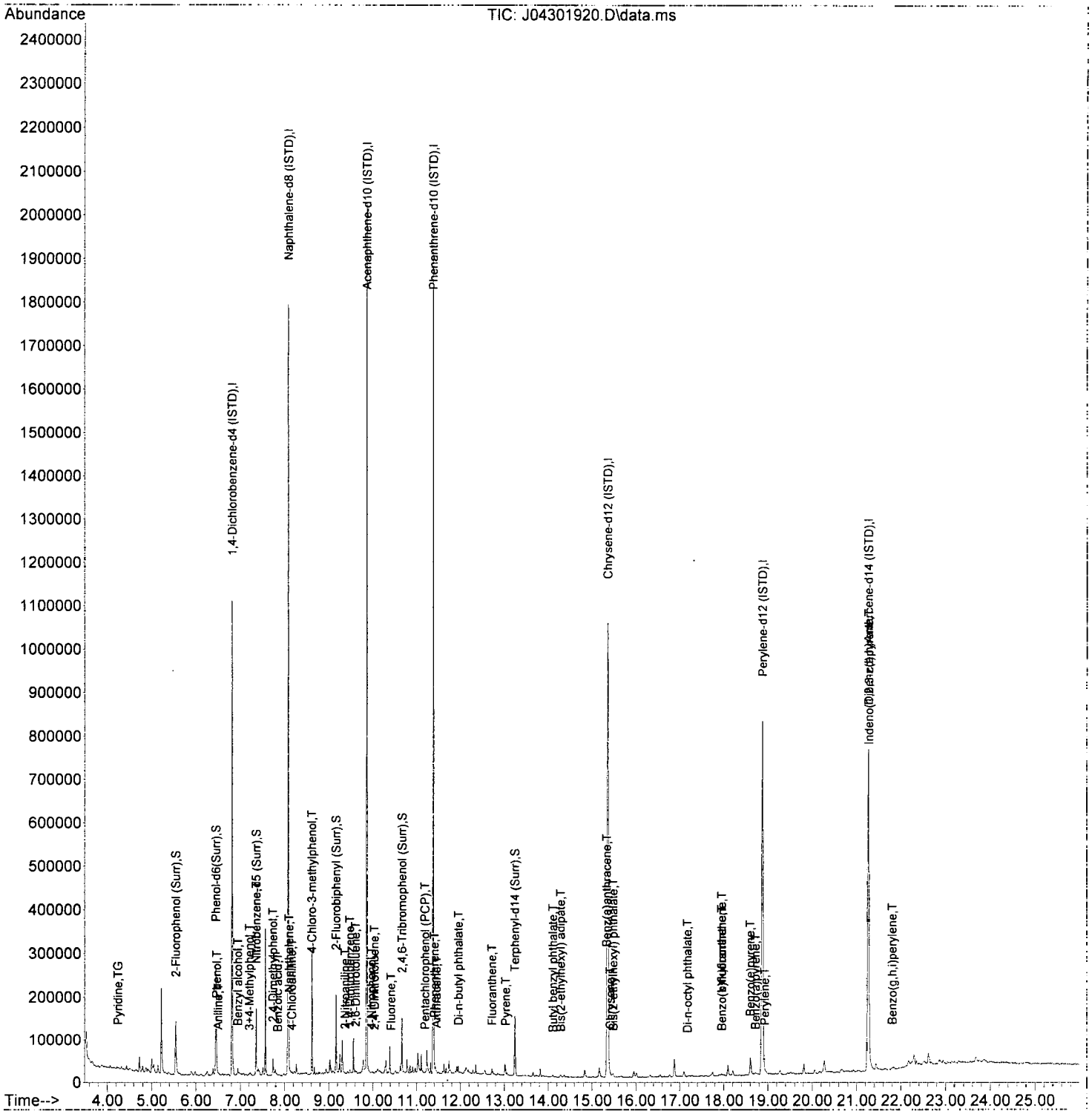
Quant Time: May 01 07:34:50 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.472	168	50	122.85 ng/ml#	1
45) Dimethyl phthalate	9.563	163	558	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	9.606	165	81	33.61 ng/ml#	52
48) 1,2-Dinitrobenzene	9.702	168	54	N.D.	
49) Acenaphthylene	9.718	152	1010	N.D.	
50) 3-Nitroaniline	9.809	138	108	N.D.	
51) Acenaphthene	9.895	153	505	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.964	139	54	74.35 ng/ml#	1
54) 2,4-Dinitrotoluene	10.034	165	136	61.63 ng/ml#	17
55) Dibenzofuran	10.071	168	339	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	10.280	149	494	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.280	170	303	N.D.	
60) Fluorene	10.413	166	805	2.57 ng/ml	93
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.	
62) 4-Nitroaniline	10.413	138	81	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.515	169	163	N.D.	
66) Azobenzene (1,2-DPH)	10.579	77	155	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.184	266	262	26.83 ng/ml#	67
71) Phenanthrene	11.403	178	3859	8.82 ng/ml	97
72) Anthracene	11.451	178	1722	4.04 ng/ml	92
73) Carbazole	11.611	167	872	N.D.	
74) Di-n-butyl phthalate	11.948	149	1688	3.42 ng/ml	93
75) Fluoranthene	12.713	202	6814	15.61 ng/ml	99
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.029	202	6824	15.17 ng/ml	94
80) Butyl benzyl phthalate	14.104	149	1392	35.84 ng/ml#	55
81) Bis(2-ethylhexyl) adipate	14.280	129	2108	10.20 ng/ml	88
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.329	228	4621	11.67 ng/ml	92
84) Chrysene	15.409	228	4310	11.22 ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.478	149	3348	10.99 ng/ml	85
87) Di-n-octyl phthalate	17.169	149	140	66.52 ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	5028	22.36 ng/ml	99
89) Benzo(k)fluoranthene	17.950	252	6613	27.36 ng/ml	97
90) Benzo(b+k)fluoranthene	17.950	252	7047	35.32 ng/ml	97
91) Benzo(e)pyrene	18.597	252	3192	8.99 ng/ml	81
92) Benzo(a)pyrene	18.714	252	3273	19.94 ng/ml	77
93) Perylene	18.923	252	2643	8.04 ng/ml	84
95) Indeno(1,2,3-cd)pyrene	21.271	276	2751	8.25 ng/ml#	1
96) Dibenz(a,h)anthracene	21.319	278	677	N.D.	
97) Benzo(g,h,i)perylene	21.801	276	3022	9.37 ng/ml	83

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

Data Path : T:\data\2019-04\9D30020\
Data File : J04301920.D
Acq On : 30 Apr 2019 7:20 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-20RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 20 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:50 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

RR-7

AMS 5/1/19 MOS

Quant Time: May 01 07:34:56 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	220834	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	970083	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	477902	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	808828	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	691832	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	627181	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	586459	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	54715	381.13	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	72795	394.20	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	58318	366.52	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	77855	230.89	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	16756	437.31	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	92641	284.47	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.236	79	906m	5.10	ng/ml#	
6) Phenol	6.461	94	1402	16.39	ng/ml#	65
7) Aniline	6.493	93	820	3.78	ng/ml	96
8) Bis(2-chloroethyl) ether	6.541	93	142	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.942	108	1469	48.90	ng/ml	96
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.049	107	198	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.065	45	54	N.D.		
16) N-Nitrosodi-n-propylamine	7.193	70	193	N.D.		
17) 3+4-Methylphenol	7.199	107	951	16.12	ng/ml#	64
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.349	77	324	N.D.		
22) Isophorone	7.600	82	223	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.734	122	65	25.79	ng/ml#	76
25) Bis(2-chloroethoxy) me...	7.798	93	82	N.D.		
26) Benzoic acid	7.798	105	525	757.71	ng/ml	67
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.097	128	2412	4.80	ng/ml	98
30) 4-Chloroaniline	8.092	127	309	16.39	ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.632	107	119	64.45	ng/ml#	1
33) 2-Methylnaphthalene	8.803	142	883	2.68	ng/ml	92
34) 1-Methylnaphthalene	8.900	142	647	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	9.263	154	247	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.381	138	59	65.68	ng/ml#	48
43) 2,6-Dimethylnaphthalene	9.429	156	724	2.55	ng/ml	81

Data Path : T:\data\2019-04\9D30020\
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:56 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	9.568	163	261	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	9.611	165	99	33.86	ng/ml	78
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	9.718	152	2185	4.57	ng/ml	91
50) 3-Nitroaniline	9.777	138	64	N.D.		
51) Acenaphthene	9.895	153	1188	3.86	ng/ml	85
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.985	139	62	74.51	ng/ml#	1
54) 2,4-Dinitrotoluene	10.060	165	76	60.96	ng/ml#	23
55) Dibenzofuran	10.071	168	522	N.D.		
56) 2,3,5,6-Tetrachlorophenol	10.157	232	69	36.09	ng/ml#	62
57) 2,3,4,6-Tetrachlorophenol	10.157	232	69	14.21	ng/ml#	42
58) Diethyl phthalate	10.280	149	430	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.274	170	193	N.D.		
60) Fluorene	10.419	166	1019	3.24	ng/ml	91
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.403	138	83	N.D.		
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.520	169	127	N.D.		
66) Azobenzene (1,2-DPH)	10.579	77	197	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.189	266	225	25.96	ng/ml	88
71) Phenanthrene	11.398	178	7793	17.76	ng/ml	96
72) Anthracene	11.451	178	2528	5.91	ng/ml	93
73) Carbazole	11.611	167	1769	4.89	ng/ml	95
74) Di-n-butyl phthalate	11.948	149	1852	3.74	ng/ml	89
75) Fluoranthene	12.713	202	17848	40.78	ng/ml	94
76) Benzidine	12.884	184	79	80.85	ng/ml	58
77) Pyrene	13.029	202	18128	40.19	ng/ml	96
80) Butyl benzyl phthalate	14.104	149	1412	36.26	ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.286	129	1774	9.00	ng/ml	84
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.334	228	9405	24.91	ng/ml MO3	97
84) Chrysene	15.409	228	8819	24.08	ng/ml MO5	94
85) Bis(2-ethylhexyl) phth...	15.479	149	17862	61.46	ng/ml	97
87) Di-n-octyl phthalate	17.169	149	1048	68.54	ng/ml#	1
88) Benzo(b)fluoranthene	17.944	252	14919	50.19	ng/ml MO5	92
89) Benzo(k)fluoranthene	~~17.944~~	~~252~~	~~18208~~	~~58.61~~	~~ng/ml~~	~~91~~ MI-J
90) Benzo(b+k)fluoranthene	17.944	252	19931	70.28	ng/ml	91
91) Benzo(e)pyrene	18.597	252	9716	28.25	ng/ml	85
92) Benzo(a)pyrene	18.720	252	10778	42.77	ng/ml	98
93) Perylene	18.928	252	6152	19.32	ng/ml	92
95) Indeno(1,2,3-cd)pyrene	21.266	276	9541	29.08	ng/ml	63
96) Dibenz(a,h)anthracene	21.330	278	1406	4.79	ng/ml	94
97) Benzo(g,h,i)perylene	21.806	276	8880	28.00	ng/ml	83

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

Quantitation Report (Qedit)

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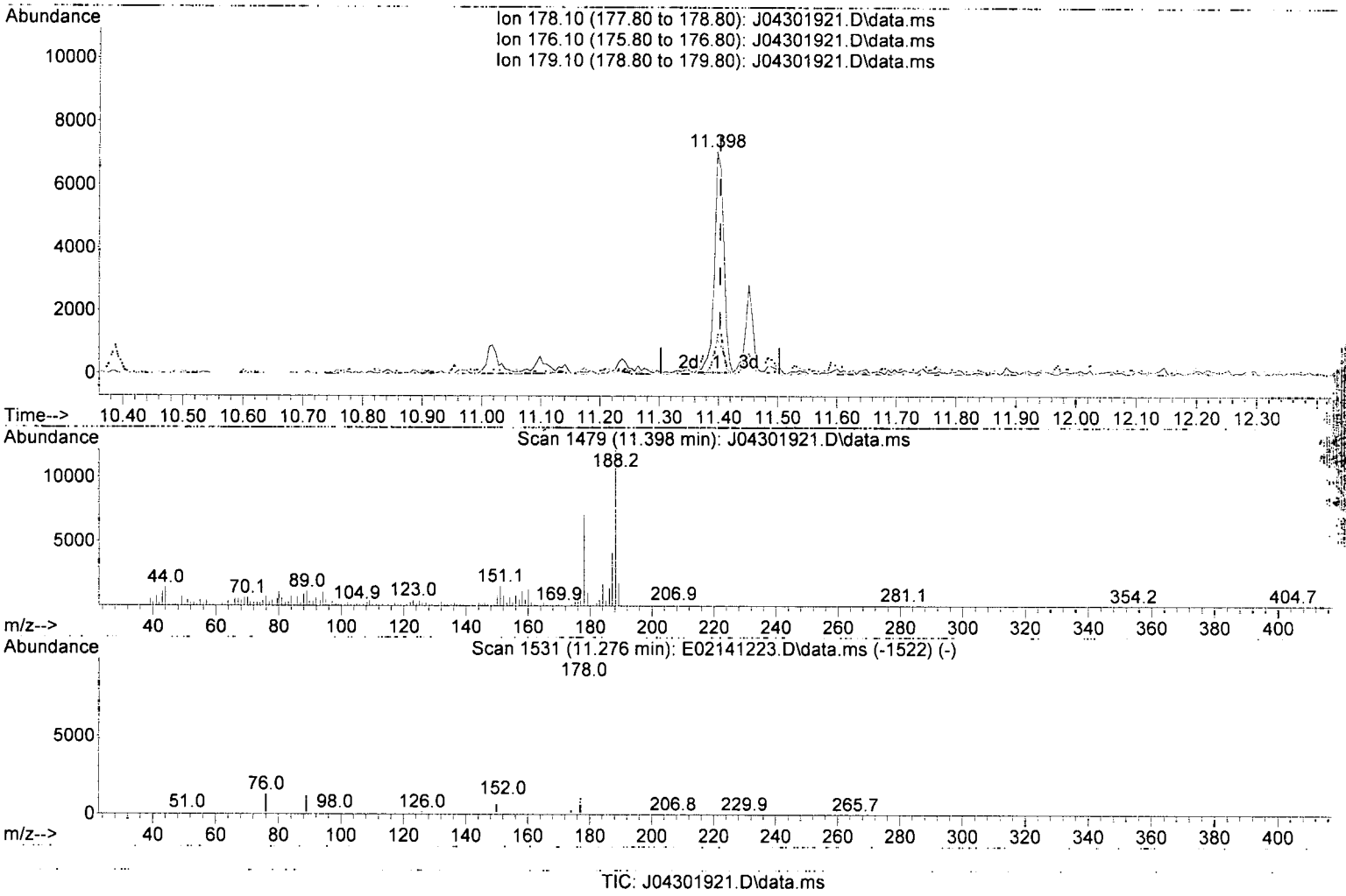
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:56 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(71) Phenanthrene (T)

11.398min (-0.005) 17.76 ng/ml

response 7793

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	16.01
179.10	15.20	15.20
0.00	0.00	0.00

J

Quantitation Report (Qedit)

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QLast Update : Mon Apr 15 09:10:15 2019
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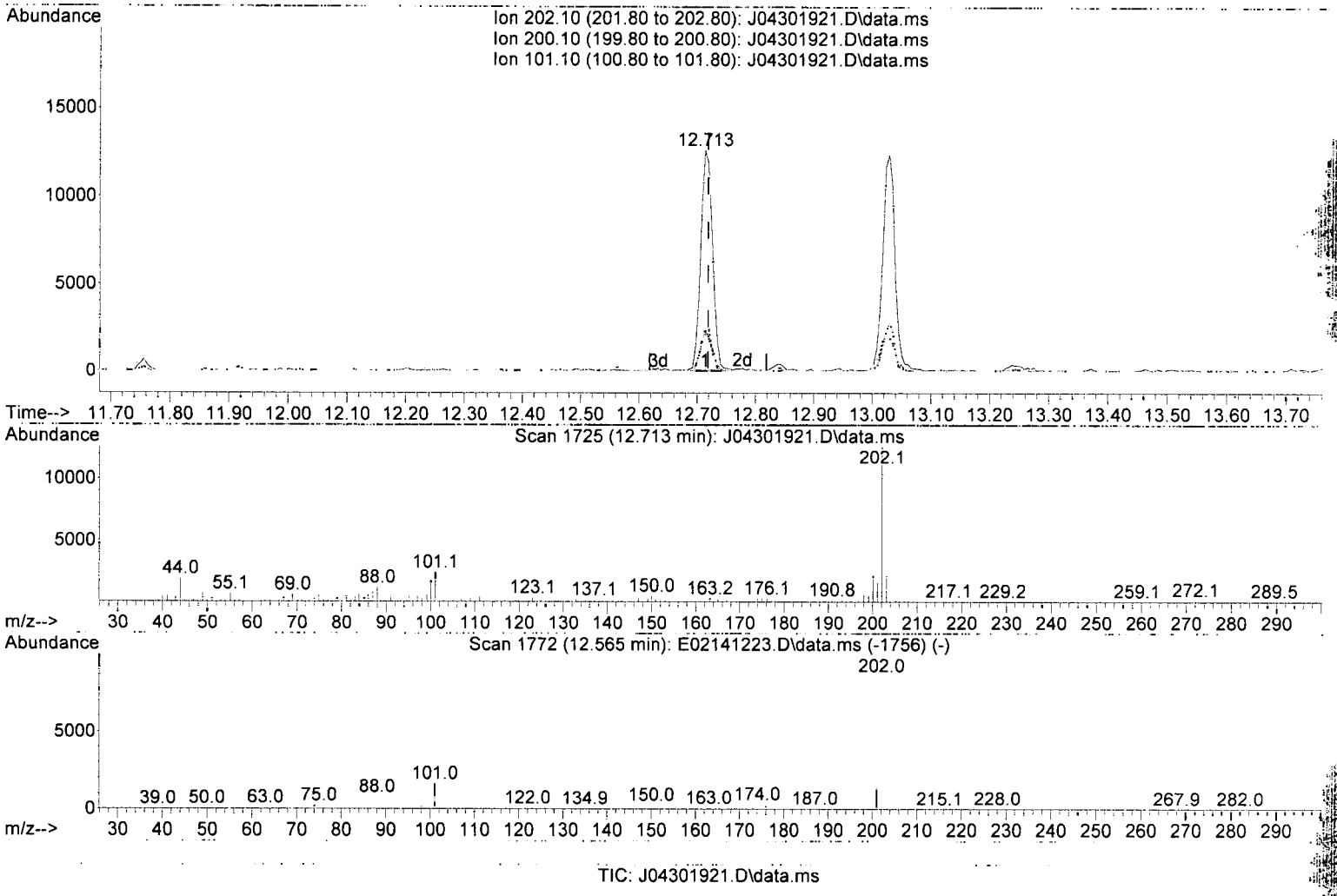

TIC: J04301921.D\data.ms

(75) Fluoranthene (T)

12.713min (-0.005) 40.78 ng/ml

response 17848

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	16.78
101.10	17.00	18.95
0.00	0.00	0.00

Quantitation Report (Qedit)

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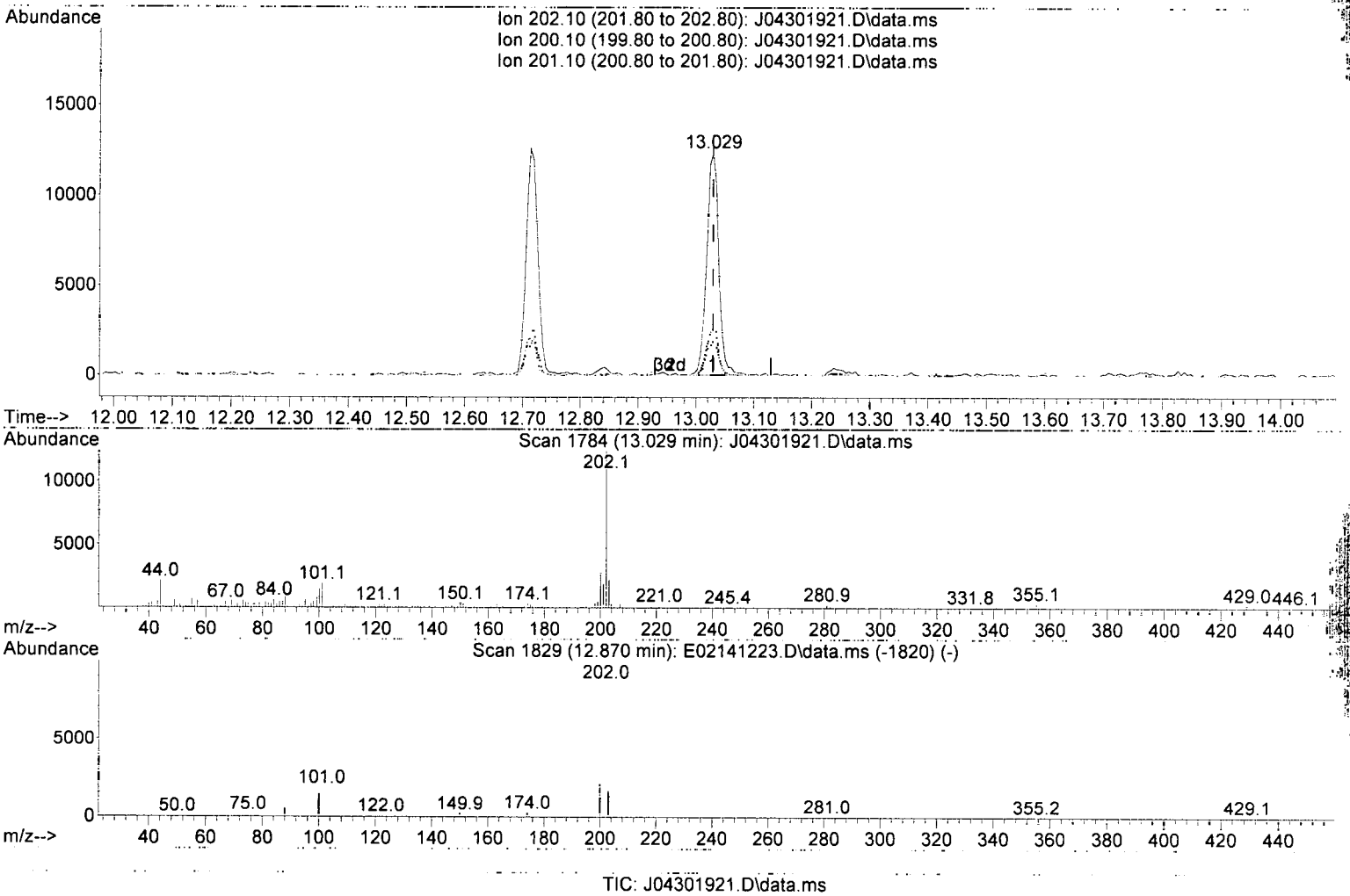

TIC: J04301921.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 40.19 ng/ml

response 18128

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	22.32
201.10	17.30	15.40
0.00	0.00	0.00

Quantitation Report (Qedit)

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Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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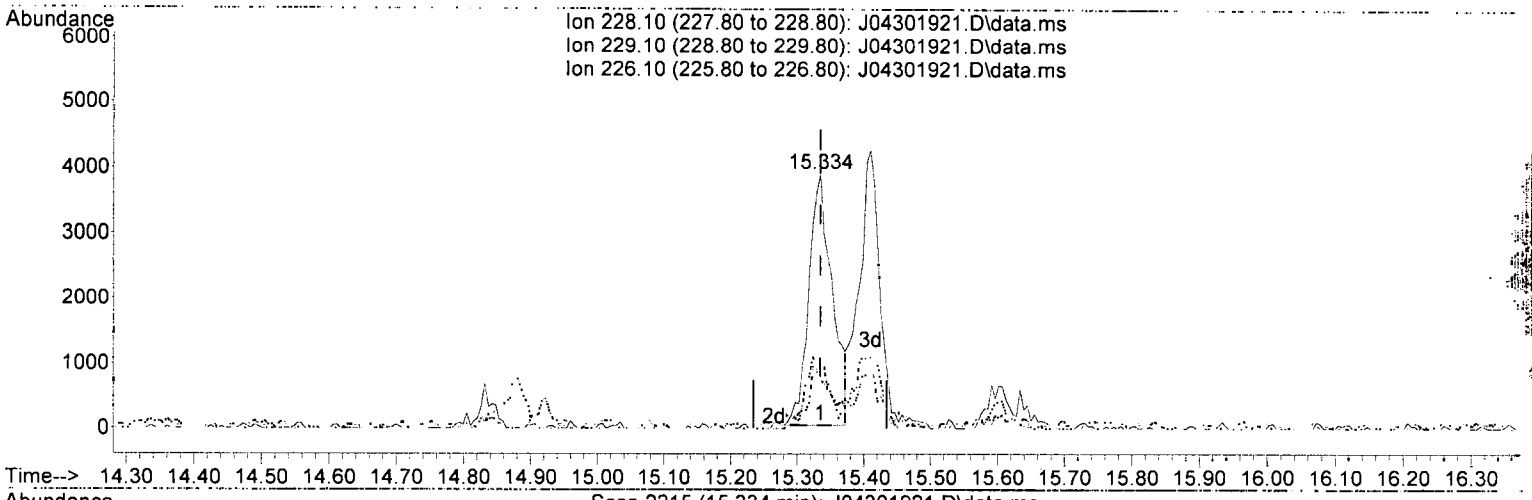
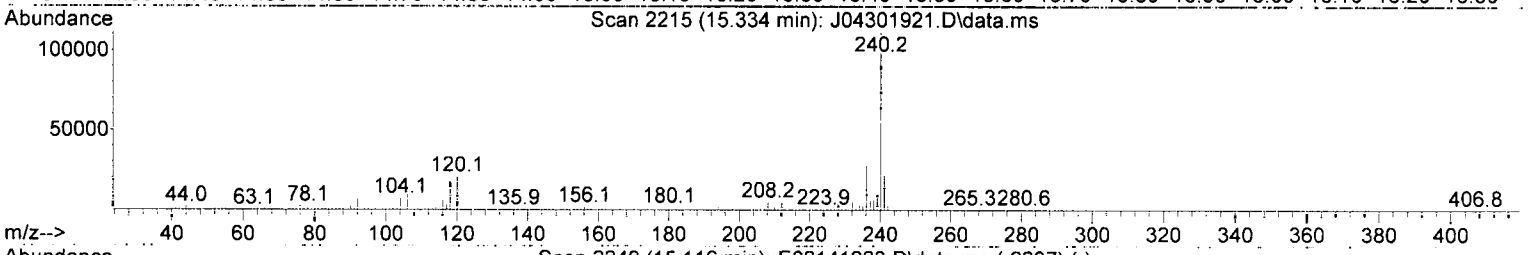
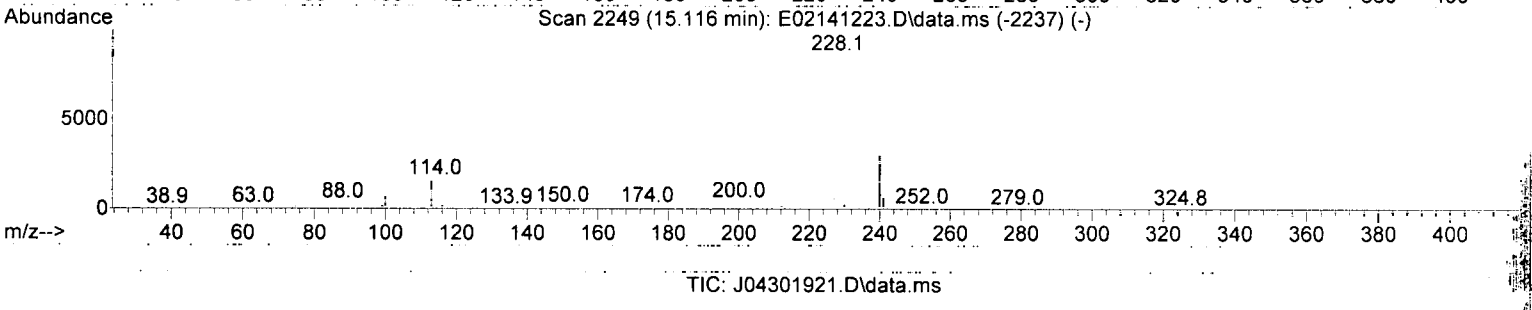
InstName : SV-GCMS10







TIC: J04301921.D\data.ms

(83) Benz(a)anthracene (T)

15.334min (+ 0.000) 24.91 ng/ml

response 9405

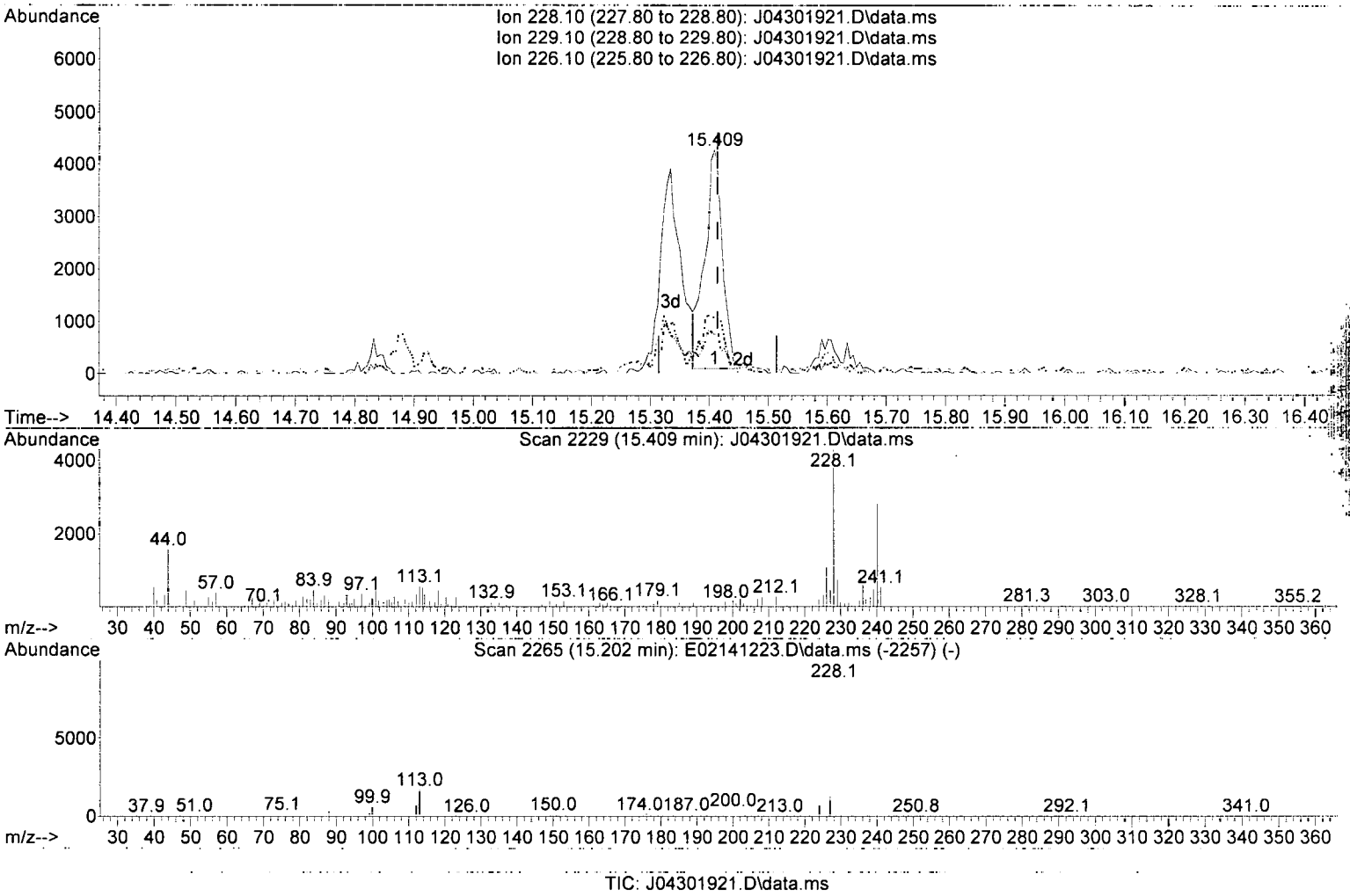
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	19.47
226.10	26.50	24.12
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:56 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(84) Chrysene (T)

15.409min (-0.005) 24.08 ng/ml

response 8819

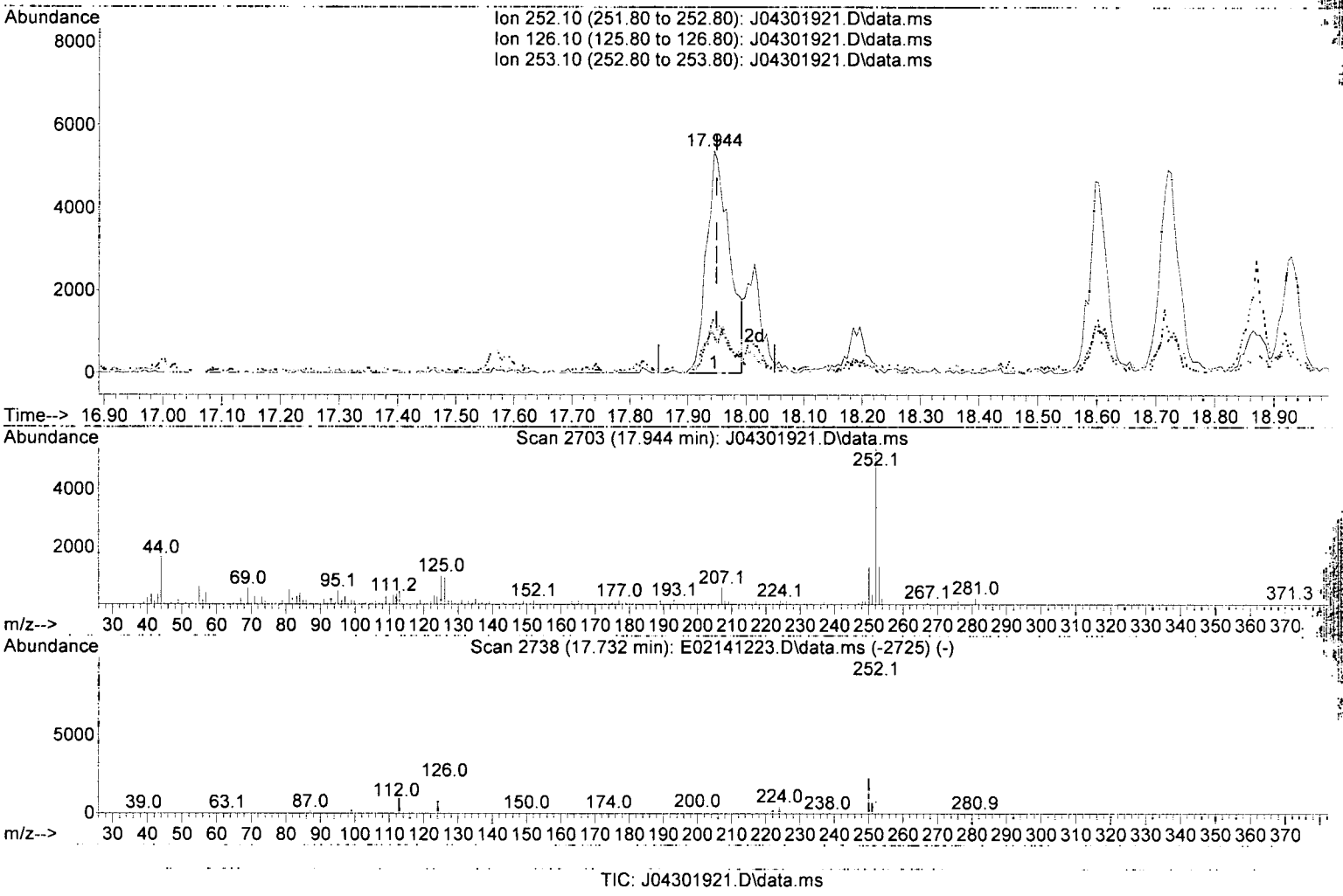
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	17.42
226.10	29.30	25.51
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 07:34:56 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.944min (-0.005) 50.19 ng/ml

response 14919

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	17.29
253.10	22.00	24.68
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-04\9D30020\
Data File : J04301921.D
Acq On : 30 Apr 2019 7:56 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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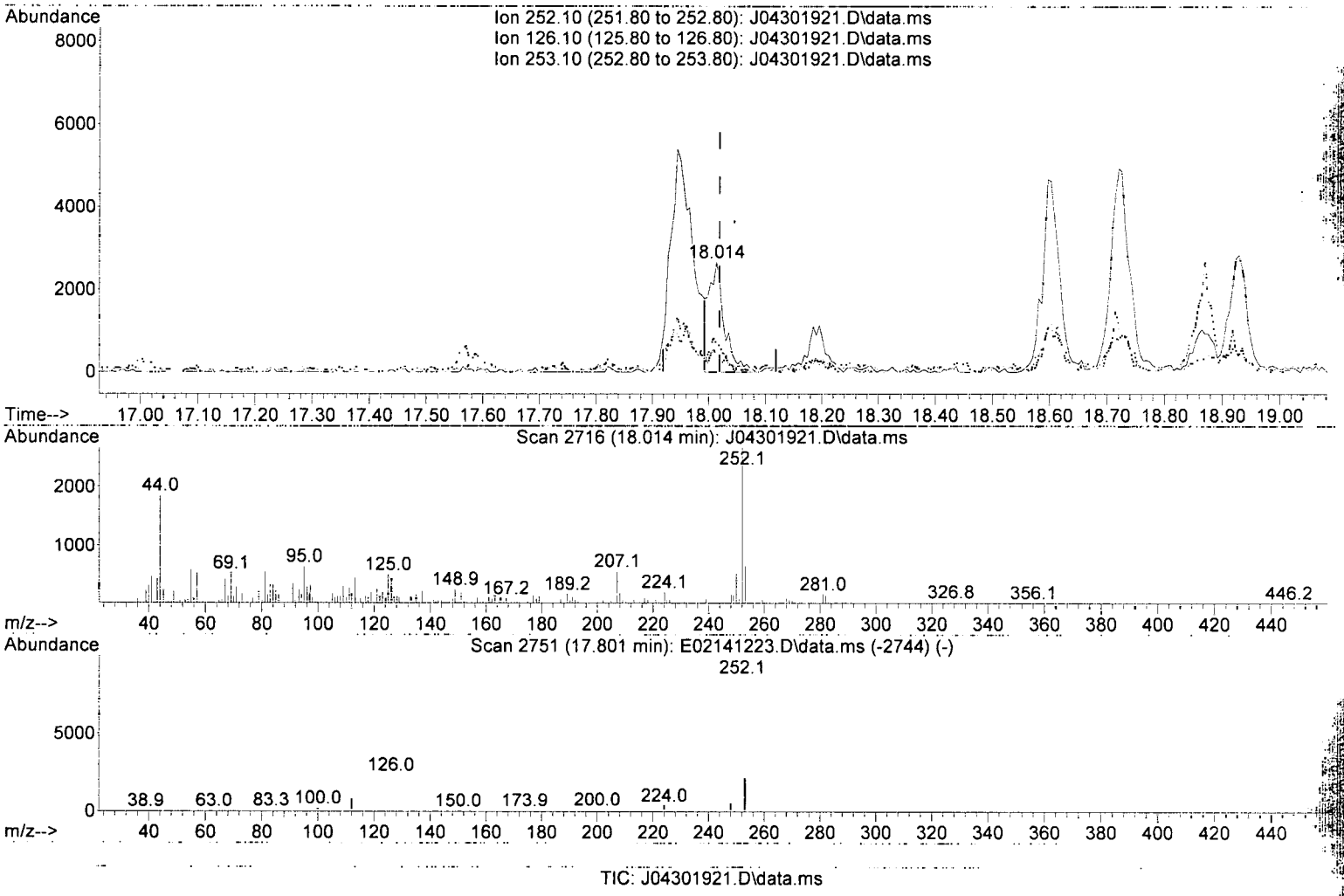
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.014min (-0.005) 23.68 ng/ml (m) AMS 5/1/19

response 5012

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	16.35
253.10	21.70	24.81
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

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Operator : JK/ AMS/ DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 21 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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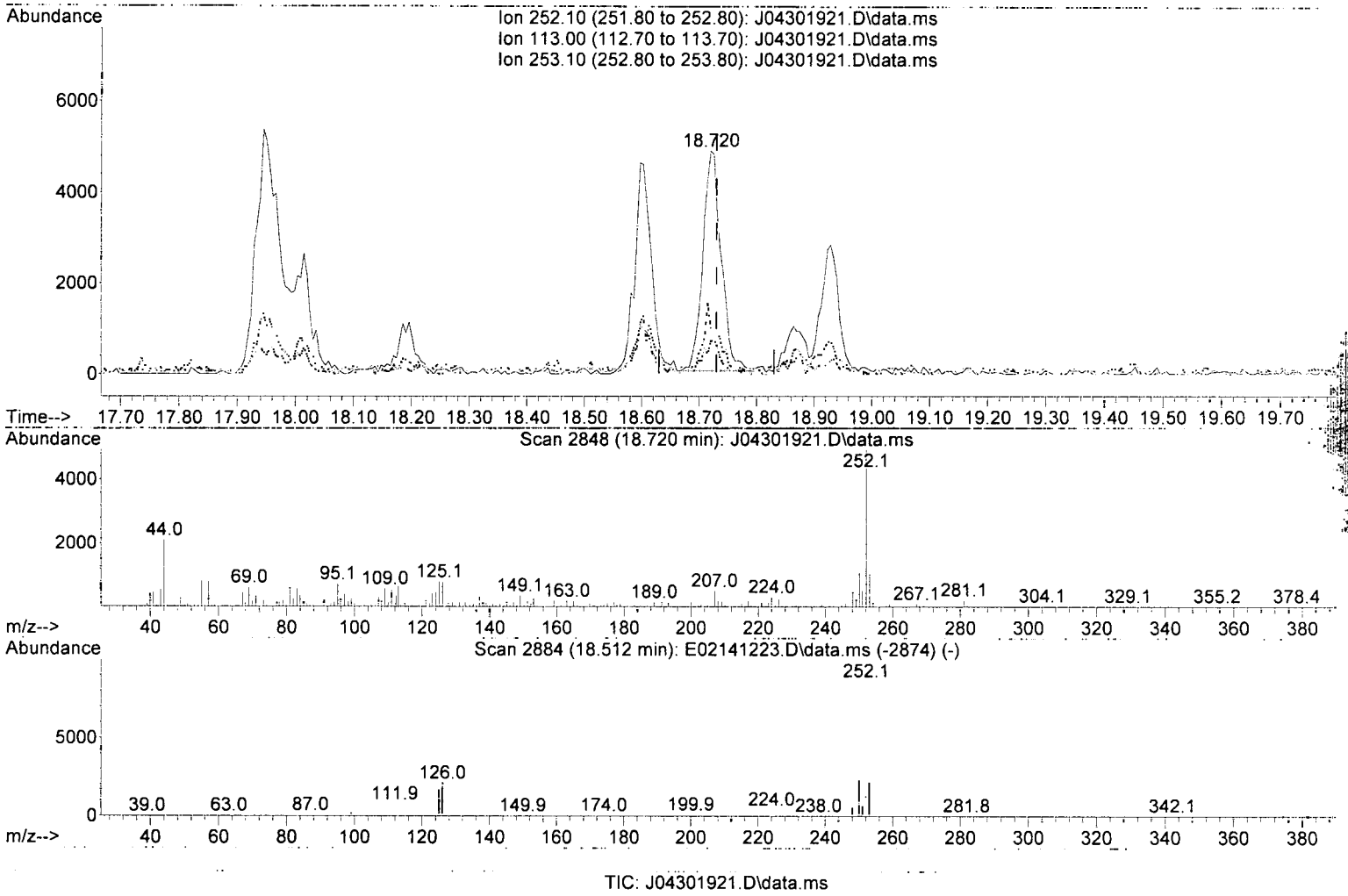
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(92) Benzo(a)pyrene (T)

18.720min (-0.010) 42.77 ng/ml

response 10778

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	14.58
253.10	21.60	20.72
0.00	0.00	0.00

Quantitation Report (Qedit)

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DataAcq Meth:SV10_AQUISITION.M

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Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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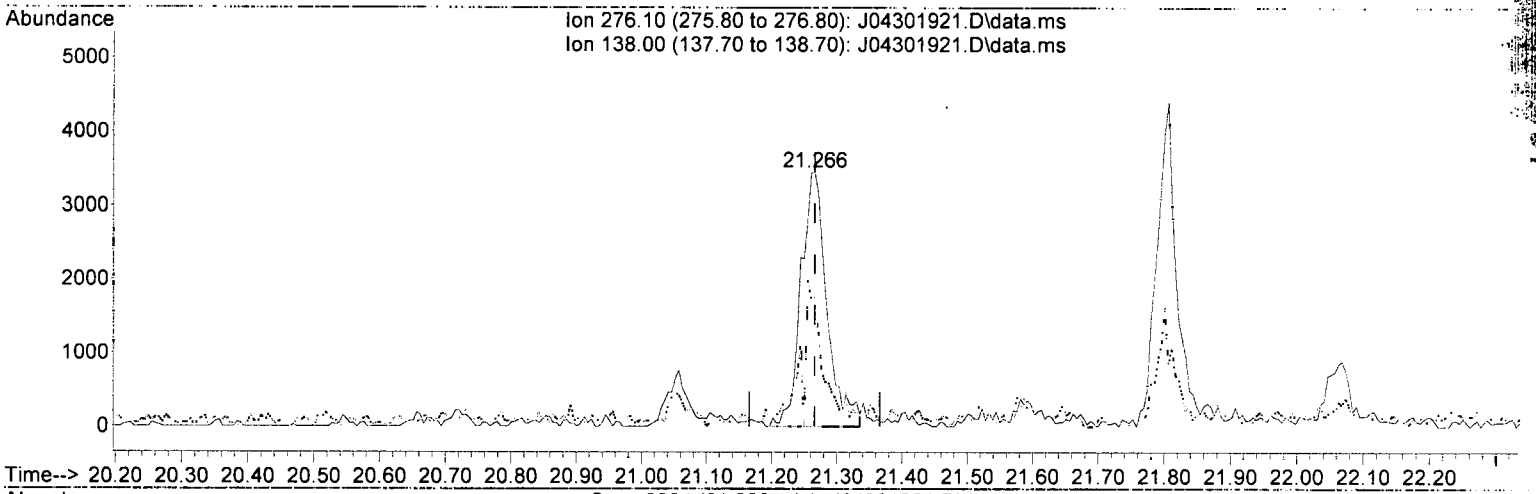
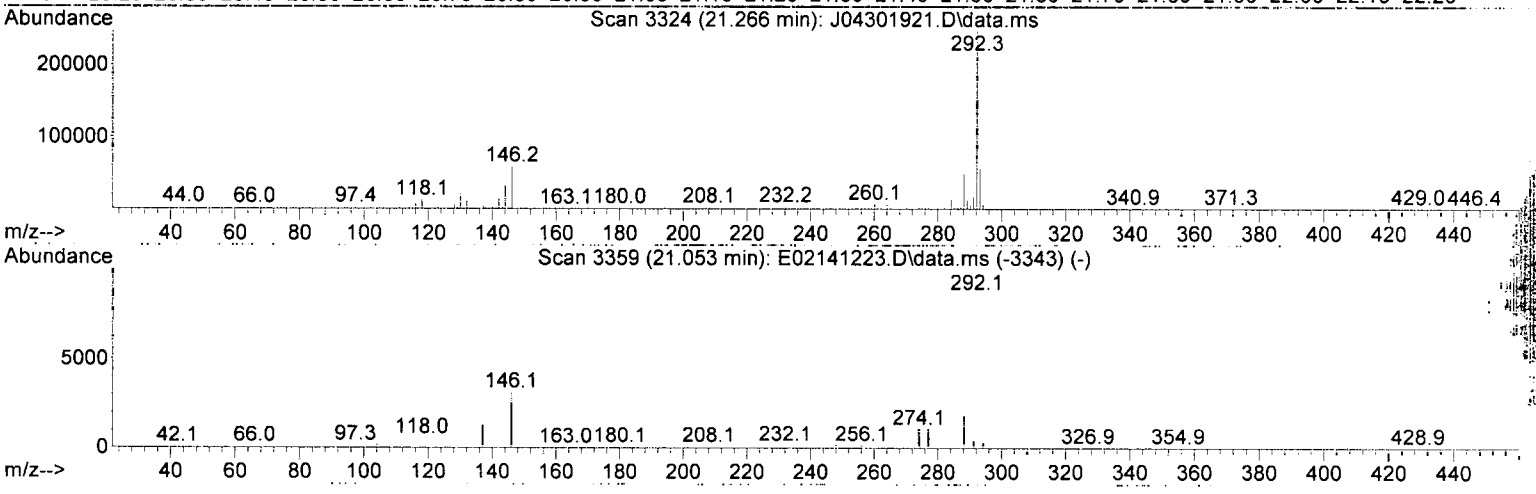
InstName : SV-GCMS10





TIC: J04301921.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.266min (+ 0.000) 29.08 ng/ml

response 9541

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	50.81
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data File : J04301921.D
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Misc : 4x, 8270D LL PAH
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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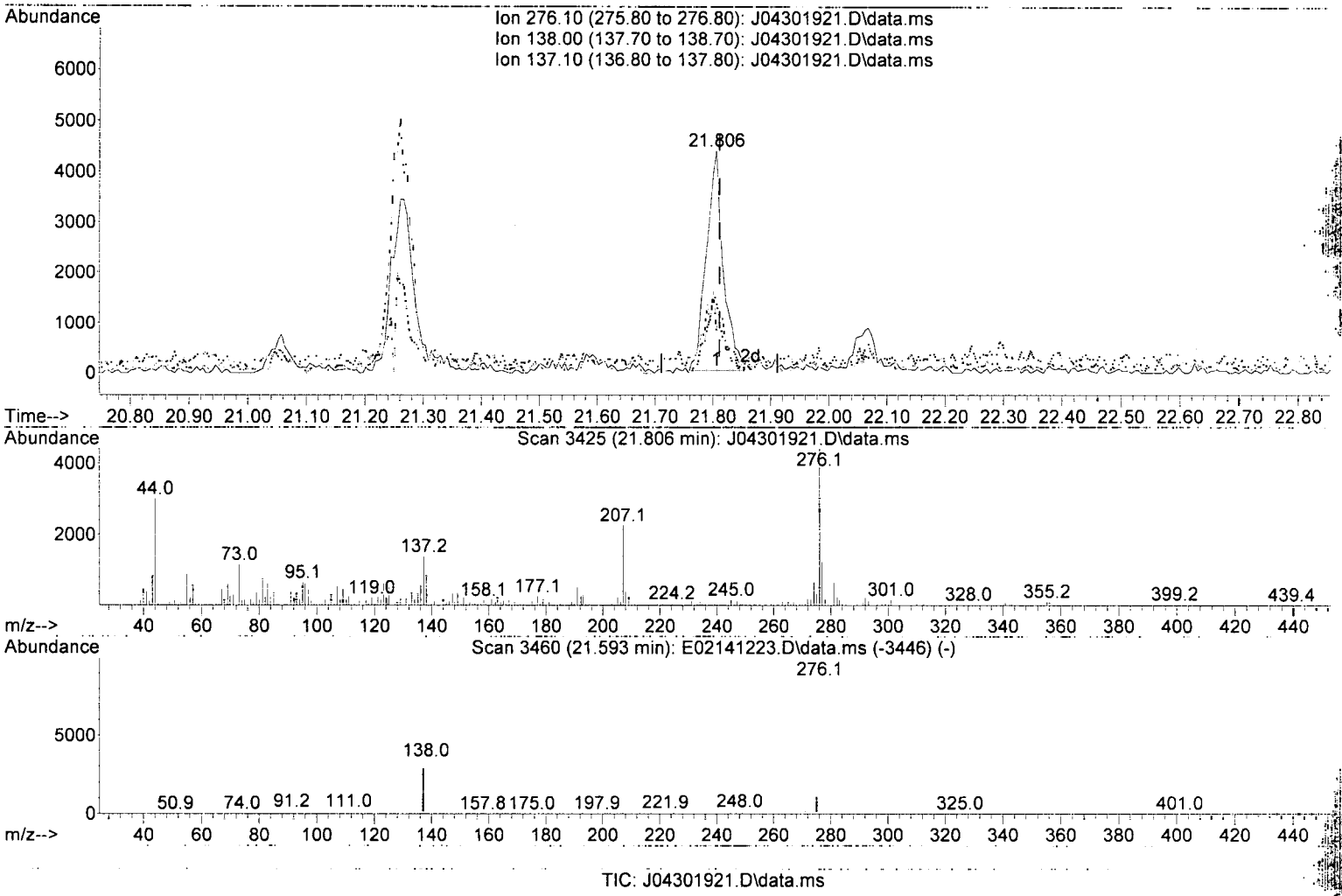
InstName : SV-GCMS10



TIC: J04301921.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.806min (-0.005) 28.00 ng/ml

response 8880

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	19.28
137.10	23.10	31.56
0.00	0.00	0.00

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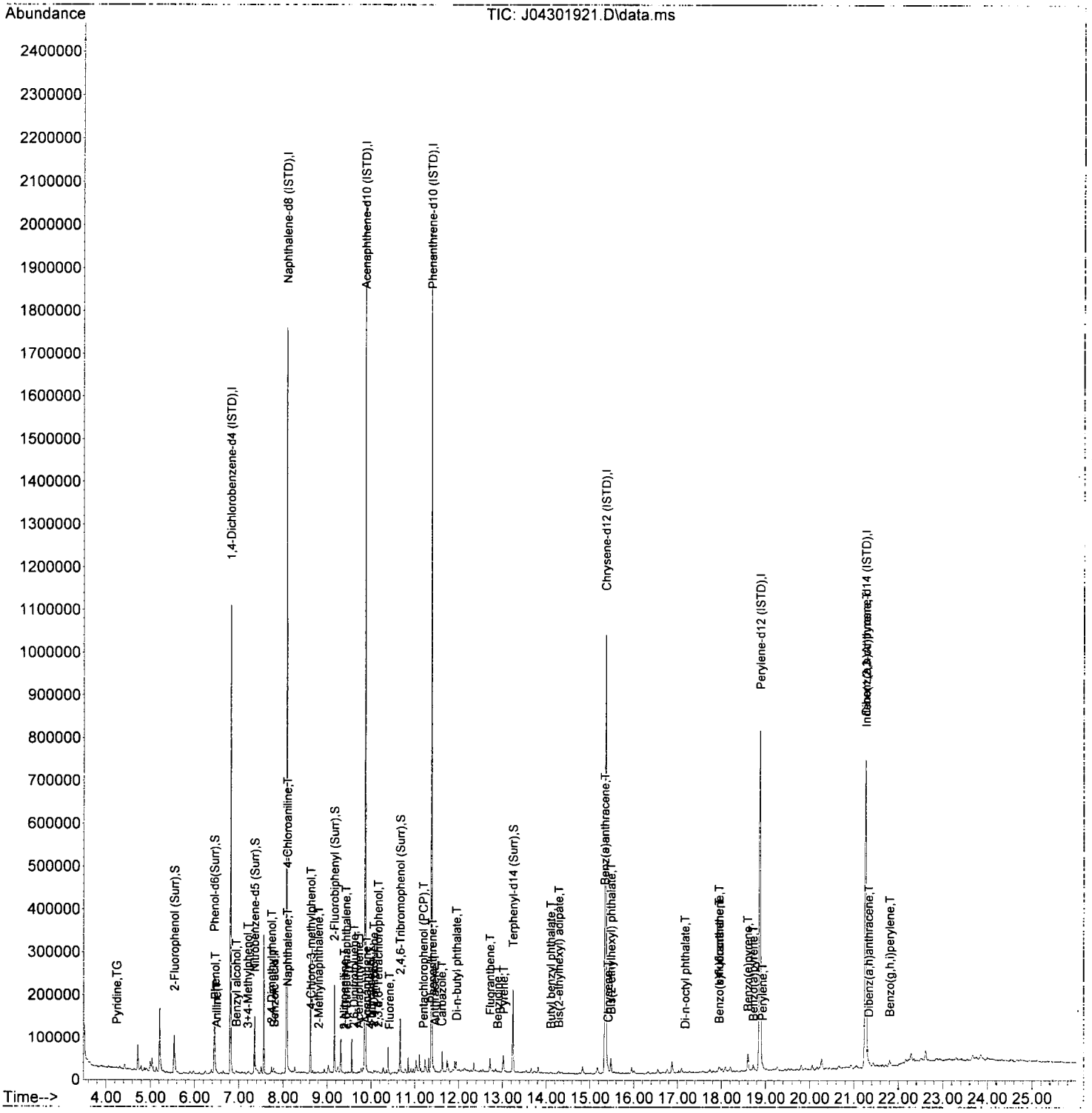
Response via : Initial Calibration
InstName : SV-GCMS10



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Sequence 9E01028 (A9D0674-15RE2,23RE1)

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E01028**	Instrument:	**SV-GCMS10**
Date:	**05/01/19 07:58**	Calibration:	**A9D1505**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E01028-TUN1	Soil	QC	QC			A19B027	A19D323
2	9E01028-IBL1	Soil	QC	QC			A19B027	
3	9E01028-TUN2	Soil	QC	QC			A19B027	A19D323
4	9E01028-CCV1	Soil	QC	QC			A19B027	A19C237
5	9E01028-CCV2	Soil	QC	QC			A19B027	A19D083
6	9E01028-CCB1	Soil	QC	QC			A19B027	
7	A9D0896-01RE2	Water	8270D LL Full List		05/08/19	9041410	A19B027	
8	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
9	A9D0896-02RE1	Water	8270D LL Full List		05/08/19	9041410	A19B027	
10	"	Water	8270D PAH Homologs (Low Level)		05/08/19	9041410	A19B027	
11	A9D0674-23RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
12	A9D0674-15RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9041271	A19B027	
13	A9D0705-23RE1	Soil	8270D LL PAH/PHTH/Phenols		05/01/19	9041290	A19B027	
14	A9D0735-01RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
15	A9D0735-05RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
16	9041393-MS1	Sediment	QC	QC		9041393	A19B027	
17	A9D0735-02RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
18	A9D0735-03RE1	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
19	A9D0735-05RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
20	A9D0735-04RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/02/19	9041393	A19B027	
21	9E01028-IBL2	Soil	QC	QC			A19B027	

Data Entered By: AMS 5/2/19

Data Reviewed By: JR 5/2/19

Comments:

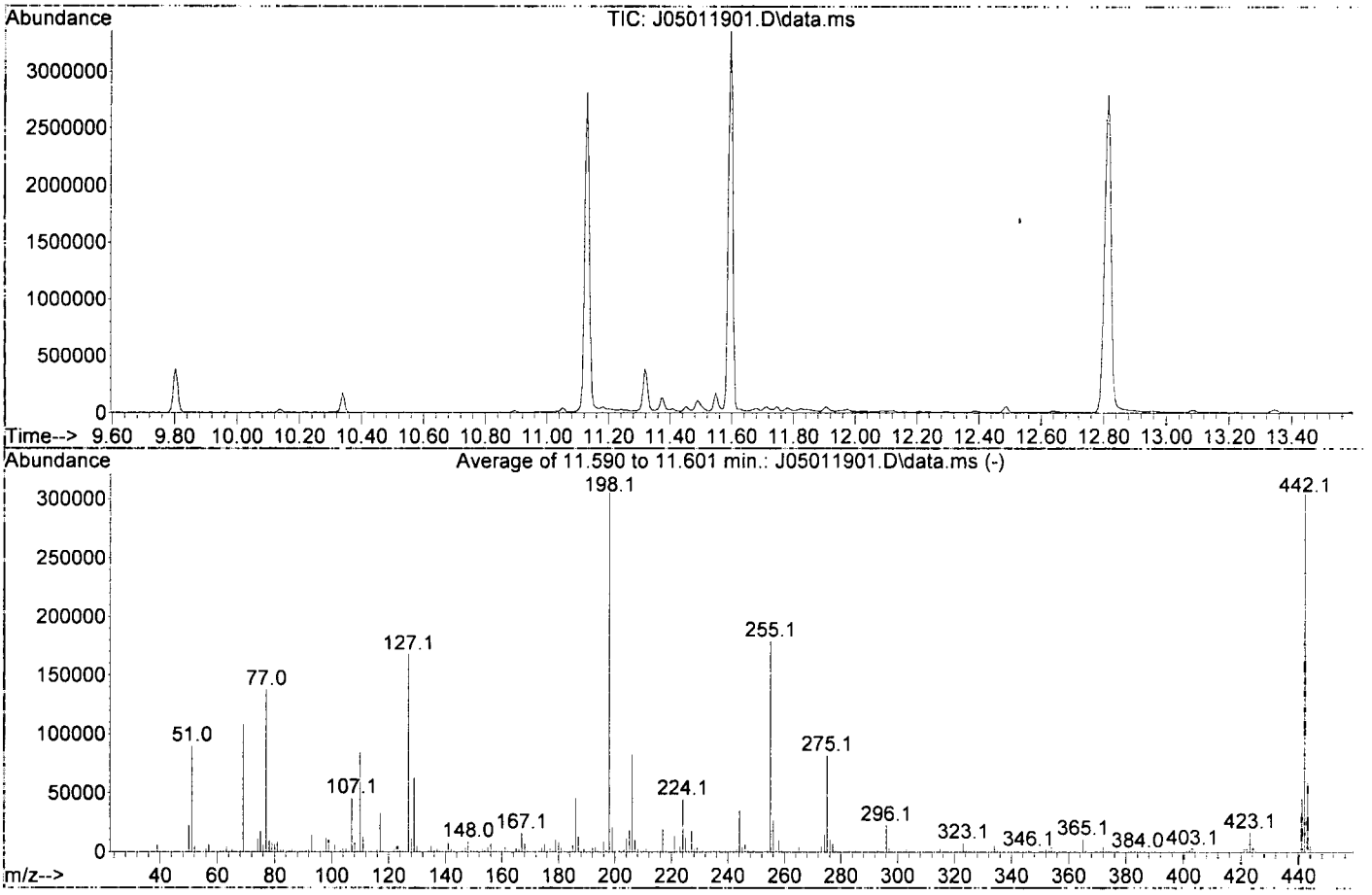
Data Path : T:\data\2019-05\9E01028\
Data File : J05011901.D
Acq On : 1 May 2019 8:04 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

High Breakdown
Changed liner after this run

T-01
AMS
5/1/19

Integration File: rteint.p

Method : T:\methods\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Apr 16 11:00:01 2019



AutoFind: Scans 1515, 1516, 1517; Background Corrected with Scan 1510

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.5	89999	PASS
68	69	0.00	2	1.4	1547	PASS
69	198	0.00	100	35.4	108080	PASS
70	69	0.00	2	0.5	533	PASS
127	198	10	80	55.0	167680	PASS
197	198	0.00	2	0.5	1512	PASS
198	198	100	100	100.0	305131	PASS
199	198	5	9	7.0	21424	PASS
275	198	10	60	27.0	82328	PASS
365	198	1	100	3.6	11058	PASS
441	442	0.01	24	14.8	45453	PASS
442	198	50	200	100.6	306944	PASS
443	442	15	24	19.2	59067	PASS

Data Path : T:\data\2019-05\9E01028\
Data File : J05011901.D
Acq On : 1 May 2019 8:04 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

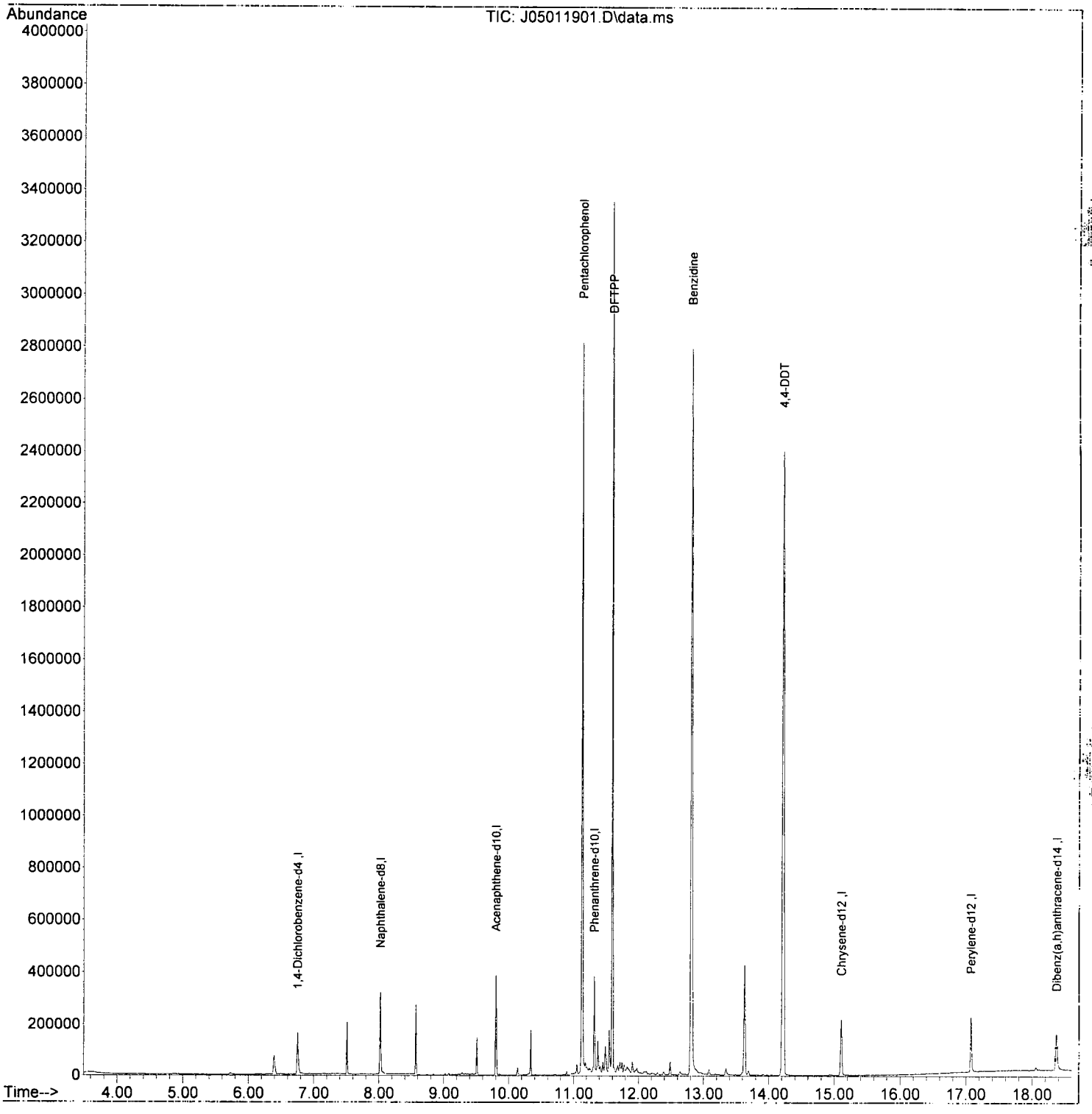
Quant Time: May 01 15:22:56 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.749	150	60243	2.00	ug/mL	0.00
2) Naphthalene-d8	8.022	136	177340	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.803	162	85347	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.317	188	141417	2.00	ug/mL	0.00
11) Chrysene-d12	15.104	240	105146	2.00	ug/mL	0.00
12) Perylene-d12	17.072	264	95134	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.367	292	91941	2.00	ug/mL	0.00
Target Compounds						Qvalue
4) Pentachlorophenol	11.130	266	336396	41.74	ug/mL	98
6) DFTPP	11.601	442	373160	32.69	ug/mL	79
7) Benzidine	12.815	184	1603214	31.87	ug/mL	96
8) 4,4-DDE	13.088	TIC	24996	No Calib		
9) 4,4-DDD	13.628	TIC	577495	No Calib		
10) 4,4-DDT	14.216	TIC	4194214	28.92	ug/mL	98

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

Data Path : T:\data\2019-05\9E01028\
Data File : J05011901.D
Acq On : 1 May 2019 8:04 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 01 15:22:56 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10

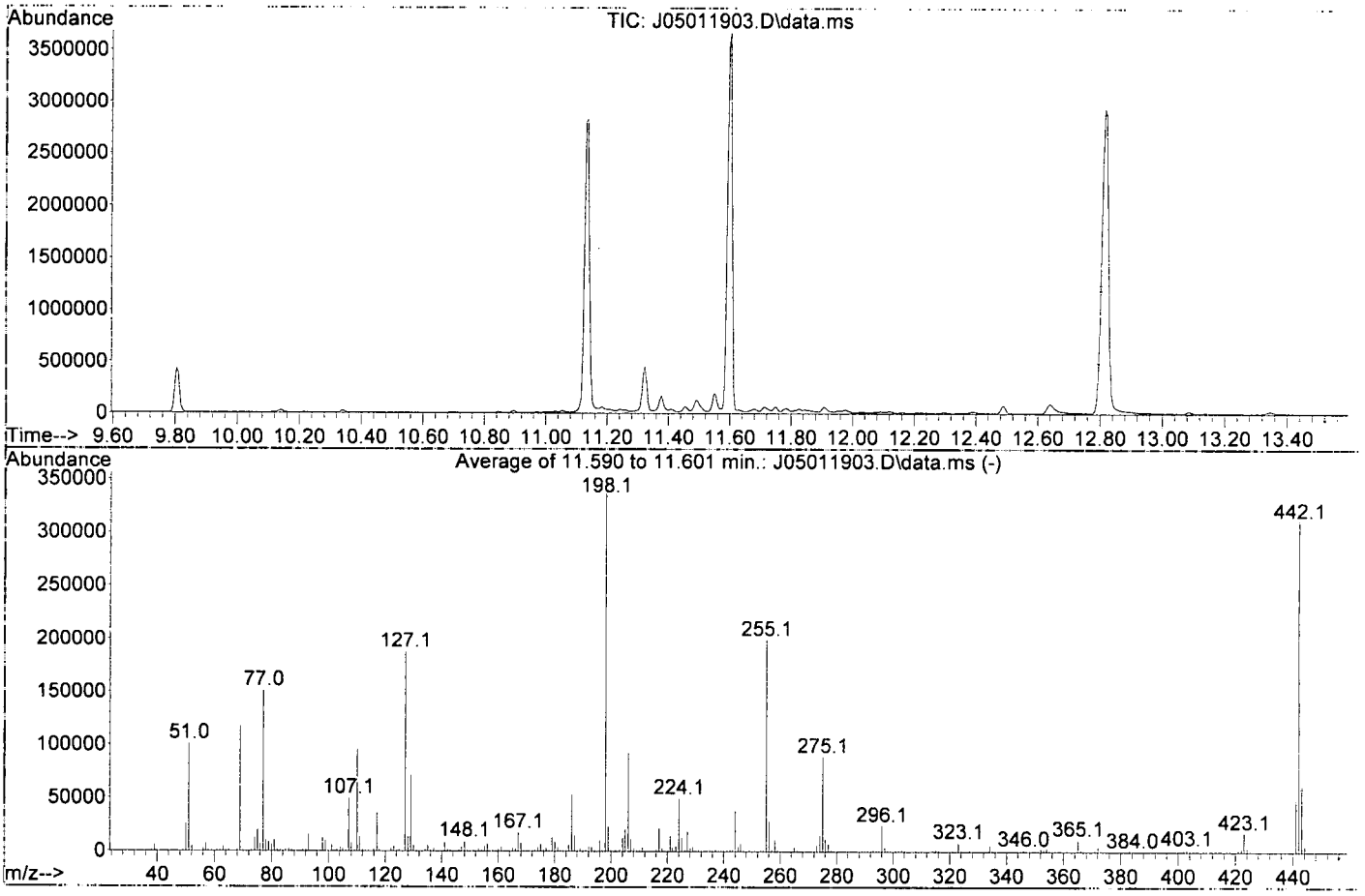


Data Path : T:\data\2019-05\9E01028\
Data File : J05011903.D
Acq On : 1 May 2019 9:20 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : T:\methods\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Apr 16 11:00:01 2019

AMS 5/1/19



AutoFind: Scans 1515, 1516, 1517; Background Corrected with Scan 1510

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.9	101230	PASS
68	69	0.00	2	1.5	1794	PASS
69	198	0.00	100	34.8	117807	PASS
70	69	0.00	2	0.3	310	PASS
127	198	10	80	55.5	187824	PASS
197	198	0.00	2	0.5	1757	PASS
198	198	100	100	100.0	338453	PASS
199	198	5	9	6.8	23165	PASS
275	198	10	60	26.3	89168	PASS
365	198	1	100	3.3	11323	PASS
441	442	0.01	24	15.3	47392	PASS
442	198	50	200	91.7	310424	PASS
443	442	15	24	19.9	61677	PASS

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011903.D
Acq On : 1 May 2019 9:20 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 01 15:23:20 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.755	150	85325	2.00	ug/mL	0.00
2) Naphthalene-d8	8.022	136	200122	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.804	162	99208	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.323	188	163138	2.00	ug/mL	0.00
11) Chrysene-d12	15.104	240	126091	2.00	ug/mL	0.00
12) Perylene-d12	17.072	264	115577	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.361	292	102034	2.00	ug/mL	-0.01
Target Compounds						Qvalue
4) Pentachlorophenol	11.135	266	356474	38.05	ug/mL	94
6) DFTPP	11.601	442	430471	32.69	ug/mL	90
7) Benzidine	12.820	184	1756904	30.27	ug/mL	97
8) 4,4-DDE	13.088	TIC	22086	No Calib		
9) 4,4-DDD	13.628	TIC	8586	No Calib		
10) 4,4-DDT	14.222	TIC	5846484	34.95	ug/mL	98

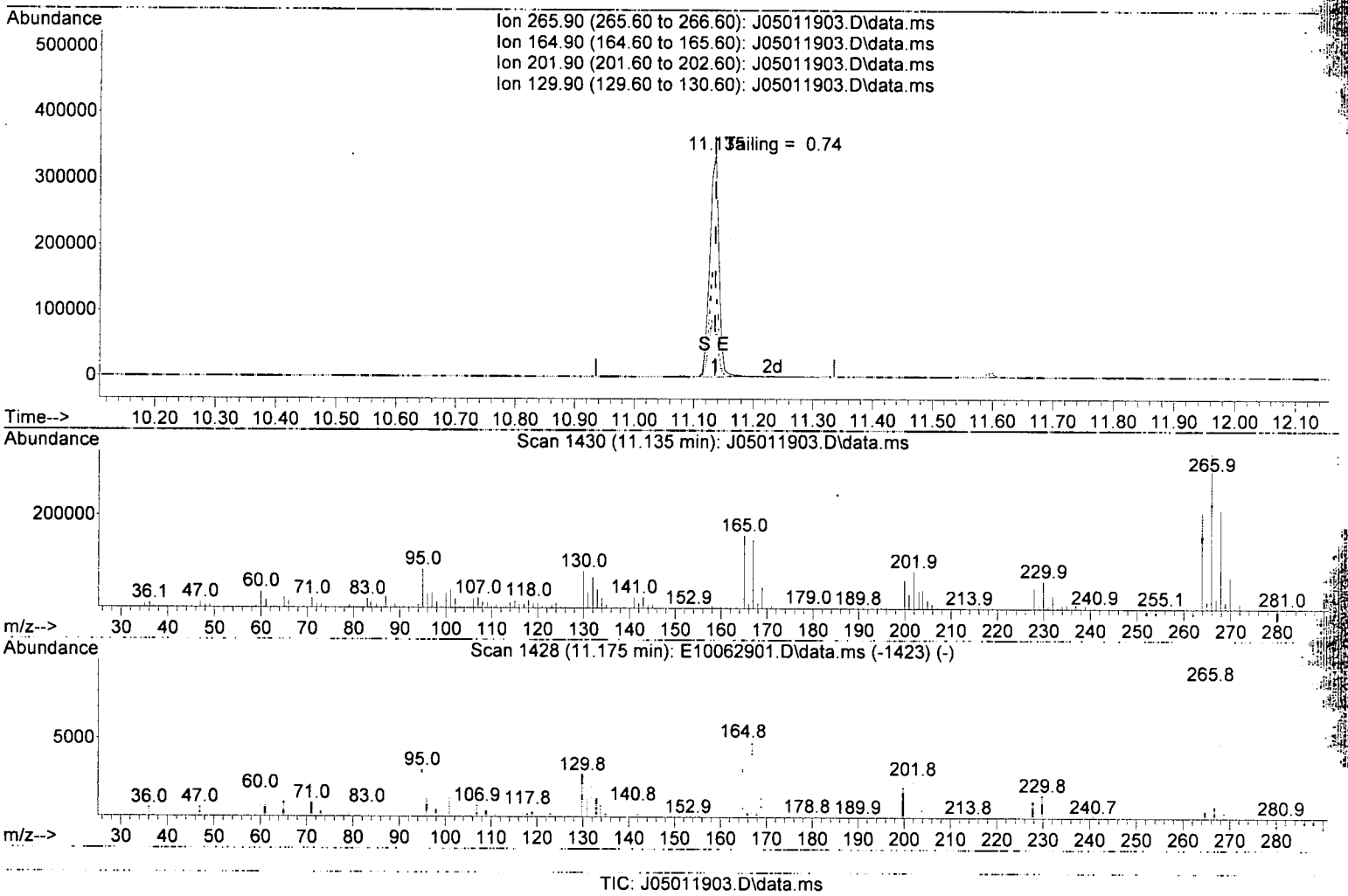
(#) = qualifier out of range (m) = manual integration (+) = signals summed

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011903.D
Acq On : 1 May 2019 9:20 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 01 15:23:20 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011903.D\data.ms

(4) Pentachlorophenol

11.135min (-0.000) 38.05 ug/mL

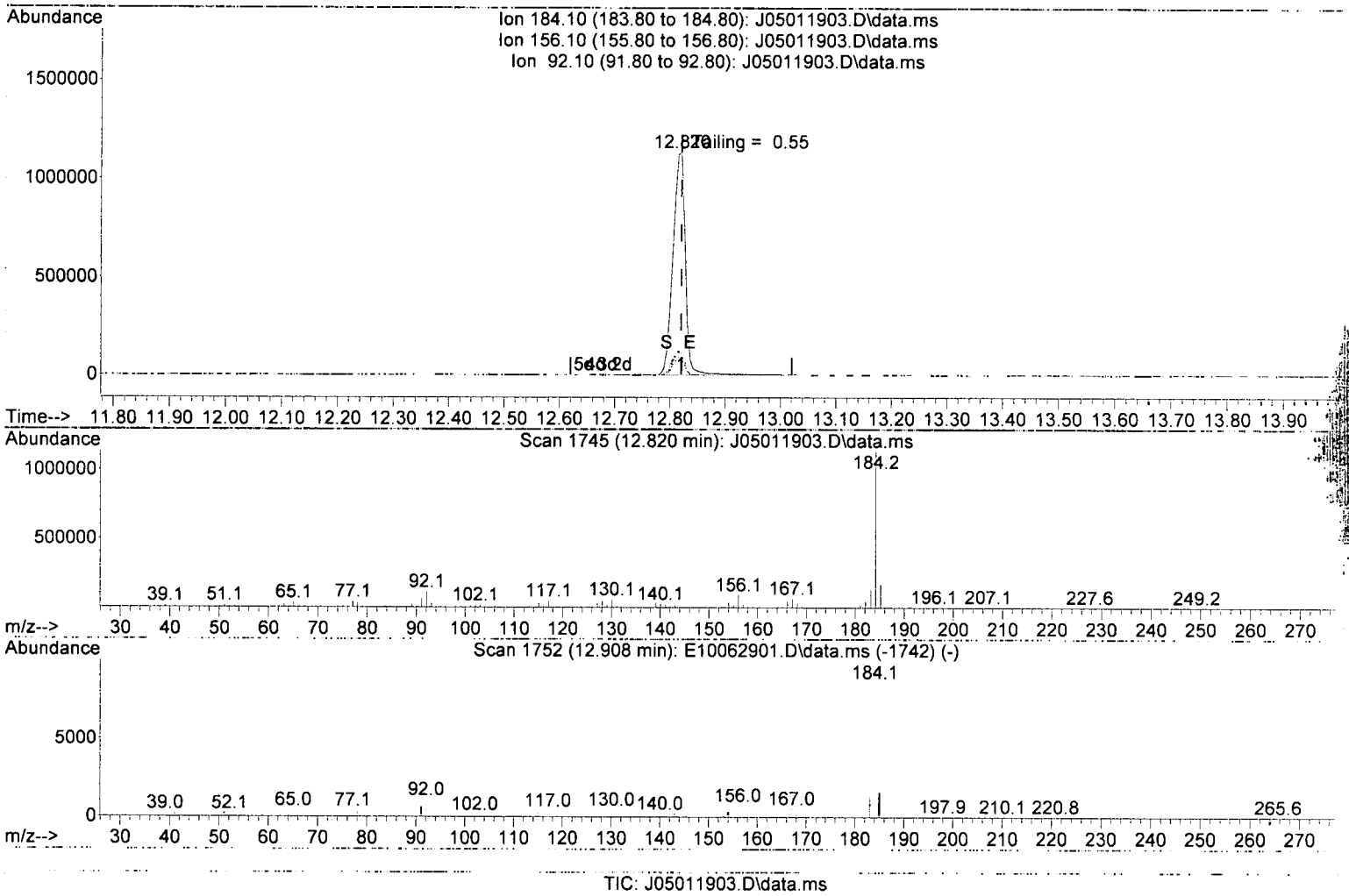
response 356474

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	50.60	46.76
201.90	25.80	23.54
129.90	27.30	23.45

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011903.D
Acq On : 1 May 2019 9:20 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 01 15:23:20 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011903.D\data.ms

(7) Benzidine

12.820min (-0.000) 30.27 ug/mL

response 1756904

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.77
92.10	8.20	9.87
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

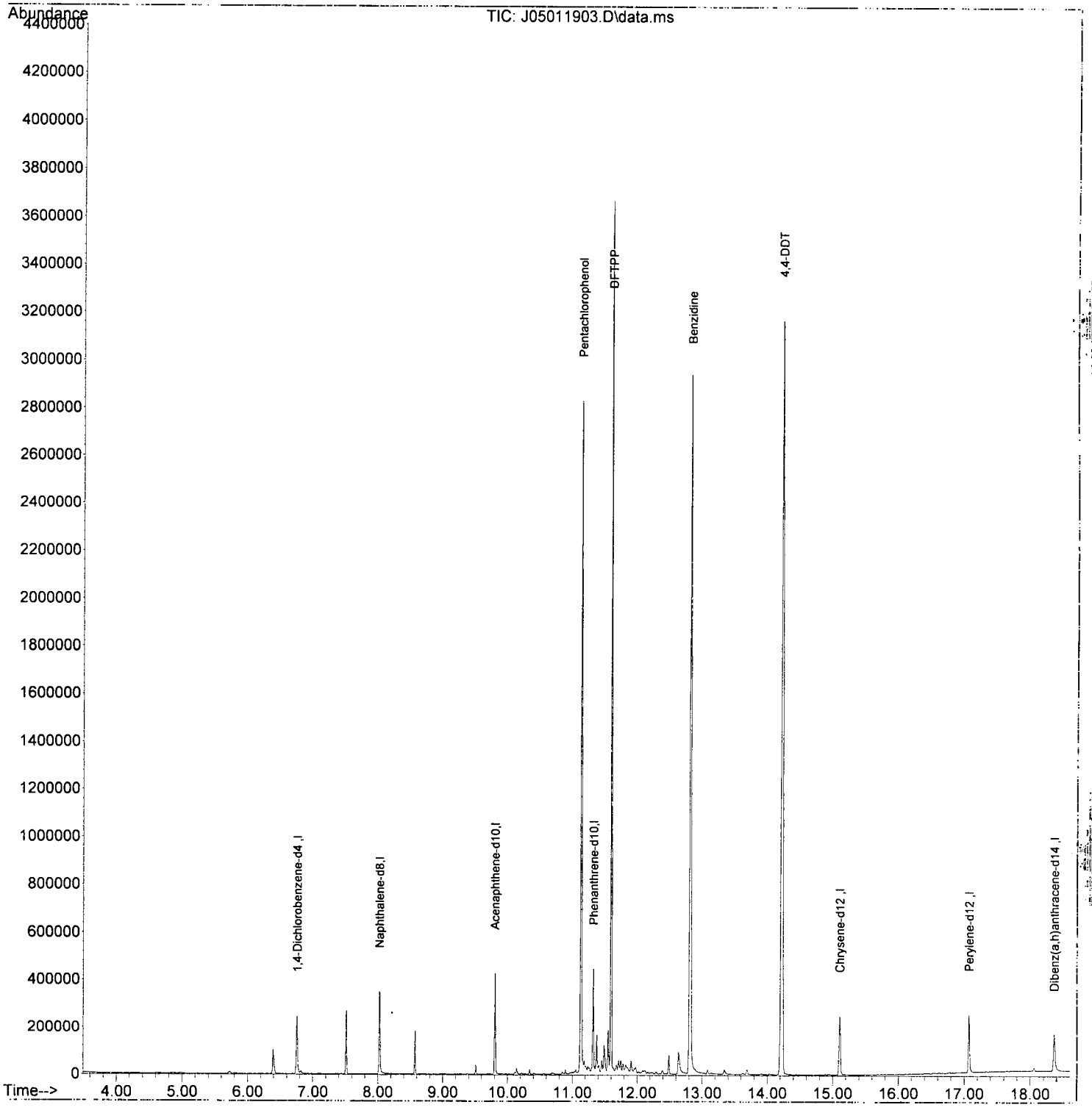
From:
9E01028-TUN2
SV-GCMS10

First Column Area Counts		Percent Breakdown	
DDE	22086		
DDD	8586		
DDT	5846484	0.52	PASS

Breakdown must be less than 20% to accept sample data.

Data Path : T:\data\2019-05\9E01028\
Data File : J05011903.D
Acq On : 1 May 2019 9:20 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 01 15:23:20 2019
Quant Method : T:\methods\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Apr 16 11:00:01 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19

Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	107	0.00
2	TG	N-Nitrosodimethylamine	1000.000	950.715	4.9	100	0.00
3	TG	Pyridine	1000.000	1012.276	-1.2	103	-0.01
4	S	2-Fluorophenol (Surr)	1000.000	1093.304	-9.3	112	0.00
5	S	Phenol-d6(Surr)	1000.000	1112.692	-11.3	113	0.00
6	T	Phenol	1000.000	1053.549	-5.4	120	0.00
7	T	Aniline	1000.000	707.788	29.2#	69	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	1175.342	-17.5	125	0.00
9	T	2-Chlorophenol	1000.000	1097.107	-9.7	108	0.00
10	T	1,3-Dichlorobenzene	1000.000	1030.289	-3.0	108	0.00
11	T	1,4-Dichlorobenzene	1000.000	1022.918	-2.3	110	0.00
12	T	Benzyl alcohol	1000.000	1108.481	-10.8	116	0.00
13	T	1,2-Dichlorobenzene	1000.000	1030.855	-3.1	108	0.00
14	T	2-Methylphenol	1000.000	1199.623	-20.0	114	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	924.878	7.5	95	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1004.525	-0.5	98	0.00
17	T	3+4-Methylphenol	1000.000	1106.381	-10.6	113	0.00
18	T	Hexachloroethane	1000.000	1094.219	-9.4	117	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1052.398	-5.2	114	0.00
20	T	Nitrobenzene	1000.000	1086.297	-8.6	108	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	105	0.00
22	T	Isophorone	1000.000	995.010	0.5	101	0.00
23	T	2-Nitrophenol	1000.000	1165.515	-16.6	120	0.00
24	T	2,4-Dimethylphenol	1000.000	1003.835	-0.4	102	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1071.436	-7.1	102	0.00
26	T	Benzoic acid	2000.000	1639.104	18.0	83	0.00
27	T	2,4-Dichlorophenol	1000.000	1112.359	-11.2	118	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1096.021	-9.6	110	0.00
29	T	Naphthalene	1000.000	1057.034	-5.7	105	0.00
30	T	4-Chloroaniline	1000.000	908.802	9.1	91	0.00
31	T	Hexachlorobutadiene	1000.000	1055.531	-5.6	110	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1052.395	-5.2	112	0.00
33	T	2-Methylnaphthalene	1000.000	1102.470	-10.2	106	0.00
34	T	1-Methylnaphthalene	1000.000	1058.759	-5.9	105	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	109	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1305.296	-30.5#	136	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1040.469	-4.0	118	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1132.384	-13.2	117	0.00
39	T	1,1'-Biphenyl	1000.000	1112.000	-11.2	110	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1126.781	-12.7	111	0.00
41	T	2-Chloronaphthalene	1000.000	1134.431	-13.4	113	0.00
42	T	2-Nitroaniline	1000.000	1124.926	-12.5	125	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1059.894	-6.0	105	0.00
44	T	1,4-Dinitrobenzene	1000.000	1375.331	-37.5#	172	0.00
45	T	Dimethyl phthalate	1000.000	1065.383	-6.5	112	0.00
46	T	1,3-Dinitrobenzene	1000.000	1283.967	-28.4#	147	0.00
47	T	2,6-Dinitrotoluene	1000.000	1110.966	-11.1	118	0.00
48	T	1,2-Dinitrobenzene	1000.000	1139.741	-14.0	123	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
49	T	Acenaphthylene	1000.000	1087.683	-8.8	110	0.00
50	T	3-Nitroaniline	1000.000	1047.679	-4.8	104	0.00
51	T	Acenaphthene	1000.000	1047.314	-4.7	109	0.00
52	T	2,4-Dinitrophenol	1000.000	1346.897	-34.7#	182	0.00
53	T	4-Nitrophenol	1000.000	1132.160	-13.2	127	0.01
54	T	2,4-Dinitrotoluene	1000.000	1165.833	-16.6	130	0.00
55	T	Dibenzofuran	1000.000	1089.760	-9.0	114	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1164.604	-16.5	124	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1143.068	-14.3	121	0.00
58	T	Diethyl phthalate	1000.000	1092.080	-9.2	111	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1078.480	-7.8	112	0.00
60	T	Fluorene	1000.000	1083.897	-8.4	112	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1076.708	-7.7	113	0.00
62	T	4-Nitroaniline	1000.000	1204.643	-20.5#	122	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1484.374	-48.4#	190	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	112	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1099.344	-9.9	114	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1016.136	-1.6	104	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1107.085	-10.7	125	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1079.020	-7.9	113	0.00
69	T	Hexachlorobenzene	1000.000	1005.761	-0.6	111	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1204.153	-20.4#	139	0.00
71	T	Phenanthrene	1000.000	1049.112	-4.9	112	0.00
72	T	Anthracene	1000.000	1093.268	-9.3	115	0.00
73	T	Carbazole	1000.000	1129.213	-12.9	116	0.00
74	T	Di-n-butyl phthalate	1000.000	1132.706	-13.3	116	0.00
75	T	Fluoranthene	1000.000	1140.722	-14.1	117	0.00
76	T	Benzidine	2000.000	1069.207	46.5#	53	0.00
77	T	Pyrene	1000.000	1104.243	-10.4	115	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	117	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1074.277	-7.4	119	0.00
80	T	Butyl benzyl phthalate	1000.000	1097.180	-9.7	125	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	1056.876	-5.7	124	0.00
82	T	3,3-Dichlorobenzidine	2000.000	2128.289	-6.4	105	0.00
83	T	Benz(a)anthracene	1000.000	1048.358	-4.8	120	0.00
84	T	Chrysene	1000.000	1027.420	-2.7	117	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	1042.957	-4.3	119	-0.01
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	121	0.00
87	T	Di-n-octyl phthalate	1000.000	1072.211	-7.2	130	0.00
88	T	Benzo(b)fluoranthene	1000.000	1098.042	-9.8	129	0.00
89	T	Benzo(k)fluoranthene	1000.000	1036.460	-3.6	121	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2140.575	-7.0	125	0.00
91	T	Benzo(e)pyrene	1000.000	1109.447	-10.9	123	0.00
92	T	Benzo(a)pyrene	1000.000	1087.603	-8.8	126	0.00
93	T	Perylene	1000.000	1176.720	-17.7	138	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	125	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
95 T	Indeno(1,2,3-cd)pyrene	1000.000	978.315	2.2	125	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1044.660	-4.5	127	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1077.773	-7.8	123	0.00

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	222998	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	913064	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	444992	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	783014	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.361	240	710488	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.880	264	667303	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.271	292	637372	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	158492	1093.30	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	207487	1112.69	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	175392	1052.40	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	353774	1126.78	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	42650	1107.09	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	359284	1074.28	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.156	74	104466	950.72	ng/ml	90
3) Pyridine	4.166	79	181489	1012.28	ng/ml	88
6) Phenol	6.455	94	219609	1053.55	ng/ml	95
7) Aniline	6.488	93	155178	707.79	ng/ml	98
8) Bis(2-chloroethyl) ether	6.541	93	221915	1175.34	ng/ml	91
9) 2-Chlorophenol	6.605	128	166323	1097.11	ng/ml	94
10) 1,3-Dichlorobenzene	6.755	146	175747	1030.29	ng/ml	99
11) 1,4-Dichlorobenzene	6.824	146	174077	1022.92	ng/ml	98
12) Benzyl alcohol	6.937	108	99934	1108.48	ng/ml	92
13) 1,2-Dichlorobenzene	6.980	146	170737	1030.85	ng/ml	99
14) 2-Methylphenol	7.044	107	140870	1199.62	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.071	45	197609	924.88	ng/ml	84
16) N-Nitrosodi-n-propylamine	7.199	70	124119	1004.52	ng/ml	95
17) 3+4-Methylphenol	7.199	107	173850	1106.38	ng/ml	97
18) Hexachloroethane	7.317	201	50187	1094.22	ng/ml	97
20) Nitrobenzene	7.375	77	172321	1086.30	ng/ml	92
22) Isophorone	7.605	82	338368	995.01	ng/ml	98
23) 2-Nitrophenol	7.691	139	83971	1165.52	ng/ml	96
24) 2,4-Dimethylphenol	7.723	122	140610	1003.83	ng/ml	98
25) Bis(2-chloroethoxy) me...	7.814	93	195420	1071.44	ng/ml	99
26) Benzoic acid	7.803	105	79584	1639.10	ng/ml	95
27) 2,4-Dichlorophenol	7.932	162	125675	1112.36	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.023	180	142140	1096.02	ng/ml	97
29) Naphthalene	8.103	128	499581	1057.03	ng/ml	99
30) 4-Chloroaniline	8.151	127	138372	908.80	ng/ml	96
31) Hexachlorobutadiene	8.231	225	74375	1055.53	ng/ml	96
32) 4-Chloro-3-methylphenol	8.627	107	140814	1052.40	ng/ml	96
33) 2-Methylnaphthalene	8.798	142	341684	1102.47	ng/ml	99
34) 1-Methylnaphthalene	8.900	142	318285	1058.76	ng/ml	99
36) Hexachlorocyclopentadiene	8.964	237	81073	1305.30	ng/ml	99
37) 2,4,6-Trichlorophenol	9.082	196	82615	1040.47	ng/ml	98
38) 2,4,5-Trichlorophenol	9.119	198	80516	1132.38	ng/ml	98
39) 1,1'-Biphenyl	9.269	154	401125	1112.00	ng/ml	99
41) 2-Chloronaphthalene	9.296	162	289390	1134.43	ng/ml	99
42) 2-Nitroaniline	9.392	138	93818	1124.93	ng/ml	90
43) 2,6-Dimethylnaphthalene	9.429	156	280319	1059.89	ng/ml	99

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

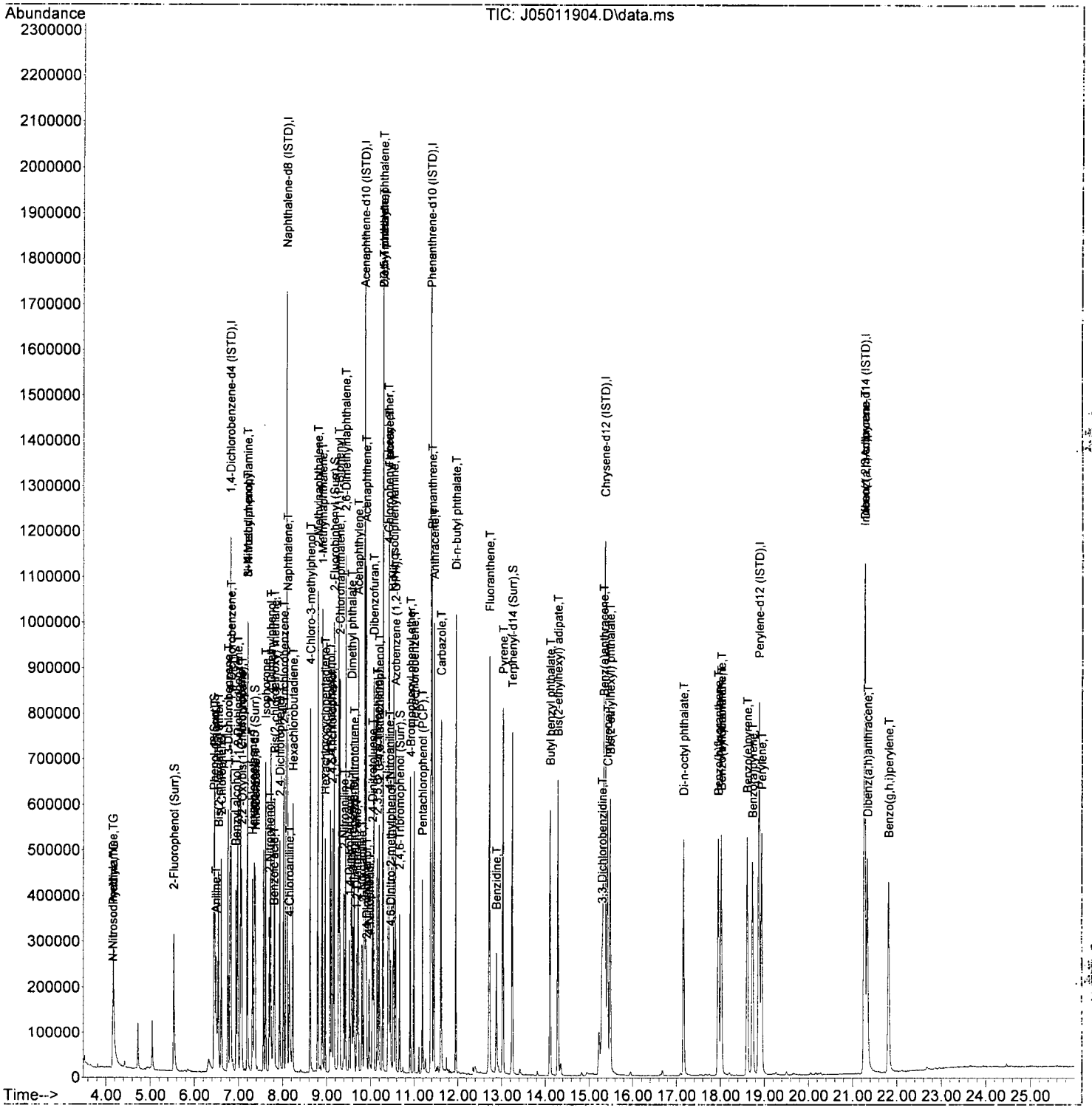
Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	42283	1375.33	ng/ml	93
45) Dimethyl phthalate	9.568	163	329757	1065.38	ng/ml	99
46) 1,3-Dinitrobenzene	9.600	168	49858	1283.97	ng/ml	93
47) 2,6-Dinitrotoluene	9.627	165	72718	1110.97	ng/ml	97
48) 1,2-Dinitrobenzene	9.686	168	33990	1139.74	ng/ml	88
49) Acenaphthylene	9.718	152	484161	1087.68	ng/ml	99
50) 3-Nitroaniline	9.809	138	63736	1047.68	ng/ml	95
51) Acenaphthene	9.895	153	299824	1047.31	ng/ml	99
52) 2,4-Dinitrophenol	9.911	184	17276	1346.90	ng/ml	96
53) 4-Nitrophenol	9.970	139	49033	1132.16	ng/ml	99
54) 2,4-Dinitrotoluene	10.039	165	93788	1165.83	ng/ml	94
55) Dibenzofuran	10.071	168	407580	1089.76	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	65960	1164.60	ng/ml	94
57) 2,3,4,6-Tetrachlorophenol	10.194	232	69896	1143.07	ng/ml	95
58) Diethyl phthalate	10.280	149	322840	1092.08	ng/ml	98
59) 2,3,5-Trimethylnaphtha...	10.280	170	255011	1078.48	ng/ml	97
60) Fluorene	10.419	166	317454	1083.90	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.408	204	144307	1076.71	ng/ml	98
62) 4-Nitroaniline	10.429	138	67422	1204.64	ng/ml	96
63) 4,6-Dinitro-2-methylph...	10.462	198	34723	1484.37	ng/ml	86
65) N-Nitrosodiphenylamine	10.526	169	265024	1099.34	ng/ml	99
66) Azobenzene (1,2-DPH)	10.569	77	331546	1016.14	ng/ml	94
68) 4-Bromophenyl phenyl e...	10.911	248	83164	1079.02	ng/ml	96
69) Hexachlorobenzene	10.991	284	94517	1005.76	ng/ml	96
70) Pentachlorophenol (PCP)	11.184	266	51078	1204.15	ng/ml	94
71) Phenanthrene	11.403	178	445749	1049.11	ng/ml	99
72) Anthracene	11.451	178	452394	1093.27	ng/ml	99
73) Carbazole	11.612	167	395444	1129.21	ng/ml	99
74) Di-n-butyl phthalate	11.948	149	542338	1132.71	ng/ml	100
75) Fluoranthene	12.719	202	483339	1140.72	ng/ml	98
76) Benzidine	12.879	184	160333	1069.21	ng/ml	98
77) Pyrene	13.034	202	482170	1104.24	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	228107	1097.18	ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.286	129	213967	1056.88	ng/ml	97
82) 3,3-Dichlorobenzidine	15.297	252	132119	2128.29	ng/ml	94
83) Benz(a)anthracene	15.334	228	406443	1048.36	ng/ml	100
84) Chrysene	15.420	228	386495	1027.42	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.479	149	311266	1042.96	ng/ml	98
87) Di-n-octyl phthalate	17.158	149	494566	1072.21	ng/ml	96
88) Benzo(b)fluoranthene	17.950	252	423274	1098.04	ng/ml	98
89) Benzo(k)fluoranthene	18.019	252	405027	1036.46	ng/ml	98
90) Benzo(b+k)fluoranthene	18.019	252	844745	2140.58	ng/ml	98
91) Benzo(e)pyrene	18.613	252	405962	1109.45	ng/ml	98
92) Benzo(a)pyrene	18.731	252	382980	1087.60	ng/ml	99
93) Perylene	18.939	252	398593	1176.72	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.266	276	348828	978.31	ng/ml	97
96) Dibenz(a,h)anthracene	21.335	278	333198	1044.66	ng/ml	92
97) Benzo(g,h,i)perylene	21.817	276	371434	1077.77	ng/ml	96

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

Data Path : T:\data\2019-05\9E01028\
Data File : J05011904.D
Acq On : 1 May 2019 9:48 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV1
Misc : 1x, A19C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:24:45 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E01028\
Data File : J05011905.D
Acq On : 1 May 2019 10:24 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19

Quant Time: May 01 15:25:14 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	120	0.00
2	S	Nitrobenzene-d5 (Surr)	1000.000	1131.929	-13.2	125	0.00
3	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	118	0.00
4	T	Decalin	1000.000	1109.392	-10.9	121	0.00
5	T	C-1 Decalin	1000.000	0.000	100.0#	0	-7.78#
6	T	C-2 Decalin	1000.000	0.000	100.0#	0	-8.28#
7	T	C-3 Decalin	1000.000	0.000	100.0#	0	-8.98#
8	T	C-4 Decalin	1000.000	0.000	100.0#	0	-9.55#
9	T	Naphthalene	1000.000	1060.350	-6.0	116	0.00
10	T	2-Methylnaphthalene	1000.000	1138.715	-13.9	120	0.00
11	T	C-1 Naphthalenes	1000.000	1040.642	-4.1	110	0.05
12	T	1-Methylnaphthalene	1000.000	1062.963	-6.3	112	0.00
13	T	1,1'-Biphenyl	1000.000	1134.252	-13.4	116	0.00
14	T	2,6-Dimethylnaphthalene	1000.000	1086.058	-8.6	112	0.00
15	T	C-2 Naphthalenes	1000.000	174.025	82.6#	18	0.16
16	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	111	0.00
17	S	2-Fluorobiphenyl (Surr)	1000.000	1181.091	-18.1	117	0.00
18	S	Acenaphthylene d-8 (Surr)	1000.000	1131.419	-13.1	114	0.00
19	T	Acenaphthylene	1000.000	1121.435	-12.1	112	0.00
20	T	Acenaphthene	1000.000	1051.709	-5.2	110	0.00
21	T	Dibenzofuran	1000.000	1084.227	-8.4	111	0.00
22	T	1,6,7-Trimethylnaphthalene	1000.000	1104.750	-10.5	114	0.00
23	T	C-3 Naphthalenes	1000.000	1.438	99.9#	0	-0.05
24	T	C-4 Naphthalenes	1000.000	0.324	100.0#	0	0.12
25	T	Fluorene	1000.000	1119.908	-12.0	113	0.00
26	T	C-1 Fluorenes	1000.000	1.020	99.9#	0	-0.11
27	T	C-2 Fluorenes	1000.000	0.000	100.0#	0	-11.58#
28	T	C-3 Fluorenes	1000.000	0.169	100.0#	0	0.00
29	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	113	0.00
30	T	Dibenzothiopene	1000.000	1084.113	-8.4	115	0.00
31		C-1 Dibenzothiophene	1000.000	0.000	100.0#	0	-11.85#
32		C-2 Dibenzothiophene	1000.000	0.000	100.0#	0	-12.35#
33		C-3 Dibenzothiophene	1000.000	0.000	100.0#	0	-12.90#
34		C-4 Dibenzothiophene	1000.000	0.000	100.0#	0	-13.68#
35	T	Phenanthrene	1000.000	1032.308	-3.2	111	0.00
36	T	Anthracene	1000.000	1089.145	-8.9	113	0.00
37	T	1-Methylphenanthrene	1000.000	1112.339	-11.2	114	0.00
38	T	C-1 Phenanthrene/anthracene	1000.000	1114.892	-11.5	114	-0.02
39	T	C-2 Phenanthrene/anthracene	1000.000	0.000	100.0#	0	-12.55#
40	T	C-3 Phenanthrene/anthracene	1000.000	0.267	100.0#	0	0.03
41	T	C-4 Phenanthrene/anthracene	1000.000	0.000	100.0#	0	-13.87#
42	T	Fluoranthene	1000.000	1142.010	-14.2	115	0.00
43	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	117	0.00
44	T	Pyrene	1000.000	1064.147	-6.4	113	0.00
45	T	C-1 Fluoranthene/pyrenes	1000.000	2.649	99.7#	0	-0.01
46	S	Terphenyl-d14 (Surr)	1000.000	1050.355	-5.0	115	0.00

Evaluate Continuing Calibration Report

Data Path : T:\data\2019-05\9E01028\
Data File : J05011905.D
Acq On : 1 May 2019 10:24 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:14 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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)
47	T	Benz(a)anthracene	1000.000	1066.793	-6.7	122	0.00
48	T	Chrysene	1000.000	1019.910	-2.0	116	0.00
49	T	C-1 Benz(a)anthracene/Chrys	1000.000	1.478	99.9#	0	0.28
50	T	C-2 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-17.55#
51	T	C-3 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-18.42#
52		C-4 Benz(a)anthracene/Chrys	1000.000	0.000	100.0#	0	-20.01#
53	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	118	0.00
54	T	Benzo(b)fluoranthene	1000.000	1129.233	-12.9	124	0.00
55	T	Benzo(k)fluoranthene	1000.000	1124.329	-12.4	123	0.00
56	T	Benzo(b+k)fluoranthene	2000.000	2224.217	-11.2	123	0.00
57	S	Benzo(a)pyrene d-12 (Surr)	1000.000	1071.973	-7.2	122	0.00
58	T	Benzo(e)pyrene	1000.000	1086.996	-8.7	122	0.00
59	T	Benzo(a)pyrene	1000.000	1121.510	-12.2	124	0.00
60	T	Perylene	1000.000	1057.294	-5.7	117	0.00
61	I	Dibenz(a,h)Anthrcene-d14(IS	2000.000	2000.000	0.0	125	0.00
62	T	Indeno(1,2,3-cd)Pyrene	1000.000	1015.717	-1.6	126	0.00
63	T	Dibenz(a,h)anthracene	1000.000	1085.802	-8.6	128	0.00
64	T	Benzo(g,h,i)perylene	1000.000	1020.188	-2.0	122	0.00

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

Data Path : T:\data\2019-05\9E01028\
Data File : J05011905.D
Acq On : 1 May 2019 10:24 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19

Quant Time: May 01 15:25:14 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	242457	2000.00	ng/ml	0.00
3) Naphthalene-d8 (ISTD)	8.081	136	950006	2000.00	ng/ml	0.00
16) Acenaphthene-d10 (ISTD)	9.862	162	444343	2000.00	ng/ml	0.00
29) Phenanthrene-d10 (ISTD)	11.376	188	762894	2000.00	ng/ml	0.00
43) Chrysene-d12 (ISTD)	15.355	240	681646	2000.00	ng/ml	0.00
53) Perylene-d12 (ISTD)	18.875	264	623711	2000.00	ng/ml	0.00
61) Dibenz(a,h)Anthrcene-d...	21.266	292	603447	2000.00	ng/ml	0.00
System Monitoring Compounds						
2) Nitrobenzene-d5 (Surr)	7.354	82	168138	1131.93	ng/ml	0.00
17) 2-Fluorobiphenyl (Surr)	9.162	172	342214	1181.09	ng/ml	0.00
18) Acenaphthylene d-8 (Surr)	9.702	160	443471	1131.42	ng/ml	0.00
46) Terphenyl-d14 (Surr)	13.243	244	329997	1050.35	ng/ml	0.00
57) Benzo(a)pyrene d-12 (S...	18.677	264	291525	1071.97	ng/ml	0.00
Target Compounds						Qvalue
4) Decalin	7.536	138	73710	1109.39	ng/ml	88
5) C-1 Decalin	0.000		0	N.D.		
6) C-2 Decalin	0.000		0	N.D.		
7) C-3 Decalin	0.000		0	N.D.		
8) C-4 Decalin	0.000		0	N.D.		
9) Naphthalene	8.103	128	526028	1060.35	ng/ml	99
10) 2-Methylnaphthalene	8.798	142	340619	1138.71	ng/ml	98
11) C-1 Naphthalenes	8.900	142	311283	1040.64	ng/ml	98
12) 1-Methylnaphthalene	8.900	142	315231	1062.96	ng/ml	99
13) 1,1'-Biphenyl	9.269	154	390262	1134.25	ng/ml	98
14) 2,6-Dimethylnaphthalene	9.429	156	285293	1086.06	ng/ml	98
15) C-2 Naphthalenes	9.702	156	45714	174.02	ng/ml	63
19) Acenaphthylene	9.718	152	494329	1121.44	ng/ml	99
20) Acenaphthene	9.894	153	318915	1051.71	ng/ml	100
21) Dibenzofuran	10.071	168	397176	1084.23	ng/ml	98
22) 1,6,7-Trimethylnaphtha...	10.280	170	258875	1104.75	ng/ml	96
23) C-3 Naphthalenes	10.183	170	337	N.D.		
24) C-4 Naphthalenes	10.969	184	76	N.D.		
25) Fluorene	10.419	166	330428	1119.91	ng/ml	99
26) C-1 Fluorenes	10.857	180	301	N.D.		
27) C-2 Fluorenes	0.000		0	N.D.		
28) C-3 Fluorenes	12.440	208	50	N.D.		
30) Dibenzothiopene	11.274	184	417256	1084.11	ng/ml	99
31) C-1 Dibenzothiophene	0.000		0	N.D.		
32) C-2 Dibenzothiophene	0.000		0	N.D.		
33) C-3 Dibenzothiophene	0.000		0	N.D.		
34) C-4 Dibenzothiophene	0.000		0	N.D.		
35) Phenanthrene	11.403	178	439378	1032.31	ng/ml	99
36) Anthracene	11.456	178	430755	1089.14	ng/ml	99
37) 1-Methylphenanthrene	12.034	192	316330	1112.34	ng/ml	100
38) C-1 Phenanthrene/anthr...	12.034	192	317056	1114.89	ng/ml#	100
39) C-2 Phenanthrene/anthr...	0.000		0	N.D.		
40) C-3 Phenanthrene/anthr...	13.237	220	76	N.D.		
41) C-4 Phenanthrene/anthr...	0.000		0	N.D.		
42) Fluoranthene	12.718	202	466995	1142.01	ng/ml	98
44) Pyrene	13.029	202	475969	1064.15	ng/ml	99
45) C-1 Fluoranthene/pyrenes	13.660	216	1185	2.65	ng/ml#	100

Data Path : T:\data\2019-05\9E01028\
Data File : J05011905.D
Acq On : 1 May 2019 10:24 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

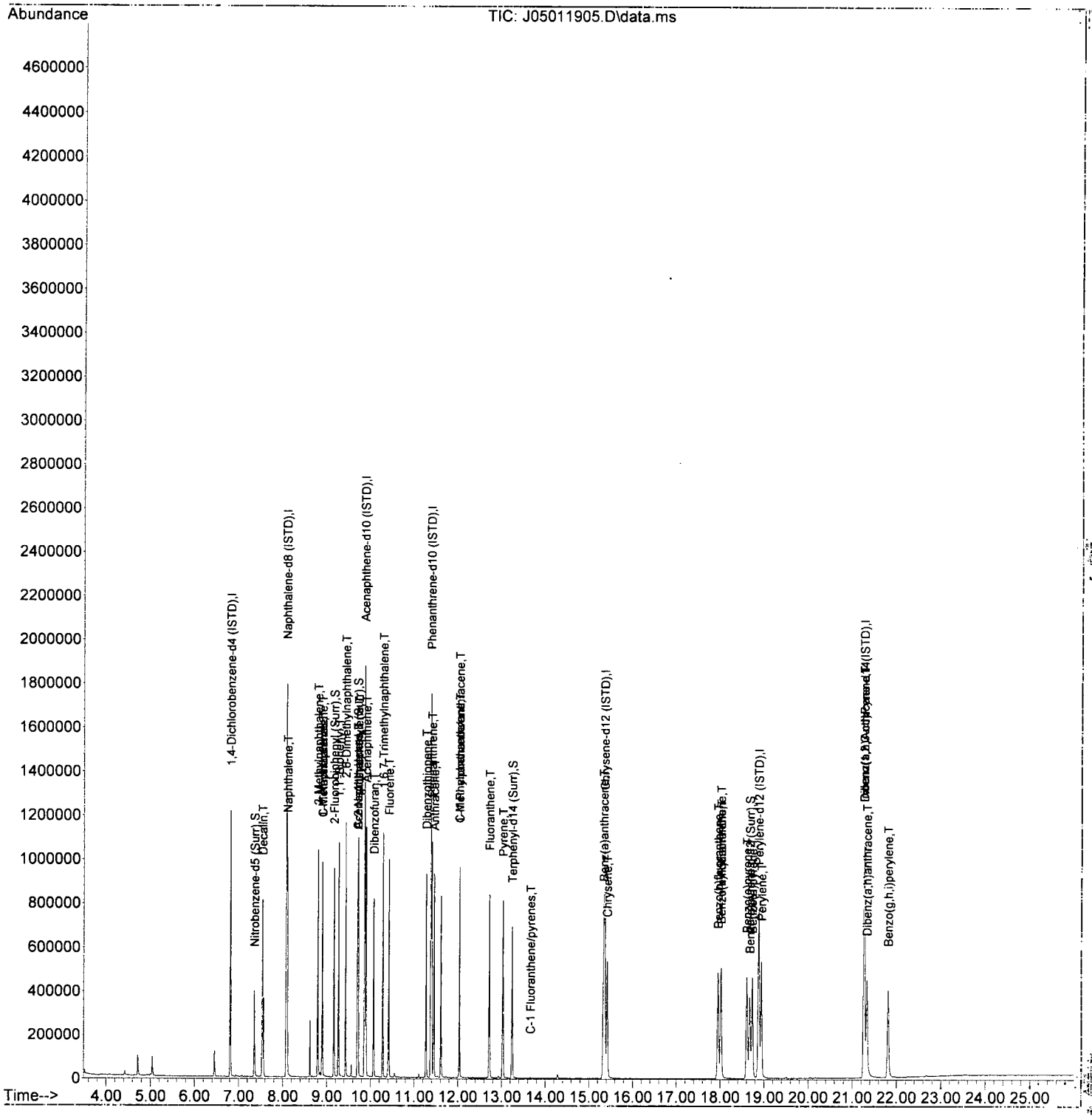
Quant Time: May 01 15:25:14 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
47)	Benz(a)anthracene	15.334	228	395128	1066.79	ng/ml	99
48)	Chrysene	15.414	228	369116	1019.91	ng/ml	97
49)	C-1 Benz(a)anthracene/...	16.660	242	535	N.D.		
50)	C-2 Benz(a)anthracene/...	0.000		0	N.D.		
51)	C-3 Benz(a)anthracene/...	0.000		0	N.D.		
52)	C-4 Benz(a)anthracene/...	0.000		0	N.D.		
54)	Benzo(b)fluoranthene	17.949	252	386730	1129.23	ng/ml	99
55)	Benzo(k)fluoranthene	18.019	252	399291	1124.33	ng/ml	98
56)	Benzo(b+k)fluoranthene	18.019	252	804759	2224.22	ng/ml	98
58)	Benzo(e)pyrene	18.607	252	379774	1087.00	ng/ml	100
59)	Benzo(a)pyrene	18.730	252	350262	1121.51	ng/ml	98
60)	Perylene	18.939	252	389827	1057.29	ng/ml	99
62)	Indeno(1,2,3-cd)Pyrene	21.266	276	326672	1015.72	ng/ml	99
63)	Dibenz(a,h)anthracene	21.330	278	323553	1085.80	ng/ml	98
64)	Benzo(g,h,i)perylene	21.811	276	343457	1020.19	ng/ml	96

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

Data Path : T:\data\2019-05\9E01028\
Data File : J05011905.D
Acq On : 1 May 2019 10:24 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCV2
Misc : 1x, A19D083@1000
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:14 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Data Path : T:\data\2019-05\9E01028\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19

Quant Time: May 01 15:25:41 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	229447	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	1006848	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	490524	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	832337	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	761379	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	711226	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	644713	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)	7.407	82	63	18.94	ng/ml	0.05
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	0.000		0	N.D.		
3) Pyridine	4.198	79	85	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.268	70	53	N.D.		
17) 3+4-Methylphenol	7.210	107	76	9.47	ng/ml#	13
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.333	77	79	N.D.		
22) Isophorone	0.000		0	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	0.000		0	N.D.		
25) Bis(2-chloroethoxy) me...	7.755	93	55	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	8.103	128	66	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.		

Data Path : T:\data\2019-05\9E01028\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

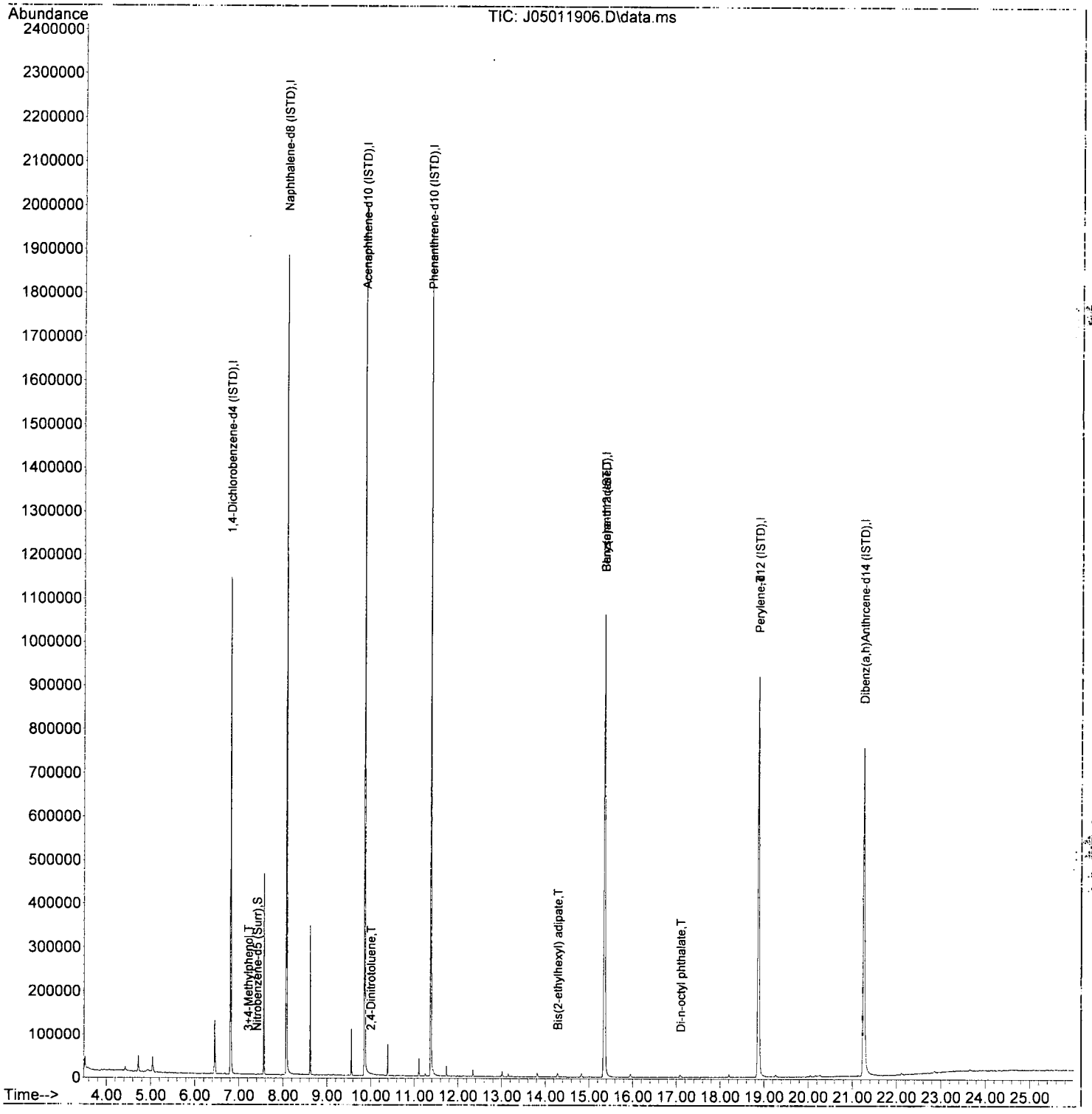
Quant Time: May 01 15:25:41 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	9.723	152	62	N.D.	
50) 3-Nitroaniline	9.862	138	95	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	10.002	165	187	62.14 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	10.274	149	112	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.392	170	112	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)	0.000		0	N.D.	
71) Phenanthrene	11.376	178	395	N.D.	
72) Anthracene	11.376	178	395	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	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.286	129	2821	13.00 ng/ml	96
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.356	228	2095	5.04 ng/ml	75
84) Chrysene	15.420	228	56	N.D.	
85) Bis(2-ethylhexyl) phth...	0.000		0	N.D.	
87) Di-n-octyl phthalate	17.099	149	94	66.40 ng/ml	73
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	18.875	252	2439	6.76 ng/ml#	65
95) Indeno(1,2,3-cd)pyrene	21.266	276	336	N.D.	
96) Dibenz(a,h)anthracene	21.260	278	202	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

Data Path : T:\data\2019-05\9E01028\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:41 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 09:48:54 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	229447	2000.00	ng/ml	0.00
3) Naphthalene-d8 (ISTD)	8.081	136	1006848	2000.00	ng/ml	0.00
16) Acenaphthene-d10 (ISTD)	9.862	162	493584	2000.00	ng/ml	0.00
29) Phenanthrene-d10 (ISTD)	11.376	188	832337	2000.00	ng/ml	0.00
43) Chrysene-d12 (ISTD)	15.356	240	761324	2000.00	ng/ml	0.00
53) Perylene-d12 (ISTD)	18.875	264	711254	2000.00	ng/ml	0.00
61) Dibenz(a,h)Anthrcene-d...	21.260	292	644713	2000.00	ng/ml	-0.01
System Monitoring Compounds						
2) Nitrobenzene-d5 (Surr)	7.407	82	63	9.52	ng/ml	0.05
17) 2-Fluorobiphenyl (Surr)	0.000	172	0	0.00	ng/ml	
18) Acenaphthylene d-8 (Surr)	9.697	160	121	0.28	ng/ml	0.00
46) Terphenyl-d14 (Surr)	0.000	244	0	0.00	ng/ml	
57) Benzo(a)pyrene d-12 (S...	0.000	264	0	0.00	ng/ml	
Target Compounds						Qvalue
4) Decalin	0.000		0	N.D.		
5) C-1 Decalin	7.755	152	87	N.D.		
6) C-2 Decalin	0.000		0	N.D.		
7) C-3 Decalin	0.000		0	N.D.		
8) C-4 Decalin	0.000		0	N.D.		
9) Naphthalene	8.103	128	66	N.D.		
10) 2-Methylnaphthalene	0.000		0	N.D.		
11) C-1 Naphthalenes	0.000		0	N.D.		
12) 1-Methylnaphthalene	0.000		0	N.D.		
13) 1,1'-Biphenyl	0.000		0	N.D.		
14) 2,6-Dimethylnaphthalene	0.000		0	N.D.		
15) C-2 Naphthalenes	9.231		0	N.D.		
19) Acenaphthylene	9.723	152	62	N.D.		
20) Acenaphthene	0.000		0	N.D.		
21) Dibenzofuran	0.000		0	N.D.		
22) 1,6,7-Trimethylnaphtha...	0.000		0	N.D.		
23) C-3 Naphthalenes	10.392	170	112	N.D.		
24) C-4 Naphthalenes	10.173		0	N.D.		
25) Fluorene	0.000		0	N.D.		
26) C-1 Fluorenes	10.552		0	N.D.		
27) C-2 Fluorenes	11.258	194	248	N.D.		
28) C-3 Fluorenes	12.350	208	579	N.D.		
30) Dibenzothiopene	0.000		0	N.D.		
31) C-1 Dibenzothiophene	0.000		0	N.D.		
32) C-2 Dibenzothiophene	0.000		0	N.D.		
33) C-3 Dibenzothiophene	0.000		0	N.D.		
34) C-4 Dibenzothiophene	0.000		0	N.D.		
35) Phenanthrene	11.376	178	395	N.D.		
36) Anthracene	11.376	178	395	N.D.		
37) 1-Methylphenanthrene	0.000		0	N.D.		
38) C-1 Phenanthrene/anthr...	12.350	192	13	N.D.		
39) C-2 Phenanthrene/anthr...	12.430	206	8	N.D.		
40) C-3 Phenanthrene/anthr...	12.590		0	N.D.		
41) C-4 Phenanthrene/anthr...	13.254		0	N.D.		
42) Fluoranthene	0.000		0	N.D.		
44) Pyrene	0.000		0	N.D.		
45) C-1 Fluoranthene/pyrenes	13.211		0	N.D.		

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:48:54 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
47) Benz(a)anthracene	15.356	228	2095	5.06 ng/ml	74
48) Chrysene	15.420	228	56	N.D.	
49) C-1 Benz(a)anthracene/...	15.960		0	N.D.	
50) C-2 Benz(a)anthracene/...	17.147	256	8	N.D.	
51) C-3 Benz(a)anthracene/...	17.174		0	N.D.	
52) C-4 Benz(a)anthracene/...	20.480	284	245	N.D.	
54) Benzo(b)fluoranthene	0.000		0	N.D.	
55) Benzo(k)fluoranthene	0.000		0	N.D.	
56) Benzo(b+k)fluoranthene	0.000		0	N.D.	
58) Benzo(e)pyrene	18.875	252	2063	13.90 ng/ml#	10
59) Benzo(a)pyrene	0.000		0	N.D.	
60) Perylene	18.875	252	2439	5.80 ng/ml	71
62) Indeno(1,2,3-cd)Pyrene	21.266	276	336	N.D.	
63) Dibenz(a,h)anthracene	21.260	278	202	N.D.	
64) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

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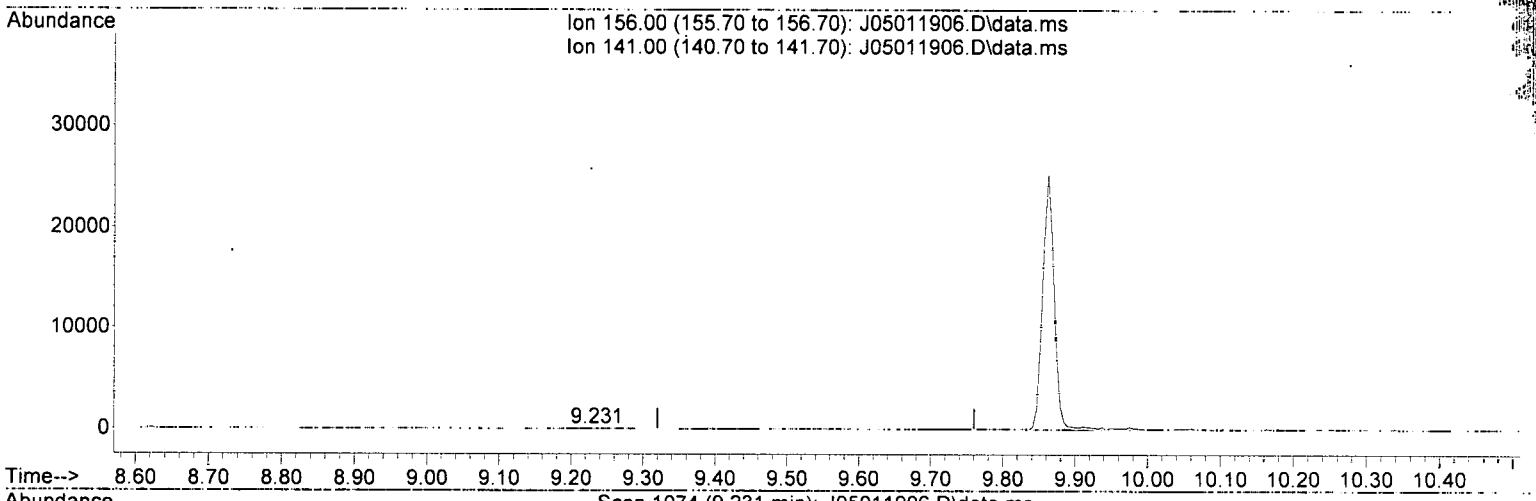
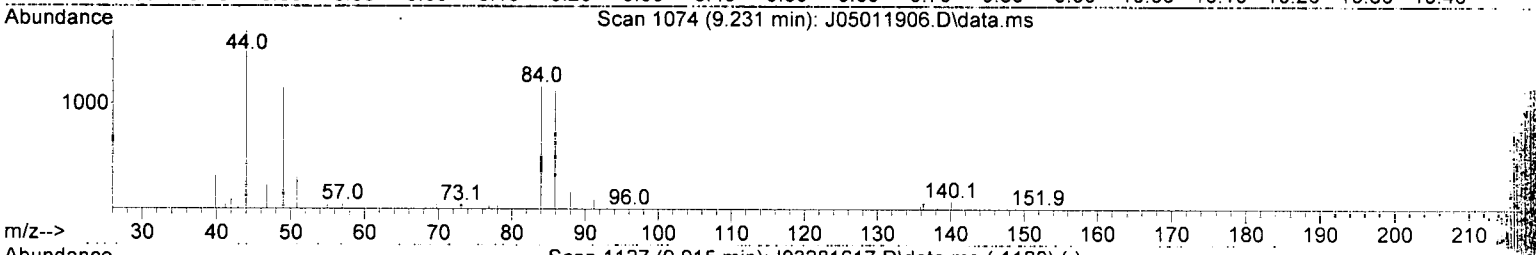
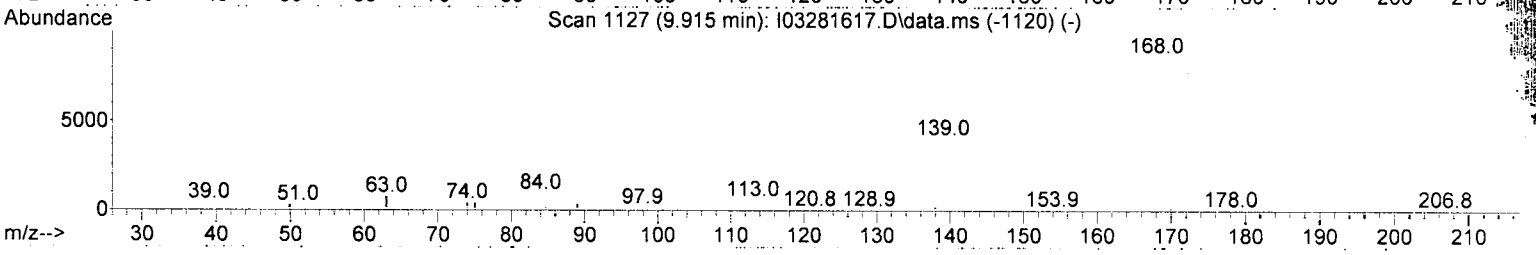
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011906.D\data.ms

(15) C-2 Naphthalenes (T)

9.231min (-0.309) 0.00 ng/ml m

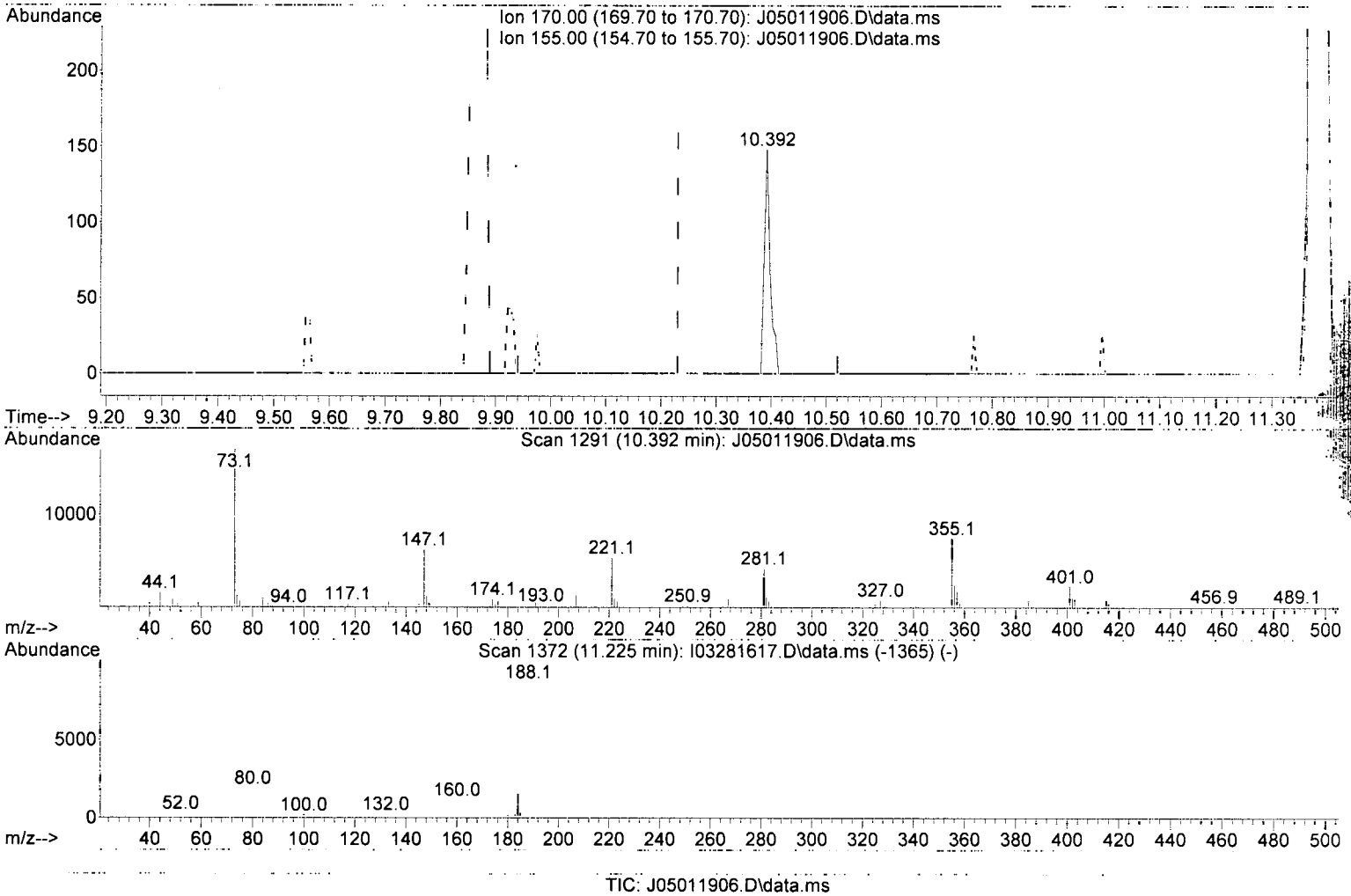
response 0

Ion	Exp%	Act%
156.00	100.00	0.00
141.00	16.10	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(23) C-3 Naphthalenes (T)

10.392min (+ 0.162) 0.43 ng/ml m

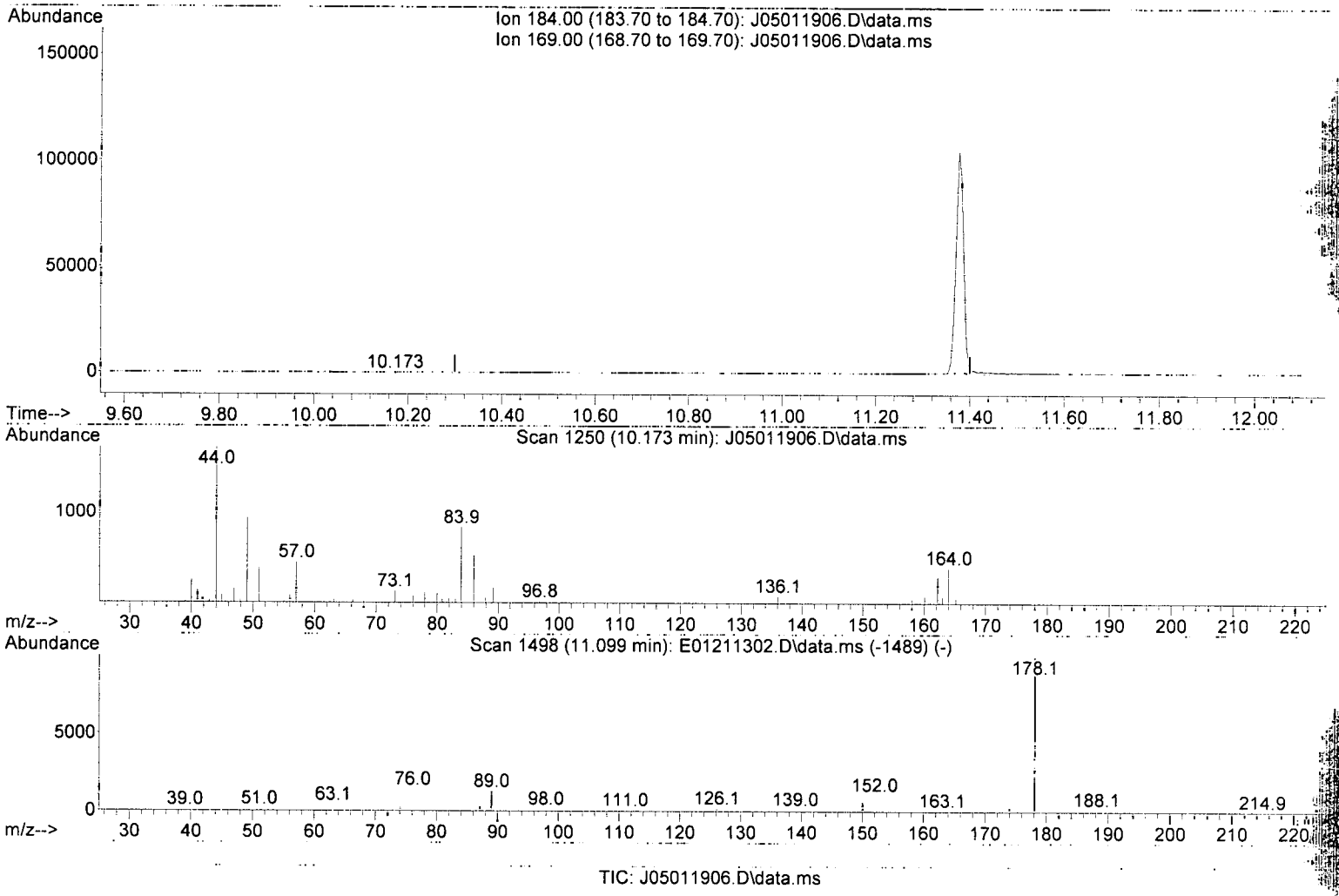
response 112

Ion	Exp%	Act%
170.00	100.00	100.00
155.00	83.80	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(24) C-4 Naphthalenes (T)

10.173min (-0.677) 0.00 ng/ml m

response 0

Ion	Exp%	Act%
184.00	100.00	0.00
169.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

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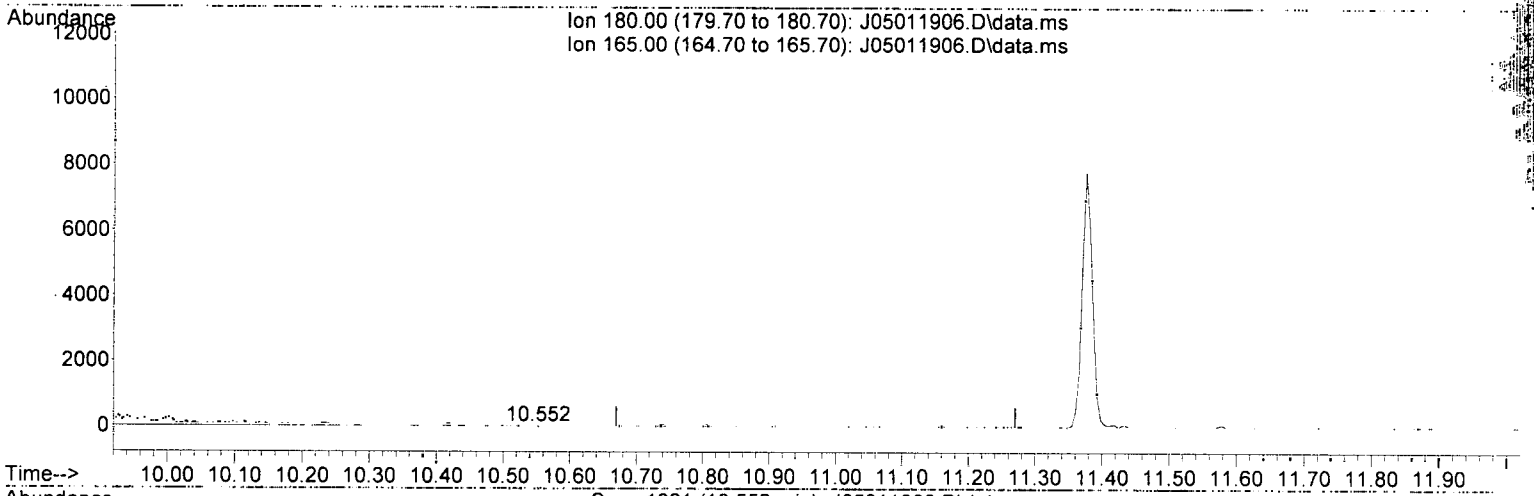
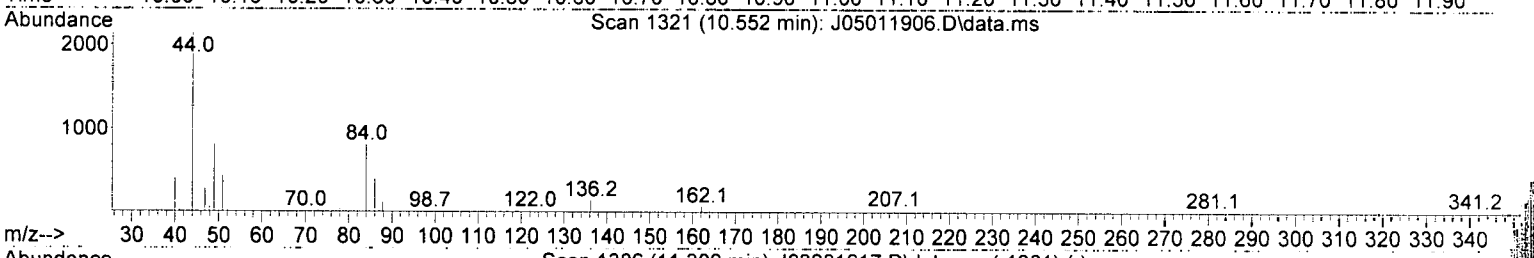
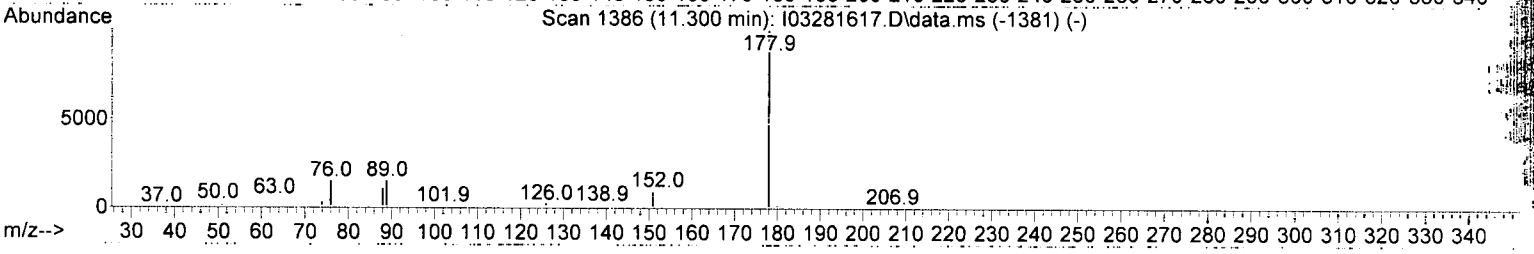
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011906.D\data.ms

(26) C-1 Fluorenes (T)

10.552min (-0.418) 0.00 ng/ml m

response 0

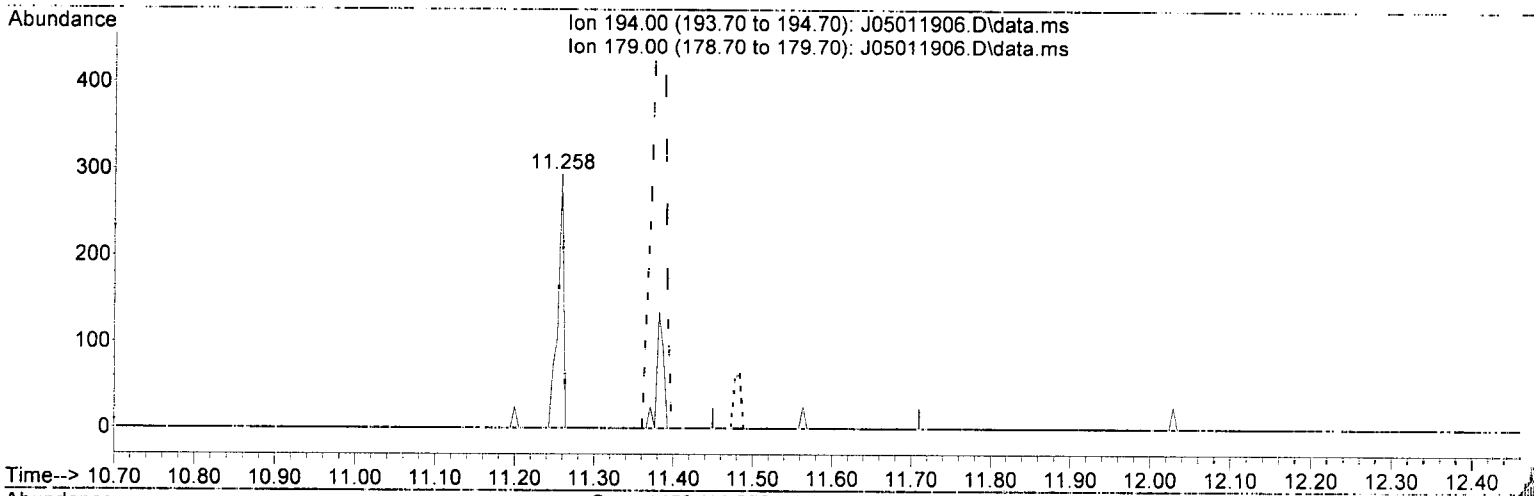
Ion	Exp%	Act%
180.00	100.00	0.00
165.00	135.60	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

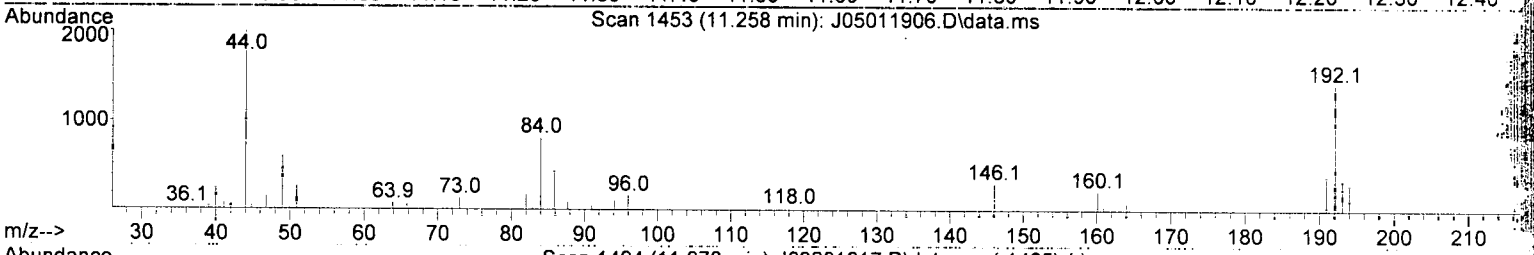
06/21/19 Anchor Port of Portland - T4 - PDI Page 857 of 1591

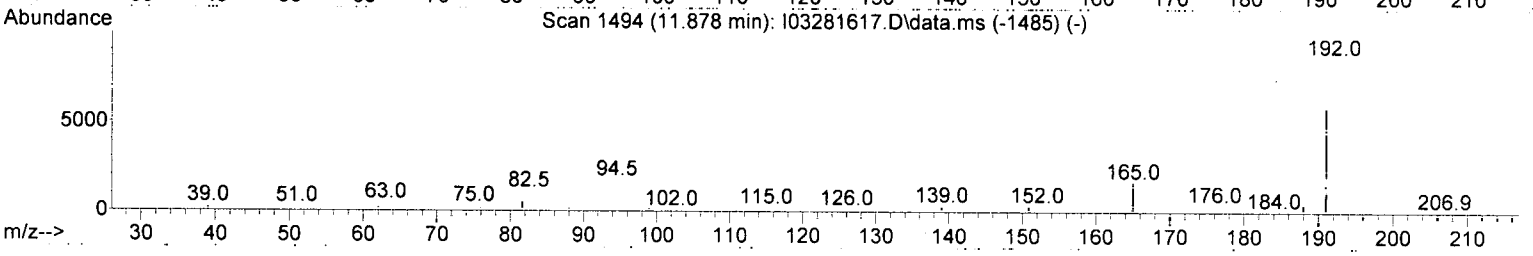
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011906.D\data.ms

(27) C-2 Fluorenes (T)

11.258min (-0.322) 0.76 ng/ml m

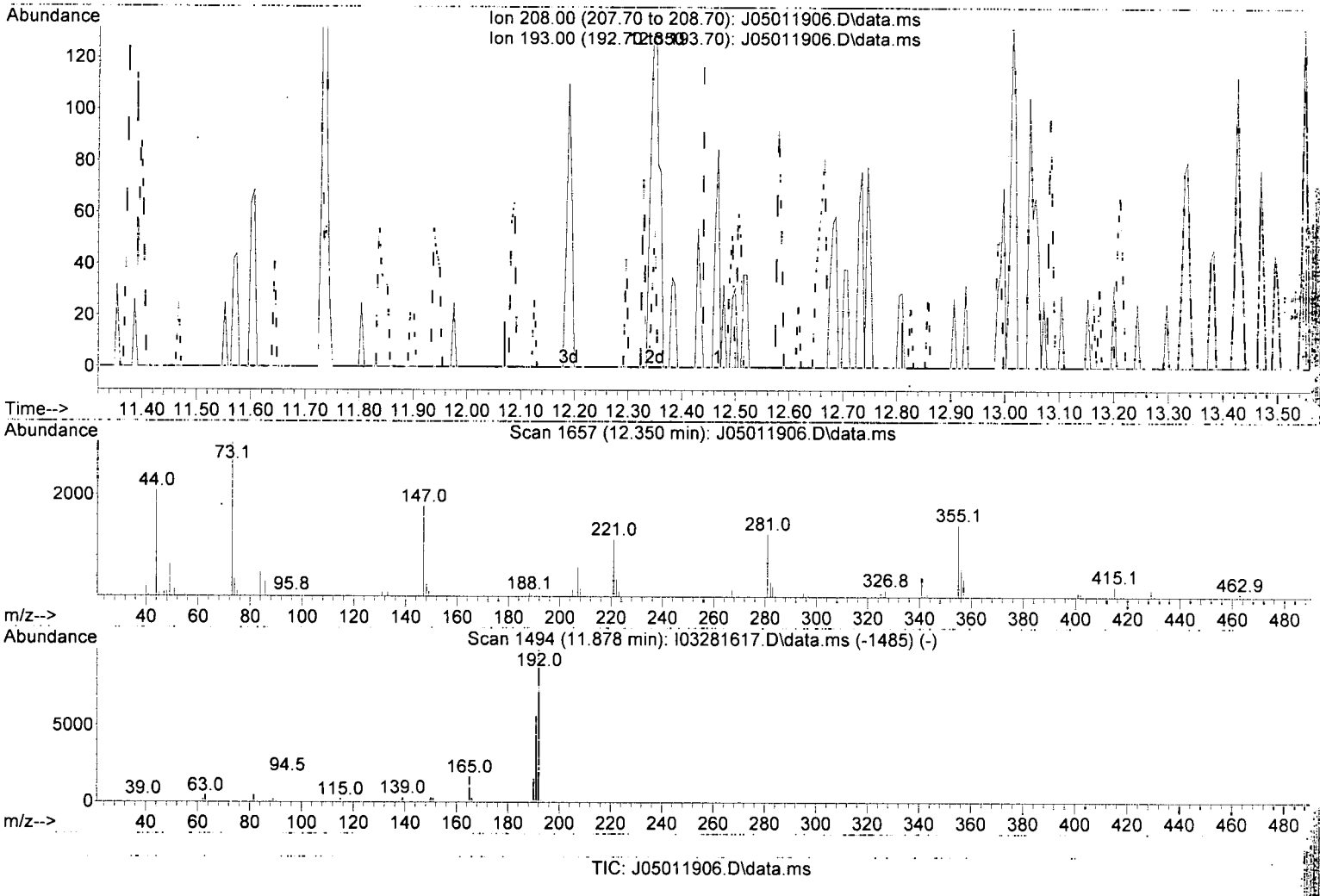
response 248

Ion	Exp%	Act%
194.00	100.00	100.00
179.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(28) C-3 Fluorenes (T)

12.350min (-0.090) 1.77 ng/ml m

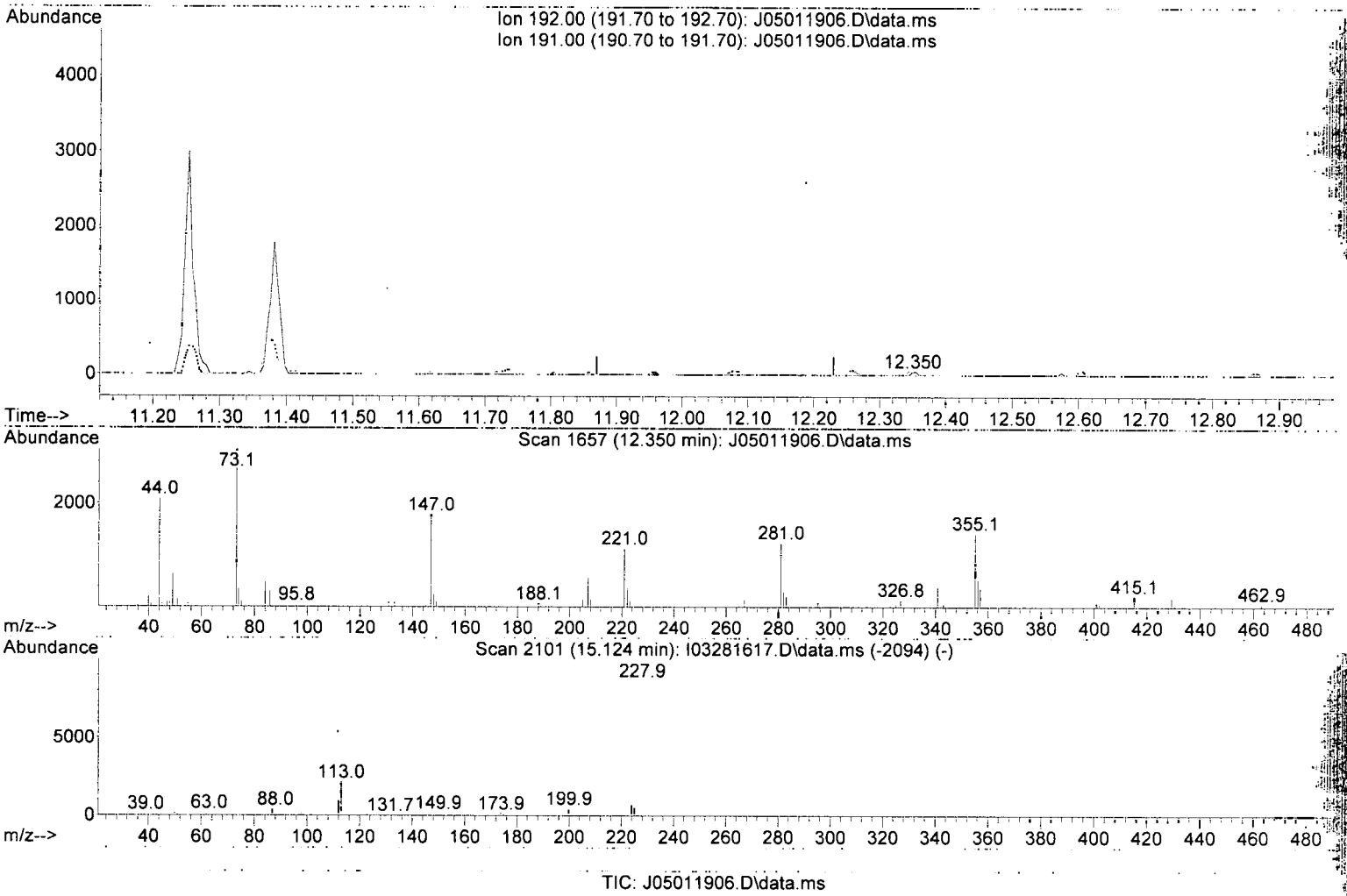
response 579

Ion	Exp%	Act%
208.00	100.00	100.00
193.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(38) C-1 Phenanthrene/anthracene (T)

12.350min (+ 0.300) 0.04 ng/ml m

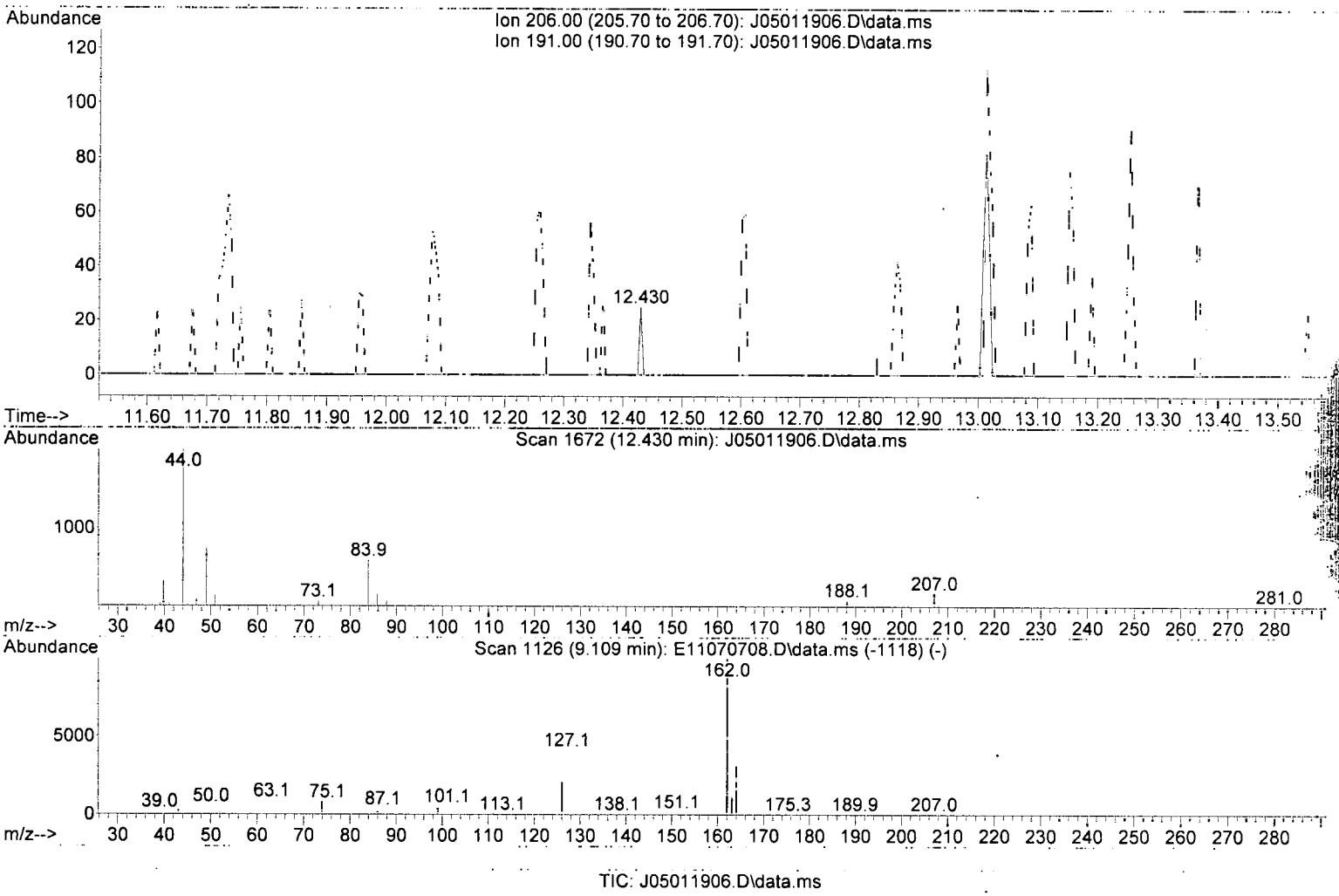
response 13

Ion	Exp%	Act%
192.00	100.00	100.00
191.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(39) C-2 Phenanthrene/anthracene (T)

12.430min (-0.120) 0.03 ng/ml m

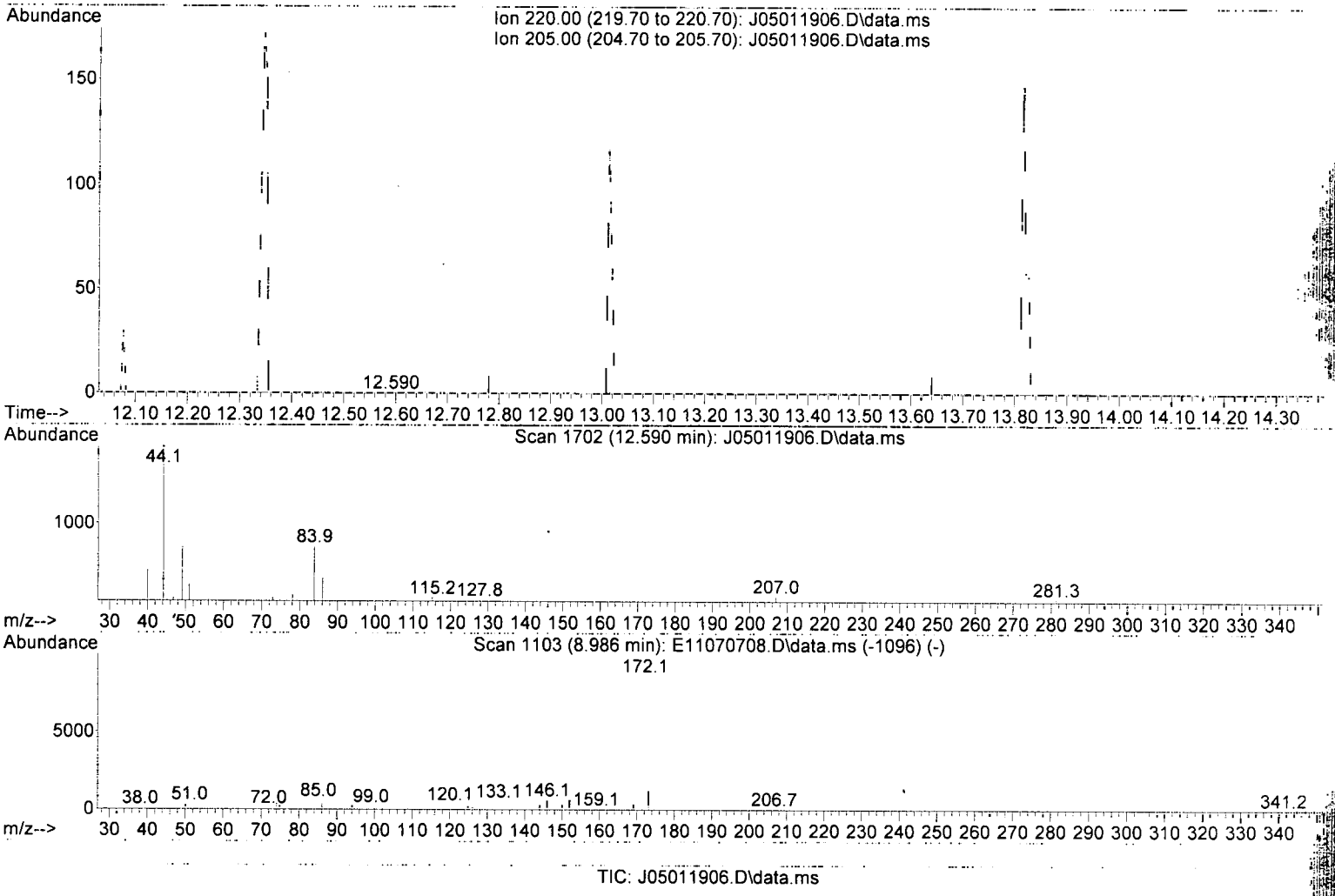
response 8

Ion	Exp%	Act%
206.00	100.00	100.00
191.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(40) C-3 Phenanthrene/anthracene (T)

12.590min (-0.620) 0.00 ng/ml m

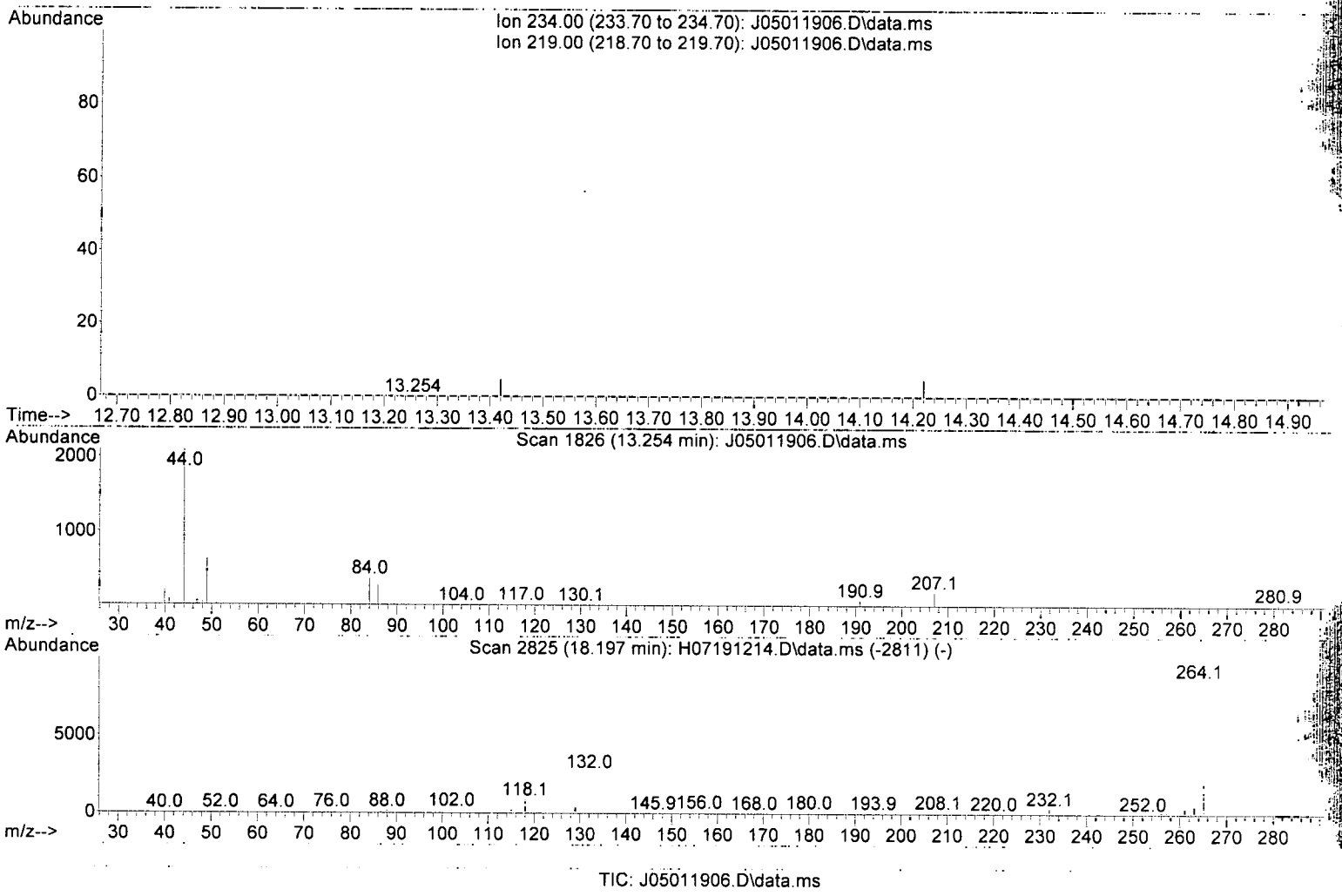
response 0

Ion	Exp%	Act%
220.00	100.00	0.00
205.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(41) C-4 Phenanthrene/anthracene (T)

13.254min (-0.616) 0.00 ng/ml m

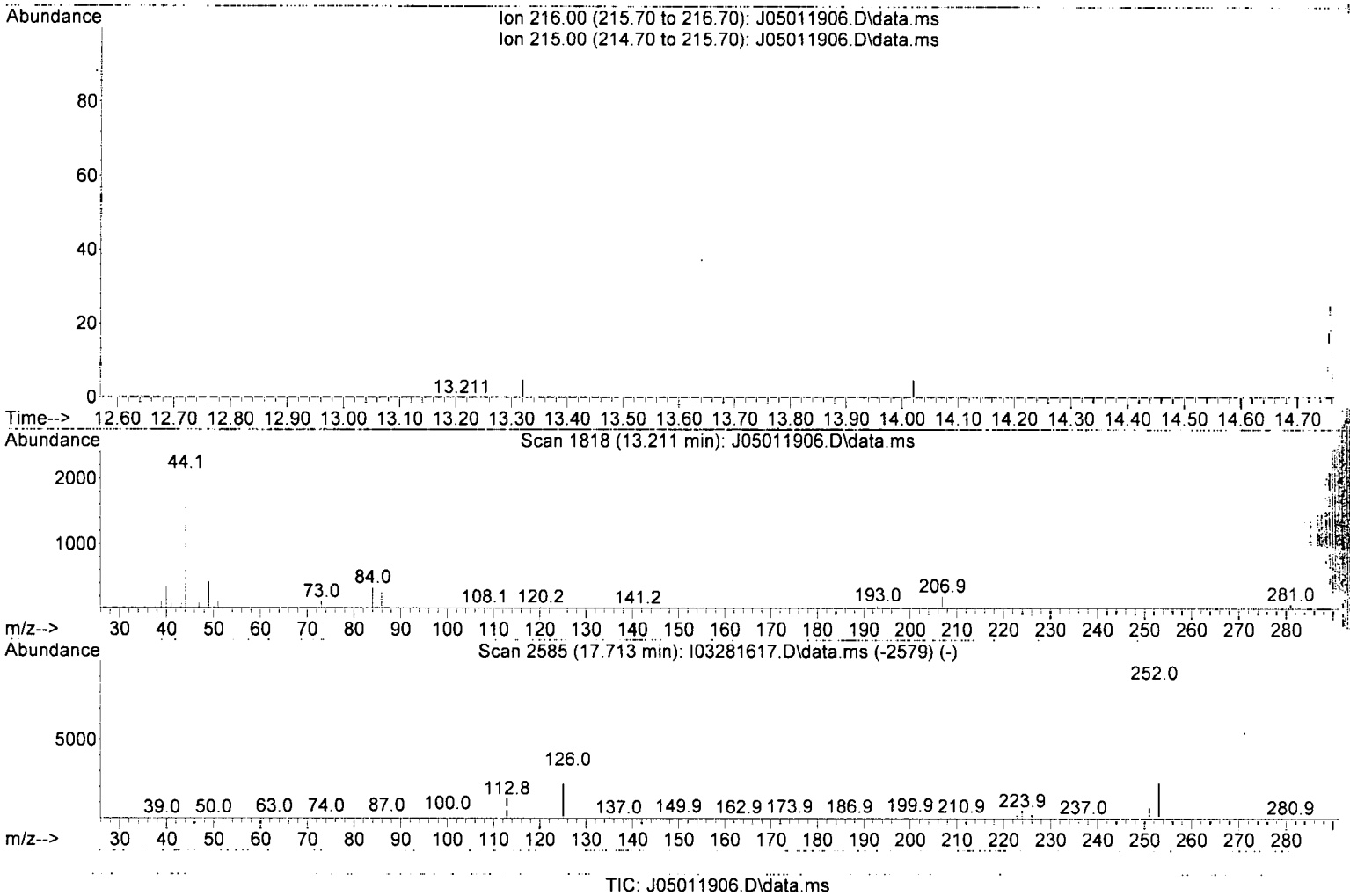
response 0

Ion	Exp%	Act%
234.00	100.00	0.00
219.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(45) C-1 Fluoranthene/pyrenes (T)

13.211min (-0.459) 0.00 ng/ml m

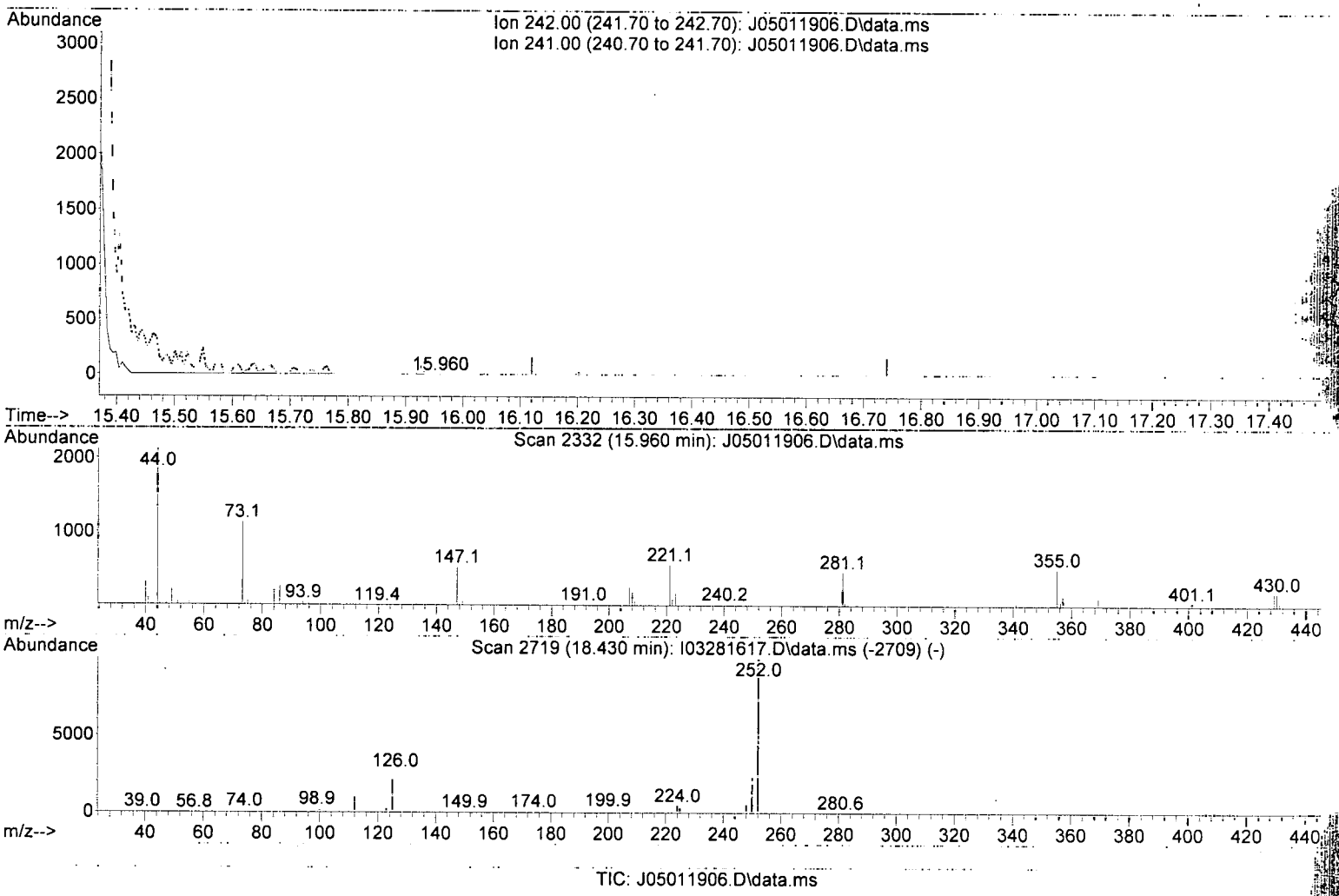
response 0

Ion	Exp%	Act%
216.00	100.00	0.00
215.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(49) C-1 Benz(a)anthracene/Chrysenes (T)

15.960min (-0.420) 0.00 ng/ml m

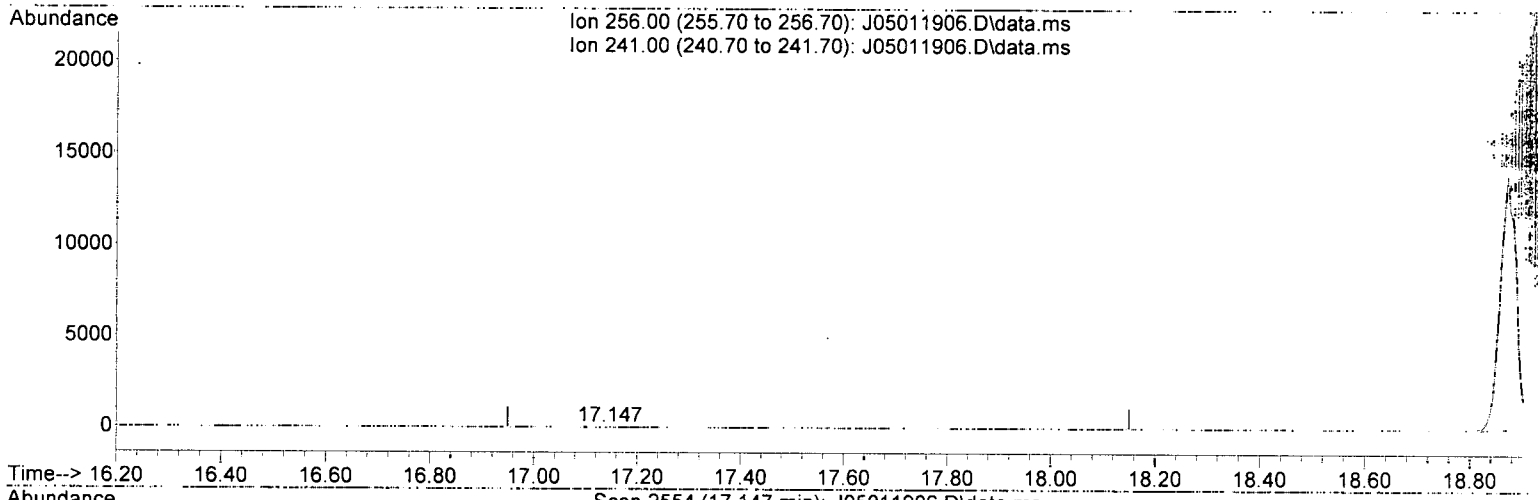
response 0

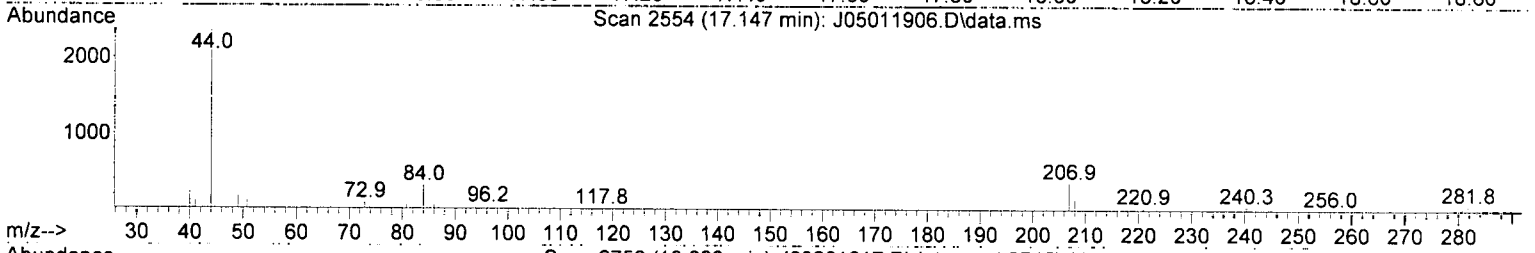
Ion	Exp%	Act%
242.00	100.00	0.00
241.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

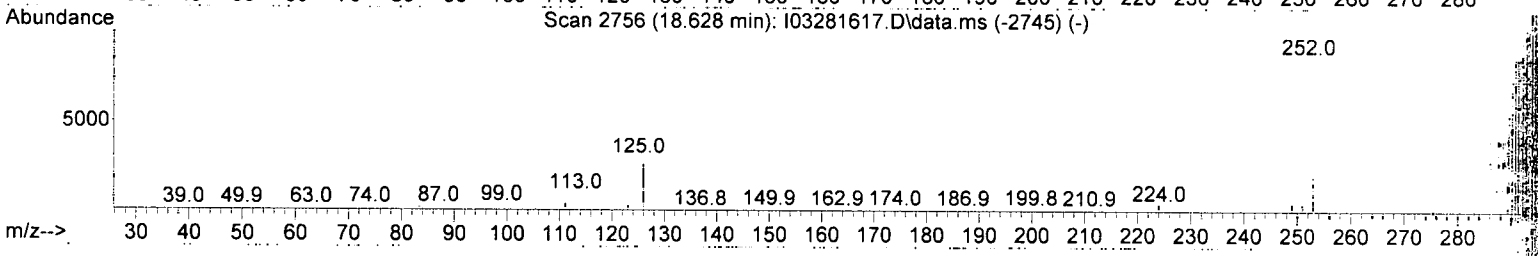
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011906.D\data.ms

(50) C-2 Benz(a)anthracene/Chrysenes (T)

17.147min (-0.403) 0.02 ng/ml m

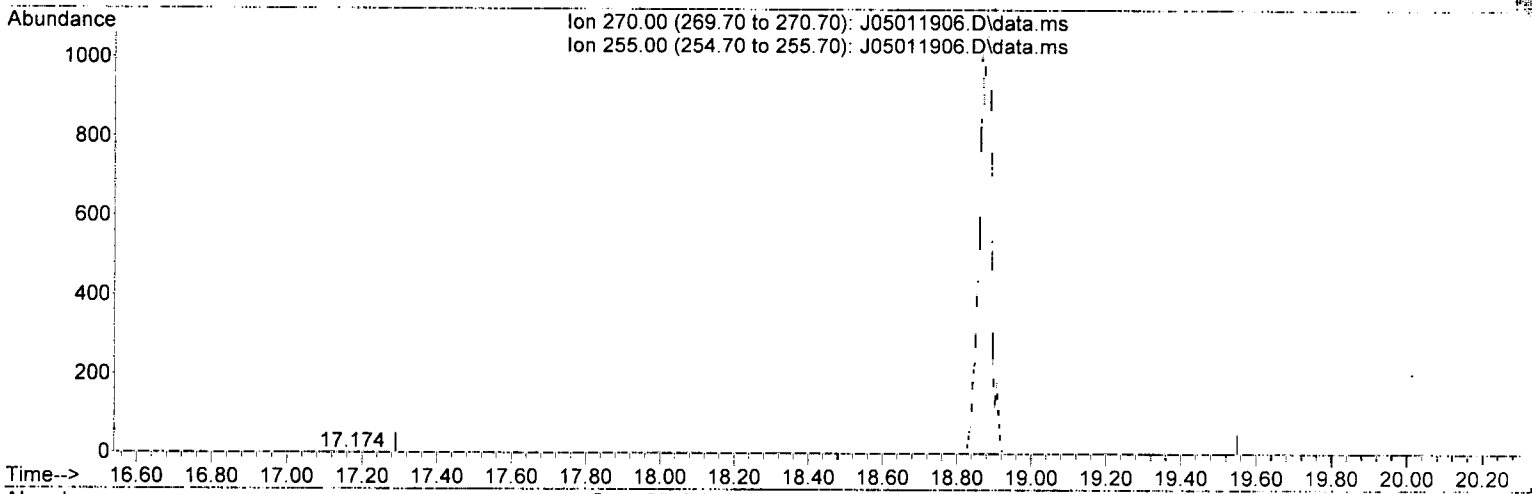
response 8

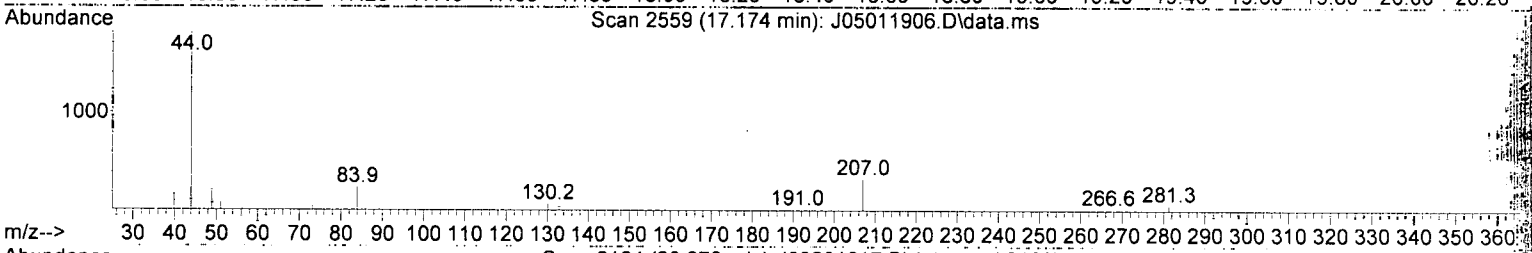
Ion	Exp%	Act%
256.00	100.00	100.00
241.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

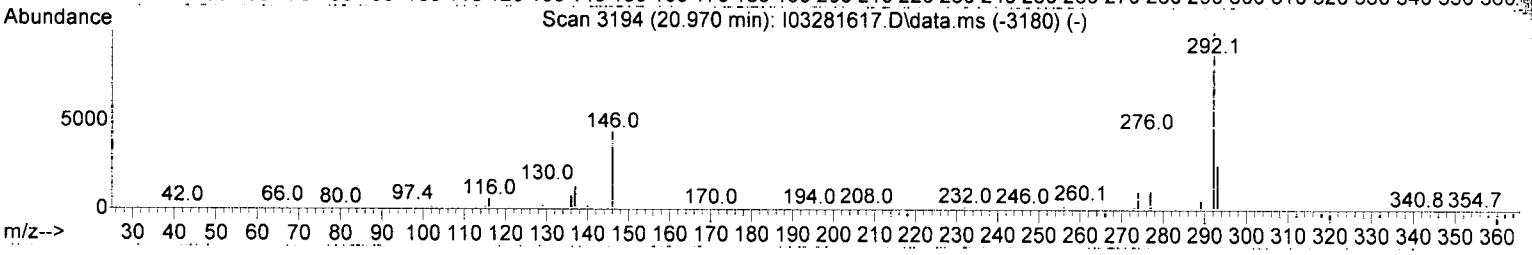
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011906.D\data.ms

(51) C-3 Benz(a)anthracene/Chrysenes (T)

17.174min (-1.246) 0.00 ng/ml m

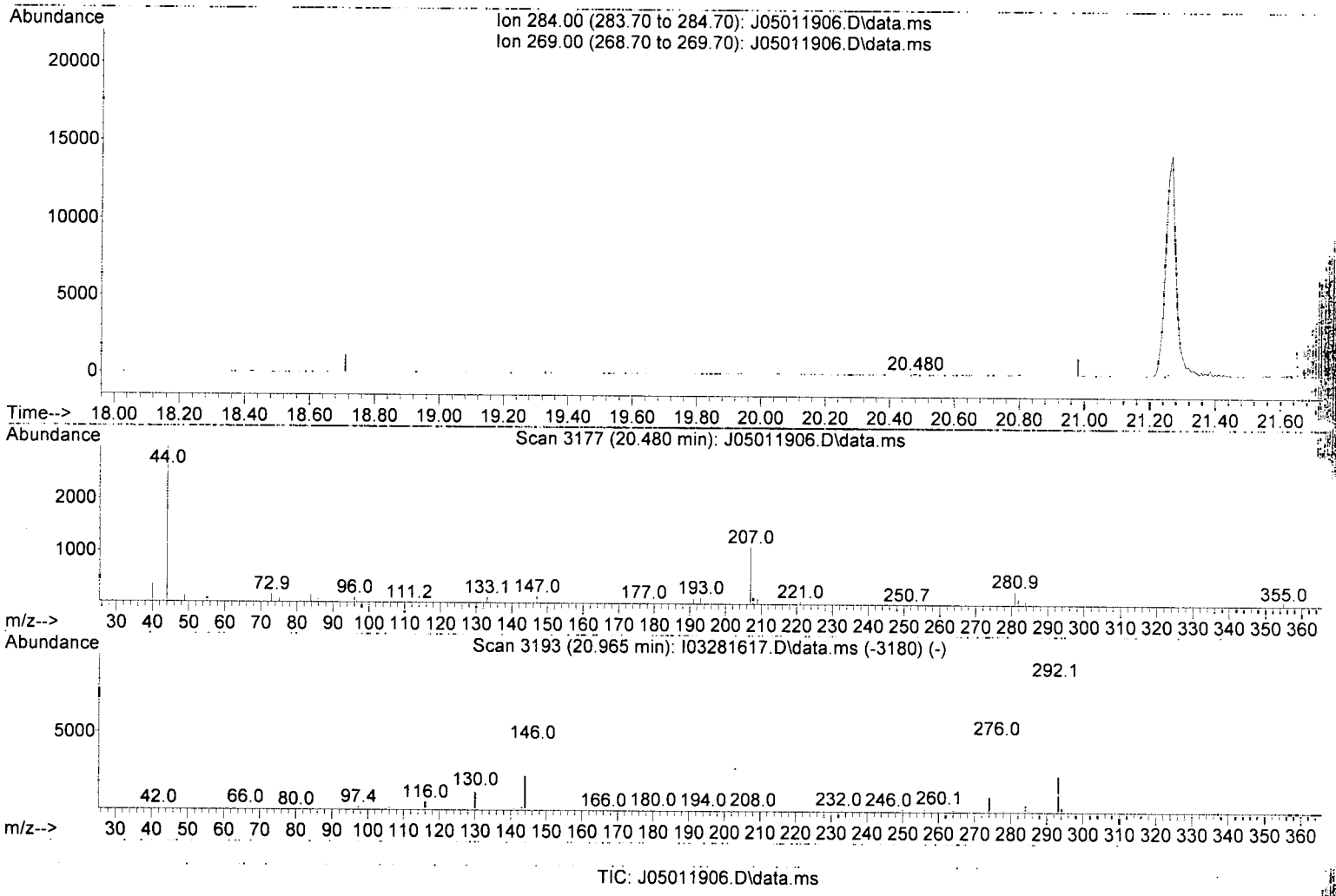
response 0

Ion	Exp%	Act%
270.00	100.00	0.00
255.00	50.00	0.00#
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:47:24 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011906.D\data.ms

(52) C-4 Benz(a)anthracene/Chrysenes

20.480min (+ 0.470) 0.61 ng/ml m

response 245

Ion	Exp%	Act%
284.00	100.00	100.00
269.00	0.00	0.00
0.00	0.00	0.00
0.00	0.00	0.00

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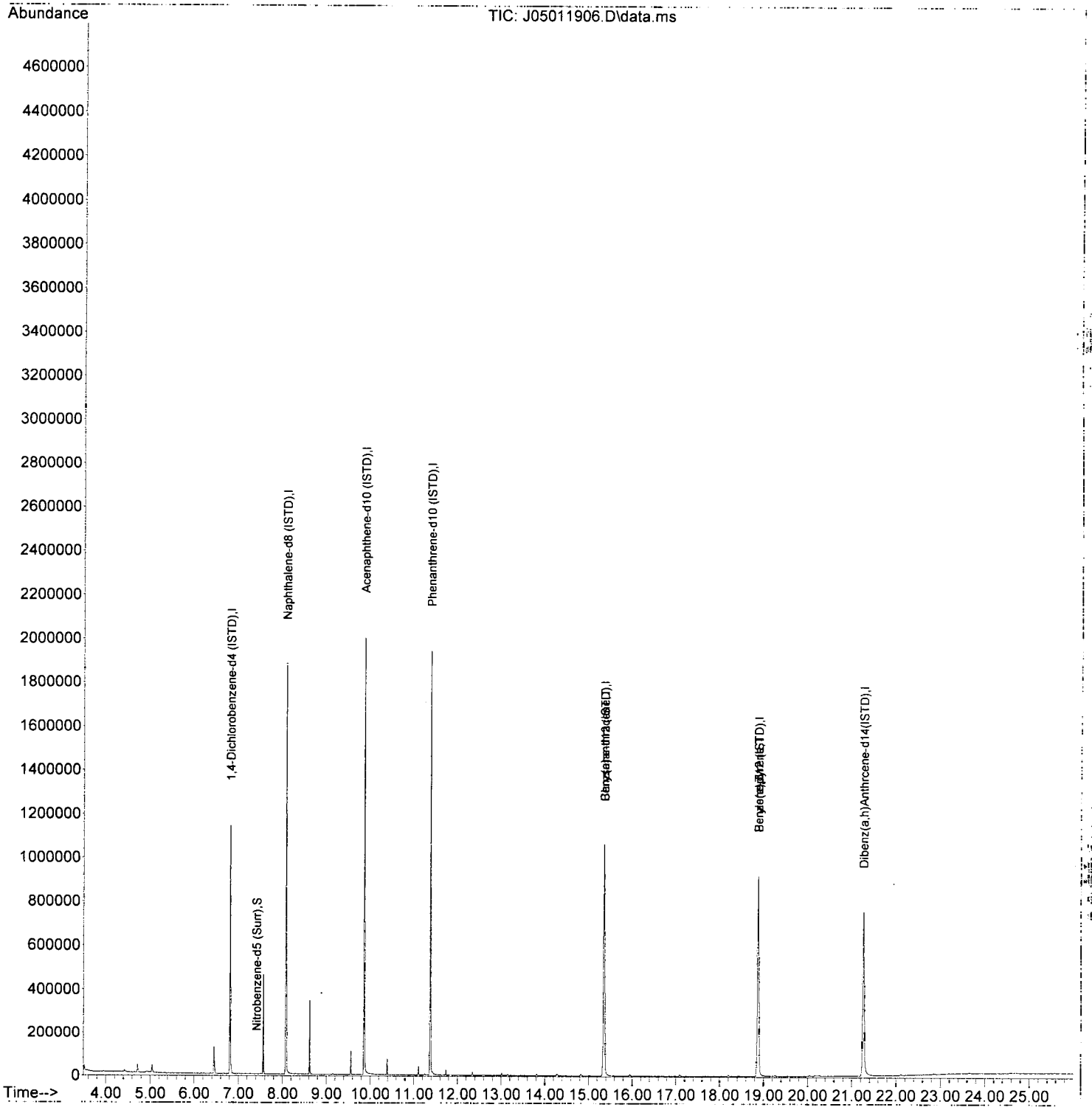
Data Path : T:\data\2019-05\9E01028\Homologs\
Data File : J05011906.D
Acq On : 1 May 2019 11:00 am
Operator : JK/ AMS/ DTH
Sample : 9E01028-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 02 09:48:54 2019
Quant Method : T:\methods\SV10_041519_HOMOLOG.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Tue Apr 16 09:29:20 2019
Response via : Initial Calibration
InstName : SV-GCMS10



No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 MOS

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	243953	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	981479	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	481889	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	814905	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	744251	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	696472	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	656862	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	52861	333.32	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	70720	346.67	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.354	82	55022	315.80	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.162	172	82841	243.65	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	17584	454.39	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.237	244	106991	305.40	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	4.246	79	1162m	5.92	ng/ml#	
6) Phenol	6.461	94	1765	17.34	ng/ml#	34
7) Aniline	6.487	93	791	3.30	ng/ml#	63
8) Bis(2-chloroethyl) ether	6.536	93	366	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.947	108	2146	54.29	ng/ml#	73
13) 1,2-Dichlorobenzene	6.980	146	58	N.D.		
14) 2-Methylphenol	7.054	107	311	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.092	45	116	N.D.		
16) N-Nitrosodi-n-propylamine	7.193	70	313	N.D.		
17) 3+4-Methylphenol	7.204	107	1426	18.70	ng/ml#	44
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.375	77	108	N.D.		
22) Isophorone	7.600	82	435	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.760	122	1100	32.40	ng/ml#	11
25) Bis(2-chloroethoxy) me...	7.744	93	117	N.D.		
26) Benzoic acid	7.846	105	421	756.55	ng/ml#	66
27) 2,4-Dichlorophenol	7.948	162	127	45.90	ng/ml#	28
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.103	128	2008	3.95	ng/ml	95
30) 4-Chloroaniline	8.172	127	79	14.91	ng/ml#	1
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.611	107	129	64.51	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	383	N.D.		
34) 1-Methylnaphthalene	8.900	142	354	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	9.263	154	391	N.D.		
41) 2-Chloronaphthalene	9.295	162	62	N.D.		
42) 2-Nitroaniline	9.392	138	79	65.89	ng/ml#	52
43) 2,6-Dimethylnaphthalene	9.435	156	283	N.D.		

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

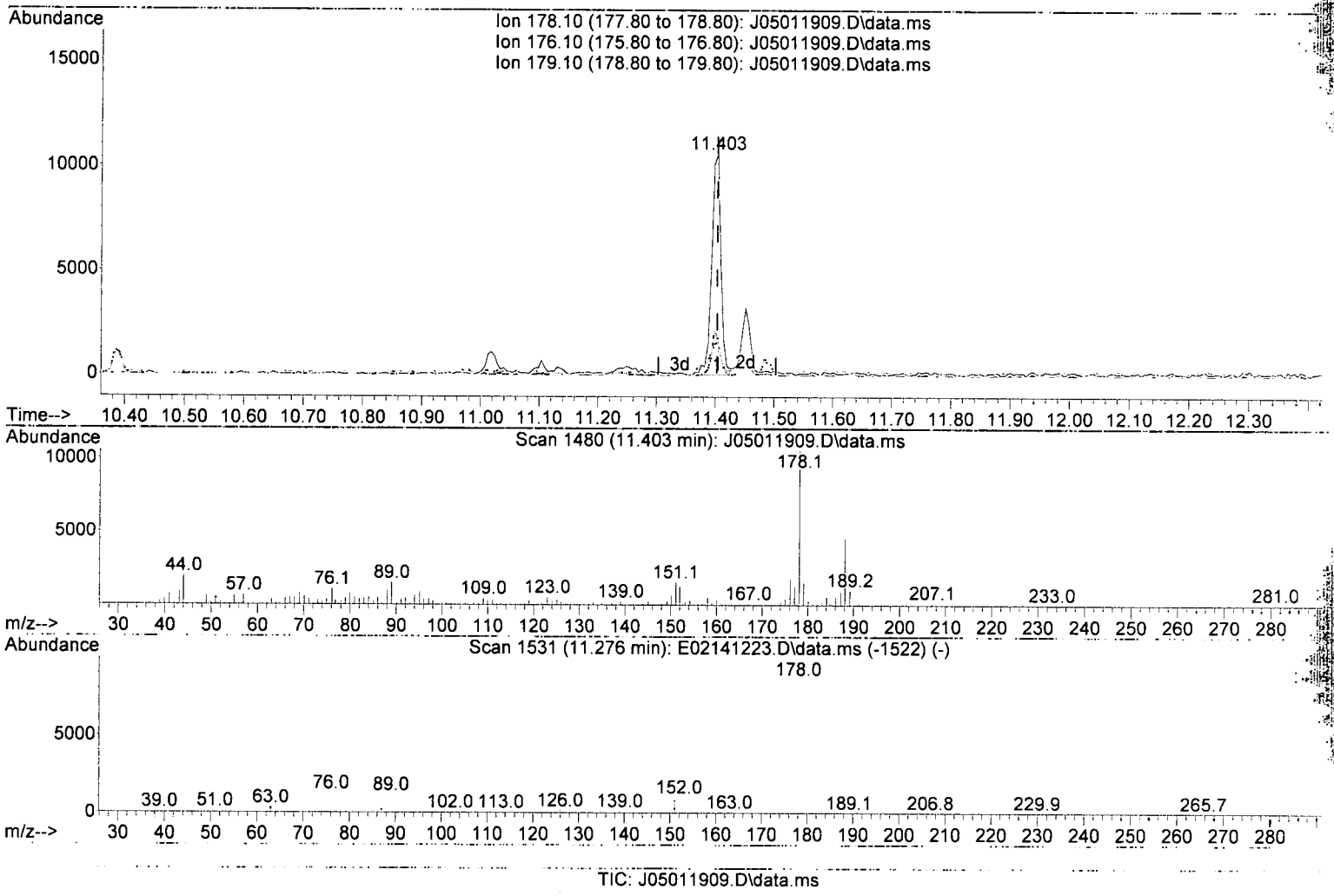
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	9.563	163	446	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	9.616	165	76	33.53	ng/ml#	14
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	9.713	152	1882	3.90	ng/ml	85
50) 3-Nitroaniline	9.804	138	58	N.D.		
51) Acenaphthene	9.895	153	1194	3.85	ng/ml	76
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	10.028	139	76	74.80	ng/ml#	1
54) 2,4-Dinitrotoluene	10.034	165	178	62.07	ng/ml#	17
55) Dibenzofuran	10.066	168	589	N.D.		
56) 2,3,5,6-Tetrachlorophenol	10.146	232	69	36.08	ng/ml#	5
57) 2,3,4,6-Tetrachlorophenol	10.146	232	69	14.20	ng/ml#	41
58) Diethyl phthalate	10.274	149	352	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.264	170	150	N.D.		
60) Fluorene	10.413	166	739	N.D.		
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.419	138	105	N.D.		
63) 4,6-Dinitro-2-methylph...	10.392	198	77	87.56	ng/ml#	21
65) N-Nitrosodiphenylamine	10.531	169	82	N.D.		
66) Azobenzene (1,2-DPH)	10.579	77	251	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.184	266	652	35.74	ng/ml	91
71) Phenanthrene	11.403	178	11583	26.19	ng/ml	97
72) Anthracene	11.451	178	3277	7.61	ng/ml	95
73) Carbazole	11.611	167	2095	5.75	ng/ml	86
74) Di-n-butyl phthalate	11.943	149	1533	3.08	ng/ml	88
75) Fluoranthene	12.713	202	23867	54.12	ng/ml	98
76) Benzidine	12.847	184	123	81.11	ng/ml#	1
77) Pyrene	13.029	202	24075	52.98	ng/ml	98
80) Butyl benzyl phthalate	14.104	149	2931	42.76	ng/ml	79
81) Bis(2-ethylhexyl) adipate	14.280	129	4523	21.33	ng/ml	98
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.334	228	12965	31.92	ng/ml MOS	95
84) Chrysene	15.409	228	13746	34.88	ng/ml MOS	91
85) Bis(2-ethylhexyl) phth...	15.484	149	6991	22.36	ng/ml	93
87) Di-n-octyl phthalate	17.158	149	585	67.38	ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	18504	55.02	ng/ml MOS	96
89) Benzo(k)fluoranthene	18.008	252	6632	26.22	ng/ml	97
90) Benzo(b+k)fluoranthene	17.950	252	26069	79.74	ng/ml	98
91) Benzo(e)pyrene	18.602	252	12041	31.53	ng/ml	90
92) Benzo(a)pyrene	18.720	252	12963	45.45	ng/ml	95
93) Perylene	18.923	252	8694	24.59	ng/ml	95
95) Indeno(1,2,3-cd)pyrene	21.255	276	12385	33.70	ng/ml	92
96) Dibenz(a,h)anthracene	21.325	278	1792	5.45	ng/ml#	51
97) Benzo(g,h,i)perylene	21.801	276	11714	32.98	ng/ml	67

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

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(71) Phenanthrene (T)

11.403min (+ 0.000) 26.19 ng/ml

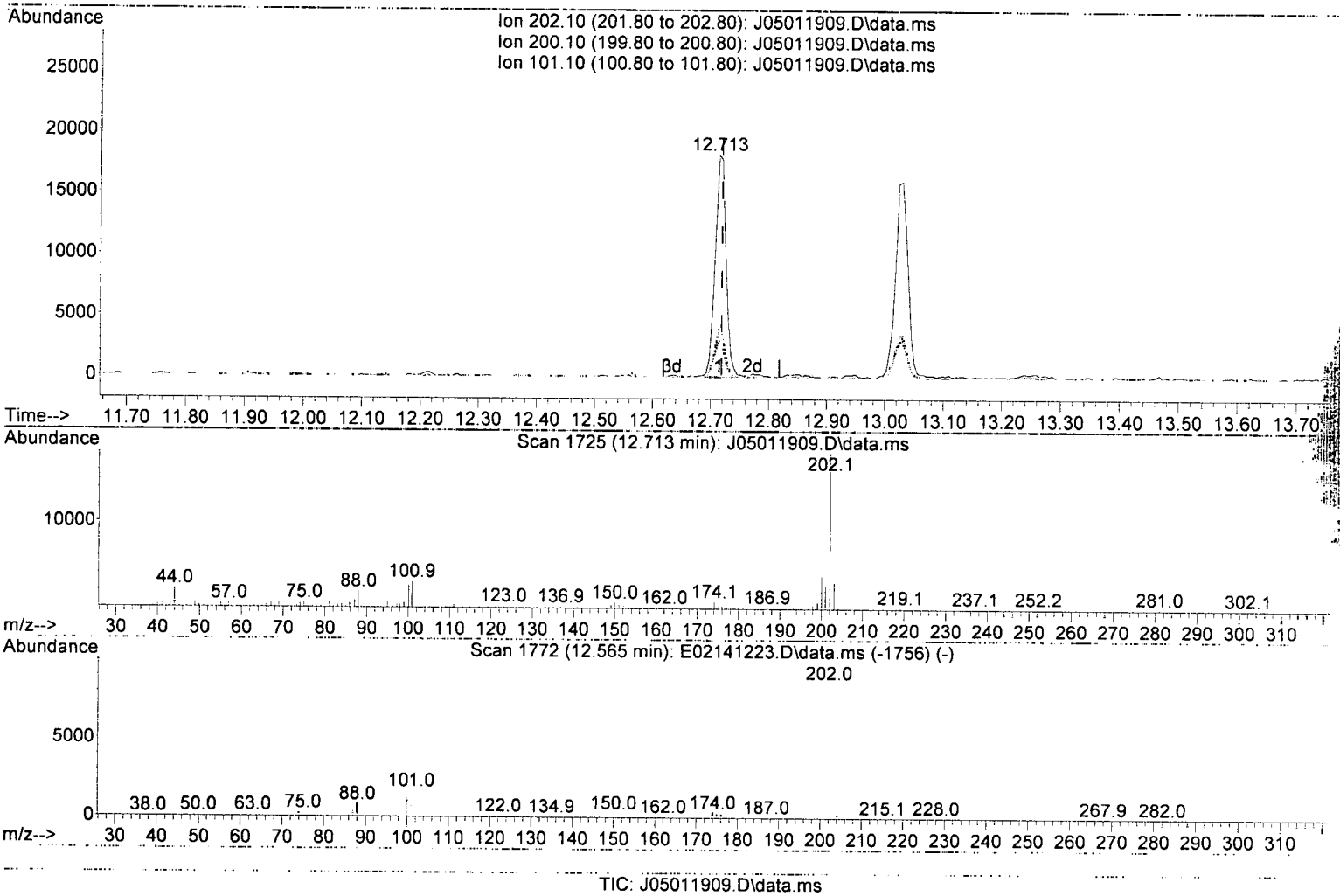
response 11583

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	17.19
179.10	15.20	14.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(75) Fluoranthene (T)

12.713min (-0.005) 54.12 ng/ml

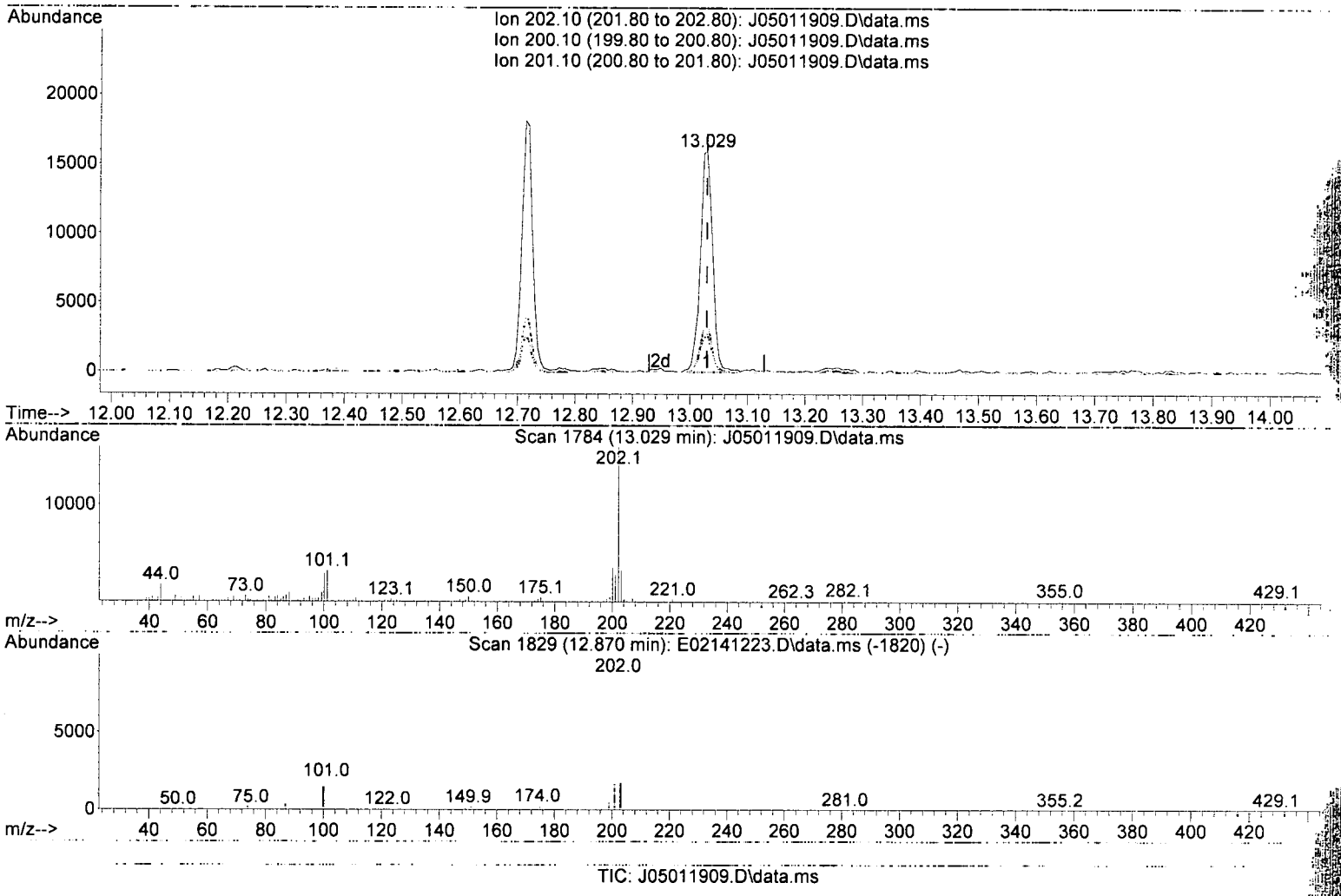
response 23867

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	21.27
101.10	17.00	16.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(77) Pyrene (T)

13.029min (+ 0.000) 52.98 ng/ml

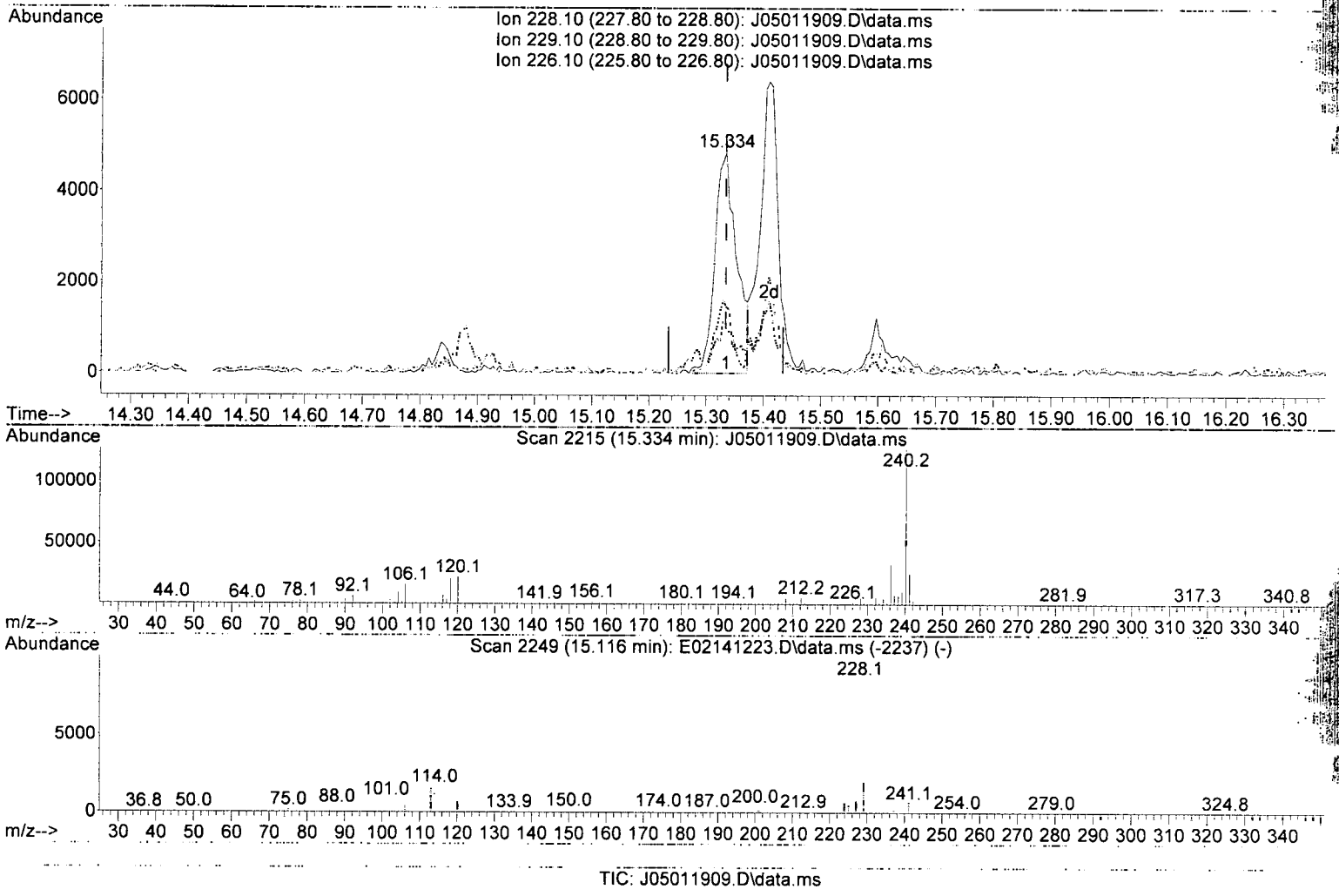
response 24075

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	22.32
201.10	17.30	17.65
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(83) Benz(a)anthracene (T)

15.334min (+ 0.000) 31.92 ng/ml

response 12965

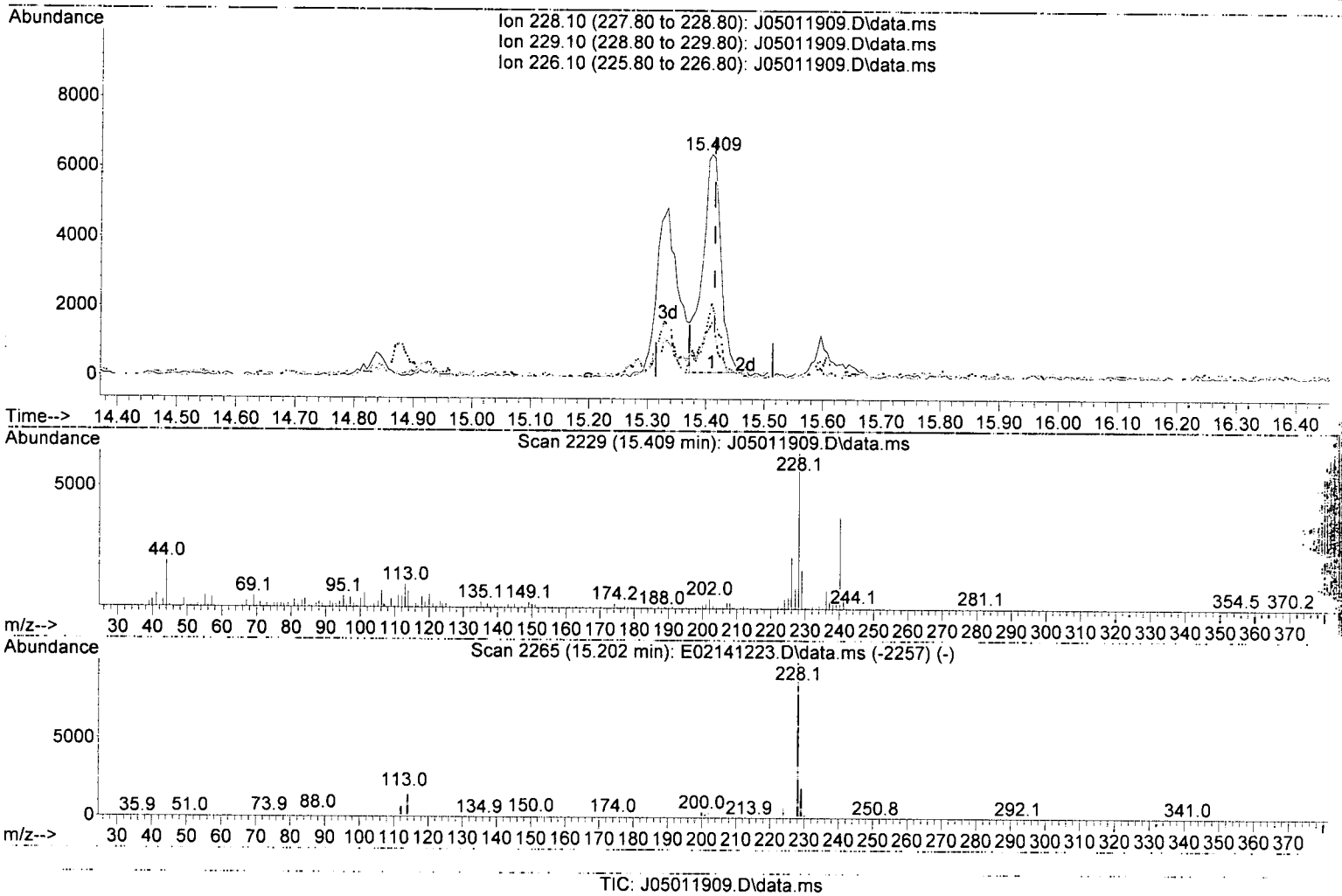
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	20.91
226.10	26.50	30.18
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(84) Chrysene (T)

15.409min (-0.005) 34.88 ng/ml

response 13746

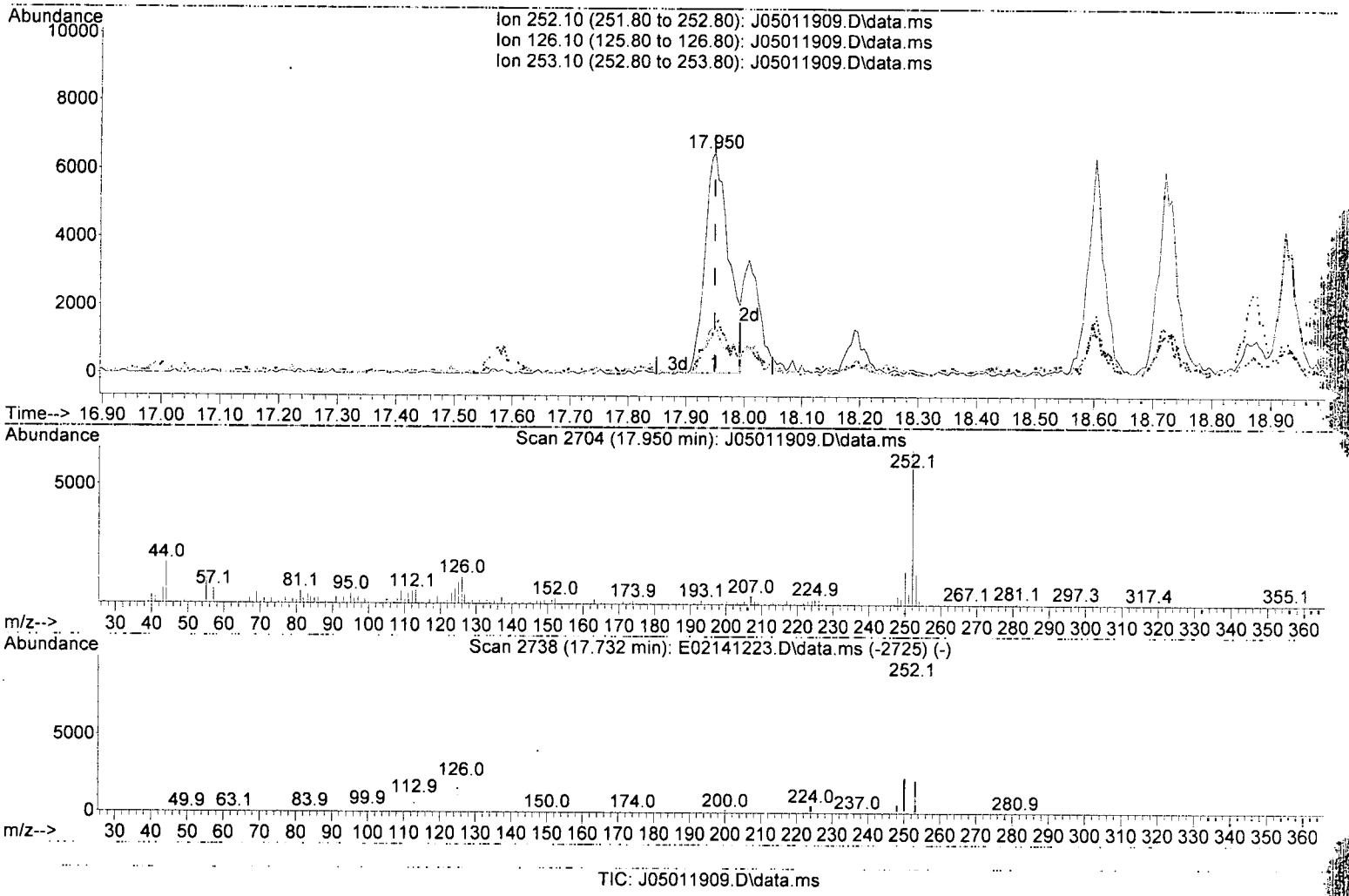
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	25.00
226.10	29.30	33.30
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.950min (+ 0.001) 55.02 ng/ml

response 18504

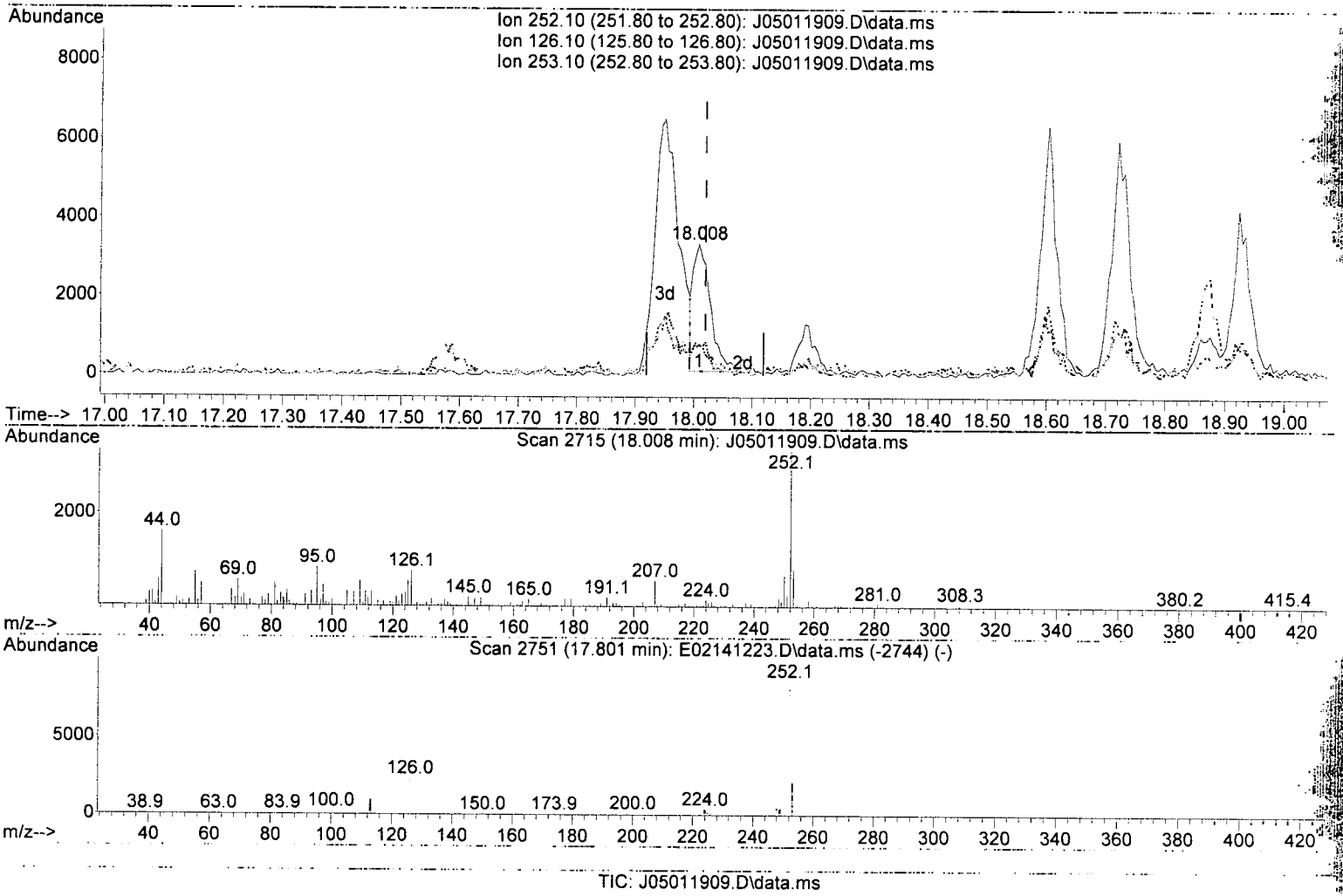
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	23.01
253.10	22.00	19.76
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.008min (-0.011) 26.22 ng/ml

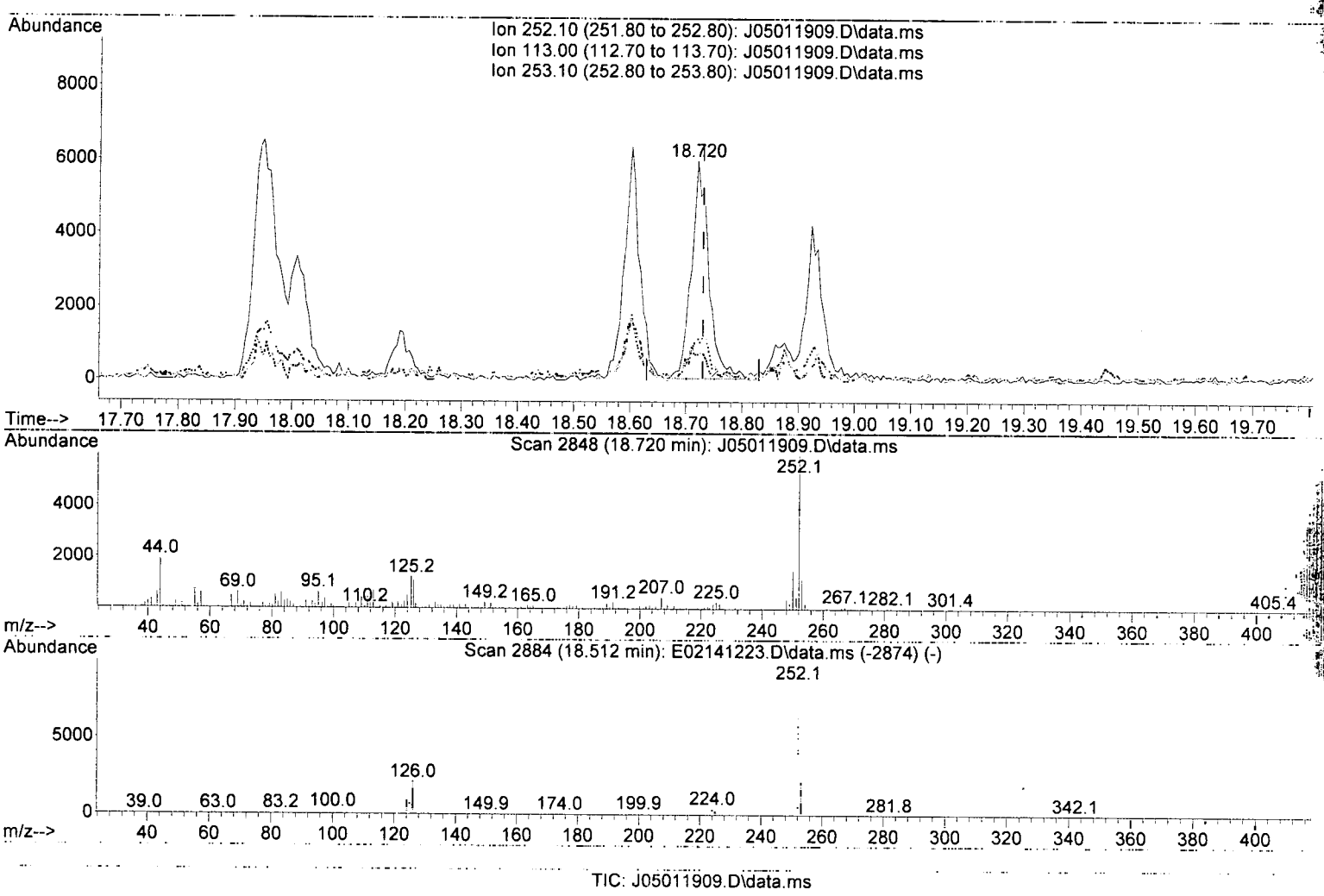
response 6632

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	23.10
253.10	21.70	24.32
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(92) Benzo(a)pyrene (T)

18.720min (-0.010) 45.45 ng/ml

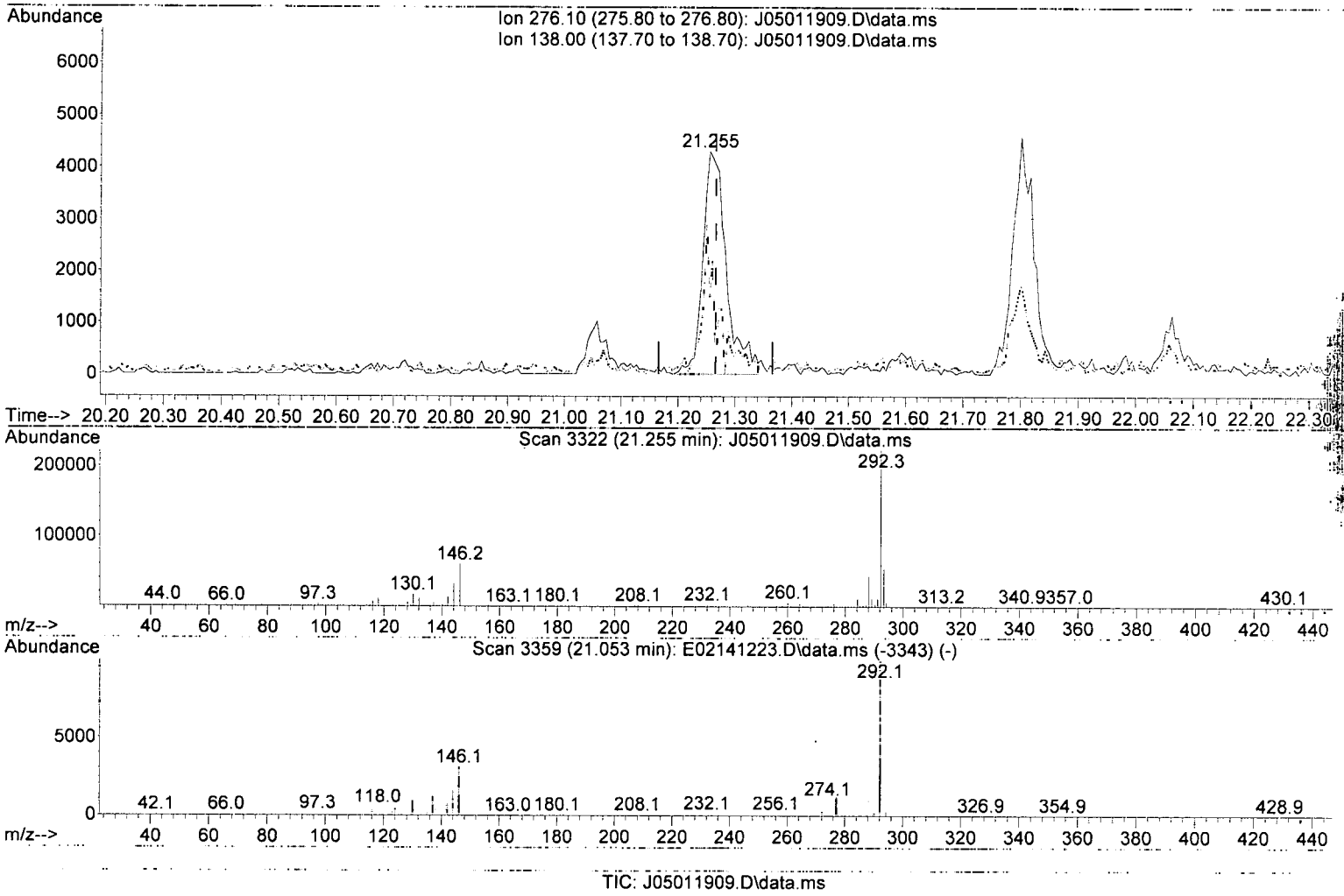
response 12963

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	11.65
253.10	21.60	19.18
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011909.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.255min (-0.011) 33.70 ng/ml

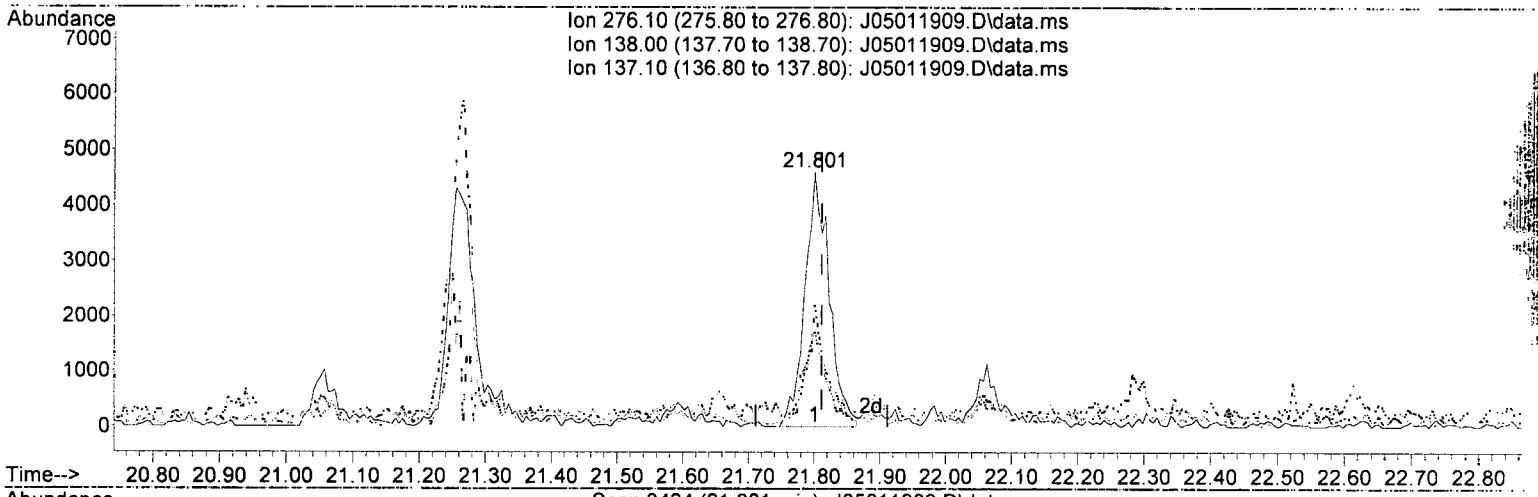
response 12385

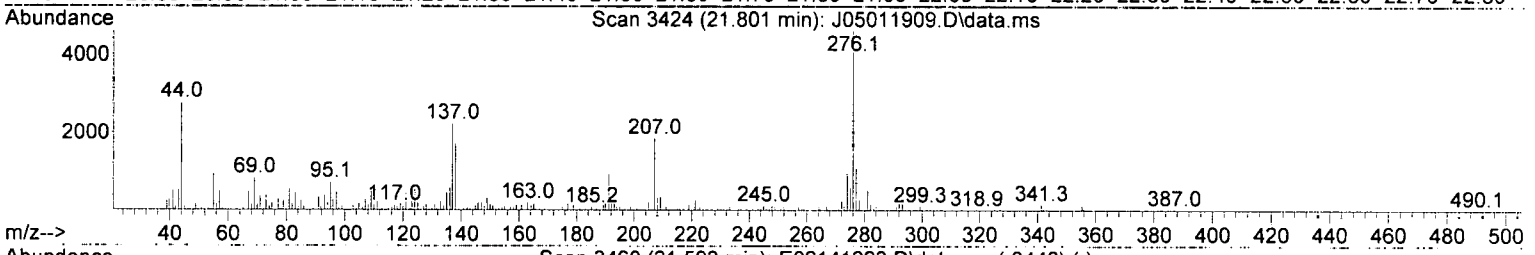
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	34.77
0.00	0.00	0.00
0.00	0.00	0.00

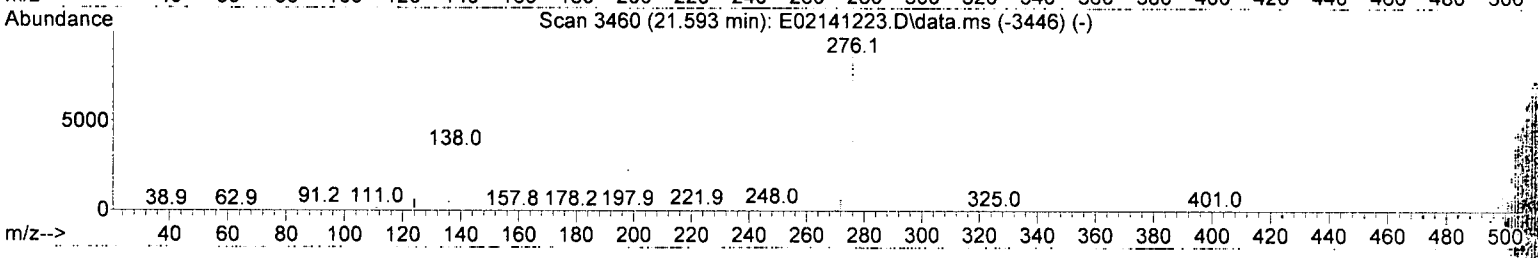
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-23RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:25:59 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011909.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.801min (-0.011) 32.98 ng/ml

response 11714

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	37.66
137.10	23.10	48.43
0.00	0.00	0.00

Data Path : T:\data\2019-05\9E01028\
Data File : J05011909.D
Acq On : 1 May 2019 12:47 pm
Operator : JK/ AMS/ DTH
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Misc : 4x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
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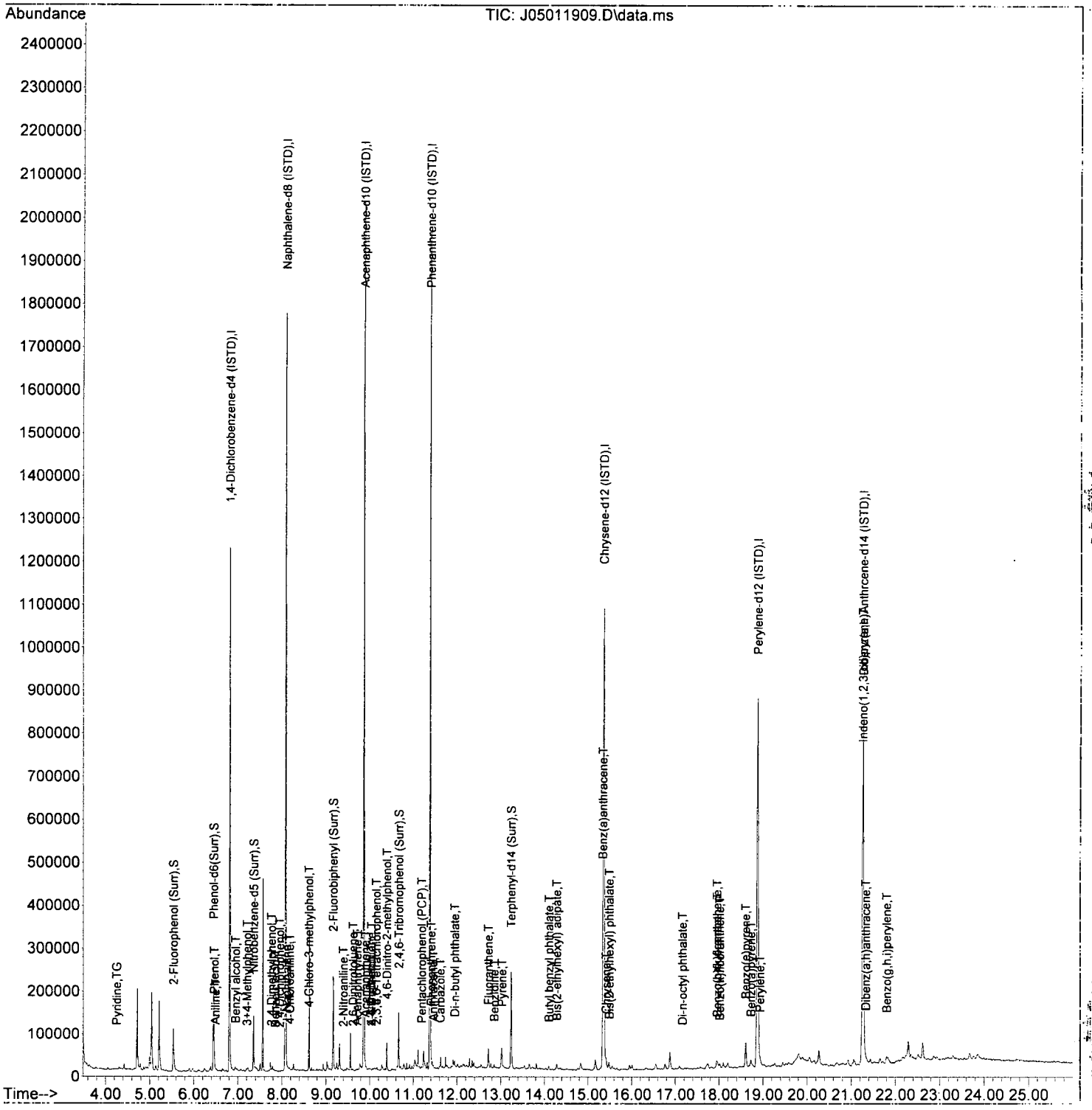

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

AMS 5/1/19 MOS

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	208589	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	857536	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	423606	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.382	188	715027	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	651979	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	580859	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.271	292	567644	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.551	112	249670	1841.24	ng/ml	0.02
5) Phenol-d6(Surr)	6.450	99	331801	1902.27	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.354	82	260039	1653.79	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	429262	1436.24	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	79093	2224.35	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	384328	1252.29	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.225	74	347m	3.38	ng/ml#	
3) Pyridine	4.204	79	9869m	58.85	ng/ml	
6) Phenol	6.461	94	21497	120.06	ng/ml	86
7) Aniline	6.482	93	3861	18.83	ng/ml	82
8) Bis(2-chloroethyl) ether	6.530	93	1042	5.90	ng/ml#	18
9) 2-Chlorophenol	6.616	128	281	N.D.		
10) 1,3-Dichlorobenzene	6.755	146	92	N.D.		
11) 1,4-Dichlorobenzene	6.830	146	204	N.D.		
12) Benzyl alcohol	6.942	108	70071	848.17	ng/ml	93
13) 1,2-Dichlorobenzene	6.980	146	81	N.D.		
14) 2-Methylphenol	7.054	107	1961	17.85	ng/ml	90
15) 2,2'-Oxybis(1-Chloropr...	7.065	45	1681	8.41	ng/ml#	1
16) N-Nitrosodi-n-propylamine	7.194	70	7167	62.01	ng/ml	72
17) 3+4-Methylphenol	7.204	107	9156	81.59	ng/ml#	60
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.354	77	1302	8.77	ng/ml#	48
22) Isophorone	7.611	82	5855	18.33	ng/ml#	39
23) 2-Nitrophenol	7.696	139	138	58.35	ng/ml#	1
24) 2,4-Dimethylphenol	7.734	122	1103	33.44	ng/ml#	70
25) Bis(2-chloroethoxy) me...	7.825	93	433	2.53	ng/ml#	1
26) Benzoic acid	7.825	105	88367	1796.51	ng/ml	96
27) 2,4-Dichlorophenol	7.932	162	459	49.03	ng/ml#	1
28) 1,2,4-Trichlorobenzene	8.028	180	81	N.D.		
29) Naphthalene	8.103	128	12813	28.87	ng/ml	98
30) 4-Chloroaniline	8.140	127	564	18.50	ng/ml#	18
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.648	107	2361	81.30	ng/ml#	1
33) 2-Methylnaphthalene	8.798	142	5789	19.89	ng/ml	89
34) 1-Methylnaphthalene	8.900	142	4028	14.27	ng/ml	79
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	9.082	196	171	46.47	ng/ml#	61
38) 2,4,5-Trichlorophenol	9.130	198	185	29.17	ng/ml#	59
39) 1,1'-Biphenyl	9.269	154	2547	7.42	ng/ml	74
41) 2-Chloronaphthalene	9.290	162	149	N.D.		
42) 2-Nitroaniline	9.392	138	355	69.34	ng/ml#	28
43) 2,6-Dimethylnaphthalene	9.440	156	4544	18.05	ng/ml	88

No Name Entered Quantitation Report (Not Reviewed)

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Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

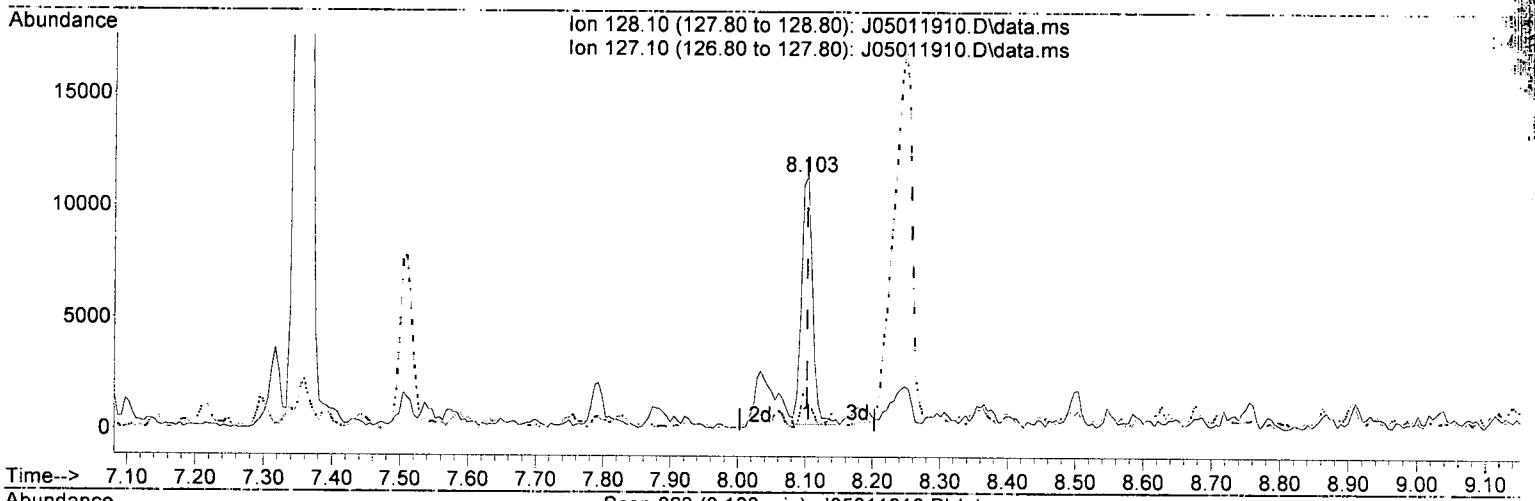
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.520	168	331	132.34	ng/ml#	67
45) Dimethyl phthalate	9.563	163	2342	7.95	ng/ml#	2
46) 1,3-Dinitrobenzene	9.600	168	273	72.08	ng/ml#	1
47) 2,6-Dinitrotoluene	9.622	165	265	36.61	ng/ml#	44
48) 1,2-Dinitrobenzene	9.670	168	1389	48.93	ng/ml#	35
49) Acenaphthylene	9.718	152	4014	9.47	ng/ml	66
50) 3-Nitroaniline	9.777	138	949	16.39	ng/ml#	1
51) Acenaphthene	9.900	153	2583	9.48	ng/ml	68
52) 2,4-Dinitrophenol	9.889	184	113	171.45	ng/ml#	1
53) 4-Nitrophenol	9.969	139	1890	118.30	ng/ml#	1
54) 2,4-Dinitrotoluene	10.039	165	195	62.55	ng/ml#	1
55) Dibenzofuran	10.066	168	2478	6.96	ng/ml#	67
56) 2,3,5,6-Tetrachlorophenol	10.151	232	169	38.06	ng/ml#	1
57) 2,3,4,6-Tetrachlorophenol	10.194	232	273	17.85	ng/ml#	1
58) Diethyl phthalate	10.285	149	1128	4.01	ng/ml#	1
59) 2,3,5-Trimethylnaphtha...	10.274	170	2827	12.56	ng/ml	72
60) Fluorene	10.413	166	6317	22.66	ng/ml	80
61) 4-Chlorophenyl phenyl ...	10.392	204	126	N.D.		
62) 4-Nitroaniline	10.408	138	583	10.94	ng/ml	96
63) 4,6-Dinitro-2-methylph...	10.456	198	100	89.18	ng/ml#	1
65) N-Nitrosodiphenylamine	10.536	169	914	4.15	ng/ml#	36
66) Azobenzene (1,2-DPH)	10.601	77	10052	33.74	ng/ml#	1
68) 4-Bromophenyl phenyl e...	10.975	248	57	N.D.		
69) Hexachlorobenzene	10.996	284	68	N.D.		
70) Pentachlorophenol (PCP)	11.189	266	1682	64.78	ng/ml	92
71) Phenanthrene	11.403	178	19545	50.37	ng/ml	91
72) Anthracene	11.456	178	6707	17.75	ng/ml	84
73) Carbazole	11.612	167	5280	16.51	ng/ml	52
74) Di-n-butyl phthalate	11.948	149	7123	16.29	ng/ml	87
75) Fluoranthene	12.719	202	35618	92.05	ng/ml	93
76) Benzidine	12.884	184	361	82.84	ng/ml#	1
77) Pyrene	13.029	202	35629	89.35	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	7282	67.50	ng/ml	87
81) Bis(2-ethylhexyl) adipate	14.286	129	6278	33.79	ng/ml	92
82) 3,3-Dichlorobenzidine	15.307	252	68	Below Cal	#	1
83) Benz(a)anthracene	15.329	228	14140	39.74	ng/ml MOS	77
84) Chrysene	15.414	228	20631	59.77	ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.479	149	20959	76.53	ng/ml	98
87) Di-n-octyl phthalate	17.163	149	636	67.74	ng/ml#	1
88) Benzo(b)fluoranthene	17.950	252	21125	72.03	ng/ml MOS	91
89) Benzo(k)fluoranthene	~~18.014~~	~~252~~	~~6243~~	~~28.25~~	~~ng/ml~~	~~71~~ MI-MOS
90) Benzo(b+k)fluoranthene	17.950	252	29118	100.99	ng/ml	89
91) Benzo(e)pyrene	18.608	252	12785	40.14	ng/ml#	64
92) Benzo(a)pyrene	18.725	252	14315	56.80	ng/ml	93
93) Perylene	18.934	252	29220	99.10	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.260	276	11652	36.69	ng/ml	75
96) Dibenz(a,h)anthracene	21.330	278	2377	8.37	ng/ml#	33
97) Benzo(g,h,i)perylene	21.811	276	12618	41.11	ng/ml	82

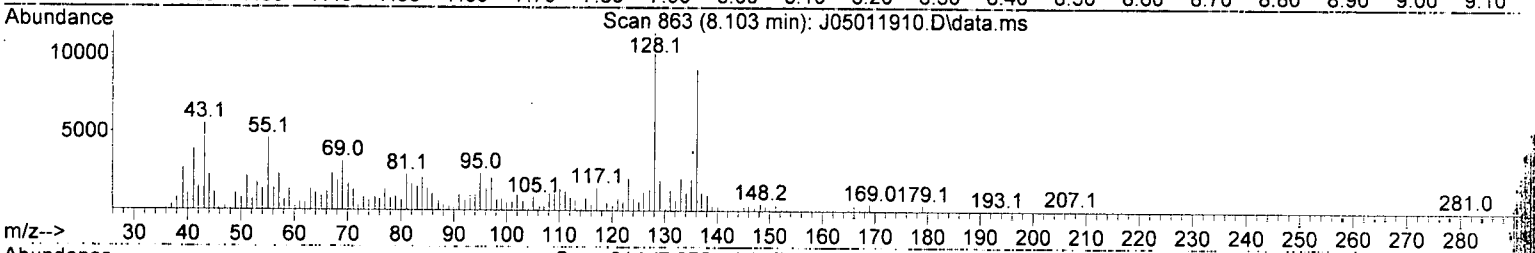
(#) = qualifier out of range (m) = manual integration (+) = signals summed

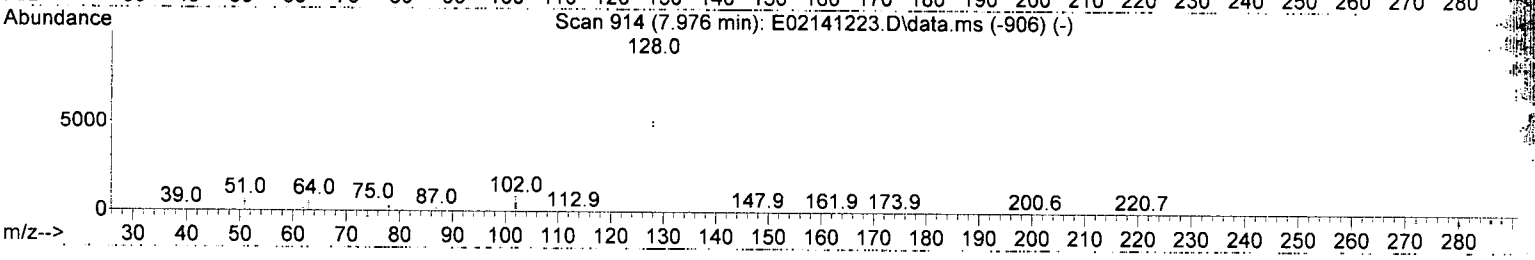
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011910.D\data.ms

(29) Naphthalene (T)

8.103min (+ 0.000) 28.87 ng/ml

response 12813

Ion	Exp%	Act%
128.10	100.00	100.00
127.10	12.70	11.92
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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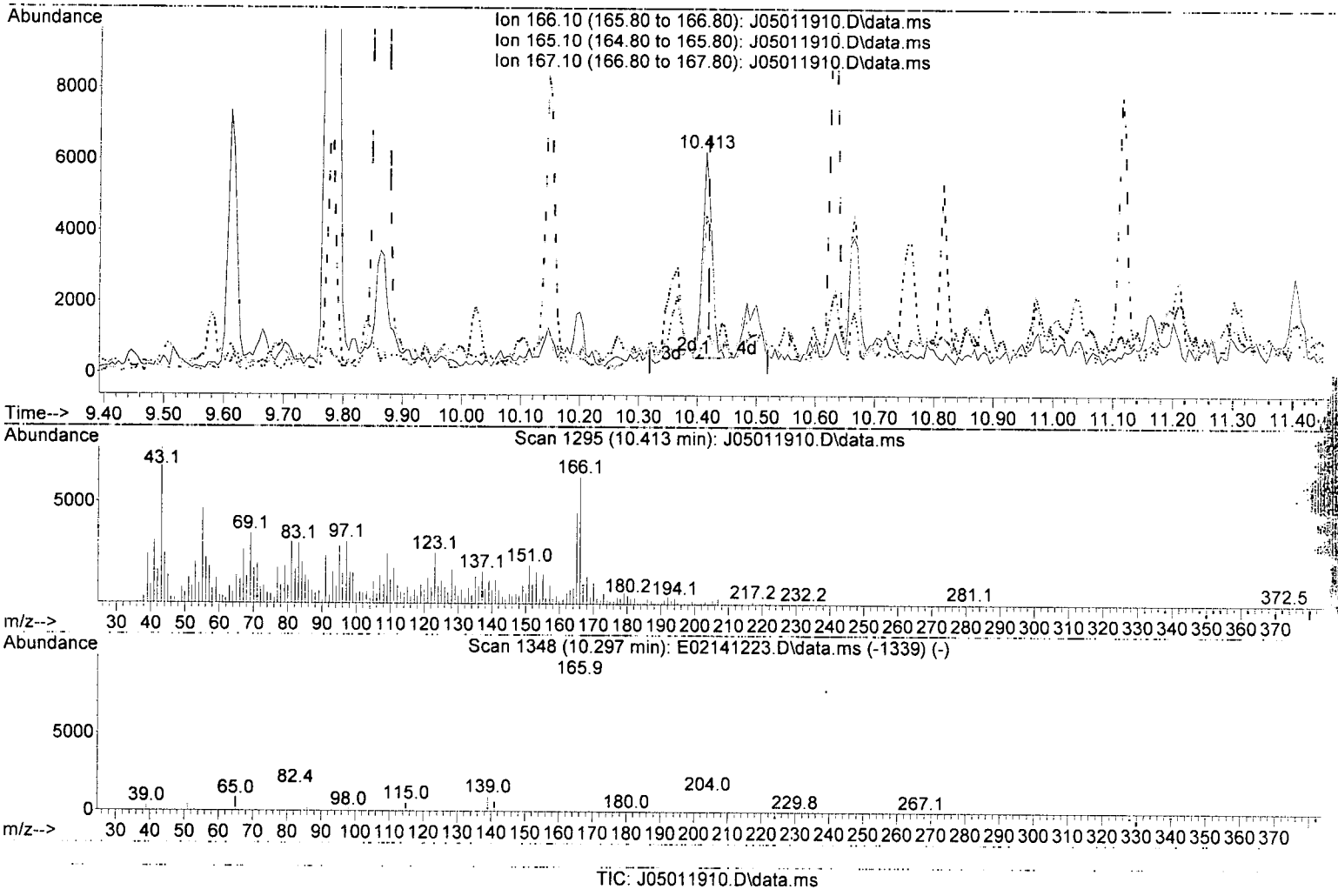
InstName : SV-GCMS10



TIC: J05011910.D\data.ms

(60) Fluorene (T)

10.413min (-0.005) 22.66 ng/ml

response 6317

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.70	71.67
167.10	13.50	14.97
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
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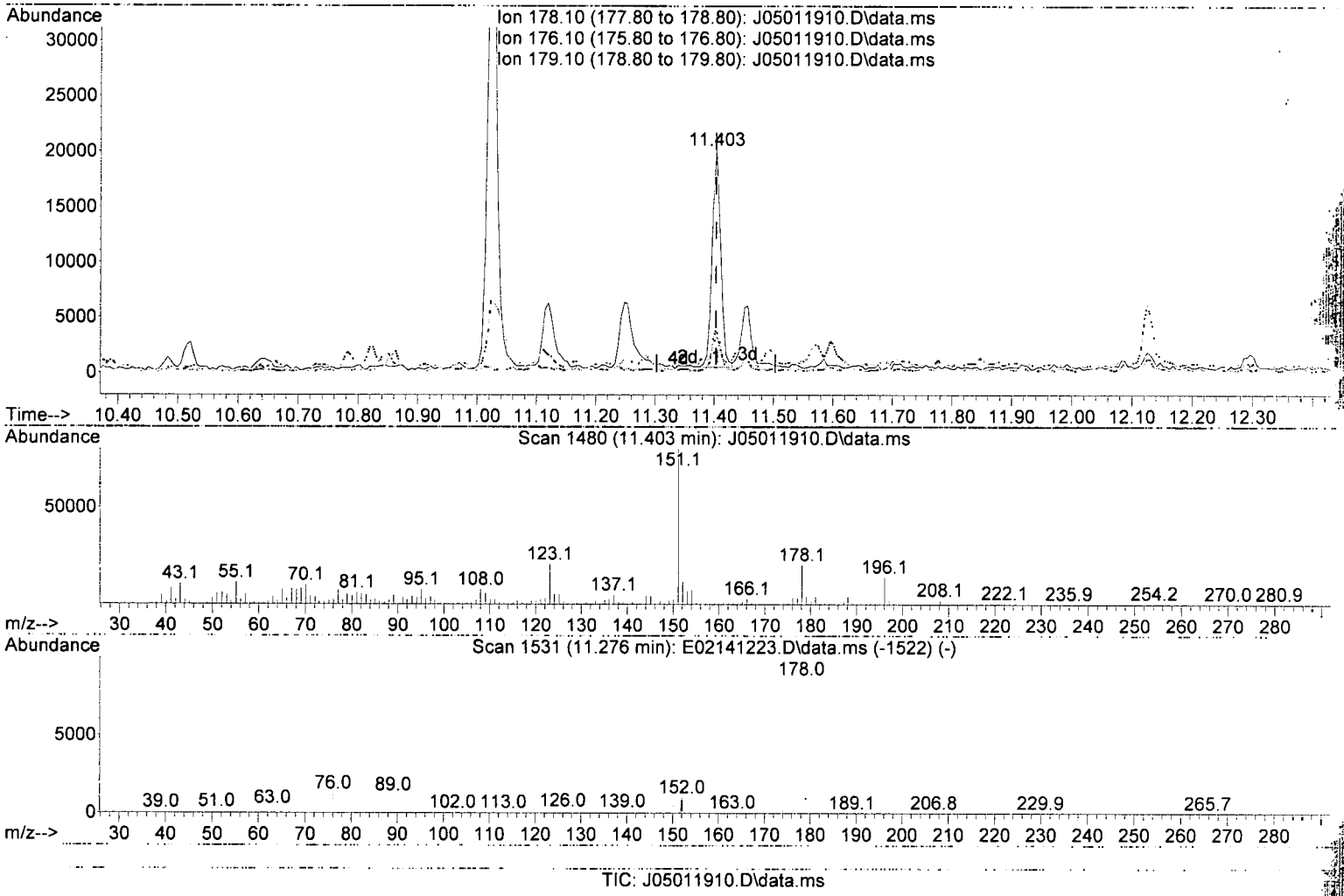

TIC: J05011910.D\data.ms

(71) Phenanthrene (T)

11.403min (+ 0.000) 50.37 ng/ml

response 19545

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.40	15.94
179.10	15.20	19.63
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
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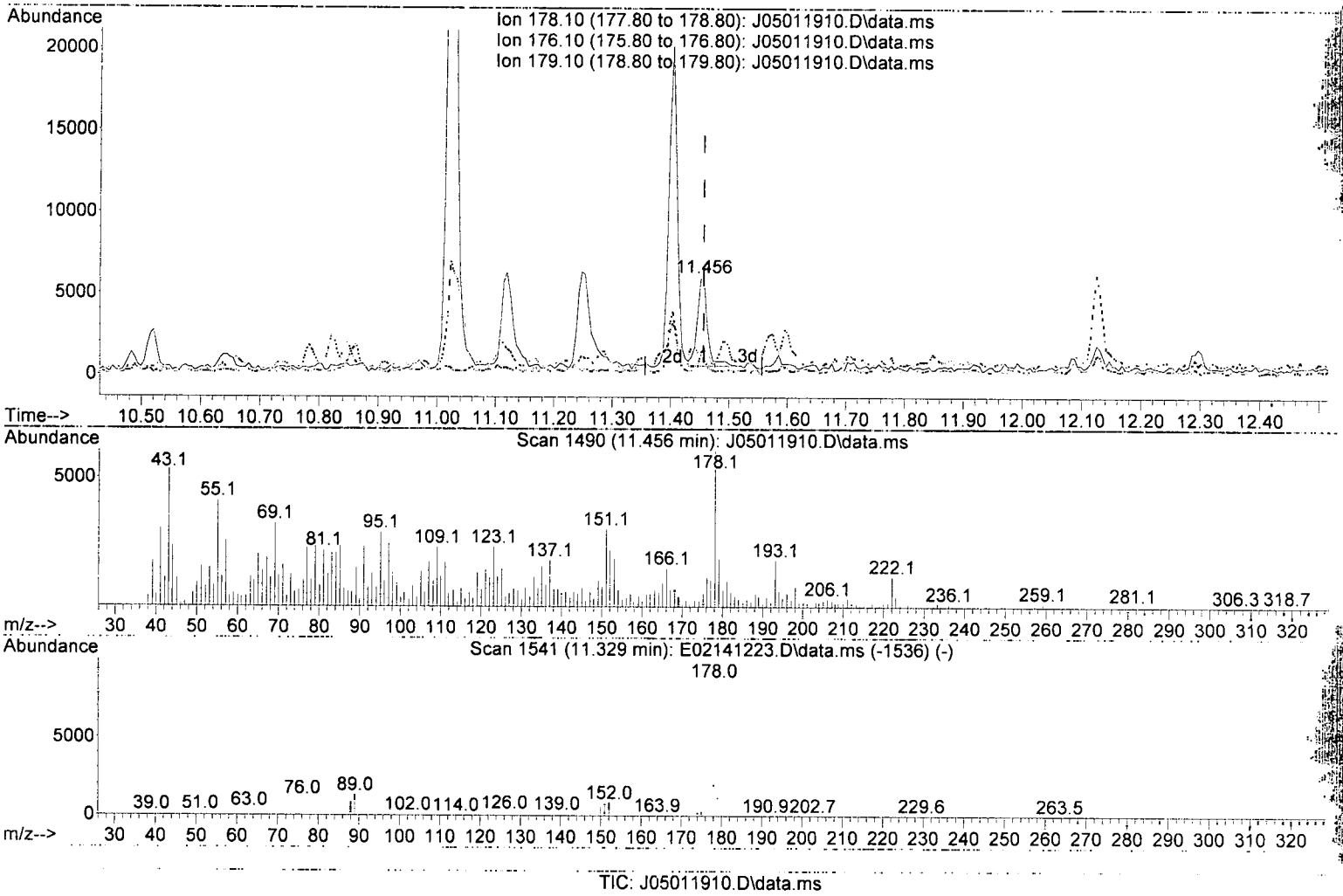


TIC: J05011910.D\data.ms

(72) Anthracene (T)

11.456min (+ 0.000) 17.75 ng/ml

response 6707

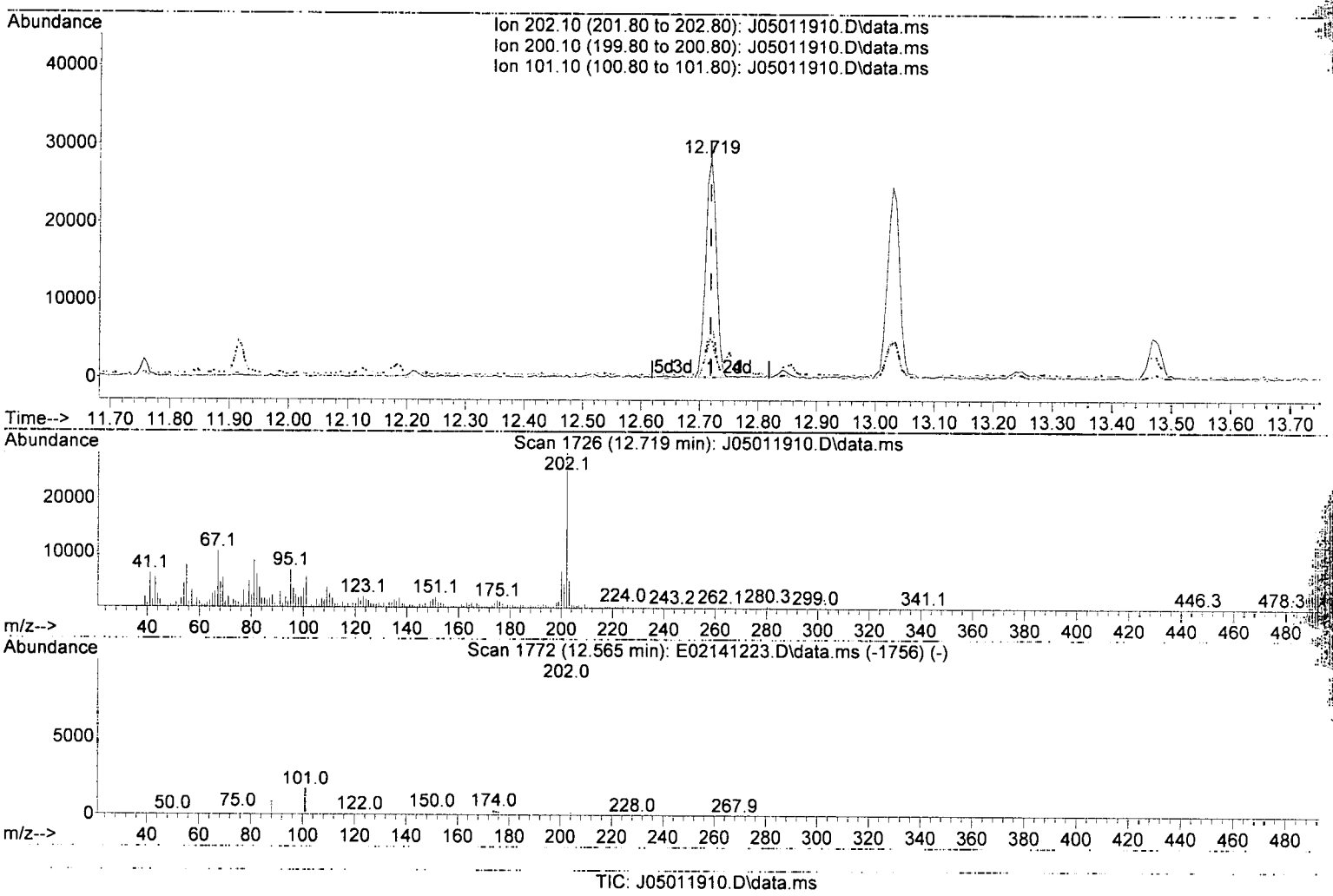
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	18.70	18.95
179.10	15.90	30.63
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(75) Fluoranthene (T)

12.719min (+ 0.000) 92.05 ng/ml

response 35618

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.20	23.45
101.10	17.00	19.54
0.00	0.00	0.00

Quantitation Report (Qedit)

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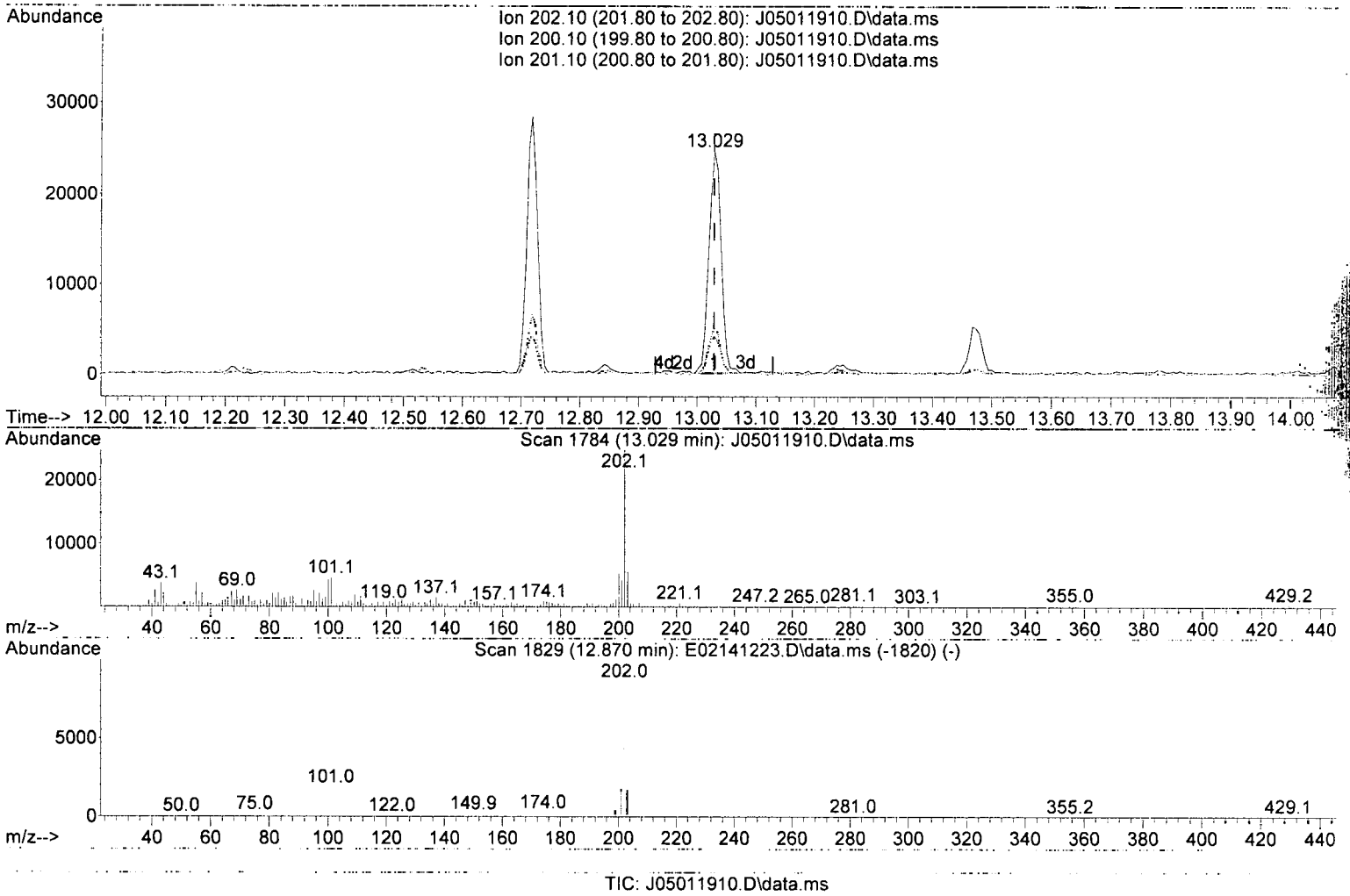

TIC: J05011910.D\data.ms

(77) Pyrene (T)

13.029min (+ 0.000) 89.35 ng/ml

response 35629

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	20.70	21.16
201.10	17.30	16.83
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
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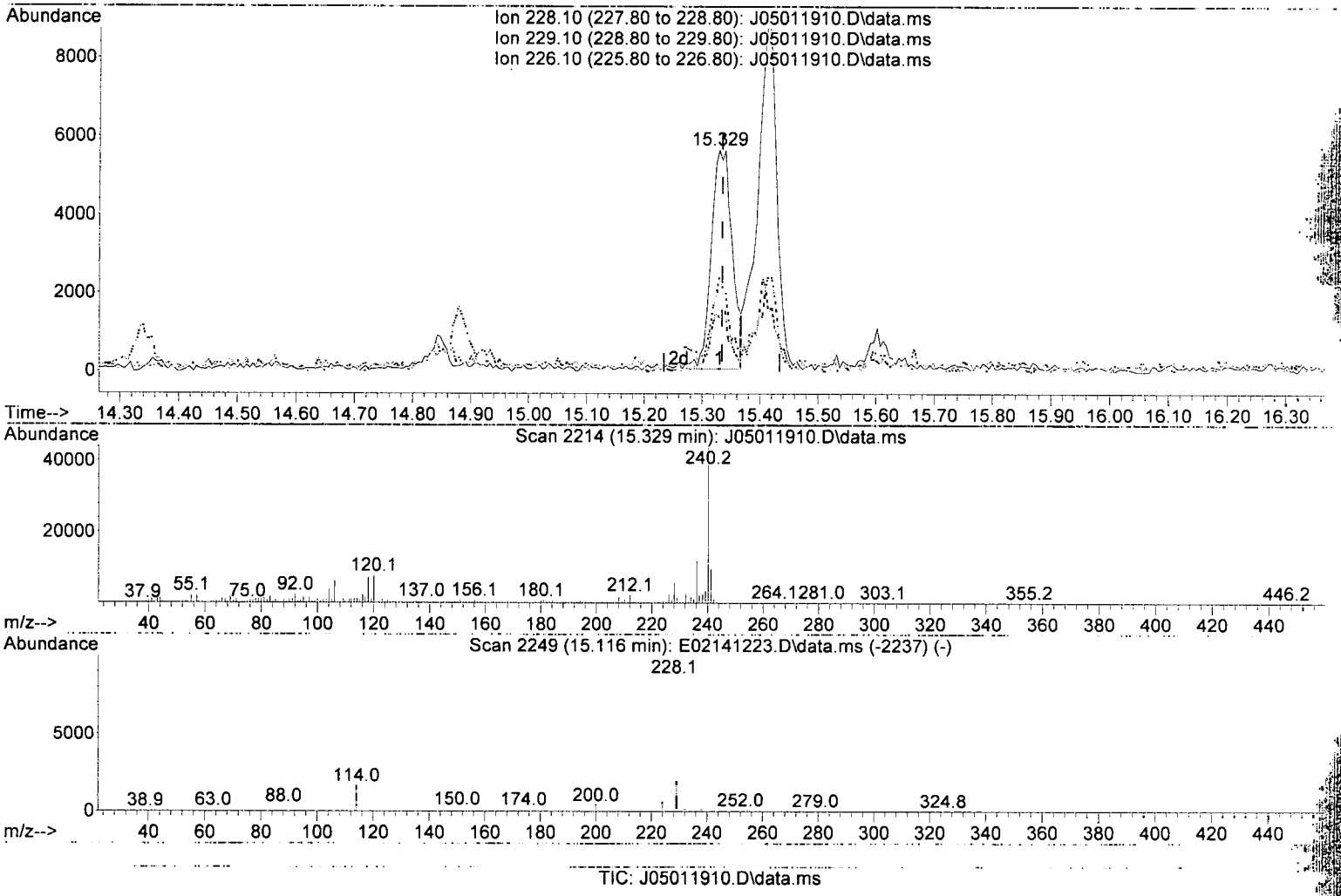

TIC: J05011910.D\data.ms

(83) Benz(a)anthracene (T)

15.329min (-0.005) 39.74 ng/ml

response 14140

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.60	24.44
226.10	26.50	43.06
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
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Misc : 1x, 8270D LL PAH
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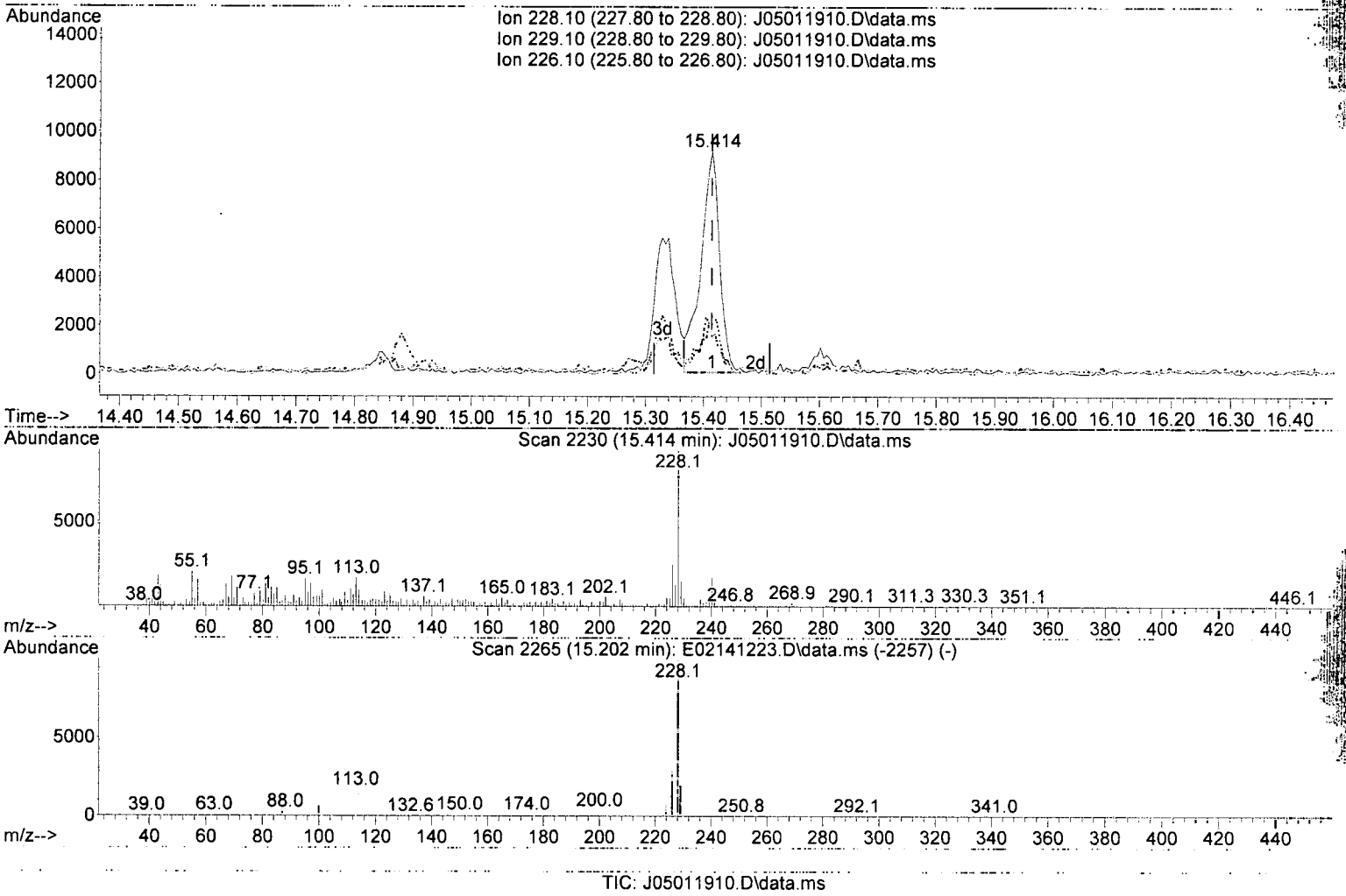
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011910.D\data.ms

(84) Chrysene (T)

15.414min (+ 0.000) 59.77 ng/ml

response 20631

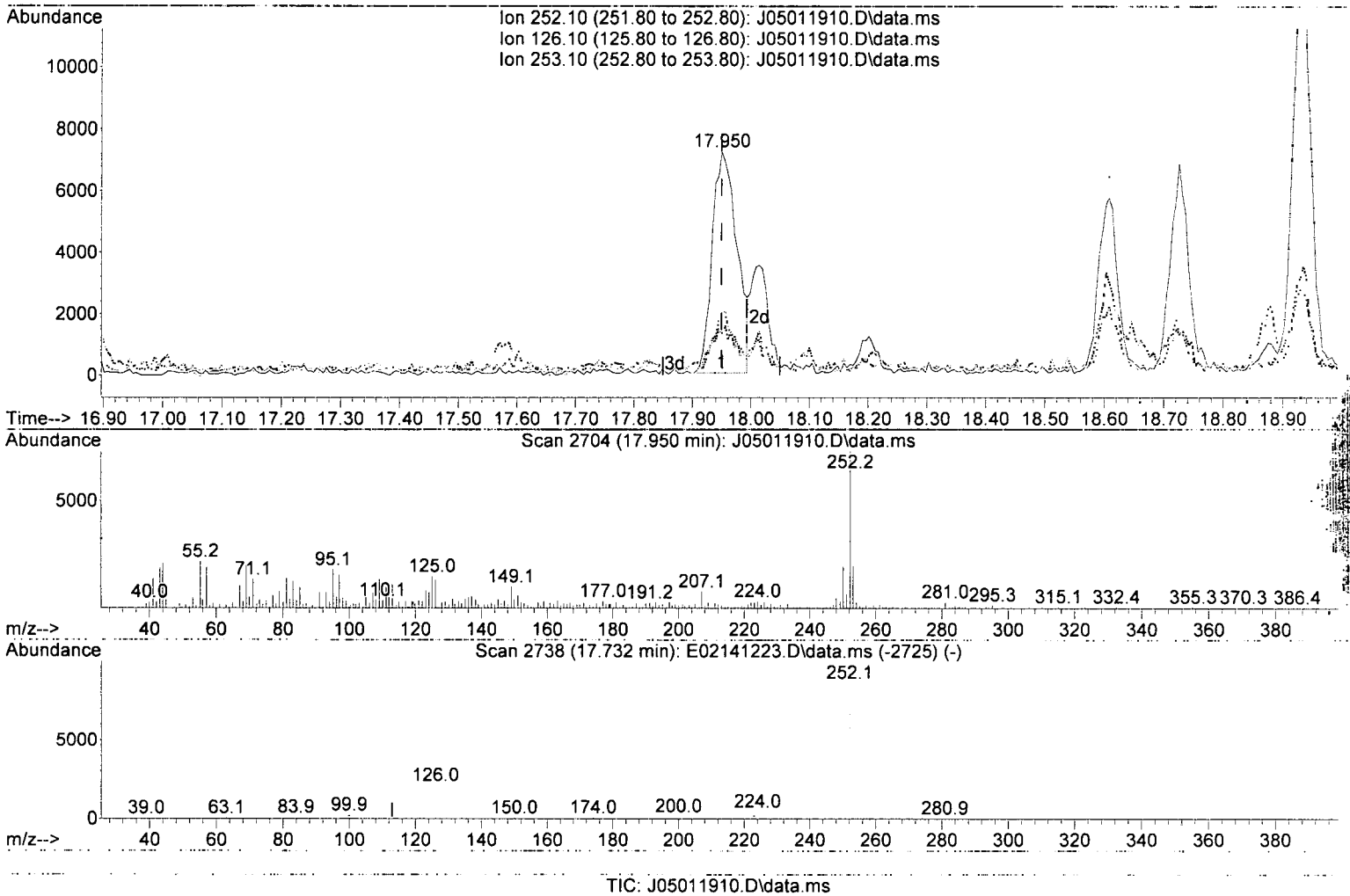
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	19.50	16.13
226.10	29.30	27.11
0.00	0.00	0.00

M-05
5/2/19

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J05011910.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.950min (+ 0.001) 72.03 ng/ml

response 21125

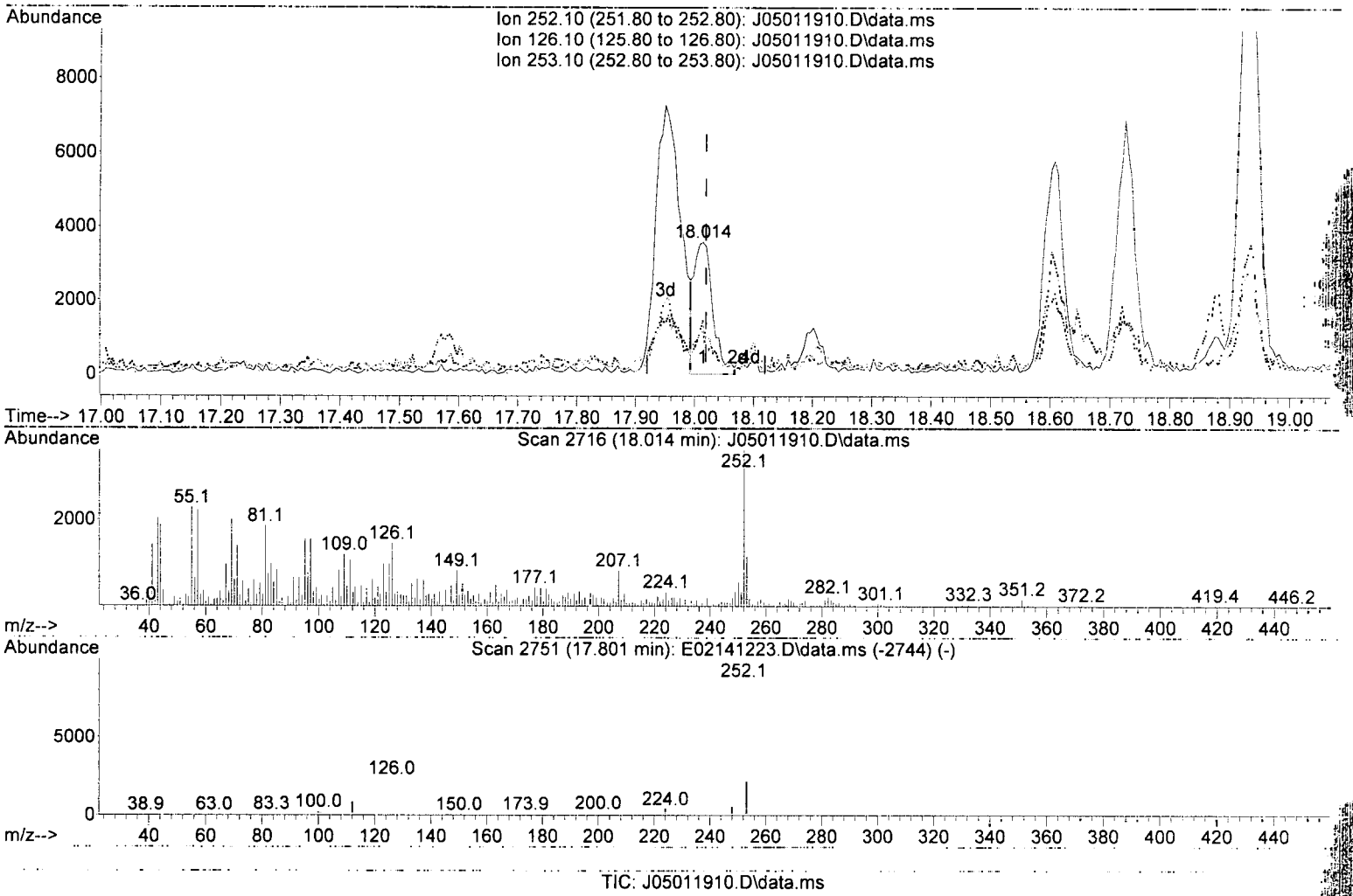
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	18.23
253.10	22.00	27.02
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(89) Benzo(k)fluoranthene (T)

18.014min (-0.005) 32.83 ng/ml m

response 7845

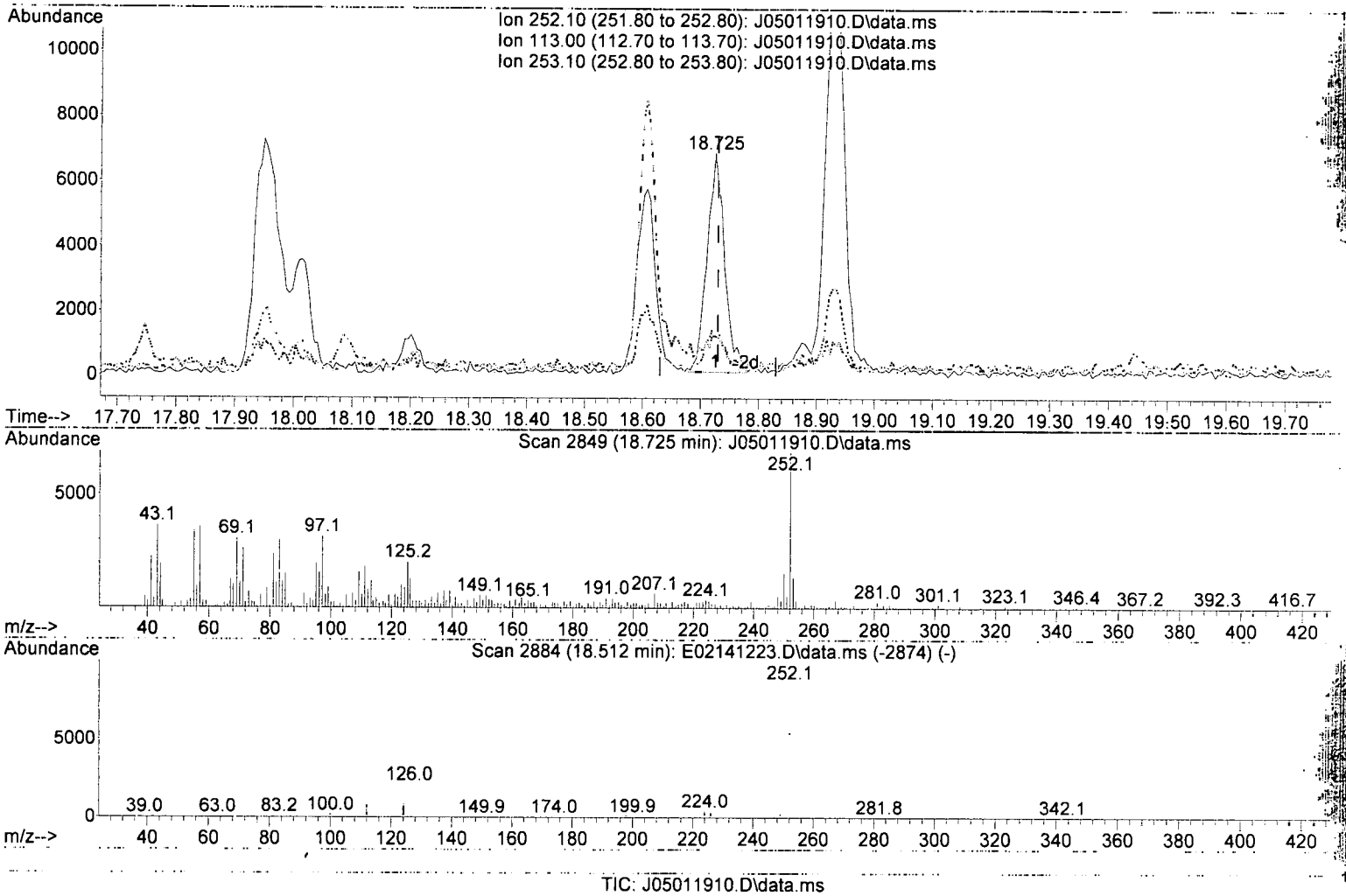
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	23.30	40.50
253.10	21.70	32.52
0.00	0.00	0.00

AMS 5/1/19

Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(92) Benzo(a)pyrene (T)

18.725min (-0.005) 56.80 ng/ml

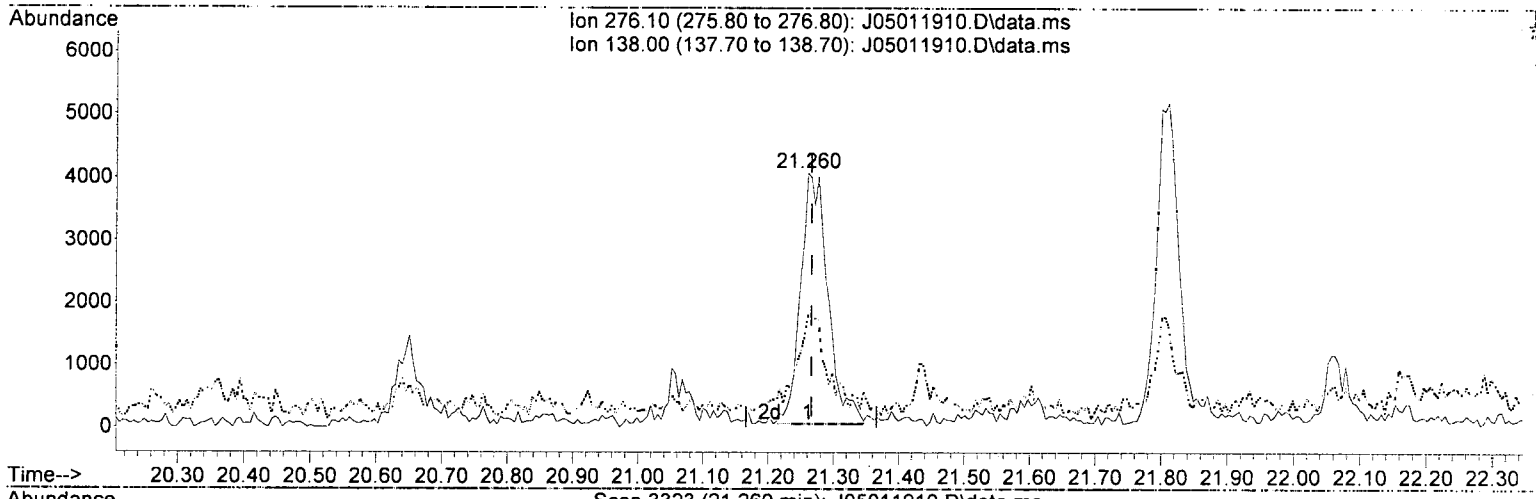
response 14315

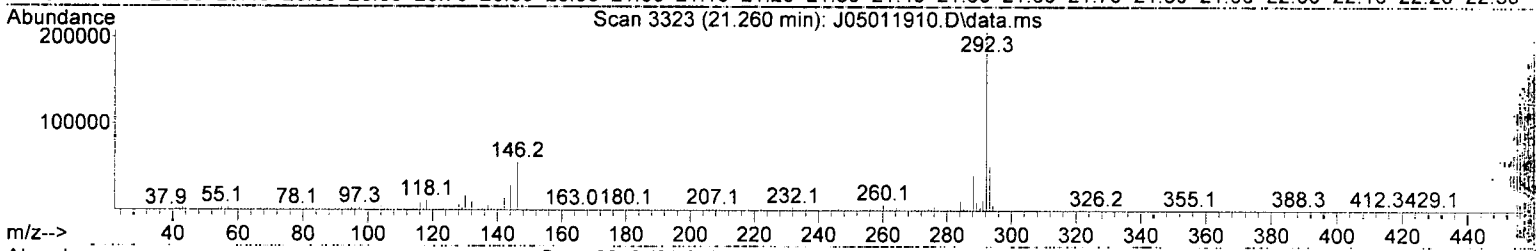
Ion	Exp%	Act%
252.10	100.00	100.00
113.00	13.40	18.06
253.10	21.60	19.98
0.00	0.00	0.00

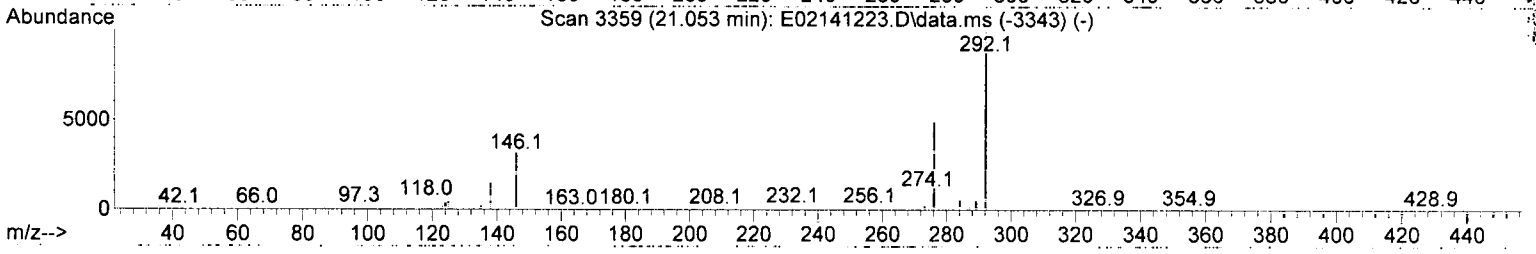
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011910.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.260min (-0.005) 36.69 ng/ml

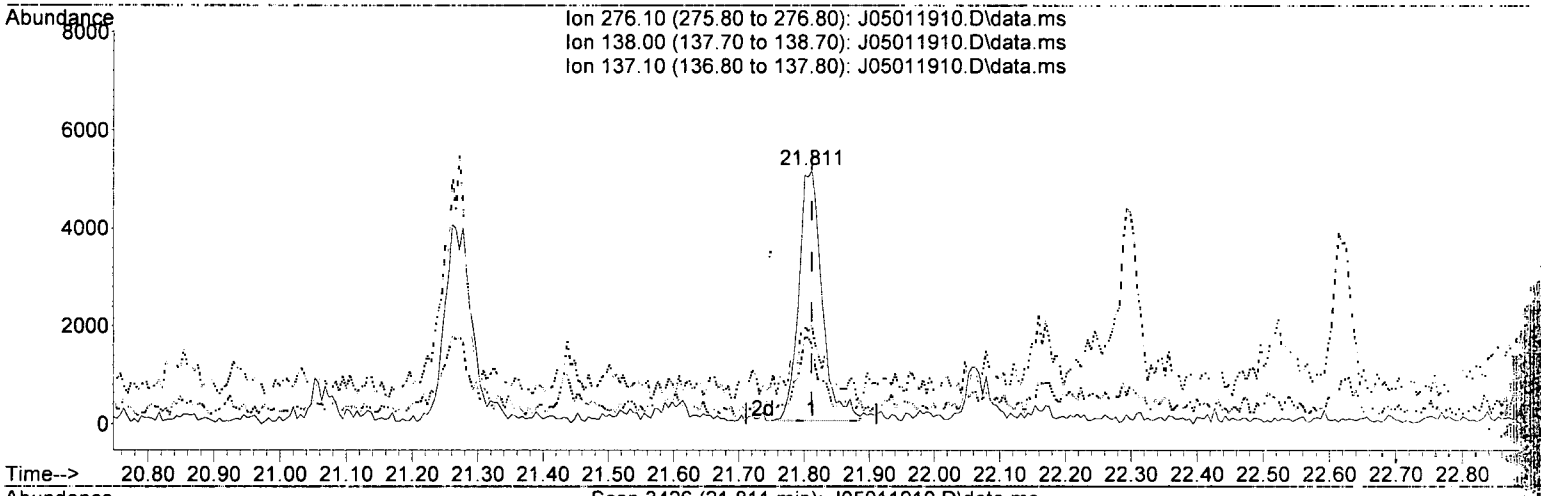
response 11652

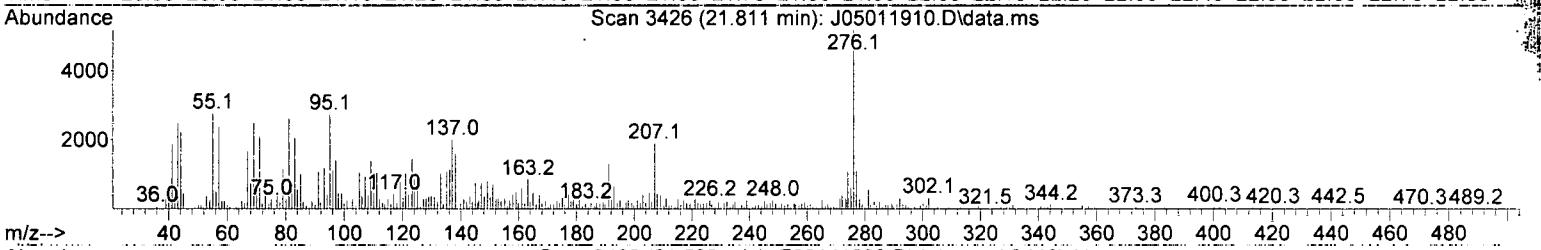
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.60	44.26
0.00	0.00	0.00
0.00	0.00	0.00

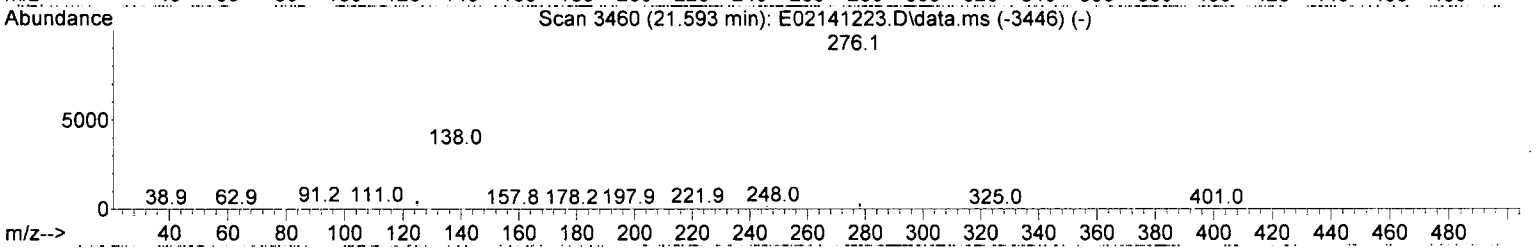
Quantitation Report (Qedit)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J05011910.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.811min (+ 0.000) 41.11 ng/ml

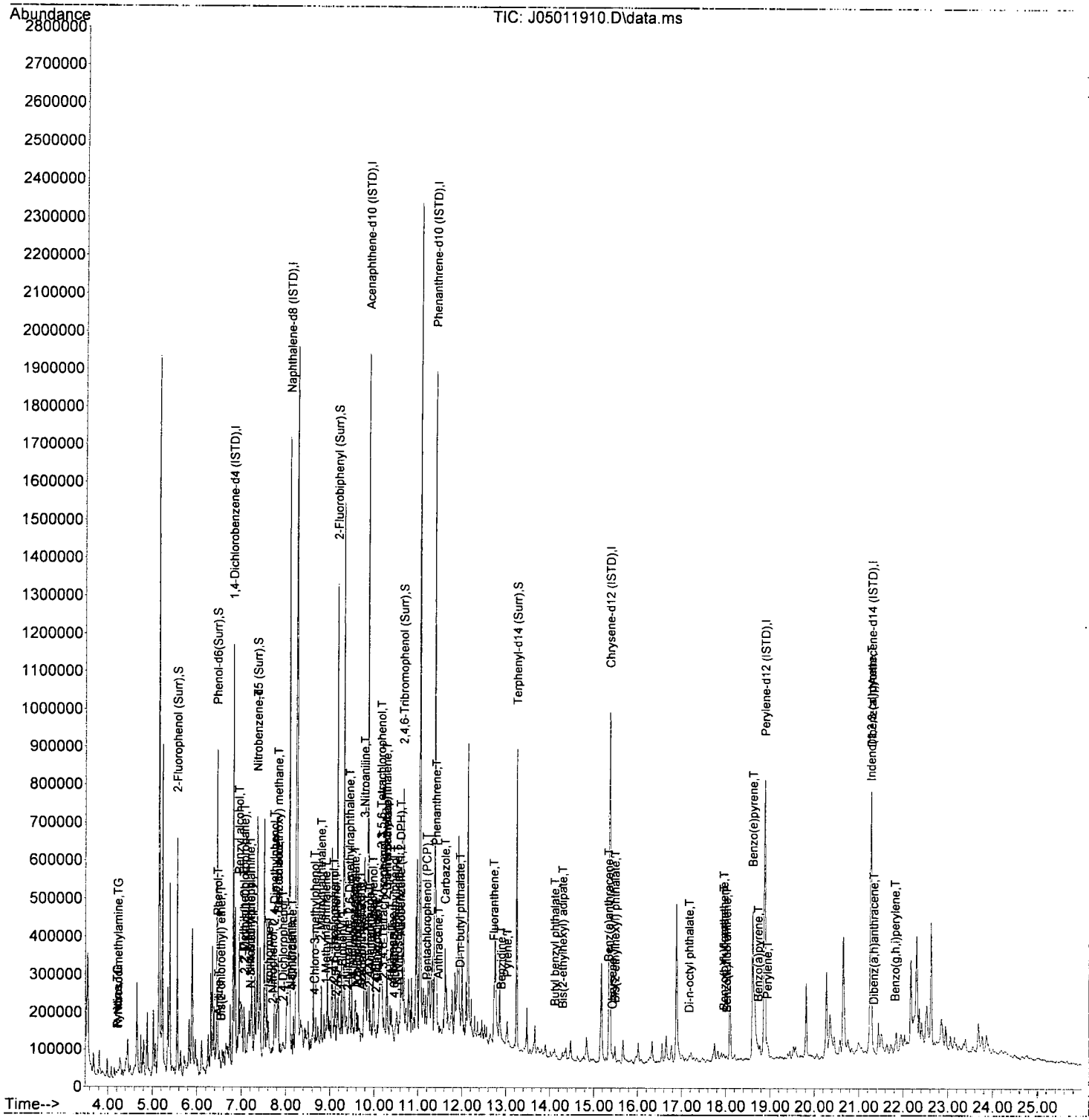
response 12618

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	28.10	31.10
137.10	23.10	38.87
0.00	0.00	0.00

No Name Entered Quantitation Report (Not Reviewed)

Data Path : T:\data\2019-05\9E01028\
Data File : J05011910.D
Acq On : 1 May 2019 1:23 pm
Operator : JK/ AMS/ DTH
Sample : A9D0674-15RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: May 01 15:26:06 2019
Quant Method : T:\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Batch 9050375
Sequence 9E01044 (A9D0674-16RE2,19RE2,20RE2,22RE2)

APEX LABORATORIES

Apex Laboratories

PREPARATION BENCH SHEET

JUN 0 5 2019

BATCH #: 9050375 (Sediment)

Prep Method: EPA 3546

#	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
	9050375-BLK1		QC	05/01/19 13:10	16	2				100					
	9050375-BS1		QC	05/01/19 13:10	15	2	A19D163		100	100					
	A9D0674-16RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	15.77	2				100	T4-PDI2019-SG52-190417	Surr Failure Added 5/1/2019 By ams			
	9050375-DUP1		QC	05/01/19 13:10	15.8	2		A9D0674-16RE2		100					
	A9D0674-19RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	15.57	2				100	T4-PDI2019-SG57-190417	Surr Failure Added 5/1/2019 By ams			
	A9D0674-20RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	15.65	2				100	T4-PDI2019-SG58-190417	Surr Failure Added 5/1/2019 By ams			
	A9D0674-22RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	15.55	2				100	FD-20190417130 1	Surr failures Added 5/1/2019 By ams			
	9050375-MS1		QC	05/01/19 13:10	15.64	2	A19D163	A9D0674-22RE2	100	100					

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19D344	10/26/19	DCM Lot# DV845-US

Analyte Spike(s)

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s)

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

Method 3546 digestion time and temperture achieved.
Initial:

Witness:_____

Prepared By: Date

AMS 5/2/19
Reviewed By: Date

Apex Laboratories

PREPARATION BENCH SHEET

BATCH #: 9050375 (Sediment)

Prep Method: EPA 3546

#	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
31	9050375-BLK1		QC	05/01/19 13:10	~~15~~ 16.00	2 ✓				100					
32	9050375-BS1		QC	05/01/19 13:10	15	2 ✓	A19D163		100	100					
33	A9D0674-16RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	~~15~~ 15.77	2 ✓				100	T4-PDI2019-SG5 2-190417	Surr Failure Added 5/1/2019 By ams Mud			
34	9050375-DUP1		QC	05/01/19 13:10	~~15~~ 15.80	2 ✓		A9D0674-16RE2		100		Mud light #			
35	A9D0674-19RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	~~15~~ 15.57	2 ✓				100	T4-PDI2019-SG5 7-190417	Surr Failure Added 5/1/2019 By ams Mud light #			
36	A9D0674-20RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	~~15~~ 15.65	2 ✓				100	T4-PDI2019-SG5 8-190417	Surr Failure Added 5/1/2019 By ams Mud light #			
37	A9D0674-22RE2	B	8270D LL PAH/PHTH/Phenols	05/01/19 13:10	~~15~~ 15.55	2 ✓				100	FD-20190417130 1	Surr failures Added 5/1/2019 By ams Mud light #			
38	9050375-MS1		QC	05/01/19 13:10	~~15~~ 15.64	2 ✓	A19D163	A9D0674-22RE2	100	100		Mud light #			

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A13L219	11/30/23	Extractions Balance
A18K311	12/31/20	Glass Wool
A19C137	09/04/19	Sodium Sulfate Lot # P334003
A19D344	10/26/19	DCM Lot# DV845-US

Analyte Spike(s) CAS

Std ID	Exp. Date	Description
A19D163	10/07/19	8270D PAH+/Phenols (JSCS) Spike @ 80 PPM

Surrogate(s) CAS

Std ID	Exp. Date	Description
A19D236	10/14/19	PAH Soil and Water Surr. (50ppm)

staining on turbovap tube

Method 3546 digestion time and temperture achieved.
Initial: CAS

Witness: VRA 05/01/19

VRA 05/01/19
Prepared By: Date

CAS ~~4~~ 5/1/19

AMS 5/2/19
Reviewed By: Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E01044**	Instrument:	**SV-GCMS5**
Date:	**05/01/19 13:08**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E01044-TUN1	Water	QC	QC			A19B027	A19D323
2	9E01044-IBL1	Water	QC	QC			A19B027	
3	9E01044-CCV1	Water	QC	QC			A19B027	A19C237
4	9E01044-CCB1	Water	QC	QC			A19B027	
5	A9D0911-01RE1	Water	625 LL Full List (All Compounds)		05/09/19	9041410	A19B027	
6	A9D0912-01	Water	625 PAH/PCP/HCB (SW)		05/09/19	9041454	A19B027	
7	9050375-BLK1	Sediment	QC	QC		9050375	A19B027	
8	9050375-BS1	Sediment	QC	QC		9050375	A19B027	
9	A9D0674-16RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9050375	A19B027	
10	9050375-DUP1	Sediment	QC	QC		9050375	A19B027	
11	A9D0674-19RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9050375	A19B027	
12	A9D0674-20RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9050375	A19B027	
13	A9D0674-22RE2	Sediment	8270D LL PAH/PHTH/Phenols	Anchor QEA, LLC	05/01/19	9050375	A19B027	
14	9050375-MS1	Sediment	QC	QC		9050375	A19B027	
15	9E01044-IBL2	Water	QC	QC			A19B027	

Data Entered By: AMS 5/2/19

Data Reviewed By: 5/2/19

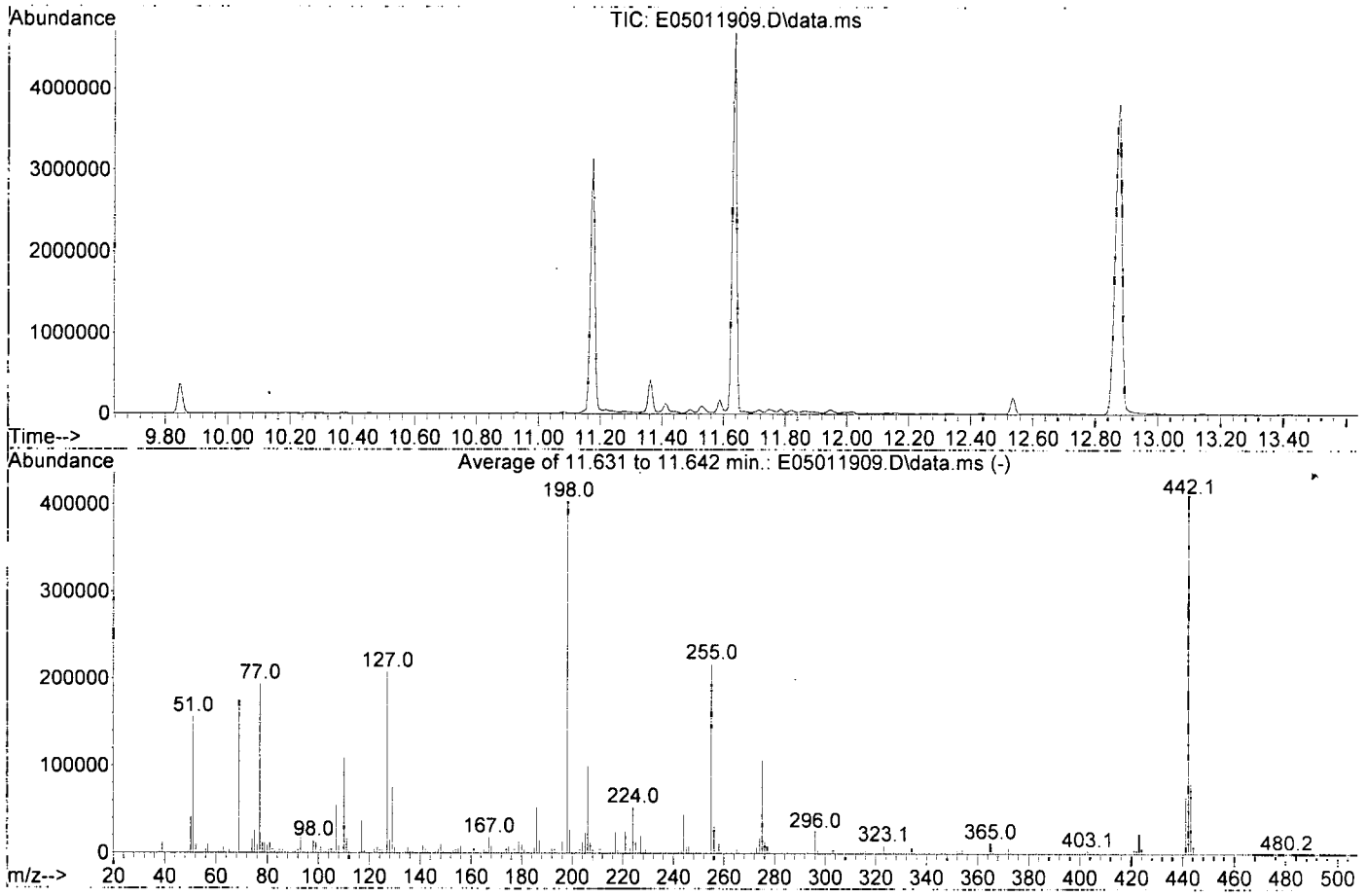
Comments:

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011909.D
Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : W:\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

AMS 5/2/19



AutoFind: Scans 1504, 1505, 1506; Background Corrected with Scan 1499

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	38.8	156840	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.2	174592	PASS
70	69	0.00	2	0.5	819	PASS
127	198	10	80	51.6	208196	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	403797	PASS
199	198	5	9	6.8	27416	PASS
275	198	10	60	26.4	106800	PASS
365	198	1	100	3.1	12341	PASS
441	442	0.01	24	15.3	63541	PASS
442	198	50	200	102.7	414827	PASS
443	442	15	24	19.4	80299	PASS

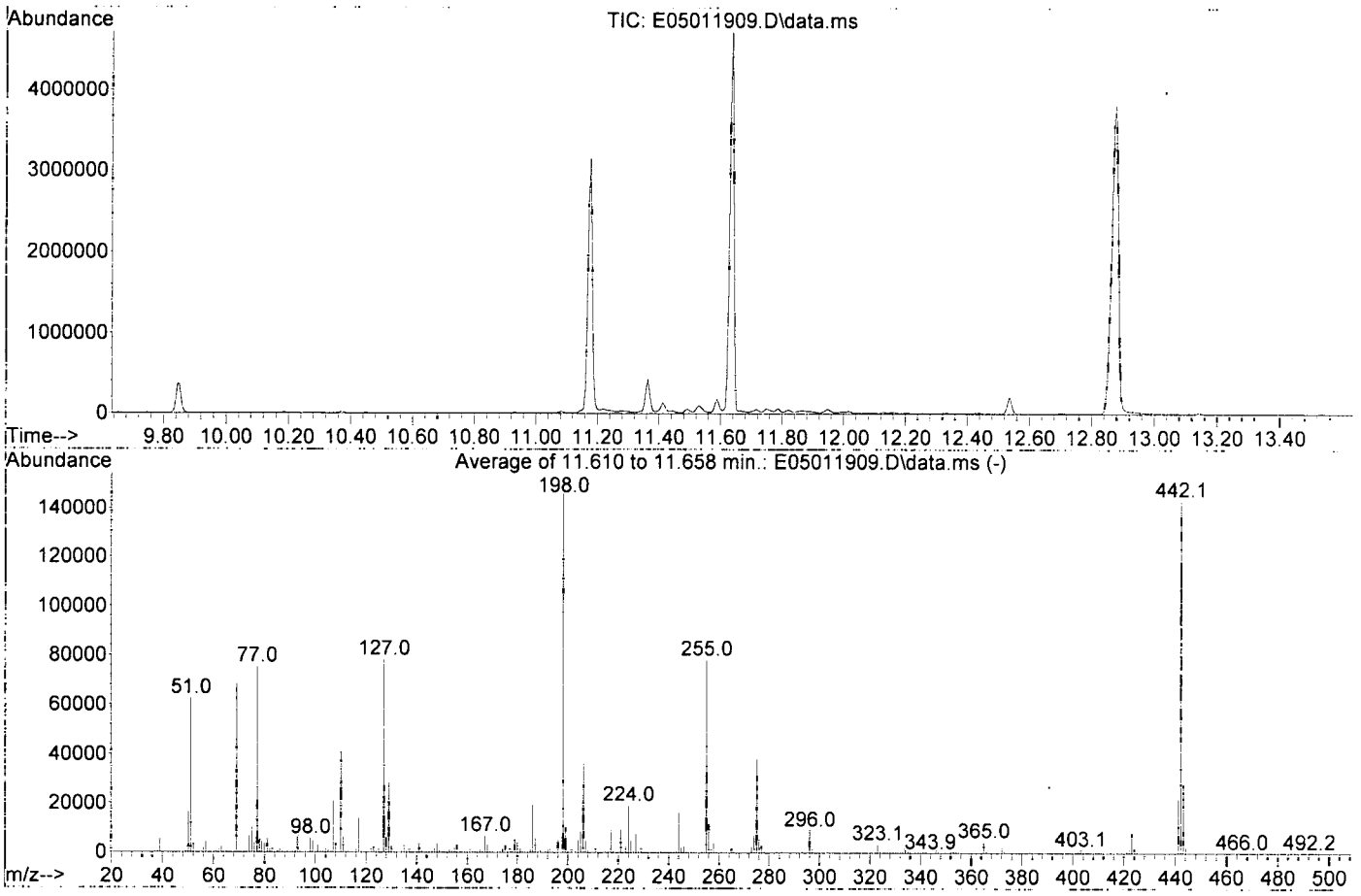
DFTPP

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011909.D
Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : W:\METHODS\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Wed Apr 17 13:14:03 2019

AMS 5/2/19



AutoFind: Averaged scan 1500 to 1509; Bkg corrected with scan 1499)

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	42.6	62481	PASS
68	69	0.00	2	0.5	346	PASS
69	198	0.00	100	46.7	68548	PASS
70	69	0.00	2	0.4	249	PASS
127	198	40	60	53.3	78249	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	146808	PASS
199	198	5	9	6.8	9991	PASS
275	198	10	30	26.0	38153	PASS
365	198	1	100	3.0	4345	PASS
441	443	0.01	100	79.3	21939	PASS
442	198	40	100	97.5	143200	PASS
443	442	17	23	19.3	27667	PASS

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011909.D
Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 10:44:05 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

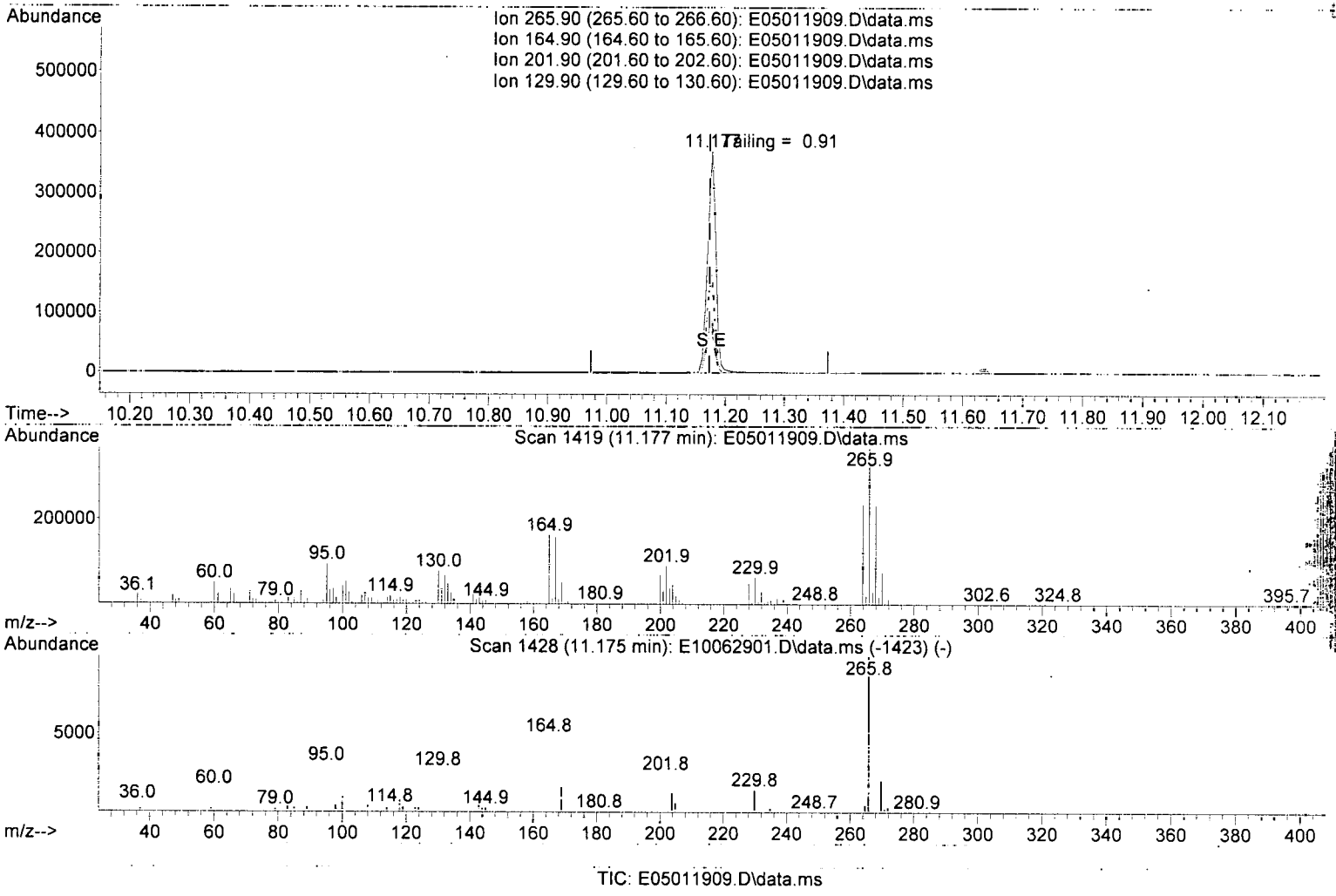
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.812	150	74052	2.00	ug/mL	0.00
2) Naphthalene-d8	8.069	136	170607	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.845	162	82130	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.364	188	146625	2.00	ug/mL	0.00
11) Chrysene-d12	15.172	240	126638	2.00	ug/mL	0.00
12) Perylene-d12	17.130	264	104319	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.440	292	88722	2.00	ug/mL	-0.06
Target Compounds						Qvalue
4) Pentachlorophenol	11.177	266	357060	46.04	ug/mL	94
6) DFTPP	11.637	442	457693	38.67	ug/mL	94
7) Benzidine	12.877	184	2226340	42.68	ug/mL	94
8) 4,4-DDE	13.145	TIC	17480	No Calib		
9) 4,4-DDD	13.696	TIC	5405	No Calib		
10) 4,4-DDT	14.306	TIC	6418601	42.69	ug/mL	96

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011909.D
Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 10:44:05 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011909.D\data.ms

(4) Pentachlorophenol

11.177min (+ 0.004) 46.04 ug/mL

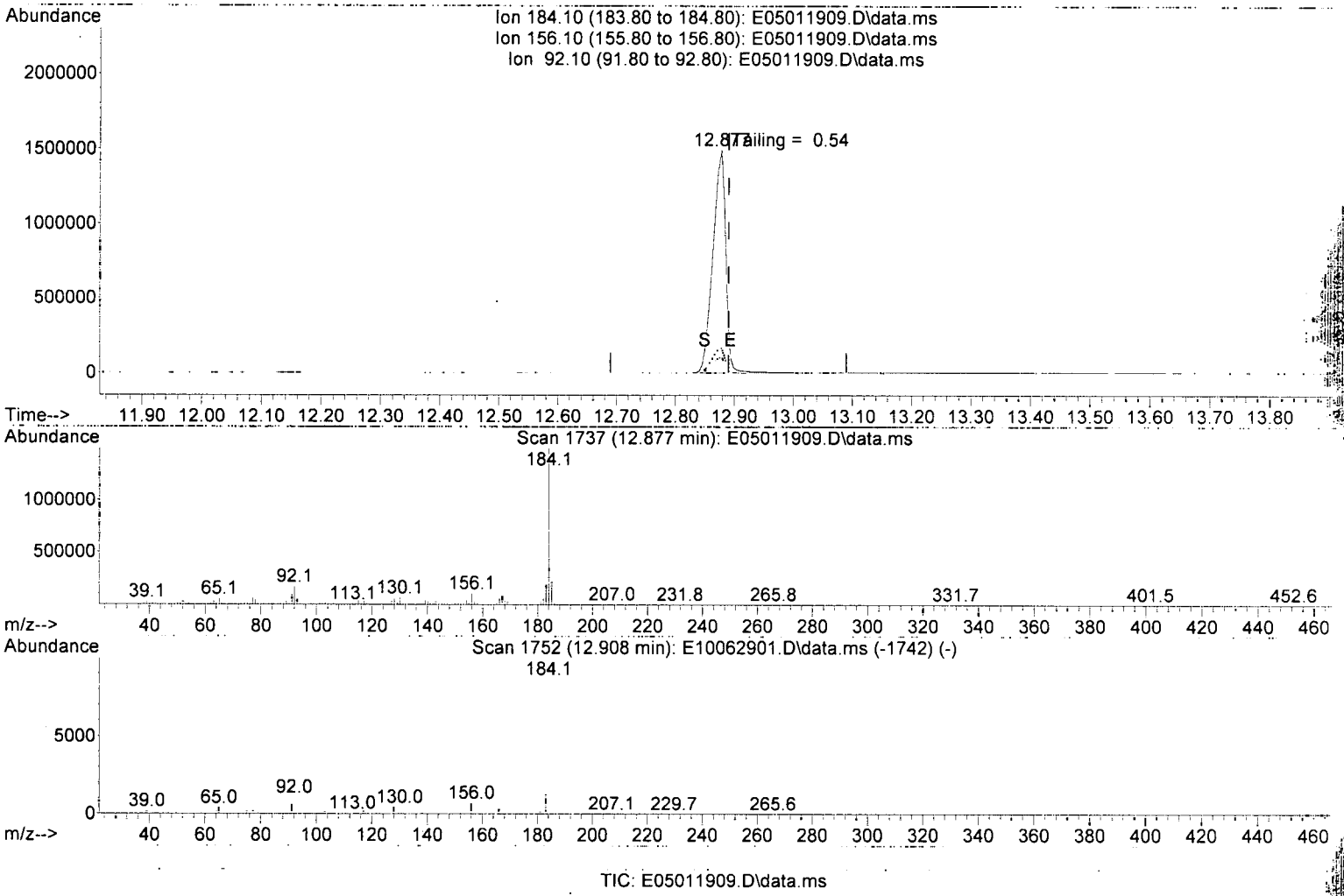
response 357060

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	44.13
201.90	23.20	24.15
129.90	27.10	20.66

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011909.D
Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 10:44:05 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011909.D\data.ms

(7) Benzidine

12.877min (-0.012) 42.68 ug/mL

response 2226340

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.06
92.10	8.20	11.36
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

From:
9E01044-TUN1
SV-GCMS5

First Column Area Counts		Percent Breakdown	
DDE	17480		
DDD	5405		
DDT	6418601	0.36	PASS

Breakdown must be less than 20% to accept sample data.

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Acq On : 1 May 2019 2:57 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 10:44:05 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
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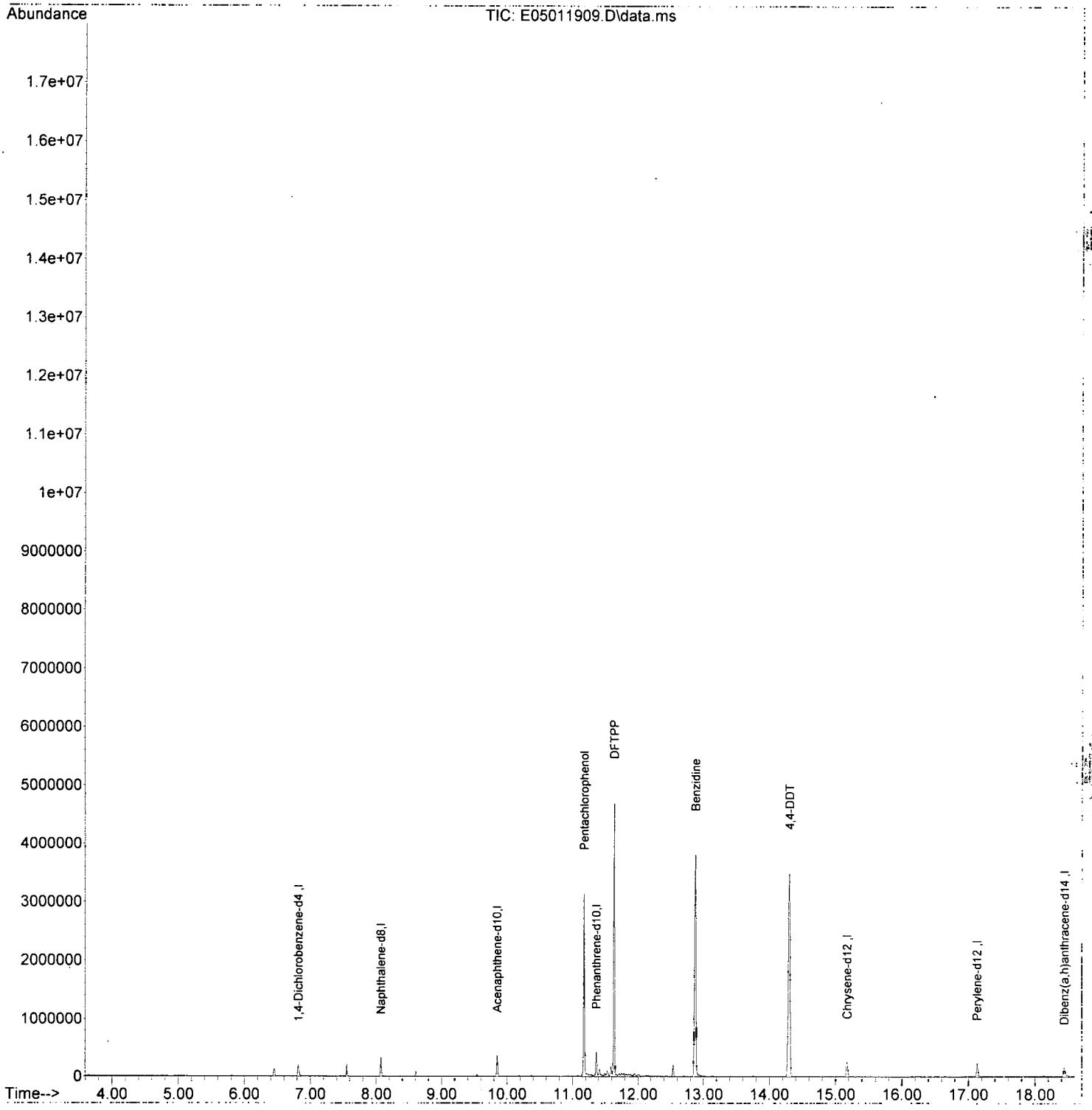

Evaluate Continuing Calibration Report

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011911.D
Acq On : 1 May 2019 4:01 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:08 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

AMS 5/2/19

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	58	-0.02
2	T	N-Nitrosodimethylamine	1000.000	956.257	4.4	55	-0.02
3	T	Pyridine	1000.000	952.475	4.8	55	-0.02
4	S	2-Fluorophenol (Surr)	1000.000	1026.776	-2.7	57	-0.02
5	S	Phenol-d6(Surr)	1000.000	993.742	0.6	57	0.00
6	T	Phenol	1000.000	1070.546	-7.1	62	0.00
7	T	Aniline	1000.000	946.344	5.4	57	-0.01
8	T	Bis(2-chloroethyl) ether	1000.000	951.655	4.8	55	0.00
9	T	2-Chlorophenol	1000.000	1046.962	-4.7	59	-0.02
10	T	1,3-Dichlorobenzene	1000.000	1013.799	-1.4	59	-0.02
11	T	1,4-Dichlorobenzene	1000.000	1022.205	-2.2	60	-0.02
12	T	Benzyl alcohol	1000.000	965.004	3.5	56	0.00
13	T	1,2-Dichlorobenzene	1000.000	1018.235	-1.8	60	0.00
14	T	2-Methylphenol	1000.000	992.973	0.7	57	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	1018.026	-1.8	59	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1014.147	-1.4	58	0.00
17	T	3+4-Methylphenol	1000.000	1010.827	-1.1	57	0.00
18	T	Hexachloroethane	1000.000	965.260	3.5	56	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1088.403	-8.8	64	0.00
20	T	Nitrobenzene	1000.000	1028.251	-2.8	58	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	59	0.00
22	T	Isophorone	1000.000	1016.016	-1.6	58	0.00
23	T	2-Nitrophenol	1000.000	1161.762	-16.2	68	0.00
24	T	2,4-Dimethylphenol	1000.000	907.739	9.2	53	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1005.132	-0.5	59	0.00
26	T	Benzoic acid	2000.000	1361.143	31.9#	36	-0.02
27	T	2,4-Dichlorophenol	1000.000	1048.020	-4.8	61	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1048.041	-4.8	63	0.00
29	T	Naphthalene	1000.000	1001.173	-0.1	60	0.00
30	T	4-Chloroaniline	1000.000	905.673	9.4	55	0.00
31	T	Hexachlorobutadiene	1000.000	1071.021	-7.1	62	0.00
32	T	4-Chloro-3-methylphenol	1000.000	998.155	0.2	60	0.00
33	T	2-Methylnaphthalene	1000.000	1042.733	-4.3	62	0.00
34	T	1-Methylnaphthalene	1000.000	1043.044	-4.3	62	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	63	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1107.914	-10.8	64	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1126.079	-12.6	68	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1006.600	-0.7	61	0.00
39	T	1,1'-Biphenyl	1000.000	1022.309	-2.2	63	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1050.317	-5.0	65	0.00
41	T	2-Chloronaphthalene	1000.000	1016.158	-1.6	64	0.00
42	T	2-Nitroaniline	1000.000	1034.214	-3.4	68	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1035.547	-3.6	63	0.00
44	T	1,4-Dinitrobenzene	1000.000	1267.234	-26.7#	88	0.00
45	T	Dimethyl phthalate	1000.000	1099.099	-9.9	67	0.00
46	T	1,3-Dinitrobenzene	1000.000	1197.487	-19.7	81	0.00
47	T	2,6-Dinitrotoluene	1000.000	1156.666	-15.7	73	0.00
48	T	1,2-Dinitrobenzene	1000.000	1226.683	-22.7#	79	0.00

Evaluate Continuing Calibration Report

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011911.D
Acq On : 1 May 2019 4:01 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:08 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
49	T	Acenaphthylene	1000.000	1050.442	-5.0	63	0.00
50	T	3-Nitroaniline	1000.000	1057.442	-5.7	70	0.00
51	T	Acenaphthene	1000.000	1024.060	-2.4	64	0.00
52	T	2,4-Dinitrophenol	1000.000	1245.473	-24.5#	104	0.00
53	T	4-Nitrophenol	1000.000	1148.087	-14.8	79	0.00
54	T	2,4-Dinitrotoluene	1000.000	1228.415	-22.8#	83	0.00
55	T	Dibenzofuran	1000.000	1031.147	-3.1	65	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1135.463	-13.5	72	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1111.363	-11.1	70	0.00
58	T	Diethyl phthalate	1000.000	1144.788	-14.5	69	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1082.316	-8.2	66	0.00
60	T	Fluorene	1000.000	1081.720	-8.2	67	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1105.400	-10.5	71	0.00
62	T	4-Nitroaniline	1000.000	1168.425	-16.8	82	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1512.783	-51.3#	124	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	76	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1009.507	-1.0	73	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	919.792	8.0	64	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1152.491	-15.2	81	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1033.200	-3.3	78	0.00
69	T	Hexachlorobenzene	1000.000	1070.151	-7.0	80	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1127.210	-12.7	87	0.00
71	T	Phenanthrene	1000.000	1046.629	-4.7	78	0.00
72	T	Anthracene	1000.000	1036.303	-3.6	77	0.00
73	T	Carbazole	1000.000	1083.153	-8.3	83	0.00
74	T	Di-n-butyl phthalate	1000.000	1008.916	-0.9	78	0.00
75	T	Fluoranthene	1000.000	1152.610	-15.3	87	0.00
76	T	Benzidine	2000.000	3224.467	-61.2#	154	0.00
77	T	Pyrene	1000.000	1182.906	-18.3	89	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	97	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1021.012	-2.1	96	0.00
80	T	Butyl benzyl phthalate	1000.000	871.662	12.8	83	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	887.525	11.2	90	0.00
82	T	3,3-Dichlorobenzidine	2000.000	1958.786	2.1	96	0.00
83	T	Benz(a)anthracene	1000.000	982.764	1.7	98	0.00
84	T	Chrysene	1000.000	1018.268	-1.8	99	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	894.938	10.5	89	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	93	0.00
87	T	Di-n-octyl phthalate	1000.000	909.100	9.1	83	0.00
88	T	Benzo(b)fluoranthene	1000.000	1118.803	-11.9	101	0.00
89	T	Benzo(k)fluoranthene	1000.000	1177.459	-17.7	103	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2224.576	-11.2	101	0.00
91	T	Benzo(e)pyrene	1000.000	1108.925	-10.9	100	0.00
92	T	Benzo(a)pyrene	1000.000	1160.011	-16.0	102	0.00
93	T	Perylene	1000.000	1120.203	-12.0	103	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	102	0.00

Evaluate Continuing Calibration Report

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Data File : E05011911.D
Acq On : 1 May 2019 4:01 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:08 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
95 T	Indeno(1,2,3-cd)pyrene	1000.000	996.659	0.3	103	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1036.726	-3.7	107	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1090.508	-9.1	106	0.00

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011911.D
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Sample : 9E01044-CCV1
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.815	152	166667	2000.00	ng/ml	-0.02
21) Naphthalene-d8 (ISTD)	8.078	136	650925	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	309388	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	635497	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.352	240	688297	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	585826	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.273	292	512443	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.617	112	106687	1026.78	ng/ml	-0.02
5) Phenol-d6(Surr)	6.468	99	138114	993.74	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	135630	1088.40	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	241670	1050.32	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	26871	1152.49	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	328348	1021.01	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.382	74	75208	956.26	ng/ml	92
3) Pyridine	4.419	79	121320	952.48	ng/ml	98
6) Phenol	6.478	94	155905	1070.55	ng/ml	94
7) Aniline	6.516	93	179593	946.34	ng/ml	98
8) Bis(2-chloroethyl) ether	6.564	93	113277	951.65	ng/ml	98
9) 2-Chlorophenol	6.617	128	114174	1046.96	ng/ml	97
10) 1,3-Dichlorobenzene	6.767	146	126381	1013.80	ng/ml	96
11) 1,4-Dichlorobenzene	6.831	146	128752	1022.20	ng/ml	99
12) Benzyl alcohol	6.954	108	66651	965.00	ng/ml	92
13) 1,2-Dichlorobenzene	6.997	146	121484	1018.23	ng/ml	98
14) 2-Methylphenol	7.056	107	90057	992.97	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.077	45	192160	1018.03	ng/ml	98
16) N-Nitrosodi-n-propylamine	7.206	70	90484	1014.15	ng/ml	96
17) 3+4-Methylphenol	7.200	107	115801	1010.83	ng/ml	92
18) Hexachloroethane	7.324	117	44882	965.26	ng/ml	84
20) Nitrobenzene	7.377	77	123753	1028.25	ng/ml	95
22) Isophorone	7.607	82	225705	1016.02	ng/ml	97
23) 2-Nitrophenol	7.693	139	56738	1161.76	ng/ml	92
24) 2,4-Dimethylphenol	7.725	122	88419	907.74	ng/ml	93
25) Bis(2-chloroethoxy) me...	7.810	93	140489	1005.13	ng/ml	98
26) Benzoic acid	7.789	105	35115	1361.14	ng/ml	93
27) 2,4-Dichlorophenol	7.933	162	79103	1048.02	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.019	180	94768	1048.04	ng/ml	96
29) Naphthalene	8.099	128	347650	1001.17	ng/ml	99
30) 4-Chloroaniline	8.147	127	108308	905.67	ng/ml	96
31) Hexachlorobutadiene	8.222	225	47303	1071.02	ng/ml	98
32) 4-Chloro-3-methylphenol	8.618	107	82542	998.15	ng/ml	97
33) 2-Methylnaphthalene	8.789	142	227755	1042.73	ng/ml	97
34) 1-Methylnaphthalene	8.891	142	218172	1043.04	ng/ml	96
36) Hexachlorocyclopentadiene	8.955	237	43970	1107.91	ng/ml	99
37) 2,4,6-Trichlorophenol	9.073	196	52498	1126.08	ng/ml	98
38) 2,4,5-Trichlorophenol	9.110	196	48739	1006.60	ng/ml	98
39) 1,1'-Biphenyl	9.260	154	270589	1022.31	ng/ml	98
41) 2-Chloronaphthalene	9.286	162	194184	1016.16	ng/ml	97
42) 2-Nitroaniline	9.383	138	60280	1034.21	ng/ml	89
43) 2,6-Dimethylnaphthalene	9.420	156	191494	1035.55	ng/ml	95

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ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:08 2019
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

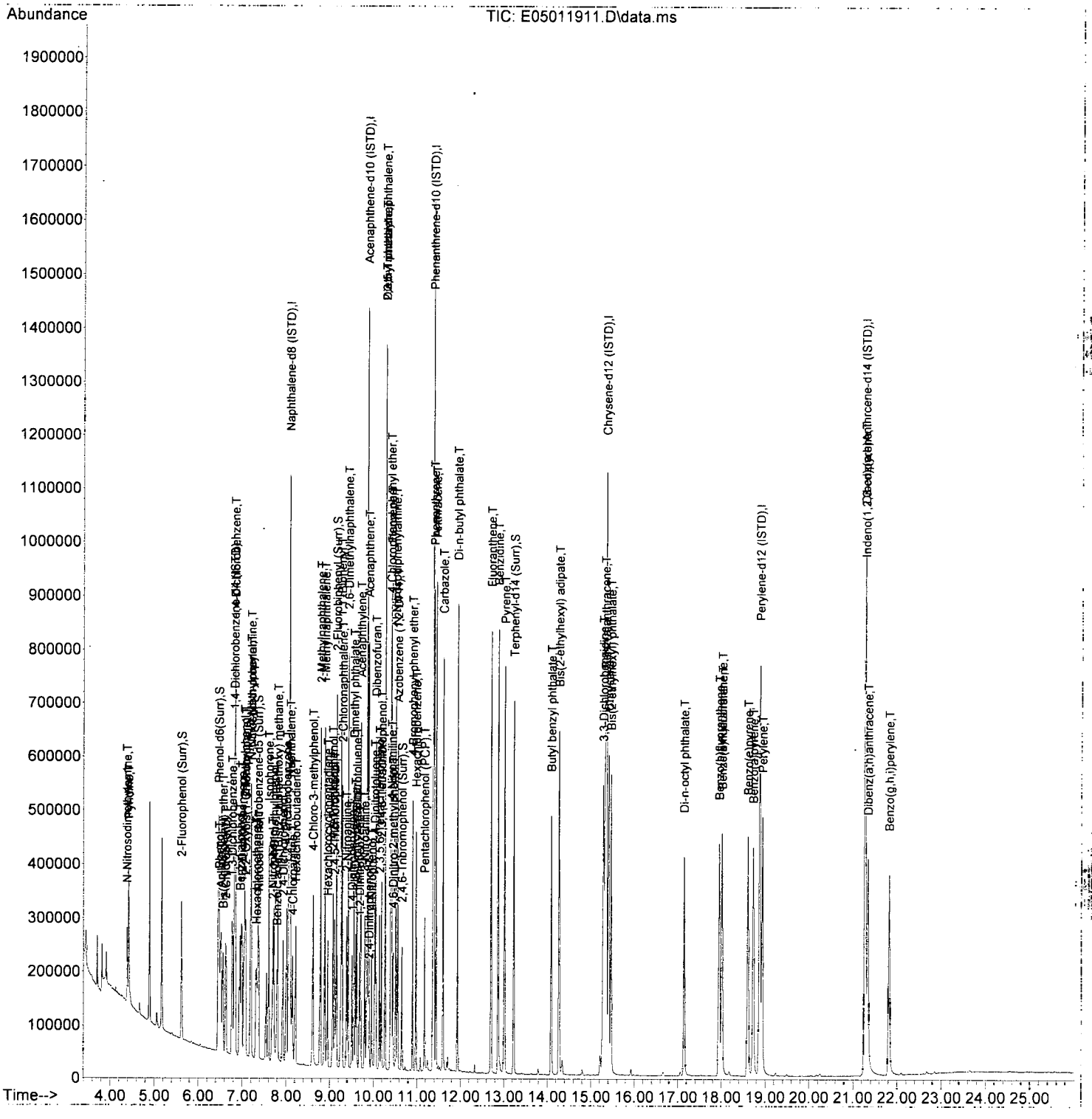
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	9.511	168	28927	1267.23	ng/ml	84
45)	Dimethyl phthalate	9.554	163	218242	1099.10	ng/ml	100
46)	1,3-Dinitrobenzene	9.591	168	34893	1197.49	ng/ml	93
47)	2,6-Dinitrotoluene	9.618	165	50409	1156.67	ng/ml	86
48)	1,2-Dinitrobenzene	9.682	168	24132	1226.68	ng/ml#	67
49)	Acenaphthylene	9.709	152	316565	1050.44	ng/ml	99
50)	3-Nitroaniline	9.795	138	52955	1057.44	ng/ml	99
51)	Acenaphthene	9.886	153	209259	1024.06	ng/ml	99
52)	2,4-Dinitrophenol	9.902	184	14881	1245.47	ng/ml	82
53)	4-Nitrophenol	9.960	139	43606	1148.09	ng/ml	80
54)	2,4-Dinitrotoluene	10.035	165	69168	1228.42	ng/ml	84
55)	Dibenzofuran	10.057	168	273930	1031.15	ng/ml	90
56)	2,3,5,6-Tetrachlorophenol	10.142	232	40983	1135.46	ng/ml	90
57)	2,3,4,6-Tetrachlorophenol	10.185	232	45463	1111.36	ng/ml	90
58)	Diethyl phthalate	10.271	149	227177	1144.79	ng/ml	95
59)	2,3,5-Trimethylnaphtha...	10.271	170	178405	1082.32	ng/ml	95
60)	Fluorene	10.410	166	230094	1081.72	ng/ml	100
61)	4-Chlorophenyl phenyl ...	10.399	204	104111	1105.40	ng/ml	87
62)	4-Nitroaniline	10.420	138	65598	1168.42	ng/ml	79
63)	4,6-Dinitro-2-methylph...	10.452	198	31666	1512.78	ng/ml	84
65)	N-Nitrosodiphenylamine	10.517	169	202670	1009.51	ng/ml	97
66)	Azobenzene (1,2-DPH)	10.559	77	252300	919.79	ng/ml	95
68)	4-Bromophenyl phenyl e...	10.896	248	60745	1033.20	ng/ml	89
69)	Hexachlorobenzene	10.982	284	63292	1070.15	ng/ml	93
70)	Pentachlorophenol (PCP)	11.175	266	33227	1127.21	ng/ml	97
71)	Phenanthrene	11.388	178	365066	1046.63	ng/ml	99
72)	Anthracene	11.442	178	370871	1036.30	ng/ml	99
73)	Carbazole	11.602	167	362952	1083.15	ng/ml	98
74)	Di-n-butyl phthalate	11.934	149	423013	1008.92	ng/ml	99
75)	Fluoranthene	12.704	202	417018	1152.61	ng/ml	98
76)	Benzidine	12.865	184	418046	3224.47	ng/ml	99
77)	Pyrene	13.020	202	434754	1182.91	ng/ml	99
80)	Butyl benzyl phthalate	14.090	149	175488	871.66	ng/ml	96
81)	Bis(2-ethylhexyl) adipate	14.266	129	177807	887.53	ng/ml	99
82)	3,3-Dichlorobenzidine	15.282	252	223087	1958.79	ng/ml	98
83)	Benz(a)anthracene	15.325	228	381552	982.76	ng/ml	97
84)	Chrysene	15.405	228	376612	1018.27	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.464	149	257485	894.94	ng/ml	96
87)	Di-n-octyl phthalate	17.144	149	347884	909.10	ng/ml	100
88)	Benzo(b)fluoranthene	17.946	252	346276	1118.80	ng/ml	99
89)	Benzo(k)fluoranthene	18.015	252	358150	1177.46	ng/ml	99
90)	Benzo(b+k)fluoranthene	18.015	252	723080	2224.58	ng/ml	99
91)	Benzo(e)pyrene	18.609	252	348463	1108.93	ng/ml	98
92)	Benzo(a)pyrene	18.727	252	325983	1160.01	ng/ml	100
93)	Perylene	18.935	252	359792	1120.20	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.278	276	279940	996.66	ng/ml	100
96)	Dibenz(a,h)anthracene	21.337	278	266671	1036.73	ng/ml	98
97)	Benzo(g,h,i)perylene	21.818	276	301555	1090.51	ng/ml	82

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011911.D
Acq On : 1 May 2019 4:01 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:08 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011912.D
Acq On : 1 May 2019 4:38 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 10:45:46 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	194025	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	775015	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	353121	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	674719	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	708590	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	609069	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	530009	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)	7.334	82	161	1.11	ng/ml	-0.03
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	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.992	108	80	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.195	70	102	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.618	82	68	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	8.099	128	76	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.		

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011912.D
Acq On : 1 May 2019 4:38 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:46 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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	9.853	153	72	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.367	178	240	N.D.	
72) Anthracene	11.367	178	240	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	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.266	129	1212	5.88 ng/ml	82
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.352	228	1659	4.15 ng/ml	61
84) Chrysene	15.352	228	1651	4.34 ng/ml	59
85) Bis(2-ethylhexyl) phth...	0.000		0	N.D.	
87) Di-n-octyl phthalate	17.058	149	67	30.84 ng/ml	71
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	18.877	252	2014	6.16 ng/ml#	15
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.877	252	2014	6.03 ng/ml	67
95) Indeno(1,2,3-cd)pyrene	21.262	276	222	N.D.	
96) Dibenz(a,h)anthracene	21.273	278	128	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

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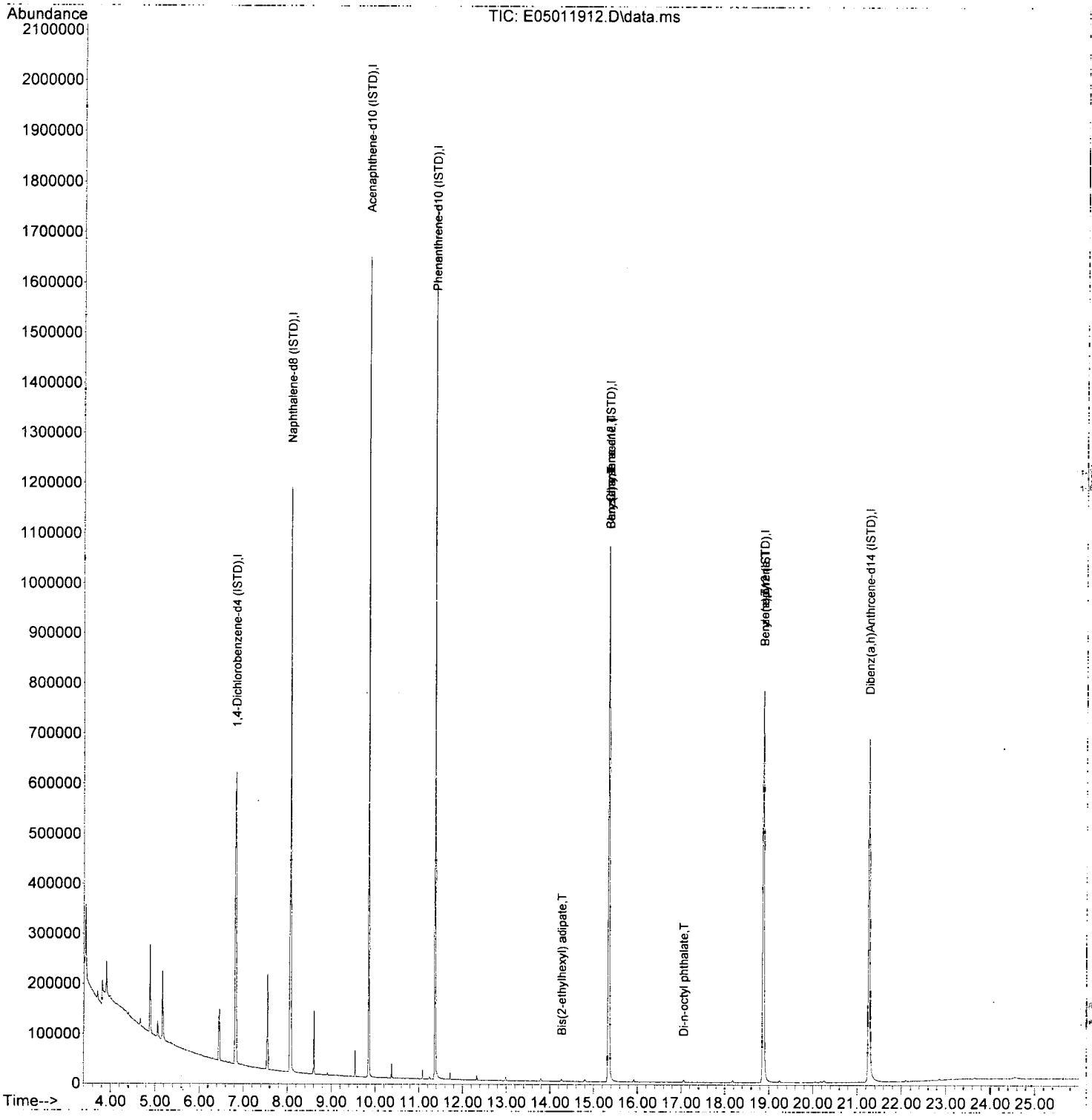
Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011912.D
Acq On : 1 May 2019 4:38 pm
Operator : JK/ AMS /DTH
Sample : 9E01044-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:45:46 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011915.D
Acq On : 1 May 2019 6:26 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 10:46:07 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.837	152	200006	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	755188	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	326675	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	667305	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	605892	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	523144	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	454132	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.639	112	224564	1800.99	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	309761	1857.25	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	276752	1850.68	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	501267	2063.26	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	54424	2094.63	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	640110	2261.16	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.366	74	175	N.D.		
3) Pyridine	4.440	79	85	N.D.		
6) Phenol	6.484	94	389	N.D.		
7) Aniline	6.559	93	195	N.D.		
8) Bis(2-chloroethyl) ether	6.559	93	195	N.D.		
9) 2-Chlorophenol	6.639	128	91	N.D.		
10) 1,3-Dichlorobenzene	6.789	146	82	N.D.		
11) 1,4-Dichlorobenzene	6.789	146	82	N.D.		
12) Benzyl alcohol	0.000		0	N.D.		
13) 1,2-Dichlorobenzene	7.008	146	50	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	7.072	45	129	N.D.		
16) N-Nitrosodi-n-propylamine	7.184	70	114	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	7.339	117	99	N.D.		
20) Nitrobenzene	7.361	77	1097	7.60	ng/ml#	30
22) Isophorone	7.607	82	207	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	0.000		0	N.D.		
25) Bis(2-chloroethoxy) me...	7.826	93	65	N.D.		
26) Benzoic acid	7.794	105	163	401.63	ng/ml#	20
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.099	128	944	N.D.		
30) 4-Chloroaniline	8.104	127	83	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.628	107	76	27.36	ng/ml#	1
33) 2-Methylnaphthalene	8.794	142	816	3.22	ng/ml	91
34) 1-Methylnaphthalene	8.891	142	560	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	9.260	154	1106	3.96	ng/ml	95
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.308	138	158	56.64	ng/ml#	45
43) 2,6-Dimethylnaphthalene	9.436	156	789	4.04	ng/ml	91

J

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011915.D
Acq On : 1 May 2019 6:26 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:07 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

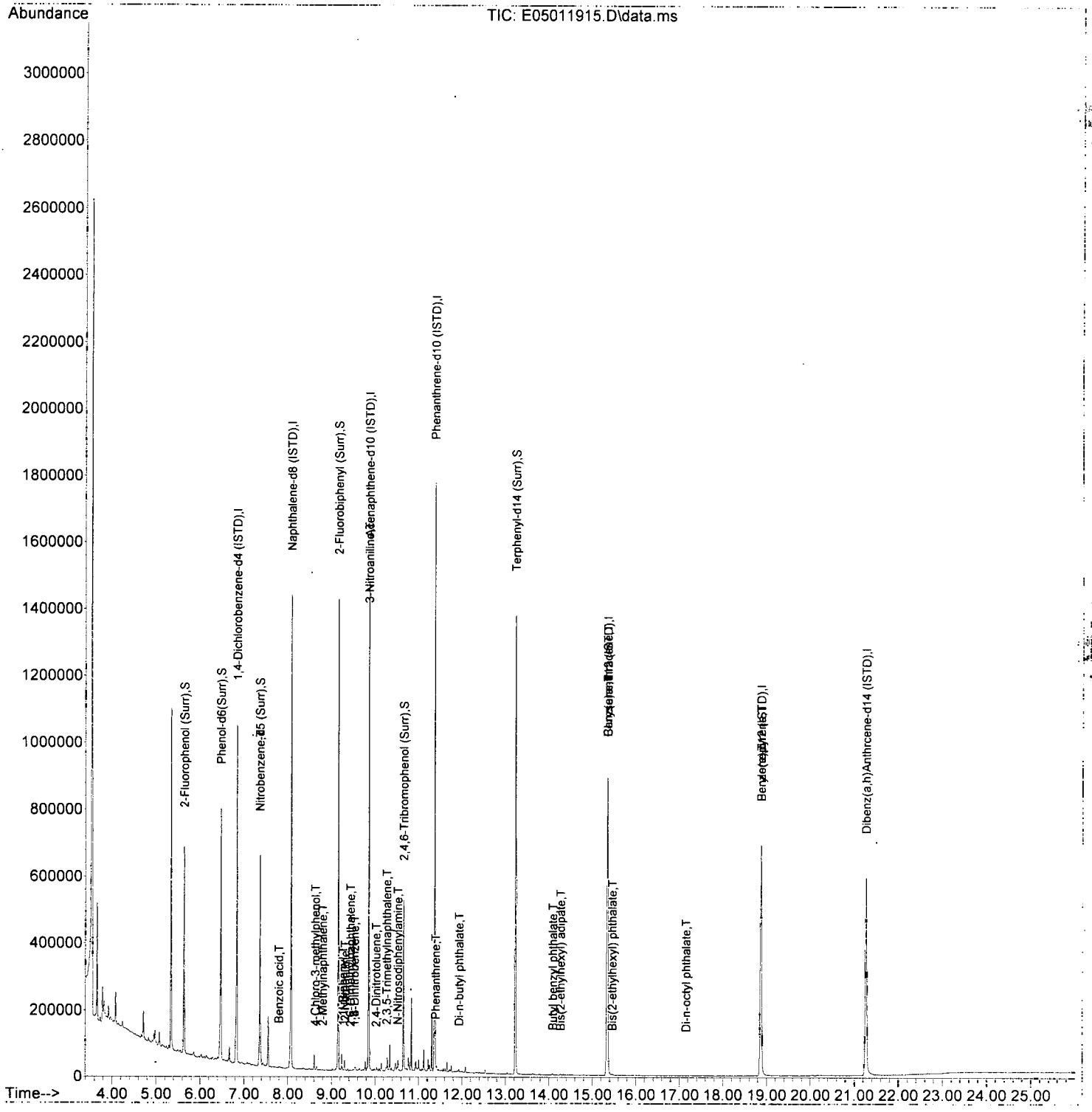
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.527	168	108	75.25 ng/ml#	1
45) Dimethyl phthalate	9.559	163	82	N.D.	
46) 1,3-Dinitrobenzene	9.527	168	108	70.60 ng/ml#	14
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	9.709	152	91	N.D.	
50) 3-Nitroaniline	9.848	138	52	30.12 ng/ml#	1
51) Acenaphthene	9.885	153	196	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.024	165	73	62.23 ng/ml#	38
55) Dibenzofuran	10.062	168	256	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	10.270	149	491	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.265	170	709	4.07 ng/ml	79
60) Fluorene	10.415	166	288	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	10.522	169	547	2.59 ng/ml#	35
66) Azobenzene (1,2-DPH)	10.575	77	132	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	0.000		0	N.D.	
71) Phenanthrene	11.388	178	1542	4.21 ng/ml	83
72) Anthracene	11.479	178	182	N.D.	
73) Carbazole	11.629	167	52	N.D.	
74) Di-n-butyl phthalate	11.934	149	1455	3.30 ng/ml	99
75) Fluoranthene	12.709	202	97	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	13.025	202	63	N.D.	
80) Butyl benzyl phthalate	14.089	149	1502	8.48 ng/ml	86
81) Bis(2-ethylhexyl) adipate	14.266	129	730	4.14 ng/ml	88
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	1497	4.38 ng/ml	75
84) Chrysene	15.346	228	1466	4.50 ng/ml	73
85) Bis(2-ethylhexyl) phth...	15.459	149	919	3.63 ng/ml	95
87) Di-n-octyl phthalate	17.154	149	74	30.89 ng/ml#	1
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	18.871	252	1566	5.58 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.871	252	1566	5.46 ng/ml	71
95) Indeno(1,2,3-cd)pyrene	21.257	276	195	N.D.	
96) Dibenz(a,h)anthracene	21.273	278	79	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011915.D
Acq On : 1 May 2019 6:26 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BLK1
Misc : 1x, 8270D LL PAH
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:07 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011916.D
Acq On : 1 May 2019 7:03 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 10:46:13 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	211015	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	801341	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	380004	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	687267	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.352	240	600991	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	506105	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.273	292	442710	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	126393	960.78	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	171000	971.78	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	148161	939.08	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	291332	1030.86	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	34226	1340.21	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	317787	1131.72	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.408	74	149217	1498.53	ng/ml	91
3) Pyridine	4.446	79	169298	1049.81	ng/ml	98
6) Phenol	6.484	94	308206	1671.56	ng/ml	94
7) Aniline	6.521	93	357642	1488.49	ng/ml	96
8) Bis(2-chloroethyl) ether	6.569	93	235129	1560.20	ng/ml	97
9) 2-Chlorophenol	6.634	128	240938	1745.04	ng/ml	99
10) 1,3-Dichlorobenzene	6.778	146	244423	1548.63	ng/ml	97
11) 1,4-Dichlorobenzene	6.847	146	250381	1570.08	ng/ml	99
12) Benzyl alcohol	6.954	108	149276	1707.06	ng/ml	92
13) 1,2-Dichlorobenzene	6.997	146	237057	1569.34	ng/ml	98
14) 2-Methylphenol	7.056	107	197546	1720.38	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.077	45	388723	1626.57	ng/ml	98
16) N-Nitrosodi-n-propylamine	7.206	70	191633	1696.43	ng/ml	94
17) 3+4-Methylphenol	7.200	107	257231	1773.47	ng/ml	93
18) Hexachloroethane	7.324	117	91933	1561.64	ng/ml	84
20) Nitrobenzene	7.382	77	259572	1703.48	ng/ml	92
22) Isophorone	7.607	82	486304	1778.20	ng/ml	97
23) 2-Nitrophenol	7.693	139	122686	1968.37	ng/ml	88
24) 2,4-Dimethylphenol	7.725	122	217105	1810.50	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.810	93	294069	1709.01	ng/ml	98
26) Benzoic acid	7.826	105	156253	3346.05	ng/ml	95
27) 2,4-Dichlorophenol	7.933	162	180480	1942.31	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.019	180	193495	1738.20	ng/ml	96
29) Naphthalene	8.099	128	710950	1663.10	ng/ml	99
30) 4-Chloroaniline	8.142	127	194778	1323.01	ng/ml	97
31) Hexachlorobutadiene	8.222	225	99172	1823.95	ng/ml	99
32) 4-Chloro-3-methylphenol	8.618	107	195198	1852.02	ng/ml	99
33) 2-Methylnaphthalene	8.789	142	471151	1752.18	ng/ml	96
34) 1-Methylnaphthalene	8.891	142	441609	1714.96	ng/ml	97
36) Hexachlorocyclopentadiene	8.955	237	109840	2253.33	ng/ml	97
37) 2,4,6-Trichlorophenol	9.072	196	123070	2064.41	ng/ml	99
38) 2,4,5-Trichlorophenol	9.110	196	125100	2023.88	ng/ml	99
39) 1,1'-Biphenyl	9.254	154	1228	3.78	ng/ml	96
41) 2-Chloronaphthalene	9.286	162	409543	1744.87	ng/ml	98
42) 2-Nitroaniline	9.383	138	139071	1845.76	ng/ml	89
43) 2,6-Dimethylnaphthalene	9.425	156	51	N.D.		

J

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011916.D
Acq On : 1 May 2019 7:03 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

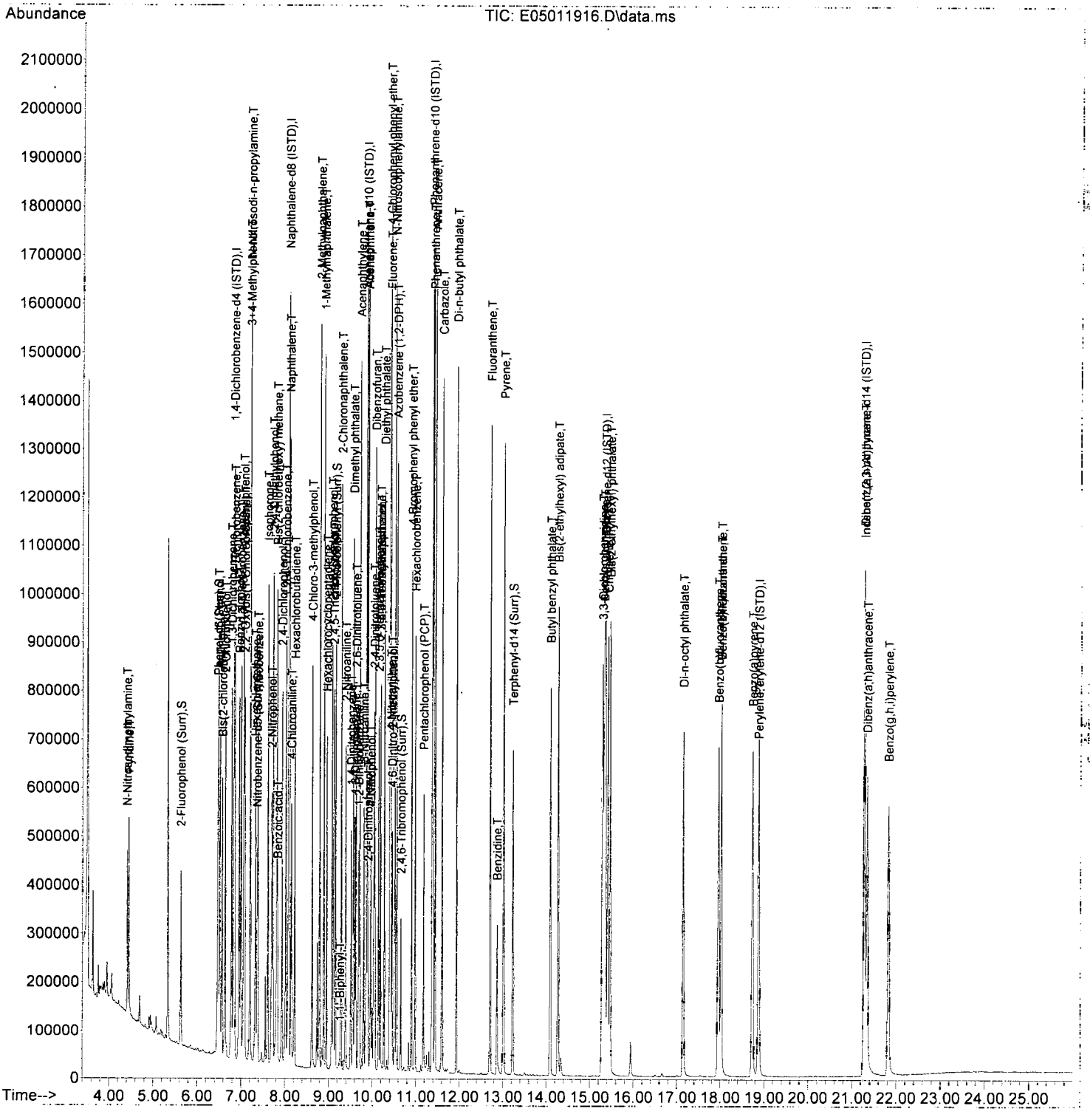
Quant Time: May 02 10:46:13 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.511	168	66052	2160.04	ng/ml	87
45) Dimethyl phthalate	9.559	163	452059	1853.57	ng/ml	100
46) 1,3-Dinitrobenzene	9.597	168	74784	1977.96	ng/ml	87
47) 2,6-Dinitrotoluene	9.623	165	108398	1956.75	ng/ml	81
48) 1,2-Dinitrobenzene	9.682	168	48724	1941.99	ng/ml#	74
49) Acenaphthylene	9.709	152	684369	1848.91	ng/ml	99
50) 3-Nitroaniline	9.800	138	100852	1597.04	ng/ml	96
51) Acenaphthene	9.885	153	441950	1760.88	ng/ml	100
52) 2,4-Dinitrophenol	9.902	184	37220	2066.26	ng/ml	86
53) 4-Nitrophenol	9.960	139	90254	1834.50	ng/ml	81
54) 2,4-Dinitrotoluene	10.035	165	140460	1954.05	ng/ml	87
55) Dibenzofuran	10.062	168	586766	1798.30	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.142	232	98814	2087.77	ng/ml	91
57) 2,3,4,6-Tetrachlorophenol	10.185	232	101474	1943.89	ng/ml	91
58) Diethyl phthalate	10.271	149	451313	1851.63	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.185	170	10501	51.87	ng/ml#	3
60) Fluorene	10.410	166	482123	1845.37	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.399	204	216133	1868.35	ng/ml	87
62) 4-Nitroaniline	10.426	138	128789	1867.69	ng/ml	79
63) 4,6-Dinitro-2-methylph...	10.452	198	71079	2430.86	ng/ml	86
65) N-Nitrosodiphenylamine	10.517	169	409529	1886.22	ng/ml	98
66) Azobenzene (1,2-DPH)	10.559	77	526533	1774.95	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.896	248	122389	1924.88	ng/ml	91
69) Hexachlorobenzene	10.982	284	123193	1926.06	ng/ml	94
70) Pentachlorophenol (PCP)	11.175	266	68362	1990.86	ng/ml	96
71) Phenanthrene	11.394	178	688360	1824.84	ng/ml	99
72) Anthracene	11.442	178	698562	1804.92	ng/ml	99
73) Carbazole	11.602	167	645116	1780.19	ng/ml	98
74) Di-n-butyl phthalate	11.934	149	762408	1681.42	ng/ml	99
75) Fluoranthene	12.710	202	720703	1841.92	ng/ml	98
76) Benzidine	12.865	184	163087	1465.47	ng/ml	99
77) Pyrene	13.020	202	736498	1852.96	ng/ml	99
80) Butyl benzyl phthalate	14.095	149	300441	1709.10	ng/ml	93
81) Bis(2-ethylhexyl) adipate	14.266	129	273313	1562.43	ng/ml	98
82) 3,3-Dichlorobenzidine	15.288	252	339767	3310.61	ng/ml	98
83) Benz(a)anthracene	15.325	228	609991	1799.40	ng/ml	98
84) Chrysene	15.411	228	595101	1842.75	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.464	149	434622	1730.06	ng/ml	96
87) Di-n-octyl phthalate	17.149	149	623923	1800.35	ng/ml	99
88) Benzo(b)fluoranthene	17.951	252	551462	2062.41	ng/ml	97
89) Benzo(k)fluoranthene	18.021	252	561630	2137.27	ng/ml	99
90) Benzo(b+k)fluoranthene	18.021	252	1142296	4067.87	ng/ml	99
91) Benzo(e)pyrene	18.604	252	120	N.D.		
92) Benzo(a)pyrene	18.732	252	524584	2160.78	ng/ml	100
93) Perylene	18.866	252	9720	35.03	ng/ml	88
95) Indeno(1,2,3-cd)pyrene	21.278	276	443404	1827.29	ng/ml	100
96) Dibenz(a,h)anthracene	21.337	278	436105	1962.48	ng/ml	98
97) Benzo(g,h,i)perylene	21.824	276	466465	1952.57	ng/ml	82

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

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011916.D
Acq On : 1 May 2019 7:03 pm
Operator : JK/ AMS /DTH
Sample : 9050375-BS1@2
Misc : 2x, 8270D LL PAH
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:13 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



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No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

MOS

AMS 5/2/19

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.826	152	198796	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.072	136	760688	2000.00	ng/ml	-0.01
35) Acenaphthene-d10 (ISTD)	9.848	162	396345	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	773424	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	692056	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	516347	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	307390	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	176488	1424.04	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	250403	1510.49	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	202437	1361.96	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	315938	1071.84	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	64158	2126.48	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	423194	1308.79	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.424	74	217	N.D.		
3) Pyridine	4.473	79	8718	57.38	ng/ml	82
6) Phenol	6.484	94	5731	32.99	ng/ml#	52
7) Aniline	6.505	93	2912	12.86	ng/ml#	62
8) Bis(2-chloroethyl) ether	6.559	93	569	4.01	ng/ml#	36
9) 2-Chlorophenol	6.639	128	288	N.D.		
10) 1,3-Dichlorobenzene	6.778	146	133	N.D.		
11) 1,4-Dichlorobenzene	6.842	146	261	N.D.		
12) Benzyl alcohol	6.954	108	14708	178.53	ng/ml	96
13) 1,2-Dichlorobenzene	6.997	146	153	N.D.		
14) 2-Methylphenol	7.056	107	1291	11.93	ng/ml	87
15) 2,2'-Oxybis(1-Chloropr...	7.067	45	151	N.D.		
16) N-Nitrosodi-n-propylamine	7.179	70	50	N.D.		
17) 3+4-Methylphenol	7.200	107	4580	33.52	ng/ml#	72
18) Hexachloroethane	7.334	117	219	3.95	ng/ml#	18
20) Nitrobenzene	7.361	77	1031	7.18	ng/ml#	39
22) Isophorone	7.602	82	832	3.20	ng/ml#	55
23) 2-Nitrophenol	7.692	139	60	25.23	ng/ml#	1
24) 2,4-Dimethylphenol	7.719	122	898	7.89	ng/ml	91
25) Bis(2-chloroethoxy) me...	7.810	93	111	N.D.		
26) Benzoic acid	7.783	105	22261	941.07	ng/ml	96
27) 2,4-Dichlorophenol	7.933	162	184	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.094	128	7602	18.73	ng/ml	100
30) 4-Chloroaniline	8.136	127	96	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.629	107	1486	41.92	ng/ml#	1
33) 2-Methylnaphthalene	8.789	142	2185	8.56	ng/ml	85
34) 1-Methylnaphthalene	8.891	142	1180	4.83	ng/ml#	64
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	9.072	196	265	15.65	ng/ml	89
38) 2,4,5-Trichlorophenol	9.115	196	292	16.11	ng/ml	90
39) 1,1'-Biphenyl	9.254	154	1299	3.83	ng/ml#	54
41) 2-Chloronaphthalene	9.276	162	248	N.D.		
42) 2-Nitroaniline	9.377	138	335	58.53	ng/ml#	72
43) 2,6-Dimethylnaphthalene	9.420	156	2442	10.31	ng/ml	97

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

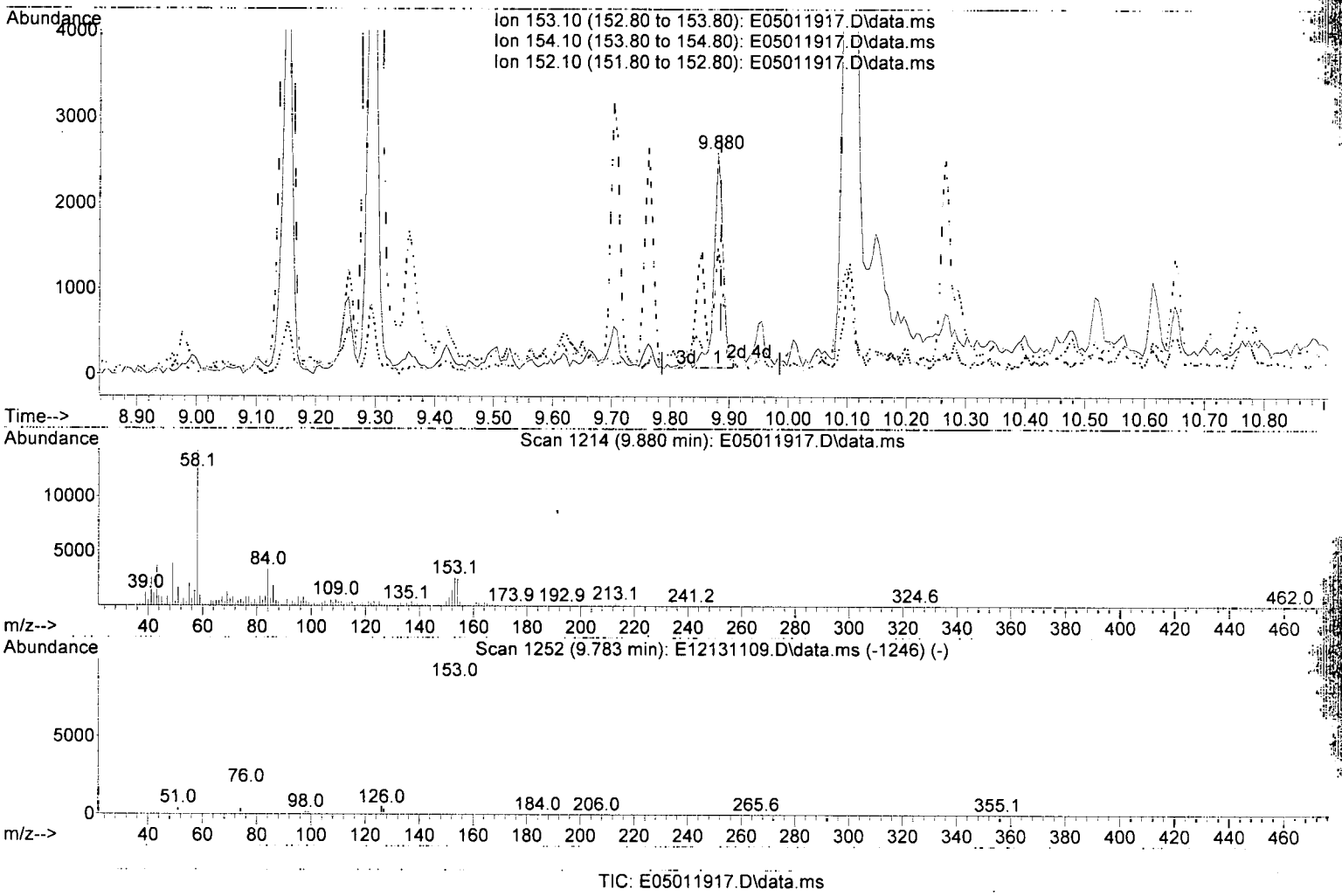
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.506	168	187	77.23	ng/ml#	27
45) Dimethyl phthalate	9.554	163	875	3.44	ng/ml	38
46) 1,3-Dinitrobenzene	9.581	168	167	71.56	ng/ml#	1
47) 2,6-Dinitrotoluene	9.639	165	117	33.83	ng/ml#	49
48) 1,2-Dinitrobenzene	9.661	168	316	47.62	ng/ml#	1
49) Acenaphthylene	9.704	152	3331	8.63	ng/ml	85
50) 3-Nitroaniline	9.795	138	1366	50.51	ng/ml#	10
51) Acenaphthene	9.880	153	2748	(10.50)	ng/ml	90
52) 2,4-Dinitrophenol	9.907	184	78	183.55	ng/ml#	1
53) 4-Nitrophenol	9.944	139	205	69.76	ng/ml#	1
54) 2,4-Dinitrotoluene	9.998	165	102	62.41	ng/ml#	42
55) Dibenzofuran	10.057	168	2121	6.23	ng/ml#	33
56) 2,3,5,6-Tetrachlorophenol	10.137	232	317	42.95	ng/ml#	31
57) 2,3,4,6-Tetrachlorophenol	10.185	232	397	31.07	ng/ml	87
58) Diethyl phthalate	10.265	149	929	3.65	ng/ml	73
59) 2,3,5-Trimethylnaphtha...	10.260	170	1244	5.89	ng/ml#	56
60) Fluorene	10.404	166	4163	(15.28)	ng/ml	89
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.431	138	180	2.50	ng/ml	83
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.517	169	534	N.D.		
66) Azobenzene (1,2-DPH)	10.570	77	356	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.180	266	1520	112.05	ng/ml	92
71) Phenanthrene	11.388	178	29119	[68.60]	ng/ml	97
72) Anthracene	11.442	178	10167	[23.34]	ng/ml	97
73) Carbazole	11.602	167	5563	13.64	ng/ml	89
74) Di-n-butyl phthalate	11.934	149	7222	14.15	ng/ml	96
75) Fluoranthene	12.704	202	76686	(174.16)	ng/ml	97
76) Benzidine	12.843	184	158	39.85	ng/ml#	1
77) Pyrene	13.014	202	77369	[172.97]	ng/ml	98
80) Butyl benzyl phthalate	14.089	149	4931	24.36	ng/ml	85
81) Bis(2-ethylhexyl) adipate	14.266	129	1899	9.43	ng/ml	62
82) 3,3-Dichlorobenzidine	15.298	252	65	21.62	ng/ml#	1
83) Benz(a)anthracene	15.325	228	39037	[100.00]	ng/ml	97
84) Chrysene	15.400	228	49211	[132.33]	ng/ml	96
85) Bis(2-ethylhexyl) phth...	15.464	149	32698	113.03	ng/ml	96
87) Di-n-octyl phthalate	17.133	149	513	32.19	ng/ml#	1
88) Benzo(b)fluoranthene	17.946	252	57315	(210.10)	ng/ml MOS	99
89) Benzo(k)fluoranthene	~~18.010~~	~~252~~	~~17406~~	~~64.92~~	~~ng/ml~~	~~95~~ MS-MOS
90) Benzo(b+k)fluoranthene	17.946	252	81963	286.09	ng/ml	99
91) Benzo(e)pyrene	18.604	252	31116	112.35	ng/ml	83
92) Benzo(a)pyrene	18.721	252	34057	(137.50)	ng/ml	91
93) Perylene	18.930	252	52484	185.40	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.267	276	16226	[96.30]	ng/ml	80
96) Dibenz(a,h)anthracene	21.326	278	3070	(19.90)	ng/ml#	38
97) Benzo(g,h,i)perylene	21.813	276	14334	[86.41]	ng/ml	90

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(51) Acenaphthene (T)

9.880min (-0.005) 10.50 ng/ml

response 2748

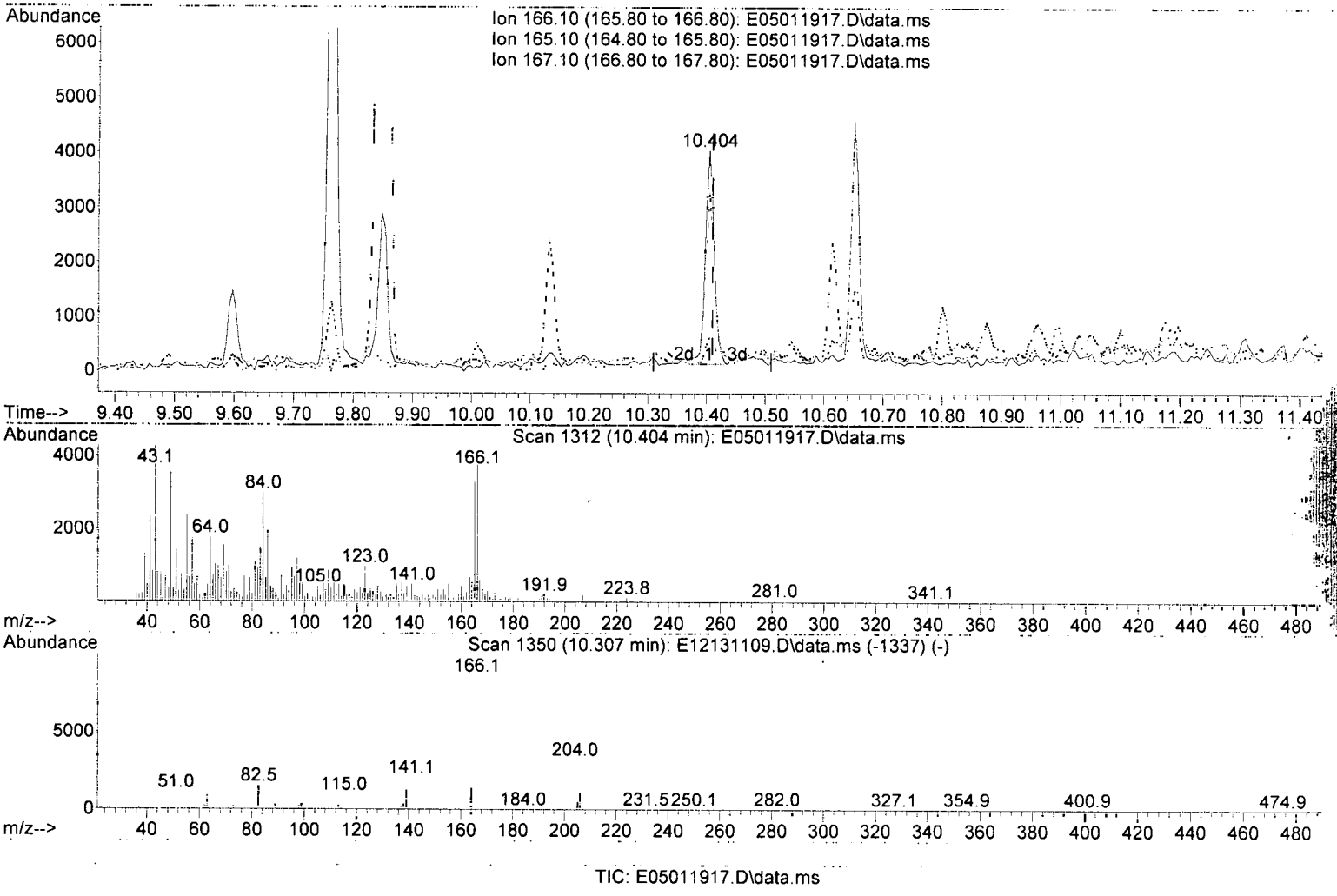
Ion	Exp%	Act%
153.10	100.00	100.00
154.10	92.00	98.96
152.10	47.10	56.98
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(60) Fluorene (T)

10.404min (-0.005) 15.28 ng/ml

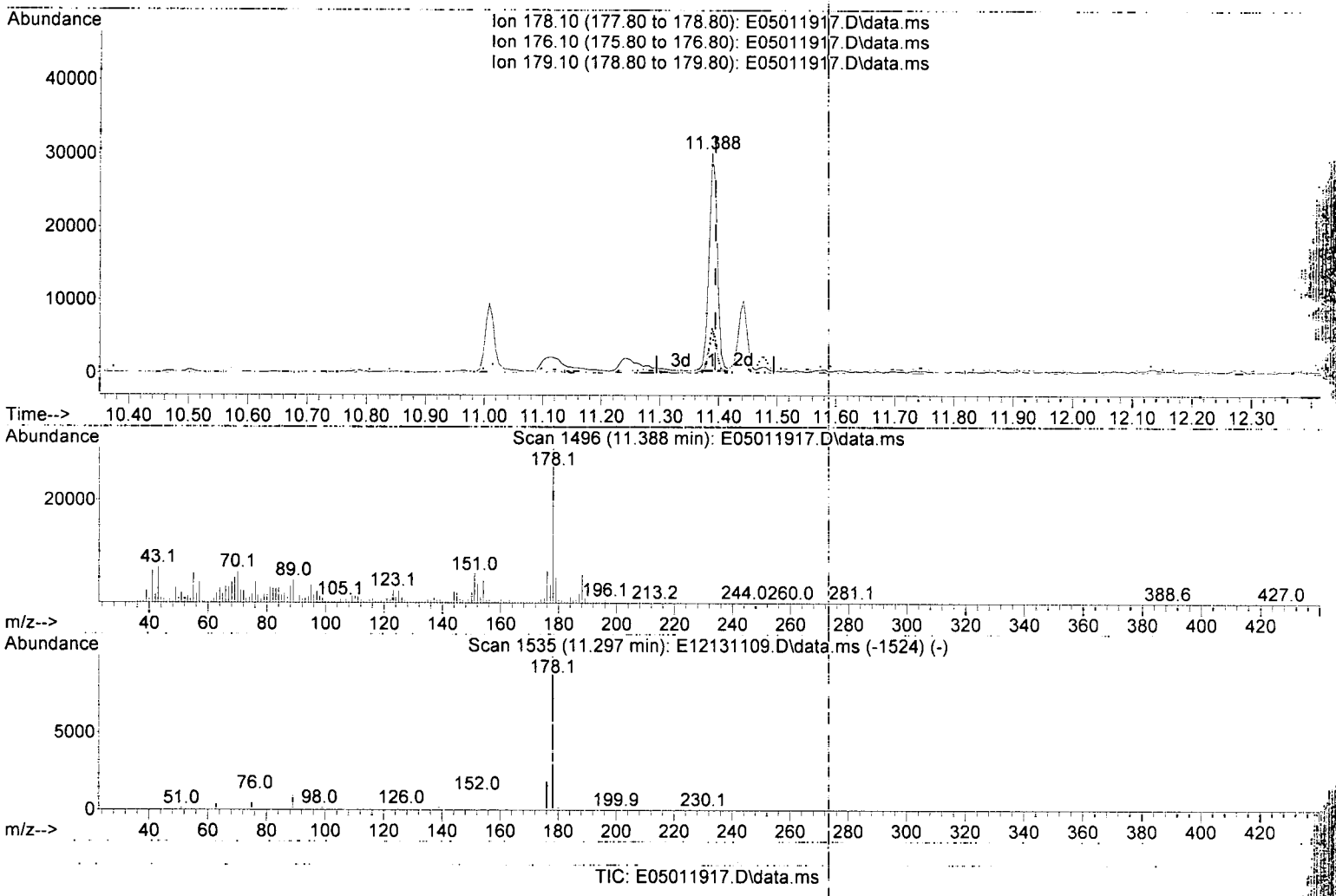
response 4163

Ion	Exp%	Act%
166.10	100.00	100.00
165.10	93.50	81.68
167.10	13.60	15.31
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(71) Phenanthrene (T)

11.388min (-0.005) 68.60 ng/ml

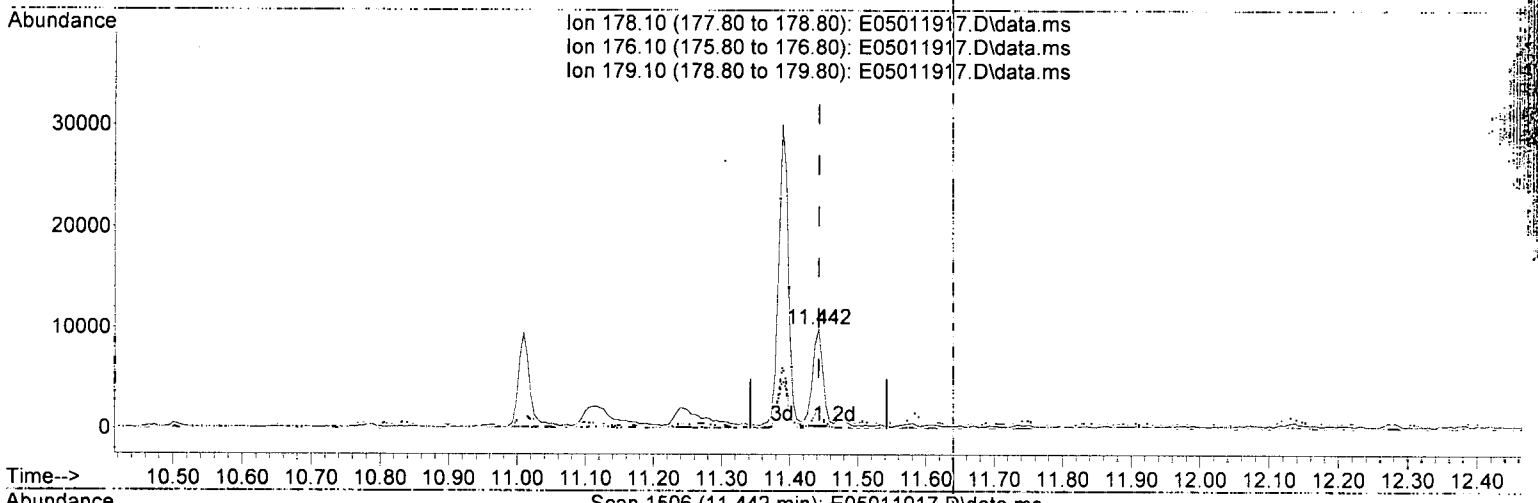
response 29119

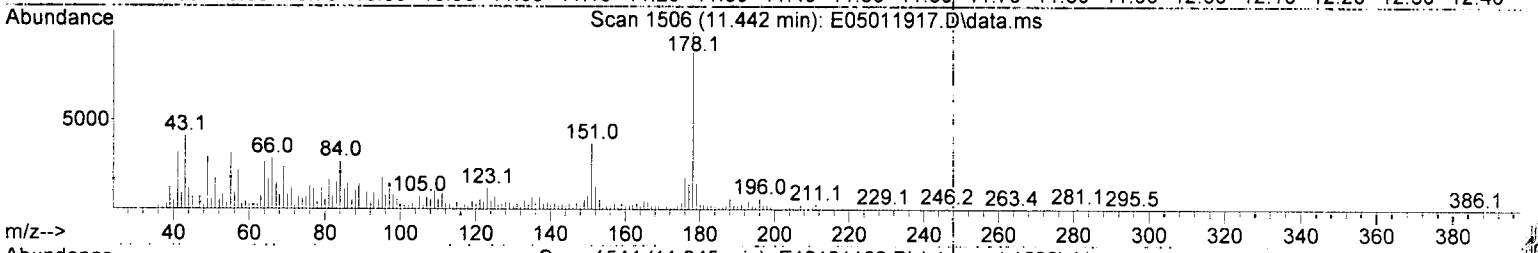
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	20.66
179.10	15.00	16.34
0.00	0.00	0.00

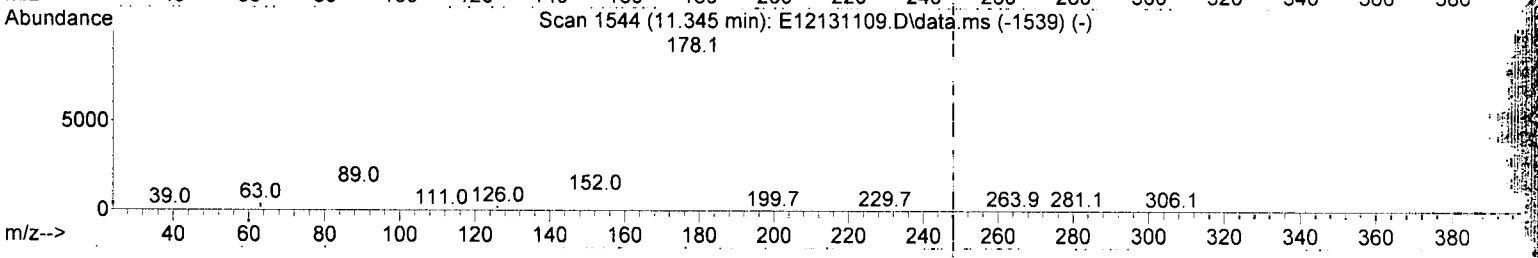
Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E05011917.D\data.ms

(72) Anthracene (T)

11.442min (-0.000) 23.34 ng/ml

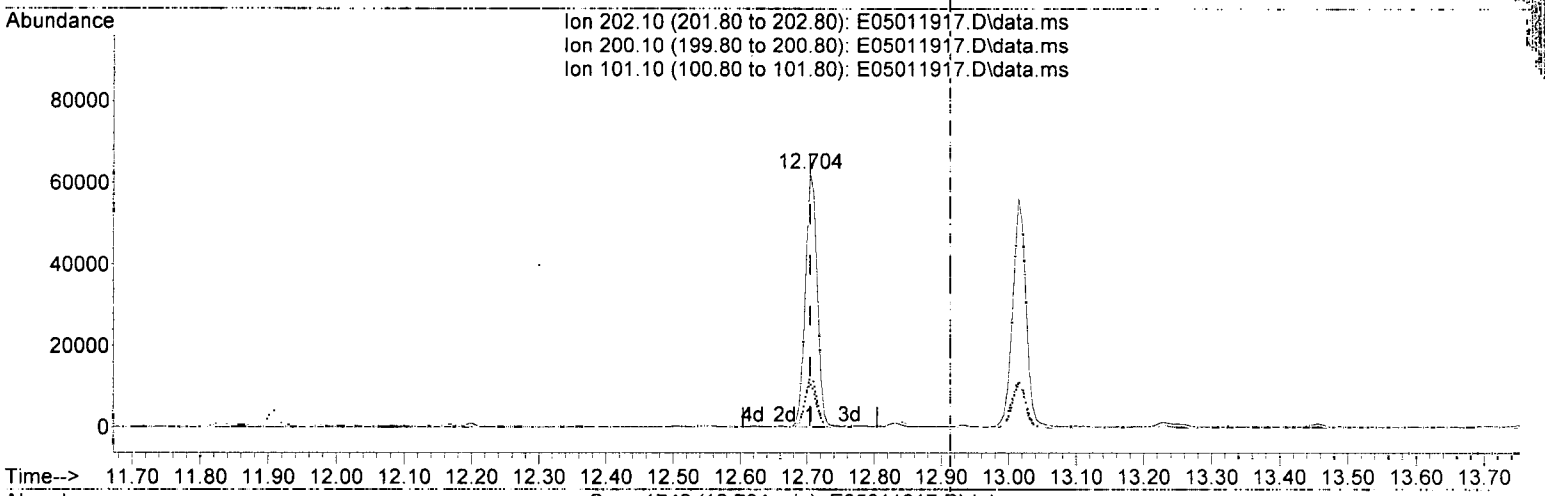
response 10167

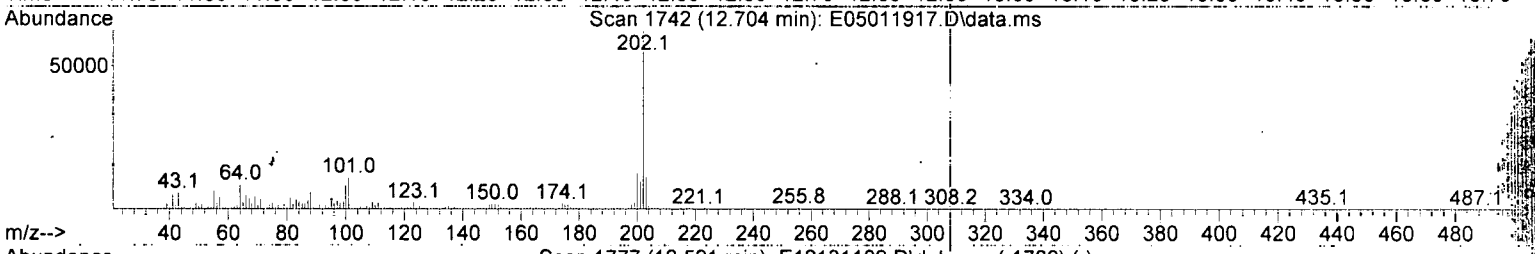
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.80
179.10	15.50	14.61
0.00	0.00	0.00

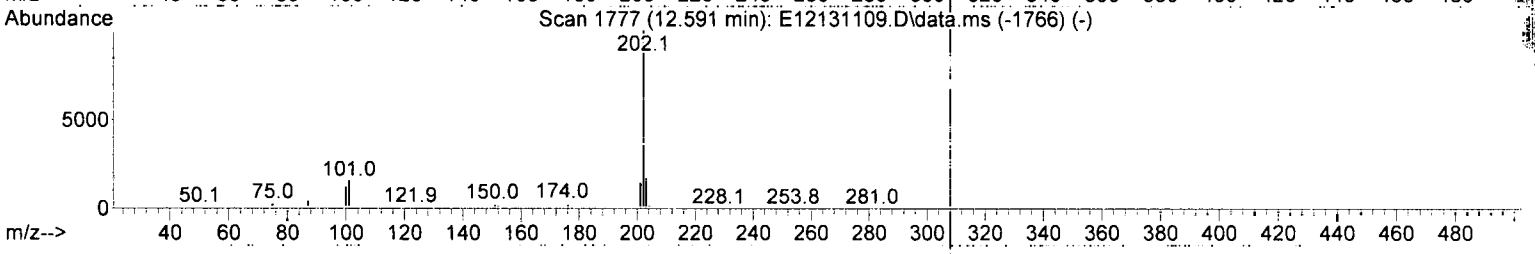
Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E05011917.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 174.16 ng/ml

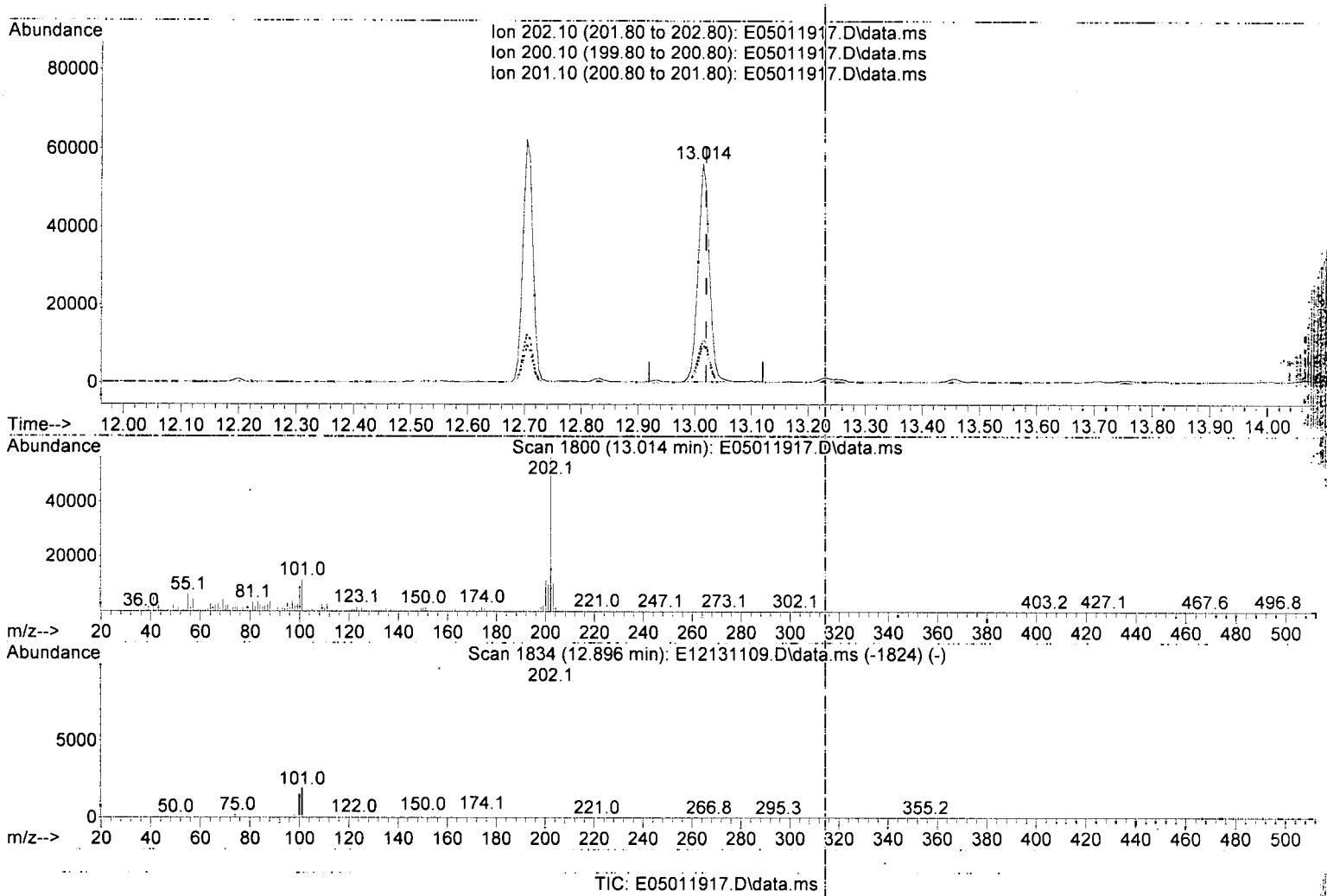
response 76686

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.87
101.10	15.70	17.47
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(77) Pyrene (T)

13.014min (-0.005) 172.97 ng/ml

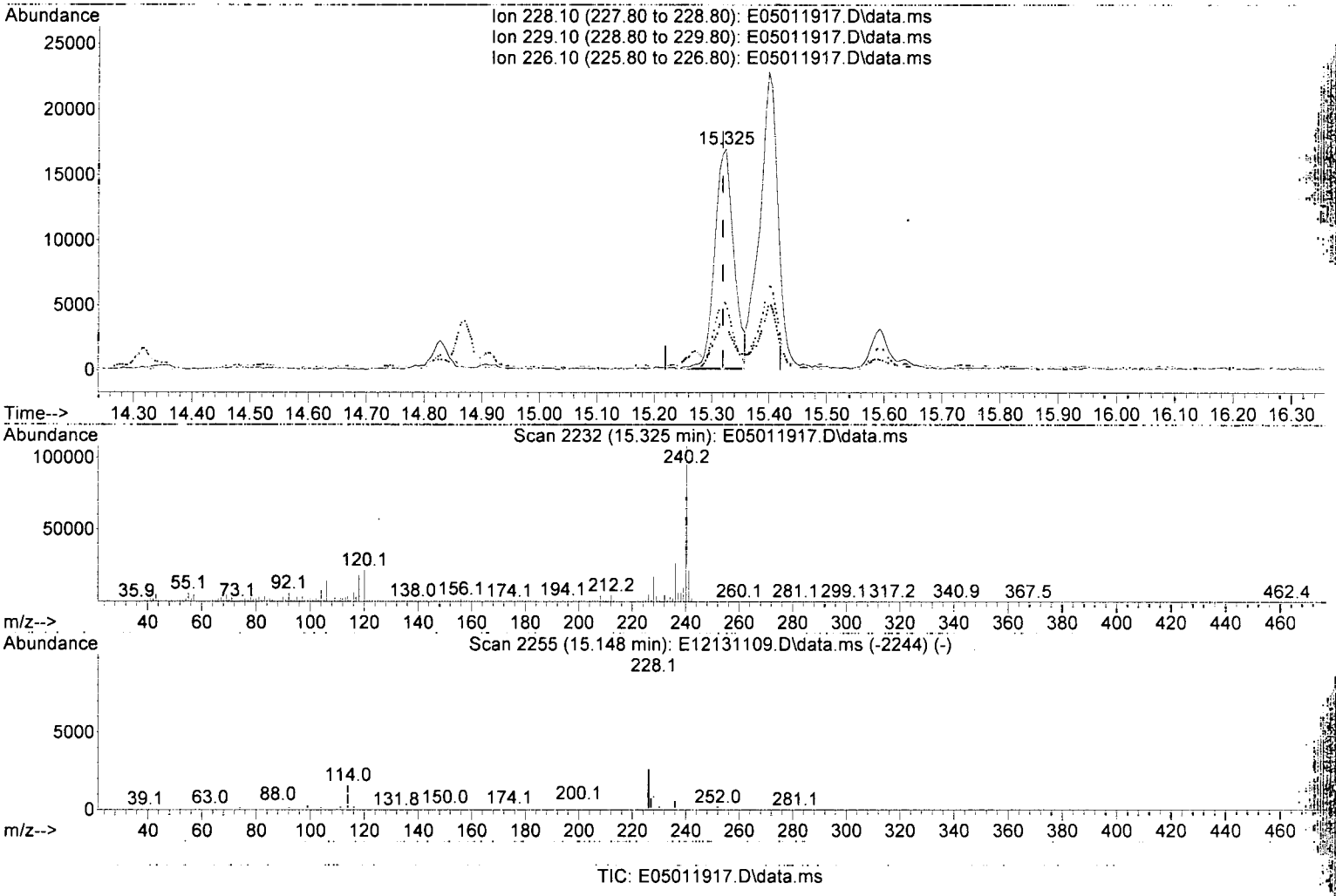
response 77369

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	19.78
201.10	17.50	17.59
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(83) Benz(a)anthracene (T)

15.325min (+ 0.005) 100.00 ng/ml

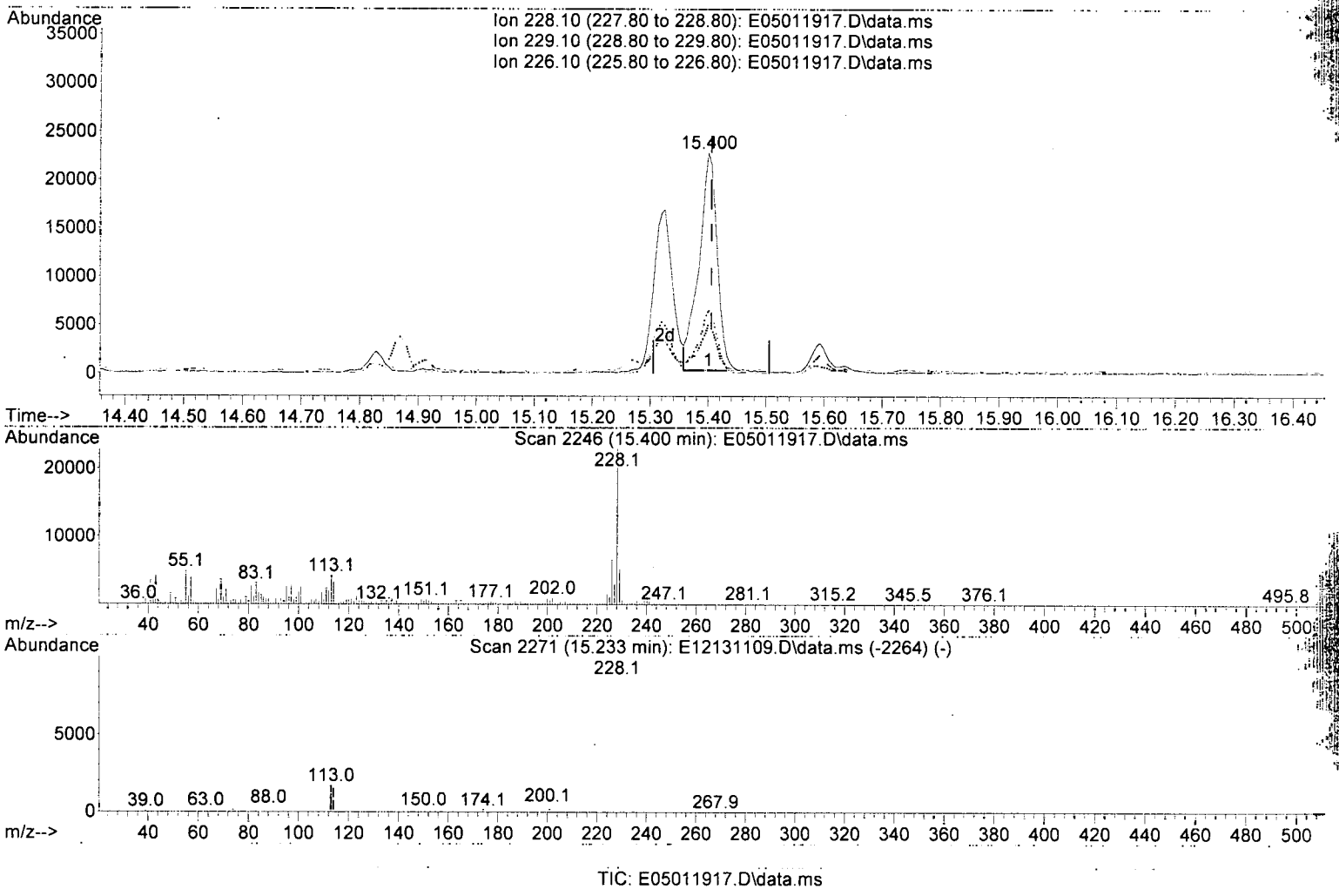
response 39037

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	20.76
226.10	27.80	29.76
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(84) Chrysene (T)

15.400min (-0.005) 132.33 ng/ml

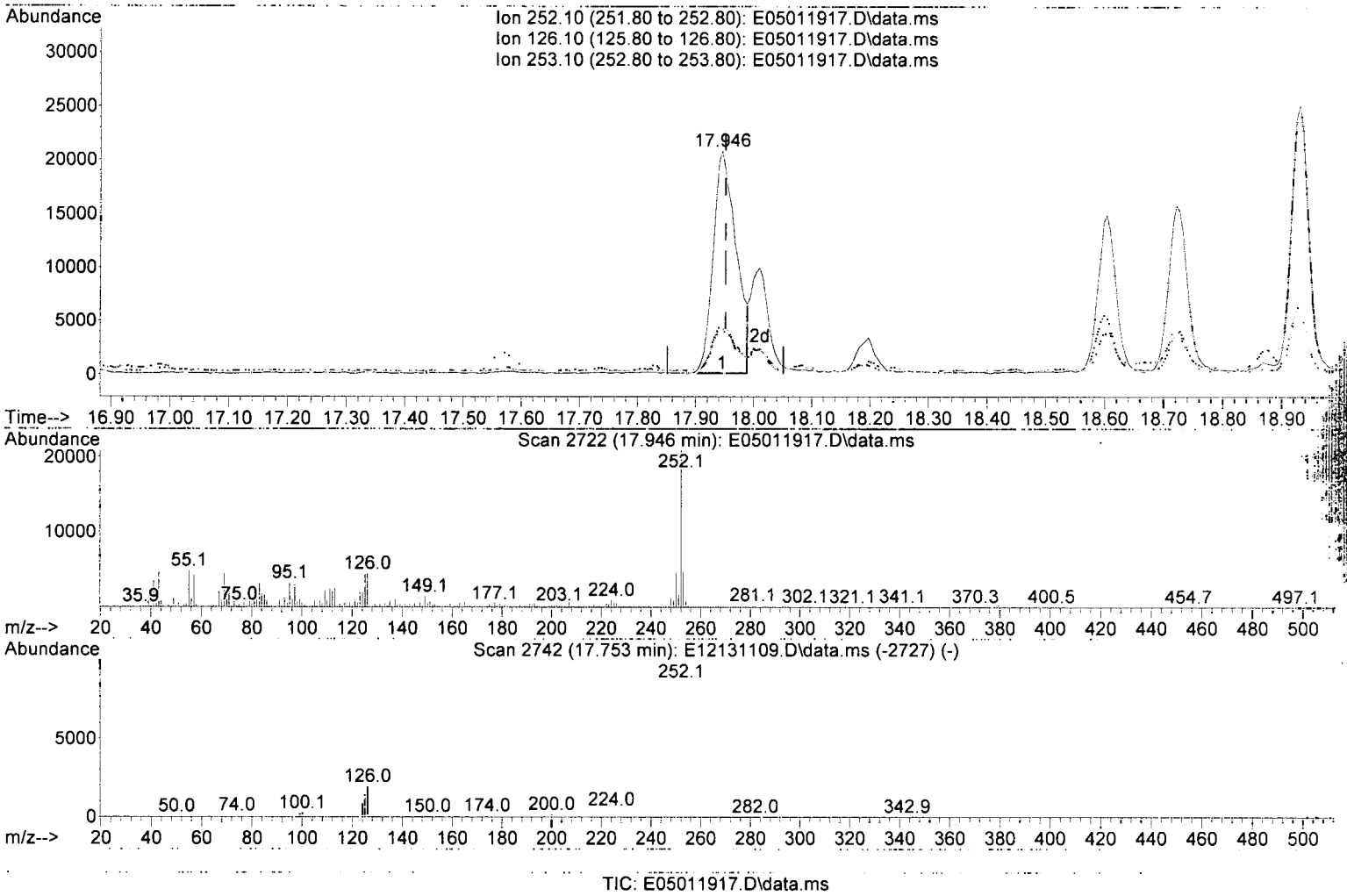
response 49211

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	22.99
226.10	29.80	28.57
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.946min (-0.005) 210.10 ng/ml

response 57315

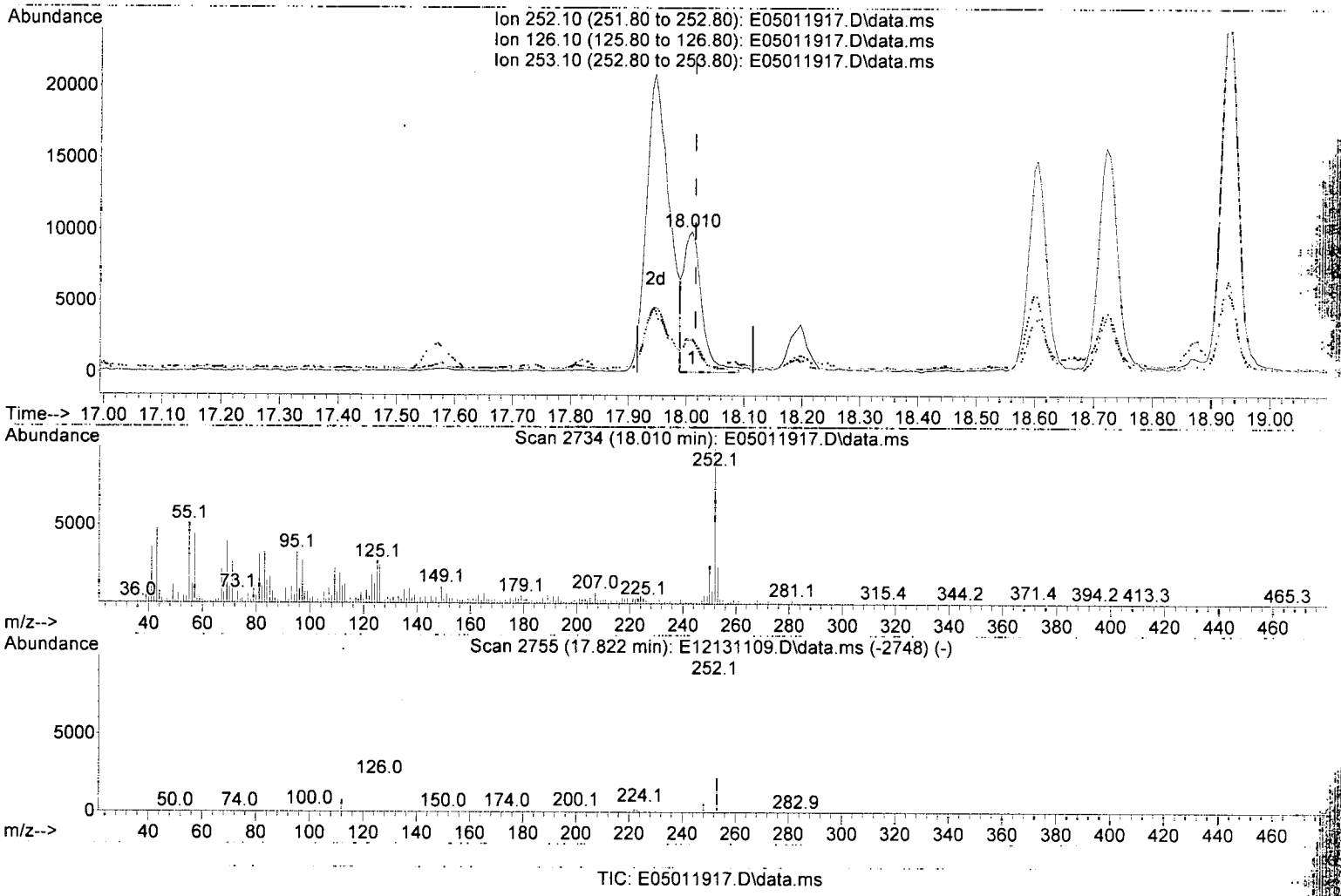
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.32
253.10	22.40	22.05
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.010min (-0.005) 79.49 ng/ml m

response 21311

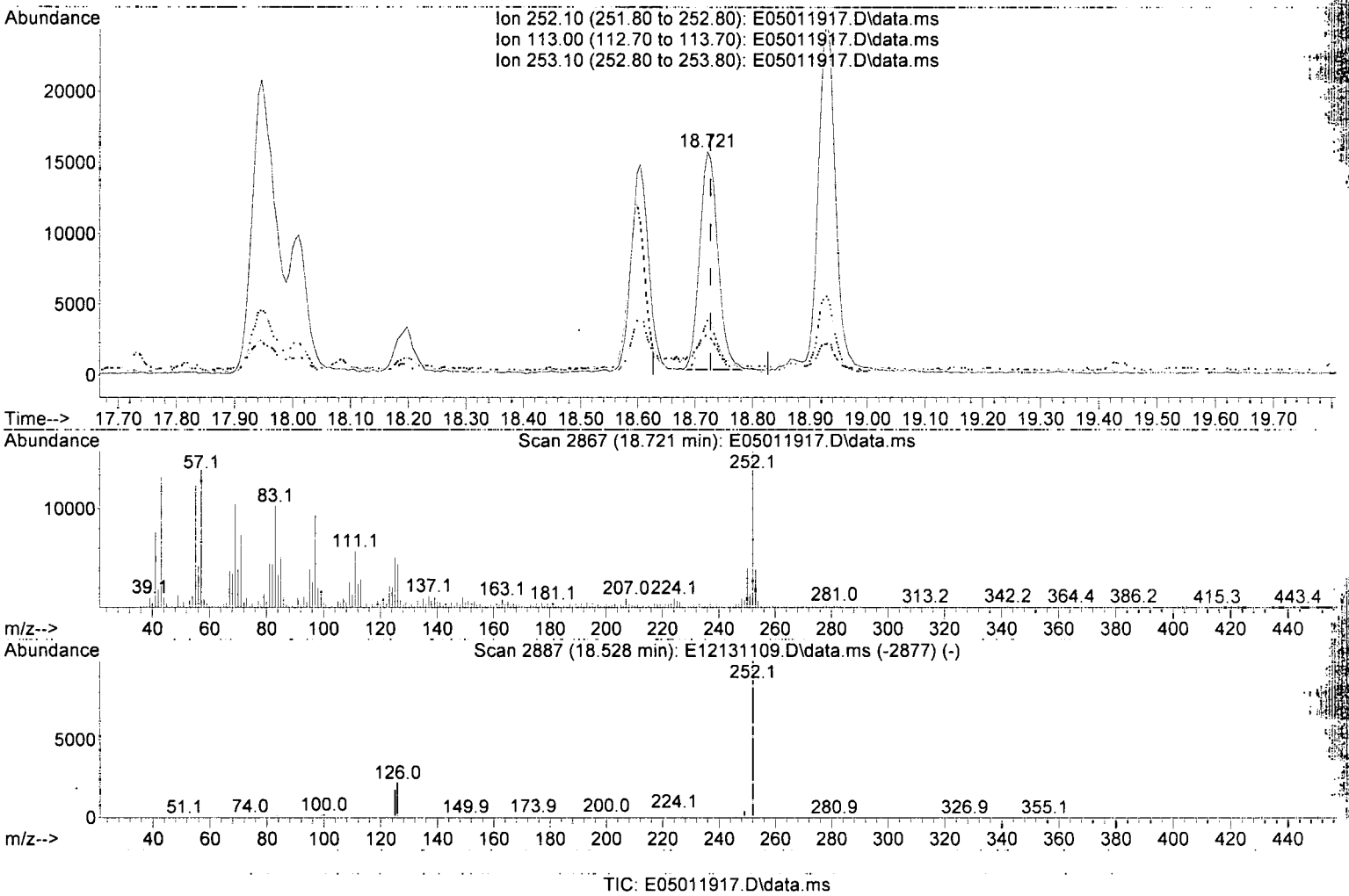
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	24.06
253.10	21.80	23.86
0.00	0.00	0.00

OAMS 5/2/19 MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(92) Benzo(a)pyrene (T)

18.721min (-0.005) 137.50 ng/ml

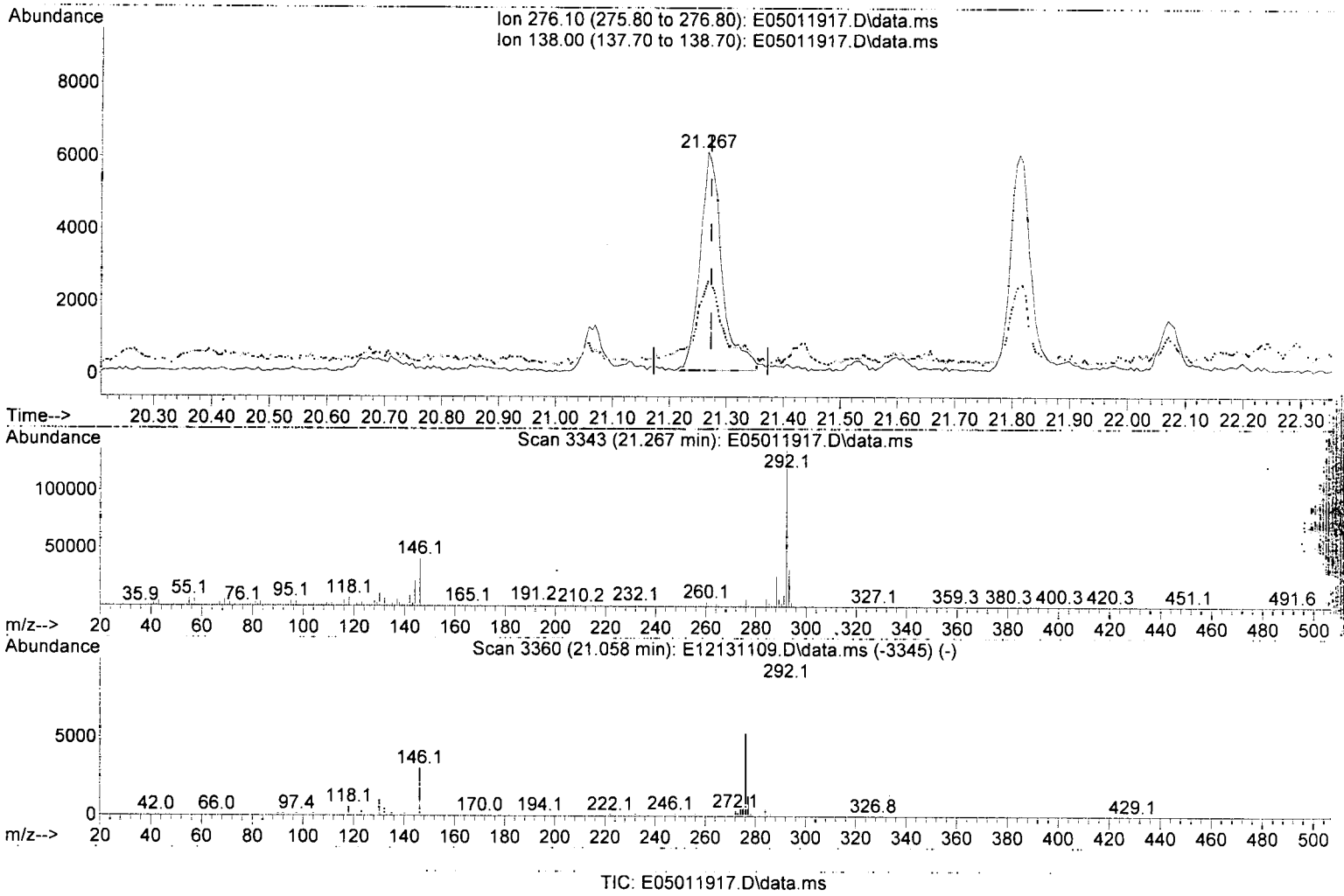
response 34057

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	18.02
253.10	21.70	24.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.267min (-0.005) 96.30 ng/ml

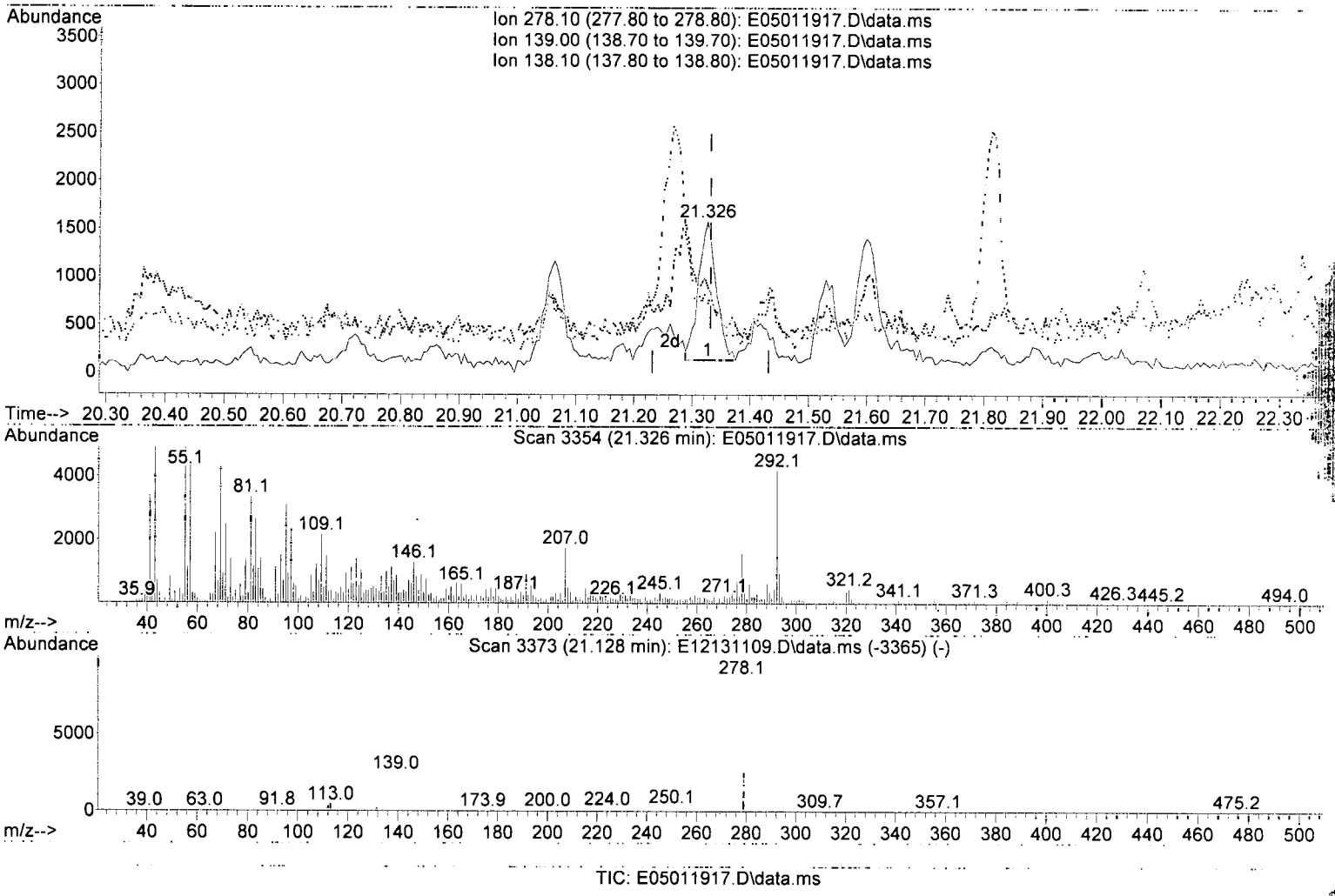
response 16226

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	41.90
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.326min (-0.005) 19.90 ng/ml

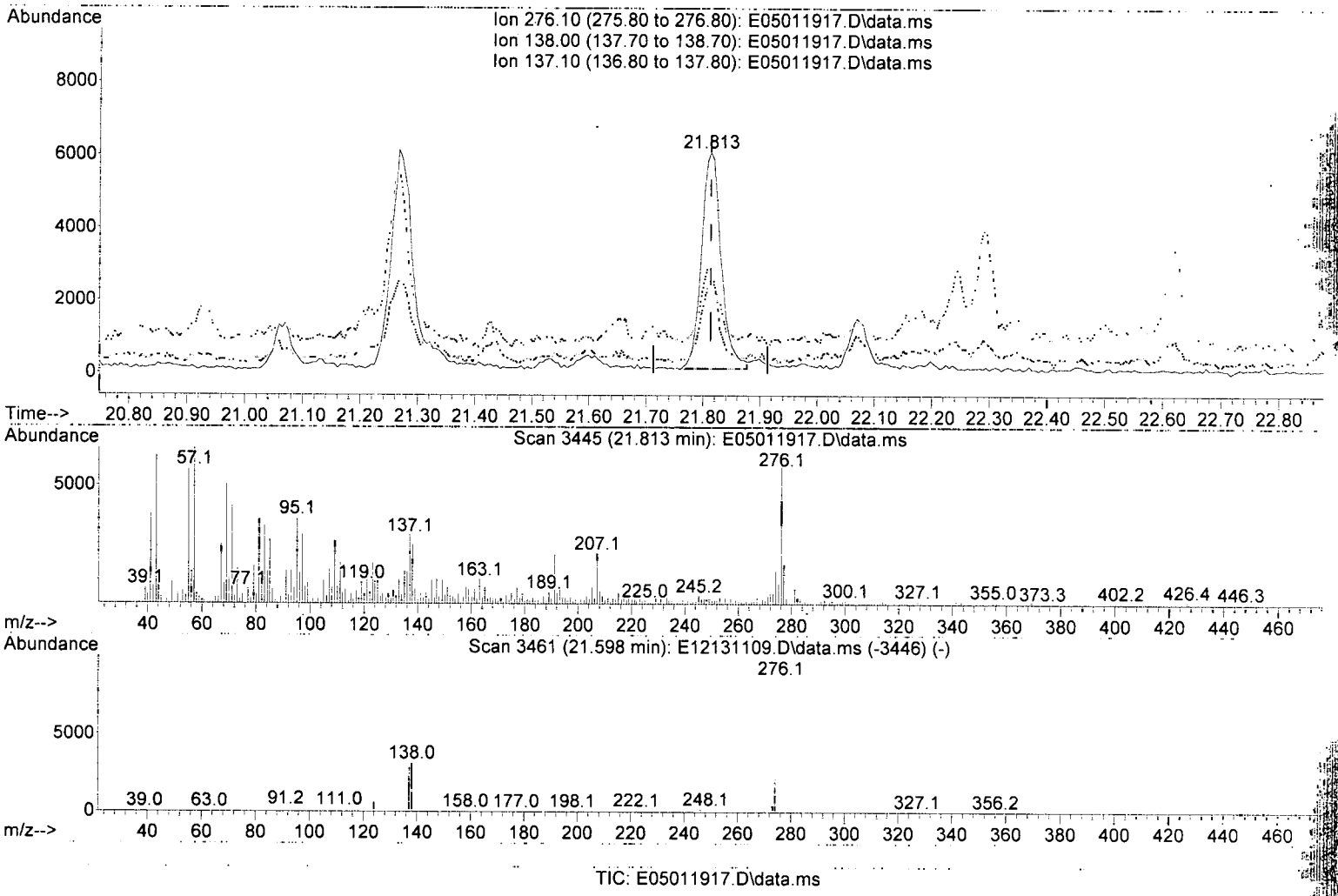
response 3070

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	56.44#
138.10	17.70	45.21
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011917.D\data.ms

(97) Benzo(g,h,i)perylene (T)

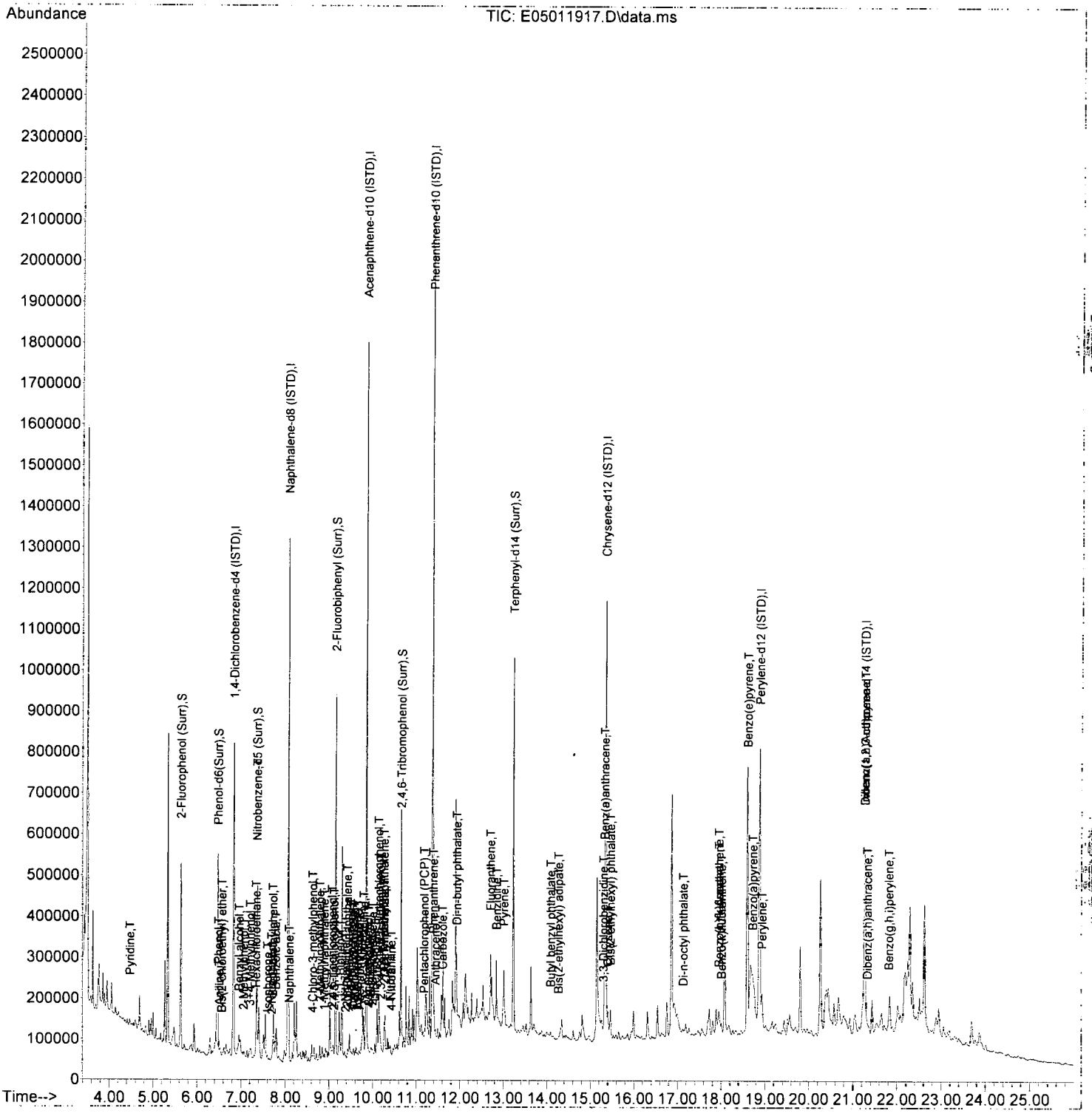
21.813min (-0.000) 86.41 ng/ml

response 14334

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	41.36
137.10	39.00	47.00
0.00	0.00	0.00

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011917.D
Acq On : 1 May 2019 7:39 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-16RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:21 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011918.D
Acq On : 1 May 2019 8:15 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP1
Misc : 1x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/21/19 MOS

Quant Time: May 02 10:46:28 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	209662	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.072	136	779549	2000.00	ng/ml	-0.01
35) Acenaphthene-d10 (ISTD)	9.848	162	355947	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	593364	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.341	240	473210	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.866	264	378149	2000.00	ng/ml	-0.01
94) Dibenz(a,h)Anthrcene-d...	21.262	292	247295	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	164092	1255.40	ng/ml	0.00
5) Phenol-d6(Surr)	6.468	99	232640	1330.61	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	196732	1254.99	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	393725	1487.34	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.650	330	53433	2286.96	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	444793	2011.76	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.334	74	84	N.D.		
3) Pyridine	4.425	79	82	N.D.		
6) Phenol	6.484	94	3457	18.87	ng/ml#	37
7) Aniline	6.505	93	1397	5.85	ng/ml	70
8) Bis(2-chloroethyl) ether	6.564	93	486	3.25	ng/ml#	33
9) 2-Chlorophenol	6.639	128	85	N.D.		
10) 1,3-Dichlorobenzene	6.847	146	62	N.D.		
11) 1,4-Dichlorobenzene	6.847	146	62	N.D.		
12) Benzyl alcohol	6.954	108	4470	51.45	ng/ml	96
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.056	107	542	4.75	ng/ml	85
15) 2,2'-Oxybis(1-Chloropr...	7.072	45	89	N.D.		
16) N-Nitrosodi-n-propylamine	7.200	70	471	4.20	ng/ml	67
17) 3+4-Methylphenol	7.200	107	3571	24.78	ng/ml	81
18) Hexachloroethane	7.340	117	213	3.64	ng/ml#	18
20) Nitrobenzene	7.361	77	725	4.79	ng/ml#	38
22) Isophorone	7.607	82	311	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.719	122	150	N.D.		
25) Bis(2-chloroethoxy) me...	7.810	93	189	N.D.		
26) Benzoic acid	7.773	105	5188	526.12	ng/ml	95
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.094	128	3920	9.43	ng/ml	92
30) 4-Chloroaniline	8.094	127	567	3.96	ng/ml#	53
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.634	107	428	30.89	ng/ml#	1
33) 2-Methylnaphthalene	8.789	142	2573	9.84	ng/ml	98
34) 1-Methylnaphthalene	8.891	142	1781	7.11	ng/ml	97
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	9.254	154	2025	6.65	ng/ml	90
41) 2-Chloronaphthalene	9.270	162	87	N.D.		
42) 2-Nitroaniline	9.372	138	179	56.74	ng/ml	84
43) 2,6-Dimethylnaphthalene	9.420	156	2934	13.79	ng/ml	95

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011918.D
Acq On : 1 May 2019 8:15 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP1
Misc : 1x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

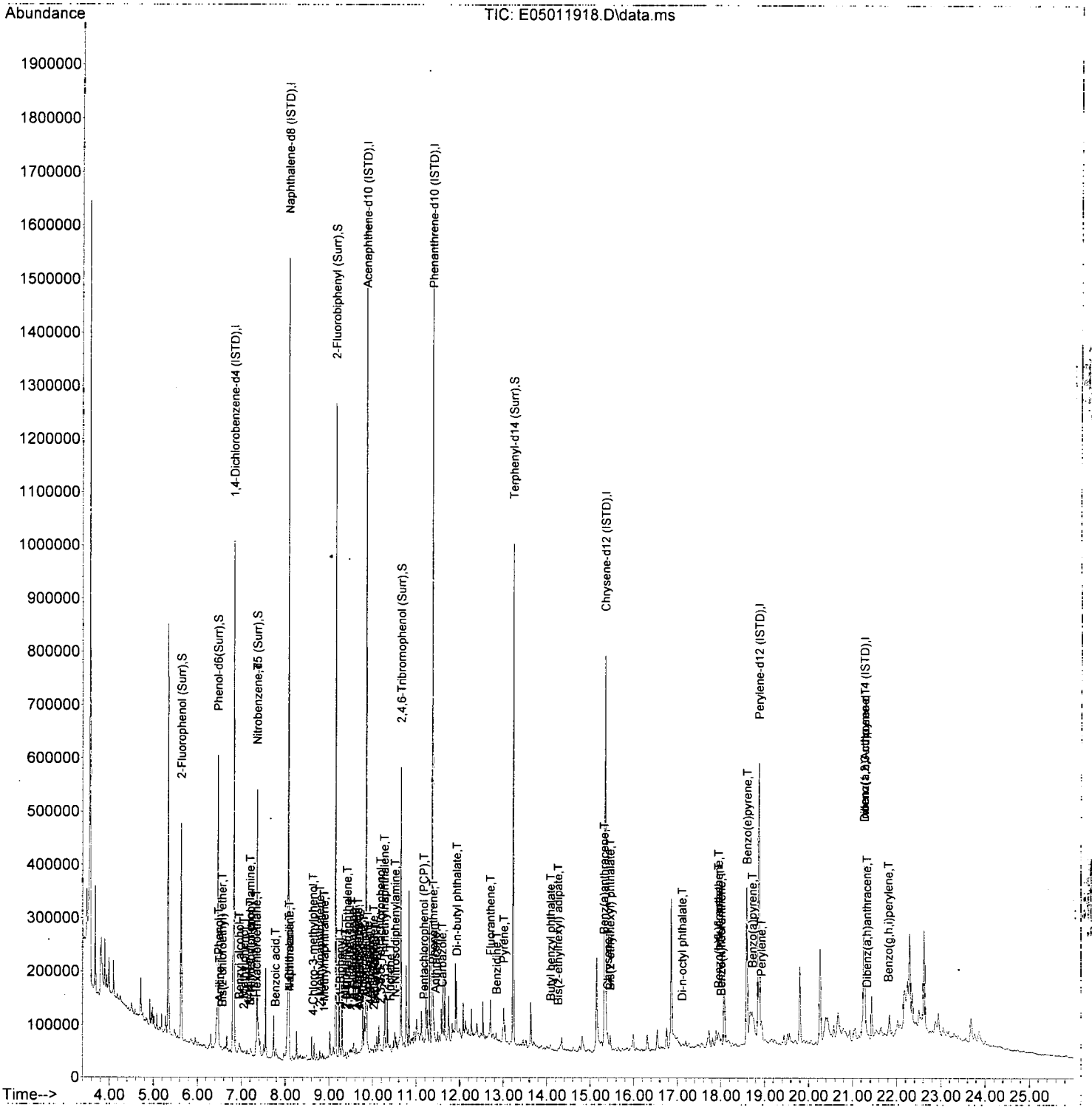
Quant Time: May 02 10:46:28 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.532	168	272	81.32 ng/ml#	52
45) Dimethyl phthalate	9.554	163	561	N.D.	
46) 1,3-Dinitrobenzene	9.581	168	86	69.67 ng/ml#	1
47) 2,6-Dinitrotoluene	9.634	165	93	33.59 ng/ml#	39
48) 1,2-Dinitrobenzene	9.666	168	63	37.69 ng/ml#	1
49) Acenaphthylene	9.704	152	1578	4.55 ng/ml	86
50) 3-Nitroaniline	9.795	138	71	30.37 ng/ml#	43
51) Acenaphthene	9.880	153	1899	8.08 ng/ml	91
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	9.950	139	185	69.78 ng/ml#	1
54) 2,4-Dinitrotoluene	10.025	165	85	62.31 ng/ml	75
55) Dibenzofuran	10.057	168	1427	4.67 ng/ml#	12
56) 2,3,5,6-Tetrachlorophenol	10.180	232	65	37.51 ng/ml#	1
57) 2,3,4,6-Tetrachlorophenol	10.180	232	65	24.76 ng/ml#	1
58) Diethyl phthalate	10.265	149	437	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.265	170	2408	12.70 ng/ml	82
60) Fluorene	10.404	166	2264	9.25 ng/ml	96
61) 4-Chlorophenyl phenyl ...	10.340	204	94	N.D.	
62) 4-Nitroaniline	10.399	138	138	N.D.	
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.	
65) N-Nitrosodiphenylamine	10.517	169	1437	7.67 ng/ml#	61
66) Azobenzene (1,2-DPH)	10.565	77	230	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.174	266	348	82.55 ng/ml	87
71) Phenanthrene	11.388	178	16196	49.73 ng/ml	98
72) Anthracene	11.442	178	4602	13.77 ng/ml	97
73) Carbazole	11.597	167	2566	8.20 ng/ml	92
74) Di-n-butyl phthalate	11.934	149	2633	6.73 ng/ml	91
75) Fluoranthene	12.704	202	37209	110.15 ng/ml	97
76) Benzidine	12.843	184	106	39.66 ng/ml#	1
77) Pyrene	13.014	202	37163	108.30 ng/ml	99
80) Butyl benzyl phthalate	14.089	149	3535	25.54 ng/ml	99
81) Bis(2-ethylhexyl) adipate	14.261	129	1464	10.63 ng/ml	65
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.314	228	18638	69.83 ng/ml	95
84) Chrysene	15.400	228	24614	96.80 ng/ml	95
85) Bis(2-ethylhexyl) phth...	15.459	149	13055	66.00 ng/ml	93
87) Di-n-octyl phthalate	17.111	149	258	31.71 ng/ml#	1
88) Benzo(b)fluoranthene	17.941	252	28969	145.00 ng/ml MQS	95
89) Benzo(k)fluoranthene	18.005	252	8398	42.77 ng/ml MQS	91
90) Benzo(b+k)fluoranthene	17.941	252	40411	192.60 ng/ml	94
91) Benzo(e)pyrene	18.598	252	15545	76.64 ng/ml	85
92) Benzo(a)pyrene	18.716	252	17040	93.94 ng/ml	95
93) Perylene	18.919	252	23261	112.20 ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.262	276	9183	67.75 ng/ml	78
96) Dibenz(a,h)anthracene	21.321	278	1712	13.79 ng/ml	68
97) Benzo(g,h,i)perylene	21.808	276	8371	62.73 ng/ml	88

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

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011918.D
Acq On : 1 May 2019 8:15 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP1
Misc : 1x, 8270D LL PAH
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:28 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

MOS

AMS 5/2/19

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.826	152	197666	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.072	136	818768	2000.00	ng/ml	-0.01
35) Acenaphthene-d10 (ISTD)	9.848	162	413632	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	750672	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	687639	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	583843	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	401288	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.623	112	193801	1572.67	ng/ml	-0.01
5) Phenol-d6(Surr)	6.462	99	289455	1756.04	ng/ml	-0.01
19) Nitrobenzene-d5 (Surr)	7.356	82	225578	1526.33	ng/ml	-0.01
40) 2-Fluorobiphenyl (Surr)	9.153	172	232136	754.62	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.650	330	47504	1667.71	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	321706	1001.32	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.441	74	93	N.D.		
3) Pyridine	4.435	79	5331	35.29	ng/ml#	67
6) Phenol	6.473	94	2782	16.11	ng/ml#	1
7) Aniline	6.500	93	1340	5.95	ng/ml	87
8) Bis(2-chloroethyl) ether	6.553	93	463	3.28	ng/ml#	52
9) 2-Chlorophenol	6.633	128	103	N.D.		
10) 1,3-Dichlorobenzene	6.842	146	53	N.D.		
11) 1,4-Dichlorobenzene	6.842	146	53	N.D.		
12) Benzyl alcohol	6.949	108	3997	48.79	ng/ml	92
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.051	107	797	7.41	ng/ml	77
15) 2,2'-Oxybis(1-Chloropr...	7.067	45	59	N.D.		
16) N-Nitrosodi-n-propylamine	7.200	70	532	5.03	ng/ml	62
17) 3+4-Methylphenol	7.200	107	2738	20.15	ng/ml#	76
18) Hexachloroethane	7.334	117	233	4.23	ng/ml#	18
20) Nitrobenzene	7.350	77	954	6.68	ng/ml#	37
22) Isophorone	7.596	82	285	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.725	122	187	N.D.		
25) Bis(2-chloroethoxy) me...	7.799	93	114	N.D.		
26) Benzoic acid	7.767	105	5892	536.44	ng/ml	84
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.094	128	2838	6.50	ng/ml	88
30) 4-Chloroaniline	8.094	127	496	3.30	ng/ml#	61
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.623	107	346	29.89	ng/ml#	1
33) 2-Methylnaphthalene	8.784	142	986	3.59	ng/ml	96
34) 1-Methylnaphthalene	8.885	142	596	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	9.254	154	847	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.367	138	74	55.06	ng/ml#	1
43) 2,6-Dimethylnaphthalene	9.420	156	1028	4.16	ng/ml	94

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

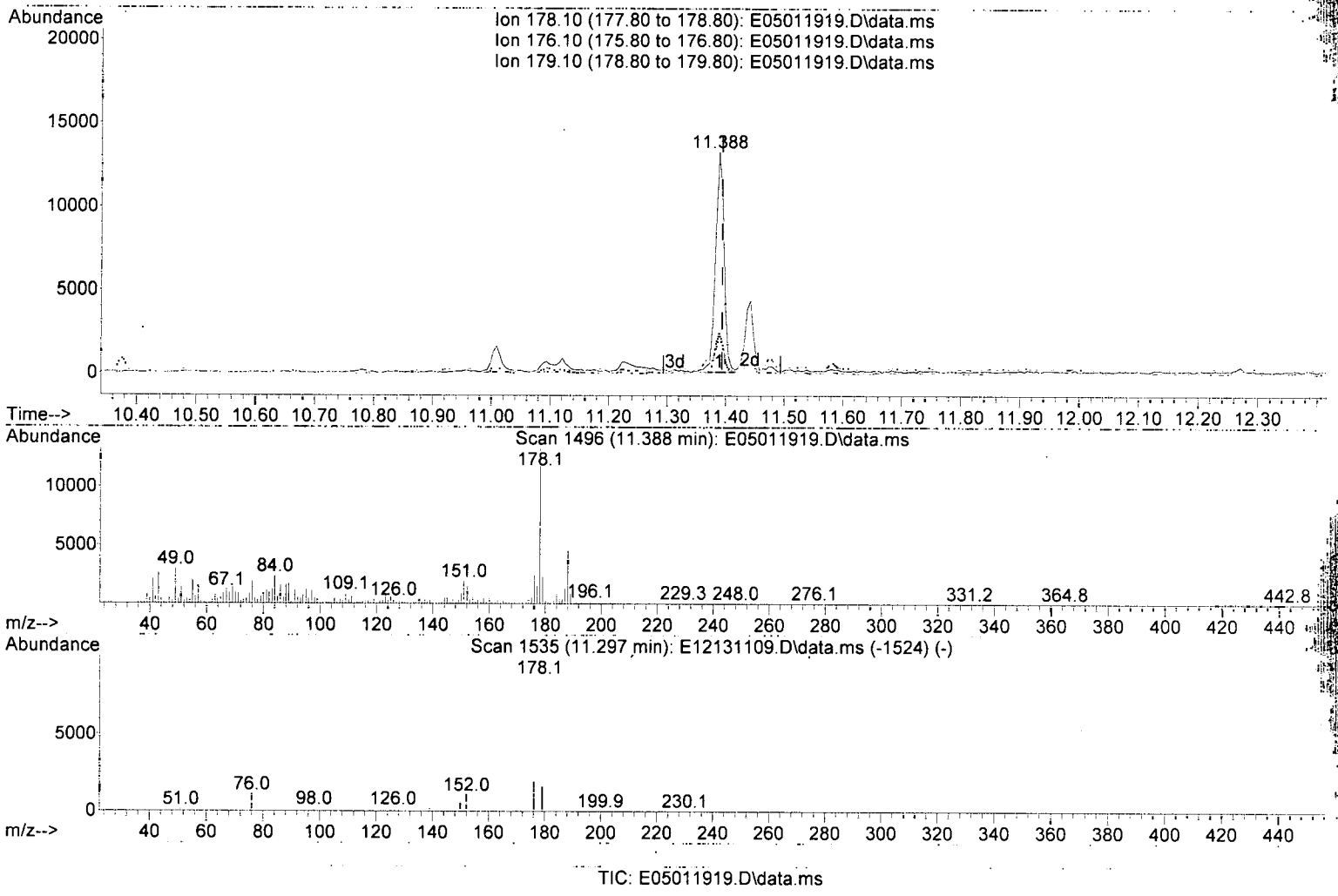
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.532	168	68	72.92	ng/ml#	60
45) Dimethyl phthalate	9.554	163	821	3.09	ng/ml	56
46) 1,3-Dinitrobenzene	9.532	168	68	68.86	ng/ml#	11
47) 2,6-Dinitrotoluene	9.634	165	66	32.86	ng/ml	70
48) 1,2-Dinitrobenzene	9.655	168	61	37.22	ng/ml#	1
49) Acenaphthylene	9.704	152	1955	4.85	ng/ml	92
50) 3-Nitroaniline	9.795	138	77	30.28	ng/ml#	34
51) Acenaphthene	9.880	153	1572	5.75	ng/ml	93
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.950	139	83	67.20	ng/ml#	1
54) 2,4-Dinitrotoluene	10.014	165	191	63.52	ng/ml#	47
55) Dibenzofuran	10.057	168	742	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	10.265	149	561	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.265	170	885	4.02	ng/ml	88
60) Fluorene	10.404	166	1548	5.44	ng/ml	82
61) 4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62) 4-Nitroaniline	10.388	138	79	N.D.		
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.522	169	501	N.D.		
66) Azobenzene (1,2-DPH)	10.559	77	134	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.174	266	459	83.09	ng/ml	90
71) Phenanthrene	11.388	178	13377	32.47	ng/ml	97
72) Anthracene	11.442	178	4240	10.03	ng/ml	90
73) Carbazole	11.597	167	2857	7.22	ng/ml	89
74) Di-n-butyl phthalate	11.934	149	3075	6.21	ng/ml	91
75) Fluoranthene	12.704	202	31790	74.38	ng/ml	97
76) Benzidine	12.838	184	72	39.04	ng/ml#	1
77) Pyrene	13.014	202	31682	72.98	ng/ml	98
80) Butyl benzyl phthalate	14.089	149	4347	21.61	ng/ml	95
81) Bis(2-ethylhexyl) adipate	14.266	129	1447	7.23	ng/ml	82
82) 3,3-Dichlorobenzidine	15.234	252	92	21.87	ng/ml#	1
83) Benz(a)anthracene	15.314	228	15392	39.68	ng/ml MOS	94
84) Chrysene	15.400	228	19609	53.07	ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.459	149	17742	61.72	ng/ml	96
87) Di-n-octyl phthalate	17.149	149	400	31.72	ng/ml#	1
88) Benzo(b)fluoranthene	17.941	252	25023	81.12	ng/ml MOS	98
89) Benzo(k)fluoranthene	17.941	252	31161	102.79	ng/ml	97 ME-MOS
90) Benzo(b+k)fluoranthene	17.941	252	34704	107.13	ng/ml	97
91) Benzo(e)pyrene	18.598	252	15514	49.54	ng/ml	85
92) Benzo(a)pyrene	18.716	252	16000	57.13	ng/ml	91
93) Perylene	18.925	252	16598	51.85	ng/ml	94
95) Indeno(1,2,3-cd)pyrene	21.267	276	10112	45.97	ng/ml	67
96) Dibenz(a,h)anthracene	21.326	278	1871	9.29	ng/ml	51
97) Benzo(g,h,i)perylene	21.808	276	9146	42.24	ng/ml	88

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(71) Phenanthrene (T)

11.388min (-0.005) 32.47 ng/ml

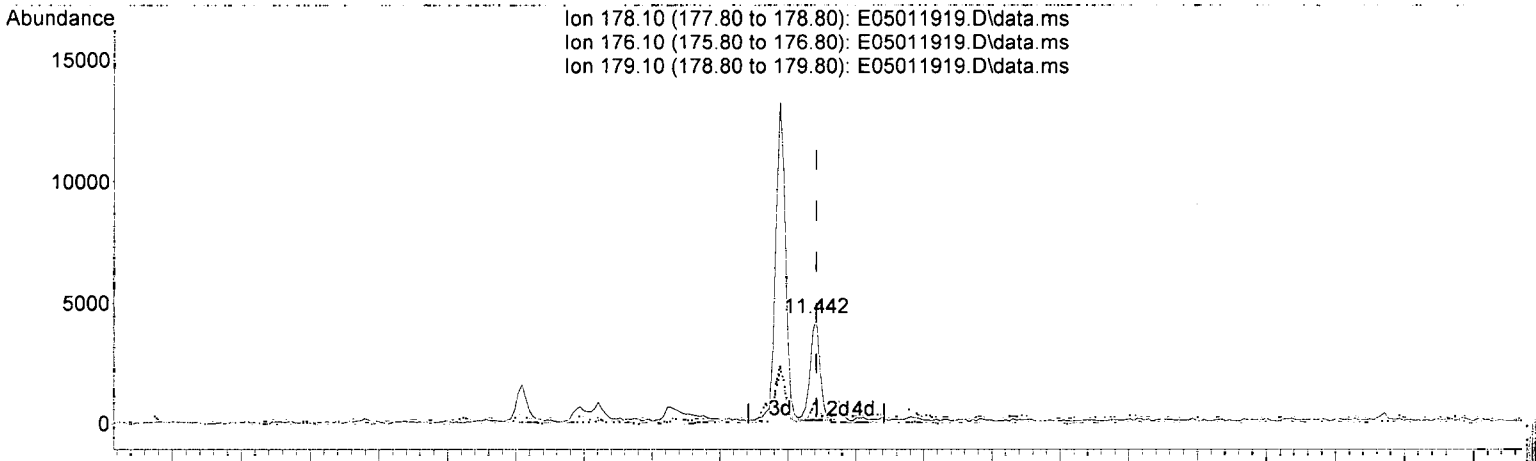
response 13377

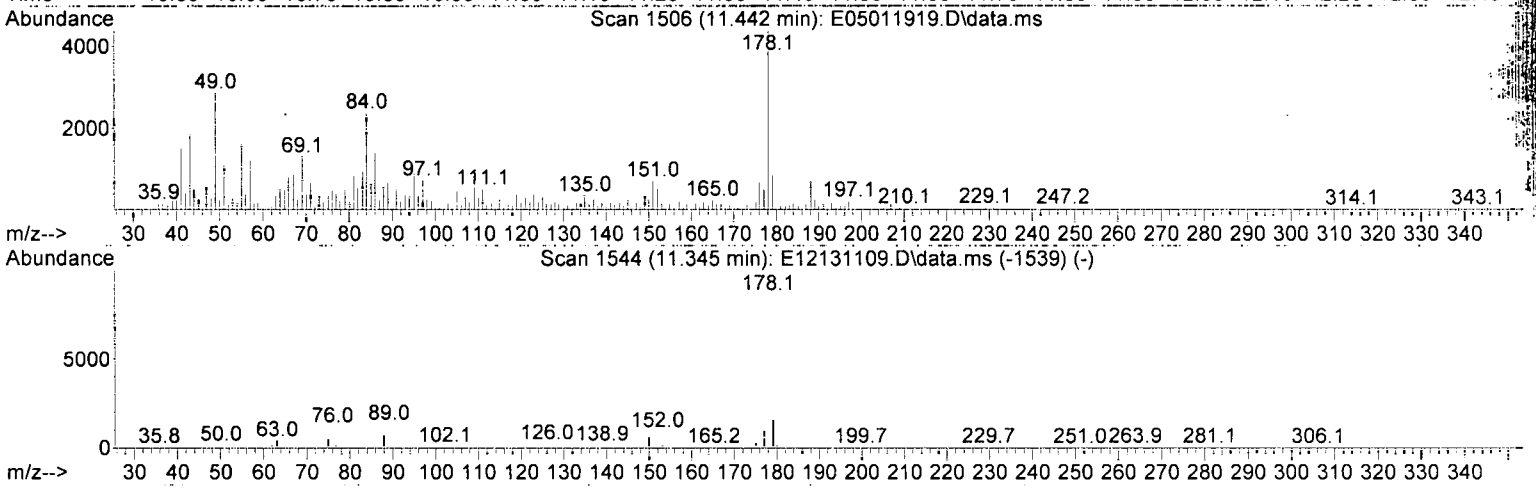
Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.29
179.10	15.00	17.29
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5





TIC: E05011919.D\data.ms

(72) Anthracene (T)

11.442min (-0.000) 10.03 ng/ml

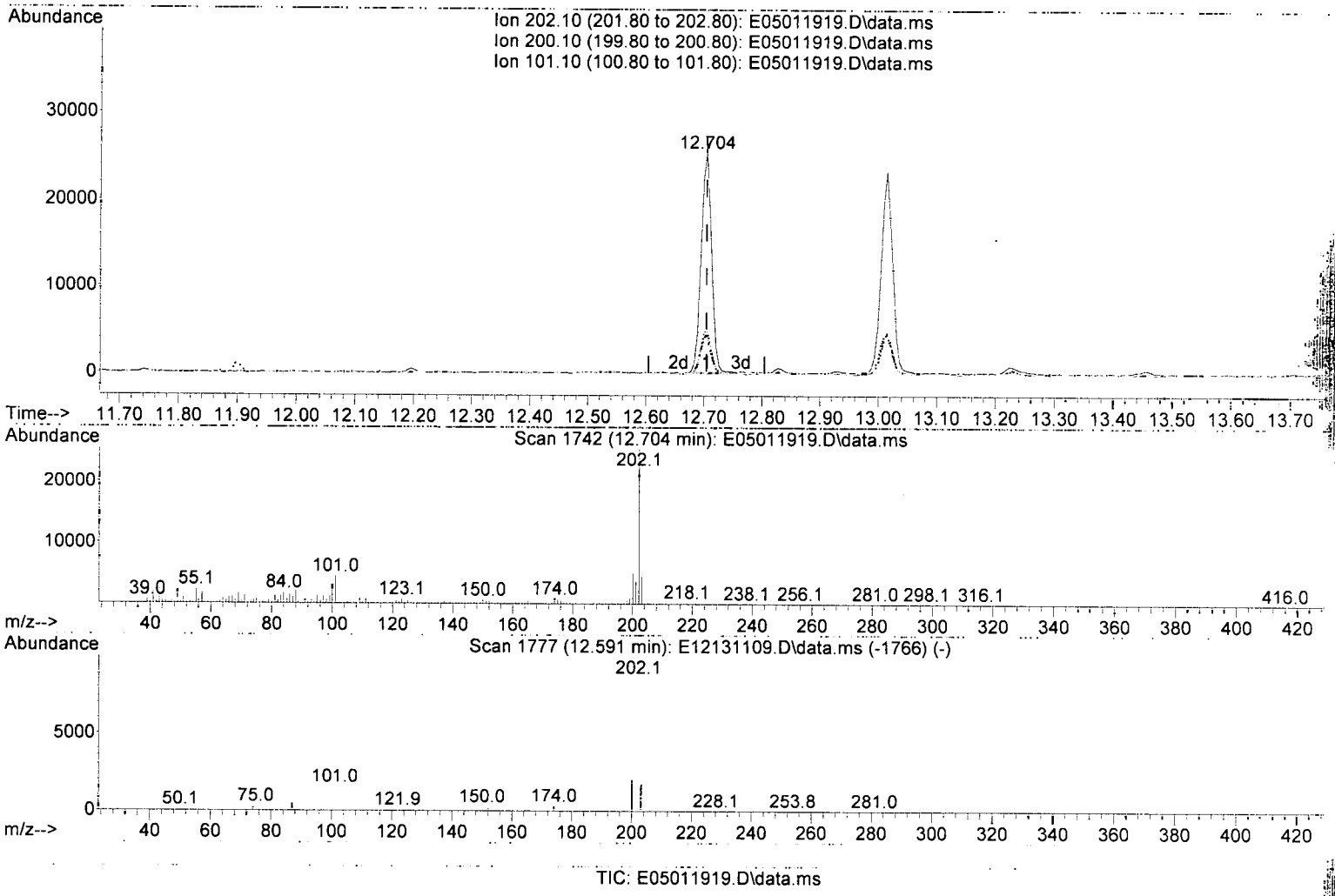
response 4240

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	15.41
179.10	15.50	20.88
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 74.38 ng/ml

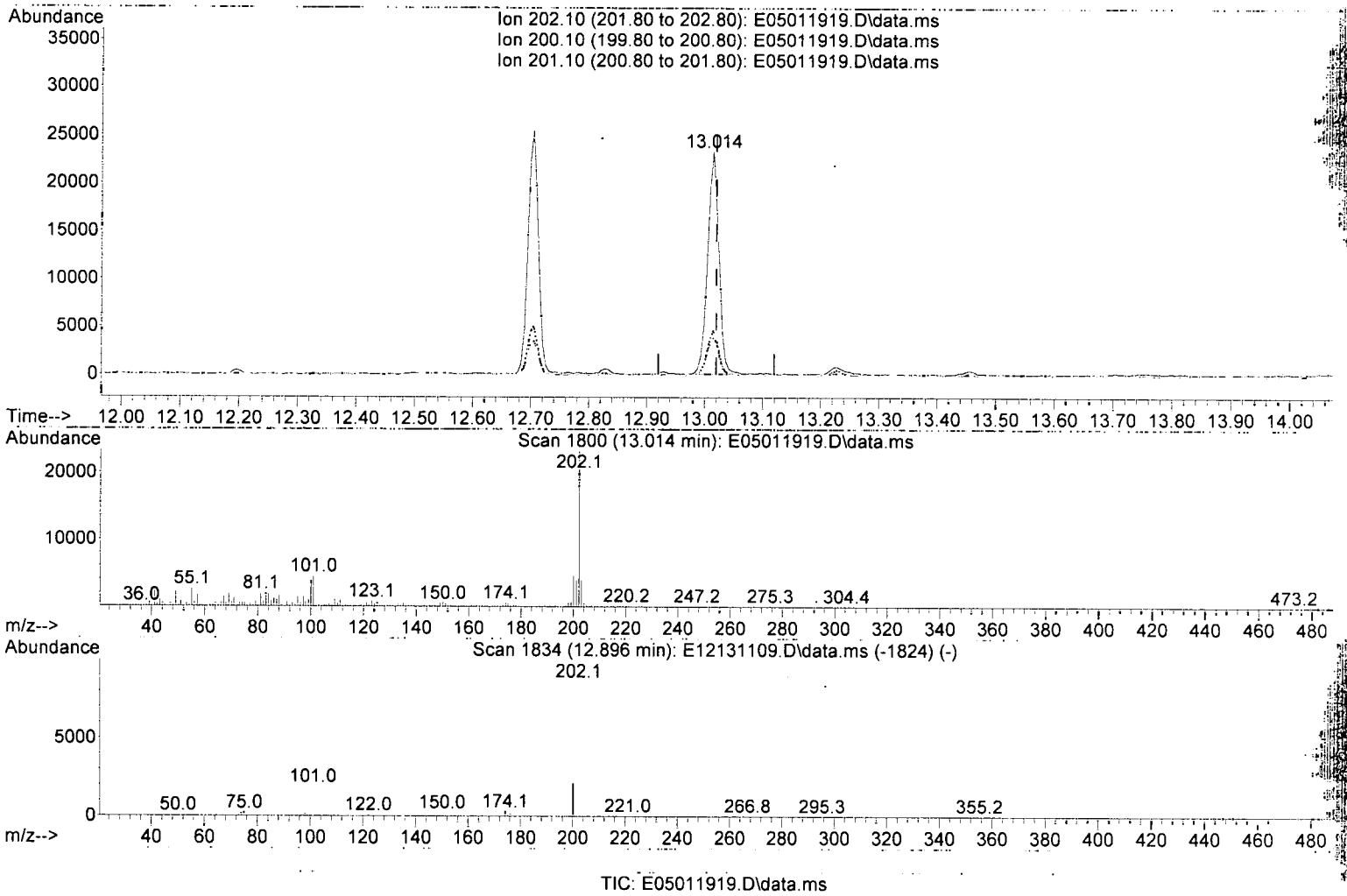
response 31790

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	19.89
101.10	15.70	17.67
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(77) Pyrene (T)

13.014min (-0.005) 72.98 ng/ml

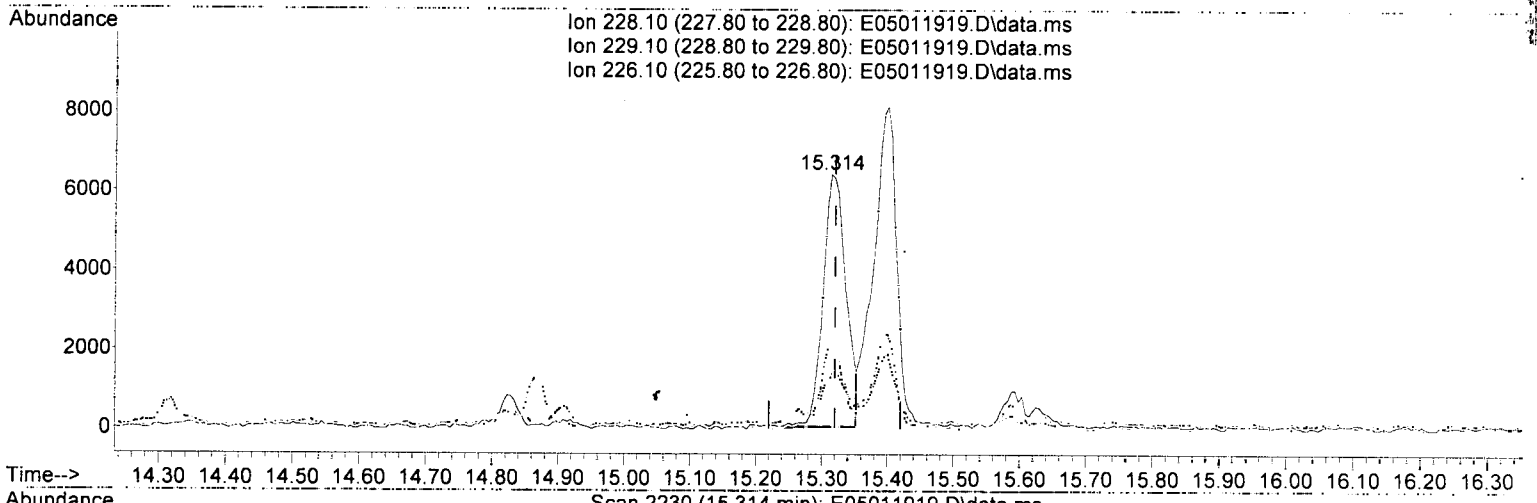
response 31682

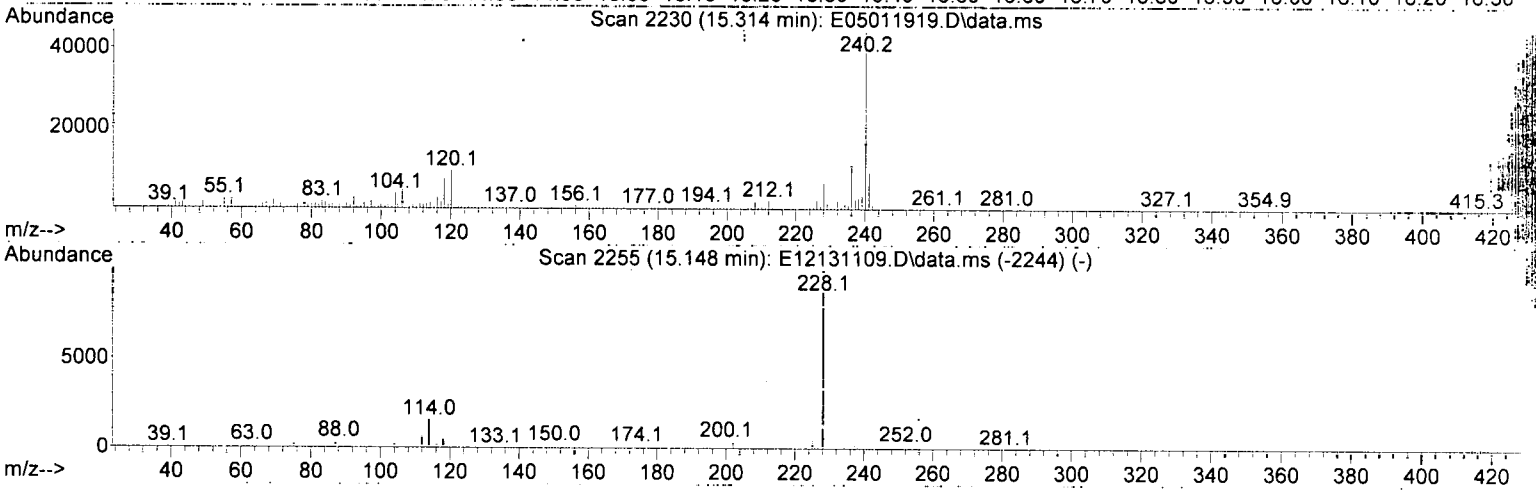
Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.07
201.10	17.50	16.91
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5





TIC: E05011919.D\data.ms

(83) Benz(a)anthracene (T)

15.314min (-0.005) 39.68 ng/ml

response 15392

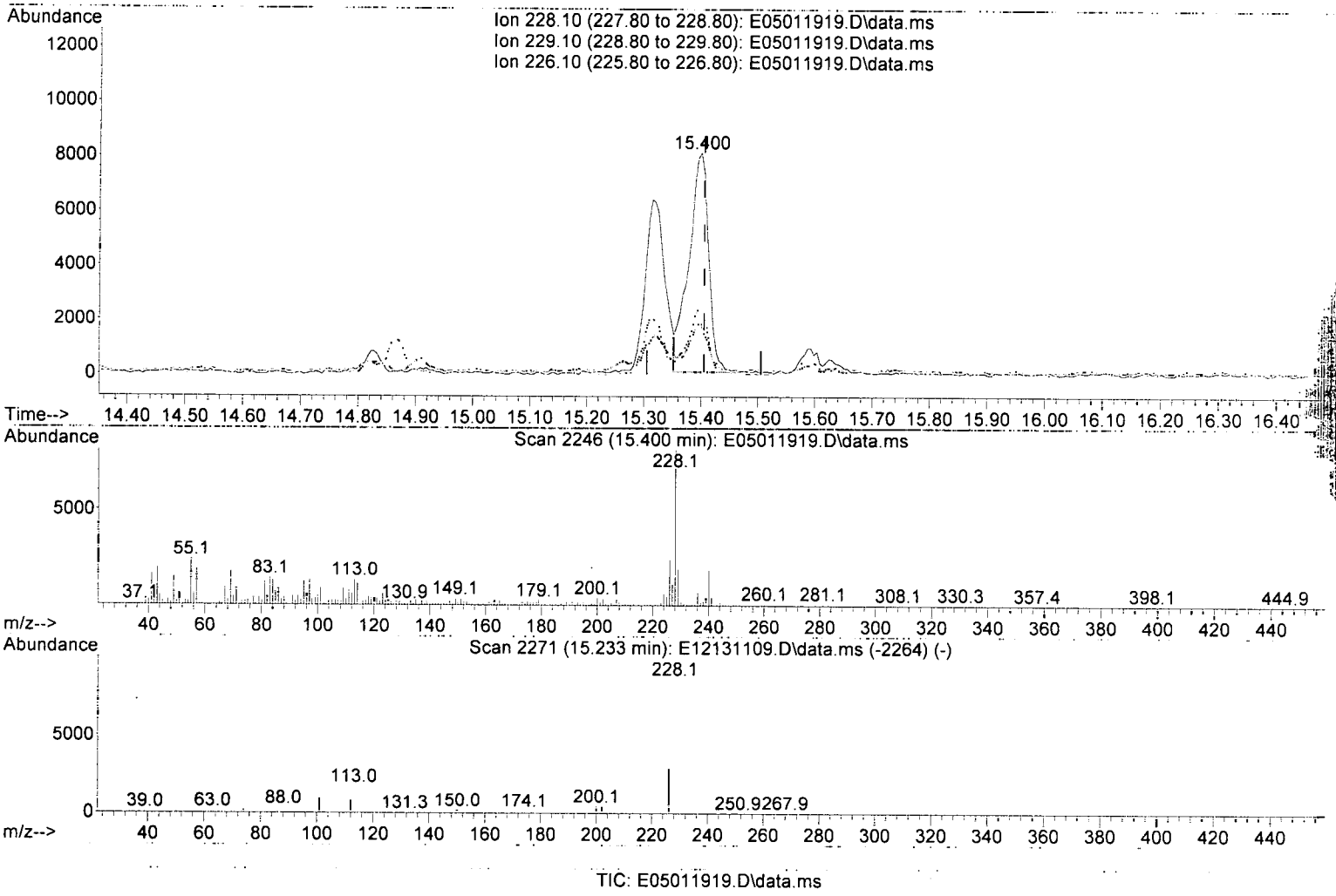
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	21.11
226.10	27.80	32.00
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(84) Chrysene (T)

15.400min (-0.005) 53.07 ng/ml

response 19609

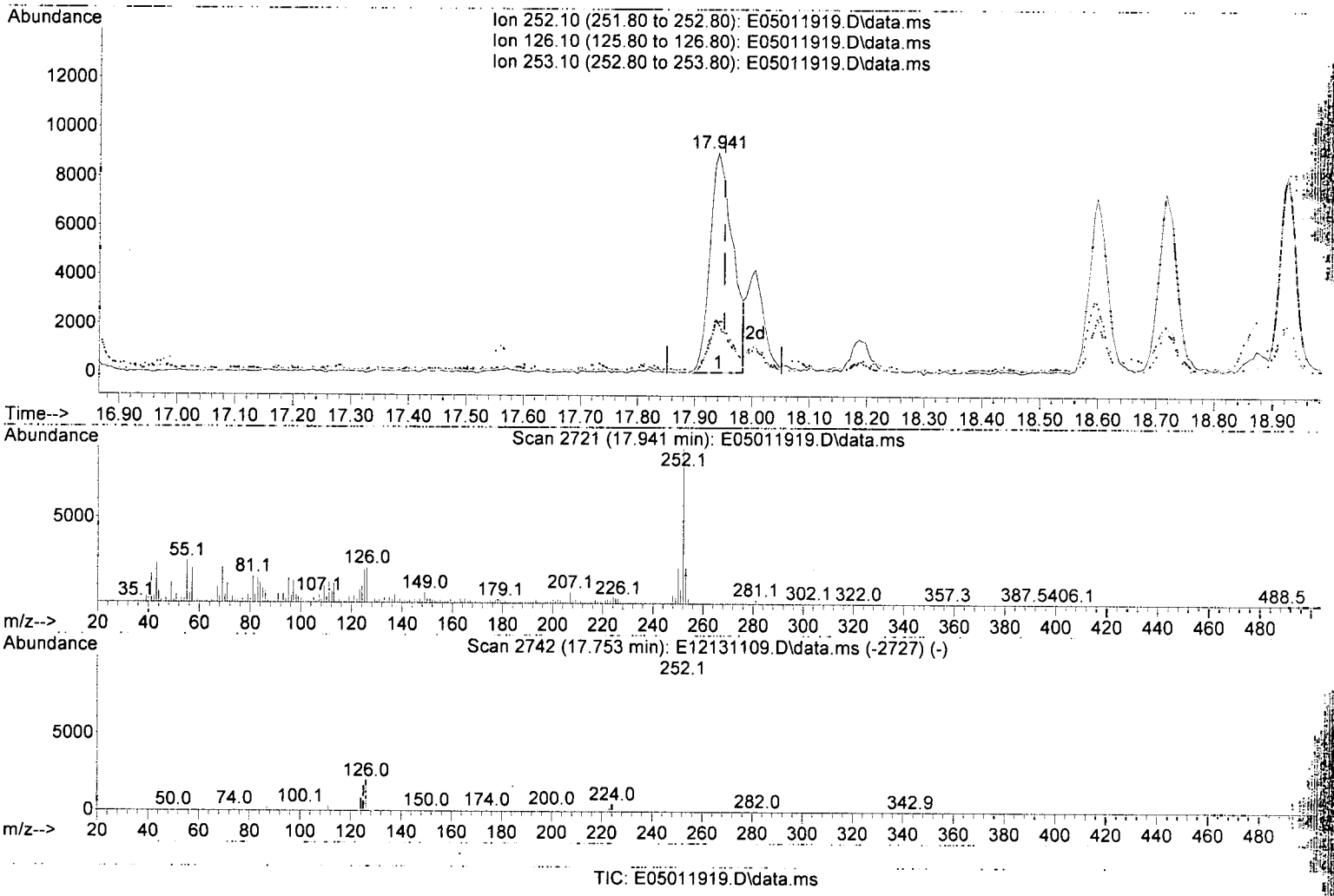
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	23.60
226.10	29.80	29.58
0.00	0.00	0.00

M-05
JK 5/2/19

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.941min (-0.011) 81.12 ng/ml

response 25023

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.90
253.10	22.40	23.49
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

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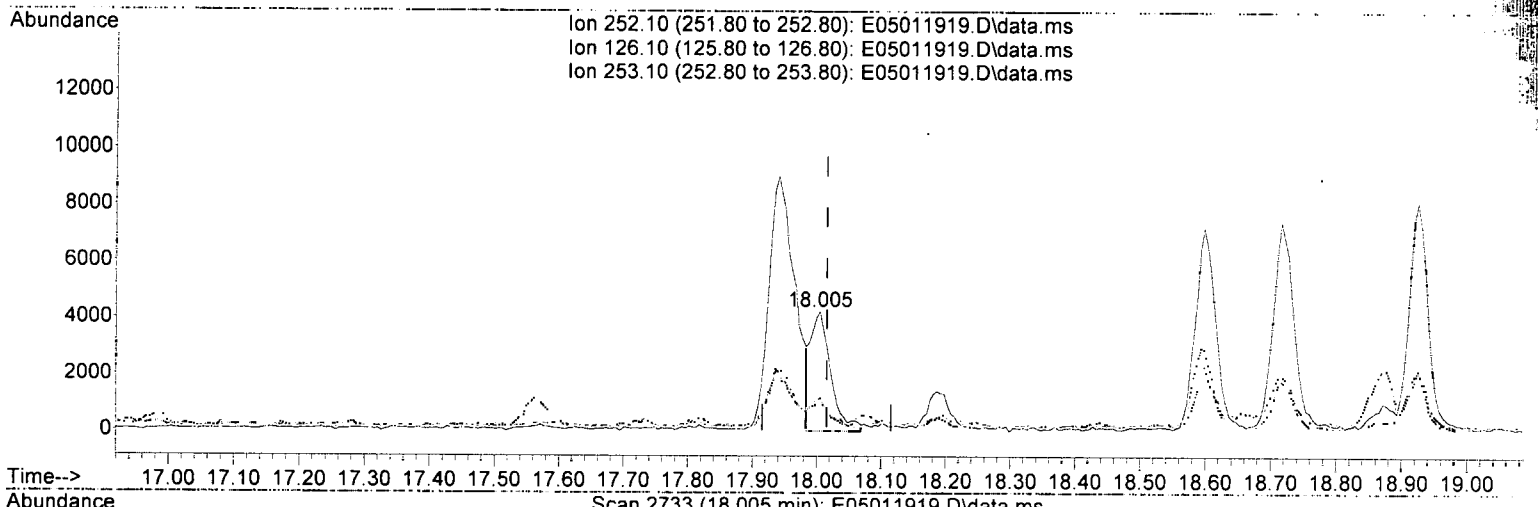

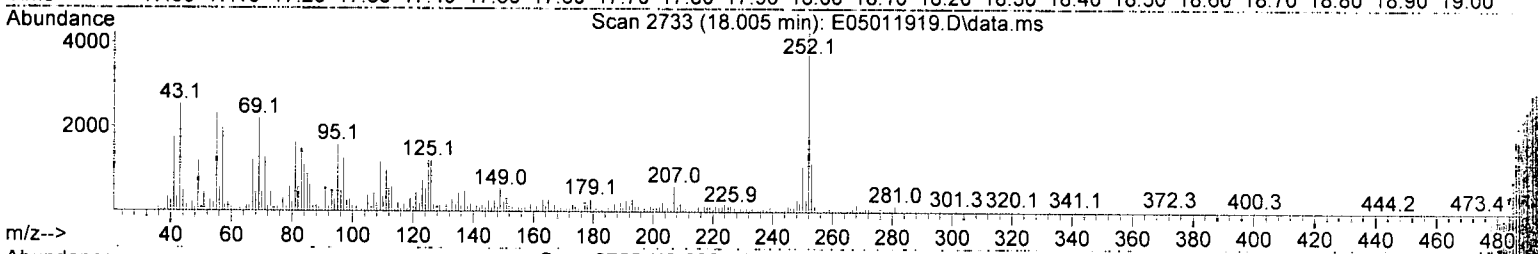

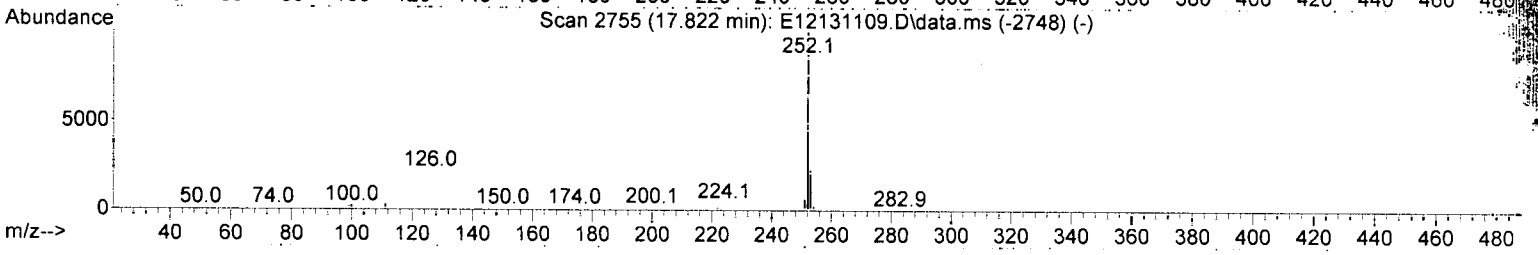

TIC: E05011919.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.005min (-0.011) 30.35 ng/ml m

AMS 5/2/19

response 9201

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	28.48
253.10	21.80	27.30
0.00	0.00	0.00

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Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
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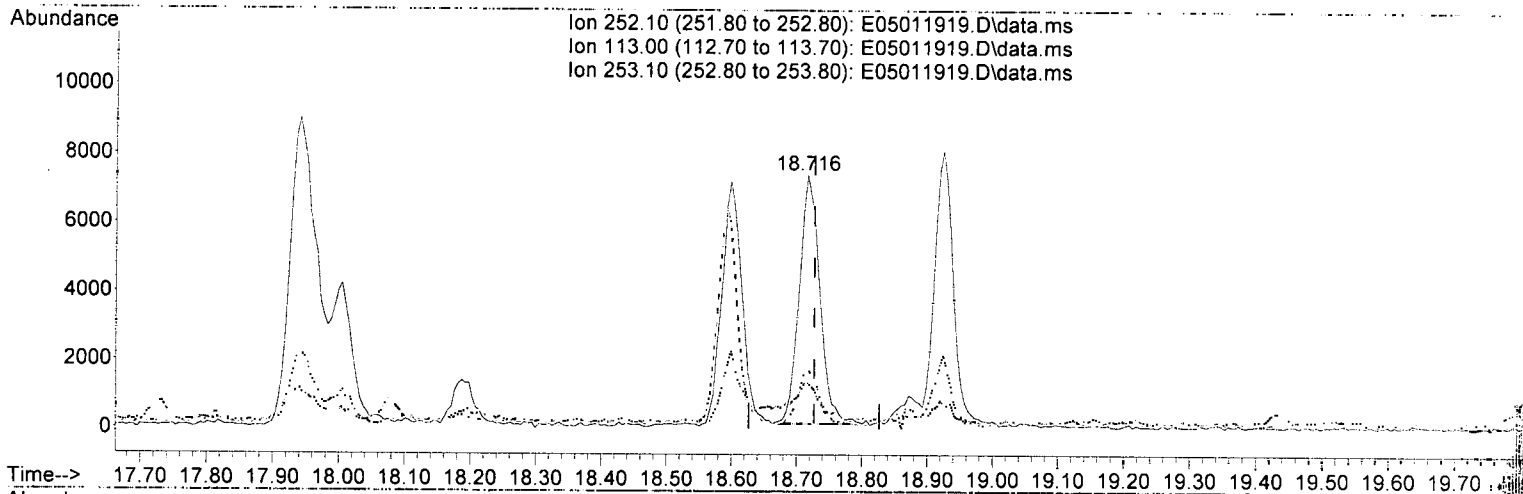
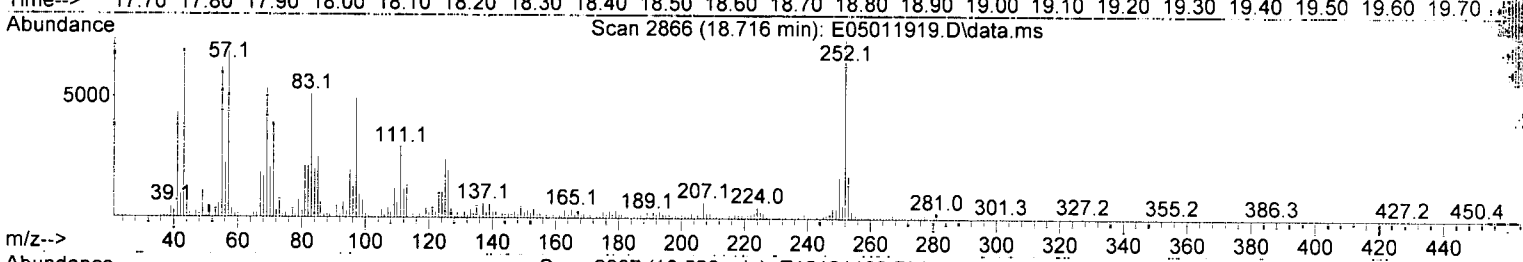
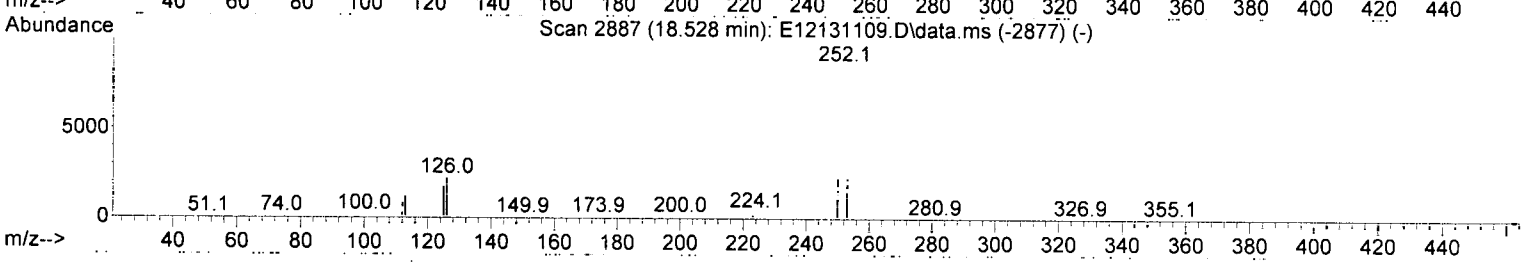
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E05011919.D\data.ms

(92) Benzo(a)pyrene (T)

18.716min (-0.011) 57.13 ng/ml

response 16000

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	18.70
253.10	21.70	24.27
0.00	0.00	0.00

Quantitation Report (Qedit)

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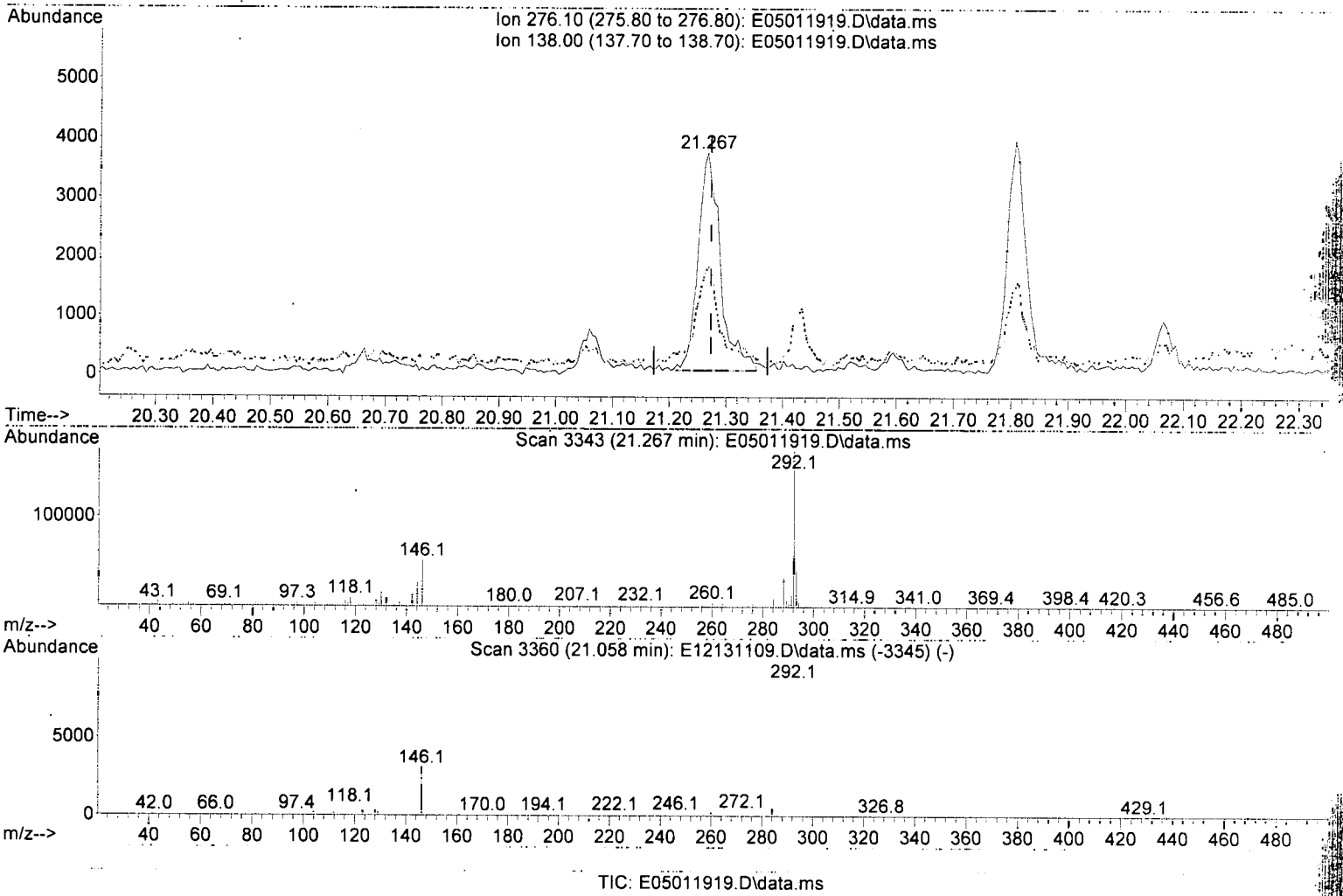

TIC: E05011919.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.267min (-0.005) 45.97 ng/ml

response 10112

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	48.82
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

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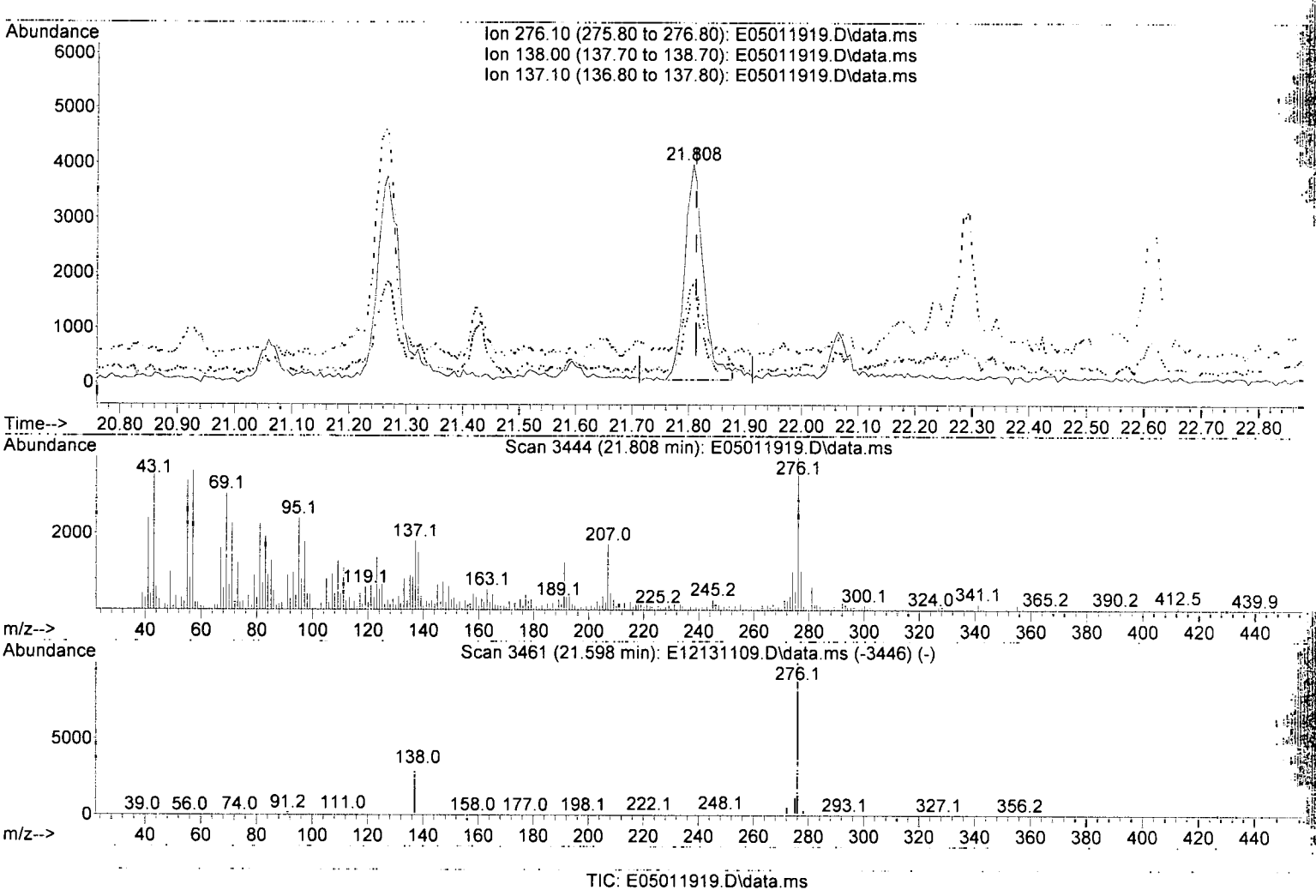
Data File : E05011919.D
Acq On : 1 May 2019 8:52 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-19RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:34 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011919.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.808min (-0.005) 42.24 ng/ml

response 9146

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	37.59
137.10	39.00	45.25
0.00	0.00	0.00

Data Path : W:\DATA\2019-05\9E01044\
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Operator : JK/ AMS /DTH
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ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

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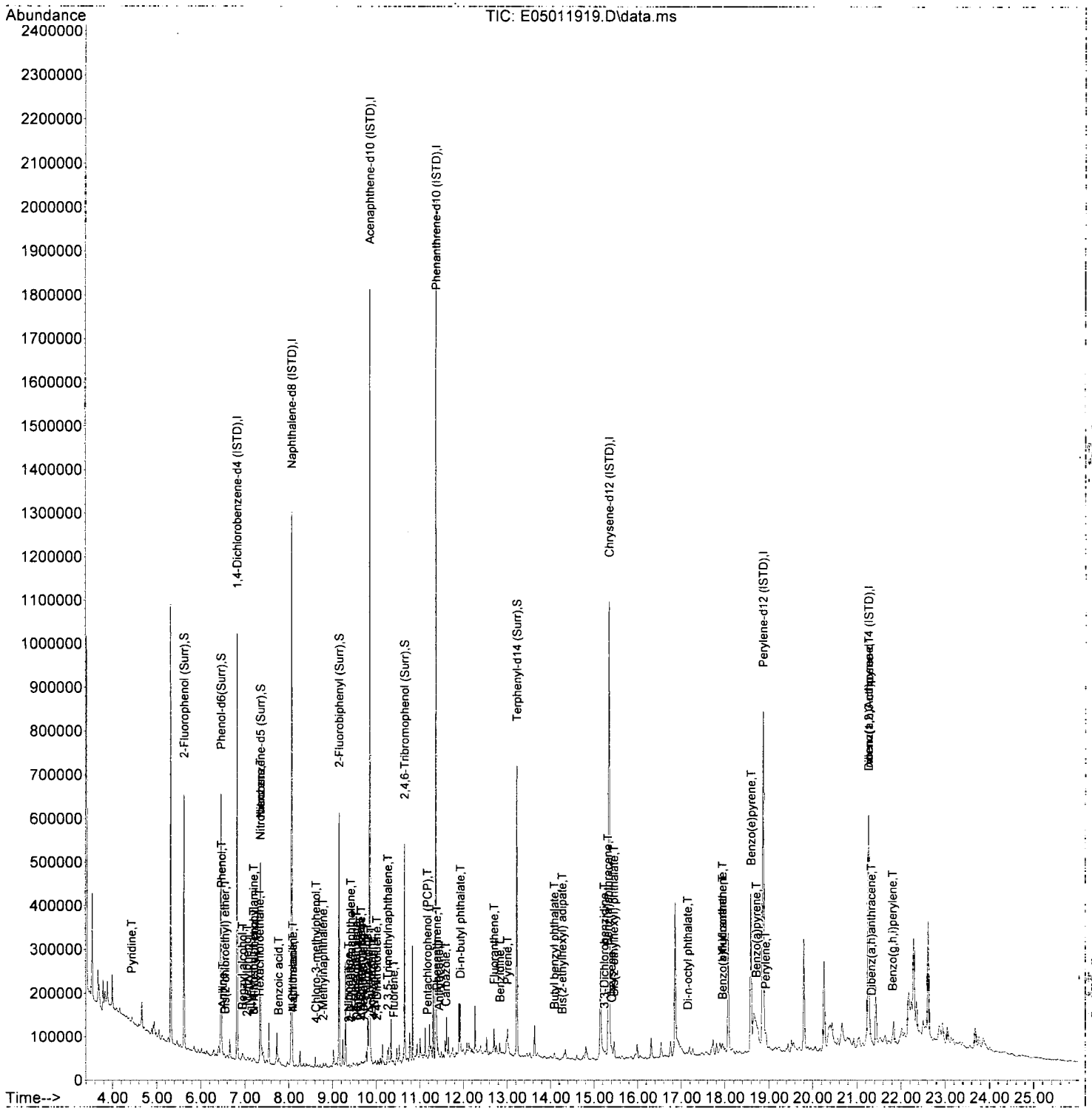

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

MOS

AMS 5/2/19

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.831	152	212318	2000.00 ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.072	136	816260	2000.00 ng/ml	-0.01
35) Acenaphthene-d10 (ISTD)	9.853	162	366616	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	617110	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.341	240	535231	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	433061	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	284399	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.633	112	151791	1146.76 ng/ml	0.00
5) Phenol-d6(Surr)	6.468	99	219437	1239.39 ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	160583	1011.57 ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	137801	505.41 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.650	330	31277	1362.01 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	208085	832.09 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	4.403	74	68	N.D.	
3) Pyridine	4.435	79	185	N.D.	
6) Phenol	6.484	94	2468	13.30 ng/ml#	6
7) Aniline	6.510	93	1696	7.02 ng/ml	70
8) Bis(2-chloroethyl) ether	6.617	93	65	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	0.000		0	N.D.	
11) 1,4-Dichlorobenzene	0.000		0	N.D.	
12) Benzyl alcohol	6.954	108	2099	23.86 ng/ml	98
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.051	107	513	4.44 ng/ml#	58
15) 2,2'-Oxybis(1-Chloropr...	7.061	45	60	N.D.	
16) N-Nitrosodi-n-propylamine	7.195	70	362	3.18 ng/ml	68
17) 3+4-Methylphenol	7.206	107	1680	11.51 ng/ml#	77
18) Hexachloroethane	7.334	117	201	3.39 ng/ml#	18
20) Nitrobenzene	7.361	77	605	3.95 ng/ml#	38
22) Isophorone	7.601	82	232	N.D.	
23) 2-Nitrophenol	0.000		0	N.D.	
24) 2,4-Dimethylphenol	7.724	122	132	N.D.	
25) Bis(2-chloroethoxy) me...	7.842	93	98	N.D.	
26) Benzoic acid	7.773	105	3079	470.76 ng/ml	93
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.099	128	2262	5.19 ng/ml	91
30) 4-Chloroaniline	8.099	127	384	2.56 ng/ml#	23
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.639	107	305	29.51 ng/ml#	1
33) 2-Methylnaphthalene	8.789	142	905	3.30 ng/ml	93
34) 1-Methylnaphthalene	8.890	142	553	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	9.260	154	617	N.D.	
41) 2-Chloronaphthalene	9.334	162	55	N.D.	
42) 2-Nitroaniline	9.399	138	89	55.39 ng/ml	83
43) 2,6-Dimethylnaphthalene	9.420	156	964	4.40 ng/ml	97

J

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Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	0.000		0	N.D.		
45)	Dimethyl phthalate	9.554	163	456	N.D.		
46)	1,3-Dinitrobenzene	0.000		0	N.D.		
47)	2,6-Dinitrotoluene	9.602	165	284	37.25	ng/ml#	75
48)	1,2-Dinitrobenzene	0.000		0	N.D.		
49)	Acenaphthylene	9.703	152	2354	6.59	ng/ml	95
50)	3-Nitroaniline	9.805	138	58	30.11	ng/ml#	24
51)	Acenaphthene	9.880	153	1667	6.88	ng/ml	92
52)	2,4-Dinitrophenol	0.000		0	N.D.		
53)	4-Nitrophenol	9.944	139	107	67.94	ng/ml#	1
54)	2,4-Dinitrotoluene	10.014	165	93	62.39	ng/ml	75
55)	Dibenzofuran	10.056	168	774	N.D.		
56)	2,3,5,6-Tetrachlorophenol	10.142	232	58	37.29	ng/ml#	7
57)	2,3,4,6-Tetrachlorophenol	10.142	232	58	24.57	ng/ml#	23
58)	Diethyl phthalate	10.265	149	556	N.D.		
59)	2,3,5-Trimethylnaphtha...	10.254	170	434	N.D.		
60)	Fluorene	10.409	166	1524	6.05	ng/ml	97
61)	4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62)	4-Nitroaniline	10.436	138	132	N.D.		
63)	4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65)	N-Nitrosodiphenylamine	10.511	169	395	N.D.		
66)	Azobenzene (1,2-DPH)	10.565	77	157	N.D.		
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
69)	Hexachlorobenzene	0.000		0	N.D.		
70)	Pentachlorophenol (PCP)	11.174	266	561	89.46	ng/ml	91
71)	Phenanthrene	11.388	178	12120	35.78	ng/ml	98
72)	Anthracene	11.442	178	4562	13.13	ng/ml	99
73)	Carbazole	11.602	167	3242	9.96	ng/ml	96
74)	Di-n-butyl phthalate	11.934	149	3004	7.38	ng/ml	91
75)	Fluoranthene	12.704	202	33924	96.56	ng/ml	96
76)	Benzidine	12.870	184	117	39.74	ng/ml#	1
77)	Pyrene	13.014	202	32995	92.45	ng/ml	97
80)	Butyl benzyl phthalate	14.089	149	3172	20.26	ng/ml	89
81)	Bis(2-ethylhexyl) adipate	14.266	129	1156	7.42	ng/ml	61
82)	3,3-Dichlorobenzidine	0.000		0	N.D.		
83)	Benz(a)anthracene	15.320	228	14741	48.83	ng/ml MOS	94
84)	Chrysene	15.394	228	21699	75.45	ng/ml	96
85)	Bis(2-ethylhexyl) phth...	15.464	149	12339	55.15	ng/ml	94
87)	Di-n-octyl phthalate	17.154	149	572	32.69	ng/ml#	1
88)	Benzo(b)fluoranthene	17.940	252	25924	113.31	ng/ml MOS	98
89)	Benzo(k)fluoranthene	18.005	252	7550	33.58	ng/ml MOS	91
90)	Benzo(b+k)fluoranthene	17.940	252	36337	151.23	ng/ml	98
91)	Benzo(e)pyrene	18.598	252	16066	69.16	ng/ml	89
92)	Benzo(a)pyrene	18.721	252	14739	70.95	ng/ml	92
93)	Perylene	18.919	252	13750	57.91	ng/ml	98
95)	Indeno(1,2,3-cd)pyrene	21.262	276	8967	57.52	ng/ml	77
96)	Dibenz(a,h)anthracene	21.315	278	1662	11.64	ng/ml	58
97)	Benzo(g,h,i)perylene	21.802	276	8165	53.20	ng/ml	93

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

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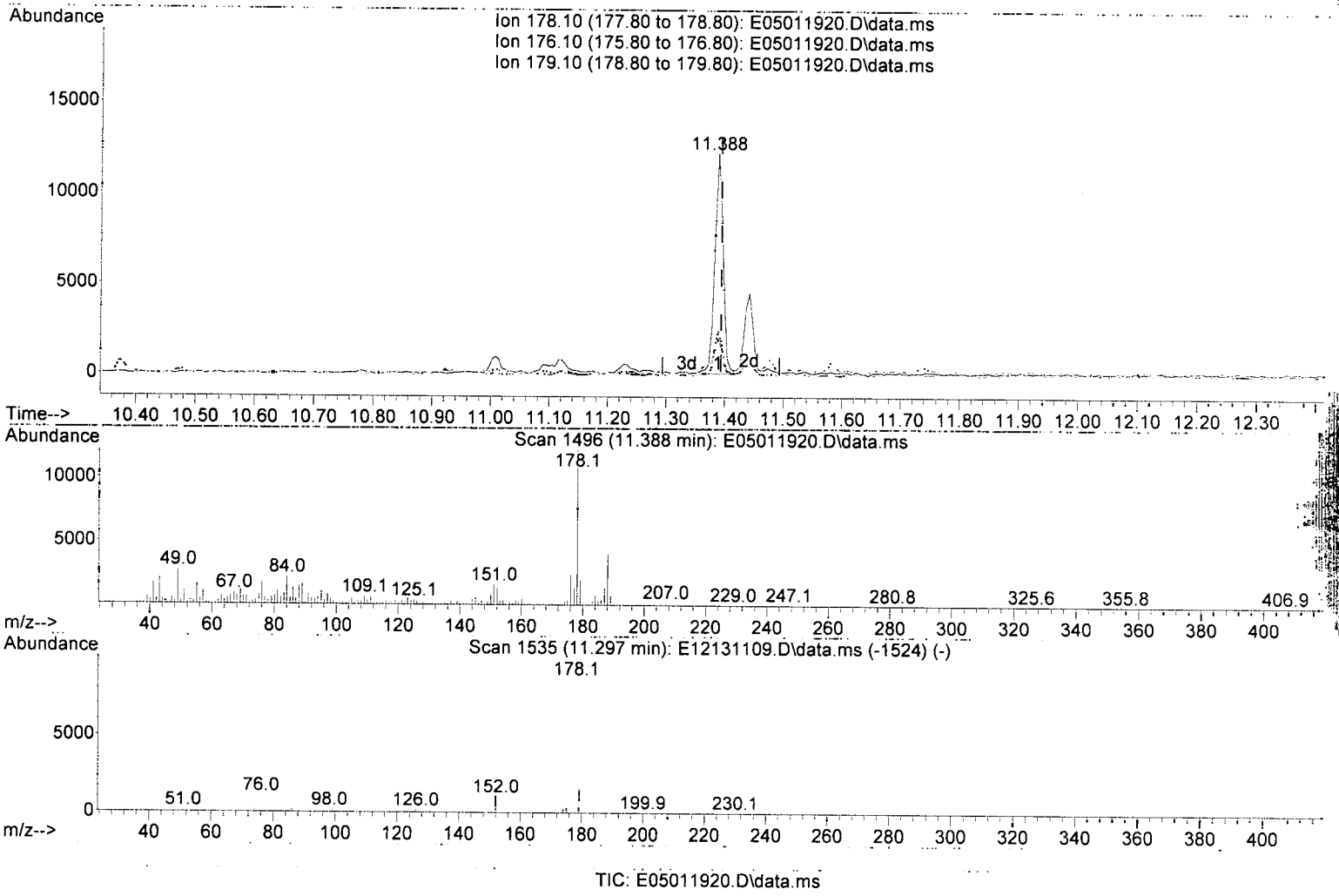
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(71) Phenanthrene (T)

11.388min (-0.006) 35.78 ng/ml

response 12120

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	19.62
179.10	15.00	16.23
0.00	0.00	0.00

Quantitation Report (Qedit)

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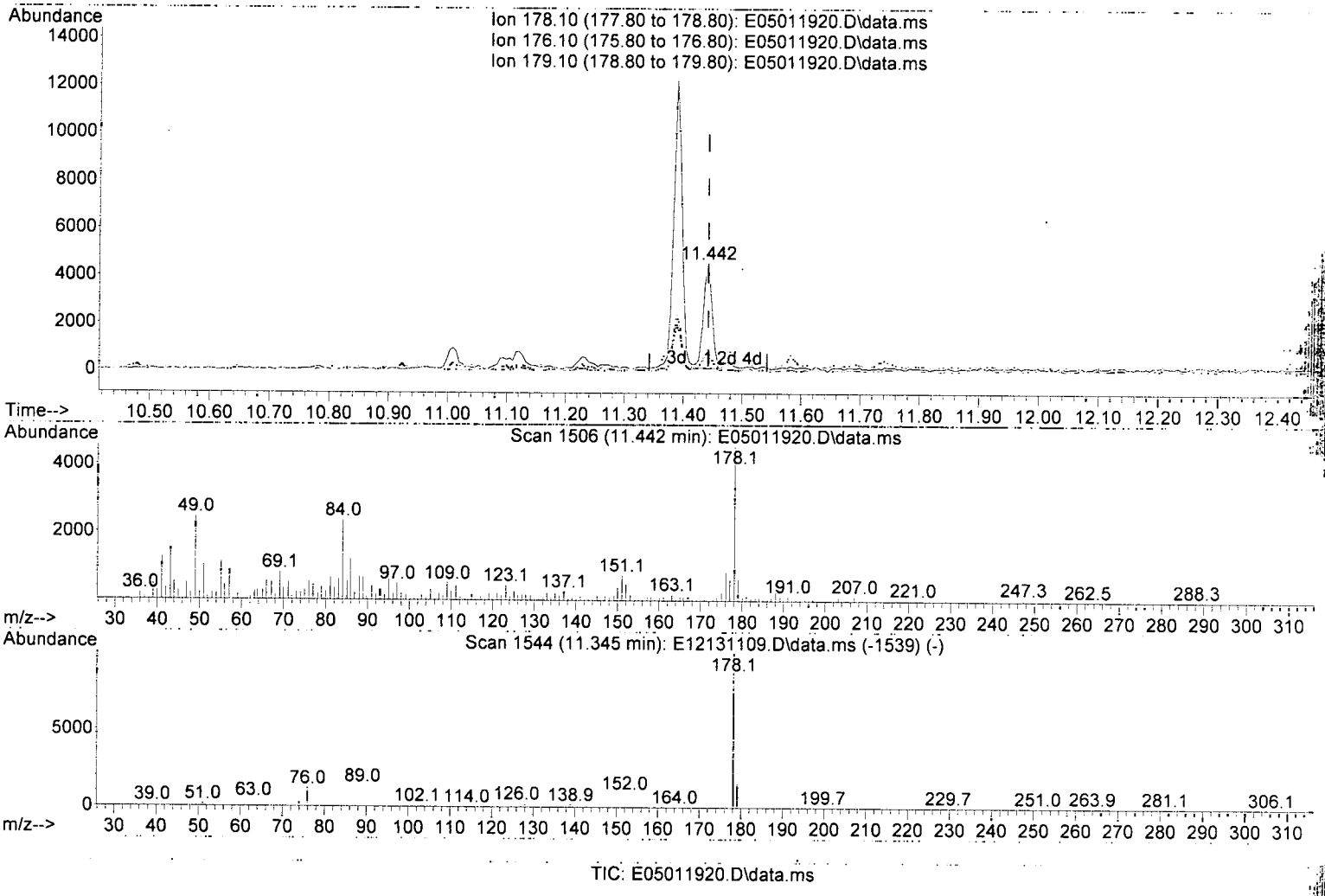

TIC: E05011920.D\data.ms

(72) Anthracene (T)

11.442min (-0.000) 13.13 ng/ml

response 4562

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	19.10
179.10	15.50	14.55
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

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Quant Title : EPA 8270D: Semivolatile Organics
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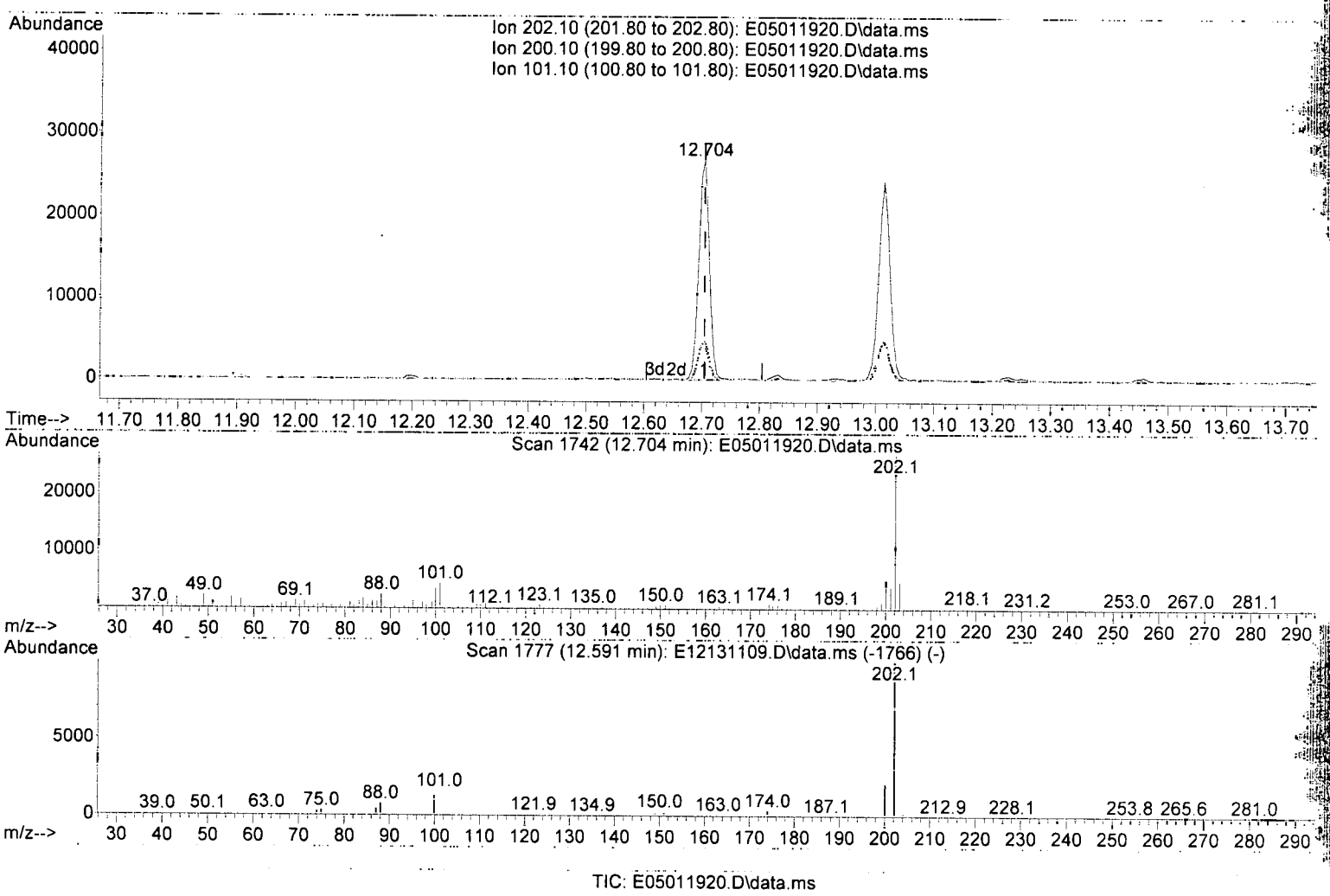

TIC: E05011920.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 96.56 ng/ml

response 33924

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	18.55
101.10	15.70	16.40
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data File : E05011920.D
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Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

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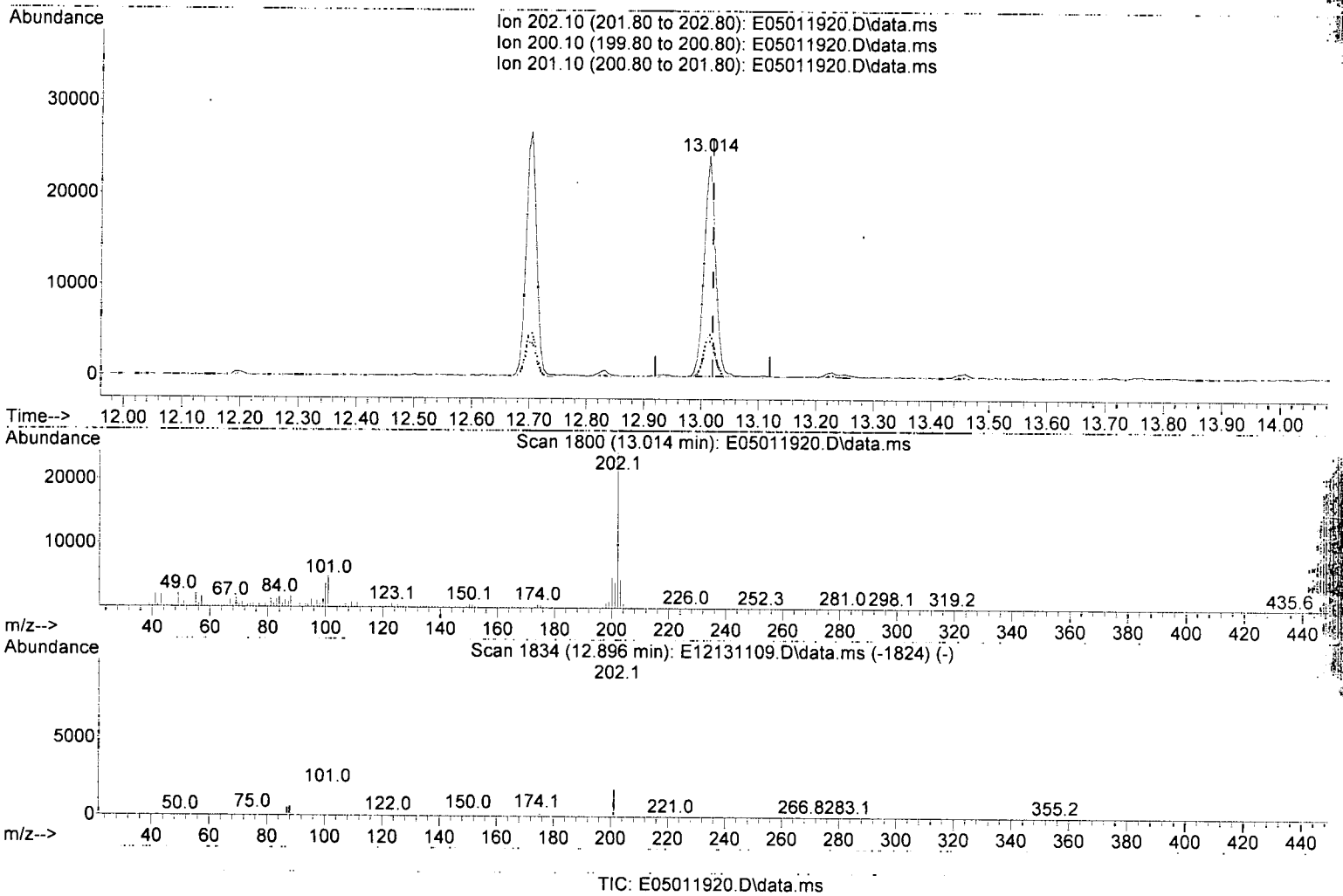


(77) Pyrene (T)

13.014min (-0.006) 92.45 ng/ml

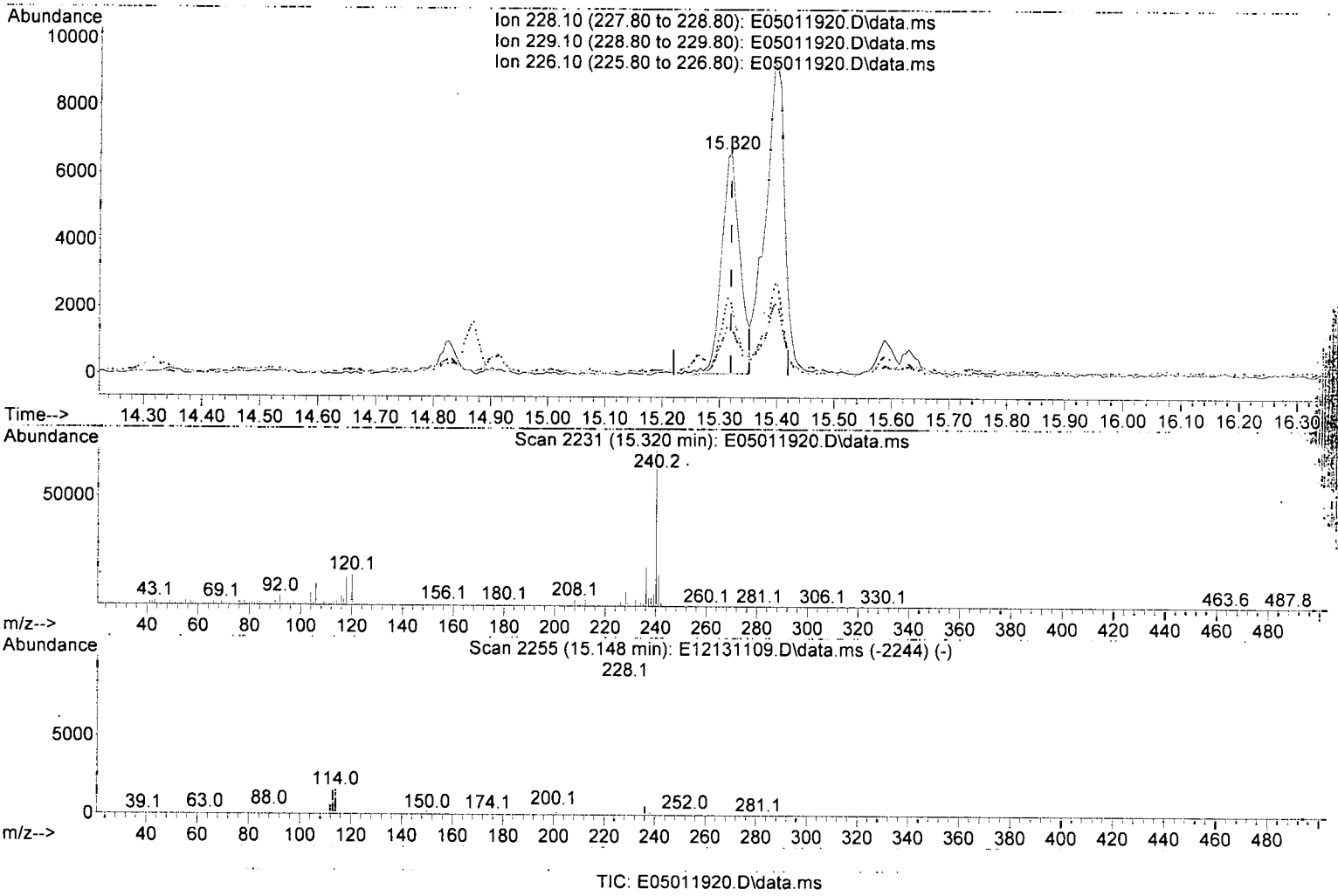
response 32995

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	19.70
201.10	17.50	16.51
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(83) Benz(a)anthracene (T)

15.320min (-0.000) 48.83 ng/ml

response 14741

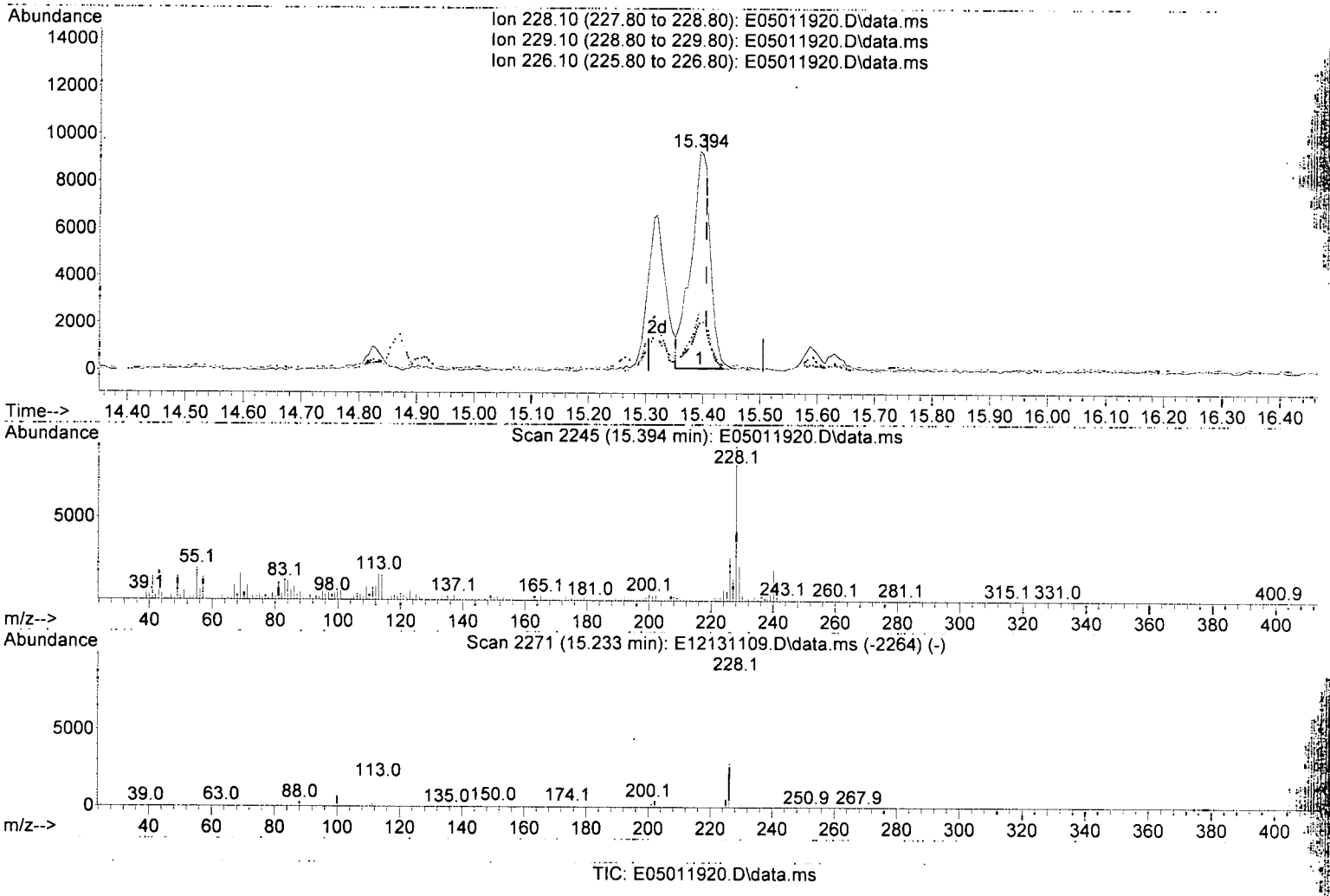
Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	21.04
226.10	27.80	32.20
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(84) Chrysene (T)

15.394min (-0.011) 75.45 ng/ml

response 21699

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	22.60
226.10	29.80	28.56
0.00	0.00	0.00

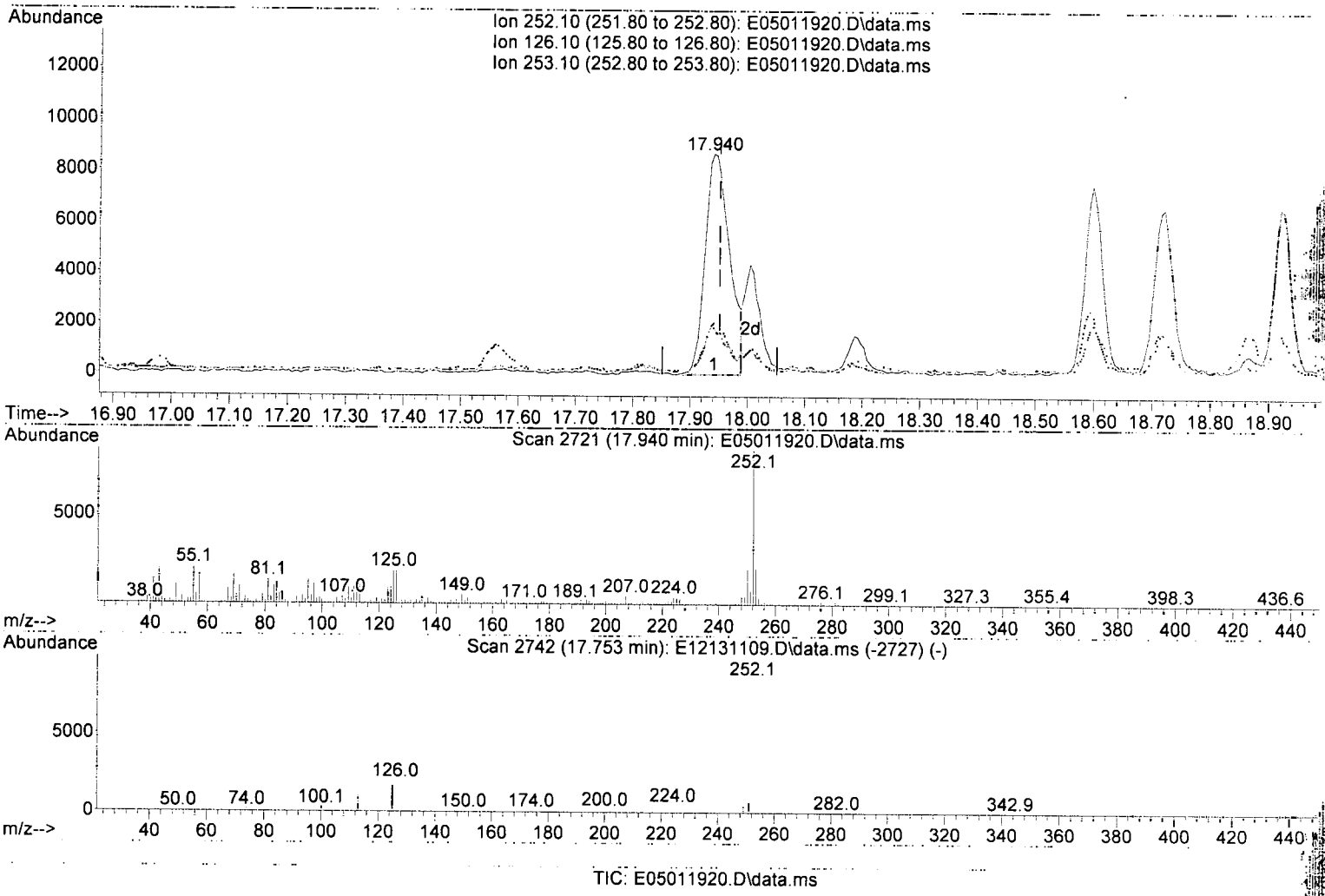
M-05

JJK 5/2/19

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.940min (-0.011) 113.31 ng/ml

response 25924

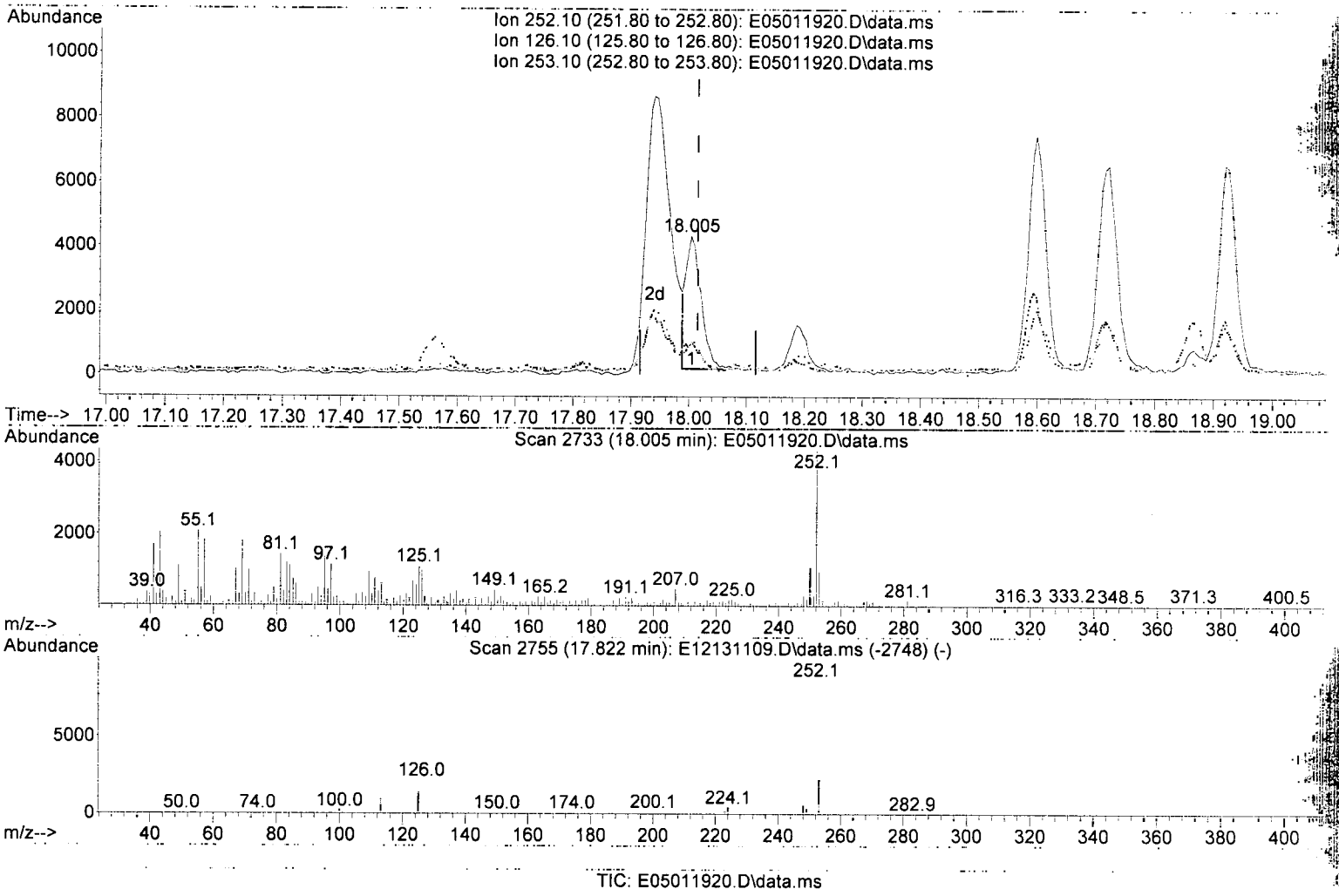
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	21.29
253.10	22.40	23.62
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(89) Benzo(k)fluoranthene (T)

18.005min (-0.011) 33.58 ng/ml

response 7550

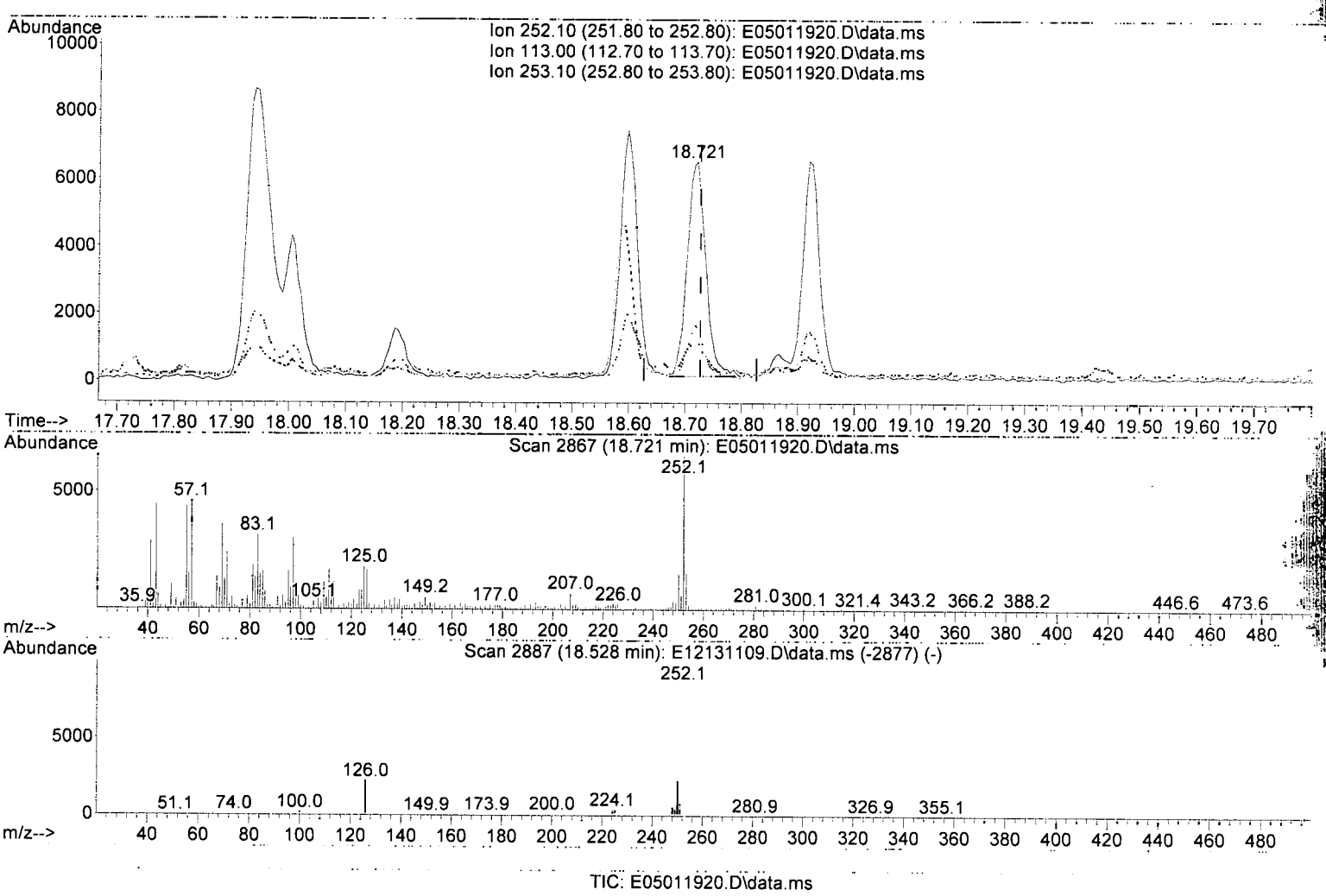
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	29.25
253.10	21.80	22.66
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(92) Benzo(a)pyrene (T)

18.721min (-0.006) 70.95 ng/ml

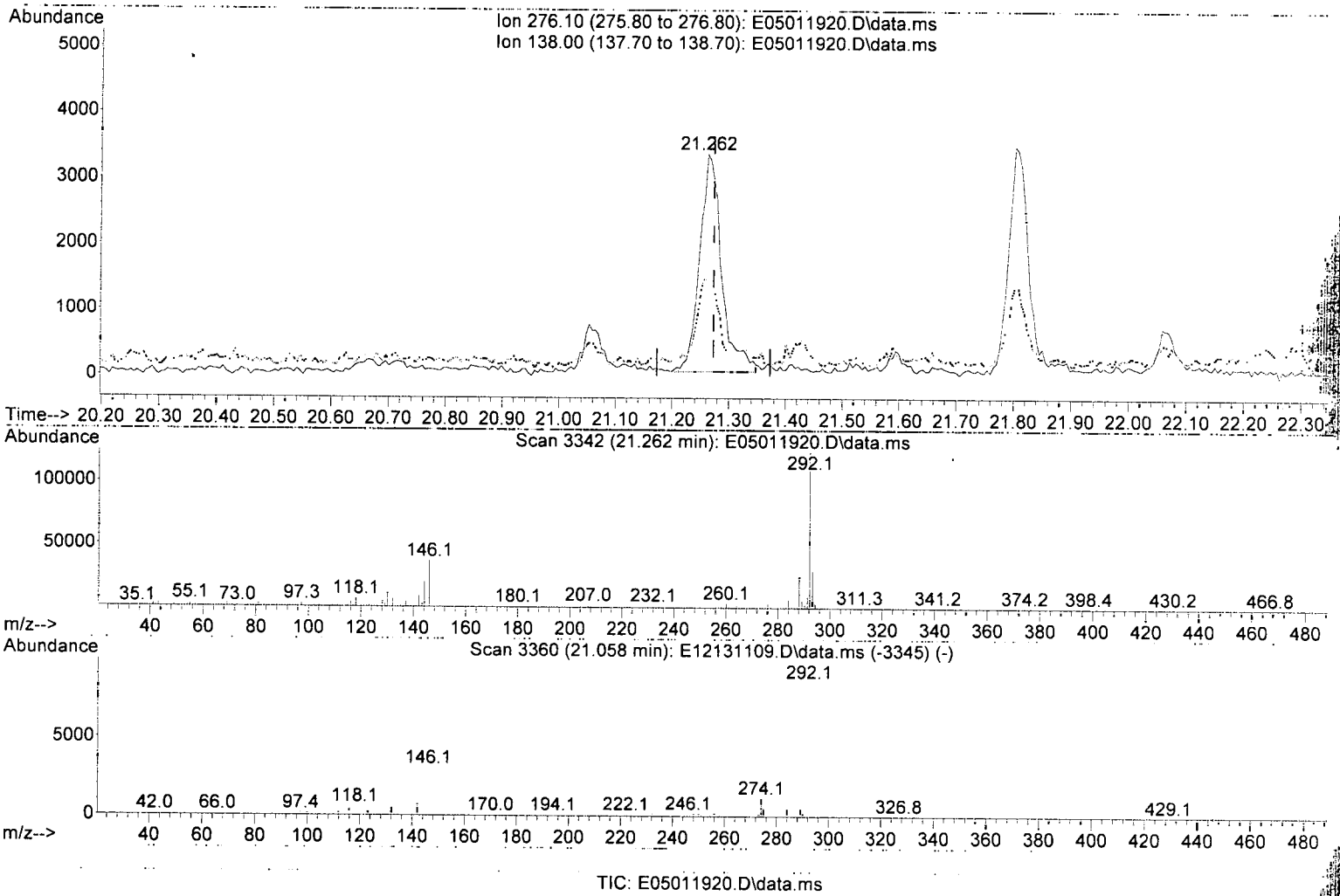
response 14739

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	17.98
253.10	21.70	24.02
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.262min (-0.011) 57.52 ng/ml

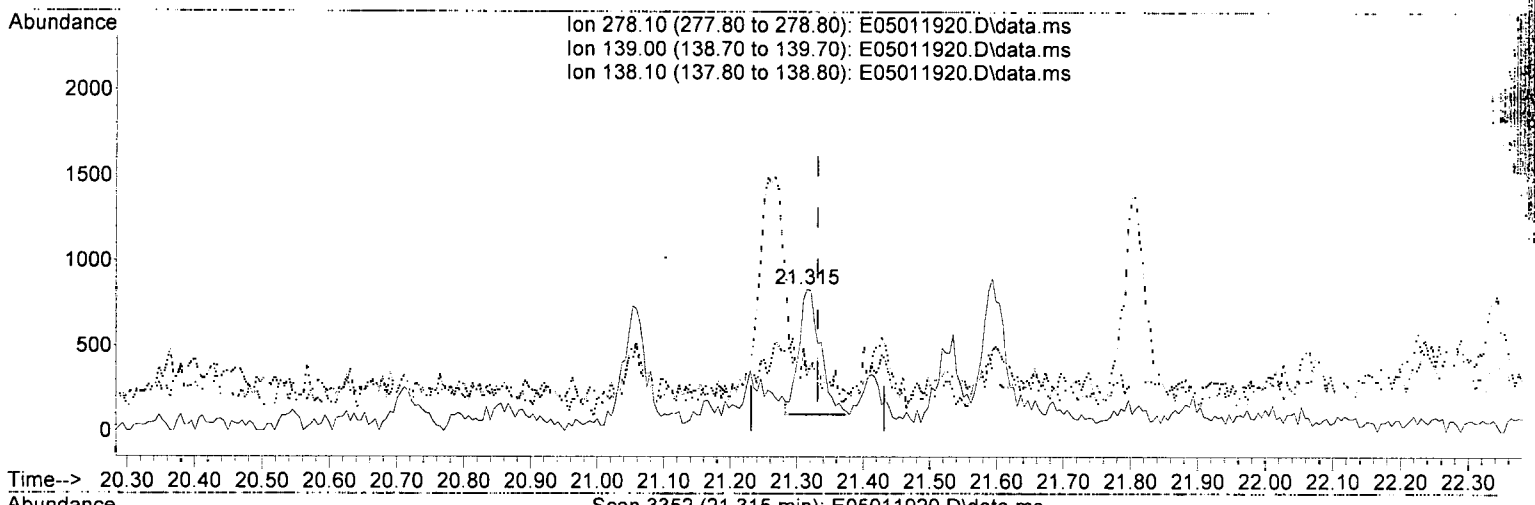
response 8967

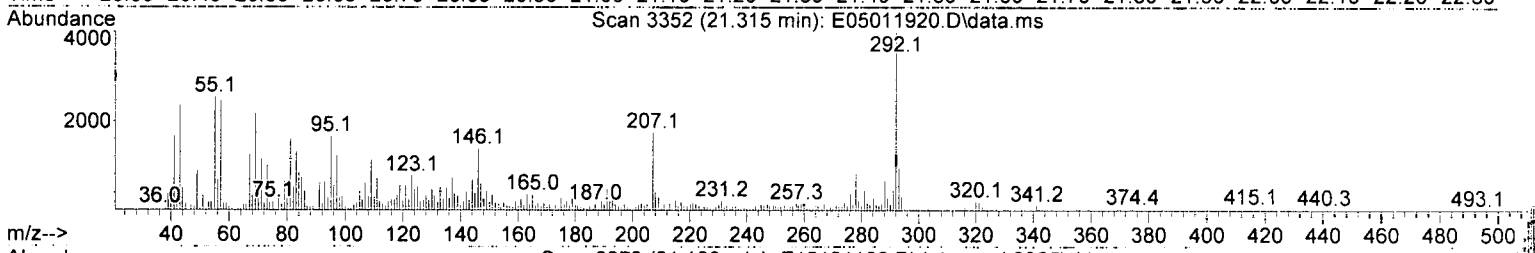
Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	43.27
0.00	0.00	0.00
0.00	0.00	0.00

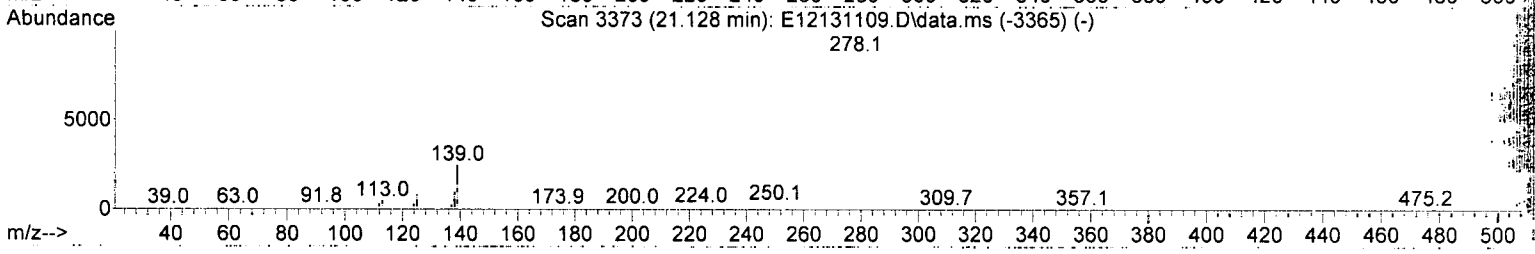
Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E05011920.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.315min (-0.016) 11.64 ng/ml

response 1662

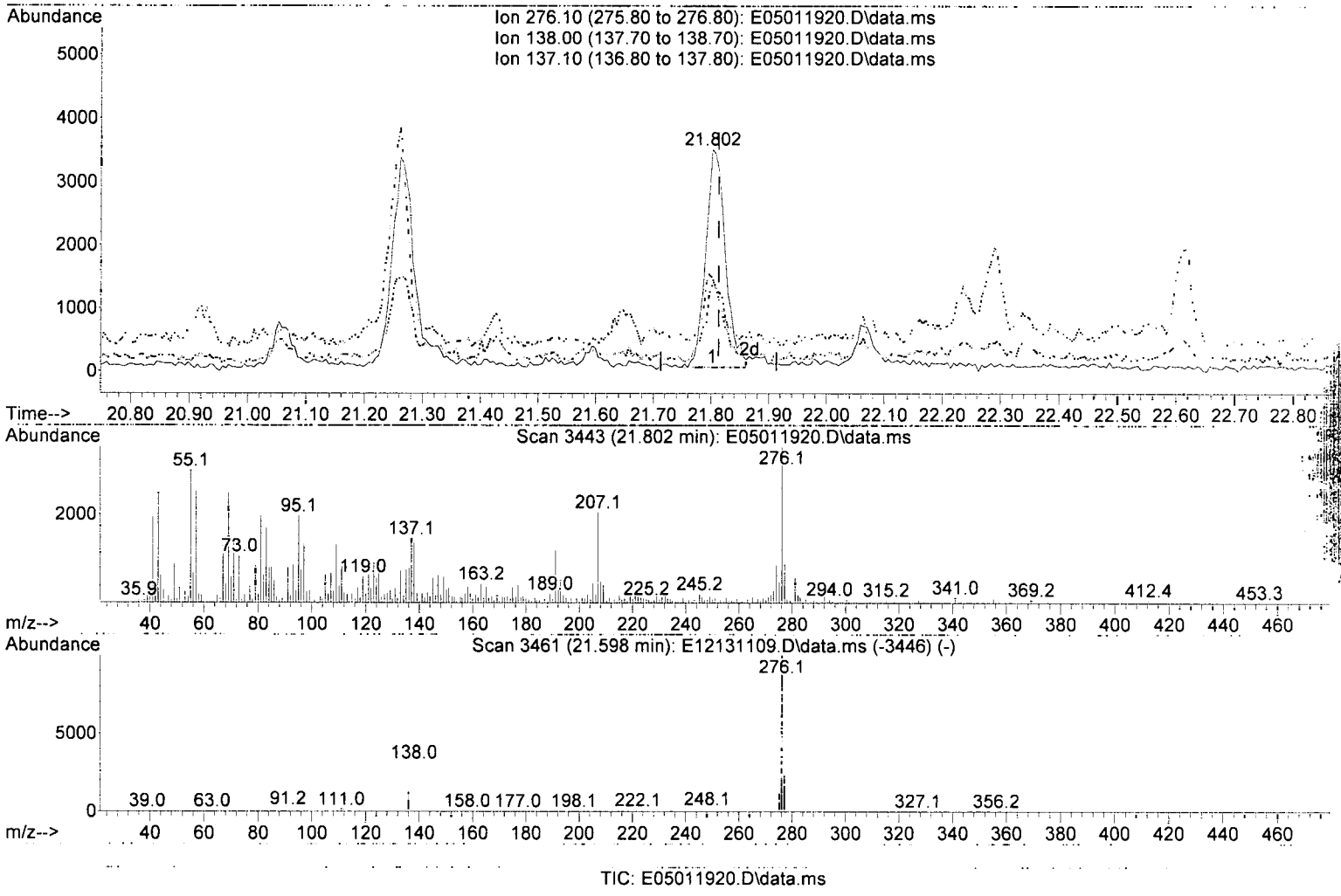
Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	39.40
138.10	17.70	45.39
0.00	0.00	0.00

J

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011920.D\data.ms

(97) Benzo(g,h,i)perylene (T)

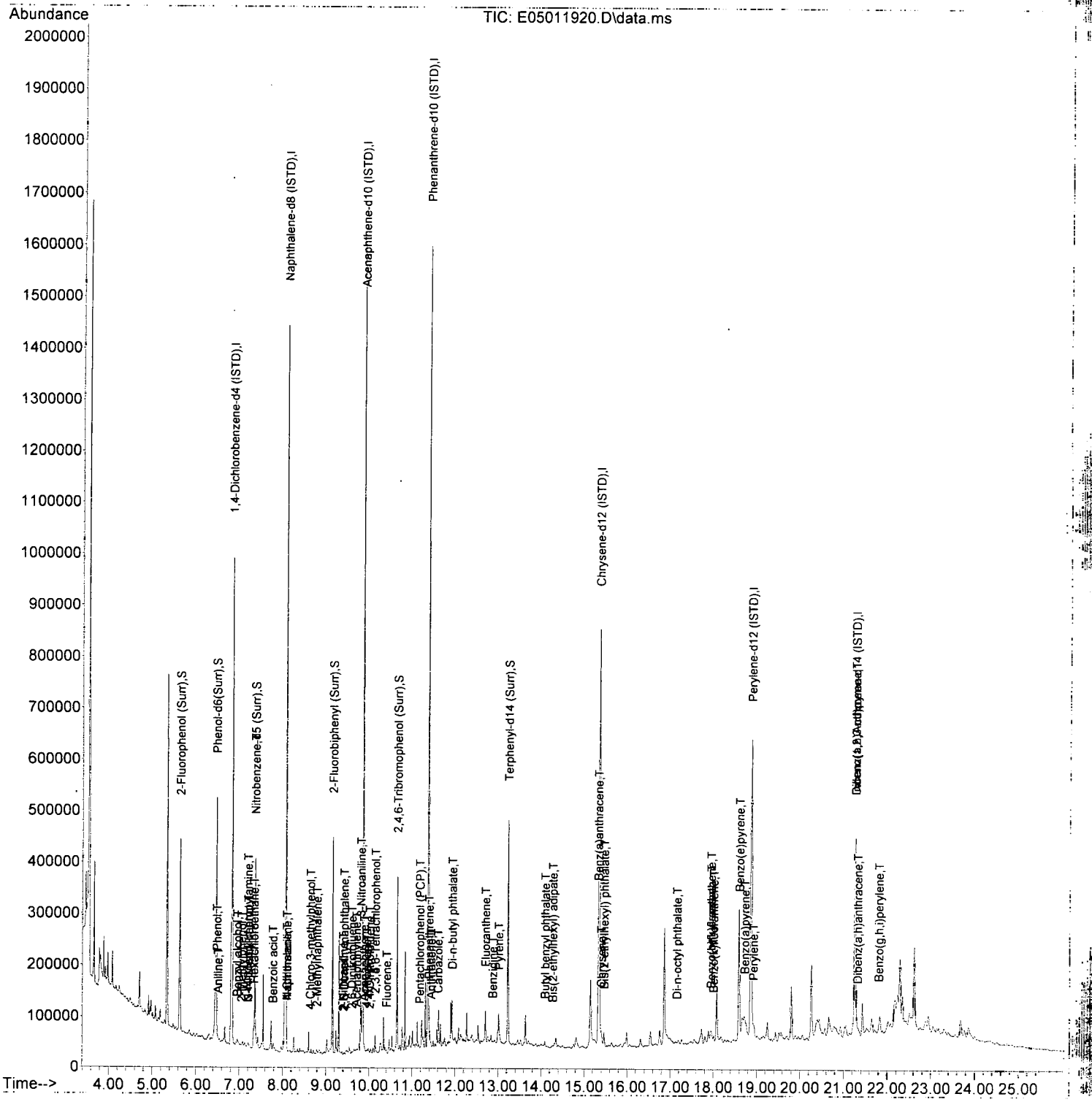
21.802min (-0.011) 53.20 ng/ml

response 8165

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	39.14
137.10	39.00	41.60
0.00	0.00	0.00

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011920.D
Acq On : 1 May 2019 9:28 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-20RE2
Misc : 1x, 8270D LL PAH
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:41 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH AMS 5/2/19
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19 MOS

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
Internal Standards					
1) 1,4-Dichlorobenzene-d4...	6.810	152	209953	2000.00 ng/ml	-0.03
21) Naphthalene-d8 (ISTD)	8.056	136	825557	2000.00 ng/ml	-0.03
35) Acenaphthene-d10 (ISTD)	9.848	162	377181	2000.00 ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	659725	2000.00 ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	722565	2000.00 ng/ml	0.00
86) Perylene-d12 (ISTD)	18.877	264	620599	2000.00 ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	426092	2000.00 ng/ml	0.00
System Monitoring Compounds					
4) 2-Fluorophenol (Surr)	5.623	112	51265	391.66 ng/ml	-0.01
5) Phenol-d6(Surr)	6.452	99	71967	411.05 ng/ml	-0.02
19) Nitrobenzene-d5 (Surr)	7.340	82	61644	392.69 ng/ml	-0.03
40) 2-Fluorobiphenyl (Surr)	9.153	172	121439	432.92 ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.650	330	14591	628.59 ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.223	244	156035	462.19 ng/ml	0.00
Target Compounds					Qvalue
2) N-Nitrosodimethylamine	0.000		0	N.D.	
3) Pyridine	4.430	79	131	N.D.	
6) Phenol	6.468	94	1077	5.87 ng/ml#	1
7) Aniline	6.500	93	831	3.48 ng/ml	90
8) Bis(2-chloroethyl) ether	6.564	93	83	N.D.	
9) 2-Chlorophenol	0.000		0	N.D.	
10) 1,3-Dichlorobenzene	6.821	146	52	N.D.	
11) 1,4-Dichlorobenzene	6.821	146	52	N.D.	
12) Benzyl alcohol	6.938	108	819	9.41 ng/ml	84
13) 1,2-Dichlorobenzene	0.000		0	N.D.	
14) 2-Methylphenol	7.035	107	136	N.D.	
15) 2,2'-Oxybis(1-Chloropr...	0.000		0	N.D.	
16) N-Nitrosodi-n-propylamine	7.190	70	130	N.D.	
17) 3+4-Methylphenol	7.184	107	1520	10.53 ng/ml	84
18) Hexachloroethane	7.302	117	78	N.D.	
20) Nitrobenzene	7.345	77	339	N.D.	
22) Isophorone	7.607	82	86	N.D.	
23) 2-Nitrophenol	0.000		0	N.D.	
24) 2,4-Dimethylphenol	7.773	122	657	5.32 ng/ml#	8
25) Bis(2-chloroethoxy) me...	7.789	93	68	N.D.	
26) Benzoic acid	7.767	105	1450	431.69 ng/ml	81
27) 2,4-Dichlorophenol	0.000		0	N.D.	
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.	
29) Naphthalene	8.078	128	2439	5.54 ng/ml	98
30) 4-Chloroaniline	8.088	127	138	N.D.	
31) Hexachlorobutadiene	0.000		0	N.D.	
32) 4-Chloro-3-methylphenol	8.623	107	220	28.67 ng/ml#	1
33) 2-Methylnaphthalene	8.778	142	583	N.D.	
34) 1-Methylnaphthalene	8.885	142	354	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	9.249	154	421	N.D.	
41) 2-Chloronaphthalene	0.000		0	N.D.	
42) 2-Nitroaniline	9.442	138	77	55.19 ng/ml#	68
43) 2,6-Dimethylnaphthalene	9.425	156	461	N.D.	

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH 2 AMS 5/2/19
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

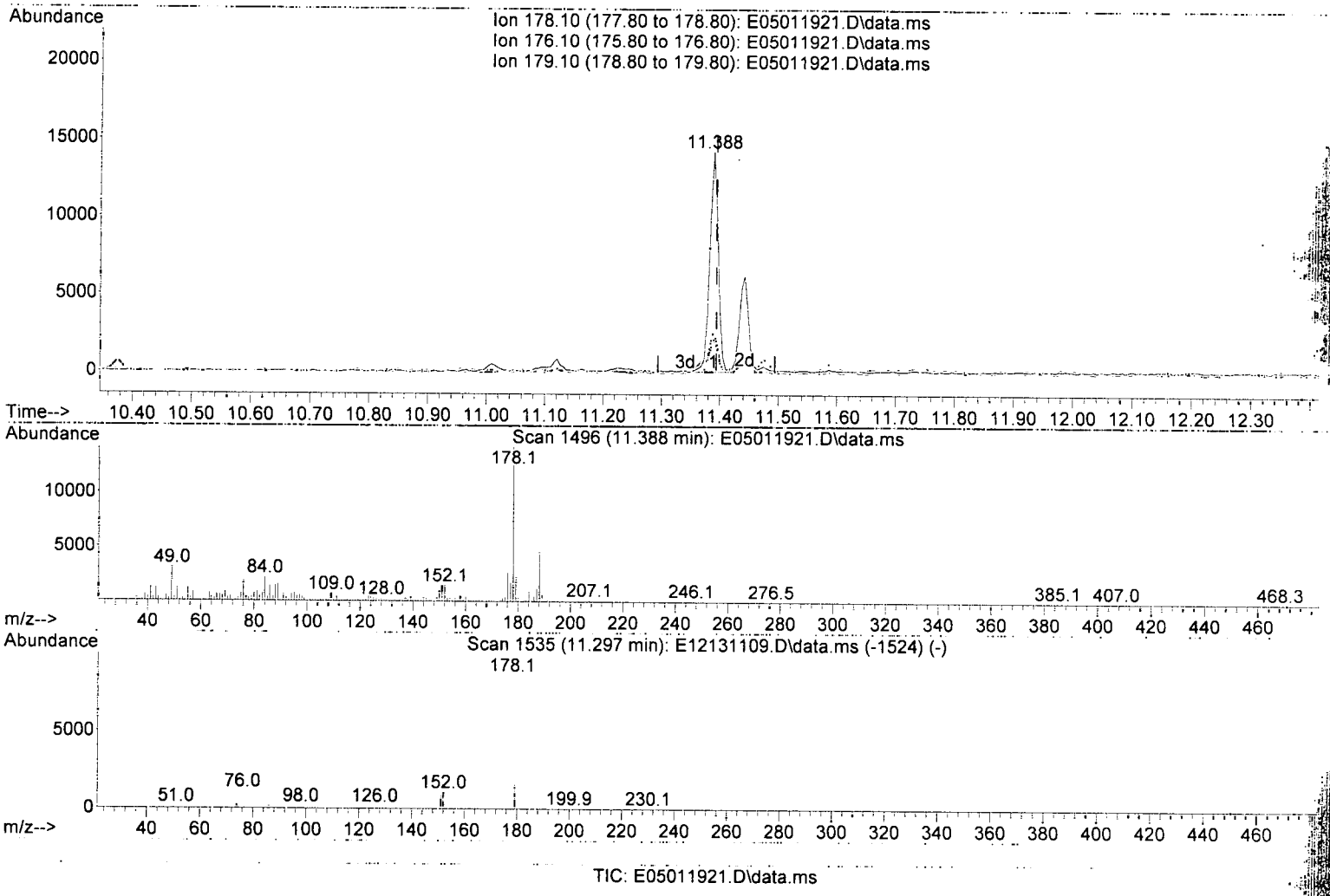
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	0.000		0	N.D.		
45)	Dimethyl phthalate	9.549	163	220	N.D.		
46)	1,3-Dinitrobenzene	0.000		0	N.D.		
47)	2,6-Dinitrotoluene	9.613	165	100	33.62	ng/ml#	52
48)	1,2-Dinitrobenzene	0.000		0	N.D.		
49)	Acenaphthylene	9.704	152	3125	8.51	ng/ml	98
50)	3-Nitroaniline	9.778	138	301	34.08	ng/ml#	1
51)	Acenaphthene	9.880	153	1586	6.37	ng/ml	98
52)	2,4-Dinitrophenol	0.000		0	N.D.		
53)	4-Nitrophenol	10.009	139	105	67.83	ng/ml#	1
54)	2,4-Dinitrotoluene	10.009	165	123	62.78	ng/ml#	46
55)	Dibenzofuran	10.051	168	845	2.61	ng/ml#	1
56)	2,3,5,6-Tetrachlorophenol	10.148	232	68	37.49	ng/ml#	23
57)	2,3,4,6-Tetrachlorophenol	10.148	232	68	24.74	ng/ml#	44
58)	Diethyl phthalate	10.265	149	185	N.D.		
59)	2,3,5-Trimethylnaphtha...	10.249	170	69	N.D.		
60)	Fluorene	10.404	166	1431	5.52	ng/ml	88
61)	4-Chlorophenyl phenyl ...	0.000		0	N.D.		
62)	4-Nitroaniline	10.394	138	80	N.D.		
63)	4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65)	N-Nitrosodiphenylamine	10.522	169	205	N.D.		
66)	Azobenzene (1,2-DPH)	10.565	77	131	N.D.		
68)	4-Bromophenyl phenyl e...	0.000		0	N.D.		
69)	Hexachlorobenzene	0.000		0	N.D.		
70)	Pentachlorophenol (PCP)	11.175	266	554	87.98	ng/ml	92
71)	Phenanthrene	11.388	178	14440	39.88	ng/ml	99
72)	Anthracene	11.442	178	6391	17.20	ng/ml	98
73)	Carbazole	11.602	167	4516	12.98	ng/ml	97
74)	Di-n-butyl phthalate	11.934	149	1479	3.40	ng/ml	88
75)	Fluoranthene	12.704	202	41372	110.15	ng/ml	98
76)	Benzidine	12.870	184	131	39.81	ng/ml#	1
77)	Pyrene	13.014	202	42811	112.21	ng/ml	98
80)	Butyl benzyl phthalate	14.089	149	1657	7.84	ng/ml	98
81)	Bis(2-ethylhexyl) adipate	14.261	129	3309	15.73	ng/ml	89
82)	3,3-Dichlorobenzidine	15.346	252	59	21.54	ng/ml#	1
83)	Benz(a)anthracene	15.320	228	23884	58.60	ng/ml	99
84)	Chrysene	15.400	228	30545	78.67	ng/ml	97
85)	Bis(2-ethylhexyl) phth...	15.464	149	11273	37.32	ng/ml	95
87)	Di-n-octyl phthalate	17.144	149	387	31.62	ng/ml#	1
88)	Benzo(b)fluoranthene	17.941	252	41242	125.78	ng/ml MO5	96
89)	Benzo(k)fluoranthene	~~17.941~~	~~252~~	~~49059~~	~~152.25~~	~~ng/ml~~	~~95~~ MI-MO5
90)	Benzo(b+k)fluoranthene	17.941	252	61772	179.39	ng/ml	95
91)	Benzo(e)pyrene	18.598	252	25210	75.73	ng/ml	93
92)	Benzo(a)pyrene	18.721	252	27051	90.87	ng/ml	98
93)	Perylene	18.925	252	19117	56.19	ng/ml	95
95)	Indeno(1,2,3-cd)pyrene	21.262	276	16924	72.46	ng/ml	81
96)	Dibenz(a,h)anthracene	21.326	278	3498	16.35	ng/ml	66
97)	Benzo(g,h,i)perylene	21.808	276	14171	61.63	ng/ml	91

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(71) Phenanthrene (T)

11.388min (-0.005) 39.88 ng/ml

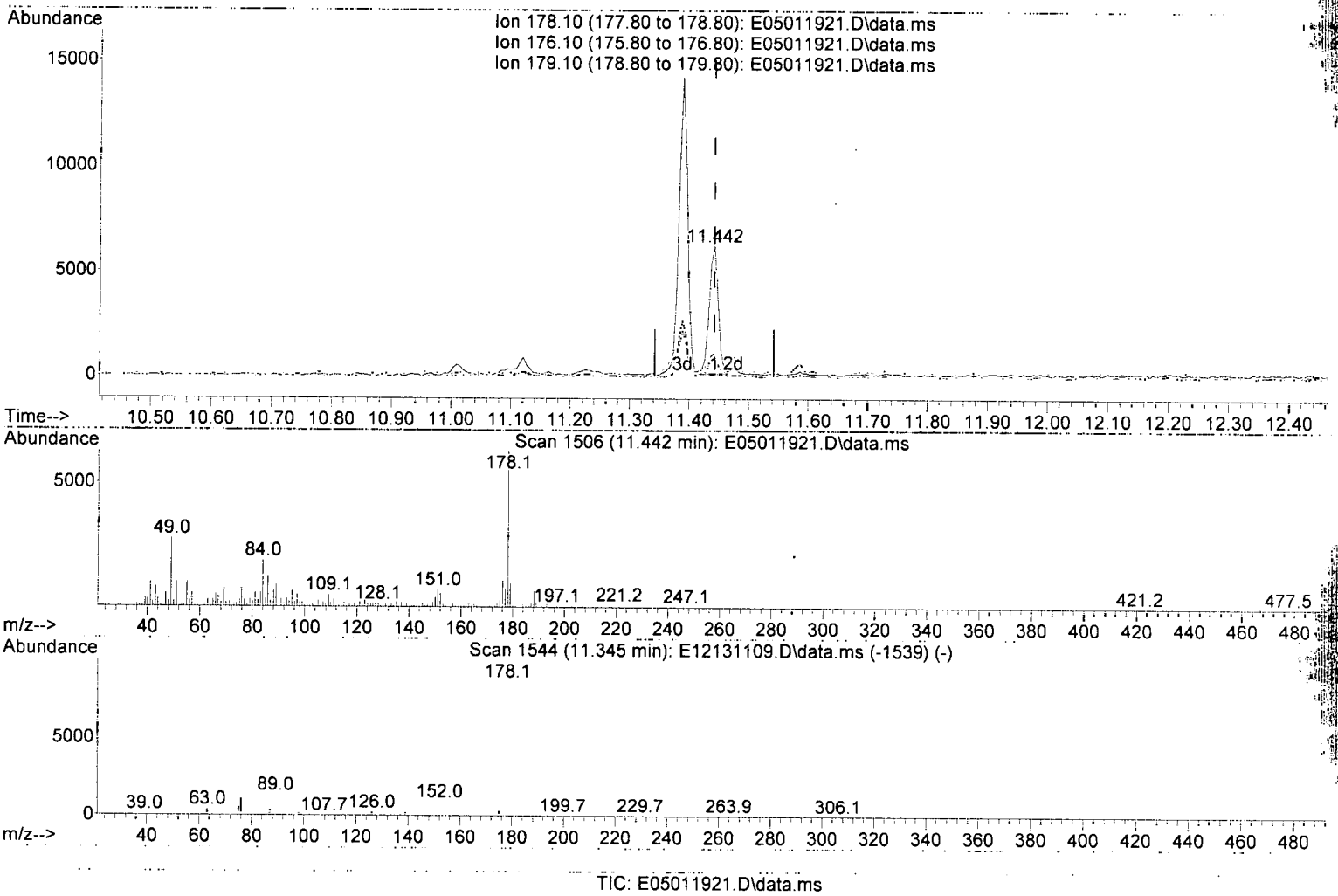
response 14440

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	18.75
179.10	15.00	15.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(72) Anthracene (T)

11.442min (-0.000) 17.20 ng/ml

response 6391

Ion	Exp%	Act%
178.10	100.00	100.00
176.10	19.10	17.63
179.10	15.50	15.50
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data File : E05011921.D
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Operator : JK/ AMS /DTH
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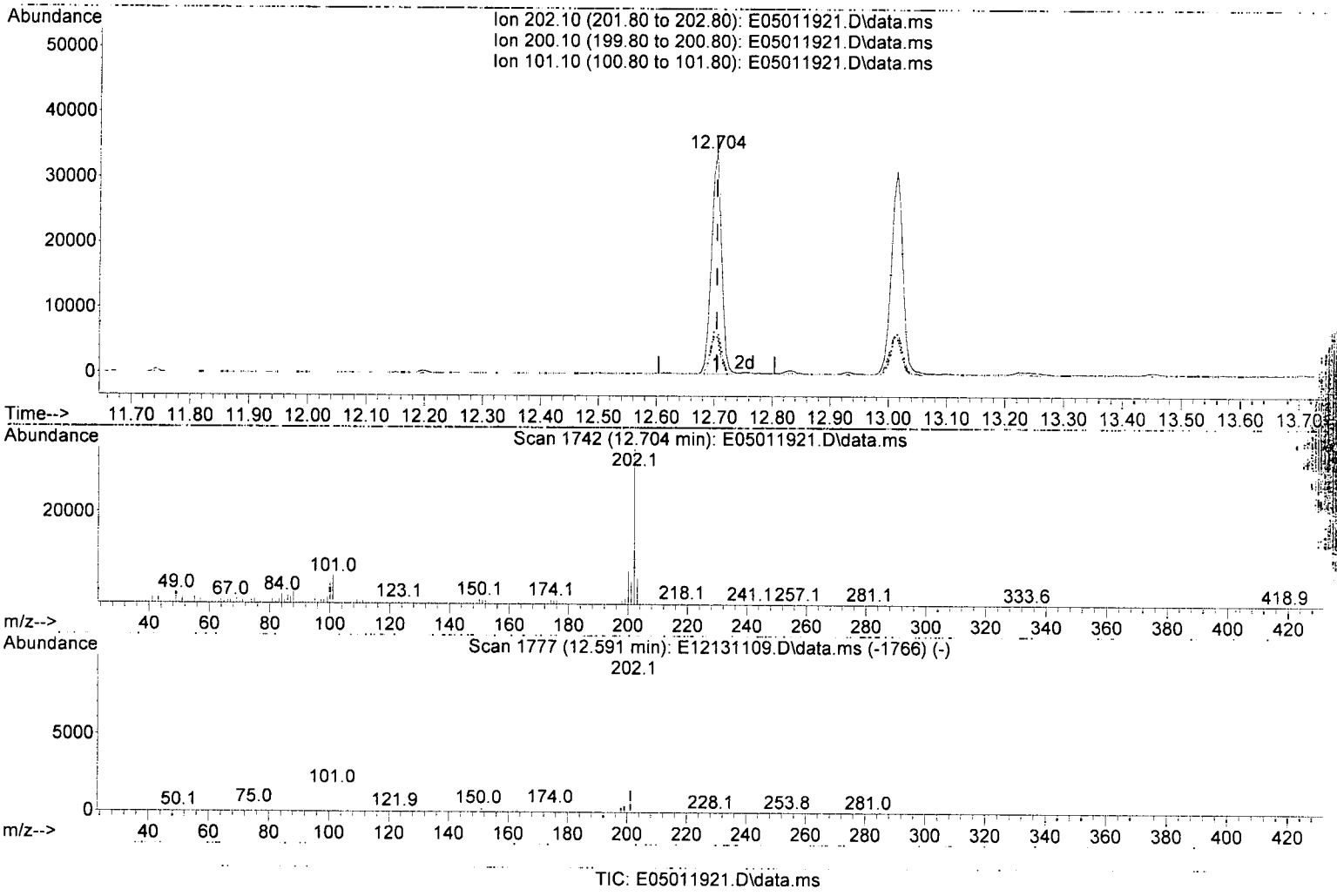

TIC: E05011921.D\data.ms

(75) Fluoranthene (T)

12.704min (-0.000) 110.15 ng/ml

response 41372

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.00	21.10
101.10	15.70	17.54
0.00	0.00	0.00

Quantitation Report (Qedit)

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Data File : E05011921.D
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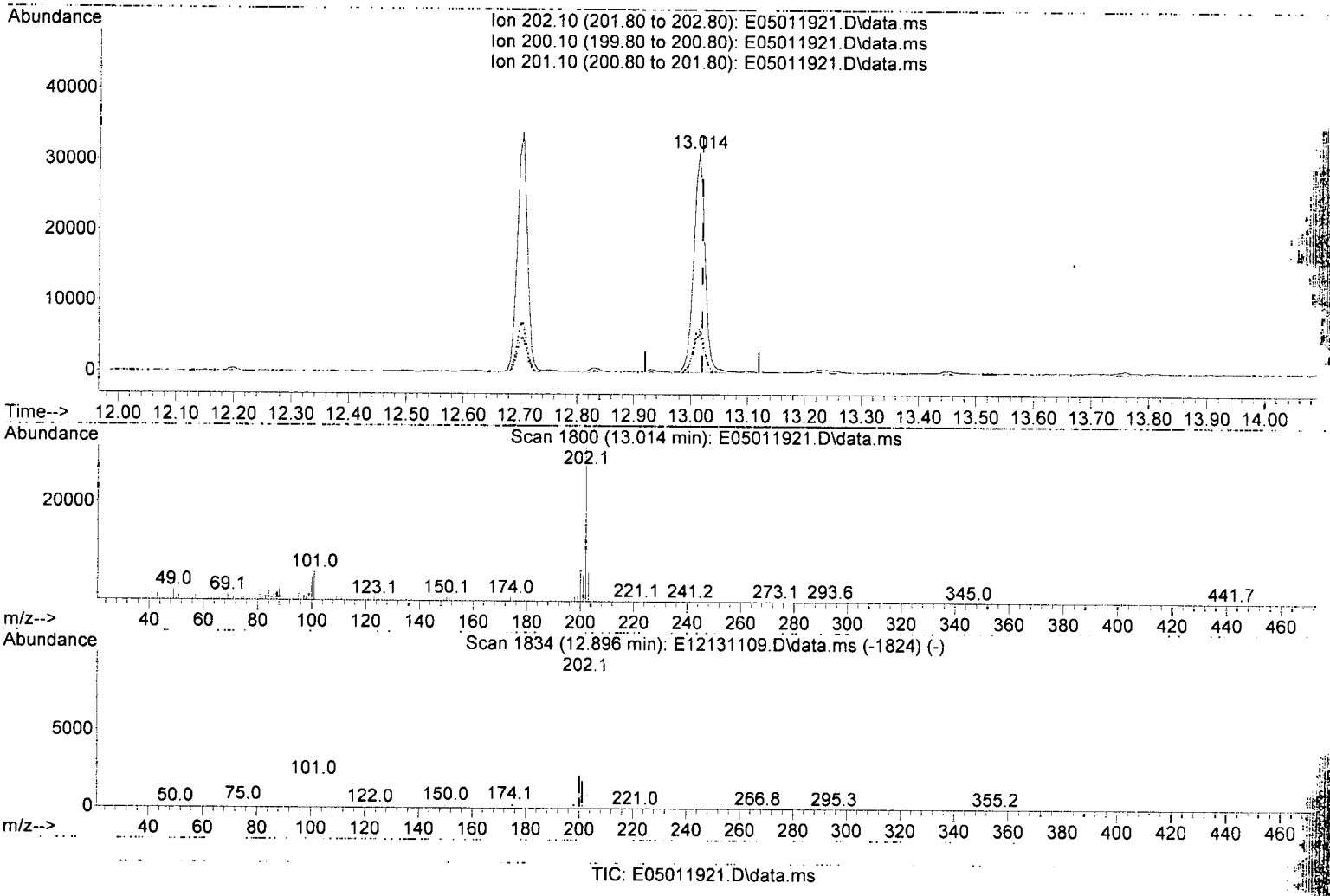
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(77) Pyrene (T)

13.014min (-0.005) 112.21 ng/ml

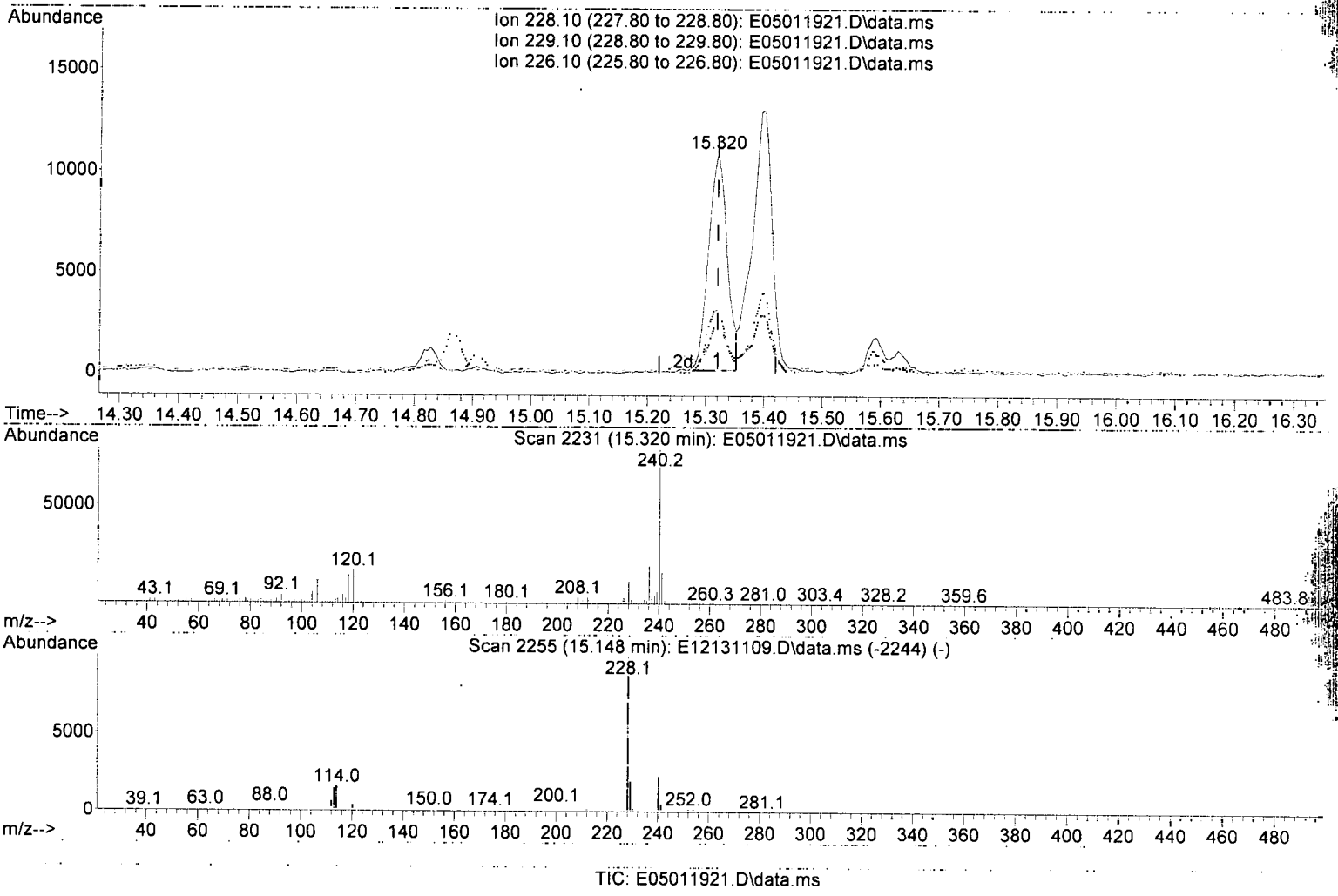
response 42811

Ion	Exp%	Act%
202.10	100.00	100.00
200.10	21.20	20.04
201.10	17.50	17.12
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(83) Benz(a)anthracene (T)

15.320min (-0.000) 58.60 ng/ml

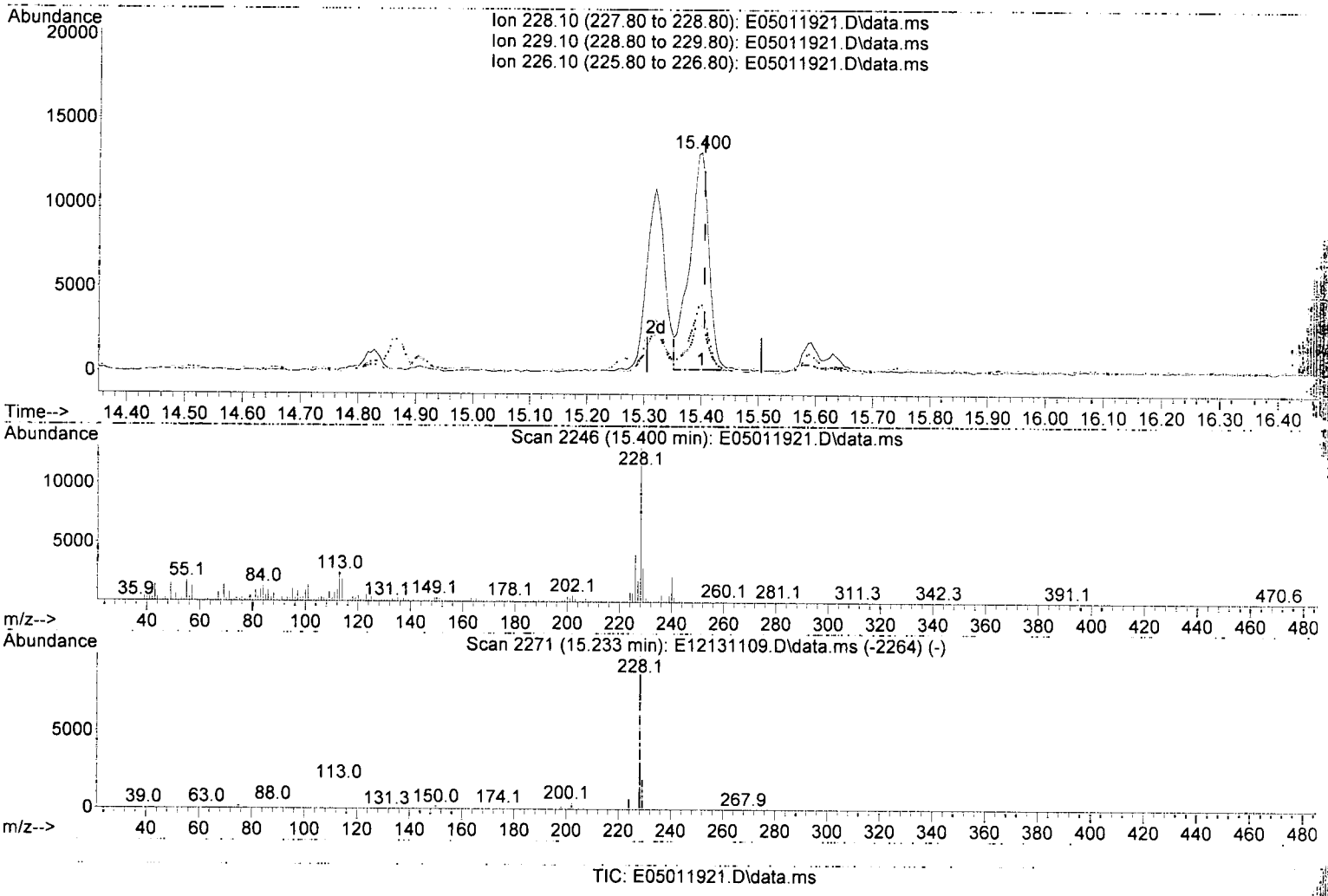
response 23884

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.10	20.51
226.10	27.80	28.37
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(84) Chrysene (T)

15.400min (-0.005) 78.67 ng/ml

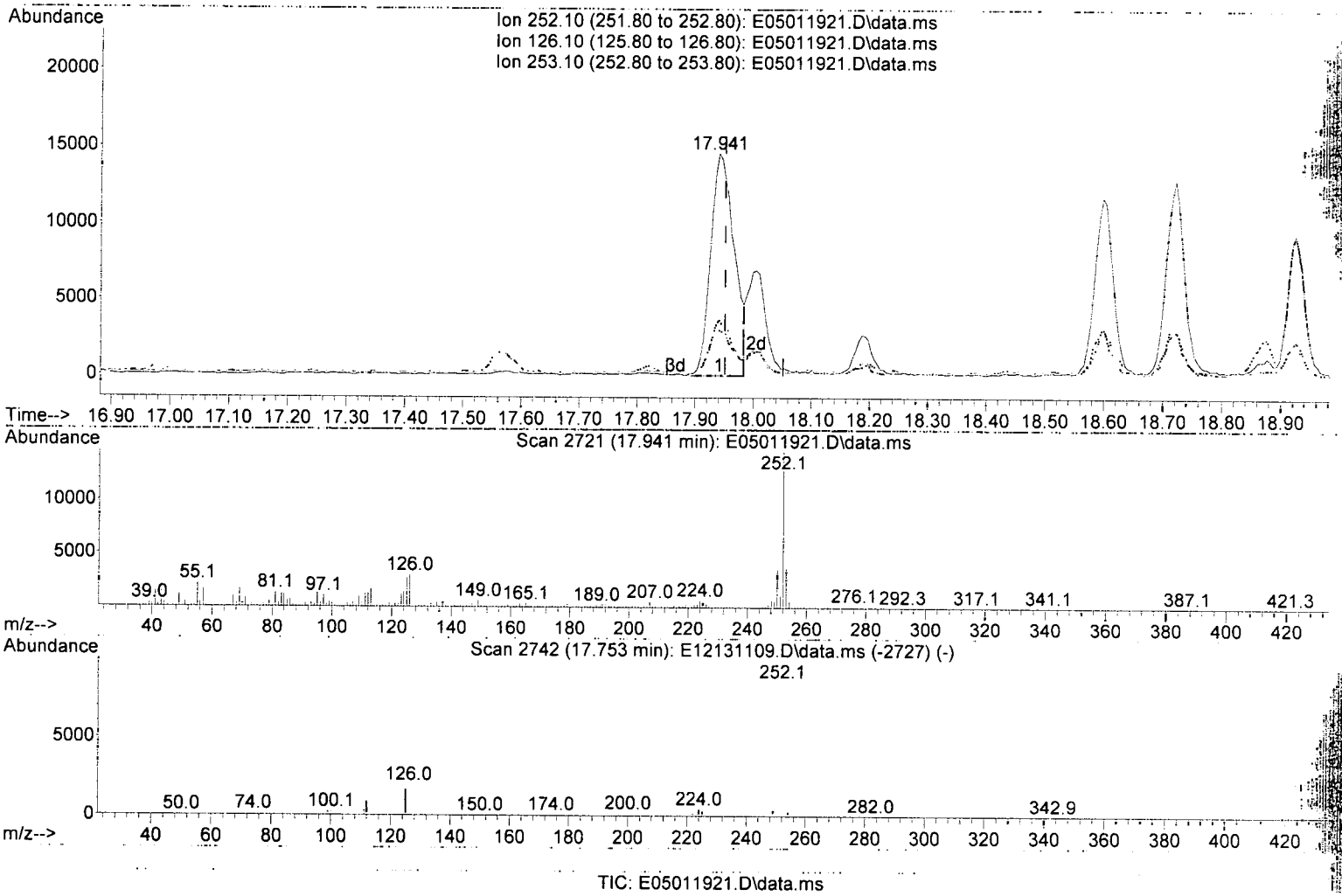
response 30545

Ion	Exp%	Act%
228.10	100.00	100.00
229.10	20.00	22.21
226.10	29.80	30.90
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.941min (-0.011) 125.78 ng/ml

response 41242

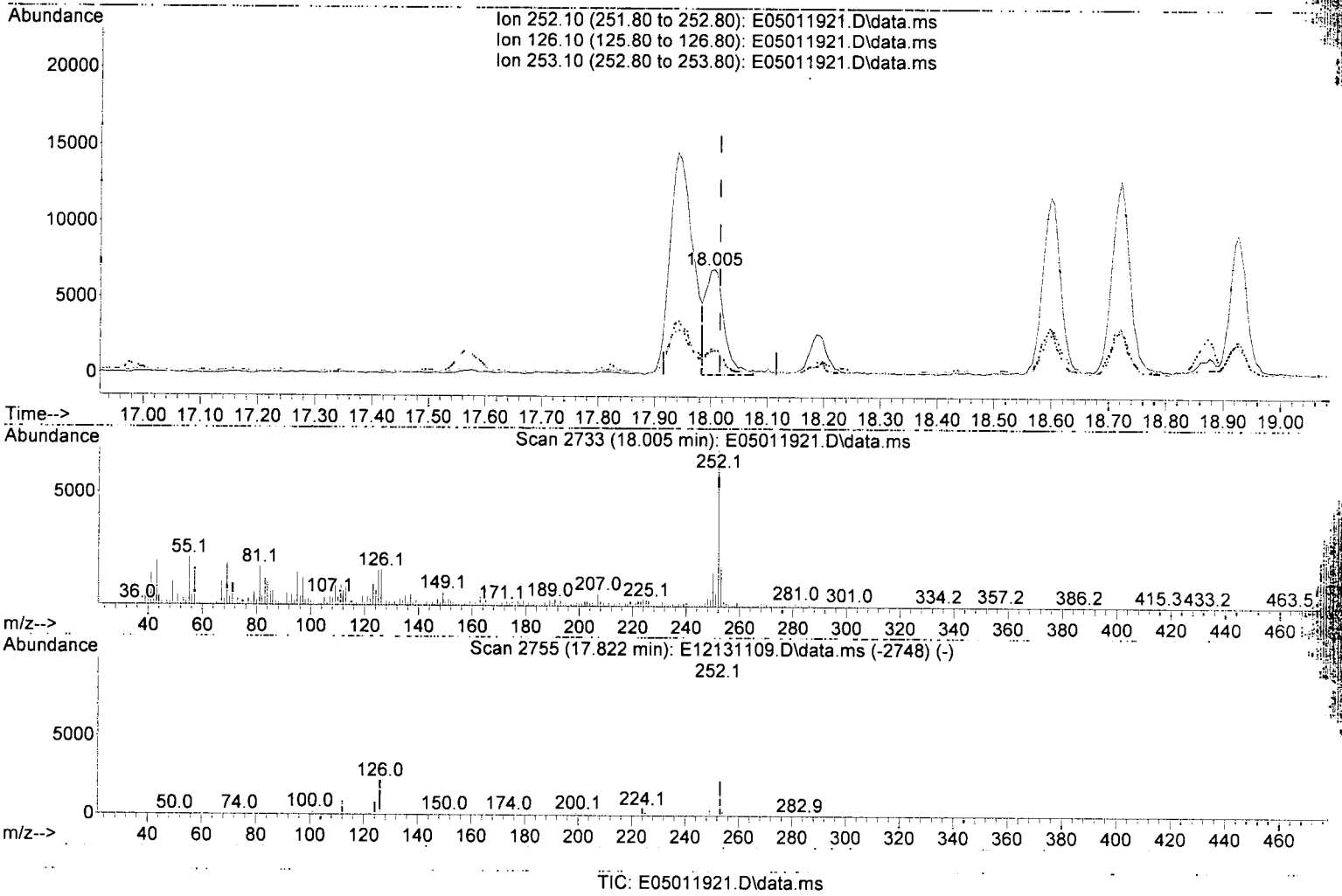
Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	20.45
253.10	22.40	25.10
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH AMS 5/2/19
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.005min (-0.011) 48.84 ng/ml m AMS 5/2/19

response 15736

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.80	22.81
253.10	21.80	25.05
0.00	0.00	0.00

MOS

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
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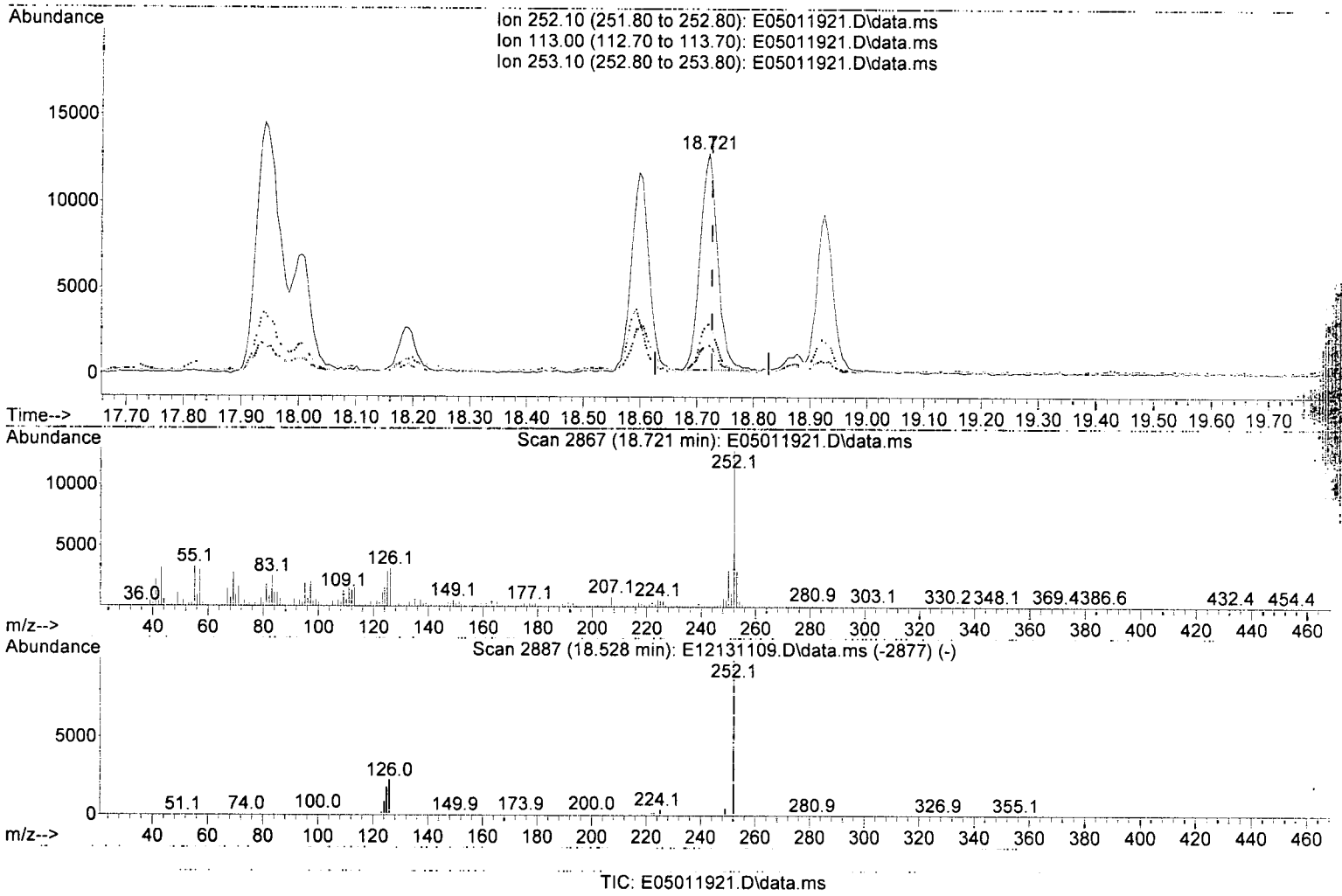
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(92) Benzo(a)pyrene (T)

18.721min (-0.005) 90.87 ng/ml

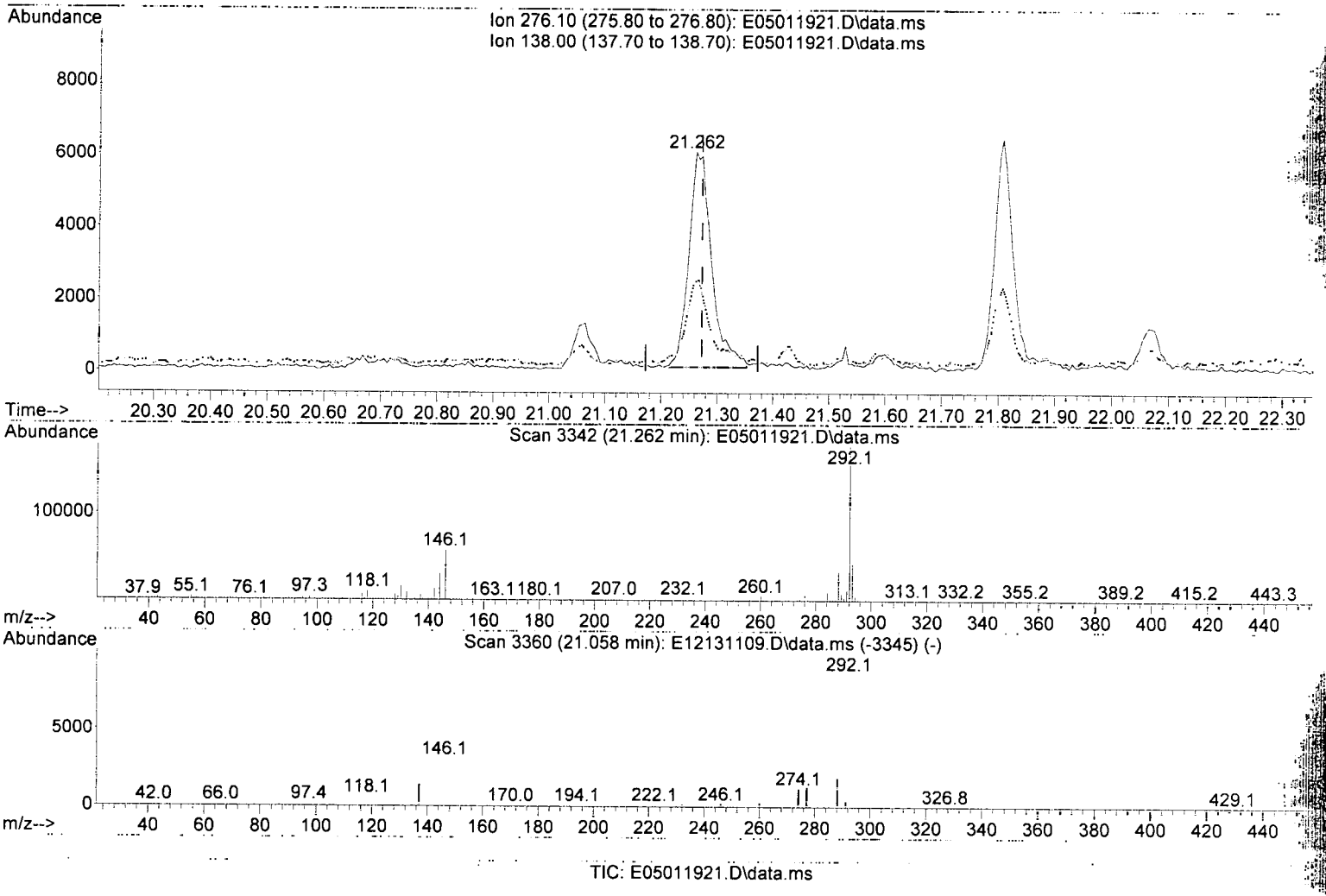
response 27051

Ion	Exp%	Act%
252.10	100.00	100.00
113.00	12.70	13.20
253.10	21.70	22.99
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.262min (-0.011) 72.46 ng/ml

response 16924

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	41.07
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
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Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
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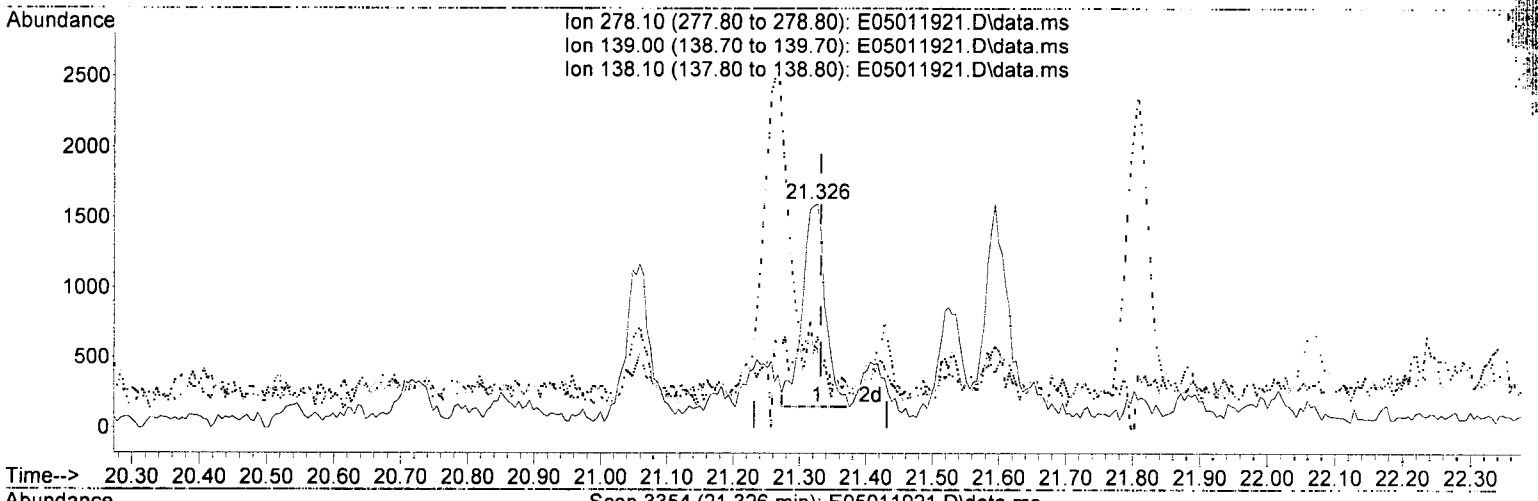
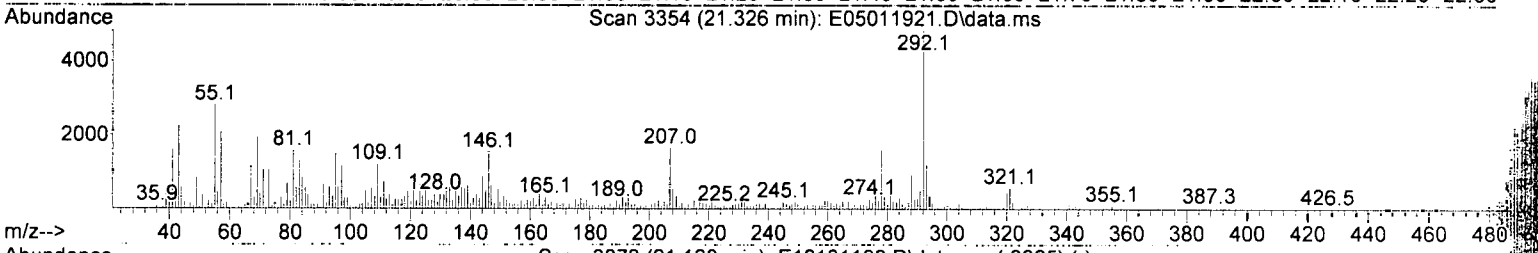
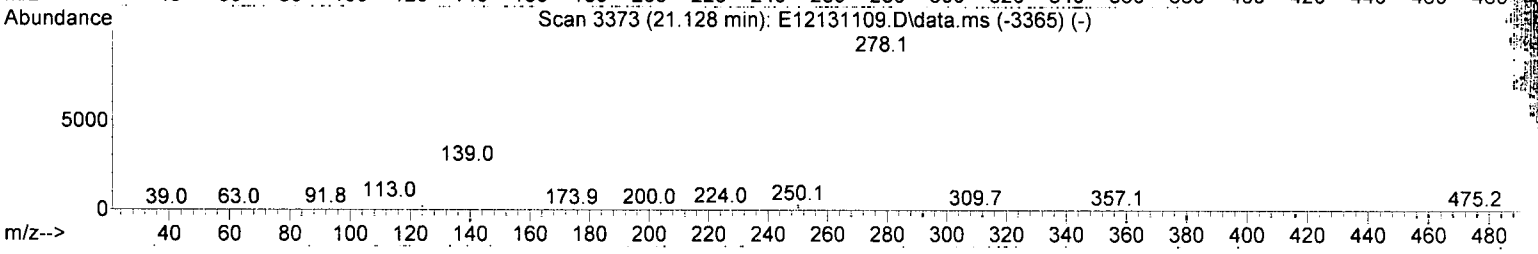
InstName : SV-GCMS5







TIC: E05011921.D\data.ms

(96) Dibenz(a,h)anthracene (T)

21.326min (-0.005) 16.35 ng/ml

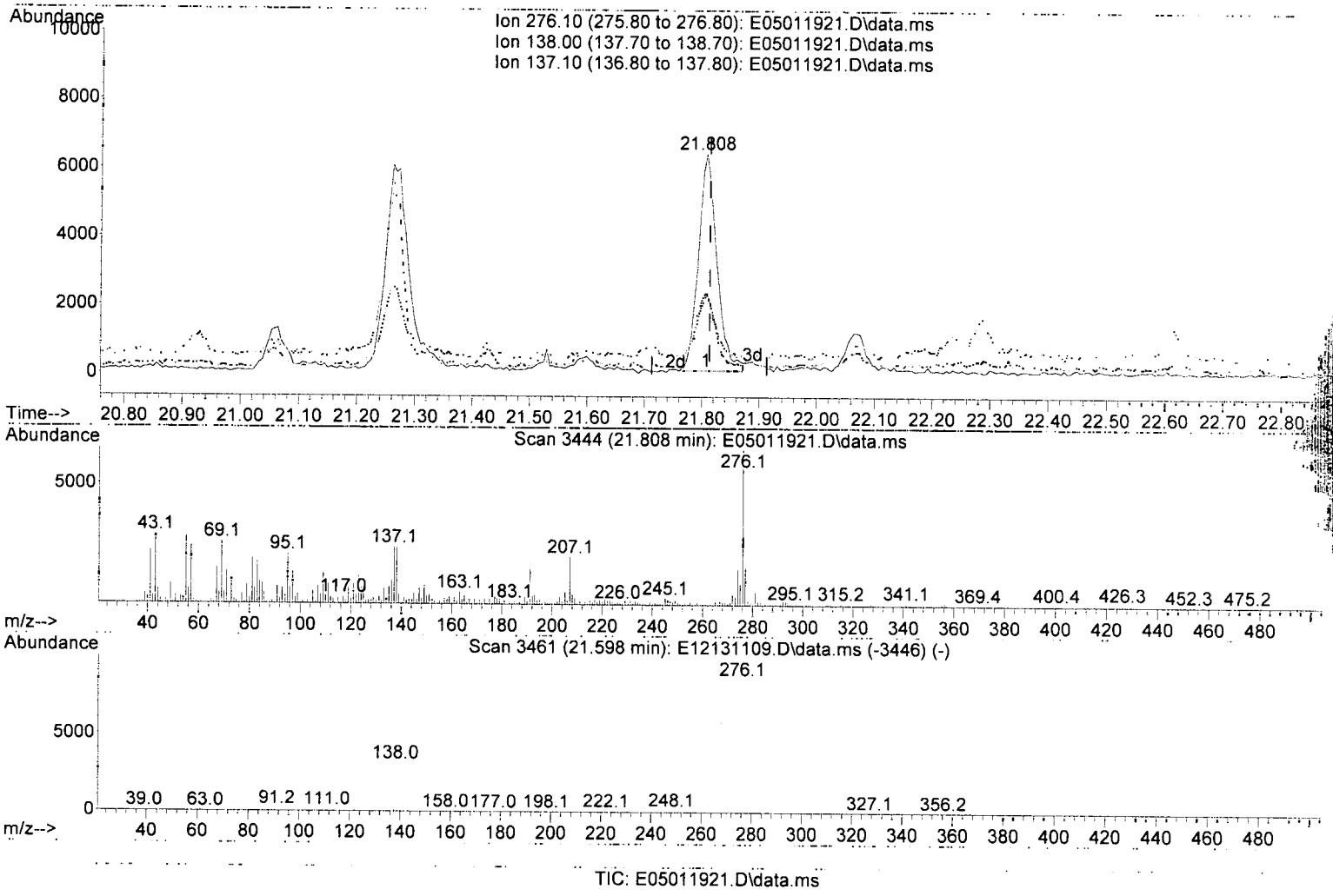
response 3498

Ion	Exp%	Act%
278.10	100.00	100.00
139.00	25.60	40.63
138.10	17.70	35.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05011921.D\data.ms

(97) Benzo(g,h,i)perylene (T)

21.808min (-0.005) 61.63 ng/ml

response 14171

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	36.55
137.10	39.00	36.98
0.00	0.00	0.00

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011921.D
Acq On : 1 May 2019 10:04 pm
Operator : JK/ AMS /DTH
Sample : A9D0674-22RE1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:48 2019
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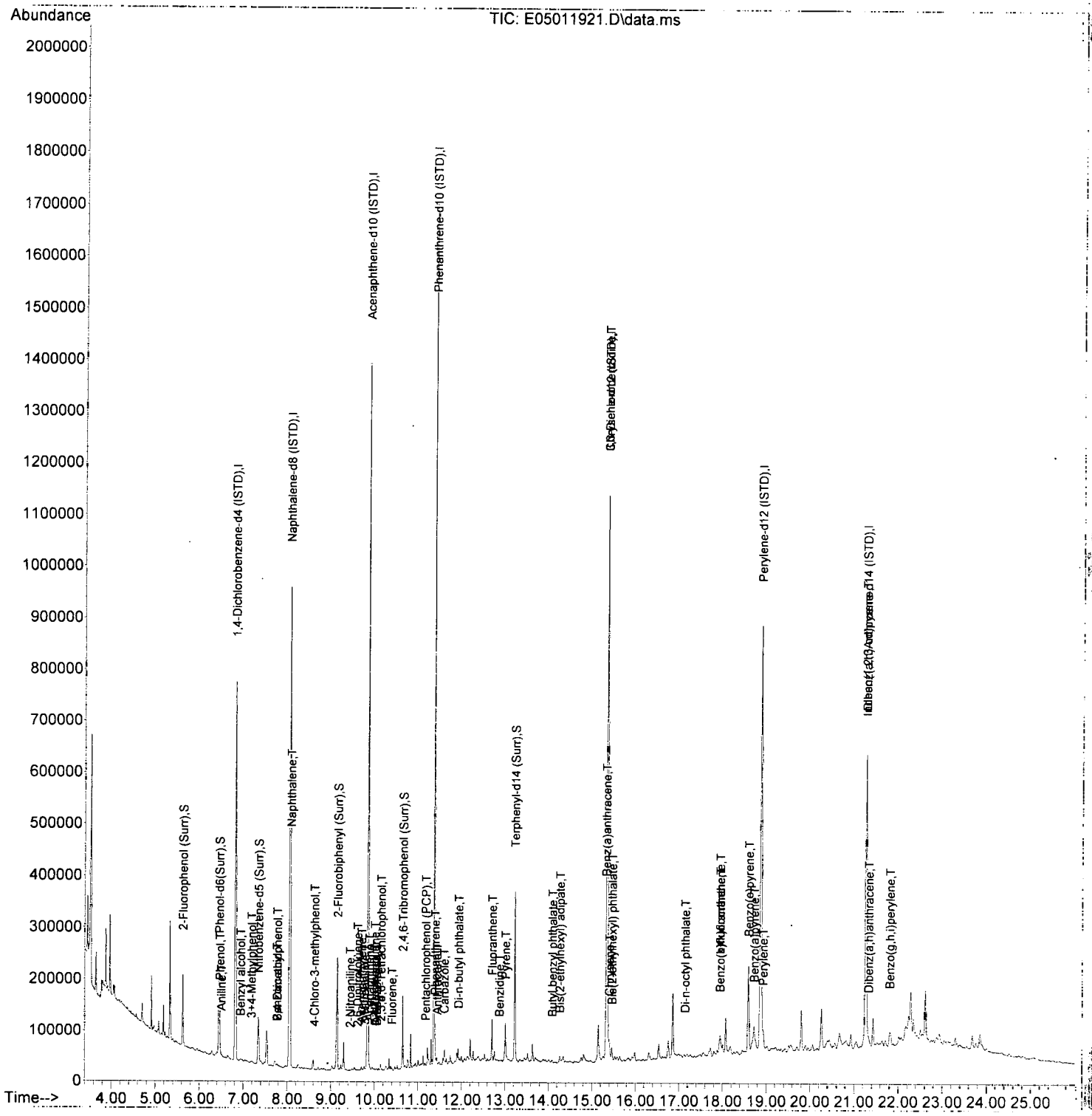


No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011922.D
Acq On : 1 May 2019 10:40 pm
Operator : JK/ AMS /DTH
Sample : 9050375-MS1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 10:46:55 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.826	152	213287	2000.00	ng/ml	-0.01
21) Naphthalene-d8 (ISTD)	8.072	136	827237	2000.00	ng/ml	-0.01
35) Acenaphthene-d10 (ISTD)	9.853	162	387523	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	702781	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	609785	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	485520	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	301211	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	52035	391.33	ng/ml	0.00
5) Phenol-d6(Surr)	6.468	99	75216	422.89	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	59319	371.97	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	107102	371.62	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.650	330	14818	600.91	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.223	244	115107	404.02	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.403	74	58479	581.03	ng/ml	90
3) Pyridine	4.441	79	79210	485.94	ng/ml	97
6) Phenol	6.478	94	129015	692.26	ng/ml	95
7) Aniline	6.516	93	91176	375.43	ng/ml	98
8) Bis(2-chloroethyl) ether	6.564	93	91851	602.99	ng/ml	96
9) 2-Chlorophenol	6.633	128	98004	702.25	ng/ml	99
10) 1,3-Dichlorobenzene	6.778	146	84891	532.13	ng/ml	97
11) 1,4-Dichlorobenzene	6.842	146	87745	544.37	ng/ml	99
12) Benzyl alcohol	6.949	108	65949	746.13	ng/ml	96
13) 1,2-Dichlorobenzene	6.997	146	84916	556.17	ng/ml	96
14) 2-Methylphenol	7.056	107	86548	745.70	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.077	45	146509	606.52	ng/ml	96
16) N-Nitrosodi-n-propylamine	7.200	70	77818	681.55	ng/ml	96
17) 3+4-Methylphenol	7.200	107	114076	778.12	ng/ml	94
18) Hexachloroethane	7.323	117	22314	375.00	ng/ml	83
20) Nitrobenzene	7.377	77	101528	659.20	ng/ml	94
22) Isophorone	7.607	82	204656	724.91	ng/ml	97
23) 2-Nitrophenol	7.692	139	44846	742.04	ng/ml	87
24) 2,4-Dimethylphenol	7.719	122	99905	807.06	ng/ml	97
25) Bis(2-chloroethoxy) me...	7.810	93	119221	671.17	ng/ml	98
26) Benzoic acid	7.810	105	100257	2378.39	ng/ml	95
27) 2,4-Dichlorophenol	7.928	162	81531	849.96	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.013	180	71107	618.77	ng/ml	95
29) Naphthalene	8.094	128	275044	623.26	ng/ml	99
30) 4-Chloroaniline	8.142	127	37714	248.15	ng/ml	97
31) Hexachlorobutadiene	8.217	225	34992	623.42	ng/ml	99
32) 4-Chloro-3-methylphenol	8.618	107	90342	866.23	ng/ml	98
33) 2-Methylnaphthalene	8.789	142	180889	651.66	ng/ml	96
34) 1-Methylnaphthalene	8.891	142	171915	646.72	ng/ml	96
36) Hexachlorocyclopentadiene	8.955	237	694	13.96	ng/ml	88
37) 2,4,6-Trichlorophenol	9.072	196	54420	940.55	ng/ml	98
38) 2,4,5-Trichlorophenol	9.110	196	58073	959.57	ng/ml	99
39) 1,1'-Biphenyl	9.254	154	898	2.71	ng/ml	81
41) 2-Chloronaphthalene	9.281	162	163122	681.50	ng/ml	99
42) 2-Nitroaniline	9.377	138	65530	908.40	ng/ml	92
43) 2,6-Dimethylnaphthalene	9.415	156	698	3.01	ng/ml	90

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011922.D
Acq On : 1 May 2019 10:40 pm
Operator : JK/ AMS /DTH
Sample : 9050375-MS1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

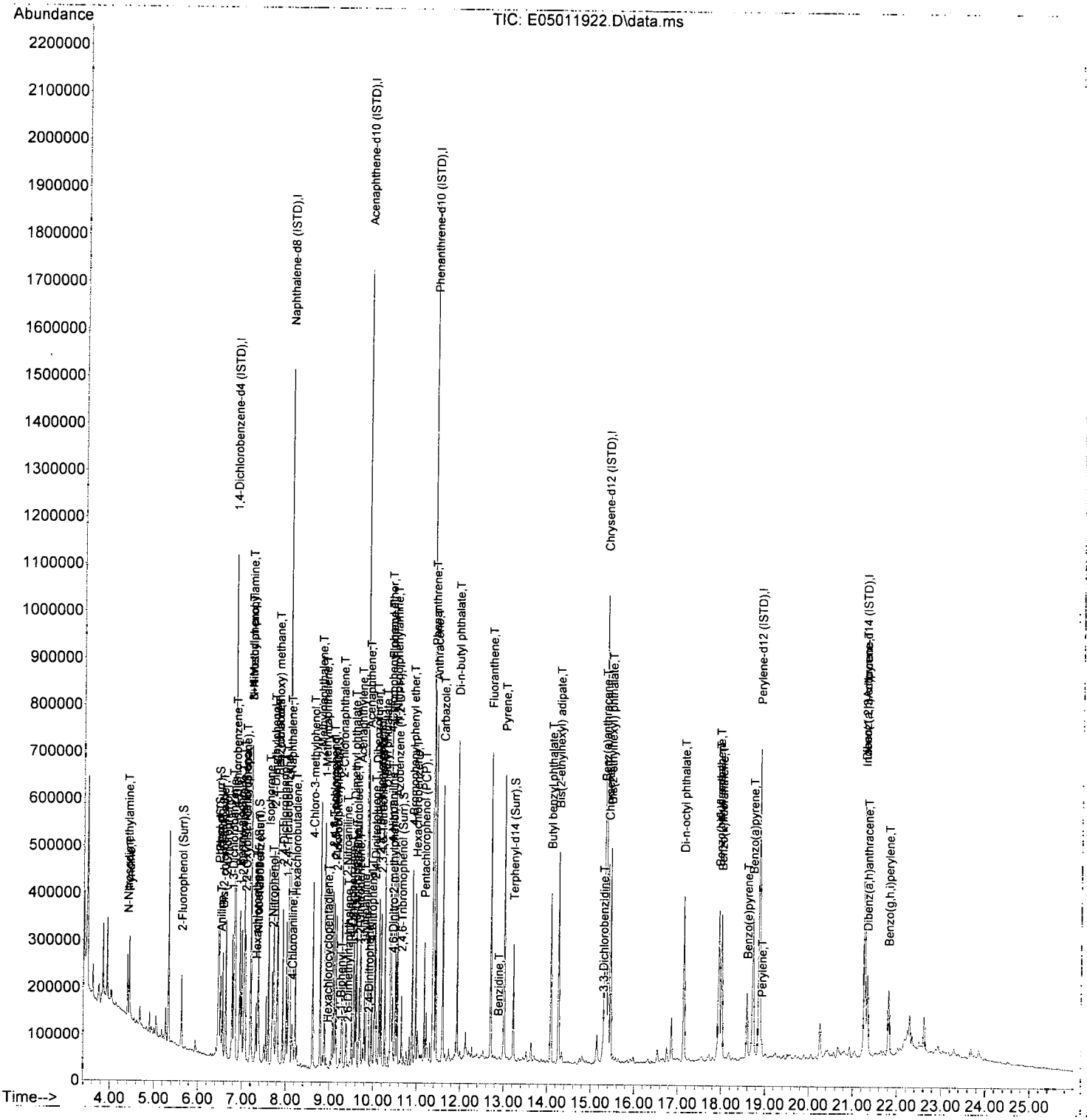
Quant Time: May 02 10:46:55 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.506	168	21226	796.39	ng/ml	94
45) Dimethyl phthalate	9.554	163	190387	765.49	ng/ml	100
46) 1,3-Dinitrobenzene	9.591	168	29647	845.22	ng/ml	90
47) 2,6-Dinitrotoluene	9.618	165	45302	846.16	ng/ml	83
48) 1,2-Dinitrobenzene	9.677	168	18364	771.74	ng/ml#	74
49) Acenaphthylene	9.704	152	277268	734.54	ng/ml	99
50) 3-Nitroaniline	9.795	138	27376	461.64	ng/ml	99
51) Acenaphthene	9.885	153	177576	693.80	ng/ml	99
52) 2,4-Dinitrophenol	9.901	184	1739	298.73	ng/ml	91
53) 4-Nitrophenol	9.960	139	36583	802.23	ng/ml	81
54) 2,4-Dinitrotoluene	10.030	165	57717	846.83	ng/ml	88
55) Dibenzofuran	10.057	168	239978	721.20	ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.137	232	44289	992.06	ng/ml	93
57) 2,3,4,6-Tetrachlorophenol	10.185	232	45287	895.30	ng/ml	91
58) Diethyl phthalate	10.265	149	173509	698.05	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.281	170	124	N.D.		
60) Fluorene	10.404	166	197278	740.45	ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.394	204	87554	742.17	ng/ml	89
62) 4-Nitroaniline	10.415	138	40231	572.11	ng/ml	80
63) 4,6-Dinitro-2-methylph...	10.447	198	19762	877.95	ng/ml	89
65) N-Nitrosodiphenylamine	10.511	169	170584	768.34	ng/ml	98
66) Azobenzene (1,2-DPH)	10.554	77	211132	696.02	ng/ml	98
68) 4-Bromophenyl phenyl e...	10.896	248	51217	787.74	ng/ml	88
69) Hexachlorobenzene	10.982	284	51883	793.26	ng/ml	91
70) Pentachlorophenol (PCP)	11.174	266	31052	971.08	ng/ml	97
71) Phenanthrene	11.388	178	300884	780.03	ng/ml	99
72) Anthracene	11.442	178	296600	749.43	ng/ml	99
73) Carbazole	11.597	167	284797	768.55	ng/ml	99
74) Di-n-butyl phthalate	11.934	149	326063	703.23	ng/ml	99
75) Fluoranthene	12.704	202	338196	845.26	ng/ml	98
76) Benzidine	12.875	184	70	39.07	ng/ml#	1
77) Pyrene	13.014	202	340369	837.43	ng/ml	99
80) Butyl benzyl phthalate	14.089	149	135383	759.04	ng/ml	93
81) Bis(2-ethylhexyl) adipate	14.266	129	129871	731.72	ng/ml	99
82) 3,3-Dichlorobenzidine	15.288	252	17036	194.28	ng/ml	98
83) Benz(a)anthracene	15.320	228	280964	816.86	ng/ml	98
84) Chrysene	15.405	228	278458	849.82	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.464	149	219758	862.15	ng/ml	98
87) Di-n-octyl phthalate	17.144	149	318370	997.73	ng/ml	97
88) Benzo(b)fluoranthene	17.946	252	263687	1027.97	ng/ml	97
89) Benzo(k)fluoranthene	18.010	252	239696	950.83	ng/ml	98
90) Benzo(b+k)fluoranthene	17.946	252	517588	1921.35	ng/ml	98
91) Benzo(e)pyrene	18.598	252	24622	94.54	ng/ml	97
92) Benzo(a)pyrene	18.721	252	230166	988.26	ng/ml	99
93) Perylene	18.925	252	21797	81.88	ng/ml	98
95) Indeno(1,2,3-cd)pyrene	21.267	276	120810	731.74	ng/ml	98
96) Dibenz(a,h)anthracene	21.326	278	111646	738.42	ng/ml	98
97) Benzo(g,h,i)perylene	21.808	276	106536	655.44	ng/ml	84

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

Data Path : W:\DATA\2019-05\9E01044\
Data File : E05011922.D
Acq On : 1 May 2019 10:40 pm
Operator : JK/ AMS /DTH
Sample : 9050375-MS1@4
Misc : 4x, 8270D LL PAH
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 10:46:55 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Benchsheet & Analysis Sequence Data (soil)

Sequence 9E02011 (QC Only)

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9E02011**	Instrument:	**SV-GCMS5**
Date:	**05/02/19 07:57**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9E02011-TUN1	Sediment	QC	QC			A19B027	A19D323
2	9E02011-IBL1	Sediment	QC	QC			A19B027	
3	9E02011-TUN2	Sediment	QC	QC			A19B027	A19D323
4	9E02011-IBL2	Sediment	QC	QC			A19B027	
5	9E02011-CCV1	Sediment	QC	QC			A19B027	A19C237
6	9E02011-CCB1	Sediment	QC	QC			A19B027	
7	9E02011-IBL3	Sediment	QC	QC			A19B027	
8	9050375-DUP2	Sediment	QC	QC		9050375	A19B027	
9	9E02011-IBL4	Sediment	QC	QC			A19B027	

Data Entered By: AMS 5/2/19

Data Reviewed By: 5/2/19

Comments:

SEQUENCE REVIEW SHEET

SEQUENCE: INSTRUMENT: _

SEQUENCE LOG

Calibration ID: A9A3103

SampleID	Analysis	Matrix	Batch	Analyzed
9E02011-TUN1	8270D LL PAH/PHTH/Phenols	Sediment	9E02011	5/2/2019 8:07:00AM
9E02011-TUN2	8270D LL PAH/PHTH/Phenols	Sediment	9E02011	5/2/2019 9:27:00AM
9E02011-CCV1	8270D LL PAH/PHTH/Phenols	Sediment	9E02011	5/2/2019 10:32:00AM
9E02011-CCB1	8270D LL PAH/PHTH/Phenols	Sediment	9E02011	5/2/2019 11:08:00AM
9050375-DUP2	8270D LL PAH/PHTH/Phenols	Sediment	9050375	5/2/2019 12:33:00PM

MS TUNE SAMPLES

0 Total Failures

CONTINUING CALIBRATION VERIFICATION

9E02011-CCV1

8270D LL PAH/PHTH/Phenols	Result	True Value	%Rec	LCL	UCL	STDID	Status	Qualifiers
2,4,6-Tribromophenol (Surr)	1,278.19	1000	128	80	120	A19C237	FAIL	Q-41

1 Failures

1 Reportable Failures in 1 CCVs

ISTD AREAS

9E02011-CCV1

8270D LL PAH/PHTH/Phenols	RT	RESP	% Rec (vs. Curve)	Rpt	Qualifier
1,4-Dichlorobenzene-d4 (ISTD)	6.831	195478	68		
Naphthalene-d8 (ISTD)	8.078	759360	69		
Acenaphthene-d10 (ISTD)	9.853	370169	75		
Phenanthrene-d10 (ISTD)	11.367	699979	83		
Chrysene-d12 (ISTD)	15.346	660584	93		
Perylene-d12 (ISTD)	18.871	572038	91		
Dibenz(a,h)anthracene-d14 (IS1	21.267	493894	98		

EXTRACTION BLANKS

	Result	MDL	MRL	>MRL/MDL?	Fail?	Qualifier

Failures

Total Failures in Blank(s)

SEQUENCE REVIEW SHEET

SEQUENCE: INSTRUMENT:

LAB CONTROL SPIKES

I Result	F Result	Conc	%Rec	LCL	UCL	RPD	RPDL	SpikeID	Pass?	Qualifier
						----	----			

Failure(s)

Failures in LCS/LCSDs

DUPLICATES

9050375-DUP2 **8270D LL PAH/PHTH/Phe** (Source: A9D0674-16RE2)

Analyte	Duplicate Result	Duplicate MDL	Source Result	Source MDL	RPD	RPDL	P/F	Qualifier	isRp?
Dibenz(a,h)anthracene	7.17	14.4	7.171	3.595	**200**	**30**	**FAIL**	Q-05	True

MATRIX SPIKES

Result	Spike Amt	Source Res	%Rec	LCL	UCL	P/F	Qualifier

Failures

No MS Failures

SURROGATE RECOVERY

9E02011-CCV1 8270D LL PAH/PHTH/PI

Surrogate	Recovery	Lower Limit	Upper Limit	Dilution	Rpt?	Fails?	Qualifiers
2,4,6-Tribromophenol (Surr)	**128**	80	120	1	Yes	**Fail**	**Q-41**

1 Failure(s)

SAMPLE HITS

Analyte	IResult	FResult	Rpt?	FMDL	FMRL	Dilution	Qualifier(s)	Conf	RPD%

MISSED HOLD TIMES

Sampled	Extracted	Hold 1	Elapsed	Analyzed	Hold 2	Elapsed

No Hold Times Missed

SEQUENCE REVIEW SHEET

SEQUENCE: INSTRUMENT:

ANALYTE QUALIFIERS

9E02011-CCV1

Analyte	Qualifier	Text
2,4-Dinitrophenol	NR	
2,3,5,6-Tetrachlorophenol	NR	
4,6-Dinitro-2-methylphenol	NR	
2,4,6-Tribromophenol (Surr)	**Q-41**	

3 Non-Reportable Qualifier(s)

9050375-DUP2

Analyte	Qualifier	Text	Rpt?
Dibenz(a,h)anthracene	**Q-05**		YES

1 Reportable Qualifier(s)

SAMPLE QUALIFIERS

A9D0674-16

Analyte	Qualifier	CustomValue
ALL	RR-1	

A9D0674-16RE1

Analyte	Qualifier	CustomValue
ALL	RR-7	

Sequence Name: C:\msdchem\1\sequence\9E02011.s
Comment: EPA 625/8270D Full Scan
Operator: JK/ AMS /DTH
Data Path: C:\MSDCHEM\1\DATA\2019-05\9E02011\
Instrument Control Pre-Seq Cmd:
Data Analysis Pre-Seq Cmd:

Instrument Control Post-Seq Cmd:
Data Analysis Post-Seq Cmd:

Method Sections To Run
(X) Full Method
( ) Reprocessing Only

Sequence Barcode Options
(X) On Mismatch, Inject Anyway
( ) On Mismatch, Don't Inject
( ) Barcode Disabled

Line		Sample Name/Misc Info
1) Sample	1	9E02011-TUN1
Datafile		E05021901
Method		DFTPP-8270
2) Sample	3	9E02011-IBL1
Datafile		E05021902
Method		SV5_AQUISITION
3) Sample	1	9E02011-TUN2
Datafile		E05021903
Method		DFTPP-8270
4) Sample	3	9E02011-IBL2
Datafile		E05021904
Method		SV5_AQUISITION
5) Sample	2	9E02011-CCV1
Datafile		E05021905
Method		SV5_AQUISITION
6) Sample	3	9E02011-CCB1
Datafile		E05021906
Method		SV5_AQUISITION
7) Sample	3	9E02011-IBL3
Datafile		E05021907
Method		SV5_AQUISITION
8) Sample	4	9050375-DUP2@4
Datafile		E05021908
Method		SV5_AQUISITION
9) Sample	3	9E02011-IBL4
Datafile		E05021909
Method		SV5_AQUISITION

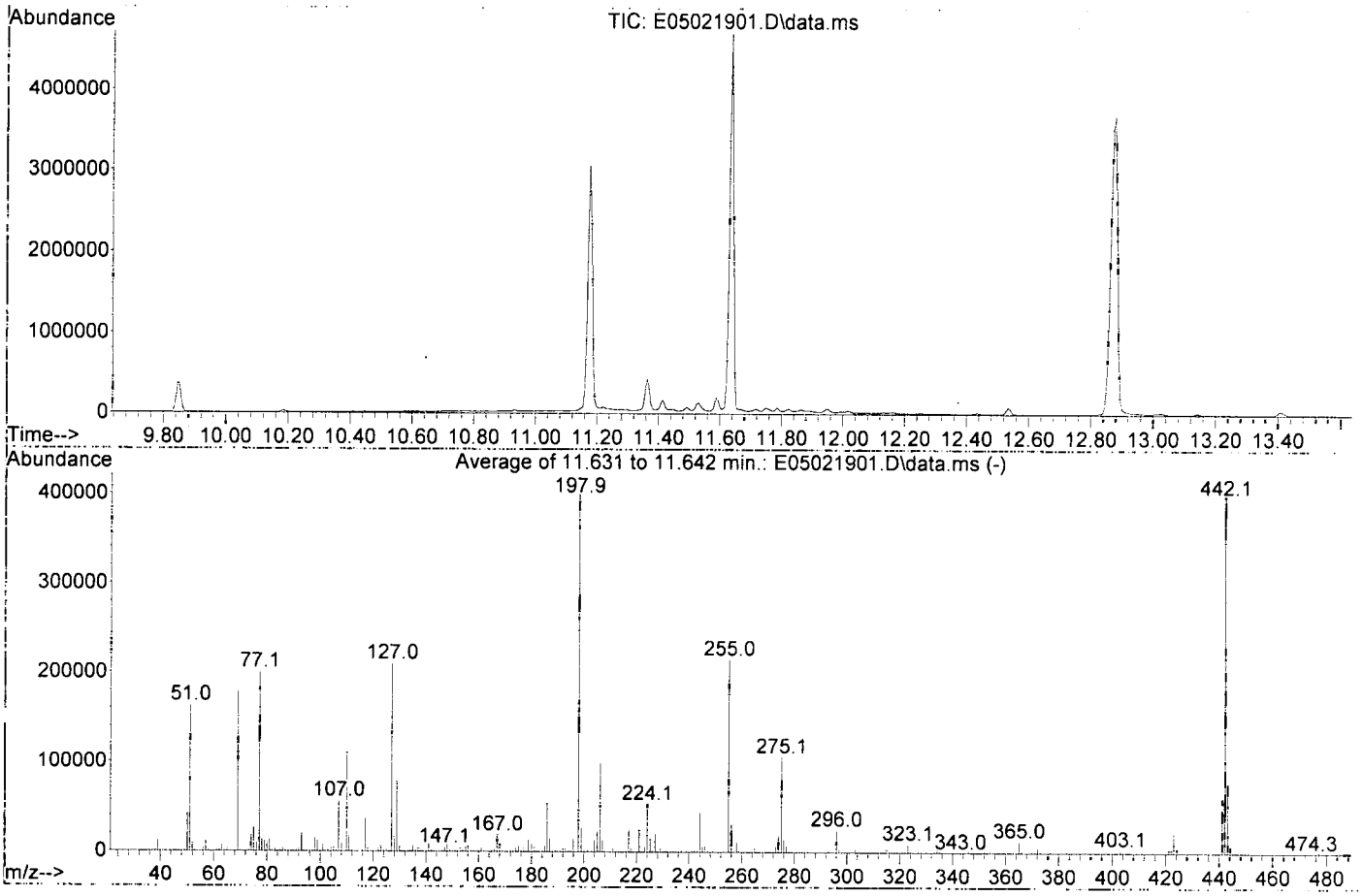
AMS 5/2/19

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021901.D
Acq On : 2 May 2019 8:07 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : W:\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

Failing Breakdown T-01
Replaced liner after this run
AMS 5/2/19



AutoFind: Scans 1504, 1505, 1506; Background Corrected with Scan 1499

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	40.4	162807	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	44.3	178440	PASS
70	69	0.00	2	0.4	751	PASS
127	198	10	80	52.1	209682	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	402681	PASS
199	198	5	9	6.7	27014	PASS
275	198	10	60	26.4	106203	PASS
365	198	1	100	3.0	12275	PASS
441	442	0.01	24	15.2	61264	PASS
442	198	50	200	99.8	401899	PASS
443	442	15	24	19.1	76939	PASS

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021901.D
Acq On : 2 May 2019 8:07 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:00:56 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.818	150	70006	2.00	ug/mL	0.00
2) Naphthalene-d8	8.069	136	163845	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.845	162	82144	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.364	188	142809	2.00	ug/mL	0.00
11) Chrysene-d12	15.172	240	122761	2.00	ug/mL	0.00
12) Perylene-d12	17.130	264	98764	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.440	292	74809	2.00	ug/mL	-0.06
Target Compounds						Qvalue
4) Pentachlorophenol	11.177	266	359534	46.35	ug/mL	94
6) DFTPP	11.637	442	448744	38.92	ug/mL	91
7) Benzidine	12.878	184	2113866	41.61	ug/mL	94
8) 4,4-DDE	13.140	TIC	22928	No Calib		
9) 4,4-DDD	13.696	TIC	1439438	No Calib		
10) 4,4-DDT	14.295	TIC	3435559	23.46	ug/mL	96

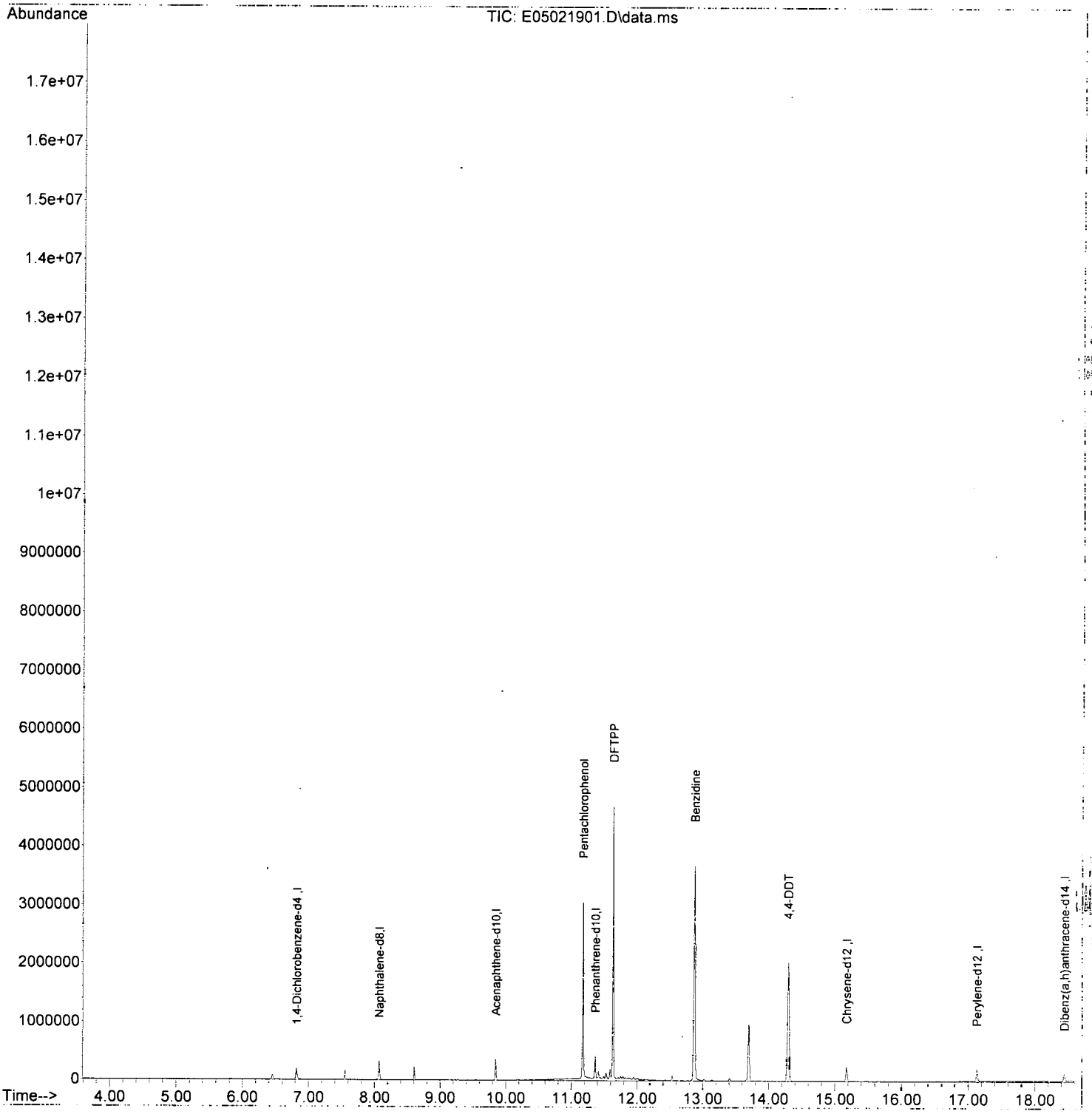
(#) = qualifier out of range (m) = manual integration (+) = signals summed

J

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021901.D
Acq On : 2 May 2019 8:07 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN1
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:00:56 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

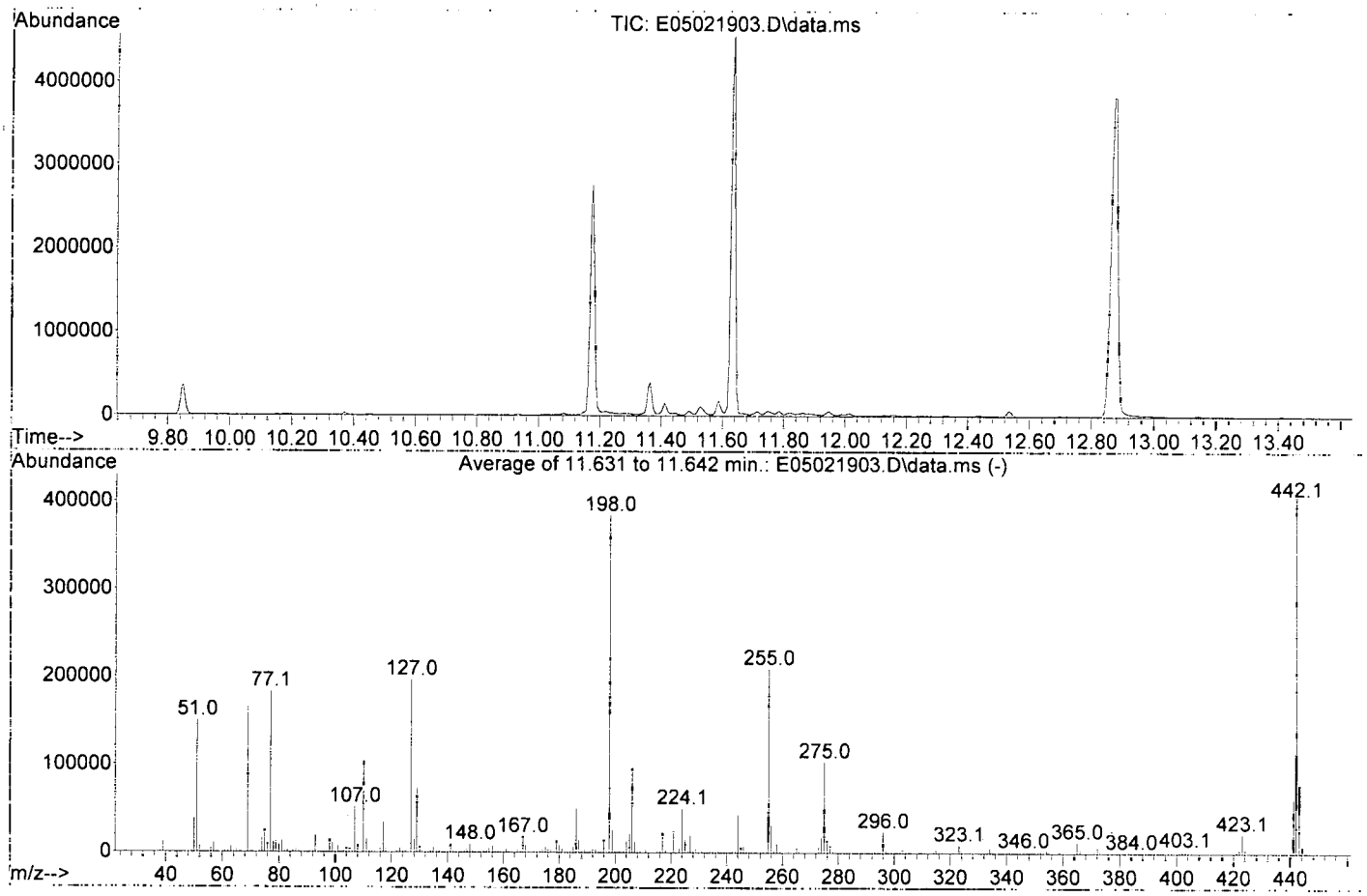


Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021903.D
Acq On : 2 May 2019 9:27 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : W:\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

AMS 5/2/19



AutoFind: Scans 1504, 1505, 1506; Background Corrected with Scan 1499

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	39.0	149810	PASS
68	69	0.00	2	0.0	0	PASS
69	198	0.00	100	43.0	165505	PASS
70	69	0.00	2	0.4	712	PASS
127	198	10	80	51.1	196391	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	384469	PASS
199	198	5	9	6.7	25862	PASS
275	198	10	60	26.9	103440	PASS
365	198	1	100	3.2	12248	PASS
441	442	0.01	24	15.3	62496	PASS
442	198	50	200	106.5	409579	PASS
443	442	15	24	19.1	78248	PASS

✓

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021903.D
Acq On : 2 May 2019 9:27 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:01:20 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5

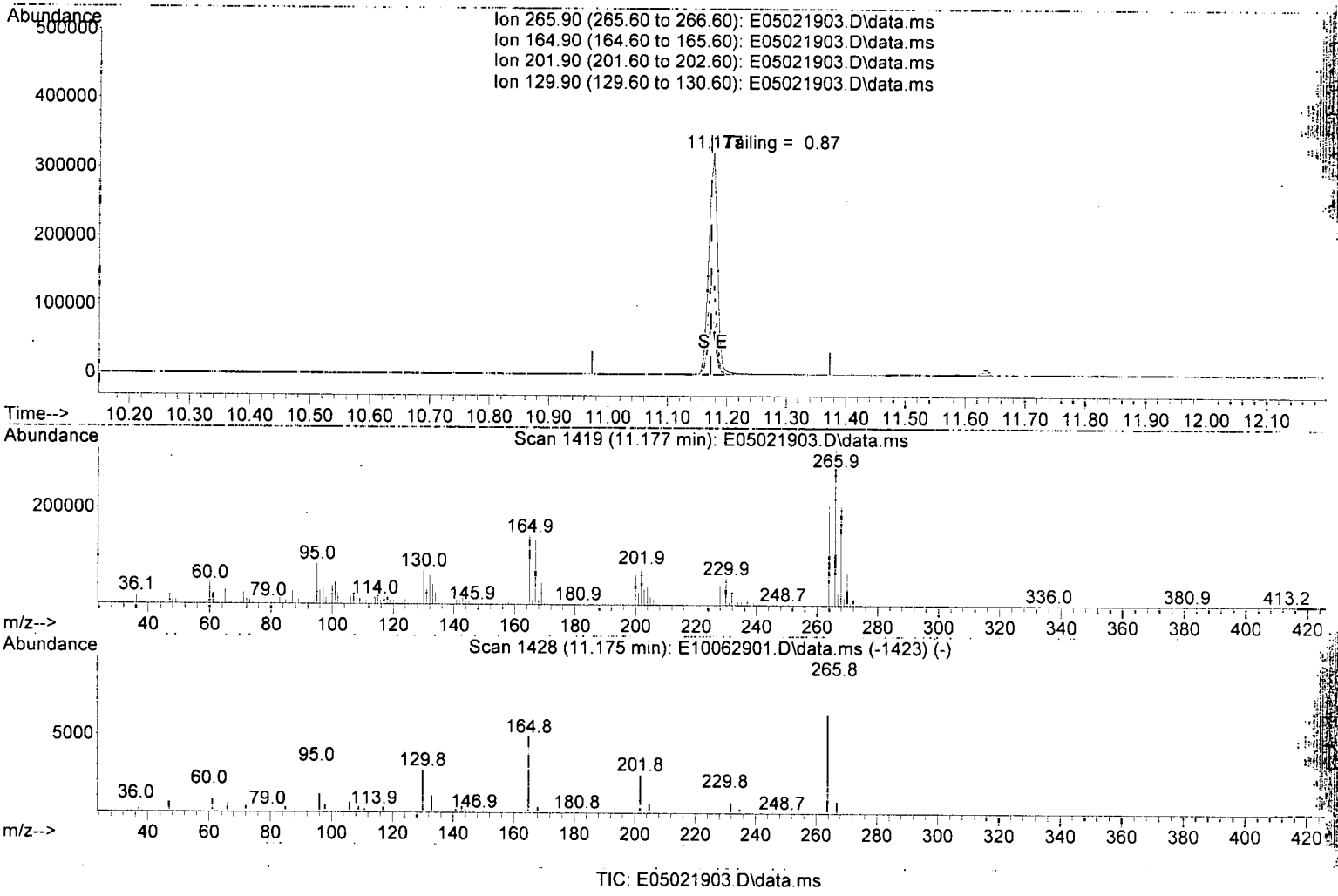
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.817	150	71783	2.00	ug/mL	0.00
2) Naphthalene-d8	8.074	136	166157	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.850	162	80785	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.364	188	142194	2.00	ug/mL	0.00
11) Chrysene-d12	15.172	240	125373	2.00	ug/mL	0.00
12) Perylene-d12	17.130	264	104095	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.435	292	88804	2.00	ug/mL	-0.06
Target Compounds						Qvalue
4) Pentachlorophenol	11.177	266	321133	42.10	ug/mL	94
6) DFTPP	11.637	442	452335	39.40	ug/mL	92
7) Benzidine	12.877	184	2264531	44.77	ug/mL	94
8) 4,4-DDE	13.140	TIC	18101	No Calib		
9) 4,4-DDD	13.690	TIC	8125	No Calib		
10) 4,4-DDT	14.300	TIC	6139221	42.10	ug/mL	97

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021903.D
Acq On : 2 May 2019 9:27 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:01:20 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05021903.D\data.ms

(4) Pentachlorophenol

11.177min (+ 0.004) 42.10 ug/mL

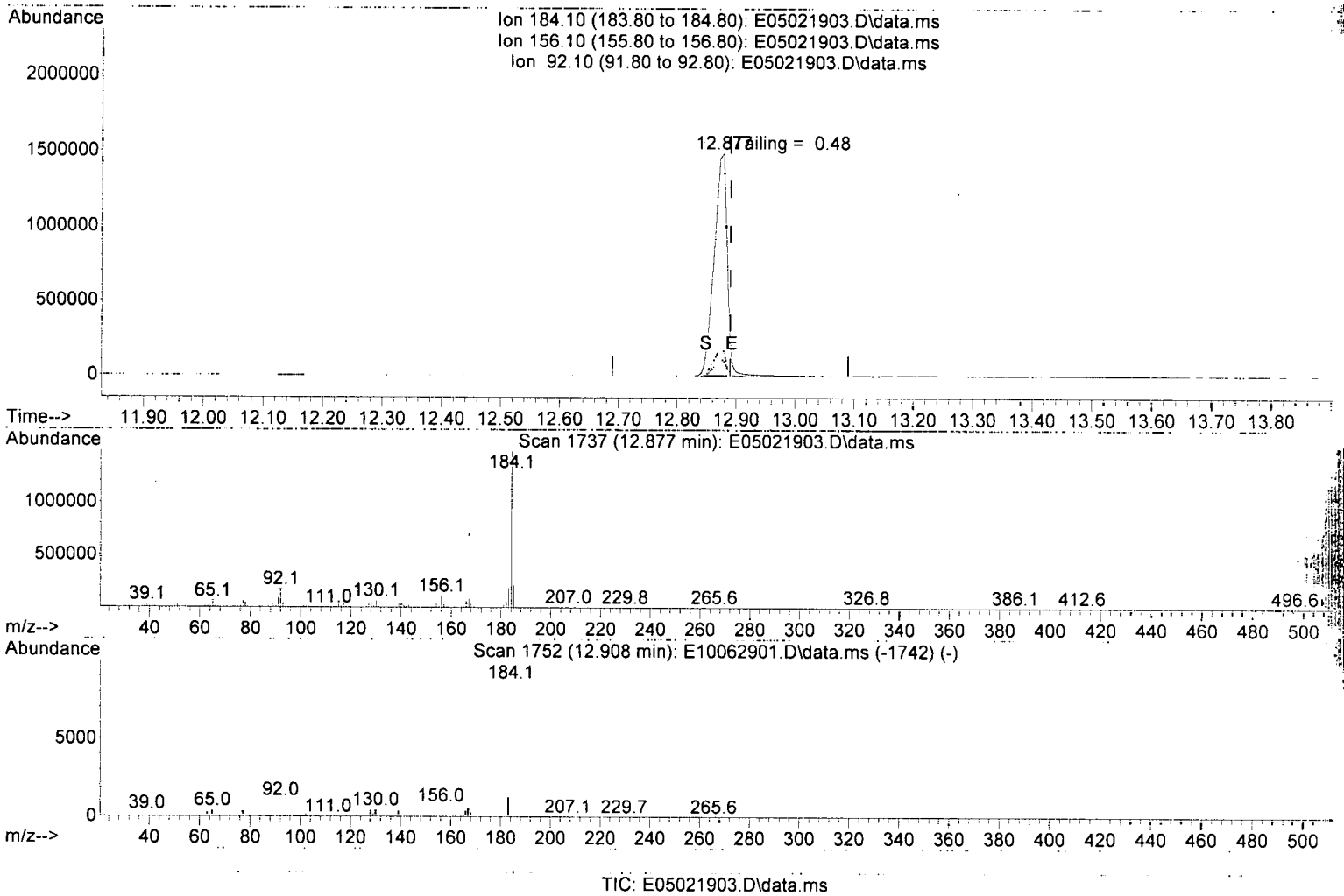
response 321133

Ion	Exp%	Act%
265.90	100.00	100.00
164.90	47.60	43.80
201.90	23.20	23.60
129.90	27.10	21.50

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021903.D
Acq On : 2 May 2019 9:27 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:01:20 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05021903.D\data.ms

(7) Benzidine

12.877min (-0.012) 44.77 ug/mL

response 2264531

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.50	7.30
92.10	8.20	11.54
0.00	0.00	0.00

DDT Breakdown Check (Validated 5/1/2013)

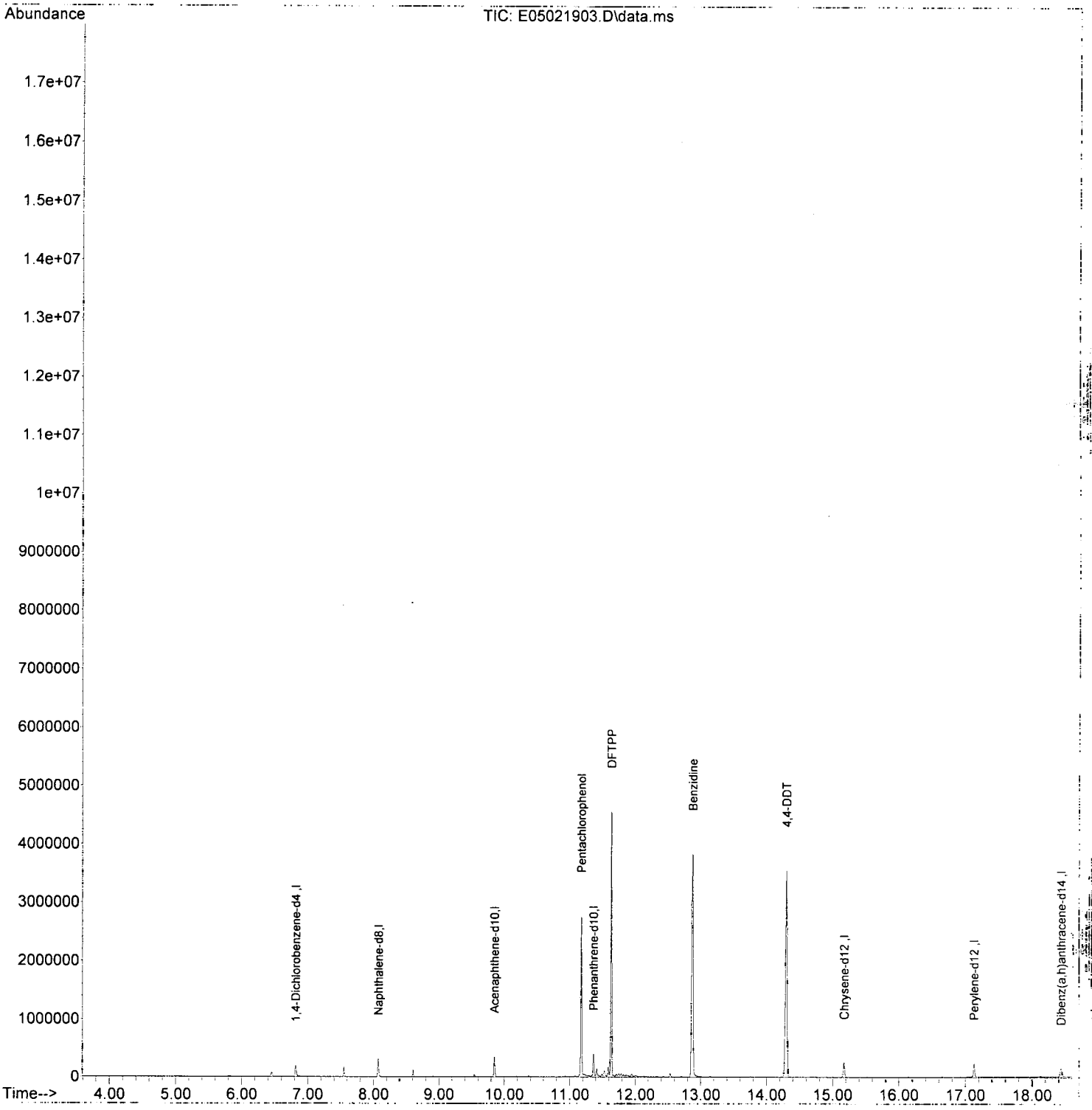
From:
9E02011-TUN2
SV-GCMS5

First Column Area Counts		Percent Breakdown	
DDE	18101		
DDD	8125		
DDT	6139221	0.43	PASS

Breakdown must be less than 20% to accept sample data.

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021903.D
Acq On : 2 May 2019 9:27 am
Operator : JK/ AMS /DTH
Sample : 9E02011-TUN2
Misc : 1x, A19D323 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: May 02 13:01:20 2019
Quant Method : W:\METHODS\DFTPP-8270.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Tue Jan 29 16:12:28 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Evaluate Continuing Calibration Report

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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	1,4-Dichlorobenzene-d4 (IST	2000.000	2000.000	0.0	68	0.00
2	T	N-Nitrosodimethylamine	1000.000	988.466	1.2	67	-0.02
3	T	Pyridine	1000.000	1025.765	-2.6	70	-0.02
4	S	2-Fluorophenol (Surr)	1000.000	1036.397	-3.6	68	-0.01
5	S	Phenol-d6(Surr)	1000.000	1019.409	-1.9	68	0.00
6	T	Phenol	1000.000	1010.925	-1.1	68	0.00
7	T	Aniline	1000.000	996.908	0.3	70	-0.01
8	T	Bis(2-chloroethyl) ether	1000.000	964.042	3.6	65	0.00
9	T	2-Chlorophenol	1000.000	1050.138	-5.0	70	0.00
10	T	1,3-Dichlorobenzene	1000.000	1016.515	-1.7	70	-0.01
11	T	1,4-Dichlorobenzene	1000.000	1022.551	-2.3	70	0.00
12	T	Benzyl alcohol	1000.000	940.628	5.9	64	0.00
13	T	1,2-Dichlorobenzene	1000.000	1017.725	-1.8	70	0.00
14	T	2-Methylphenol	1000.000	1041.033	-4.1	70	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	1046.615	-4.7	71	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1025.074	-2.5	69	0.00
17	T	3+4-Methylphenol	1000.000	1052.661	-5.3	70	0.00
18	T	Hexachloroethane	1000.000	1005.279	-0.5	68	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1019.170	-1.9	71	0.00
20	T	Nitrobenzene	1000.000	1053.424	-5.3	70	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	69	0.00
22	T	Isophorone	1000.000	1029.532	-3.0	68	0.00
23	T	2-Nitrophenol	1000.000	1187.349	-18.7	81	0.00
24	T	2,4-Dimethylphenol	1000.000	1030.976	-3.1	70	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	999.898	0.0	69	0.00
26	T	Benzoic acid	2000.000	2113.405	-5.7	80	0.00
27	T	2,4-Dichlorophenol	1000.000	1115.974	-11.6	76	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1047.784	-4.8	73	0.00
29	T	Naphthalene	1000.000	1002.949	-0.3	70	0.00
30	T	4-Chloroaniline	1000.000	1012.765	-1.3	72	0.00
31	T	Hexachlorobutadiene	1000.000	1097.649	-9.8	74	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1081.018	-8.1	76	0.00
33	T	2-Methylnaphthalene	1000.000	1053.518	-5.4	73	0.00
34	T	1-Methylnaphthalene	1000.000	1044.424	-4.4	72	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	75	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1295.785	-29.6#	90	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1165.487	-16.5	84	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1164.954	-16.5	85	0.00
39	T	1,1'-Biphenyl	1000.000	1017.646	-1.8	75	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1033.149	-3.3	76	0.00
41	T	2-Chloronaphthalene	1000.000	1021.032	-2.1	77	0.00
42	T	2-Nitroaniline	1000.000	1120.610	-12.1	88	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1037.702	-3.8	75	0.00
44	T	1,4-Dinitrobenzene	1000.000	1338.611	-33.9#	112	0.00
45	T	Dimethyl phthalate	1000.000	1094.688	-9.5	80	0.00
46	T	1,3-Dinitrobenzene	1000.000	1241.775	-24.2#	101	0.00
47	T	2,6-Dinitrotoluene	1000.000	1189.115	-18.9	90	0.00
48	T	1,2-Dinitrobenzene	1000.000	1233.872	-23.4#	95	0.00

Evaluate Continuing Calibration Report

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
49	T	Acenaphthylene	1000.000	1059.217	-5.9	76	0.00
50	T	3-Nitroaniline	1000.000	1100.837	-10.1	87	0.00
51	T	Acenaphthene	1000.000	1029.286	-2.9	77	0.00
52	T	2,4-Dinitrophenol	1000.000	1325.771	-32.6#	136	0.00
53	T	4-Nitrophenol	1000.000	1054.697	-5.5	86	0.00
54	T	2,4-Dinitrotoluene	1000.000	1212.731	-21.3#	98	0.00
55	T	Dibenzofuran	1000.000	1065.216	-6.5	81	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1245.599	-24.6#	95	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1181.753	-18.2	90	0.00
58	T	Diethyl phthalate	1000.000	1118.628	-11.9	81	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1095.085	-9.5	80	0.00
60	T	Fluorene	1000.000	1091.130	-9.1	81	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1098.458	-9.8	84	0.00
62	T	4-Nitroaniline	1000.000	1033.337	-3.3	87	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1466.205	-46.6#	142	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	83	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1076.863	-7.7	85	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1018.404	-1.8	78	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1278.193	-27.8#	100	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1077.231	-7.7	89	0.00
69	T	Hexachlorobenzene	1000.000	1124.506	-12.5	92	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1141.554	-14.2	97	0.00
71	T	Phenanthrene	1000.000	1037.373	-3.7	85	0.00
72	T	Anthracene	1000.000	1030.843	-3.1	84	0.00
73	T	Carbazole	1000.000	997.459	0.3	84	0.00
74	T	Di-n-butyl phthalate	1000.000	948.659	5.1	81	0.00
75	T	Fluoranthene	1000.000	1041.578	-4.2	87	0.00
76	T	Benzidine	2000.000	3126.656	-56.3#	163	0.00
77	T	Pyrene	1000.000	1062.717	-6.3	88	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	93	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1017.109	-1.7	92	0.00
80	T	Butyl benzyl phthalate	1000.000	873.410	12.7	80	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	793.290	20.7#	77	0.00
82	T	3,3-Dichlorobenzidine	2000.000	1654.558	17.3	77	0.00
83	T	Benz(a)anthracene	1000.000	984.762	1.5	95	0.00
84	T	Chrysene	1000.000	1021.323	-2.1	95	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	895.011	10.5	85	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	91	0.00
87	T	Di-n-octyl phthalate	1000.000	870.021	13.0	77	0.00
88	T	Benzo(b)fluoranthene	1000.000	1117.102	-11.7	98	0.00
89	T	Benzo(k)fluoranthene	1000.000	1164.380	-16.4	99	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2209.095	-10.5	98	0.00
91	T	Benzo(e)pyrene	1000.000	1098.188	-9.8	97	0.00
92	T	Benzo(a)pyrene	1000.000	1151.674	-15.2	99	0.00
93	T	Perylene	1000.000	1106.205	-10.6	99	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	98	0.00

Evaluate Continuing Calibration Report

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
95 T	Indeno(1,2,3-cd)pyrene	1000.000	1022.997	-2.3	102	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1038.645	-3.9	103	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1058.136	-5.8	99	0.00

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

No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	195478	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	759360	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	370169	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	699979	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	660584	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	572038	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.267	292	493894	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.623	112	126302	1036.40	ng/ml	-0.01
5) Phenol-d6(Surr)	6.468	99	166173	1019.41	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	148957	1019.17	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	284421	1033.15	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	33109	1278.19	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.228	244	313923	1017.11	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.387	74	91180	988.47	ng/ml	89
3) Pyridine	4.419	79	153241	1025.77	ng/ml	98
6) Phenol	6.478	94	172672	1010.93	ng/ml	96
7) Aniline	6.516	93	221893	996.91	ng/ml	98
8) Bis(2-chloroethyl) ether	6.564	93	134588	964.04	ng/ml	98
9) 2-Chlorophenol	6.633	128	134317	1050.14	ng/ml	99
10) 1,3-Dichlorobenzene	6.778	146	148625	1016.52	ng/ml	96
11) 1,4-Dichlorobenzene	6.847	146	151060	1022.55	ng/ml	98
12) Benzyl alcohol	6.954	108	76198	940.63	ng/ml	94
13) 1,2-Dichlorobenzene	6.997	146	142413	1017.72	ng/ml	98
14) 2-Methylphenol	7.056	107	110737	1041.03	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.077	45	231707	1046.61	ng/ml	98
16) N-Nitrosodi-n-propylamine	7.206	70	107269	1025.07	ng/ml	96
17) 3+4-Methylphenol	7.200	107	141440	1052.66	ng/ml	94
18) Hexachloroethane	7.323	117	54823	1005.28	ng/ml	84
20) Nitrobenzene	7.382	77	148699	1053.42	ng/ml	92
22) Isophorone	7.607	82	266807	1029.53	ng/ml	97
23) 2-Nitrophenol	7.698	139	67738	1187.35	ng/ml	86
24) 2,4-Dimethylphenol	7.725	122	117152	1030.98	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.810	93	163039	999.90	ng/ml	99
26) Benzoic acid	7.810	105	77954	2113.40	ng/ml	94
27) 2,4-Dichlorophenol	7.933	162	98264	1115.97	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.019	180	110528	1047.78	ng/ml	96
29) Naphthalene	8.099	128	406283	1002.95	ng/ml	99
30) 4-Chloroaniline	8.142	127	141291	1012.76	ng/ml	98
31) Hexachlorobutadiene	8.222	225	56555	1097.65	ng/ml	98
32) 4-Chloro-3-methylphenol	8.618	107	104732	1081.02	ng/ml	97
33) 2-Methylnaphthalene	8.789	142	268444	1053.52	ng/ml	97
34) 1-Methylnaphthalene	8.891	142	254853	1044.42	ng/ml	96
36) Hexachlorocyclopentadiene	8.955	237	61529	1295.78	ng/ml	97
37) 2,4,6-Trichlorophenol	9.072	196	65131	1165.49	ng/ml	99
38) 2,4,5-Trichlorophenol	9.110	196	67944	1164.95	ng/ml	97
39) 1,1'-Biphenyl	9.260	154	322271	1017.65	ng/ml	98
41) 2-Chloronaphthalene	9.286	162	233447	1021.03	ng/ml	98
42) 2-Nitroaniline	9.383	138	78710	1120.61	ng/ml	90
43) 2,6-Dimethylnaphthalene	9.420	156	229591	1037.70	ng/ml	96

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

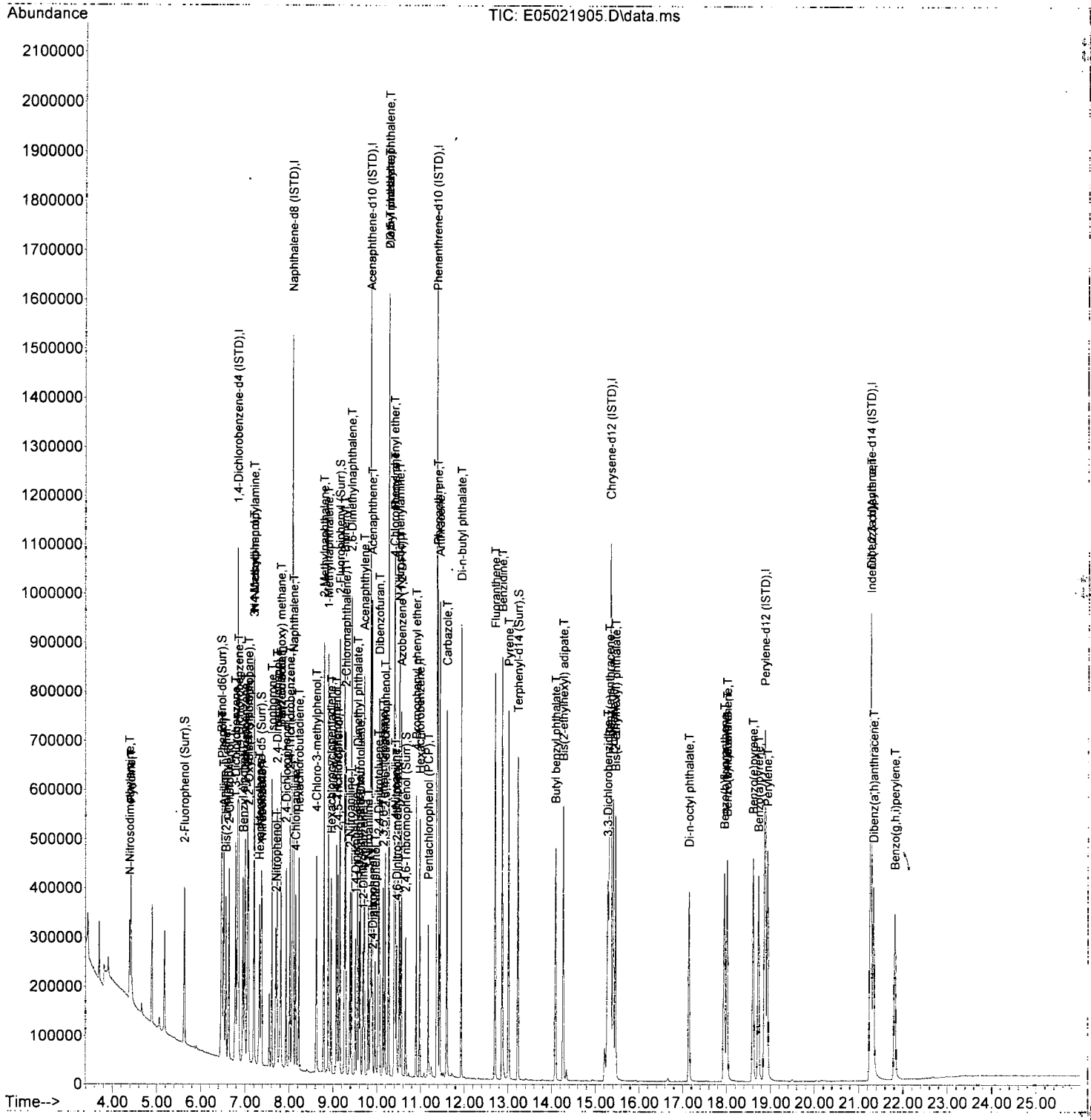
Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.511	168	36864	1338.61	ng/ml	86
45) Dimethyl phthalate	9.559	163	260069	1094.69	ng/ml	100
46) 1,3-Dinitrobenzene	9.591	168	43463	1241.77	ng/ml	92
47) 2,6-Dinitrotoluene	9.618	165	62110	1189.12	ng/ml	86
48) 1,2-Dinitrobenzene	9.682	168	29055	1233.87	ng/ml#	68
49) Acenaphthylene	9.709	152	381920	1059.22	ng/ml	99
50) 3-Nitroaniline	9.800	138	66122	1100.84	ng/ml	95
51) Acenaphthene	9.885	153	251647	1029.29	ng/ml	100
52) 2,4-Dinitrophenol	9.901	184	19427	1325.77	ng/ml	85
53) 4-Nitrophenol	9.960	139	47469	1054.70	ng/ml	82
54) 2,4-Dinitrotoluene	10.035	165	81610	1212.73	ng/ml	84
55) Dibenzofuran	10.057	168	338574	1065.22	ng/ml	91
56) 2,3,5,6-Tetrachlorophenol	10.142	232	54270	1245.60	ng/ml	90
57) 2,3,4,6-Tetrachlorophenol	10.185	232	58058	1181.75	ng/ml	92
58) Diethyl phthalate	10.270	149	265596	1118.63	ng/ml	95
59) 2,3,5-Trimethylnaphtha...	10.270	170	215972	1095.09	ng/ml	95
60) Fluorene	10.410	166	277692	1091.13	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.399	204	123782	1098.46	ng/ml	86
62) 4-Nitroaniline	10.420	138	69411	1033.34	ng/ml	80
63) 4,6-Dinitro-2-methylph...	10.452	198	36418	1466.21	ng/ml	84
65) N-Nitrosodiphenylamine	10.517	169	238129	1076.86	ng/ml	97
66) Azobenzene (1,2-DPH)	10.559	77	307694	1018.40	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.896	248	69760	1077.23	ng/ml	88
69) Hexachlorobenzene	10.982	284	73255	1124.51	ng/ml	93
70) Pentachlorophenol (PCP)	11.174	266	37124	1141.55	ng/ml	97
71) Phenanthrene	11.388	178	398552	1037.37	ng/ml	99
72) Anthracene	11.442	178	406350	1030.84	ng/ml	98
73) Carbazole	11.602	167	368151	997.46	ng/ml	98
74) Di-n-butyl phthalate	11.934	149	438107	948.66	ng/ml	99
75) Fluoranthene	12.704	202	415084	1041.58	ng/ml	98
76) Benzidine	12.865	184	441497	3126.66	ng/ml	98
77) Pyrene	13.014	202	430212	1062.72	ng/ml	99
80) Butyl benzyl phthalate	14.089	149	168760	873.41	ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.266	129	152529	793.29	ng/ml	99
82) 3,3-Dichlorobenzidine	15.282	252	179374	1654.56	ng/ml	96
83) Benz(a)anthracene	15.320	228	366934	984.76	ng/ml	98
84) Chrysene	15.405	228	362533	1021.32	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.464	149	247138	895.01	ng/ml	96
87) Di-n-octyl phthalate	17.143	149	324150	870.02	ng/ml	98
88) Benzo(b)fluoranthene	17.946	252	337612	1117.10	ng/ml	99
89) Benzo(k)fluoranthene	18.015	252	345836	1164.38	ng/ml	99
90) Benzo(b+k)fluoranthene	18.015	252	701148	2209.09	ng/ml	99
91) Benzo(e)pyrene	18.604	252	336967	1098.19	ng/ml	99
92) Benzo(a)pyrene	18.727	252	316023	1151.67	ng/ml	100
93) Perylene	18.930	252	346934	1106.21	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.273	276	276937	1023.00	ng/ml	99
96) Dibenz(a,h)anthracene	21.331	278	257494	1038.64	ng/ml	98
97) Benzo(g,h,i)perylene	21.813	276	282012	1058.14	ng/ml	84

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

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021905.D
Acq On : 2 May 2019 10:32 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCV1
Misc : 1x, A1C237@1000
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:02:30 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021906.D
Acq On : 2 May 2019 11:08 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 13:02:56 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	193492	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.077	136	749259	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	350014	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	594356	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.341	240	555260	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	467158	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	387527	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)	7.361	82	187	1.29	ng/ml	0.00
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	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	7.024	108	85	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	7.157	70	146	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.601	82	139	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	8.099	128	98	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.		

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Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021906.D
Acq On : 2 May 2019 11:08 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

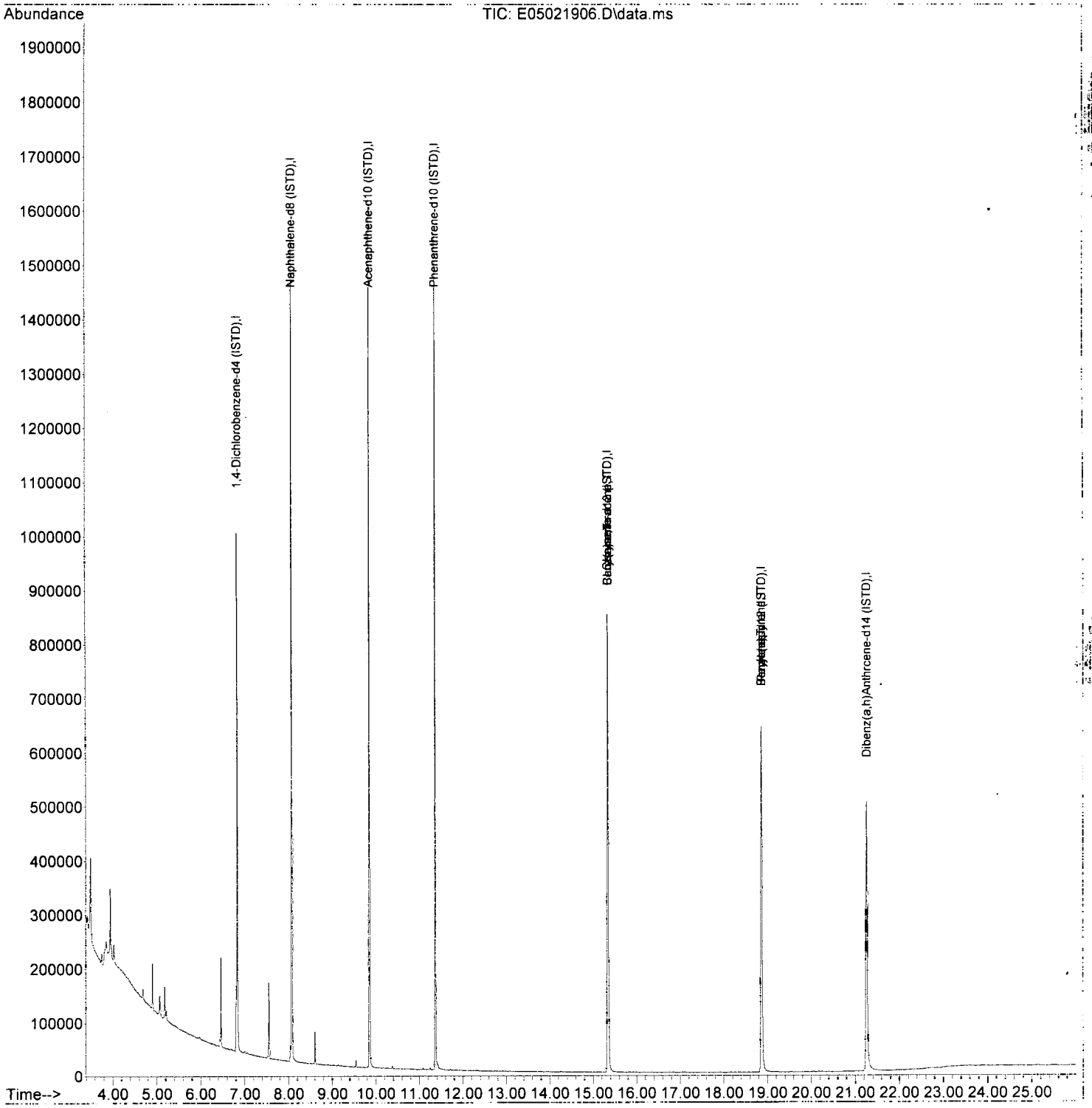
Quant Time: May 02 13:02:56 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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	0.000		0	N.D.	
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	0.000		0	N.D.	
71) Phenanthrene	11.367	178	239	N.D.	
72) Anthracene	11.367	178	239	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.939	149	65	N.D.	
75) Fluoranthene	0.000		0	N.D.	
76) Benzidine	0.000		0	N.D.	
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.261	129	392	N.D.	
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.346	228	1359	4.34 ng/ml	63
84) Chrysene	15.346	228	1359	4.55 ng/ml	61
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	18.866	252	1585	6.33 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.866	252	1585	6.19 ng/ml#	60
95) Indeno(1,2,3-cd)pyrene	21.257	276	124	N.D.	
96) Dibenz(a,h)anthracene	21.257	278	75	N.D.	
97) Benzo(g,h,i)perylene	0.000		0	N.D.	

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

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021906.D
Acq On : 2 May 2019 11:08 am
Operator : JK/ AMS /DTH
Sample : 9E02011-CCB1
Misc : 1x, DCM + ISTD
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:02:56 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



No Name Entered Quantitation Report (Not Reviewed)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021908.D
Acq On : 2 May 2019 12:33 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP2@4
Misc : 4x, Last ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

AMS 5/2/19

Quant Time: May 02 13:03:22 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.831	152	185579	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.078	136	729262	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.853	162	335546	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.367	188	639987	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.346	240	659729	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.871	264	568353	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.262	292	457229	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	36170	312.63	ng/ml	0.00
5) Phenol-d6(Surr)	6.468	99	51752	334.41	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.361	82	43192	311.28	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.153	172	97703	391.52	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.656	330	11218	504.85	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.223	244	156449	507.55	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.382	74	50	N.D.		
3) Pyridine	4.494	79	1143	8.06	ng/ml#	1
6) Phenol	6.478	94	896	5.53	ng/ml#	1
7) Aniline	6.505	93	633	3.00	ng/ml	85
8) Bis(2-chloroethyl) ether	6.505	93	633	4.78	ng/ml#	22
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	6.831	146	50	N.D.		
11) 1,4-Dichlorobenzene	6.831	146	50	N.D.		
12) Benzyl alcohol	6.960	108	1774	23.07	ng/ml	99
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	7.077	107	288	2.85	ng/ml#	40
15) 2,2'-Oxybis(1-Chloropr...	7.077	45	228	N.D.		
16) N-Nitrosodi-n-propylamine	7.195	70	57	N.D.		
17) 3+4-Methylphenol	7.211	107	914	7.17	ng/ml#	76
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.361	77	273	N.D.		
22) Isophorone	7.607	82	115	N.D.		
23) 2-Nitrophenol	0.000		0	N.D.		
24) 2,4-Dimethylphenol	7.730	122	174	N.D.		
25) Bis(2-chloroethoxy) me...	0.000		0	N.D.		
26) Benzoic acid	7.821	105	163	401.78	ng/ml#	53
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	8.099	128	1132	2.91	ng/ml	96
30) 4-Chloroaniline	8.099	127	143	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.629	107	299	29.80	ng/ml#	1
33) 2-Methylnaphthalene	8.789	142	645	2.64	ng/ml	98
34) 1-Methylnaphthalene	8.896	142	403	N.D.		
36) Hexachlorocyclopentadiene	0.000		0	N.D.		
37) 2,4,6-Trichlorophenol	9.078	196	77	12.63	ng/ml#	44
38) 2,4,5-Trichlorophenol	9.078	196	77	12.80	ng/ml#	44
39) 1,1'-Biphenyl	9.260	154	411	N.D.		
41) 2-Chloronaphthalene	0.000		0	N.D.		
42) 2-Nitroaniline	9.303	138	192	57.11	ng/ml#	65
43) 2,6-Dimethylnaphthalene	9.420	156	800	3.99	ng/ml	90

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021908.D
Acq On : 2 May 2019 12:33 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP2@4
Misc : 4x, Last ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:03:22 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5

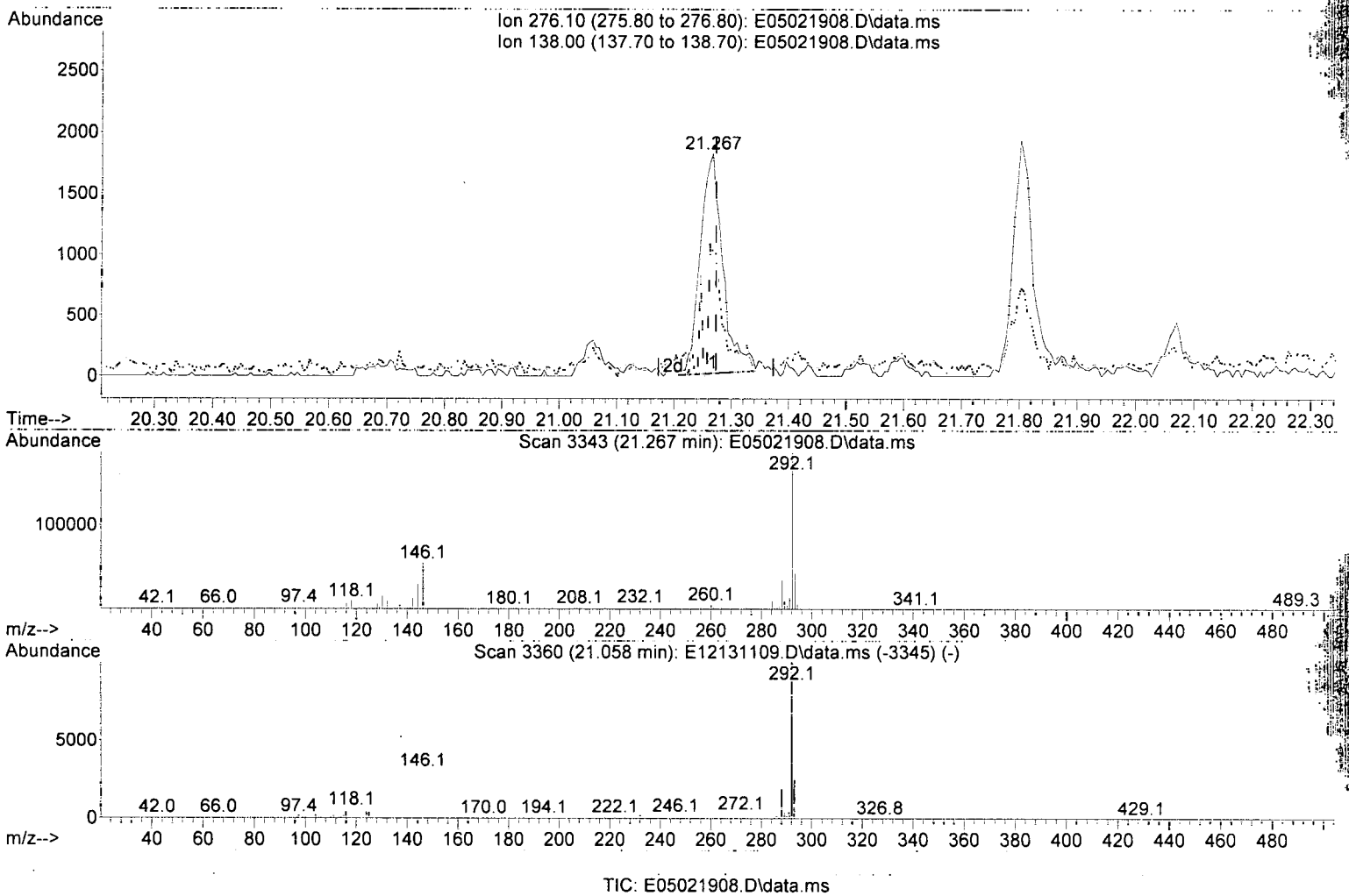
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	9.559	163	126	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	9.704	152	496	N.D.		
50) 3-Nitroaniline	9.762	138	77	30.55	ng/ml#	40
51) Acenaphthene	9.880	153	487	N.D.		
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	10.003	139	95	67.87	ng/ml#	33
54) 2,4-Dinitrotoluene	10.025	165	163	63.65	ng/ml#	15
55) Dibenzofuran	10.057	168	358	N.D.		
56) 2,3,5,6-Tetrachlorophenol	10.180	232	89	38.24	ng/ml#	52
57) 2,3,4,6-Tetrachlorophenol	10.180	232	89	25.40	ng/ml#	42
58) Diethyl phthalate	10.265	149	232	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.265	170	564	3.15	ng/ml	85
60) Fluorene	10.410	166	572	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	10.511	169	424	N.D.		
66) Azobenzene (1,2-DPH)	10.570	77	84	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.175	266	263	78.79	ng/ml#	74
71) Phenanthrene	11.388	178	4847	13.80	ng/ml	97
72) Anthracene	11.442	178	1325	3.68	ng/ml	92
73) Carbazole	11.602	167	971	2.88	ng/ml	84
74) Di-n-butyl phthalate	11.934	149	917	N.D.		
75) Fluoranthene	12.704	202	12223	33.55	ng/ml	97
76) Benzidine	0.000		0	N.D.		
77) Pyrene	13.014	202	12532	33.86	ng/ml	98
80) Butyl benzyl phthalate	14.084	149	829	4.30	ng/ml	83
81) Bis(2-ethylhexyl) adipate	14.266	129	1356	7.06	ng/ml	76
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.320	228	8093	21.75	ng/ml	94
84) Chrysene	15.395	228	9088	25.64	ng/ml	96
85) Bis(2-ethylhexyl) phth...	15.464	149	2807	10.18	ng/ml	91
87) Di-n-octyl phthalate	17.144	149	148	31.07	ng/ml#	1
88) Benzo(b)fluoranthene	17.941	252	10358	34.50	ng/ml	94
89) Benzo(k)fluoranthene	18.010	252	2957	10.02	ng/ml	89
90) Benzo(b+k)fluoranthene	17.941	252	14808	46.96	ng/ml	94
91) Benzo(e)pyrene	18.593	252	6424	21.07	ng/ml	85
92) Benzo(a)pyrene	18.716	252	6056	22.21	ng/ml	99
93) Perylene	18.925	252	9433	30.27	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.267	276	4978	19.86	ng/ml	55
96) Dibenz(a,h)anthracene	21.326	278	1144	4.98	ng/ml#	38
97) Benzo(g,h,i)perylene	21.802	276	4609	18.68	ng/ml	93

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

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021908.D
Acq On : 2 May 2019 12:33 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP2@4
Misc : 4x, Last ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:03:22 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05021908.D\data.ms

(95) Indeno(1,2,3-cd)pyrene (T)

21.267min (-0.005) 19.86 ng/ml

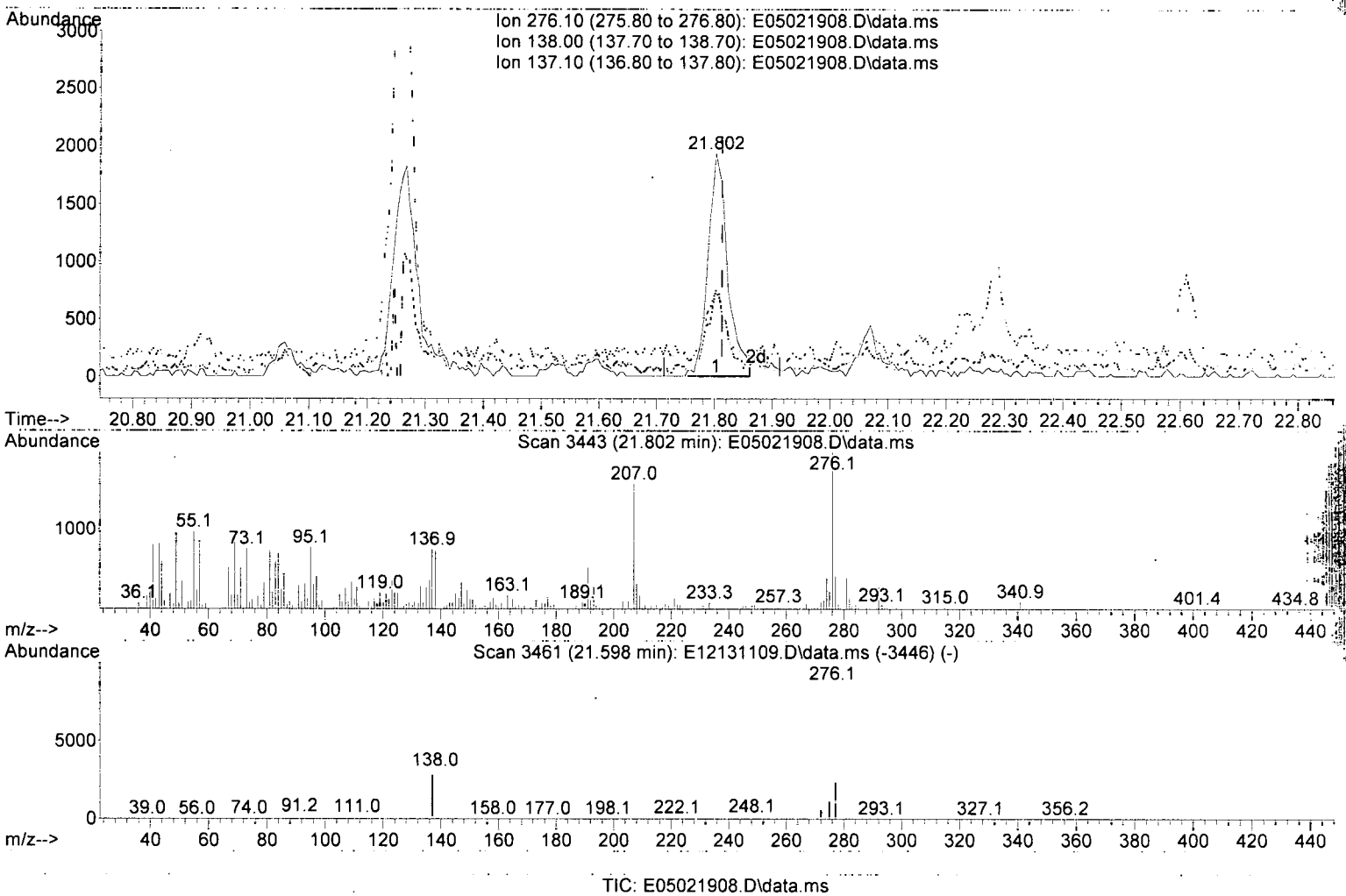
response 4978

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	30.90	55.69
0.00	0.00	0.00
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021908.D
Acq On : 2 May 2019 12:33 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP2@4
Misc : 4x, Last ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:03:22 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E05021908.D\data.ms

(97) Benzo(g,h,i)perylene (T)

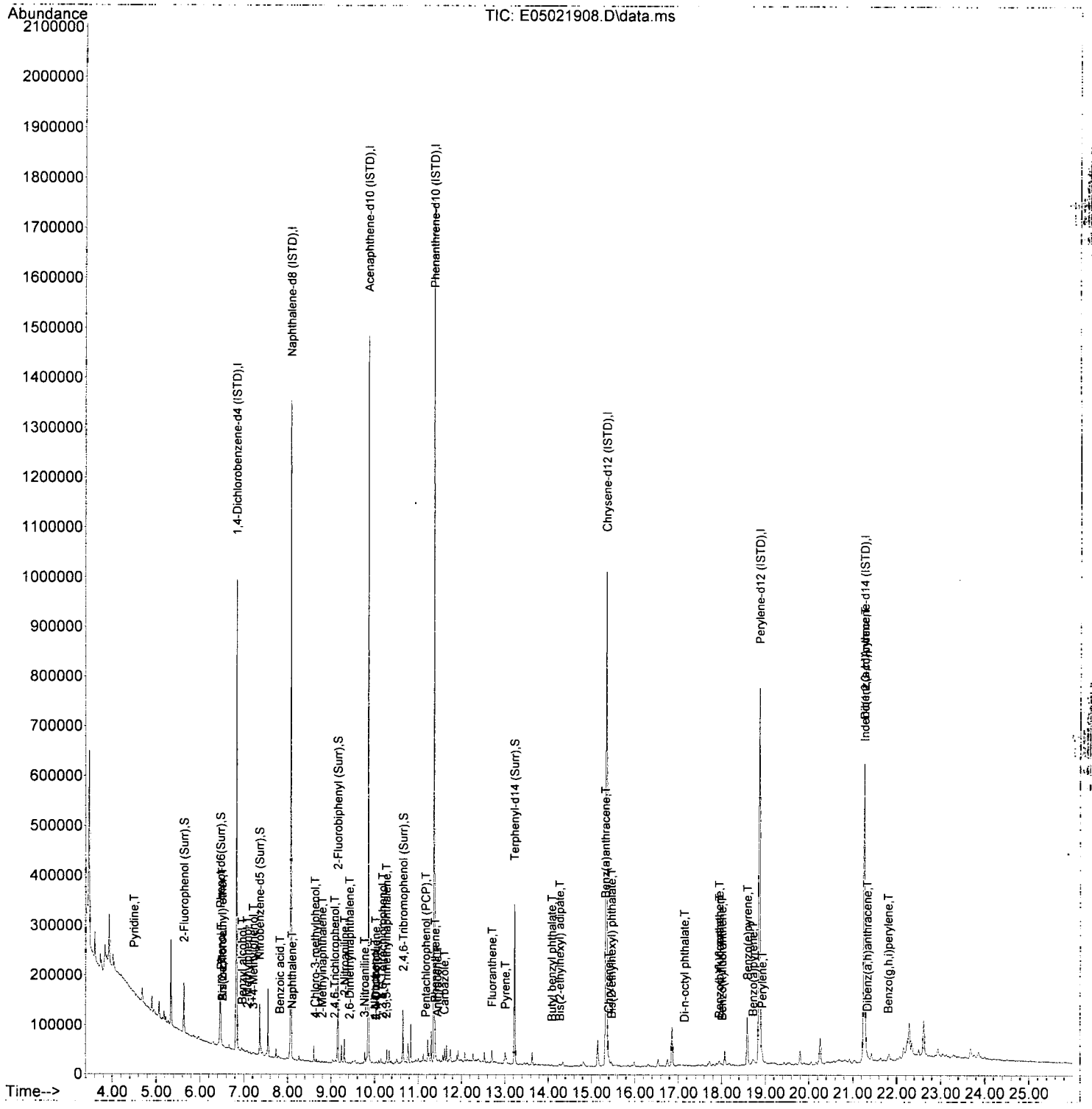
21.802min (-0.011) 18.68 ng/ml

response 4609

Ion	Exp%	Act%
276.10	100.00	100.00
138.00	45.90	37.67
137.10	39.00	38.70
0.00	0.00	0.00

Data Path : W:\DATA\2019-05\9E02011\
Data File : E05021908.D
Acq On : 2 May 2019 12:33 pm
Operator : JK/ AMS /DTH
Sample : 9050375-DUP2@4
Misc : 4x, Last ISTD
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: May 02 13:03:22 2019
Quant Method : W:\METHODS\SV5_013019R2.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 29 09:47:43 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Calibration Data

Sequence 9A30046 (Cal ID A9A3103) GCMS5

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9A30046**	Instrument:	**SV-GCMS5**
Date:	**01/30/19 16:37**	Calibration:	**A9A3103**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9A30046-TUN1	Water	QC	QC			A18L267	A19A180
2	9A30046-TUN2	Water	QC	QC			A18L267	A19A180
3	9A30046-ICB1	Water	QC	QC			A18L267	
4	9A30046-CAL1	Water	QC	QC			A18L267	A18L327
5	9A30046-CAL2	Water	QC	QC			A18L267	A18L328
6	9A30046-CAL3	Water	QC	QC			A18L267	A18L329
7	9A30046-CAL4	Water	QC	QC			A18L267	A18L330
8	9A30046-CAL5	Water	QC	QC			A18L267	A18L331
9	9A30046-CAL6	Water	QC	QC			A18L267	A18L332
10	9A30046-CAL7	Water	QC	QC			A18L267	A18L333
11	9A30046-CAL8	Water	QC	QC			A18L267	A18L334
12	9A30046-CAL9	Water	QC	QC			A18L267	A18L335
13	9A30046-CALA	Water	QC	QC			A18L267	A18L336
14	9A30046-IBL1	Water	QC	QC			A18L267	
15	9A30046-ICV1	Water	QC	QC			A18L267	A19A013
16	9A30046-IBL2	Water	QC	QC			A18L267	

Data Entered By: 1/31/19

Data Reviewed By: 2/1/19

Comments:

Calibration Status Report SV-GCMS5

Method Path : C:\msdchem\1\METHODS\
Method File : SV5_013019.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu Jan 31 10:44:49 2019
Response Via : Initial Calibration

A 9A3103

1/31/19

#	ID	Conc	ISTD Conc	Path\File
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2	50	50	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301915.D
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5	500	500	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301918.D
6	1000	1000	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301919.D
7	2000	2000	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301920.D
8	4000	4000	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301921.D
9	6000	6000	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301922.D
10	8000	8000	2000	C:\msdchem\1\DATA\2019-01\9A30046\E01301923.D

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1	20	Jan 31 10:43 2019	Jan 31 09:52 2019	30 Jan 2019 7:00 pm
2	50	Jan 31 10:44 2019	Jan 31 10:31 2019	30 Jan 2019 7:37 pm
3	100	Jan 31 10:44 2019	Jan 31 10:32 2019	30 Jan 2019 8:13 pm
4	200	Jan 31 10:44 2019	Jan 31 10:33 2019	30 Jan 2019 8:50 pm
5	500	Jan 31 10:44 2019	Jan 31 09:53 2019	30 Jan 2019 9:26 pm
6	1000	Jan 31 10:44 2019	Jan 31 09:53 2019	30 Jan 2019 10:02 pm
7	2000	Jan 31 10:44 2019	Jan 31 09:53 2019	30 Jan 2019 10:39 pm
8	4000	Jan 31 10:44 2019	Jan 31 10:36 2019	30 Jan 2019 11:15 pm
9	6000	Jan 31 10:44 2019	Jan 31 10:37 2019	30 Jan 2019 11:51 pm
10	8000	Jan 31 10:44 2019	Jan 31 10:38 2019	31 Jan 2019 12:28 am

SV5_013019.M Thu Jan 31 11:58:46 2019

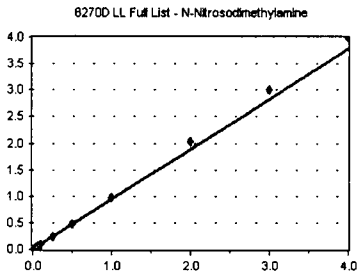
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

N-Nitrosodimethylamine

Curve Fit: **AVERAGE RF**

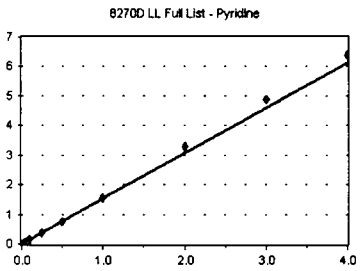


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2349	0.878	4.40
9A30046-CAL2	50	5969	0.849	4.41
9A30046-CAL3	100	12079	0.880	4.40
9A30046-CAL4	200	26607	0.915	4.39
9A30046-CAL5	500	68738	0.975	4.39
9A30046-CAL6	1000	136572	0.954	4.39
9A30046-CAL7	2000	276378	0.976	4.38
9A30046-CAL8	4000	561142	1.013	4.38
9A30046-CAL9	6000	871542	1.000	4.39
9A30046-CALA	8000	1122619	0.999	4.39

AVE RF **0.944** RF RSD **6.24** AVE RT **4.39**

Pyridine

Curve Fit: **AVERAGE RF**

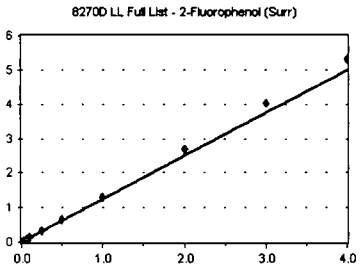


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~2510~~	~~0.938~~	~~4.47~~
9A30046-CAL2	50	9139	1.300	4.46
9A30046-CAL3	100	19576	1.427	4.45
9A30046-CAL4	200	42897	1.475	4.44
9A30046-CAL5	500	111106	1.575	4.43
9A30046-CAL6	1000	220078	1.537	4.43
9A30046-CAL7	2000	442924	1.564	4.42
9A30046-CAL8	4000	916259	1.654	4.41
9A30046-CAL9	6000	1414684	1.623	4.42
9A30046-CALA	8000	1799769	1.602	4.42

AVE RF **1.528** RF RSD **7.27** AVE RT **4.43**

2-Fluorophenol (Surr)

Curve Fit: **AVERAGE RF**

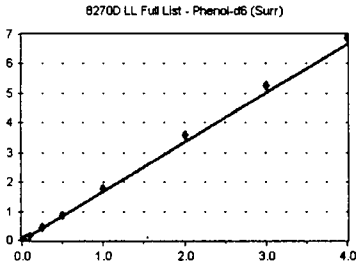


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2703	1.010	5.63
9A30046-CAL2	50	7768	1.105	5.63
9A30046-CAL3	100	16374	1.193	5.63
9A30046-CAL4	200	35753	1.229	5.63
9A30046-CAL5	500	92637	1.313	5.63
9A30046-CAL6	1000	186079	1.299	5.63
9A30046-CAL7	2000	365609	1.291	5.63
9A30046-CAL8	4000	749425	1.352	5.63
9A30046-CAL9	6000	1170363	1.343	5.63
9A30046-CALA	8000	1496600	1.332	5.63

AVE RF **1.247** RF RSD **9.11** AVE RT **5.63**

Phenol-d6 (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3503	1.309	6.48
9A30046-CAL2	50	10982	1.562	6.47
9A30046-CAL3	100	22782	1.661	6.47
9A30046-CAL4	200	47985	1.650	6.47
9A30046-CAL5	500	124633	1.767	6.47
9A30046-CAL6	1000	244299	1.706	6.47
9A30046-CAL7	2000	498621	1.761	6.48
9A30046-CAL8	4000	994097	1.794	6.48
9A30046-CAL9	6000	1526449	1.752	6.48
9A30046-CALA	8000	1930075	1.718	6.50

AVE RF **1.668** RF RSD **8.62** AVE RT **6.48**

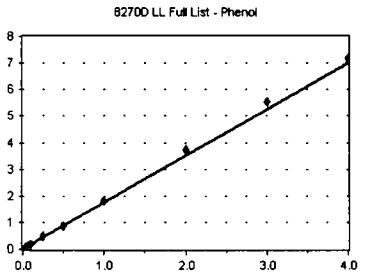
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Phenol

Curve Fit: **AVERAGE RF**

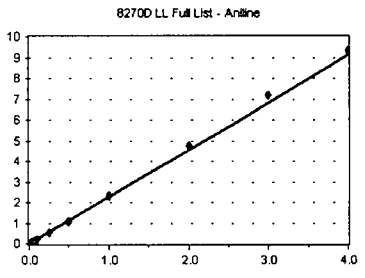


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3623	1.353	6.49
9A30046-CAL2	50	11772	1.675	6.49
9A30046-CAL3	100	24600	1.793	6.48
9A30046-CAL4	200	50967	1.752	6.48
9A30046-CAL5	500	128306	1.819	6.48
9A30046-CAL6	1000	252632	1.764	6.49
9A30046-CAL7	2000	512010	1.808	6.49
9A30046-CAL8	4000	1035475	1.869	6.49
9A30046-CAL9	6000	1606385	1.843	6.50
9A30046-CALA	8000	2021684	1.799	6.51

AVE RF **1.748** RF RSD **8.49** AVE RT **6.49**

Aniline

Curve Fit: **AVERAGE RF**

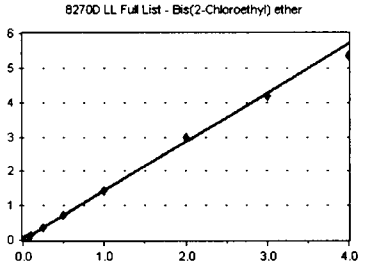


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~4076~~	~~1.523~~	~~6.53~~
9A30046-CAL2	50	15128	2.152	6.53
9A30046-CAL3	100	30756	2.242	6.53
9A30046-CAL4	200	63650	2.188	6.53
9A30046-CAL5	500	159299	2.259	6.53
9A30046-CAL6	1000	316926	2.213	6.53
9A30046-CAL7	2000	658664	2.326	6.53
9A30046-CAL8	4000	1318849	2.380	6.54
9A30046-CAL9	6000	2085810	2.394	6.54
9A30046-CALA	8000	2632489	2.343	6.55

AVE RF **2.277** RF RSD **3.81** AVE RT **6.53**

Bis(2-Chloroethyl) ether

Curve Fit: **AVERAGE RF**

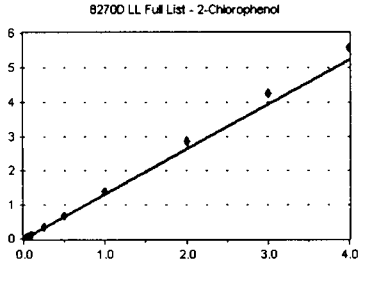


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3961	1.480	6.58
9A30046-CAL2	50	9806	1.395	6.58
9A30046-CAL3	100	18886	1.377	6.58
9A30046-CAL4	200	42294	1.454	6.58
9A30046-CAL5	500	105210	1.492	6.58
9A30046-CAL6	1000	205585	1.435	6.58
9A30046-CAL7	2000	405853	1.433	6.58
9A30046-CAL8	4000	824988	1.489	6.59
9A30046-CAL9	6000	1215843	1.395	6.59
9A30046-CALA	8000	1499102	1.334	6.60

AVE RF **1.428** RF RSD **3.68** AVE RT **6.58**

2-Chlorophenol

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2671	0.998	6.65
9A30046-CAL2	50	8358	1.189	6.65
9A30046-CAL3	100	17282	1.260	6.65
9A30046-CAL4	200	37904	1.303	6.64
9A30046-CAL5	500	97220	1.378	6.64
9A30046-CAL6	1000	192879	1.347	6.65
9A30046-CAL7	2000	391006	1.381	6.65
9A30046-CAL8	4000	789250	1.424	6.65
9A30046-CAL9	6000	1233532	1.416	6.66
9A30046-CALA	8000	1563047	1.391	6.66

AVE RF **1.309** RF RSD **10.08** AVE RT **6.65**

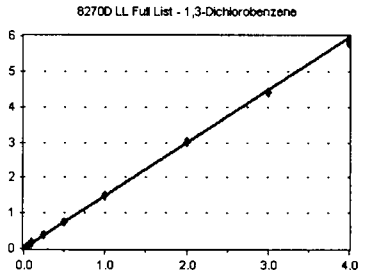
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**

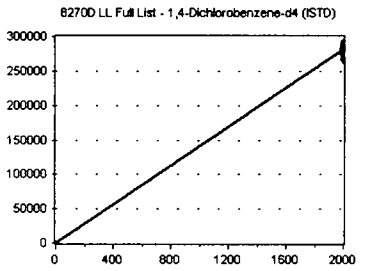


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3951	1.476	6.80
9A30046-CAL2	50	10651	1.515	6.80
9A30046-CAL3	100	20846	1.519	6.80
9A30046-CAL4	200	44104	1.516	6.79
9A30046-CAL5	500	108871	1.544	6.79
9A30046-CAL6	1000	212750	1.485	6.80
9A30046-CAL7	2000	418520	1.478	6.80
9A30046-CAL8	4000	831375	1.500	6.80
9A30046-CAL9	6000	1285655	1.475	6.80
9A30046-CALA	8000	1629041	1.450	6.81

AVE RF **1.496** RF RSD **1.87** AVE RT **6.80**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

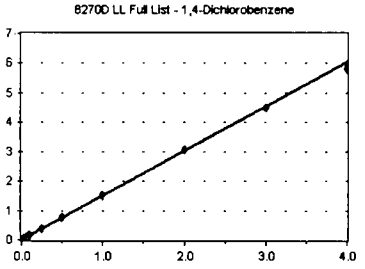


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	267680	133.840	6.85
9A30046-CAL2	2000	281181	140.590	6.85
9A30046-CAL3	2000	274393	137.196	6.85
9A30046-CAL4	2000	290867	145.434	6.85
9A30046-CAL5	2000	282130	141.065	6.85
9A30046-CAL6	2000	286436	143.218	6.85
9A30046-CAL7	2000	283178	141.589	6.85
9A30046-CAL8	2000	277065	138.533	6.85
9A30046-CAL9	2000	290473	145.236	6.85
9A30046-CALA	2000	280934	140.467	6.85

AVE RF **140.717** RF RSD **2.53** AVE RT **6.85**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**

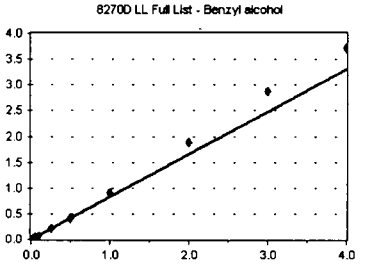


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3880	1.449	6.86
9A30046-CAL2	50	10515	1.496	6.86
9A30046-CAL3	100	21382	1.558	6.86
9A30046-CAL4	200	44829	1.541	6.86
9A30046-CAL5	500	111060	1.575	6.86
9A30046-CAL6	1000	215651	1.506	6.86
9A30046-CAL7	2000	426556	1.506	6.86
9A30046-CAL8	4000	845971	1.527	6.86
9A30046-CAL9	6000	1303668	1.496	6.86
9A30046-CALA	8000	1640871	1.460	6.87

AVE RF **1.511** RF RSD **2.64** AVE RT **6.86**

Benzyl alcohol

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~1088~~	~~0.406~~	~~6.97~~
9A30046-CAL2	50	4308	0.613	6.97
9A30046-CAL3	100	9554	0.696	6.97
9A30046-CAL4	200	21731	0.747	6.97
9A30046-CAL5	500	59139	0.838	6.97
9A30046-CAL6	1000	119831	0.837	6.97
9A30046-CAL7	2000	255452	0.902	6.97
9A30046-CAL8	4000	520771	0.940	6.97
9A30046-CAL9	6000	832173	0.955	6.98
9A30046-CALA	8000	1046185	0.931	6.99

AVE RF **0.829** RF RSD **14.47** AVE RT **6.97**

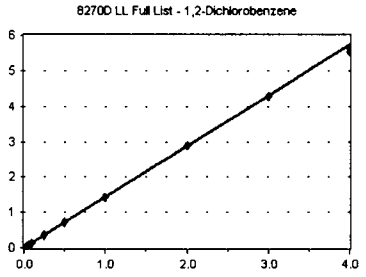
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

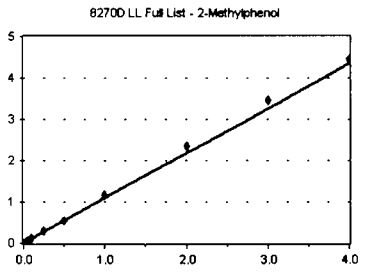


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3694	1.380	7.01
9A30046-CAL2	50	10083	1.434	7.01
9A30046-CAL3	100	20256	1.476	7.01
9A30046-CAL4	200	42117	1.448	7.01
9A30046-CAL5	500	104161	1.477	7.01
9A30046-CAL6	1000	203885	1.424	7.01
9A30046-CAL7	2000	401451	1.418	7.01
9A30046-CAL8	4000	802569	1.448	7.01
9A30046-CAL9	6000	1239034	1.422	7.01
9A30046-CALA	8000	1561940	1.390	7.02

AVE RF **1.432** RF RSD **2.25** AVE RT **7.01**

2-Methylphenol

Curve Fit: **AVERAGE RF**

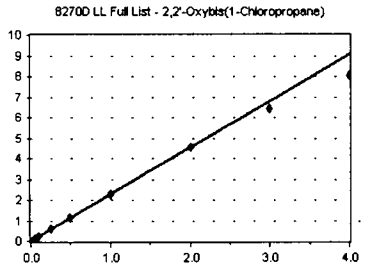


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2376	0.888	7.07
9A30046-CAL2	50	6847	0.974	7.07
9A30046-CAL3	100	14811	1.080	7.07
9A30046-CAL4	200	31237	1.074	7.06
9A30046-CAL5	500	81540	1.156	7.07
9A30046-CAL6	1000	158539	1.107	7.07
9A30046-CAL7	2000	326863	1.154	7.07
9A30046-CAL8	4000	654892	1.182	7.07
9A30046-CAL9	6000	1006886	1.155	7.07
9A30046-CALA	8000	1251343	1.114	7.08

AVE RF **1.088** RF RSD **8.49** AVE RT **7.07**

2,2'-Oxybis(1-Chloropropane)

Curve Fit: **AVERAGE RF**

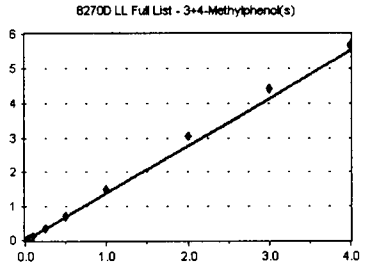


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5888	2.200	7.10
9A30046-CAL2	50	16784	2.388	7.10
9A30046-CAL3	100	32803	2.391	7.09
9A30046-CAL4	200	67804	2.331	7.09
9A30046-CAL5	500	168498	2.389	7.09
9A30046-CAL6	1000	325929	2.276	7.10
9A30046-CAL7	2000	642111	2.268	7.10
9A30046-CAL8	4000	1253005	2.261	7.10
9A30046-CAL9	6000	1862706	2.138	7.10
9A30046-CALA	8000	2259312	2.011	7.10

AVE RF **2.265** RF RSD **5.43** AVE RT **7.10**

3+4-Methylphenol(s)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2797	1.045	7.21
9A30046-CAL2	50	8837	1.257	7.21
9A30046-CAL3	100	18073	1.317	7.21
9A30046-CAL4	200	38619	1.328	7.21
9A30046-CAL5	500	104697	1.484	7.21
9A30046-CAL6	1000	201525	1.407	7.21
9A30046-CAL7	2000	423242	1.495	7.22
9A30046-CAL8	4000	845995	1.527	7.22
9A30046-CAL9	6000	1282429	1.472	7.23
9A30046-CALA	8000	1590888	1.416	7.24

AVE RF **1.375** RF RSD **10.56** AVE RT **7.22**

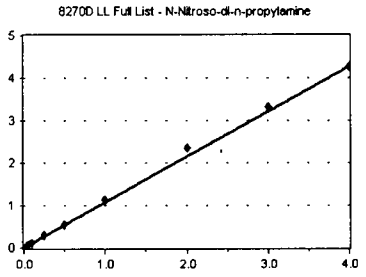
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

N-Nitroso-di-n-propylamine

Curve Fit: **AVERAGE RF**

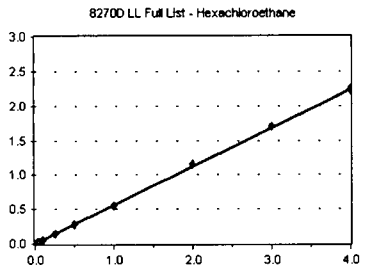


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2415	0.902	7.22
9A30046-CAL2	50	6849	0.974	7.22
9A30046-CAL3	100	14289	1.041	7.22
9A30046-CAL4	200	30932	1.063	7.22
9A30046-CAL5	500	81082	1.150	7.22
9A30046-CAL6	1000	155529	1.086	7.22
9A30046-CAL7	2000	323691	1.143	7.23
9A30046-CAL8	4000	649377	1.172	7.23
9A30046-CAL9	6000	964528	1.107	7.24
9A30046-CALA	8000	1199931	1.068	7.25

AVE RF **1.071** RF RSD **7.74** AVE RT **7.23**

Hexachloroethane

Curve Fit: **AVERAGE RF**

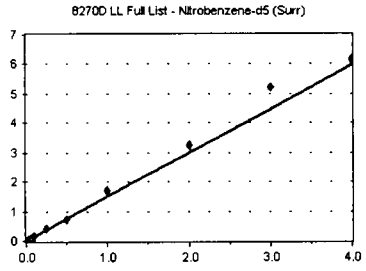


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	1366	0.510	7.35
9A30046-CAL2	50	3855	0.548	7.35
9A30046-CAL3	100	7837	0.571	7.35
9A30046-CAL4	200	16252	0.559	7.35
9A30046-CAL5	500	40316	0.572	7.35
9A30046-CAL6	1000	80048	0.559	7.35
9A30046-CAL7	2000	158301	0.559	7.35
9A30046-CAL8	4000	319170	0.576	7.35
9A30046-CAL9	6000	494803	0.568	7.35
9A30046-CALA	8000	626658	0.558	7.35

AVE RF **0.558** RF RSD **3.35** AVE RT **7.35**

Nitrobenzene-d5 (Surr)

Curve Fit: **AVERAGE RF**

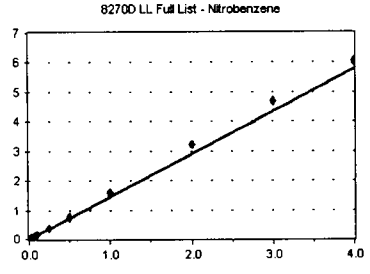


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~3003~~	~~1.122~~	~~7.38~~
9A30046-CAL2	50	7789	1.108	7.38
9A30046-CAL3	100	17308	1.262	7.38
9A30046-CAL4	200	38942	1.339	7.38
9A30046-CAL5	500	116738	1.655	7.38
9A30046-CAL6	1000	210602	1.471	7.38
9A30046-CAL7	2000	486300	1.717	7.38
9A30046-CAL8	4000	903192	1.630	7.38
9A30046-CAL9	6000	1512631	1.736	7.39
9A30046-CALA	8000	1731910	1.541	7.39

AVE RF **1.495** RF RSD **14.62** AVE RT **7.38**

Nitrobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3065	1.145	7.40
9A30046-CAL2	50	8550	1.216	7.40
9A30046-CAL3	100	18438	1.344	7.40
9A30046-CAL4	200	41375	1.422	7.39
9A30046-CAL5	500	109635	1.554	7.39
9A30046-CAL6	1000	213695	1.492	7.40
9A30046-CAL7	2000	445401	1.573	7.40
9A30046-CAL8	4000	894143	1.614	7.40
9A30046-CAL9	6000	1366079	1.568	7.41
9A30046-CALA	8000	1701352	1.514	7.42

AVE RF **1.444** RF RSD **11.11** AVE RT **7.40**

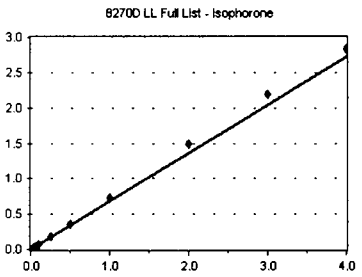
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Isophorone

Curve Fit: **AVERAGE RF**

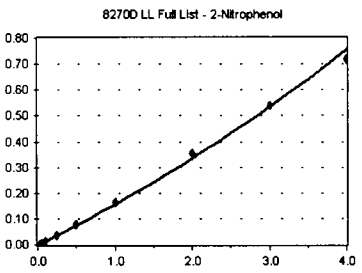


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5446	0.516	7.63
9A30046-CAL2	50	16770	0.628	7.63
9A30046-CAL3	100	35464	0.650	7.62
9A30046-CAL4	200	76306	0.676	7.62
9A30046-CAL5	500	203487	0.727	7.62
9A30046-CAL6	1000	391987	0.715	7.63
9A30046-CAL7	2000	818603	0.727	7.63
9A30046-CAL8	4000	1662743	0.749	7.64
9A30046-CAL9	6000	2507237	0.728	7.64
9A30046-CALA	8000	3162533	0.709	7.66

AVE RF **0.683** RF RSD **10.26** AVE RT **7.63**

2-Nitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

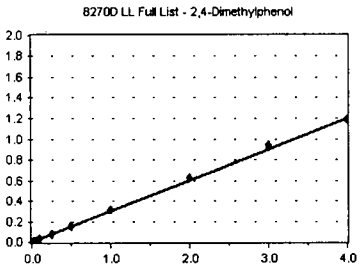


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~775~~	~~0.073~~	~~7.71~~
9A30046-CAL2	50	2288	0.086	7.71
9A30046-CAL3	100	5408	9.914	7.71
9A30046-CAL4	200	12965	0.115	7.71
9A30046-CAL5	500	40651	0.145	7.71
9A30046-CAL6	1000	83980	0.153	7.71
9A30046-CAL7	2000	184428	0.164	7.71
9A30046-CAL8	4000	394481	0.178	7.71
9A30046-CAL9	6000	619284	0.180	7.72
9A30046-CALA	8000	801876	0.180	7.73

AVE RF **0.144** RF RSD **25.03** AVE RT **7.72**

2,4-Dimethylphenol

Curve Fit: **AVERAGE RF**

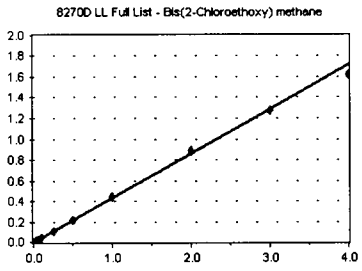


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~2085~~	~~0.197~~	~~7.74~~
9A30046-CAL2	50	7337	0.275	7.74
9A30046-CAL3	100	15179	0.278	7.74
9A30046-CAL4	200	32468	0.288	7.74
9A30046-CAL5	500	87099	0.311	7.74
9A30046-CAL6	1000	168017	0.307	7.74
9A30046-CAL7	2000	352518	0.313	7.74
9A30046-CAL8	4000	691817	0.312	7.75
9A30046-CAL9	6000	1081606	0.314	7.75
9A30046-CALA	8000	1321200	0.296	7.76

AVE RF **0.299** RF RSD **5.22** AVE RT **7.74**

Bis(2-Chloroethoxy) methane

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	4242	0.402	7.83
9A30046-CAL2	50	11626	0.435	7.83
9A30046-CAL3	100	23620	0.433	7.83
9A30046-CAL4	200	48550	0.430	7.83
9A30046-CAL5	500	126251	0.451	7.83
9A30046-CAL6	1000	237898	0.434	7.83
9A30046-CAL7	2000	493285	0.438	7.83
9A30046-CAL8	4000	982323	0.443	7.84
9A30046-CAL9	6000	1460686	0.424	7.84
9A30046-CALA	8000	1803114	0.404	7.85

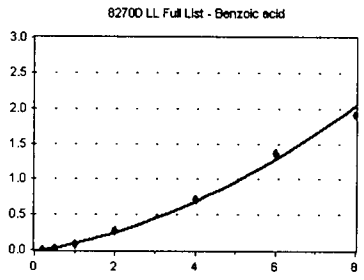
AVE RF **0.429** RF RSD **3.66** AVE RT **7.84**

Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Benzoic acid

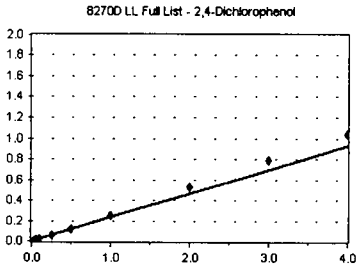


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~40~~	~~69~~	~~3.267~~	~~7.85~~
~~9A30046-CAL2~~	~~100~~	~~56~~	~~1.048~~	~~7.82~~
~~9A30046-CAL3~~	~~200~~	~~308~~	~~2.823~~	~~7.82~~
9A30046-CAL4	400	2001	8.862	7.77
9A30046-CAL5	1000	24058	0.043	7.79
9A30046-CAL6	2000	97527	8.897	7.82
9A30046-CAL7	4000	314631	0.140	7.85
9A30046-CAL8	8000	790966	0.178	7.90
9A30046-CAL9	12000	1567369	0.228	7.94
9A30046-CALA	16000	2134233	0.239	7.97

AVE RF **0.132** RF RSD **67.48** AVE RT **7.86**

2,4-Dichlorophenol



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~1557~~	~~0.147~~	~~7.95~~
9A30046-CAL2	50	4758	0.178	7.95
9A30046-CAL3	100	10325	0.189	7.95
9A30046-CAL4	200	23291	0.206	7.94
9A30046-CAL5	500	66479	0.238	7.95
9A30046-CAL6	1000	129436	0.236	7.95
9A30046-CAL7	2000	283710	0.252	7.95
9A30046-CAL8	4000	583274	0.263	7.96
9A30046-CAL9	6000	912238	0.265	7.96
9A30046-CALA	8000	1159632	0.260	7.97

AVE RF **0.232** RF RSD **14.18** AVE RT **7.95**

1,2,4-Trichlorobenzene

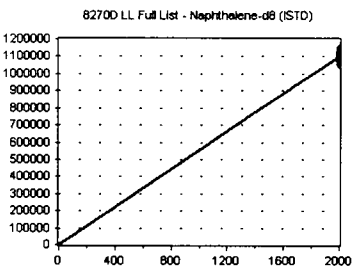


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2751	0.261	8.04
9A30046-CAL2	50	7910	0.296	8.04
9A30046-CAL3	100	15521	0.285	8.04
9A30046-CAL4	200	31882	0.282	8.04
9A30046-CAL5	500	78967	0.282	8.04
9A30046-CAL6	1000	151142	0.276	8.04
9A30046-CAL7	2000	307169	0.273	8.04
9A30046-CAL8	4000	617165	0.278	8.04
9A30046-CAL9	6000	947888	0.275	8.05
9A30046-CALA	8000	1206585	0.271	8.05

AVE RF **0.278** RF RSD **3.41** AVE RT **8.04**

Naphthalene-d8 (ISTD)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	1055936	527.968	8.10
9A30046-CAL2	2000	1068309	534.154	8.10
9A30046-CAL3	2000	1090991	545.496	8.10
9A30046-CAL4	2000	1128963	564.482	8.10
9A30046-CAL5	2000	1119185	559.593	8.10
9A30046-CAL6	2000	1096117	548.058	8.10
9A30046-CAL7	2000	1126005	563.003	8.10
9A30046-CAL8	2000	1109587	554.793	8.10
9A30046-CAL9	2000	1148108	574.054	8.10
9A30046-CALA	2000	1114798	557.399	8.10

AVE RF **552.900** RF RSD **2.56** AVE RT **8.10**

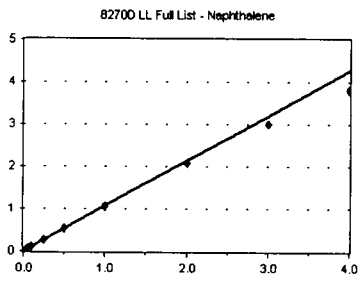
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Naphthalene

Curve Fit: **AVERAGE RF**

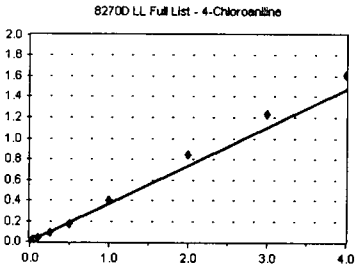


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	11917	1.129	8.12
9A30046-CAL2	50	30779	1.152	8.12
9A30046-CAL3	100	59651	1.094	8.12
9A30046-CAL4	200	122429	1.084	8.12
9A30046-CAL5	500	307927	1.101	8.12
9A30046-CAL6	1000	582708	1.063	8.12
9A30046-CAL7	2000	1180925	1.049	8.12
9A30046-CAL8	4000	2314690	1.043	8.13
9A30046-CAL9	6000	3450382	1.002	8.13
9A30046-CALA	8000	4249185	0.953	8.13

AVE RF **1.067** RF RSD **5.54** AVE RT **8.12**

4-Chloroaniline

Curve Fit: **AVERAGE RF**

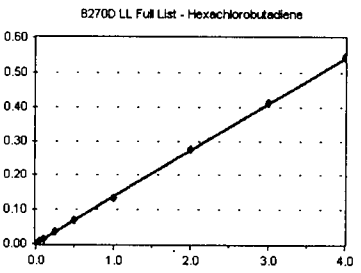


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	2975	0.282	8.16
9A30046-CAL2	50	8890	0.333	8.16
9A30046-CAL3	100	19347	0.355	8.16
9A30046-CAL4	200	39584	0.351	8.16
9A30046-CAL5	500	102663	0.367	8.16
9A30046-CAL6	1000	195519	0.357	8.16
9A30046-CAL7	2000	447643	0.398	8.16
9A30046-CAL8	4000	932245	0.420	8.16
9A30046-CAL9	6000	1415802	0.411	8.17
9A30046-CALA	8000	1793320	0.402	8.17

AVE RF **0.367** RF RSD **11.43** AVE RT **8.16**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**

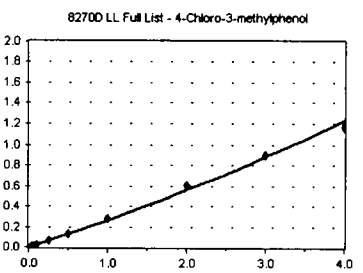


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	1290	0.122	8.24
9A30046-CAL2	50	3731	0.140	8.24
9A30046-CAL3	100	7485	0.137	8.24
9A30046-CAL4	200	15189	0.135	8.24
9A30046-CAL5	500	38478	0.138	8.24
9A30046-CAL6	1000	76109	0.139	8.24
9A30046-CAL7	2000	151477	0.135	8.24
9A30046-CAL8	4000	307584	0.139	8.25
9A30046-CAL9	6000	473675	0.138	8.25
9A30046-CALA	8000	608097	0.136	8.25

AVE RF **0.136** RF RSD **3.72** AVE RT **8.24**

4-Chloro-3-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~895~~	~~8.476~~	~~8.64~~
9A30046-CAL2	50	3536	0.132	8.64
9A30046-CAL3	100	9340	0.171	8.63
9A30046-CAL4	200	22255	0.197	8.63
9A30046-CAL5	500	69673	0.249	8.63
9A30046-CAL6	1000	137180	0.250	8.63
9A30046-CAL7	2000	317795	0.282	8.63
9A30046-CAL8	4000	668189	0.301	8.64
9A30046-CAL9	6000	1026539	0.298	8.64
9A30046-CALA	8000	1296093	0.291	8.65

AVE RF **0.241** RF RSD **25.28** AVE RT **8.64**

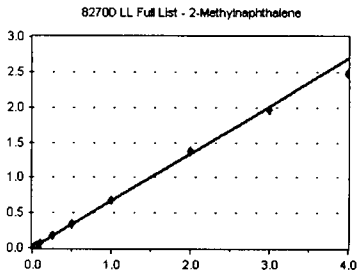
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

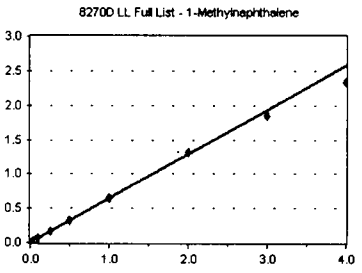


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6941	0.657	8.82
9A30046-CAL2	50	18189	0.681	8.82
9A30046-CAL3	100	36689	0.673	8.81
9A30046-CAL4	200	76316	0.676	8.81
9A30046-CAL5	500	195835	0.700	8.81
9A30046-CAL6	1000	368916	0.673	8.82
9A30046-CAL7	2000	771341	0.685	8.82
9A30046-CAL8	4000	1531917	0.690	8.82
9A30046-CAL9	6000	2256262	0.655	8.82
9A30046-CALA	8000	2767888	0.621	8.82

AVE RF **0.671** RF RSD **3.33** AVE RT **8.82**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**

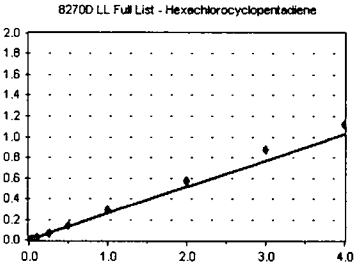


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6831	0.647	8.91
9A30046-CAL2	50	17571	0.658	8.92
9A30046-CAL3	100	35408	0.649	8.91
9A30046-CAL4	200	72918	0.646	8.91
9A30046-CAL5	500	188716	0.674	8.91
9A30046-CAL6	1000	353069	0.644	8.92
9A30046-CAL7	2000	730943	0.649	8.92
9A30046-CAL8	4000	1454487	0.655	8.92
9A30046-CAL9	6000	2130936	0.619	8.92
9A30046-CALA	8000	2608946	0.585	8.92

AVE RF **0.643** RF RSD **3.82** AVE RT **8.92**

Hexachlorocyclopentadiene

Curve Fit: **AVERAGE RF**

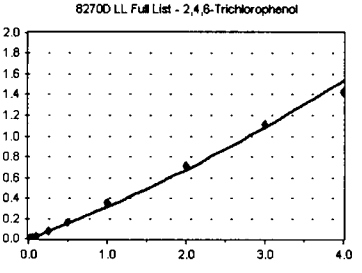


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	899	0.185	8.98
9A30046-CAL2	50	2439	0.208	8.98
9A30046-CAL3	100	5330	0.225	8.98
9A30046-CAL4	200	12226	0.246	8.98
9A30046-CAL5	500	34778	0.273	8.98
9A30046-CAL6	1000	68561	0.278	8.98
9A30046-CAL7	2000	153915	0.291	8.98
9A30046-CAL8	4000	309053	0.287	8.98
9A30046-CAL9	6000	489813	0.293	8.98
9A30046-CALA	8000	607633	0.280	8.99

AVE RF **0.257** RF RSD **14.99** AVE RT **8.98**

2,4,6-Trichlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	754	0.155	9.09
9A30046-CAL2	50	2135	0.182	9.09
9A30046-CAL3	100	5412	0.228	9.09
9A30046-CAL4	200	12662	0.254	9.09
9A30046-CAL5	500	39573	0.310	9.09
9A30046-CAL6	1000	77589	0.314	9.09
9A30046-CAL7	2000	185604	0.351	9.09
9A30046-CAL8	4000	386229	0.358	9.10
9A30046-CAL9	6000	617479	0.370	9.10
9A30046-CALA	8000	774818	0.357	9.11

AVE RF **0.288** RF RSD **27.15** AVE RT **9.10**

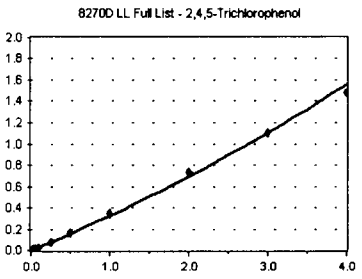
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

2,4,5-Trichlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

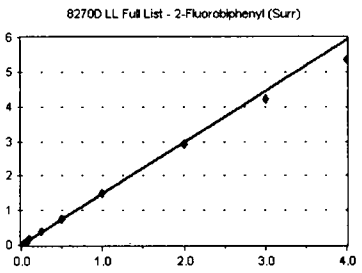


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	702	0.145	9.14
9A30046-CAL2	50	2609	0.223	9.13
9A30046-CAL3	100	6051	0.255	9.13
9A30046-CAL4	200	12964	0.260	9.13
9A30046-CAL5	500	40483	0.318	9.13
9A30046-CAL6	1000	79865	0.324	9.13
9A30046-CAL7	2000	183508	0.347	9.13
9A30046-CAL8	4000	398737	0.370	9.13
9A30046-CAL9	6000	611970	0.367	9.14
9A30046-CALA	8000	807064	0.372	9.14

AVE RF **0.298** RF RSD **25.32** AVE RT **9.13**

2-Fluorobiphenyl (Surr)

Curve Fit: **AVERAGE RF**

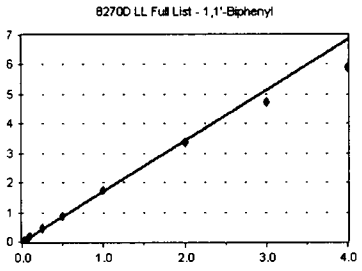


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7112	1.465	9.18
9A30046-CAL2	50	18089	1.543	9.18
9A30046-CAL3	100	36884	1.556	9.18
9A30046-CAL4	200	77186	1.550	9.18
9A30046-CAL5	500	198705	1.559	9.18
9A30046-CAL6	1000	371894	1.507	9.18
9A30046-CAL7	2000	786718	1.490	9.18
9A30046-CAL8	4000	1579625	1.465	9.19
9A30046-CAL9	6000	2343826	1.404	9.19
9A30046-CALA	8000	2900077	1.335	9.19

AVE RF **1.487** RF RSD **4.93** AVE RT **9.18**

1,1'-Biphenyl

Curve Fit: **AVERAGE RF**

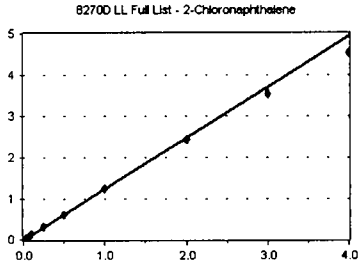


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	8419	1.734	9.28
9A30046-CAL2	50	21089	1.799	9.28
9A30046-CAL3	100	42772	1.804	9.28
9A30046-CAL4	200	88511	1.778	9.28
9A30046-CAL5	500	230563	1.809	9.28
9A30046-CAL6	1000	427889	1.734	9.28
9A30046-CAL7	2000	909543	1.722	9.29
9A30046-CAL8	4000	1815386	1.683	9.29
9A30046-CAL9	6000	2626639	1.573	9.29
9A30046-CALA	8000	3199105	1.473	9.30

AVE RF **1.711** RF RSD **6.40** AVE RT **9.28**

2-Chloronaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6075	1.252	9.31
9A30046-CAL2	50	14859	1.268	9.31
9A30046-CAL3	100	30467	1.285	9.31
9A30046-CAL4	200	63199	1.270	9.31
9A30046-CAL5	500	163765	1.285	9.31
9A30046-CAL6	1000	302479	1.226	9.31
9A30046-CAL7	2000	650474	1.232	9.31
9A30046-CAL8	4000	1315972	1.220	9.31
9A30046-CAL9	6000	1970530	1.180	9.32
9A30046-CALA	8000	2468792	1.137	9.32

AVE RF **1.235** RF RSD **3.86** AVE RT **9.31**

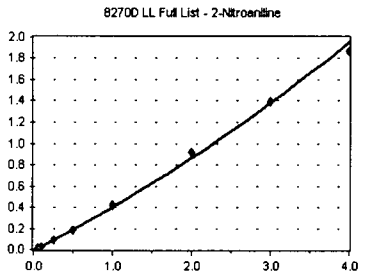
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

2-Nitroaniline

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

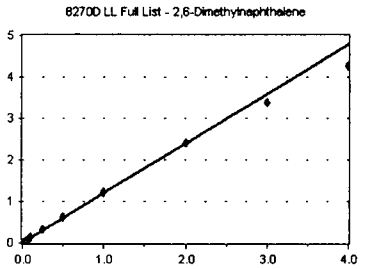


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~663~~	~~0.137~~	~~9.40~~
~~9A30046-CAL2~~	~~50~~	~~2037~~	~~0.174~~	~~9.40~~
9A30046-CAL3	100	4661	0.197	9.40
9A30046-CAL4	200	12071	0.242	9.40
9A30046-CAL5	500	43914	0.344	9.40
9A30046-CAL6	1000	89229	0.362	9.40
9A30046-CAL7	2000	225078	0.426	9.40
9A30046-CAL8	4000	493107	0.457	9.41
9A30046-CAL9	6000	778160	0.466	9.42
9A30046-CALA	8000	1014716	0.467	9.43

AVE RF **0.370** RF RSD **28.24** AVE RT **9.41**

2,6-Dimethylnaphthalene

Curve Fit: **AVERAGE RF**

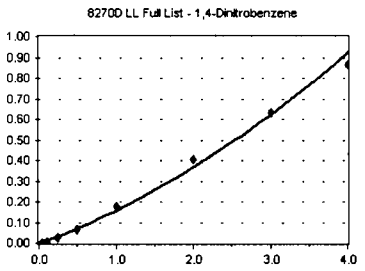


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5544	1.142	9.44
9A30046-CAL2	50	14256	1.216	9.45
9A30046-CAL3	100	29357	1.238	9.44
9A30046-CAL4	200	61710	1.240	9.44
9A30046-CAL5	500	161748	1.269	9.44
9A30046-CAL6	1000	304453	1.234	9.45
9A30046-CAL7	2000	646334	1.224	9.45
9A30046-CAL8	4000	1294122	1.200	9.45
9A30046-CAL9	6000	1873897	1.122	9.45
9A30046-CALA	8000	2321419	1.069	9.46

AVE RF **1.195** RF RSD **5.30** AVE RT **9.45**

1,4-Dinitrobenzene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

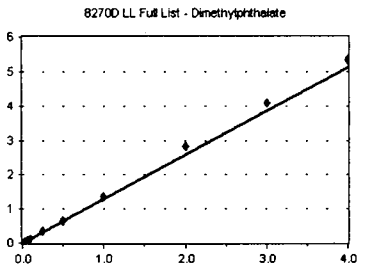


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~197~~	~~4.058~~	~~9.53~~
~~9A30046-CAL2~~	~~50~~	~~523~~	~~4.462~~	~~9.53~~
9A30046-CAL3	100	1254	5.289	9.53
9A30046-CAL4	200	3705	7.442	9.53
9A30046-CAL5	500	15009	0.118	9.53
9A30046-CAL6	1000	32964	0.134	9.53
9A30046-CAL7	2000	93455	0.177	9.53
9A30046-CAL8	4000	217979	0.202	9.54
9A30046-CAL9	6000	353235	0.212	9.54
9A30046-CALA	8000	468426	0.216	9.55

AVE RF **0.148** RF RSD **42.68** AVE RT **9.54**

Dimethylphthalate

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5420	1.117	9.58
9A30046-CAL2	50	13040	1.112	9.58
9A30046-CAL3	100	27948	1.179	9.58
9A30046-CAL4	200	63042	1.266	9.58
9A30046-CAL5	500	175061	1.373	9.58
9A30046-CAL6	1000	323675	1.312	9.58
9A30046-CAL7	2000	722554	1.368	9.59
9A30046-CAL8	4000	1516221	1.406	9.60
9A30046-CAL9	6000	2274017	1.362	9.61
9A30046-CALA	8000	2911473	1.340	9.61

AVE RF **1.284** RF RSD **8.57** AVE RT **9.59**

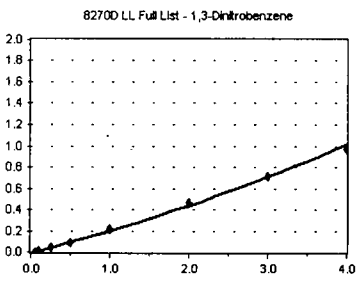
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

1,3-Dinitrobenzene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

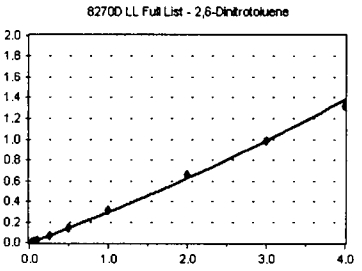


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~245~~	~~5.047~~	~~9.61~~
~~9A30046-CAL2~~	~~50~~	~~748~~	~~6.381~~	~~9.61~~
9A30046-CAL3	100	1734	7.313	9.61
9A30046-CAL4	200	5323	0.107	9.61
9A30046-CAL5	500	21039	0.165	9.61
9A30046-CAL6	1000	43195	0.175	9.61
9A30046-CAL7	2000	113932	0.216	9.62
9A30046-CAL8	4000	251848	0.234	9.62
9A30046-CAL9	6000	398456	0.239	9.63
9A30046-CALA	8000	525895	0.242	9.65

AVE RF **0.181** RF RSD **35.16** AVE RT **9.62**

2,6-Dinitrotoluene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

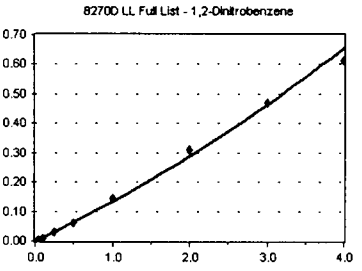


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~434~~	~~8.941~~	~~9.64~~
9A30046-CAL2	50	1439	0.123	9.64
9A30046-CAL3	100	3823	0.161	9.64
9A30046-CAL4	200	10458	0.210	9.64
9A30046-CAL5	500	35146	0.276	9.64
9A30046-CAL6	1000	69388	0.281	9.65
9A30046-CAL7	2000	164544	0.312	9.65
9A30046-CAL8	4000	358077	0.332	9.66
9A30046-CAL9	6000	550344	0.330	9.66
9A30046-CALA	8000	715275	0.329	9.67

AVE RF **0.262** RF RSD **30.01** AVE RT **9.65**

1,2-Dinitrobenzene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

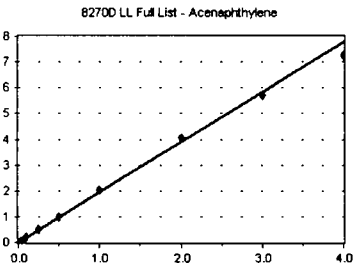


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~203~~	~~4.182~~	~~9.70~~
9A30046-CAL2	50	546	4.658	9.70
9A30046-CAL3	100	1698	7.161	9.70
9A30046-CAL4	200	4275	8.587	9.70
9A30046-CAL5	500	15598	0.122	9.70
9A30046-CAL6	1000	30555	0.124	9.70
9A30046-CAL7	2000	76738	0.145	9.71
9A30046-CAL8	4000	167602	0.155	9.72
9A30046-CAL9	6000	260513	0.156	9.73
9A30046-CALA	8000	333646	0.154	9.74

AVE RF **0.118** RF RSD **34.47** AVE RT **9.71**

Acenaphthylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7974	1.643	9.73
9A30046-CAL2	50	22412	1.912	9.74
9A30046-CAL3	100	47041	1.984	9.73
9A30046-CAL4	200	100207	2.013	9.73
9A30046-CAL5	500	268456	2.106	9.73
9A30046-CAL6	1000	501305	2.032	9.74
9A30046-CAL7	2000	1078092	2.041	9.74
9A30046-CAL8	4000	2187965	2.029	9.74
9A30046-CAL9	6000	3178592	1.904	9.75
9A30046-CALA	8000	3948147	1.818	9.75

AVE RF **1.948** RF RSD **6.97** AVE RT **9.74**

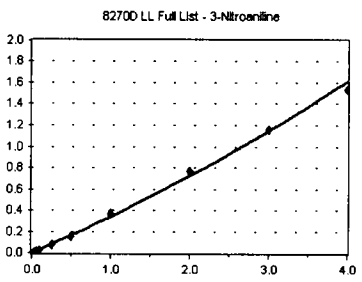
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

3-Nitroaniline

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

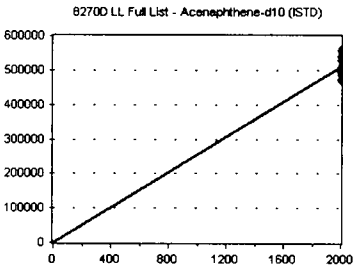


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~572~~	~~0.118~~	~~9.82~~
9A30046-CAL2	50	1785	0.152	9.82
9A30046-CAL3	100	4826	0.204	9.82
9A30046-CAL4	200	12489	0.251	9.82
9A30046-CAL5	500	40839	0.320	9.82
9A30046-CAL6	1000	75940	0.308	9.82
9A30046-CAL7	2000	193626	0.367	9.82
9A30046-CAL8	4000	413792	0.384	9.83
9A30046-CAL9	6000	645615	0.387	9.84
9A30046-CALA	8000	834824	0.384	9.85

AVE RF **0.306** RF RSD **28.22** AVE RT **9.82**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

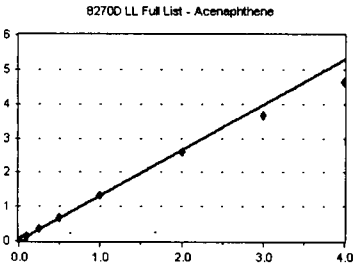


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	485404	242.702	9.88
9A30046-CAL2	2000	468864	234.432	9.88
9A30046-CAL3	2000	474233	237.117	9.88
9A30046-CAL4	2000	497817	248.908	9.88
9A30046-CAL5	2000	509897	254.948	9.88
9A30046-CAL6	2000	493423	246.712	9.88
9A30046-CAL7	2000	528163	264.082	9.88
9A30046-CAL8	2000	539188	269.594	9.89
9A30046-CAL9	2000	556496	278.248	9.89
9A30046-CALA	2000	543018	271.509	9.89

AVE RF **254.825** RF RSD **6.01** AVE RT **9.88**

Acenaphthene

Curve Fit: **AVERAGE RF**

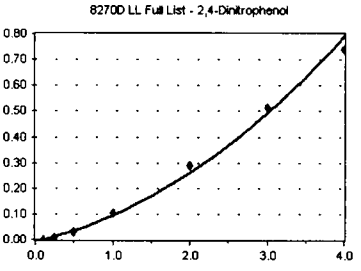


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6866	1.414	9.91
9A30046-CAL2	50	15975	1.363	9.91
9A30046-CAL3	100	32436	1.368	9.91
9A30046-CAL4	200	67960	1.365	9.91
9A30046-CAL5	500	176086	1.381	9.91
9A30046-CAL6	1000	328378	1.331	9.91
9A30046-CAL7	2000	694436	1.315	9.91
9A30046-CAL8	4000	1394892	1.294	9.92
9A30046-CAL9	6000	2033161	1.218	9.92
9A30046-CALA	8000	2520666	1.160	9.93

AVE RF **1.321** RF RSD **5.95** AVE RT **9.91**

2,4-Dinitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
~~9A30046-CAL2~~	~~50~~	~~0~~	~~0.000~~	~~0.00~~
~~9A30046-CAL3~~	~~100~~	~~0~~	~~0.000~~	~~0.00~~
9A30046-CAL4	200	686	1.378	9.92
9A30046-CAL5	500	4803	0.038	9.92
9A30046-CAL6	1000	14249	5.776	9.92
9A30046-CAL7	2000	55055	0.104	9.92
9A30046-CAL8	4000	155885	0.145	9.93
9A30046-CAL9	6000	286154	0.171	9.94
9A30046-CALA	8000	400481	0.184	9.95

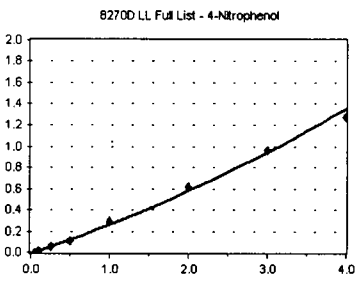
AVE RF **0.102** RF RSD **66.15** AVE RT **9.93**

Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

4-Nitrophenol

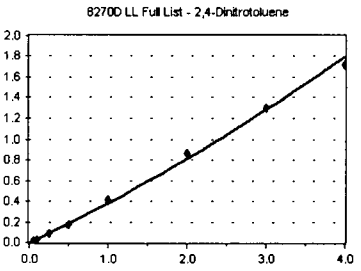


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~335~~	~~6.901~~	~~9.99~~
~~9A30046-CAL2~~	~~50~~	~~1002~~	~~8.548~~	~~9.98~~
9A30046-CAL3	100	2407	0.102	9.97
9A30046-CAL4	200	6776	0.136	9.97
9A30046-CAL5	500	27714	0.217	9.97
9A30046-CAL6	1000	55114	0.223	9.97
9A30046-CAL7	2000	153275	0.290	9.98
9A30046-CAL8	4000	332708	0.309	9.99
9A30046-CAL9	6000	535869	0.321	10.00
9A30046-CALA	8000	695415	0.320	10.01

AVE RF **0.240** RF RSD **35.58** AVE RT **9.98**

2,4-Dinitrotoluene

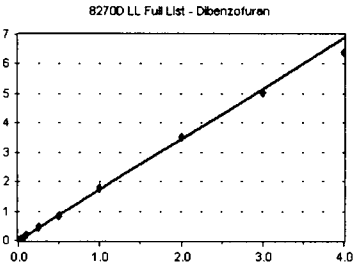


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~575~~	~~0.118~~	~~10.05~~
~~9A30046-CAL2~~	~~50~~	~~1435~~	~~0.122~~	~~10.06~~
9A30046-CAL3	100	3832	0.162	10.05
9A30046-CAL4	200	11280	0.227	10.05
9A30046-CAL5	500	41590	0.326	10.05
9A30046-CAL6	1000	83270	0.338	10.06
9A30046-CAL7	2000	214871	0.407	10.06
9A30046-CAL8	4000	465322	0.432	10.07
9A30046-CAL9	6000	723845	0.434	10.08
9A30046-CALA	8000	930978	0.429	10.08

AVE RF **0.344** RF RSD **29.92** AVE RT **10.06**

Dibenzofuran

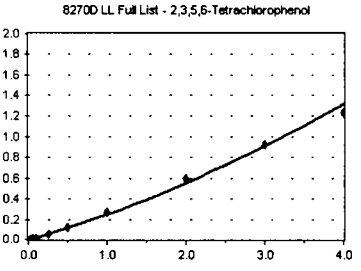


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	8455	1.742	10.08
9A30046-CAL2	50	19948	1.702	10.08
9A30046-CAL3	100	40600	1.712	10.08
9A30046-CAL4	200	85176	1.711	10.08
9A30046-CAL5	500	231005	1.812	10.08
9A30046-CAL6	1000	418743	1.697	10.08
9A30046-CAL7	2000	931904	1.764	10.09
9A30046-CAL8	4000	1891403	1.754	10.09
9A30046-CAL9	6000	2796501	1.675	10.09
9A30046-CALA	8000	3482255	1.603	10.10

AVE RF **1.717** RF RSD **3.29** AVE RT **10.09**

2,3,5,6-Tetrachlorophenol



Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~340~~	~~7.004~~	~~10.16~~
9A30046-CAL2	50	1011	8.625	10.17
9A30046-CAL3	100	2714	0.114	10.16
9A30046-CAL4	200	7669	0.154	10.16
9A30046-CAL5	500	28568	0.224	10.16
9A30046-CAL6	1000	56972	0.231	10.16
9A30046-CAL7	2000	145369	0.275	10.16
9A30046-CAL8	4000	322748	0.299	10.17
9A30046-CAL9	6000	514203	0.308	10.17
9A30046-CALA	8000	669191	0.308	10.17

AVE RF **0.222** RF RSD **38.41** AVE RT **10.17**

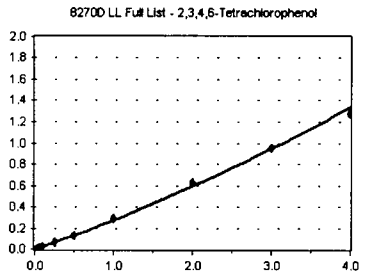
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

2,3,4,6-Tetrachlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

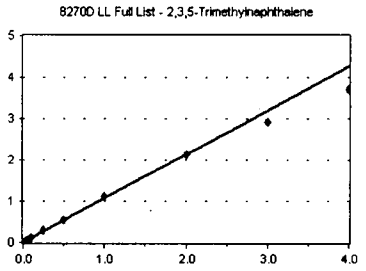


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~529~~	~~0.109~~	~~10.21~~
9A30046-CAL2	50	1812	0.155	10.21
9A30046-CAL3	100	4318	0.182	10.21
9A30046-CAL4	200	9650	0.194	10.21
9A30046-CAL5	500	33782	0.265	10.21
9A30046-CAL6	1000	64617	0.262	10.21
9A30046-CAL7	2000	156617	0.297	10.21
9A30046-CAL8	4000	339662	0.315	10.21
9A30046-CAL9	6000	530685	0.318	10.22
9A30046-CALA	8000	692769	0.319	10.22

AVE RF **0.256** RF RSD **24.93** AVE RT **10.21**

2,3,5-Trimethylnaphthalene

Curve Fit: **AVERAGE RF**

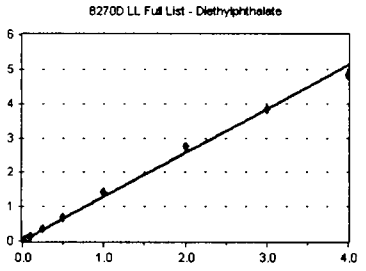


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5065	1.043	10.29
9A30046-CAL2	50	12539	1.070	10.29
9A30046-CAL3	100	25788	1.088	10.29
9A30046-CAL4	200	54877	1.102	10.29
9A30046-CAL5	500	148844	1.168	10.29
9A30046-CAL6	1000	270700	1.097	10.30
9A30046-CAL7	2000	590742	1.118	10.30
9A30046-CAL8	4000	1153744	1.070	10.30
9A30046-CAL9	6000	1629306	0.976	10.31
9A30046-CALA	8000	2005572	0.923	10.31

AVE RF **1.066** RF RSD **6.62** AVE RT **10.30**

Diethylphthalate

Curve Fit: **AVERAGE RF**

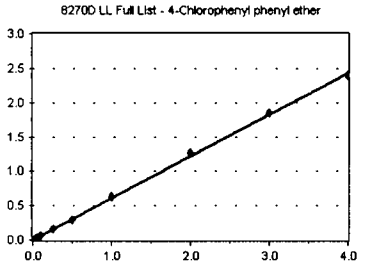


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5519	1.137	10.29
9A30046-CAL2	50	13590	1.159	10.30
9A30046-CAL3	100	27965	1.179	10.29
9A30046-CAL4	200	64179	1.289	10.29
9A30046-CAL5	500	182306	1.430	10.30
9A30046-CAL6	1000	329843	1.337	10.30
9A30046-CAL7	2000	754784	1.429	10.30
9A30046-CAL8	4000	1485515	1.378	10.31
9A30046-CAL9	6000	2138606	1.281	10.31
9A30046-CALA	8000	2624972	1.209	10.32

AVE RF **1.283** RF RSD **8.53** AVE RT **10.30**

4-Chlorophenyl phenyl ether

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	3010	0.620	10.43
9A30046-CAL2	50	6698	0.571	10.43
9A30046-CAL3	100	13730	0.579	10.43
9A30046-CAL4	200	29765	0.598	10.43
9A30046-CAL5	500	81475	0.639	10.43
9A30046-CAL6	1000	146848	0.595	10.43
9A30046-CAL7	2000	334037	0.632	10.43
9A30046-CAL8	4000	685667	0.636	10.43
9A30046-CAL9	6000	1030051	0.617	10.44
9A30046-CALA	8000	1303879	0.600	10.44

AVE RF **0.609** RF RSD **3.90** AVE RT **10.43**

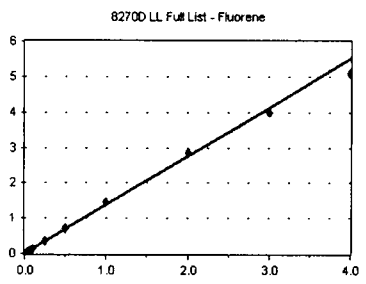
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Fluorene

Curve Fit: **AVERAGE RF**

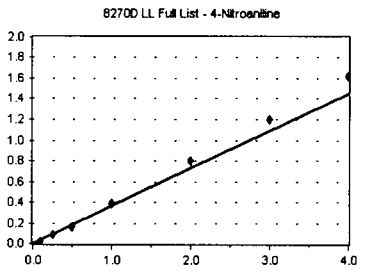


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6383	1.315	10.44
9A30046-CAL2	50	15560	1.327	10.44
9A30046-CAL3	100	32279	1.361	10.44
9A30046-CAL4	200	69347	1.393	10.44
9A30046-CAL5	500	189023	1.483	10.44
9A30046-CAL6	1000	344351	1.396	10.44
9A30046-CAL7	2000	765816	1.450	10.44
9A30046-CAL8	4000	1531912	1.421	10.44
9A30046-CAL9	6000	2221082	1.330	10.45
9A30046-CALA	8000	2767503	1.274	10.45

AVE RF **1.375** RF RSD **4.74** AVE RT **10.44**

4-Nitroaniline

Curve Fit: **AVERAGE RF**

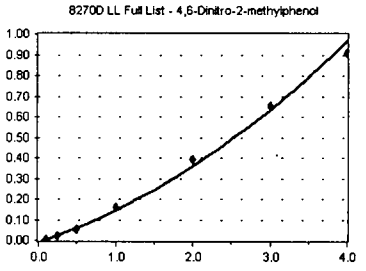


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~713~~	~~0.147~~	~~10.44~~
~~9A30046-CAL2~~	~~50~~	~~2087~~	~~0.178~~	~~10.44~~
~~9A30046-CAL3~~	~~100~~	~~5107~~	~~0.215~~	~~10.44~~
9A30046-CAL4	200	13118	0.264	10.44
9A30046-CAL5	500	45265	0.355	10.44
9A30046-CAL6	1000	79908	0.324	10.44
9A30046-CAL7	2000	207882	0.394	10.45
9A30046-CAL8	4000	430052	0.399	10.46
9A30046-CAL9	6000	669009	0.401	10.47
9A30046-CALA	8000	879385	0.405	10.49

AVE RF **0.363** RF RSD **14.62** AVE RT **10.45**

4,6-Dinitro-2-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

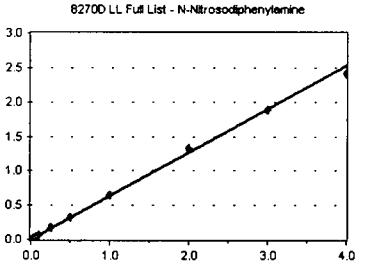


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
~~9A30046-CAL2~~	~~50~~	~~74~~	~~6.313~~	~~10.48~~
~~9A30046-CAL3~~	~~100~~	~~342~~	~~1.442~~	~~10.47~~
9A30046-CAL4	200	1644	3.302	10.47
9A30046-CAL5	500	10218	8.016	10.47
9A30046-CAL6	1000	25579	0.104	10.47
9A30046-CAL7	2000	84552	0.160	10.48
9A30046-CAL8	4000	212554	0.197	10.49
9A30046-CAL9	6000	362560	0.217	10.50
9A30046-CALA	8000	494172	0.228	10.51

AVE RF **0.146** RF RSD **51.27** AVE RT **10.49**

N-Nitrosodiphenylamine

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	4930	0.539	10.54
9A30046-CAL2	50	11920	0.606	10.54
9A30046-CAL3	100	24736	0.626	10.54
9A30046-CAL4	200	55485	0.652	10.54
9A30046-CAL5	500	159639	0.683	10.54
9A30046-CAL6	1000	278990	0.664	10.54
9A30046-CAL7	2000	652932	0.655	10.55
9A30046-CAL8	4000	1315096	0.663	10.55
9A30046-CAL9	6000	1960689	0.626	10.56
9A30046-CALA	8000	2473583	0.604	10.57

AVE RF **0.632** RF RSD **6.60** AVE RT **10.55**

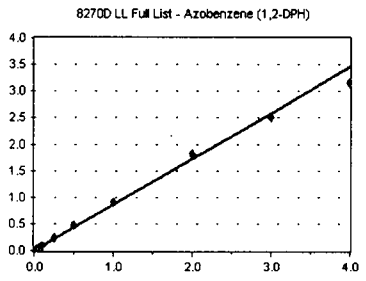
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Azobenzene (1,2-DPH)

Curve Fit: **AVERAGE RF**

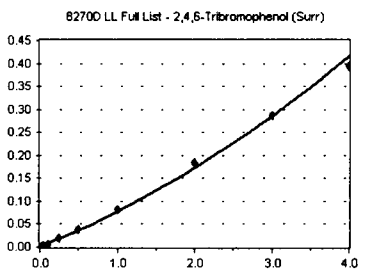


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6350	0.694	10.59
9A30046-CAL2	50	16055	0.817	10.59
9A30046-CAL3	100	34575	0.875	10.59
9A30046-CAL4	200	76986	0.905	10.59
9A30046-CAL5	500	223701	0.957	10.59
9A30046-CAL6	1000	394223	0.938	10.59
9A30046-CAL7	2000	914026	0.917	10.59
9A30046-CAL8	4000	1800004	0.908	10.59
9A30046-CAL9	6000	2612835	0.835	10.60
9A30046-CALA	8000	3228382	0.788	10.60

AVE RF **0.863** RF RSD **9.31** AVE RT **10.59**

2,4,6-Tribromophenol (Surr)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

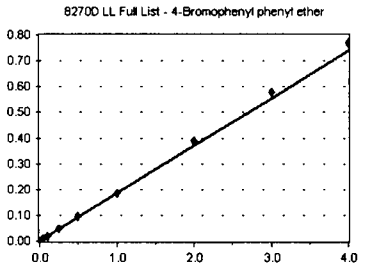


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	229	2.504	10.68
9A30046-CAL2	50	770	0.039	10.68
9A30046-CAL3	100	2028	5.130	10.68
9A30046-CAL4	200	5139	6.038	10.68
9A30046-CAL5	500	17303	7.400	10.68
9A30046-CAL6	1000	33163	7.888	10.68
9A30046-CAL7	2000	82762	8.302	10.68
9A30046-CAL8	4000	183331	9.248	10.69
9A30046-CAL9	6000	299172	0.096	10.69
9A30046-CALA	8000	403091	9.843	10.70

AVE RF **6.983** RF RSD **35.87** AVE RT **10.69**

4-Bromophenyl phenyl ether

Curve Fit: **AVERAGE RF**

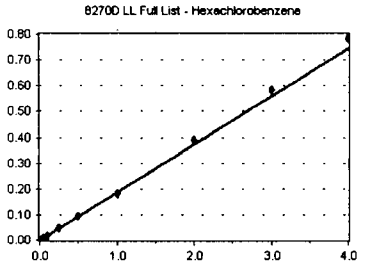


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	1566	0.171	10.93
9A30046-CAL2	50	3436	0.175	10.93
9A30046-CAL3	100	7025	0.178	10.93
9A30046-CAL4	200	15771	0.185	10.93
9A30046-CAL5	500	44122	0.189	10.92
9A30046-CAL6	1000	78242	0.186	10.93
9A30046-CAL7	2000	186018	0.187	10.93
9A30046-CAL8	4000	385860	0.195	10.93
9A30046-CAL9	6000	602434	0.192	10.93
9A30046-CALA	8000	789349	0.193	10.94

AVE RF **0.185** RF RSD **4.31** AVE RT **10.93**

Hexachlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	1571	0.172	11.01
9A30046-CAL2	50	3548	0.180	11.01
9A30046-CAL3	100	7238	0.183	11.01
9A30046-CAL4	200	15793	0.186	11.01
9A30046-CAL5	500	42972	0.184	11.01
9A30046-CAL6	1000	79296	0.189	11.01
9A30046-CAL7	2000	182419	0.183	11.01
9A30046-CAL8	4000	387180	0.195	11.01
9A30046-CAL9	6000	606966	0.194	11.02
9A30046-CALA	8000	801760	0.196	11.03

AVE RF **0.186** RF RSD **4.03** AVE RT **11.01**

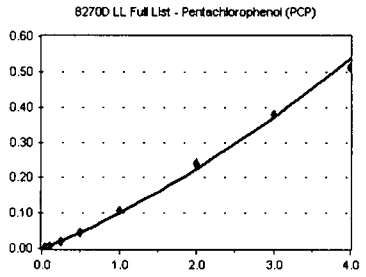
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Pentachlorophenol (PCP)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

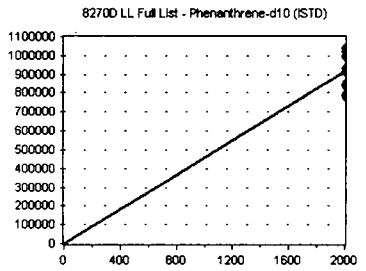


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~315~~	~~3.444~~	~~11.20~~
~~9A30046-CAL2~~	~~50~~	~~571~~	~~0.029~~	~~11.21~~
9A30046-CAL3	100	1341	3.392	11.20
9A30046-CAL4	200	4272	5.019	11.20
9A30046-CAL5	500	18186	7.778	11.20
9A30046-CAL6	1000	38085	9.059	11.20
9A30046-CAL7	2000	106556	0.107	11.20
9A30046-CAL8	4000	237575	0.120	11.21
9A30046-CAL9	6000	395292	0.126	11.21
9A30046-CALA	8000	524085	0.128	11.21

AVE RF **9.169** RF RSD **38.65** AVE RT **11.20**

Phenanthrene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

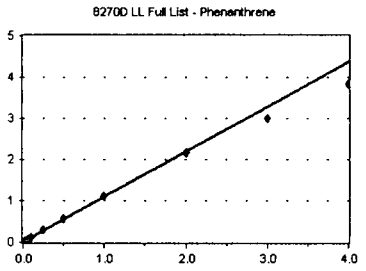


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	914631	457.316	11.40
9A30046-CAL2	2000	786274	393.137	11.40
9A30046-CAL3	2000	790595	395.298	11.40
9A30046-CAL4	2000	851122	425.561	11.40
9A30046-CAL5	2000	935268	467.634	11.40
9A30046-CAL6	2000	840808	420.404	11.40
9A30046-CAL7	2000	996904	498.452	11.40
9A30046-CAL8	2000	991158	495.579	11.40
9A30046-CAL9	2000	1043364	521.682	11.40
9A30046-CALA	2000	1023802	511.901	11.41

AVE RF **458.696** RF RSD **10.46** AVE RT **11.40**

Phenanthrene

Curve Fit: **AVERAGE RF**

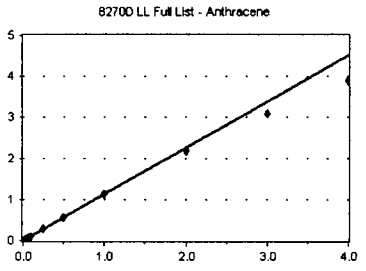


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	10388	1.136	11.42
9A30046-CAL2	50	22253	1.132	11.42
9A30046-CAL3	100	45679	1.156	11.42
9A30046-CAL4	200	96988	1.140	11.42
9A30046-CAL5	500	271509	1.161	11.42
9A30046-CAL6	1000	468364	1.114	11.42
9A30046-CAL7	2000	1092838	1.096	11.43
9A30046-CAL8	4000	2134782	1.077	11.43
9A30046-CAL9	6000	3142052	1.004	11.43
9A30046-CALA	8000	3940073	0.962	11.44

AVE RF **1.098** RF RSD **6.05** AVE RT **11.42**

Anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	10748	1.175	11.47
9A30046-CAL2	50	23381	1.189	11.47
9A30046-CAL3	100	46433	1.175	11.47
9A30046-CAL4	200	99476	1.169	11.47
9A30046-CAL5	500	280169	1.198	11.47
9A30046-CAL6	1000	482023	1.147	11.47
9A30046-CAL7	2000	1119959	1.123	11.47
9A30046-CAL8	4000	2161101	1.090	11.48
9A30046-CAL9	6000	3204108	1.024	11.49
9A30046-CALA	8000	3984243	0.973	11.49

AVE RF **1.126** RF RSD **6.71** AVE RT **11.48**

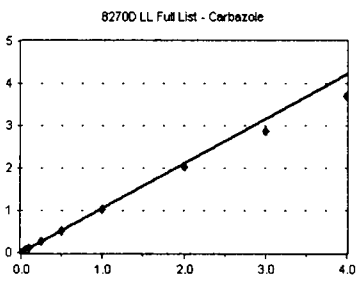
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Carbazole

Curve Fit: **AVERAGE RF**

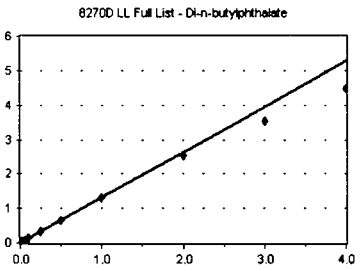


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	11056	1.209	11.63
9A30046-CAL2	50	21647	1.101	11.63
9A30046-CAL3	100	43052	1.089	11.63
9A30046-CAL4	200	91479	1.075	11.63
9A30046-CAL5	500	257322	1.101	11.63
9A30046-CAL6	1000	436227	1.038	11.63
9A30046-CAL7	2000	1032155	1.035	11.63
9A30046-CAL8	4000	2012508	1.015	11.63
9A30046-CAL9	6000	2995482	0.957	11.64
9A30046-CALA	8000	3792212	0.926	11.65

AVE RF **1.055** RF RSD **7.61** AVE RT **11.63**

Di-n-butylphthalate

Curve Fit: **AVERAGE RF**

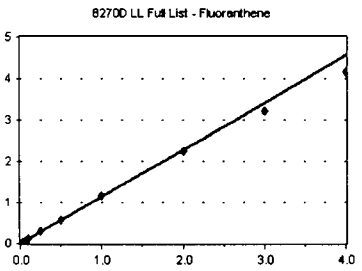


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	15373	1.681	11.97
9A30046-CAL2	50	26968	1.372	11.97
9A30046-CAL3	100	51497	1.303	11.97
9A30046-CAL4	200	111961	1.315	11.97
9A30046-CAL5	500	318442	1.362	11.97
9A30046-CAL6	1000	541942	1.289	11.97
9A30046-CAL7	2000	1296945	1.301	11.97
9A30046-CAL8	4000	2515776	1.269	11.97
9A30046-CAL9	6000	3697863	1.181	11.98
9A30046-CALA	8000	4593818	1.122	11.98

AVE RF **1.320** RF RSD **11.22** AVE RT **11.97**

Fluoranthene

Curve Fit: **AVERAGE RF**

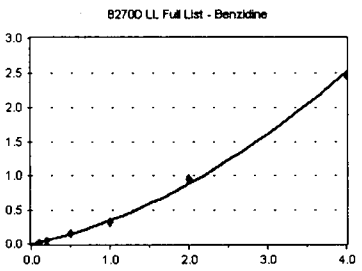


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	10781	1.179	12.74
9A30046-CAL2	50	22810	1.160	12.75
9A30046-CAL3	100	45822	1.159	12.74
9A30046-CAL4	200	98210	1.154	12.74
9A30046-CAL5	500	281703	1.205	12.74
9A30046-CAL6	1000	478274	1.138	12.75
9A30046-CAL7	2000	1147170	1.151	12.75
9A30046-CAL8	4000	2228063	1.124	12.75
9A30046-CAL9	6000	3367710	1.076	12.76
9A30046-CALA	8000	4263906	1.041	12.76

AVE RF **1.139** RF RSD **4.23** AVE RT **12.75**

Benzidine

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~40~~	~~1323~~	~~7.232~~	~~12.90~~
~~9A30046-CAL2~~	~~100~~	~~6453~~	~~0.164~~	~~12.91~~
9A30046-CAL3	200	18666	0.236	12.90
9A30046-CAL4	400	37500	0.220	12.90
9A30046-CAL5	1000	152834	0.327	12.90
9A30046-CAL6	2000	270903	0.322	12.90
9A30046-CAL7	4000	956344	0.480	12.91
9A30046-CAL8	8000	2439653	0.615	12.92
~~9A30046-CAL9~~	~~12000~~	~~3789861~~	~~0.605~~	~~12.93~~
~~9A30046-CALA~~	~~16000~~	~~4855656~~	~~0.593~~	~~12.93~~

AVE RF **0.367** RF RSD **41.65** AVE RT **12.91**

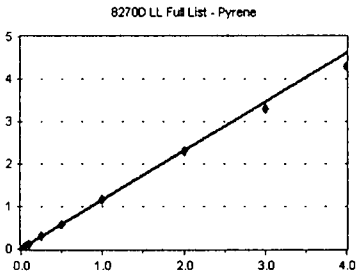
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Pyrene

Curve Fit: **AVERAGE RF**

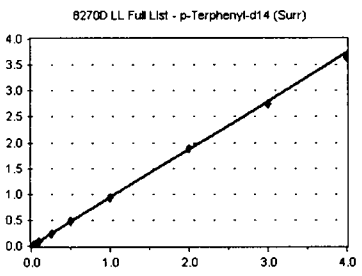


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	10777	1.178	13.06
9A30046-CAL2	50	23055	1.173	13.06
9A30046-CAL3	100	46111	1.166	13.06
9A30046-CAL4	200	100024	1.175	13.06
9A30046-CAL5	500	285718	1.222	13.06
9A30046-CAL6	1000	486318	1.157	13.06
9A30046-CAL7	2000	1167359	1.171	13.06
9A30046-CAL8	4000	2275000	1.148	13.07
9A30046-CAL9	6000	3451729	1.103	13.08
9A30046-CALA	8000	4397051	1.074	13.08

AVE RF **1.157** RF RSD **3.59** AVE RT **13.07**

p-Terphenyl-d14 (Surr)

Curve Fit: **AVERAGE RF**

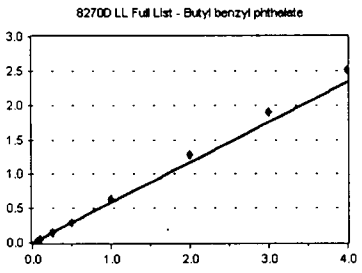


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7570	0.891	13.28
9A30046-CAL2	50	16079	0.926	13.28
9A30046-CAL3	100	32265	0.935	13.28
9A30046-CAL4	200	69836	0.967	13.28
9A30046-CAL5	500	202060	0.963	13.28
9A30046-CAL6	1000	340885	0.964	13.28
9A30046-CAL7	2000	841709	0.932	13.28
9A30046-CAL8	4000	1664387	0.938	13.29
9A30046-CAL9	6000	2557660	0.919	13.29
9A30046-CALA	8000	3299466	0.909	13.29

AVE RF **0.934** RF RSD **2.67** AVE RT **13.28**

Butyl benzyl phthalate

Curve Fit: **AVERAGE RF**

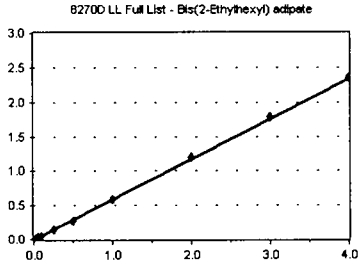


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~3108~~	~~0.366~~	~~14.15~~
~~9A30046-CAL2~~	~~50~~	~~7172~~	~~0.413~~	~~14.15~~
9A30046-CAL3	100	14773	0.428	14.16
9A30046-CAL4	200	38485	0.533	14.15
9A30046-CAL5	500	124269	0.592	14.15
9A30046-CAL6	1000	212214	0.600	14.16
9A30046-CAL7	2000	564166	0.625	14.16
9A30046-CAL8	4000	1137127	0.641	14.17
9A30046-CAL9	6000	1765700	0.634	14.18
9A30046-CALA	8000	2274562	0.627	14.18

AVE RF **0.585** RF RSD **12.35** AVE RT **14.16**

Bis(2-Ethylhexyl) adipate

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~9073~~	~~1.068~~	~~14.34~~
9A30046-CAL2	50	11698	0.674	14.34
9A30046-CAL3	100	18339	0.531	14.34
9A30046-CAL4	200	40129	0.556	14.34
9A30046-CAL5	500	118447	0.565	14.34
9A30046-CAL6	1000	197213	0.558	14.34
9A30046-CAL7	2000	522769	0.579	14.35
9A30046-CAL8	4000	1061254	0.598	14.35
9A30046-CAL9	6000	1647877	0.592	14.36
9A30046-CALA	8000	2130742	0.587	14.36

AVE RF **0.582** RF RSD **6.92** AVE RT **14.35**

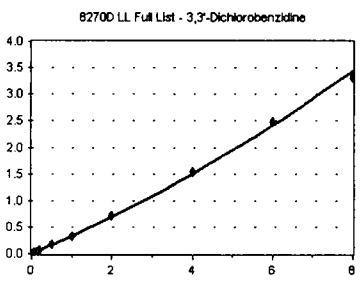
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

3,3'-Dichlorobenzidine

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

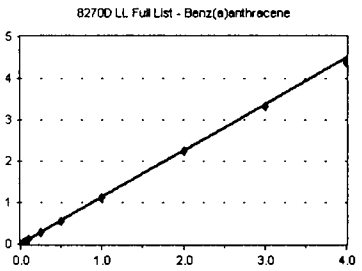


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	40	2805	0.165	15.35
9A30046-CAL2	100	8063	0.232	15.35
9A30046-CAL3	200	18339	0.266	15.34
9A30046-CAL4	400	43713	0.303	15.34
9A30046-CAL5	1000	145270	0.346	15.35
9A30046-CAL6	2000	231650	0.327	15.35
9A30046-CAL7	4000	642844	0.356	15.36
9A30046-CAL8	8000	1371474	0.386	15.38
9A30046-CAL9	12000	2297909	0.413	15.40
9A30046-CALA	16000	2995565	0.413	15.41

AVE RF **0.321** RF RSD **25.15** AVE RT **15.36**

Benz(a)anthracene

Curve Fit: **AVERAGE RF**

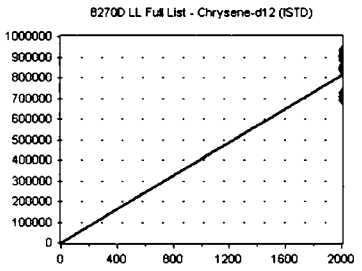


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	10870	1.280	15.39
9A30046-CAL2	50	20129	1.160	15.39
9A30046-CAL3	100	37587	1.089	15.38
9A30046-CAL4	200	79592	1.103	15.38
9A30046-CAL5	500	236770	1.129	15.39
9A30046-CAL6	1000	387630	1.096	15.39
9A30046-CAL7	2000	997082	1.104	15.40
9A30046-CAL8	4000	1987811	1.120	15.41
9A30046-CAL9	6000	3081071	1.107	15.42
9A30046-CALA	8000	3973101	1.094	15.43

AVE RF **1.128** RF RSD **5.07** AVE RT **15.40**

Chrysene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

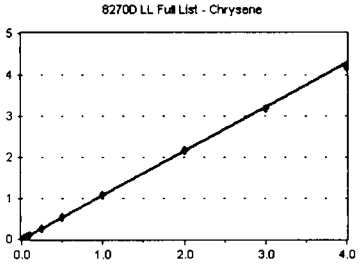


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	849263	424.632	15.42
9A30046-CAL2	2000	694365	347.183	15.41
9A30046-CAL3	2000	690491	345.246	15.41
9A30046-CAL4	2000	721909	360.954	15.41
9A30046-CAL5	2000	839042	419.521	15.42
9A30046-CAL6	2000	707423	353.712	15.42
9A30046-CAL7	2000	902831	451.416	15.42
9A30046-CAL8	2000	887261	443.631	15.43
9A30046-CAL9	2000	927852	463.926	15.44
9A30046-CALA	2000	907570	453.785	15.45

AVE RF **406.400** RF RSD **12.04** AVE RT **15.42**

Chrysene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	9138	1.076	15.47
9A30046-CAL2	50	18408	1.060	15.46
9A30046-CAL3	100	36919	1.069	15.47
9A30046-CAL4	200	77934	1.080	15.47
9A30046-CAL5	500	232271	1.107	15.47
9A30046-CAL6	1000	381765	1.079	15.48
9A30046-CAL7	2000	973945	1.079	15.49
9A30046-CAL8	4000	1929550	1.087	15.50
9A30046-CAL9	6000	2949203	1.060	15.51
9A30046-CALA	8000	3809563	1.049	15.52

AVE RF **1.075** RF RSD **1.52** AVE RT **15.48**

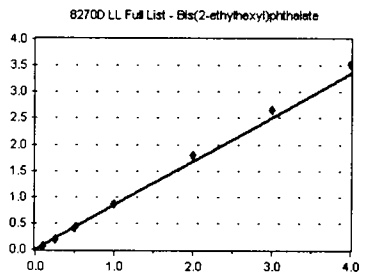
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Bis(2-ethylhexyl)phthalate

Curve Fit: **AVERAGE RF**

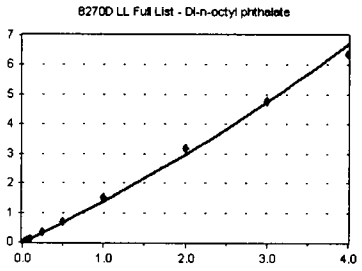


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~3944~~	~~0.464~~	~~15.54~~
~~9A30046-CAL2~~	~~50~~	~~8608~~	~~0.496~~	~~15.54~~
~~9A30046-CAL3~~	~~100~~	~~19228~~	~~0.557~~	~~15.55~~
9A30046-CAL4	200	50647	0.702	15.54
9A30046-CAL5	500	168525	0.803	15.54
9A30046-CAL6	1000	289406	0.818	15.54
9A30046-CAL7	2000	783437	0.868	15.55
9A30046-CAL8	4000	1587394	0.895	15.56
9A30046-CAL9	6000	2465950	0.886	15.56
9A30046-CALA	8000	3197212	0.881	15.57

AVE RF **0.836** RF RSD **8.23** AVE RT **15.55**

Di-n-octyl phthalate

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

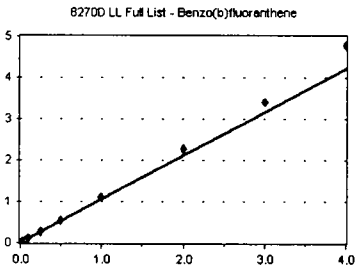


Standard	Concentration	Response	Response Factor	RT
~~9A30046-CAL1~~	~~20~~	~~3881~~	~~0.504~~	~~17.24~~
9A30046-CAL2	50	9748	0.636	17.24
9A30046-CAL3	100	21395	0.699	17.23
9A30046-CAL4	200	63652	0.991	17.23
9A30046-CAL5	500	245753	1.292	17.24
9A30046-CAL6	1000	421456	1.338	17.24
9A30046-CAL7	2000	1248768	1.504	17.24
9A30046-CAL8	4000	2594376	1.589	17.25
9A30046-CAL9	6000	4069870	1.585	17.26
9A30046-CALA	8000	5278776	1.585	17.27

AVE RF **1.247** RF RSD **30.56** AVE RT **17.24**

Benzo(b)fluoranthene

Curve Fit: **AVERAGE RF**

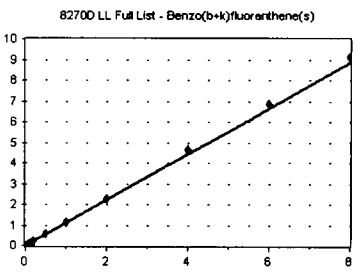


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6730	0.874	18.02
9A30046-CAL2	50	14286	0.932	18.02
9A30046-CAL3	100	29112	0.952	18.02
9A30046-CAL4	200	66187	1.030	18.02
9A30046-CAL5	500	209622	1.102	18.02
9A30046-CAL6	1000	343841	1.091	18.02
9A30046-CAL7	2000	927026	1.116	18.03
9A30046-CAL8	4000	1854491	1.136	18.05
9A30046-CAL9	6000	2914506	1.135	18.06
9A30046-CALA	8000	3991347	1.199	18.08

AVE RF **1.057** RF RSD **9.99** AVE RT **18.03**

Benzo(b+k)fluoranthene(s)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	40	15677	1.018	18.09
9A30046-CAL2	100	31983	1.043	18.02
9A30046-CAL3	200	63728	1.041	18.08
9A30046-CAL4	400	141743	1.103	18.02
9A30046-CAL5	1000	437476	1.150	18.09
9A30046-CAL6	2000	717329	1.138	18.09
9A30046-CAL7	4000	1906416	1.148	18.10
9A30046-CAL8	8000	3805265	1.166	18.12
9A30046-CAL9	12000	5886892	1.146	18.14
9A30046-CALA	16000	7617275	1.144	18.15

AVE RF **1.110** RF RSD **4.95** AVE RT **18.09**

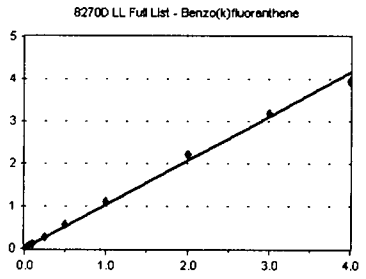
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Benzo(k)fluoranthene

Curve Fit: **AVERAGE RF**

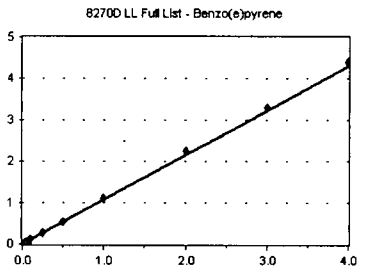


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7026	0.912	18.09
9A30046-CAL2	50	14559	0.950	18.09
9A30046-CAL3	100	29589	0.967	18.08
9A30046-CAL4	200	67887	1.057	18.09
9A30046-CAL5	500	210325	1.106	18.09
9A30046-CAL6	1000	349392	1.109	18.09
9A30046-CAL7	2000	931062	1.121	18.10
9A30046-CAL8	4000	1814554	1.112	18.12
9A30046-CAL9	6000	2736373	1.065	18.14
9A30046-CALA	8000	3282962	0.986	18.15

AVE RF **1.038** RF RSD **7.49** AVE RT **18.10**

Benzo(e)pyrene

Curve Fit: **AVERAGE RF**

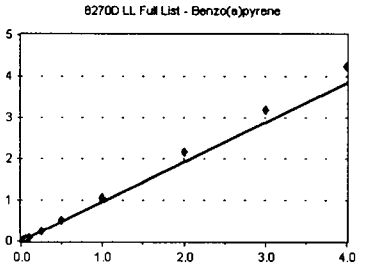


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7648	0.993	18.68
9A30046-CAL2	50	15484	1.010	18.67
9A30046-CAL3	100	31282	1.022	18.67
9A30046-CAL4	200	68515	1.066	18.67
9A30046-CAL5	500	211572	1.112	18.68
9A30046-CAL6	1000	347001	1.101	18.68
9A30046-CAL7	2000	912421	1.099	18.70
9A30046-CAL8	4000	1835807	1.125	18.72
9A30046-CAL9	6000	2825299	1.100	18.73
9A30046-CALA	8000	3659927	1.099	18.74

AVE RF **1.073** RF RSD **4.41** AVE RT **18.69**

Benzo(a)pyrene

Curve Fit: **AVERAGE RF**

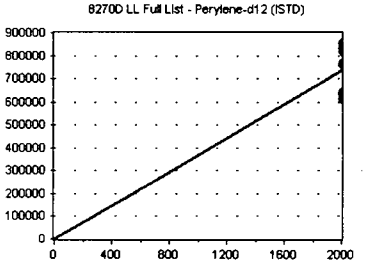


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5806	0.754	18.80
9A30046-CAL2	50	12367	0.807	18.80
9A30046-CAL3	100	25304	0.827	18.80
9A30046-CAL4	200	58935	0.917	18.80
9A30046-CAL5	500	193455	1.017	18.80
9A30046-CAL6	1000	319982	1.016	18.80
9A30046-CAL7	2000	875788	1.055	18.82
9A30046-CAL8	4000	1767067	1.083	18.84
9A30046-CAL9	6000	2720886	1.059	18.86
9A30046-CALA	8000	3529245	1.060	18.87

AVE RF **0.959** RF RSD **12.80** AVE RT **18.82**

Perylene-d12 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	770351	385.176	18.95
9A30046-CAL2	2000	613296	306.648	18.95
9A30046-CAL3	2000	611891	305.945	18.95
9A30046-CAL4	2000	642441	321.220	18.95
9A30046-CAL5	2000	760928	380.464	18.95
9A30046-CAL6	2000	630113	315.057	18.95
9A30046-CAL7	2000	830313	415.157	18.96
9A30046-CAL8	2000	816129	408.064	18.97
9A30046-CAL9	2000	856100	428.050	18.97
9A30046-CALA	2000	832510	416.255	18.98

AVE RF **368.204** RF RSD **13.68** AVE RT **18.96**

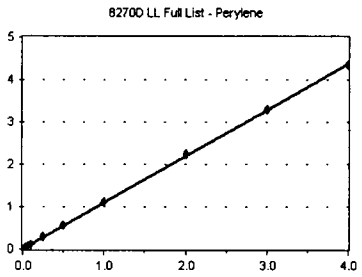
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Perylene

Curve Fit: **AVERAGE RF**

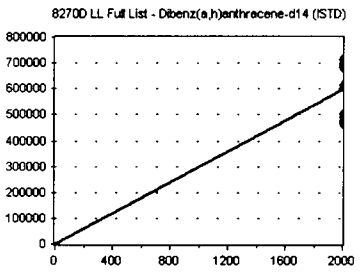


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	7762	1.008	19.00
9A30046-CAL2	50	16978	1.107	19.01
9A30046-CAL3	100	33514	1.095	19.01
9A30046-CAL4	200	70185	1.092	19.00
9A30046-CAL5	500	216816	1.140	19.01
9A30046-CAL6	1000	350972	1.114	19.01
9A30046-CAL7	2000	918814	1.107	19.02
9A30046-CAL8	4000	1826834	1.119	19.04
9A30046-CAL9	6000	2815058	1.096	19.06
9A30046-CALA	8000	3618955	1.087	19.08

AVE RF **1.097** RF RSD **3.18** AVE RT **19.02**

Dibenz(a,h)anthracene-d14 (ISTD)

Curve Fit: **AVERAGE RF**

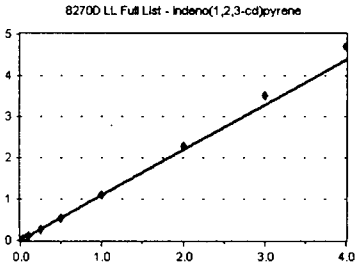


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	2000	614628	307.314	21.35
9A30046-CAL2	2000	475223	237.612	21.35
9A30046-CAL3	2000	467911	233.955	21.35
9A30046-CAL4	2000	493160	246.580	21.35
9A30046-CAL5	2000	615052	307.526	21.35
9A30046-CAL6	2000	502143	251.072	21.35
9A30046-CAL7	2000	698997	349.498	21.36
9A30046-CAL8	2000	692377	346.188	21.37
9A30046-CAL9	2000	715157	357.578	21.39
9A30046-CALA	2000	683312	341.656	21.40

AVE RF **297.898** RF RSD **17.04** AVE RT **21.36**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**

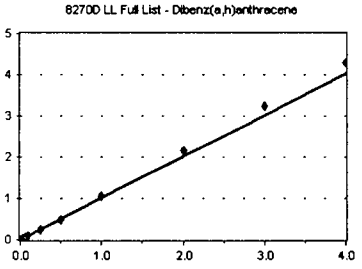


Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	6544	1.065	21.34
9A30046-CAL2	50	12358	1.040	21.34
9A30046-CAL3	100	24570	1.050	21.34
9A30046-CAL4	200	51991	1.054	21.34
9A30046-CAL5	500	166318	1.082	21.35
9A30046-CAL6	1000	270568	1.078	21.35
9A30046-CAL7	2000	772179	1.105	21.37
9A30046-CAL8	4000	1577648	1.139	21.39
9A30046-CAL9	6000	2513172	1.171	21.41
9A30046-CALA	8000	3220620	1.178	21.42

AVE RF **1.096** RF RSD **4.60** AVE RT **21.36**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5352	0.871	21.41
9A30046-CAL2	50	11253	0.947	21.41
9A30046-CAL3	100	22041	0.942	21.41
9A30046-CAL4	200	48121	0.976	21.41
9A30046-CAL5	500	156689	1.019	21.41
9A30046-CAL6	1000	250339	0.997	21.41
9A30046-CAL7	2000	733789	1.050	21.43
9A30046-CAL8	4000	1499940	1.083	21.44
9A30046-CAL9	6000	2316997	1.080	21.47
9A30046-CALA	8000	2936332	1.074	21.48

AVE RF **1.004** RF RSD **7.04** AVE RT **21.43**

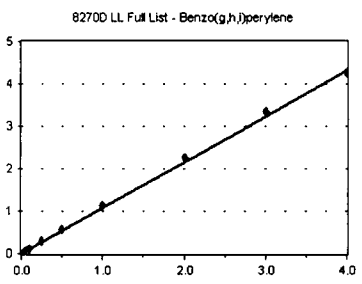
Element Calibration Review Sheet

Calibration ID: **A9A3103** Instrument: **SV-GCMS5** Calibration Date: **01/31/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9A3103**

Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9A30046-CAL1	20	5584	0.909	21.88
9A30046-CAL2	50	12123	1.020	21.88
9A30046-CAL3	100	24346	1.041	21.88
9A30046-CAL4	200	53734	1.090	21.89
9A30046-CAL5	500	175449	1.141	21.89
9A30046-CAL6	1000	285618	1.138	21.89
9A30046-CAL7	2000	791021	1.132	21.91
9A30046-CAL8	4000	1580720	1.142	21.93
9A30046-CAL9	6000	2394723	1.116	21.95
9A30046-CALA	8000	2911992	1.065	21.96

AVE RF **1.079** RF RSD **6.88** AVE RT **21.91**

Compound List Report SV-GCMS5

Method Path : C:\msdchem\1\METHODS\
Method File : SV5_013019.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu Jan 31 10:44:49 2019
Response Via : Initial Calibration

GK 1/31/19

Total Cpnds : 97

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4 (ISTD)	152	6.848	1.000	A	2	A	R
2	T	N-Nitrosodimethylamine	74	4.387	0.641	A	2	A	R
3	T	Pyridine	79	4.424	0.646	A	2	A	R
4	S	2-Fluorophenol (Surr)	112	5.628	0.822	A	1	A	R
5	S	Phenol-d6(Surr)	99	6.473	0.945	A	2	A	R
6	T	Phenol	94	6.489	0.948	A	2	A	R
7	T	Aniline	93	6.531	0.954	A	2	A	R
8	T	Bis(2-chloroethyl) ether	93	6.580	0.961	A	2	A	R
9	T	2-Chlorophenol	128	6.650	0.971	A	2	A	R
10	T	1,3-Dichlorobenzene	146	6.799	0.993	A	2	A	R
11	T	1,4-Dichlorobenzene	146	6.864	1.002	A	2	A	R
12	T	Benzyl alcohol	108	6.965	1.017	A	2	A	R
13	T	1,2-Dichlorobenzene	146	7.013	1.024	A	2	A	R
14	T	2-Methylphenol	107	7.067	1.032	A	2	A	R
15	T	2,2'-Oxybis(1-Chloropropane)	45	7.099	1.037	A	2	A	R
16	T	N-Nitrosodi-n-propylamine	70	7.222	1.055	A	2	A	R
17	T	3+4-Methylphenol	107	7.211	1.053	A	3	A	R
18	T	Hexachloroethane	117	7.345	1.073	A	2	A	R
19	S	Nitrobenzene-d5 (Surr)	82	7.377	1.077	A	2	A	R
20	T	Nitrobenzene	77	7.398	1.080	A	2	A	R
21	I	Naphthalene-d8 (ISTD)	136	8.099	1.000	A	1	A	R
22	T	Isophorone	82	7.628	0.942	A	2	A	R
23	T	2-Nitrophenol	139	7.713	0.952	Q 1/a2	2	A	R
24	T	2,4-Dimethylphenol	122	7.740	0.956	A	2	A	R
25	T	Bis(2-chloroethoxy) methane	93	7.832	0.967	A	2	A	R
26	T	Benzoic acid	105	7.815	0.965	Q 1/a2	2	A	R
27	T	2,4-Dichlorophenol	162	7.949	0.981	A	2	A	R
28	T	1,2,4-Trichlorobenzene	180	8.040	0.993	A	2	A	R
29	T	Naphthalene	128	8.120	1.003	A	1	A	R
30	T	4-Chloroaniline	127	8.163	1.008	A	2	A	R
31	T	Hexachlorobutadiene	225	8.243	1.018	A	2	A	R
32	T	4-Chloro-3-methylphenol	107	8.633	1.066	Q 1/a2	2	A	R
33	T	2-Methylnaphthalene	142	8.816	1.088	A	2	A	R
34	T	1-Methylnaphthalene	142	8.917	1.101	A	2	A	R
35	I	Acenaphthene-d10 (ISTD)	162	9.880	1.000	A	2	A	R
36	T	Hexachlorocyclopentadiene	237	8.982	0.909	A	2	A	R
37	T	2,4,6-Trichlorophenol	196	9.094	0.920	Q 1/a2	2	A	R
38	T	2,4,5-Trichlorophenol	196	9.131	0.924	Q 1/a2	2	A	R
39	T	1,1'-Biphenyl	154	9.281	0.939	A	2	A	R
40	S	2-Fluorobiphenyl (Surr)	172	9.180	0.929	A	2	A	R
41	T	2-Chloronaphthalene	162	9.308	0.942	A	2	A	R
42	T	2-Nitroaniline	138	9.404	0.952	Q 1/a2	2	A	R
43	T	2,6-Dimethylnaphthalene	156	9.447	0.956	A	2	A	R
44	T	1,4-Dinitrobenzene	168	9.532	0.965	Q 1/a2	2	A	R
45	T	Dimethyl phthalate	163	9.581	0.970	A	2	A	R
46	T	1,3-Dinitrobenzene	168	9.612	0.973	Q 1/a2	2	A	R
47	T	2,6-Dinitrotoluene	165	9.644	0.976	Q 1/a2	2	A	R
48	T	1,2-Dinitrobenzene	168	9.703	0.982	Q 1/a2	2	A	R
49	T	Acenaphthylene	152	9.736	0.985	A	2	A	R
50	T	3-Nitroaniline	138	9.816	0.994	Q 1/a2	2	A	R
51	T	Acenaphthene	153	9.912	1.003	A	2	A	R
52	T	2,4-Dinitrophenol	184	9.922	1.004	Q 1/a2	2	A	R
53	T	4-Nitrophenol	139	9.971	1.009	Q 1/a2	2	A	R

54	T	2,4-Dinitrotoluene	165	10.056	1.018	Q	1/a2	2	A	R
55	T	Dibenzofuran	168	10.083	1.021	A		2	A	R
56	T	2,3,5,6-Tetrachlorophenol	232	10.163	1.029	Q	1/a2	2	A	R
57	T	2,3,4,6-Tetrachlorophenol	232	10.206	1.033	Q	1/a2	2	A	R
58	T	Diethyl phthalate	149	10.297	1.042	A		2	A	R
59	T	2,3,5-Trimethylnaphthalene	170	10.297	1.042	A		2	A	R
60	T	Fluorene	166	10.436	1.056	A		2	A	R
61	T	4-Chlorophenyl phenyl ether	204	10.426	1.055	A		2	A	R
62	T	4-Nitroaniline	138	10.441	1.057	A		2	A	R
63	T	4,6-Dinitro-2-methylphenol	198	10.473	1.060	Q	1/a2	2	A	R
64	I	Phenanthrene-d10 (ISTD)	188	11.399	1.000	A		2	A	R
65	T	N-Nitrosodiphenylamine	169	10.543	0.925	A		2	A	R
66	T	Azobenzene (1,2-DPH)	77	10.586	0.929	A		2	A	R
67	S	2,4,6-Tribromophenol (Surr)	330	10.682	0.937	Q	1/a2	2	A	R
68	T	4-Bromophenyl phenyl ether	248	10.929	0.959	A		2	A	R
69	T	Hexachlorobenzene	284	11.009	0.966	A		2	A	R
70	T	Pentachlorophenol (PCP)	266	11.201	0.983	Q	1/a2	2	A	R
71	T	Phenanthrene	178	11.421	1.002	A		2	A	R
72	T	Anthracene	178	11.474	1.007	A		2	A	R
73	T	Carbazole	167	11.629	1.020	A		2	A	R
74	T	Di-n-butyl phthalate	149	11.972	1.050	A		2	A	R
75	T	Fluoranthene	202	12.747	1.118	A	1/a2	2	A	R
76	T	Benzidine	184	12.902	1.132	Q		2	A	R
77	T	Pyrene	202	13.063	1.146	A		2	A	R
78	I	Chrysene-d12 (ISTD)	240	15.416	1.000	A		2	A	R
79	S	Terphenyl-d14 (Surr)	244	13.277	0.861	A		2	A	R
80	T	Butyl benzyl phthalate	149	14.159	0.918	A		2	A	R
81	T	Bis(2-ethylhexyl) adipate	129	14.340	0.930	A	1/a2	2	A	R
82	T	3,3-Dichlorobenzidine	252	15.347	0.995	Q		2	A	R
83	T	Benz(a)anthracene	228	15.389	0.998	A		2	A	R
84	T	Chrysene	228	15.475	1.004	A		2	A	R
85	T	Bis(2-ethylhexyl) phthalate	149	15.544	1.008	A		2	A	R
86	I	Perylene-d12 (ISTD)	264	18.951	1.000	A	1/a2	2	A	R
87	T	Di-n-octyl phthalate	149	17.234	0.909	Q		2	A	R
88	T	Benzo(b)fluoranthene	252	18.020	0.951	A		2	A	R
89	T	Benzo(k)fluoranthene	252	18.090	0.955	A		2	A	R
90	T	Benzo(b+k)fluoranthene	252	18.090	0.955	A		2	A	R
91	T	Benzo(e)pyrene	252	18.679	0.986	A		2	A	R
92	T	Benzo(a)pyrene	252	18.801	0.992	A		2	A	R
93	T	Perylene	252	19.010	1.003	A		2	A	B
94	I	Dibenz(a,h)Anthrcene-d14 (I...	292	21.348	1.000	A		1	A	R
95	T	Indeno(1,2,3-cd)pyrene	276	21.348	1.000	A		1	A	R
96	T	Dibenz(a,h)anthracene	278	21.412	1.003	A		2	A	R
97	T	Benzo(g,h,i)perylene	276	21.893	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

SV5_013019.M Thu Jan 31 11:54:33 2019

Response Factor Report SV-GCMS5

Method Path : C:\msdchem\1\METHODS\
Method File : SV5_013019.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Thu Jan 31 10:44:49 2019
Response Via : Initial Calibration

1/31/19

Calibration Files
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4000=E01301921.D 6000=E01301922.D 8000=E01301923.D

		Compound	20	50	100	200	500	1000	2000	4000	6000	8000	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------ISTD----------											7.53
2)	T	N-Nitrosodimet...	0.878	0.849	0.880	0.915	0.975	0.954	0.976	1.013	1.000	0.999	0.944	6.24
3)	T	Pyridine			1.300	1.427	1.475	1.575	1.537	1.564	1.654	1.623	1.602	1.528	7.27
4)	S	2-Fluorophenol...	1.010	1.105	1.193	1.229	1.313	1.299	1.291	1.352	1.343	1.332	1.247	9.11
5)	S	Phenol-d6(Surr)	1.309	1.562	1.661	1.650	1.767	1.706	1.761	1.794	1.752	1.718	1.668	8.62
6)	T	Phenol	1.353	1.675	1.793	1.752	1.819	1.764	1.808	1.869	1.843	1.799	1.748	8.49
7)	T	Aniline			2.152	2.242	2.188	2.259	2.213	2.326	2.380	2.394	2.343	2.277	3.81
8)	T	Bis(2-chloroet...	1.480	1.395	1.377	1.454	1.492	1.435	1.433	1.489	1.395	1.334	1.428	3.68
9)	T	2-Chlorophenol	0.998	1.189	1.260	1.303	1.378	1.347	1.381	1.424	1.416	1.391	1.309	10.08
10)	T	1,3-Dichlorobe...	1.476	1.515	1.519	1.516	1.544	1.485	1.478	1.500	1.475	1.450	1.496	1.87
11)	T	1,4-Dichlorobe...	1.449	1.496	1.558	1.541	1.575	1.506	1.506	1.527	1.496	1.460	1.511	2.64
12)	T	Benzyl alcohol			0.613	0.696	0.747	0.838	0.837	0.902	0.940	0.955	0.931	0.829	14.47
13)	T	1,2-Dichlorobe...	1.380	1.434	1.476	1.448	1.477	1.424	1.418	1.448	1.422	1.390	1.432	2.25
14)	T	2-Methylphenol	0.888	0.974	1.080	1.074	1.156	1.107	1.154	1.182	1.155	1.114	1.088	8.49
15)	T	2,2'-Oxybis(1-...	2.200	2.388	2.391	2.331	2.389	2.276	2.268	2.261	2.138	2.011	2.265	5.43
16)	T	N-Nitrosodi-n-...	0.902	0.974	1.041	1.063	1.150	1.086	1.143	1.172	1.107	1.068	1.071	7.74
17)	T	3+4-Methylphenol	1.045	1.257	1.317	1.328	1.484	1.407	1.495	1.527	1.472	1.416	1.375	10.56
18)	T	Hexachloroethane	0.510	0.548	0.571	0.559	0.572	0.559	0.559	0.576	0.568	0.558	0.558	3.35
19)	S	Nitrobenzene-d...			1.108	1.262	1.339	1.655	1.470	1.717	1.630	1.736	1.541	1.495	14.62
20)	T	Nitrobenzene	1.145	1.216	1.344	1.422	1.554	1.492	1.573	1.614	1.568	1.514	1.444	11.11
21)	I	Naphthalene-d8 (ISTD)	----------ISTD----------											2.56
22)	T	Isophorone	0.516	0.628	0.650	0.676	0.727	0.715	0.727	0.749	0.728	0.709	0.683	10.26
23)	T	2-Nitrophenol			0.086	0.099	0.115	0.145	0.153	0.164	0.178	0.180	0.180	0.144	25.03
24)	T	2,4-Dimethylph...			0.275	0.278	0.288	0.311	0.307	0.313	0.312	0.314	0.296	0.299	5.22
25)	T	Bis(2-chloroet...	0.402	0.435	0.433	0.430	0.451	0.434	0.438	0.443	0.424	0.404	0.429	3.66
26)	T	Benzoic acid					0.009	0.043	0.089	0.140	0.178	0.228	0.239	0.132	67.48
27)	T	2,4-Dichloroph...			0.178	0.189	0.206	0.238	0.236	0.252	0.263	0.265	0.260	0.232	14.18
28)	T	1,2,4-Trichlor...	0.261	0.296	0.285	0.282	0.282	0.276	0.273	0.278	0.275	0.271	0.278	3.41
29)	T	Naphthalene	1.129	1.152	1.094	1.084	1.101	1.063	1.049	1.043	1.002	0.953	1.067	5.54
30)	T	4-Chloroaniline	0.282	0.333	0.355	0.351	0.367	0.357	0.398	0.420	0.411	0.402	0.367	11.43
31)	T	Hexachlorobuta...	0.122	0.140	0.137	0.135	0.138	0.139	0.135	0.139	0.138	0.136	0.136	3.72
32)	T	4-Chloro-3-met...			0.132	0.171	0.197	0.249	0.250	0.282	0.301	0.298	0.291	0.241	25.28
33)	T	2-Methylnaphth...	0.657	0.681	0.673	0.676	0.700	0.673	0.685	0.690	0.655	0.621	0.671	3.33
34)	T	1-Methylnaphth...	0.647	0.658	0.649	0.646	0.674	0.644	0.649	0.655	0.619	0.585	0.643	3.82
35)	I	Acenaphthene-d10 (...	----------ISTD----------											6.01
36)	T	Hexachlorocycl...	0.185	0.208	0.225	0.246	0.273	0.278	0.291	0.287	0.293	0.280	0.257	14.99
37)	T	2,4,6-Trichlor...	0.155	0.182	0.228	0.254	0.310	0.314	0.351	0.358	0.370	0.357	0.288	27.15
38)	T	2,4,5-Trichlor...	0.145	0.223	0.255	0.260	0.318	0.324	0.347	0.370	0.367	0.372	0.298	25.32

Method Path : C:\msdchem\1\METHODS\
Method File : SV5_013019.M
Title : EPA 8270D: Semivolatile Organics

39)	T	1,1'-Biphenyl	1.734	1.799	1.804	1.778	1.809	1.734	1.722	1.683	1.573	1.473	1.711	6.40
40)	S	2-Fluorobiphen...	1.465	1.543	1.556	1.550	1.559	1.507	1.490	1.465	1.404	1.335	1.487	4.93
41)	T	2-Chloronaphth...	1.252	1.268	1.285	1.270	1.285	1.226	1.232	1.220	1.180	1.137	1.235	3.86
42)	T	2-Nitroaniline			0.197	0.242	0.344	0.362	0.426	0.457	0.466	0.467	0.370	28.24
43)	T	2,6-Dimethylna...	1.142	1.216	1.238	1.240	1.269	1.234	1.224	1.200	1.122	1.069	1.195	5.30
44)	T	1,4-Dinitroben...			0.053	0.074	0.118	0.134	0.177	0.202	0.212	0.216	0.148	42.68
45)	T	Dimethyl phtha...	1.117	1.112	1.179	1.266	1.373	1.312	1.368	1.406	1.362	1.340	1.284	8.57
46)	T	1,3-Dinitroben...			0.073	0.107	0.165	0.175	0.216	0.234	0.239	0.242	0.181	35.16
47)	T	2,6-Dinitrotol...		0.123	0.161	0.210	0.276	0.281	0.312	0.332	0.330	0.329	0.262	30.01
48)	T	1,2-Dinitroben...		0.047	0.072	0.086	0.122	0.124	0.145	0.155	0.156	0.154	0.118	34.47
49)	T	Acenaphthylene	1.643	1.912	1.984	2.013	2.106	2.032	2.041	2.029	1.904	1.818	1.948	6.97
50)	T	3-Nitroaniline		0.152	0.204	0.251	0.320	0.308	0.367	0.384	0.387	0.384	0.306	28.22
51)	T	Acenaphthene	1.414	1.363	1.368	1.365	1.381	1.331	1.315	1.294	1.218	1.160	1.321	5.95
52)	T	2,4-Dinitrophenol				0.014	0.038	0.058	0.104	0.145	0.171	0.184	0.102	66.15
53)	T	4-Nitrophenol			0.102	0.136	0.217	0.223	0.290	0.309	0.321	0.320	0.240	35.58
54)	T	2,4-Dinitrotol...			0.162	0.227	0.326	0.338	0.407	0.432	0.434	0.429	0.344	29.92
55)	T	Dibenzofuran	1.742	1.702	1.712	1.711	1.812	1.697	1.764	1.754	1.675	1.603	1.717	3.29
56)	T	2,3,5,6-Tetrac...		0.086	0.114	0.154	0.224	0.231	0.275	0.299	0.308	0.308	0.222	38.41
57)	T	2,3,4,6-Tetrac...		0.155	0.182	0.194	0.265	0.262	0.297	0.315	0.318	0.319	0.256	24.93
58)	T	Diethyl phthalate	1.137	1.159	1.179	1.289	1.430	1.337	1.429	1.378	1.281	1.209	1.283	8.53
59)	T	2,3,5-Trimethy...	1.043	1.070	1.088	1.102	1.168	1.097	1.118	1.070	0.976	0.923	1.066	6.62
60)	T	Fluorene	1.315	1.327	1.361	1.393	1.483	1.396	1.450	1.421	1.330	1.274	1.375	4.74
61)	T	4-Chlorophenyl...	0.620	0.571	0.579	0.598	0.639	0.595	0.632	0.636	0.617	0.600	0.609	3.90
62)	T	4-Nitroaniline				0.264	0.355	0.324	0.394	0.399	0.401	0.405	0.363	14.62
63)	T	4,6-Dinitro-2-...				0.033	0.080	0.104	0.160	0.197	0.217	0.228	0.146	51.27
														10.46
64)	I	Phenanthrene-d10 (...	----------	----------	ISTD	----------	----------							
65)	T	N-Nitrosodiphe...	0.539	0.606	0.626	0.652	0.683	0.664	0.655	0.663	0.626	0.604	0.632	6.60
66)	T	Azobenzene (1,...	0.694	0.817	0.875	0.905	0.957	0.938	0.917	0.908	0.835	0.788	0.863	9.31
67)	S	2,4,6-Tribromo...	0.025	0.039	0.051	0.060	0.074	0.079	0.083	0.092	0.096	0.098	0.070	35.87
68)	T	4-Bromophenyl ...	0.171	0.175	0.178	0.185	0.189	0.186	0.187	0.195	0.192	0.193	0.185	4.31
69)	T	Hexachlorobenzene	0.172	0.180	0.183	0.186	0.184	0.189	0.183	0.195	0.194	0.196	0.186	4.03
70)	T	Pentachlorophe...			0.034	0.050	0.078	0.091	0.107	0.120	0.126	0.128	0.092	38.65
71)	T	Phenanthrene	1.136	1.132	1.156	1.140	1.161	1.114	1.096	1.077	1.004	0.962	1.098	6.05
72)	T	Anthracene	1.175	1.189	1.175	1.169	1.198	1.147	1.123	1.090	1.024	0.973	1.126	6.71
73)	T	Carbazole	1.209	1.101	1.089	1.075	1.101	1.038	1.035	1.015	0.957	0.926	1.055	7.61
74)	T	Di-n-butyl pht...	1.681	1.372	1.303	1.315	1.362	1.289	1.301	1.269	1.181	1.122	1.320	11.22
75)	T	Fluoranthene	1.179	1.160	1.159	1.154	1.205	1.138	1.151	1.124	1.076	1.041	1.139	4.23
76)	T	Benzidine			0.236	0.220	0.327	0.322	0.480	0.615			0.367	41.65
77)	T	Pyrene	1.178	1.173	1.166	1.175	1.222	1.157	1.171	1.148	1.103	1.074	1.157	3.59
														12.04
78)	I	Chrysene-d12 (ISTD)	----------	----------	ISTD	----------	----------							
79)	S	Terphenyl-d14 ...	0.891	0.926	0.935	0.967	0.963	0.964	0.932	0.938	0.919	0.909	0.934	2.67
80)	T	Butyl benzyl p...			0.428	0.533	0.592	0.600	0.625	0.641	0.634	0.627	0.585	12.35
81)	T	Bis(2-ethylhex...		0.674	0.531	0.556	0.565	0.558	0.579	0.598	0.592	0.587	0.582	6.92
82)	T	3,3-Dichlorobe...	0.165	0.232	0.266	0.303	0.346	0.327	0.356	0.386	0.413	0.413	0.321	25.15
83)	T	Benz(a)anthracene	1.280	1.160	1.089	1.103	1.129	1.096	1.104	1.120	1.107	1.094	1.128	5.07
84)	T	Chrysene	1.076	1.060	1.069	1.080	1.107	1.079	1.079	1.087	1.060	1.049	1.075	1.52
85)	T	Bis(2-ethylhex...				0.702	0.803	0.818	0.868	0.895	0.886	0.881	0.836	8.23

Method Path : C:\msdchem\1\METHODS\
Method File : SV5_013019.M
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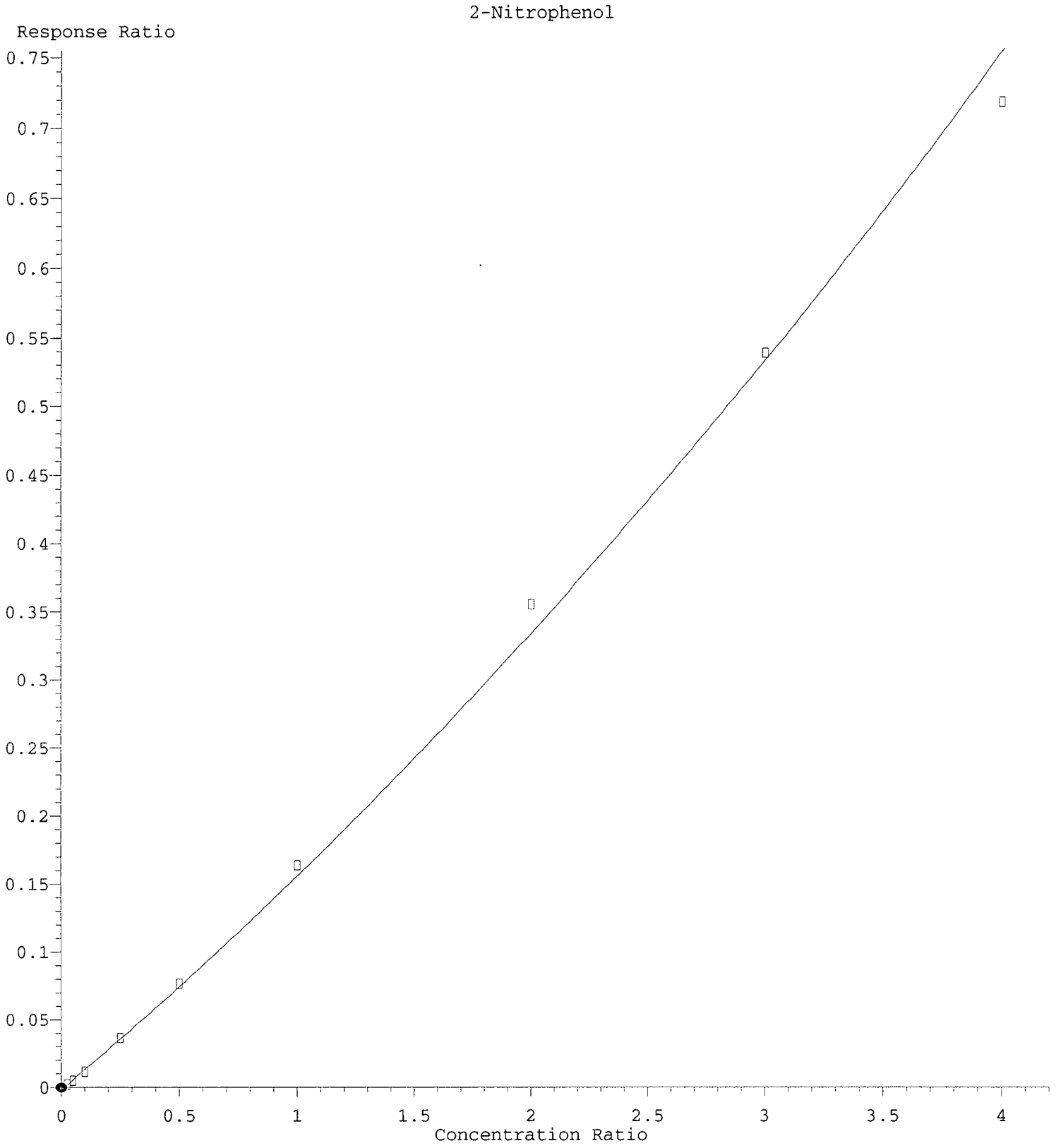
13.68

86)	I	Perylene-d12 (ISTD)	----------ISTD----------										
87)	T	Di-n-octyl pht...	0.636	0.699	0.991	1.292	1.338	1.504	1.589	1.585	1.585	1.247	30.56
88)	T	Benzo(b)fluora...	0.874	0.932	0.952	1.030	1.102	1.091	1.116	1.136	1.135	1.199	1.057	9.99
89)	T	Benzo(k)fluora...	0.912	0.950	0.967	1.057	1.106	1.109	1.121	1.112	1.065	0.986	1.038	7.49
90)	T	Benzo(b+k)fluo...	1.018	1.043	1.041	1.103	1.150	1.138	1.148	1.166	1.146	1.144	1.110	4.95
91)	T	Benzo(e)pyrene	0.993	1.010	1.022	1.066	1.112	1.101	1.099	1.125	1.100	1.099	1.073	4.41
92)	T	Benzo(a)pyrene	0.754	0.807	0.827	0.917	1.017	1.016	1.055	1.083	1.059	1.060	0.959	12.80
93)	T	Perylene	1.008	1.107	1.095	1.092	1.140	1.114	1.107	1.119	1.096	1.087	1.097	3.18
94)	I	Dibenz(a,h)Anthrce...	----------ISTD----------										
95)	T	Indeno(1,2,3-c...	1.065	1.040	1.050	1.054	1.082	1.078	1.105	1.139	1.171	1.178	1.096	4.60
96)	T	Dibenz(a,h)ant...	0.871	0.947	0.942	0.976	1.019	0.997	1.050	1.083	1.080	1.074	1.004	7.04
97)	T	Benzo(g,h,i)pe...	0.909	1.020	1.041	1.090	1.141	1.138	1.132	1.142	1.116	1.065	1.079	6.88

1/31/19 ~~17~~ 17.04

(#) = Out of Range

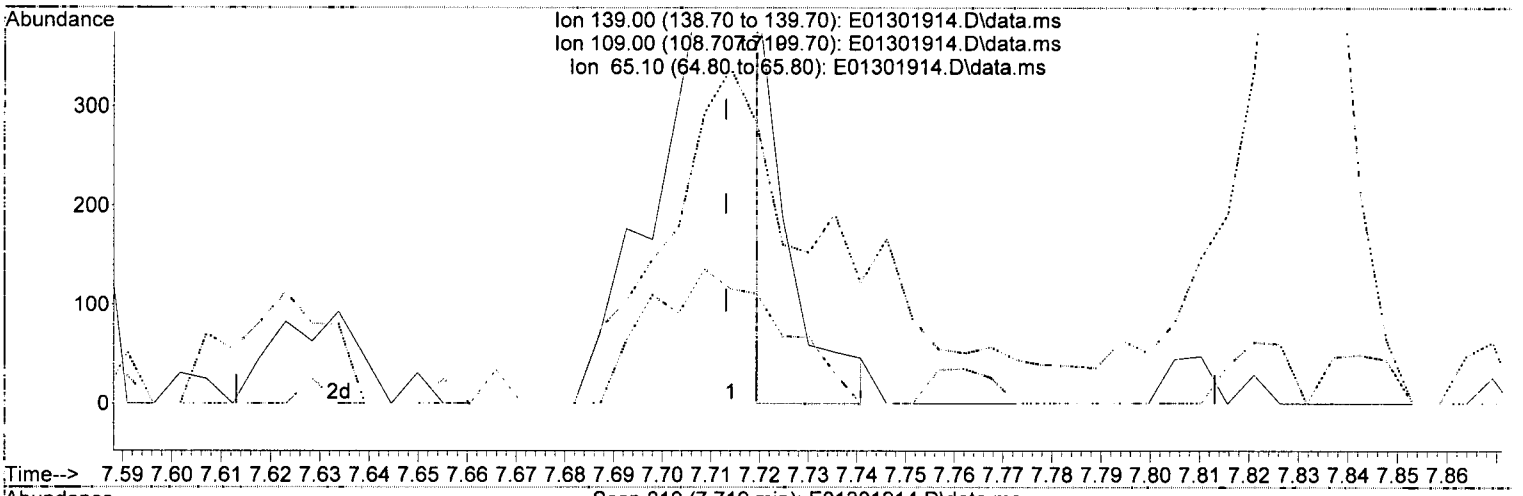


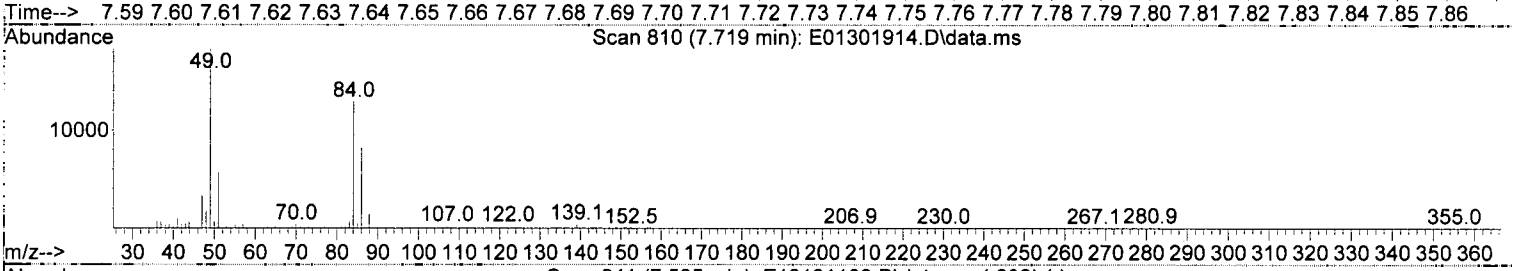
R = 1.05e-002 A*A + 1.47e-001 A - 1.78e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SVS_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

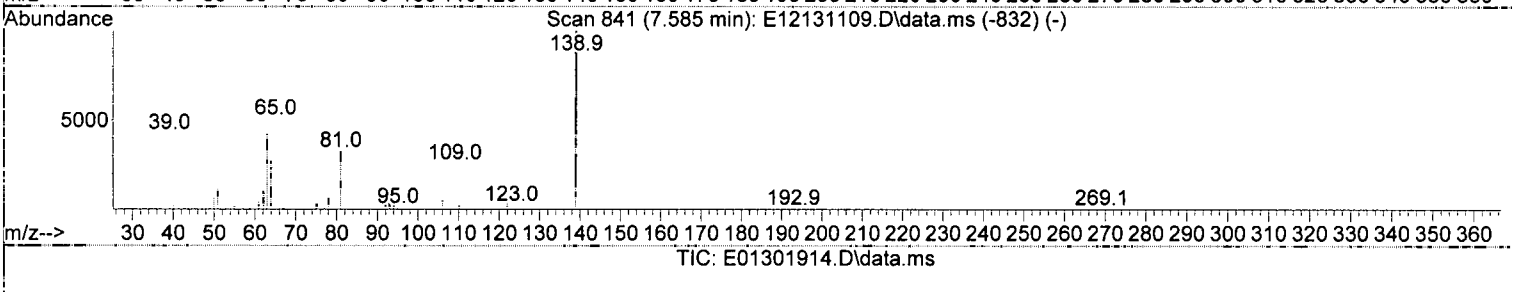
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







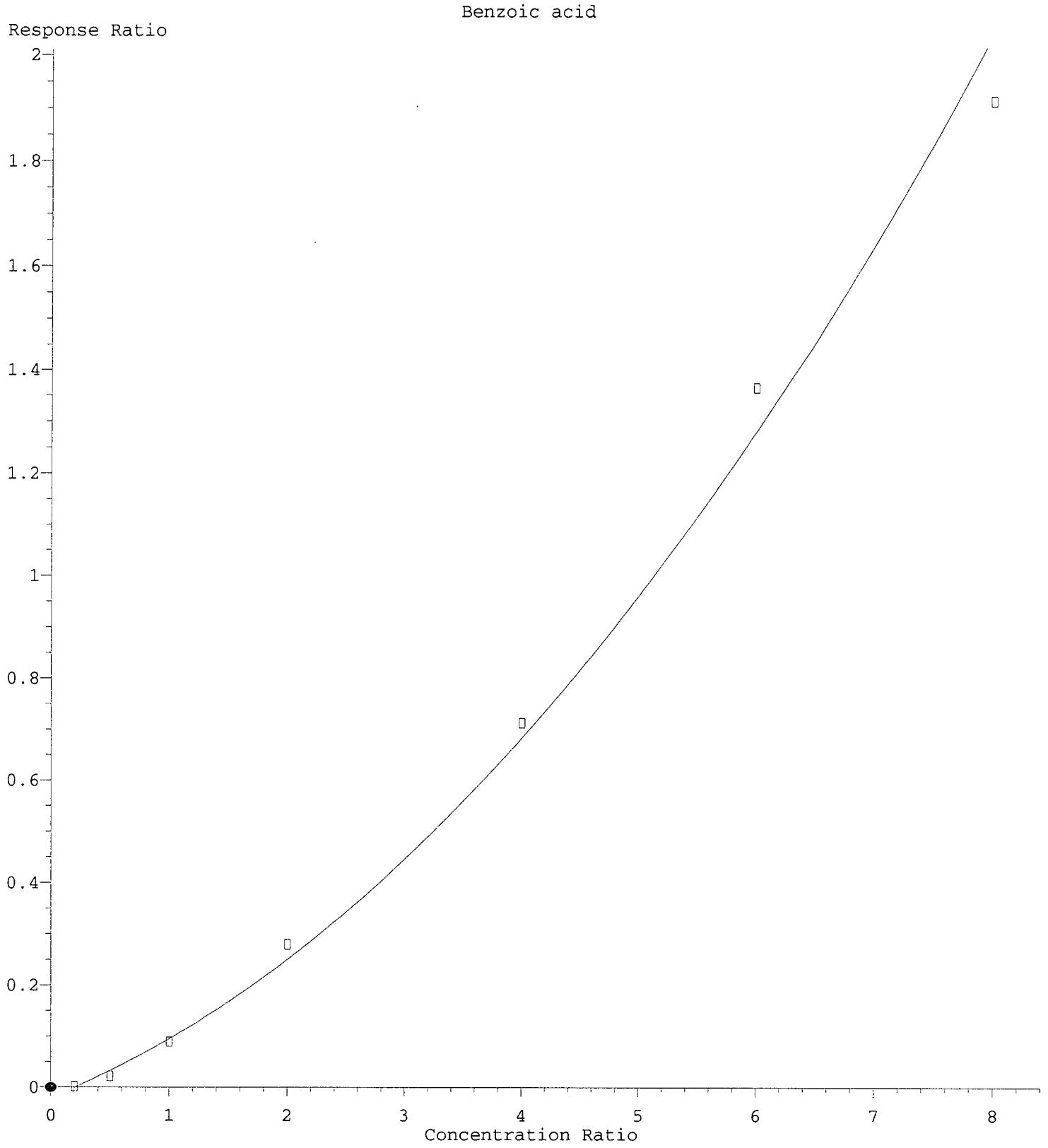
TIC: E01301914.D\data.ms

(23) 2-Nitrophenol (T)

7.719min (+ 0.006) 25.58 ng/ml m

response 111

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	29.10	26.56
65.10	60.80	67.70
0.00	0.00	0.00

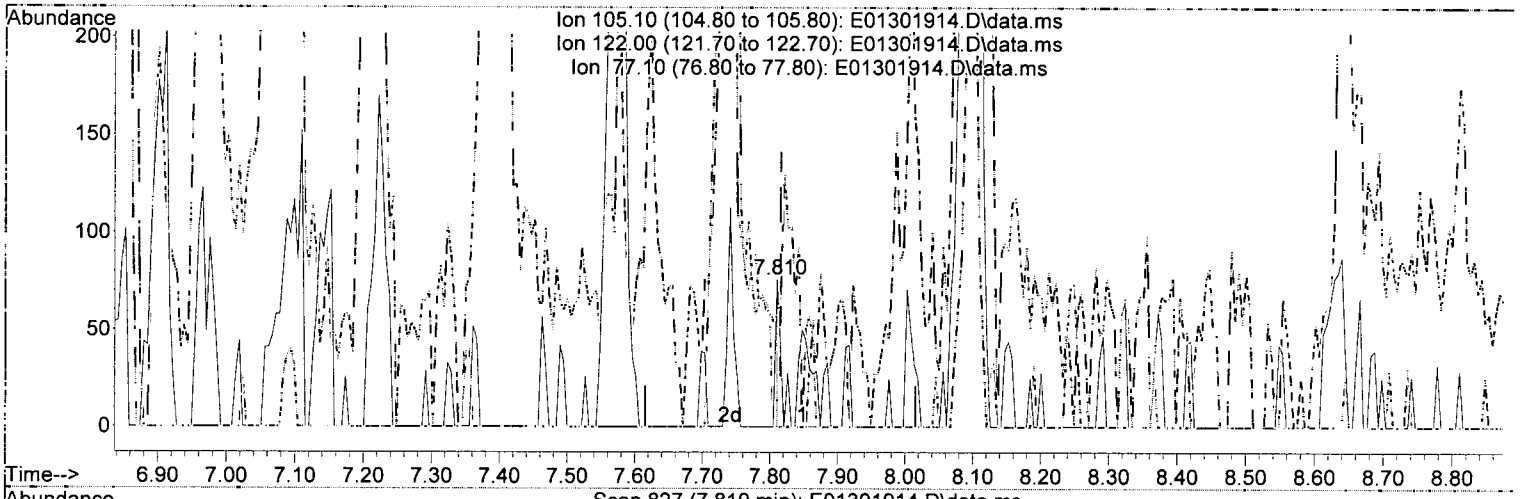


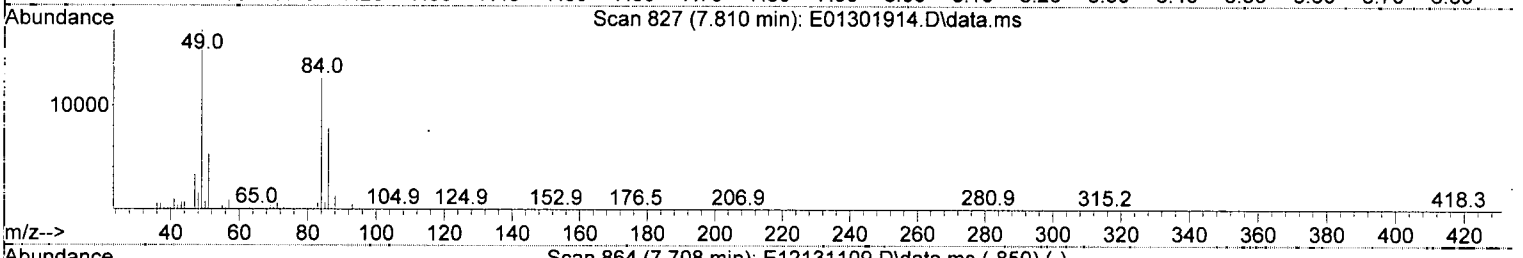
R = 2.05e-002 A*A + 9.40e-002 A - 1.95e-002
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

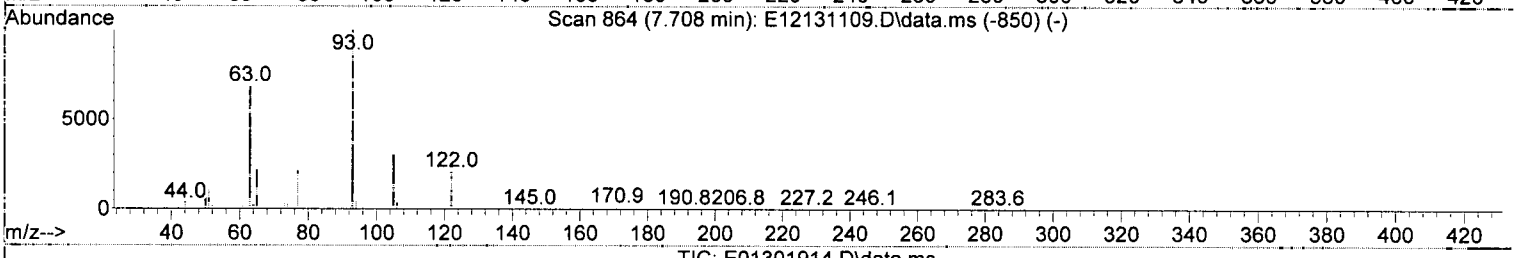
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







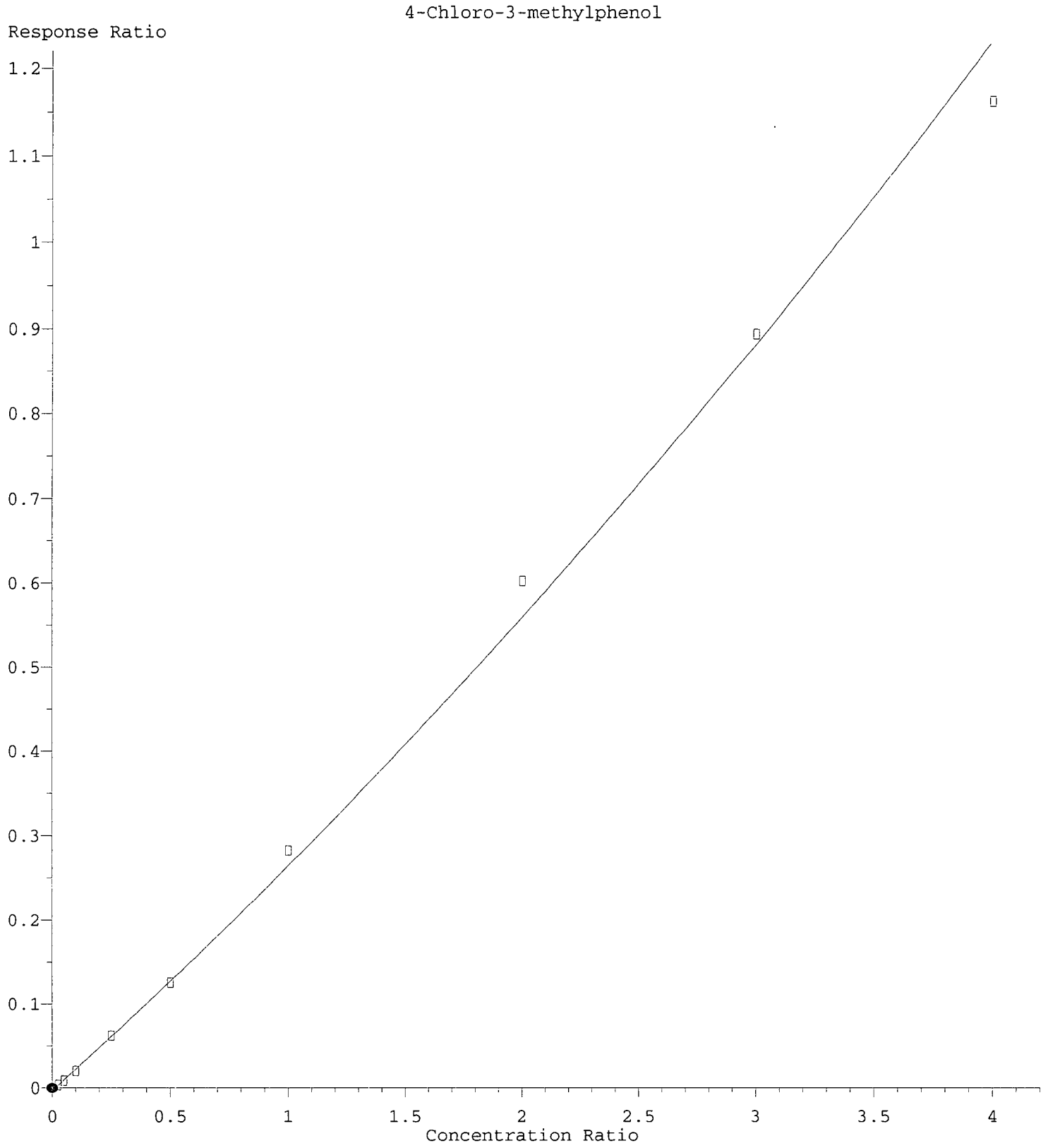
TIC: E01301914.D\data.ms

(26) Benzoic acid (T)

7.810min (-0.005) 399.93 ng/ml m

response 136

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	0.00#
77.10	85.50	77.63
0.00	0.00	0.00

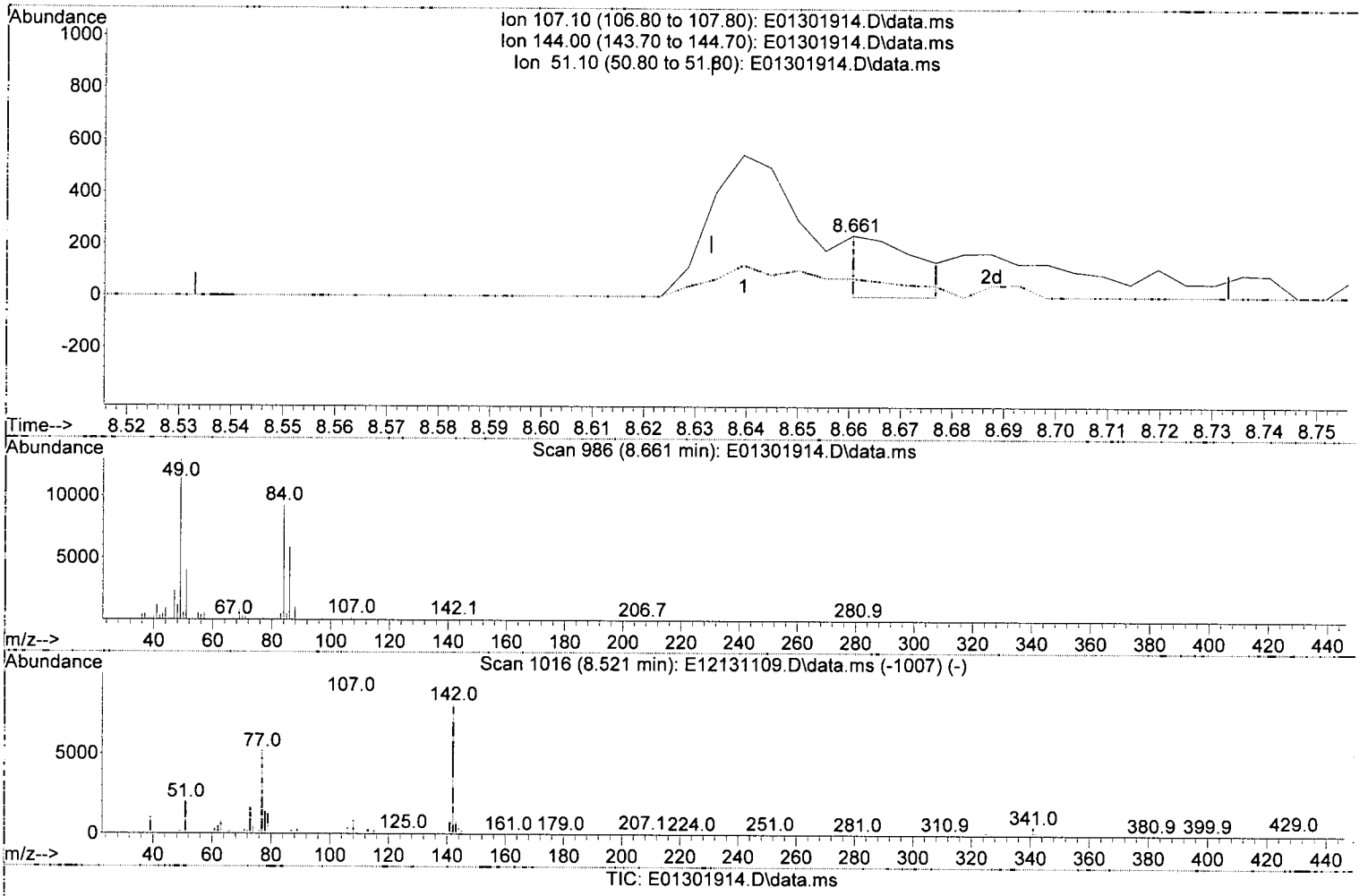


R = 1.37e-002 A*A + 2.54e-001 A - 3.38e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5



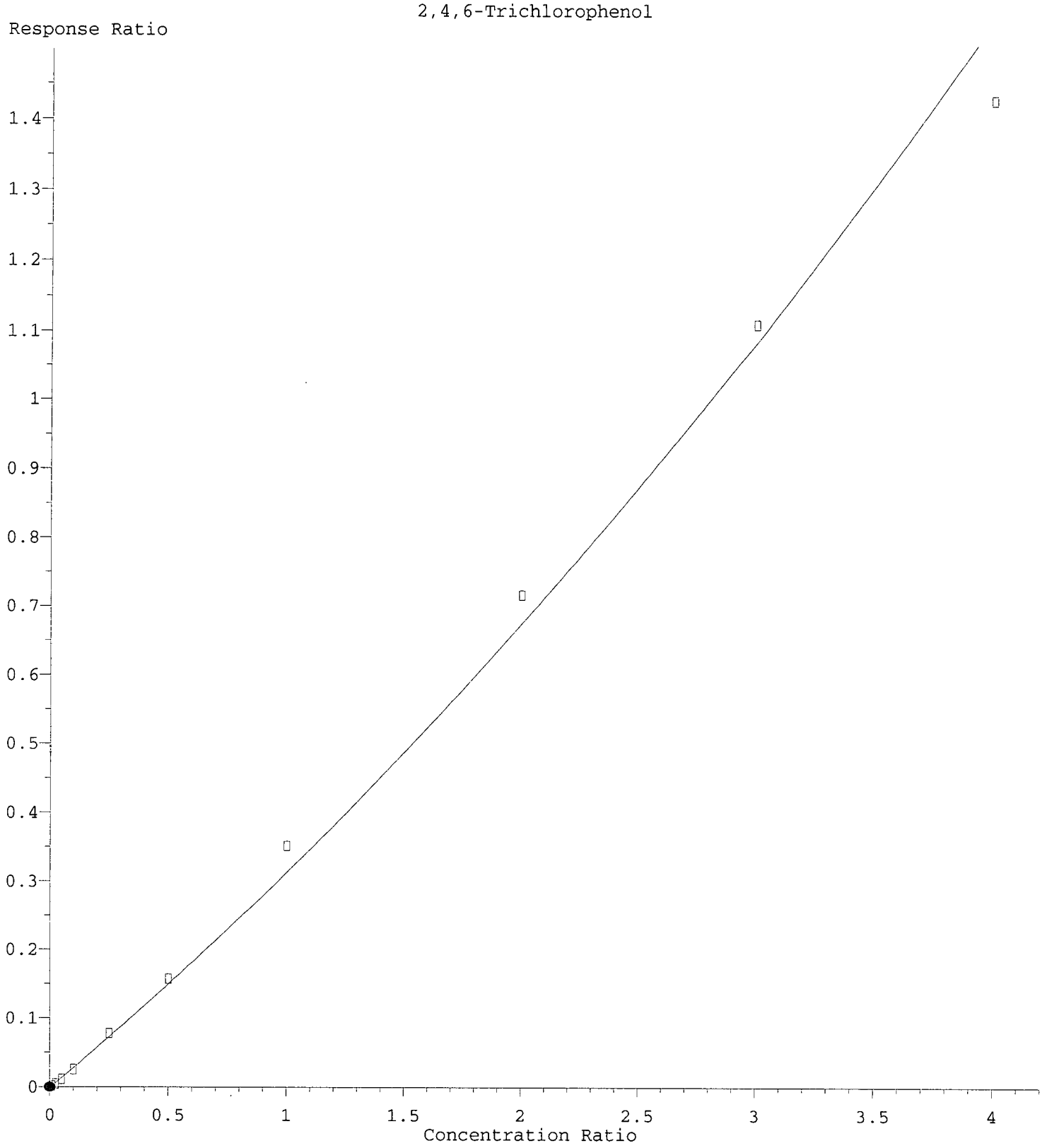
TIC: E01301914.D\data.ms

(32) 4-Chloro-3-methylphenol (T)

8.661min (+ 0.028) 27.82 ng/ml m ✓

response 167

Ion	Exp%	Act%
107.10	100.00	100.00
144.00	25.60	29.54
51.10	22.90	1701.27#
0.00	0.00	0.00

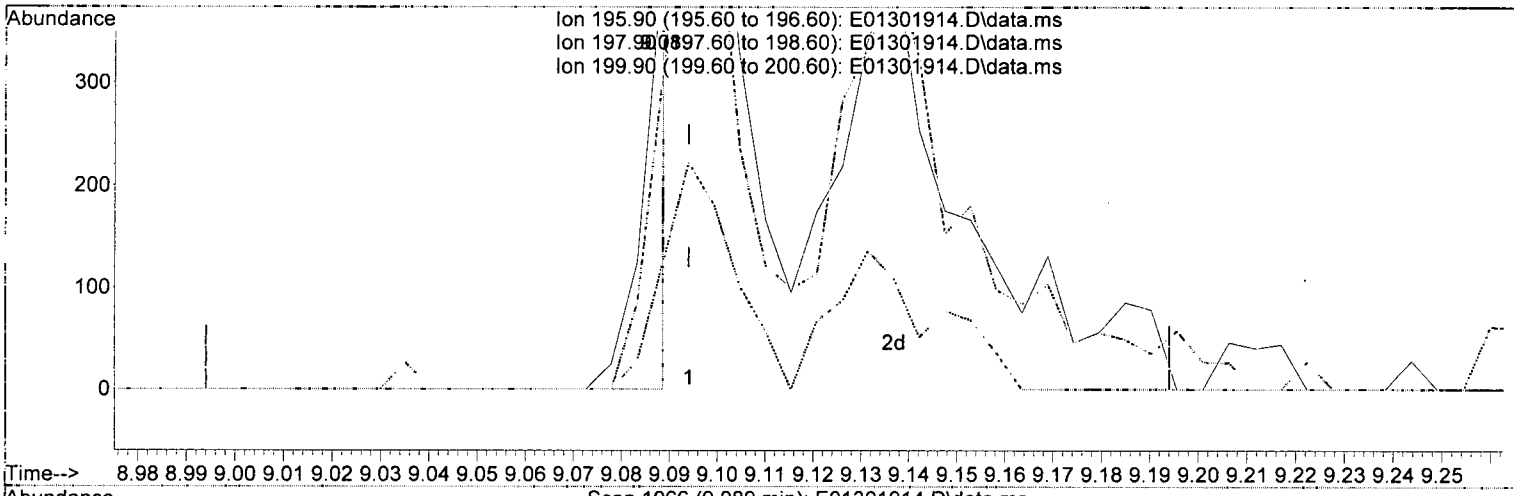


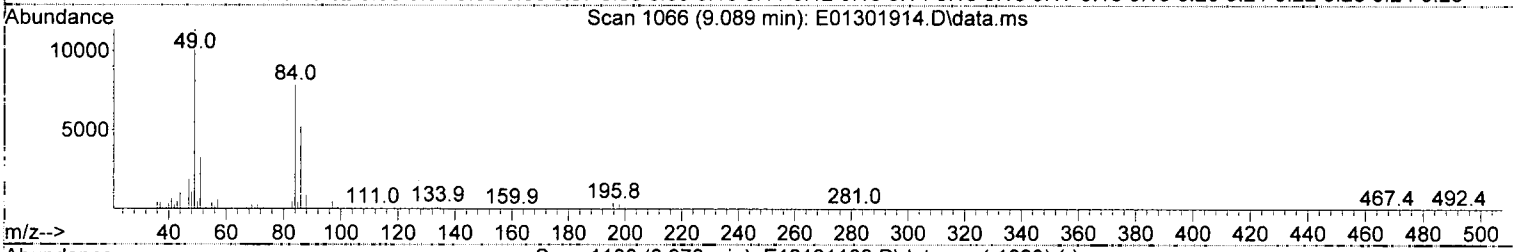
R = 2.36e-002 A*A + 2.91e-001 A - 1.61e-003
Coef of Det (r^2) = 0.990 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

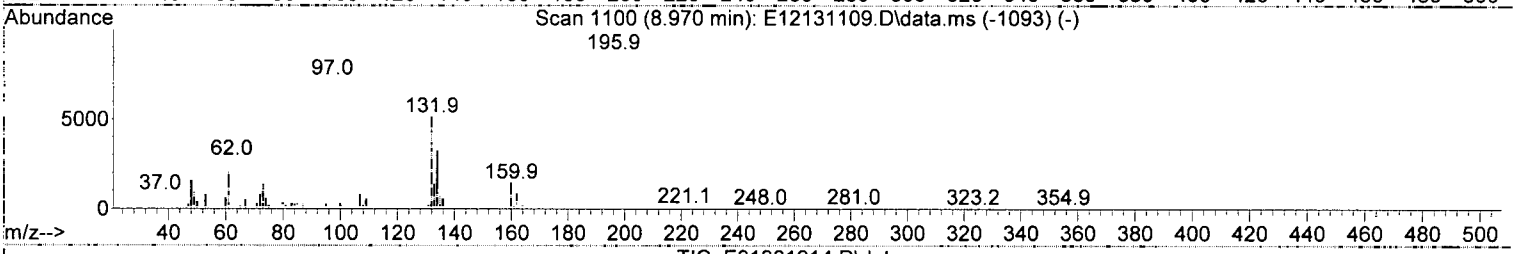
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







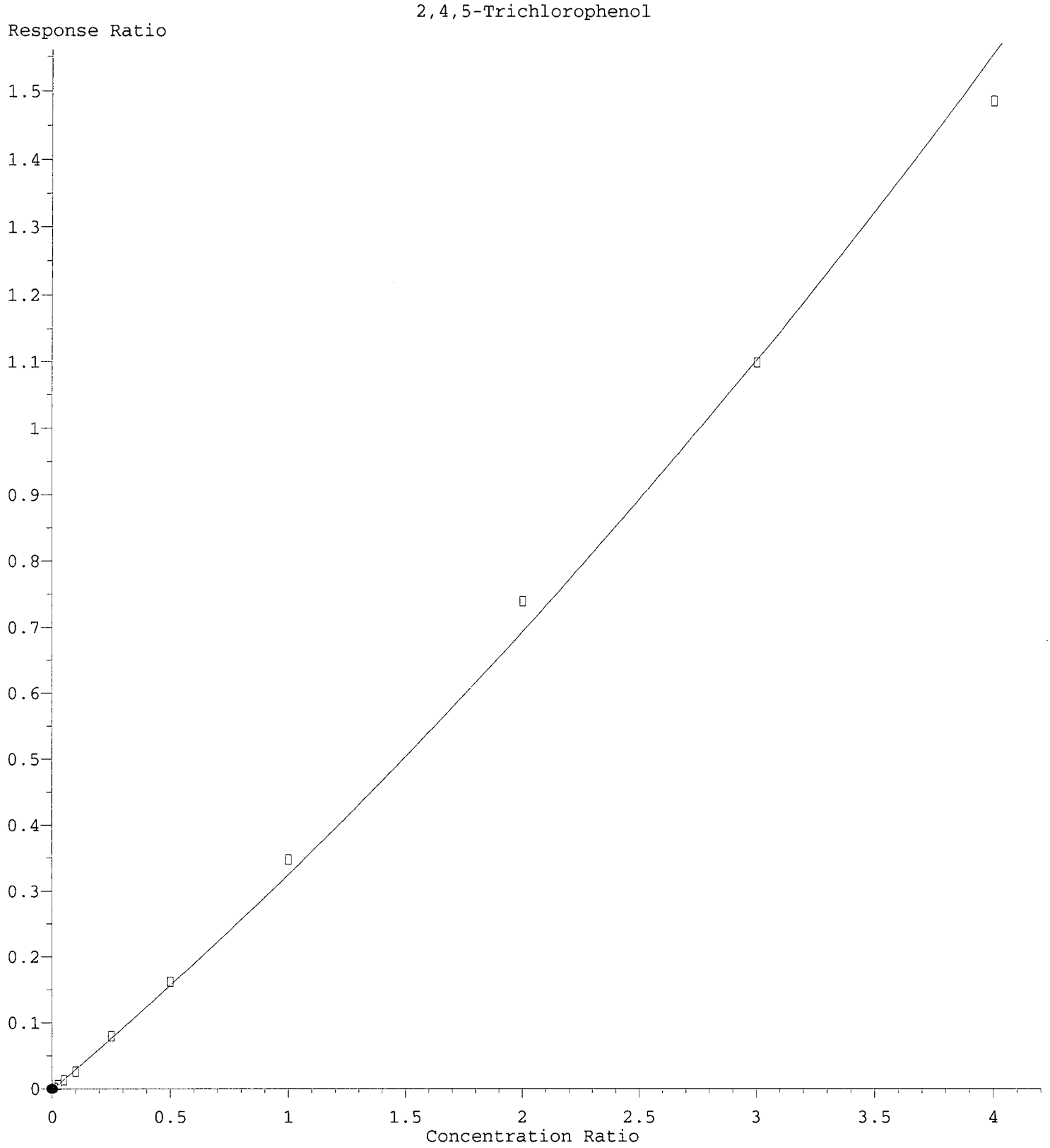
TIC: E01301914.D\data.ms

(37) 2,4,6-Trichlorophenol (T)

9.089min (-0.005) 13.66 ng/ml m

response 184

Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	72.64
199.90	30.90	29.48
0.00	0.00	0.00

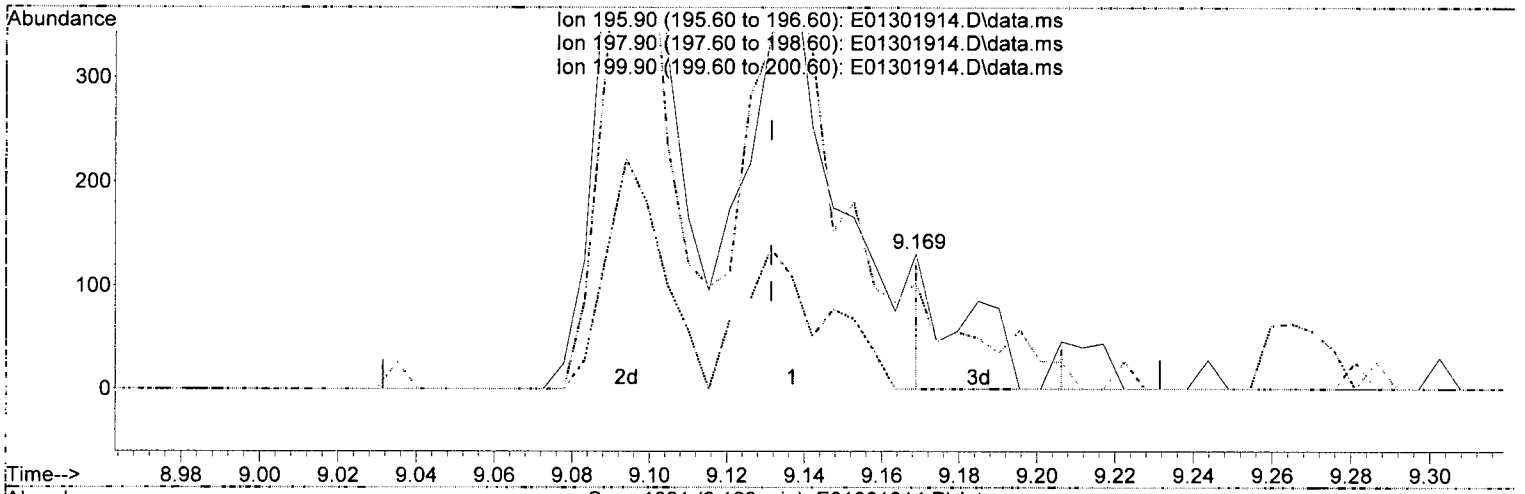


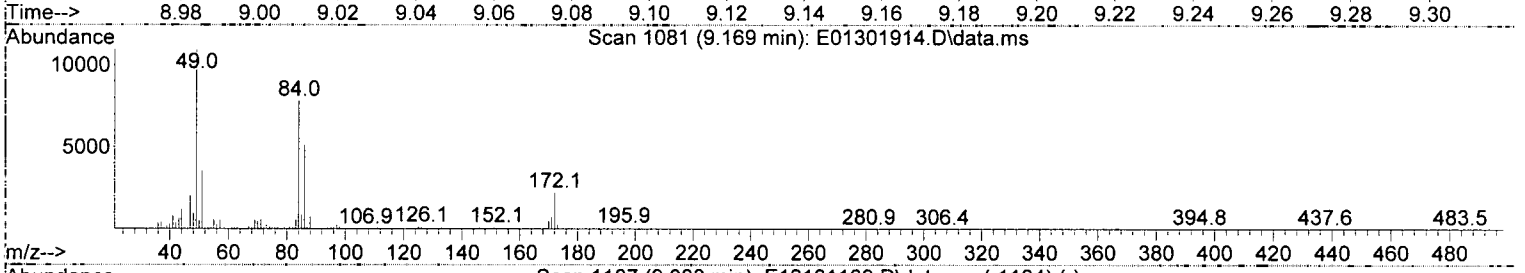
R = 2.08e-002 A*A + 3.06e-001 A - 1.73e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

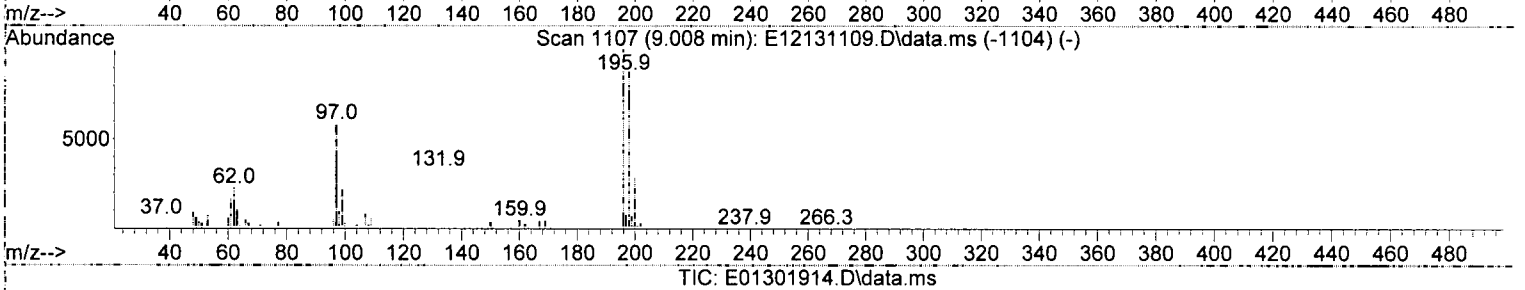
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







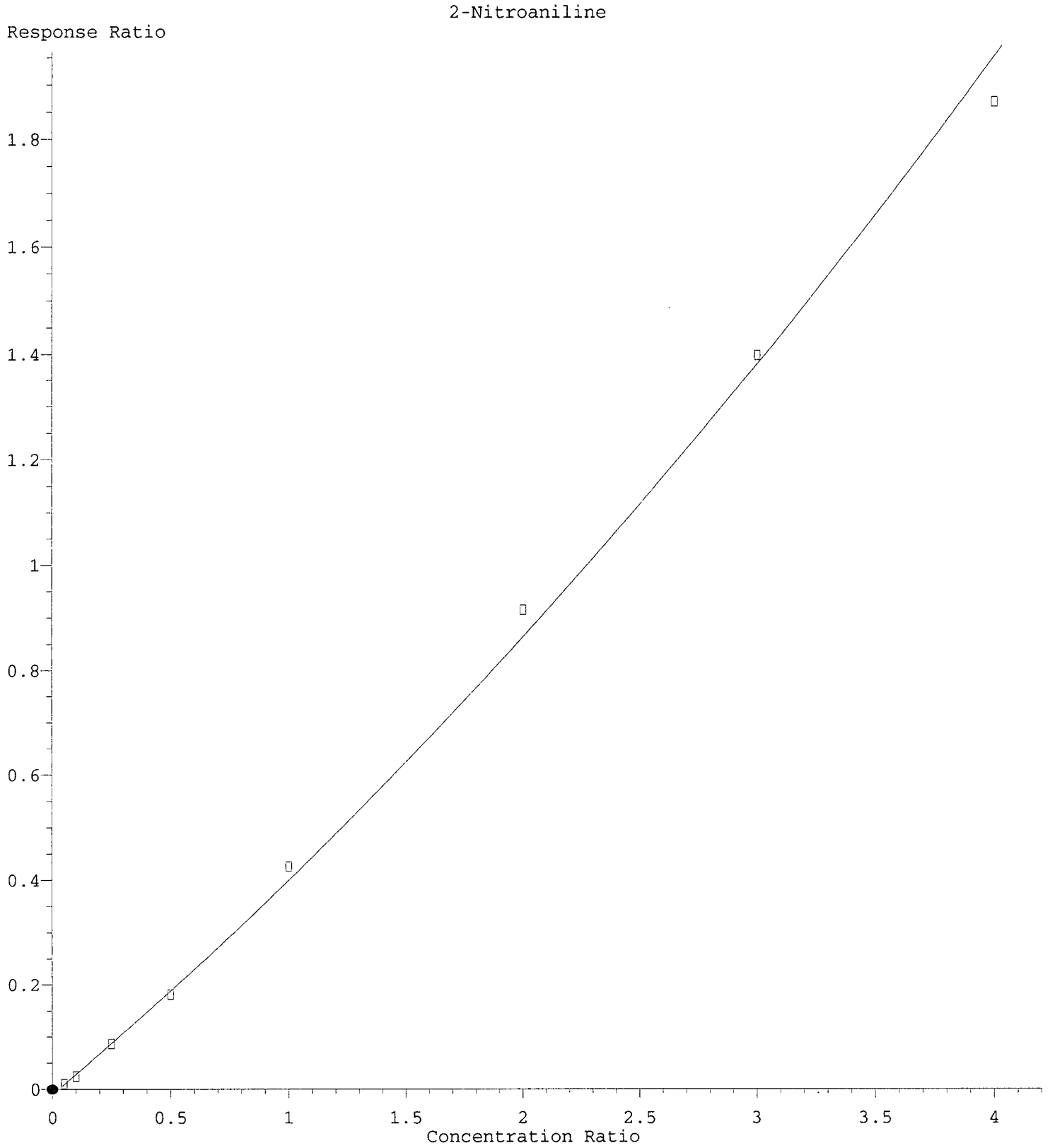
TIC: E01301914.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.169min (+ 0.037) 12.64 ng/ml m ✓

response 100

Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	78.63
199.90	32.40	0.00#
0.00	0.00	0.00

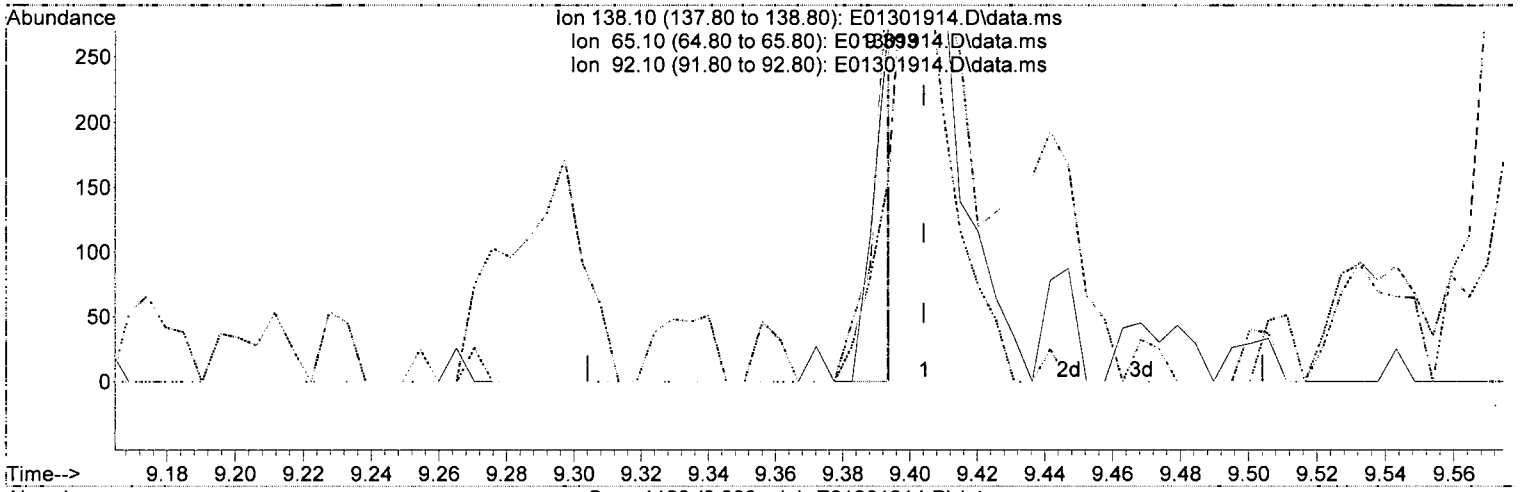


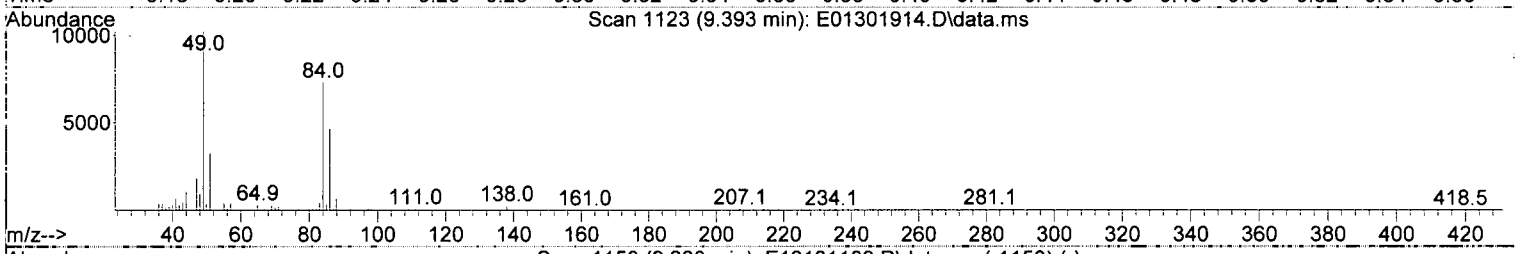
R = 2.70e-002 A*A + 3.83e-001 A - 1.04e-002
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

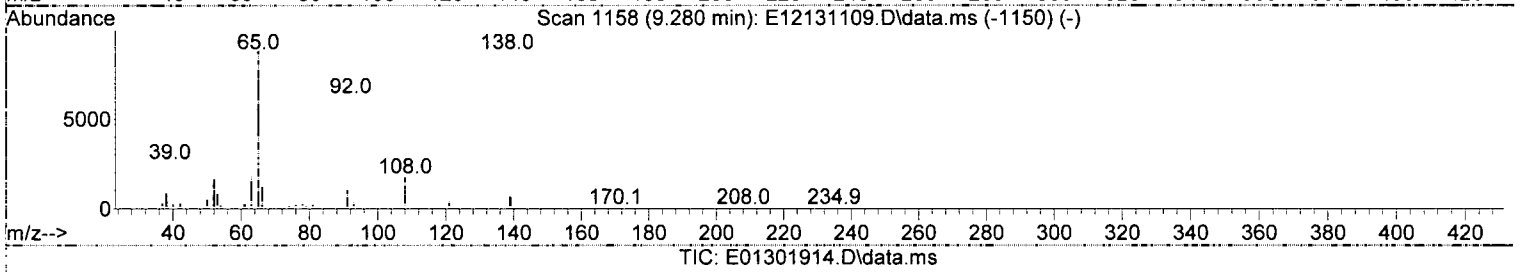
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







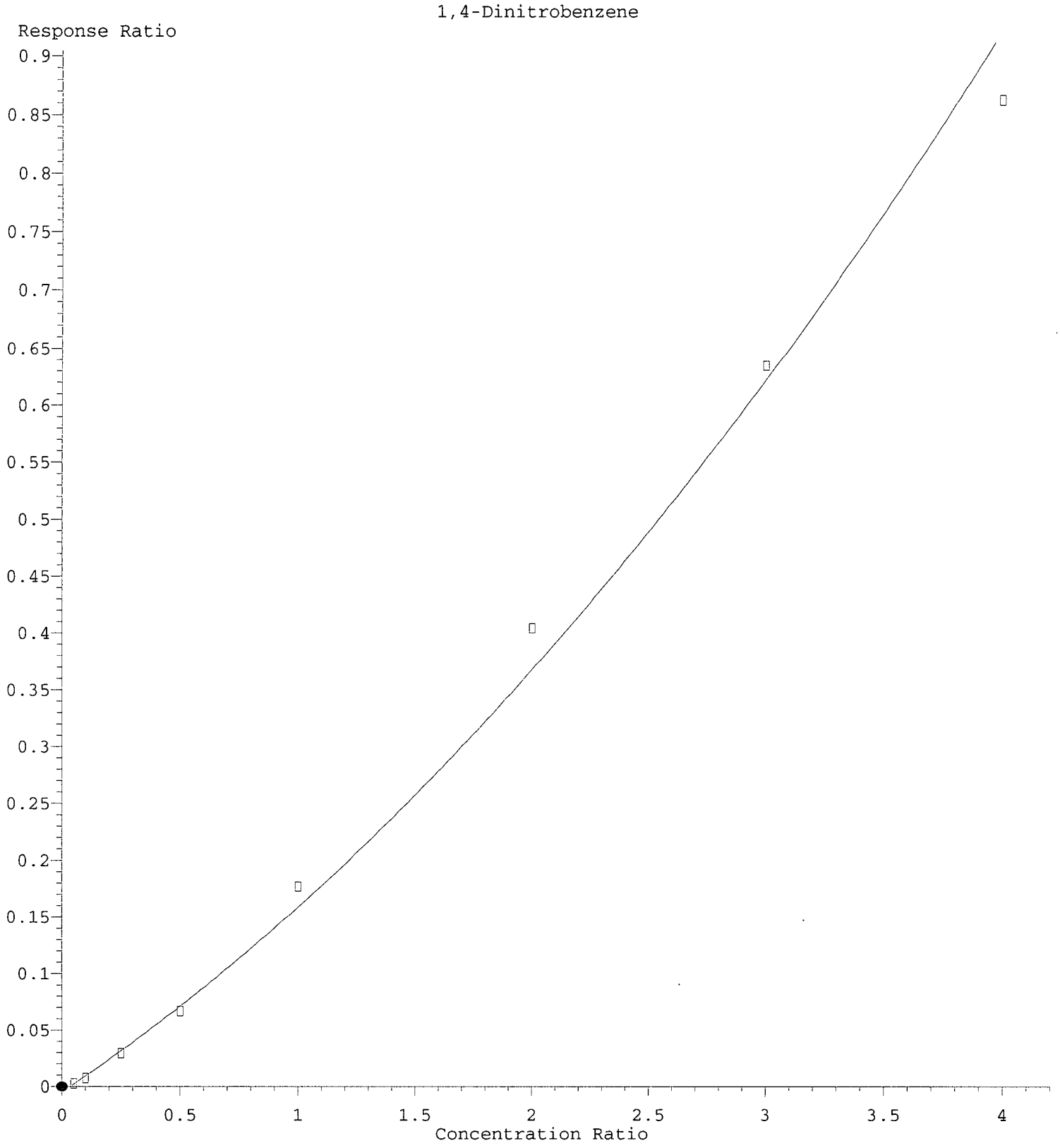
TIC: E01301914.D\data.ms

(42) 2-Nitroaniline (T)

9.393min (-0.011) 55.46 ng/ml m

response 124

Ion	Exp%	Act%
138.10	100.00	100.00
65.10	109.90	120.80
92.10	67.00	56.57
0.00	0.00	0.00

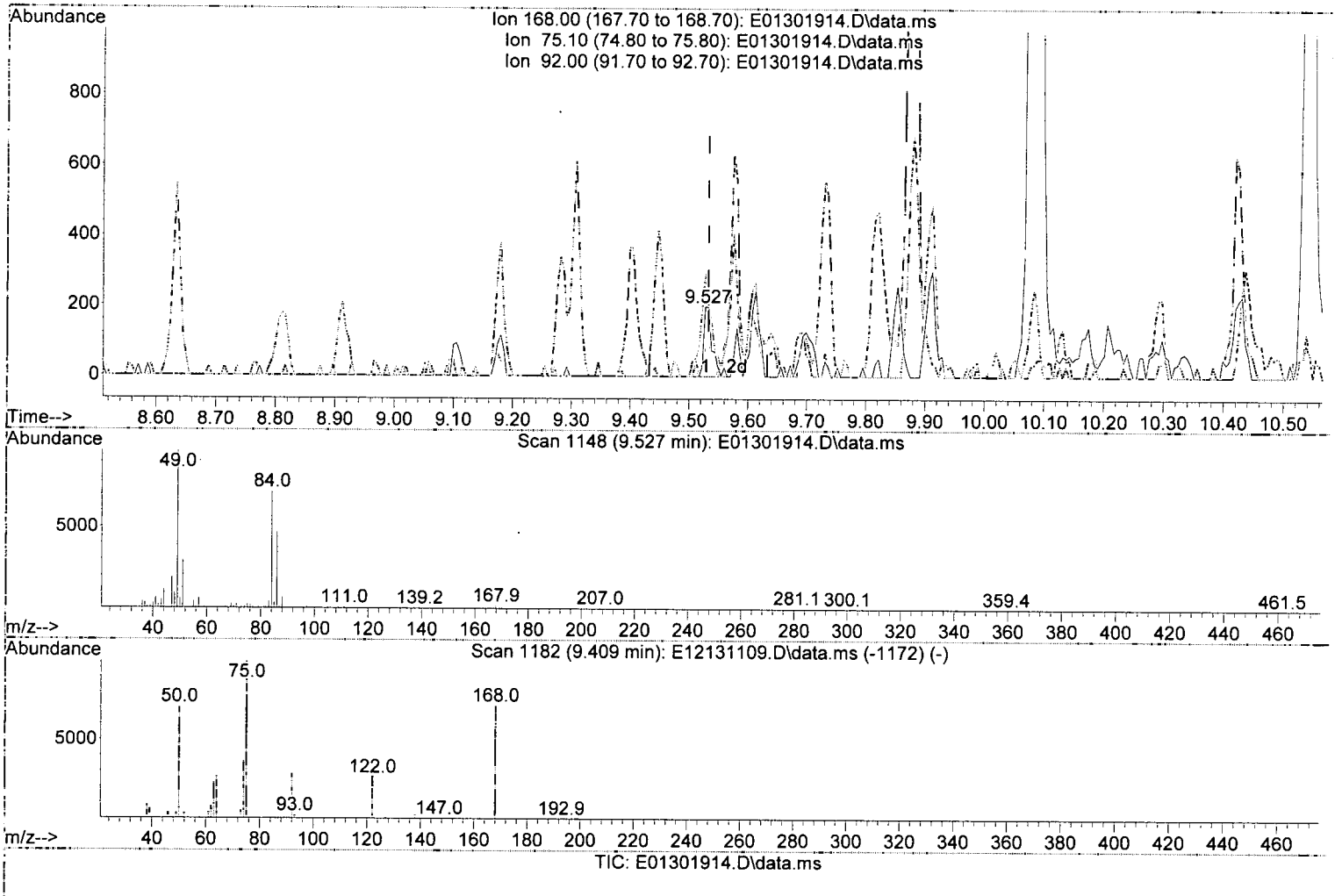


R = 2.26e-002 A*A + 1.41e-001 A - 5.01e-003
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

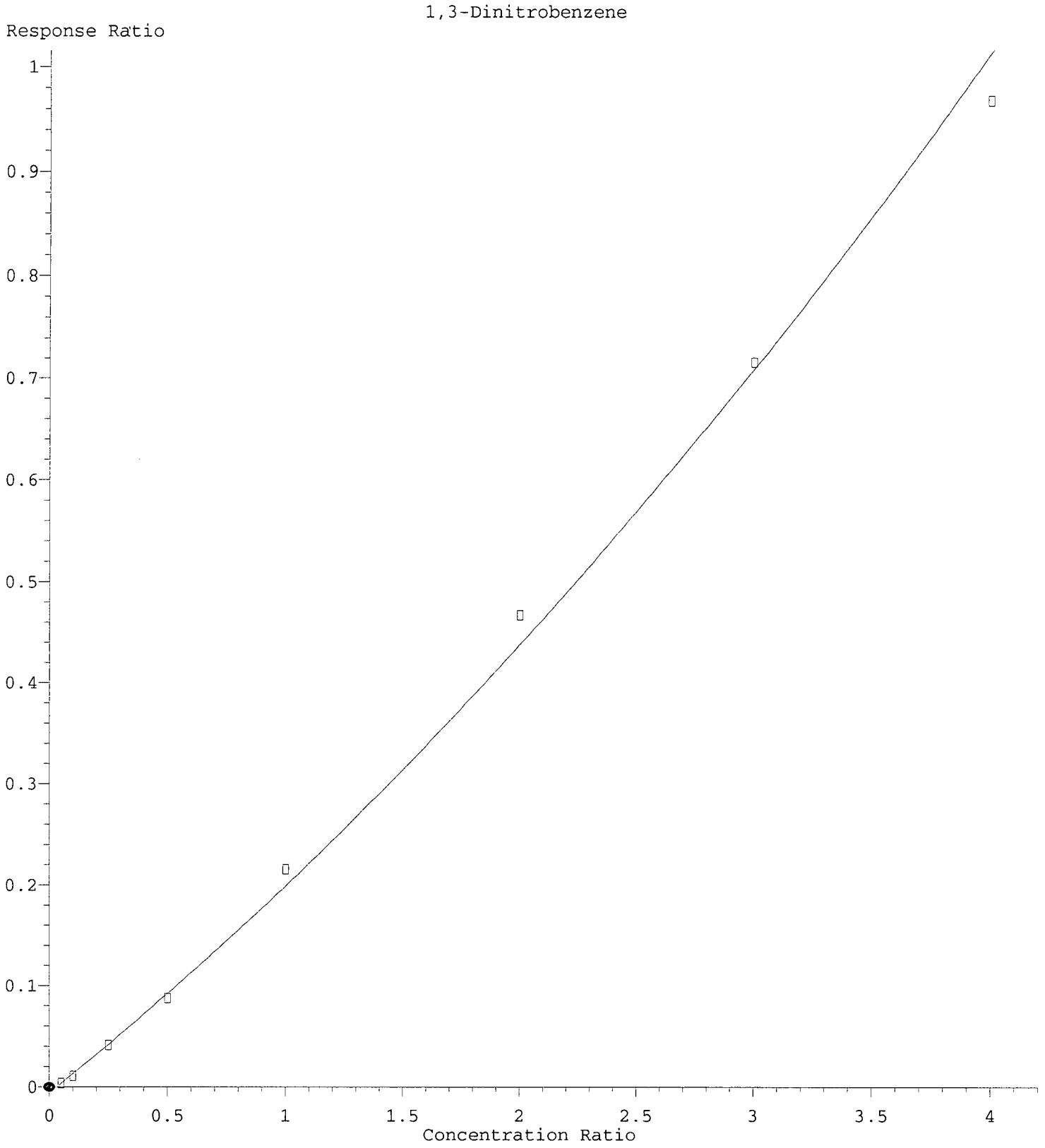


(44) 1,4-Dinitrobenzene (T)

9.527min (-0.005) 76.30 ng/ml

response 197

Ion	Exp%	Act%
168.00	100.00	100.00
75.10	147.50	148.73
92.00	40.30	42.13
0.00	0.00	0.00

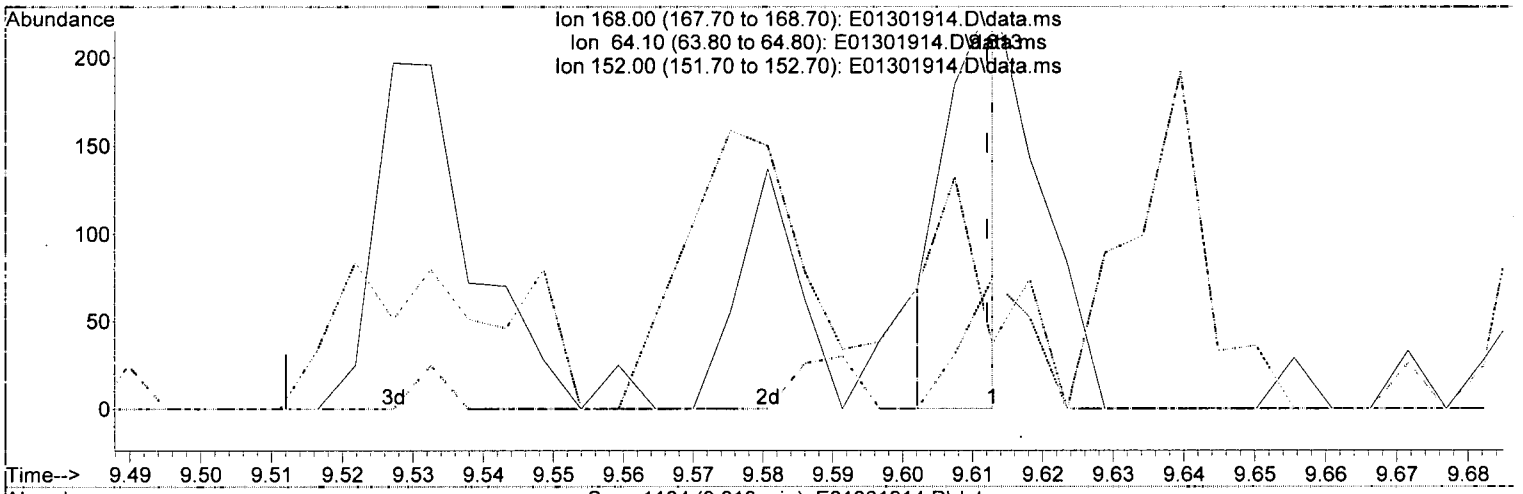


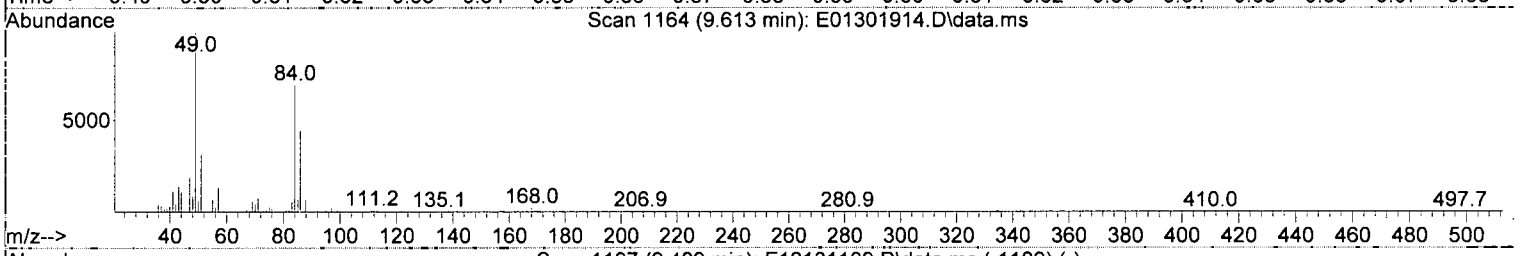
R = 1.65e-002 A*A + 1.89e-001 A - 6.37e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

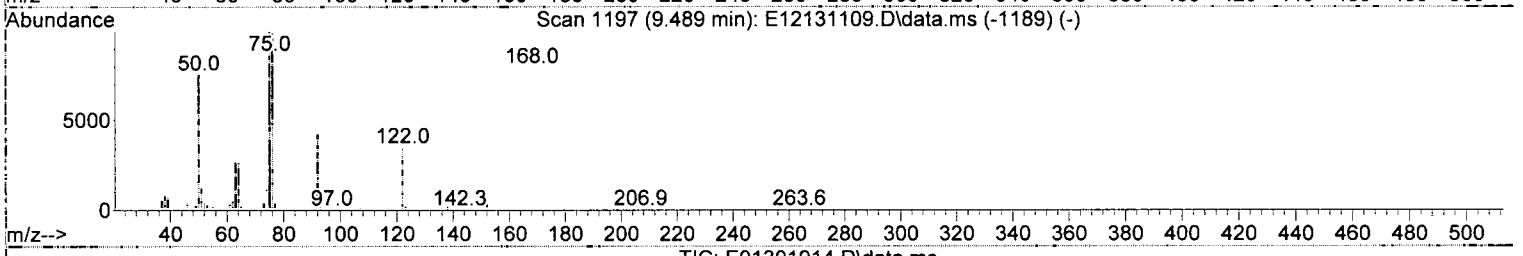
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







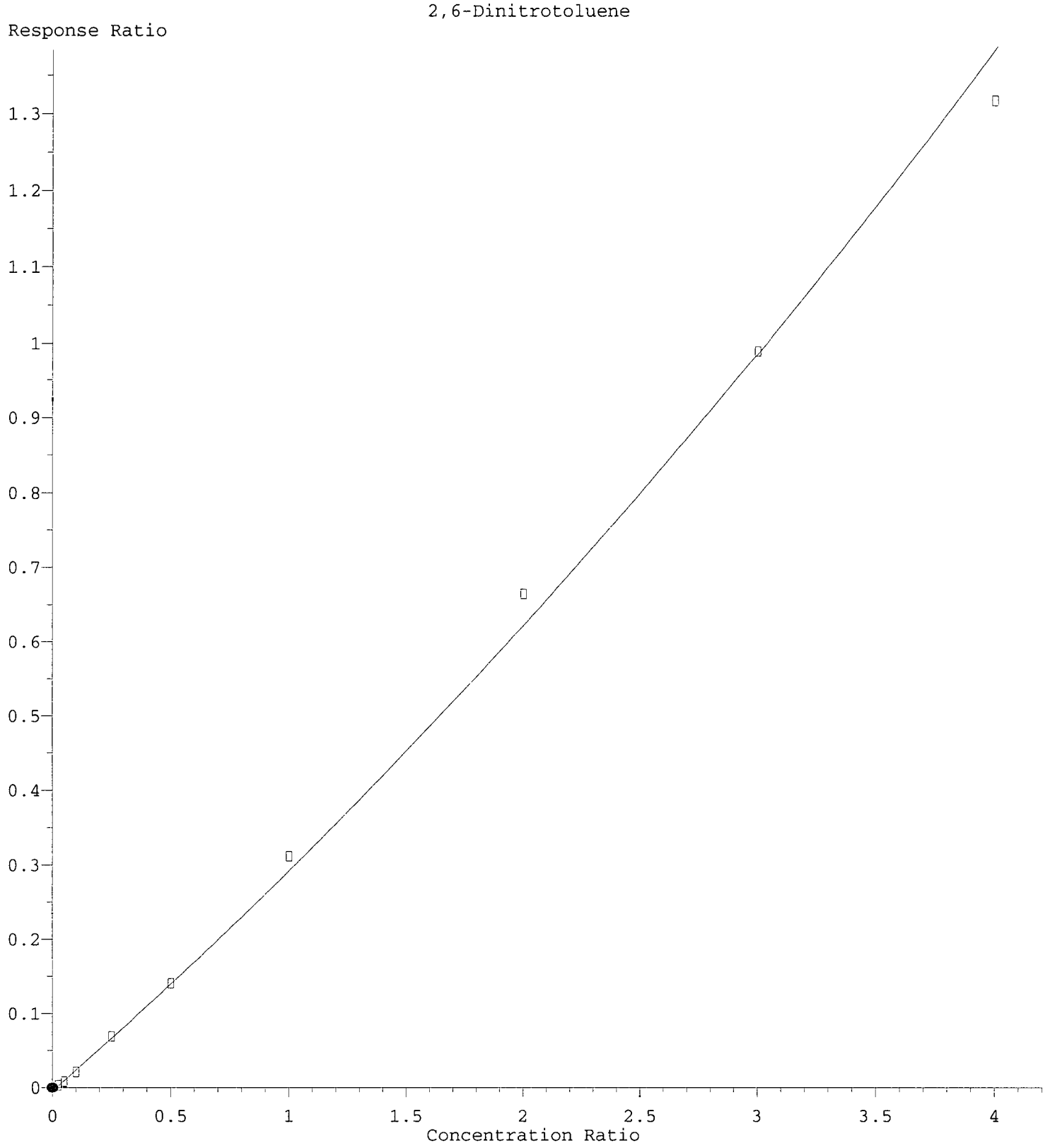
TIC: E01301914.D\data.ms

(46) 1,3-Dinitrobenzene (T)

9.613min (+ 0.001) 70.10 ng/ml m

response 137

Ion	Exp%	Act%
168.00	100.00	100.00
64.10	36.10	15.23
152.00	6.10	30.45
0.00	0.00	0.00

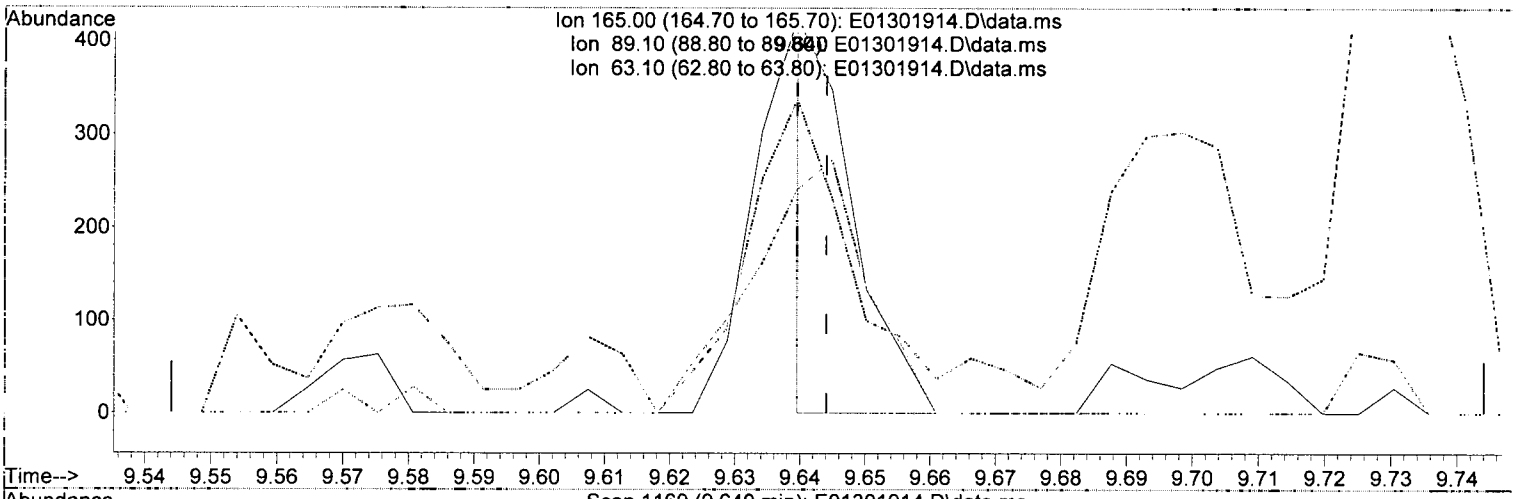


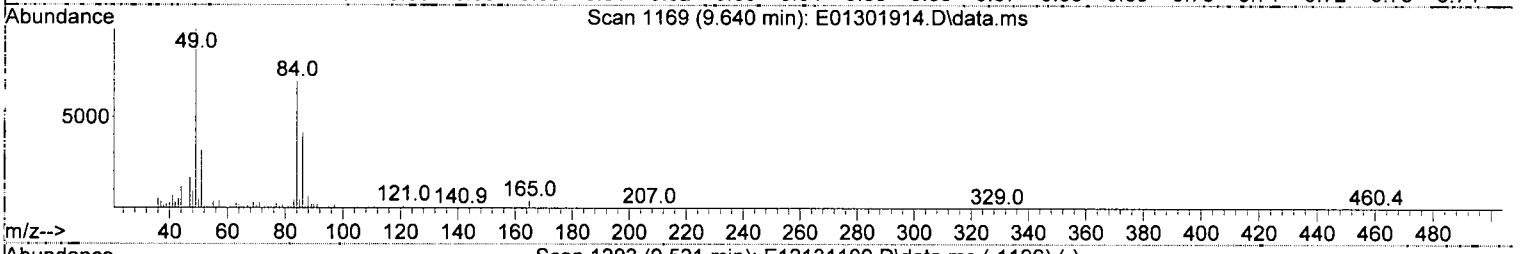
R = 1.67e-002 A*A + 2.80e-001 A - 4.44e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

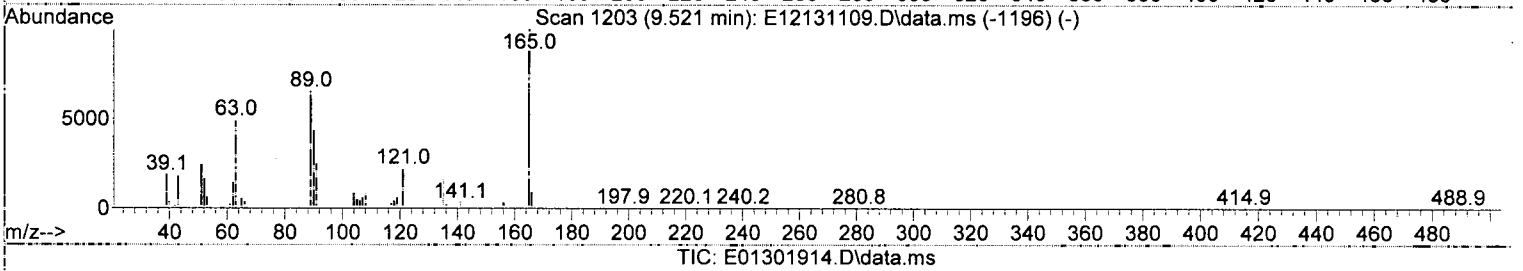
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







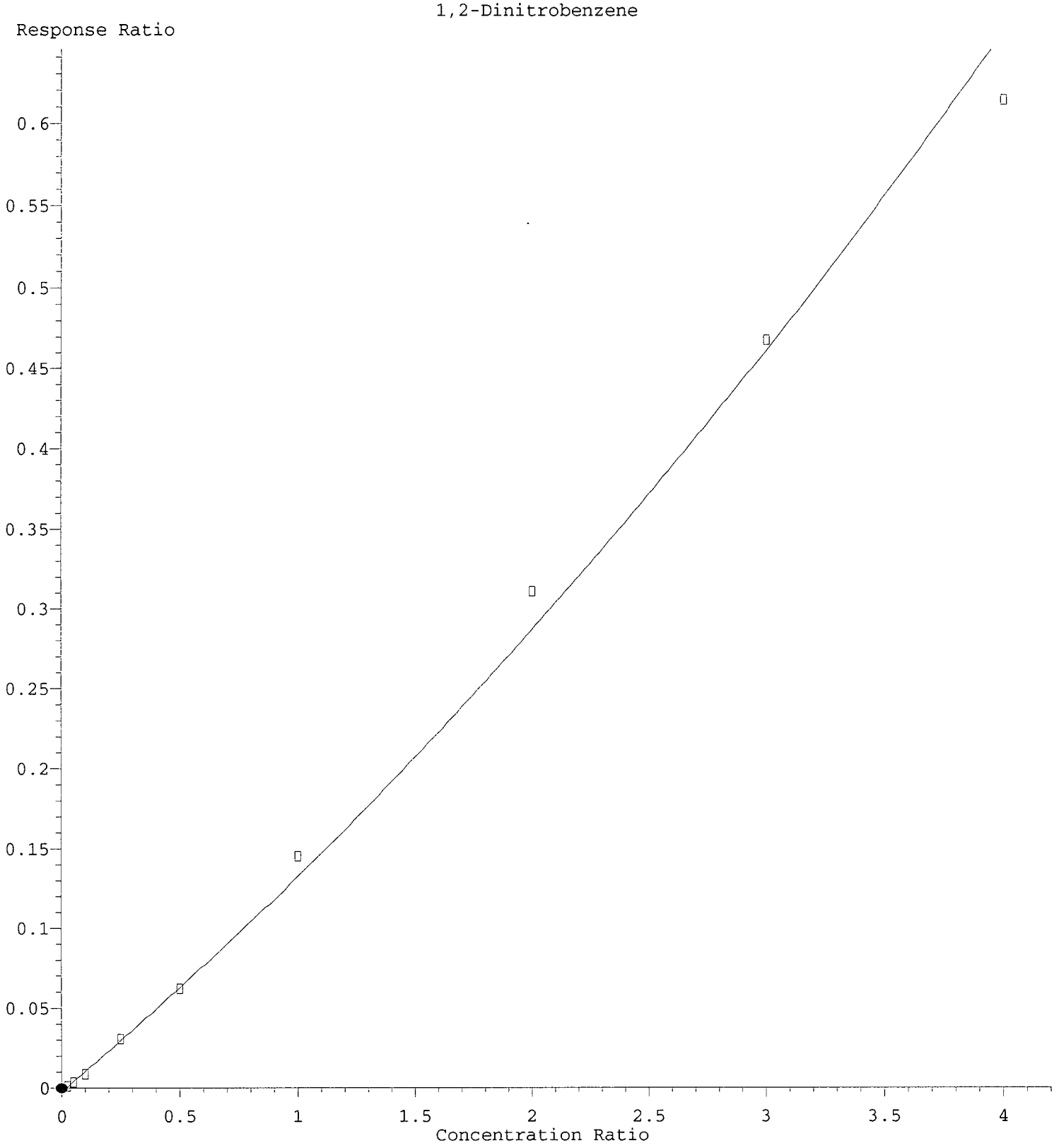
TIC: E01301914.D\data.ms

(47) 2,6-Dinitrotoluene (T)

9.640min (-0.004) 34.30 ng/ml m ✓

response 175

Ion	Exp%	Act%
165.00	100.00	100.00
89.10	71.70	56.57
63.10	68.70	79.11
0.00	0.00	0.00

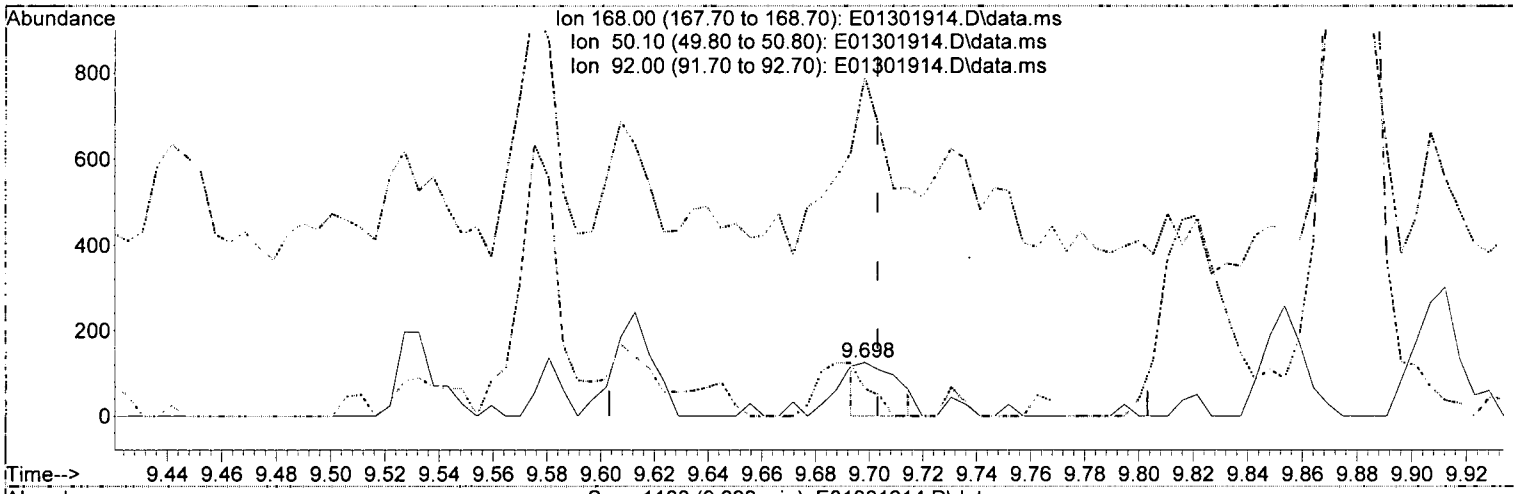


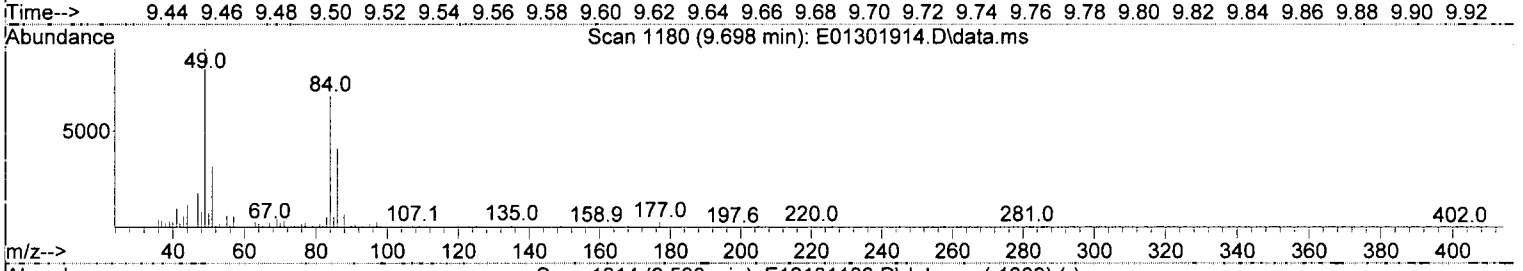
R = 9.99e-003 A*A + 1.25e-001 A - 2.17e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

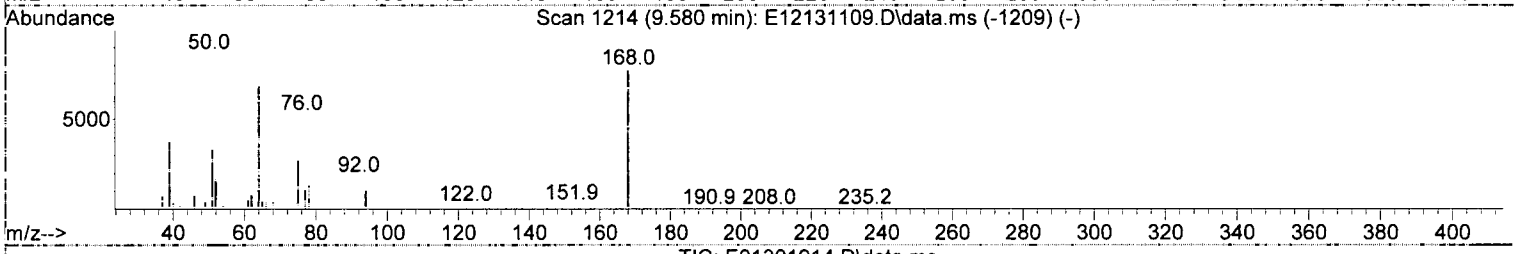
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







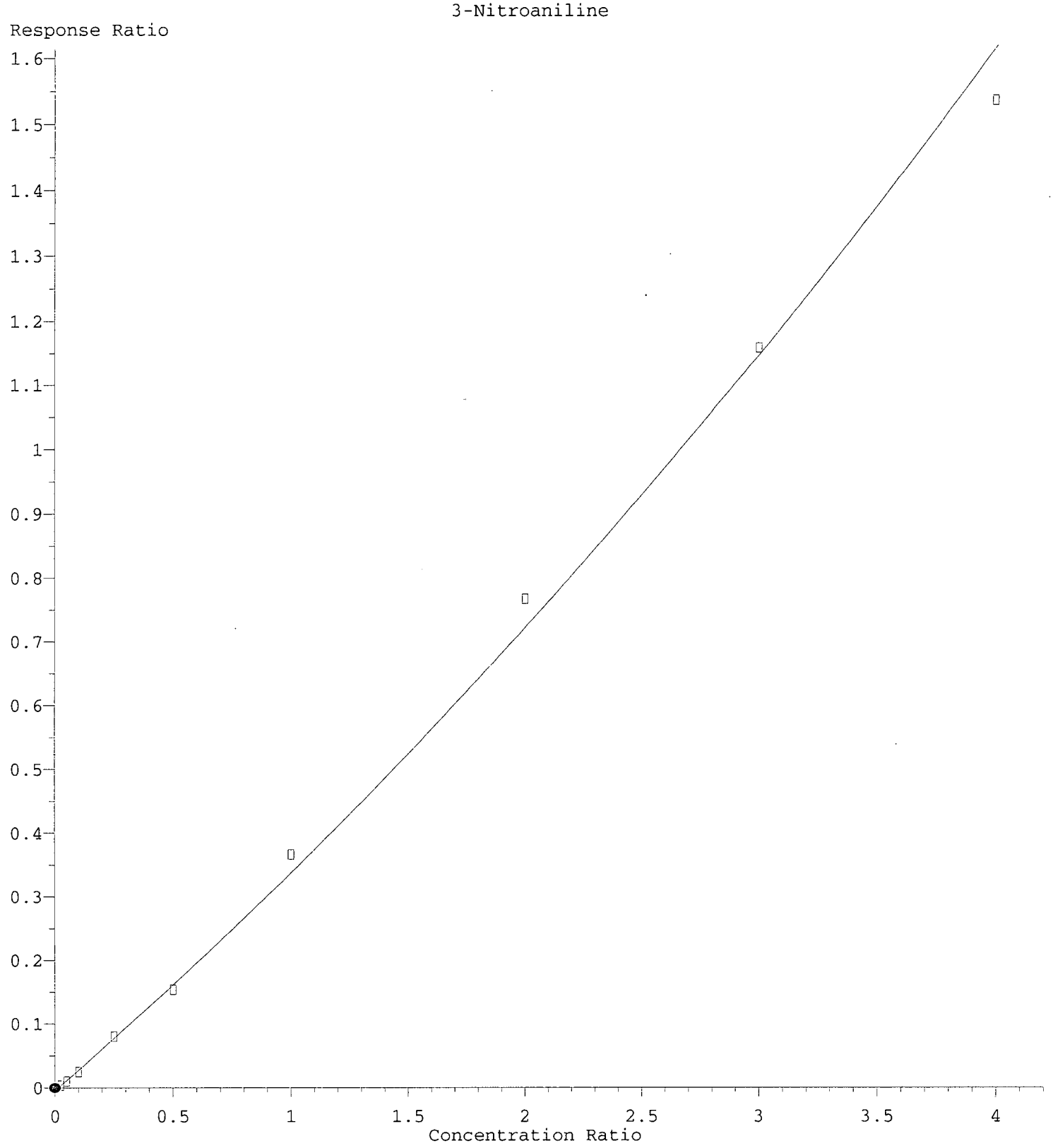
TIC: E01301914.D\data.ms

(48) 1,2-Dinitrobenzene (T)

9.698min (-0.005) 39.02 ng/ml m ✓

response 126

Ion	Exp%	Act%
168.00	100.00	100.00
50.10	166.30	627.78#
92.00	26.00	50.79
0.00	0.00	0.00

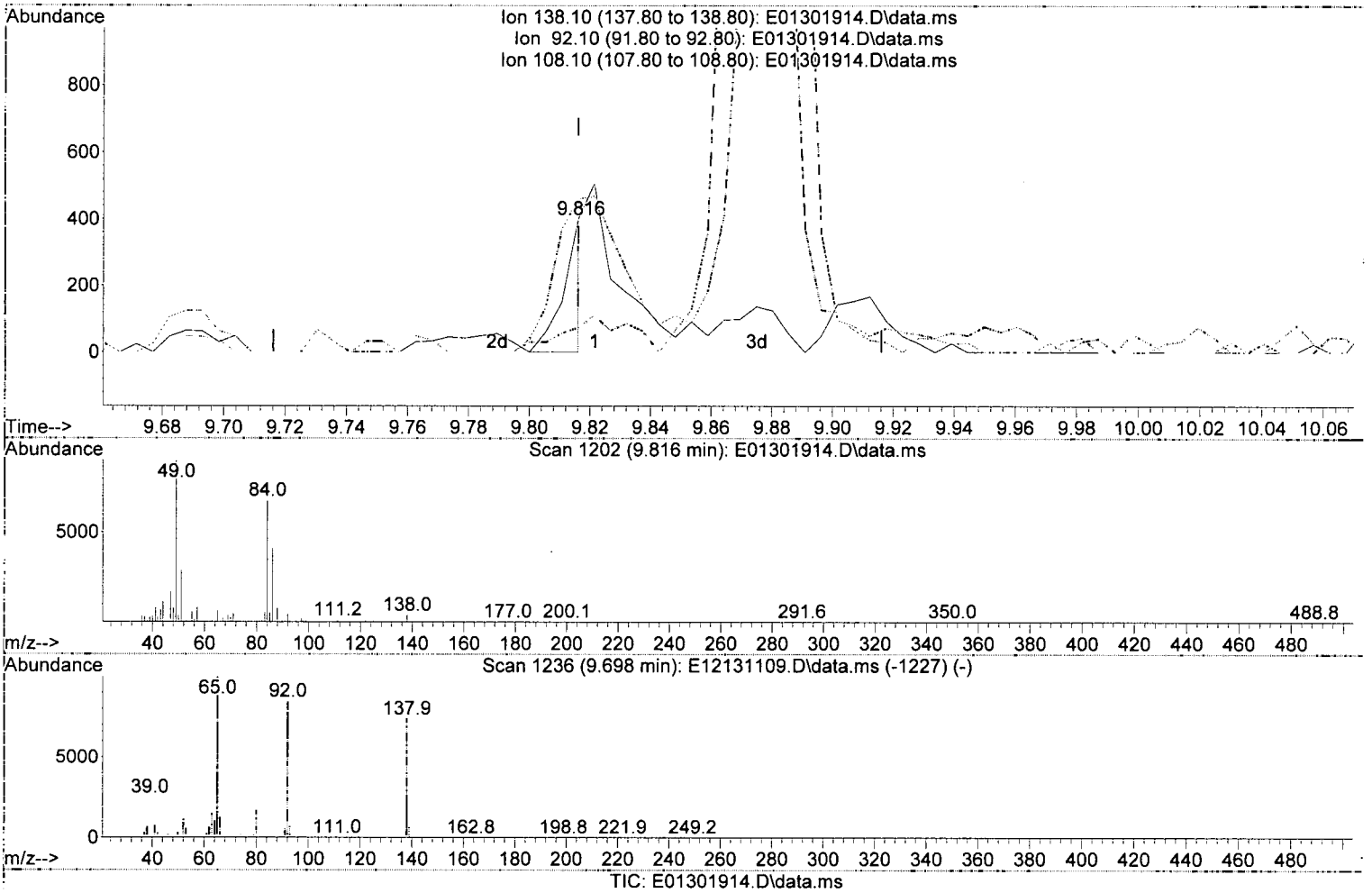


R = 2.09e-002 A*A + 3.22e-001 A - 4.69e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV3_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5



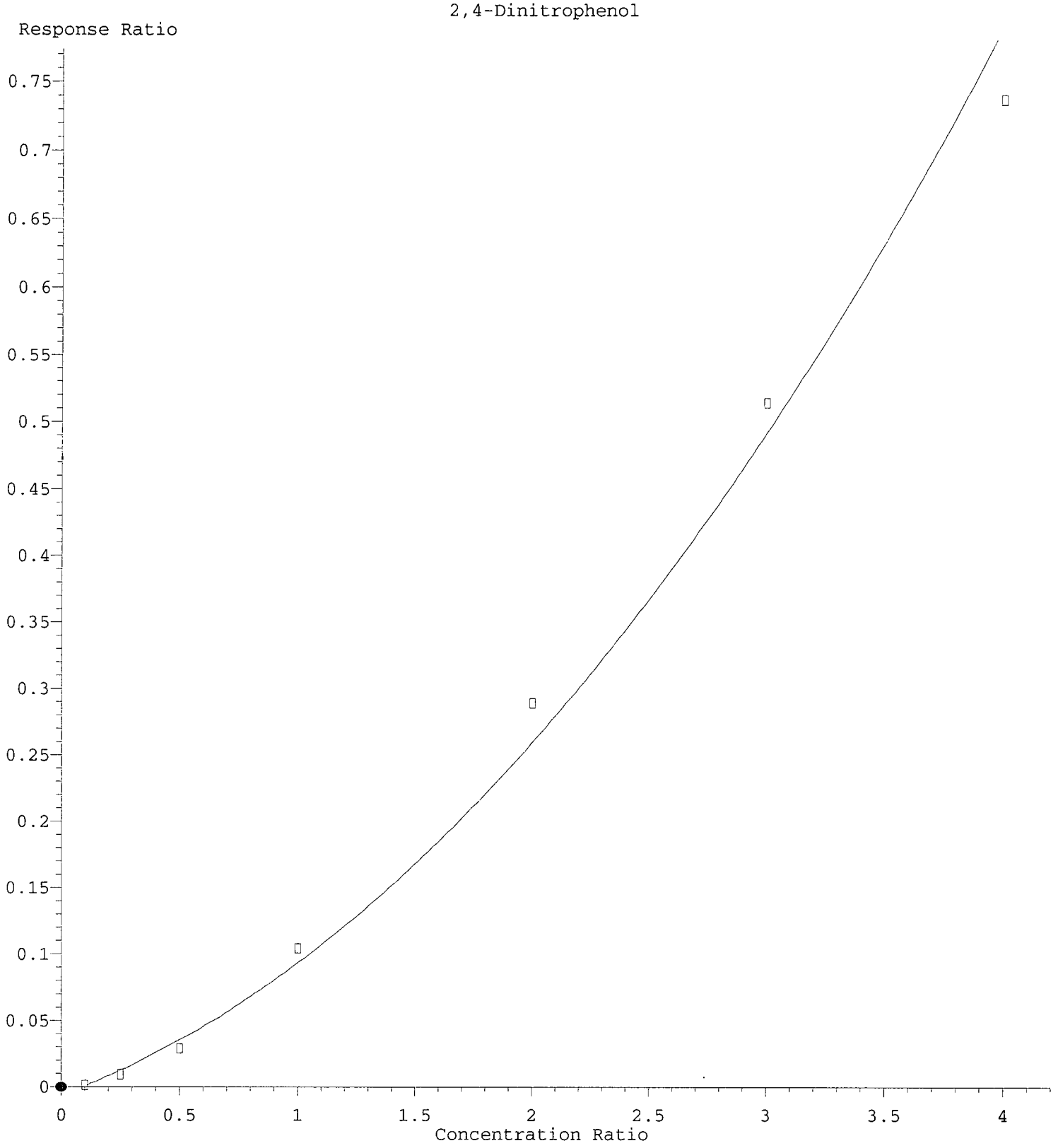
TIC: E01301914.D\data.ms

(50) 3-Nitroaniline (T)

9.816min (+ 0.000) 31.62 ng/ml m

response 195

Ion	Exp%	Act%
138.10	100.00	100.00
92.10	117.60	115.04
108.10	9.90	18.55
0.00	0.00	0.00

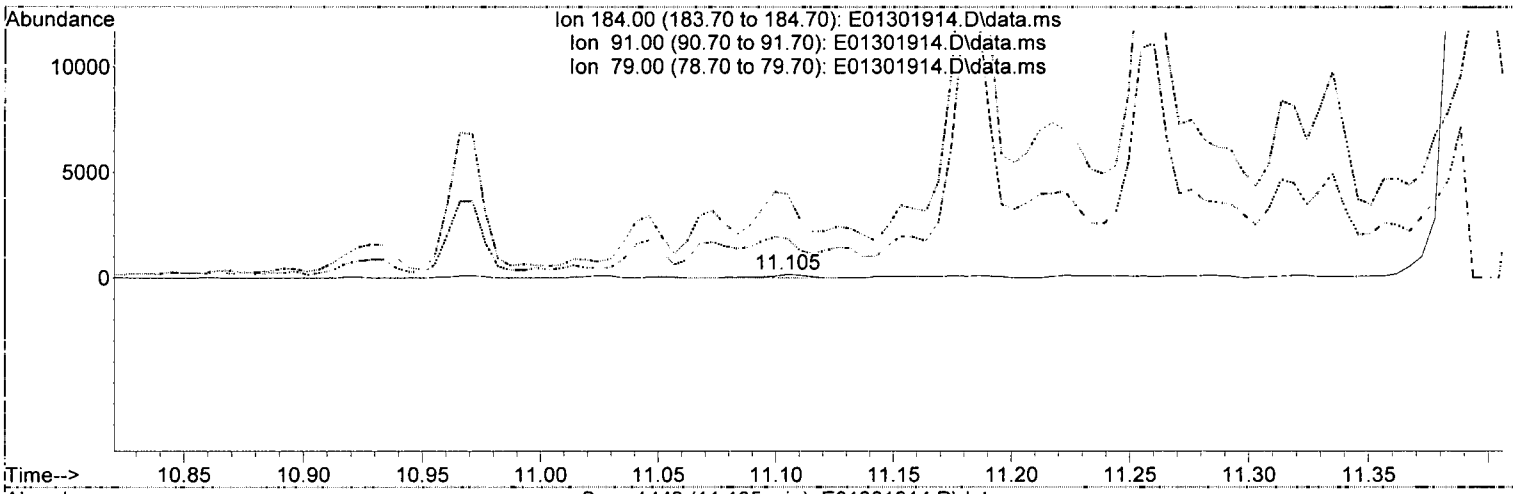


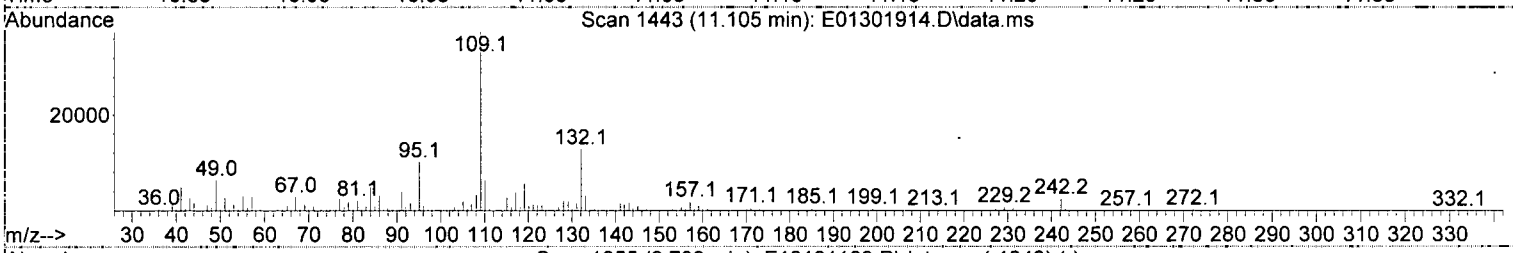
R = 3.32e-002 A*A + 6.65e-002 A - 6.19e-003
Coef of Det (r^2) = 0.990 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SVS_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

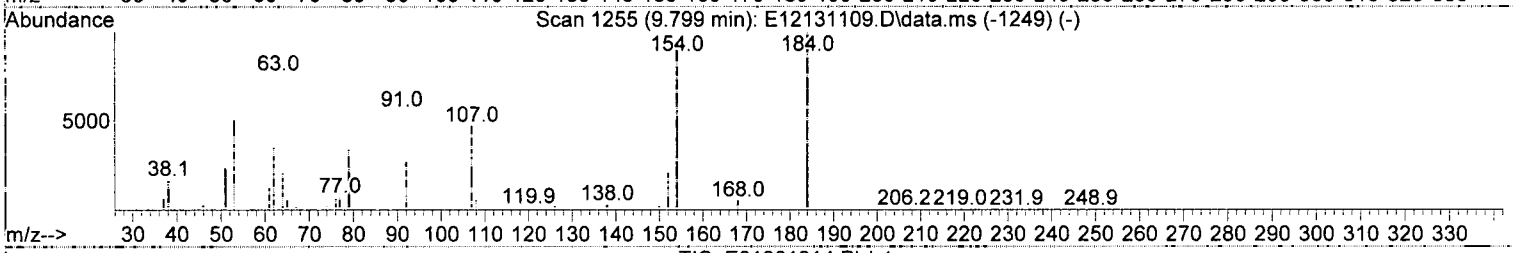
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







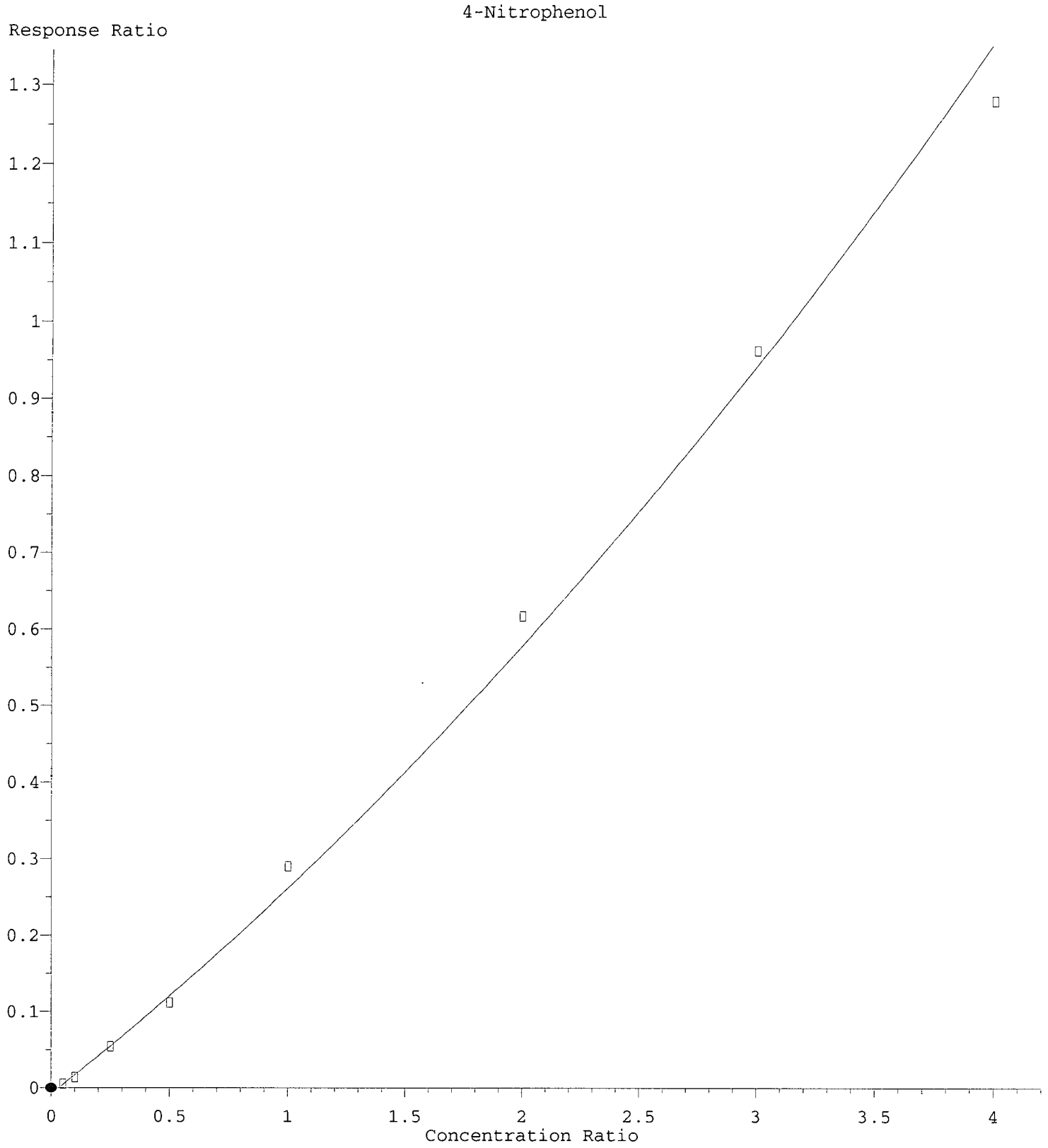
TIC: E01301914.D\data.ms

(52) 2,4-Dinitrophenol (T)

11.105min (+ 1.183) 188.23 ng/ml m

response 178

Ion	Exp%	Act%
184.00	100.00	100.00
91.00	61.90	2521.52#
79.00	44.90	1181.01#
0.00	0.00	0.00

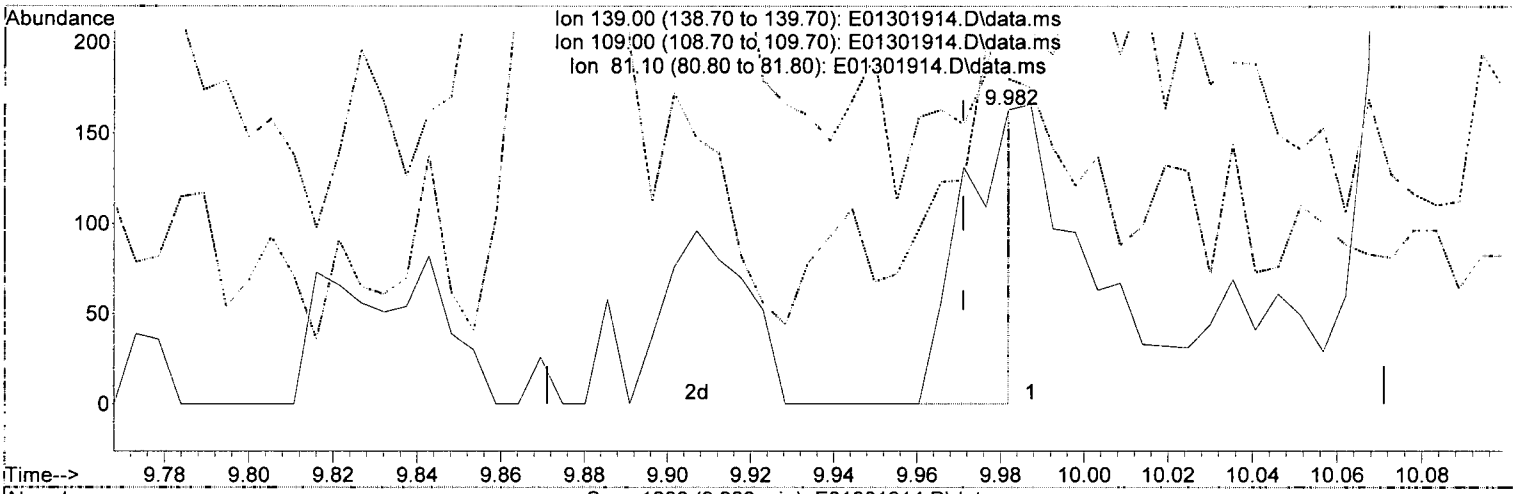


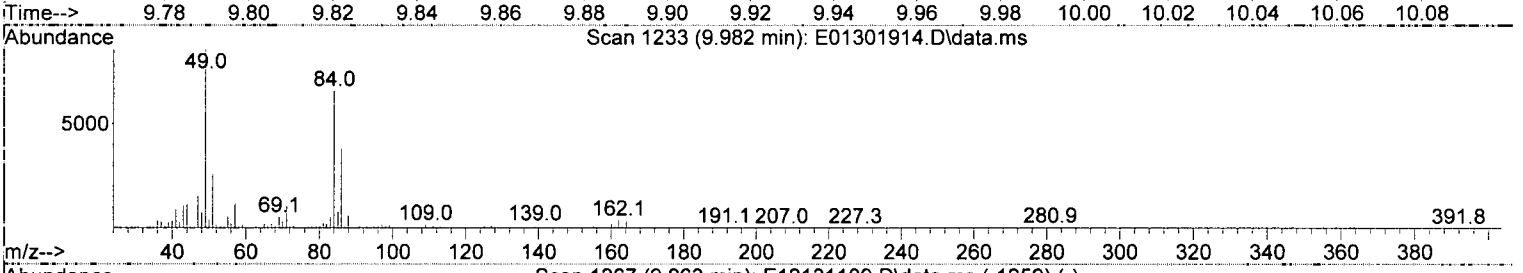
R = 2.37e-002 A*A + 2.46e-001 A - 8.09e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

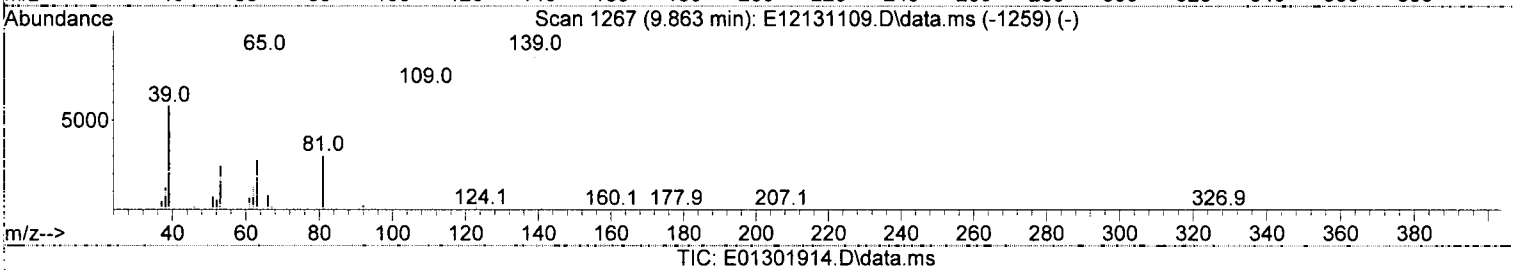
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







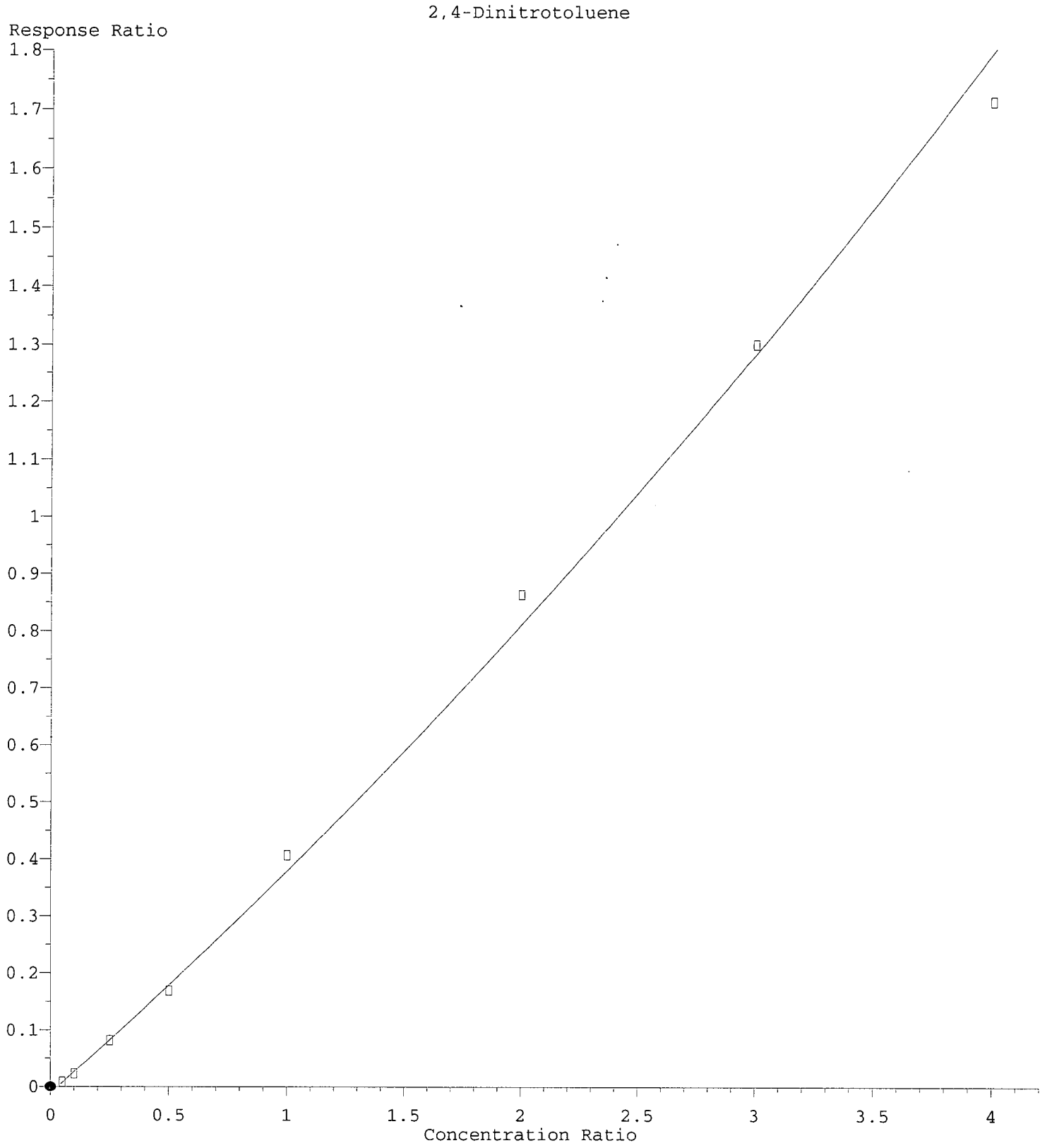
TIC: E01301914.D\data.ms

(53) 4-Nitrophenol (T)

9.982min (+ 0.011) 68.04 ng/ml m

response 148

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	74.20	110.43#
81.10	37.00	152.76#
0.00	0.00	0.00

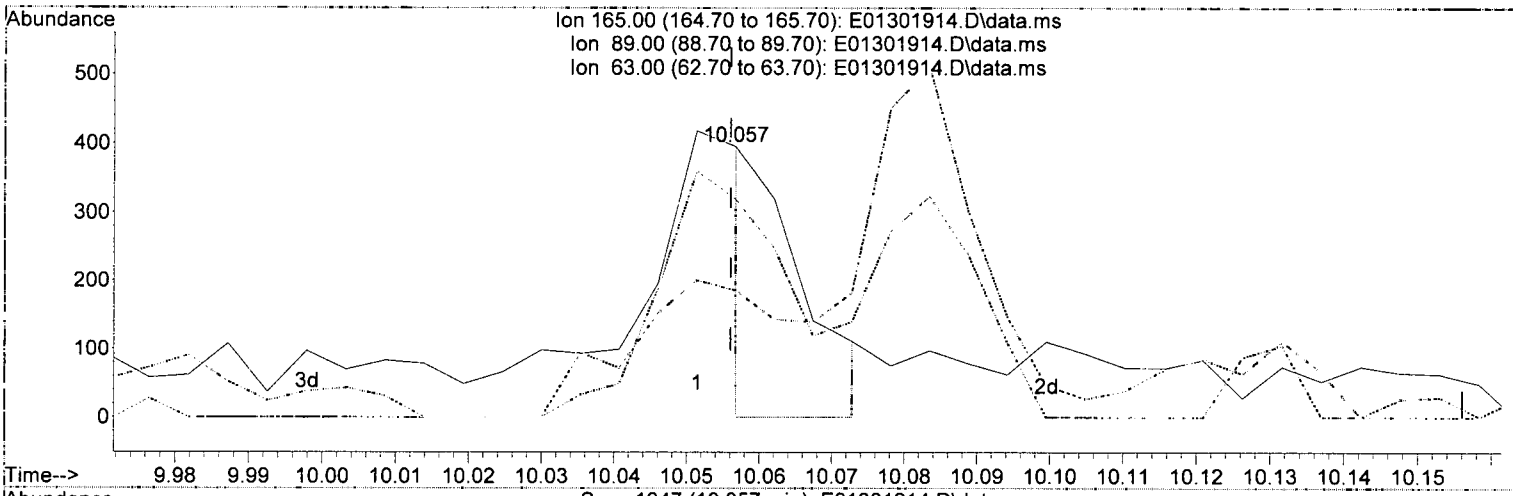


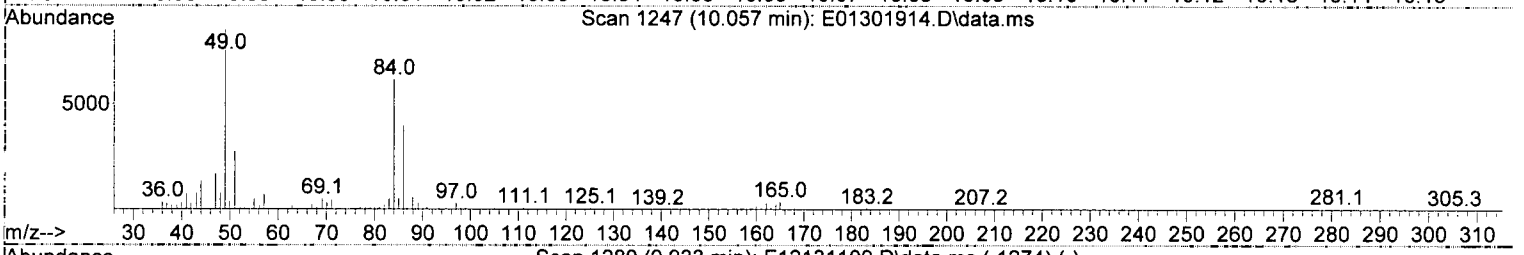
R = 2.07e-002 A*A + 3.70e-001 A - 1.13e-002
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

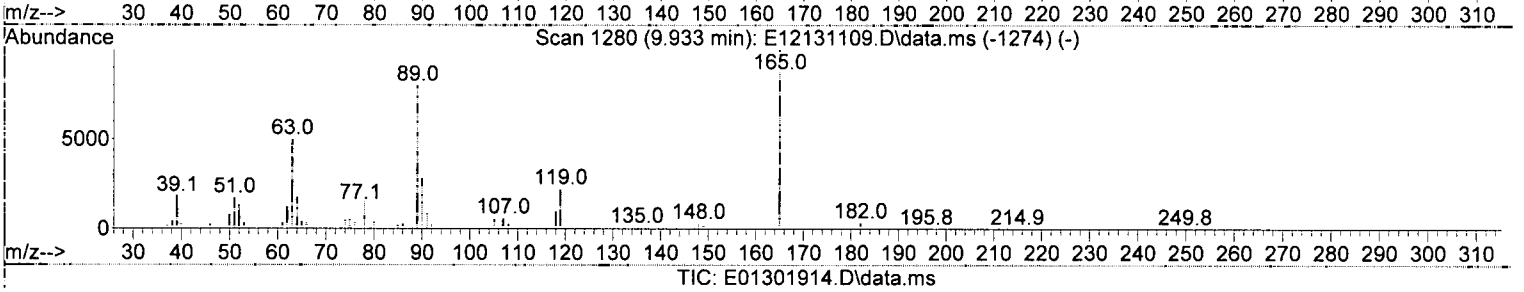
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







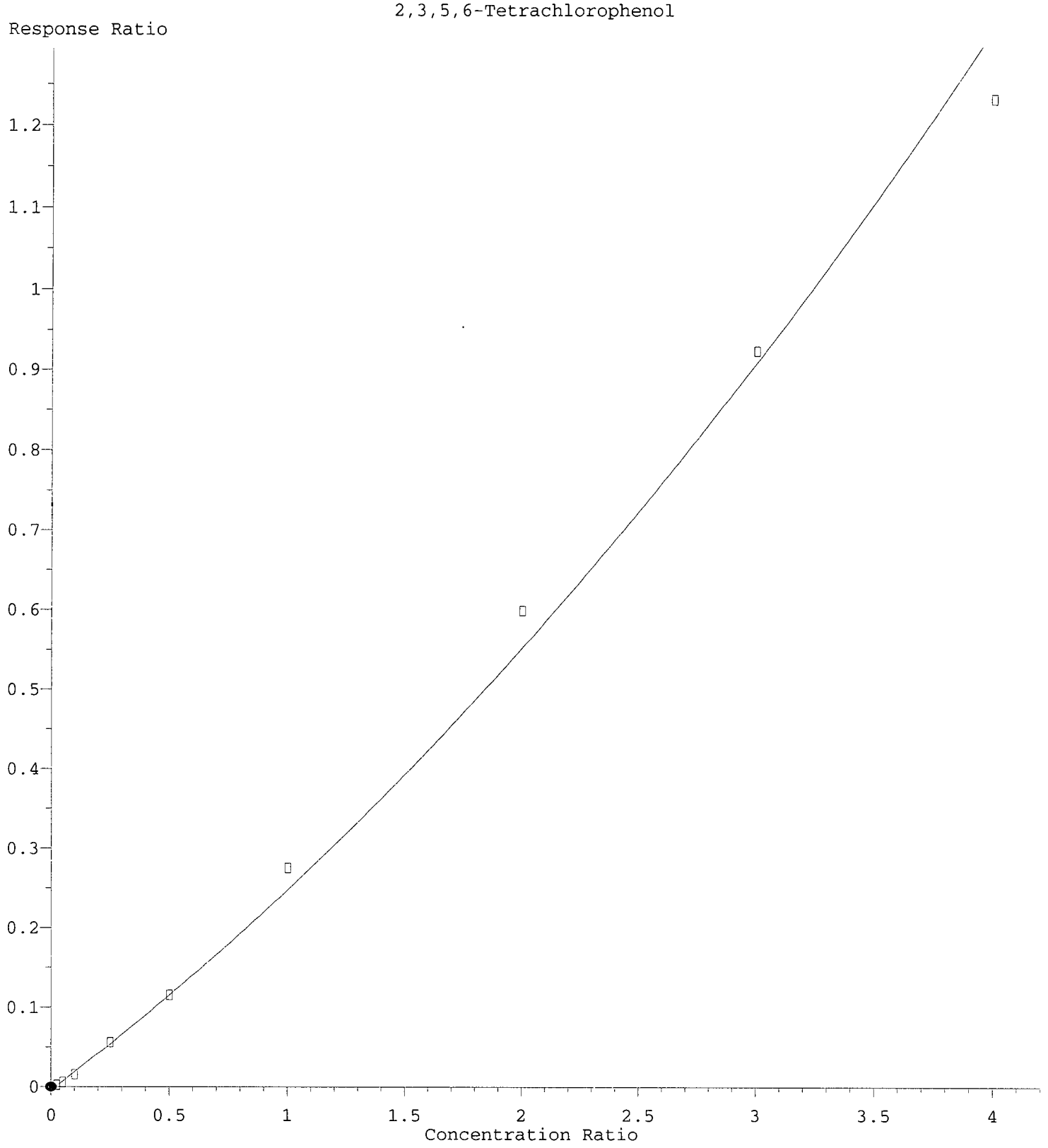
TIC: E01301914.D\data.ms

(54) 2,4-Dinitrotoluene (T)

10.057min (+ 0.001) 63.06 ng/ml m

response 183

Ion	Exp%	Act%
165.00	100.00	100.00
89.00	81.60	80.76
63.00	52.60	46.84
0.00	0.00	0.00

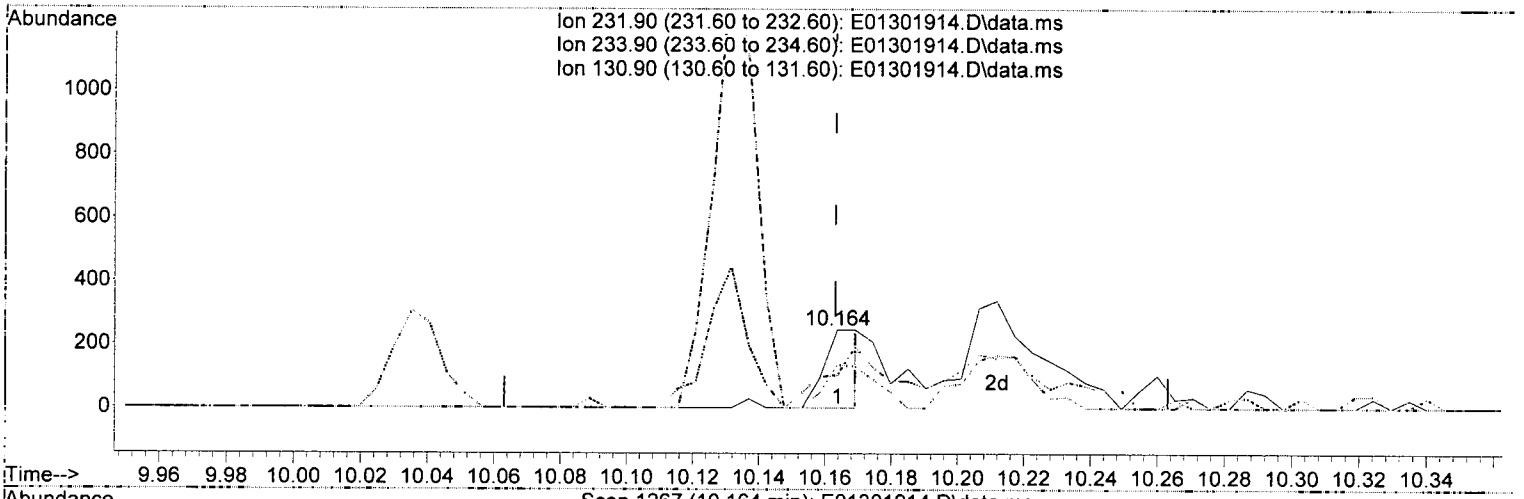


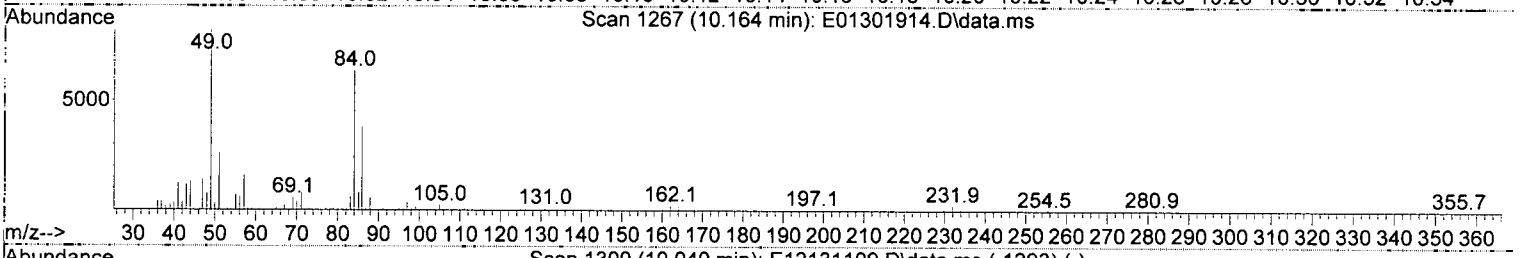
R = 2.63e-002 A*A + 2.26e-001 A - 4.06e-003
Coef of Det (r^2) = 0.990 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

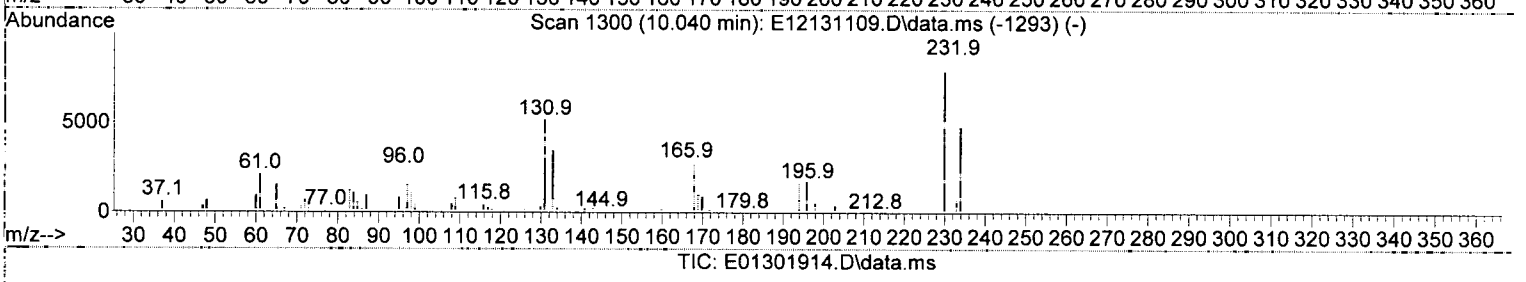
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







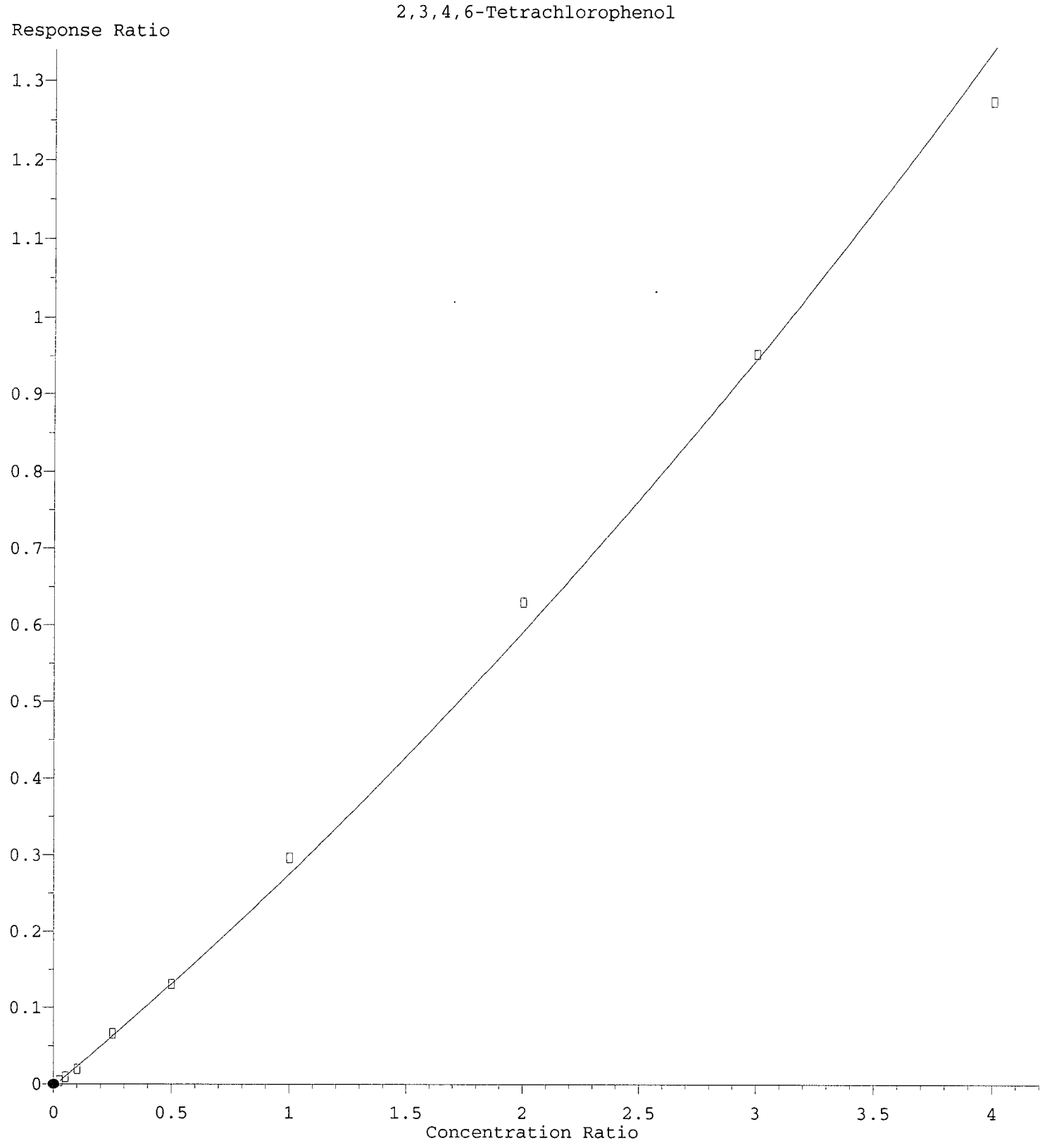
TIC: E01301914.D\data.ms

(56) 2,3,5,6-Tetrachlorophenol (T)

10.164min (+ 0.001) 39.31 ng/ml m

response 188

Ion	Exp%	Act%
231.90	100.00	100.00
233.90	46.40	55.28
130.90	52.90	42.28
0.00	0.00	0.00

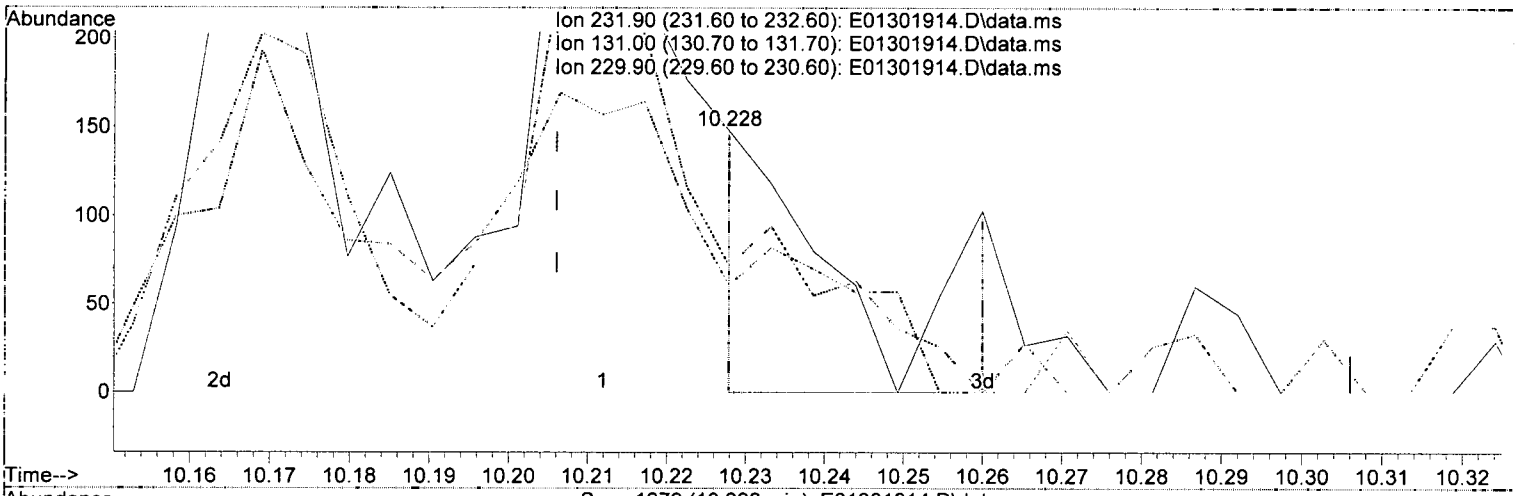


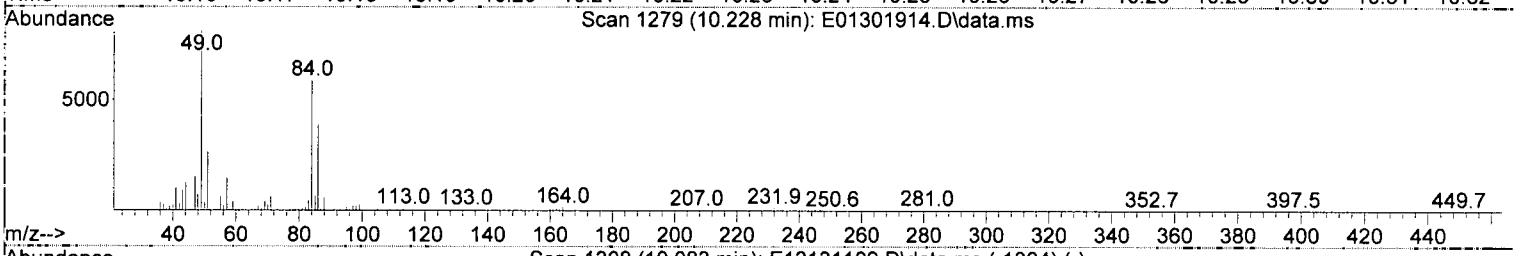
R = 1.91e-002 A*A + 2.59e-001 A - 3.03e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

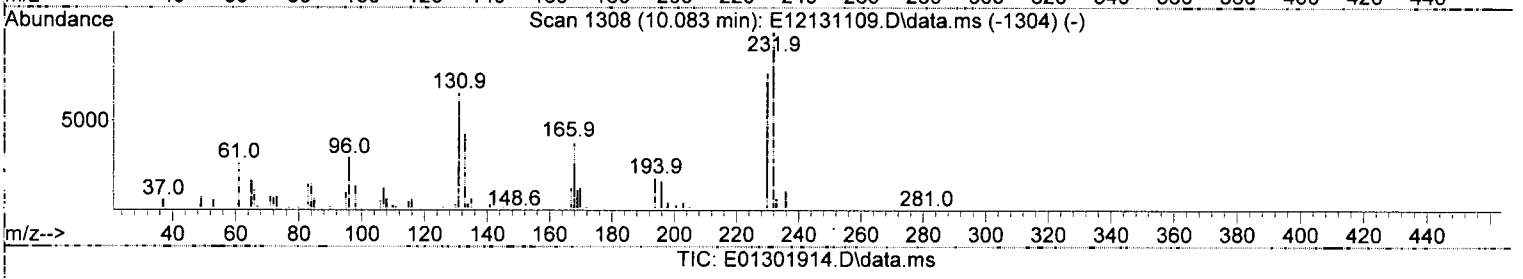
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







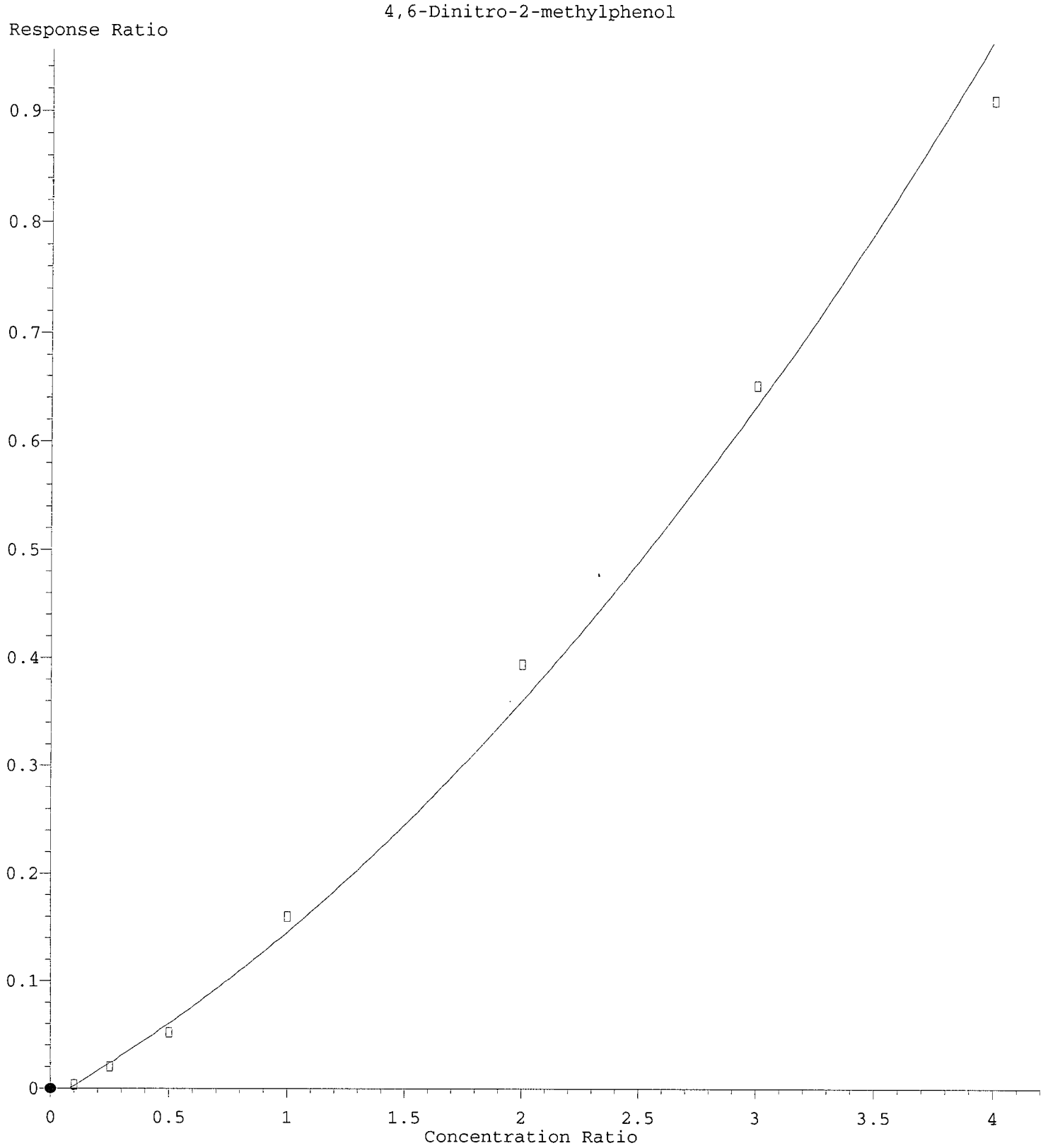
TIC: E01301914.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.228min (+ 0.022) 25.48 ng/ml m

response 134

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	61.50	41.22
229.90	79.80	48.65#
0.00	0.00	0.00

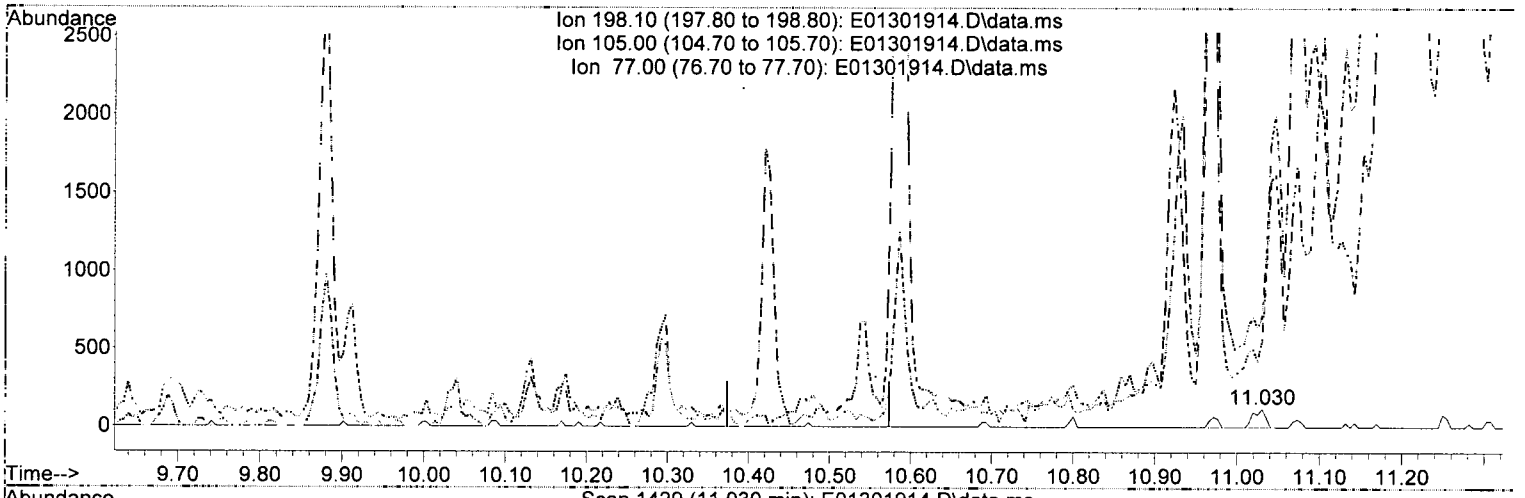


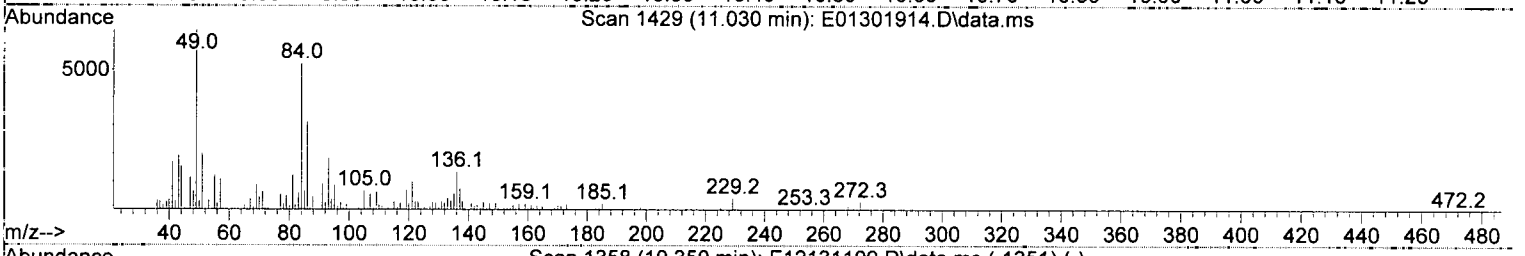
R = 2.93e-002 A*A + 1.27e-001 A - 1.03e-002
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

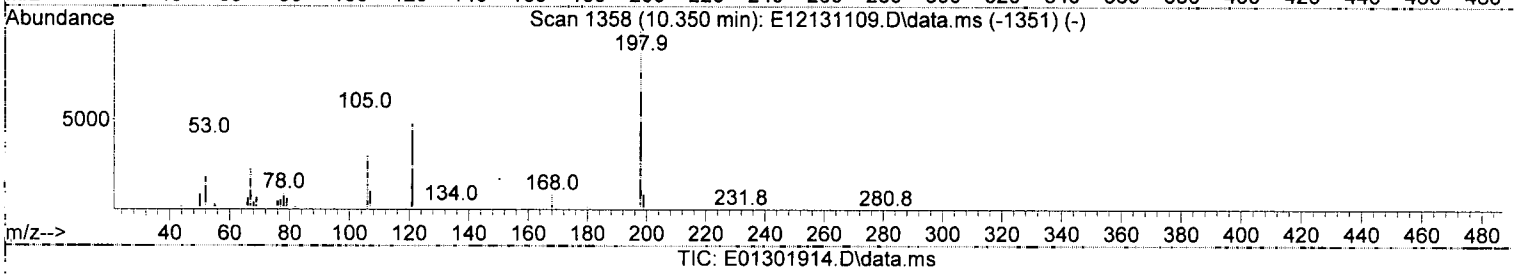
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







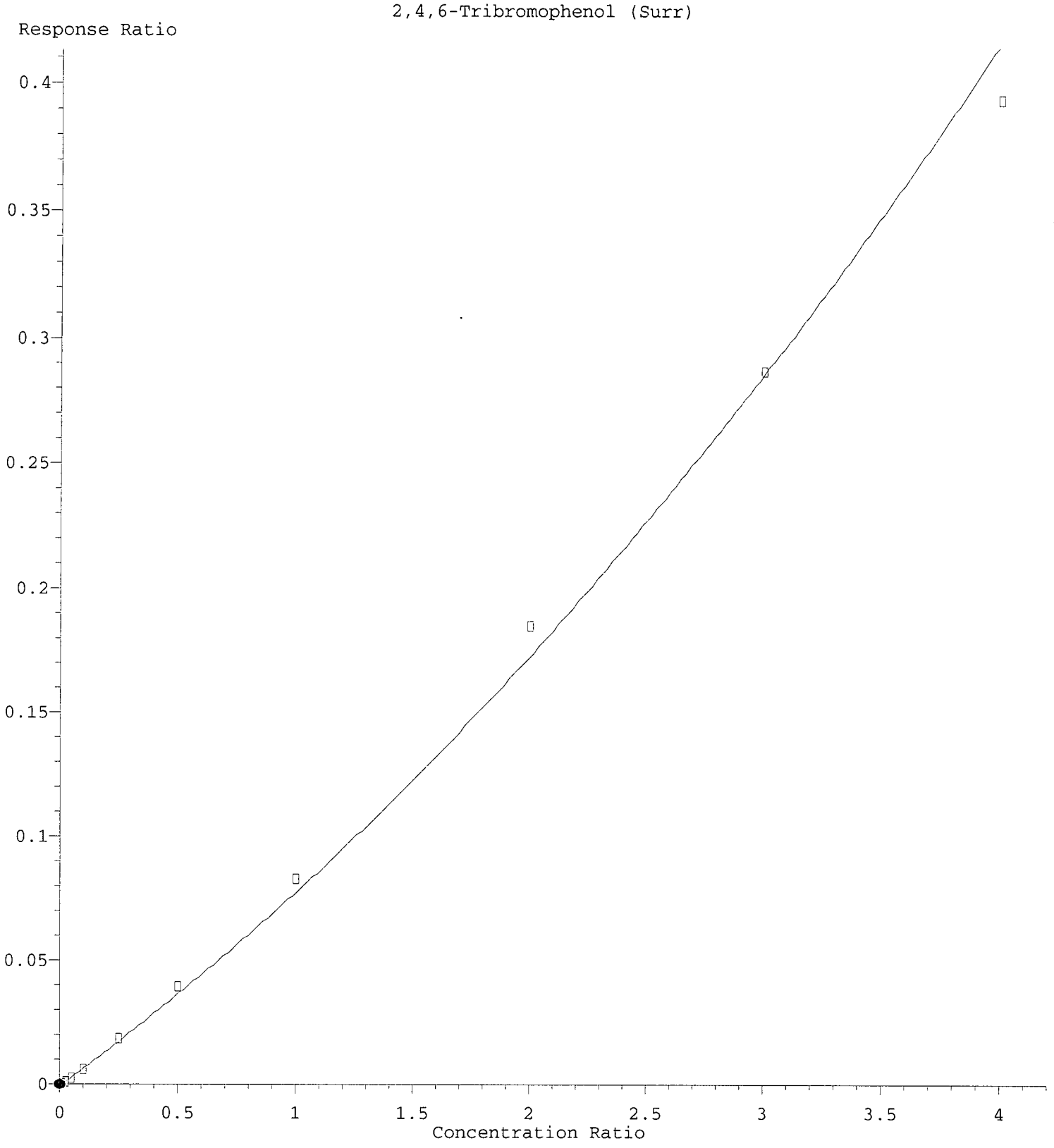
TIC: E01301914.D\data.ms

(63) 4,6-Dinitro-2-methylphenol (T)

11.030min (+ 0.557) 164.67 ng/ml m

response 160

Ion	Exp%	Act%
198.10	100.00	100.00
105.00	58.30	594.92#
77.00	33.50	466.95#
0.00	0.00	0.00

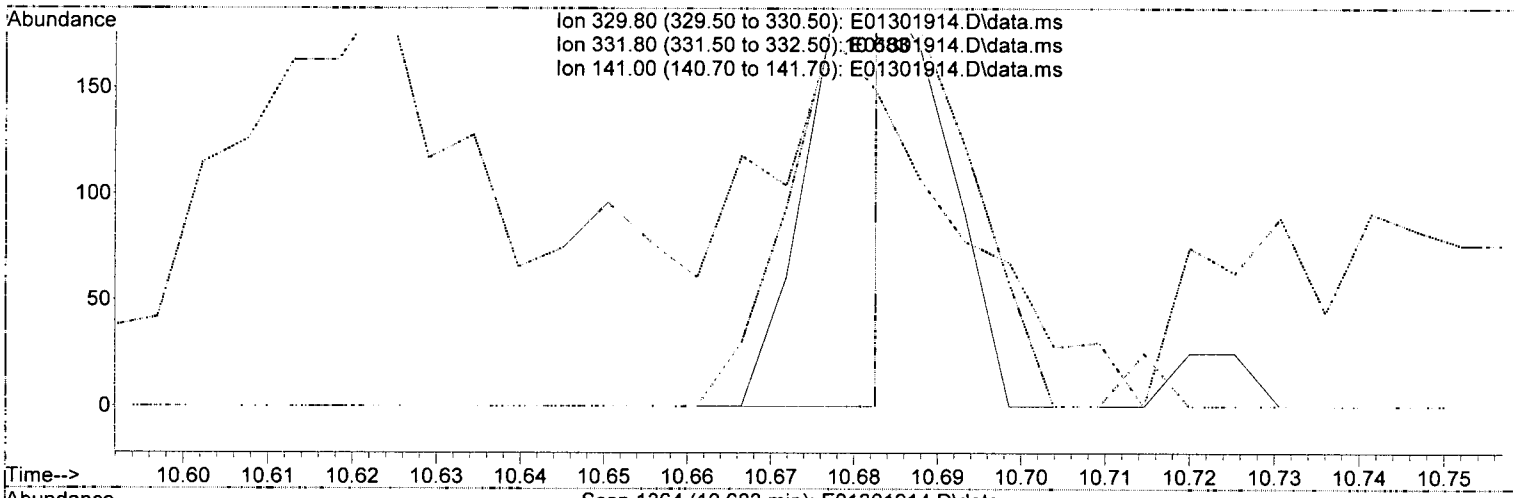


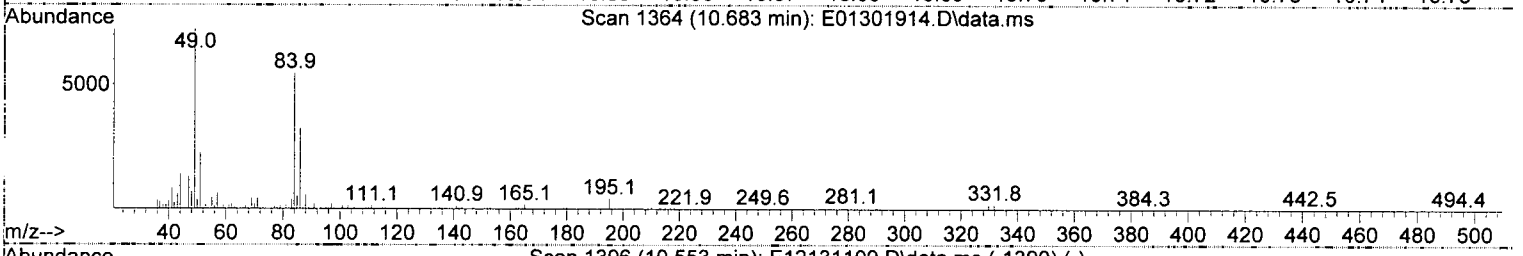
R = 8.71e-003 A*A + 6.92e-002 A - 5.01e-004
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

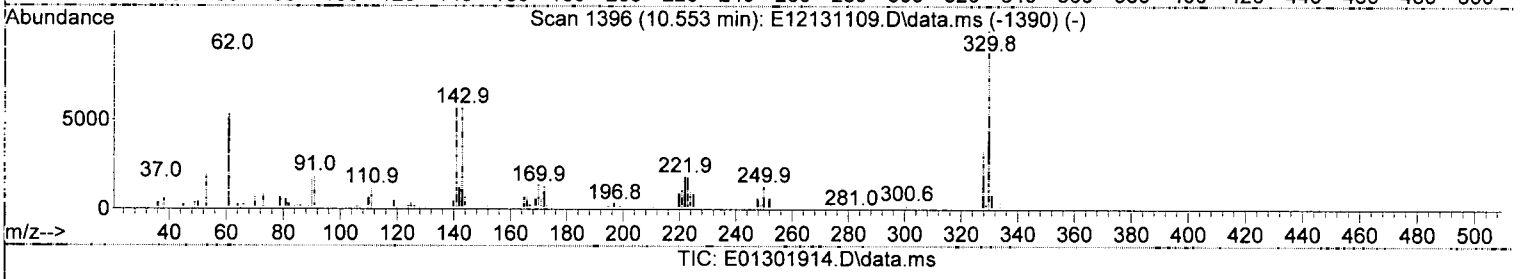
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5





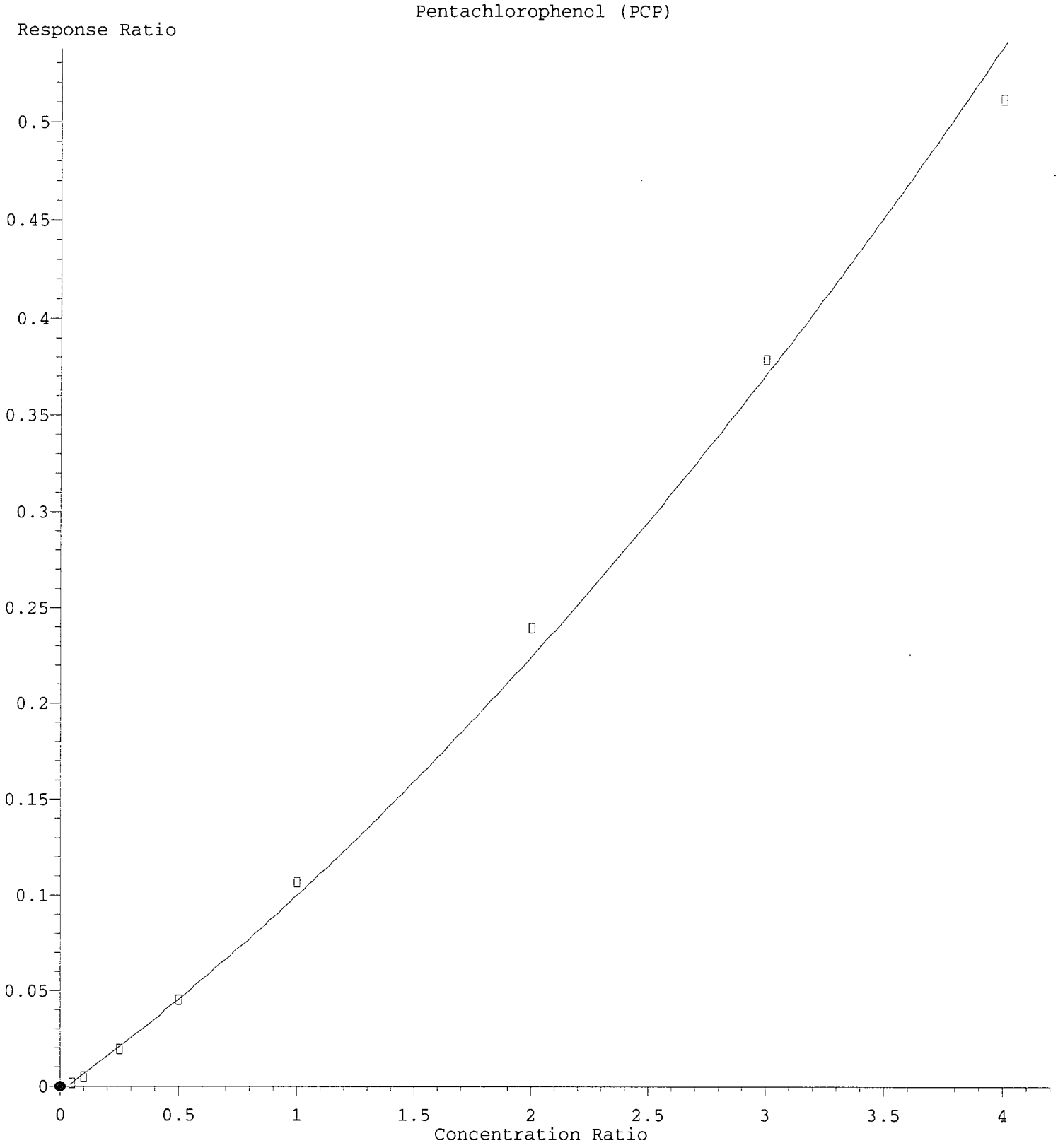


(67) 2,4,6-Tribromophenol (Surr) (S)

10.683min (+ 0.000) 19.07 ng/ml m

response 146

Ion	Exp%	Act%
329.80	100.00	100.00
331.80	93.60	103.32
141.00	55.20	70.62
0.00	0.00	0.00

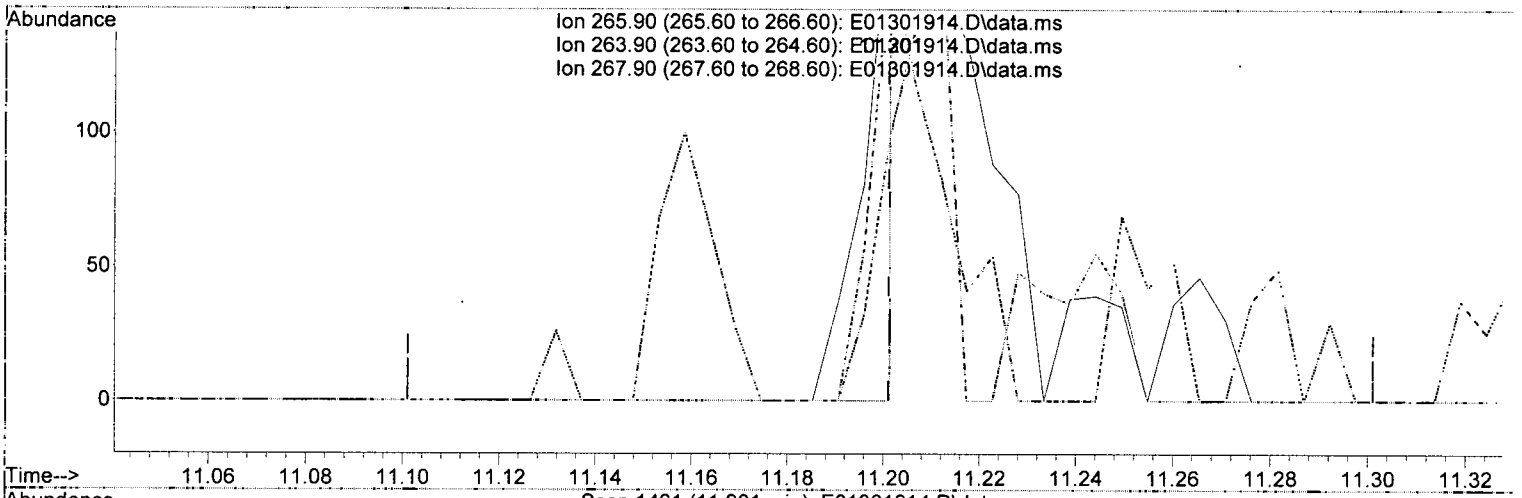


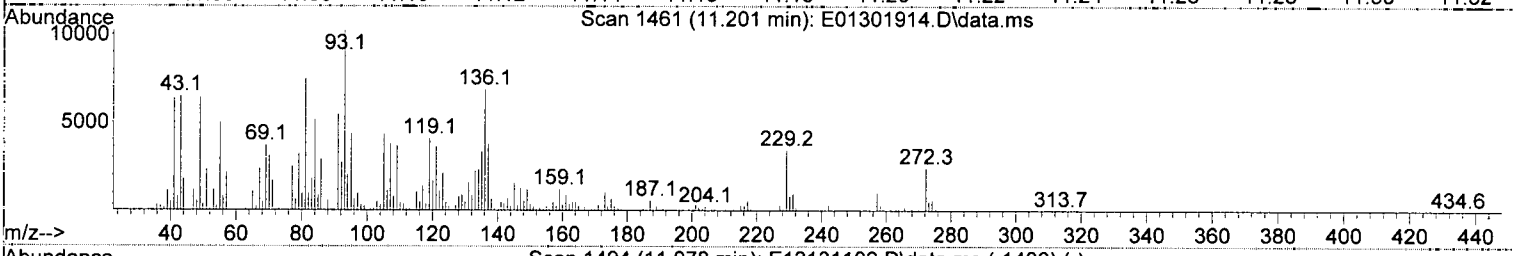
R = 1.08e-002 A*A + 9.25e-002 A - 3.25e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SV5_019019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

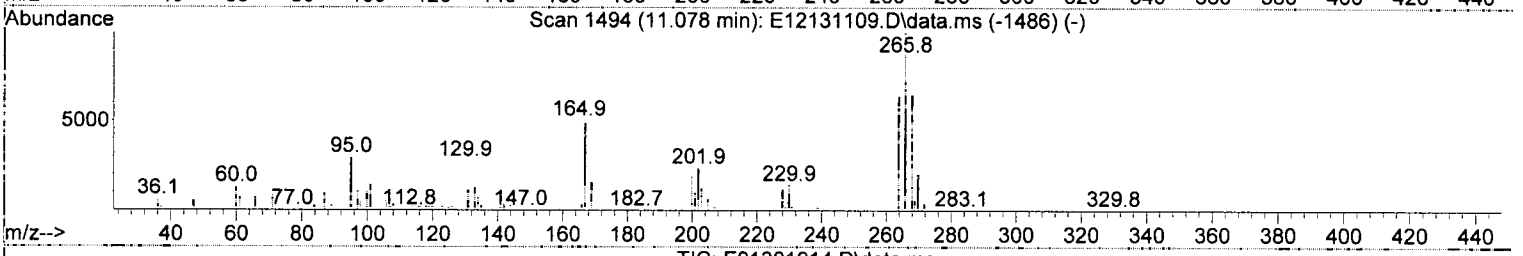
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







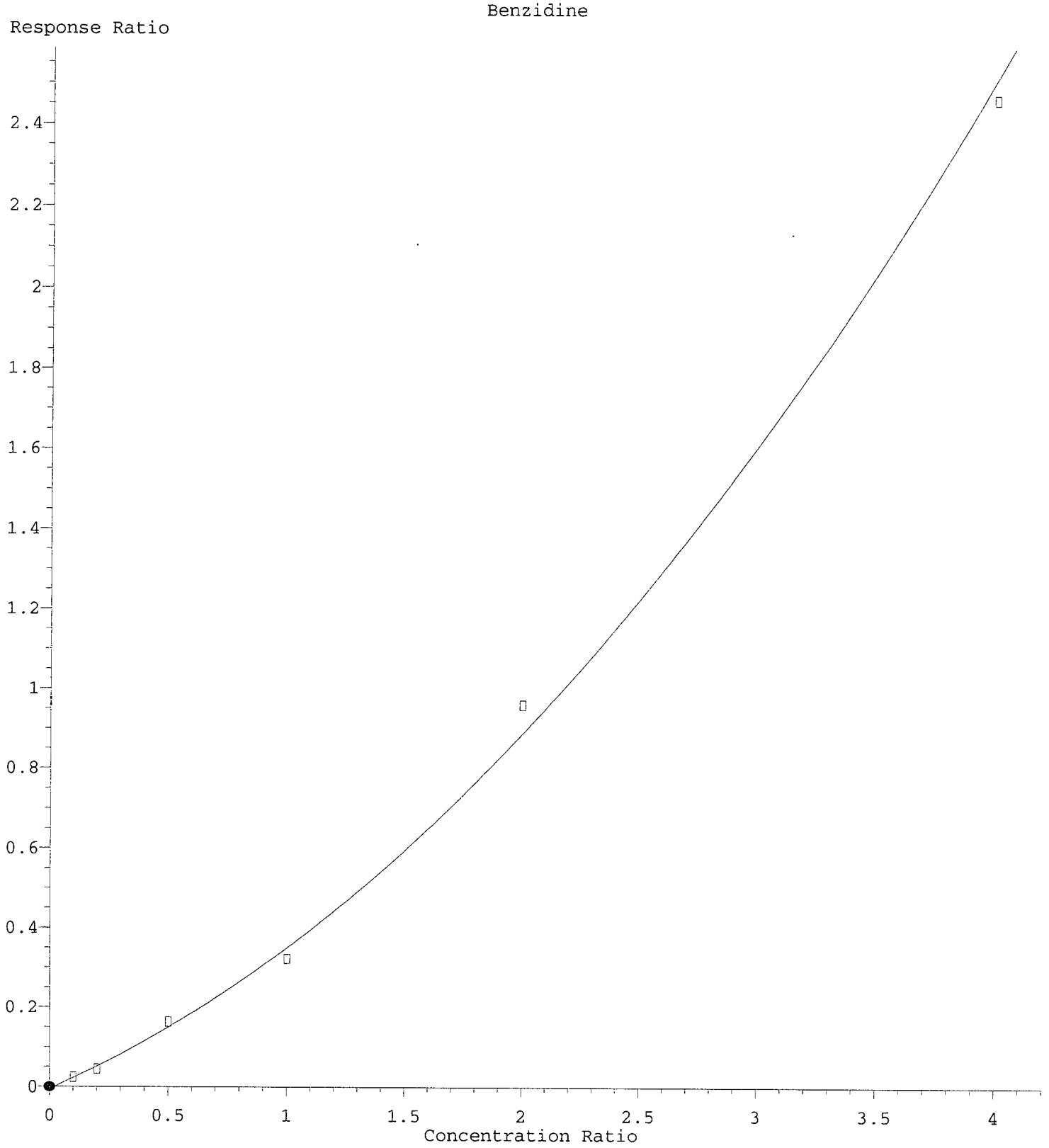
TIC: E01301914.D\data.ms

(70) Pentachlorophenol (PCP) (T)

11.201min (+ 0.000) 72.35 ng/ml m

response 101

Ion	Exp%	Act%
265.90	100.00	100.00
263.90	65.40	50.25
267.90	67.30	85.28
0.00	0.00	0.00

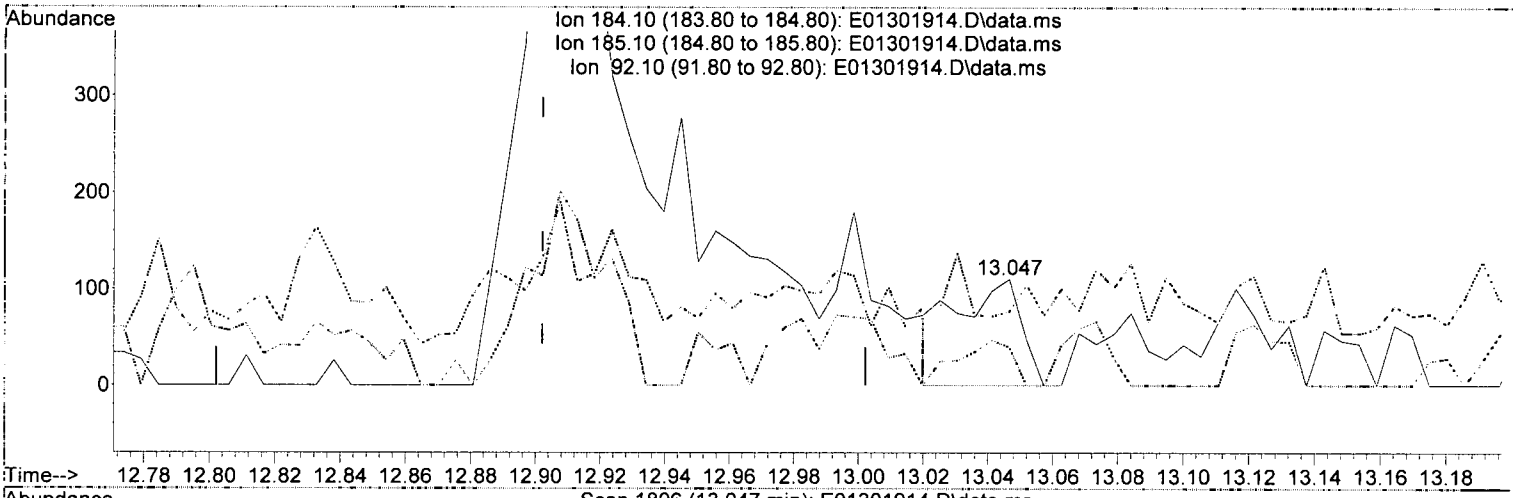


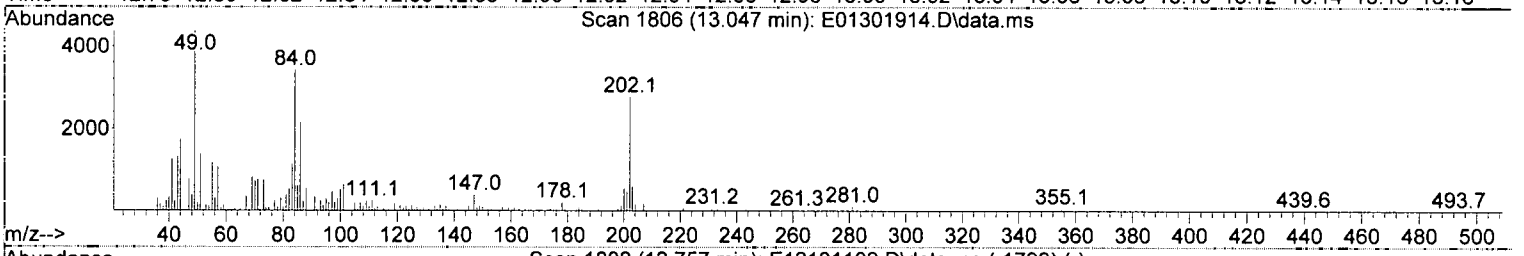
R = 9.14e-002 A*A + 2.64e-001 A - 5.09e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SVS_[illegible]
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

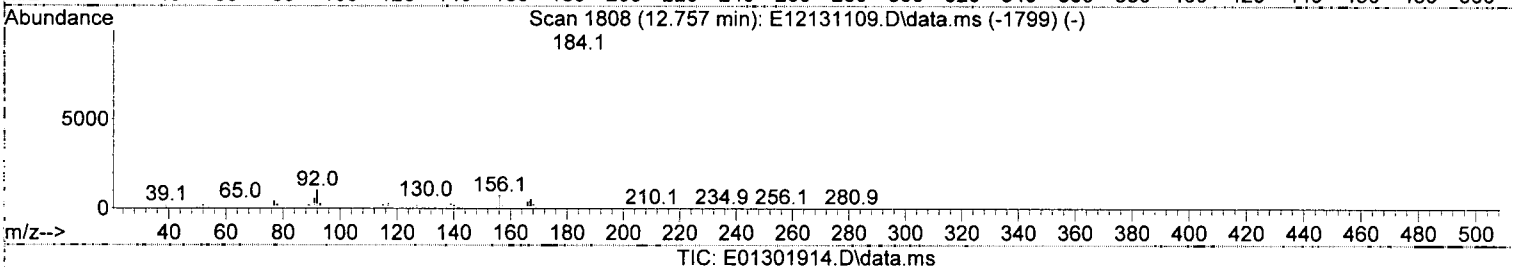
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







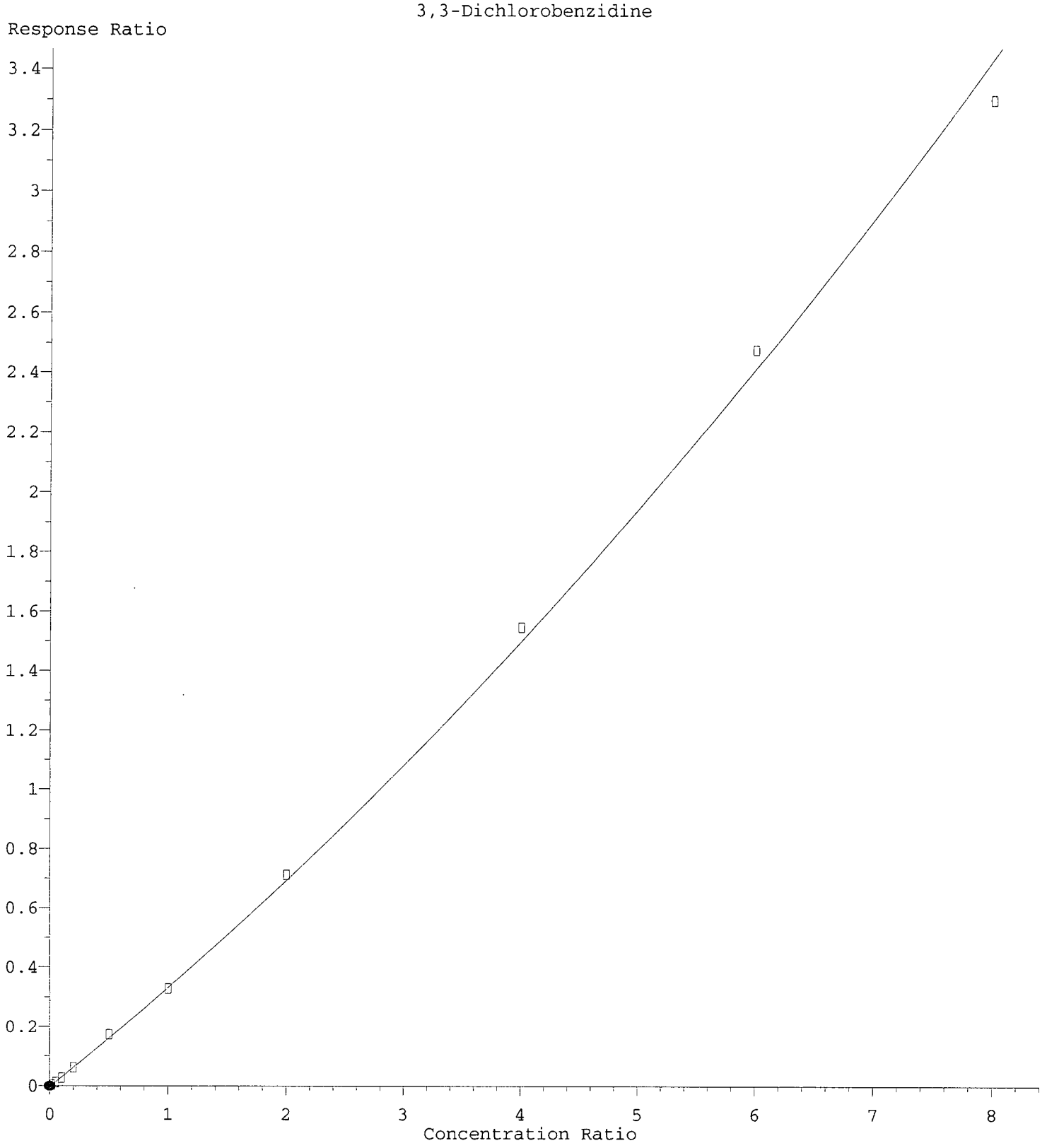
TIC: E01301914.D\data.ms

(76) Benzidine (T)

13.047min (+ 0.145) 39.61 ng/ml m

response 157

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	14.50	36.36
92.10	10.50	70.00#
0.00	0.00	0.00

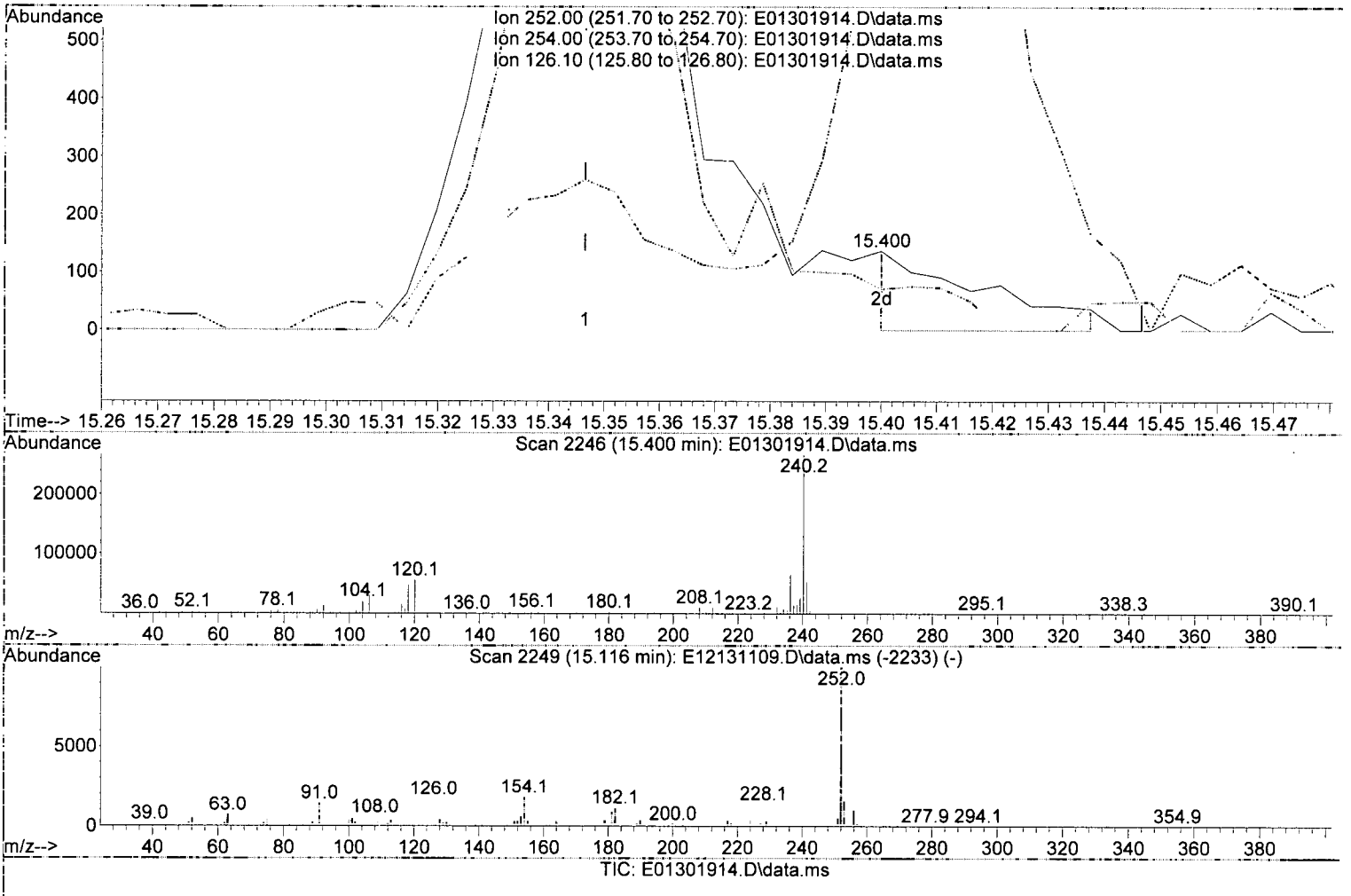


R = 1.36e-002 A*A + 3.21e-001 A - 3.38e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SVS_013019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5



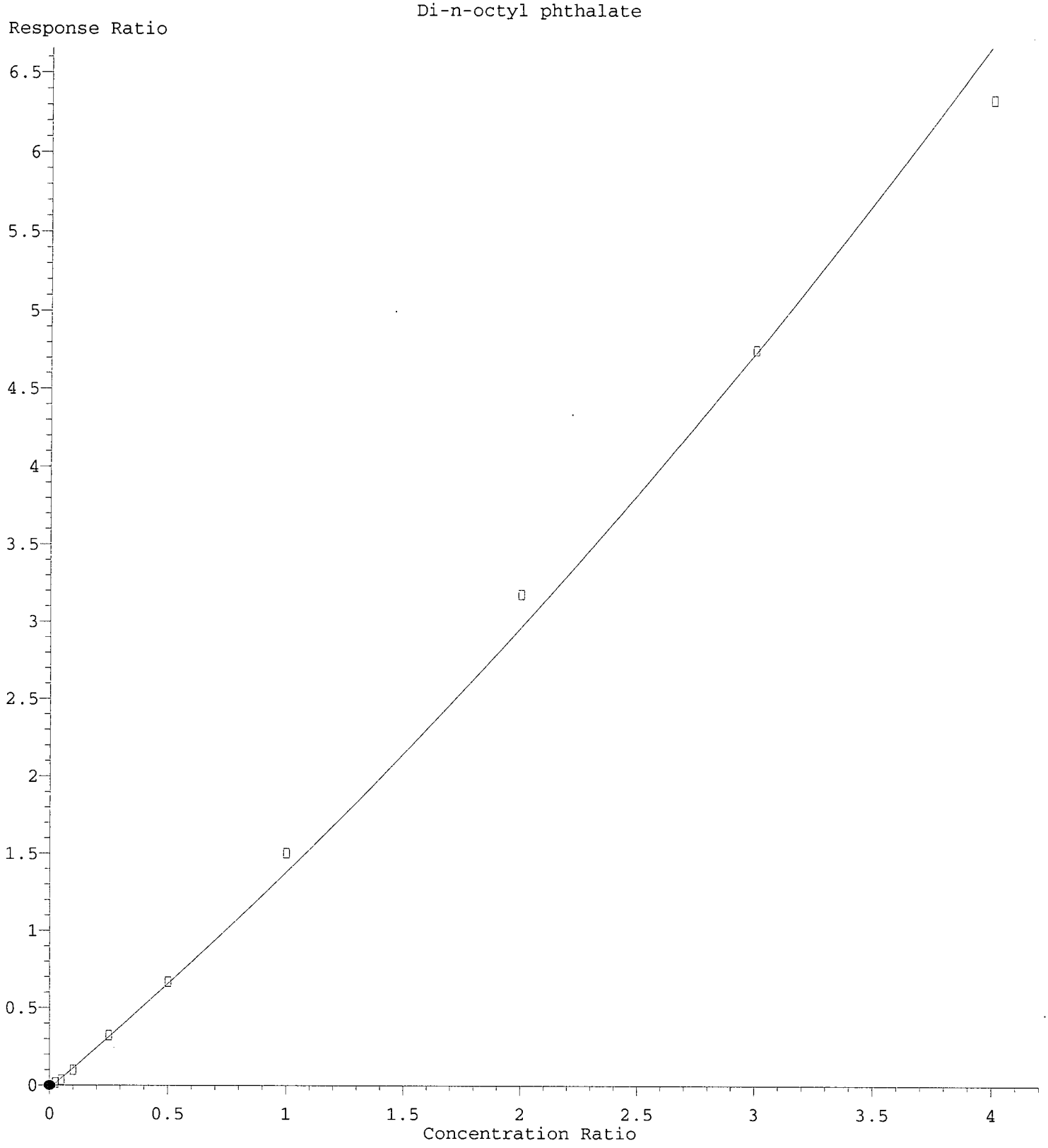
TIC: E01301914.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.400min (+ 0.053) 22.11 ng/ml m

response 147

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	63.30	51.82
126.10	16.90	608.76#
0.00	0.00	0.00

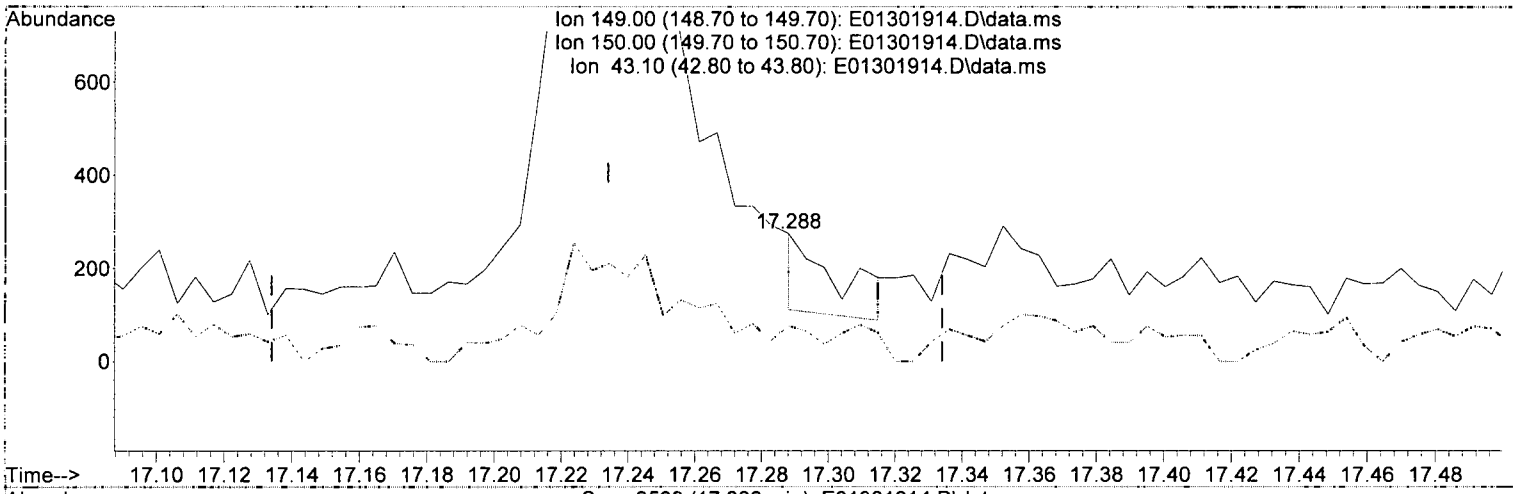


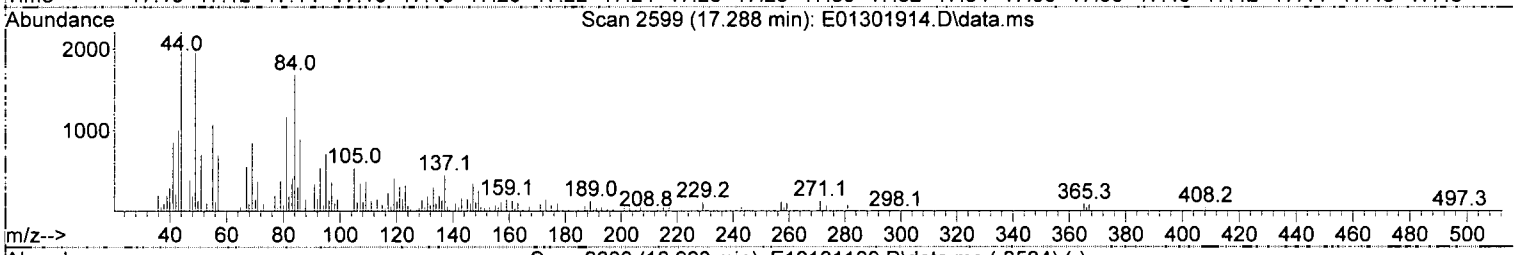
R = 9.25e-002 A*A + 1.31e+000 A - 2.01e-002
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\METHODS\SVS_019019.M
Calibration Table Last Updated: Thu Jan 31 11:41:33 2019

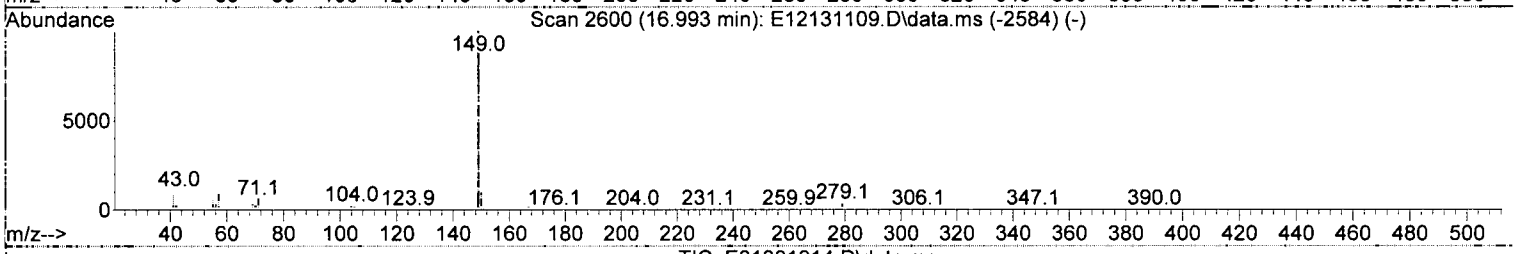
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\REQUANT\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 11:50:38 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301914.D\data.ms

(87) Di-n-octyl phthalate (T)

17.288min (+ 0.054) 30.95 ng/ml m

response 141

Ion	Exp%	Act%
149.00	100.00	100.00
150.00	9.80	27.54
43.10	11.80	365.94#
0.00	0.00	0.00

CALIBRATION SEQUENCE REVIEW SHEET

SEQUENCE: 9A30046

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9A30046-TUN1	MS Tune	Soil	A19A180	A18L267	1/30/2019 4:45:00PM
9A30046-TUN2	MS Tune	Soil	A19A180	A18L267	1/30/2019 5:18:00PM
9A30046-ICB1	Initial Cal Blank	Soil		A18L267	1/30/2019 6:24:00PM
9A30046-CAL1	Cal Standard	Soil	A18L327	"	1/30/2019 7:00:00PM
9A30046-CAL2	Cal Standard	Soil	A18L328	"	1/30/2019 7:37:00PM
9A30046-CAL3	Cal Standard	Soil	A18L329	"	1/30/2019 8:13:00PM
9A30046-CAL4	Cal Standard	Soil	A18L330	"	1/30/2019 8:50:00PM
9A30046-CAL5	Cal Standard	Soil	A18L331	"	1/30/2019 9:26:00PM
9A30046-CAL6	Cal Standard	Soil	A18L332	"	1/30/2019 10:02:00PM
9A30046-CAL7	Cal Standard	Soil	A18L333	"	1/30/2019 10:39:00PM
9A30046-CAL8	Cal Standard	Soil	A18L334	"	1/30/2019 11:15:00PM
9A30046-CAL9	Cal Standard	Soil	A18L335	"	1/30/2019 11:51:00PM
9A30046-CALA	Cal Standard	Soil	A18L336	"	1/31/2019 12:28:00AM
9A30046-ICV1	Initial Cal Check	Soil	A19A013	"	1/31/2019 1:40:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9A3103** Instrument: **SV-GCMS5**

8270D LL Full List Sequence: **9A30046** Matrix: **Soil**

9A30046-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-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: 9A30046

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: **A9A3103** Instrument: **SV-GCMS5**

8270D LL Full List Sequence: **9A30046** Matrix: **Soil**

9A30046-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: 9A30046

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed
9A30046-TUN1	MS Tune	Water	A19A180	A18L267	1/30/2019 4:45:00PM
9A30046-TUN2	MS Tune	Water	A19A180	A18L267	1/30/2019 5:18:00PM
9A30046-ICB1	Initial Cal Blank	Water		A18L267	1/30/2019 6:24:00PM
9A30046-CAL1	Cal Standard	Water	A18L327	"	1/30/2019 7:00:00PM
9A30046-CAL2	Cal Standard	Water	A18L328	"	1/30/2019 7:37:00PM
9A30046-CAL3	Cal Standard	Water	A18L329	"	1/30/2019 8:13:00PM
9A30046-CAL4	Cal Standard	Water	A18L330	"	1/30/2019 8:50:00PM
9A30046-CAL5	Cal Standard	Water	A18L331	"	1/30/2019 9:26:00PM
9A30046-CAL6	Cal Standard	Water	A18L332	"	1/30/2019 10:02:00PM
9A30046-CAL7	Cal Standard	Water	A18L333	"	1/30/2019 10:39:00PM
9A30046-CAL8	Cal Standard	Water	A18L334	"	1/30/2019 11:15:00PM
9A30046-CAL9	Cal Standard	Water	A18L335	"	1/30/2019 11:51:00PM
9A30046-CALA	Cal Standard	Water	A18L336	"	1/31/2019 12:28:00AM
9A30046-ICV1	Initial Cal Check	Water	A19A013	"	1/31/2019 1:40:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9A3103** Instrument: **SV-GCMS5**

8270D LL Full List Sequence: **9A30046** Matrix: **Water**

9A30046-CAL1	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL2	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL3	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL4	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL5	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL6	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL7	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL8	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-CAL9	Inst. MRL	Recalc Res.	Cal Level	%Rec.	Qual
9A30046-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: 9A30046

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: **A9A3103** Instrument: **SV-GCMS5**

8270D LL Full List Sequence: **9A30046** Matrix: **Water**

9A30046-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 : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

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	97	0.00
2	T	N-Nitrosodimethylamine	1000.000	1034.868	-3.5	99	-0.01
3	T	Pyridine	1000.000	1030.492	-3.0	99	-0.02
4	S	2-Fluorophenol (Surr)	1000.000	1025.738	-2.6	95	0.00
5	S	Phenol-d6(Surr)	1000.000	1038.804	-3.9	98	0.00
6	T	Phenol	1000.000	1020.994	-2.1	98	0.00
7	T	Aniline	1000.000	980.198	2.0	98	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	1039.862	-4.0	100	0.00
9	T	2-Chlorophenol	1000.000	1051.713	-5.2	99	0.00
10	T	1,3-Dichlorobenzene	1000.000	1015.201	-1.5	99	0.00
11	T	1,4-Dichlorobenzene	1000.000	1023.842	-2.4	100	0.00
12	T	Benzyl alcohol	1000.000	989.088	1.1	95	0.00
13	T	1,2-Dichlorobenzene	1000.000	1030.249	-3.0	100	0.00
14	T	2-Methylphenol	1000.000	1046.965	-4.7	100	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	1009.585	-1.0	97	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1065.529	-6.6	102	0.00
17	T	3+4-Methylphenol	1000.000	1079.894	-8.0	102	0.00
18	T	Hexachloroethane	1000.000	1017.826	-1.8	98	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1061.227	-6.1	105	0.00
20	T	Nitrobenzene	1000.000	1093.502	-9.4	103	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	99	0.00
22	T	Isophorone	1000.000	1076.183	-7.6	102	0.00
23	T	2-Nitrophenol	1000.000	1119.875	-12.0	109	0.00
24	T	2,4-Dimethylphenol	1000.000	1009.117	-0.9	98	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1061.050	-6.1	104	0.00
26	T	Benzoic acid	2000.000	2255.555	-12.8	126	0.00
27	T	2,4-Dichlorophenol	1000.000	1075.182	-7.5	105	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1023.230	-2.3	103	0.00
29	T	Naphthalene	1000.000	1017.093	-1.7	102	0.00
30	T	4-Chloroaniline	1000.000	1108.762	-10.9	114	0.00
31	T	Hexachlorobutadiene	1000.000	1043.111	-4.3	101	0.00
32	T	4-Chloro-3-methylphenol	1000.000	1059.623	-6.0	107	0.00
33	T	2-Methylnaphthalene	1000.000	1077.500	-7.8	107	0.00
34	T	1-Methylnaphthalene	1000.000	1058.801	-5.9	105	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	107	0.00
36	T	Hexachlorocyclopentadiene	1000.000	981.409	1.9	97	0.00
37	T	2,4,6-Trichlorophenol	1000.000	1102.497	-10.2	113	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1098.052	-9.8	114	0.00
39	T	1,1'-Biphenyl	1000.000	1022.172	-2.2	108	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1018.739	-1.9	108	0.00
41	T	2-Chloronaphthalene	1000.000	1017.014	-1.7	110	0.00
42	T	2-Nitroaniline	1000.000	1113.798	-11.4	125	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1069.017	-6.9	111	0.00
44	T	1,4-Dinitrobenzene	1000.000	1158.489	-15.8	135	0.00
45	T	Dimethyl phthalate	1000.000	1121.495	-12.1	118	0.00
46	T	1,3-Dinitrobenzene	1000.000	1152.437	-15.2	132	0.00
47	T	2,6-Dinitrotoluene	1000.000	1134.194	-13.4	122	0.00

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Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
48	T	1,2-Dinitrobenzene	1000.000	1168.425	-16.8	128	0.00
49	T	Acenaphthylene	1000.000	1068.875	-6.9	110	0.00
50	T	3-Nitroaniline	1000.000	1119.893	-12.0	127	0.00
51	T	Acenaphthene	1000.000	1033.180	-3.3	110	0.00
52	T	2,4-Dinitrophenol	1000.000	1090.025	-9.0	148	0.00
53	T	4-Nitrophenol	1000.000	1088.313	-8.8	128	0.00
54	T	2,4-Dinitrotoluene	1000.000	1137.244	-13.7	131	0.00
55	T	Dibenzofuran	1000.000	1064.708	-6.5	116	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1150.756	-15.1	125	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1106.823	-10.7	120	0.00
58	T	Diethyl phthalate	1000.000	1146.401	-14.6	118	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1096.146	-9.6	114	0.00
60	T	Fluorene	1000.000	1105.141	-10.5	117	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1077.167	-7.7	118	0.00
62	T	4-Nitroaniline	1000.000	1078.749	-7.9	130	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1209.638	-21.0	160	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	117	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1073.651	-7.4	120	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1112.477	-11.2	120	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1137.965	-13.8	124	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1058.952	-5.9	124	0.00
69	T	Hexachlorobenzene	1000.000	1046.388	-4.6	121	0.00
70	T	Pentachlorophenol (PCP)	1000.000	999.557	0.0	118	0.00
71	T	Phenanthrene	1000.000	1037.200	-3.7	120	0.00
72	T	Anthracene	1000.000	1033.614	-3.4	119	0.00
73	T	Carbazole	1000.000	1002.379	-0.2	120	0.00
74	T	Di-n-butyl phthalate	1000.000	1017.760	-1.8	122	0.00
75	T	Fluoranthene	1000.000	1039.584	-4.0	122	0.00
76	T	Benzidine	2000.000	2024.852	-1.2	130	0.00
77	T	Pyrene	1000.000	1048.131	-4.8	123	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	126	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1050.253	-5.0	128	0.00
80	T	Butyl benzyl phthalate	1000.000	1055.065	-5.5	130	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	982.141	1.8	129	0.00
82	T	3,3-Dichlorobenzidine	2000.000	2201.800	-10.1	141	0.00
83	T	Benz(a)anthracene	1000.000	1056.356	-5.6	137	0.00
84	T	Chrysene	1000.000	1030.712	-3.1	129	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	1009.539	-1.0	130	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	129	0.00
87	T	Di-n-octyl phthalate	1000.000	1063.360	-6.3	136	0.00
88	T	Benzo(b)fluoranthene	1000.000	1081.373	-8.1	135	0.00
89	T	Benzo(k)fluoranthene	1000.000	1082.745	-8.3	131	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2106.989	-5.3	133	0.00
91	T	Benzo(e)pyrene	1000.000	1035.215	-3.5	130	0.00
92	T	Benzo(a)pyrene	1000.000	1093.769	-9.4	133	0.00
93	T	Perylene	1000.000	1064.737	-6.5	135	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

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)
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	133	0.00
95	T	Indeno(1,2,3-cd)pyrene	1000.000	995.259	0.5	134	0.00
96	T	Dibenz(a,h)anthracene	1000.000	1025.848	-2.6	137	0.00
97	T	Benzo(g,h,i)perylene	1000.000	1053.780	-5.4	133	0.00

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

DFTPP

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301911.D
Acq On : 30 Jan 2019 4:45 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN1
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

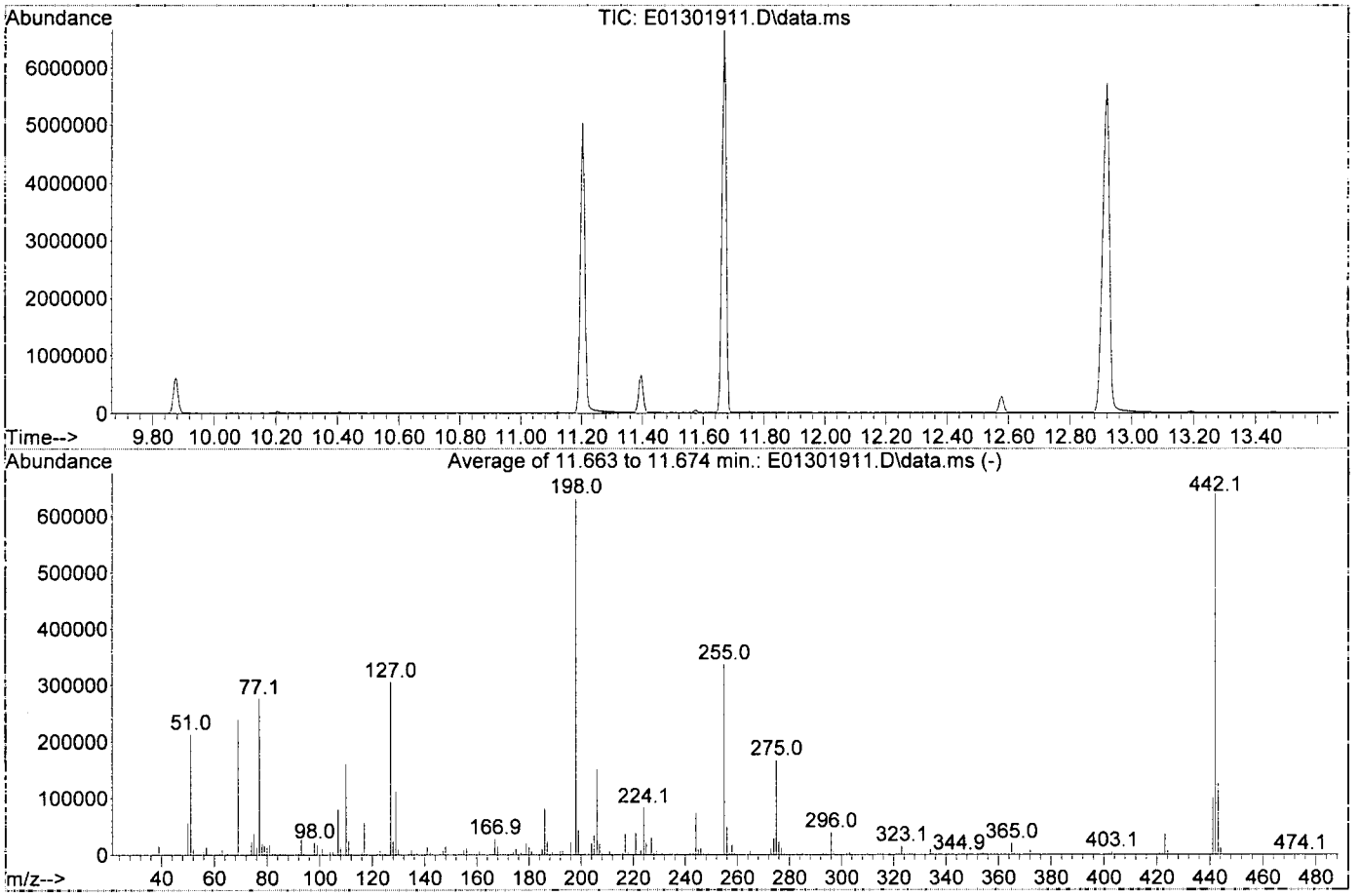
Retuned after this run

T-01

1/31/19

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Thu Jan 31 09:49:42 2019



AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	33.8	213705	PASS
68	69	0.00	2	1.1	2671	PASS
69	198	0.00	100	37.8	239097	PASS
70	69	0.00	2	0.5	1157	PASS
127	198	40	60	48.5	306325	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	632235	PASS
199	198	5	9	6.8	43123	PASS
275	198	10	30	26.6	168075	PASS
365	198	1	100	3.2	19964	PASS
441	443	0.01	100	78.9	100003	PASS
442	198	40	100	102.0	645035	FAIL*
443	442	17	23	19.6	126720	PASS

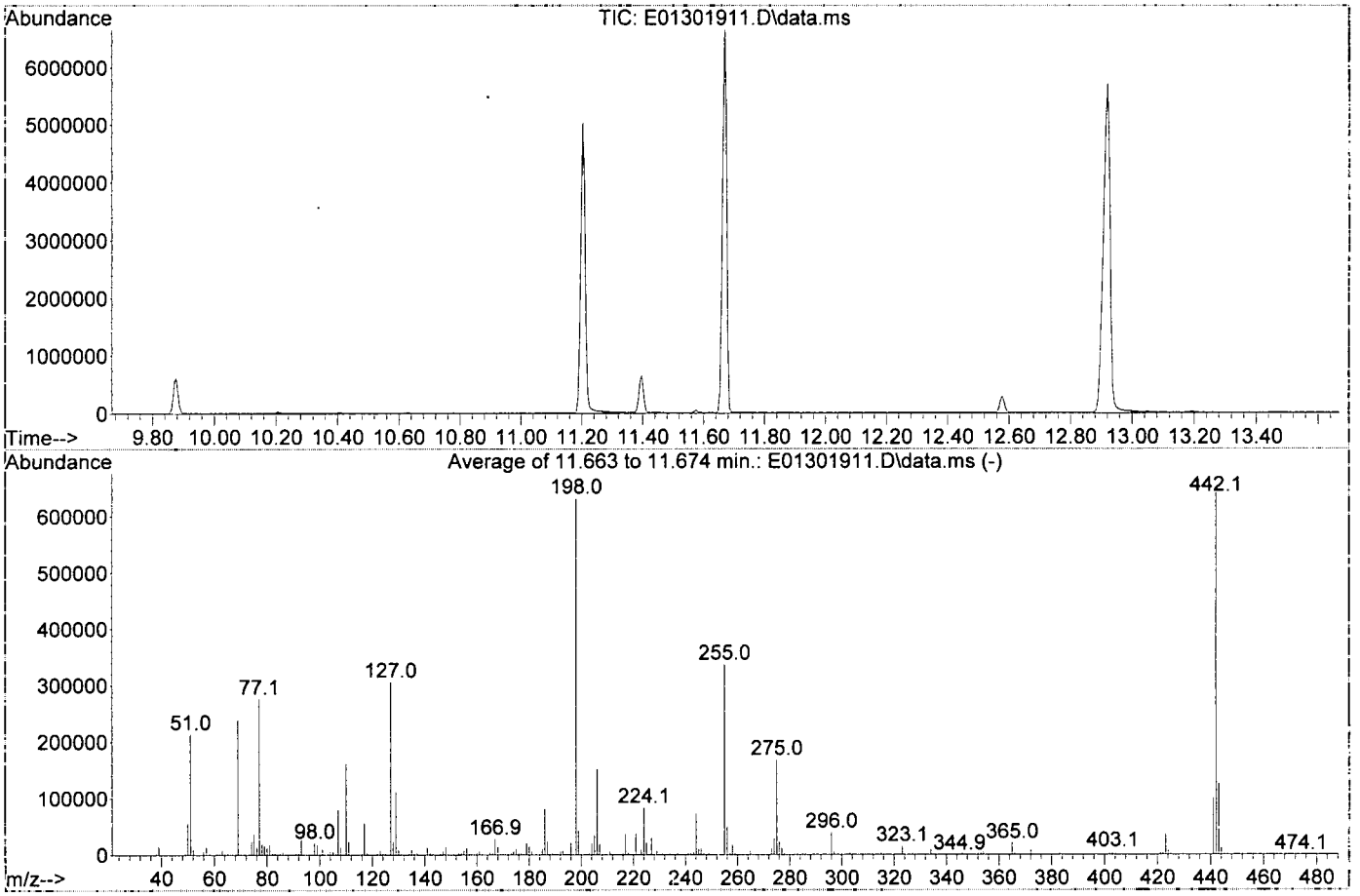
Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301911.D
Acq On : 30 Jan 2019 4:45 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN1
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

T-01

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

GL 1/31/19



AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	33.8	213705	PASS
68	69	0.00	2	1.1	2671	PASS
69	198	0.00	100	37.8	239097	PASS
70	69	0.00	2	0.5	1157	PASS
127	198	10	80	48.5	306325	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	632235	PASS
199	198	5	9	6.8	43123	PASS
275	198	10	60	26.6	168075	PASS
365	198	1	100	3.2	19964	PASS
441	442	0.01	24	15.5	100003	PASS
442	198	50	200	102.0	645035	PASS
443	442	15	24	19.6	126720	PASS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301911.D
Acq On : 30 Jan 2019 4:45 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN1
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

T-01

Quant Time: Jan 31 09:49:49 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5

1/31/19

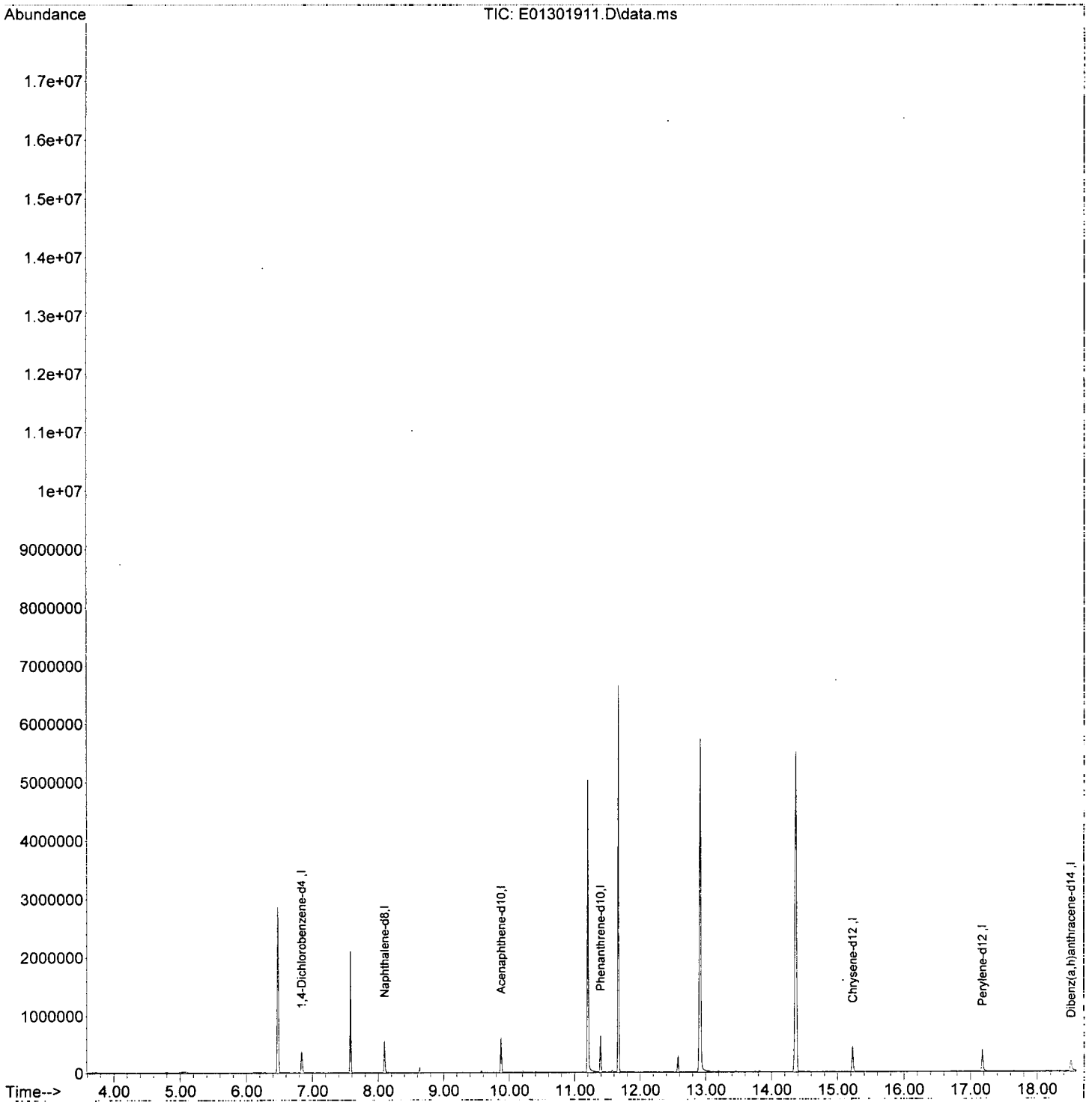
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4	6.834	150	126132	2.00	ug/mL	0.00
2) Naphthalene-d8	8.096	136	289939	2.00	ug/mL	0.00
3) Acenaphthene-d10	9.877	162	134988	2.00	ug/mL	0.00
5) Phenanthrene-d10	11.396	188	238791	2.00	ug/mL	0.00
11) Chrysene-d12	15.226	240	204323	2.00	ug/mL	0.00
12) Perylene-d12	17.178	264	172332	2.00	ug/mL	0.00
13) Dibenz(a,h)anthracene-...	18.504	292	113174	2.00	ug/mL	0.00
Target Compounds						Qvalue
4) Pentachlorophenol	11.203	266	581670	No CC lev		
6) DFTPP	11.674	442	720727	No CC lev		#
7) Benzidine	12.920	184	3259461	No CC lev		
8) 4,4-DDE	13.193	TIC	27535	No CC lev		
9) 4,4-DDD	13.749	TIC	14720	No CC lev		
10) 4,4-DDT	14.375	TIC	9373183	No CC lev		

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301911.D
Acq On : 30 Jan 2019 4:45 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN1
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jan 31 09:49:49 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jan 31 09:50:01 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	6.834	150	117666	2.00	ug/mL		0.00
2) Naphthalene-d8	8.096	136	274635	2.00	ug/mL		0.00
3) Acenaphthene-d10	9.877	162	127812	2.00	ug/mL		0.00
5) Phenanthrene-d10	11.396	188	221921	2.00	ug/mL		0.00
11) Chrysene-d12	15.226	240	182307	2.00	ug/mL		0.00
12) Perylene-d12	17.183	264	149703	2.00	ug/mL		0.00
13) Dibenz(a,h)anthracene-...	18.510	292	99850	2.00	ug/mL		0.00
Target Compounds							Qvalue
4) Pentachlorophenol	11.203	266	527569	No CC lev			
6) DFTPP	11.674	442	615356	No CC lev		#	
7) Benzidine	12.920	184	3031599	No CC lev			
8) 4,4-DDE	13.193	TIC	20624	No CC lev			
9) 4,4-DDD	13.755	TIC	11420	No CC lev			
10) 4,4-DDT	14.375	TIC	8660634	No CC lev			

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

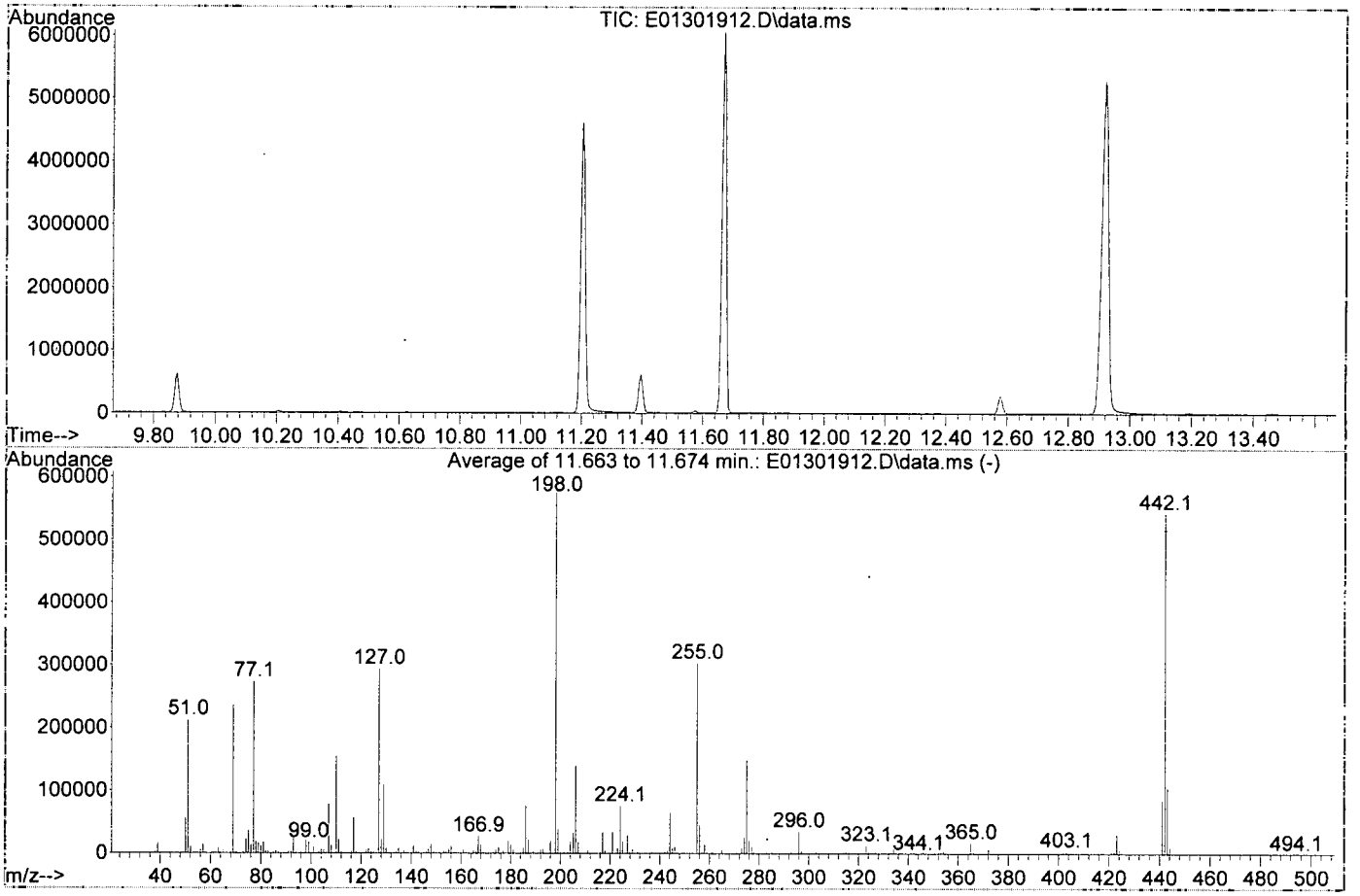
DFTPP

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Thu Jan 31 09:49:42 2019

1/31/19



AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

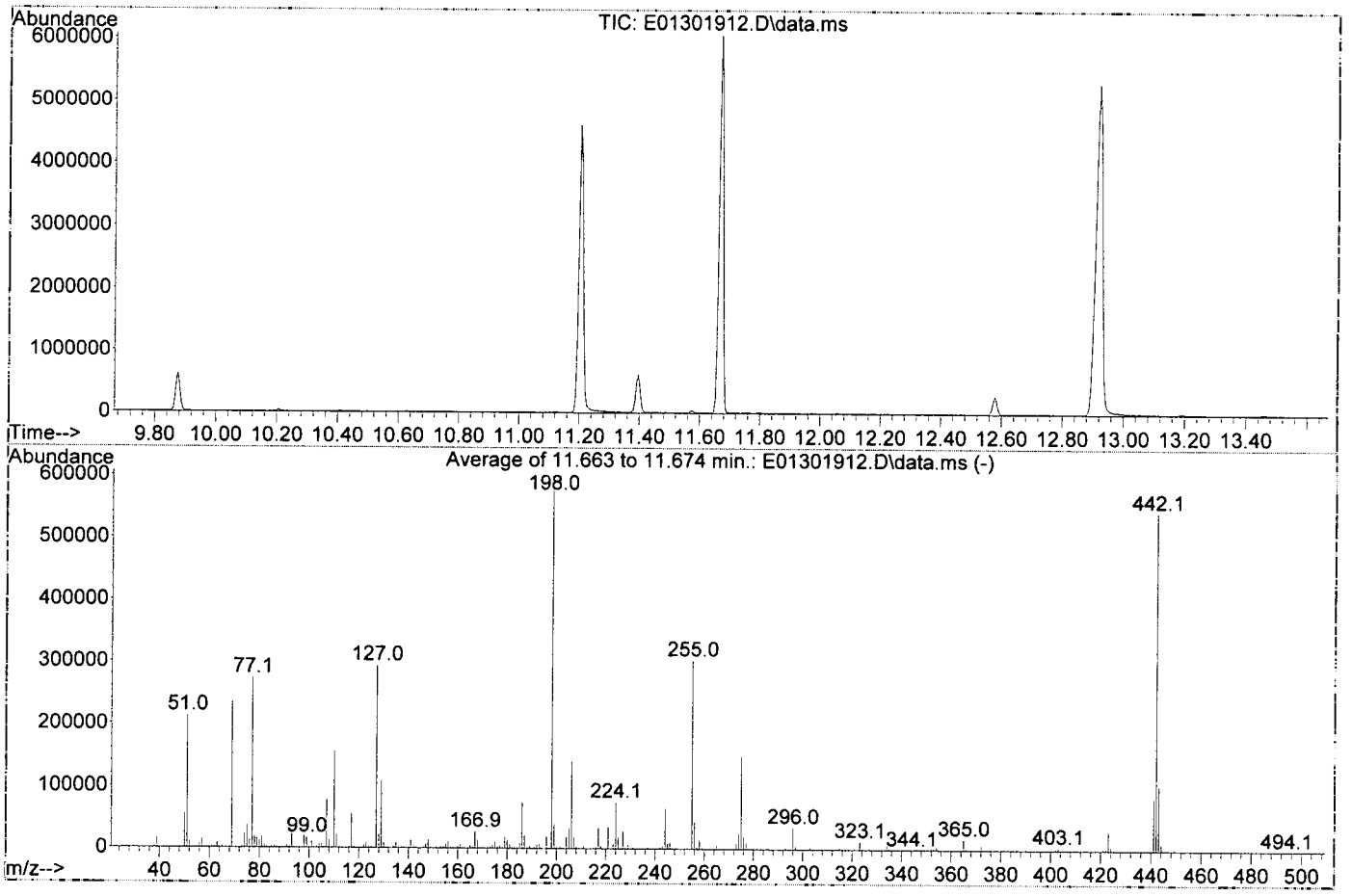
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	36.8	212856	PASS
68	69	0.00	2	1.2	2720	PASS
69	198	0.00	100	40.7	235823	PASS
70	69	0.00	2	0.5	1200	PASS
127	198	40	60	50.9	294293	PASS
197	198	0.00	1	0.0	0	PASS
198	198	100	100	100.0	578709	PASS
199	198	5	9	6.8	39504	PASS
275	198	10	30	25.8	149573	PASS
365	198	1	100	2.9	16879	PASS
441	443	0.01	100	80.3	84597	PASS
442	198	40	100	94.0	543808	PASS
443	442	17	23	19.4	105349	PASS

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\METHODS\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Tue Jan 29 16:12:28 2019

JK 1/31/19



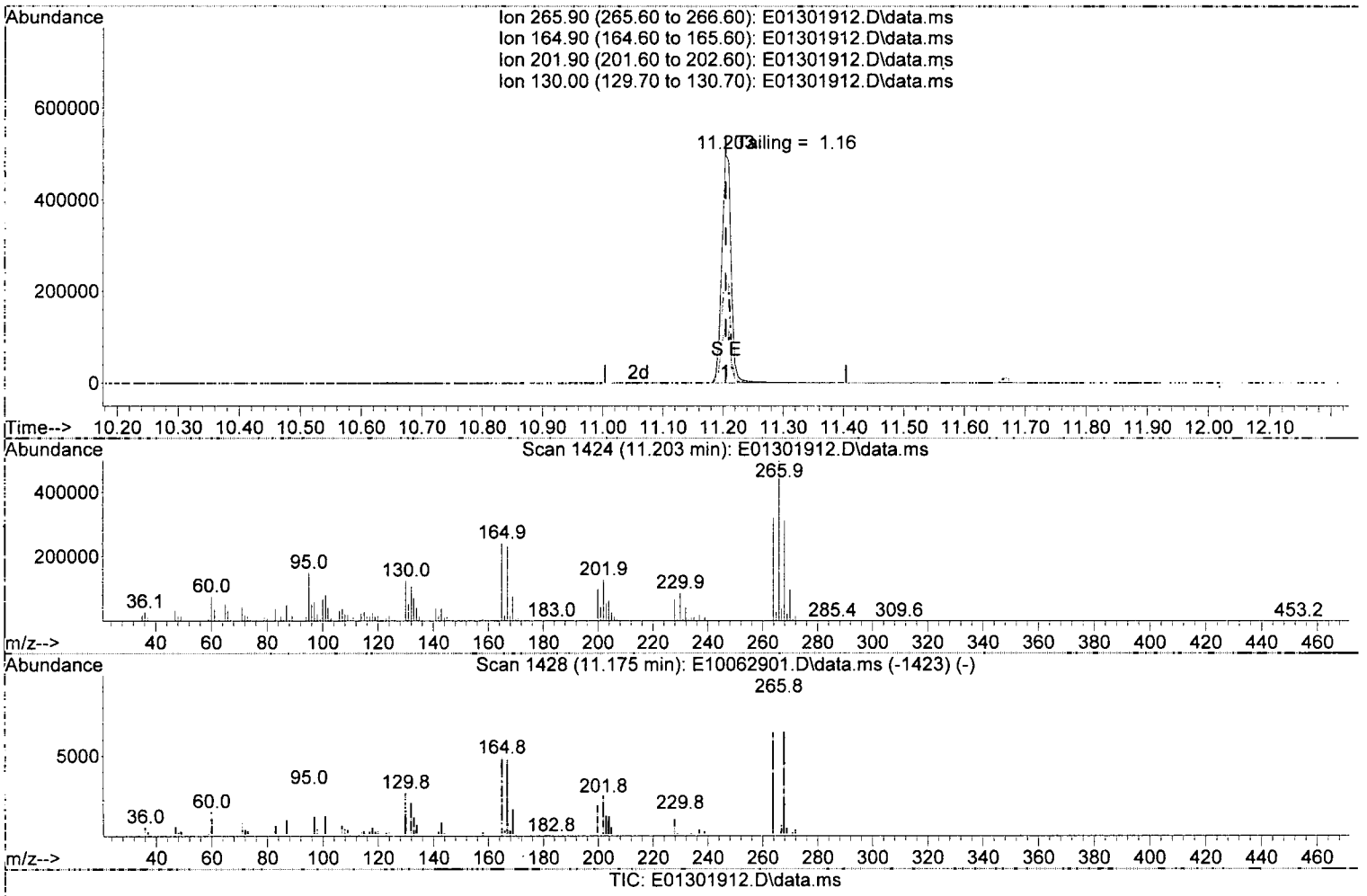
AutoFind: Scans 1510, 1511, 1512; Background Corrected with Scan 1505

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	36.8	212856	PASS
68	69	0.00	2	1.2	2720	PASS
69	198	0.00	100	40.7	235823	PASS
70	69	0.00	2	0.5	1200	PASS
127	198	10	80	50.9	294293	PASS
197	198	0.00	2	0.0	0	PASS
198	198	100	100	100.0	578709	PASS
199	198	5	9	6.8	39504	PASS
275	198	10	60	25.8	149573	PASS
365	198	1	100	2.9	16879	PASS
441	442	0.01	24	15.6	84597	PASS
442	198	50	200	94.0	543808	PASS
443	442	15	24	19.4	105349	PASS

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jan 31 09:50:01 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5



TIC: E01301912.D\data.ms

(4) Pentachlorophenol

11.203min (0.000) 0.00 ug/mL

response 527569

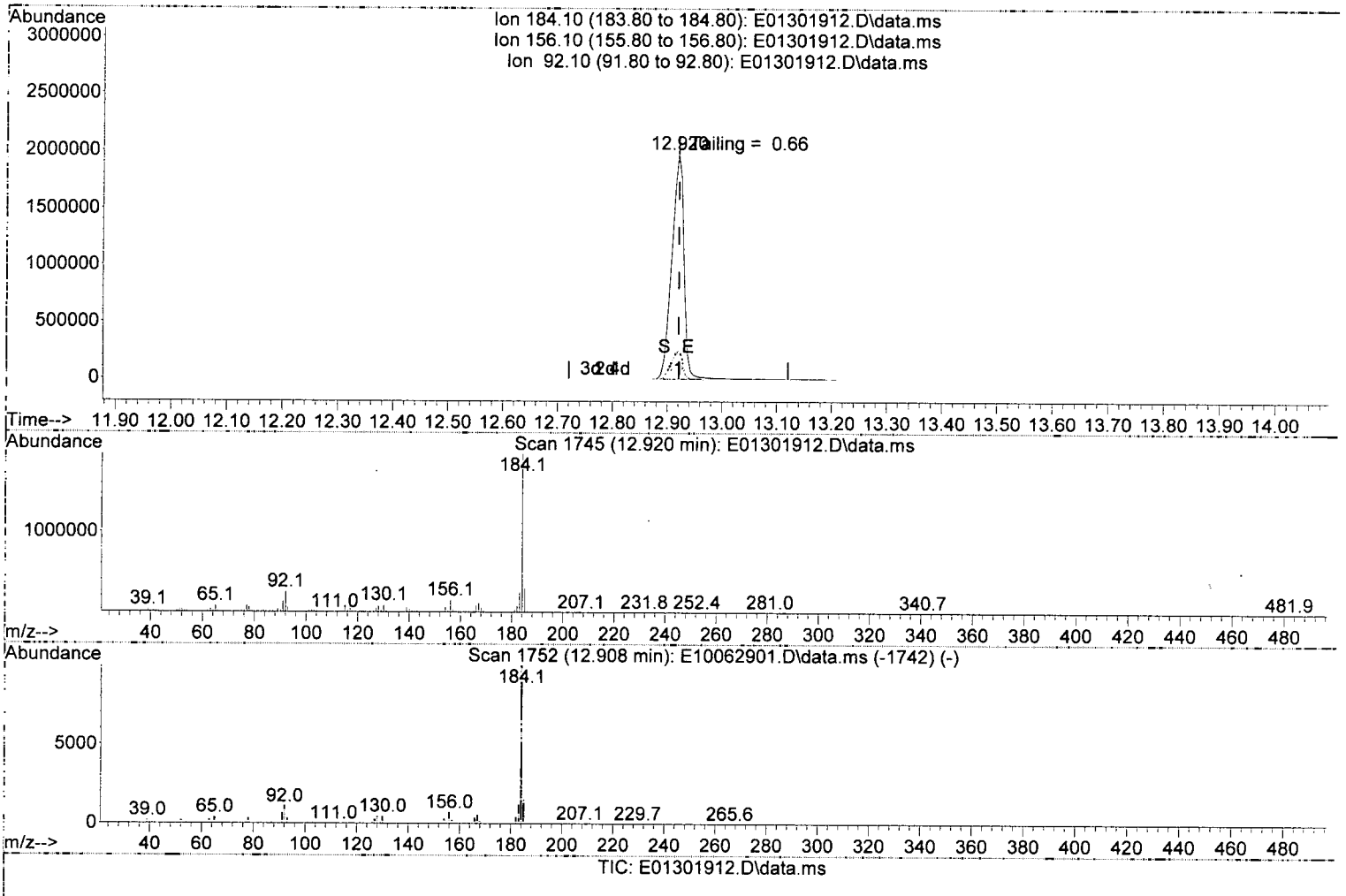
Ion	Exp%	Act%
265.90	100.00	100.00
164.90	50.80	48.40
201.90	25.10	25.64
130.00	27.20	24.92

JK 1/31/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jan 31 09:50:01 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5



(7) Benzidine

12.920min (0.000) 0.00 ug/mL

response 3031599

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.40	7.66
92.10	8.40	12.67
0.00	0.00	0.00

JK 1/31/19

DDT Breakdown Check (Validated 5/1/2013)

From:
9A30046-TUN2
SV-GCMS5

First Column Area Counts		Percent Breakdown	
DDE	20624		
DDD	11420		
DDT	8660634	0.37	PASS

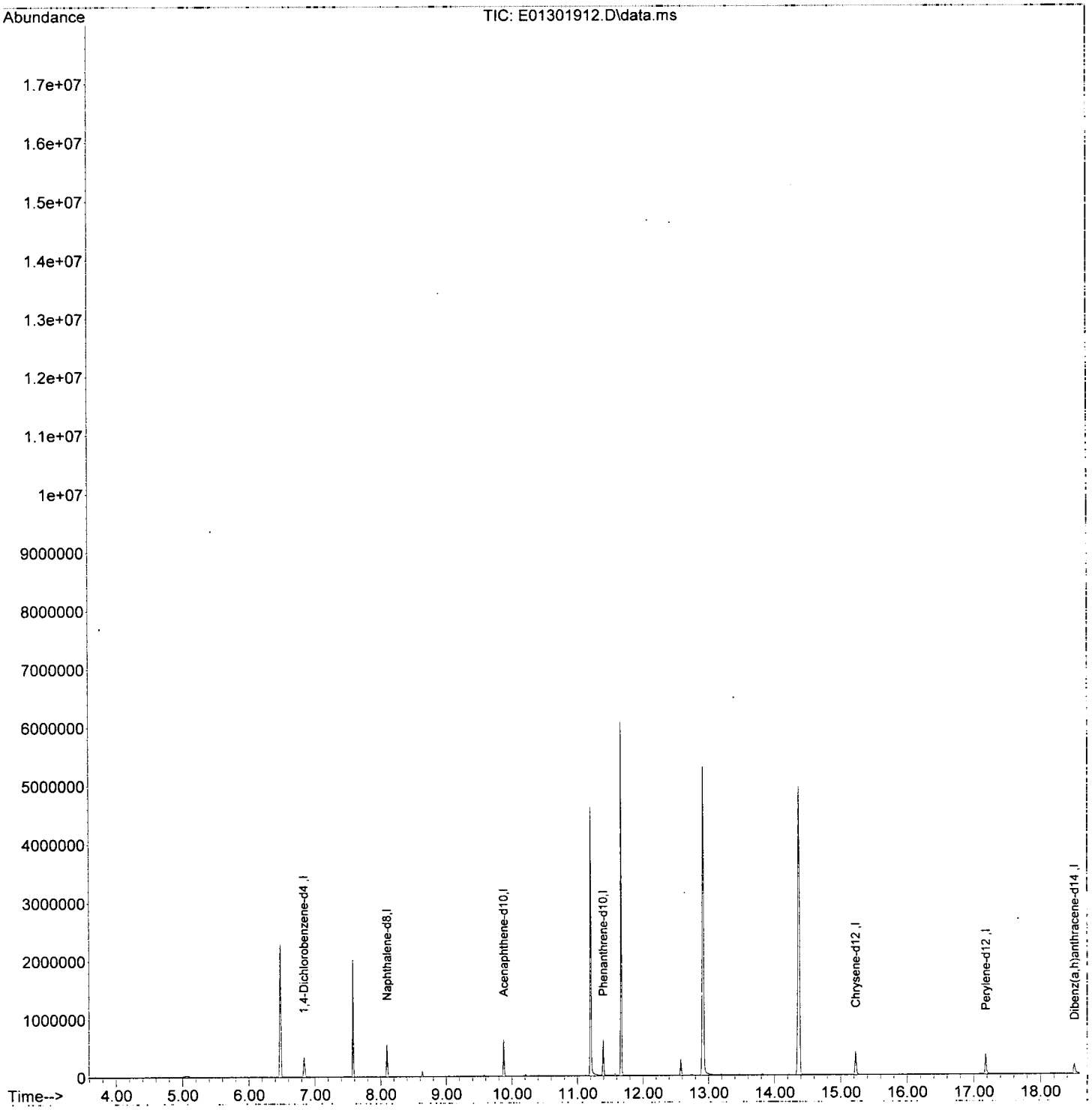
1/31/19

Breakdown must be less than 20% to accept sample data.

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301912.D
Acq On : 30 Jan 2019 5:18 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-TUN2
Misc : 1x, A19A180 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Jan 31 09:50:01 2019
Quant Method : C:\msdchem\1\METHODS\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Thu Jan 31 09:49:42 2019
Response via : Continuing Cal File:
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:40 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	268380	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1074503	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	493384	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	885116	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	713859	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	636345	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	470342	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)	6.478	99	192	0.91	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	53	0.28	ng/ml	0.00
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	4.398	74	54	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.484	94	156	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	7.088	45	69	N.D.		
16) N-Nitrosodi-n-propylamine	7.238	70	120	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.634	82	185	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	8.115	128	546	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:40 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

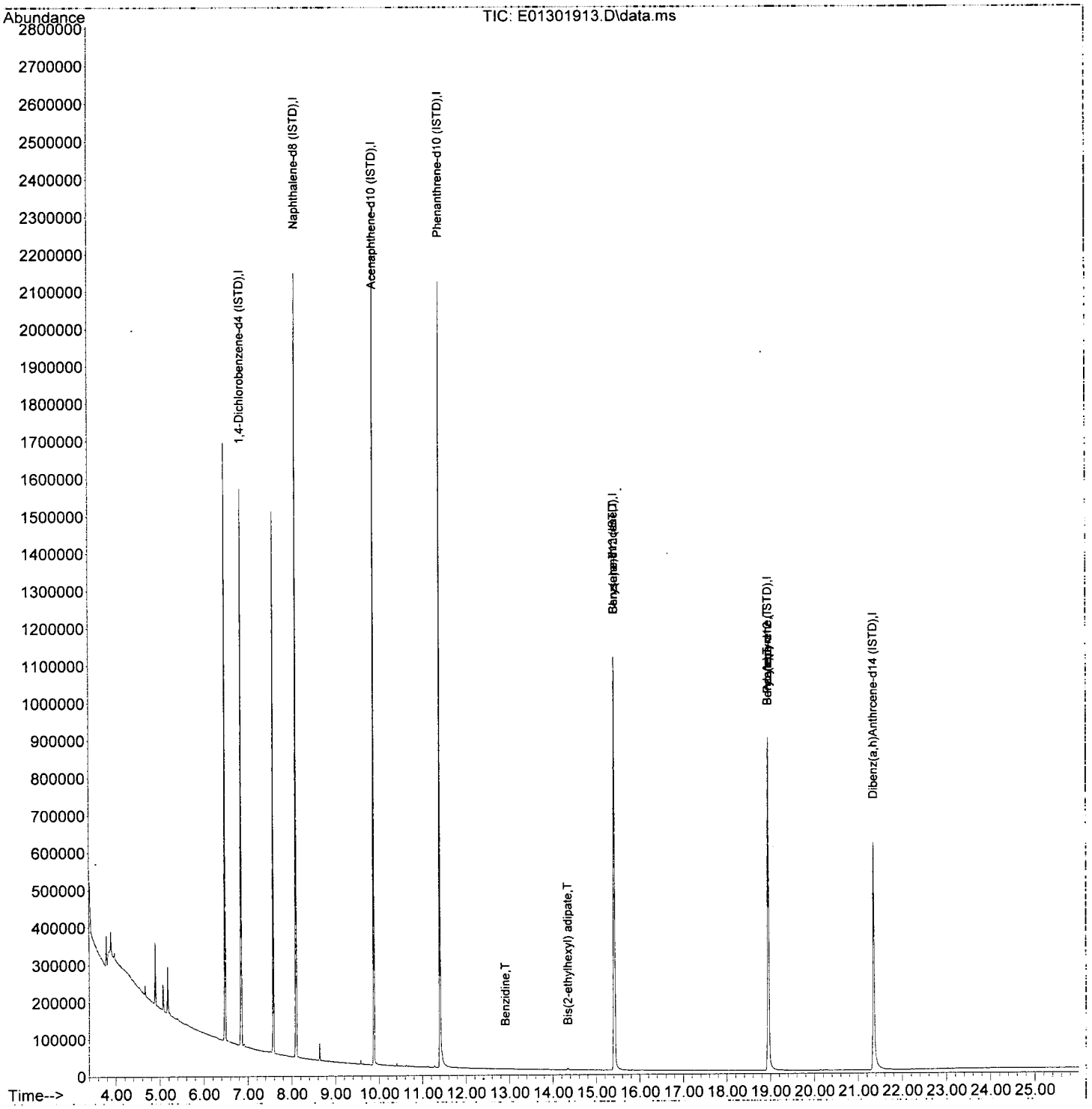
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.		
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	0.000		0	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	0.000		0	N.D.		
50) 3-Nitroaniline	0.000		0	N.D.		
51) Acenaphthene	9.885	153	92	N.D.		
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	10.051	165	53	N.D.		
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	0.000		0	N.D.		
59) 2,3,5-Trimethylnaphtha...	10.410	170	99	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)	0.000		0	N.D.		
71) Phenanthrene	11.421	178	193	N.D.		
72) Anthracene	11.421	178	193	N.D.		
73) Carbazole	0.000		0	N.D.		
74) Di-n-butyl phthalate	11.971	149	152	N.D.		
75) Fluoranthene	0.000		0	N.D.		
76) Benzidine	12.902	184	114	69.06	ng/ml	68
77) Pyrene	0.000		0	N.D.		
80) Butyl benzyl phthalate	0.000		0	N.D.		
81) Bis(2-ethylhexyl) adipate	14.341	129	1045	5.36	ng/ml	90
82) 3,3-Dichlorobenzidine	0.000		0	N.D.		
83) Benz(a)anthracene	15.416	228	1753	4.26	ng/ml	71
84) Chrysene	15.416	228	1715	4.40	ng/ml	69
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	18.946	252	2036	6.21	ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.		
93) Perylene	18.946	252	2036	5.59	ng/ml	72
95) Indeno(1,2,3-cd)pyrene	21.348	276	162	N.D.		
96) Dibenz(a,h)anthracene	21.342	278	95	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 : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:40 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Final Reqnant
1/31/19

Quant Time: Jan 31 12:00:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	268380	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1074503	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	493384	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	885116	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	713859	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	636345	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	470342	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)	6.478	99	192	0.86	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.372	82	53	0.26	ng/ml	0.00
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	4.398	74	54	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	6.484	94	156	N.D.		
7) Aniline	0.000		0	N.D.		
8) Bis(2-chloroethyl) ether	0.000		0	N.D.		
9) 2-Chlorophenol	0.000		0	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...	7.088	45	69	N.D.		
16) N-Nitrosodi-n-propylamine	7.238	70	120	N.D.		
17) 3+4-Methylphenol	0.000		0	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	0.000		0	N.D.		
22) Isophorone	7.634	82	185	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	8.115	128	546	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.		

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

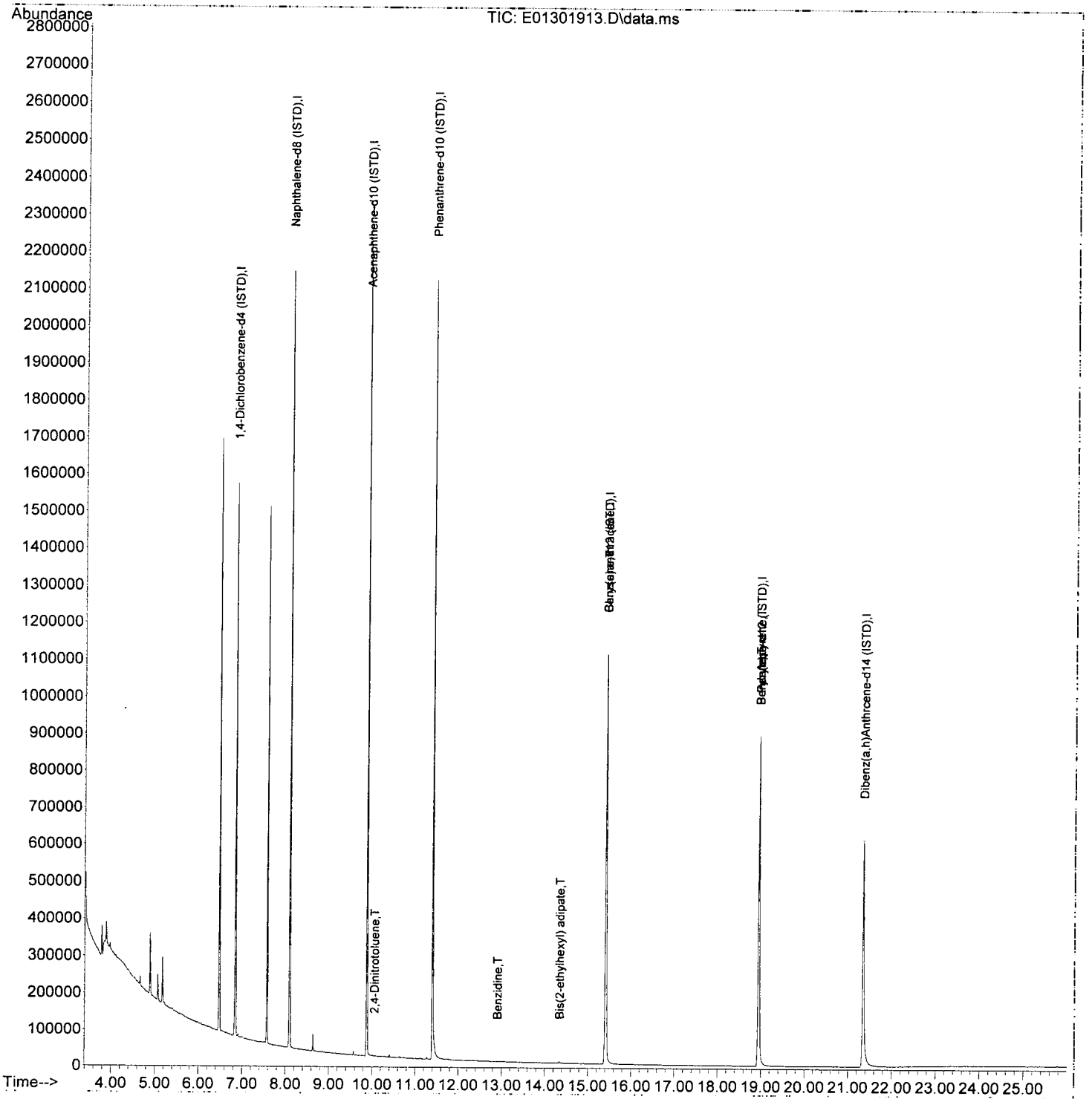
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	0.000		0	N.D.	
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.885	153	92	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.051	165	53	61.61 ng/ml#	15
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	0.000		0	N.D.	
59) 2,3,5-Trimethylnaphtha...	10.410	170	99	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)	0.000		0	N.D.	
71) Phenanthrene	11.421	178	193	N.D.	
72) Anthracene	11.421	178	193	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.971	149	152	N.D.	
75) Fluoranthene	0.000		0	N.D.	
76) Benzidine	12.902	184	114	39.29 ng/ml	68
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.341	129	1045	5.03 ng/ml	90
82) 3,3-Dichlorobenzidine	0.000		0	N.D.	
83) Benz(a)anthracene	15.416	228	1753	4.35 ng/ml	71
84) Chrysene	15.416	228	1715	4.47 ng/ml	69
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	18.946	252	2036	5.96 ng/ml#	1
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.946	252	2036	5.84 ng/ml	72
95) Indeno(1,2,3-cd)pyrene	21.348	276	162	N.D.	
96) Dibenz(a,h)anthracene	21.342	278	95	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 : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301913.D
Acq On : 30 Jan 2019 6:24 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JJK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.848	152	267680	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1055936	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	485404	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	914631	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	849263	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	770351	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	614628	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	2703	16.69	ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	3503	16.64	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	3003	15.92	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.180	172	7112	19.01	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.683	330	229	20.60	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	7570	19.70	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.403	74	2349	20.25	ng/ml#	17
3) Pyridine	4.473	79	2510	13.44	ng/ml#	1
6) Phenol	6.489	94	3623	16.07	ng/ml	97
7) Aniline	6.532	93	4076	14.74	ng/ml	98
8) Bis(2-chloroethyl) ether	6.580	93	3961	20.93	ng/ml	96
9) 2-Chlorophenol	6.650	128	2671	15.07	ng/ml	99
10) 1,3-Dichlorobenzene	6.799	146	3951	18.62	ng/ml	94
11) 1,4-Dichlorobenzene	6.864	146	3880	17.95	ng/ml	89
12) Benzyl alcohol	6.971	108	1088	35.15	ng/ml	94
13) 1,2-Dichlorobenzene	7.013	146	3694	18.13	ng/ml	95
14) 2-Methylphenol	7.067	107	2376	16.92	ng/ml	96
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	5888	22.91	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.222	70	2415	18.34	ng/ml	92
17) 3+4-Methylphenol	7.211	107	2797	15.39	ng/ml	96
18) Hexachloroethane	7.345	117	1366	18.01	ng/ml	90
20) Nitrobenzene	7.398	77	3065	16.34	ng/ml	99
22) Isophorone	7.628	82	5446	15.86	ng/ml	100
23) 2-Nitrophenol	7.714	139	775	8.41	ng/ml	88
24) 2,4-Dimethylphenol	7.735	122	2085	13.77	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.832	93	4242	19.32	ng/ml	97
26) Benzoic acid	7.848	105	69	841.66	ng/ml#	8
27) 2,4-Dichlorophenol	7.949	162	1557	11.67	ng/ml	84
28) 1,2,4-Trichlorobenzene	8.040	180	2751	17.58	ng/ml	99
29) Naphthalene	8.121	128	11917	20.68	ng/ml	98
30) 4-Chloroaniline	8.158	127	2975	14.05	ng/ml	95
31) Hexachlorobutadiene	8.244	225	1290	16.78	ng/ml	91
32) 4-Chloro-3-methylphenol	8.639	107	895	33.74	ng/ml#	1
33) 2-Methylnaphthalene	8.816	142	6941	18.47	ng/ml	97
34) 1-Methylnaphthalene	8.912	142	6831	18.66	ng/ml	94
36) Hexachlorocyclopentadiene	8.982	237	899	14.29	ng/ml	92
37) 2,4,6-Trichlorophenol	9.094	196	754	36.37	ng/ml	95
38) 2,4,5-Trichlorophenol	9.137	196	702	20.25	ng/ml	93
39) 1,1'-Biphenyl	9.281	154	8419	19.66	ng/ml	97
41) 2-Chloronaphthalene	9.308	162	6075	19.81	ng/ml	97
42) 2-Nitroaniline	9.404	138	663	6.26	ng/ml	90

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

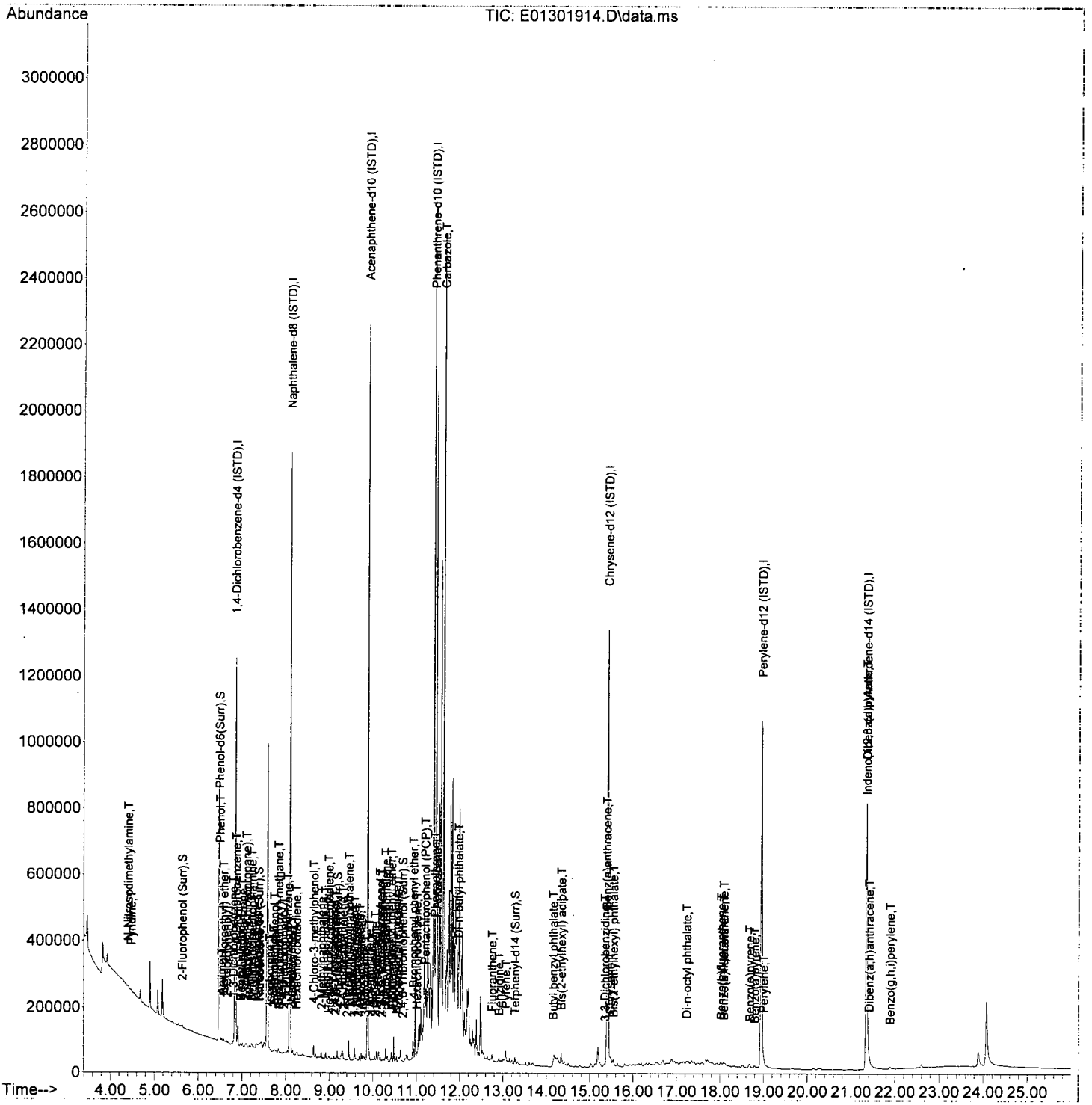
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.442	156	5544	18.54	ng/ml	98
44) 1,4-Dinitrobenzene	9.527	168	197	4.14	ng/ml	99
45) Dimethyl phthalate	9.575	163	5420	15.96	ng/ml	97
46) 1,3-Dinitrobenzene	9.613	168	245	4.61	ng/ml	59
47) 2,6-Dinitrotoluene	9.640	165	434	5.63	ng/ml	84
48) 1,2-Dinitrobenzene	9.698	168	203	6.04	ng/ml#	1
49) Acenaphthylene	9.730	152	7974	16.44	ng/ml	95
50) 3-Nitroaniline	9.821	138	572	6.50	ng/ml	77
51) Acenaphthene	9.912	153	6866	20.47	ng/ml	98
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.987	139	335	74.70	ng/ml#	26
54) 2,4-Dinitrotoluene	10.051	165	575	5.88	ng/ml	94
55) Dibenzofuran	10.083	168	8455	19.23	ng/ml#	55
56) 2,3,5,6-Tetrachlorophenol	10.164	232	340	43.86	ng/ml	86
57) 2,3,4,6-Tetrachlorophenol	10.212	232	529	36.13	ng/ml	85
58) Diethyl phthalate	10.292	149	5519	16.26	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.292	170	5065	18.55	ng/ml	99
60) Fluorene	10.436	166	6383	18.15	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.426	204	3010	19.74	ng/ml	91
62) 4-Nitroaniline	10.436	138	713	7.90	ng/ml	92
63) 4,6-Dinitro-2-methylph...	0.000		0	N.D.		
65) N-Nitrosodiphenylamine	10.538	169	4930	16.70	ng/ml	91
66) Azobenzene (1,2-DPH)	10.586	77	6350	17.79	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.929	248	1566	19.85	ng/ml	93
69) Hexachlorobenzene	11.009	284	1571	19.29	ng/ml	96
70) Pentachlorophenol (PCP)	11.201	266	315	75.67	ng/ml	79
71) Phenanthrene	11.421	178	10388	19.59	ng/ml	94
72) Anthracene	11.474	178	10748	20.97	ng/ml	92
73) Carbazole	11.629	167	11056	24.57	ng/ml	70
74) Di-n-butyl phthalate	11.972	149	15373	27.84	ng/ml	86
75) Fluoranthene	12.742	202	10781	21.15	ng/ml	92
76) Benzidine	12.902	184	1323	73.45	ng/ml	88
77) Pyrene	13.057	202	10777	20.51	ng/ml	98
80) Butyl benzyl phthalate	14.154	149	3108	38.84	ng/ml	84
81) Bis(2-ethylhexyl) adipate	14.341	129	9073	39.11	ng/ml	93
82) 3,3-Dichlorobenzidine	15.347	252	2805	47.65	ng/ml	95
83) Benz(a)anthracene	15.389	228	10870	22.19	ng/ml	98
84) Chrysene	15.470	228	9138	19.72	ng/ml	97
85) Bis(2-ethylhexyl) phth...	15.544	149	3944	10.93	ng/ml	98
87) Di-n-octyl phthalate	17.235	149	3881	76.75	ng/ml#	14
88) Benzo(b)fluoranthene	18.021	252	6730	25.15	ng/ml	98
89) Benzo(k)fluoranthene	18.085	252	7026	25.66	ng/ml	95
90) Benzo(b+k)fluoranthene	18.085	252	15677	52.15	ng/ml	95
91) Benzo(e)pyrene	18.679	252	7648	19.26	ng/ml	98
92) Benzo(a)pyrene	18.796	252	5806	26.47	ng/ml	96
93) Perylene	19.000	252	7762	17.60	ng/ml	97
95) Indeno(1,2,3-cd)pyrene	21.342	276	6544	17.34	ng/ml#	24
96) Dibenz(a,h)anthracene	21.407	278	5352	14.83	ng/ml	86
97) Benzo(g,h,i)perylene	21.883	276	5584	14.69	ng/ml	92

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301914.D
Acq On : 30 Jan 2019 7:00 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL1
Misc : 1x, A18L327@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:45 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	281181	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1068309	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	468864	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	786274	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	694365	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	613296	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	475223	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	7768	45.67	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	10982	49.66	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	7789	39.30	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	18089	50.05	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	770	43.72	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	16079	51.18	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.408	74	5969	48.98	ng/ml	84
3) Pyridine	4.462	79	9139	46.59	ng/ml#	72
6) Phenol	6.489	94	11772	49.71	ng/ml	94
7) Aniline	6.532	93	15128	52.07	ng/ml	96
8) Bis(2-chloroethyl) ether	6.580	93	9806	49.33	ng/ml	96
9) 2-Chlorophenol	6.650	128	8358	44.89	ng/ml	96
10) 1,3-Dichlorobenzene	6.799	146	10651	47.79	ng/ml	94
11) 1,4-Dichlorobenzene	6.864	146	10515	46.31	ng/ml	97
12) Benzyl alcohol	6.965	108	4308	63.18	ng/ml	98
13) 1,2-Dichlorobenzene	7.013	146	10083	47.23	ng/ml	98
14) 2-Methylphenol	7.067	107	6847	46.42	ng/ml	93
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	16784	62.17	ng/ml	96
16) N-Nitrosodi-n-propylamine	7.222	70	6849	49.51	ng/ml	96
17) 3+4-Methylphenol	7.211	107	8837	46.28	ng/ml	95
18) Hexachloroethane	7.345	117	3855	48.38	ng/ml	86
20) Nitrobenzene	7.398	77	8550	43.39	ng/ml	99
22) Isophorone	7.628	82	16770	48.27	ng/ml	97
23) 2-Nitrophenol	7.714	139	2288	24.55	ng/ml	96
24) 2,4-Dimethylphenol	7.735	122	7337	47.89	ng/ml	93
25) Bis(2-chloroethoxy) me...	7.832	93	11626	52.34	ng/ml	98
26) Benzoic acid	7.816	105	56	841.51	ng/ml#	55
27) 2,4-Dichlorophenol	7.949	162	4758	35.24	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.035	180	7910	49.96	ng/ml	93
29) Naphthalene	8.120	128	30779	52.80	ng/ml	99
30) 4-Chloroaniline	8.163	127	8890	41.48	ng/ml	95
31) Hexachlorobutadiene	8.243	225	3731	47.97	ng/ml	95
32) 4-Chloro-3-methylphenol	8.639	107	3536	52.52	ng/ml#	1
33) 2-Methylnaphthalene	8.816	142	18189	47.83	ng/ml	96
34) 1-Methylnaphthalene	8.917	142	17571	47.44	ng/ml	98
36) Hexachlorocyclopentadiene	8.982	237	2439	40.14	ng/ml	96
37) 2,4,6-Trichlorophenol	9.094	196	2135	53.91	ng/ml	97
38) 2,4,5-Trichlorophenol	~~9.131~~	~~196~~	~~2141~~	~~40.01~~	~~ng/ml~~	89
39) 1,1'-Biphenyl	9.281	154	21089	50.98	ng/ml	98
41) 2-Chloronaphthalene	9.308	162	14859	50.16	ng/ml	99
42) 2-Nitroaniline	9.404	138	2037	19.91	ng/ml	89

See MS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

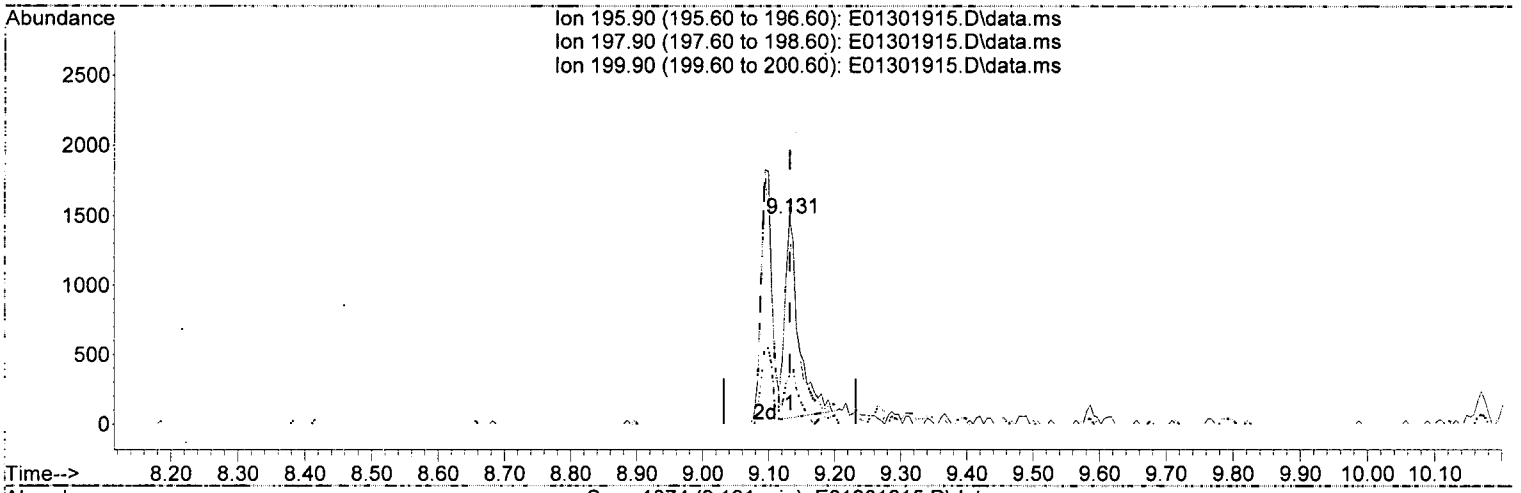
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.447	156	14256	49.36	ng/ml	98
44)	1,4-Dinitrobenzene	9.527	168	523	11.39	ng/ml#	65
45)	Dimethyl phthalate	9.575	163	13040	39.75	ng/ml	97
46)	1,3-Dinitrobenzene	9.613	168	748	14.56	ng/ml	71
47)	2,6-Dinitrotoluene	9.639	165	1439	19.33	ng/ml	88
48)	1,2-Dinitrobenzene	9.698	168	546	16.81	ng/ml#	18
49)	Acenaphthylene	9.736	152	22412	47.82	ng/ml	99
50)	3-Nitroaniline	9.816	138	1785	21.00	ng/ml	83
51)	Acenaphthene	9.912	153	15975	49.32	ng/ml	97
52)	2,4-Dinitrophenol	0.000		0	N.D.		
53)	4-Nitrophenol	9.976	139	1002	85.58	ng/ml#	76
54)	2,4-Dinitrotoluene	10.057	165	1435	15.18	ng/ml	96
55)	Dibenzofuran	10.083	168	19948	46.96	ng/ml#	78
56)	2,3,5,6-Tetrachlorophenol	10.169	232	1011	55.13	ng/ml	85
57)	2,3,4,6-Tetrachlorophenol	~~10.212~~	~~232~~	~~1470~~	~~50.67~~	~~ng/ml~~	80 see MS
58)	Diethyl phthalate	10.297	149	13590	41.44	ng/ml	95
59)	2,3,5-Trimethylnaphtha...	10.292	170	12539	47.54	ng/ml	93
60)	Fluorene	10.436	166	15560	45.81	ng/ml	99
61)	4-Chlorophenyl phenyl ...	10.426	204	6698	45.47	ng/ml	88
62)	4-Nitroaniline	10.436	138	2087	23.93	ng/ml	87
63)	4,6-Dinitro-2-methylph...	10.479	198	74	77.83	ng/ml#	1
65)	N-Nitrosodiphenylamine	10.543	169	11920	46.96	ng/ml	98
66)	Azobenzene (1,2-DPH)	10.586	77	16055	52.33	ng/ml	98
68)	4-Bromophenyl phenyl e...	10.928	248	3436	50.67	ng/ml	93
69)	Hexachlorobenzene	11.009	284	3548	50.68	ng/ml	99
70)	Pentachlorophenol (PCP)	11.207	266	571	83.26	ng/ml	91
71)	Phenanthrene	11.421	178	22253	48.83	ng/ml	99
72)	Anthracene	11.474	178	23381	53.07	ng/ml	97
73)	Carbazole	11.629	167	21647	55.95	ng/ml	93
74)	Di-n-butyl phthalate	11.971	149	26968	56.81	ng/ml	96
75)	Fluoranthene	12.747	202	22810	52.04	ng/ml	99
76)	Benzidine	12.907	184	6453	95.98	ng/ml	90
77)	Pyrene	13.057	202	23055	51.04	ng/ml	97
80)	Butyl benzyl phthalate	14.154	149	7172	61.13	ng/ml	98
81)	Bis(2-ethylhexyl) adipate	14.341	129	11698	61.67	ng/ml	97
82)	3,3-Dichlorobenzidine	15.346	252	8063	100.49	ng/ml	96
83)	Benz(a)anthracene	15.389	228	20129	50.25	ng/ml	95
84)	Chrysene	15.464	228	18408	48.59	ng/ml	95
85)	Bis(2-ethylhexyl) phth...	15.544	149	8608	29.16	ng/ml	99
87)	Di-n-octyl phthalate	17.235	149	9748	92.86	ng/ml	83
88)	Benzo(b)fluoranthene	18.015	252	14286	52.97	ng/ml	98
89)	Benzo(k)fluoranthene	18.085	252	14559	52.66	ng/ml	97
90)	Benzo(b+k)fluoranthene	18.015	252	31983	108.94	ng/ml	98
91)	Benzo(e)pyrene	18.673	252	15484	48.98	ng/ml	99
92)	Benzo(a)pyrene	18.802	252	12367	52.44	ng/ml	97
93)	Perylene	19.005	252	16978	48.35	ng/ml	98
95)	Indeno(1,2,3-cd)pyrene	21.342	276	12358	42.35	ng/ml	80
96)	Dibenz(a,h)anthracene	21.412	278	11253	40.33	ng/ml	93
97)	Benzo(g,h,i)perylene	21.882	276	12123	41.24	ng/ml	87

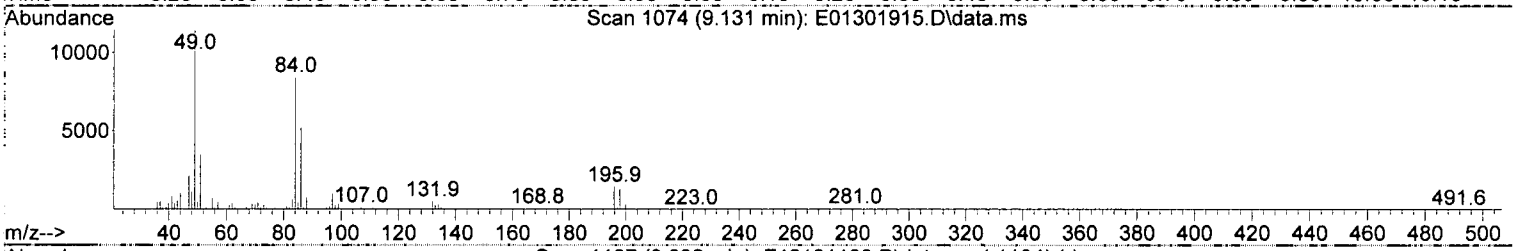
(#) = qualifier out of range (m) = manual integration (+) = signals summed

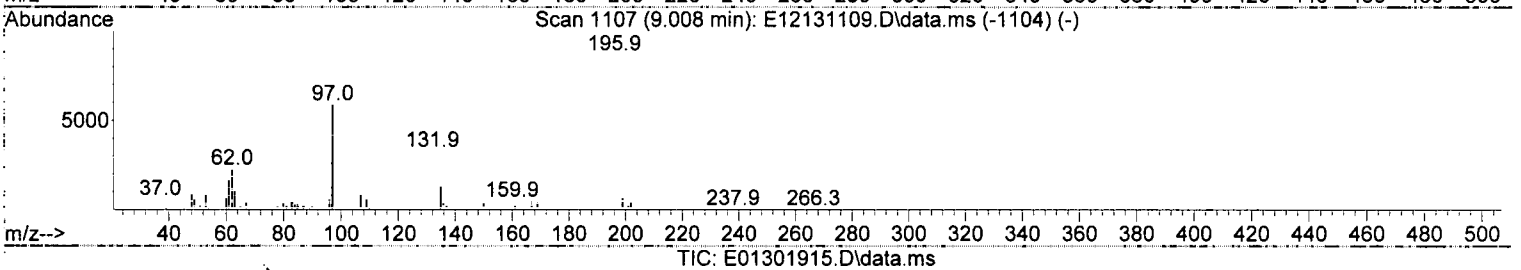
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301915.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.131min (-0.000) 40.01 ng/ml

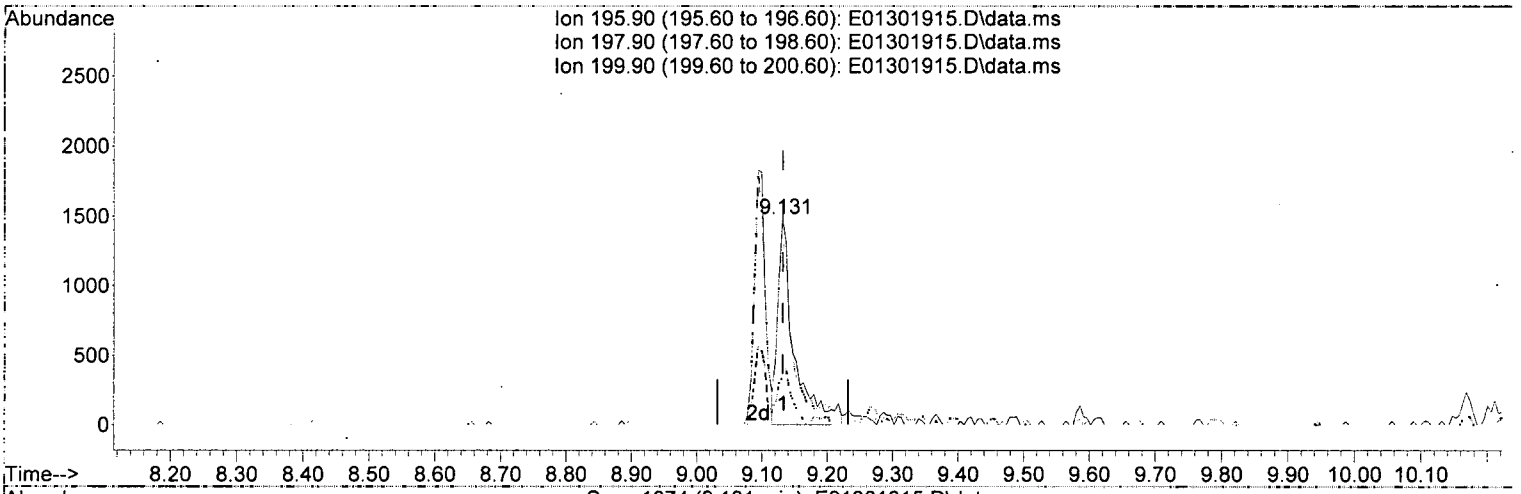
response 2141

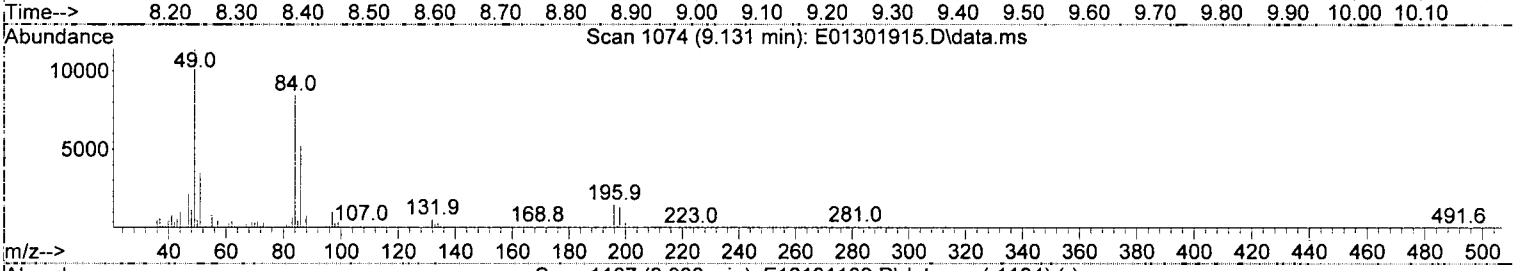
Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	87.77
199.90	32.40	23.38
0.00	0.00	0.00

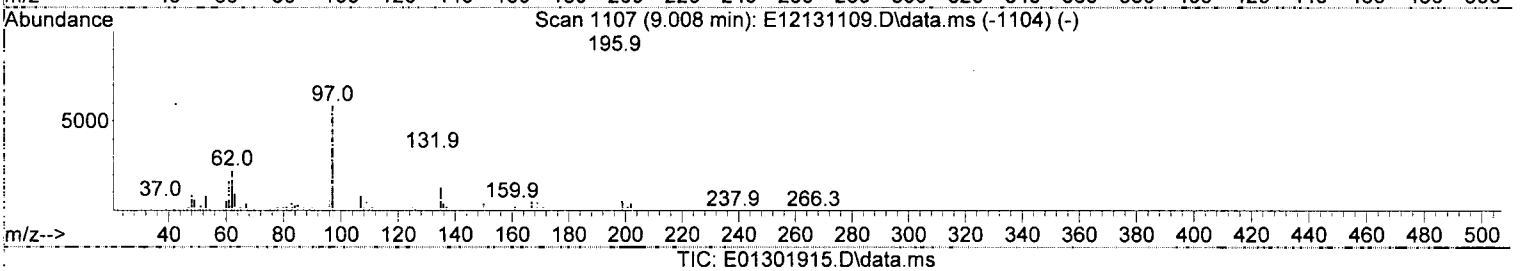
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301915.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.131min (-0.000) 46.32 ng/ml m

response 2609

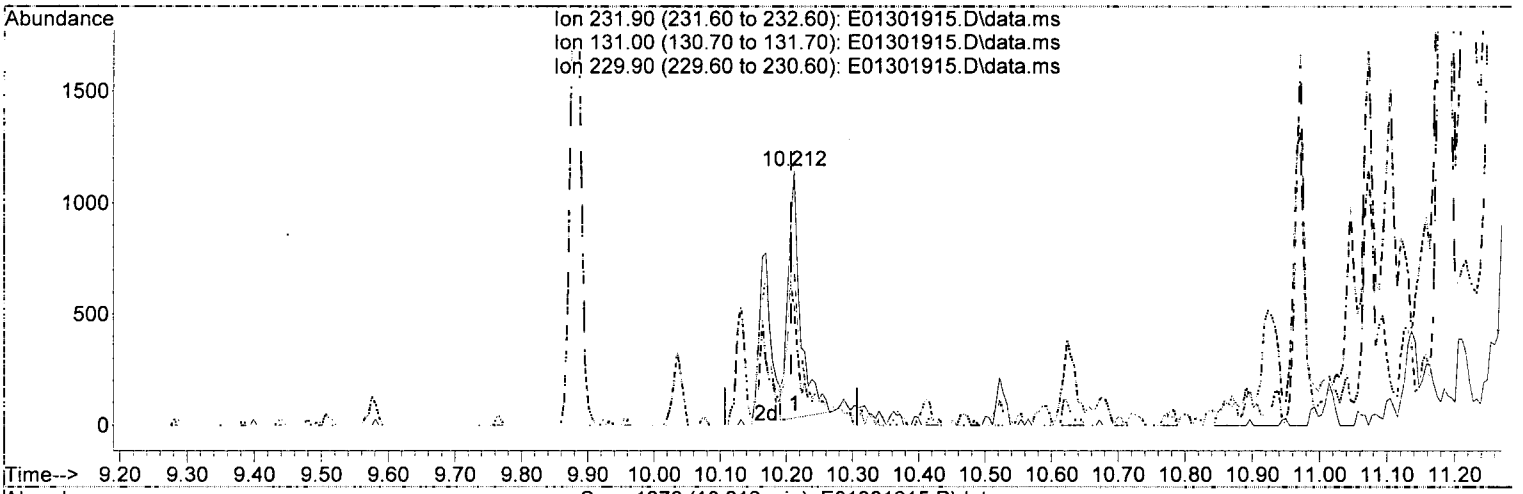
Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	87.77
199.90	32.40	23.38
0.00	0.00	0.00

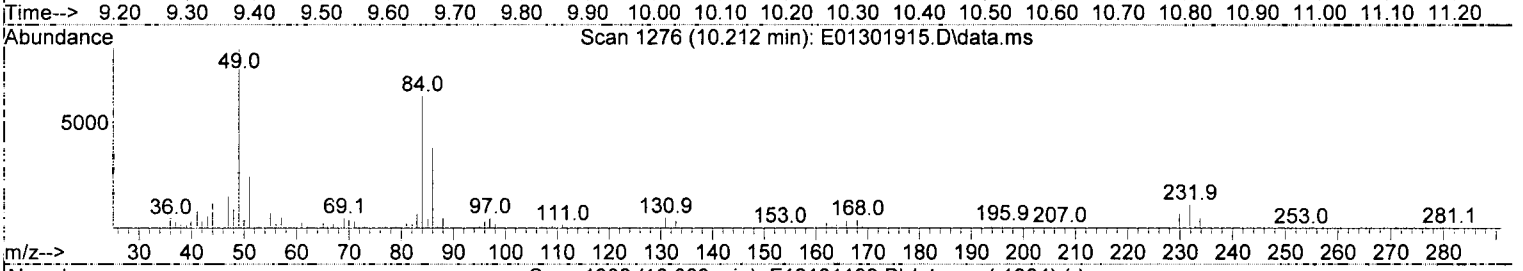
JK 1/31/19

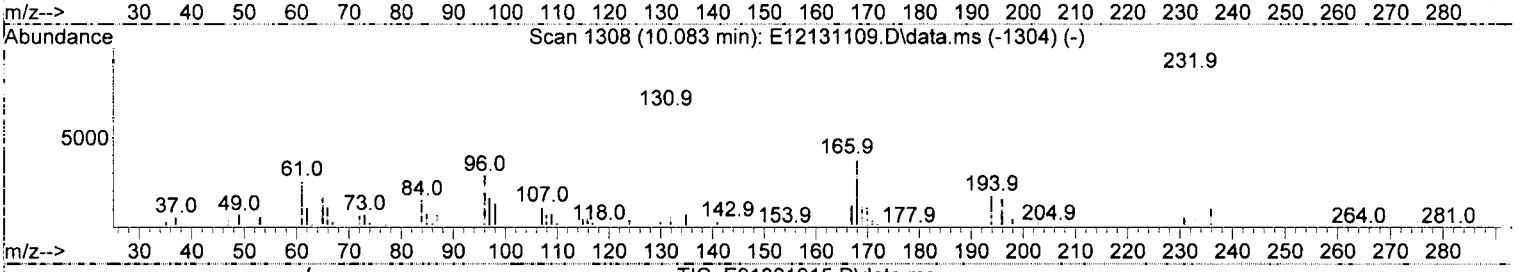
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301915.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.212min (+ 0.005) 50.67 ng/ml

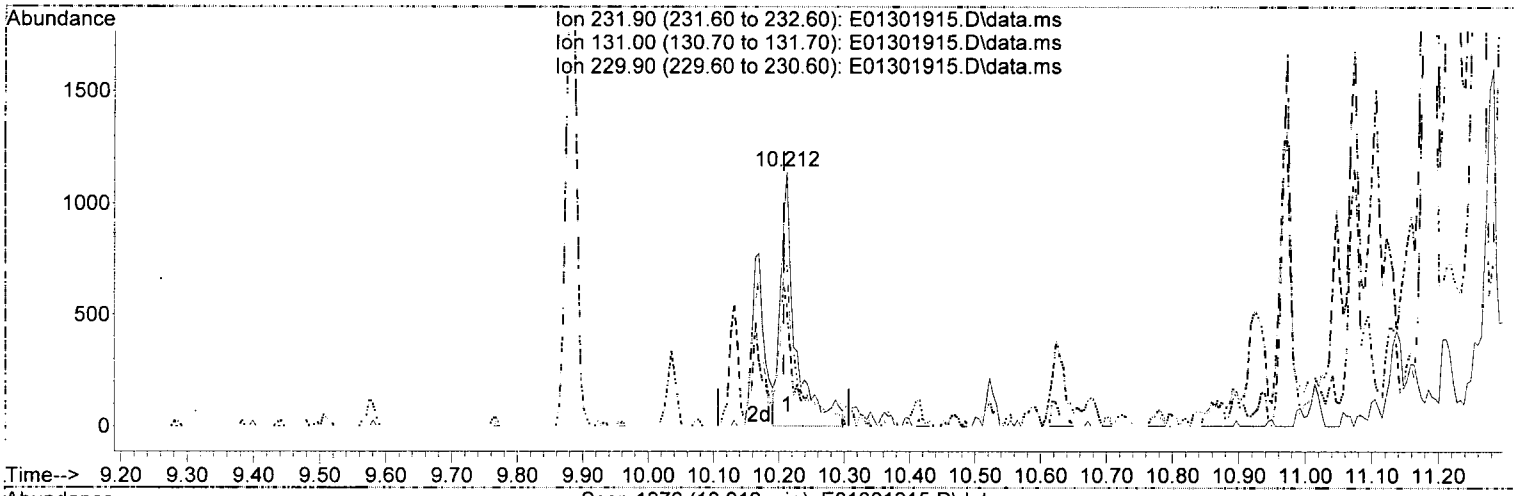
response 1470

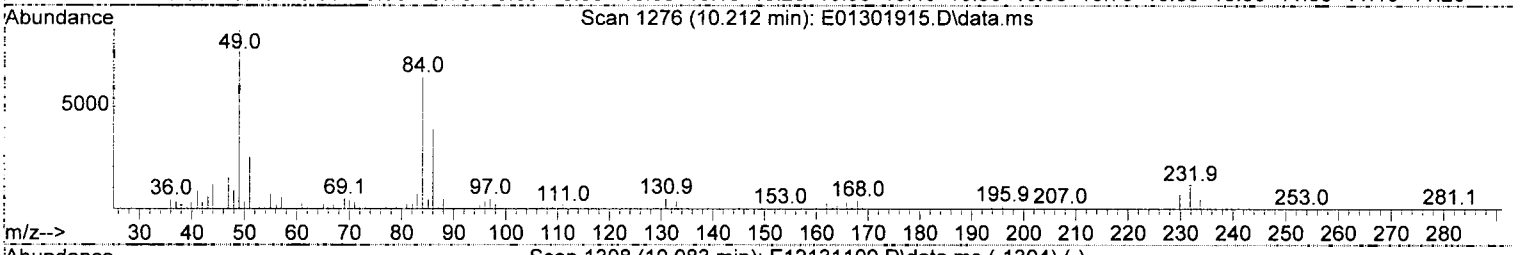
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	61.50	45.49
229.90	79.80	62.82
0.00	0.00	0.00

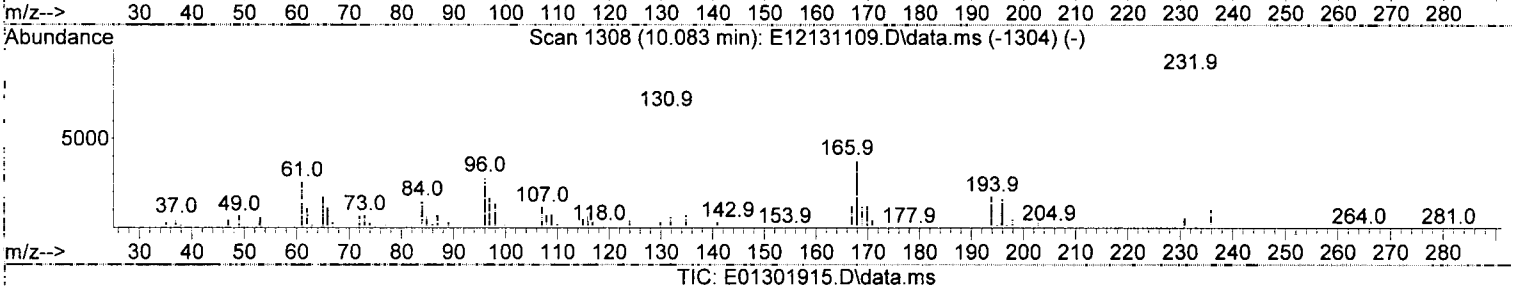
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301915.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.212min (+ 0.005) 55.86 ng/ml m

response 1812

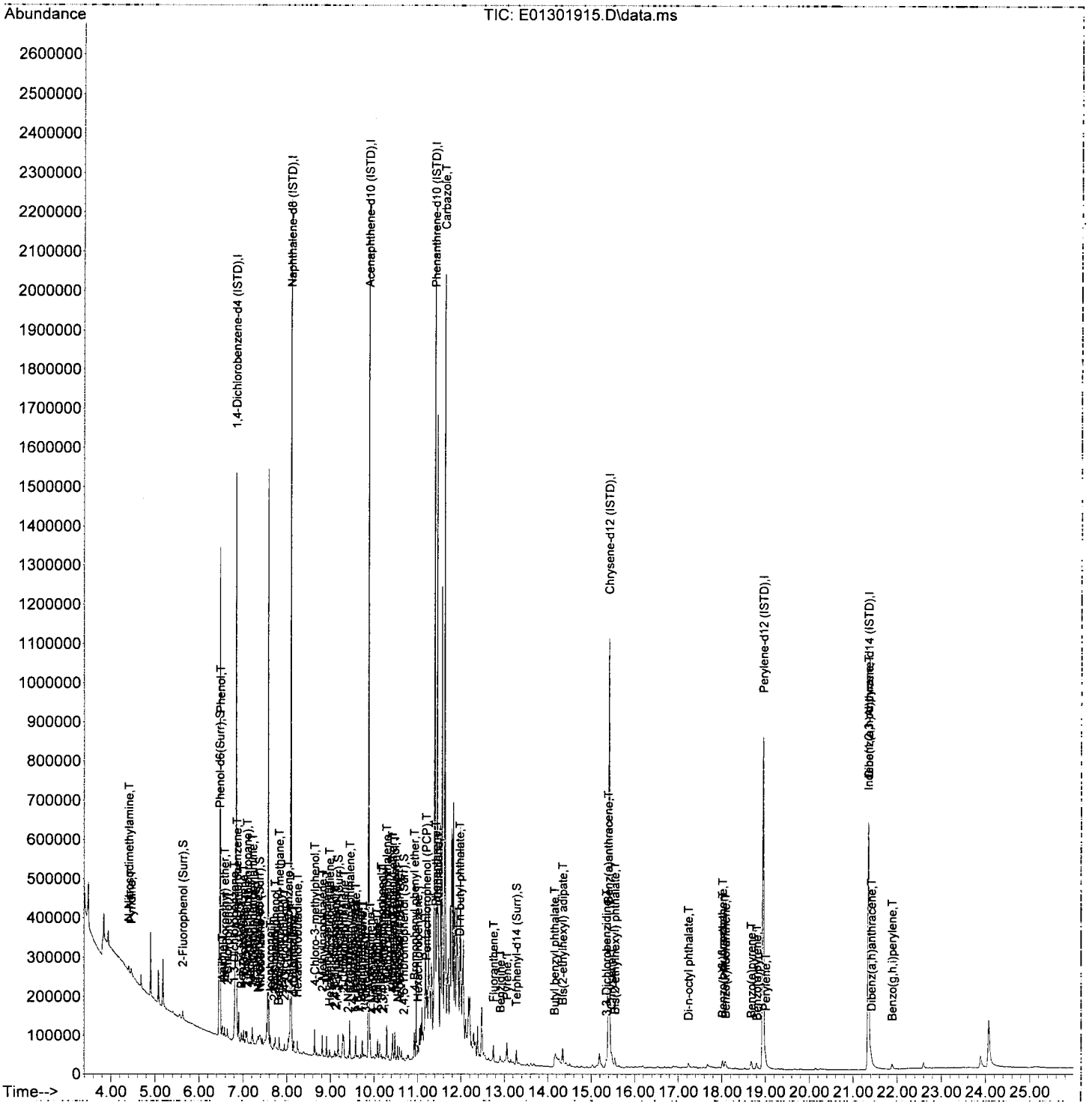
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	61.50	45.49
229.90	79.80	62.82
0.00	0.00	0.00

1/31/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301915.D
Acq On : 30 Jan 2019 7:37 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL2
Misc : 1x, A18L328@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:50 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	274393	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1090991	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	474233	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	790595	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.410	240	690491	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	611891	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.347	292	467911	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	16374	98.64	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	22782	105.57	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	17308	89.48	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	36884	100.90	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	2028	93.89	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	32265	103.27	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.403	74	12079	101.56	ng/ml	96
3) Pyridine	4.451	79	19576	102.26	ng/ml	85
6) Phenol	6.484	94	24600	106.45	ng/ml	93
7) Aniline	6.532	93	30756	108.47	ng/ml	99
8) Bis(2-chloroethyl) ether	6.580	93	18886	97.36	ng/ml	97
9) 2-Chlorophenol	6.649	128	17282	95.13	ng/ml	98
10) 1,3-Dichlorobenzene	6.799	146	20846	95.85	ng/ml	96
11) 1,4-Dichlorobenzene	6.863	146	21382	96.50	ng/ml	98
12) Benzyl alcohol	6.965	108	9554	111.61	ng/ml	95
13) 1,2-Dichlorobenzene	7.013	146	20256	97.24	ng/ml	97
14) 2-Methylphenol	7.067	107	14811	102.90	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.093	45	32803	124.52	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.222	70	14289	105.84	ng/ml	98
17) 3+4-Methylphenol	7.211	107	18073	96.98	ng/ml	95
18) Hexachloroethane	7.345	117	7837	100.79	ng/ml	90
20) Nitrobenzene	7.398	77	18438	95.89	ng/ml	98
22) Isophorone	7.623	82	35464	99.96	ng/ml	97
23) 2-Nitrophenol	7.714	139	5408	56.82	ng/ml	88
24) 2,4-Dimethylphenol	7.735	122	15179	97.01	ng/ml	92
25) Bis(2-chloroethoxy) me...	7.831	93	23620	104.13	ng/ml	97
26) Benzoic acid	7.821	105	308	844.21	ng/ml#	74
27) 2,4-Dichlorophenol	7.949	162	10325	74.89	ng/ml	97
28) 1,2,4-Trichlorobenzene	8.035	180	15521	95.99	ng/ml	95
29) Naphthalene	8.115	128	59651	100.20	ng/ml	100
30) 4-Chloroaniline	8.158	127	19347	88.40	ng/ml	98
31) Hexachlorobutadiene	8.243	225	7485	94.24	ng/ml	96
32) 4-Chloro-3-methylphenol	8.634	107	9340	92.53	ng/ml#	44
33) 2-Methylnaphthalene	8.810	142	36689	94.47	ng/ml	96
34) 1-Methylnaphthalene	8.912	142	35408	93.61	ng/ml	98
36) Hexachlorocyclopentadiene	8.981	237	5330	86.72	ng/ml	96
37) 2,4,6-Trichlorophenol	9.094	196	5412	94.00	ng/ml	98
38) 2,4,5-Trichlorophenol	9.131	196	5163	79.94	ng/ml	93
39) 1,1'-Biphenyl	9.281	154	42772	102.22	ng/ml	100
41) 2-Chloronaphthalene	9.308	162	30467	101.69	ng/ml	99
42) 2-Nitroaniline	9.399	138	4661	45.04	ng/ml	96

See MS

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.441	156	29357	100.49	ng/ml	98
44) 1,4-Dinitrobenzene	9.527	168	1254	26.99	ng/ml	76
45) Dimethyl phthalate	9.575	163	27948	84.22	ng/ml	98
46) 1,3-Dinitrobenzene	9.607	168	1734	33.37	ng/ml	90
47) 2,6-Dinitrotoluene	9.639	165	3823	50.77	ng/ml	95
48) 1,2-Dinitrobenzene	9.698	168	1698	51.70	ng/ml	88
49) Acenaphthylene	9.730	152	47041	99.24	ng/ml	100
50) 3-Nitroaniline	9.816	138	4826	56.15	ng/ml	84
51) Acenaphthene	9.907	153	32436	99.00	ng/ml	99
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.971	139	2407	107.66	ng/ml	95
54) 2,4-Dinitrotoluene	10.051	165	3832	40.09	ng/ml	91
55) Dibenzofuran	10.083	168	40600	94.50	ng/ml	86
56) 2,3,5,6-Tetrachlorophenol	10.163	232	2714	82.70	ng/ml	97
57) 2,3,4,6-Tetrachlorophenol	10.206	232	3745	84.51	ng/ml	89
58) Diethyl phthalate	10.292	149	27965	84.31	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.292	170	25788	96.67	ng/ml	95
60) Fluorene	10.436	166	32279	93.97	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.426	204	13730	92.14	ng/ml	92
62) 4-Nitroaniline	10.436	138	5107	57.89	ng/ml	86
63) 4,6-Dinitro-2-methylph...	10.474	198	342	83.78	ng/ml#	1
65) N-Nitrosodiphenylamine	10.543	169	24736	96.92	ng/ml	98
66) Azobenzene (1,2-DPH)	10.586	77	34575	112.09	ng/ml	98
68) 4-Bromophenyl phenyl e...	10.928	248	7025	103.04	ng/ml	99
69) Hexachlorobenzene	11.009	284	7238	102.83	ng/ml	98
70) Pentachlorophenol (PCP)	11.201	266	1341	102.51	ng/ml	91
71) Phenanthrene	11.420	178	45679	99.68	ng/ml	99
72) Anthracene	11.474	178	46433	104.82	ng/ml	99
73) Carbazole	11.629	167	43052	110.66	ng/ml	97
74) Di-n-butyl phthalate	11.966	149	51497	107.89	ng/ml	98
75) Fluoranthene	12.742	202	45822	103.97	ng/ml	97
76) Benzidine	12.902	184	18666	147.24	ng/ml	95
77) Pyrene	13.057	202	46111	101.53	ng/ml	99
80) Butyl benzyl phthalate	14.159	149	14773	98.07	ng/ml	95
81) Bis(2-ethylhexyl) adipate	14.341	129	18339	97.22	ng/ml	95
82) 3,3-Dichlorobenzidine	15.341	252	18339	195.28	ng/ml	98
83) Benz(a)anthracene	15.384	228	37587	94.36	ng/ml	100
84) Chrysene	15.469	228	36919	97.99	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.550	149	19228	65.51	ng/ml	97
87) Di-n-octyl phthalate	17.234	149	21395	121.10	ng/ml	92
88) Benzo(b)fluoranthene	18.015	252	29112	99.29	ng/ml	96
89) Benzo(k)fluoranthene	18.079	252	29589	98.12	ng/ml	99
90) Benzo(b+k)fluoranthene	18.079	252	63728	201.74	ng/ml	99
91) Benzo(e)pyrene	18.673	252	31282	99.19	ng/ml	97
92) Benzo(a)pyrene	18.796	252	25304	95.97	ng/ml	97
93) Perylene	19.005	252	33514	95.67	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.342	276	24570	85.51	ng/ml	86
96) Dibenz(a,h)anthracene	21.406	278	22041	80.24	ng/ml	90
97) Benzo(g,h,i)perylene	21.882	276	24346	84.12	ng/ml	85

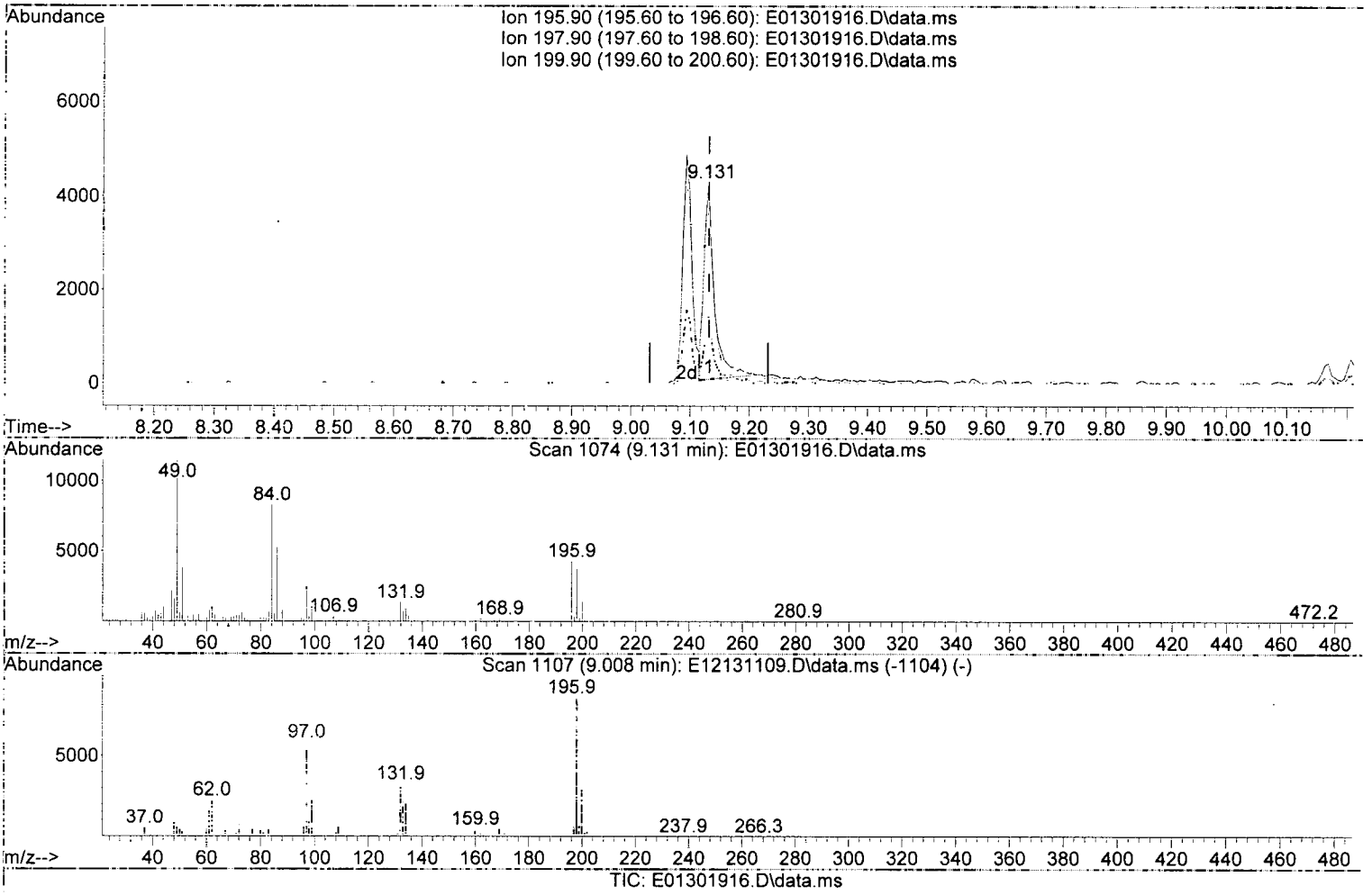
See M.I

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E01301916.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.131min (-0.000) 79.94 ng/ml

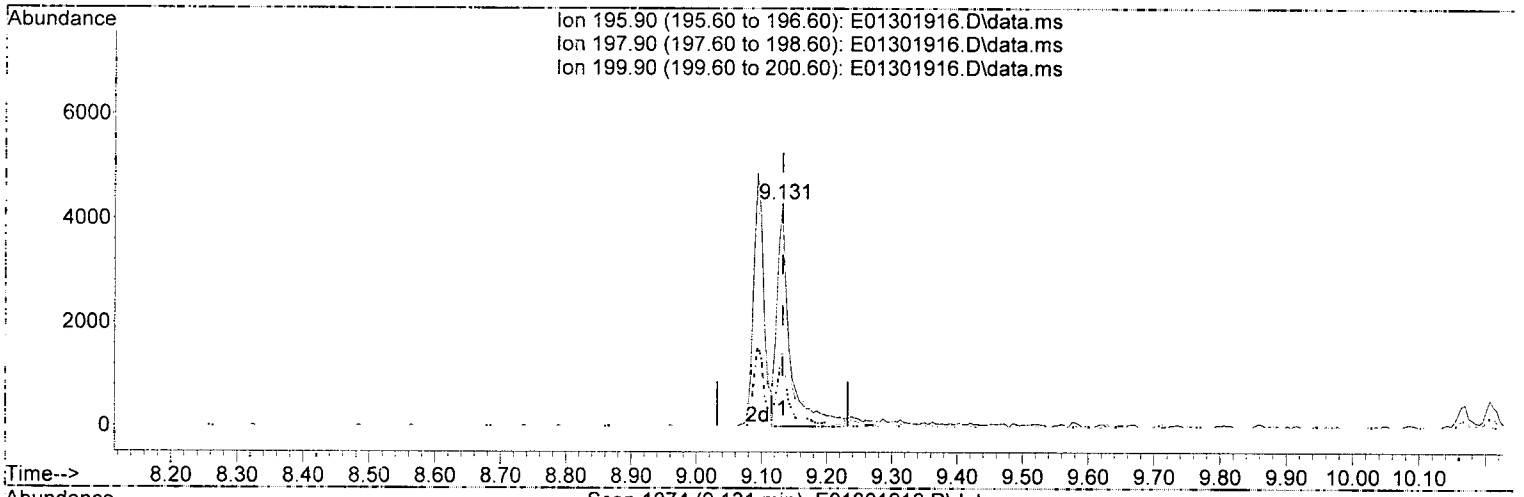
response 5163

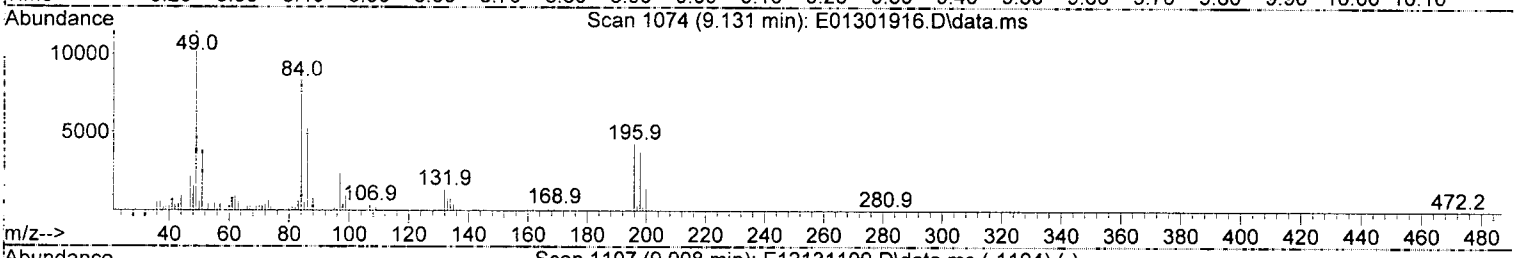
Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	87.47
199.90	32.40	33.06
0.00	0.00	0.00

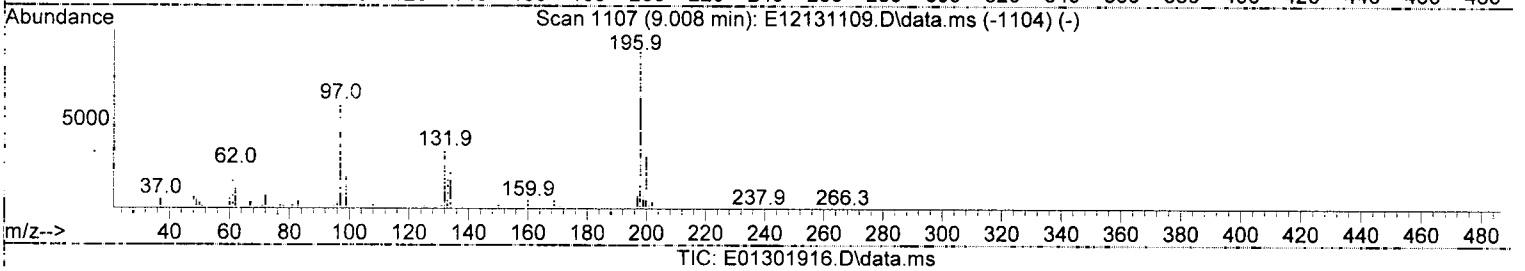
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301916.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.131min (-0.000) 91.76 ng/ml m

response 6051

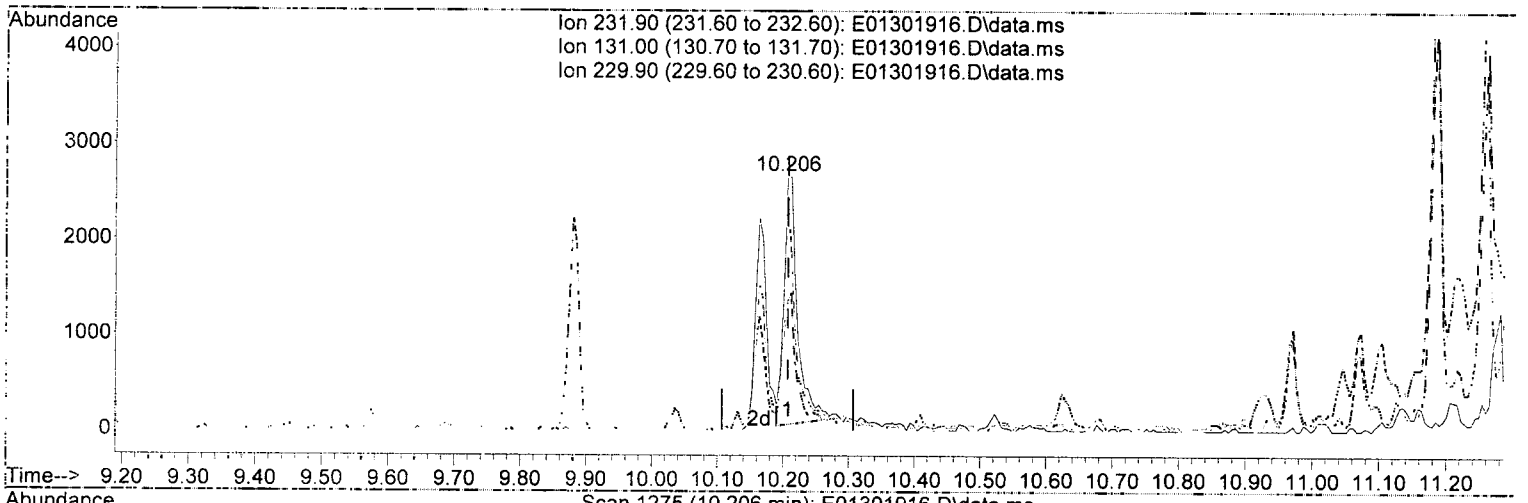
Ion	Exp%	Act%
195.90	100.00	100.00
197.90	96.30	87.47
199.90	32.40	33.06
0.00	0.00	0.00

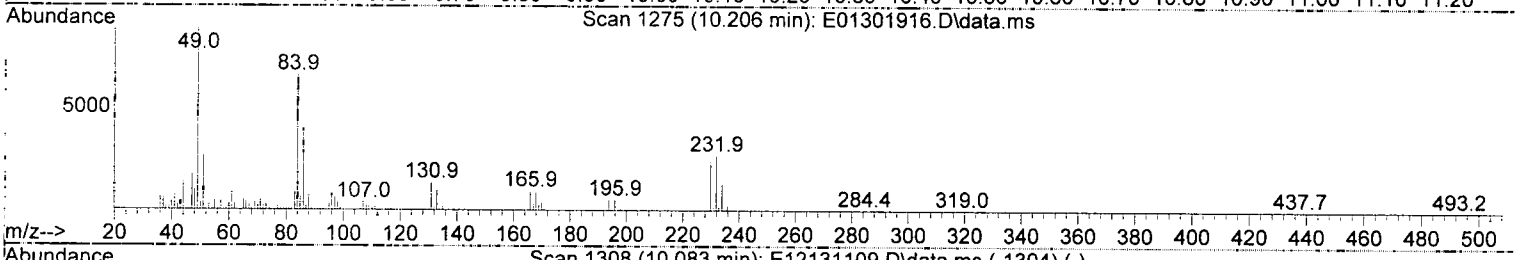
1/31/19

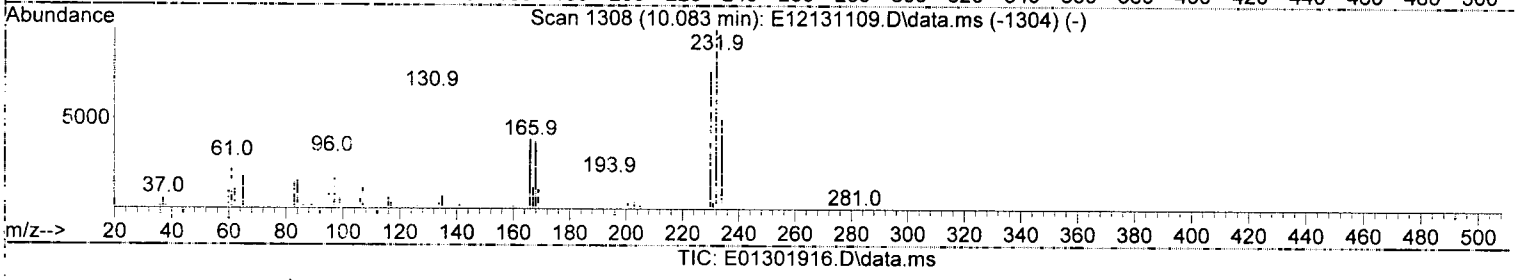
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301916.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.206min (-0.000) 84.51 ng/ml

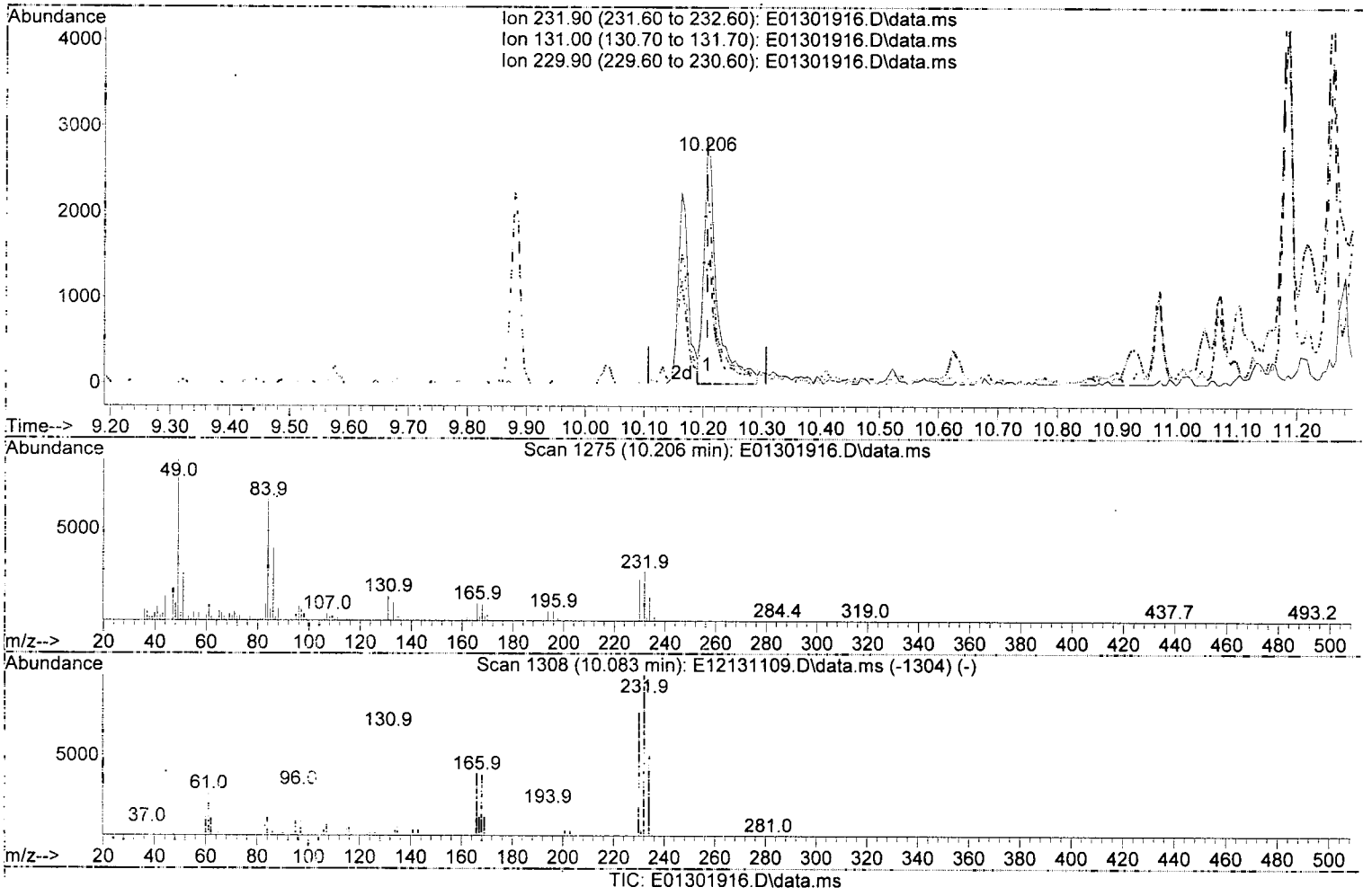
response 3745

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	61.50	50.43
229.90	79.80	86.85
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(57) 2,3,4,6-Tetrachlorophenol (T)

10.206min (-0.000) 93.09 ng/ml m

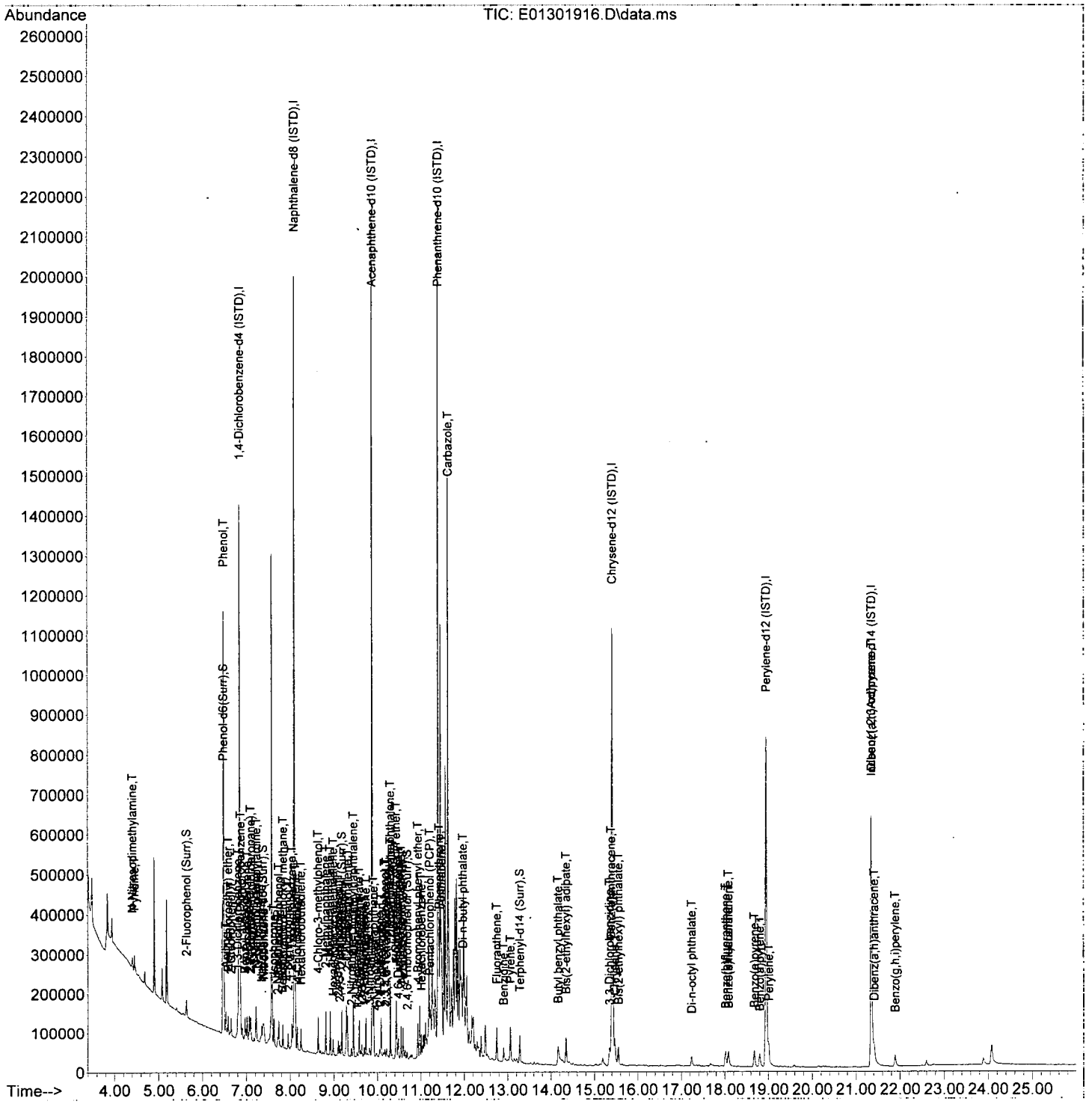
response 4318

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	61.50	50.43
229.90	79.80	86.85
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301916.D
Acq On : 30 Jan 2019 8:13 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL3
Misc : 1x, A18L329@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:52:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301917.D
Acq On : 30 Jan 2019 8:50 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL4
Misc : 1x, A18L330@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	290867	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1128963	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	497817	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	851122	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.411	240	721909	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.946	264	642441	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	493160	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	35753	203.19	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	47985	209.76	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	38942	189.93	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	77186	201.16	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	5139	203.22	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.276	244	69836	213.79	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.392	74	26607	211.04	ng/ml	93
3) Pyridine	4.441	79	42897	211.40	ng/ml	93
6) Phenol	6.484	94	50967	208.05	ng/ml	93
7) Aniline	6.526	93	63650	211.77	ng/ml	98
8) Bis(2-chloroethyl) ether	6.580	93	42294	205.69	ng/ml	96
9) 2-Chlorophenol	6.644	128	37904	196.82	ng/ml	97
10) 1,3-Dichlorobenzene	6.794	146	44104	191.30	ng/ml	97
11) 1,4-Dichlorobenzene	6.863	146	44829	190.86	ng/ml	99
12) Benzyl alcohol	6.965	108	21731	210.30	ng/ml	96
13) 1,2-Dichlorobenzene	7.013	146	42117	190.72	ng/ml	98
14) 2-Methylphenol	7.061	107	31237	204.73	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.093	45	67804	242.80	ng/ml	98
16) N-Nitrosodi-n-propylamine	7.222	70	30932	216.14	ng/ml	96
17) 3+4-Methylphenol	7.211	107	38619	195.49	ng/ml	97
18) Hexachloroethane	7.345	117	16252	197.18	ng/ml	84
20) Nitrobenzene	7.393	77	41375	202.98	ng/ml	96
22) Isophorone	7.623	82	76306	207.85	ng/ml	99
23) 2-Nitrophenol	7.714	139	12965	131.64	ng/ml	91
24) 2,4-Dimethylphenol	7.735	122	32468	200.53	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.832	93	48550	206.85	ng/ml	99
26) Benzoic acid	7.810	105	538	846.50	ng/ml	92
27) 2,4-Dichlorophenol	7.944	162	23291	163.25	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.035	180	31882	190.55	ng/ml	95
29) Naphthalene	8.115	128	122429	198.73	ng/ml	99
30) 4-Chloroaniline	8.158	127	39584	174.79	ng/ml	98
31) Hexachlorobutadiene	8.243	225	15189	184.81	ng/ml	99
32) 4-Chloro-3-methylphenol	8.634	107	22255	177.28	ng/ml	78
33) 2-Methylnaphthalene	8.810	142	76316	189.90	ng/ml	97
34) 1-Methylnaphthalene	8.912	142	72918	186.29	ng/ml	97
36) Hexachlorocyclopentadiene	8.982	237	12226	189.50	ng/ml	94
37) 2,4,6-Trichlorophenol	9.094	196	12662	175.88	ng/ml	97
38) 2,4,5-Trichlorophenol	9.131	196	12964	175.26	ng/ml	98
39) 1,1'-Biphenyl	9.281	154	88511	201.52	ng/ml	98
41) 2-Chloronaphthalene	9.308	162	63199	200.94	ng/ml	98
42) 2-Nitroaniline	9.399	138	12071	111.12	ng/ml	98

See MJ

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Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301917.D
Acq On : 30 Jan 2019 8:50 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL4
Misc : 1x, A18L330@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

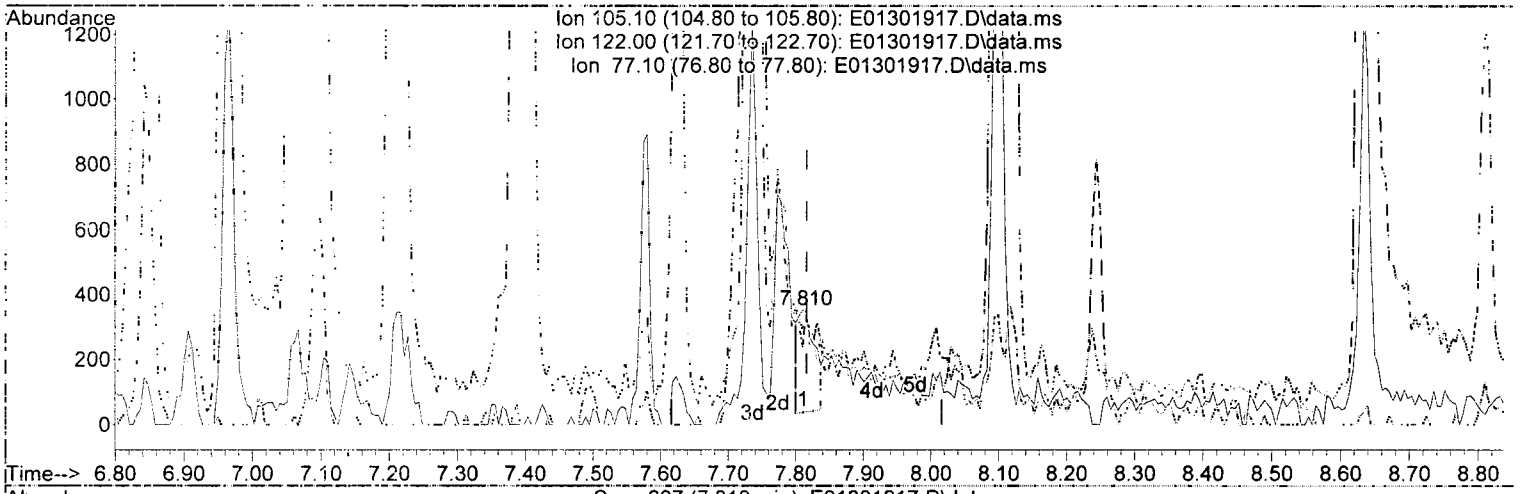
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.441	156	61710	201.24	ng/ml	99
44) 1,4-Dinitrobenzene	9.527	168	3705	75.97	ng/ml	93
45) Dimethyl phthalate	9.575	163	63042	180.98	ng/ml	99
46) 1,3-Dinitrobenzene	9.607	168	5323	97.57	ng/ml	96
47) 2,6-Dinitrotoluene	9.639	165	10458	132.30	ng/ml	97
48) 1,2-Dinitrobenzene	9.698	168	4275	123.99	ng/ml	88
49) Acenaphthylene	9.730	152	100207	201.39	ng/ml	99
50) 3-Nitroaniline	9.816	138	12489	138.41	ng/ml	94
51) Acenaphthene	9.912	153	67960	197.59	ng/ml	99
52) 2,4-Dinitrophenol	9.923	184	686	185.31	ng/ml	69
53) 4-Nitrophenol	9.971	139	6776	171.64	ng/ml	89
54) 2,4-Dinitrotoluene	10.051	165	11280	112.41	ng/ml	95
55) Dibenzofuran	10.083	168	85176	188.87	ng/ml	90
56) 2,3,5,6-Tetrachlorophenol	10.164	232	7669	157.36	ng/ml	95
57) 2,3,4,6-Tetrachlorophenol	10.206	232	9650	166.04	ng/ml	97
58) Diethyl phthalate	10.292	149	64179	184.32	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.292	170	54877	195.96	ng/ml	98
60) Fluorene	10.436	166	69347	192.31	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.426	204	29765	190.29	ng/ml	91
62) 4-Nitroaniline	10.436	138	13118	141.64	ng/ml	82
63) 4,6-Dinitro-2-methylph...	10.474	198	1644	110.99	ng/ml	91
65) N-Nitrosodiphenylamine	10.543	169	55485	201.93	ng/ml	97
66) Azobenzene (1,2-DPH)	10.586	77	76986	231.83	ng/ml	98
68) 4-Bromophenyl phenyl e...	10.928	248	15771	214.87	ng/ml	94
69) Hexachlorobenzene	11.009	284	15793	208.42	ng/ml	98
70) Pentachlorophenol (PCP)	11.201	266	4272	168.33	ng/ml	94
71) Phenanthrene	11.420	178	96988	196.59	ng/ml	100
72) Anthracene	11.474	178	99476	208.60	ng/ml	100
73) Carbazole	11.629	167	91479	218.42	ng/ml	99
74) Di-n-butyl phthalate	11.966	149	111961	217.89	ng/ml	98
75) Fluoranthene	12.742	202	98210	207.00	ng/ml	97
76) Benzidine	12.902	184	37500	215.15	ng/ml	96
77) Pyrene	13.057	202	100024	204.57	ng/ml	99
80) Butyl benzyl phthalate	14.154	149	38485	204.24	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.341	129	40129	203.48	ng/ml	99
82) 3,3-Dichlorobenzidine	15.341	252	43713	409.50	ng/ml	99
83) Benz(a)anthracene	15.384	228	79592	191.12	ng/ml	98
84) Chrysene	15.469	228	77934	197.85	ng/ml	98
85) Bis(2-ethylhexyl) phth...	15.544	149	50647	165.05	ng/ml	98
87) Di-n-octyl phthalate	17.234	149	63652	215.44	ng/ml	95
88) Benzo(b)fluoranthene	18.015	252	66187	204.64	ng/ml	98
89) Benzo(k)fluoranthene	18.085	252	67887	203.84	ng/ml	98
90) Benzo(b+k)fluoranthene	18.015	252	141743	409.23	ng/ml	99
91) Benzo(e)pyrene	18.673	252	68515	206.91	ng/ml	99
92) Benzo(a)pyrene	18.796	252	58935	199.15	ng/ml	99
93) Perylene	19.000	252	70185	190.82	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.342	276	51991	171.67	ng/ml	92
96) Dibenz(a,h)anthracene	21.412	278	48121	166.21	ng/ml	98
97) Benzo(g,h,i)perylene	21.888	276	53734	176.15	ng/ml	87

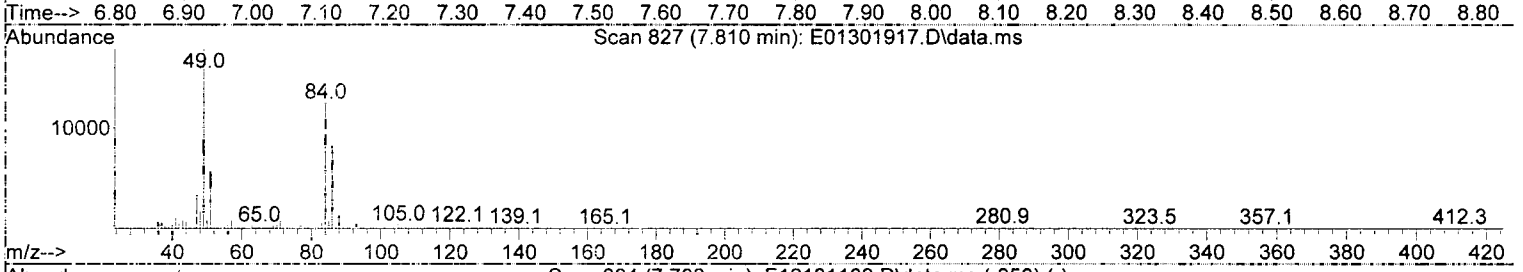
(#) = qualifier out of range (m) = manual integration (+) = signals summed

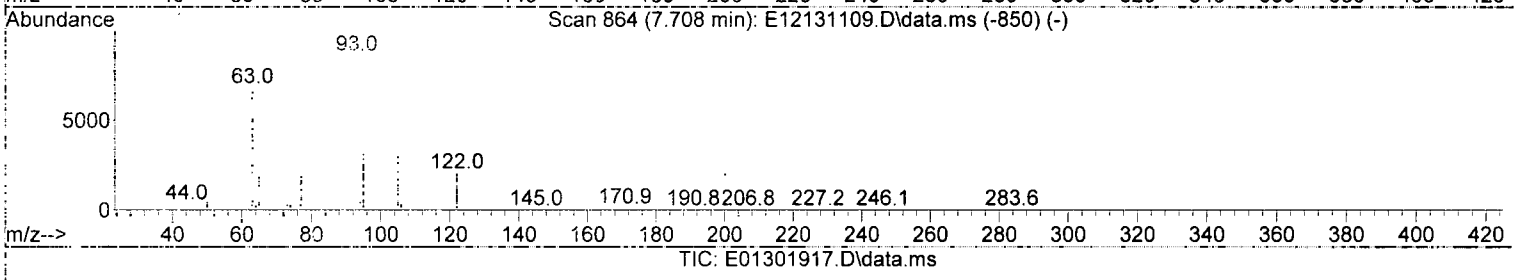
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301917.D
Acq On : 30 Jan 2019 8:50 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL4
Misc : 1x, A18L330@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301917.D\data.ms

(26) Benzoic acid (T)

7.810min (-0.005) 846.50 ng/ml

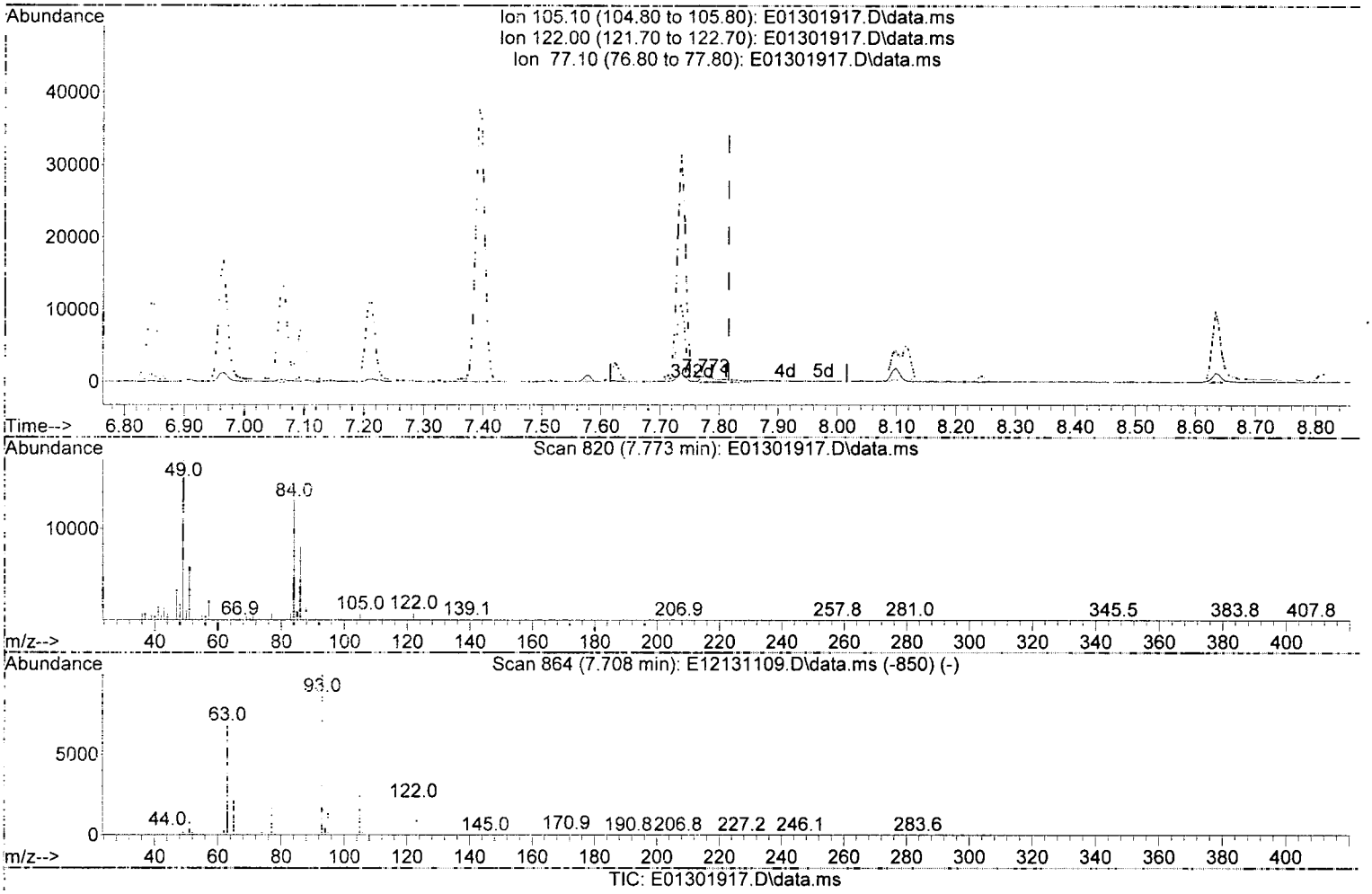
response 538

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	66.76
77.10	85.50	83.24
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301917.D
Acq On : 30 Jan 2019 8:50 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL4
Misc : 1x, A18L330@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(26) Benzoic acid (T)

7.773min (-0.043) 861.74 ng/ml (m) 1/31/19

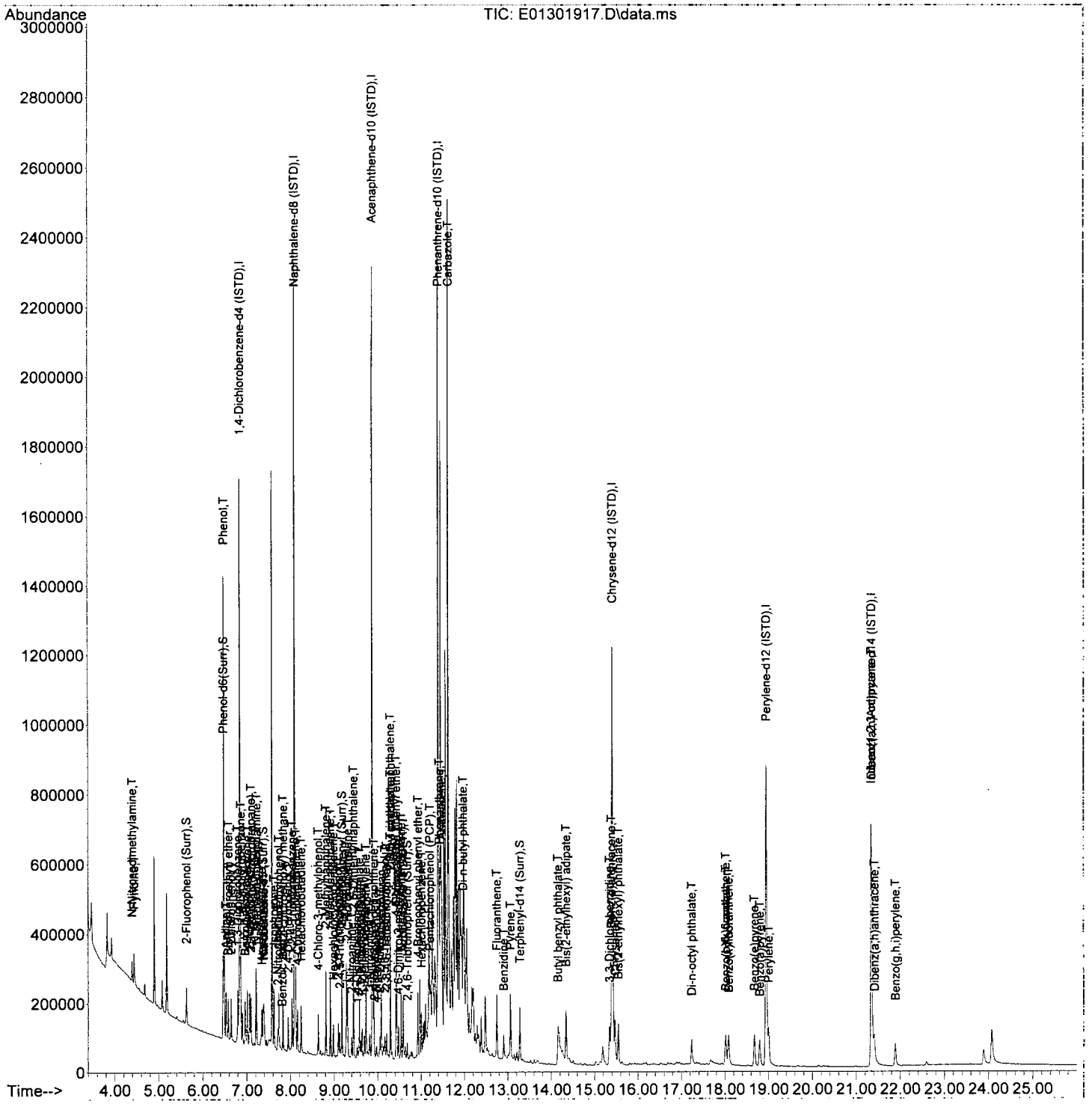
response 2001

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	110.73#
77.10	85.50	106.21
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301917.D
Acq On : 30 Jan 2019 8:50 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL4
Misc : 1x, A18L330@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:02 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301918.D
Acq On : 30 Jan 2019 9:26 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL5
Misc : 1x, A18L331@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	282130	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1119185	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	509897	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	935268	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	839042	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	760928	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	615052	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	92637	542.77	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	124633	561.68	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	116738	587.00	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	198705	505.58	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	17303	589.77	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	202060	532.22	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.387	74	68738	562.11	ng/ml	89
3) Pyridine	4.430	79	111106	564.50	ng/ml	96
6) Phenol	6.484	94	128306	539.97	ng/ml	93
7) Aniline	6.527	93	159299	546.41	ng/ml	97
8) Bis(2-chloroethyl) ether	6.580	93	105210	527.51	ng/ml	96
9) 2-Chlorophenol	6.644	128	97220	520.45	ng/ml	99
10) 1,3-Dichlorobenzene	6.794	146	108871	486.86	ng/ml	98
11) 1,4-Dichlorobenzene	6.864	146	111060	487.49	ng/ml	99
12) Benzyl alcohol	6.965	108	59139	540.17	ng/ml	93
13) 1,2-Dichlorobenzene	7.013	146	104161	486.29	ng/ml	97
14) 2-Methylphenol	7.067	107	81540	550.97	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.093	45	168498	622.05	ng/ml	96
16) N-Nitrosodi-n-propylamine	7.222	70	81082	584.12	ng/ml	96
17) 3+4-Methylphenol	7.211	107	104697	546.40	ng/ml	94
18) Hexachloroethane	7.345	117	40316	504.28	ng/ml	86
20) Nitrobenzene	7.393	77	109635	554.52	ng/ml	95
22) Isophorone	7.623	82	203487	559.11	ng/ml	99
23) 2-Nitrophenol	7.714	139	40651	416.35	ng/ml	91
24) 2,4-Dimethylphenol	7.735	122	87099	542.65	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.832	93	126251	542.59	ng/ml	98
26) Benzoic acid	7.789	105	24058	1091.25	ng/ml	94
27) 2,4-Dichlorophenol	7.949	162	66479	470.03	ng/ml	100
28) 1,2,4-Trichlorobenzene	8.040	180	78967	476.08	ng/ml	95
29) Naphthalene	8.120	128	307927	504.19	ng/ml	98
30) 4-Chloroaniline	8.158	127	102663	457.29	ng/ml	97
31) Hexachlorobutadiene	8.243	225	38478	472.27	ng/ml	99
32) 4-Chloro-3-methylphenol	8.634	107	69673	497.87	ng/ml	94
33) 2-Methylnaphthalene	8.810	142	195835	491.55	ng/ml	97
34) 1-Methylnaphthalene	8.912	142	188716	486.34	ng/ml	98
36) Hexachlorocyclopentadiene	8.982	237	34778	526.29	ng/ml	96
37) 2,4,6-Trichlorophenol	9.094	196	39573	479.41	ng/ml	99
38) 2,4,5-Trichlorophenol	9.126	196	40483	506.08	ng/ml	97
39) 1,1'-Biphenyl	9.281	154	230563	512.49	ng/ml	99
41) 2-Chloronaphthalene	9.308	162	163765	508.35	ng/ml	100
42) 2-Nitroaniline	9.404	138	43914	394.68	ng/ml	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301918.D
Acq On : 30 Jan 2019 9:26 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL5
Misc : 1x, A18L331@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

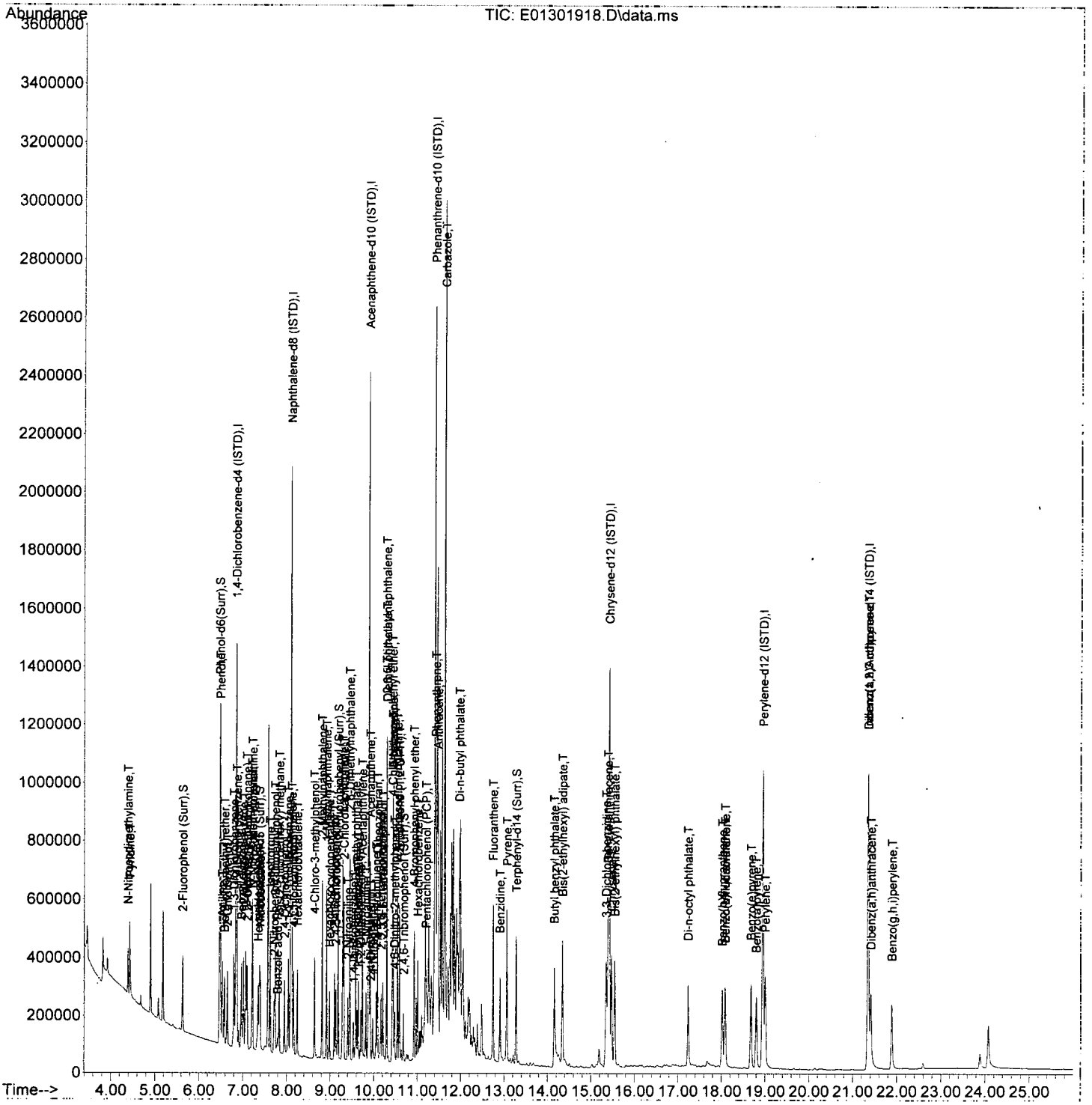
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.442	156	161748	514.96	ng/ml	97
44) 1,4-Dinitrobenzene	9.532	168	15009	300.45	ng/ml	87
45) Dimethyl phthalate	9.581	163	175061	490.67	ng/ml	100
46) 1,3-Dinitrobenzene	9.613	168	21039	376.51	ng/ml	92
47) 2,6-Dinitrotoluene	9.639	165	35146	434.09	ng/ml	95
48) 1,2-Dinitrobenzene	9.698	168	15598	441.67	ng/ml	85
49) Acenaphthylene	9.730	152	268456	526.73	ng/ml	99
50) 3-Nitroaniline	9.816	138	40839	441.89	ng/ml	94
51) Acenaphthene	9.912	153	176086	499.84	ng/ml	99
52) 2,4-Dinitrophenol	9.923	184	4803	303.29	ng/ml	93
53) 4-Nitrophenol	9.971	139	27714	474.08	ng/ml	87
54) 2,4-Dinitrotoluene	10.051	165	41590	404.63	ng/ml	97
55) Dibenzofuran	10.083	168	231005	500.10	ng/ml	92
56) 2,3,5,6-Tetrachlorophenol	10.164	232	28568	467.61	ng/ml	95
57) 2,3,4,6-Tetrachlorophenol	10.206	232	33782	497.12	ng/ml	96
58) Diethyl phthalate	10.297	149	182306	511.19	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.292	170	148844	518.92	ng/ml	97
60) Fluorene	10.436	166	189023	511.77	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.426	204	81475	508.54	ng/ml	91
62) 4-Nitroaniline	10.436	138	45265	477.18	ng/ml	84
63) 4,6-Dinitro-2-methylph...	10.474	198	10218	285.80	ng/ml	91
65) N-Nitrosodiphenylamine	10.543	169	159639	528.72	ng/ml	97
66) Azobenzene (1,2-DPH)	10.586	77	223701	613.02	ng/ml	98
68) 4-Bromophenyl phenyl e...	10.923	248	44122	547.04	ng/ml	95
69) Hexachlorobenzene	11.009	284	42972	516.08	ng/ml	95
70) Pentachlorophenol (PCP)	11.201	266	18186	451.52	ng/ml	97
71) Phenanthrene	11.421	178	271509	500.82	ng/ml	99
72) Anthracene	11.474	178	280169	534.65	ng/ml	99
73) Carbazole	11.629	167	257322	559.12	ng/ml	99
74) Di-n-butyl phthalate	11.966	149	318442	563.97	ng/ml	99
75) Fluoranthene	12.742	202	281703	540.32	ng/ml	97
76) Benzidine	12.902	184	152834	608.56	ng/ml	95
77) Pyrene	13.063	202	285718	531.77	ng/ml	99
80) Butyl benzyl phthalate	14.154	149	124269	516.51	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.341	129	118447	516.75	ng/ml	97
82) 3,3-Dichlorobenzidine	15.346	252	145270	1106.24	ng/ml	99
83) Benz(a)anthracene	15.389	228	236770	489.18	ng/ml	98
84) Chrysene	15.469	228	232271	507.34	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.544	149	168525	472.51	ng/ml	98
87) Di-n-octyl phthalate	17.235	149	245753	538.14	ng/ml	98
88) Benzo(b)fluoranthene	18.015	252	209622	528.78	ng/ml	99
89) Benzo(k)fluoranthene	18.085	252	210325	517.81	ng/ml	97
90) Benzo(b+k)fluoranthene	18.085	252	437476	1037.22	ng/ml	97
91) Benzo(e)pyrene	18.679	252	211572	539.44	ng/ml	100
92) Benzo(a)pyrene	18.796	252	193455	529.09	ng/ml	98
93) Perylene	19.005	252	216816	497.70	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.348	276	166318	440.34	ng/ml	95
96) Dibenz(a,h)anthracene	21.412	278	156689	433.95	ng/ml	97
97) Benzo(g,h,i)perylene	21.888	276	175449	461.18	ng/ml	88

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301918.D
Acq On : 30 Jan 2019 9:26 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL5
Misc : 1x, A18L331@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:08 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301919.D
Acq On : 30 Jan 2019 10:02 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL6
Misc : 1x, A18L332@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:13 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JJK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.848	152	286436	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1096117	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	493423	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	840808	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	707423	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	630113	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.348	292	502143	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	186079	1073.87	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	244299	1084.42	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	210602	1043.06	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.180	172	371894	977.83	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	33163	1220.16	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	340885	1064.94	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.387	74	136572	1100.04	ng/ml	88
3) Pyridine	4.425	79	220078	1101.34	ng/ml	95
6) Phenol	6.489	94	252632	1047.20	ng/ml	91
7) Aniline	6.532	93	316926	1070.75	ng/ml	97
8) Bis(2-chloroethyl) ether	6.580	93	205585	1015.27	ng/ml	96
9) 2-Chlorophenol	6.650	128	192879	1017.03	ng/ml	98
10) 1,3-Dichlorobenzene	6.799	146	212750	937.09	ng/ml	97
11) 1,4-Dichlorobenzene	6.864	146	215651	932.36	ng/ml	99
12) Benzyl alcohol	6.965	108	119831	1039.39	ng/ml	95
13) 1,2-Dichlorobenzene	7.013	146	203885	937.56	ng/ml	98
14) 2-Methylphenol	7.067	107	158539	1055.15	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	325929	1185.16	ng/ml	96
16) N-Nitrosodi-n-propylamine	7.222	70	155529	1103.61	ng/ml	96
17) 3+4-Methylphenol	7.211	107	201525	1035.93	ng/ml	94
18) Hexachloroethane	7.345	117	80048	986.21	ng/ml	85
20) Nitrobenzene	7.398	77	213695	1064.59	ng/ml	93
22) Isophorone	7.628	82	391987	1099.71	ng/ml	97
23) 2-Nitrophenol	7.714	139	83980	878.23	ng/ml	89
24) 2,4-Dimethylphenol	7.741	122	168017	1068.32	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.832	93	237898	1043.93	ng/ml	98
26) Benzoic acid	7.816	105	97527	1844.98	ng/ml	97
27) 2,4-Dichlorophenol	7.949	162	129436	934.42	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.040	180	151142	930.38	ng/ml	96
29) Naphthalene	8.120	128	582708	974.20	ng/ml	99
30) 4-Chloroaniline	8.163	127	195519	889.22	ng/ml	97
31) Hexachlorobutadiene	8.243	225	76109	953.81	ng/ml	99
32) 4-Chloro-3-methylphenol	8.634	107	137180	964.28	ng/ml	97
33) 2-Methylnaphthalene	8.816	142	368916	945.47	ng/ml	97
34) 1-Methylnaphthalene	8.917	142	353069	929.05	ng/ml	97
36) Hexachlorocyclopentadiene	8.982	237	68561	1072.15	ng/ml	97
37) 2,4,6-Trichlorophenol	9.094	196	77589	939.42	ng/ml	99
38) 2,4,5-Trichlorophenol	9.131	196	79865	1003.71	ng/ml	98
39) 1,1'-Biphenyl	9.281	154	427889	982.86	ng/ml	99
41) 2-Chloronaphthalene	9.308	162	302479	970.29	ng/ml	99
42) 2-Nitroaniline	9.404	138	89229	828.74	ng/ml	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301919.D
Acq On : 30 Jan 2019 10:02 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL6
Misc : 1x, A18L332@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:13 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

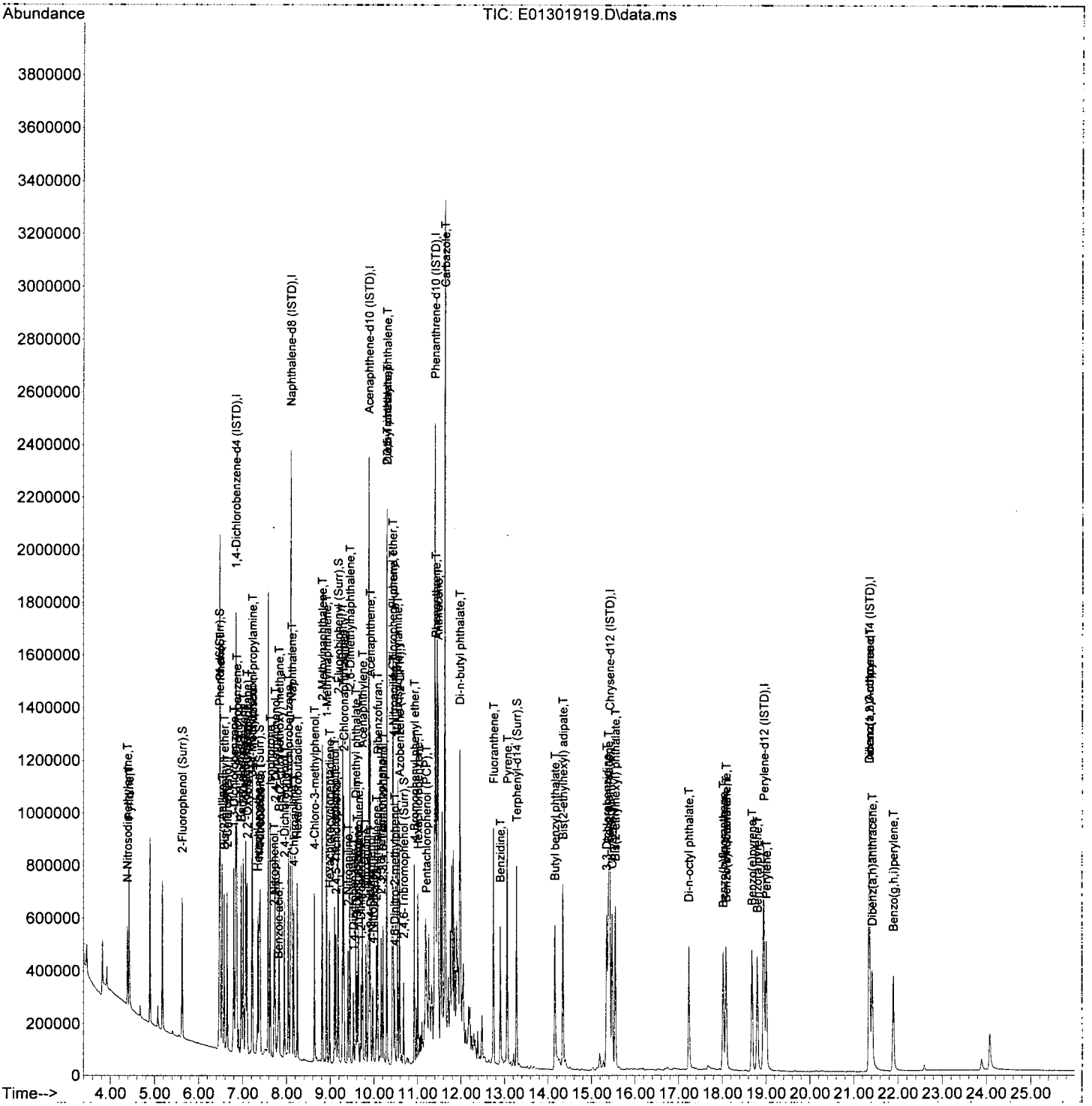
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.447	156	304453	1001.66	ng/ml	96
44) 1,4-Dinitrobenzene	9.533	168	32964	681.90	ng/ml	89
45) Dimethyl phthalate	9.581	163	323675	937.49	ng/ml	99
46) 1,3-Dinitrobenzene	9.613	168	43195	798.83	ng/ml	95
47) 2,6-Dinitrotoluene	9.645	165	69388	885.62	ng/ml	87
48) 1,2-Dinitrobenzene	9.704	168	30555	894.08	ng/ml#	73
49) Acenaphthylene	9.736	152	501305	1016.44	ng/ml	99
50) 3-Nitroaniline	9.816	138	75940	849.12	ng/ml	99
51) Acenaphthene	9.912	153	328378	963.27	ng/ml	100
52) 2,4-Dinitrophenol	9.923	184	14249	579.44	ng/ml	87
53) 4-Nitrophenol	9.971	139	55114	891.96	ng/ml	86
54) 2,4-Dinitrotoluene	10.057	165	83270	837.18	ng/ml	93
55) Dibenzofuran	10.083	168	418743	936.80	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	10.164	232	56972	913.28	ng/ml	96
57) 2,3,4,6-Tetrachlorophenol	10.206	232	64617	950.20	ng/ml	97
58) Diethyl phthalate	10.297	149	329843	955.76	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.297	170	270700	975.26	ng/ml	96
60) Fluorene	10.436	166	344351	963.44	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.426	204	146848	947.17	ng/ml	92
62) 4-Nitroaniline	10.442	138	79908	870.50	ng/ml	80
63) 4,6-Dinitro-2-methylph...	10.474	198	25579	610.47	ng/ml	90
65) N-Nitrosodiphenylamine	10.543	169	278990	1027.82	ng/ml	97
66) Azobenzene (1,2-DPH)	10.586	77	394223	1201.67	ng/ml	99
68) 4-Bromophenyl phenyl e...	10.929	248	78242	1079.06	ng/ml	92
69) Hexachlorobenzene	11.009	284	79296	1059.30	ng/ml	98
70) Pentachlorophenol (PCP)	11.201	266	38085	949.12	ng/ml	98
71) Phenanthrene	11.421	178	468364	960.99	ng/ml	99
72) Anthracene	11.474	178	482023	1023.20	ng/ml	99
73) Carbazole	11.629	167	436227	1054.35	ng/ml	99
74) Di-n-butyl phthalate	11.972	149	541942	1067.62	ng/ml	99
75) Fluoranthene	12.747	202	478274	1020.42	ng/ml	97
76) Benzidine	12.902	184	270903	1124.28	ng/ml	96
77) Pyrene	13.063	202	486318	1006.81	ng/ml	99
80) Butyl benzyl phthalate	14.159	149	212214	1007.60	ng/ml	97
81) Bis(2-ethylhexyl) adipate	14.341	129	197213	1020.46	ng/ml	99
82) 3,3-Dichlorobenzidine	15.347	252	231650	2031.62	ng/ml	99
83) Benz(a)anthracene	15.389	228	387630	949.87	ng/ml	98
84) Chrysene	15.475	228	381765	989.01	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.544	149	289406	962.42	ng/ml	96
87) Di-n-octyl phthalate	17.235	149	421456	1017.79	ng/ml	99
88) Benzo(b)fluoranthene	18.021	252	343841	1026.35	ng/ml	99
89) Benzo(k)fluoranthene	18.090	252	349392	1026.13	ng/ml	98
90) Benzo(b+k)fluoranthene	18.090	252	717329	2026.59	ng/ml	98
91) Benzo(e)pyrene	18.679	252	347001	1068.42	ng/ml	99
92) Benzo(a)pyrene	18.802	252	319982	1035.50	ng/ml	99
93) Perylene	19.010	252	350972	972.91	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.348	276	270568	877.43	ng/ml	94
96) Dibenz(a,h)anthracene	21.412	278	250339	849.20	ng/ml	94
97) Benzo(g,h,i)perylene	21.893	276	285618	919.58	ng/ml	86

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301919.D
Acq On : 30 Jan 2019 10:02 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL6
Misc : 1x, A18L332@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:13 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301920.D
Acq On : 30 Jan 2019 10:39 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL7
Misc : 1x, A18L333@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:18 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	283178	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1126005	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	528163	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	996904	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.421	240	902831	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.962	264	830313	2000.00	ng/ml	0.01
94) Dibenz(a,h)Anthrcene-d...	21.364	292	698997	2000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	365609	2134.22	ng/ml	0.00
5) Phenol-d6(Surr)	6.478	99	498621	2238.79	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.382	82	486300	2436.22	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	786718	1932.48	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	82762	2464.32	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.282	244	841709	2060.40	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.382	74	276378	2251.74	ng/ml	88
3) Pyridine	4.419	79	442924	2242.04	ng/ml	95
6) Phenol	6.489	94	512010	2146.79	ng/ml	94
7) Aniline	6.532	93	658664	2250.92	ng/ml	97
8) Bis(2-chloroethyl) ether	6.580	93	405853	2027.35	ng/ml	98
9) 2-Chlorophenol	6.650	128	391006	2085.45	ng/ml	99
10) 1,3-Dichlorobenzene	6.799	146	418520	1864.65	ng/ml	97
11) 1,4-Dichlorobenzene	6.864	146	426556	1865.42	ng/ml	99
12) Benzyl alcohol	6.971	108	255452	2149.09	ng/ml	92
13) 1,2-Dichlorobenzene	7.013	146	401451	1867.31	ng/ml	99
14) 2-Methylphenol	7.067	107	326863	2200.45	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	642111	2361.75	ng/ml	96
16) N-Nitrosodi-n-propylamine	7.227	70	323691	2323.28	ng/ml	96
17) 3+4-Methylphenol	7.217	107	423242	2200.69	ng/ml	94
18) Hexachloroethane	7.345	117	158301	1972.74	ng/ml	85
20) Nitrobenzene	7.398	77	445401	2244.44	ng/ml	95
22) Isophorone	7.628	82	818603	2235.62	ng/ml	98
23) 2-Nitrophenol	7.714	139	184428	1877.49	ng/ml	89
24) 2,4-Dimethylphenol	7.741	122	352518	2182.99	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.832	93	493285	2107.14	ng/ml	98
26) Benzoic acid	7.853	105	314631	3763.21	ng/ml	96
27) 2,4-Dichlorophenol	7.949	162	283710	1993.78	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.040	180	307169	1840.64	ng/ml	95
29) Naphthalene	8.120	128	1180925	1921.92	ng/ml	99
30) 4-Chloroaniline	8.163	127	447643	1981.83	ng/ml	97
31) Hexachlorobutadiene	8.243	225	151477	1847.95	ng/ml	97
32) 4-Chloro-3-methylphenol	8.634	107	317795	2092.52	ng/ml	99
33) 2-Methylnaphthalene	8.816	142	771341	1924.35	ng/ml	97
34) 1-Methylnaphthalene	8.917	142	730943	1872.31	ng/ml	97
36) Hexachlorocyclopentadiene	8.982	237	153915	2248.60	ng/ml	97
37) 2,4,6-Trichlorophenol	9.094	196	185604	2044.99	ng/ml	98
38) 2,4,5-Trichlorophenol	9.131	196	183508	2069.74	ng/ml	98
39) 1,1'-Biphenyl	9.286	154	909543	1951.81	ng/ml	99
41) 2-Chloronaphthalene	9.313	162	650474	1949.34	ng/ml	99
42) 2-Nitroaniline	9.404	138	225078	1952.96	ng/ml	94

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301920.D
Acq On : 30 Jan 2019 10:39 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL7
Misc : 1x, A18L333@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:18 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

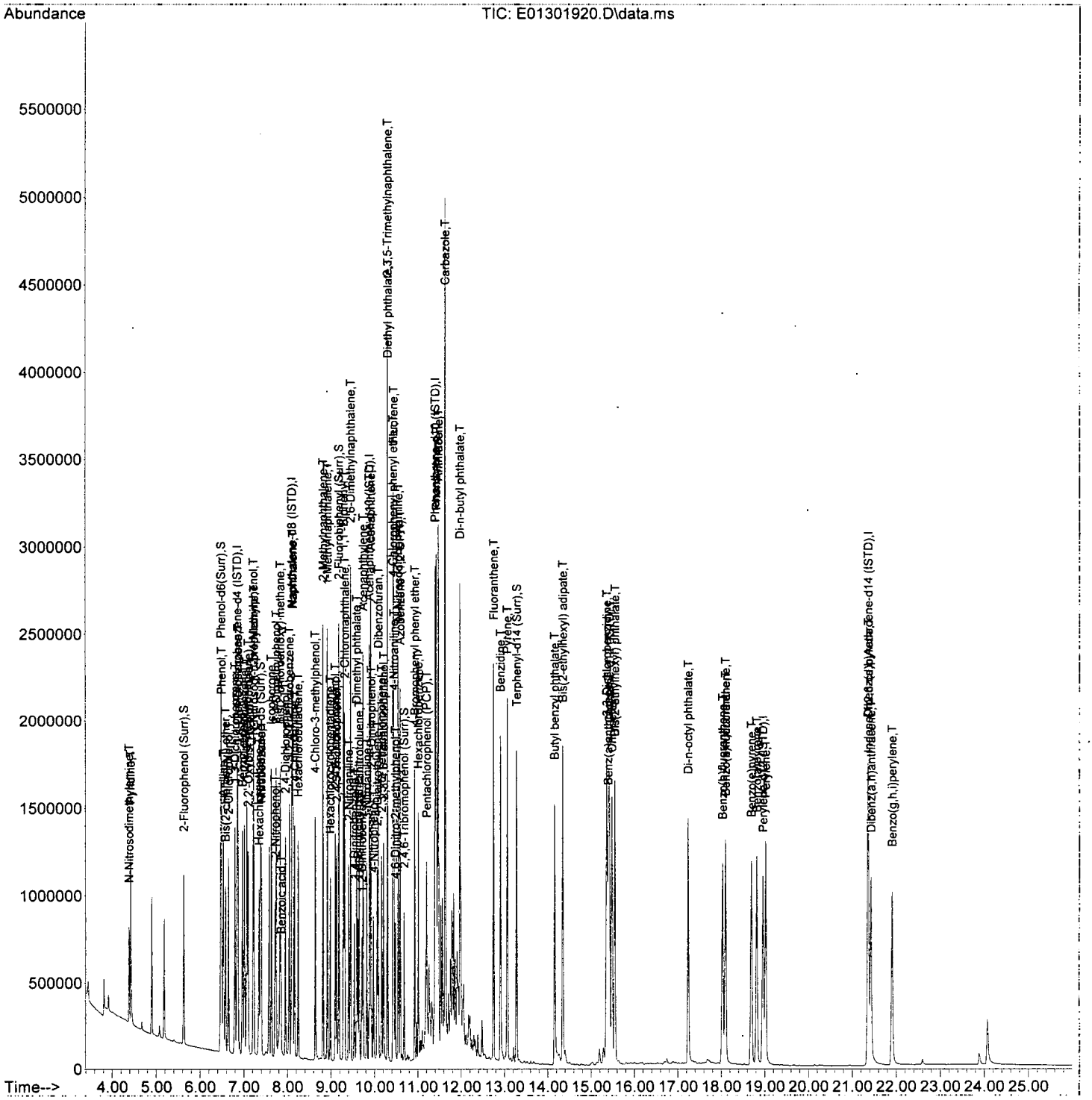
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.447	156	646334	1986.59	ng/ml	98
44) 1,4-Dinitrobenzene	9.533	168	93455	1806.07	ng/ml	94
45) Dimethyl phthalate	9.586	163	722554	1955.16	ng/ml	99
46) 1,3-Dinitrobenzene	9.618	168	113932	1968.41	ng/ml	91
47) 2,6-Dinitrotoluene	9.645	165	164544	1961.99	ng/ml	91
48) 1,2-Dinitrobenzene	9.709	168	76738	2097.77	ng/ml#	73
49) Acenaphthylene	9.736	152	1078092	2042.15	ng/ml	99
50) 3-Nitroaniline	9.821	138	193626	2022.62	ng/ml	98
51) Acenaphthene	9.912	153	694436	1903.08	ng/ml	99
52) 2,4-Dinitrophenol	9.923	184	55055	1548.65	ng/ml	93
53) 4-Nitrophenol	9.976	139	153275	2139.66	ng/ml	85
54) 2,4-Dinitrotoluene	10.062	165	214871	2018.19	ng/ml	92
55) Dibenzofuran	10.089	168	931904	1947.71	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	10.164	232	145369	2066.79	ng/ml	97
57) 2,3,4,6-Tetrachlorophenol	10.212	232	156617	2089.38	ng/ml	94
58) Diethyl phthalate	10.303	149	754784	2043.22	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.297	170	590742	1988.29	ng/ml	98
60) Fluorene	10.436	166	765816	2001.69	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.426	204	334037	2012.83	ng/ml	94
62) 4-Nitroaniline	10.447	138	207882	2115.67	ng/ml	81
63) 4,6-Dinitro-2-methylph...	10.479	198	84552	1651.66	ng/ml	90
65) N-Nitrosodiphenylamine	10.549	169	652932	2028.80	ng/ml	98
66) Azobenzene (1,2-DPH)	10.592	77	914026	2349.88	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.928	248	186018	2163.73	ng/ml	93
69) Hexachlorobenzene	11.009	284	182419	2055.83	ng/ml	99
70) Pentachlorophenol (PCP)	11.201	266	106556	2088.13	ng/ml	96
71) Phenanthrene	11.426	178	1092838	1891.20	ng/ml	99
72) Anthracene	11.474	178	1119959	2005.11	ng/ml	100
73) Carbazole	11.629	167	1032155	2104.07	ng/ml	100
74) Di-n-butyl phthalate	11.971	149	1296945	2154.90	ng/ml	99
75) Fluoranthene	12.747	202	1147170	2064.30	ng/ml	97
76) Benzidine	12.907	184	956344	3113.49	ng/ml	97
77) Pyrene	13.063	202	1167359	2038.33	ng/ml	100
80) Butyl benzyl phthalate	14.159	149	564166	2023.16	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.346	129	522769	2119.55	ng/ml	98
82) 3,3-Dichlorobenzidine	15.363	252	642844	4208.60	ng/ml	99
83) Benz(a)anthracene	15.395	228	997082	1914.49	ng/ml	99
84) Chrysene	15.486	228	973945	1977.02	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.550	149	783437	2041.42	ng/ml	96
87) Di-n-octyl phthalate	17.240	149	1248768	2096.42	ng/ml	100
88) Benzo(b)fluoranthene	18.031	252	927026	2039.75	ng/ml	98
89) Benzo(k)fluoranthene	18.101	252	931062	2050.87	ng/ml	97
90) Benzo(b+k)fluoranthene	18.101	252	1906416	4024.25	ng/ml	97
91) Benzo(e)pyrene	18.695	252	912421	2131.99	ng/ml	99
92) Benzo(a)pyrene	18.818	252	875788	2095.22	ng/ml	99
93) Perylene	19.021	252	918814	1932.87	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.369	276	772179	1798.90	ng/ml	95
96) Dibenz(a,h)anthracene	21.428	278	733789	1788.16	ng/ml	94
97) Benzo(g,h,i)perylene	21.909	276	791021	1829.56	ng/ml	87

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301920.D
Acq On : 30 Jan 2019 10:39 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL7
Misc : 1x, A18L333@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:18 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301921.D
Acq On : 30 Jan 2019 11:15 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL8
Misc : 1x, A18L334@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:25 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JJ 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	277065	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1109587	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	539188	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	991158	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.432	240	887261	2000.00	ng/ml	0.02
86) Perylene-d12 (ISTD)	18.967	264	816129	2000.00	ng/ml	0.02
94) Dibenz(a,h)Anthrcene-d...	21.374	292	692377	2000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	749425	4471.24	ng/ml	0.00
5) Phenol-d6(Surr)	6.484	99	994097	4561.94	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.382	82	903192	4624.56	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.185	172	1579625	3800.81	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.688	330	183331	5094.74	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.287	244	1664387	4145.71	ng/ml	0.01
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.376	74	561142	4672.66	ng/ml	86
3) Pyridine	4.408	79	916259	4740.35	ng/ml	94
6) Phenol	6.494	94	1035475	4437.40	ng/ml	93
7) Aniline	6.537	93	1318849	4606.48	ng/ml	96
8) Bis(2-chloroethyl) ether	6.585	93	824988	4211.97	ng/ml	97
9) 2-Chlorophenol	6.649	128	789250	4302.39	ng/ml	98
10) 1,3-Dichlorobenzene	6.799	146	831375	3785.78	ng/ml	97
11) 1,4-Dichlorobenzene	6.863	146	845971	3781.24	ng/ml	100
12) Benzyl alcohol	6.970	108	520771	4223.92	ng/ml	94
13) 1,2-Dichlorobenzene	7.013	146	802569	3815.43	ng/ml	99
14) 2-Methylphenol	7.072	107	654892	4506.03	ng/ml	100
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	1253005	4710.36	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.232	70	649377	4763.71	ng/ml	95
17) 3+4-Methylphenol	7.222	107	845995	4495.88	ng/ml	95
18) Hexachloroethane	7.345	117	319170	4065.24	ng/ml	85
20) Nitrobenzene	7.404	77	894143	4605.13	ng/ml	93
22) Isophorone	7.639	82	1662743	4608.17	ng/ml	97
23) 2-Nitrophenol	7.714	139	394481	4075.25	ng/ml	90
24) 2,4-Dimethylphenol	7.746	122	691817	4347.50	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.837	93	982323	4258.23	ng/ml	99
26) Benzoic acid	7.746	105	25997	1113.51	ng/ml#	1
27) 2,4-Dichlorophenol	7.955	162	583274	4159.62	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.040	180	617165	3752.95	ng/ml	95
29) Naphthalene	8.126	128	2314690	3822.82	ng/ml	100
30) 4-Chloroaniline	8.163	127	932245	4188.37	ng/ml	97
31) Hexachlorobutadiene	8.249	225	307584	3807.90	ng/ml	97
32) 4-Chloro-3-methylphenol	8.639	107	668189	4250.95	ng/ml	98
33) 2-Methylnaphthalene	8.816	142	1531917	3878.40	ng/ml	97
34) 1-Methylnaphthalene	8.917	142	1454487	3780.80	ng/ml	98
36) Hexachlorocyclopentadiene	8.981	237	309053	4422.75	ng/ml	98
37) 2,4,6-Trichlorophenol	9.099	196	386229	4065.05	ng/ml	99
38) 2,4,5-Trichlorophenol	9.131	196	398737	4124.50	ng/ml	98
39) 1,1'-Biphenyl	9.286	154	1815386	3816.01	ng/ml	99
41) 2-Chloronaphthalene	9.313	162	1315972	3863.07	ng/ml	99
42) 2-Nitroaniline	9.409	138	493107	4191.12	ng/ml	92

see ML

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301921.D
Acq On : 30 Jan 2019 11:15 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL8
Misc : 1x, A18L334@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:25 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

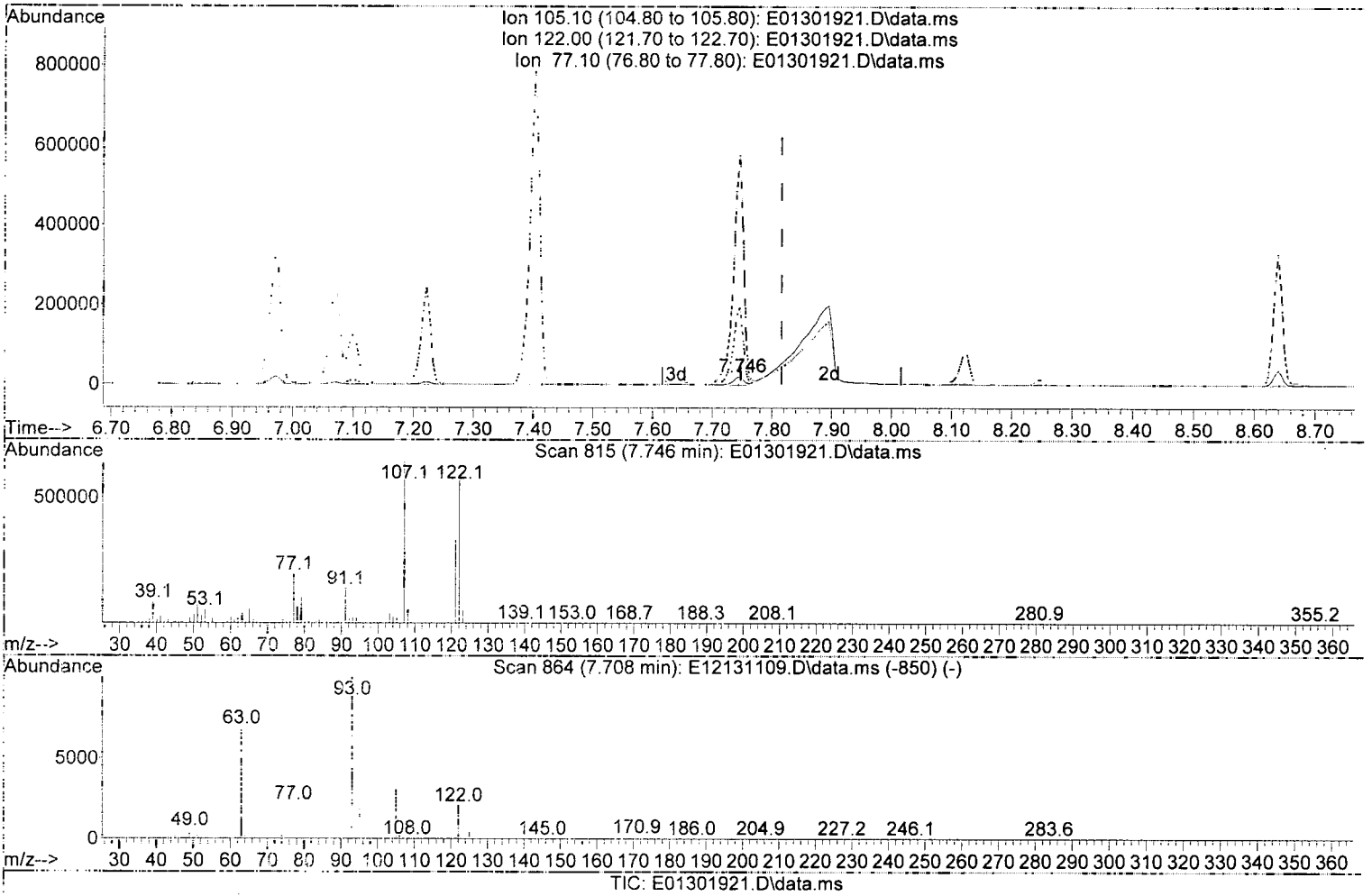
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	1294122	3896.32	ng/ml	98
44) 1,4-Dinitrobenzene	9.538	168	217979	4126.43	ng/ml	94
45) Dimethyl phthalate	9.597	163	1516221	4018.85	ng/ml	100
46) 1,3-Dinitrobenzene	9.623	168	251848	4262.23	ng/ml	93
47) 2,6-Dinitrotoluene	9.655	165	358077	4182.35	ng/ml	83
48) 1,2-Dinitrobenzene	9.720	168	167602	4488.01	ng/ml#	70
49) Acenaphthylene	9.741	152	2187965	4069.76	ng/ml	98
50) 3-Nitroaniline	9.832	138	413792	4234.09	ng/ml	99
51) Acenaphthene	9.917	153	1394892	3744.49	ng/ml	99
52) 2,4-Dinitrophenol	9.934	184	155885	3497.95	ng/ml	84
53) 4-Nitrophenol	9.987	139	332708	4250.50	ng/ml	84
54) 2,4-Dinitrotoluene	10.067	165	465322	4281.20	ng/ml	96
55) Dibenzofuran	10.089	168	1891403	3872.25	ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	10.169	232	322748	4234.05	ng/ml	95
57) 2,3,4,6-Tetrachlorophenol	10.212	232	339662	4302.14	ng/ml	97
58) Diethyl phthalate	10.308	149	1485515	3939.10	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.303	170	1153744	3803.82	ng/ml	98
60) Fluorene	10.442	166	1531912	3922.25	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.431	204	685667	4047.20	ng/ml	90
62) 4-Nitroaniline	10.463	138	430052	4287.27	ng/ml	80
63) 4,6-Dinitro-2-methylph...	10.490	198	212554	3646.85	ng/ml	88
65) N-Nitrosodiphenylamine	10.554	169	1315096	4109.98	ng/ml	98
66) Azobenzene (1,2-DPH)	10.591	77	1800004	4654.49	ng/ml	97
68) 4-Bromophenyl phenyl e...	10.934	248	385860	4514.28	ng/ml	89
69) Hexachlorobenzene	11.014	284	387180	4387.67	ng/ml	97
70) Pentachlorophenol (PCP)	11.207	266	237575	4358.53	ng/ml	97
71) Phenanthrene	11.426	178	2134782	3715.73	ng/ml	98
72) Anthracene	11.479	178	2161101	3891.54	ng/ml	99
73) Carbazole	11.634	167	2012508	4126.32	ng/ml	99
74) Di-n-butyl phthalate	11.971	149	2515776	4204.25	ng/ml	99
75) Fluoranthene	12.752	202	2228063	4032.58	ng/ml	98
76) Benzidine	12.918	184	2439653	7389.22	ng/ml	97
77) Pyrene	13.073	202	2275000	3995.42	ng/ml	99
80) Butyl benzyl phthalate	14.170	149	1137127	3950.39	ng/ml	95
81) Bis(2-ethylhexyl) adipate	14.352	129	1061254	4378.32	ng/ml	98
82) 3,3-Dichlorobenzidine	15.378	252	1371474	8438.71	ng/ml	99
83) Benz(a)anthracene	15.405	228	1987811	3883.75	ng/ml	99
84) Chrysene	15.496	228	1929550	3985.56	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.555	149	1587394	4208.90	ng/ml	96
87) Di-n-octyl phthalate	17.245	149	2594376	4008.11	ng/ml	99
88) Benzo(b)fluoranthene	18.047	252	1854491	3958.20	ng/ml	98
89) Benzo(k)fluoranthene	18.122	252	1814554	4001.36	ng/ml	97
90) Benzo(b+k)fluoranthene	18.122	252	3805265	7973.36	ng/ml	97
91) Benzo(e)pyrene	18.716	252	1835807	4364.14	ng/ml	100
92) Benzo(a)pyrene	18.839	252	1767067	4127.08	ng/ml	99
93) Perylene	19.042	252	1826834	3909.82	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.390	276	1577648	3710.50	ng/ml	95
96) Dibenz(a,h)anthracene	21.444	278	1499940	3690.13	ng/ml	95
97) Benzo(g,h,i)perylene	21.931	276	1580720	3691.01	ng/ml	88

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

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301921.D
Acq On : 30 Jan 2019 11:15 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL8
Misc : 1x, A18L334@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:25 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



(26) Benzoic acid (T)

7.746min (-0.070) 1113.51 ng/ml

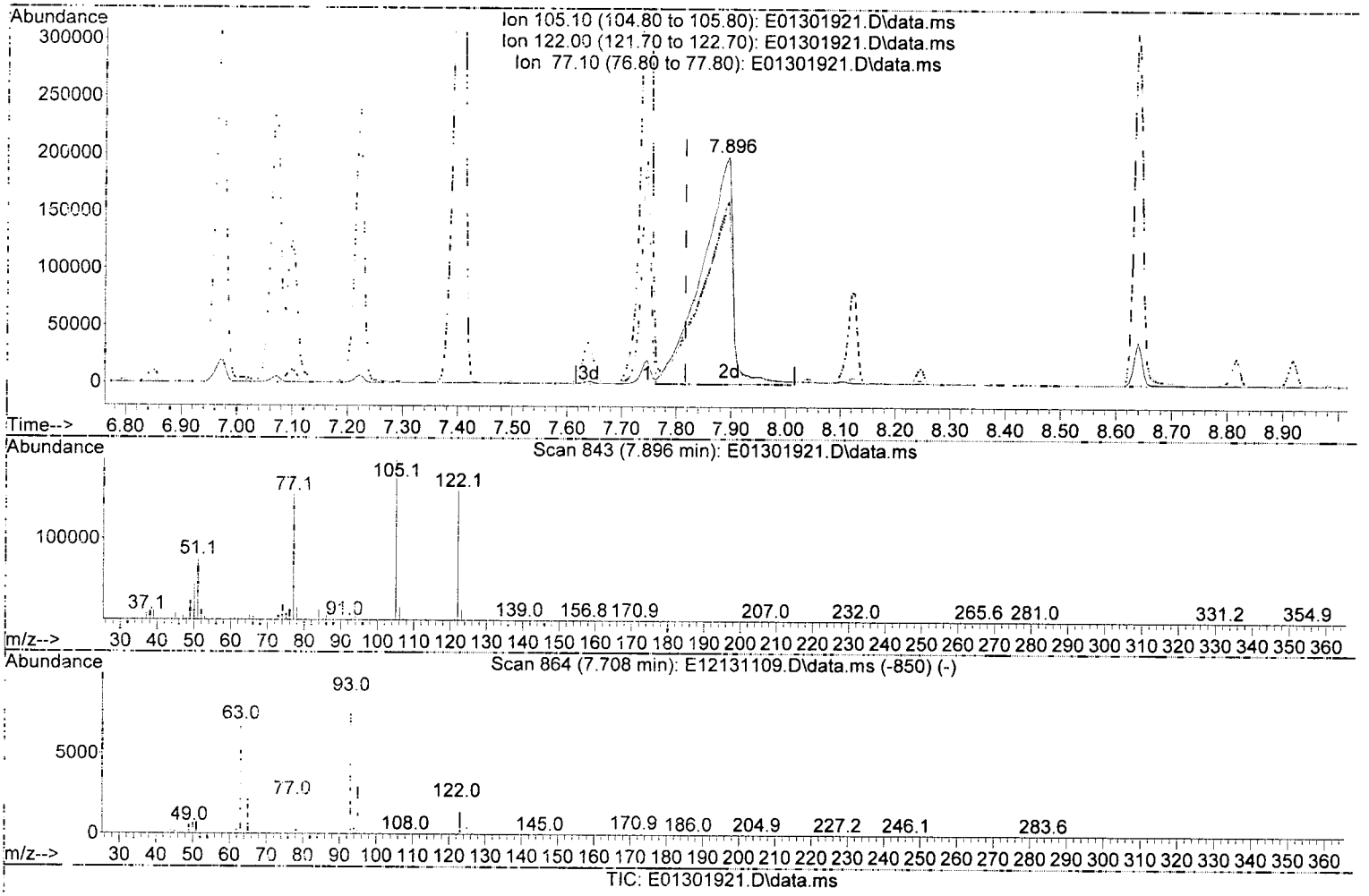
response 25997

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	2760.05#
77.10	85.50	931.34#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301921.D
Acq On : 30 Jan 2019 11:15 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL8
Misc : 1x, A18L334@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:25 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E01301921.D\data.ms

(26) Benzoic acid (T)

7.896min (+ 0.080) 7389.38 ng/ml m

response 790966

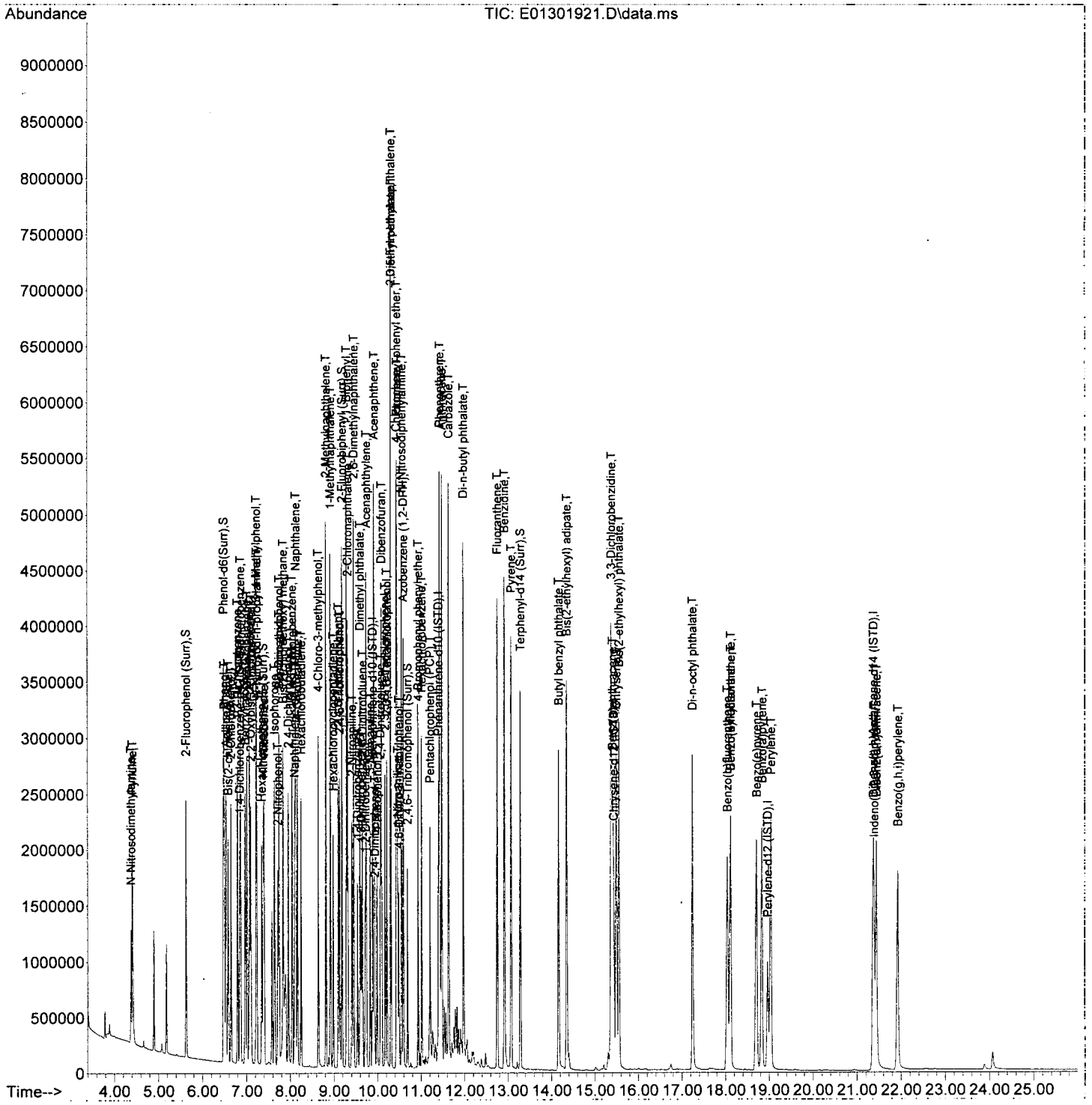
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	80.54
77.10	85.50	78.13
0.00	0.00	0.00

1/31/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301921.D
Acq On : 30 Jan 2019 11:15 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL8
Misc : 1x, A18L334@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:25 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301922.D
Acq On : 30 Jan 2019 11:51 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL9
Misc : 1x, A18L335@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:30 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

GK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	290473	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.104	136	1148108	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.885	162	556496	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.404	188	1043364	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.443	240	927852	2000.00	ng/ml	0.03
86) Perylene-d12 (ISTD)	18.973	264	856100	2000.00	ng/ml	0.02
94) Dibenz(a,h)Anthrcene-d...	21.385	292	715157	2000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	1170363	6660.34	ng/ml	0.00
5) Phenol-d6(Surr)	6.484	99	1526449	6681.57	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.387	82	1512631	7387.54	ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.185	172	2343826	5464.20	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.693	330	299172	7432.08	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.292	244	2557660	6092.00	ng/ml	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.387	74	871542	6922.39	ng/ml	85
3) Pyridine	4.419	79	1414684	6981.16	ng/ml	93
6) Phenol	6.500	94	1606385	6566.21	ng/ml	93
7) Aniline	6.542	93	2085810	6949.04	ng/ml	96
8) Bis(2-chloroethyl) ether	6.591	93	1215843	5920.94	ng/ml	95
9) 2-Chlorophenol	6.655	128	1233532	6413.88	ng/ml	97
10) 1,3-Dichlorobenzene	6.799	146	1285655	5584.18	ng/ml	97
11) 1,4-Dichlorobenzene	6.863	146	1303668	5558.04	ng/ml	99
12) Benzyl alcohol	6.981	108	832173	6136.30	ng/ml	91
13) 1,2-Dichlorobenzene	7.013	146	1239034	5618.50	ng/ml	99
14) 2-Methylphenol	7.072	107	1006886	6608.16	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.104	45	1862706	6679.16	ng/ml	92
16) N-Nitrosodi-n-propylamine	7.243	70	964528	6748.99	ng/ml	94
17) 3+4-Methylphenol	7.227	107	1282429	6500.65	ng/ml	94
18) Hexachloroethane	7.345	117	494803	6011.35	ng/ml	85
20) Nitrobenzene	7.409	77	1366079	6710.99	ng/ml	92
22) Isophorone	7.644	82	2507237	6715.49	ng/ml	97
23) 2-Nitrophenol	7.719	139	619284	6182.97	ng/ml	88
24) 2,4-Dimethylphenol	7.751	122	1081606	6568.96	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.842	93	1460686	6119.43	ng/ml	99
26) Benzoic acid	~~7.751~~	105	40451	1248.51	ng/ml#	1
27) 2,4-Dichlorophenol	7.960	162	912238	6287.36	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.045	180	947888	5570.66	ng/ml	95
29) Naphthalene	8.126	128	3450382	5507.27	ng/ml	100
30) 4-Chloroaniline	8.168	127	1415802	6147.46	ng/ml	97
31) Hexachlorobutadiene	8.249	225	473675	5667.36	ng/ml	98
32) 4-Chloro-3-methylphenol	8.644	107	1026539	6084.76	ng/ml	97
33) 2-Methylnaphthalene	8.821	142	2256262	5520.59	ng/ml	97
34) 1-Methylnaphthalene	8.923	142	2130936	5353.31	ng/ml	98
36) Hexachlorocyclopentadiene	8.981	237	489813	6791.53	ng/ml	99
37) 2,4,6-Trichlorophenol	9.099	196	617479	6165.33	ng/ml	98
38) 2,4,5-Trichlorophenol	9.136	196	611970	5831.75	ng/ml	97
39) 1,1'-Biphenyl	9.292	154	2626639	5349.58	ng/ml	98
41) 2-Chloronaphthalene	9.318	162	1970530	5604.63	ng/ml	99
42) 2-Nitroaniline	9.420	138	778160	6408.20	ng/ml	84

See MJ

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301922.D
Acq On : 30 Jan 2019 11:51 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL9
Misc : 1x, A18L335@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:30 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

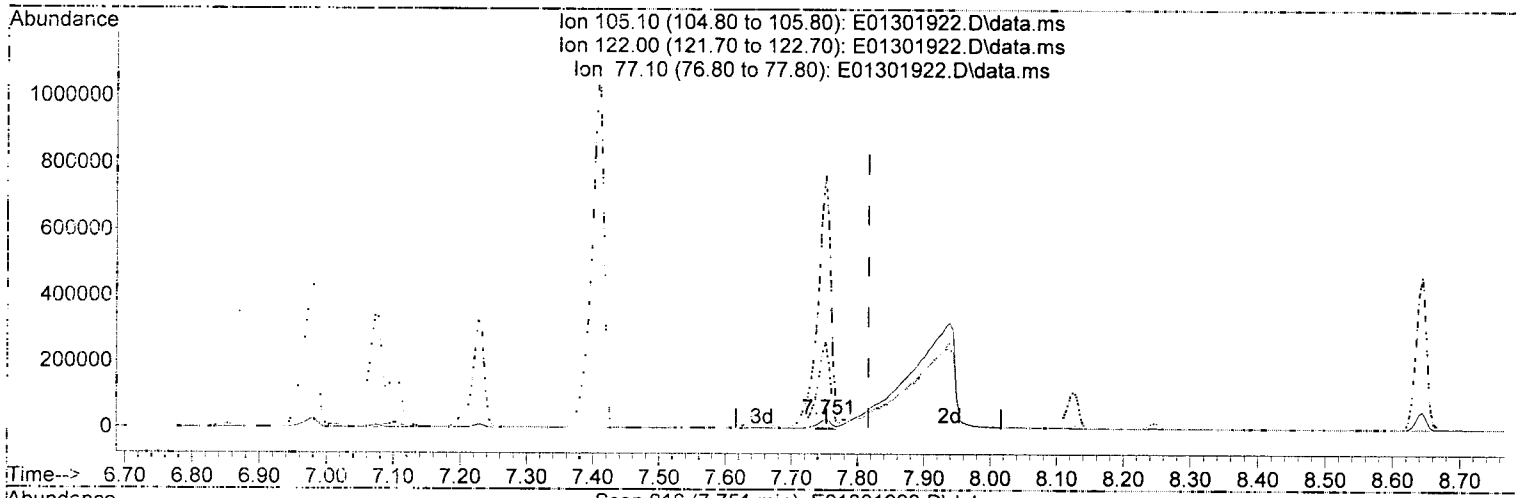
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.452	156	1873897	5466.42	ng/ml	99
44) 1,4-Dinitrobenzene	9.543	168	353235	6478.90	ng/ml	93
45) Dimethyl phthalate	9.607	163	2274017	5839.97	ng/ml	100
46) 1,3-Dinitrobenzene	9.634	168	398456	6533.67	ng/ml	91
47) 2,6-Dinitrotoluene	9.661	165	550344	6228.11	ng/ml	84
48) 1,2-Dinitrobenzene	9.725	168	260513	6758.99	ng/ml#	74
49) Acenaphthylene	9.746	152	3178592	5714.43	ng/ml	98
50) 3-Nitroaniline	9.843	138	645615	6400.74	ng/ml	96
51) Acenaphthene	9.923	153	2033161	5288.13	ng/ml	99
52) 2,4-Dinitrophenol	9.939	184	286154	5414.16	ng/ml	85
53) 4-Nitrophenol	9.998	139	535869	6292.27	ng/ml	83
54) 2,4-Dinitrotoluene	10.078	165	723845	6452.61	ng/ml	93
55) Dibenzofuran	10.094	168	2796501	5547.19	ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	10.174	232	514203	6235.27	ng/ml	93
57) 2,3,4,6-Tetrachlorophenol	10.217	232	530685	6357.49	ng/ml	95
58) Diethyl phthalate	10.313	149	2138606	5494.51	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.308	170	1629306	5204.64	ng/ml	98
60) Fluorene	10.447	166	2221082	5509.90	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.436	204	1030051	5890.85	ng/ml	88
62) 4-Nitroaniline	10.474	138	669009	6462.04	ng/ml	80
63) 4,6-Dinitro-2-methylph...	10.500	198	362560	5558.92	ng/ml	85
65) N-Nitrosodiphenylamine	10.559	169	1960689	5821.00	ng/ml	99
66) Azobenzene (1,2-DPH)	10.597	77	2612835	6418.26	ng/ml	94
68) 4-Bromophenyl phenyl e...	10.934	248	602434	6695.38	ng/ml	91
69) Hexachlorobenzene	11.019	284	606966	6534.21	ng/ml	95
70) Pentachlorophenol (PCP)	11.206	266	395292	6524.62	ng/ml	97
71) Phenanthrene	11.431	178	3142052	5195.31	ng/ml	98
72) Anthracene	11.485	178	3204108	5481.01	ng/ml	99
73) Carbazole	11.640	167	2995482	5834.43	ng/ml	99
74) Di-n-butyl phthalate	11.977	149	3697863	5870.49	ng/ml	99
75) Fluoranthene	12.758	202	3367710	5790.24	ng/ml	97
76) Benzidine	12.929	184	3789861	10411.39	ng/ml	98
77) Pyrene	13.078	202	3451729	5758.71	ng/ml	99
80) Butyl benzyl phthalate	14.175	149	1765700	5646.23	ng/ml	94
81) Bis(2-ethylhexyl) adipate	14.357	129	1647877	6501.08	ng/ml	99
82) 3,3-Dichlorobenzidine	15.400	252	2297909	12597.23	ng/ml	99
83) Benz(a)anthracene	15.421	228	3081071	5756.40	ng/ml	99
84) Chrysene	15.512	228	2949203	5825.19	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.560	149	2465950	6252.31	ng/ml	95
87) Di-n-octyl phthalate	17.256	149	4069870	5590.76	ng/ml	98
88) Benzo(b)fluoranthene	18.063	252	2914506	5696.15	ng/ml	99
89) Benzo(k)fluoranthene	18.138	252	2736373	5680.51	ng/ml	97
90) Benzo(b+k)fluoranthene	18.138	252	5886892	11520.04	ng/ml	97
91) Benzo(e)pyrene	18.727	252	2825299	6402.81	ng/ml	99
92) Benzo(a)pyrene	18.855	252	2720886	5863.18	ng/ml	98
93) Perylene	19.064	252	2815058	5743.54	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.406	276	2513172	5722.50	ng/ml	94
96) Dibenz(a,h)anthracene	21.465	278	2316997	5518.68	ng/ml	96
97) Benzo(g,h,i)perylene	21.952	276	2394723	5413.62	ng/ml	85

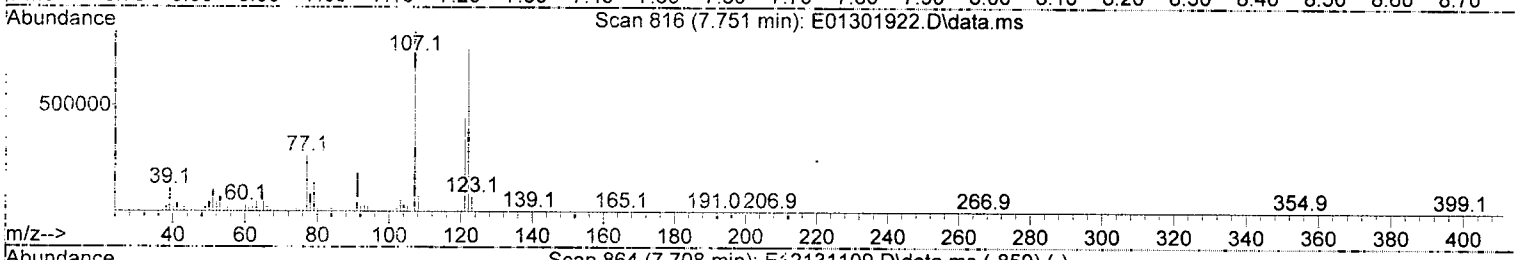
(#) = qualifier out of range (m) = manual integration (+) = signals summed

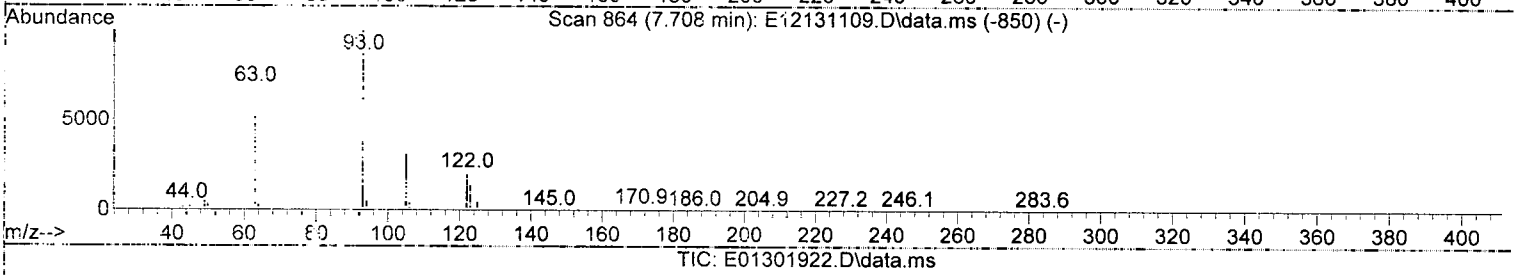
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301922.D
Acq On : 30 Jan 2019 11:51 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL9
Misc : 1x, A18L335@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:30 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301922.D\data.ms

(26) Benzoic acid (T)

7.751min (-0.064) 1248.51 ng/ml

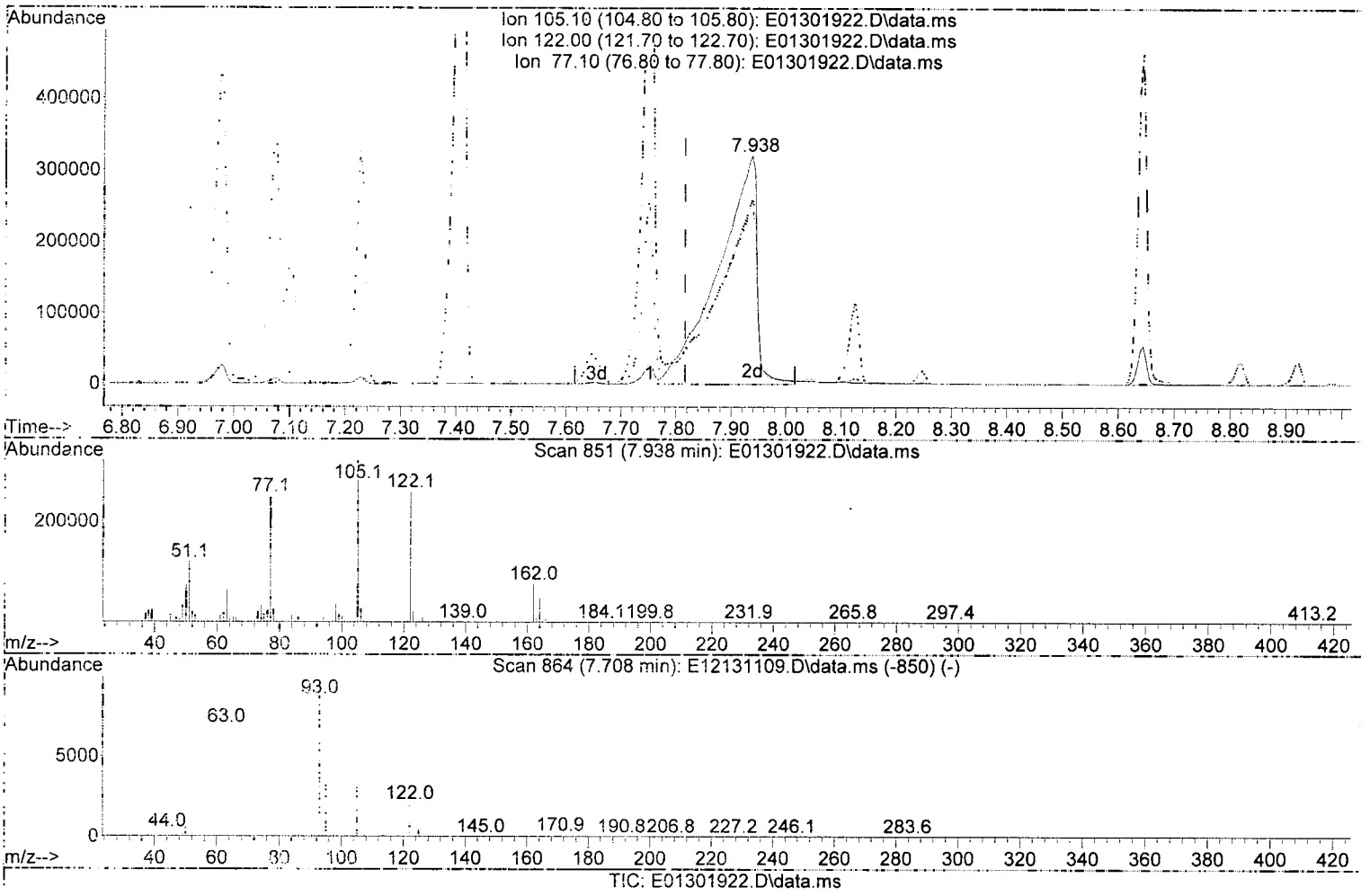
response 40451

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	**2724.94#**
77.10	85.50	**925.17#**
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301922.D
Acq On : 30 Jan 2019 11:51 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL9
Misc : 1x, A18L335@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:30 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



TIC: E01301922.D\data.ms

(26) Benzoic acid (T)

7.938min (+ 0.123) 11774.00 ng/ml m JK 1/31/19

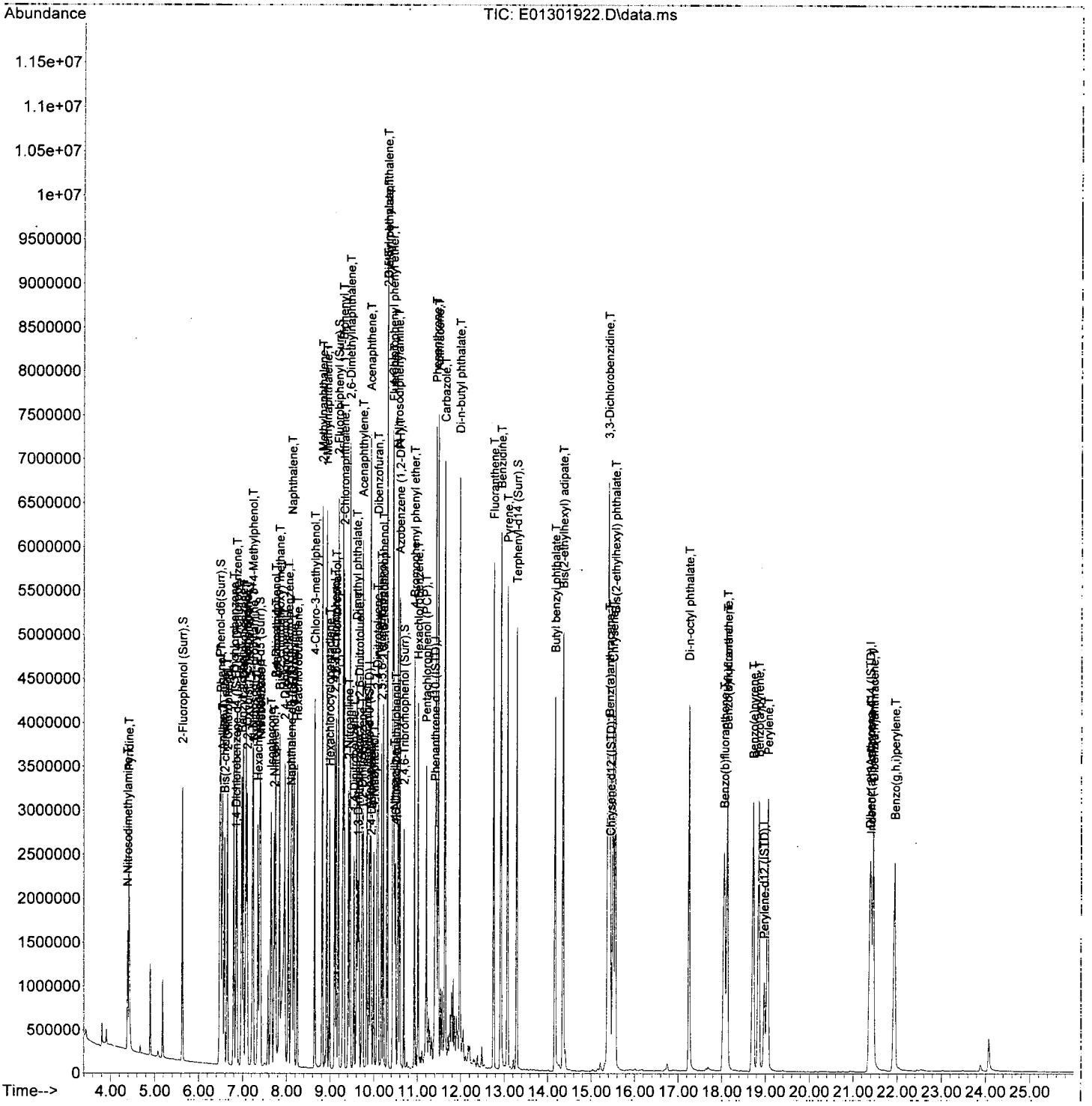
response 1567369

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	81.01
77.10	85.50	78.27
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301922.D
Acq On : 30 Jan 2019 11:51 pm
Operator : JK/ AMS /DTH
Sample : 9A30046-CAL9
Misc : 1x, A18L335@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:30 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301923.D
Acq.On : 31 Jan 2019 12:28 am
Operator : JK/ AMS /DTH
Sample : 9A30046-CALA
Misc : 1x, A18L336@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:36 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

JK 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.853	152	280934	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.104	136	1114798	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.886	162	543018	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.405	188	1023802	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.454	240	907570	2000.00	ng/ml	0.04
86) Perylene-d12 (ISTD)	18.978	264	832510	2000.00	ng/ml	0.03
94) Dibenz(a,h)Anthrcene-d...	21.396	292	683312	2000.00	ng/ml	0.05
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.633	112	1496600	8806.09	ng/ml	0.00
5) Phenol-d6(Surr)	6.495	99	1930075	8735.18	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.393	82	1731910	8745.68	ng/ml	0.02
40) 2-Fluorobiphenyl (Surr)	9.190	172	2900077	6928.80	ng/ml	0.01
67) 2,4,6-Tribromophenol (...	10.699	330	403091	9663.57	ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.293	244	3299466	8034.51	ng/ml	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.393	74	1122619	9219.37	ng/ml	83
3) Pyridine	4.419	79	1799769	9183.04	ng/ml	93
6) Phenol	6.511	94	2021684	8544.36	ng/ml	94
7) Aniline	6.548	93	2632489	9068.14	ng/ml	96
8) Bis(2-chloroethyl) ether	6.596	93	1499102	7548.25	ng/ml	95
9) 2-Chlorophenol	6.655	128	1563047	8403.19	ng/ml	97
10) 1,3-Dichlorobenzene	6.805	146	1629041	7315.91	ng/ml	97
11) 1,4-Dichlorobenzene	6.869	146	1640871	7233.20	ng/ml	100
12) Benzyl alcohol	6.987	108	1046185	7688.30	ng/ml	91
13) 1,2-Dichlorobenzene	7.019	146	1561940	7323.23	ng/ml	99
14) 2-Methylphenol	7.078	107	1251343	8491.37	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.104	45	2259312	8376.35	ng/ml	90
16) N-Nitrosodi-n-propylamine	7.249	70	1199931	8681.24	ng/ml	94
17) 3+4-Methylphenol	7.238	107	1590888	8338.05	ng/ml	95
18) Hexachloroethane	7.350	117	626658	7871.76	ng/ml	83
20) Nitrobenzene	7.415	77	1701352	8641.84	ng/ml	90
22) Isophorone	7.655	82	3162533	8723.77	ng/ml	96
23) 2-Nitrophenol	7.725	139	801876	8245.20	ng/ml	86
24) 2,4-Dimethylphenol	7.757	122	1321200	8263.85	ng/ml	96
25) Bis(2-chloroethoxy) me...	7.848	93	1803114	7779.71	ng/ml	100
26) Benzoic acid	~~7.757~~	~~105~~	48296	1340.17	~~ng/ml#~~	1
27) 2,4-Dichlorophenol	7.965	162	1159632	8231.27	ng/ml	99
28) 1,2,4-Trichlorobenzene	8.046	180	1206585	7302.88	ng/ml	95
29) Naphthalene	8.131	128	4249185	6984.92	ng/ml	99
30) 4-Chloroaniline	8.174	127	1793320	8019.32	ng/ml	96
31) Hexachlorobutadiene	8.249	225	608097	7493.07	ng/ml	97
32) 4-Chloro-3-methylphenol	8.645	107	1296093	7677.52	ng/ml	98
33) 2-Methylnaphthalene	8.821	142	2767888	6974.79	ng/ml	97
34) 1-Methylnaphthalene	8.923	142	2608946	6750.00	ng/ml	98
36) Hexachlorocyclopentadiene	8.987	237	607633	8634.28	ng/ml	98
37) 2,4,6-Trichlorophenol	9.105	196	774818	7807.23	ng/ml	98
38) 2,4,5-Trichlorophenol	9.142	196	807064	7518.74	ng/ml	98
39) 1,1'-Biphenyl	9.297	154	3199105	6677.22	ng/ml	97
41) 2-Chloronaphthalene	9.324	162	2468792	7196.08	ng/ml	100
42) 2-Nitroaniline	9.426	138	1014716	8563.66	ng/ml	83

see NJ

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301923.D
Acq On : 31 Jan 2019 12:28 am
Operator : JK/ AMS /DTH
Sample : 9A30046-CALA
Misc : 1x, A18L336@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:36 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

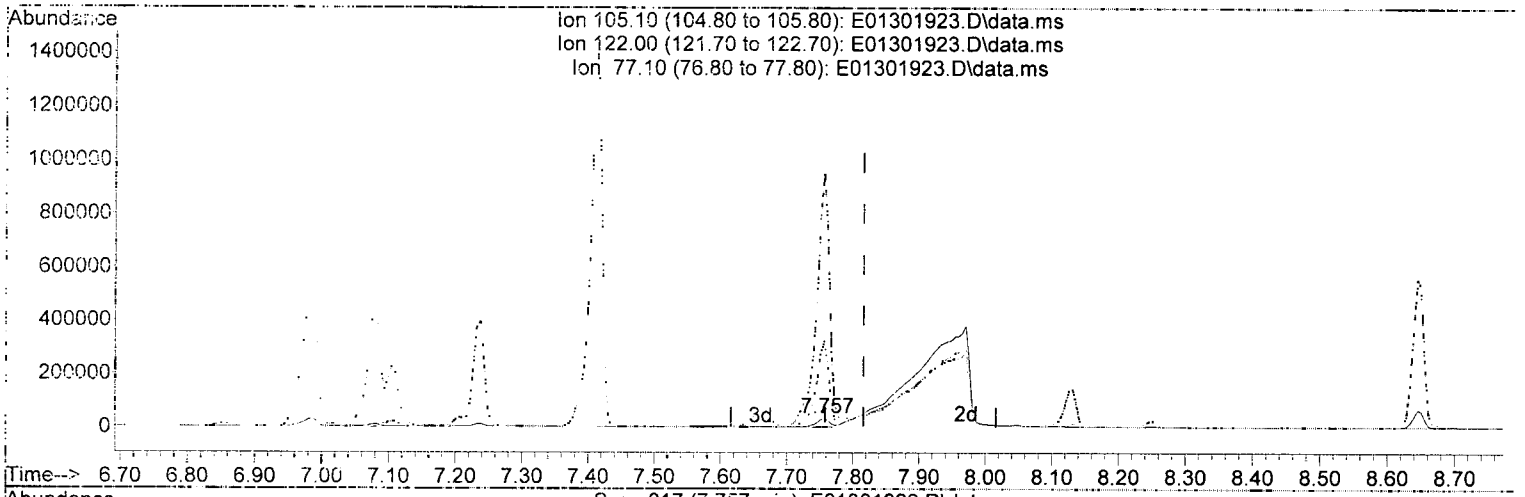
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.458	156	2321419	6939.99	ng/ml	98
44)	1,4-Dinitrobenzene	9.549	168	468426	8804.93	ng/ml	89
45)	Dimethyl phthalate	9.613	163	2911473	7662.63	ng/ml	99
46)	1,3-Dinitrobenzene	9.645	168	525895	8837.38	ng/ml	95
47)	2,6-Dinitrotoluene	9.666	165	715275	8295.50	ng/ml	82
48)	1,2-Dinitrobenzene	9.736	168	333646	8871.28	ng/ml#	70
49)	Acenaphthylene	9.747	152	3948147	7274.10	ng/ml	97
50)	3-Nitroaniline	9.848	138	834824	8482.01	ng/ml	97
51)	Acenaphthene	9.928	153	2520666	6718.82	ng/ml	99
52)	2,4-Dinitrophenol	9.950	184	400481	7030.55	ng/ml	79
53)	4-Nitrophenol	10.009	139	695415	8031.66	ng/ml	82
54)	2,4-Dinitrotoluene	10.083	165	930978	8505.05	ng/ml	93
55)	Dibenzofuran	10.100	168	3482255	7078.91	ng/ml	95
56)	2,3,5,6-Tetrachlorophenol	10.174	232	669191	8000.00	ng/ml	95
57)	2,3,4,6-Tetrachlorophenol	10.223	232	692769	8323.33	ng/ml	94
58)	Diethyl phthalate	10.319	149	2624972	6911.48	ng/ml	95
59)	2,3,5-Trimethylnaphtha...	10.308	170	2005572	6565.60	ng/ml	99
60)	Fluorene	10.453	166	2767503	7035.83	ng/ml	98
61)	4-Chlorophenyl phenyl ...	10.436	204	1303879	7641.95	ng/ml	90
62)	4-Nitroaniline	10.485	138	879385	8704.92	ng/ml	80
63)	4,6-Dinitro-2-methylph...	10.506	198	494172	7276.17	ng/ml	86
65)	N-Nitrosodiphenylamine	10.565	169	2473583	7484.03	ng/ml	99
66)	Azobenzene (1,2-DPH)	10.602	77	3228382	8081.84	ng/ml	91
68)	4-Bromophenyl phenyl e...	10.939	248	789349	8940.36	ng/ml	88
69)	Hexachlorobenzene	11.025	284	801760	8796.15	ng/ml	92
70)	Pentachlorophenol (PCP)	11.212	266	524085	8437.76	ng/ml	97
71)	Phenanthrene	11.437	178	3940073	6639.30	ng/ml	98
72)	Anthracene	11.490	178	3984243	6945.75	ng/ml	99
73)	Carbazole	11.645	167	3792212	7527.39	ng/ml	99
74)	Di-n-butyl phthalate	11.977	149	4593818	7432.19	ng/ml	99
75)	Fluoranthene	12.763	202	4263906	7471.19	ng/ml	97
76)	Benzidine	12.934	184	4855656	13082.99	ng/ml	99
77)	Pyrene	13.084	202	4397051	7476.01	ng/ml	98
80)	Butyl benzyl phthalate	14.181	149	2274562	7195.35	ng/ml	94
81)	Bis(2-ethylhexyl) adipate	14.362	129	2130742	8593.90	ng/ml	98
82)	3,3-Dichlorobenzidine	15.411	252	2995565	15923.87	ng/ml	99
83)	Benz(a)anthracene	15.432	228	3973101	7588.88	ng/ml	99
84)	Chrysene	15.523	228	3809563	7692.71	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.566	149	3197212	8287.55	ng/ml	95
87)	Di-n-octyl phthalate	17.267	149	5278776	7035.45	ng/ml	98
88)	Benzo(b)fluoranthene	18.080	252	3991347	7678.49	ng/ml	99
89)	Benzo(k)fluoranthene	18.149	252	3282962	6944.39	ng/ml	96
90)	Benzo(b+k)fluoranthene	18.149	252	7617275	15030.09	ng/ml	96
91)	Benzo(e)pyrene	18.743	252	3659927	8529.31	ng/ml	99
92)	Benzo(a)pyrene	18.871	252	3529245	7581.59	ng/ml	99
93)	Perylene	19.075	252	3618955	7592.94	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.417	276	3220620	7675.13	ng/ml	95
96)	Dibenz(a,h)anthracene	21.476	278	2936332	7319.76	ng/ml	96
97)	Benzo(g,h,i)perylene	21.963	276	2911992	6889.77	ng/ml	85

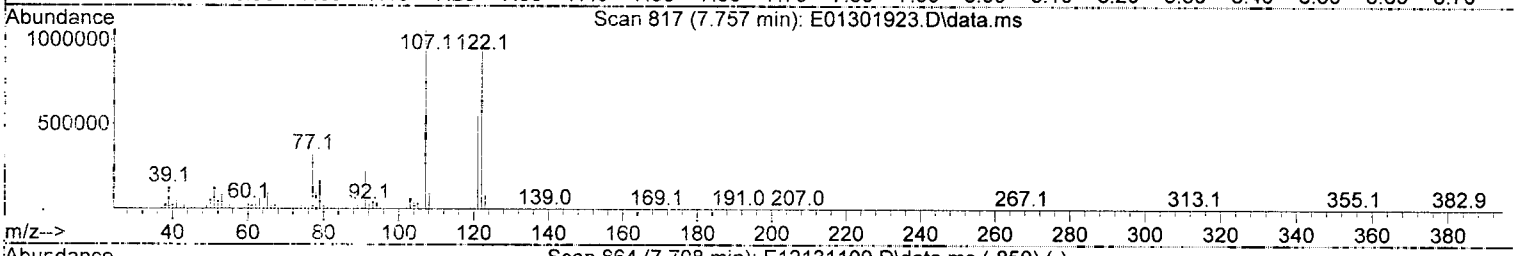
(#) = qualifier out of range (m) = manual integration (+) = signals summed

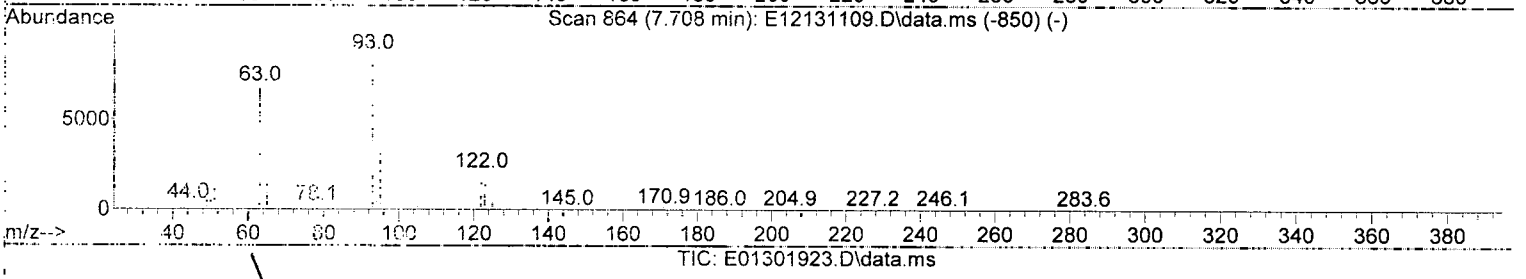
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301923.D
Acq On : 31 Jan 2019 12:28 am
Operator : JK/ AMS /DTH
Sample : 9A30046-CALA
Misc : 1x, A18L336@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:36 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301923.D\data.ms

(26) Benzoic acid (T)

7.757min (-0.059) 1340.17 ng/ml

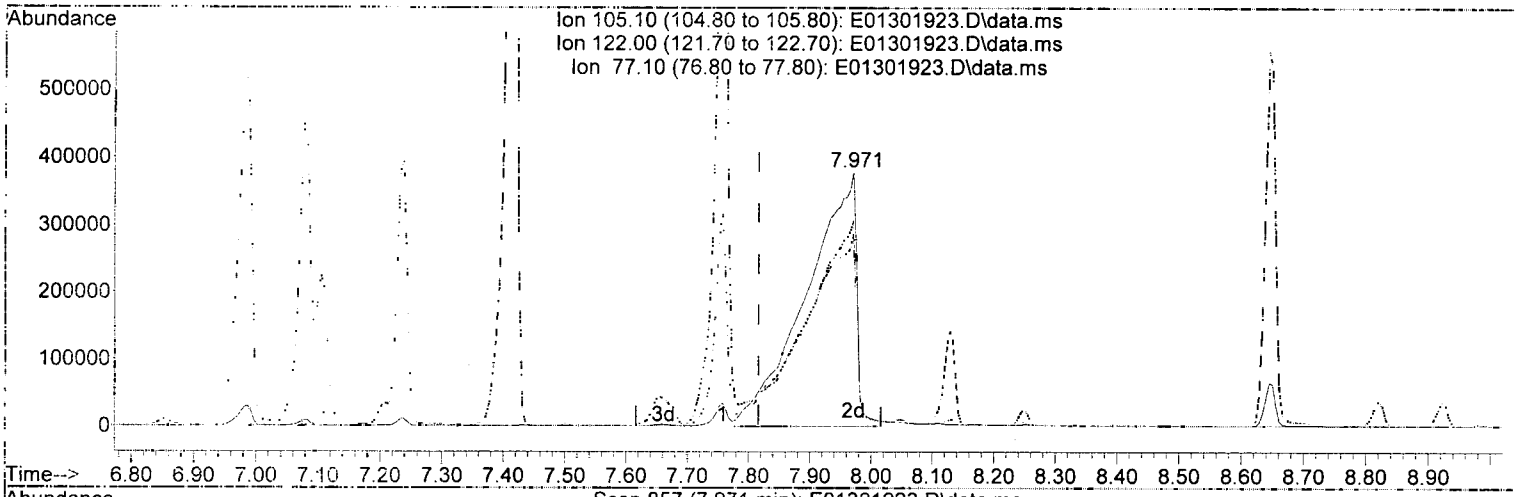
response 48296

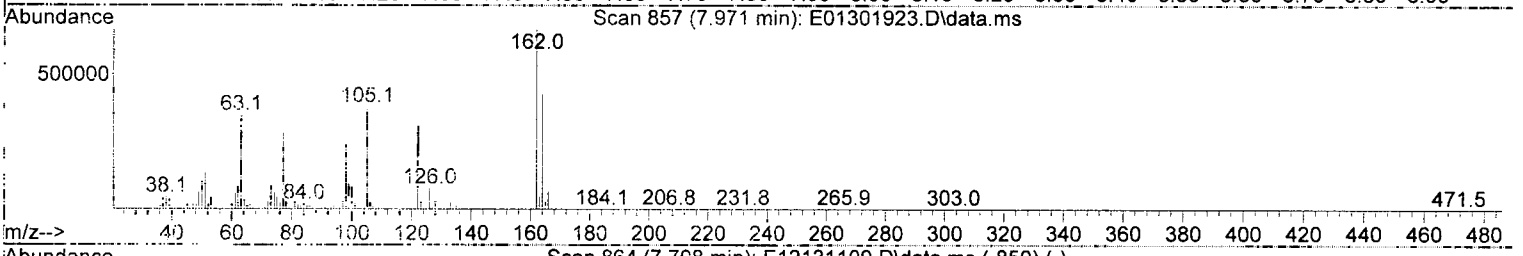
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	2734.05#
77.10	85.50	927.68#
0.00	0.00	0.00

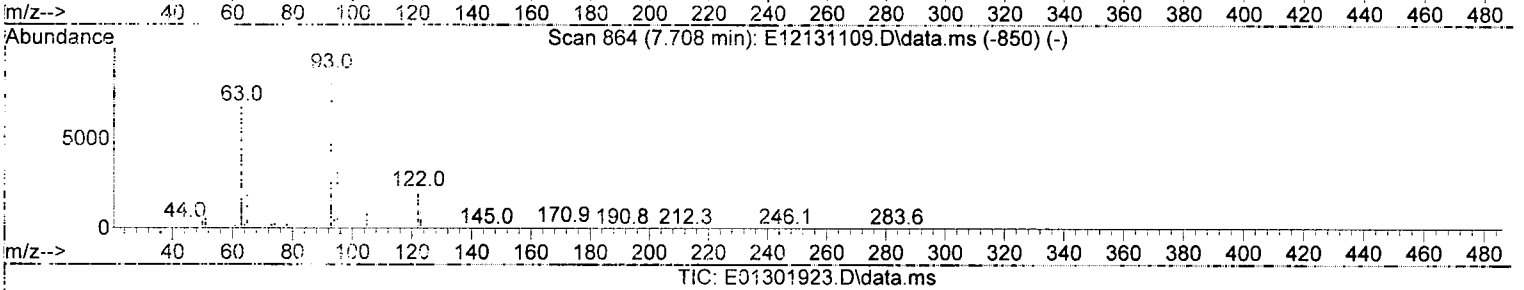
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301923.D
Acq On : 31 Jan 2019 12:28 am
Operator : JK/ AMS /DTH
Sample : 9A30046-CALA
Misc : 1x, A18L336@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:36 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5







TIC: E01301923.D\data.ms

(26) Benzoic acid (T)

7.971min (+ 0.155) 14891.92 ng/ml m

response 2134233

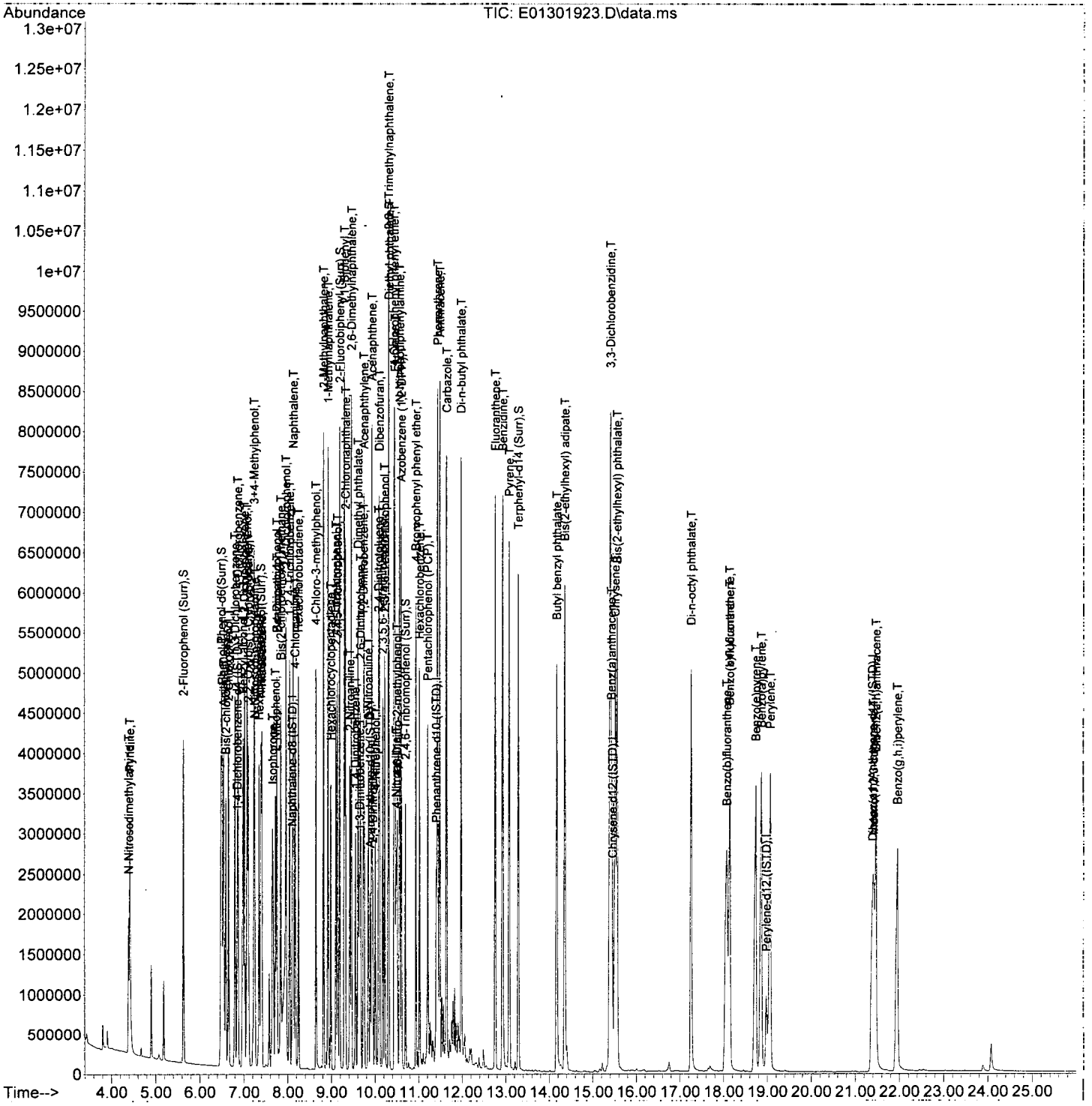
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	79.60	80.84
77.10	85.50	75.70
0.00	0.00	0.00

1/31/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301923.D
Acq On : 31 Jan 2019 12:28 am
Operator : JK/ AMS /DTH
Sample : 9A30046-CALA
Misc : 1x, A18L336@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:36 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

GJ 1/31/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	277641	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1090359	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	529225	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	987863	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	891477	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	813758	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.353	292	665943	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	177544	1057.07	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	240509	1101.41	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	220297	1125.63	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	400961	982.93	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	41202	1287.03	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	437453	1084.47	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.376	74	135584	1126.67	ng/ml	86
3) Pyridine	4.409	79	218654	1128.88	ng/ml	95
6) Phenol	6.489	94	247692	1059.25	ng/ml	91
7) Aniline	6.532	93	309908	1080.20	ng/ml	95
8) Bis(2-chloroethyl) ether	6.580	93	206192	1050.53	ng/ml	96
9) 2-Chlorophenol	6.650	128	191059	1039.35	ng/ml	96
10) 1,3-Dichlorobenzene	6.799	146	210822	958.02	ng/ml	96
11) 1,4-Dichlorobenzene	6.864	146	214824	958.21	ng/ml	99
12) Benzyl alcohol	6.965	108	113801	1019.39	ng/ml	94
13) 1,2-Dichlorobenzene	7.013	146	204761	971.42	ng/ml	99
14) 2-Methylphenol	7.067	107	158178	1086.10	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	317454	1190.91	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.222	70	158369	1159.36	ng/ml	96
17) 3+4-Methylphenol	7.211	107	206087	1092.94	ng/ml	94
18) Hexachloroethane	7.345	117	78838	1002.07	ng/ml	85
20) Nitrobenzene	7.398	77	219235	1126.79	ng/ml	92
22) Isophorone	7.628	82	400466	1129.44	ng/ml	96
23) 2-Nitrophenol	7.714	139	91410	960.98	ng/ml	87
24) 2,4-Dimethylphenol	7.741	122	164651	1052.94	ng/ml	93
25) Bis(2-chloroethoxy) me...	7.832	93	248424	1095.87	ng/ml	99
26) Benzoic acid	7.821	105	122981	2100.46	ng/ml	96
27) 2,4-Dichlorophenol	7.949	162	135939	986.55	ng/ml	100
28) 1,2,4-Trichlorobenzene	8.040	180	154987	959.09	ng/ml	96
29) Naphthalene	8.120	128	591606	994.30	ng/ml	99
30) 4-Chloroaniline	8.163	127	222109	1015.48	ng/ml	96
31) Hexachlorobutadiene	8.243	225	77172	972.24	ng/ml	98
32) 4-Chloro-3-methylphenol	8.634	107	147250	1036.87	ng/ml	98
33) 2-Methylnaphthalene	8.816	142	394231	1015.69	ng/ml	96
34) 1-Methylnaphthalene	8.917	142	370979	981.33	ng/ml	97
36) Hexachlorocyclopentadiene	8.982	237	66625	971.40	ng/ml	98
37) 2,4,6-Trichlorophenol	9.094	196	87821	989.42	ng/ml	99
38) 2,4,5-Trichlorophenol	9.131	196	91305	1066.93	ng/ml	99
39) 1,1'-Biphenyl	9.281	154	462795	991.18	ng/ml	98
41) 2-Chloronaphthalene	9.308	162	332442	994.26	ng/ml	99
42) 2-Nitroaniline	9.404	138	111786	968.00	ng/ml	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5

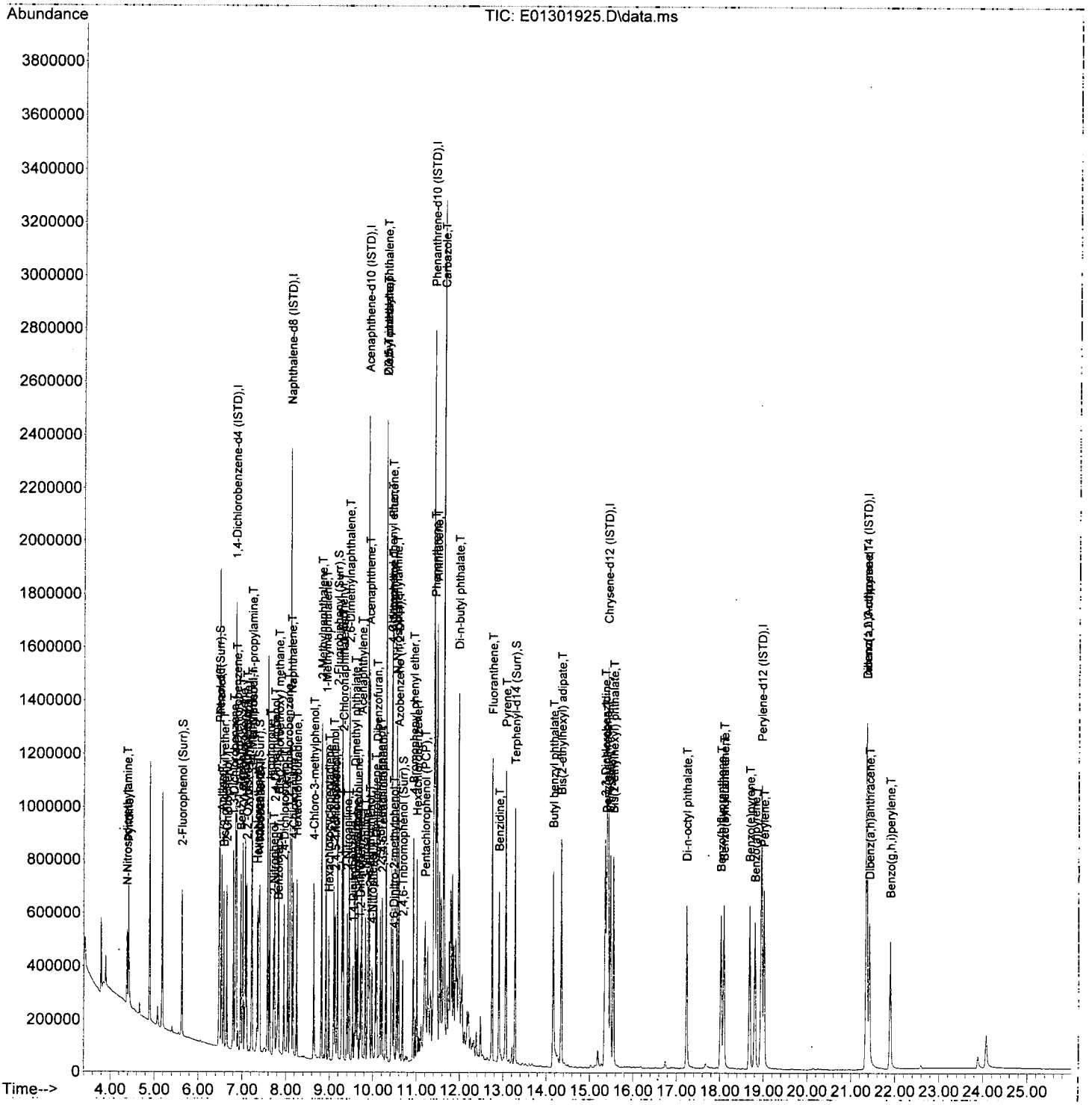
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43)	2,6-Dimethylnaphthalene	9.447	156	338148	1037.26	ng/ml	97
44)	1,4-Dinitrobenzene	9.533	168	44630	860.77	ng/ml	88
45)	Dimethyl phthalate	9.581	163	380922	1028.67	ng/ml	99
46)	1,3-Dinitrobenzene	9.613	168	57201	986.28	ng/ml	93
47)	2,6-Dinitrotoluene	9.645	165	84450	1004.95	ng/ml	86
48)	1,2-Dinitrobenzene	9.704	168	39174	1068.74	ng/ml#	72
49)	Acenaphthylene	9.736	152	551004	1041.63	ng/ml	99
50)	3-Nitroaniline	9.821	138	96272	1003.64	ng/ml	97
51)	Acenaphthene	9.912	153	361137	987.70	ng/ml	100
52)	2,4-Dinitrophenol	9.923	184	21125	730.73	ng/ml	87
53)	4-Nitrophenol	9.971	139	70280	1043.52	ng/ml	84
54)	2,4-Dinitrotoluene	10.057	165	108807	1019.92	ng/ml	93
55)	Dibenzofuran	10.089	168	483823	1009.17	ng/ml	92
56)	2,3,5,6-Tetrachlorophenol	10.164	232	71138	1053.44	ng/ml	96
57)	2,3,4,6-Tetrachlorophenol	10.212	232	77430	1057.03	ng/ml	92
58)	Diethyl phthalate	10.297	149	389146	1051.31	ng/ml	96
59)	2,3,5-Trimethylnaphtha...	10.297	170	309071	1038.17	ng/ml	97
60)	Fluorene	10.436	166	402110	1048.93	ng/ml	100
61)	4-Chlorophenyl phenyl ...	10.426	204	173539	1043.61	ng/ml	92
62)	4-Nitroaniline	10.442	138	103597	1052.22	ng/ml	79
63)	4,6-Dinitro-2-methylph...	10.474	198	40799	861.78	ng/ml	91
65)	N-Nitrosodiphenylamine	10.543	169	335063	1050.64	ng/ml	97
66)	Azobenzene (1,2-DPH)	10.586	77	474353	1230.68	ng/ml	99
68)	4-Bromophenyl phenyl e...	10.929	248	96780	1136.03	ng/ml	94
69)	Hexachlorobenzene	11.009	284	96201	1093.82	ng/ml	96
70)	Pentachlorophenol (PCP)	11.201	266	45098	955.89	ng/ml	97
71)	Phenanthrene	11.421	178	562373	982.11	ng/ml	99
72)	Anthracene	11.474	178	575013	1038.89	ng/ml	99
73)	Carbazole	11.629	167	522125	1074.10	ng/ml	99
74)	Di-n-butyl phthalate	11.971	149	663326	1112.22	ng/ml	99
75)	Fluoranthene	12.747	202	584676	1061.74	ng/ml	98
76)	Benzidine	12.907	184	351382	1232.02	ng/ml	99
77)	Pyrene	13.063	202	598814	1055.16	ng/ml	99
80)	Butyl benzyl phthalate	14.159	149	275114	1035.16	ng/ml	96
81)	Bis(2-ethylhexyl) adipate	14.341	129	254845	1046.42	ng/ml	99
82)	3,3-Dichlorobenzidine	15.352	252	326783	2261.07	ng/ml	98
83)	Benz(a)anthracene	15.389	228	531189	1032.92	ng/ml	98
84)	Chrysene	15.475	228	493746	1015.03	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.544	149	376198	992.75	ng/ml	96
87)	Di-n-octyl phthalate	17.235	149	571095	1062.37	ng/ml	100
88)	Benzo(b)fluoranthene	18.021	252	464912	1072.93	ng/ml	99
89)	Benzo(k)fluoranthene	18.090	252	457480	1040.14	ng/ml	97
90)	Benzo(b+k)fluoranthene	18.090	252	951323	2080.05	ng/ml	97
91)	Benzo(e)pyrene	18.684	252	451868	1077.33	ng/ml	99
92)	Benzo(a)pyrene	18.807	252	426958	1068.81	ng/ml	100
93)	Perylene	19.010	252	475033	1019.64	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.353	276	363284	888.38	ng/ml	96
96)	Dibenz(a,h)anthracene	21.417	278	342915	877.12	ng/ml	96
97)	Benzo(g,h,i)perylene	21.893	276	378686	919.34	ng/ml	86

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 09:53:48 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 09:52:26 2019
Response via : Initial Calibration
InstName : SV-GCMS5



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Final Reqmnt
1/31/19

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.847	152	277641	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.099	136	1090359	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.880	162	529225	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.399	188	987863	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.416	240	891477	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.951	264	813758	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.353	292	665943	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.628	112	177544	1025.74	ng/ml	0.00
5) Phenol-d6(Surr)	6.473	99	240509	1038.80	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.377	82	220297	1061.23	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.179	172	400961	1018.74	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.682	330	41202	1137.97	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.277	244	437453	1050.25	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.376	74	135584	1034.87	ng/ml	86
3) Pyridine	4.409	79	218654	1030.49	ng/ml	95
6) Phenol	6.489	94	247692	1020.99	ng/ml	91
7) Aniline	6.532	93	309876	980.20	ng/ml	95
8) Bis(2-chloroethyl) ether	6.580	93	206192	1039.86	ng/ml	96
9) 2-Chlorophenol	6.650	128	191059	1051.71	ng/ml	96
10) 1,3-Dichlorobenzene	6.799	146	210822	1015.20	ng/ml	96
11) 1,4-Dichlorobenzene	6.864	146	214824	1023.84	ng/ml	99
12) Benzyl alcohol	6.965	108	113801	989.09	ng/ml	94
13) 1,2-Dichlorobenzene	7.013	146	204761	1030.25	ng/ml	99
14) 2-Methylphenol	7.067	107	158178	1046.97	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.099	45	317454	1009.58	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.222	70	158369	1065.53	ng/ml	96
17) 3+4-Methylphenol	7.211	107	206087	1079.89	ng/ml	94
18) Hexachloroethane	7.345	117	78838	1017.83	ng/ml	85
20) Nitrobenzene	7.398	77	219235	1093.50	ng/ml	92
22) Isophorone	7.628	82	400466	1076.18	ng/ml	96
23) 2-Nitrophenol	7.714	139	91410	1119.87	ng/ml	87
24) 2,4-Dimethylphenol	7.741	122	164651	1009.12	ng/ml	93
25) Bis(2-chloroethoxy) me...	7.832	93	248424	1061.05	ng/ml	99
26) Benzoic acid	7.821	105	122679	2255.56	ng/ml	96
27) 2,4-Dichlorophenol	7.949	162	135939	1075.18	ng/ml	100
28) 1,2,4-Trichlorobenzene	8.040	180	154987	1023.23	ng/ml	96
29) Naphthalene	8.120	128	591606	1017.09	ng/ml	99
30) 4-Chloroaniline	8.163	127	222109	1108.76	ng/ml	96
31) Hexachlorobutadiene	8.243	225	77172	1043.11	ng/ml	98
32) 4-Chloro-3-methylphenol	8.634	107	147250	1059.62	ng/ml	98
33) 2-Methylnaphthalene	8.816	142	394231	1077.50	ng/ml	96
34) 1-Methylnaphthalene	8.917	142	370979	1058.80	ng/ml	97
36) Hexachlorocyclopentadiene	8.982	237	66625	981.41	ng/ml	98
37) 2,4,6-Trichlorophenol	9.094	196	87821	1102.50	ng/ml	99
38) 2,4,5-Trichlorophenol	9.131	196	91305	1098.05	ng/ml	99
39) 1,1'-Biphenyl	9.281	154	462795	1022.17	ng/ml	98
41) 2-Chloronaphthalene	9.308	162	332442	1017.01	ng/ml	99
42) 2-Nitroaniline	9.404	138	111786	1113.80	ng/ml	89

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5

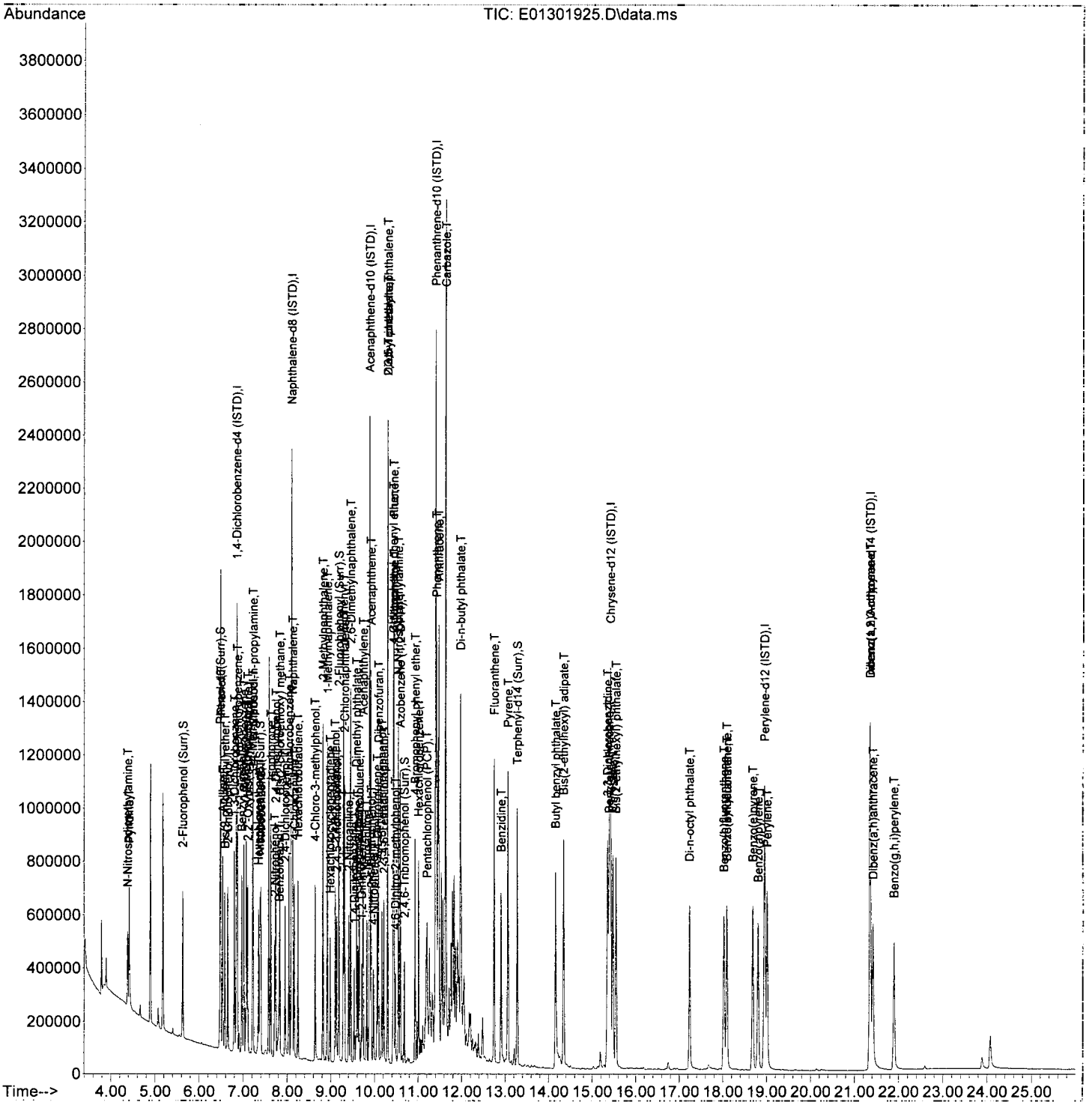
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
43) 2,6-Dimethylnaphthalene	9.447	156	338148	1069.02	ng/ml	97
44) 1,4-Dinitrobenzene	9.533	168	44630	1158.49	ng/ml	88
45) Dimethyl phthalate	9.581	163	380922	1121.50	ng/ml	99
46) 1,3-Dinitrobenzene	9.613	168	57201	1152.44	ng/ml	93
47) 2,6-Dinitrotoluene	9.645	165	84450	1134.19	ng/ml	86
48) 1,2-Dinitrobenzene	9.704	168	39174	1168.42	ng/ml#	72
49) Acenaphthylene	9.736	152	551004	1068.88	ng/ml	99
50) 3-Nitroaniline	9.821	138	96272	1119.89	ng/ml	97
51) Acenaphthene	9.912	153	361137	1033.18	ng/ml	100
52) 2,4-Dinitrophenol	9.923	184	21125	1090.03	ng/ml	87
53) 4-Nitrophenol	9.971	139	70280	1088.31	ng/ml	84
54) 2,4-Dinitrotoluene	10.057	165	108807	1137.24	ng/ml	93
55) Dibenzofuran	10.089	168	483823	1064.71	ng/ml	92
56) 2,3,5,6-Tetrachlorophenol	10.164	232	71138	1150.76	ng/ml	96
57) 2,3,4,6-Tetrachlorophenol	10.212	232	77430	1106.82	ng/ml	92
58) Diethyl phthalate	10.297	149	389146	1146.40	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.297	170	309071	1096.15	ng/ml	97
60) Fluorene	10.436	166	402110	1105.14	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.426	204	173539	1077.17	ng/ml	92
62) 4-Nitroaniline	10.442	138	103597	1078.75	ng/ml	79
63) 4,6-Dinitro-2-methylph...	10.474	198	40799	1209.64	ng/ml	91
65) N-Nitrosodiphenylamine	10.543	169	335063	1073.65	ng/ml	97
66) Azobenzene (1,2-DPH)	10.586	77	474353	1112.48	ng/ml	99
68) 4-Bromophenyl phenyl e...	10.929	248	96780	1058.95	ng/ml	94
69) Hexachlorobenzene	11.009	284	96201	1046.39	ng/ml	96
70) Pentachlorophenol (PCP)	11.201	266	45098	999.56	ng/ml	97
71) Phenanthrene	11.421	178	562373	1037.20	ng/ml	99
72) Anthracene	11.474	178	575013	1033.61	ng/ml	99
73) Carbazole	11.629	167	522125	1002.38	ng/ml	99
74) Di-n-butyl phthalate	11.971	149	663326	1017.76	ng/ml	99
75) Fluoranthene	12.747	202	584676	1039.58	ng/ml	98
76) Benzidine	12.907	184	351382	2024.85	ng/ml	99
77) Pyrene	13.063	202	598814	1048.13	ng/ml	99
80) Butyl benzyl phthalate	14.159	149	275114	1055.06	ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.341	129	254845	982.14	ng/ml	99
82) 3,3-Dichlorobenzidine	15.352	252	326783	2201.80	ng/ml	98
83) Benz(a)anthracene	15.389	228	531189	1056.36	ng/ml	98
84) Chrysene	15.475	228	493746	1030.71	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.544	149	376198	1009.54	ng/ml	96
87) Di-n-octyl phthalate	17.235	149	571095	1063.36	ng/ml	100
88) Benzo(b)fluoranthene	18.021	252	464912	1081.37	ng/ml	99
89) Benzo(k)fluoranthene	18.090	252	457480	1082.75	ng/ml	97
90) Benzo(b+k)fluoranthene	18.090	252	951323	2106.99	ng/ml	97
91) Benzo(e)pyrene	18.684	252	451868	1035.22	ng/ml	99
92) Benzo(a)pyrene	18.807	252	426958	1093.77	ng/ml	100
93) Perylene	19.010	252	475033	1064.74	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.353	276	363284	995.26	ng/ml	96
96) Dibenz(a,h)anthracene	21.417	278	342915	1025.85	ng/ml	96
97) Benzo(g,h,i)perylene	21.893	276	378686	1053.78	ng/ml	86

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\DATA\2019-01\9A30046\
Data File : E01301925.D
Acq On : 31 Jan 2019 1:40 am
Operator : JK/ AMS /DTH
Sample : 9A30046-ICV1
Misc : 1x, A19A013@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV5_AQUISITION.M

Quant Time: Jan 31 12:00:55 2019
Quant Method : C:\msdchem\1\METHODS\SV5_013019.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Thu Jan 31 10:44:49 2019
Response via : Initial Calibration
InstName : SV-GCMS5



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Semivolatile Organic Compounds (PAHs) by EPA 8270D
Calibration Data

Sequence 9D12042 (Cal ID A9D1505) GCMS10

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D12042**	Instrument:	**SV-GCMS10**
Date:	**04/12/19 17:14**	Calibration:	**A9D1505**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D12042-TUN1	Water	QC	QC			A19D031	A19D089
2	9D12042-TUN2	Water	QC	QC			A19D031	A19D089
3	9D12042-ICB1	Water	QC	QC			A19D031	
4	9D12042-CAL1	Water	QC	QC			A19D031	A19D053
5	9D12042-CAL2	Water	QC	QC			A19D031	A19D054
6	9D12042-CAL3	Water	QC	QC			A19D031	A19D055
7	9D12042-CAL4	Water	QC	QC			A19D031	A19D056
8	9D12042-CAL5	Water	QC	QC			A19D031	A19D057
9	9D12042-CAL6	Water	QC	QC			A19D031	A19D058
10	9D12042-CAL7	Water	QC	QC			A19D031	A19D059
11	9D12042-CAL8	Water	QC	QC			A19D031	A19D060
12	9D12042-CAL9	Water	QC	QC			A19D031	A19D061
13	9D12042-CALA	Water	QC	QC			A19D031	A19D062
14	9D12042-IBL1	Water	QC	QC			A19D031	
15	9D12042-ICV1	Water	QC	QC			A19D031	A19C239
16	9D12042-IBL2	Water	QC	QC			A19D031	

Data Entered By: 4/15/19

Data Reviewed By: 4/17/19

Comments: Raise 3,3-Dichlorobenzidene to 200/400 for soils

Calibration Status Report SV-GCMS10

Method Path : C:\msdchem\1\methods\
Method File : SV10_041219.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Mon Apr 15 09:10:15 2019
Response Via : Initial Calibration

A9D1505
4/15/19

#	ID	Conc	ISTD Conc	Path\File
1	20	20	2000	C:\msdchem\1\data\2019-04\9D12042\J04121915.D
2	50	50	2000	C:\msdchem\1\data\2019-04\9D12042\J04121916.D
3	100	100	2000	C:\msdchem\1\data\2019-04\9D12042\J04121917.D
4	200	200	2000	C:\msdchem\1\data\2019-04\9D12042\J04121918.D
5	500	500	2000	C:\msdchem\1\data\2019-04\9D12042\J04121919.D
6	1000	1000	2000	C:\msdchem\1\data\2019-04\9D12042\J04121920.D
7	2000	2000	2000	C:\msdchem\1\data\2019-04\9D12042\J04121921.D
8	4000	4000	2000	C:\msdchem\1\data\2019-04\9D12042\J04121922.D
9	6000	6000	2000	C:\msdchem\1\data\2019-04\9D12042\J04121923.D
10	8000	8000	2000	C:\msdchem\1\data\2019-04\9D12042\J04121924.D

#	ID	Update Time	Quant Time	Acquisition Time
1	20	Apr 15 09:09 2019	Apr 15 08:54 2019	12 Apr 2019 6:51 pm
2	50	Apr 15 09:09 2019	Apr 15 08:59 2019	12 Apr 2019 7:27 pm
3	100	Apr 15 09:09 2019	Apr 15 09:00 2019	12 Apr 2019 8:03 pm
4	200	Apr 15 09:09 2019	Apr 15 09:01 2019	12 Apr 2019 8:39 pm
5	500	Apr 15 09:09 2019	Apr 15 08:55 2019	12 Apr 2019 9:16 pm
6	1000	Apr 15 09:09 2019	Apr 15 08:55 2019	12 Apr 2019 9:52 pm
7	2000	Apr 15 09:09 2019	Apr 15 08:55 2019	12 Apr 2019 10:28 pm
8	4000	Apr 15 09:10 2019	Apr 15 08:55 2019	12 Apr 2019 11:04 pm
9	6000	Apr 15 09:10 2019	Apr 15 09:04 2019	12 Apr 2019 11:40 pm
10	8000	Apr 15 09:10 2019	Apr 15 09:05 2019	13 Apr 2019 12:15 am

SV10_041219.M Mon Apr 15 12:04:32 2019

Method Path : C:\msdchem\1\methods\
Method File : SV10_041219.M
Title : EPA 8270D: Semivolatile Organics

40)	S	2-Fluorobiphen...		1.365	1.351	1.571	1.631	1.557	1.472	1.360	1.233	1.160	1.411	11.25
41)	T	2-Chloronaphth...	0.973	1.048	1.079	1.228	1.325	1.256	1.215	1.144	1.051		1.147	10.16
42)	T	2-Nitroaniline				0.154	0.226	0.345	0.366	0.407	0.429	0.431	0.429	0.348	29.95
43)	T	2,6-Dimethylna...	1.059	1.207	1.248	1.323	1.361	1.306	1.238	1.137	1.038	0.970	1.189	11.13
44)	T	1,4-Dinitroben...				0.061	0.101	0.120	0.155	0.178	0.183	0.188	0.141	34.41
45)	T	Dimethyl phtha...	1.354	1.382	1.480	1.488	1.532	1.434	1.403	1.355	1.261	1.222	1.391	7.09
46)	T	1,3-Dinitroben...				0.072	0.102	0.153	0.166	0.193	0.208	0.208	0.206	0.163	31.75
47)	T	2,6-Dinitrotol...			0.127	0.166	0.245	0.288	0.301	0.309	0.312	0.301	0.284	0.259	26.10
48)	T	1,2-Dinitroben...					0.109	0.129	0.135	0.139	0.148	0.143	0.134	0.134	9.38
49)	T	Acenaphthylene	1.903	1.943	2.139	2.109	2.208	2.145	2.004	1.899	1.657		2.001	8.59
50)	T	3-Nitroaniline					0.245	0.293	0.300	0.296	0.274	0.261	0.246	0.273	8.61
51)	T	Acenaphthene	1.408	1.319	1.403	1.409	1.407	1.342	1.276	1.193	1.089	1.022	1.287	10.97
52)	T	2,4-Dinitrophenol					0.014	0.029	0.046	0.070	0.103	0.118	0.131	0.073	62.20
53)	T	4-Nitrophenol				0.063	0.111	0.154	0.189	0.226	0.253	0.257	0.260	0.189	39.12
54)	T	2,4-Dinitrotol...				0.164	0.244	0.314	0.353	0.392	0.412	0.394	0.378	0.331	26.17
55)	T	Dibenzofuran	1.700	1.774	1.786	1.856	1.873	1.747	1.699	1.604	1.442	1.329	1.681	10.48
56)	T	2,3,5,6-Tetrac...		0.096	0.134	0.202	0.242	0.259	0.276	0.291	0.279	0.277	0.228	30.66
57)	T	2,3,4,6-Tetrac...	0.110	0.170	0.216	0.262	0.275	0.284	0.294	0.300	0.293	0.283	0.249	25.53
58)	T	Diethyl phthalate	1.300	1.326	1.517	1.498	1.521	1.419	1.347	1.234	1.100	1.024	1.329	12.89
59)	T	2,3,5-Trimethy...	1.053	1.124	1.202	1.211	1.204	1.116	1.063	0.964	0.873	0.818	1.063	13.08
60)	T	Fluorene	1.307	1.354	1.472	1.488	1.483	1.385	1.329	1.216	1.094	1.036	1.316	12.04
61)	T	4-Chlorophenyl...	0.615	0.614	0.658	0.648	0.649	0.622	0.608	0.574	0.527	0.510	0.602	8.39
62)	T	4-Nitroaniline				0.180	0.243	0.254	0.270	0.276	0.270	0.263	0.256	0.252	12.23
63)	T	4,6-Dinitro-2-...				0.022	0.045	0.072	0.090	0.124	0.159	0.169	0.176	0.107	54.99
															5.07
64)	I	Phenanthrene-d10 (...	----------	ISTD	----------										
65)	T	N-Nitrosodiphe...	0.531	0.631	0.697	0.695	0.721	0.665	0.635	0.576	0.521	0.486	0.616	13.41
66)	T	Azobenzene (1,...	0.794	0.821	0.920	0.938	0.963	0.906	0.865	0.788	0.701	0.637	0.833	12.72
67)	S	2,4,6-Tribromo...		0.049	0.068	0.088	0.094	0.098	0.102	0.104	0.100	0.096	0.089	20.57
68)	T	4-Bromophenyl ...	0.164	0.190	0.206	0.215	0.220	0.210	0.205	0.198	0.183	0.178	0.197	9.01
69)	T	Hexachlorobenzene	0.288	0.270	0.261	0.248	0.253	0.243	0.229	0.215	0.201	0.193	0.240	12.70
70)	T	Pentachlorophe...		0.068	0.074	0.096	0.101	0.105	0.120	0.126	0.125	0.125	0.104	20.99
71)	T	Phenanthrene	1.156	1.176	1.215	1.197	1.177	1.131	1.078	0.984	0.893	0.845	1.085	12.23
72)	T	Anthracene	0.998	1.082	1.183	1.181	1.197	1.126	1.088	0.991	0.894	0.828	1.057	11.97
73)	T	Carbazole	0.754	0.833	0.975	1.009	1.014	0.972	0.880	0.718			0.894	13.01
74)	T	Di-n-butyl pht...			1.118	1.287	1.377	1.332	1.317	1.229	1.101	1.024	1.223	10.44
75)	T	Fluoranthene	0.942	0.962	1.129	1.208	1.238	1.176	1.159	1.083	0.990	0.936	1.082	10.70
76)	T	Benzidine			0.274	0.272	0.362	0.430	0.434	0.454	0.474	0.461	0.395	20.93
77)	T	Pyrene	1.015	1.042	1.181	1.234	1.278	1.200	1.168	1.088	0.999	0.948	1.115	10.03
															6.90
78)	I	Chrysene-d12 (ISTD)	----------	ISTD	----------										
79)	S	Terphenyl-d14 ...	0.817	0.900	0.960	0.969	1.012	0.993	0.970	0.963	0.920	0.912	0.941	5.99
80)	T	Butyl benzyl p...		0.276	0.369	0.445	0.562	0.599	0.642	0.685	0.676	0.686	0.549	27.53
81)	T	Bis(2-ethylhex...				0.438	0.531	0.567	0.595	0.633	0.614	0.613	0.570	11.84
82)	T	3,3-Dichlorobe...				0.275	0.221	0.206	0.148	0.143	0.148		0.190	28.01
83)	T	Benz(a)anthracene	1.101	1.023	1.076	1.128	1.153	1.113	1.102	1.098	1.062	1.057	1.091	3.46
84)	T	Chrysene	1.033	1.015	1.088	1.089	1.096	1.084	1.074	1.059	1.029	1.023	1.059	2.95
85)	T	Bis(2-ethylhex...				0.651	0.808	0.862	0.886	0.912	0.886	0.876	0.840	10.65
															7.73
86)	I	Perylene-d12 (ISTD)	----------	ISTD	----------										
87)	T	Di-n-octyl pht...			0.566	0.833	1.176	1.379	1.539	1.664	1.603	1.577	1.292	31.17

Method Path : C:\msdchem\1\methods\
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88)	T	Benzo(b)fluora...	0.699	0.833	0.984	1.068	1.198	1.192	1.221	1.258	1.208	1.219	1.088	17.56
89)	T	Benzo(k)fluora...	0.627	0.853	1.029	1.119	1.211	1.211	1.182	1.162	1.079	0.983	1.046	17.75
90)	T	Benzo(b+k)fluo...	0.741	0.872	1.038	1.118	1.230	1.225	1.222	1.229	1.162	1.142	1.098	15.32
91)	T	Benzo(e)pyrene	0.844	0.896	1.052	1.110	1.217	1.203	1.198	1.194	1.134	1.118	1.097	11.91
92)	T	Benzo(a)pyrene	0.583	0.699	0.849	0.998	1.096	1.108	1.137	1.127	1.066	1.037	0.970	20.03
93)	T	Perylene	0.971	0.954	1.028	1.105	1.075	1.052	1.029	1.018	0.966	0.955	1.015	5.19
94)	I	Dibenz(a,h)Anthrce...	----------ISTD----------											9.34
95)	T	Indeno(1,2,3-c...	1.200	1.053	1.089	1.086	1.105	1.089	1.090	1.120	1.107	1.249	1.119	5.31
96)	T	Dibenz(a,h)ant...	0.963	0.914	1.002	0.999	1.043	1.026	1.063	1.032	0.993	0.973	1.001	4.36
97)	T	Benzo(g,h,i)pe...	0.904	0.982	1.006	1.096	1.175	1.179	1.157	1.137	1.094	1.084	1.081	8.42

(#) = Out of Range

Response Factor Report SV-GCMS10

Method Path : C:\msdchem\1\methods\
Method File : SV10_041219.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Mon Apr 15 09:10:15 2019
Response Via : Initial Calibration

4/15/19

Calibration Files
20 =J04121915.D 50 =J04121916.D 100 =J04121917.D 200 =J04121918.D 500 =J04121919.D 1000=J04121920.D 2000=J04121921.D
4000=J04121922.D 6000=J04121923.D 8000=J04121924.D

		Compound	20	50	100	200	500	1000	2000	4000	6000	8000	Avg	%RSD
1)	I	1,4-Dichlorobenzen...	----------	ISTD	----------									3.00
2)	TG	N-Nitrosodimet...	0.888	0.995	0.939	0.973	0.991	1.009	0.991	1.036	1.021	1.012	0.985	4.41
3)	TG	Pyridine	1.215	1.364	1.498	1.598	1.610	1.706	1.703	1.795	1.797	1.793	1.608	12.27
4)	S	2-Fluorophenol...	1.086	1.025	1.156	1.272	1.350	1.360	1.389	1.463	1.464	1.436	1.300	12.28
5)	S	Phenol-d6(Surr)		1.196	1.397	1.568	1.712	1.762	1.826	1.894	1.872	1.825	1.672	14.32
6)	T	Phenol	1.024	1.450	1.505	1.809	1.941	1.767	2.012	2.061	2.011	1.954	1.753	18.94
7)	T	Aniline		2.011	1.972	1.868	1.965	2.160	1.907	1.860	1.950	2.006	1.966	4.62
8)	T	Bis(2-chloroet...	1.724	1.649	1.643	1.711	1.781	1.704	1.774	1.777	1.641	1.530	1.693	4.69
9)	T	2-Chlorophenol	1.076	1.143	1.289	1.344	1.445	1.486	1.466	1.479	1.468	1.400	1.360	10.82
10)	T	1,3-Dichlorobe...	1.462	1.540	1.520	1.645	1.638	1.564	1.542	1.522	1.468	1.396	1.530	5.01
11)	T	1,4-Dichlorobe...	1.544	1.590	1.611	1.601	1.611	1.531	1.527	1.484	1.420	1.344	1.526	5.80
12)	T	Benzyl alcohol		0.358	0.408	0.645	0.704	0.833	0.932	1.017	1.017	1.004	0.769	33.42
13)	T	1,2-Dichlorobe...	1.405	1.553	1.535	1.620	1.605	1.529	1.490	1.437	1.384	1.297	1.485	6.94
14)	T	2-Methylphenol	0.839	0.813	0.917	1.025	1.128	1.186	1.180	1.192	1.152	1.100	1.053	13.92
15)	T	2,2'-Oxybis(1-...	2.142	2.068	2.029	2.018	2.081	2.004	1.877	1.780	1.656	1.507	1.916	10.81
16)	T	N-Nitrosodi-n-...	1.012	1.002	1.055	1.127	1.244	1.219	1.168	1.103	1.043		1.108	7.96
17)	T	3+4-Methylphenol	0.739	0.817	1.026	1.178	1.421	1.489	1.518				1.170	27.41
18)	T	Hexachloroethane	0.346	0.408	0.412	0.414	0.431	0.412	0.426	0.432	0.422	0.410	0.411	5.99
19)	S	Nitrobenzene-d...		0.948	1.285	1.307	1.424	1.482	1.567	1.582	1.549	1.516	1.407	14.44
20)	T	Nitrobenzene		1.106	1.323	1.394	1.485	1.534	1.537	1.532	1.482	1.411	1.423	9.81
21)	I	Naphthalene-d8 (ISTD)	----------	ISTD	----------									2.40
22)	T	Isophorone	0.687	0.703	0.729	0.776	0.799	0.773	0.757	0.754	0.737	0.733	0.745	4.57
23)	T	2-Nitrophenol			0.075	0.110	0.138	0.161	0.165	0.178	0.179	0.179	0.148	25.66
24)	T	2,4-Dimethylph...		0.172	0.214	0.257	0.308	0.315	0.323	0.306	0.289	0.281	0.274	18.59
25)	T	Bis(2-chloroet...	0.282	0.330	0.416	0.431	0.444	0.439	0.437	0.430	0.403	0.382	0.400	13.47
26)	T	Benzoic acid					0.053	0.111	0.168	0.220	0.239	0.249	0.173	45.07
27)	T	2,4-Dichloroph...		0.102	0.118	0.156	0.224	0.245	0.255	0.258	0.246		0.200	32.22
28)	T	1,2,4-Trichlor...	0.268	0.287	0.313	0.302	0.306	0.296	0.282	0.274	0.262	0.250	0.284	7.21
29)	T	Naphthalene	1.039	1.088	1.130	1.131	1.147	1.092	1.052	0.972	0.881	0.820	1.035	10.72
30)	T	4-Chloroaniline	0.197	0.190	0.227	0.259	0.337	0.349	0.354				0.273	26.43
31)	T	Hexachlorobuta...	0.178	0.164	0.171	0.157	0.158	0.156	0.150	0.142	0.135	0.132	0.154	9.53
32)	T	4-Chloro-3-met...			0.124	0.189	0.275	0.290	0.309	0.318	0.308	0.299	0.264	26.37
33)	T	2-Methylnaphth...	0.578	0.596	0.643	0.748	0.773	0.740	0.726	0.682	0.624		0.679	10.53
34)	T	1-Methylnaphth...	0.631	0.642	0.685	0.732	0.748	0.698	0.680	0.641	0.581	0.548	0.658	9.58
35)	I	Acenaphthene-d10 (...	----------	ISTD	----------									3.28
36)	T	Hexachlorocycl...		0.128	0.180	0.211	0.262	0.291	0.300	0.311	0.309	0.302	0.255	26.05
37)	T	2,4,6-Trichlor...		0.154	0.161	0.247	0.327	0.341	0.364	0.367	0.359	0.343	0.296	29.20
38)	T	2,4,5-Trichlor...		0.181	0.190	0.252	0.315	0.338	0.341	0.360	0.340	0.335	0.295	23.36
39)	T	1,1'-Biphenyl	1.288	1.495	1.510	1.783	1.864	1.789	1.694	1.546			1.621	11.97

Compound List Report SV-GCMS10

Method Path : C:\msdchem\1\methods\
Method File : SV10_041219.M
Title : EPA 8270D: Semivolatile Organics
Last Update : Mon Apr 15 09:10:15 2019
Response Via : Initial Calibration

Total Cpnds : 97

GJ 4/15/19

PK#		Compound Name	QIon	Exp_RT	Rel_RT	Cal	#Qual	A/H	ID
1	I	1,4-Dichlorobenzene-d4 (ISTD)	152	6.808	1.000	A	2	A	R
2	T	N-Nitrosodimethylamine	74	4.150	0.610	A	2	A	A
3	T	Pyridine	79	4.177	0.614	A	2	A	A
4	S	2-Fluorophenol (Surr)	112	5.535	0.813	A	1	A	R
5	S	Phenol-d6(Surr)	99	6.433	0.945	A	2	A	R
6	T	Phenol	94	6.449	0.947	Q	2	A	R
7	T	Aniline	93	6.487	0.953	A	2	A	R
8	T	Bis(2-chloroethyl) ether	93	6.541	0.961	A	2	A	R
9	T	2-Chlorophenol	128	6.605	0.970	A	2	A	R
10	T	1,3-Dichlorobenzene	146	6.755	0.992	A	2	A	R
11	T	1,4-Dichlorobenzene	146	6.830	1.003	A	2	A	R
12	T	Benzyl alcohol	108	6.936	1.019	Q	2	A	R
13	T	1,2-Dichlorobenzene	146	6.979	1.025	A	2	A	R
14	T	2-Methylphenol	107	7.044	1.035	A	2	A	R
15	T	2,2'-Oxybis(1-Chloropropane)	45	7.070	1.039	A	2	A	R
16	T	N-Nitrosodi-n-propylamine	70	7.198	1.057	A	2	A	R
17	T	3+4-Methylphenol	107	7.193	1.057	Q	3	A	R
18	T	Hexachloroethane	201	7.322	1.075	A	2	A	R
19	S	Nitrobenzene-d5 (Surr)	82	7.353	1.080	Q	2	A	R
20	T	Nitrobenzene	77	7.375	1.083	A	2	A	R
21	I	Naphthalene-d8 (ISTD)	136	8.081	1.000	A	1	A	R
22	T	Isophorone	82	7.605	0.941	A	2	A	R
23	T	2-Nitrophenol	139	7.696	0.952	Q	2	A	R
24	T	2,4-Dimethylphenol	122	7.722	0.956	Q	2	A	R
25	T	Bis(2-chloroethoxy) methane	93	7.814	0.967	A	2	A	R
26	T	Benzoic acid	105	7.813	0.967	Q	2	A	R
27	T	2,4-Dichlorophenol	162	7.931	0.981	Q	2	A	R
28	T	1,2,4-Trichlorobenzene	180	8.022	0.993	A	2	A	R
29	T	Naphthalene	128	8.103	1.003	A	1	A	R
30	T	4-Chloroaniline	127	8.145	1.008	Q	2	A	R
31	T	Hexachlorobutadiene	225	8.231	1.019	A	2	A	R
32	T	4-Chloro-3-methylphenol	107	8.621	1.067	Q	2	A	R
33	T	2-Methylnaphthalene	142	8.797	1.089	A	2	A	R
34	T	1-Methylnaphthalene	142	8.900	1.101	A	2	A	R
35	I	Acenaphthene-d10 (ISTD)	162	9.868	1.000	A	2	A	R
36	T	Hexachlorocyclopentadiene	237	8.969	0.909	Q	2	A	R
37	T	2,4,6-Trichlorophenol	196	9.081	0.920	Q	2	A	R
38	T	2,4,5-Trichlorophenol	198	9.118	0.924	Q	2	A	R
39	T	1,1'-Biphenyl	154	9.268	0.939	A	2	A	R
40	S	2-Fluorobiphenyl (Surr)	172	9.167	0.929	A	2	A	R
41	T	2-Chloronaphthalene	162	9.295	0.942	A	2	A	R
42	T	2-Nitroaniline	138	9.391	0.952	Q	2	A	R
43	T	2,6-Dimethylnaphthalene	156	9.429	0.956	A	2	A	R
44	T	1,4-Dinitrobenzene	168	9.514	0.964	Q	2	A	R
45	T	Dimethyl phthalate	163	9.568	0.970	A	2	A	R
46	T	1,3-Dinitrobenzene	168	9.600	0.973	Q	2	A	R
47	T	2,6-Dinitrotoluene	165	9.626	0.976	Q	2	A	R
48	T	1,2-Dinitrobenzene	168	9.691	0.982	A	2	A	R
49	T	Acenaphthylene	152	9.717	0.985	A	2	A	R
50	T	3-Nitroaniline	138	9.803	0.993	A	2	A	R
51	T	Acenaphthene	153	9.900	1.003	A	2	A	R
52	T	2,4-Dinitrophenol	184	9.905	1.004	Q	2	A	R
53	T	4-Nitrophenol	139	9.958	1.009	Q	2	A	R
54	T	2,4-Dinitrotoluene	165	10.038	1.017	Q	2	A	R

55	T	Dibenzofuran	168	10.071	1.021	A	1/a2	2	A	R
56	T	2,3,5,6-Tetrachlorophenol	232	10.151	1.029	Q	1/a2	2	A	R
57	T	2,3,4,6-Tetrachlorophenol	232	10.193	1.033	Q	1/a2	2	A	R
58	T	Diethyl phthalate	149	10.285	1.042	A		2	A	R
59	T	2,3,5-Trimethylnaphthalene	170	10.280	1.042	A		2	A	R
60	T	Fluorene	166	10.419	1.056	A		2	A	R
61	T	4-Chlorophenyl phenyl ether	204	10.408	1.055	A		2	A	R
62	T	4-Nitroaniline	138	10.423	1.056	A		2	A	R
63	T	4,6-Dinitro-2-methylphenol	198	10.461	1.060	Q	1/a2	2	A	R
64	I	Phenanthrene-d10 (ISTD)	188	11.381	1.000	A		2	A	R
65	T	N-Nitrosodiphenylamine	169	10.526	0.925	A		2	A	R
66	T	Azobenzene (1,2-DPH)	77	10.574	0.929	A		2	A	R
67	S	2,4,6-Tribromophenol (Surr)	330	10.664	0.937	Q	1/a2	2	A	R
68	T	4-Bromophenyl phenyl ether	248	10.911	0.959	A		2	A	R
69	T	Hexachlorobenzene	284	10.991	0.966	A		2	A	R
70	T	Pentachlorophenol (PCP)	266	11.183	0.983	Q	1/a2	2	A	R
71	T	Phenanthrene	178	11.403	1.002	A		2	A	R
72	T	Anthracene	178	11.456	1.007	A		2	A	R
73	T	Carbazole	167	11.611	1.020	A		2	A	R
74	T	Di-n-butyl phthalate	149	11.948	1.050	A		2	A	R
75	T	Fluoranthene	202	12.719	1.117	A	1/a2	2	A	R
76	T	Benzidine	184	12.878	1.132	Q		2	A	R
77	T	Pyrene	202	13.029	1.145	A		2	A	R
78	I	Chrysene-d12 (ISTD)	240	15.355	1.000	A		2	A	R
79	S	Terphenyl-d14 (Surr)	244	13.243	0.862	A		2	A	R
80	T	Butyl benzyl phthalate	149	14.109	0.919	Q	1/a2	2	A	R
81	T	Bis(2-ethylhexyl) adipate	129	14.291	0.931	A		2	A	R
82	T	3,3-Dichlorobenzidine	252	15.291	0.996	Q	1/a	2	A	R
83	T	Benz(a)anthracene	228	15.334	0.999	A		2	A	R
84	T	Chrysene	228	15.414	1.004	A		2	A	R
85	T	Bis(2-ethylhexyl) phthalate	149	15.489	1.009	A		2	A	R
86	I	Perylene-d12 (ISTD)	264	18.875	1.000	A		2	A	R
87	T	Di-n-octyl phthalate	149	17.163	0.909	Q	1/a2	2	A	R
88	T	Benzo(b)fluoranthene	252	17.949	0.951	Q	1/a2	2	A	R
89	T	Benzo(k)fluoranthene	252	18.019	0.955	Q	1/a2	2	A	R
90	T	Benzo(b+k)fluoranthene	252	18.019	0.955	Q	1/a2	2	A	R
91	T	Benzo(e)pyrene	252	18.607	0.986	A		2	A	R
92	T	Benzo(a)pyrene	252	18.730	0.992	Q	1/a2	2	A	R
93	T	Perylene	252	18.934	1.003	A		2	A	B
94	I	Dibenz(a,h)Anthrcene-d14 (I...	292	21.266	1.000	A		1	A	B
95	T	Indeno(1,2,3-cd)pyrene	276	21.266	1.000	A		1	A	R
96	T	Dibenz(a,h)anthracene	278	21.330	1.003	A		2	A	R
97	T	Benzo(g,h,i)perylene	276	21.811	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

SV10_041219.M Mon Apr 15 10:45:34 2019

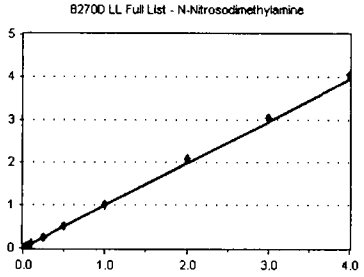
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

N-Nitrosodimethylamine

Curve Fit: **AVERAGE RF**

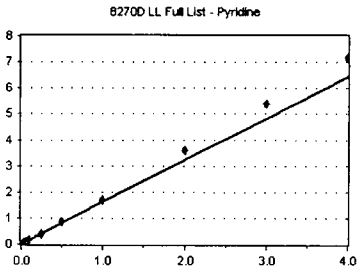


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1826	0.888	4.16
9D12042-CAL2	50	5209	0.995	4.15
9D12042-CAL3	100	10206	0.939	4.19
9D12042-CAL4	200	21690	0.973	4.20
9D12042-CAL5	500	53776	0.991	4.16
9D12042-CAL6	1000	104701	1.009	4.15
9D12042-CAL7	2000	208448	0.991	4.17
9D12042-CAL8	4000	426026	1.036	4.17
9D12042-CAL9	6000	627490	1.021	4.15
9D12042-CALA	8000	831842	1.012	4.17

AVE RF **0.985** RF RSD **4.41** AVE RT **4.17**

Pyridine

Curve Fit: **AVERAGE RF**

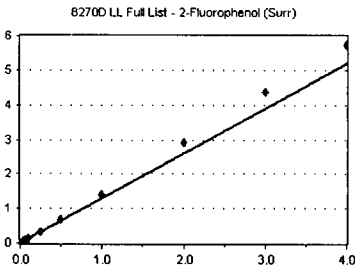


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2498	1.215	4.23
9D12042-CAL2	50	7142	1.364	4.20
9D12042-CAL3	100	16277	1.498	4.23
9D12042-CAL4	200	35631	1.598	4.21
9D12042-CAL5	500	87366	1.610	4.18
9D12042-CAL6	1000	177059	1.706	4.18
9D12042-CAL7	2000	358336	1.703	4.18
9D12042-CAL8	4000	737969	1.795	4.18
9D12042-CAL9	6000	1105047	1.797	4.16
9D12042-CALA	8000	1473300	1.793	4.17

AVE RF **1.608** RF RSD **12.27** AVE RT **4.19**

2-Fluorophenol (Surr)

Curve Fit: **AVERAGE RF**

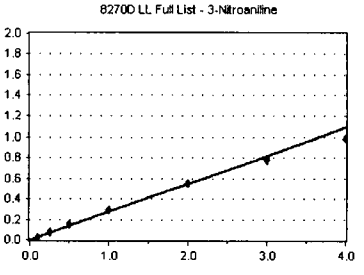


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2233	1.086	5.54
9D12042-CAL2	50	5365	1.025	5.54
9D12042-CAL3	100	12560	1.156	5.54
9D12042-CAL4	200	28367	1.272	5.54
9D12042-CAL5	500	73276	1.350	5.53
9D12042-CAL6	1000	141127	1.360	5.54
9D12042-CAL7	2000	292249	1.389	5.54
9D12042-CAL8	4000	601422	1.463	5.54
9D12042-CAL9	6000	900422	1.464	5.54
9D12042-CALA	8000	1179847	1.436	5.54

AVE RF **1.300** RF RSD **12.28** AVE RT **5.54**

3-Nitroaniline

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~533~~	~~0.126~~	~~9.80~~
~~9D12042-CAL2~~	~~50~~	~~1478~~	~~0.138~~	~~9.80~~
~~9D12042-CAL3~~	~~100~~	~~4053~~	~~0.183~~	~~9.80~~
9D12042-CAL4	200	11232	0.245	9.80
9D12042-CAL5	500	31835	0.293	9.80
9D12042-CAL6	1000	61316	0.300	9.80
9D12042-CAL7	2000	125110	0.296	9.81
9D12042-CAL8	4000	227237	0.274	0.00
9D12042-CAL9	6000	329674	0.261	0.00
9D12042-CALA	8000	417444	0.246	0.00

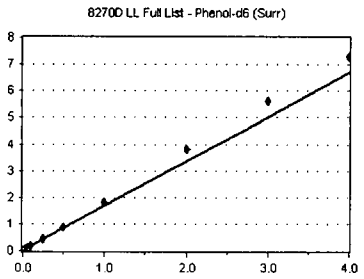
AVE RF **0.273** RF RSD **8.61** AVE RT **5.60**

Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Phenol-d6 (Surr)

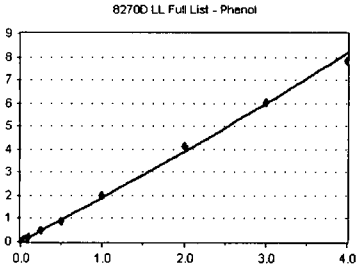


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~2259~~	~~1.099~~	~~6.44~~
9D12042-CAL2	50	6263	1.196	6.44
9D12042-CAL3	100	15186	1.397	6.44
9D12042-CAL4	200	34950	1.568	6.44
9D12042-CAL5	500	92867	1.712	6.43
9D12042-CAL6	1000	182856	1.762	6.43
9D12042-CAL7	2000	384186	1.826	6.44
9D12042-CAL8	4000	778420	1.894	6.45
9D12042-CAL9	6000	1151230	1.872	6.45
9D12042-CALA	8000	1499696	1.825	6.46

AVE RF **1.672** RF RSD **14.32** AVE RT **6.44**

Phenol

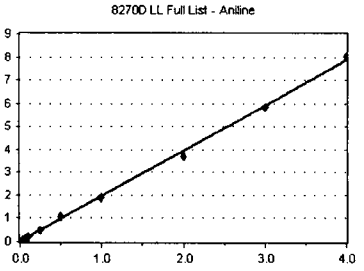


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2105	1.024	6.45
9D12042-CAL2	50	7594	1.450	6.45
9D12042-CAL3	100	16356	1.505	6.45
9D12042-CAL4	200	40326	1.809	6.45
9D12042-CAL5	500	105308	1.941	6.45
9D12042-CAL6	1000	183416	1.767	6.45
9D12042-CAL7	2000	423399	2.012	6.46
9D12042-CAL8	4000	846992	2.061	6.46
9D12042-CAL9	6000	1236521	2.011	6.47
9D12042-CALA	8000	1605219	1.954	6.47

AVE RF **1.753** RF RSD **18.94** AVE RT **6.46**

Aniline

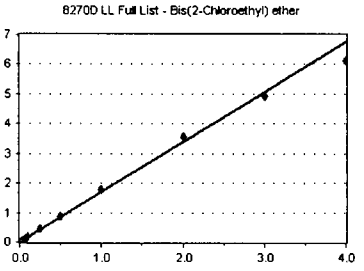


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~3702~~	~~1.801~~	~~6.49~~
9D12042-CAL2	50	10528	2.011	6.49
9D12042-CAL3	100	21433	1.972	6.49
9D12042-CAL4	200	41636	1.868	6.49
9D12042-CAL5	500	106597	1.965	6.49
9D12042-CAL6	1000	224184	2.160	6.49
9D12042-CAL7	2000	401171	1.907	6.49
9D12042-CAL8	4000	764336	1.860	6.49
9D12042-CAL9	6000	1198758	1.950	6.49
9D12042-CALA	8000	1648364	2.006	6.50

AVE RF **1.966** RF RSD **4.62** AVE RT **6.49**

Bis(2-Chloroethyl) ether



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3544	1.724	6.54
9D12042-CAL2	50	8634	1.649	6.54
9D12042-CAL3	100	17852	1.643	6.55
9D12042-CAL4	200	38143	1.711	6.55
9D12042-CAL5	500	96650	1.781	6.54
9D12042-CAL6	1000	176845	1.704	6.54
9D12042-CAL7	2000	373313	1.774	6.55
9D12042-CAL8	4000	730472	1.777	6.55
9D12042-CAL9	6000	1009123	1.641	6.55
9D12042-CALA	8000	1256889	1.530	6.56

AVE RF **1.693** RF RSD **4.69** AVE RT **6.55**

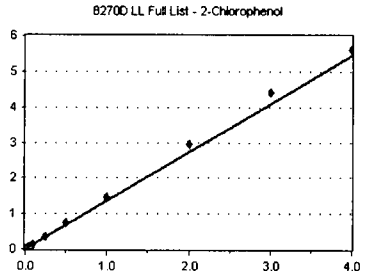
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

2-Chlorophenol

Curve Fit: **AVERAGE RF**

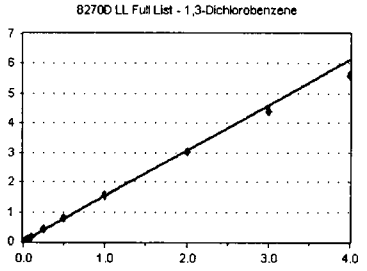


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2212	1.076	6.61
9D12042-CAL2	50	5987	1.143	6.61
9D12042-CAL3	100	14013	1.289	6.61
9D12042-CAL4	200	29959	1.344	6.61
9D12042-CAL5	500	78427	1.445	6.61
9D12042-CAL6	1000	154232	1.486	6.61
9D12042-CAL7	2000	308446	1.466	6.61
9D12042-CAL8	4000	607949	1.479	6.61
9D12042-CAL9	6000	902513	1.468	6.61
9D12042-CALA	8000	1150237	1.400	6.62

AVE RF **1.360** RF RSD **10.82** AVE RT **6.61**

1,3-Dichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3006	1.462	6.76
9D12042-CAL2	50	8063	1.540	6.76
9D12042-CAL3	100	16517	1.520	6.76
9D12042-CAL4	200	36684	1.645	6.76
9D12042-CAL5	500	88880	1.638	6.76
9D12042-CAL6	1000	162324	1.564	6.76
9D12042-CAL7	2000	324509	1.542	6.76
9D12042-CAL8	4000	625796	1.522	6.76
9D12042-CAL9	6000	902850	1.468	6.76
9D12042-CALA	8000	1147379	1.396	6.77

AVE RF **1.530** RF RSD **5.01** AVE RT **6.76**

1,4-Dichlorobenzene-d4 (ISTD)

Curve Fit: **AVERAGE RF**

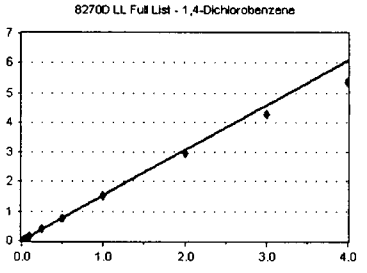


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	205604	102.802	6.81
9D12042-CAL2	2000	209444	104.722	6.81
9D12042-CAL3	2000	217345	108.673	6.81
9D12042-CAL4	2000	222946	111.473	6.81
9D12042-CAL5	2000	217042	108.521	6.81
9D12042-CAL6	2000	207595	103.798	6.81
9D12042-CAL7	2000	210386	105.193	6.81
9D12042-CAL8	2000	205518	102.759	6.81
9D12042-CAL9	2000	204951	102.475	6.81
9D12042-CALA	2000	205419	102.710	6.81

AVE RF **105.313** RF RSD **3.00** AVE RT **6.81**

1,4-Dichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3174	1.544	6.82
9D12042-CAL2	50	8325	1.590	6.82
9D12042-CAL3	100	17508	1.611	6.83
9D12042-CAL4	200	35701	1.601	6.82
9D12042-CAL5	500	87396	1.611	6.82
9D12042-CAL6	1000	158903	1.531	6.83
9D12042-CAL7	2000	321266	1.527	6.83
9D12042-CAL8	4000	609817	1.484	6.83
9D12042-CAL9	6000	873197	1.420	6.83
9D12042-CALA	8000	1104480	1.344	6.84

AVE RF **1.526** RF RSD **5.80** AVE RT **6.83**

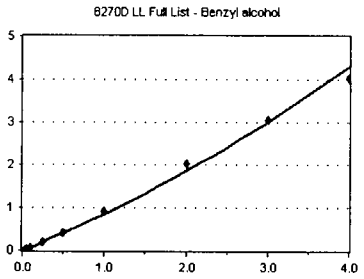
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Benzyl alcohol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

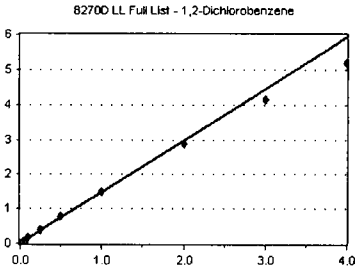


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~527~~	~~0.256~~	~~6.95~~
9D12042-CAL2	50	1873	0.358	6.95
9D12042-CAL3	100	4432	0.408	6.94
9D12042-CAL4	200	14374	0.645	6.94
9D12042-CAL5	500	38189	0.704	6.94
9D12042-CAL6	1000	86489	0.833	6.94
9D12042-CAL7	2000	196023	0.932	6.94
9D12042-CAL8	4000	417822	1.017	6.95
9D12042-CAL9	6000	625005	1.017	6.95
9D12042-CALA	8000	825334	1.004	6.96

AVE RF **0.769** RF RSD **33.42** AVE RT **6.95**

1,2-Dichlorobenzene

Curve Fit: **AVERAGE RF**

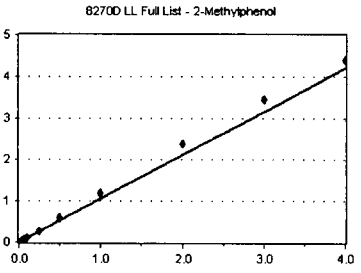


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2889	1.405	6.99
9D12042-CAL2	50	8131	1.553	6.98
9D12042-CAL3	100	16678	1.535	6.99
9D12042-CAL4	200	36123	1.620	6.99
9D12042-CAL5	500	87063	1.605	6.98
9D12042-CAL6	1000	158706	1.529	6.98
9D12042-CAL7	2000	313391	1.490	6.99
9D12042-CAL8	4000	590567	1.437	6.99
9D12042-CAL9	6000	851080	1.384	6.99
9D12042-CALA	8000	1066099	1.297	6.99

AVE RF **1.485** RF RSD **6.94** AVE RT **6.98**

2-Methylphenol

Curve Fit: **AVERAGE RF**

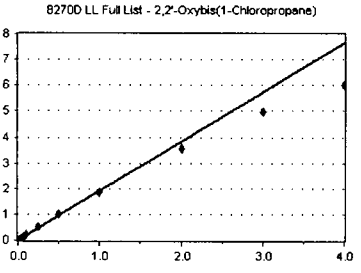


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1724	0.839	7.04
9D12042-CAL2	50	4259	0.813	7.04
9D12042-CAL3	100	9962	0.917	7.04
9D12042-CAL4	200	22860	1.025	7.04
9D12042-CAL5	500	61181	1.128	7.04
9D12042-CAL6	1000	123097	1.186	7.04
9D12042-CAL7	2000	248169	1.180	7.04
9D12042-CAL8	4000	490045	1.192	7.05
9D12042-CAL9	6000	708351	1.152	7.05
9D12042-CALA	8000	904249	1.100	7.05

AVE RF **1.053** RF RSD **13.92** AVE RT **7.05**

2,2'-Oxybis(1-Chloropropane)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4404	2.142	7.07
9D12042-CAL2	50	10826	2.068	7.07
9D12042-CAL3	100	22045	2.029	7.07
9D12042-CAL4	200	44983	2.018	7.07
9D12042-CAL5	500	112928	2.081	7.07
9D12042-CAL6	1000	207984	2.004	7.07
9D12042-CAL7	2000	394994	1.877	7.08
9D12042-CAL8	4000	731830	1.780	7.08
9D12042-CAL9	6000	1018502	1.656	7.08
9D12042-CALA	8000	1238496	1.507	7.08

AVE RF **1.916** RF RSD **10.81** AVE RT **7.07**

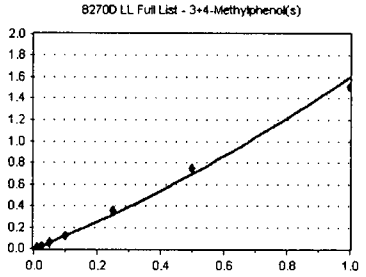
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

3+4-Methylphenol(s)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

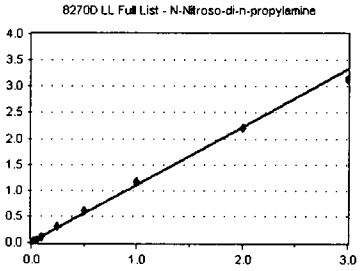


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1519	0.739	7.19
9D12042-CAL2	50	4279	0.817	7.19
9D12042-CAL3	100	11154	1.026	7.19
9D12042-CAL4	200	26267	1.178	7.19
9D12042-CAL5	500	77098	1.421	7.19
9D12042-CAL6	1000	154518	1.489	7.19
9D12042-CAL7	2000	319359	1.518	7.19
~~9D12042-CAL8~~	~~4000~~	~~622867~~	~~1.515~~	~~7.20~~
~~9D12042-CAL9~~	~~6000~~	~~876610~~	~~1.426~~	~~7.21~~
~~9D12042-CALA~~	~~8000~~	~~1108625~~	~~1.349~~	~~7.22~~

AVE RF **1.170** RF RSD **27.41** AVE RT **7.19**

N-Nitroso-di-n-propylamine

Curve Fit: **AVERAGE RF**

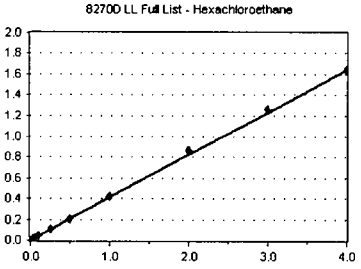


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2080	1.012	7.20
9D12042-CAL2	50	5246	1.002	7.20
9D12042-CAL3	100	11467	1.055	7.20
9D12042-CAL4	200	25133	1.127	7.20
9D12042-CAL5	500	67493	1.244	7.20
9D12042-CAL6	1000	126521	1.219	7.20
9D12042-CAL7	2000	245818	1.168	7.20
9D12042-CAL8	4000	453288	1.103	7.22
9D12042-CAL9	6000	641593	1.043	7.22
~~9D12042-CALA~~	~~8000~~	~~824622~~	~~1.004~~	~~7.23~~

AVE RF **1.108** RF RSD **7.96** AVE RT **7.20**

Hexachloroethane

Curve Fit: **AVERAGE RF**

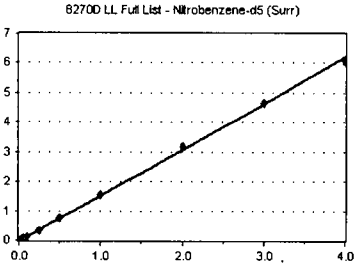


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	711	0.346	7.32
9D12042-CAL2	50	2137	0.408	7.32
9D12042-CAL3	100	4477	0.412	7.32
9D12042-CAL4	200	9240	0.414	7.32
9D12042-CAL5	500	23400	0.431	7.32
9D12042-CAL6	1000	42742	0.412	7.32
9D12042-CAL7	2000	89727	0.426	7.32
9D12042-CAL8	4000	177511	0.432	7.32
9D12042-CAL9	6000	259269	0.422	7.32
9D12042-CALA	8000	336985	0.410	7.32

AVE RF **0.411** RF RSD **5.99** AVE RT **7.32**

Nitrobenzene-d5 (Surr)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~2134~~	~~1.038~~	~~7.36~~
9D12042-CAL2	50	4963	0.948	7.35
9D12042-CAL3	100	13960	1.285	7.35
9D12042-CAL4	200	29144	1.307	7.35
9D12042-CAL5	500	77263	1.424	7.35
9D12042-CAL6	1000	153864	1.482	7.35
9D12042-CAL7	2000	329613	1.567	7.36
9D12042-CAL8	4000	650463	1.582	7.37
9D12042-CAL9	6000	952331	1.549	7.37
9D12042-CALA	8000	1245282	1.516	7.37

AVE RF **1.407** RF RSD **14.44** AVE RT **7.36**

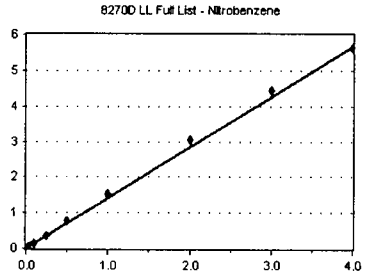
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Nitrobenzene

Curve Fit: **AVERAGE RF**

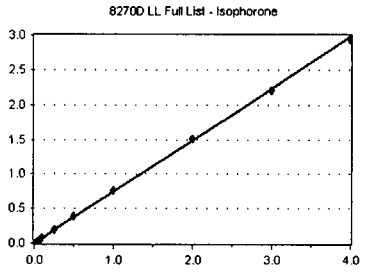


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~2275~~	~~1.106~~	~~7.38~~
9D12042-CAL2	50	5793	1.106	7.37
9D12042-CAL3	100	14380	1.323	7.38
9D12042-CAL4	200	31068	1.394	7.38
9D12042-CAL5	500	80603	1.485	7.38
9D12042-CAL6	1000	159222	1.534	7.38
9D12042-CAL7	2000	323406	1.537	7.38
9D12042-CAL8	4000	629792	1.532	7.38
9D12042-CAL9	6000	911090	1.482	7.39
9D12042-CALA	8000	1159115	1.411	7.39

AVE RF **1.423** RF RSD **9.81** AVE RT **7.38**

Isophorone

Curve Fit: **AVERAGE RF**

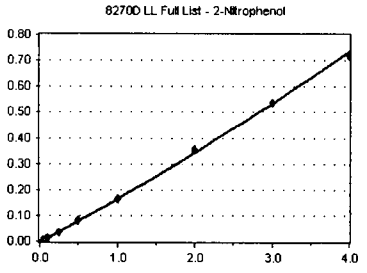


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5760	0.687	7.61
9D12042-CAL2	50	15037	0.703	7.61
9D12042-CAL3	100	31645	0.729	7.61
9D12042-CAL4	200	70389	0.776	7.61
9D12042-CAL5	500	179496	0.799	7.61
9D12042-CAL6	1000	336596	0.773	7.61
9D12042-CAL7	2000	660663	0.757	7.61
9D12042-CAL8	4000	1289086	0.754	7.62
9D12042-CAL9	6000	1905816	0.737	7.63
9D12042-CALA	8000	2513149	0.733	7.64

AVE RF **0.745** RF RSD **4.57** AVE RT **7.61**

2-Nitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

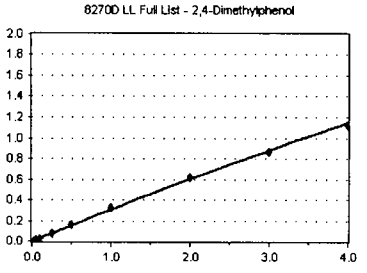


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~482~~	~~5.750~~	~~7.70~~
~~9D12042-CAL2~~	~~50~~	~~1610~~	~~7.531~~	~~7.69~~
9D12042-CAL3	100	3262	7.518	7.70
9D12042-CAL4	200	10018	0.110	7.70
9D12042-CAL5	500	30957	0.138	7.70
9D12042-CAL6	1000	70238	0.161	7.70
9D12042-CAL7	2000	144348	0.165	7.70
9D12042-CAL8	4000	303901	0.178	7.70
9D12042-CAL9	6000	463565	0.179	7.70
9D12042-CALA	8000	613878	0.179	7.70

AVE RF **0.148** RF RSD **25.66** AVE RT **7.70**

2,4-Dimethylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~1331~~	~~0.159~~	~~7.73~~
9D12042-CAL2	50	3681	0.172	7.72
9D12042-CAL3	100	9305	0.214	7.72
9D12042-CAL4	200	23349	0.257	7.72
9D12042-CAL5	500	69085	0.308	7.72
9D12042-CAL6	1000	137294	0.315	7.72
9D12042-CAL7	2000	281937	0.323	7.73
9D12042-CAL8	4000	523529	0.306	7.73
9D12042-CAL9	6000	746900	0.289	7.74
9D12042-CALA	8000	964243	0.281	7.74

AVE RF **0.274** RF RSD **18.59** AVE RT **7.73**

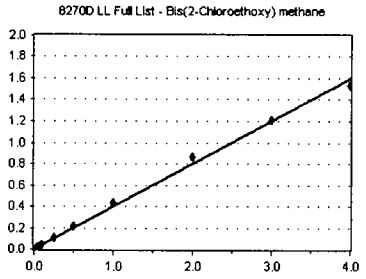
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Bis(2-Chloroethoxy) methane

Curve Fit: **AVERAGE RF**

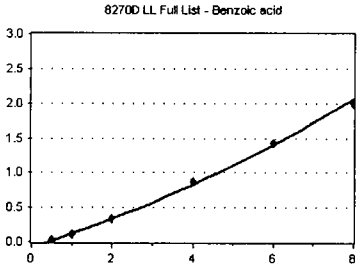


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2366	0.282	7.81
9D12042-CAL2	50	7058	0.330	7.81
9D12042-CAL3	100	18067	0.416	7.81
9D12042-CAL4	200	39106	0.431	7.81
9D12042-CAL5	500	99782	0.444	7.81
9D12042-CAL6	1000	191279	0.439	7.81
9D12042-CAL7	2000	381475	0.437	7.82
9D12042-CAL8	4000	734704	0.430	7.83
9D12042-CAL9	6000	1040589	0.403	7.83
9D12042-CALA	8000	1311481	0.382	7.83

AVE RF **0.400** RF RSD **13.47** AVE RT **7.82**

Benzoic acid

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

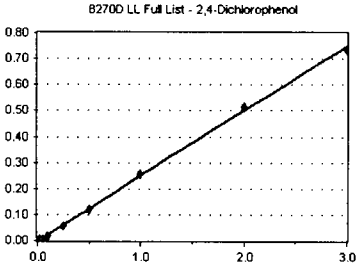


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~40~~	~~55~~	~~3.281~~	~~7.77~~
~~9D12042-CAL2~~	~~100~~	~~106~~	~~2.479~~	~~7.89~~
~~9D12042-CAL3~~	~~200~~	~~212~~	~~2.443~~	~~7.78~~
~~9D12042-CAL4~~	~~400~~	~~2517~~	~~0.014~~	~~7.77~~
9D12042-CAL5	1000	23976	5.336	7.79
9D12042-CAL6	2000	96370	0.111	7.81
9D12042-CAL7	4000	293257	0.168	7.85
9D12042-CAL8	8000	750898	0.220	7.90
9D12042-CAL9	12000	1234711	0.239	7.93
9D12042-CALA	16000	1706623	0.249	7.96

AVE RF **0.173** RF RSD **45.07** AVE RT **7.87**

2,4-Dichlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

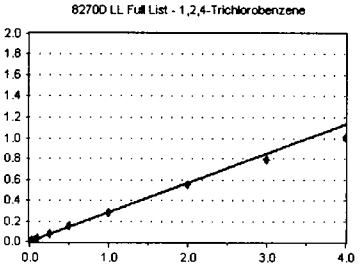


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~425~~	~~5.070~~	~~7.94~~
9D12042-CAL2	50	2177	0.102	7.94
9D12042-CAL3	100	5136	0.118	7.93
9D12042-CAL4	200	14168	0.156	7.93
9D12042-CAL5	500	50336	0.224	7.93
9D12042-CAL6	1000	106512	0.245	7.93
9D12042-CAL7	2000	222208	0.255	7.94
9D12042-CAL8	4000	440368	0.258	7.94
9D12042-CAL9	6000	634884	0.246	7.95
~~9D12042-CALA~~	~~8000~~	~~807681~~	~~0.236~~	~~7.95~~

AVE RF **0.200** RF RSD **32.22** AVE RT **7.94**

1,2,4-Trichlorobenzene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2246	0.268	8.02
9D12042-CAL2	50	6141	0.287	8.02
9D12042-CAL3	100	13568	0.313	8.02
9D12042-CAL4	200	27382	0.302	8.02
9D12042-CAL5	500	68791	0.306	8.02
9D12042-CAL6	1000	129034	0.296	8.02
9D12042-CAL7	2000	246059	0.282	8.02
9D12042-CAL8	4000	468931	0.274	8.03
9D12042-CAL9	6000	677553	0.262	8.03
9D12042-CALA	8000	857676	0.250	8.03

AVE RF **0.284** RF RSD **7.21** AVE RT **8.02**

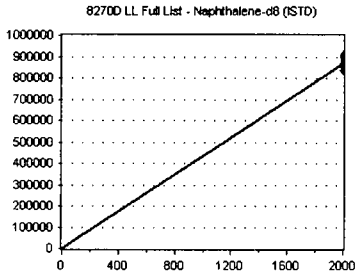
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Naphthalene-d8 (ISTD)

Curve Fit: **AVERAGE RF**

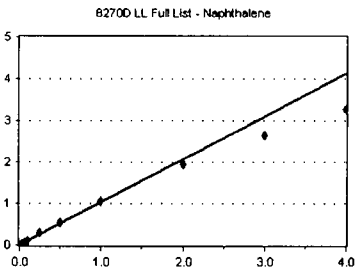


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	838248	419.124	8.08
9D12042-CAL2	2000	855155	427.578	8.08
9D12042-CAL3	2000	867816	433.908	8.08
9D12042-CAL4	2000	907511	453.756	8.08
9D12042-CAL5	2000	898567	449.283	8.08
9D12042-CAL6	2000	870566	435.283	8.08
9D12042-CAL7	2000	872864	436.432	8.08
9D12042-CAL8	2000	854691	427.346	8.09
9D12042-CAL9	2000	861766	430.883	8.09
9D12042-CALA	2000	857219	428.609	8.09

AVE RF **434.220** RF RSD **2.40** AVE RT **8.08**

Naphthalene

Curve Fit: **AVERAGE RF**

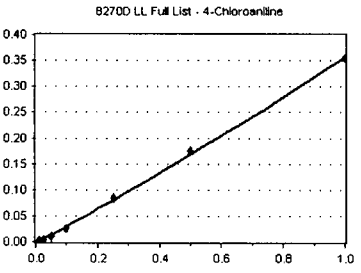


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	8711	1.039	8.10
9D12042-CAL2	50	23251	1.088	8.10
9D12042-CAL3	100	49024	1.130	8.10
9D12042-CAL4	200	102649	1.131	8.10
9D12042-CAL5	500	257687	1.147	8.10
9D12042-CAL6	1000	475302	1.092	8.10
9D12042-CAL7	2000	918583	1.052	8.10
9D12042-CAL8	4000	1661053	0.972	8.11
9D12042-CAL9	6000	2278161	0.881	8.11
9D12042-CALA	8000	2813330	0.820	8.11

AVE RF **1.035** RF RSD **10.72** AVE RT **8.11**

4-Chloroaniline

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

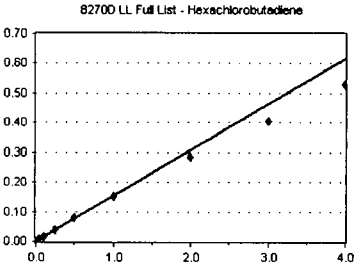


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1652	0.197	8.15
9D12042-CAL2	50	4055	0.190	8.15
9D12042-CAL3	100	9860	0.227	8.15
9D12042-CAL4	200	23535	0.259	8.15
9D12042-CAL5	500	75620	0.337	8.15
9D12042-CAL6	1000	151775	0.349	8.15
9D12042-CAL7	2000	308711	0.354	8.15
~~9D12042-CAL8~~	~~4000~~	~~625745~~	~~0.366~~	~~8.15~~
~~9D12042-CAL9~~	~~6000~~	~~903302~~	~~0.349~~	~~8.16~~
~~9D12042-CALA~~	~~8000~~	~~1106729~~	~~0.323~~	~~8.16~~

AVE RF **0.273** RF RSD **26.43** AVE RT **8.15**

Hexachlorobutadiene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1492	0.178	8.23
9D12042-CAL2	50	3496	0.164	8.23
9D12042-CAL3	100	7405	0.171	8.23
9D12042-CAL4	200	14260	0.157	8.23
9D12042-CAL5	500	35545	0.158	8.23
9D12042-CAL6	1000	67844	0.156	8.23
9D12042-CAL7	2000	131105	0.150	8.23
9D12042-CAL8	4000	243190	0.142	8.23
9D12042-CAL9	6000	350040	0.135	8.24
9D12042-CALA	8000	453153	0.132	8.24

AVE RF **0.154** RF RSD **9.53** AVE RT **8.23**

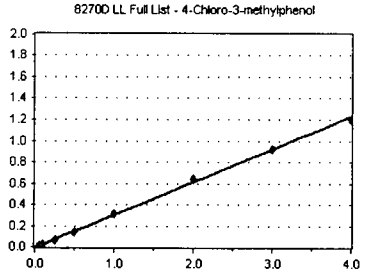
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

4-Chloro-3-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

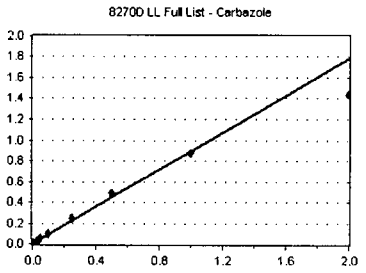


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~606~~	~~7.229~~	~~8.63~~
~~9D12042-CAL2~~	~~50~~	~~2641~~	~~0.124~~	~~8.63~~
9D12042-CAL3	100	5402	0.124	8.63
9D12042-CAL4	200	17148	0.189	8.62
9D12042-CAL5	500	61878	0.275	8.62
9D12042-CAL6	1000	126121	0.290	8.62
9D12042-CAL7	2000	269479	0.309	8.63
9D12042-CAL8	4000	543982	0.318	8.63
9D12042-CAL9	6000	795091	0.308	8.63
9D12042-CALA	8000	1024540	0.299	8.64

AVE RF **0.264** RF RSD **26.37** AVE RT **8.63**

Carbazole

Curve Fit: **AVERAGE RF**

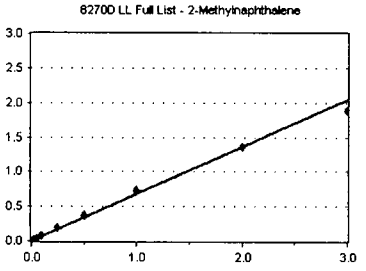


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5247	0.754	11.61
9D12042-CAL2	50	14600	0.833	11.61
9D12042-CAL3	100	36766	0.975	11.61
9D12042-CAL4	200	80323	1.009	11.61
9D12042-CAL5	500	187353	1.014	11.61
9D12042-CAL6	1000	340948	0.972	11.61
9D12042-CAL7	2000	651258	0.880	0.00
9D12042-CAL8	4000	1088868	0.718	0.00
~~9D12042-CAL9~~	~~6000~~	~~1519317~~	~~0.652~~	~~0.00~~
~~9D12042-CALA~~	~~8000~~	~~1858306~~	~~0.583~~	~~0.00~~

AVE RF **0.894** RF RSD **13.01** AVE RT **8.71**

2-Methylnaphthalene

Curve Fit: **AVERAGE RF**

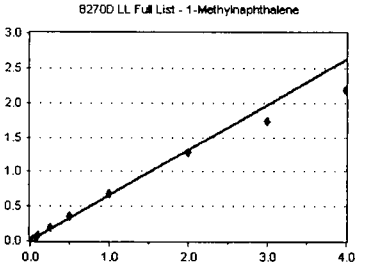


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4843	0.578	8.80
9D12042-CAL2	50	12740	0.596	8.80
9D12042-CAL3	100	27918	0.643	8.80
9D12042-CAL4	200	67852	0.748	8.80
9D12042-CAL5	500	173683	0.773	8.80
9D12042-CAL6	1000	322088	0.740	8.80
9D12042-CAL7	2000	633302	0.726	8.80
9D12042-CAL8	4000	1165928	0.682	8.80
9D12042-CAL9	6000	1614149	0.624	8.81
~~9D12042-CALA~~	~~8000~~	~~2022092~~	~~0.590~~	~~8.81~~

AVE RF **0.679** RF RSD **10.53** AVE RT **8.80**

1-Methylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5287	0.631	8.90
9D12042-CAL2	50	13733	0.642	8.90
9D12042-CAL3	100	29703	0.685	8.90
9D12042-CAL4	200	66438	0.732	8.90
9D12042-CAL5	500	168058	0.748	8.90
9D12042-CAL6	1000	303908	0.698	8.90
9D12042-CAL7	2000	593190	0.680	8.91
9D12042-CAL8	4000	1095549	0.641	8.91
9D12042-CAL9	6000	1501404	0.581	8.91
9D12042-CALA	8000	1877715	0.548	8.91

AVE RF **0.658** RF RSD **9.58** AVE RT **8.90**

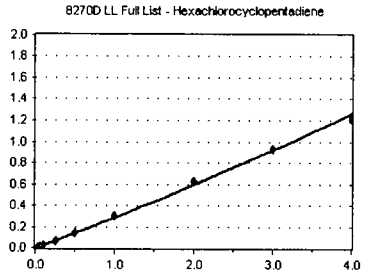
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Hexachlorocyclopentadiene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

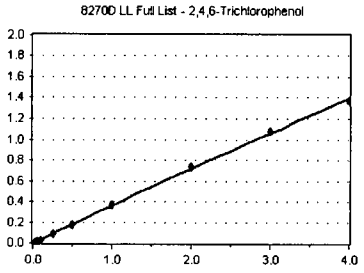


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~396~~	~~9.377~~	~~8.96~~
9D12042-CAL2	50	1375	0.128	8.97
9D12042-CAL3	100	3968	0.180	8.97
9D12042-CAL4	200	9648	0.211	8.97
9D12042-CAL5	500	28477	0.262	8.97
9D12042-CAL6	1000	59442	0.291	8.97
9D12042-CAL7	2000	126849	0.300	8.97
9D12042-CAL8	4000	258289	0.311	8.97
9D12042-CAL9	6000	390476	0.309	8.97
9D12042-CALA	8000	512416	0.302	8.98

AVE RF **0.255** RF RSD **26.05** AVE RT **8.97**

2,4,6-Trichlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

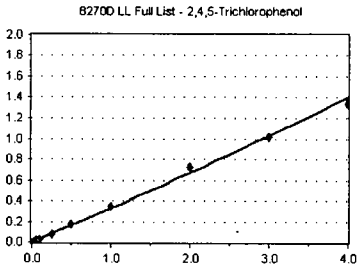


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~637~~	~~0.151~~	~~9.08~~
9D12042-CAL2	50	1647	0.154	9.08
9D12042-CAL3	100	3552	0.161	9.08
9D12042-CAL4	200	11339	0.247	9.08
9D12042-CAL5	500	35536	0.327	9.08
9D12042-CAL6	1000	69804	0.341	9.08
9D12042-CAL7	2000	154065	0.364	9.08
9D12042-CAL8	4000	304939	0.367	9.09
9D12042-CAL9	6000	453546	0.359	9.09
9D12042-CALA	8000	583608	0.343	9.09

AVE RF **0.296** RF RSD **29.20** AVE RT **9.08**

2,4,5-Trichlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

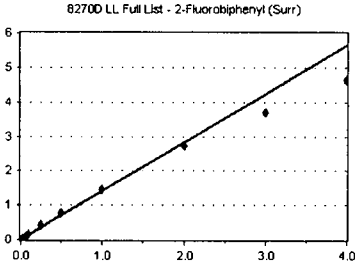


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~570~~	~~0.135~~	~~9.12~~
9D12042-CAL2	50	1937	0.181	9.12
9D12042-CAL3	100	4207	0.190	9.12
9D12042-CAL4	200	11558	0.252	9.12
9D12042-CAL5	500	34165	0.315	9.11
9D12042-CAL6	1000	69025	0.338	9.12
9D12042-CAL7	2000	144274	0.341	9.12
9D12042-CAL8	4000	298945	0.360	9.12
9D12042-CAL9	6000	429331	0.340	9.12
9D12042-CALA	8000	569105	0.335	9.13

AVE RF **0.295** RF RSD **23.36** AVE RT **9.12**

2-Fluorobiphenyl (Surr)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~4958~~	~~1.174~~	~~9.17~~
9D12042-CAL2	50	14620	1.365	9.17
9D12042-CAL3	100	29847	1.351	9.17
9D12042-CAL4	200	71986	1.571	9.17
9D12042-CAL5	500	177018	1.631	9.17
9D12042-CAL6	1000	318318	1.557	9.17
9D12042-CAL7	2000	622727	1.472	9.17
9D12042-CAL8	4000	1129555	1.360	9.17
9D12042-CAL9	6000	1558757	1.233	9.17
9D12042-CALA	8000	1972042	1.160	9.18

AVE RF **1.411** RF RSD **11.25** AVE RT **9.17**

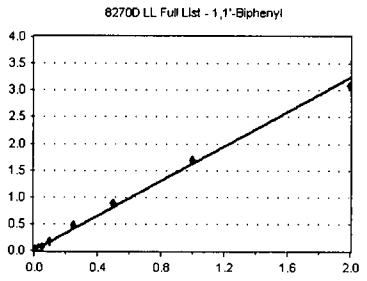
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

1,1'-Biphenyl

Curve Fit: **AVERAGE RF**

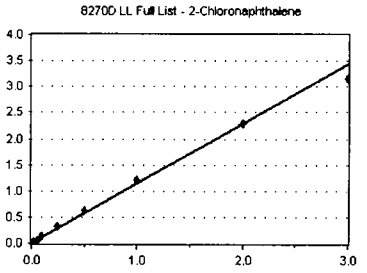


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5440	1.288	9.27
9D12042-CAL2	50	16008	1.495	9.27
9D12042-CAL3	100	33353	1.510	9.27
9D12042-CAL4	200	81722	1.783	9.27
9D12042-CAL5	500	202383	1.864	9.27
9D12042-CAL6	1000	365897	1.789	9.27
9D12042-CAL7	2000	716600	1.694	9.27
9D12042-CAL8	4000	1284403	1.546	9.27
~~9D12042-CAL9~~	~~6000~~	~~1770639~~	~~1.401~~	~~9.28~~
~~9D12042-CALA~~	~~8000~~	~~2197978~~	~~1.293~~	~~9.28~~

AVE RF **1.621** RF RSD **11.97** AVE RT **9.27**

2-Chloronaphthalene

Curve Fit: **AVERAGE RF**

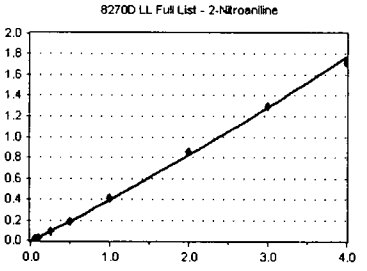


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4110	0.973	9.30
9D12042-CAL2	50	11226	1.048	9.30
9D12042-CAL3	100	23833	1.079	9.30
9D12042-CAL4	200	56267	1.228	9.30
9D12042-CAL5	500	143842	1.325	9.30
9D12042-CAL6	1000	256777	1.256	9.30
9D12042-CAL7	2000	513880	1.215	9.30
9D12042-CAL8	4000	950535	1.144	9.30
9D12042-CAL9	6000	1327873	1.051	9.31
~~9D12042-CALA~~	~~8000~~	~~1678580~~	~~0.988~~	~~9.31~~

AVE RF **1.147** RF RSD **10.16** AVE RT **9.30**

2-Nitroaniline

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

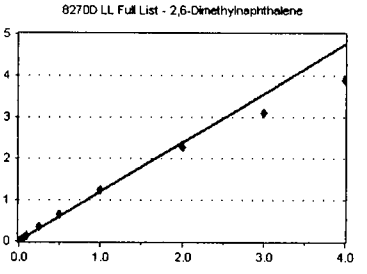


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~491~~	~~0.116~~	~~9.39~~
~~9D12042-CAL2~~	~~50~~	~~1501~~	~~0.140~~	~~9.39~~
9D12042-CAL3	100	3408	0.154	9.39
9D12042-CAL4	200	10366	0.226	9.39
9D12042-CAL5	500	37427	0.345	9.39
9D12042-CAL6	1000	74805	0.366	9.39
9D12042-CAL7	2000	172195	0.407	9.39
9D12042-CAL8	4000	356149	0.429	9.40
9D12042-CAL9	6000	544899	0.431	9.40
9D12042-CALA	8000	729589	0.429	9.41

AVE RF **0.348** RF RSD **29.95** AVE RT **9.39**

2,6-Dimethylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4471	1.059	9.43
9D12042-CAL2	50	12930	1.207	9.43
9D12042-CAL3	100	27574	1.248	9.43
9D12042-CAL4	200	60607	1.323	9.43
9D12042-CAL5	500	147706	1.361	9.43
9D12042-CAL6	1000	267086	1.306	9.43
9D12042-CAL7	2000	523522	1.238	9.43
9D12042-CAL8	4000	944826	1.137	9.44
9D12042-CAL9	6000	1312335	1.038	9.44
9D12042-CALA	8000	1648270	0.970	9.45

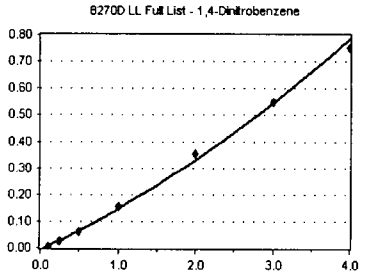
AVE RF **1.189** RF RSD **11.13** AVE RT **9.43**

Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

1,4-Dinitrobenzene

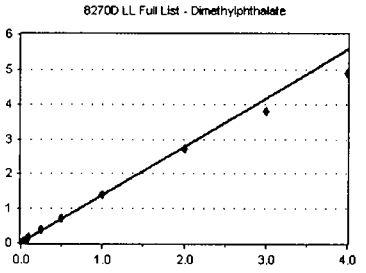


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~72~~	~~1.705~~	~~0.00~~
~~9D12042-CAL2~~	~~50~~	~~512~~	~~4.781~~	~~9.52~~
~~9D12042-CAL3~~	~~100~~	~~1082~~	~~4.899~~	~~9.52~~
9D12042-CAL4	200	2775	6.055	9.52
9D12042-CAL5	500	10966	0.101	9.52
9D12042-CAL6	1000	24586	0.120	9.52
9D12042-CAL7	2000	65644	0.155	9.52
9D12042-CAL8	4000	148152	0.178	9.53
9D12042-CAL9	6000	231647	0.183	9.53
9D12042-CALA	8000	319922	0.188	9.54

AVE RF **0.141** RF RSD **34.41** AVE RT **9.52**

Dimethylphthalate

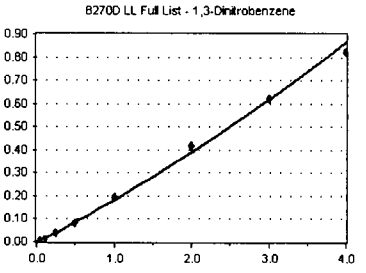


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5716	1.354	9.56
9D12042-CAL2	50	14804	1.382	9.56
9D12042-CAL3	100	32685	1.480	9.56
9D12042-CAL4	200	68197	1.488	9.56
9D12042-CAL5	500	166367	1.532	9.57
9D12042-CAL6	1000	293273	1.434	9.57
9D12042-CAL7	2000	593270	1.403	9.57
9D12042-CAL8	4000	1125792	1.355	9.58
9D12042-CAL9	6000	1593856	1.261	9.59
9D12042-CALA	8000	2076750	1.222	9.60

AVE RF **1.391** RF RSD **7.09** AVE RT **9.57**

1,3-Dinitrobenzene

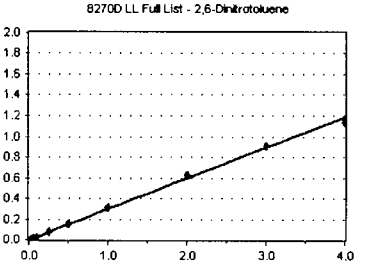


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~137~~	~~3.244~~	~~9.60~~
~~9D12042-CAL2~~	~~50~~	~~496~~	~~4.632~~	~~9.60~~
9D12042-CAL3	100	1592	7.208	9.60
9D12042-CAL4	200	4684	0.102	9.60
9D12042-CAL5	500	16599	0.153	9.60
9D12042-CAL6	1000	33847	0.166	9.60
9D12042-CAL7	2000	81663	0.193	9.60
9D12042-CAL8	4000	172914	0.208	9.61
9D12042-CAL9	6000	262552	0.208	9.62
9D12042-CALA	8000	349862	0.206	9.63

AVE RF **0.163** RF RSD **31.75** AVE RT **9.61**

2,6-Dinitrotoluene



Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~429~~	~~0.102~~	~~9.63~~
9D12042-CAL2	50	1360	0.127	9.63
9D12042-CAL3	100	3662	0.166	9.63
9D12042-CAL4	200	11248	0.245	9.63
9D12042-CAL5	500	31238	0.288	9.63
9D12042-CAL6	1000	61642	0.301	9.63
9D12042-CAL7	2000	130676	0.309	9.63
9D12042-CAL8	4000	259088	0.312	9.64
9D12042-CAL9	6000	380933	0.301	9.65
9D12042-CALA	8000	483438	0.284	9.65

AVE RF **0.259** RF RSD **26.10** AVE RT **9.63**

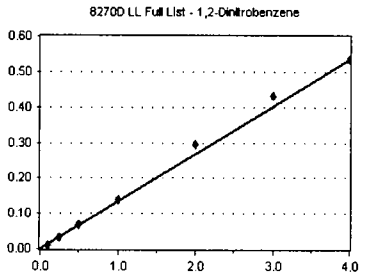
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

1,2-Dinitrobenzene

Curve Fit: **AVERAGE RF**

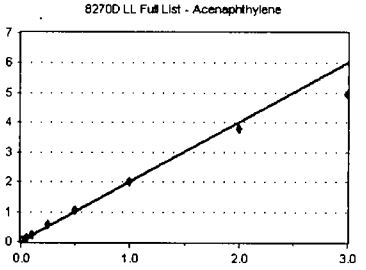


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~247~~	~~0.058~~	~~9.68~~
~~9D12042-CAL2~~	~~50~~	~~594~~	~~5.547~~	~~9.68~~
~~9D12042-CAL3~~	~~100~~	~~1685~~	~~7.629~~	~~9.69~~
9D12042-CAL4	200	5007	0.109	9.68
9D12042-CAL5	500	14052	0.129	9.69
9D12042-CAL6	1000	27578	0.135	9.69
9D12042-CAL7	2000	58797	0.139	9.70
9D12042-CAL8	4000	123107	0.148	9.70
9D12042-CAL9	6000	181239	0.143	9.71
9D12042-CALA	8000	227922	0.134	9.72

AVE RF **0.134** RF RSD **9.38** AVE RT **9.70**

Acenaphthylene

Curve Fit: **AVERAGE RF**

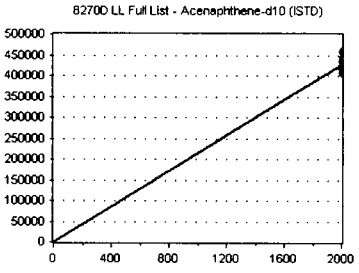


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	8037	1.903	9.72
9D12042-CAL2	50	20809	1.943	9.72
9D12042-CAL3	100	47235	2.139	9.72
9D12042-CAL4	200	96629	2.109	9.72
9D12042-CAL5	500	239738	2.208	9.72
9D12042-CAL6	1000	438645	2.145	9.72
9D12042-CAL7	2000	847485	2.004	9.72
9D12042-CAL8	4000	1577347	1.899	9.72
9D12042-CAL9	6000	2093729	1.657	9.73
~~9D12042-CALA~~	~~8000~~	~~2539761~~	~~1.494~~	~~9.73~~

AVE RF **2.001** RF RSD **8.59** AVE RT **9.72**

Acenaphthene-d10 (ISTD)

Curve Fit: **AVERAGE RF**

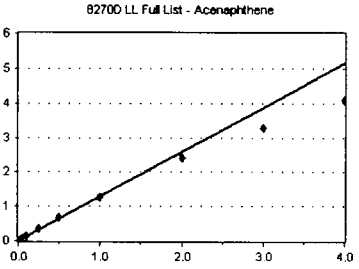


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	422298	211.149	9.86
9D12042-CAL2	2000	428361	214.180	9.86
9D12042-CAL3	2000	441746	220.873	9.86
9D12042-CAL4	2000	458269	229.135	9.86
9D12042-CAL5	2000	434239	217.120	9.86
9D12042-CAL6	2000	408985	204.493	9.87
9D12042-CAL7	2000	422972	211.486	9.87
9D12042-CAL8	2000	415395	207.698	9.87
9D12042-CAL9	2000	421304	210.652	9.87
9D12042-CALA	2000	424880	212.440	9.87

AVE RF **213.923** RF RSD **3.28** AVE RT **9.87**

Acenaphthene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5944	1.408	9.90
9D12042-CAL2	50	14121	1.319	9.90
9D12042-CAL3	100	30980	1.403	9.90
9D12042-CAL4	200	64550	1.409	9.90
9D12042-CAL5	500	152764	1.407	9.89
9D12042-CAL6	1000	274380	1.342	9.90
9D12042-CAL7	2000	539641	1.276	9.90
9D12042-CAL8	4000	991538	1.193	9.91
9D12042-CAL9	6000	1376414	1.089	9.91
9D12042-CALA	8000	1737085	1.022	9.91

AVE RF **1.287** RF RSD **10.97** AVE RT **9.90**

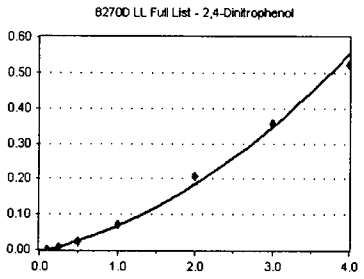
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

2,4-Dinitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

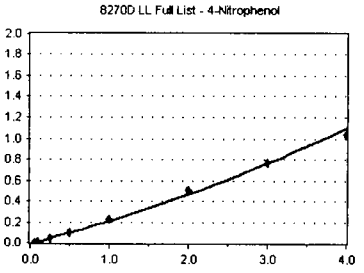


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~0~~	~~0.000~~	~~0.00~~
~~9D12042-CAL2~~	~~50~~	~~0~~	~~0.000~~	~~0.00~~
~~9D12042-CAL3~~	~~100~~	~~95~~	~~4.301~~	~~9.91~~
9D12042-CAL4	200	631	1.377	9.91
9D12042-CAL5	500	3186	2.935	9.91
9D12042-CAL6	1000	9505	4.648	9.91
9D12042-CAL7	2000	29815	0.070	9.91
9D12042-CAL8	4000	85634	0.103	9.92
9D12042-CAL9	6000	149631	0.118	9.93
9D12042-CALA	8000	222443	0.131	9.93

AVE RF **0.073** RF RSD **62.20** AVE RT **9.91**

4-Nitrophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

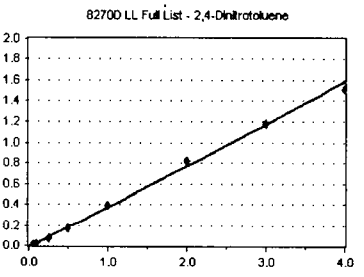


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~81~~	~~1.918~~	~~0.00~~
~~9D12042-CAL2~~	~~50~~	~~479~~	~~4.473~~	~~9.96~~
9D12042-CAL3	100	1391	6.298	9.96
9D12042-CAL4	200	5108	0.111	9.96
9D12042-CAL5	500	16667	0.154	9.96
9D12042-CAL6	1000	38661	0.189	9.96
9D12042-CAL7	2000	95687	0.226	9.96
9D12042-CAL8	4000	210496	0.253	9.98
9D12042-CAL9	6000	325043	0.257	9.98
9D12042-CALA	8000	441662	0.260	9.99

AVE RF **0.189** RF RSD **39.12** AVE RT **9.97**

2,4-Dinitrotoluene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

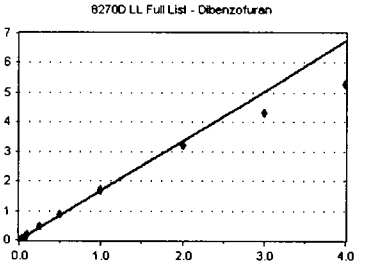


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~516~~	~~0.122~~	~~10.04~~
~~9D12042-CAL2~~	~~50~~	~~1414~~	~~0.132~~	~~10.04~~
9D12042-CAL3	100	3628	0.164	10.04
9D12042-CAL4	200	11165	0.244	10.04
9D12042-CAL5	500	34132	0.314	10.04
9D12042-CAL6	1000	72103	0.353	10.04
9D12042-CAL7	2000	165775	0.392	10.04
9D12042-CAL8	4000	342144	0.412	10.06
9D12042-CAL9	6000	498579	0.394	10.06
9D12042-CALA	8000	642029	0.378	10.07

AVE RF **0.331** RF RSD **26.17** AVE RT **10.05**

Dibenzofuran

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	7180	1.700	10.07
9D12042-CAL2	50	18996	1.774	10.07
9D12042-CAL3	100	39453	1.786	10.07
9D12042-CAL4	200	85043	1.856	10.07
9D12042-CAL5	500	203340	1.873	10.07
9D12042-CAL6	1000	357236	1.747	10.07
9D12042-CAL7	2000	718481	1.699	10.07
9D12042-CAL8	4000	1332830	1.604	10.08
9D12042-CAL9	6000	1822175	1.442	10.08
9D12042-CALA	8000	2258697	1.329	10.08

AVE RF **1.681** RF RSD **10.48** AVE RT **10.07**

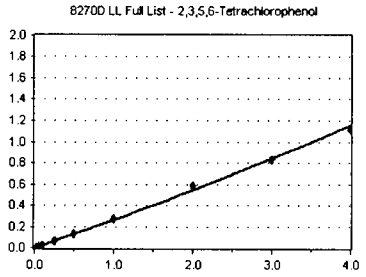
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

2,3,5,6-Tetrachlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

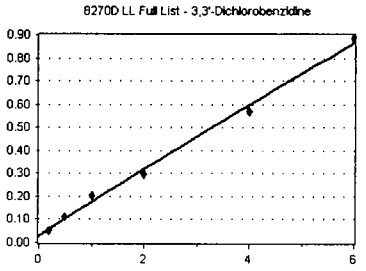


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~365~~	~~8.643~~	~~10.16~~
9D12042-CAL2	50	1033	0.096	10.15
9D12042-CAL3	100	2960	0.134	10.15
9D12042-CAL4	200	9240	0.202	10.15
9D12042-CAL5	500	26249	0.242	10.15
9D12042-CAL6	1000	53006	0.259	10.15
9D12042-CAL7	2000	116600	0.276	10.15
9D12042-CAL8	4000	241470	0.291	10.16
9D12042-CAL9	6000	352904	0.279	10.16
9D12042-CALA	8000	471457	0.277	10.16

AVE RF **0.228** RF RSD **30.66** AVE RT **10.15**

3,3'-Dichlorobenzidine

Curve Fit: **QUADRATIC: Weighting: (1/a), Origin: Ignore**

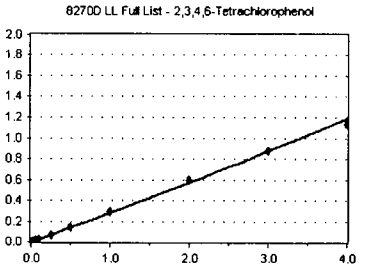


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~40~~	~~2133~~	~~0.175~~	~~0.00~~
~~9D12042-CAL2~~	~~100~~	~~6271~~	~~0.205~~	~~0.00~~
~~9D12042-CAL3~~	~~200~~	~~17285~~	~~0.255~~	~~15.29~~
9D12042-CAL4	400	40983	0.275	15.29
9D12042-CAL5	1000	74081	0.221	15.29
9D12042-CAL6	2000	125386	0.206	15.29
9D12042-CAL7	4000	194322	0.148	15.30
9D12042-CAL8	8000	367601	0.143	0.00
9D12042-CAL9	12000	561471	0.148	0.00
~~9D12042-CALA~~	~~16000~~	~~784747~~	~~0.156~~	~~0.00~~

AVE RF **0.190** RF RSD **28.01** AVE RT **10.19**

2,3,4,6-Tetrachlorophenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

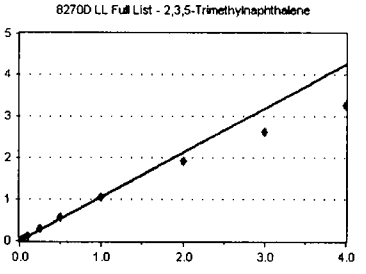


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	466	0.110	10.19
9D12042-CAL2	50	1825	0.170	10.19
9D12042-CAL3	100	4761	0.216	10.19
9D12042-CAL4	200	12019	0.262	10.19
9D12042-CAL5	500	29885	0.275	10.19
9D12042-CAL6	1000	57975	0.284	10.19
9D12042-CAL7	2000	124349	0.294	10.19
9D12042-CAL8	4000	249107	0.300	10.20
9D12042-CAL9	6000	370697	0.293	10.21
9D12042-CALA	8000	480353	0.283	10.21

AVE RF **0.249** RF RSD **25.53** AVE RT **10.20**

2,3,5-Trimethylnaphthalene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4447	1.053	10.27
9D12042-CAL2	50	12035	1.124	10.28
9D12042-CAL3	100	26553	1.202	10.28
9D12042-CAL4	200	55486	1.211	10.28
9D12042-CAL5	500	130703	1.204	10.28
9D12042-CAL6	1000	228198	1.116	10.28
9D12042-CAL7	2000	449654	1.063	10.29
9D12042-CAL8	4000	800915	0.964	10.29
9D12042-CAL9	6000	1102900	0.873	10.29
9D12042-CALA	8000	1390016	0.818	10.30

AVE RF **1.063** RF RSD **13.08** AVE RT **10.28**

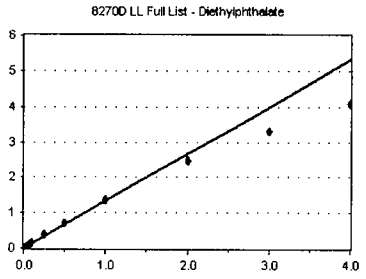
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Diethylphthalate

Curve Fit: **AVERAGE RF**

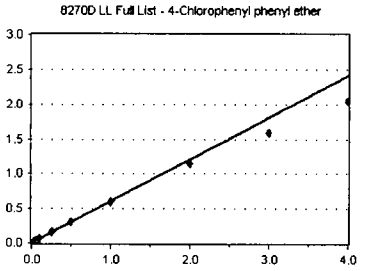


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5489	1.300	10.28
9D12042-CAL2	50	14203	1.326	10.28
9D12042-CAL3	100	33503	1.517	10.28
9D12042-CAL4	200	68644	1.498	10.28
9D12042-CAL5	500	165131	1.521	10.28
9D12042-CAL6	1000	290221	1.419	10.29
9D12042-CAL7	2000	569548	1.347	10.29
9D12042-CAL8	4000	1025219	1.234	10.29
9D12042-CAL9	6000	1390913	1.100	10.30
9D12042-CALA	8000	1740855	1.024	10.30

AVE RF **1.329** RF RSD **12.89** AVE RT **10.29**

4-Chlorophenyl phenyl ether

Curve Fit: **AVERAGE RF**

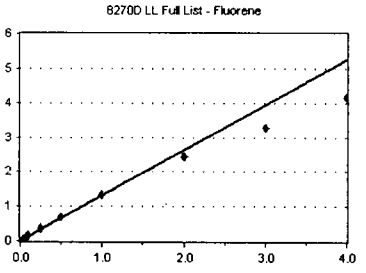


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2599	0.615	10.41
9D12042-CAL2	50	6570	0.614	10.41
9D12042-CAL3	100	14524	0.658	10.41
9D12042-CAL4	200	29693	0.648	10.41
9D12042-CAL5	500	70419	0.649	10.41
9D12042-CAL6	1000	127242	0.622	10.41
9D12042-CAL7	2000	257040	0.608	10.41
9D12042-CAL8	4000	476543	0.574	10.41
9D12042-CAL9	6000	666343	0.527	10.42
9D12042-CALA	8000	866576	0.510	10.42

AVE RF **0.602** RF RSD **8.39** AVE RT **10.41**

Fluorene

Curve Fit: **AVERAGE RF**

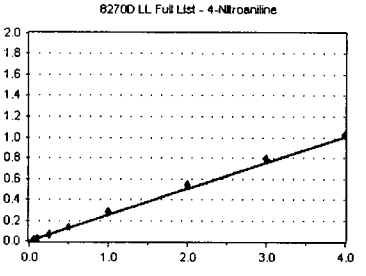


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5519	1.307	10.42
9D12042-CAL2	50	14499	1.354	10.42
9D12042-CAL3	100	32507	1.472	10.42
9D12042-CAL4	200	68196	1.488	10.42
9D12042-CAL5	500	160999	1.483	10.42
9D12042-CAL6	1000	283189	1.385	10.42
9D12042-CAL7	2000	562191	1.329	10.42
9D12042-CAL8	4000	1010351	1.216	10.43
9D12042-CAL9	6000	1382772	1.094	10.43
9D12042-CALA	8000	1760020	1.036	10.44

AVE RF **1.316** RF RSD **12.04** AVE RT **10.42**

4-Nitroaniline

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~410~~	~~9.709~~	~~10.42~~
~~9D12042-CAL2~~	~~50~~	~~1321~~	~~0.123~~	~~10.42~~
9D12042-CAL3	100	3975	0.180	10.42
9D12042-CAL4	200	11137	0.243	10.42
9D12042-CAL5	500	27588	0.254	10.42
9D12042-CAL6	1000	55130	0.270	10.42
9D12042-CAL7	2000	116803	0.276	10.43
9D12042-CAL8	4000	224177	0.270	10.44
9D12042-CAL9	6000	332833	0.263	10.45
9D12042-CALA	8000	435677	0.256	10.46

AVE RF **0.252** RF RSD **12.23** AVE RT **10.43**

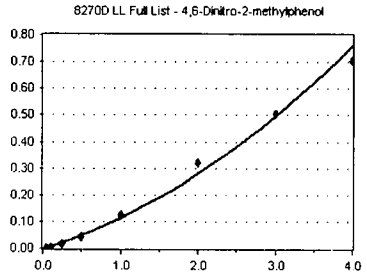
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

4,6-Dinitro-2-methylphenol

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

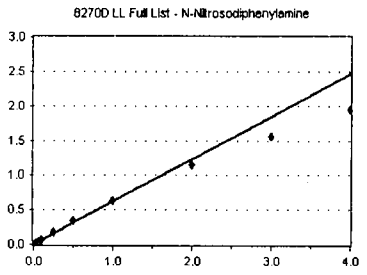


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~66~~	~~1.563~~	~~10.46~~
~~9D12042-CAL2~~	~~50~~	~~144~~	~~0.013~~	~~10.46~~
9D12042-CAL3	100	481	2.178	10.46
9D12042-CAL4	200	2085	0.045	10.46
9D12042-CAL5	500	7777	7.164	10.46
9D12042-CAL6	1000	18318	8.958	10.46
9D12042-CAL7	2000	52412	0.124	10.46
9D12042-CAL8	4000	132375	0.159	10.47
9D12042-CAL9	6000	214039	0.169	10.48
9D12042-CALA	8000	299612	0.176	10.49

AVE RF **0.107** RF RSD **54.99** AVE RT **10.47**

N-Nitrosodiphenylamine

Curve Fit: **AVERAGE RF**

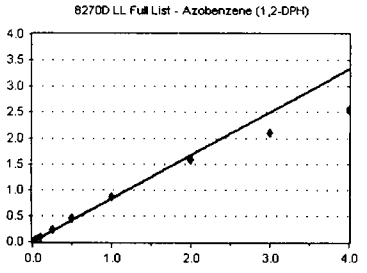


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3694	0.531	10.53
9D12042-CAL2	50	11052	0.631	10.53
9D12042-CAL3	100	26271	0.697	10.53
9D12042-CAL4	200	55332	0.695	10.53
9D12042-CAL5	500	133109	0.721	10.53
9D12042-CAL6	1000	233117	0.665	10.53
9D12042-CAL7	2000	470356	0.635	10.53
9D12042-CAL8	4000	873790	0.576	10.54
9D12042-CAL9	6000	1213548	0.521	10.54
9D12042-CALA	8000	1549603	0.486	10.55

AVE RF **0.616** RF RSD **13.41** AVE RT **10.53**

Azobenzene (1,2-DPH)

Curve Fit: **AVERAGE RF**

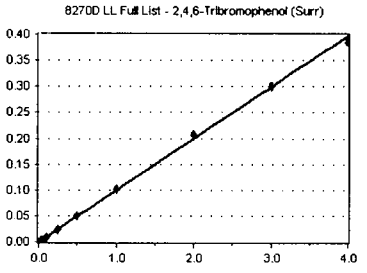


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5526	0.794	10.57
9D12042-CAL2	50	14382	0.821	10.57
9D12042-CAL3	100	34700	0.920	10.57
9D12042-CAL4	200	74635	0.938	10.57
9D12042-CAL5	500	177851	0.963	10.57
9D12042-CAL6	1000	317716	0.906	10.57
9D12042-CAL7	2000	640569	0.865	10.57
9D12042-CAL8	4000	1195391	0.788	10.58
9D12042-CAL9	6000	1634030	0.701	10.59
9D12042-CALA	8000	2030780	0.637	10.59

AVE RF **0.833** RF RSD **12.72** AVE RT **10.57**

2,4,6-Tribromophenol (Surr)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~384~~	~~0.055~~	~~10.67~~
9D12042-CAL2	50	864	4.929	10.67
9D12042-CAL3	100	2582	6.846	10.67
9D12042-CAL4	200	7004	8.799	10.67
9D12042-CAL5	500	17282	9.357	10.67
9D12042-CAL6	1000	34203	9.756	10.67
9D12042-CAL7	2000	75759	0.102	10.67
9D12042-CAL8	4000	157542	0.104	10.67
9D12042-CAL9	6000	233263	0.100	10.68
9D12042-CALA	8000	307443	9.646	10.68

AVE RF **0.089** RF RSD **20.57** AVE RT **10.67**

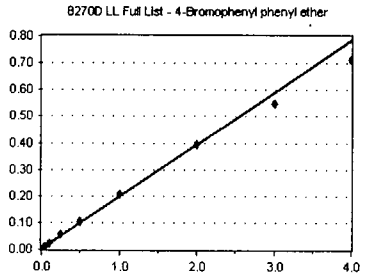
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

4-Bromophenyl phenyl ether

Curve Fit: **AVERAGE RF**

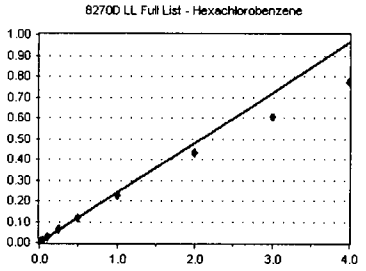


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	1143	0.164	10.91
9D12042-CAL2	50	3328	0.190	10.91
9D12042-CAL3	100	7754	0.206	10.91
9D12042-CAL4	200	17137	0.215	10.91
9D12042-CAL5	500	40555	0.220	10.91
9D12042-CAL6	1000	73569	0.210	10.91
9D12042-CAL7	2000	152125	0.205	10.91
9D12042-CAL8	4000	299638	0.198	10.92
9D12042-CAL9	6000	426557	0.183	10.92
9D12042-CALA	8000	567177	0.178	10.92

AVE RF **0.197** RF RSD **9.01** AVE RT **10.91**

Hexachlorobenzene

Curve Fit: **AVERAGE RF**

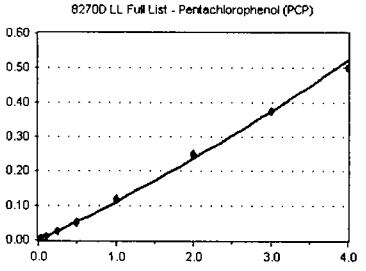


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	2003	0.288	10.99
9D12042-CAL2	50	4727	0.270	10.99
9D12042-CAL3	100	9841	0.261	10.99
9D12042-CAL4	200	19743	0.248	10.99
9D12042-CAL5	500	46685	0.253	10.99
9D12042-CAL6	1000	85256	0.243	10.99
9D12042-CAL7	2000	169660	0.229	11.00
9D12042-CAL8	4000	325856	0.215	11.00
9D12042-CAL9	6000	468256	0.201	11.00
9D12042-CALA	8000	614308	0.193	11.01

AVE RF **0.240** RF RSD **12.70** AVE RT **10.99**

Pentachlorophenol (PCP)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

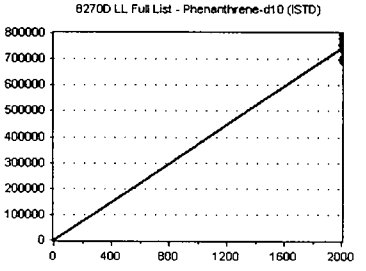


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~966~~	~~0.139~~	~~11.18~~
9D12042-CAL2	50	1190	6.789	11.18
9D12042-CAL3	100	2796	7.413	11.18
9D12042-CAL4	200	7672	9.639	11.18
9D12042-CAL5	500	18590	0.101	11.18
9D12042-CAL6	1000	36665	0.105	11.18
9D12042-CAL7	2000	88610	0.120	11.18
9D12042-CAL8	4000	190485	0.126	11.19
9D12042-CAL9	6000	290217	0.125	11.19
9D12042-CALA	8000	397295	0.125	11.19

AVE RF **0.104** RF RSD **20.99** AVE RT **11.19**

Phenanthrene-d10 (ISTD)

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	695574	347.787	11.38
9D12042-CAL2	2000	701109	350.554	11.38
9D12042-CAL3	2000	754332	377.166	11.38
9D12042-CAL4	2000	795971	397.986	11.38
9D12042-CAL5	2000	738796	369.398	11.38
9D12042-CAL6	2000	701196	350.598	11.38
9D12042-CAL7	2000	740336	370.168	11.38
9D12042-CAL8	2000	758182	379.091	11.38
9D12042-CAL9	2000	776478	388.239	11.39
9D12042-CALA	2000	796822	398.411	11.39

AVE RF **372.940** RF RSD **5.07** AVE RT **11.38**

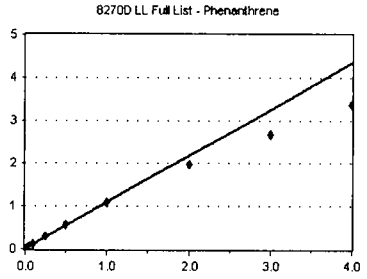
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Phenanthrene

Curve Fit: **AVERAGE RF**

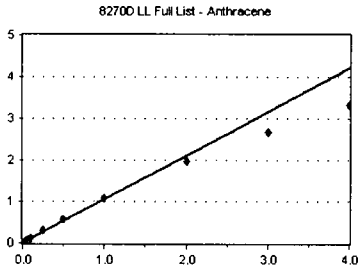


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	8041	1.156	11.40
9D12042-CAL2	50	20614	1.176	11.40
9D12042-CAL3	100	45844	1.215	11.40
9D12042-CAL4	200	95305	1.197	11.40
9D12042-CAL5	500	217396	1.177	11.40
9D12042-CAL6	1000	396616	1.131	11.40
9D12042-CAL7	2000	798010	1.078	11.41
9D12042-CAL8	4000	1492206	0.984	11.41
9D12042-CAL9	6000	2079626	0.893	11.41
9D12042-CALA	8000	2691755	0.845	11.42

AVE RF **1.085** RF RSD **12.23** AVE RT **11.41**

Anthracene

Curve Fit: **AVERAGE RF**

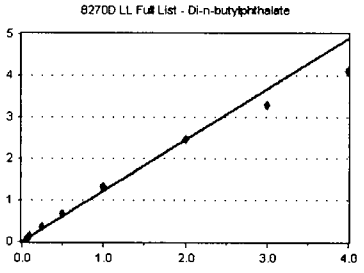


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	6943	0.998	11.45
9D12042-CAL2	50	18968	1.082	11.45
9D12042-CAL3	100	44636	1.183	11.45
9D12042-CAL4	200	94023	1.181	11.45
9D12042-CAL5	500	221004	1.197	11.46
9D12042-CAL6	1000	394791	1.126	11.46
9D12042-CAL7	2000	805661	1.088	11.46
9D12042-CAL8	4000	1503459	0.991	11.46
9D12042-CAL9	6000	2083055	0.894	11.47
9D12042-CALA	8000	2638439	0.828	11.47

AVE RF **1.057** RF RSD **11.97** AVE RT **11.46**

Di-n-butylphthalate

Curve Fit: **AVERAGE RF**

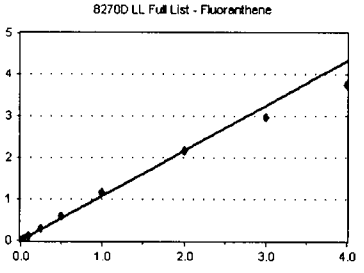


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~6378~~	~~0.917~~	~~0.00~~
~~9D12042-CAL2~~	~~50~~	~~17235~~	~~0.983~~	~~11.95~~
9D12042-CAL3	100	42155	1.118	11.95
9D12042-CAL4	200	102422	1.287	11.95
9D12042-CAL5	500	254292	1.377	11.95
9D12042-CAL6	1000	466951	1.332	11.95
9D12042-CAL7	2000	975285	1.317	11.95
9D12042-CAL8	4000	1863184	1.229	11.95
9D12042-CAL9	6000	2563602	1.101	11.95
9D12042-CALA	8000	3263829	1.024	11.96

AVE RF **1.223** RF RSD **10.44** AVE RT **11.95**

Fluoranthene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	6550	0.942	12.72
9D12042-CAL2	50	16870	0.962	12.72
9D12042-CAL3	100	42585	1.129	12.72
9D12042-CAL4	200	96117	1.208	12.72
9D12042-CAL5	500	228649	1.238	12.72
9D12042-CAL6	1000	412285	1.176	12.72
9D12042-CAL7	2000	857707	1.159	12.72
9D12042-CAL8	4000	1642237	1.083	12.72
9D12042-CAL9	6000	2306517	0.990	12.73
9D12042-CALA	8000	2984085	0.936	12.74

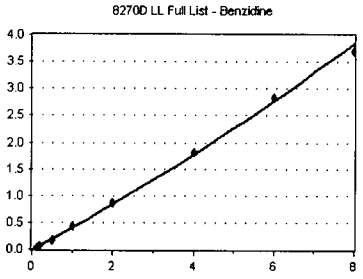
AVE RF **1.082** RF RSD **10.70** AVE RT **12.72**

Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Benzidine

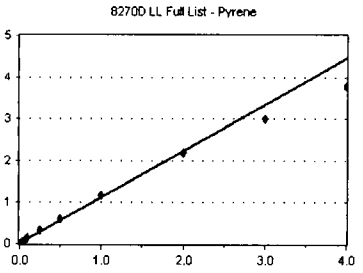


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~40~~	~~5651~~	~~0.406~~	~~12.87~~
~~9D12042-CAL2~~	~~100~~	~~8239~~	~~0.235~~	~~12.87~~
9D12042-CAL3	200	20642	0.274	12.87
9D12042-CAL4	400	43225	0.272	12.87
9D12042-CAL5	1000	133741	0.362	12.87
9D12042-CAL6	2000	301351	0.430	12.88
9D12042-CAL7	4000	643196	0.434	12.88
9D12042-CAL8	8000	1376314	0.454	12.89
9D12042-CAL9	12000	2206262	0.474	12.90
9D12042-CALA	16000	2941124	0.461	12.90

AVE RF **0.395** RF RSD **20.93** AVE RT **12.88**

Pyrene

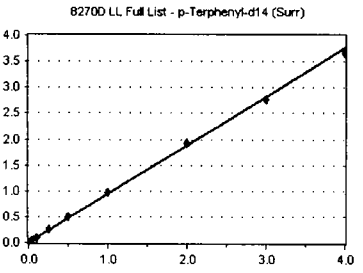


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	7061	1.015	13.03
9D12042-CAL2	50	18258	1.042	13.03
9D12042-CAL3	100	44554	1.181	13.03
9D12042-CAL4	200	98204	1.234	13.03
9D12042-CAL5	500	236036	1.278	13.03
9D12042-CAL6	1000	420841	1.200	13.03
9D12042-CAL7	2000	864674	1.168	13.03
9D12042-CAL8	4000	1649971	1.088	13.04
9D12042-CAL9	6000	2327794	0.999	13.05
9D12042-CALA	8000	3020323	0.948	13.05

AVE RF **1.115** RF RSD **10.03** AVE RT **13.03**

p-Terphenyl-d14 (Surr)

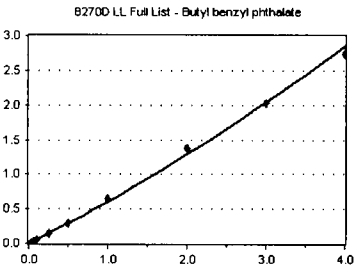


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4983	0.817	13.24
9D12042-CAL2	50	13758	0.900	13.24
9D12042-CAL3	100	32507	0.960	13.24
9D12042-CAL4	200	72239	0.969	13.24
9D12042-CAL5	500	169985	1.012	13.24
9D12042-CAL6	1000	302416	0.993	13.24
9D12042-CAL7	2000	637269	0.970	13.25
9D12042-CAL8	4000	1238678	0.963	13.25
9D12042-CAL9	6000	1748485	0.920	13.25
9D12042-CALA	8000	2287744	0.912	13.26

AVE RF **0.941** RF RSD **5.99** AVE RT **13.25**

Butyl benzyl phthalate



Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~1437~~	~~0.236~~	~~14.11~~
9D12042-CAL2	50	4216	0.276	14.11
9D12042-CAL3	100	12505	0.369	14.11
9D12042-CAL4	200	33181	0.445	14.11
9D12042-CAL5	500	94315	0.562	14.11
9D12042-CAL6	1000	182466	0.599	14.11
9D12042-CAL7	2000	421549	0.642	14.11
9D12042-CAL8	4000	881875	0.685	14.12
9D12042-CAL9	6000	1284862	0.676	14.13
9D12042-CALA	8000	1721965	0.686	14.13

AVE RF **0.549** RF RSD **27.53** AVE RT **14.12**

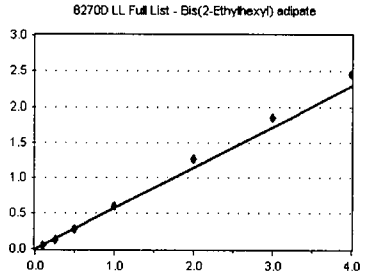
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Bis(2-Ethylhexyl) adipate

Curve Fit: **AVERAGE RF**

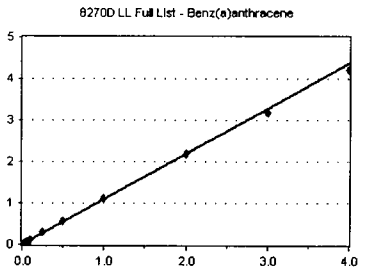


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~2012~~	~~0.330~~	~~0.00~~
~~9D12042-CAL2~~	~~50~~	~~4520~~	~~0.296~~	~~0.00~~
~~9D12042-CAL3~~	~~100~~	~~13416~~	~~0.396~~	~~14.29~~
9D12042-CAL4	200	32652	0.438	14.29
9D12042-CAL5	500	89139	0.531	14.29
9D12042-CAL6	1000	172525	0.567	14.29
9D12042-CAL7	2000	390927	0.595	14.30
9D12042-CAL8	4000	814038	0.633	14.30
9D12042-CAL9	6000	1167165	0.614	14.30
9D12042-CALA	8000	1536908	0.613	14.31

AVE RF **0.570** RF RSD **11.84** AVE RT **14.30**

Benz(a)anthracene

Curve Fit: **AVERAGE RF**

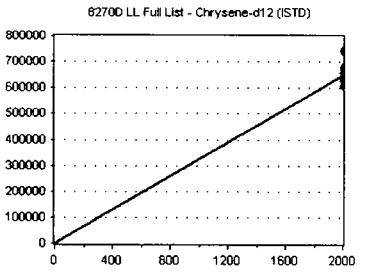


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	6716	1.101	15.33
9D12042-CAL2	50	15643	1.023	15.33
9D12042-CAL3	100	36438	1.076	15.33
9D12042-CAL4	200	84134	1.128	15.33
9D12042-CAL5	500	193655	1.153	15.33
9D12042-CAL6	1000	339038	1.113	15.33
9D12042-CAL7	2000	723880	1.102	15.33
9D12042-CAL8	4000	1412877	1.098	15.35
9D12042-CAL9	6000	2019475	1.062	15.35
9D12042-CALA	8000	2651985	1.057	15.36

AVE RF **1.091** RF RSD **3.46** AVE RT **15.34**

Chrysene-d12 (ISTD)

Curve Fit: **AVERAGE RF**

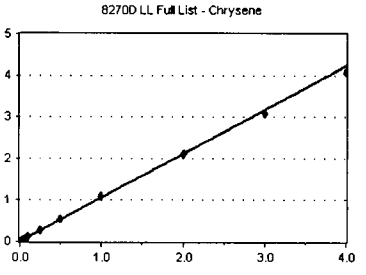


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	610059	305.030	15.35
9D12042-CAL2	2000	611518	305.759	15.35
9D12042-CAL3	2000	677420	338.710	15.36
9D12042-CAL4	2000	745877	372.938	15.36
9D12042-CAL5	2000	671794	335.897	15.36
9D12042-CAL6	2000	609064	304.532	15.36
9D12042-CAL7	2000	656807	328.403	15.37
9D12042-CAL8	2000	643412	321.706	15.37
9D12042-CAL9	2000	633760	316.880	15.38
9D12042-CALA	2000	627246	313.623	15.38

AVE RF **324.348** RF RSD **6.50** AVE RT **15.36**

Chrysene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	6300	1.033	15.41
9D12042-CAL2	50	15517	1.015	15.41
9D12042-CAL3	100	36836	1.088	15.41
9D12042-CAL4	200	81237	1.089	15.41
9D12042-CAL5	500	184149	1.096	15.41
9D12042-CAL6	1000	330019	1.084	15.41
9D12042-CAL7	2000	705299	1.074	15.43
9D12042-CAL8	4000	1362723	1.059	15.44
9D12042-CAL9	6000	1955932	1.029	15.45
9D12042-CALA	8000	2567396	1.023	15.46

AVE RF **1.059** RF RSD **2.95** AVE RT **15.42**

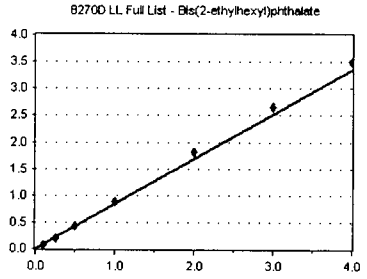
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Bis(2-ethylhexyl)phthalate

Curve Fit: **AVERAGE RF**

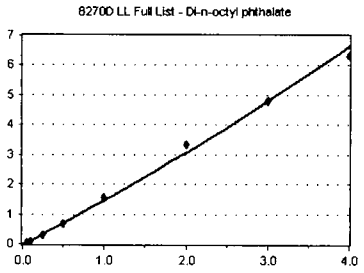


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~1961~~	~~0.321~~	~~15.48~~
~~9D12042-CAL2~~	~~50~~	~~5834~~	~~0.382~~	~~15.49~~
~~9D12042-CAL3~~	~~100~~	~~17462~~	~~0.516~~	~~15.49~~
9D12042-CAL4	200	48543	0.651	15.49
9D12042-CAL5	500	135678	0.808	15.49
9D12042-CAL6	1000	262635	0.862	15.49
9D12042-CAL7	2000	581618	0.886	15.49
9D12042-CAL8	4000	1174172	0.912	15.50
9D12042-CAL9	6000	1684021	0.886	15.50
9D12042-CALA	8000	2197866	0.876	15.51

AVE RF **0.840** RF RSD **10.65** AVE RT **15.49**

Di-n-octyl phthalate

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

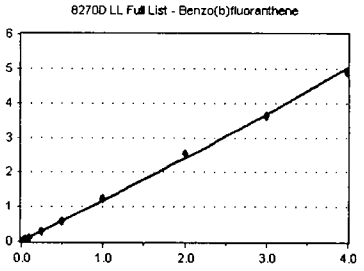


Standard	Concentration	Response	Response Factor	RT
~~9D12042-CAL1~~	~~20~~	~~1918~~	~~0.355~~	~~17.15~~
~~9D12042-CAL2~~	~~50~~	~~5426~~	~~0.399~~	~~17.17~~
9D12042-CAL3	100	17362	0.566	17.16
9D12042-CAL4	200	57618	0.833	17.16
9D12042-CAL5	500	179707	1.176	17.17
9D12042-CAL6	1000	379612	1.379	17.16
9D12042-CAL7	2000	937211	1.539	17.17
9D12042-CAL8	4000	2011354	1.664	17.17
9D12042-CAL9	6000	2987922	1.603	17.18
9D12042-CALA	8000	3987899	1.577	17.19

AVE RF **1.292** RF RSD **31.17** AVE RT **17.17**

Benzo(b)fluoranthene

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

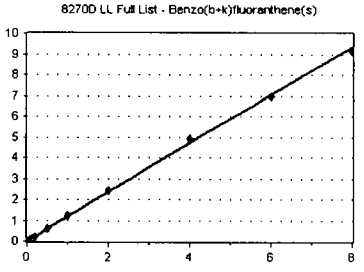


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3779	0.699	17.93
9D12042-CAL2	50	11314	0.833	17.94
9D12042-CAL3	100	30164	0.984	17.94
9D12042-CAL4	200	73883	1.068	17.94
9D12042-CAL5	500	182995	1.198	17.95
9D12042-CAL6	1000	328149	1.192	17.95
9D12042-CAL7	2000	743627	1.221	17.96
9D12042-CAL8	4000	1520664	1.258	17.97
9D12042-CAL9	6000	2251243	1.208	17.99
9D12042-CALA	8000	3082964	1.219	18.00

AVE RF **1.088** RF RSD **17.56** AVE RT **17.96**

Benzo(b+k)fluoranthene(s)

Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	40	8014	0.741	17.93
9D12042-CAL2	100	23691	0.872	18.01
9D12042-CAL3	200	63641	1.038	18.01
9D12042-CAL4	400	154717	1.118	18.01
9D12042-CAL5	1000	376051	1.230	18.01
9D12042-CAL6	2000	674655	1.225	18.02
9D12042-CAL7	4000	1488733	1.222	18.03
9D12042-CAL8	8000	2970412	1.229	18.05
9D12042-CAL9	12000	4333245	1.162	18.06
9D12042-CALA	16000	5776538	1.142	18.07

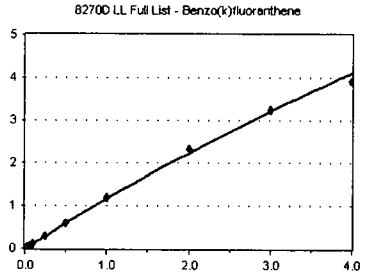
AVE RF **1.098** RF RSD **15.32** AVE RT **18.02**

Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Benzo(k)fluoranthene

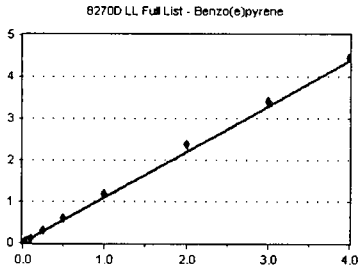


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3388	0.627	18.01
9D12042-CAL2	50	11590	0.853	18.01
9D12042-CAL3	100	31556	1.029	18.01
9D12042-CAL4	200	77404	1.119	18.01
9D12042-CAL5	500	185113	1.211	18.01
9D12042-CAL6	1000	333411	1.211	18.02
9D12042-CAL7	2000	719520	1.182	18.03
9D12042-CAL8	4000	1404715	1.162	18.05
9D12042-CAL9	6000	2012368	1.079	18.06
9D12042-CALA	8000	2486052	0.983	18.07

AVE RF **1.046** RF RSD **17.75** AVE RT **18.03**

Benzo(e)pyrene

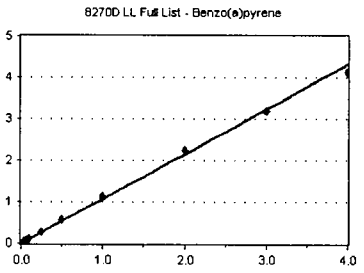


Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4564	0.844	18.60
9D12042-CAL2	50	12166	0.896	18.60
9D12042-CAL3	100	32260	1.052	18.60
9D12042-CAL4	200	76788	1.110	18.60
9D12042-CAL5	500	185968	1.217	18.61
9D12042-CAL6	1000	331204	1.203	18.61
9D12042-CAL7	2000	729599	1.198	18.62
9D12042-CAL8	4000	1443185	1.194	18.63
9D12042-CAL9	6000	2113962	1.134	18.65
9D12042-CALA	8000	2828166	1.118	18.66

AVE RF **1.097** RF RSD **11.91** AVE RT **18.62**

Benzo(a)pyrene

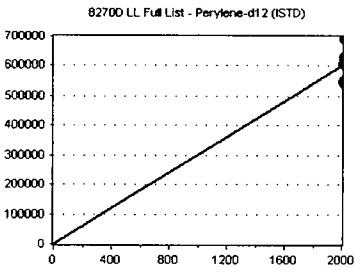


Curve Fit: **QUADRATIC: Weighting: (1/a^2), Origin: Ignore**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	3153	0.583	18.73
9D12042-CAL2	50	9489	0.699	18.73
9D12042-CAL3	100	26020	0.849	18.72
9D12042-CAL4	200	69007	0.998	18.72
9D12042-CAL5	500	167492	1.096	18.73
9D12042-CAL6	1000	305060	1.108	18.73
9D12042-CAL7	2000	692390	1.137	18.74
9D12042-CAL8	4000	1361909	1.127	18.76
9D12042-CAL9	6000	1987626	1.066	18.77
9D12042-CALA	8000	2622343	1.037	18.78

AVE RF **0.970** RF RSD **20.03** AVE RT **18.74**

Perylene-d12 (ISTD)



Curve Fit: **AVERAGE RF**

Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	540507	270.253	18.87
9D12042-CAL2	2000	543287	271.643	18.87
9D12042-CAL3	2000	613080	306.540	18.87
9D12042-CAL4	2000	691727	345.863	18.88
9D12042-CAL5	2000	611227	305.613	18.88
9D12042-CAL6	2000	550560	275.280	18.88
9D12042-CAL7	2000	608933	304.467	18.88
9D12042-CAL8	2000	604409	302.205	18.89
9D12042-CAL9	2000	621448	310.724	18.89
9D12042-CALA	2000	632280	316.140	18.90

AVE RF **300.873** RF RSD **7.73** AVE RT **18.88**

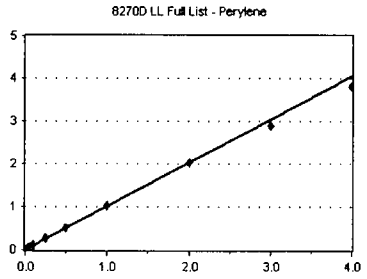
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

Perylene

Curve Fit: **AVERAGE RF**

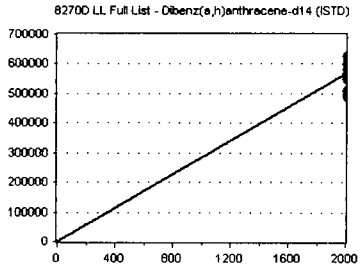


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5247	0.971	18.92
9D12042-CAL2	50	12964	0.954	18.92
9D12042-CAL3	100	31514	1.028	18.92
9D12042-CAL4	200	76410	1.105	18.92
9D12042-CAL5	500	164210	1.075	18.93
9D12042-CAL6	1000	289485	1.052	18.93
9D12042-CAL7	2000	626831	1.029	18.94
9D12042-CAL8	4000	1230925	1.018	18.96
9D12042-CAL9	6000	1800658	0.966	18.97
9D12042-CALA	8000	2414315	0.955	18.99

AVE RF **1.015** RF RSD **5.19** AVE RT **18.94**

Dibenz(a,h)anthracene-d14 (ISTD)

Curve Fit: **AVERAGE RF**

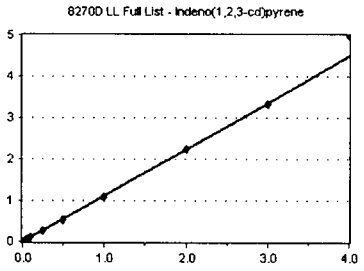


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	2000	486802	243.401	21.26
9D12042-CAL2	2000	498877	249.438	21.26
9D12042-CAL3	2000	548377	274.188	21.26
9D12042-CAL4	2000	629435	314.718	21.27
9D12042-CAL5	2000	566816	283.408	21.27
9D12042-CAL6	2000	510954	255.477	21.27
9D12042-CAL7	2000	581304	290.652	21.27
9D12042-CAL8	2000	596931	298.465	21.29
9D12042-CAL9	2000	616591	308.295	21.30
9D12042-CALA	2000	623208	311.604	21.31

AVE RF **282.965** RF RSD **9.34** AVE RT **21.27**

Indeno(1,2,3-cd)pyrene

Curve Fit: **AVERAGE RF**

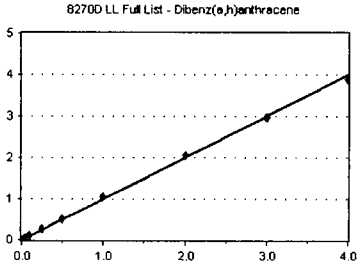


Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	5842	1.200	21.26
9D12042-CAL2	50	13136	1.053	21.26
9D12042-CAL3	100	29860	1.089	21.26
9D12042-CAL4	200	68379	1.086	21.26
9D12042-CAL5	500	156537	1.105	21.26
9D12042-CAL6	1000	278226	1.089	21.27
9D12042-CAL7	2000	633467	1.090	21.28
9D12042-CAL8	4000	1337697	1.120	21.30
9D12042-CAL9	6000	2048112	1.107	21.31
9D12042-CALA	8000	3112495	1.249	21.33

AVE RF **1.119** RF RSD **5.31** AVE RT **21.28**

Dibenz(a,h)anthracene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4686	0.963	21.32
9D12042-CAL2	50	11403	0.914	21.33
9D12042-CAL3	100	27470	1.002	21.33
9D12042-CAL4	200	62866	0.999	21.33
9D12042-CAL5	500	147780	1.043	21.32
9D12042-CAL6	1000	262242	1.026	21.33
9D12042-CAL7	2000	618025	1.063	21.34
9D12042-CAL8	4000	1232473	1.032	21.36
9D12042-CAL9	6000	1836914	0.993	21.37
9D12042-CALA	8000	2425385	0.973	21.38

AVE RF **1.001** RF RSD **4.36** AVE RT **21.34**

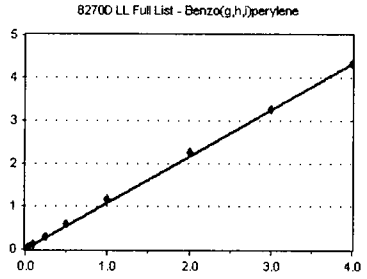
Element Calibration Review Sheet

Calibration ID: **A9D1505** Instrument: **SV-GCMS10** Calibration Date: **04/15/2019**

Analysis: **8270D LL Full List** Instrument Cal ID: **A9D1505**

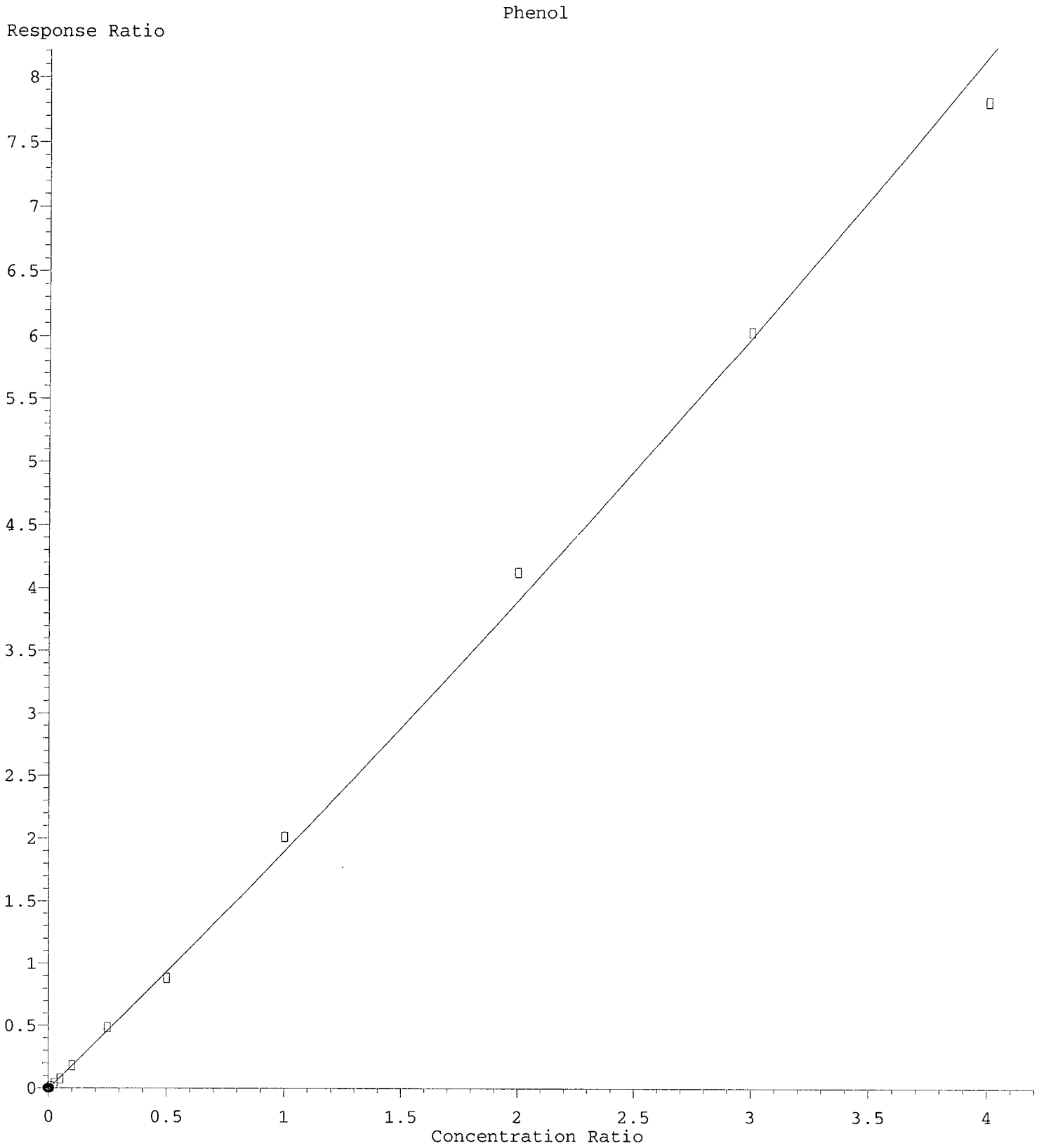
Benzo(g,h,i)perylene

Curve Fit: **AVERAGE RF**



Standard	Concentration	Response	Response Factor	RT
9D12042-CAL1	20	4399	0.904	21.81
9D12042-CAL2	50	12250	0.982	21.80
9D12042-CAL3	100	27580	1.006	21.80
9D12042-CAL4	200	68971	1.096	21.80
9D12042-CAL5	500	166477	1.175	21.81
9D12042-CAL6	1000	301297	1.179	21.81
9D12042-CAL7	2000	672680	1.157	21.82
9D12042-CAL8	4000	1357790	1.137	21.84
9D12042-CAL9	6000	2023853	1.094	21.87
9D12042-CALA	8000	2701841	1.084	21.88

AVE RF **1.081** RF RSD **8.42** AVE RT **21.82**

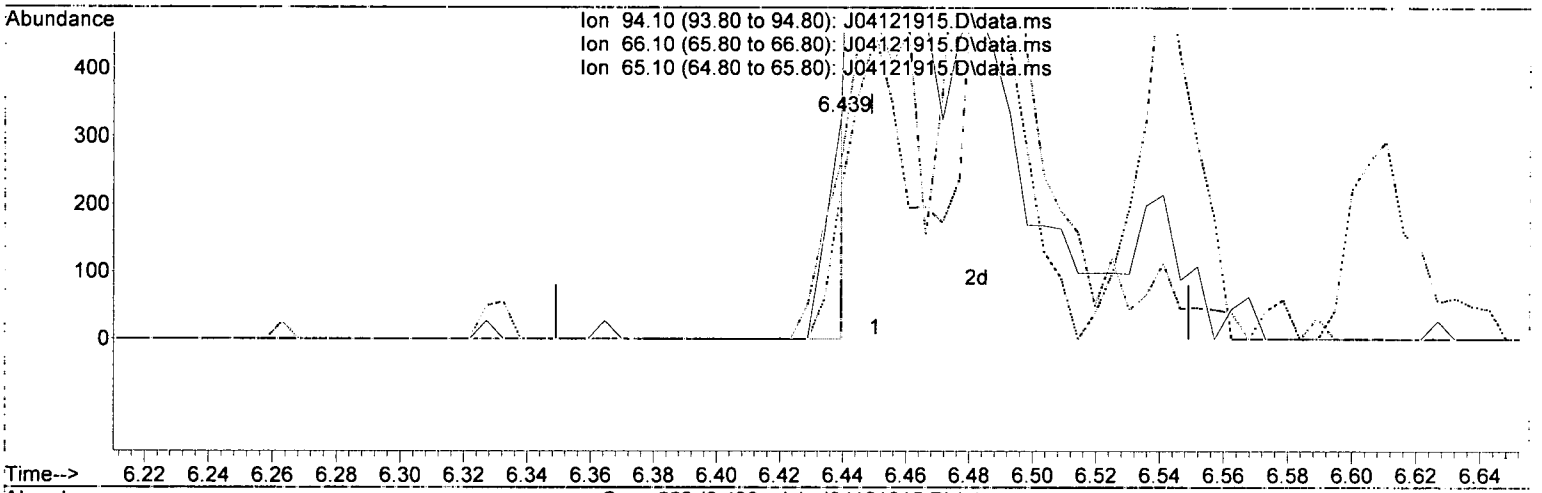


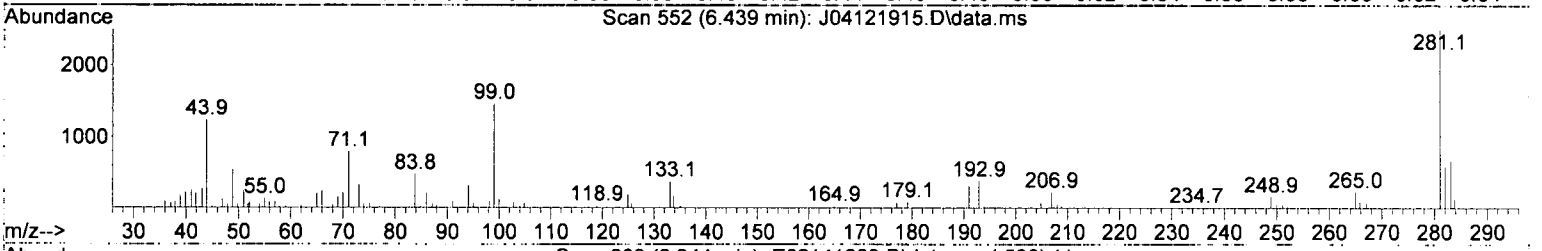
R = 4.53e-002 A*A + 1.86e+000 A - 8.91e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\8v10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

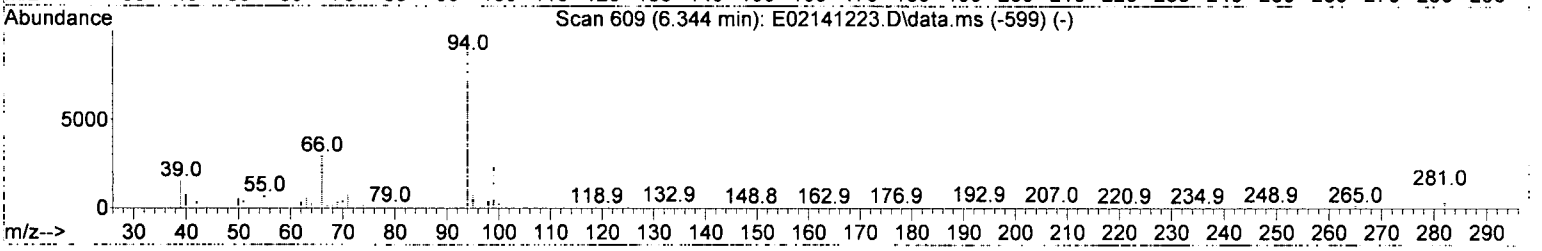
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







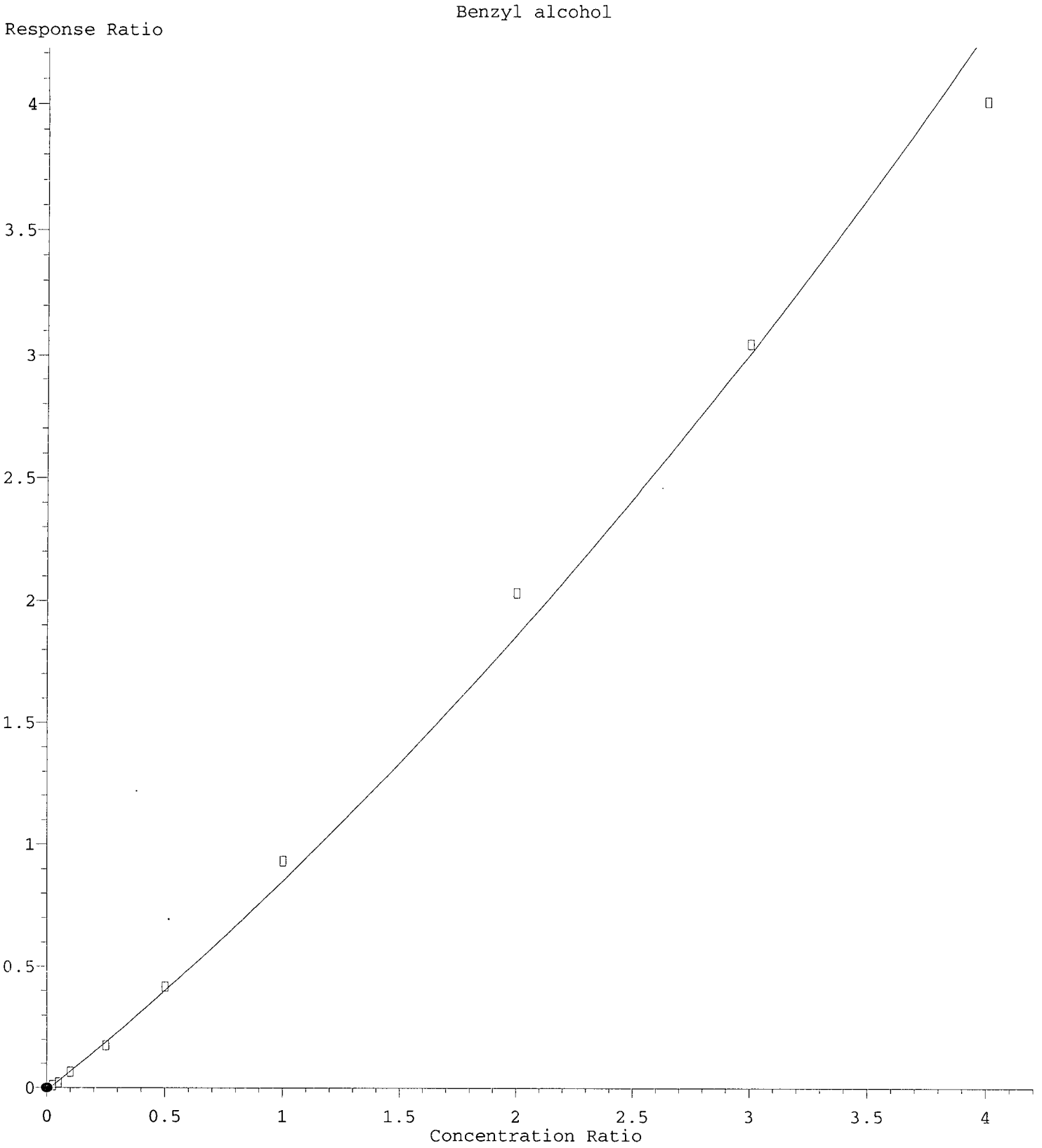
TIC: J04121915.D\data.ms

(6) Phenol (T)

6.439min (-0.010) 10.39 ng/ml m

response 156

Ion	Exp%	Act%
94.10	100.00	100.00
66.10	34.30	80.24#
65.10	26.20	68.09#
0.00	0.00	0.00

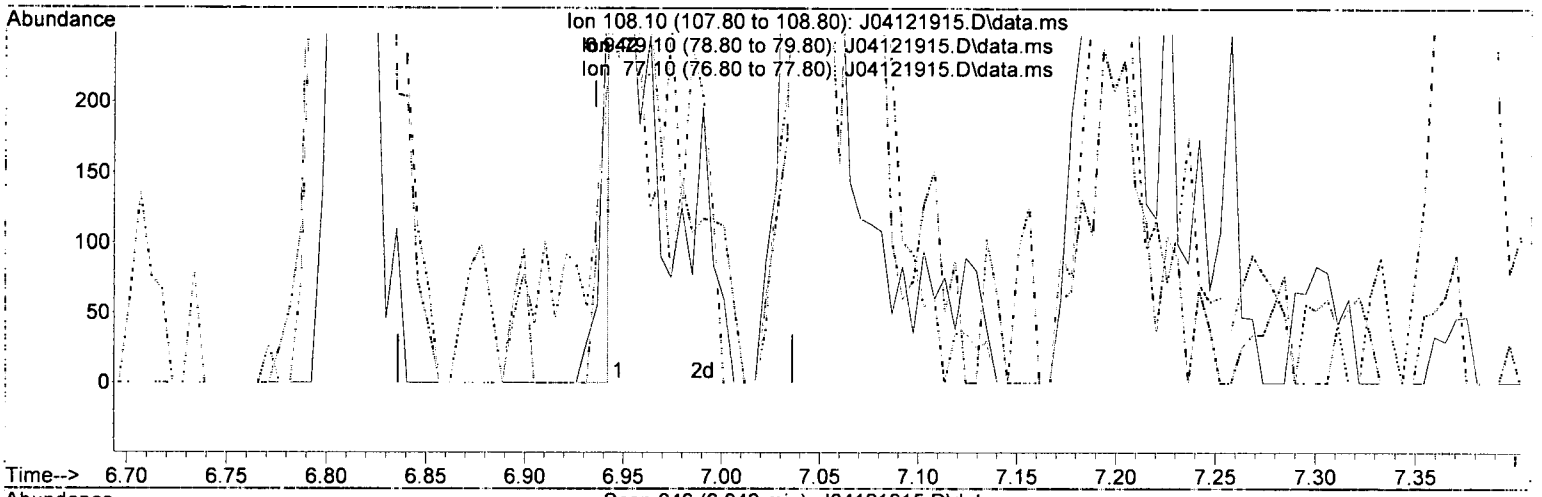


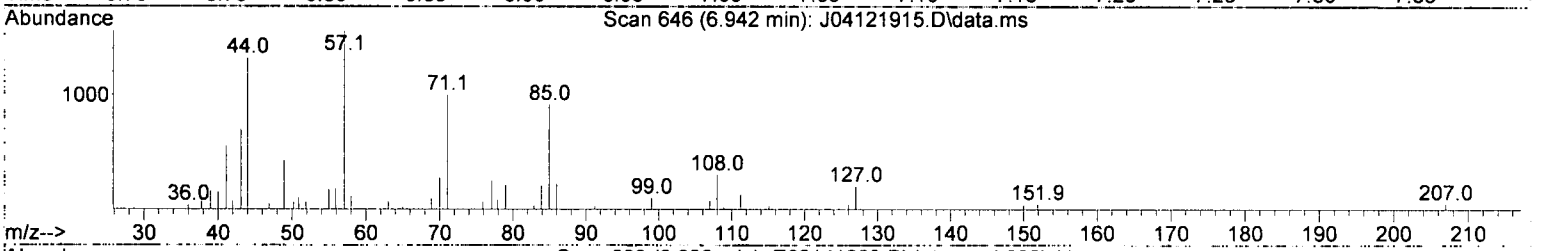
R = 7.20e-002 A*A + 7.92e-001 A - 1.27e-002
Coef of Det (r^2) = 0.991 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

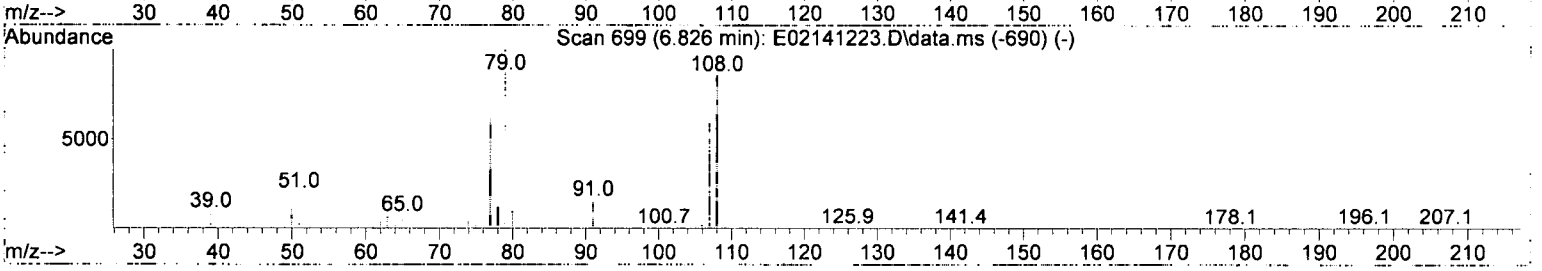
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







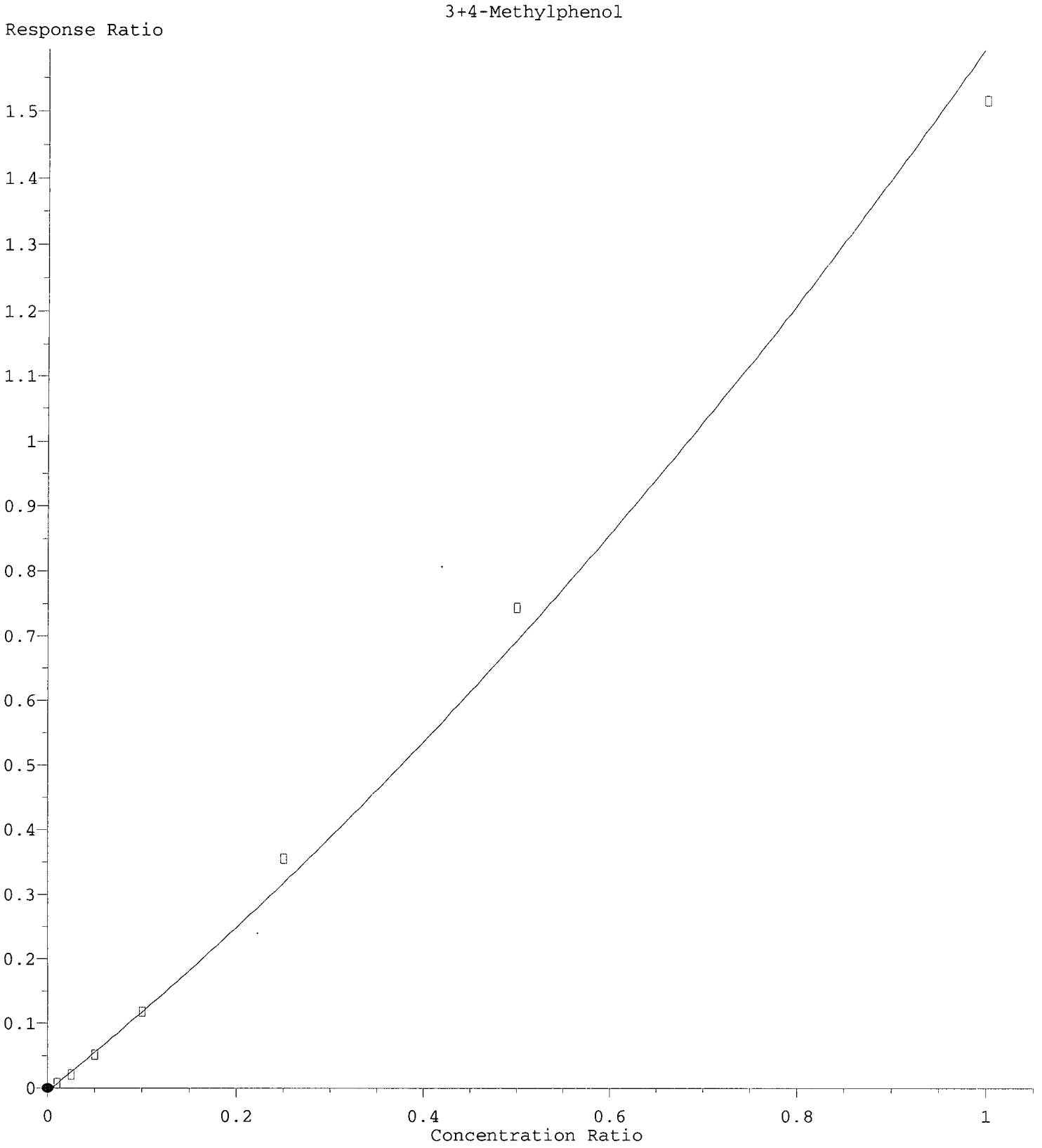
TIC: J04121915.D\data.ms

(12) Benzyl alcohol (T)

6.942min (+ 0.006) 33.75 ng/ml m

response 130

Ion	Exp%	Act%
108.10	100.00	100.00
79.10	130.20	71.96#
77.10	80.10	82.55
0.00	0.00	0.00

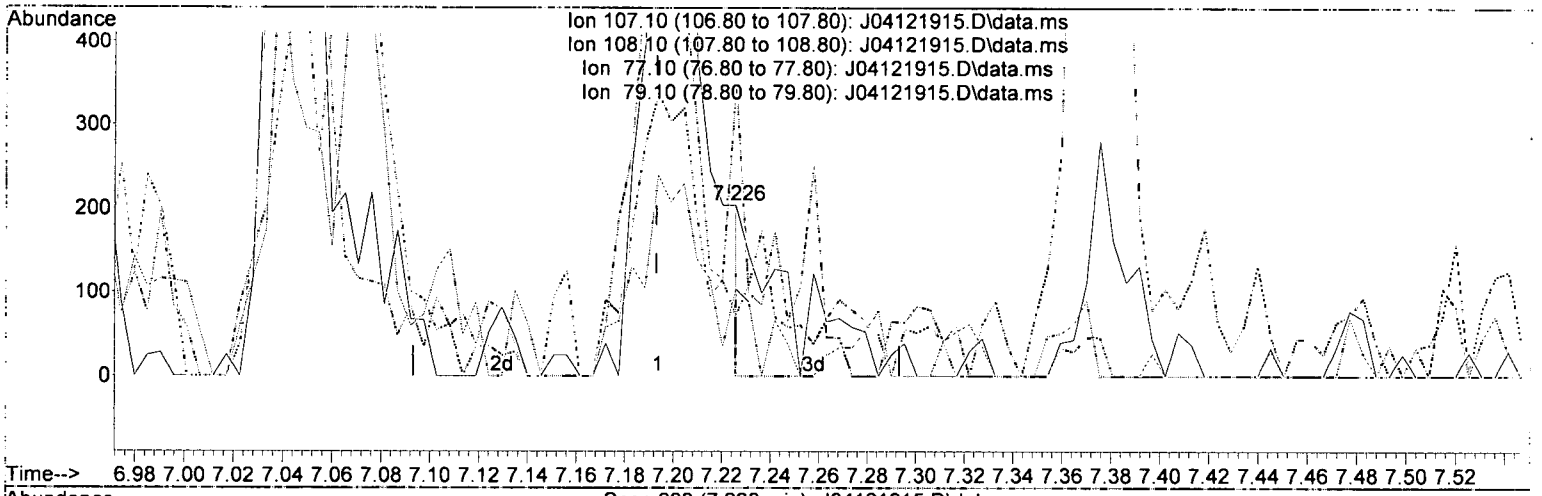


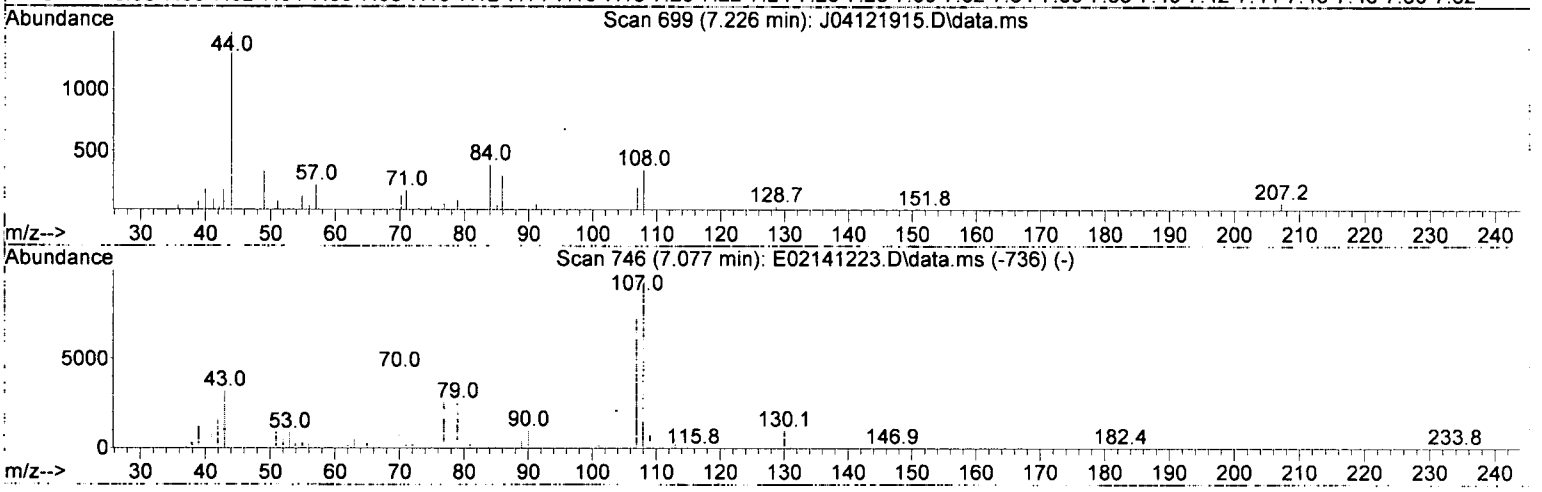
R = 4.16e-001 A*A + 1.19e+000 A - 5.31e-003
Coef of Det (r^2) = 0.990 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





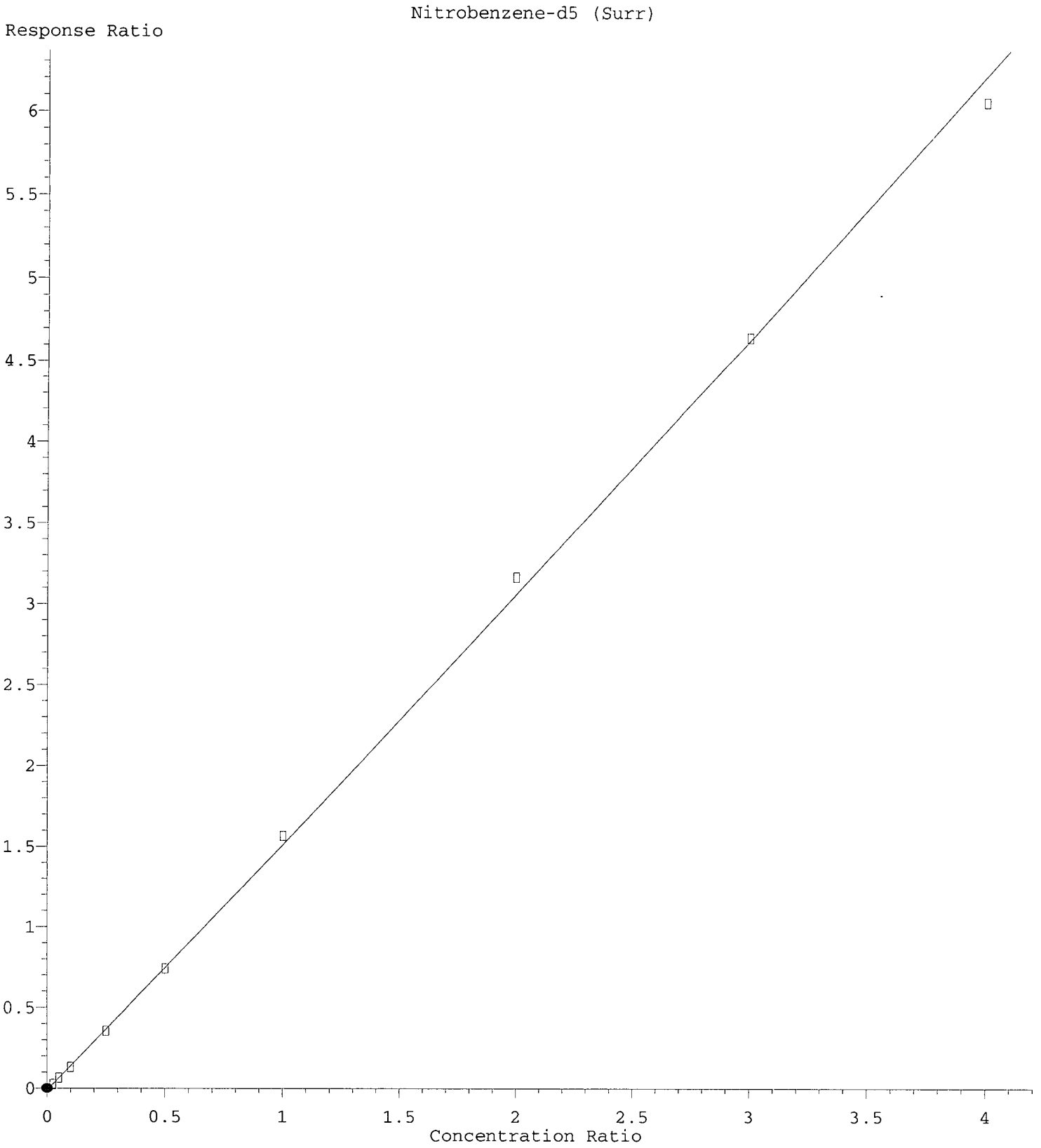
TIC: J04121915.D\data.ms

(17) 3+4-Methylphenol (T)

7.226min (+ 0.033) 10.21 ng/ml m

response 160

Ion	Exp%	Act%
107.10	100.00	100.00
108.10	91.10	171.08#
77.10	32.60	35.29
79.10	27.90	50.98

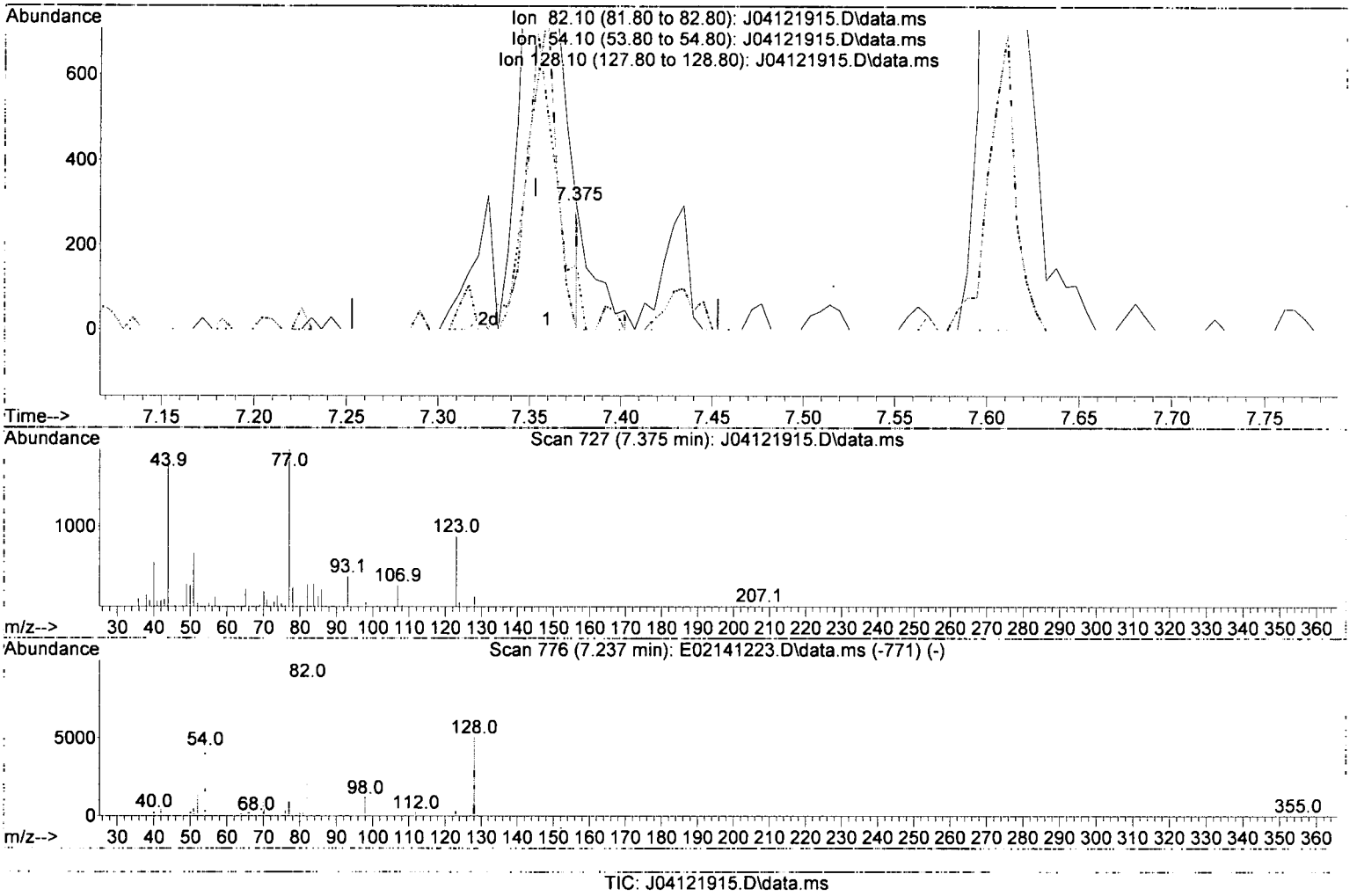


R = 1.06e-002 A*A + 1.52e+000 A - 1.41e-002
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

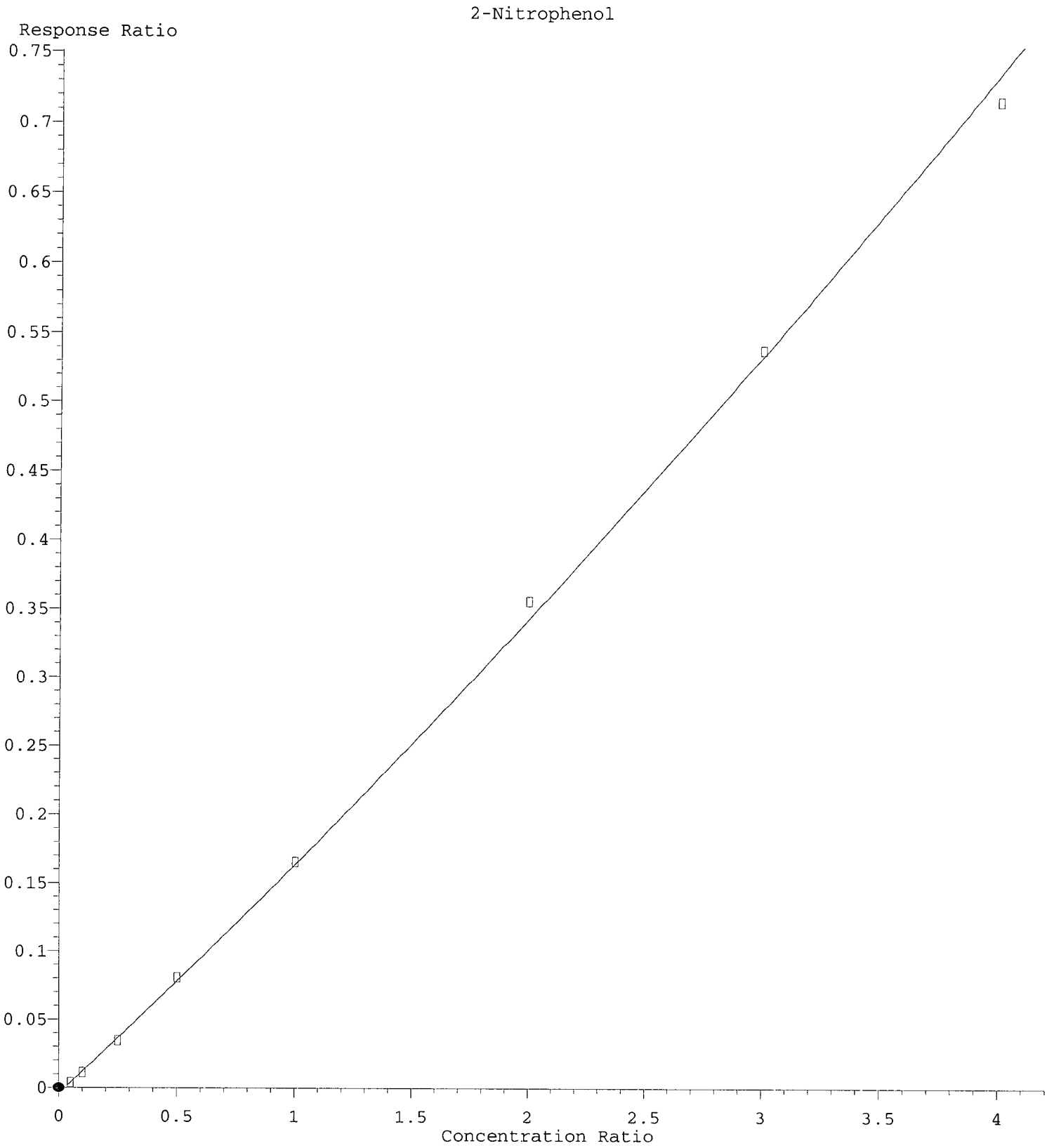


(19) Nitrobenzene-d5 (Surr) (S)

7.375min (+ 0.022) 19.52 ng/ml m

response 147

Ion	Exp%	Act%
82.10	100.00	100.00
54.10	47.50	0.00#
128.10	44.10	51.53
0.00	0.00	0.00

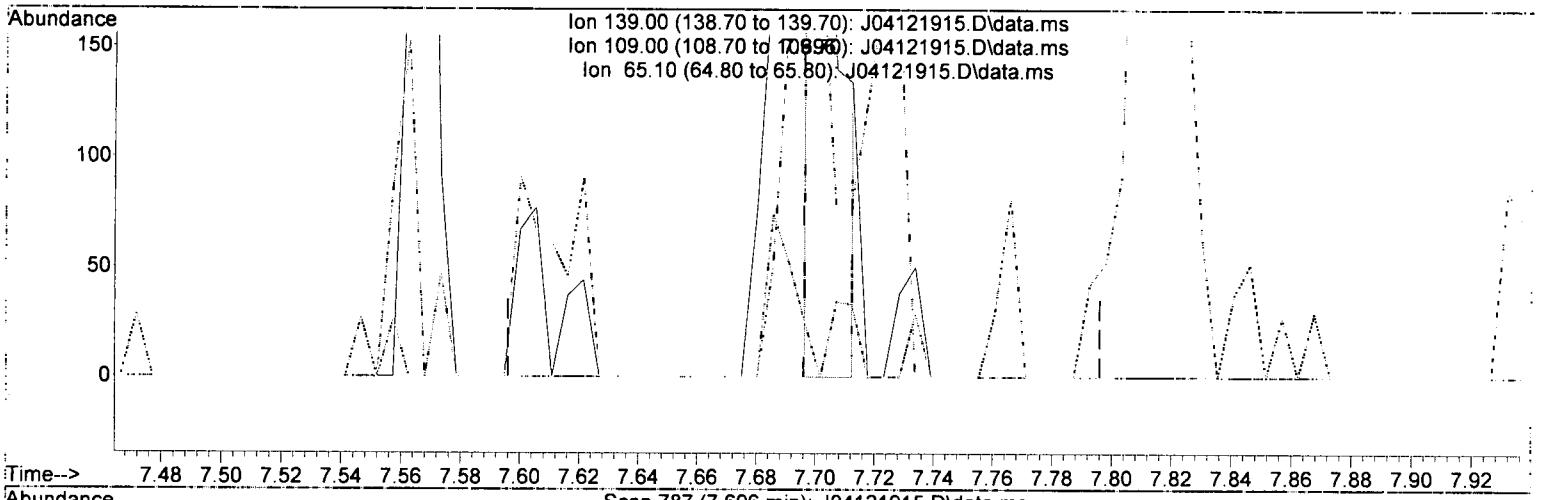


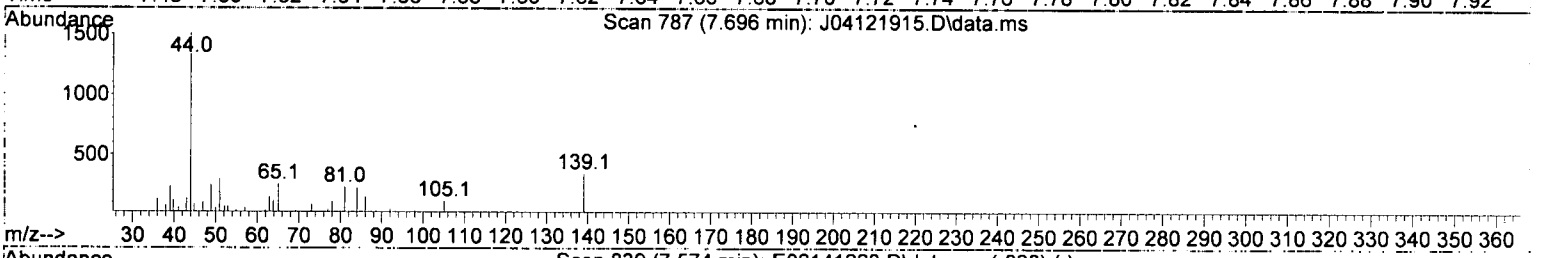
R = 5.66e-003 A*A + 1.62e-001 A - 4.58e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

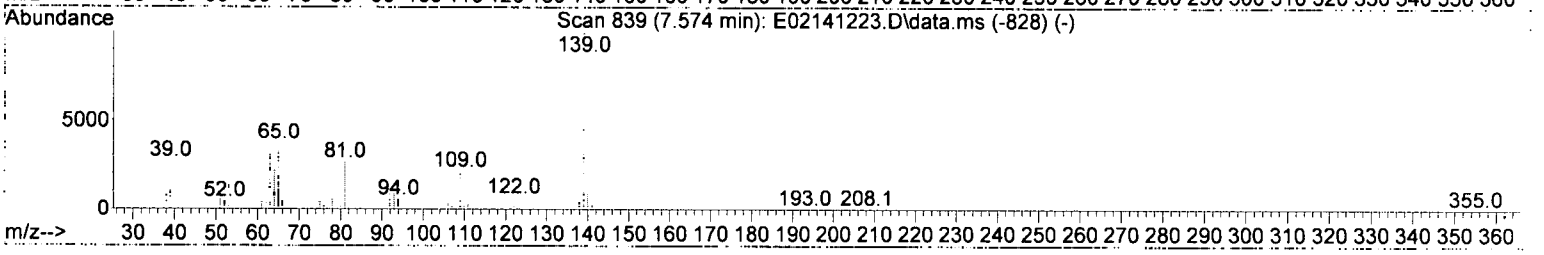
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







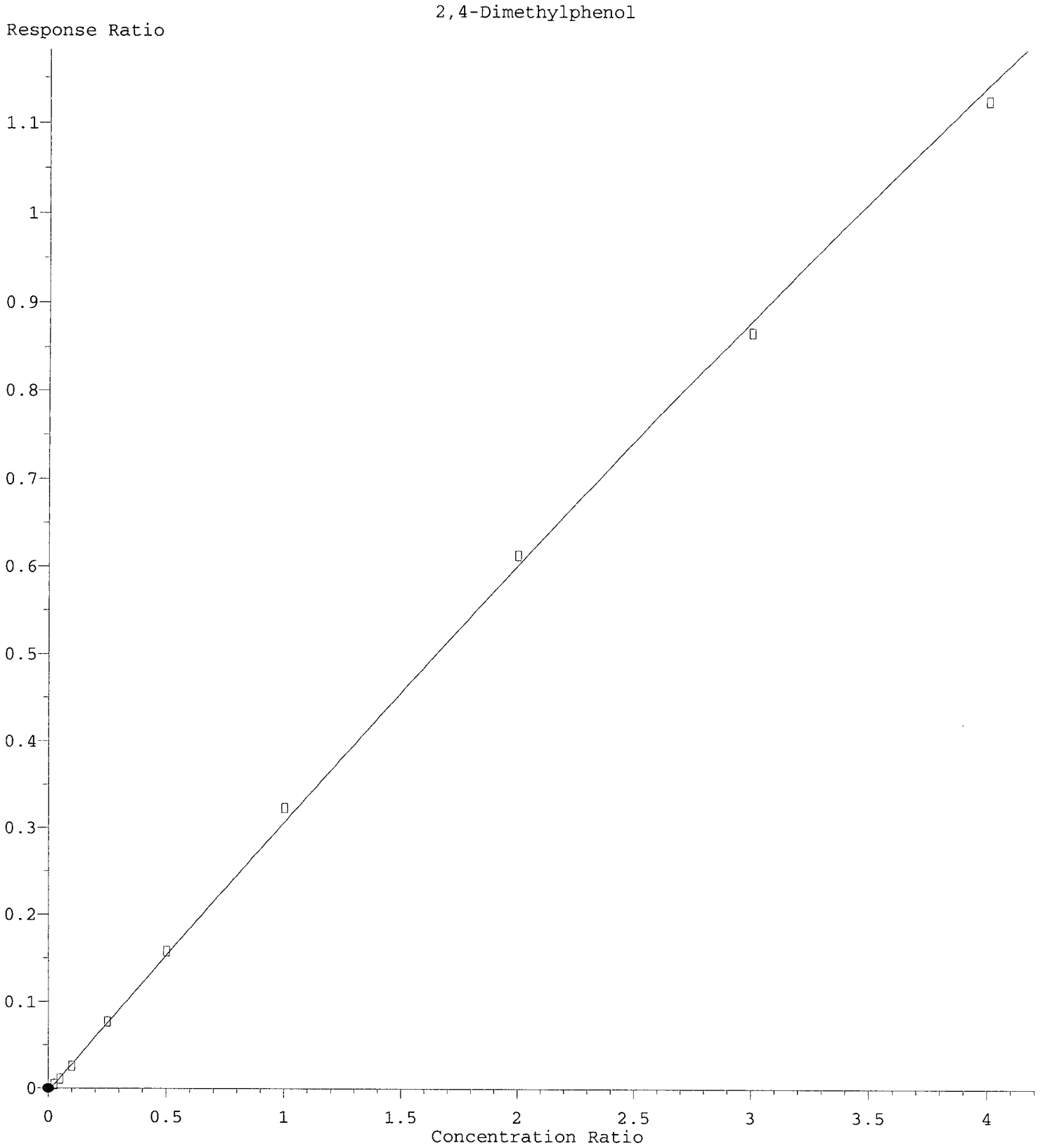
TIC: J04121915.D\data.ms

(23) 2-Nitrophenol (T)

7.696min (+ 0.000) 59.22 ng/ml m

response 194

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	21.70	7.20
65.10	46.00	73.78
0.00	0.00	0.00

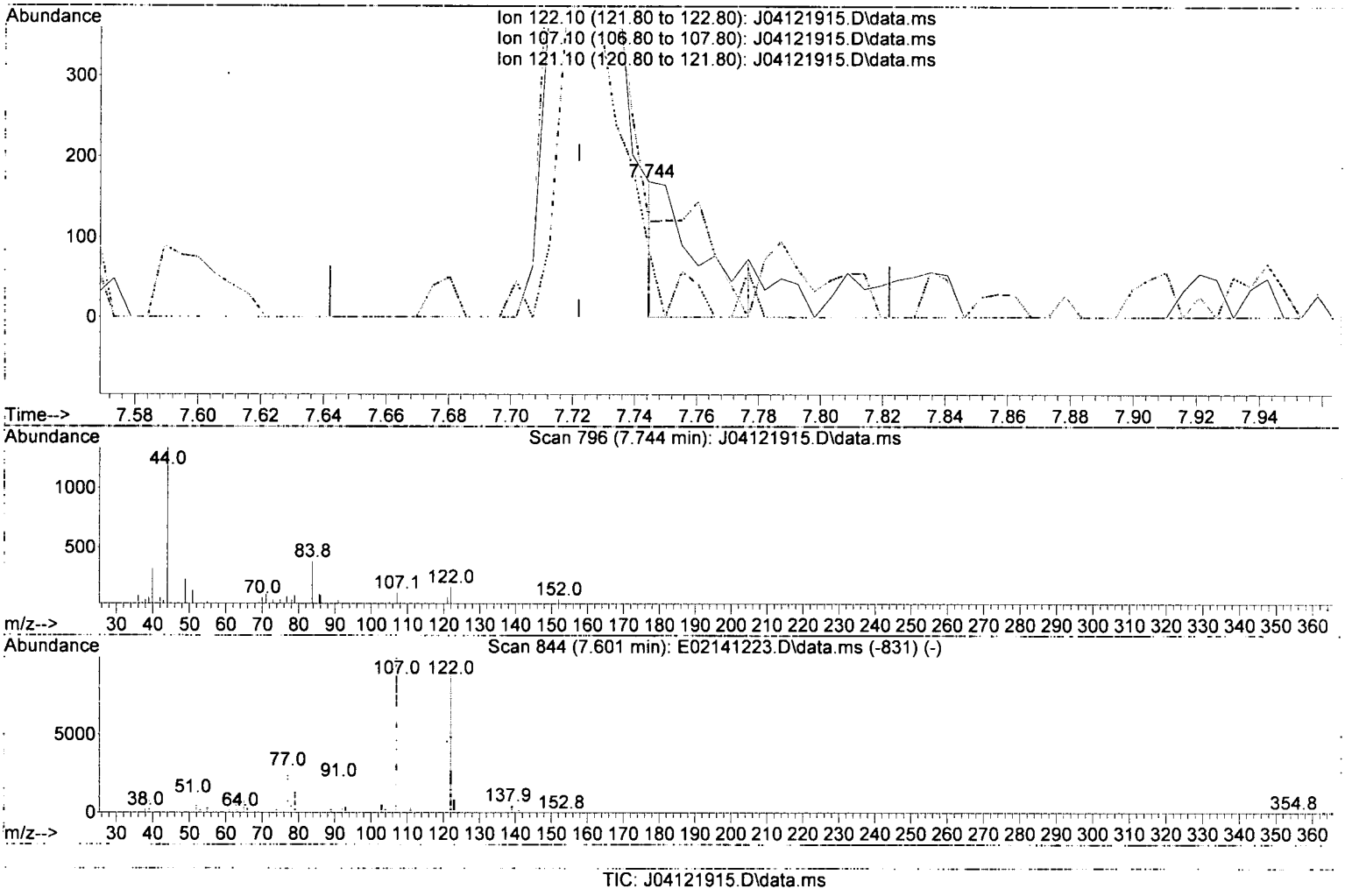


R = -8.10e-003 A*A + 3.19e-001 A - 4.04e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



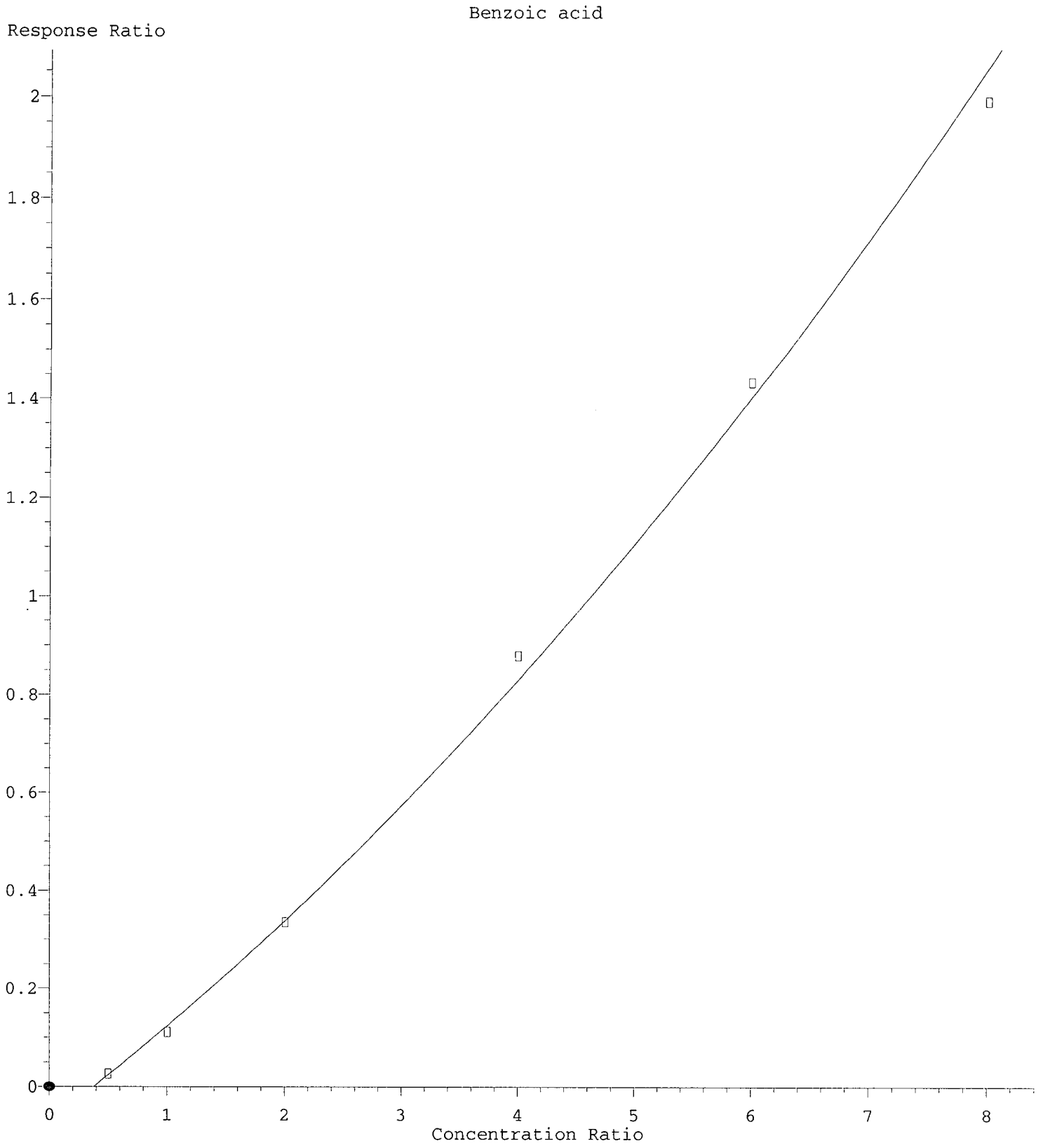
TIC: J04121915.D\data.ms

(24) 2,4-Dimethylphenol (T)

7.744min (+ 0.022) 26.60 ng/ml m

response 165

Ion	Exp%	Act%
122.10	100.00	100.00
107.10	112.80	71.01#
121.10	56.80	49.70
0.00	0.00	0.00

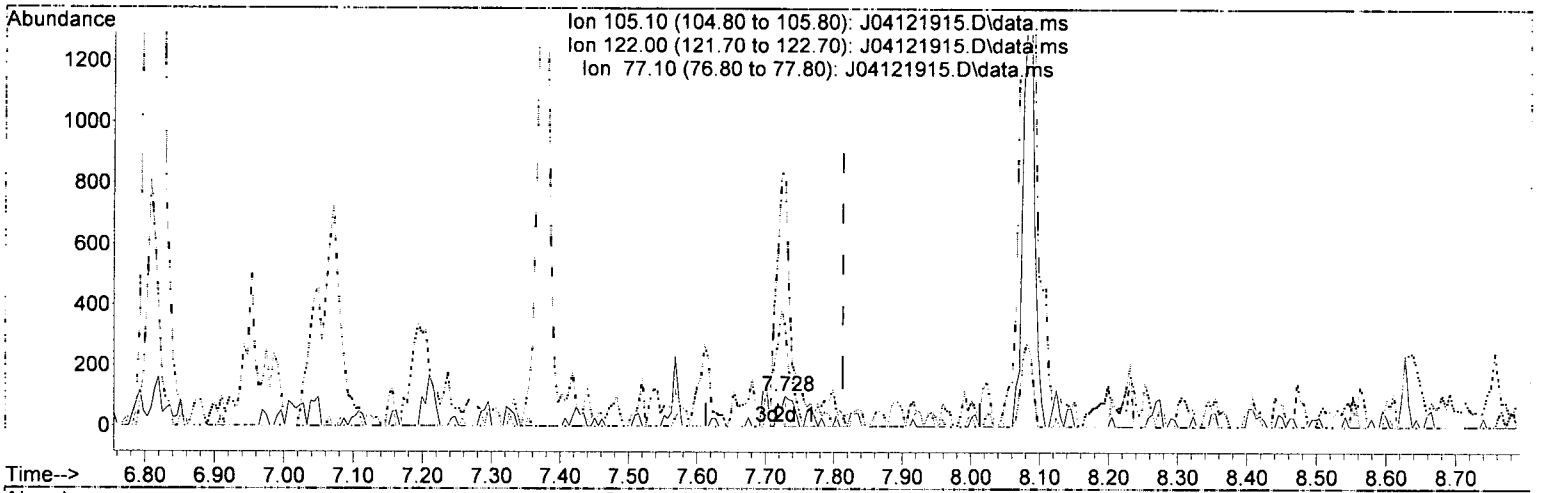


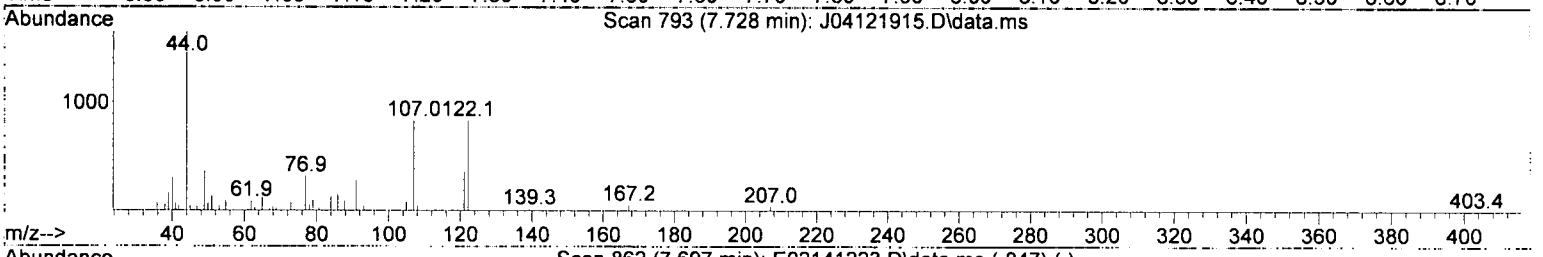
R = 1.02e-002 A*A + 1.84e-001 A - 7.08e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

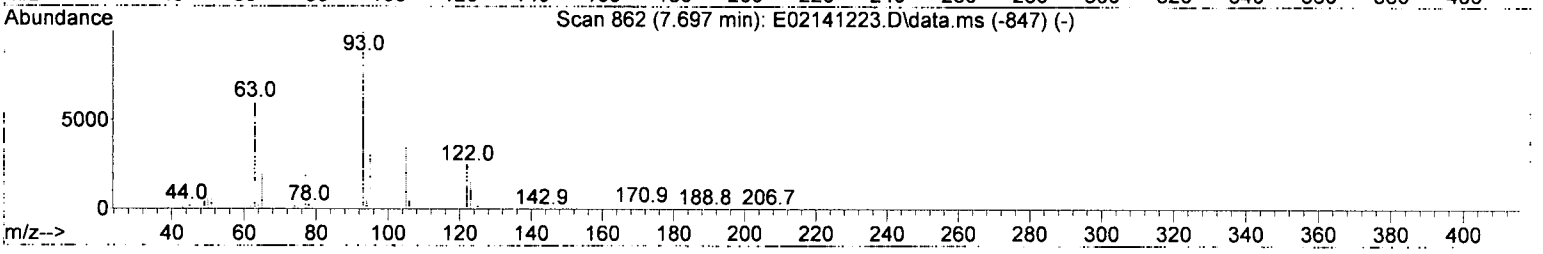
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







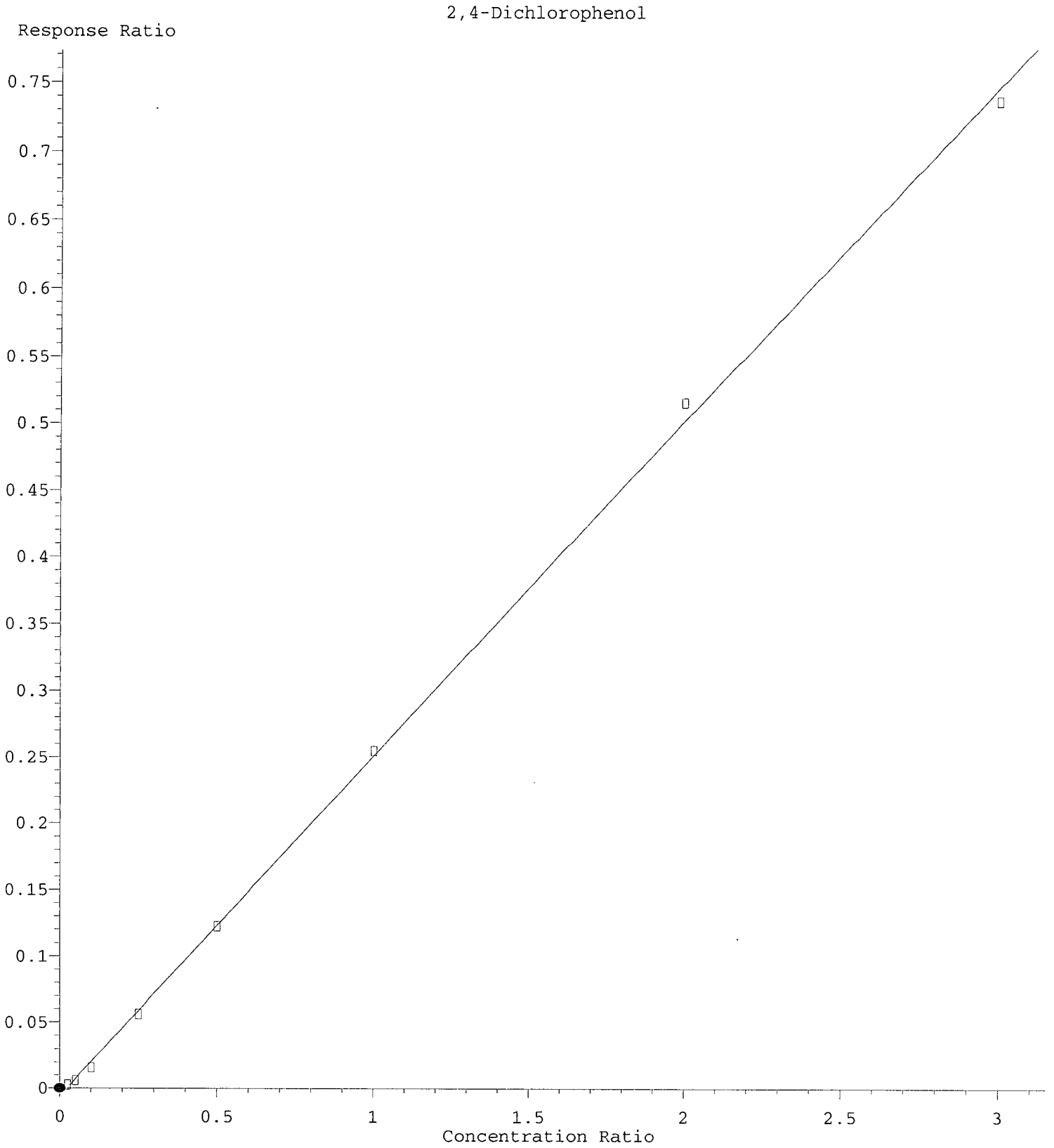
TIC: J04121915.D\data.ms

(26) Benzoic acid (T)

7.728min (-0.085) 753.95 ng/ml m

response 151

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	827.72#
77.10	76.00	329.70#
0.00	0.00	0.00

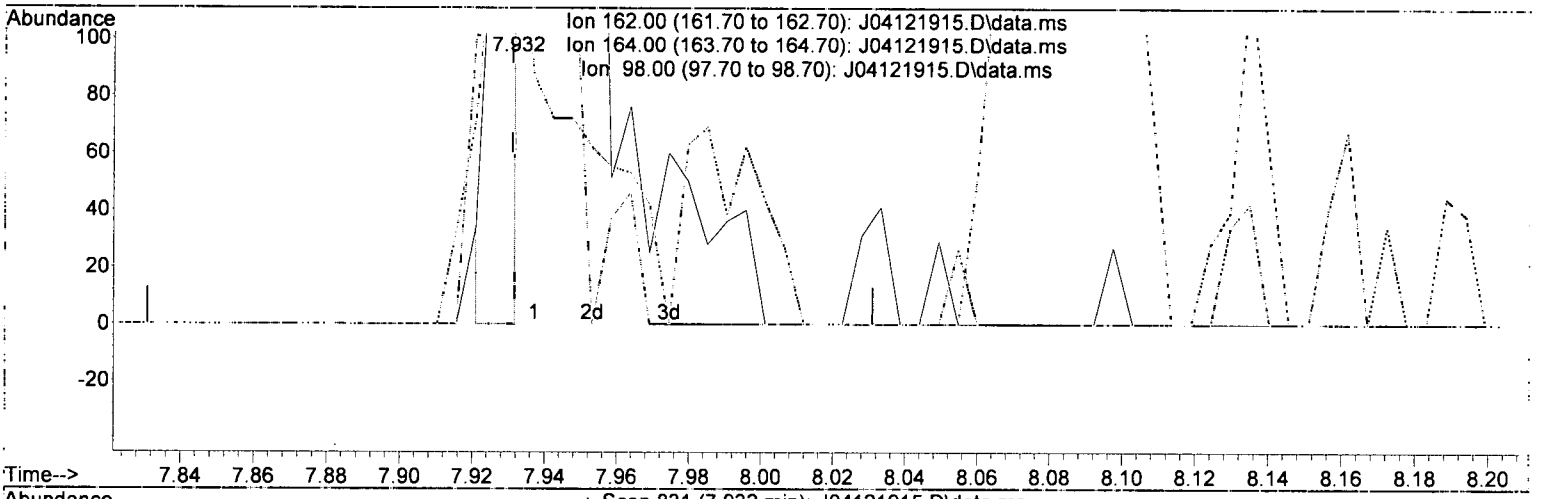


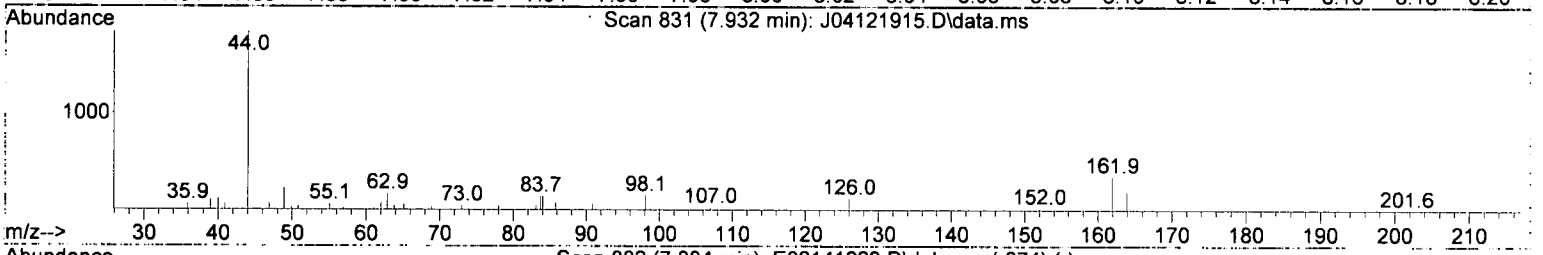
R = -2.93e-003 A*A + 2.60e-001 A - 5.83e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\5710_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

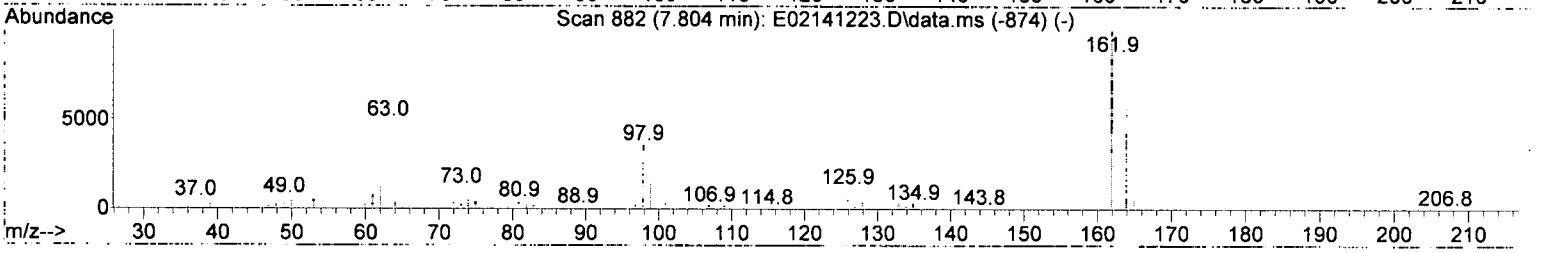
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







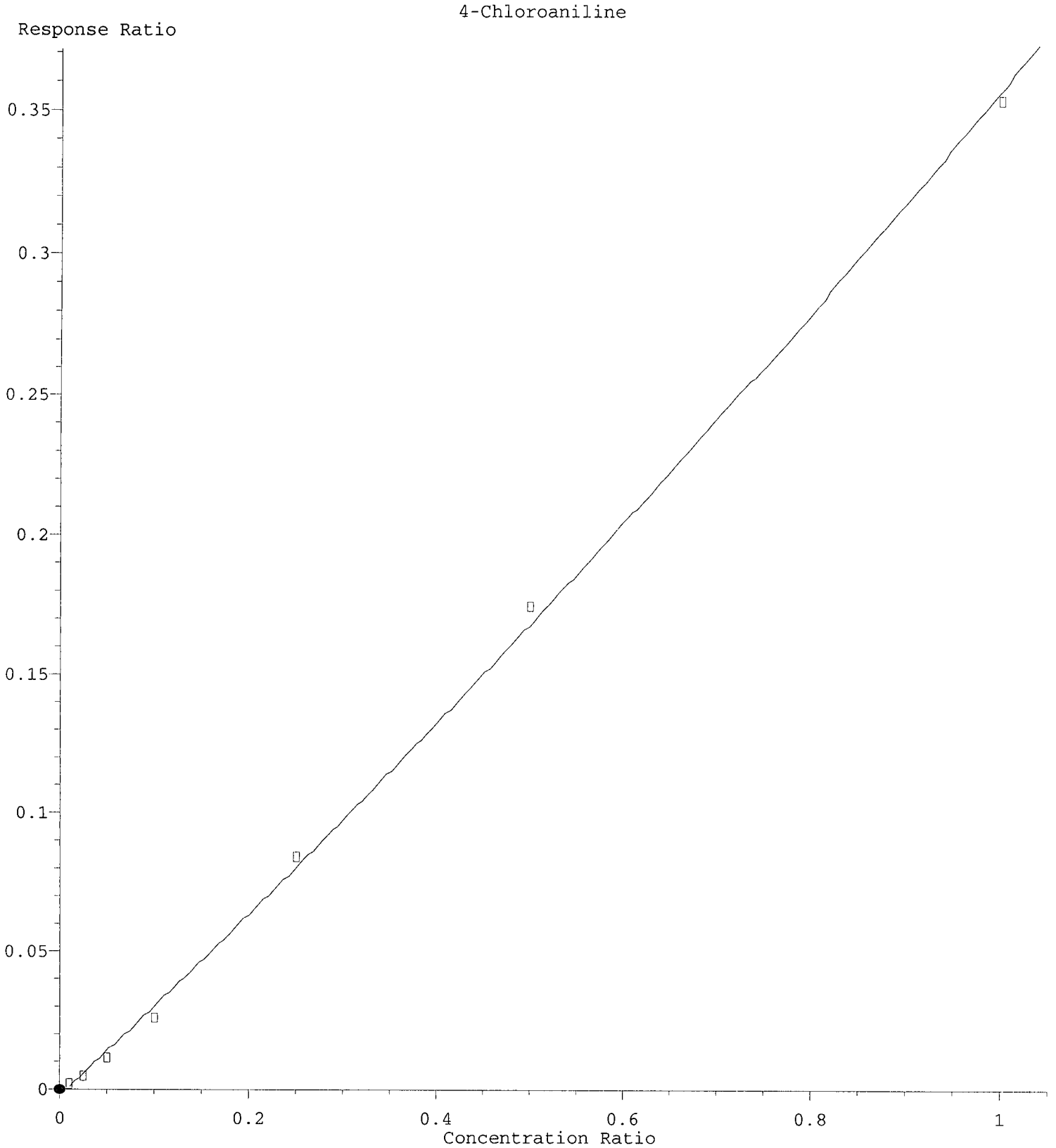
TIC: J04121915.D\data.ms

(27) 2,4-Dichlorophenol (T)

7.932min (+ 0.001) 46.48 ng/ml m

response 172

Ion	Exp%	Act%
162.00	100.00	100.00
164.00	63.60	57.06
98.00	37.40	46.26
0.00	0.00	0.00

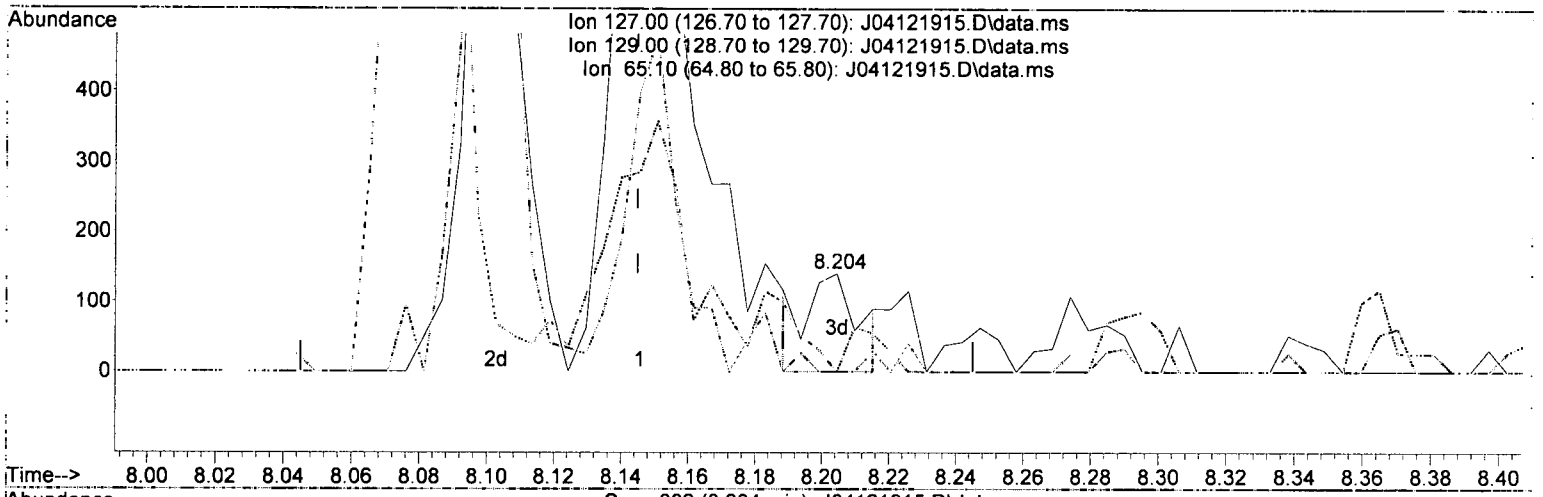


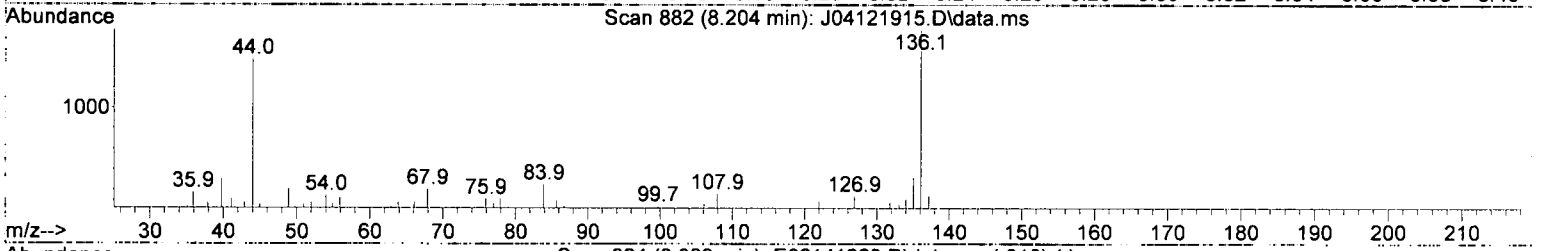
R = 3.85e-002 A*A + 3.21e-001 A - 2.32e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

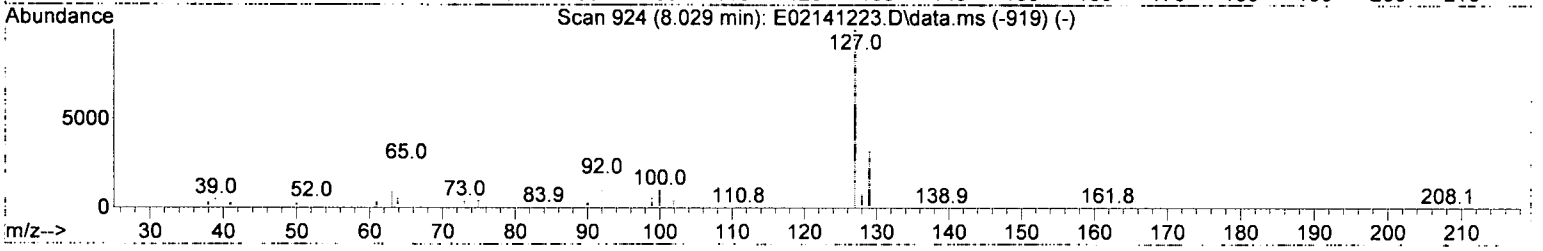
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







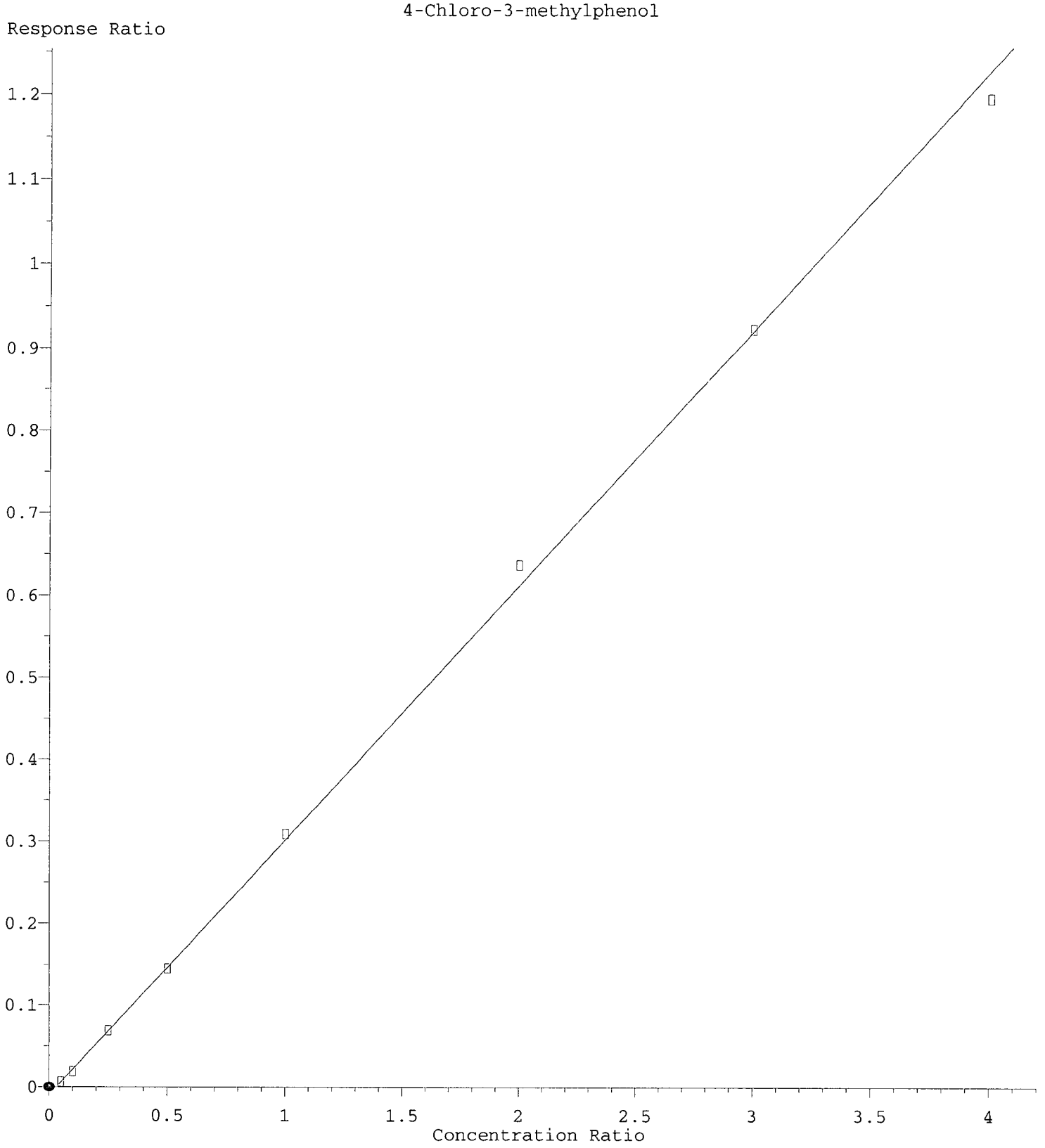
TIC: J04121915.D\data.ms

(30) 4-Chloroaniline (T)

8.204min (+ 0.059) 15.51 ng/ml m

response 148

Ion	Exp%	Act%
127.00	100.00	100.00
129.00	31.20	0.00#
65.10	31.40	0.00#
0.00	0.00	0.00

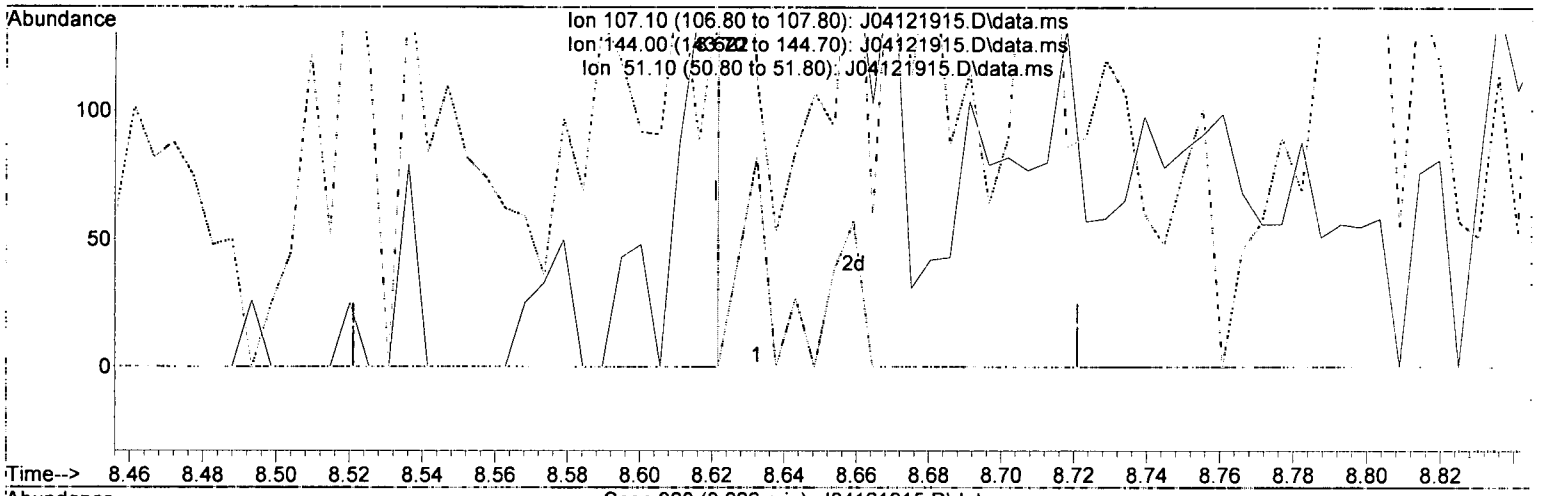


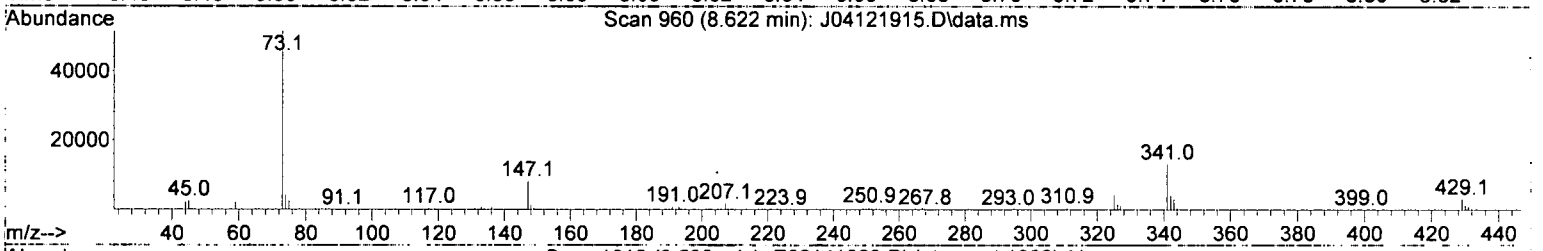
R = -7.81e-004 A*A + 3.12e-001 A - 9.94e-003
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

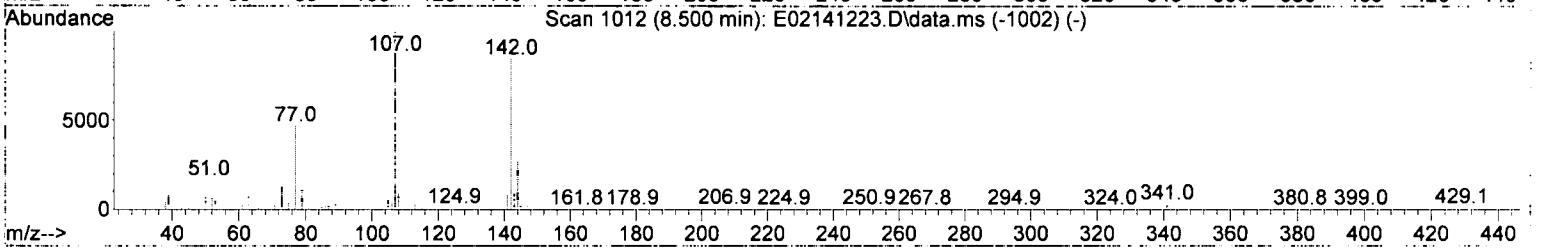
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







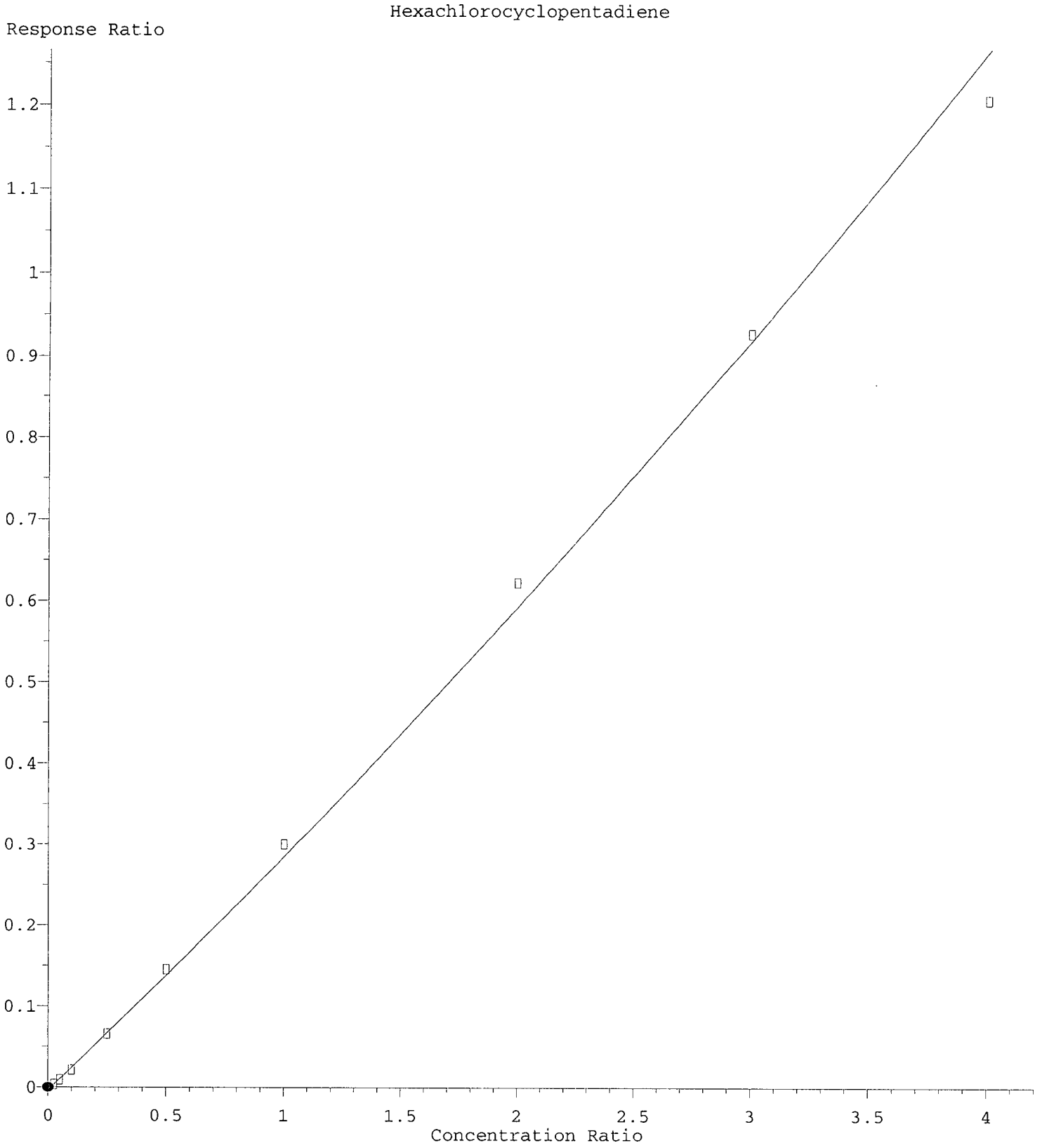
TIC: J04121915.D\data.ms

(32) 4-Chloro-3-methylphenol (T)

8.622min (+ 0.001) 64.93 ng/ml m

response 165

Ion	Exp%	Act%
107.10	100.00	100.00
144.00	26.00	0.00
51.10	19.80	52.30#
0.00	0.00	0.00

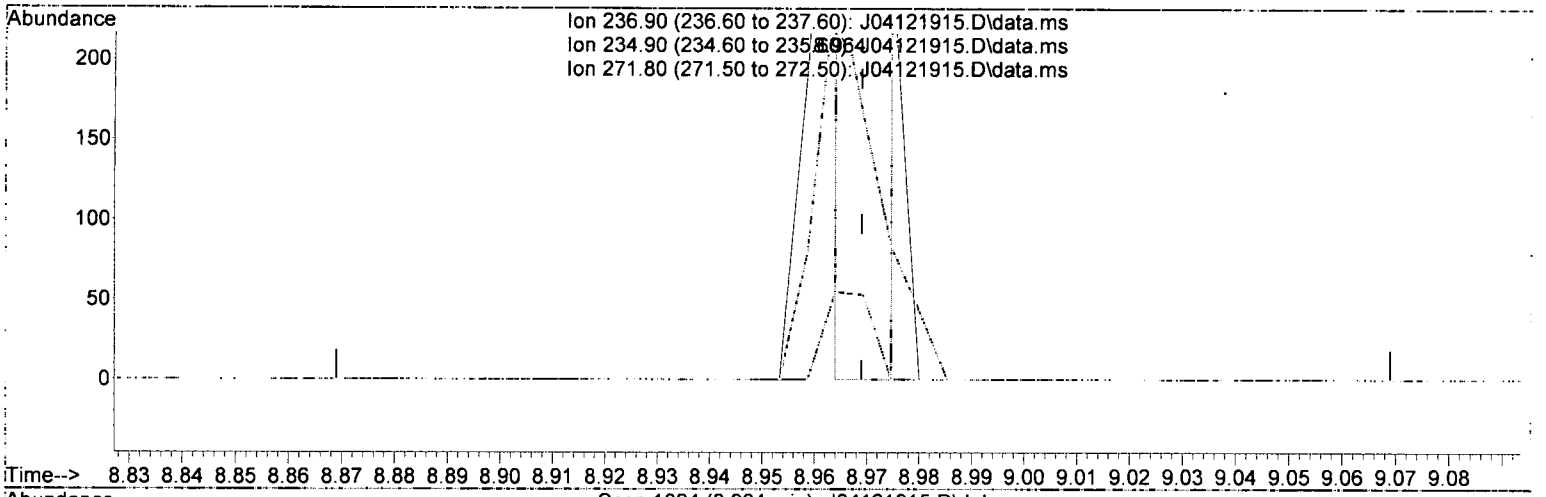


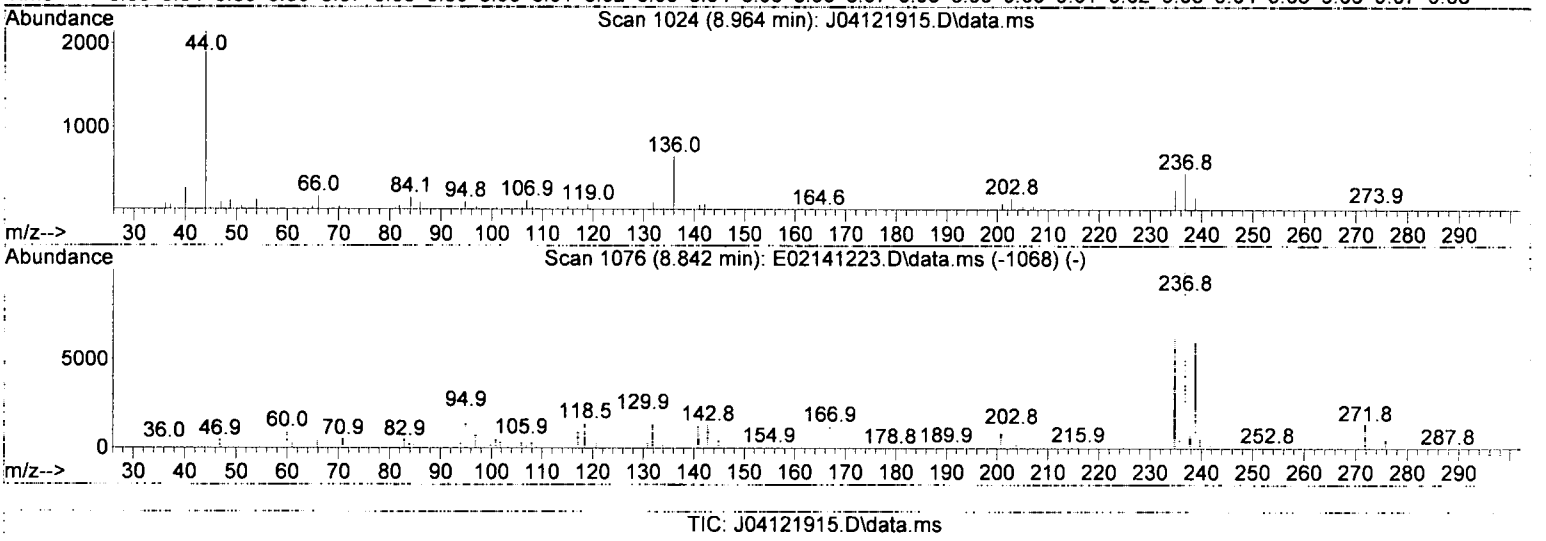
R = 9.35e-003 A*A + 2.79e-001 A - 4.15e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





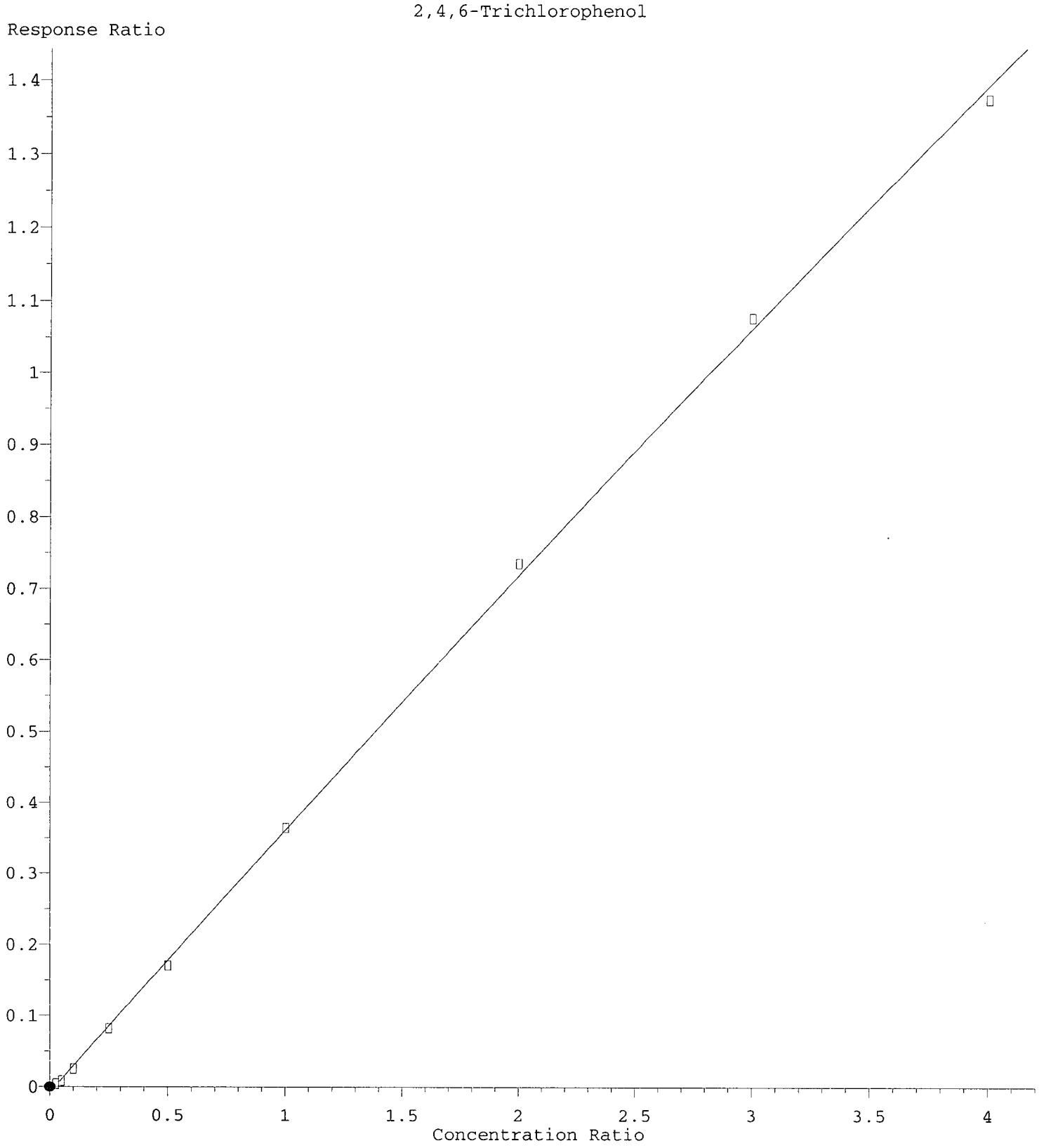
TIC: J04121915.D\data.ms

(36) Hexachlorocyclopentadiene (T)

8.964min (-0.005) 32.87 ng/ml m

response 188

Ion	Exp%	Act%
236.90	100.00	100.00
234.90	62.80	56.48
271.80	12.50	12.09
0.00	0.00	0.00

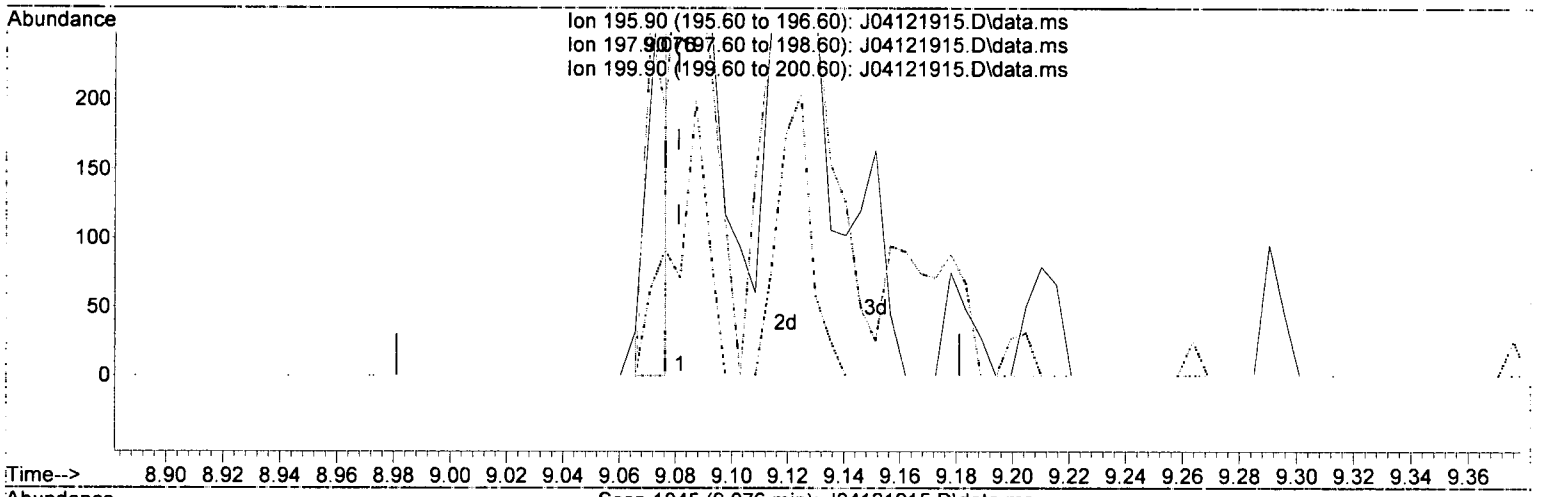


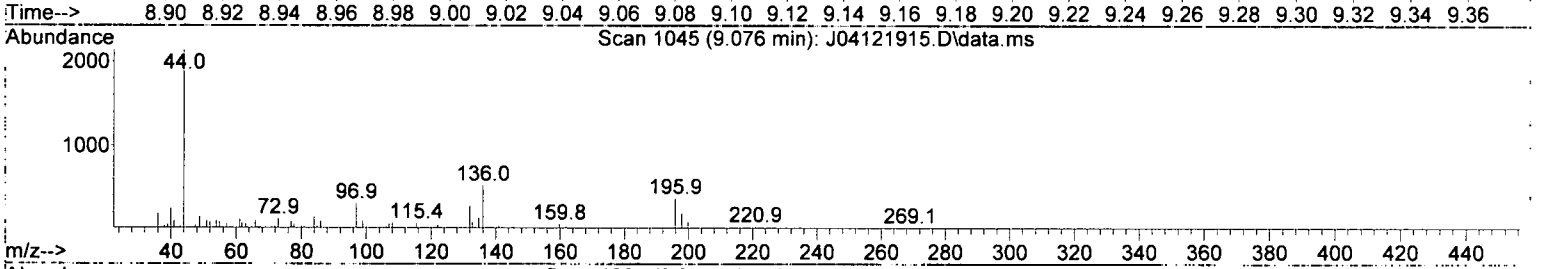
R = -6.54e-003 A*A + 3.76e-001 A - 8.34e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

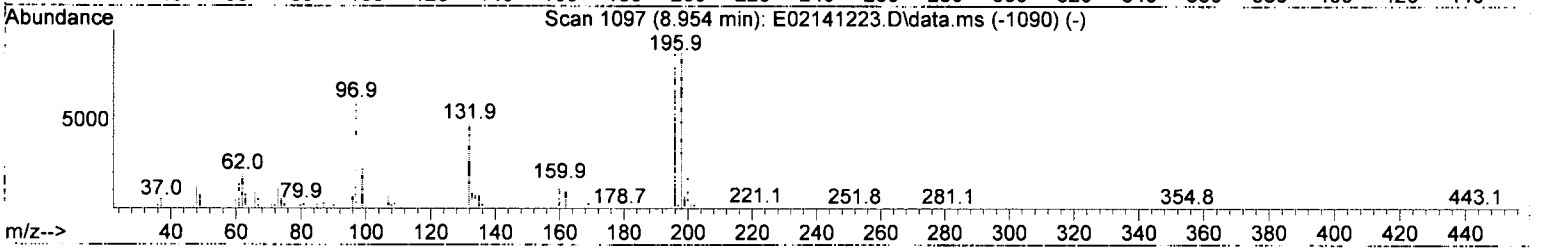
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







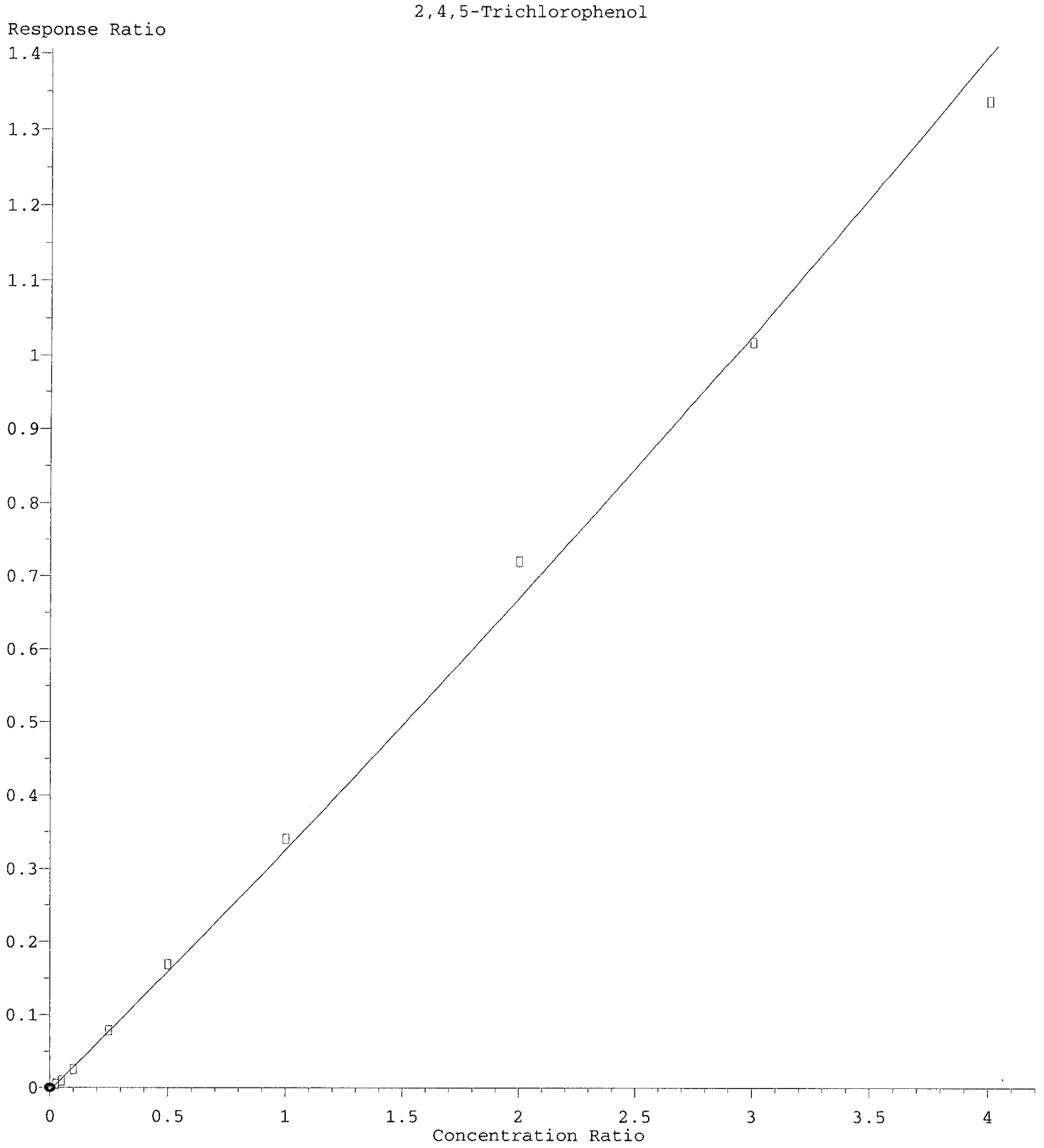
TIC: J04121915.D\data.ms

(37) 2,4,6-Trichlorophenol (T)

9.076min (-0.005) 46.64 ng/ml m

response 184

Ion	Exp%	Act%
195.90	100.00	100.00
197.90	97.50	51.47#
199.90	30.40	24.40
0.00	0.00	0.00

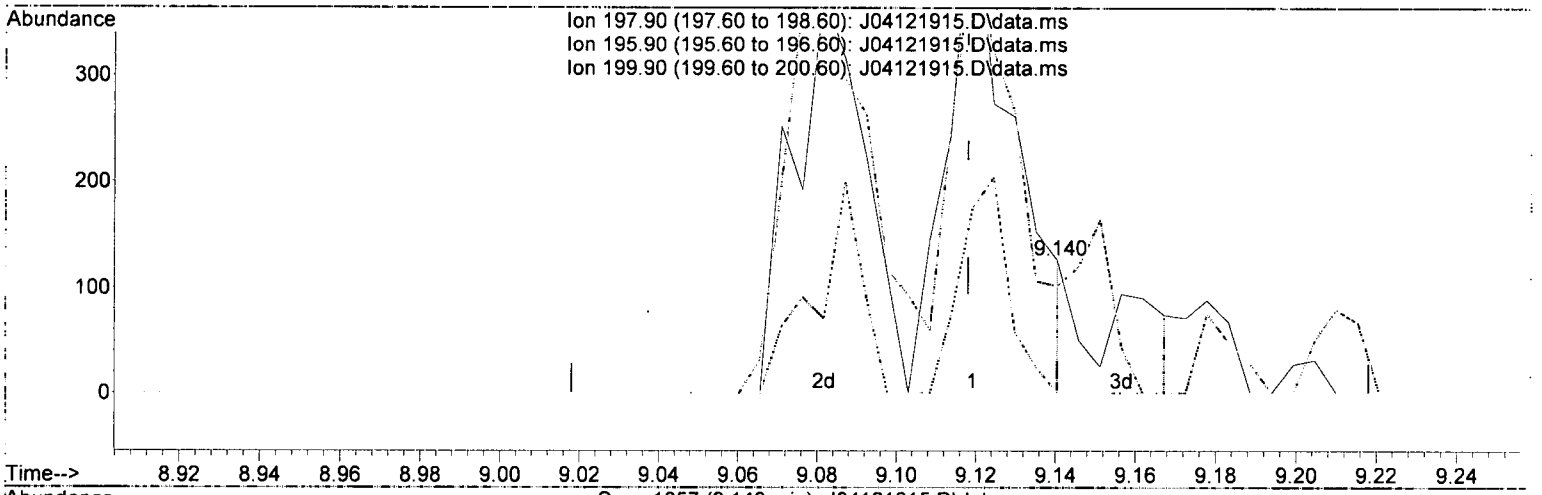


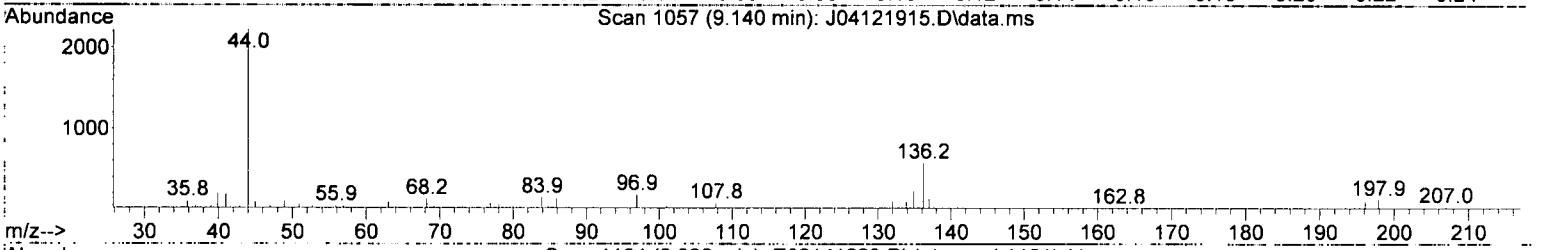
R = 7.07e-003 A*A + 3.23e-001 A - 4.28e-003
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

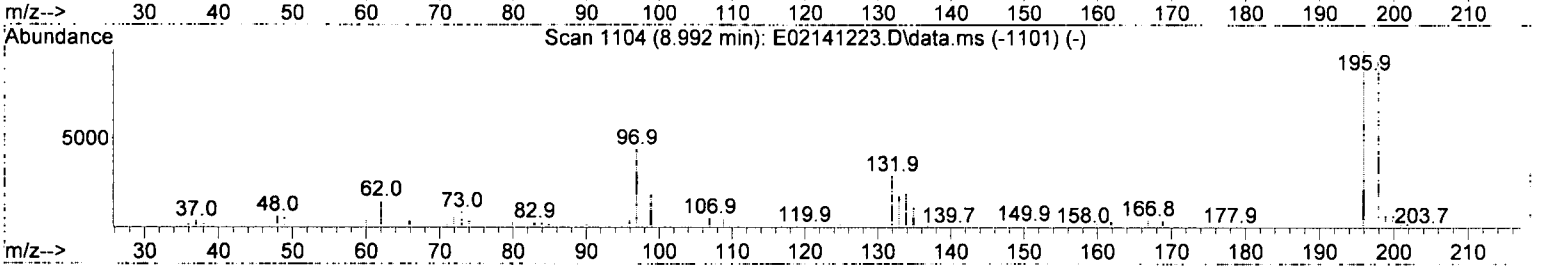
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







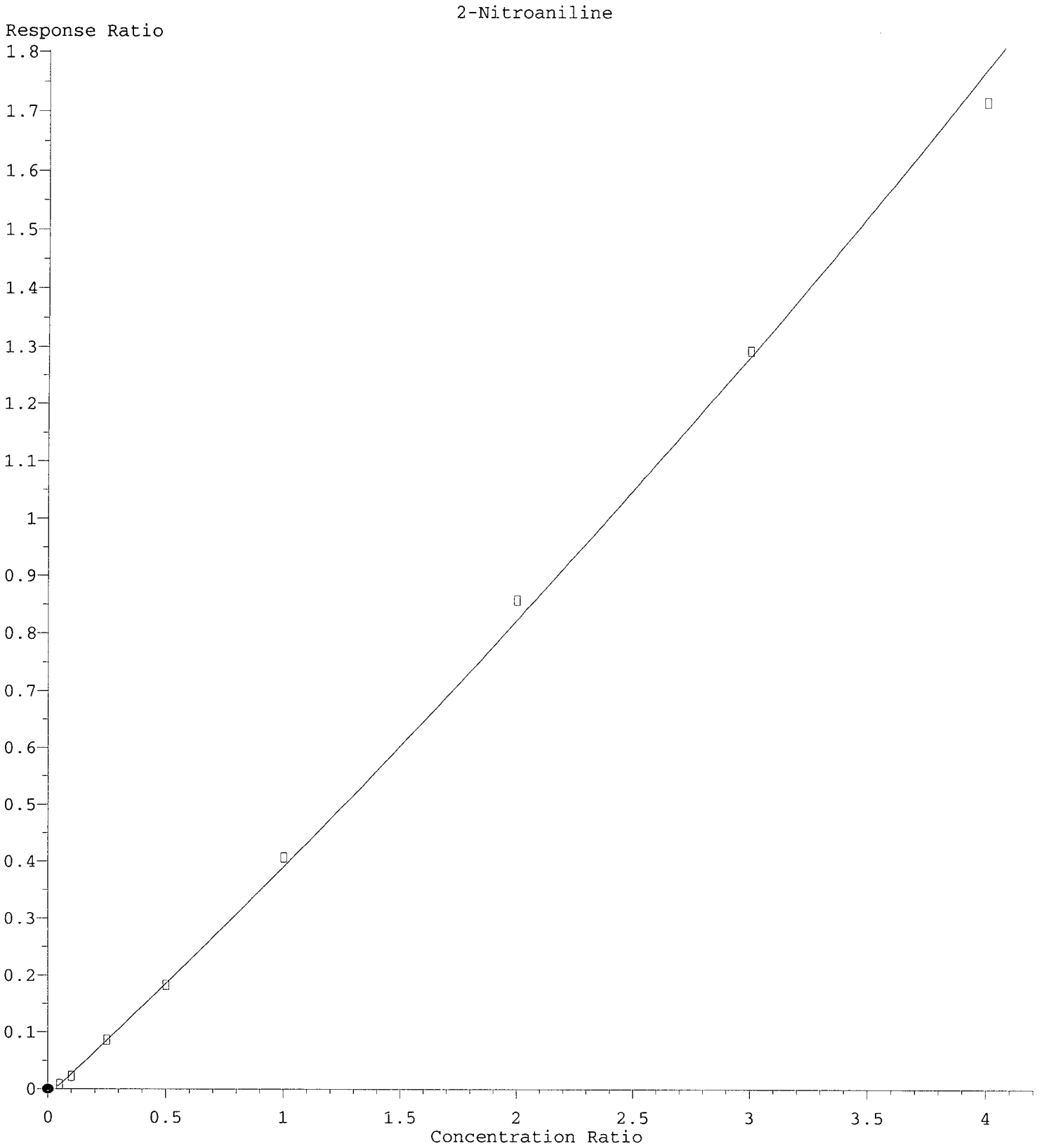
TIC: J04121915.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.140min (+ 0.022) 28.04 ng/ml m

response 107

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	80.95
199.90	31.10	0.00#
0.00	0.00	0.00

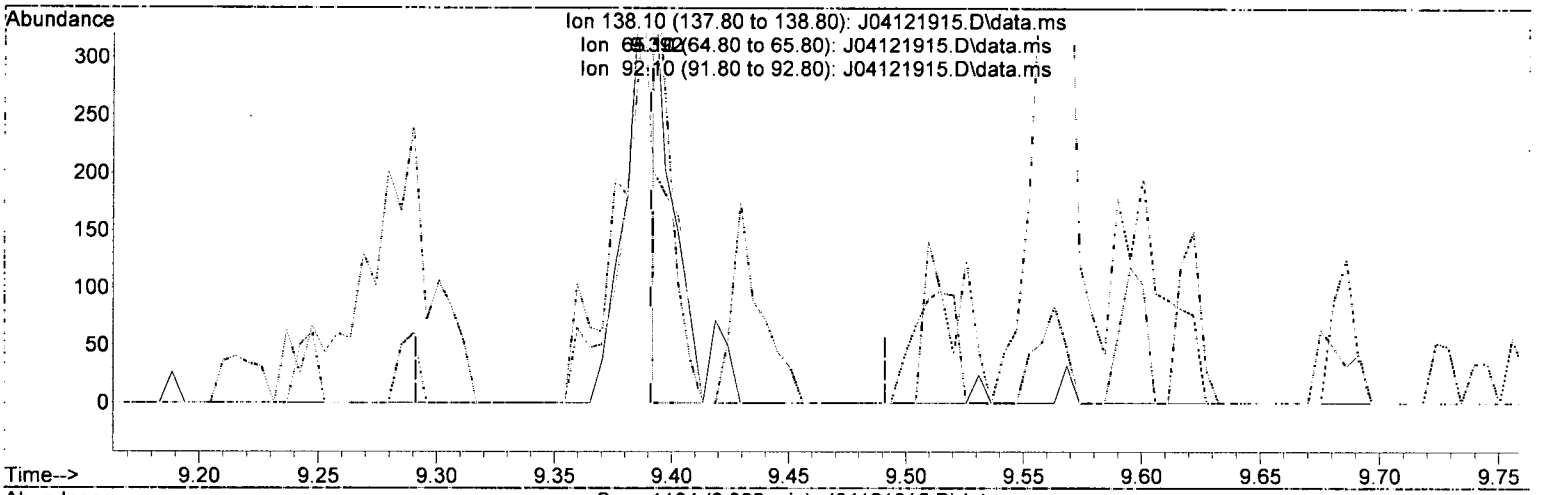


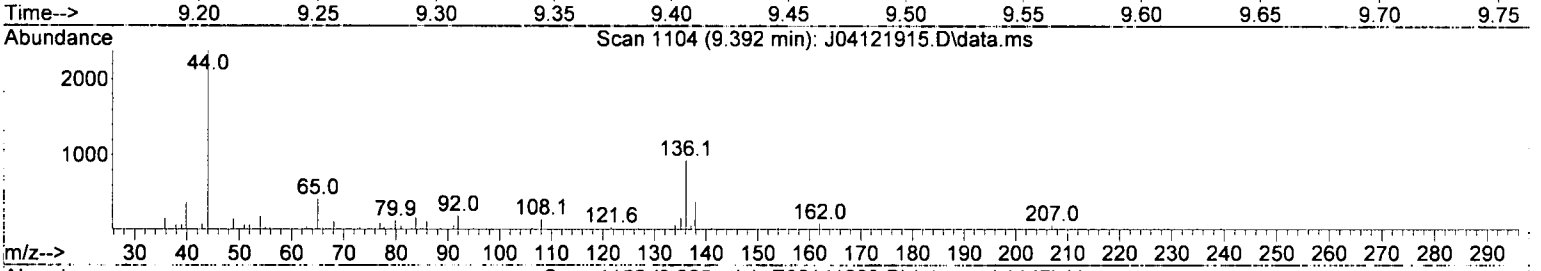
R = 1.42e-002 A*A + 3.89e-001 A - 1.27e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

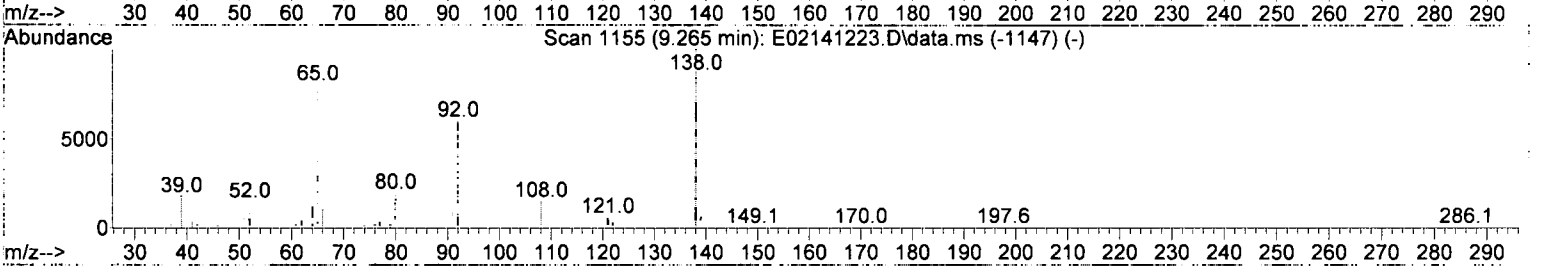
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







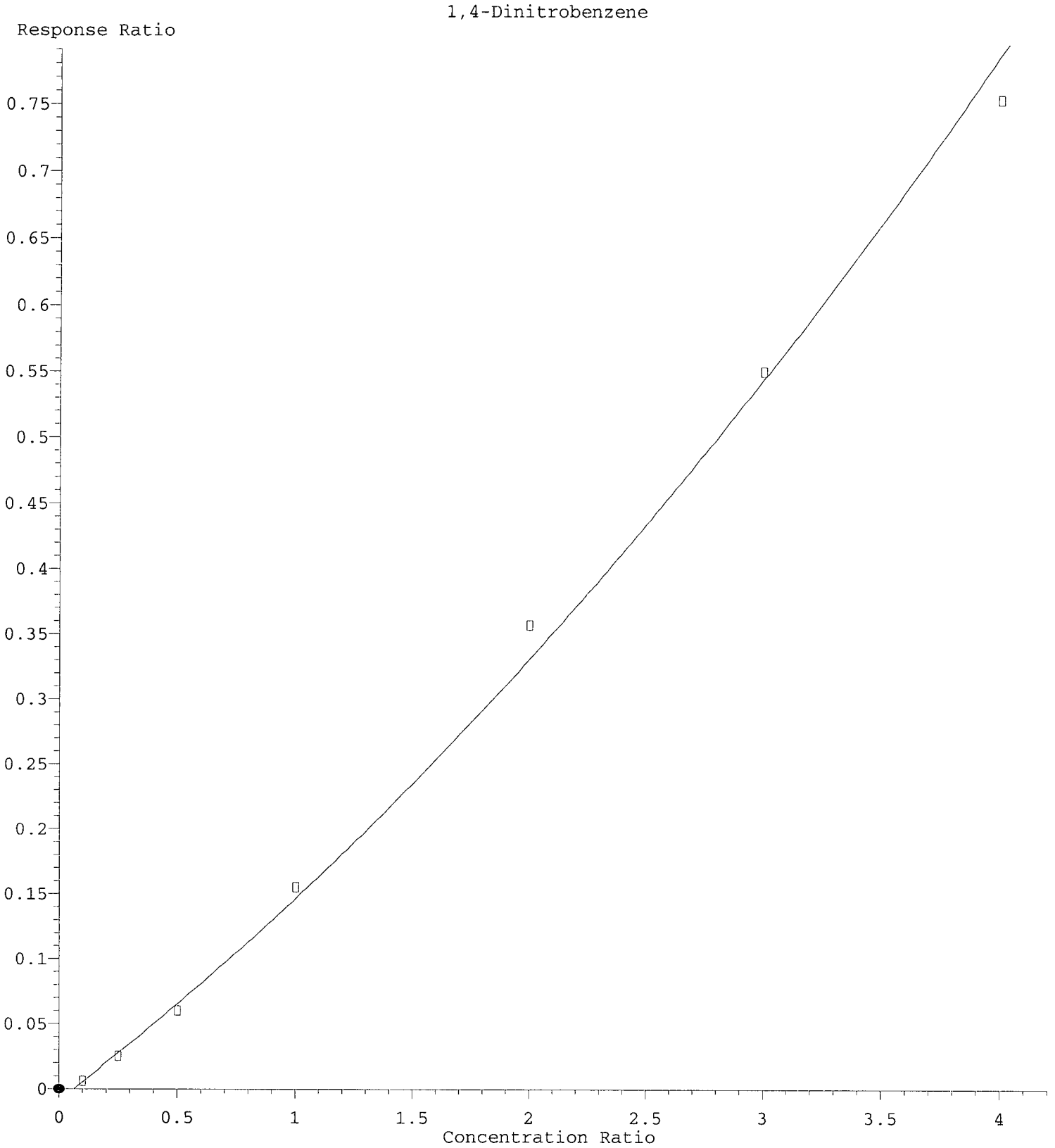
TIC: J04121915.D\data.ms

(42) 2-Nitroaniline (T)

9.392min (+ 0.001) 66.72 ng/ml m

response 138

Ion	Exp%	Act%
138.10	100.00	100.00
65.10	92.00	109.35
92.10	64.50	52.73
0.00	0.00	0.00

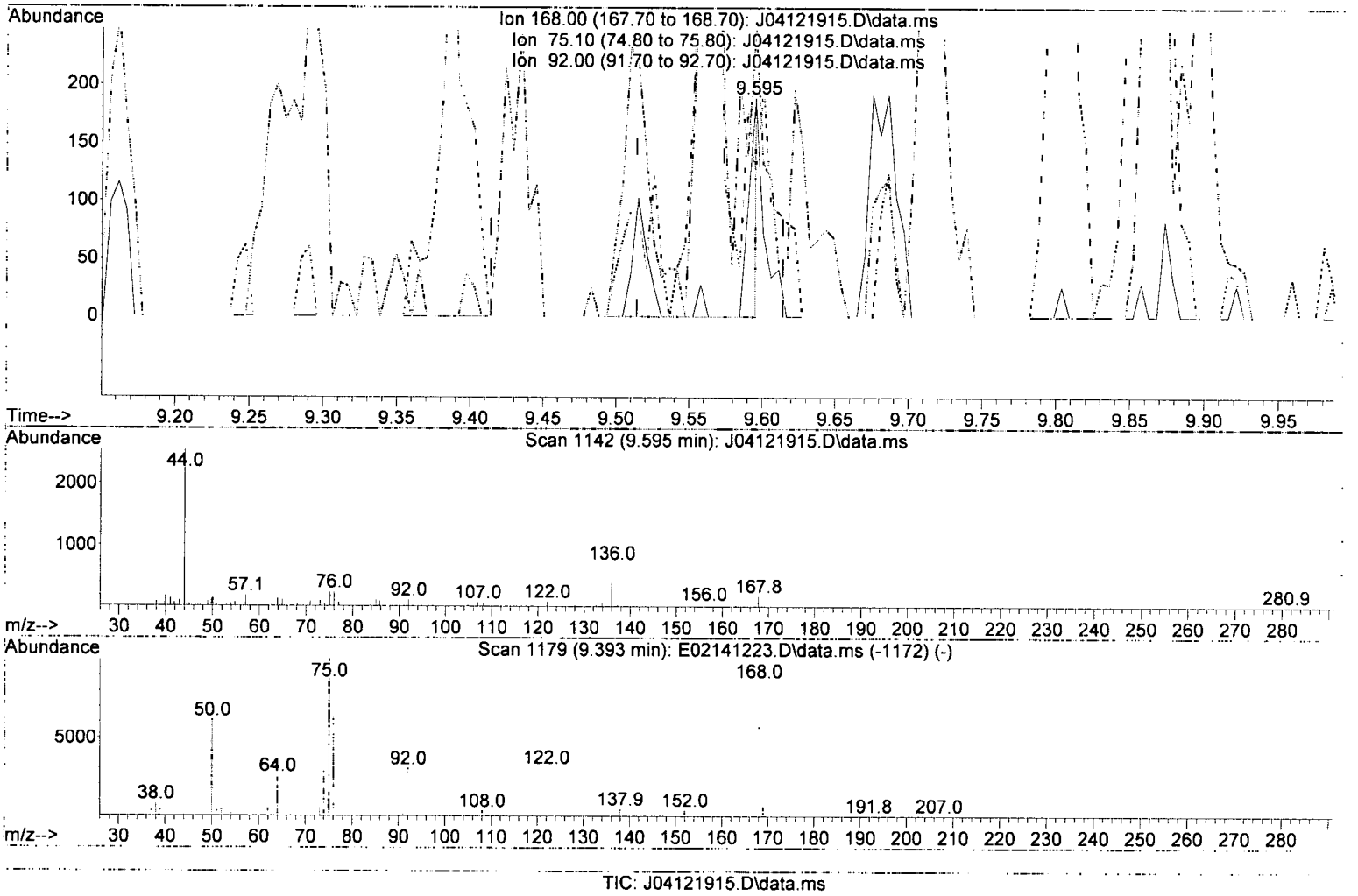


R = 1.45e-002 A*A + 1.41e-001 A - 8.59e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



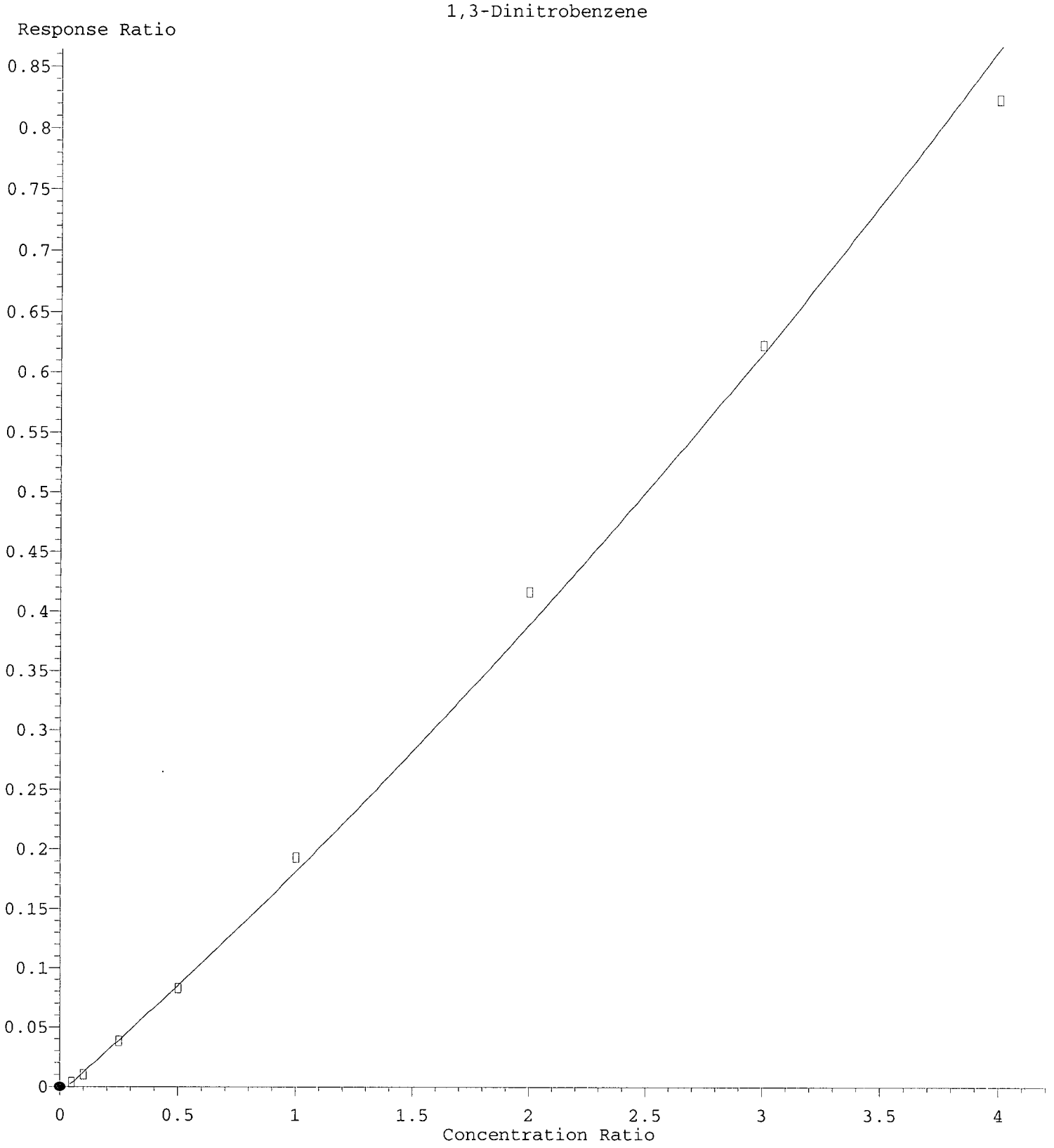
TIC: J04121915.D\data.ms

(44) 1,4-Dinitrobenzene (T)

9.595min (+ 0.081) 127.06 ng/ml m

response 171

Ion	Exp%	Act%
168.00	100.00	100.00
75.10	134.30	131.75
92.00	43.50	66.14
0.00	0.00	0.00

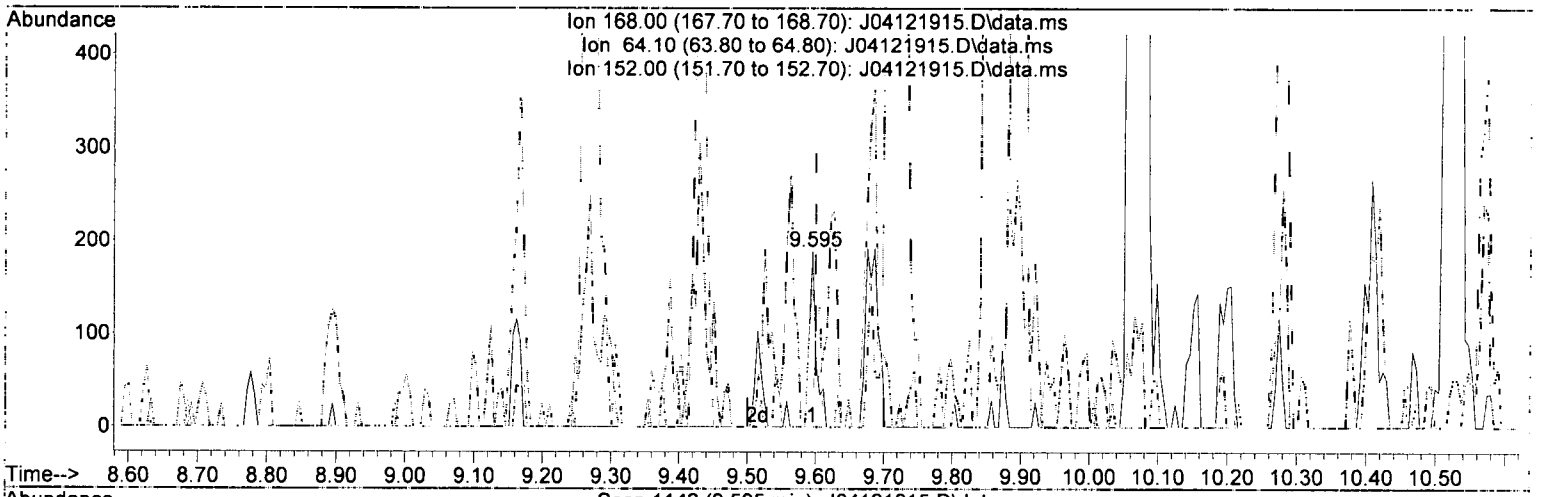


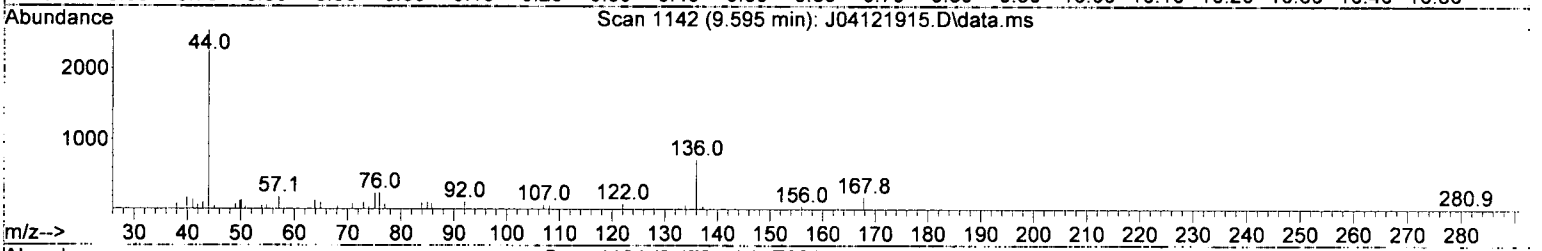
R = 1.02e-002 A*A + 1.77e-001 A - 5.75e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

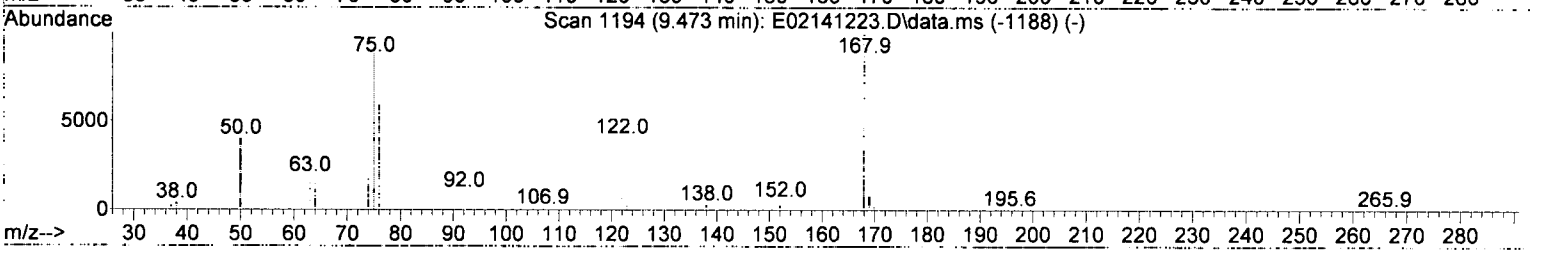
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







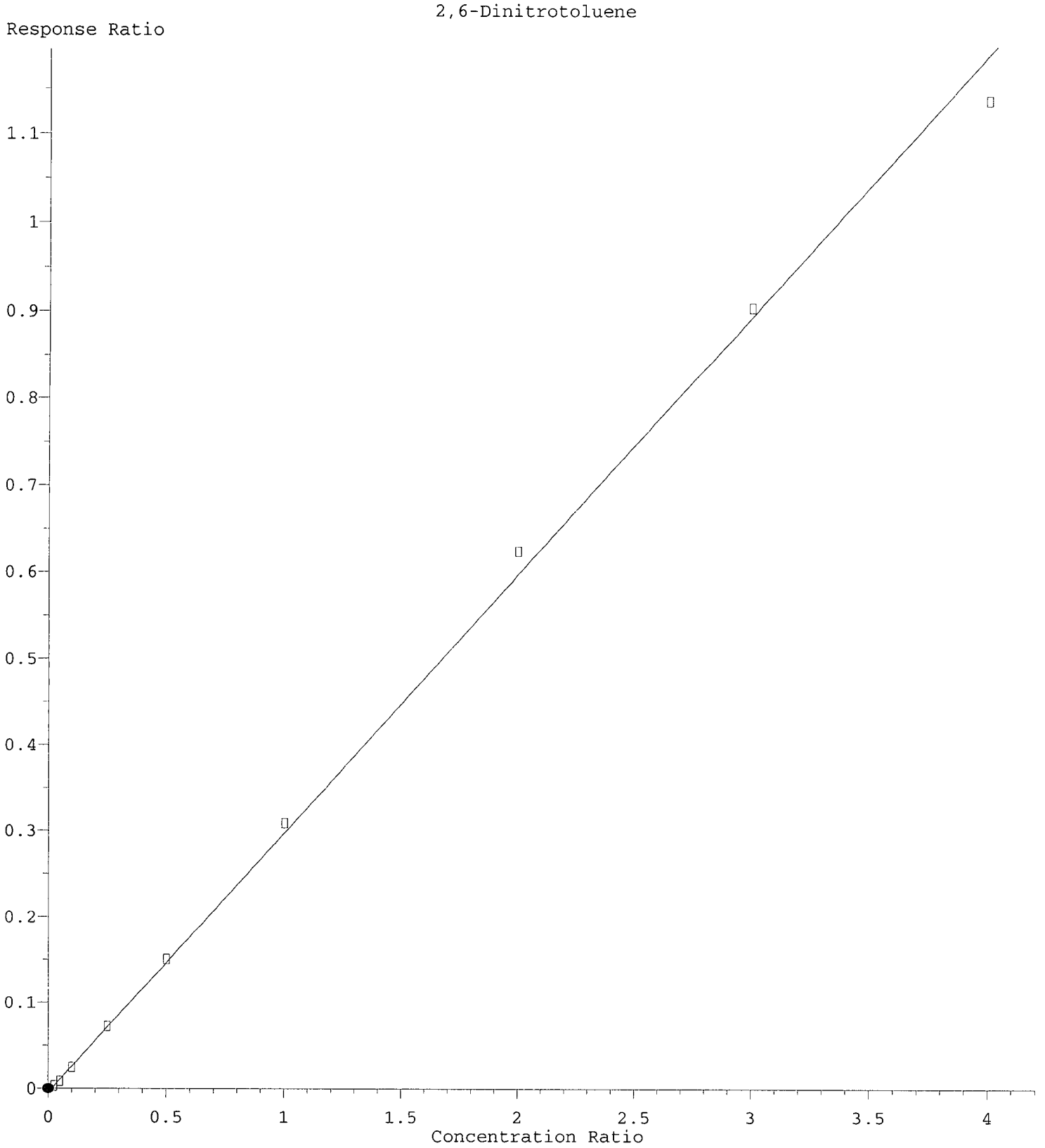
TIC: J04121915.D\data.ms

(46) 1,3-Dinitrobenzene (T)

9.595min (-0.005) 68.48 ng/ml

response 137

Ion	Exp%	Act%
168.00	100.00	100.00
64.10	29.70	80.42#
152.00	7.70	0.00
0.00	0.00	0.00

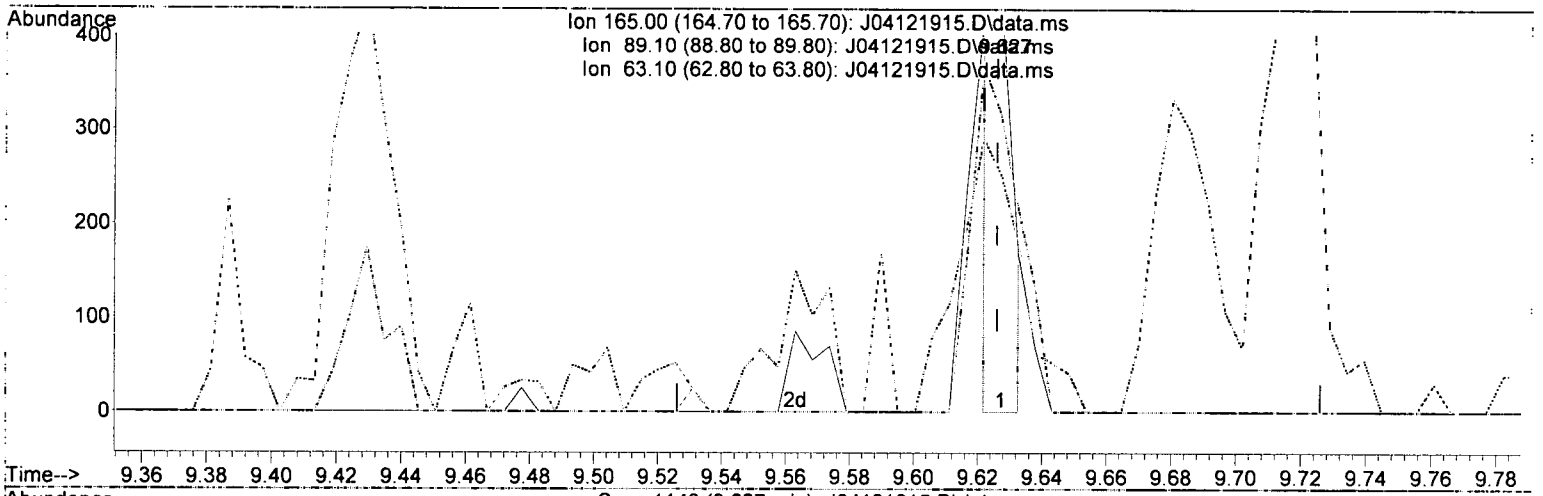


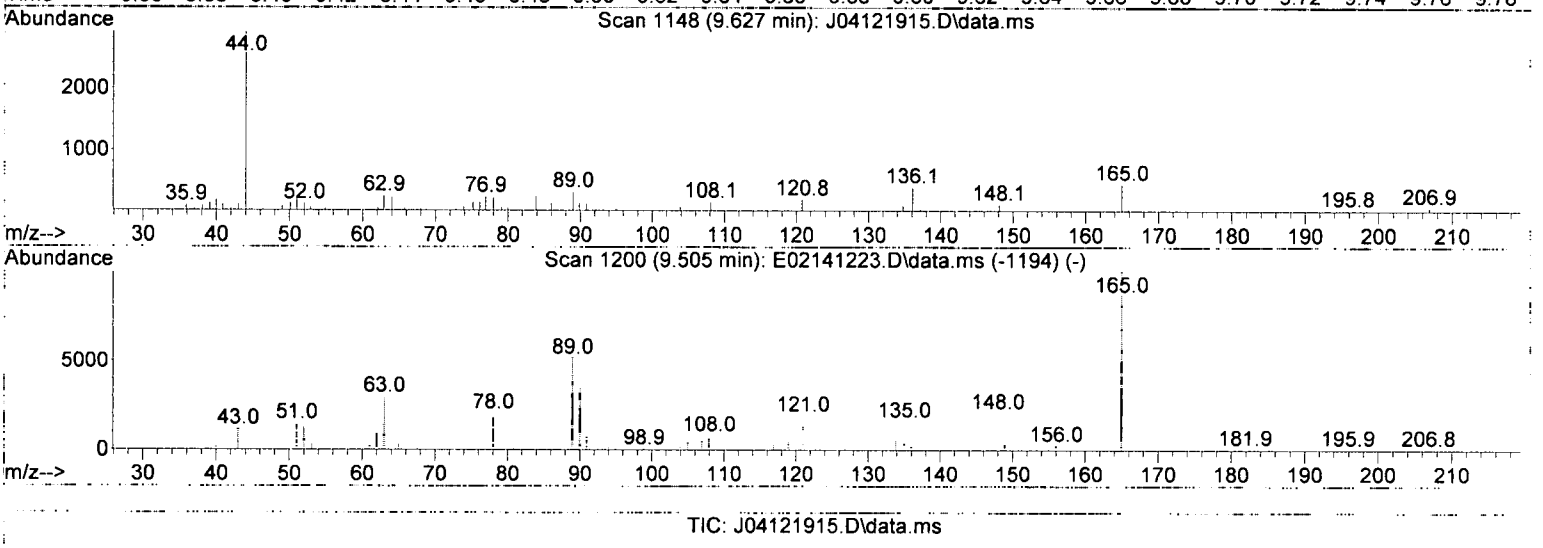
R = -1.37e-003 A*A + 3.04e-001 A - 4.94e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





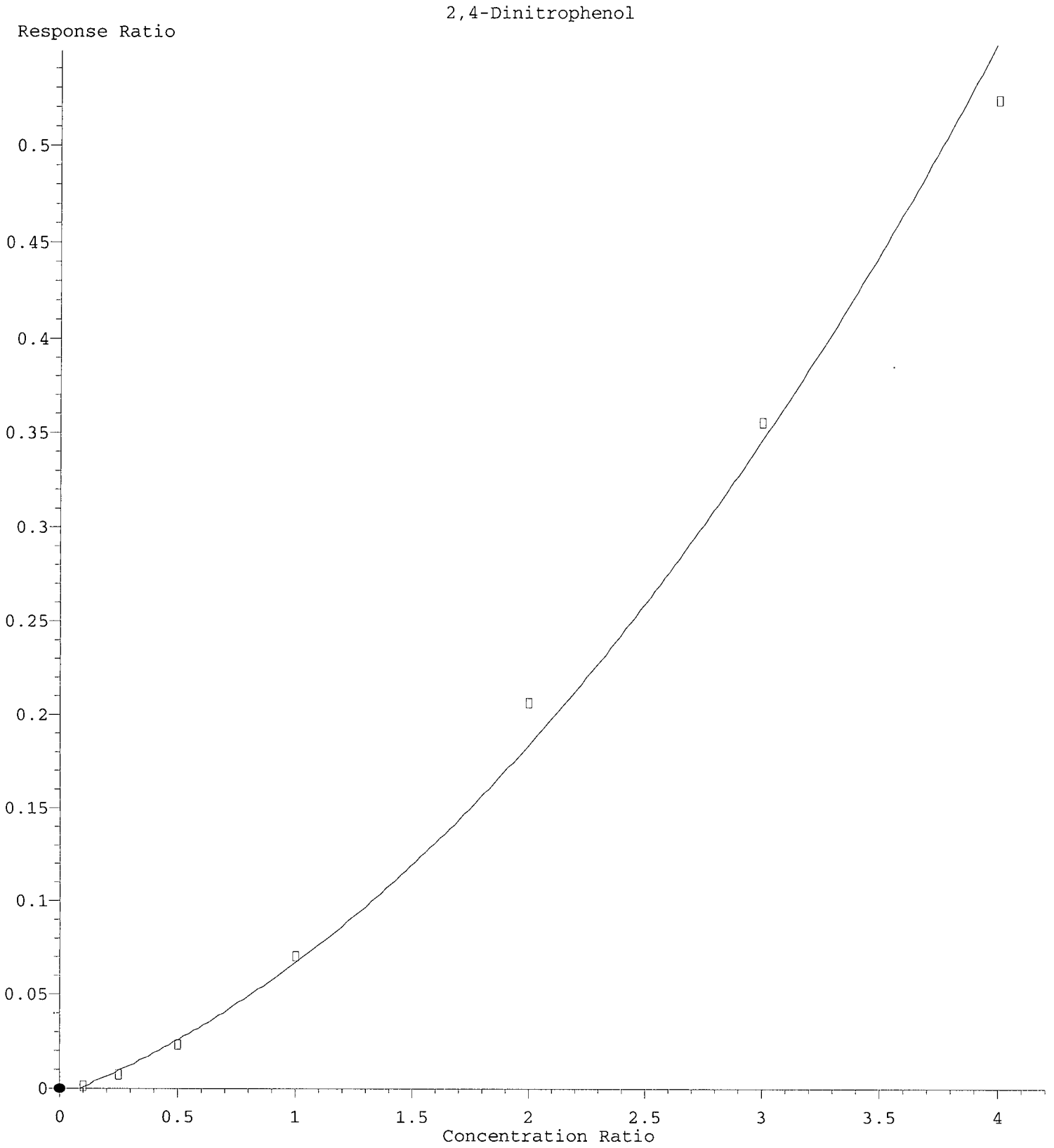
TIC: J04121915.D\data.ms

(47) 2,6-Dinitrotoluene (T)

9.627min (+ 0.001) 35.57 ng/ml m

response 197

Ion	Exp%	Act%
165.00	100.00	100.00
89.10	61.40	71.40
63.10	61.10	57.21
0.00	0.00	0.00

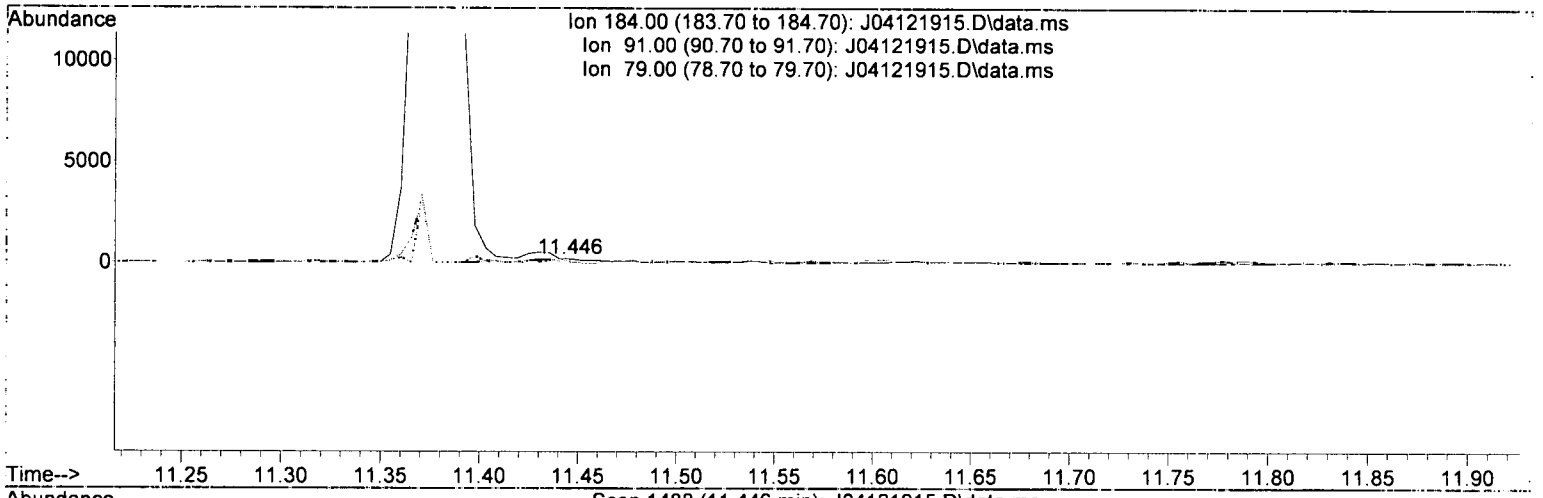


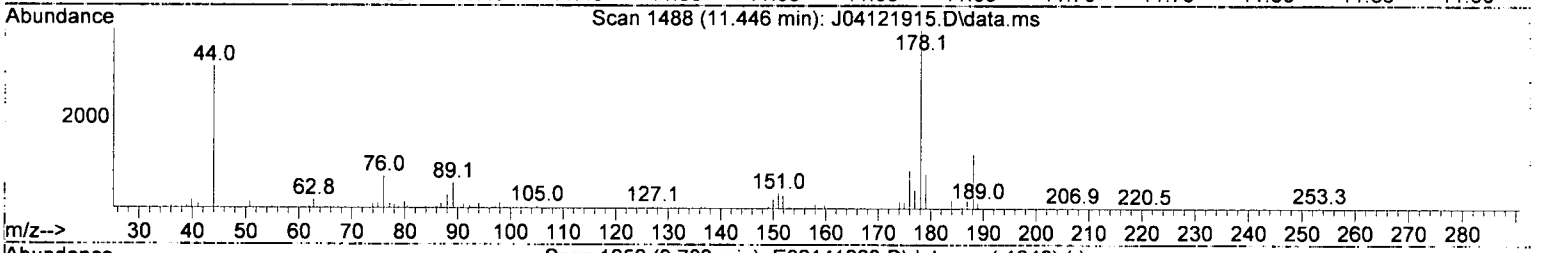
R = 2.28e-002 A*A + 4.83e-002 A - 4.04e-003
Coef of Det (r^2) = 0.993 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

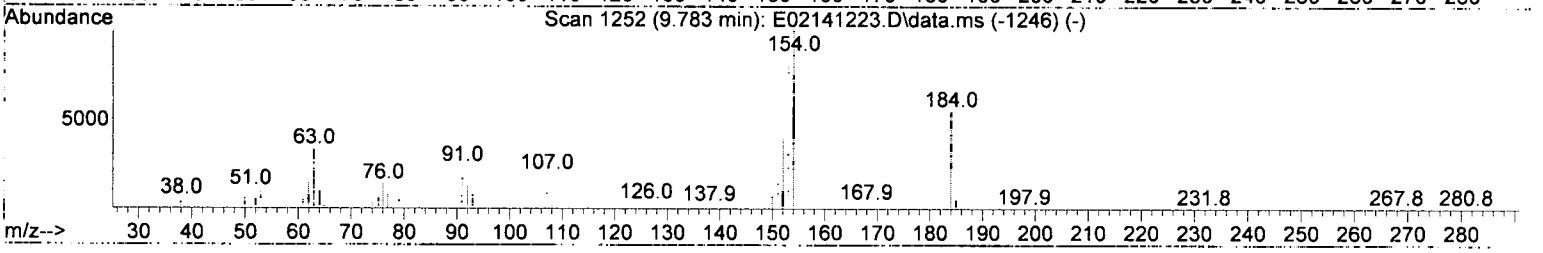
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







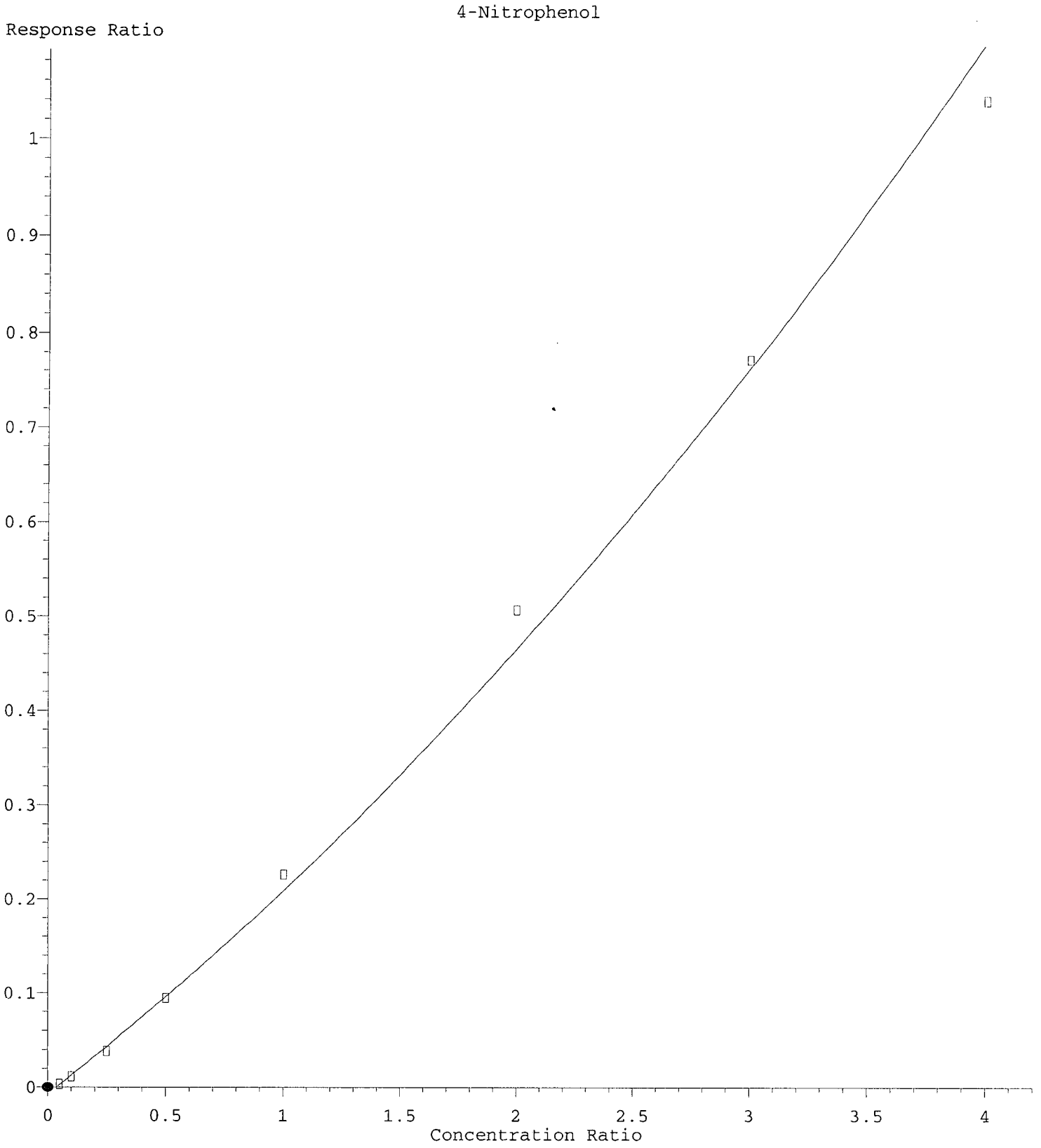
TIC: J04121915.D\data.ms

(52) 2,4-Dinitrophenol (T)

11.446min (+ 1.541) 172.30 ng/ml m

response 122

Ion	Exp%	Act%
184.00	100.00	100.00
91.00	53.50	54.17
79.00	32.30	18.75
0.00	0.00	0.00

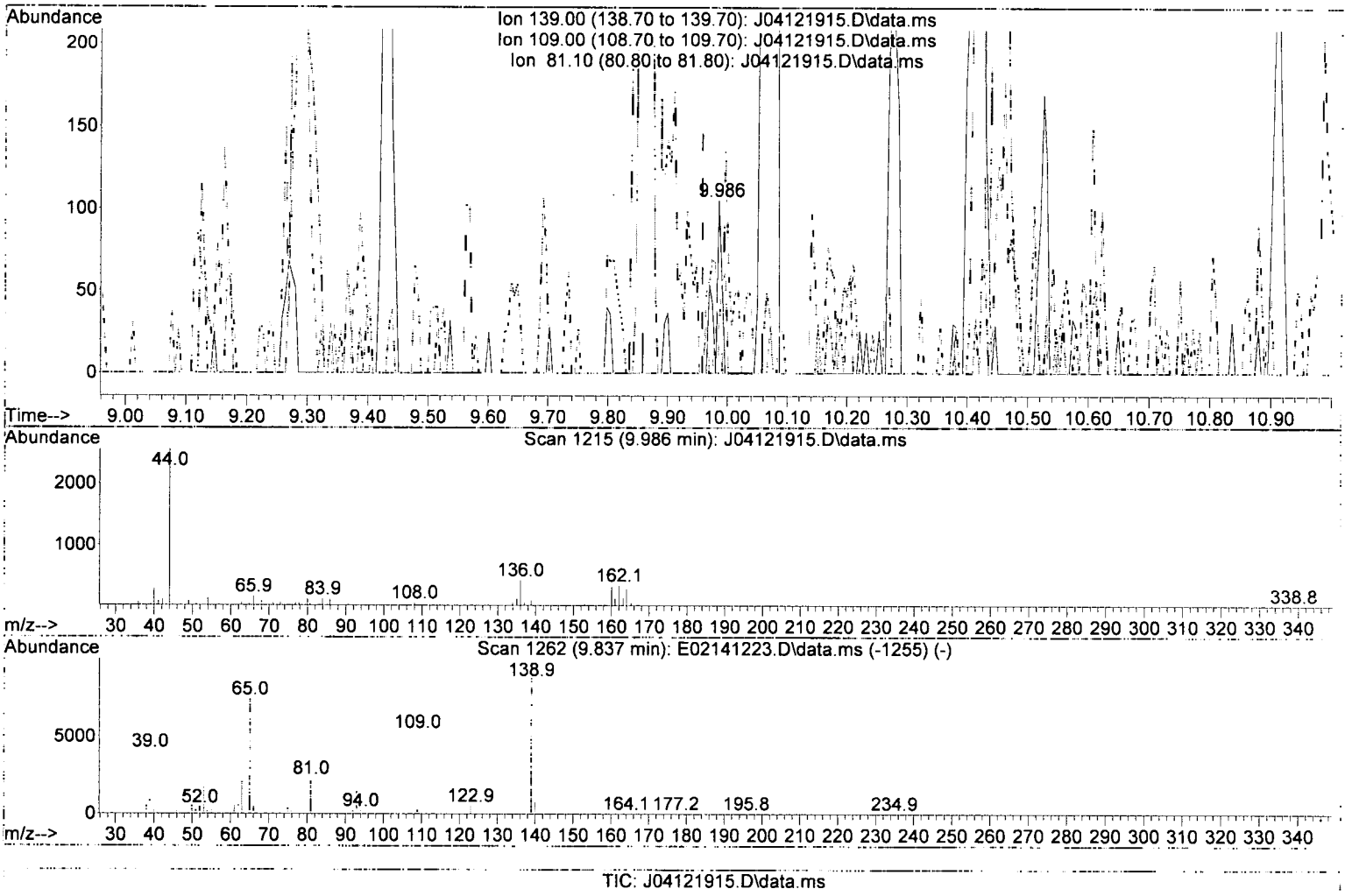


R = 2.02e-002 A*A + 1.96e-001 A - 7.20e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



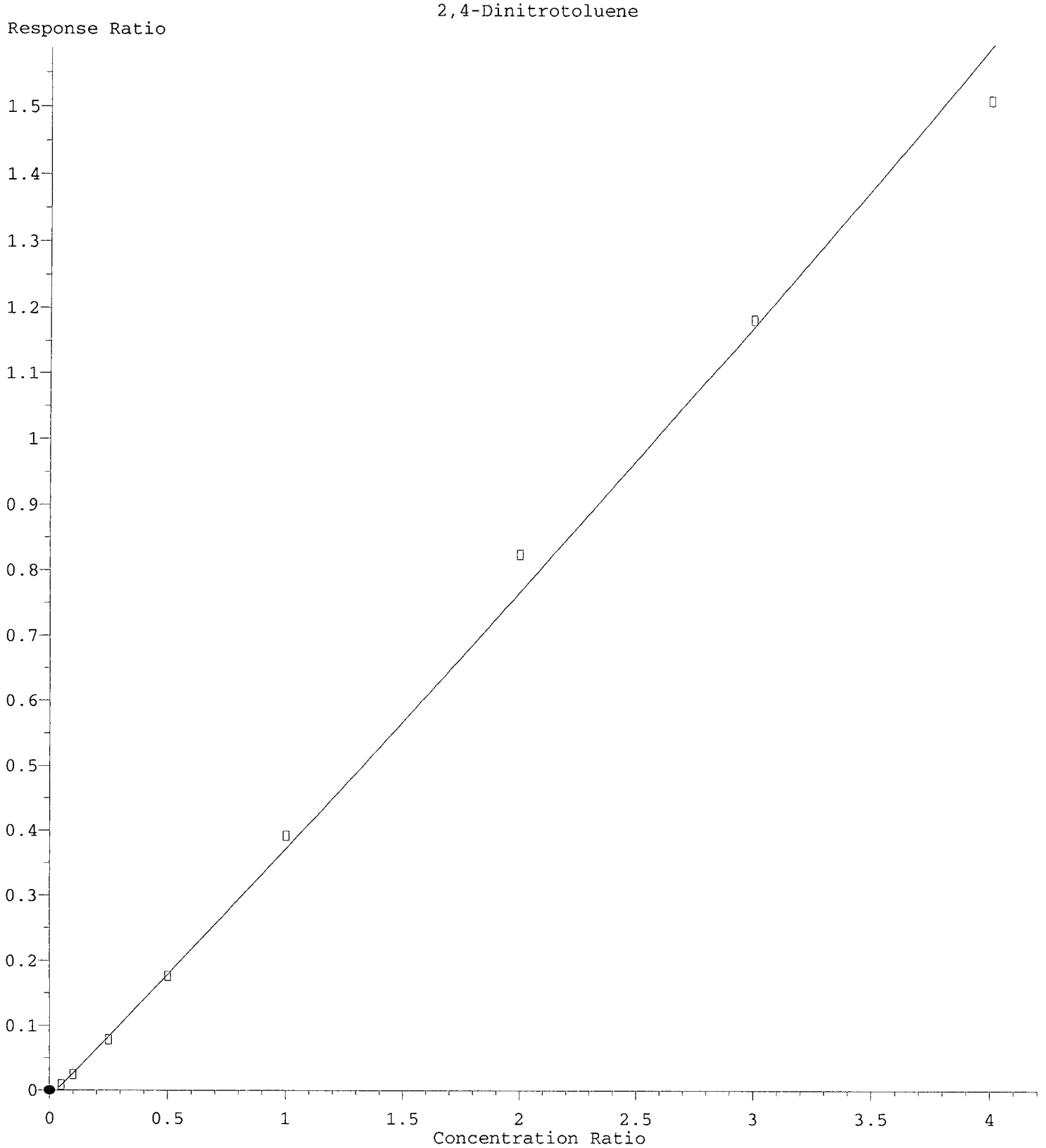
TIC: J04121915.D\data.ms

(53) 4-Nitrophenol (T)

9.986min (+ 0.028) 75.67 ng/ml m

response 103

Ion	Exp%	Act%
139.00	100.00	100.00
109.00	64.20	26.67#
81.10	30.90	0.00#
0.00	0.00	0.00

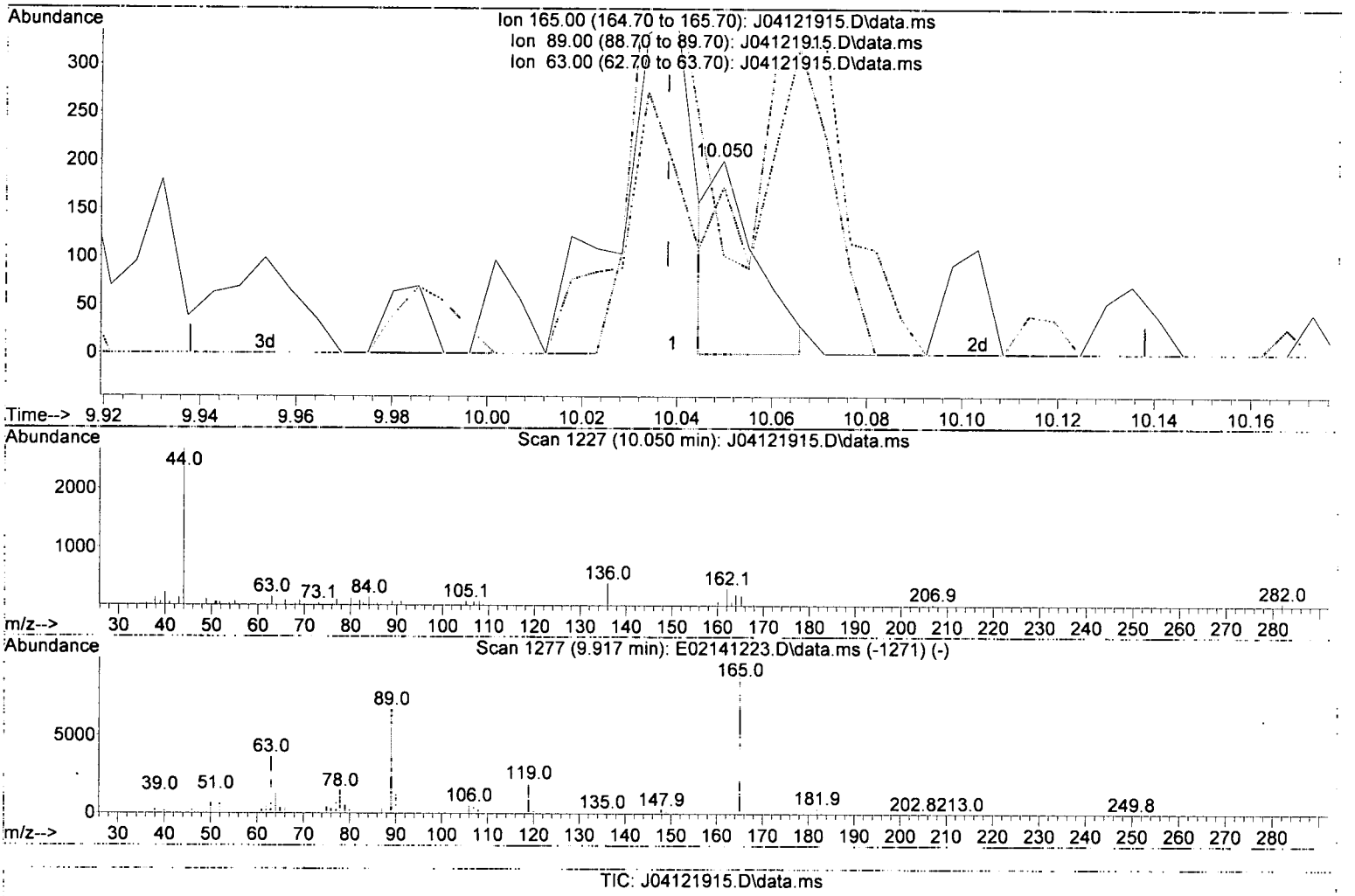


R = 5.63e-003 A*A + 3.78e-001 A - 1.14e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



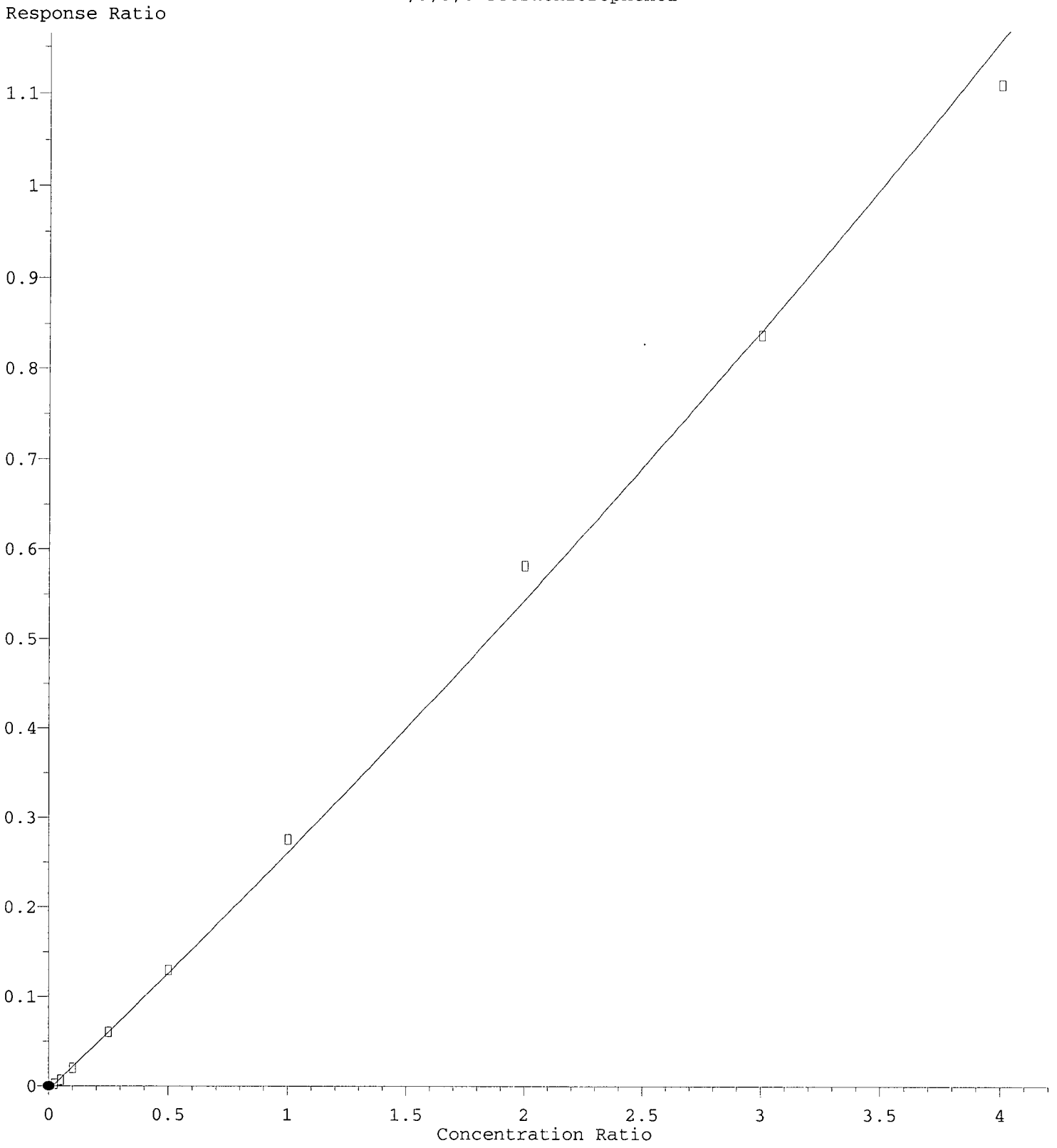
TIC: J04121915.D\data.ms

(54) 2,4-Dinitrotoluene (T)

10.050min (+ 0.012) 61.75 ng/ml m

response 130

Ion	Exp%	Act%
165.00	100.00	100.00
89.00	80.10	50.75
63.00	47.20	86.57#
0.00	0.00	0.00

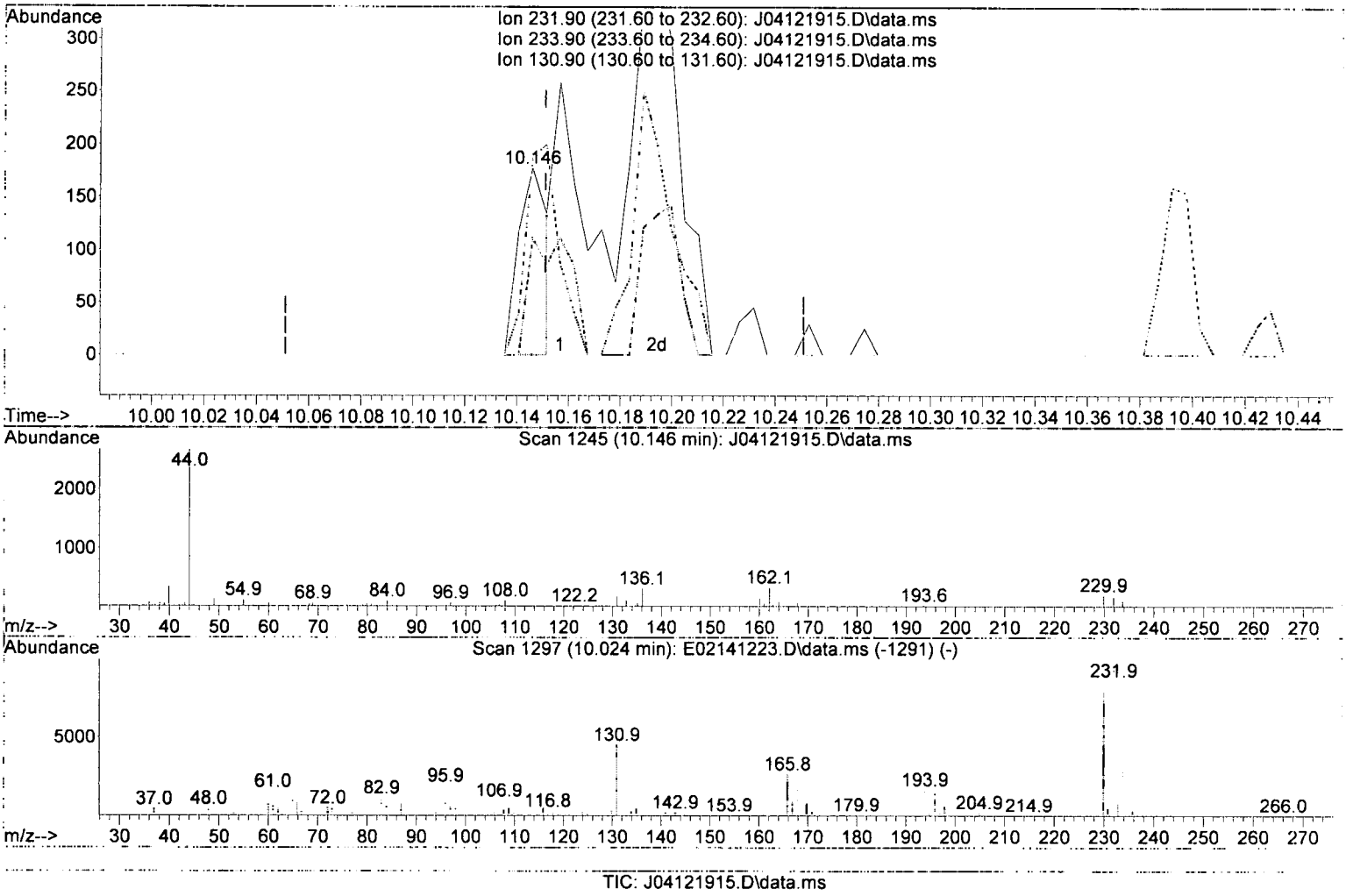


R = 8.29e-003 A*A + 2.57e-001 A - 4.50e-003
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



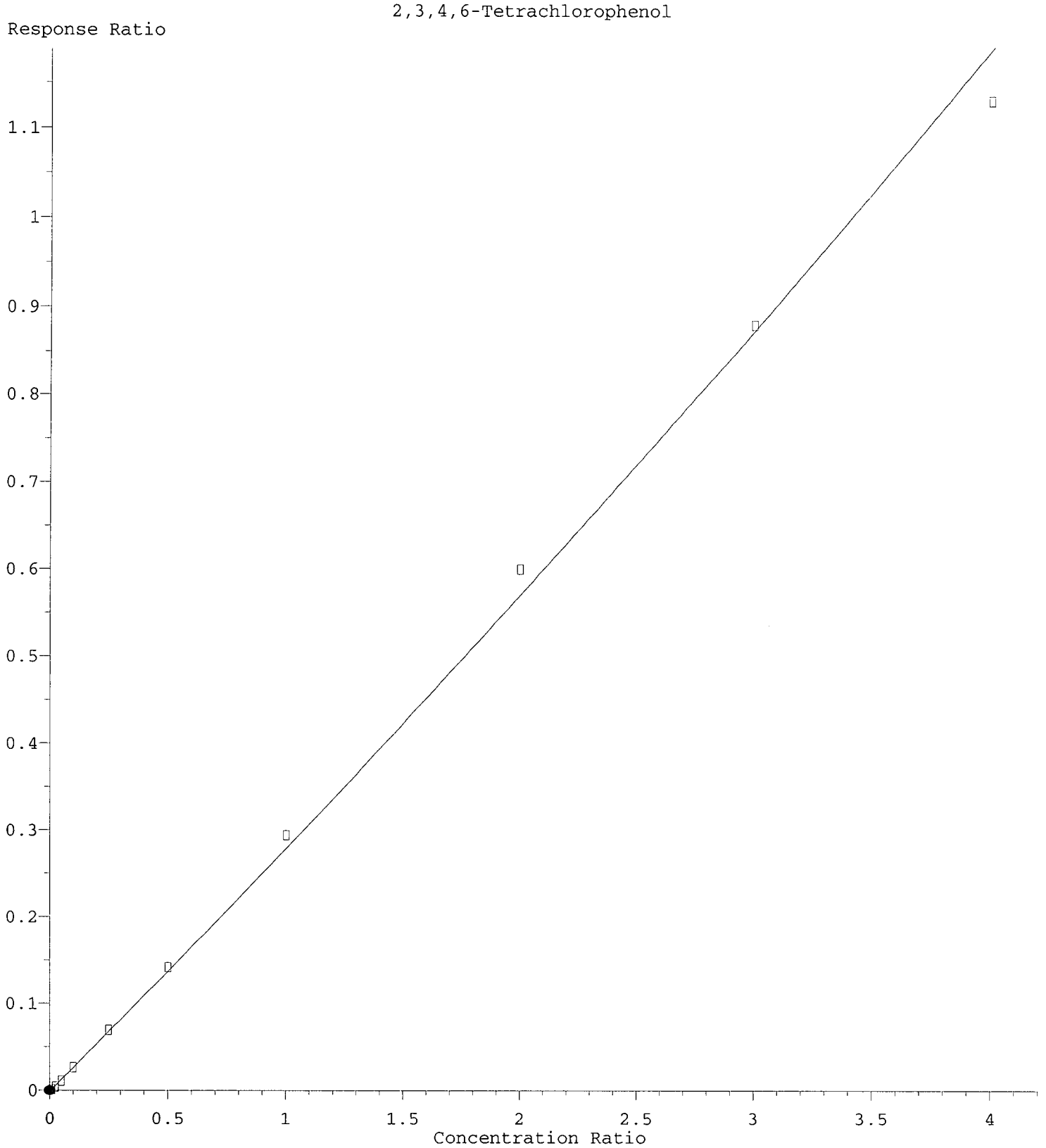
TIC: J04121915.D\data.ms

(56) 2,3,5,6-Tetrachlorophenol (T)

10.146min (-0.005) 37.50 ng/ml m

response 138

Ion	Exp%	Act%
231.90	100.00	100.00
233.90	49.20	62.71
130.90	53.00	106.21#
0.00	0.00	0.00

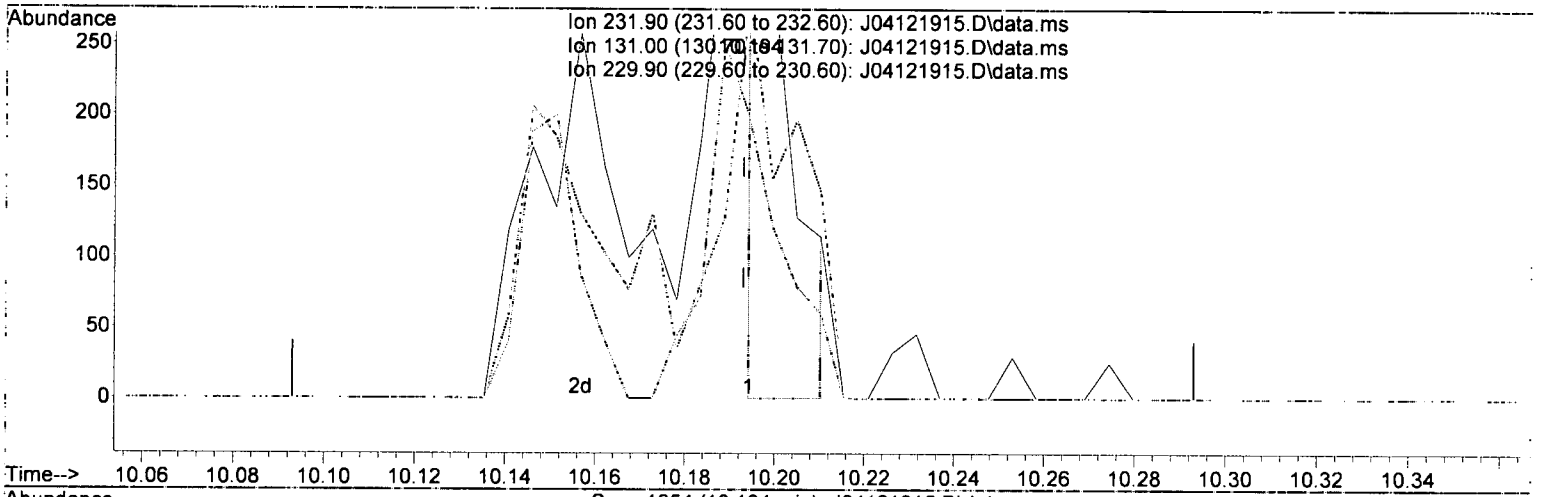


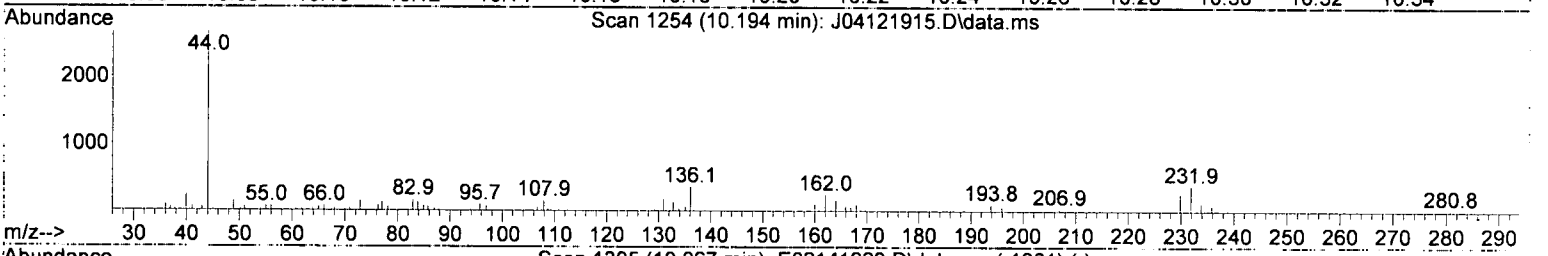
R = 5.62e-003 A*A + 2.75e-001 A - 1.81e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

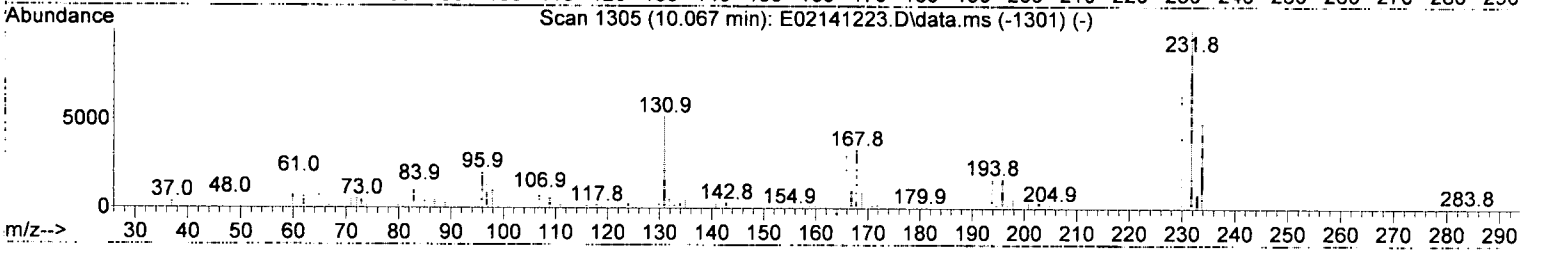
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







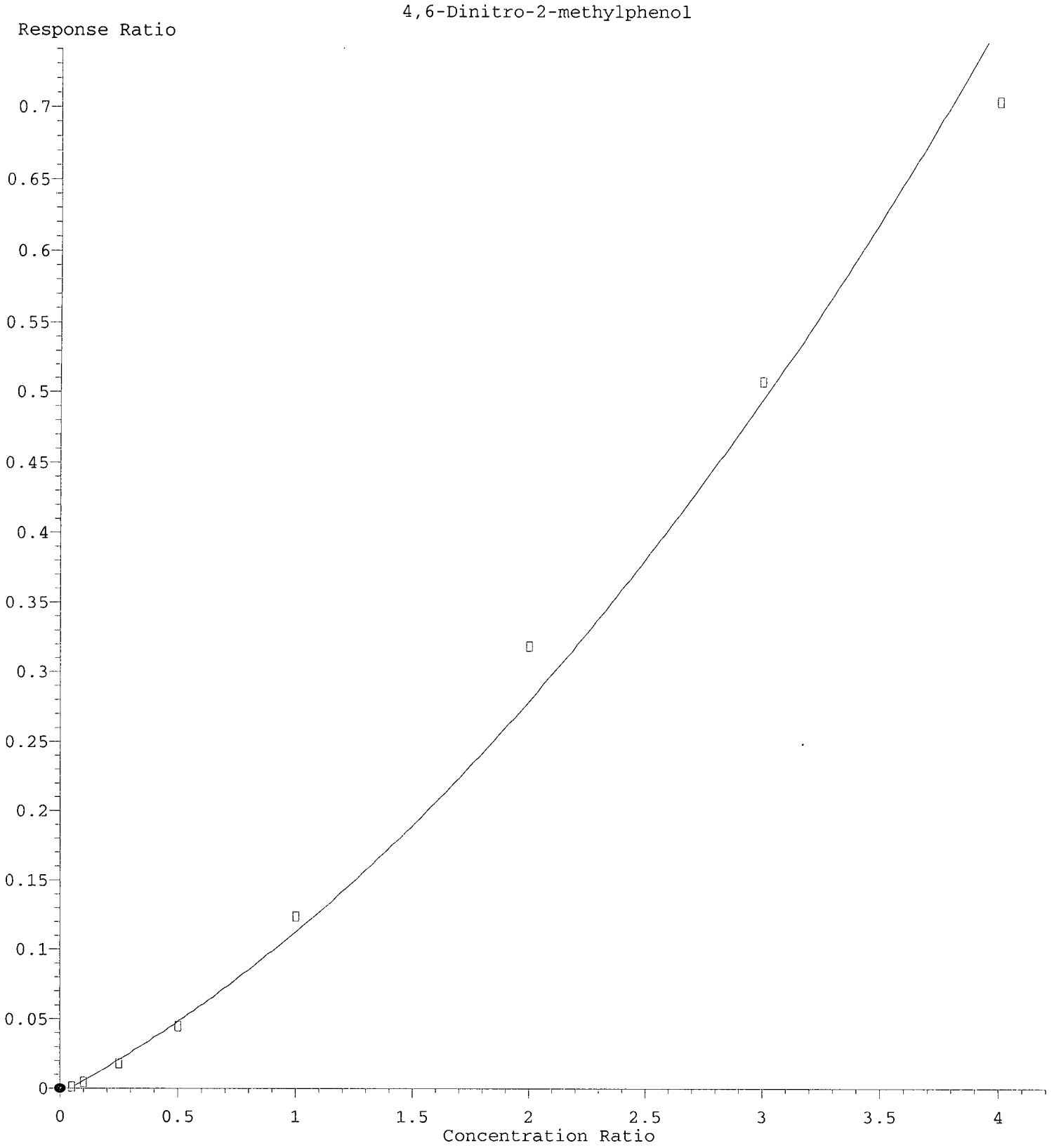
TIC: J04121915.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.001) 16.14 ng/ml m

response 173

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	51.03
229.90	78.40	72.05
0.00	0.00	0.00

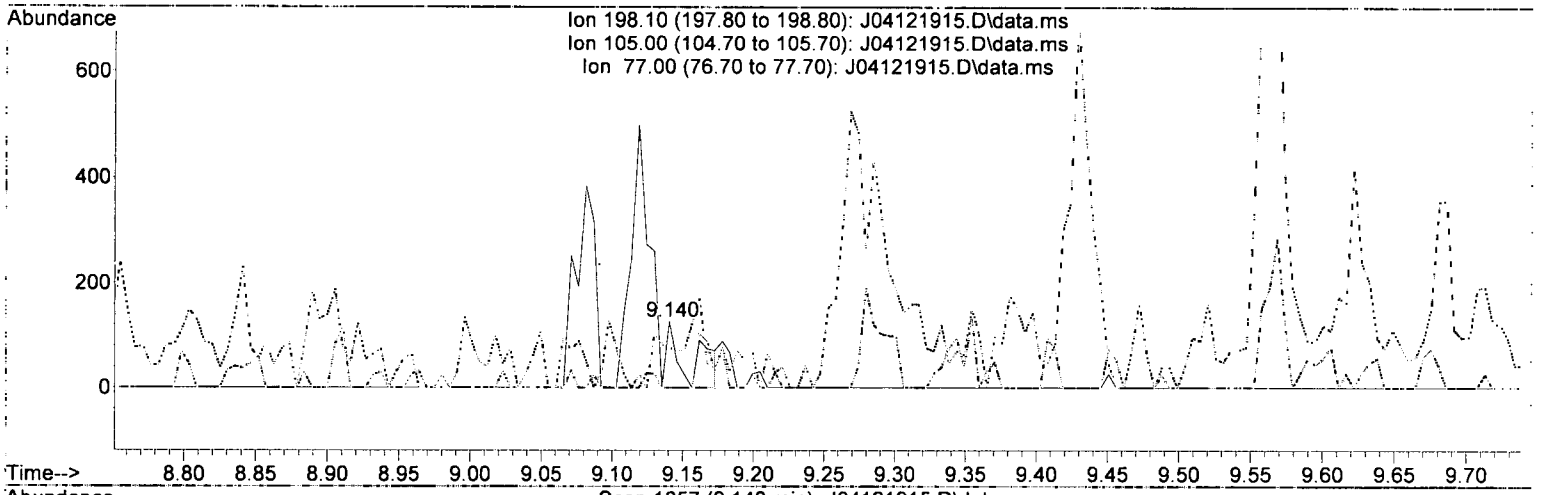


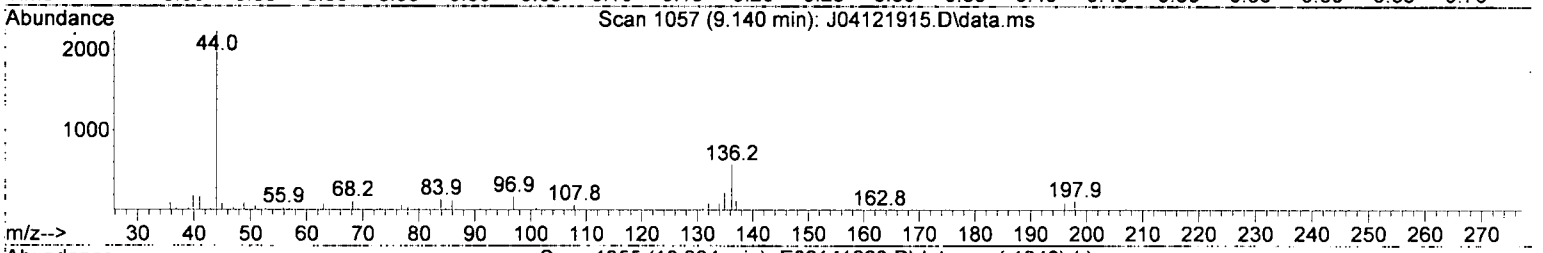
R = 2.48e-002 A*A + 9.20e-002 A - 3.92e-003
Coef of Det (r^2) = 0.991 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

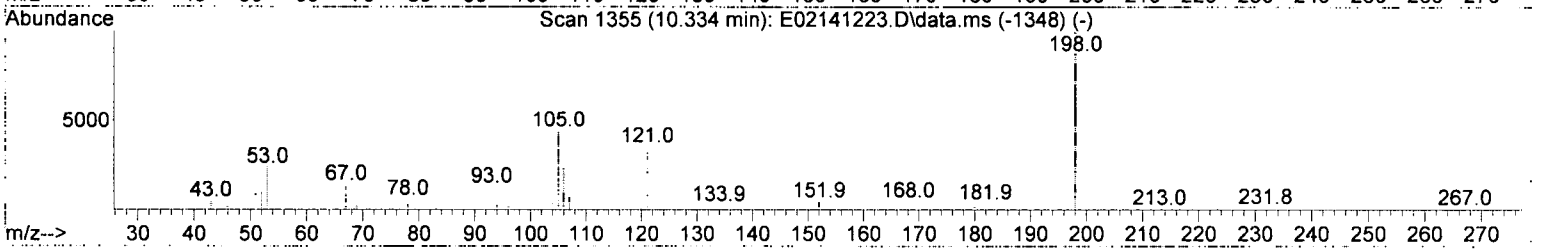
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







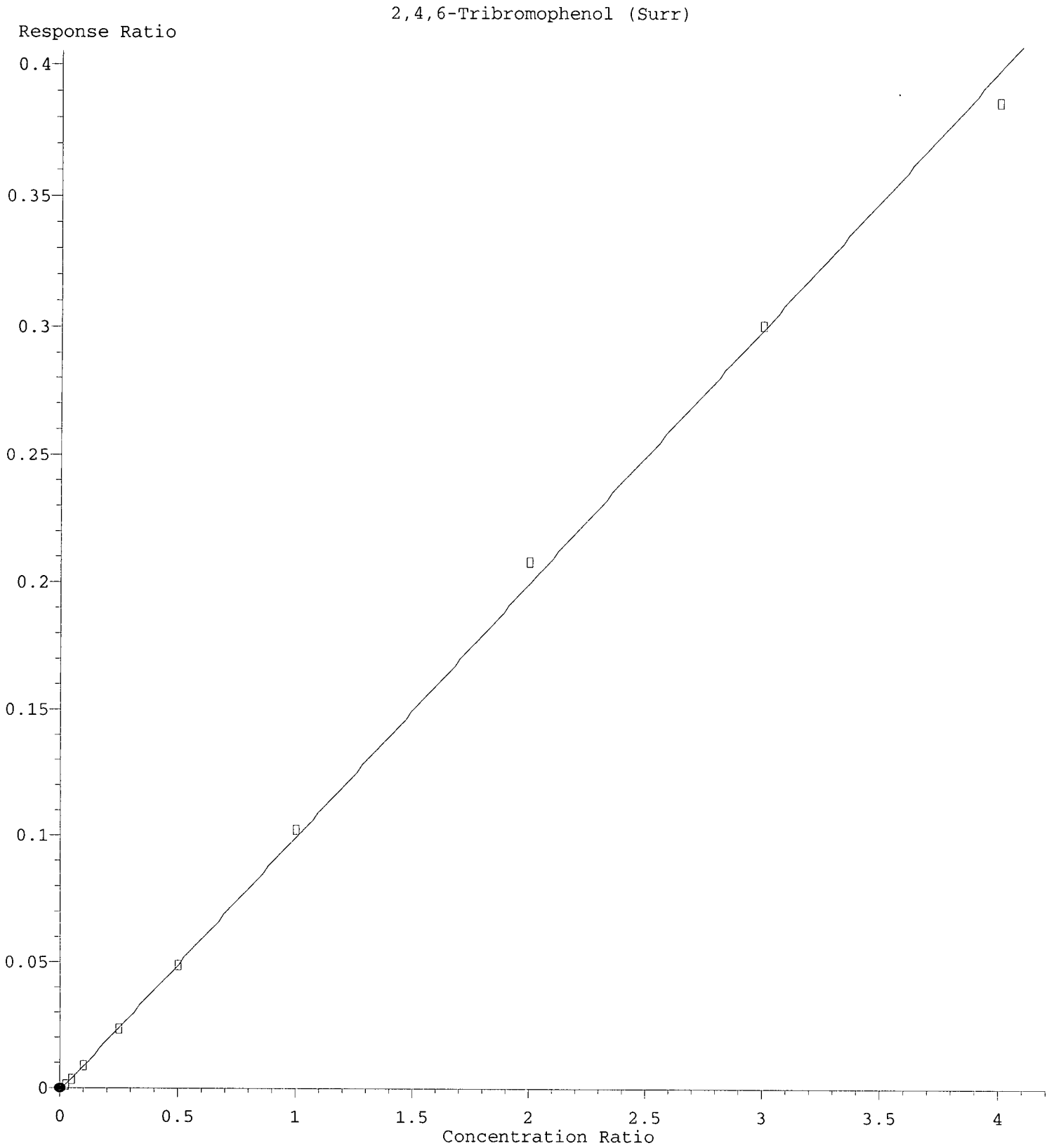
TIC: J04121915.D\data.ms

(63) 4,6-Dinitro-2-methylphenol (T)

9.140min (-1.321) 91.21 ng/ml m ✓

response 140

Ion	Exp%	Act%
198.10	100.00	100.00
105.00	58.40	0.00#
77.00	31.80	61.11
0.00	0.00	0.00

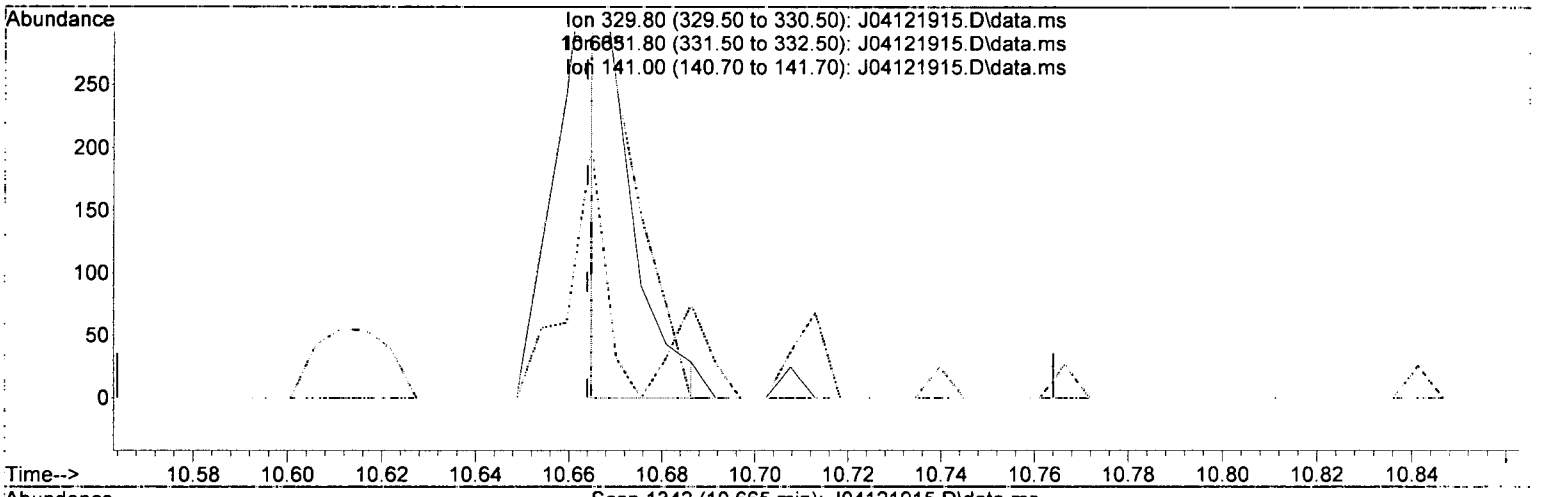


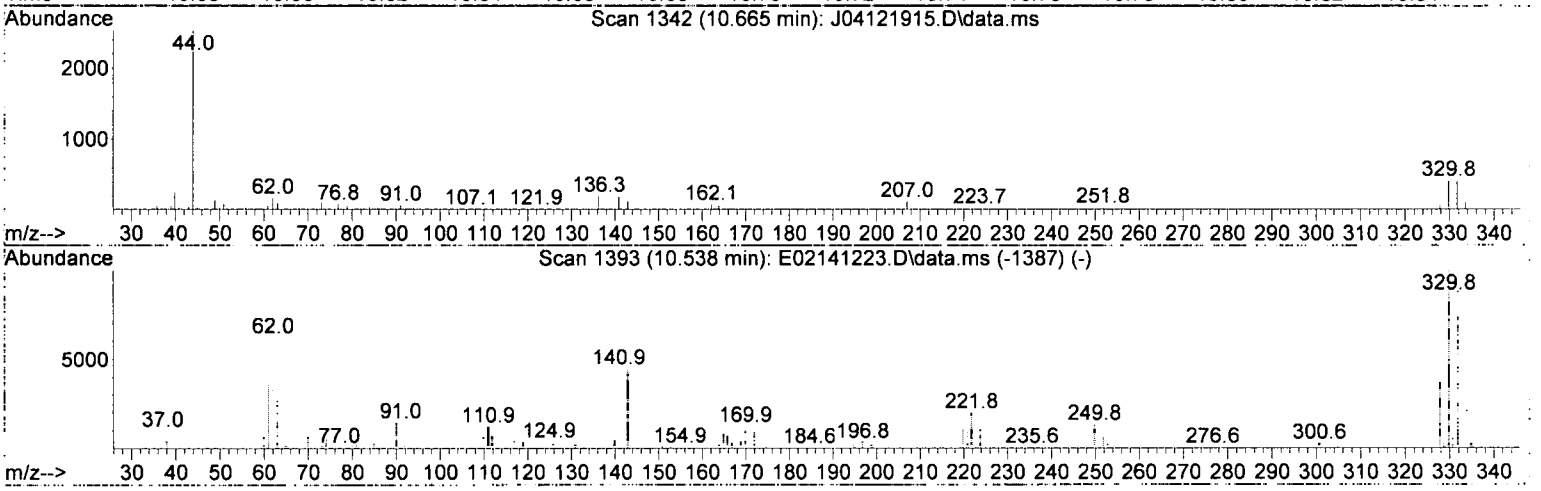
R = -3.14e-004 A*A + 1.01e-001 A - 1.36e-003
Coef of Det (r^2) = 0.999 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





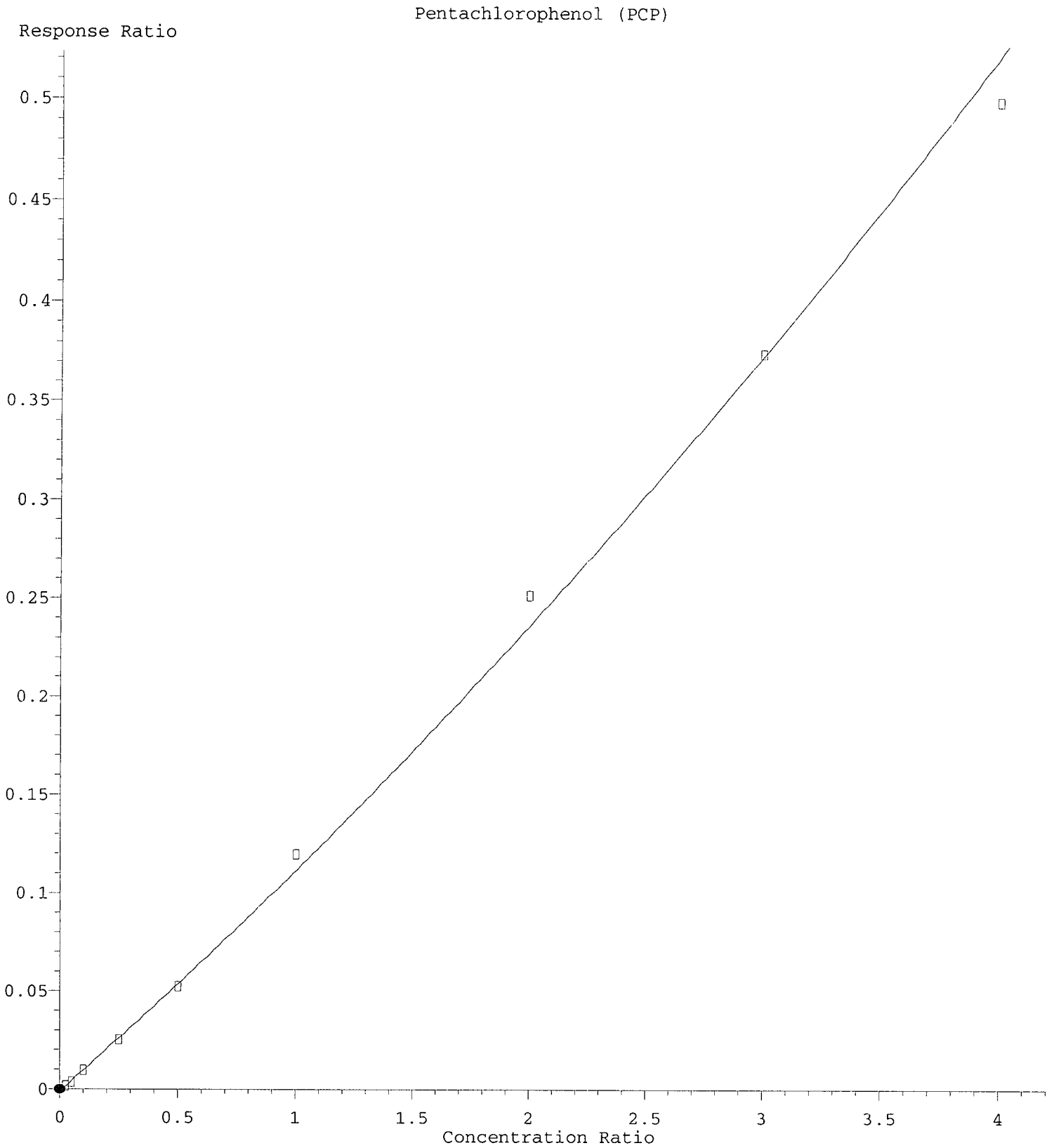
TIC: J04121915.D\data.ms

(67) 2,4,6-Tribromophenol (Surr) (S)

10.665min (+ 0.001) 30.67 ng/ml m

response 132

Ion	Exp%	Act%
329.80	100.00	100.00
331.80	95.30	97.88
141.00	47.50	47.17
0.00	0.00	0.00

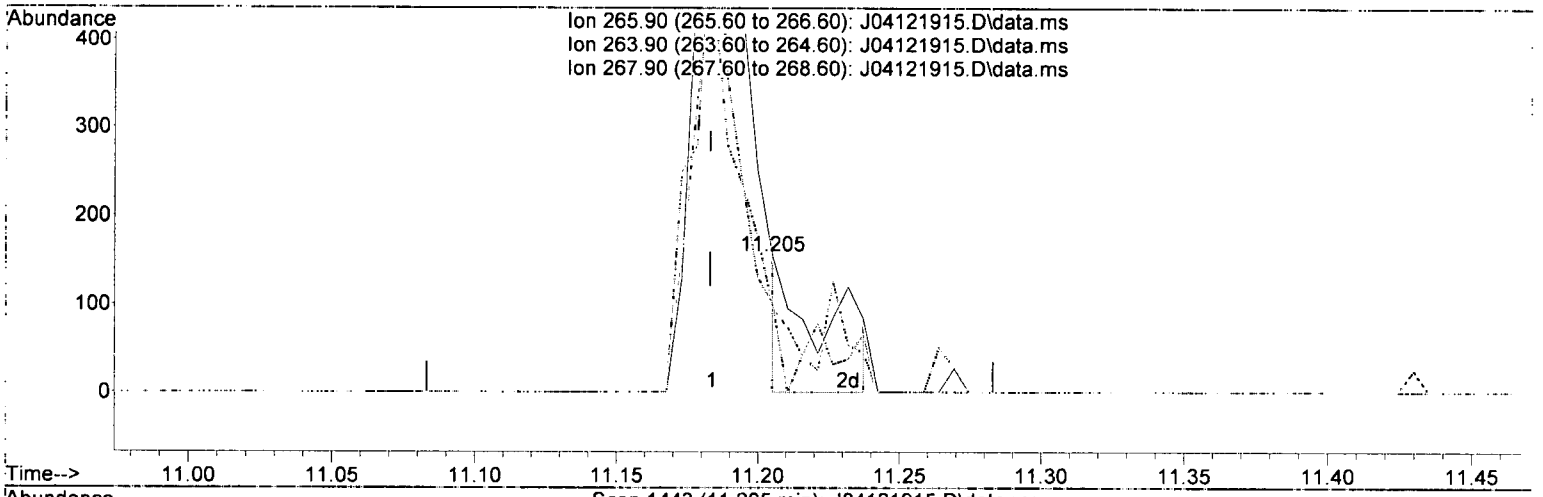


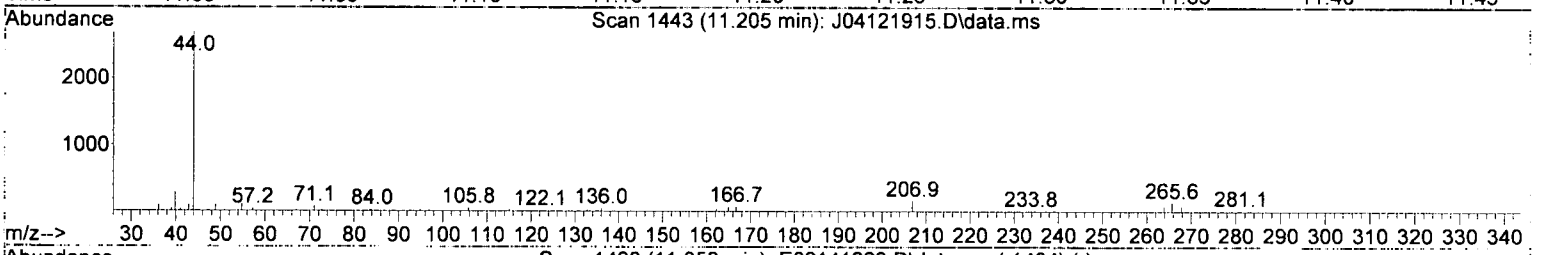
R = 5.98e-003 A*A + 1.07e-001 A - 1.11e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

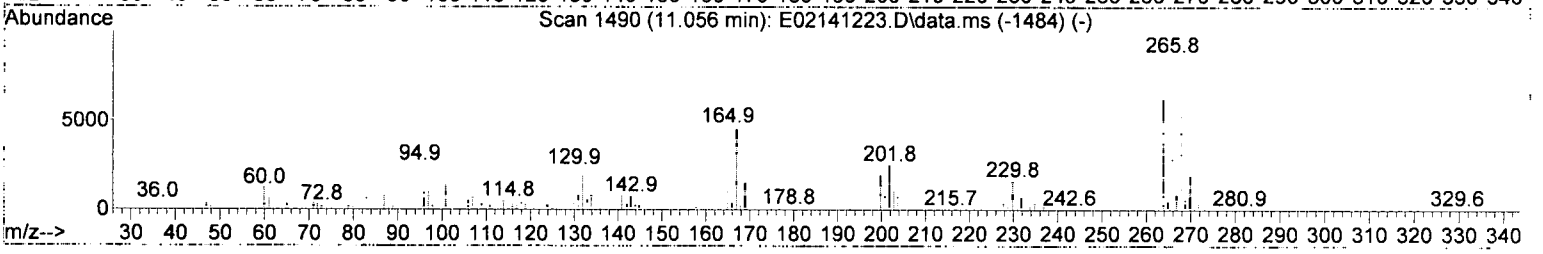
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







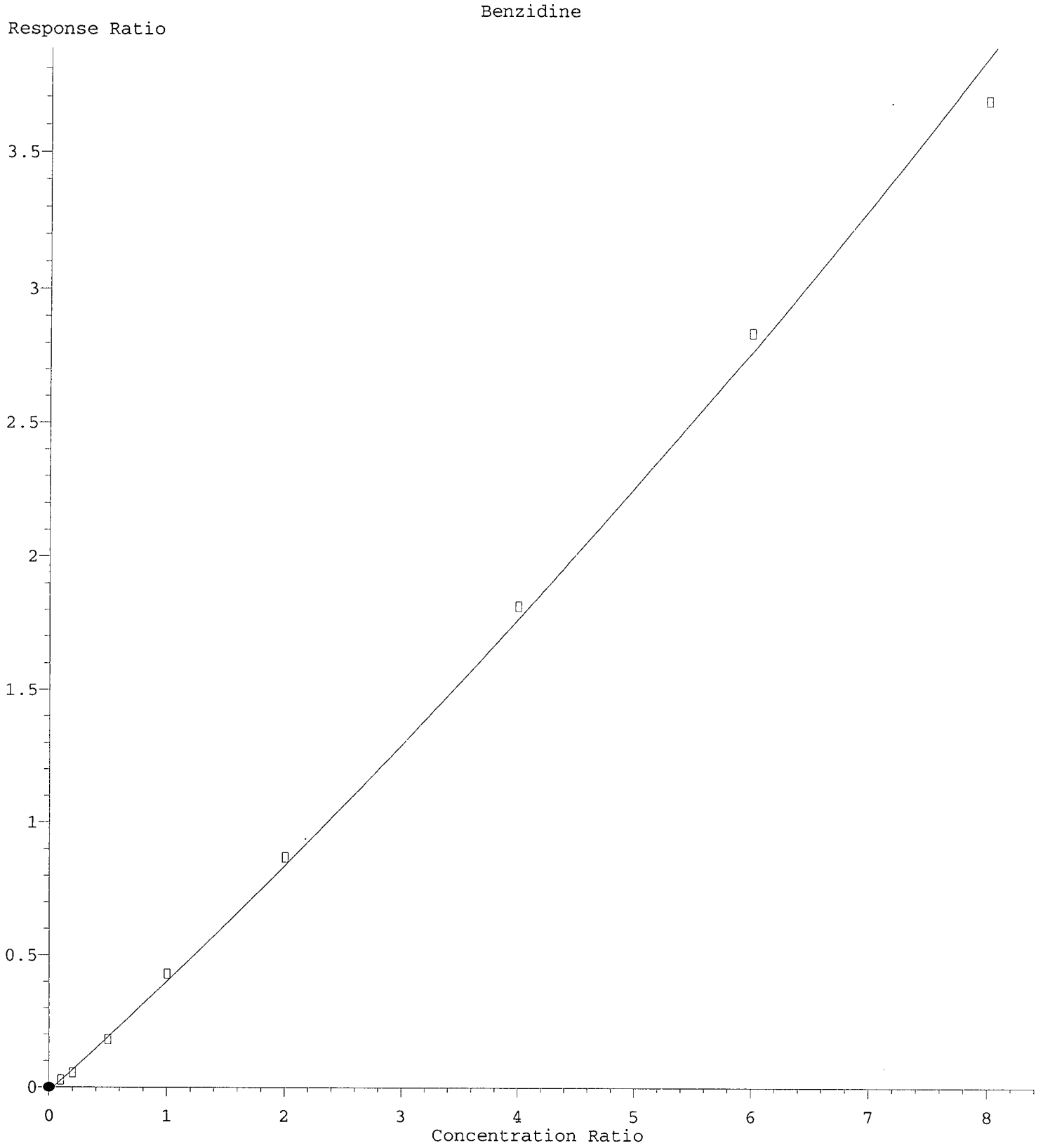
TIC: J04121915.D\data.ms

(70) Pentachlorophenol (PCP) (T)

11.205min (+ 0.022) 25.14 ng/ml m

response 163

Ion	Exp%	Act%
265.90	100.00	100.00
263.90	65.20	65.16
267.90	61.20	61.94
0.00	0.00	0.00

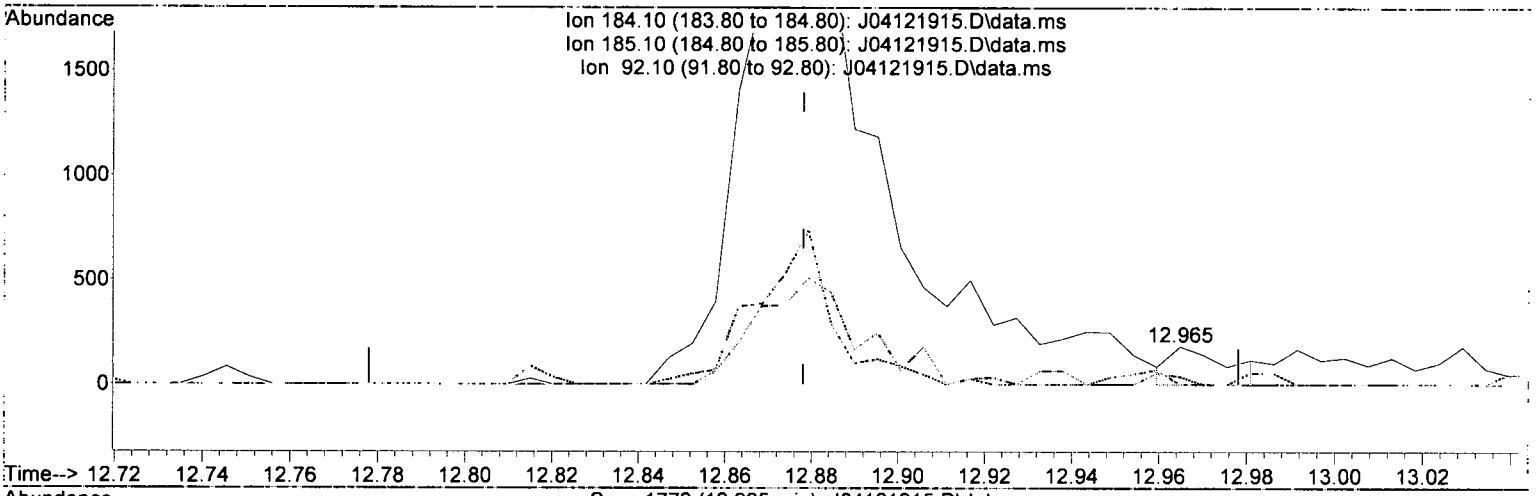


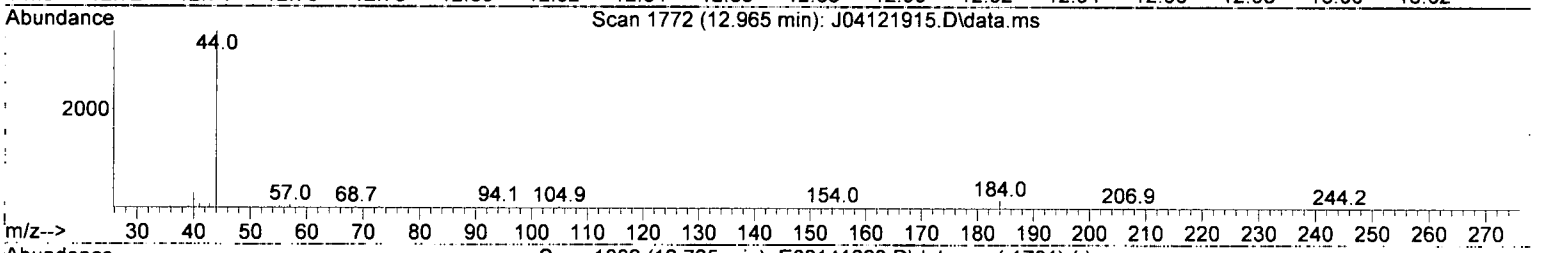
R = 9.30e-003 A*A + 4.09e-001 A - 1.64e-002
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

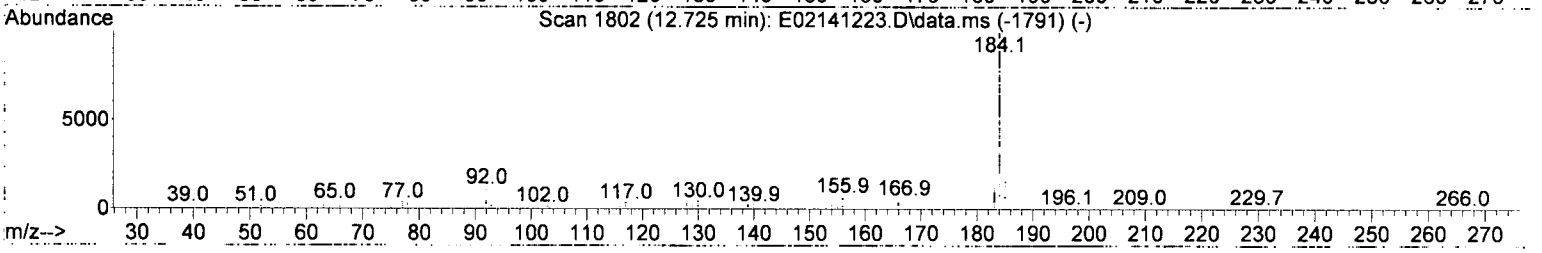
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







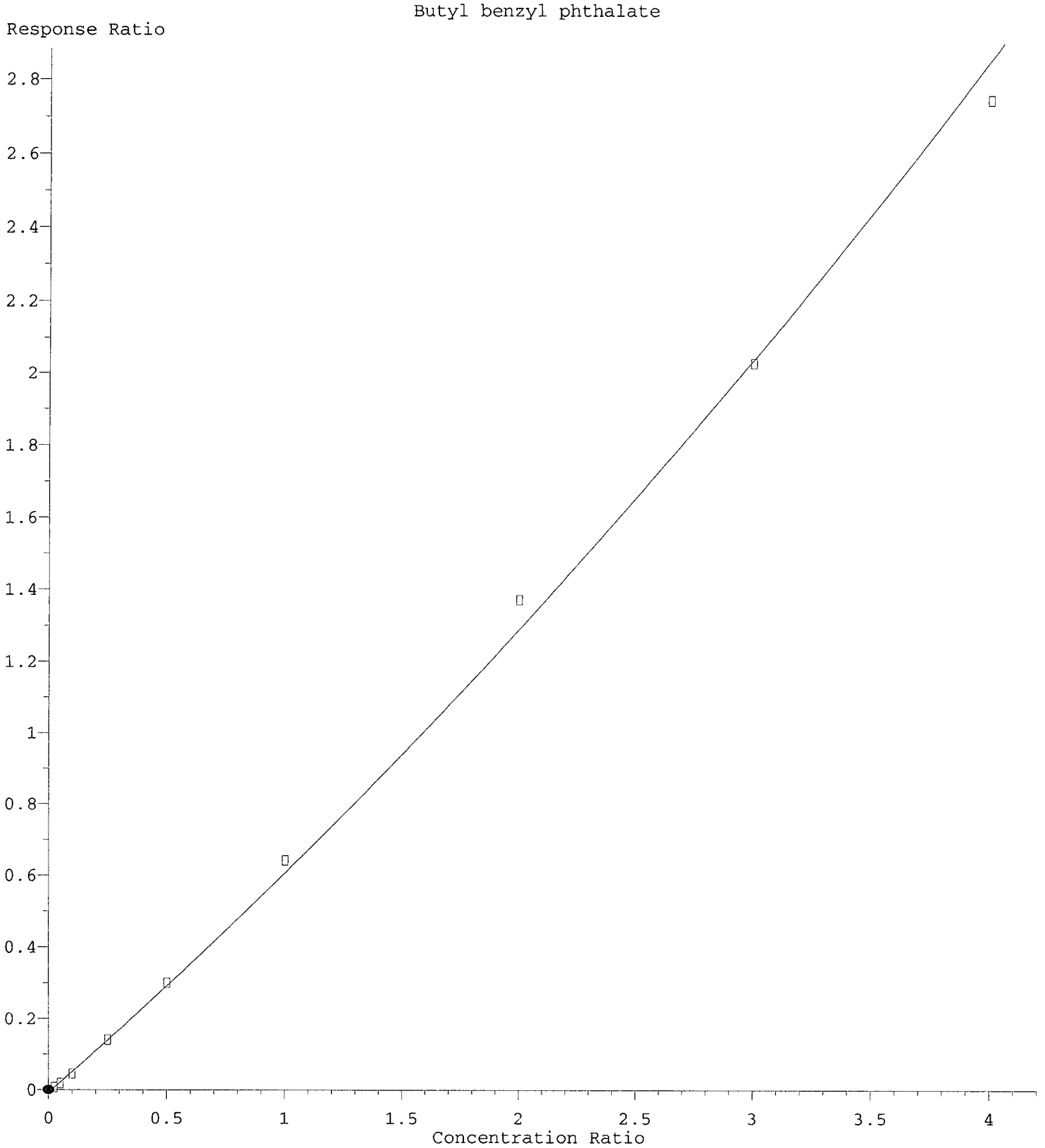
TIC: J04121915.D\data.ms

(76) Benzidine (T)

12.965min (+ 0.087) 81.55 ng/ml m

response 167

Ion	Exp%	Act%
184.10	100.00	100.00
185.10	15.10	20.67
92.10	11.90	0.00
0.00	0.00	0.00

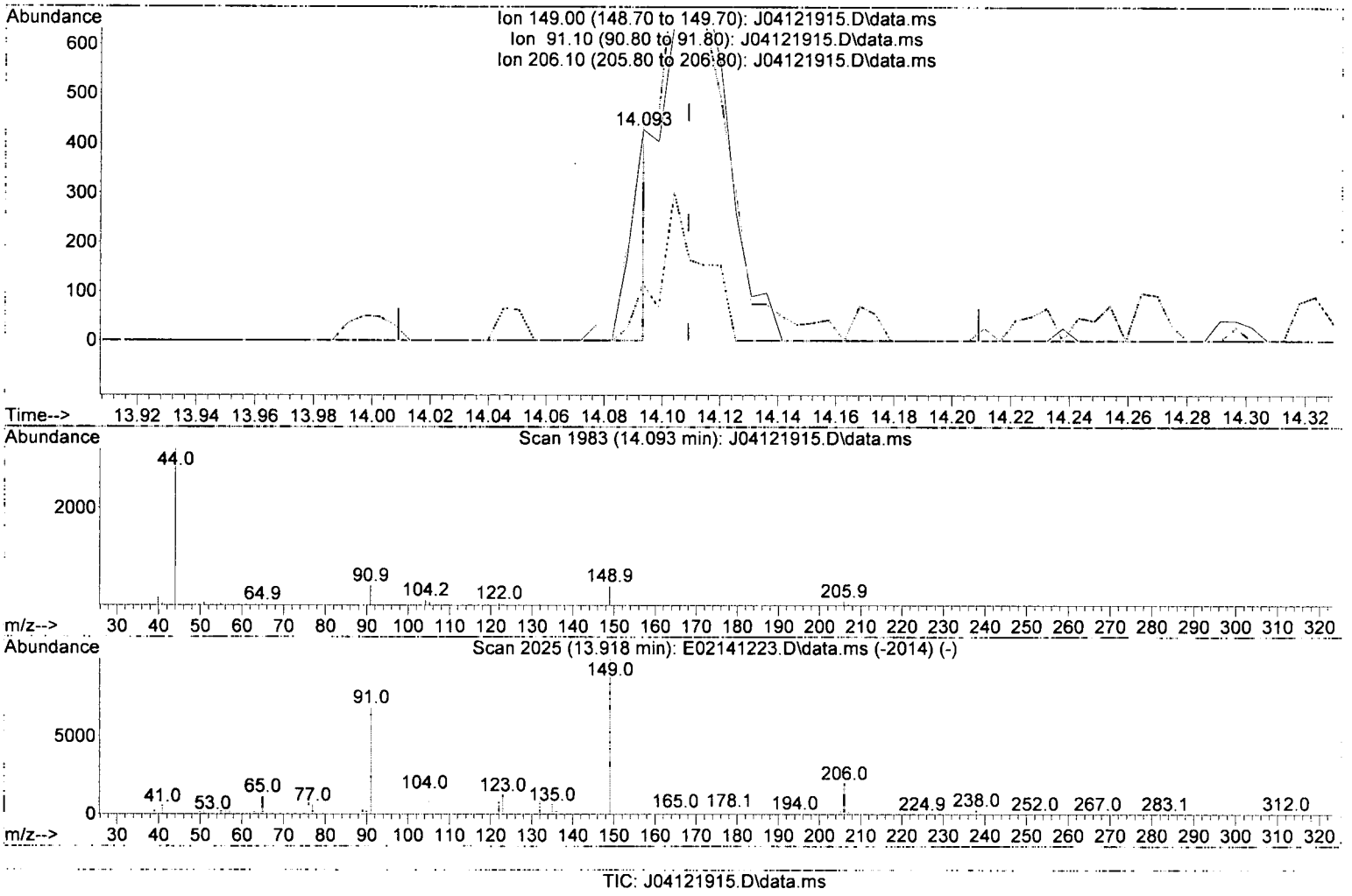


R = 3.32e-002 A*A + 5.83e-001 A - 8.53e-003
Coef of Det (r^2) = 0.996 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



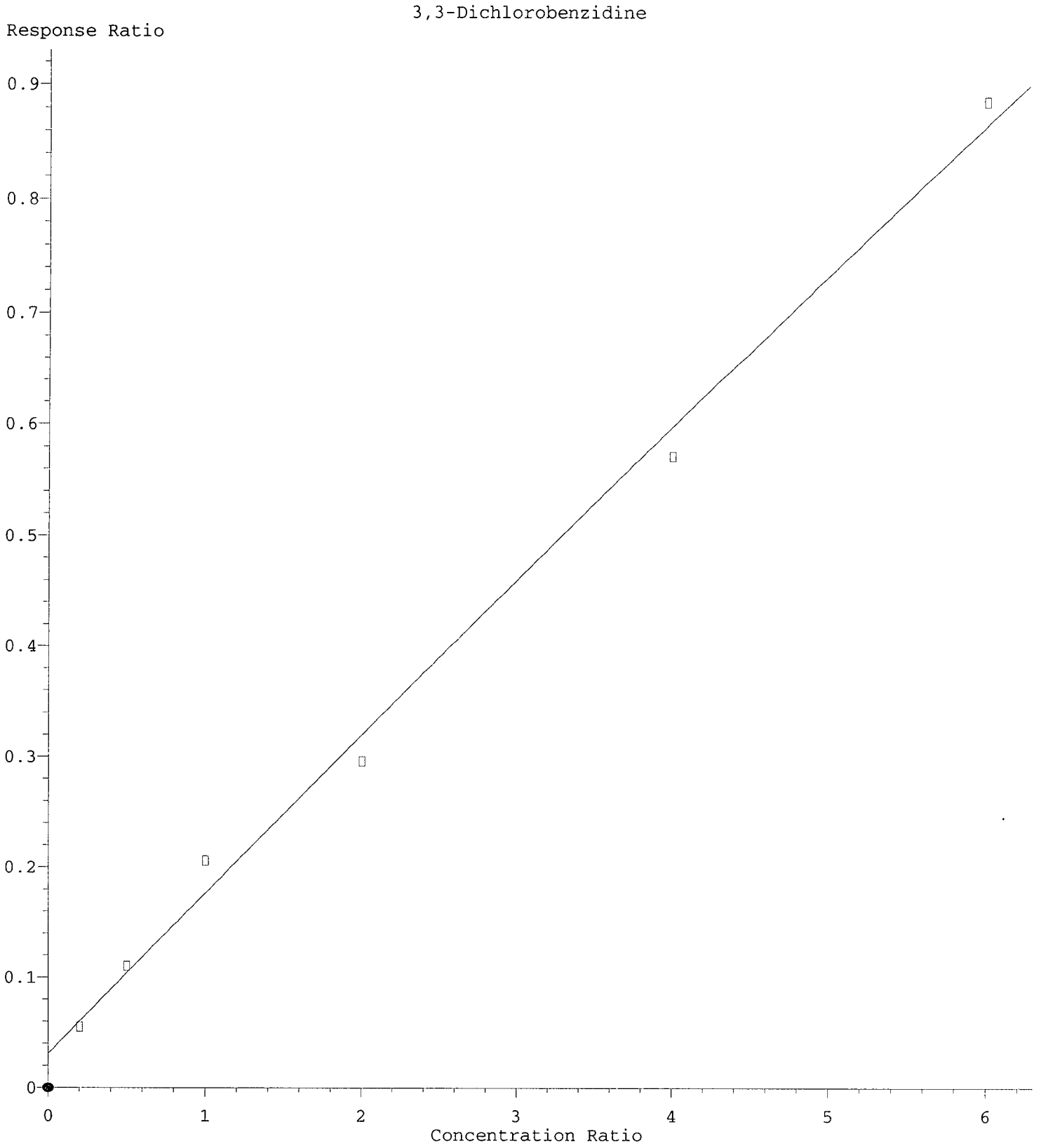
TIC: J04121915.D\data.ms

(80) Butyl benzyl phthalate (T)

14.093min (-0.016) 30.34 ng/ml m

response 192

Ion	Exp%	Act%
149.00	100.00	100.00
91.10	76.30	101.17
206.10	18.00	26.64
0.00	0.00	0.00

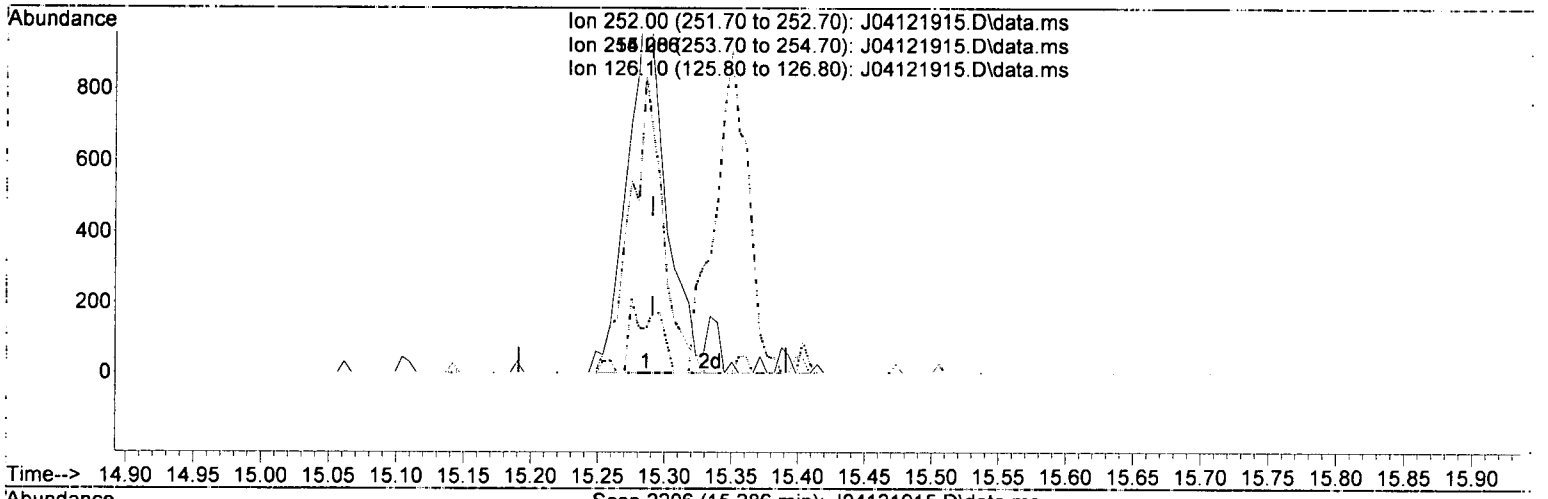


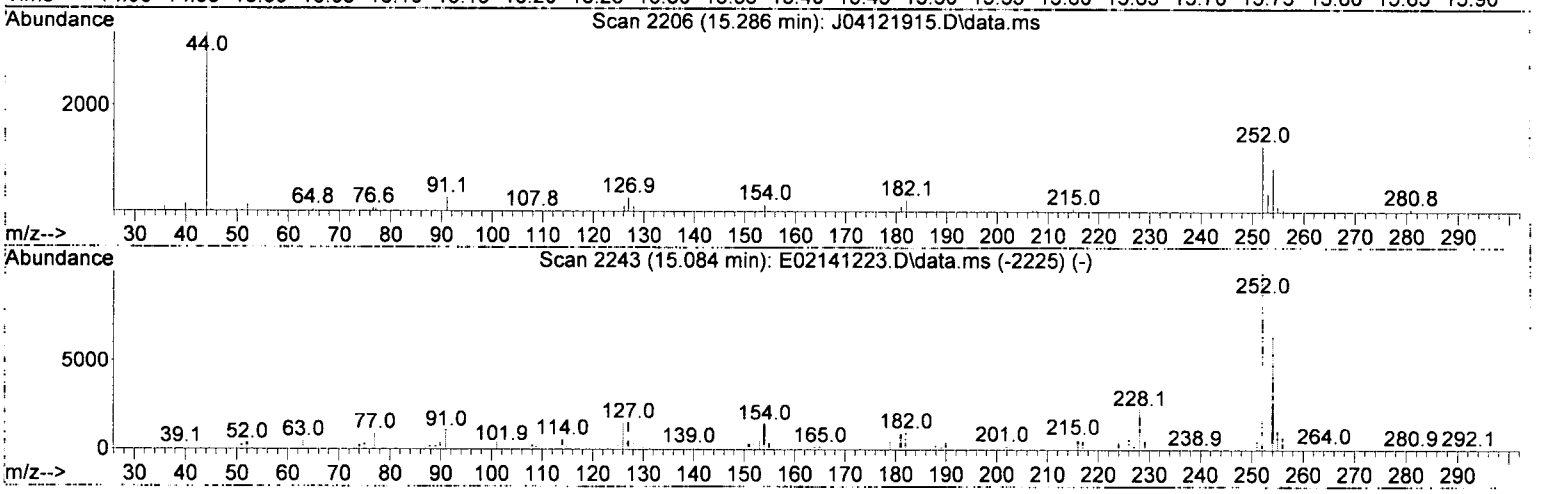
R = -1.36e-003 A*A + 1.47e-001 A + 3.08e-002
Coef of Det (r^2) = 0.992 Curve Fit: Quadratic w(1/a)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





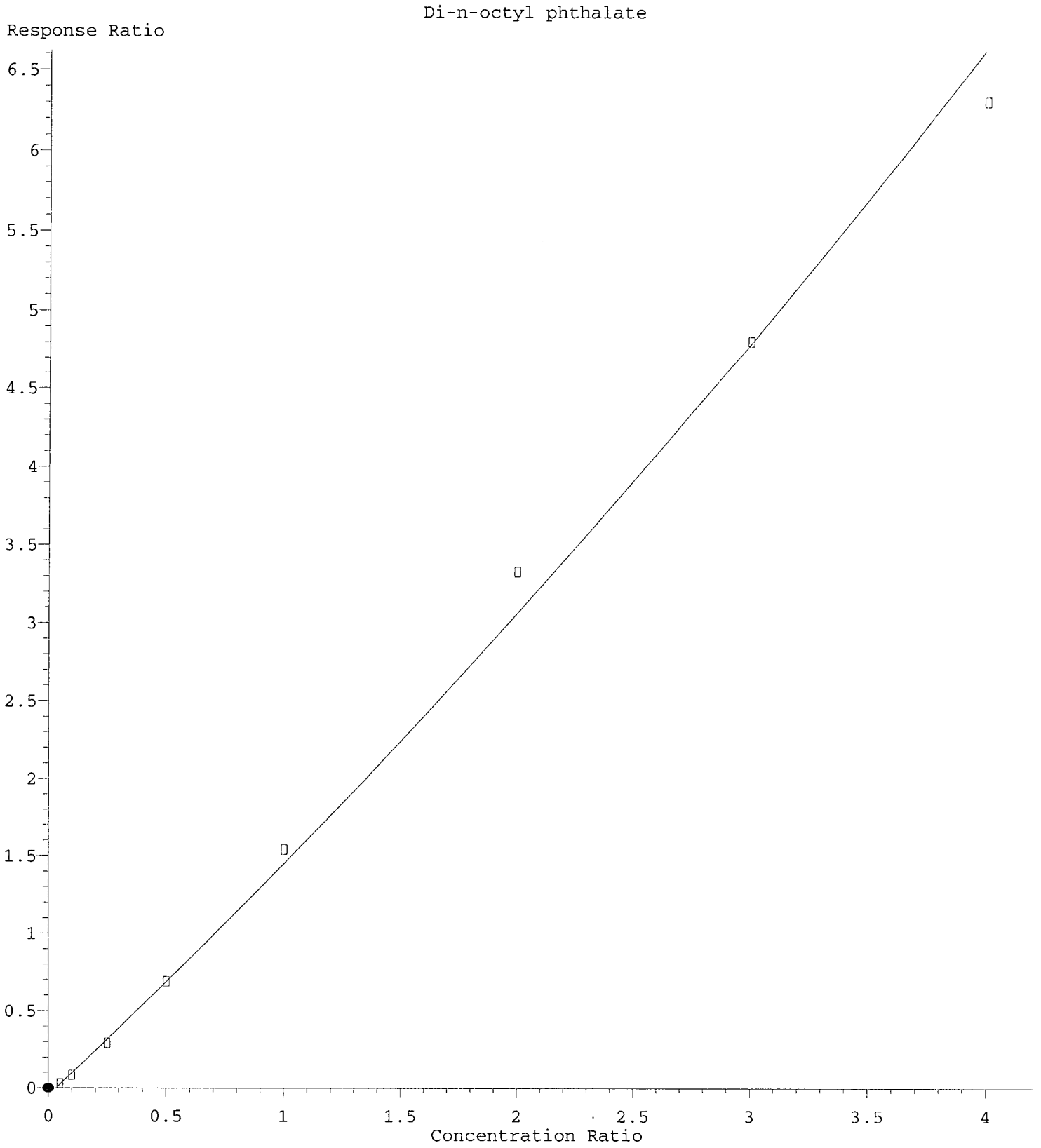
TIC: J04121915.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.286min (-0.005) -1.00 ng/ml m

response 2297

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	66.27
126.10	16.90	9.84
0.00	0.00	0.00

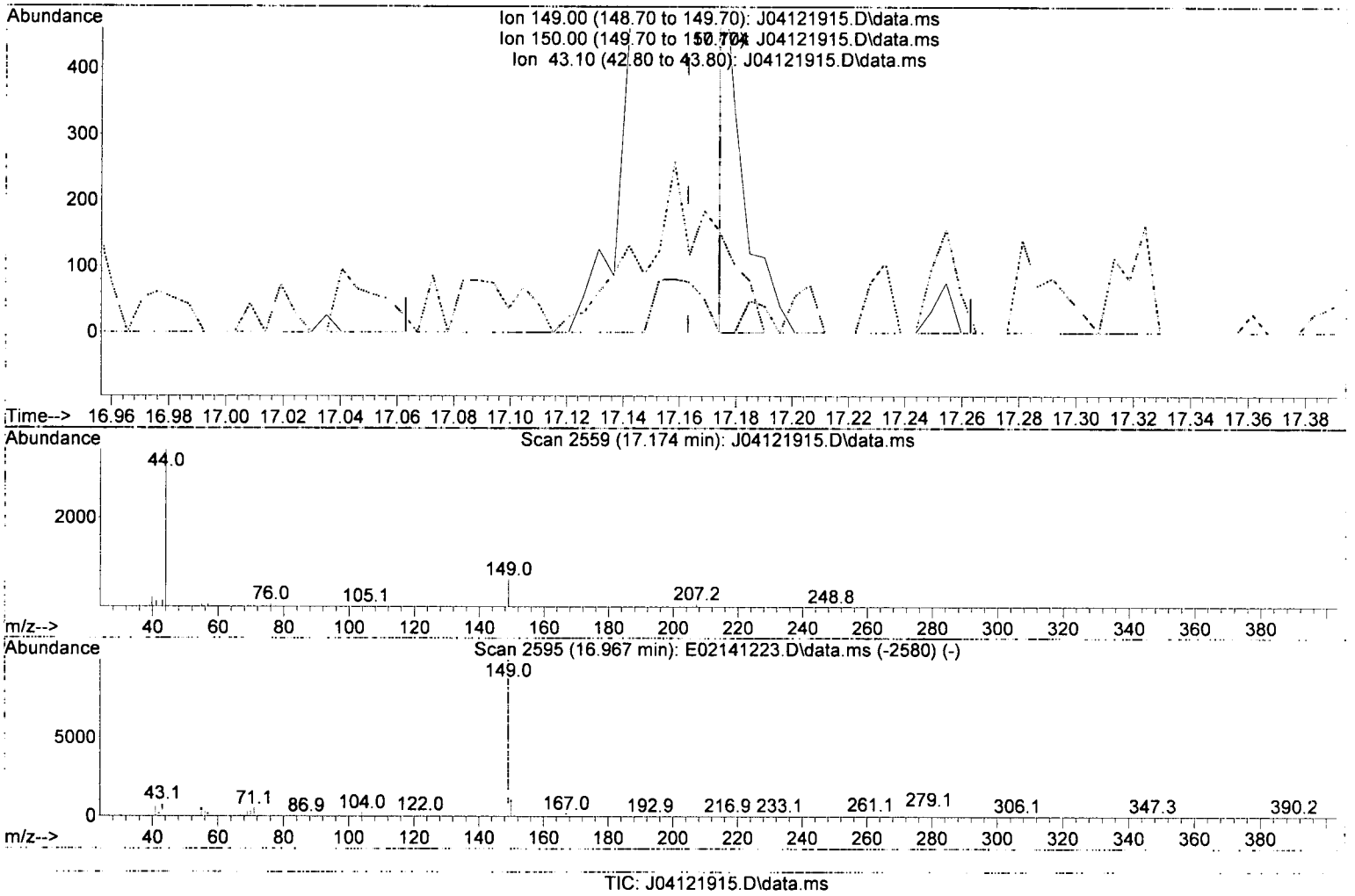


R = 5.80e-002 A*A + 1.44e+000 A - 4.78e-002
Coef of Det (r^2) = 0.995 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

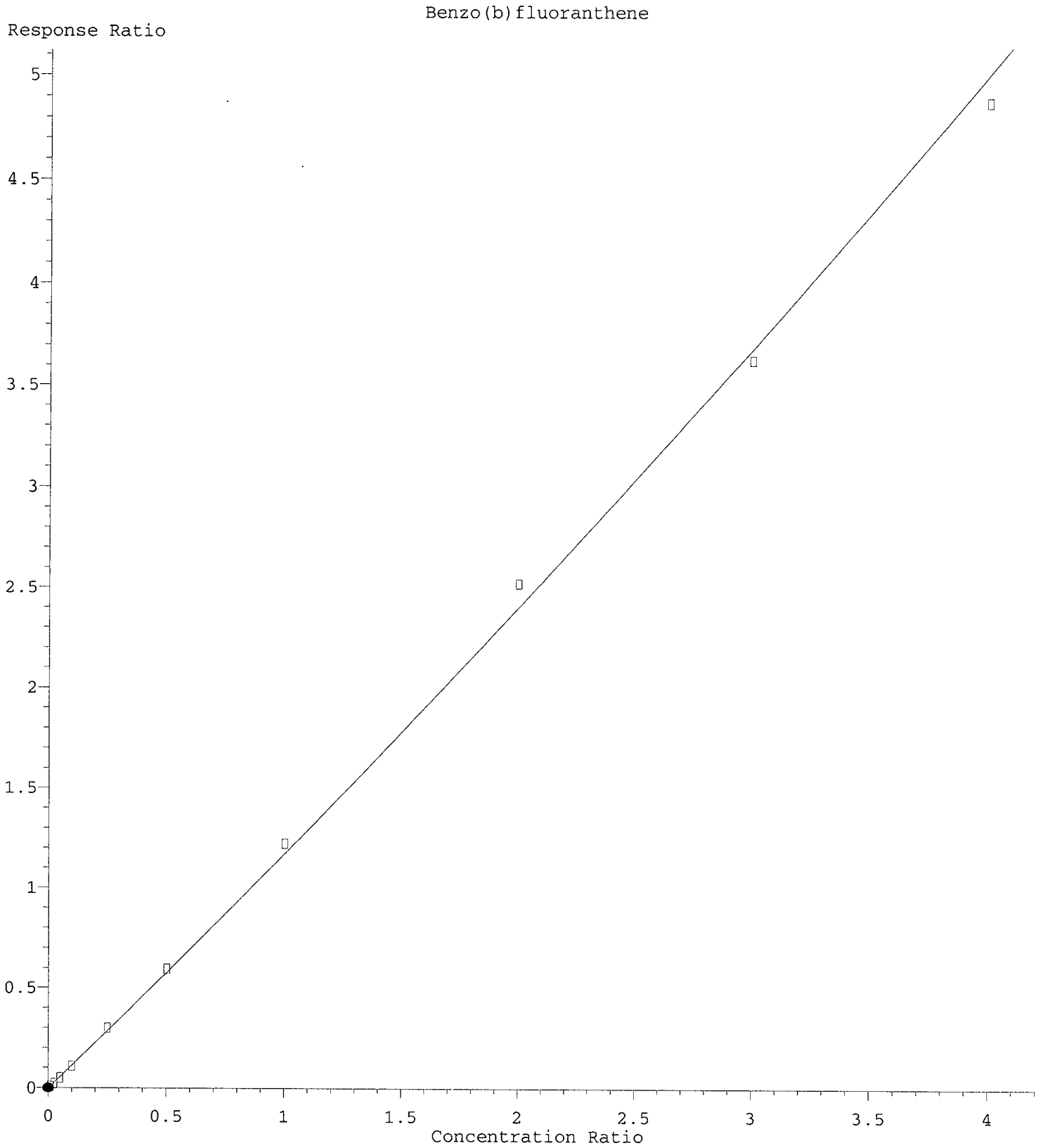


(87) Di-n-octyl phthalate (T)

17.174min (+ 0.011) 66.72 ng/ml m

response 196

Ion	Exp%	Act%
149.00	100.00	100.00
150.00	9.60	0.00
43.10	10.40	24.44
0.00	0.00	0.00

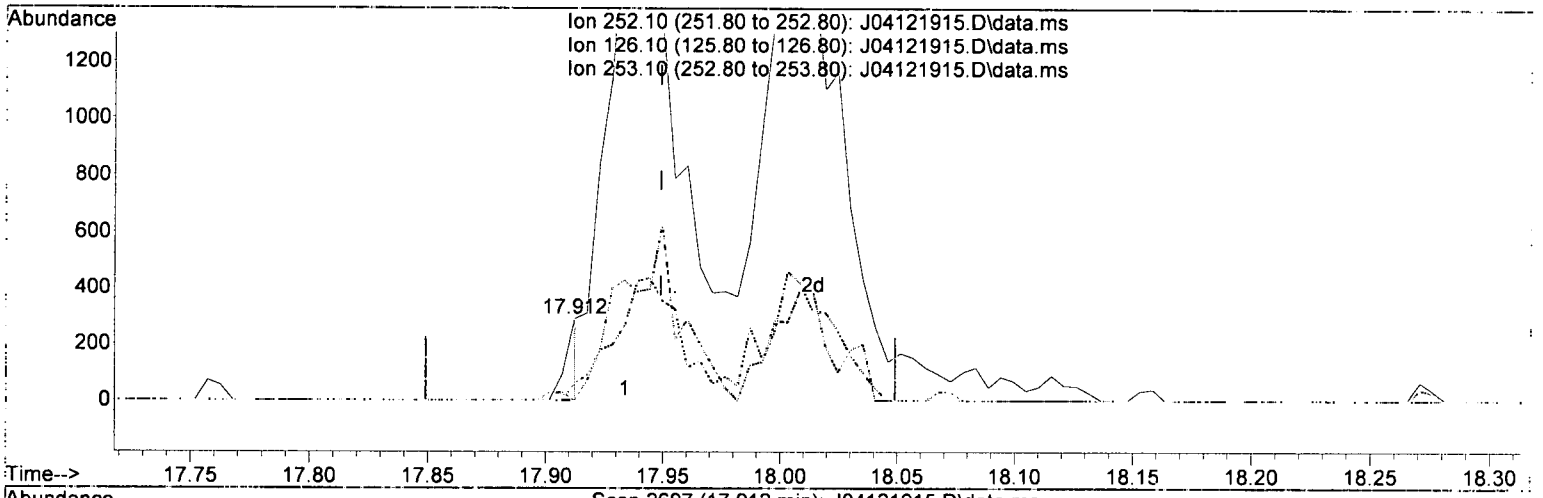


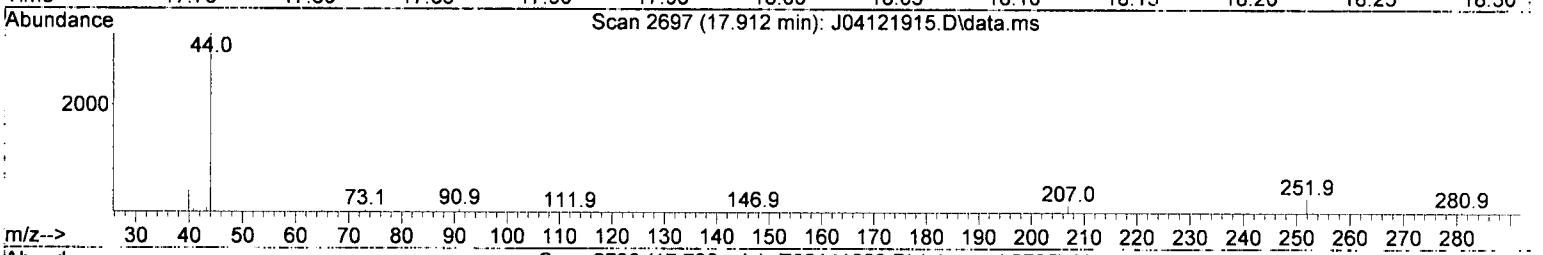
R = 2.59e-002 A*A + 1.15e+000 A - 5.10e-003
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

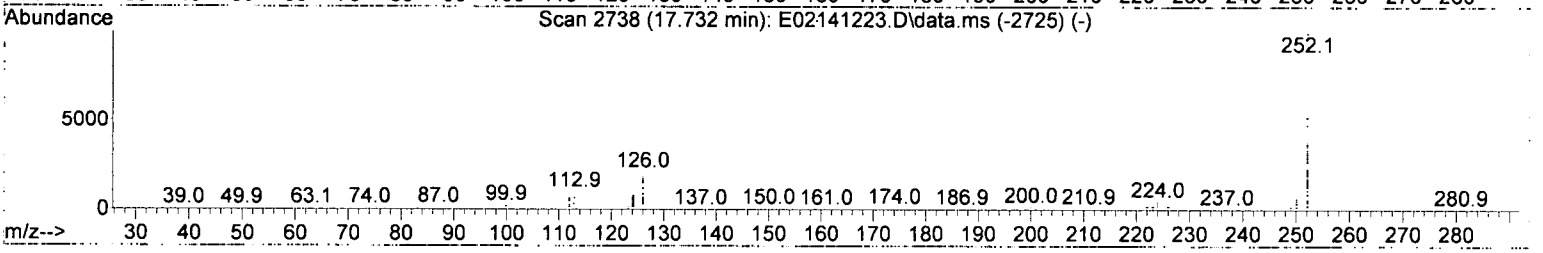
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







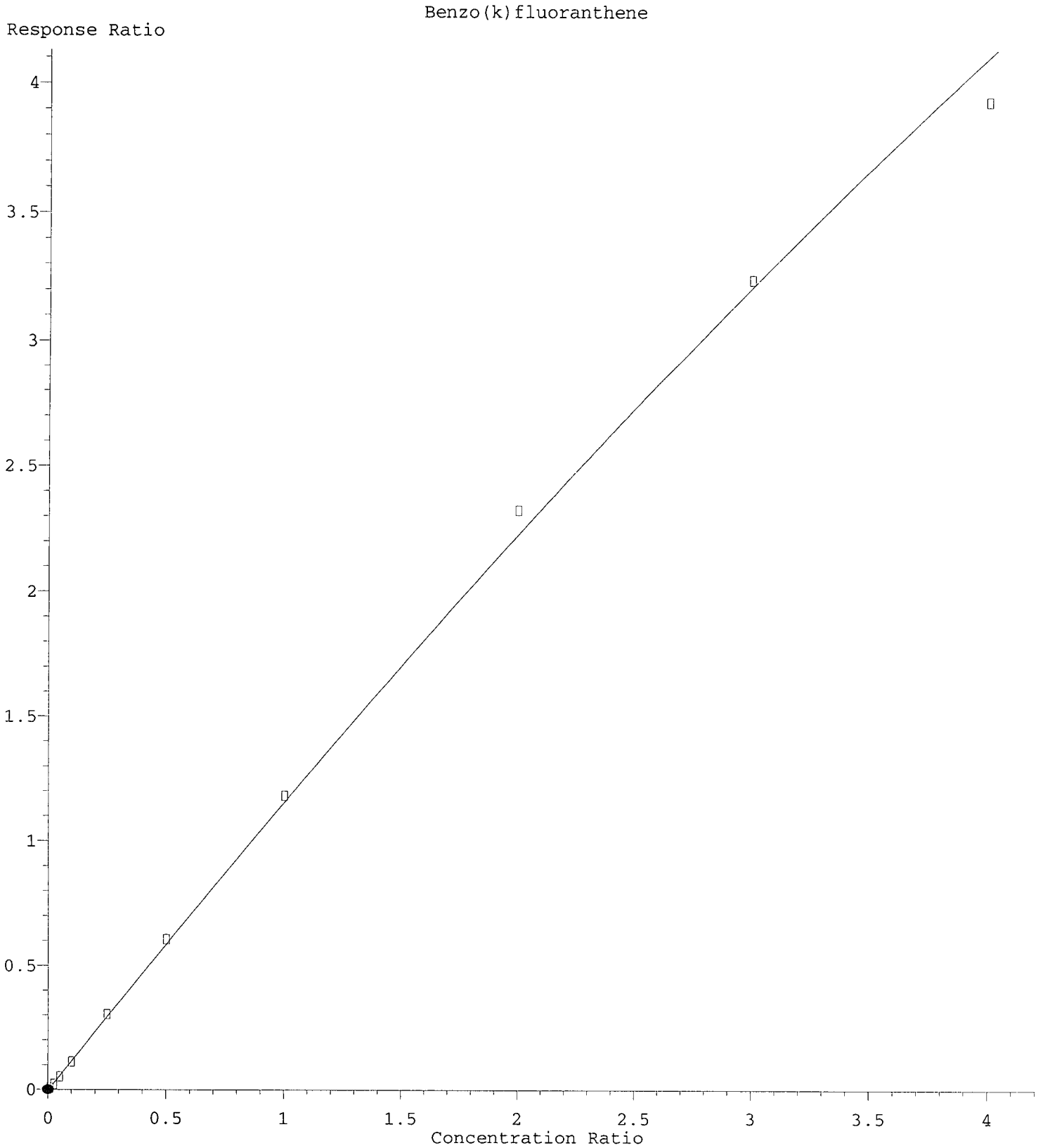
TIC: J04121915.D\data.ms

(88) Benzo(b)fluoranthene (T)

17.912min (-0.037) 9.25 ng/ml m

response 122

Ion	Exp%	Act%
252.10	100.00	100.00
126.10	21.90	0.00
253.10	22.00	21.03
0.00	0.00	0.00

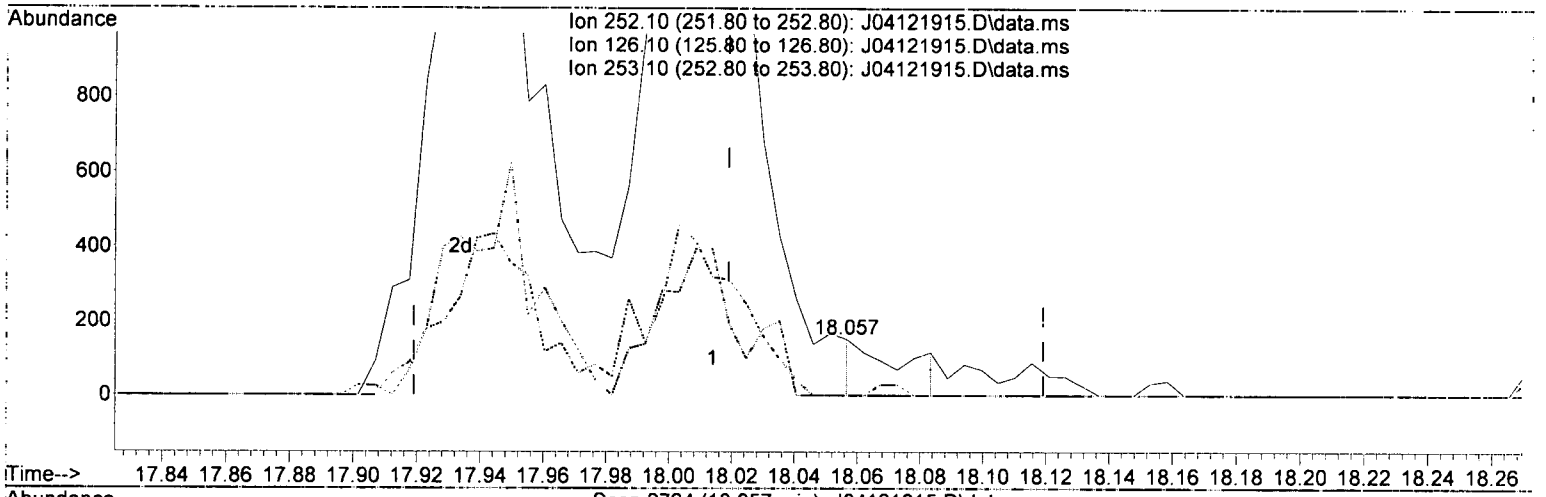


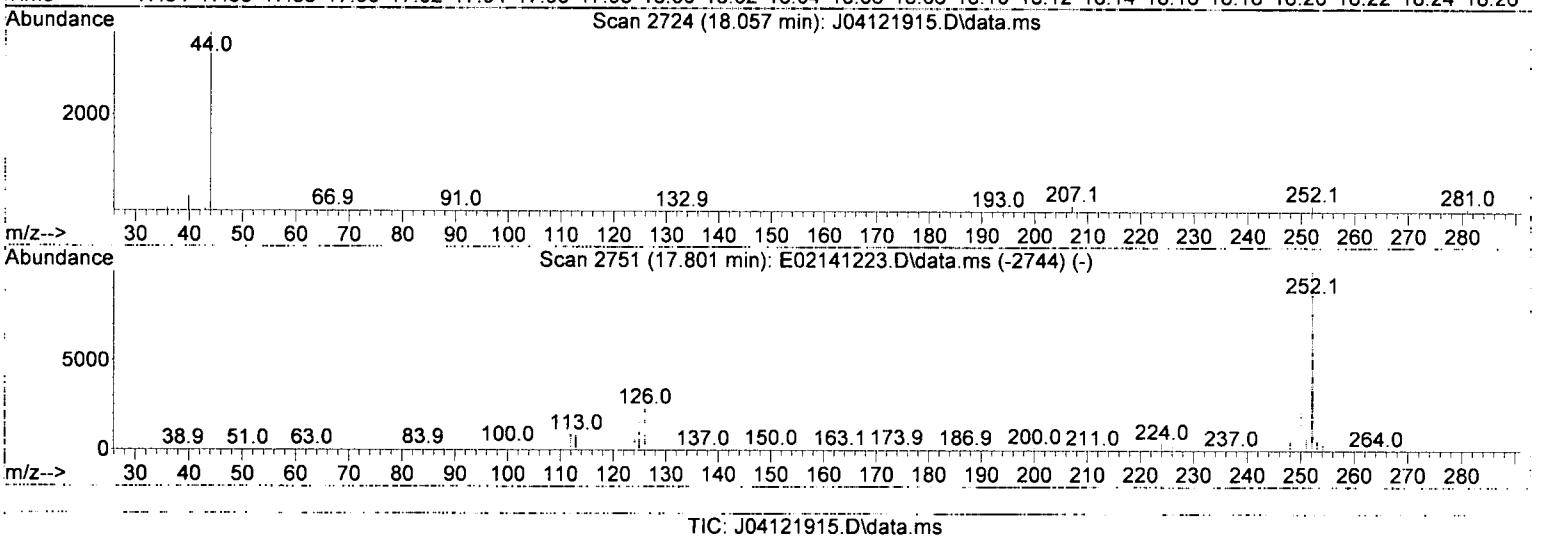
R = -4.47e-002 A*A + 1.21e+000 A - 6.28e-003
Coef of Det (r^2) = 0.998 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





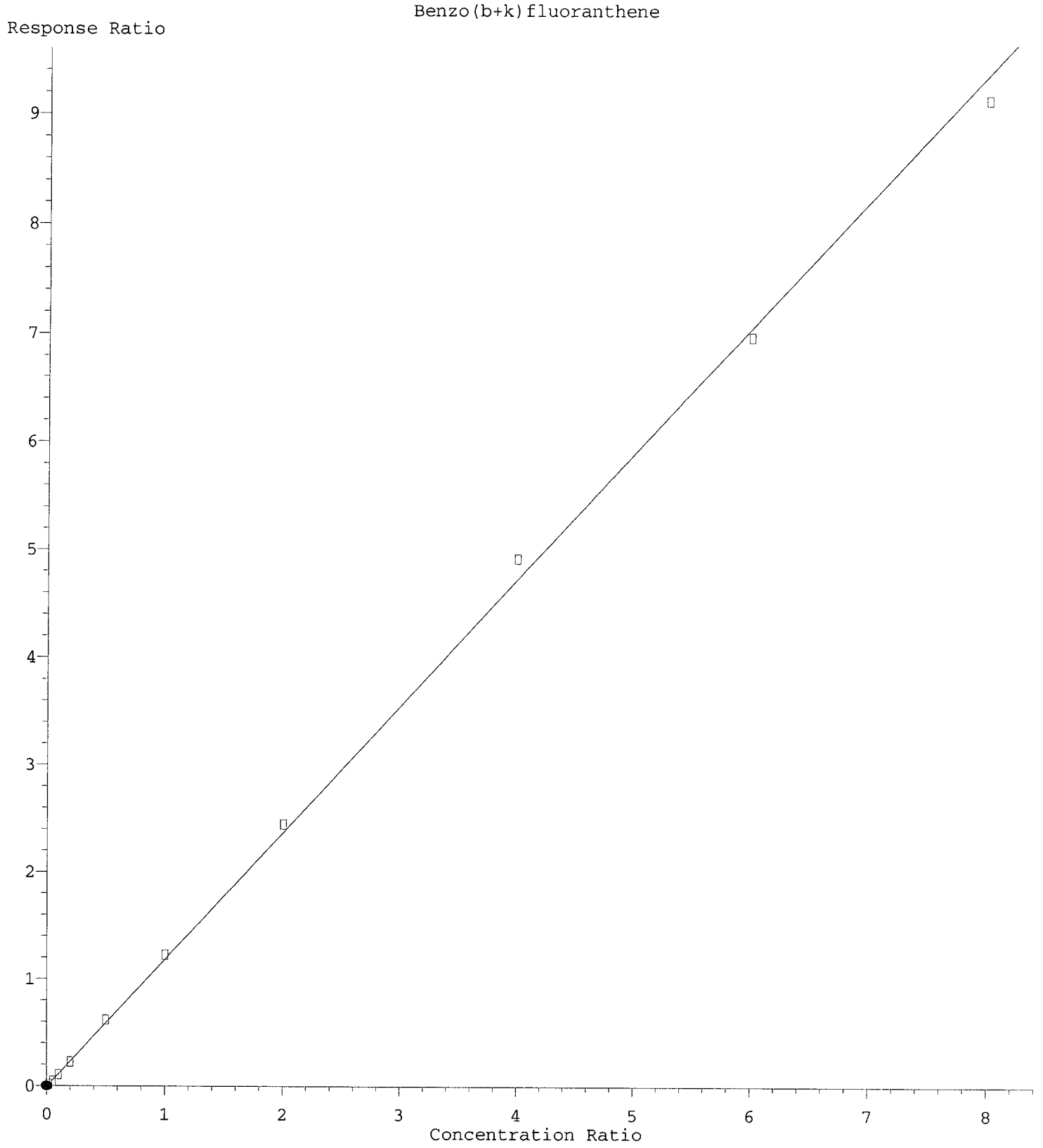
TIC: J04121915.D\data.ms

(89) Benzo(k)fluoranthene (T)

18.057min (+ 0.038) 10.91 ng/ml m

response 159

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

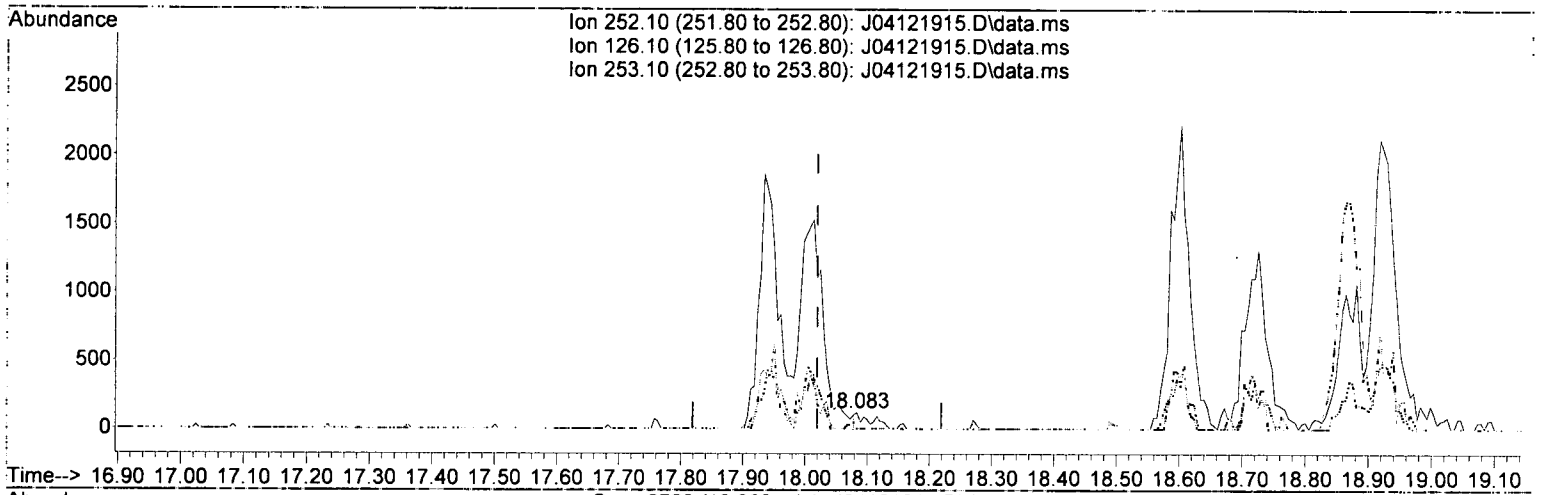


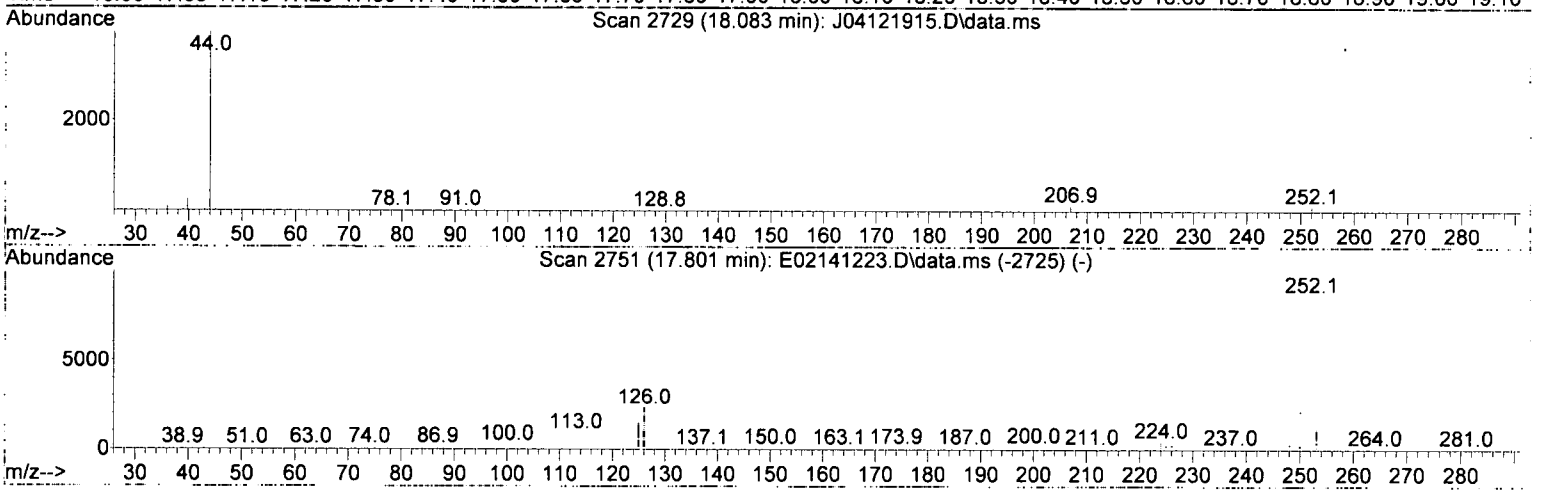
R = -2.85e-003 A*A + 1.20e+000 A - 1.02e-002
Coef of Det (r^2) = 0.997 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\5710_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10





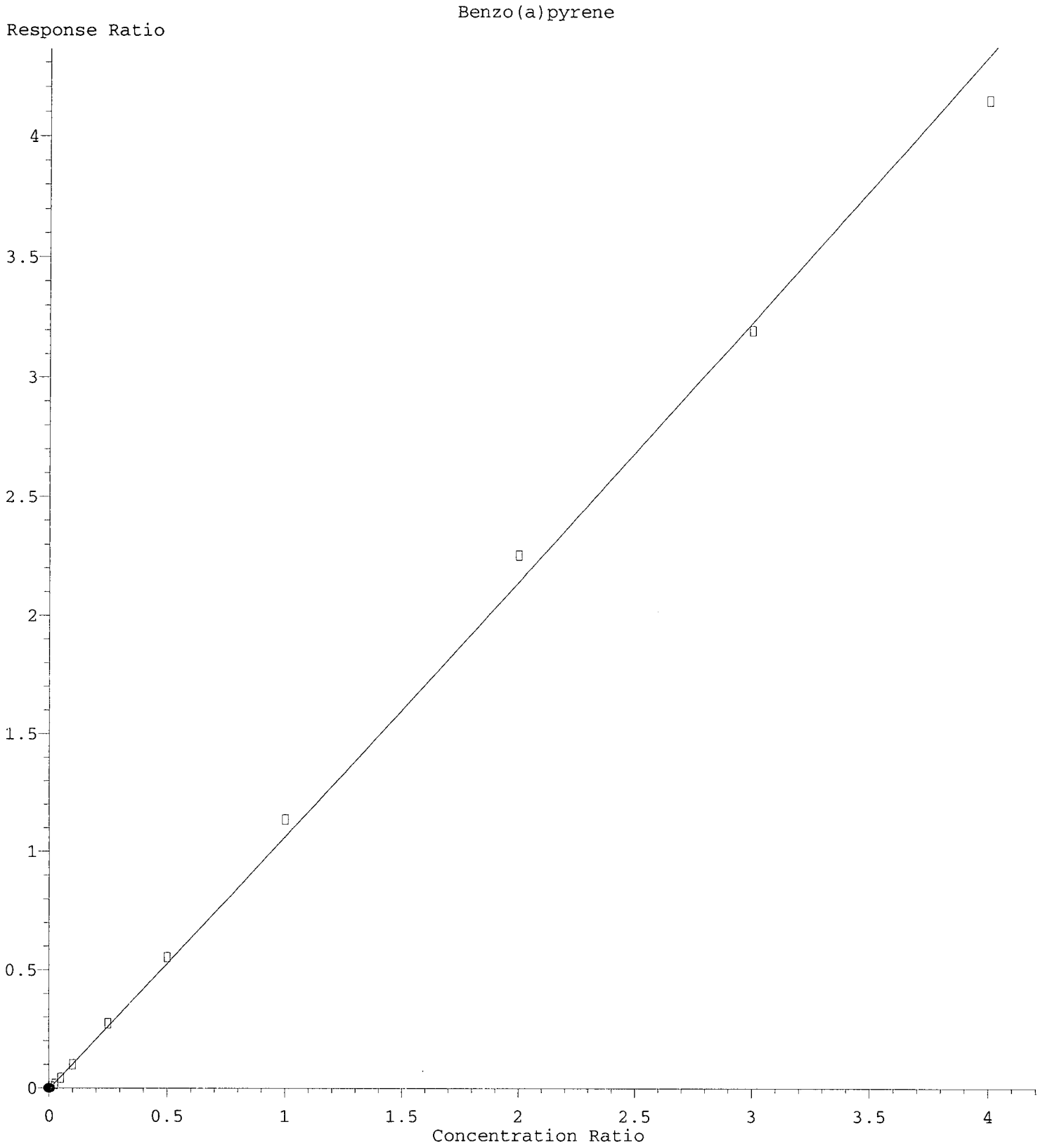
TIC: J04121915.D\data.ms

(90) Benzo(b+k)fluoranthene (T)

18.083min (+ 0.064) 17.72 ng/ml m

response 196

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

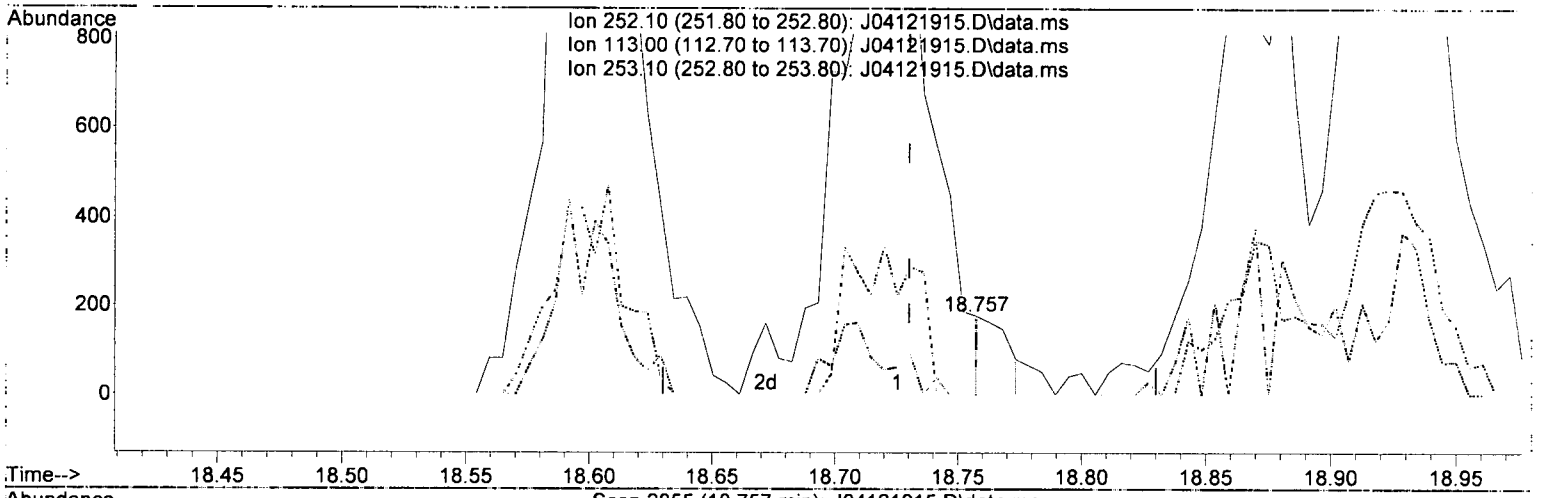


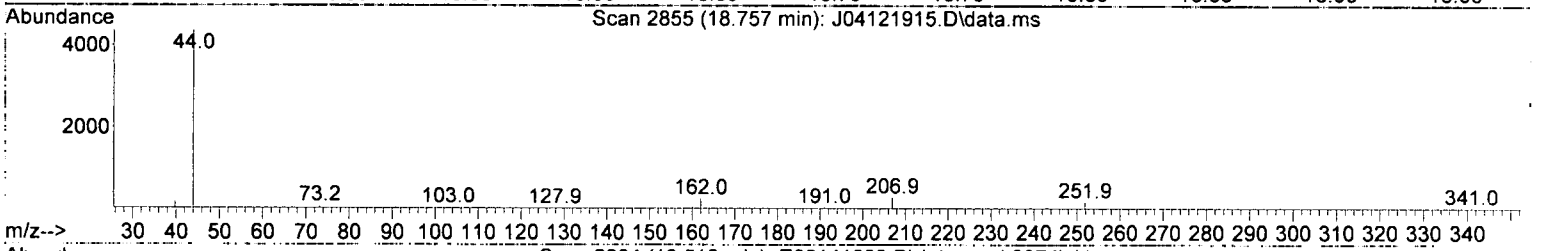
R = 5.46e-003 A*A + 1.06e+000 A - 5.54e-003
Coef of Det (r^2) = 0.994 Curve Fit: Quadratic w(1/a^2)
Method Name: C:\msdchem\1\methods\SV10_041219.M
Calibration Table Last Updated: Mon Apr 15 09:41:18 2019

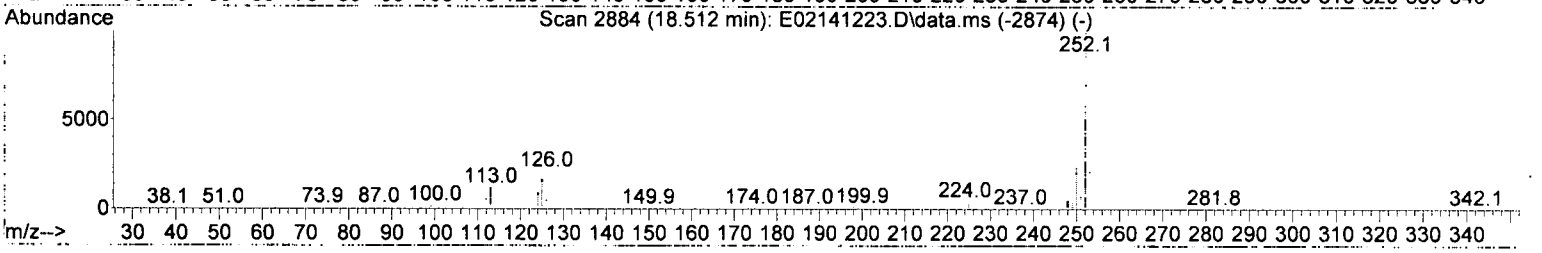
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\REQUANT\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 11:33:28 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121915.D\data.ms

(92) Benzo(a)pyrene (T)

18.757min (+ 0.027) 10.86 ng/ml m

response 124

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: 9D12042

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD ID	Analyzed	
9D12042-TUN1	MS Tune	Soil	A19D089	A19D031	4/12/2019	5:19:00PM
9D12042-TUN2	MS Tune	Soil	A19D089	A19D031	4/12/2019	5:47:00PM
9D12042-ICB1	Initial Cal Blank	Soil		A19D031	4/12/2019	6:15:00PM
9D12042-CAL1	Cal Standard	Soil	A19D053	"	4/12/2019	6:51:00PM
9D12042-CAL2	Cal Standard	Soil	A19D054	"	4/12/2019	7:27:00PM
9D12042-CAL3	Cal Standard	Soil	A19D055	"	4/12/2019	8:03:00PM
9D12042-CAL4	Cal Standard	Soil	A19D056	"	4/12/2019	8:39:00PM
9D12042-CAL5	Cal Standard	Soil	A19D057	"	4/12/2019	9:16:00PM
9D12042-CAL6	Cal Standard	Soil	A19D058	"	4/12/2019	9:52:00PM
9D12042-CAL7	Cal Standard	Soil	A19D059	"	4/12/2019	10:28:00PM
9D12042-CAL8	Cal Standard	Soil	A19D060	"	4/12/2019	11:04:00PM
9D12042-CAL9	Cal Standard	Soil	A19D061	"	4/12/2019	11:40:00PM
9D12042-CALA	Cal Standard	Soil	A19D062	"	4/13/2019	12:15:00AM
9D12042-ICV1	Initial Cal Check	Soil	A19C239	"	4/13/2019	1:26:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9D1505** Instrument: **SV-GCMS10**

8270D LL Full List Sequence: **9D12042** Matrix: **Soil**

9D12042-CAL1	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL2	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL3	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL4	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL5	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL6	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL7	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL8	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL9	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-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: 9D12042

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: **A9D1505** Instrument: **SV-GCMS10**

8270D LL Full List Sequence: **9D12042** Matrix: **Soil**

9D12042-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: 9D12042

Analysis Included
8270D LL Full List

INSTRUMENT SEQUENCE LOG

SampleID	SampleName	Matrix	STDID	ISTD_ID	Analyzed	
9D12042-TUN1	MS Tune	Water	A19D089	A19D031	4/12/2019	5:19:00PM
9D12042-TUN2	MS Tune	Water	A19D089	A19D031	4/12/2019	5:47:00PM
9D12042-ICB1	Initial Cal Blank	Water		A19D031	4/12/2019	6:15:00PM
9D12042-CAL1	Cal Standard	Water	A19D053	"	4/12/2019	6:51:00PM
9D12042-CAL2	Cal Standard	Water	A19D054	"	4/12/2019	7:27:00PM
9D12042-CAL3	Cal Standard	Water	A19D055	"	4/12/2019	8:03:00PM
9D12042-CAL4	Cal Standard	Water	A19D056	"	4/12/2019	8:39:00PM
9D12042-CAL5	Cal Standard	Water	A19D057	"	4/12/2019	9:16:00PM
9D12042-CAL6	Cal Standard	Water	A19D058	"	4/12/2019	9:52:00PM
9D12042-CAL7	Cal Standard	Water	A19D059	"	4/12/2019	10:28:00PM
9D12042-CAL8	Cal Standard	Water	A19D060	"	4/12/2019	11:04:00PM
9D12042-CAL9	Cal Standard	Water	A19D061	"	4/12/2019	11:40:00PM
9D12042-CALA	Cal Standard	Water	A19D062	"	4/13/2019	12:15:00AM
9D12042-ICV1	Initial Cal Check	Water	A19C239	"	4/13/2019	1:26:00AM

CALIBRATION STANDARD RECOVERIES

Calibration: **A9D1505** Instrument: **SV-GCMS10**

8270D LL Full List Sequence: **9D12042** Matrix: **Water**

9D12042-CAL1	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL2	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL3	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL4	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL5	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL6	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL7	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL8	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-CAL9	**Inst. MRL**	**Recalc Res.**	**Cal Level**	**%Rec.**	**Qual**
9D12042-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: 9D12042

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: **A9D1505** Instrument: **SV-GCMS10**

8270D LL Full List Sequence: **9D12042** Matrix: **Water**

9D12042-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 : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

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	108	0.00
2	TG	N-Nitrosodimethylamine	1000.000	965.906	3.4	102	0.00
3	TG	Pyridine	1000.000	927.959	7.2	95	0.00
4	S	2-Fluorophenol (Surr)	1000.000	1025.320	-2.5	106	0.00
5	S	Phenol-d6(Surr)	1000.000	1017.562	-1.8	105	0.00
6	T	Phenol	1000.000	1050.648	-5.1	121	0.00
7	T	Aniline	1000.000	1014.189	-1.4	100	0.00
8	T	Bis(2-chloroethyl) ether	1000.000	1016.599	-1.7	110	0.00
9	T	2-Chlorophenol	1000.000	1073.697	-7.4	107	0.00
10	T	1,3-Dichlorobenzene	1000.000	1024.137	-2.4	109	0.00
11	T	1,4-Dichlorobenzene	1000.000	1015.395	-1.5	110	0.00
12	T	Benzyl alcohol	1000.000	990.848	0.9	103	0.00
13	T	1,2-Dichlorobenzene	1000.000	1027.383	-2.7	108	0.00
14	T	2-Methylphenol	1000.000	1077.700	-7.8	104	0.00
15	T	2,2'-Oxybis(1-Chloropropane	1000.000	993.420	0.7	103	0.00
16	T	N-Nitrosodi-n-propylamine	1000.000	1060.937	-6.1	105	0.00
17	T	3+4-Methylphenol	1000.000	1052.775	-5.3	107	0.00
18	T	Hexachloroethane	1000.000	1019.949	-2.0	111	0.00
19	S	Nitrobenzene-d5 (Surr)	1000.000	1010.052	-1.0	110	0.00
20	T	Nitrobenzene	1000.000	1058.295	-5.8	106	0.00
21	I	Naphthalene-d8 (ISTD)	2000.000	2000.000	0.0	108	0.00
22	T	Isophorone	1000.000	1028.661	-2.9	107	0.00
23	T	2-Nitrophenol	1000.000	1121.760	-12.2	118	0.00
24	T	2,4-Dimethylphenol	1000.000	987.262	1.3	104	0.00
25	T	Bis(2-chloroethoxy) methane	1000.000	1113.781	-11.4	109	0.00
26	T	Benzoic acid	2000.000	1817.644	9.1	103	0.00
27	T	2,4-Dichlorophenol	1000.000	1020.661	-2.1	111	0.00
28	T	1,2,4-Trichlorobenzene	1000.000	1022.098	-2.2	106	0.00
29	T	Naphthalene	1000.000	1048.621	-4.9	107	0.00
30	T	4-Chloroaniline	1000.000	1033.027	-3.3	108	0.00
31	T	Hexachlorobutadiene	1000.000	995.324	0.5	106	0.00
32	T	4-Chloro-3-methylphenol	1000.000	992.952	0.7	108	0.00
33	T	2-Methylnaphthalene	1000.000	1085.222	-8.5	108	0.00
34	T	1-Methylnaphthalene	1000.000	1049.763	-5.0	107	0.00
35	I	Acenaphthene-d10 (ISTD)	2000.000	2000.000	0.0	111	0.00
36	T	Hexachlorocyclopentadiene	1000.000	1089.803	-9.0	115	0.00
37	T	2,4,6-Trichlorophenol	1000.000	963.902	3.6	112	0.00
38	T	2,4,5-Trichlorophenol	1000.000	1081.649	-8.2	114	0.00
39	T	1,1'-Biphenyl	1000.000	1089.764	-9.0	110	0.00
40	S	2-Fluorobiphenyl (Surr)	1000.000	1095.248	-9.5	110	0.00
41	T	2-Chloronaphthalene	1000.000	1107.028	-10.7	112	0.00
42	T	2-Nitroaniline	1000.000	1054.080	-5.4	119	0.00
43	T	2,6-Dimethylnaphthalene	1000.000	1071.651	-7.2	108	0.00
44	T	1,4-Dinitrobenzene	1000.000	1067.403	-6.7	131	0.00
45	T	Dimethyl phthalate	1000.000	1048.390	-4.8	113	0.00
46	T	1,3-Dinitrobenzene	1000.000	1080.548	-8.1	125	0.00
47	T	2,6-Dinitrotoluene	1000.000	1065.260	-6.5	115	0.00
48	T	1,2-Dinitrobenzene	1000.000	1016.448	-1.6	112	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	1077.323	-7.7	112	0.00
50	T	3-Nitroaniline	1000.000	1139.377	-13.9	115	0.00
51	T	Acenaphthene	1000.000	1029.641	-3.0	110	0.00
52	T	2,4-Dinitrophenol	1000.000	962.195	3.8	117	0.00
53	T	4-Nitrophenol	1000.000	1076.922	-7.7	122	0.00
54	T	2,4-Dinitrotoluene	1000.000	1054.717	-5.5	119	0.00
55	T	Dibenzofuran	1000.000	1058.399	-5.8	113	0.00
56	T	2,3,5,6-Tetrachlorophenol	1000.000	1034.556	-3.5	112	0.00
57	T	2,3,4,6-Tetrachlorophenol	1000.000	1042.775	-4.3	112	0.00
58	T	Diethyl phthalate	1000.000	1068.746	-6.9	111	0.00
59	T	2,3,5-Trimethylnaphthalene	1000.000	1051.392	-5.1	111	0.00
60	T	Fluorene	1000.000	1070.707	-7.1	113	0.00
61	T	4-Chlorophenyl phenyl ether	1000.000	1046.868	-4.7	113	0.00
62	T	4-Nitroaniline	1000.000	1186.320	-18.6	123	0.00
63	T	4,6-Dinitro-2-methylphenol	1000.000	1185.979	-18.6	147	0.00
64	I	Phenanthrene-d10 (ISTD)	2000.000	2000.000	0.0	113	0.00
65	T	N-Nitrosodiphenylamine	1000.000	1079.662	-8.0	113	0.00
66	T	Azobenzene (1,2-DPH)	1000.000	1060.338	-6.0	110	0.00
67	S	2,4,6-Tribromophenol (Surr)	1000.000	1004.377	-0.4	114	0.00
68	T	4-Bromophenyl phenyl ether	1000.000	1092.310	-9.2	115	0.00
69	T	Hexachlorobenzene	1000.000	987.469	1.3	110	0.00
70	T	Pentachlorophenol (PCP)	1000.000	1050.075	-5.0	122	0.00
71	T	Phenanthrene	1000.000	1037.406	-3.7	112	0.00
72	T	Anthracene	1000.000	1053.610	-5.4	111	0.00
73	T	Carbazole	1000.000	1064.803	-6.5	110	0.00
74	T	Di-n-butyl phthalate	1000.000	1089.305	-8.9	113	0.00
75	T	Fluoranthene	1000.000	1098.536	-9.9	114	0.00
76	T	Benzidine	2000.000	1975.912	1.2	104	0.00
77	T	Pyrene	1000.000	1092.930	-9.3	114	0.00
78	I	Chrysene-d12 (ISTD)	2000.000	2000.000	0.0	116	0.00
79	S	Terphenyl-d14 (Surr)	1000.000	1045.592	-4.6	115	0.00
80	T	Butyl benzyl phthalate	1000.000	1011.767	-1.2	114	0.00
81	T	Bis(2-ethylhexyl) adipate	1000.000	980.779	1.9	115	0.00
82	T	3,3-Dichlorobenzidine	2000.000	2025.163	-1.3	101	0.00
83	T	Benz(a)anthracene	1000.000	1039.863	-4.0	118	0.00
84	T	Chrysene	1000.000	1020.998	-2.1	116	0.00
85	T	Bis(2-ethylhexyl) phthalate	1000.000	1007.488	-0.7	114	0.00
86	I	Perylene-d12 (ISTD)	2000.000	2000.000	0.0	119	0.00
87	T	Di-n-octyl phthalate	1000.000	993.336	0.7	118	0.00
88	T	Benzo(b)fluoranthene	1000.000	1030.121	-3.0	119	0.00
89	T	Benzo(k)fluoranthene	1000.000	1016.408	-1.6	117	0.00
90	T	Benzo(b+k)fluoranthene	2000.000	2049.178	-2.5	118	0.00
91	T	Benzo(e)pyrene	1000.000	1058.645	-5.9	115	0.00
92	T	Benzo(a)pyrene	1000.000	1035.112	-3.5	118	0.00
93	T	Perylene	1000.000	1170.703	-17.1	135	0.00
94	I	Dibenz(a,h)Anthrcene-d14 (I	2000.000	2000.000	0.0	119	0.00

Evaluate Continuing Calibration Report

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

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	956.675	4.3	117	0.00
96 T	Dibenz(a,h)anthracene	1000.000	1019.034	-1.9	118	0.00
97 T	Benzo(g,h,i)perylene	1000.000	1063.811	-6.4	116	0.00

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121912.D
Acq On : 12 Apr 2019 5:19 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

T-01

Quant Time: Apr 15 08:50:09 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

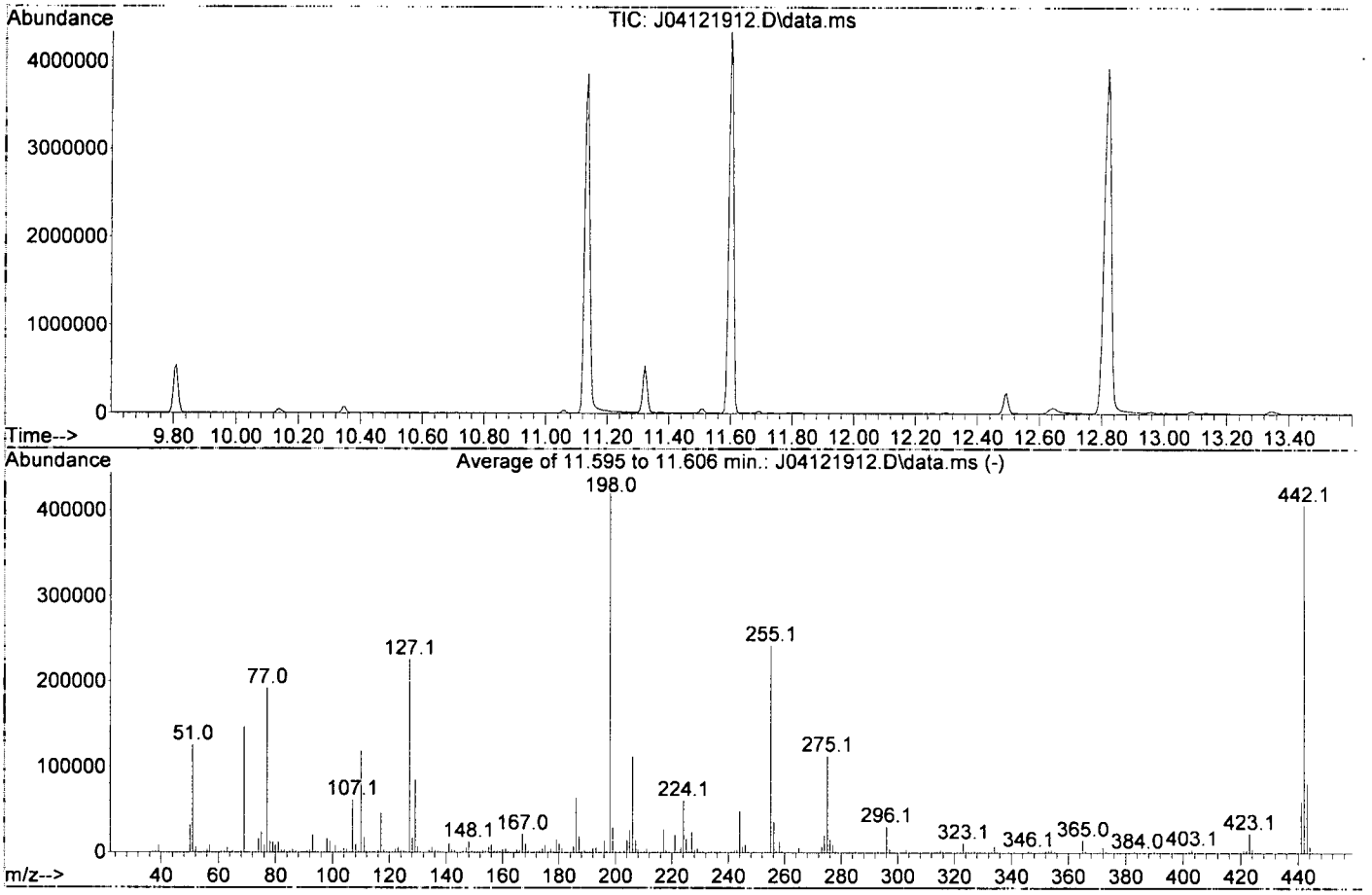
Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	6.749	150	105364	2.00	ug/mL		0.00
2) Naphthalene-d8	8.022	136	259999	2.00	ug/mL		0.00
3) Acenaphthene-d10	9.809	162	118988	2.00	ug/mL		0.00
5) Phenanthrene-d10	11.323	188	190047	2.00	ug/mL		0.00
11) Chrysene-d12	15.104	240	146844	2.00	ug/mL		0.00
12) Perylene-d12	17.072	264	128559	2.00	ug/mL		0.00
13) Dibenz(a,h)anthracene-...	18.361	292	108852	2.00	ug/mL	#	0.00
Target Compounds							Qvalue
4) Pentachlorophenol	11.135	266	496307	43.01	ug/mL		97
6) DFTPP	11.606	442	509644	48.91	ug/mL	#	69
7) Benzidine	12.820	184	2327418	37.28	ug/mL		95
8) 4,4-DDE	13.088	TIC	24696	No Calib			
9) 4,4-DDD	13.628	TIC	31921	No Calib			
10) 4,4-DDT	14.232	TIC	7317139	41.59	ug/mL		98

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

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121912.D
Acq On : 12 Apr 2019 5:19 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Mon Apr 15 08:49:58 2019



AutoFind: Scans 1516, 1517, 1518; Background Corrected with Scan 1511

T-01

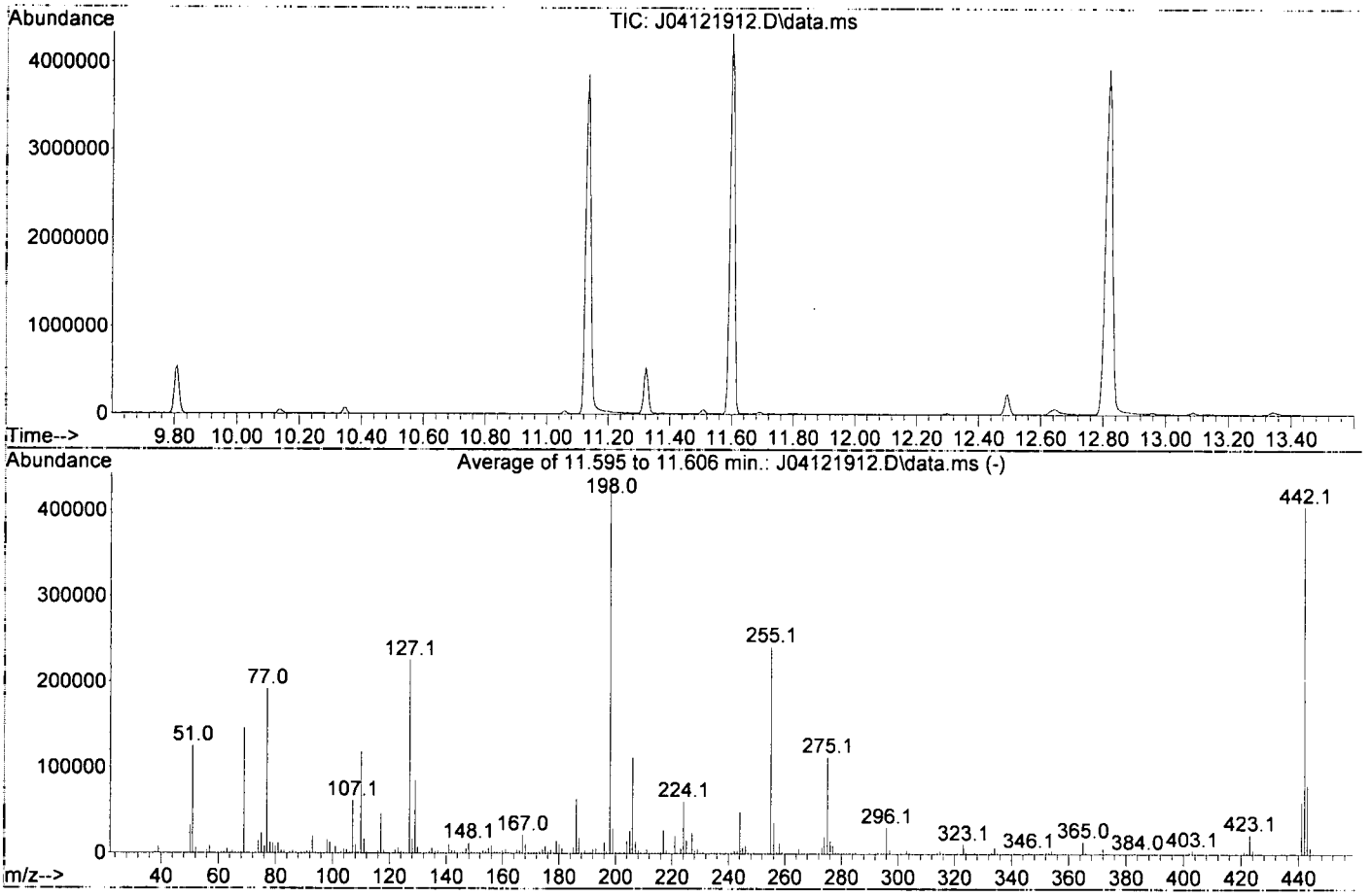
4/15/19

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	29.7	125636	FAIL*
68	69	0.00	2	1.4	2103	PASS
69	198	0.00	100	34.7	146789	PASS
70	69	0.00	2	0.5	756	PASS
127	198	40	60	53.5	226005	PASS
197	198	0.00	1	0.5	2241	PASS
198	198	100	100	100.0	422549	PASS
199	198	5	9	6.9	29192	PASS
275	198	10	30	26.8	113115	PASS
365	198	1	100	3.4	14380	PASS
441	443	0.01	100	75.1	60699	PASS
442	198	40	100	96.1	406187	PASS
443	442	17	23	19.9	80771	PASS

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121912.D
Acq On : 12 Apr 2019 5:19 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Wed Apr 10 09:20:15 2019



AutoFind: Scans 1516, 1517, 1518; Background Corrected with Scan 1511

Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.7	125636	PASS
68	69	0.00	2	1.4	2103	PASS
69	198	0.00	100	34.7	146789	PASS
70	69	0.00	2	0.5	756	PASS
127	198	10	80	53.5	226005	PASS
197	198	0.00	2	0.5	2241	PASS
198	198	100	100	100.0	422549	PASS
199	198	5	9	6.9	29192	PASS
275	198	10	60	26.8	113115	PASS
365	198	1	100	3.4	14380	PASS
441	442	0.01	24	14.9	60699	PASS
442	198	50	200	96.1	406187	PASS
443	442	15	24	19.9	80771	PASS

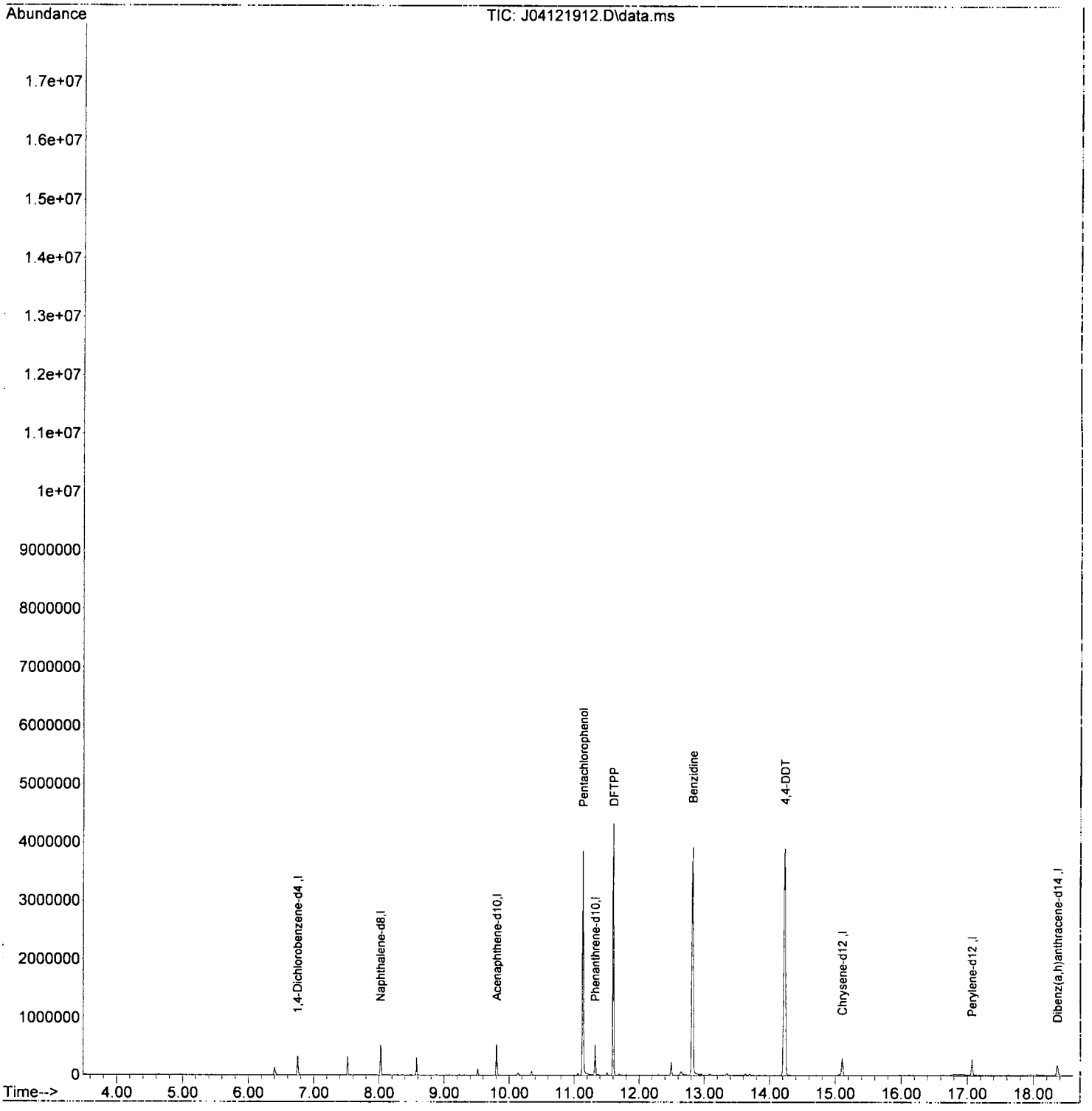
T-01

JK 4/15/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121912.D
Acq On : 12 Apr 2019 5:19 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN1
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 15 08:50:09 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 15 08:50:50 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/15/19

Compound	R.T.	QIon	Response	Conc	Units		Dev(Min)
Internal Standards							
1) 1,4-Dichlorobenzene-d4	6.755	150	96555	2.00	ug/mL		0.00
2) Naphthalene-d8	8.023	136	242638	2.00	ug/mL		0.00
3) Acenaphthene-d10	9.809	162	107879	2.00	ug/mL		0.00
5) Phenanthrene-d10	11.323	188	174337	2.00	ug/mL		0.00
11) Chrysene-d12	15.104	240	131592	2.00	ug/mL		0.00
12) Perylene-d12	17.072	264	108112	2.00	ug/mL		0.00
13) Dibenz(a,h)anthracene-...	18.361	292	98890	2.00	ug/mL	#	0.00
Target Compounds							Qvalue
4) Pentachlorophenol	11.135	266	464648	44.41	ug/mL		97
6) DFTPP	11.606	442	460400	48.17	ug/mL	#	66
7) Benzidine	12.820	184	2222430	38.81	ug/mL		95
8) 4,4-DDE	13.088	TIC	21833	No Calib			
9) 4,4-DDD	13.628	TIC	21085	No Calib			
10) 4,4-DDT	14.227	TIC	6698933	41.51	ug/mL		99

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

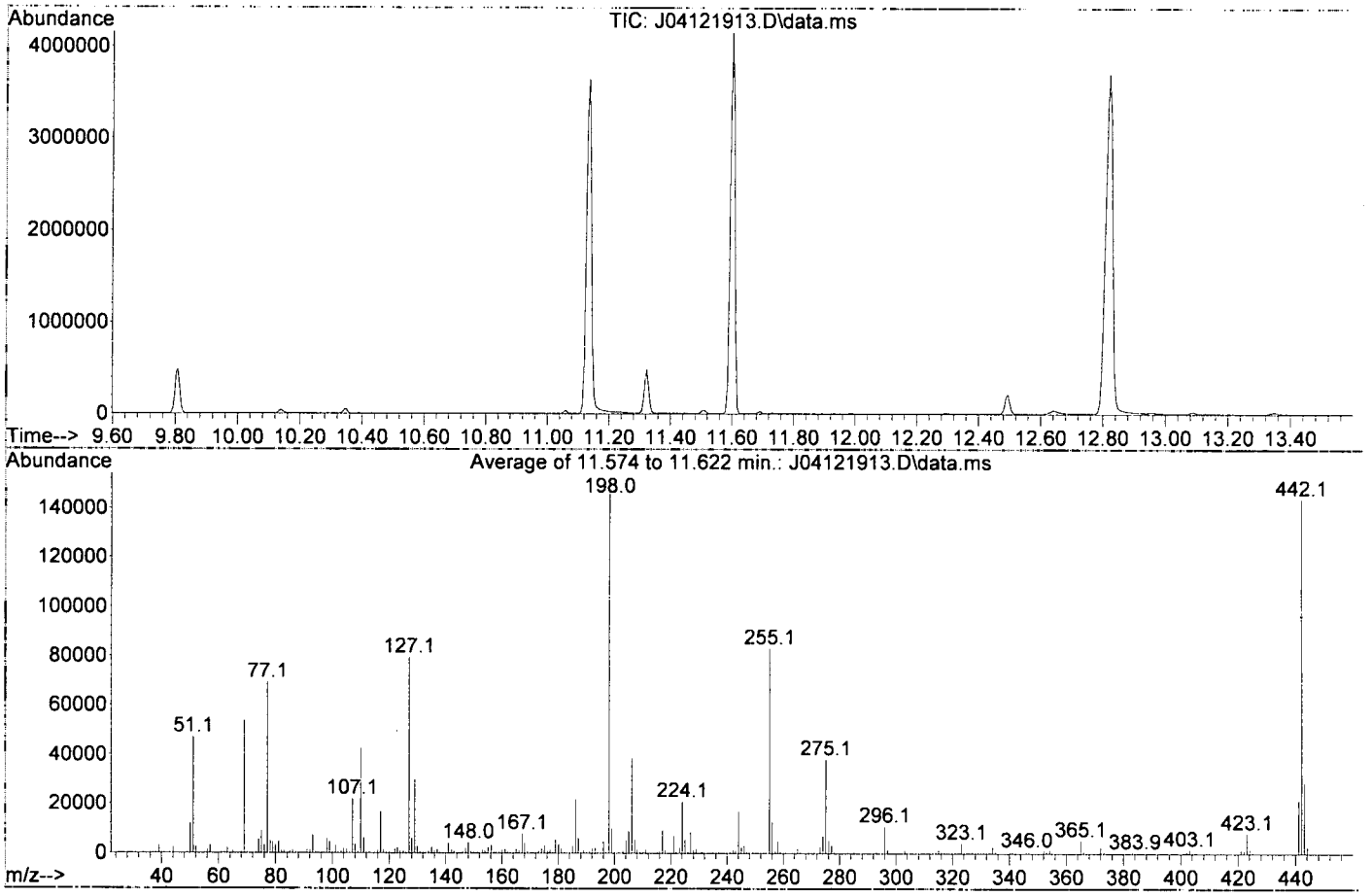
DFTPP

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP-625.M
Title : 8270 DFTPP Tune Method
Last Update : Mon Apr 15 08:49:58 2019

JK 4/15/19



Spectrum Information: Average of 11.574 to 11.622 min.

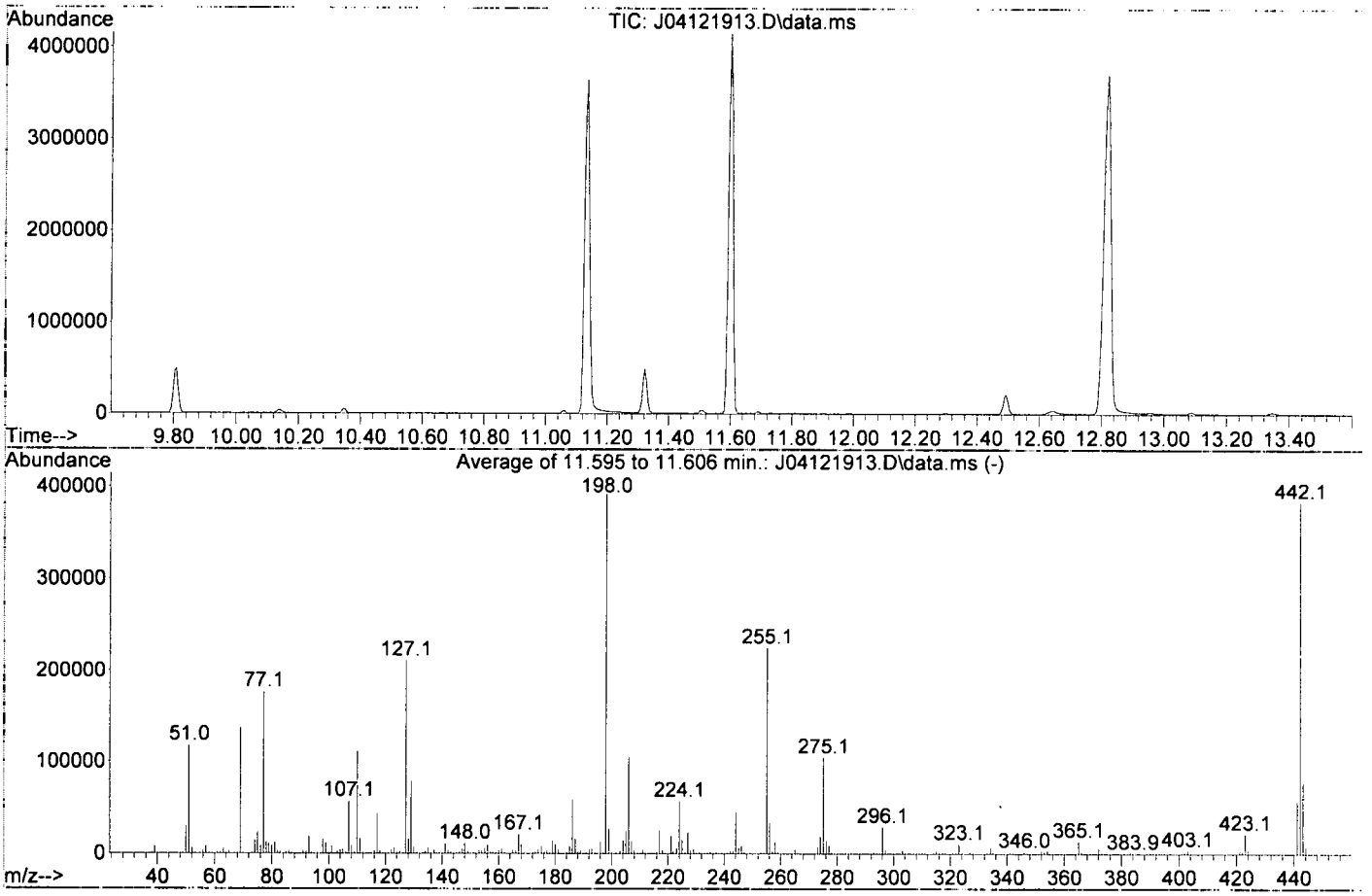
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	30	60	32.1	47075	PASS
68	69	0.00	2	1.4	739	PASS
69	198	0.00	100	36.8	53963	PASS
70	69	0.00	2	0.6	303	PASS
127	198	40	60	54.1	79320	PASS
197	198	0.00	1	0.3	412	PASS
198	198	100	100	100.0	146603	PASS
199	198	5	9	6.8	9971	PASS
275	198	10	30	26.0	38183	PASS
365	198	1	100	3.5	5166	PASS
441	443	0.01	100	75.0	21528	PASS
442	198	40	100	98.1	143756	PASS
443	442	17	23	20.0	28722	PASS

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1

Integration File: rteint.p

Method : C:\msdchem\1\methods\DFTPP-8270.M
Title : 8270 DFTPP Tune Method
Last Update : Wed Apr 10 09:20:15 2019

JD 4/15/19



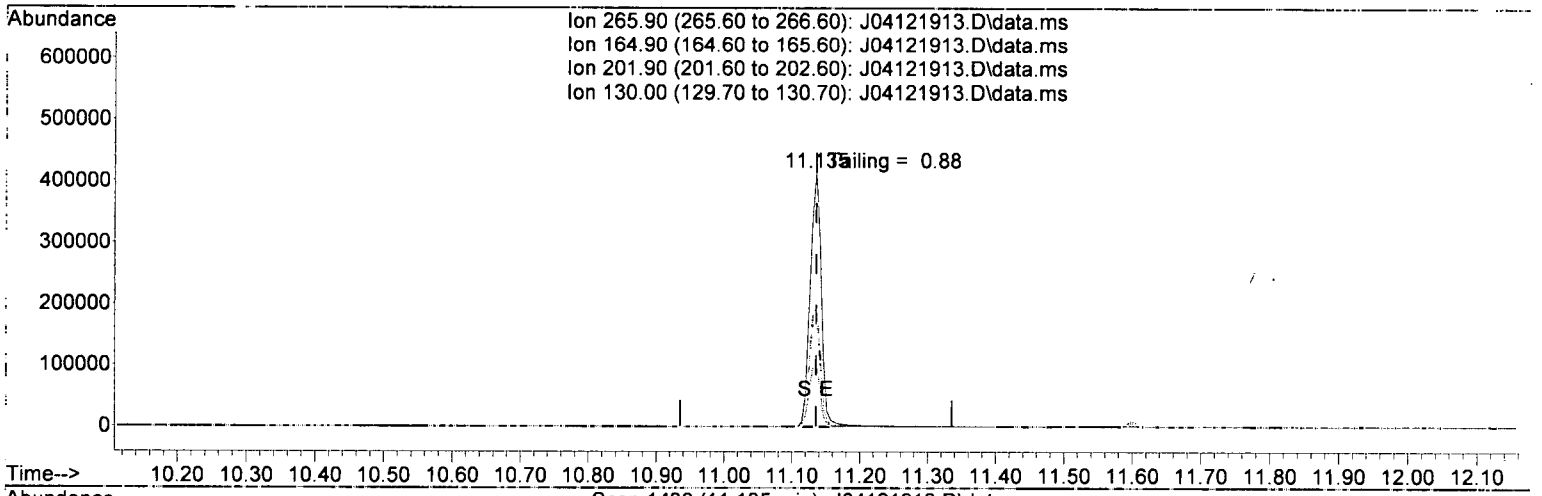
AutoFind: Scans 1516, 1517, 1518; Background Corrected with Scan 1511

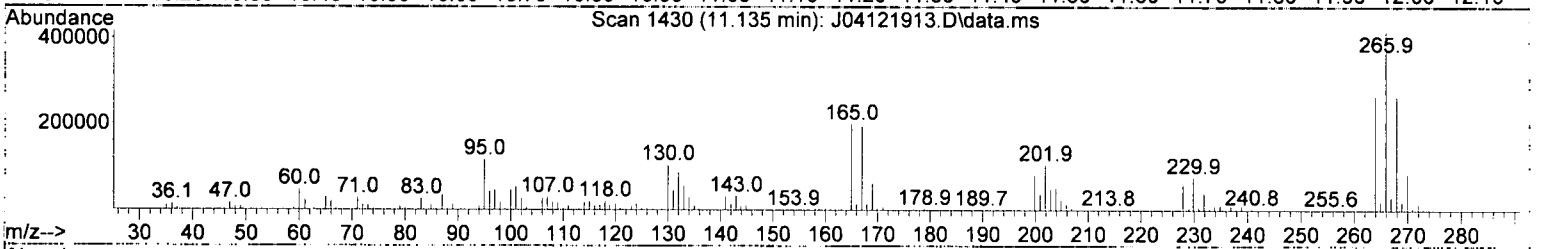
Target Mass	Rel. to Mass	Lower Limit%	Upper Limit%	Rel. Abn%	Raw Abn	Result Pass/Fail
51	198	10	80	29.9	117992	PASS
68	69	0.00	2	1.4	1916	PASS
69	198	0.00	100	34.8	137277	PASS
70	69	0.00	2	0.5	700	PASS
127	198	10	80	53.5	211115	PASS
197	198	0.00	2	0.3	1356	PASS
198	198	100	100	100.0	394773	PASS
199	198	5	9	6.9	27253	PASS
275	198	10	60	26.5	104576	PASS
365	198	1	100	3.4	13573	PASS
441	442	0.01	24	14.9	57208	PASS
442	198	50	200	97.2	383808	PASS
443	442	15	24	20.2	77488	PASS

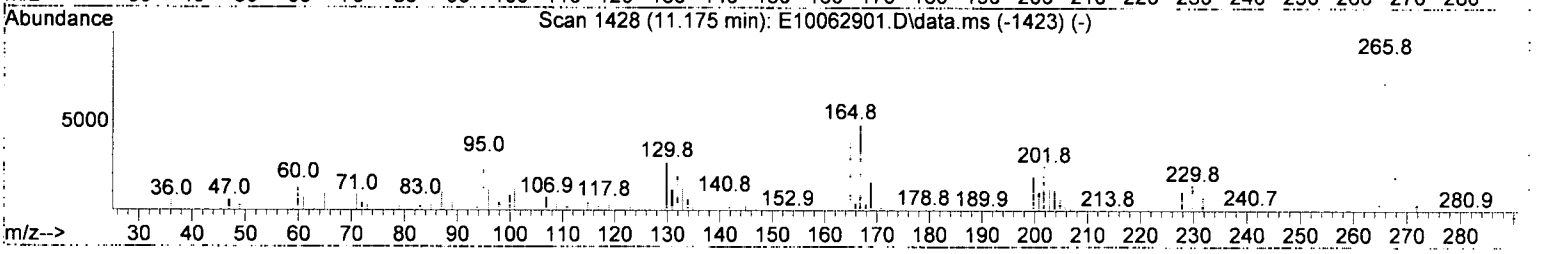
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 15 08:50:50 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121913.D\data.ms

(4) Pentachlorophenol

11.135min (+ 0.000) 44.41 ug/mL

response 464648

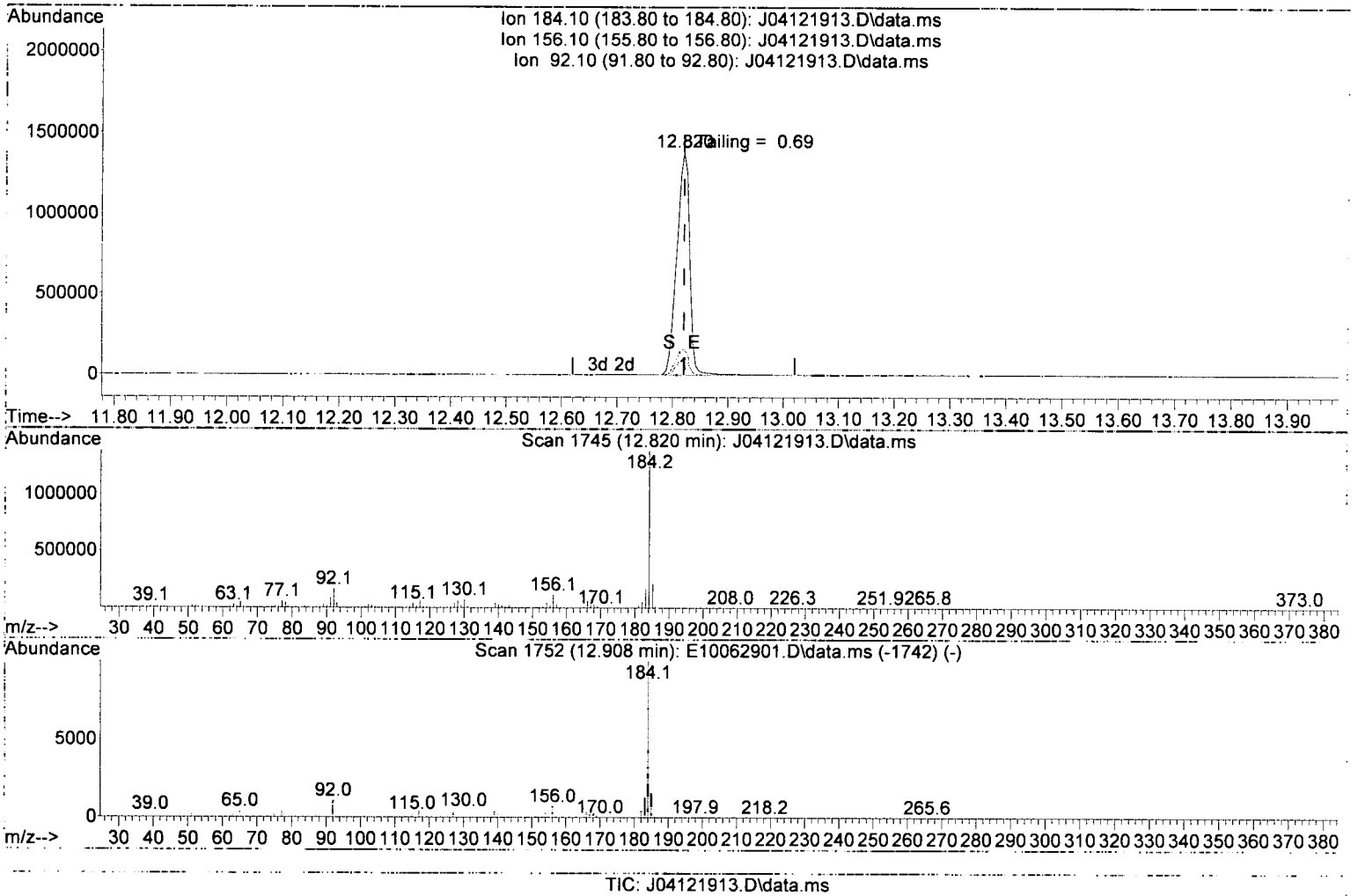
Ion	Exp%	Act%
265.90	100.00	100.00
164.90	50.80	47.90
201.90	25.10	25.27
130.00	27.20	25.16

4/15/19

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 15 08:50:50 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121913.D\data.ms

(7) Benzidine

12.820min (+ 0.000) 38.81 ug/mL

response 2222430

Ion	Exp%	Act%
184.10	100.00	100.00
156.10	8.40	8.11
92.10	8.40	11.75
0.00	0.00	0.00

4/15/19

DDT Breakdown Check (Validated 5/1/2013)

From:
9D12042-TUN2
SV-GCMS10

First Column Area Counts		Percent Breakdown	
DDE	21833		
DDD	21085		
DDT	6698933	0.64	PASS

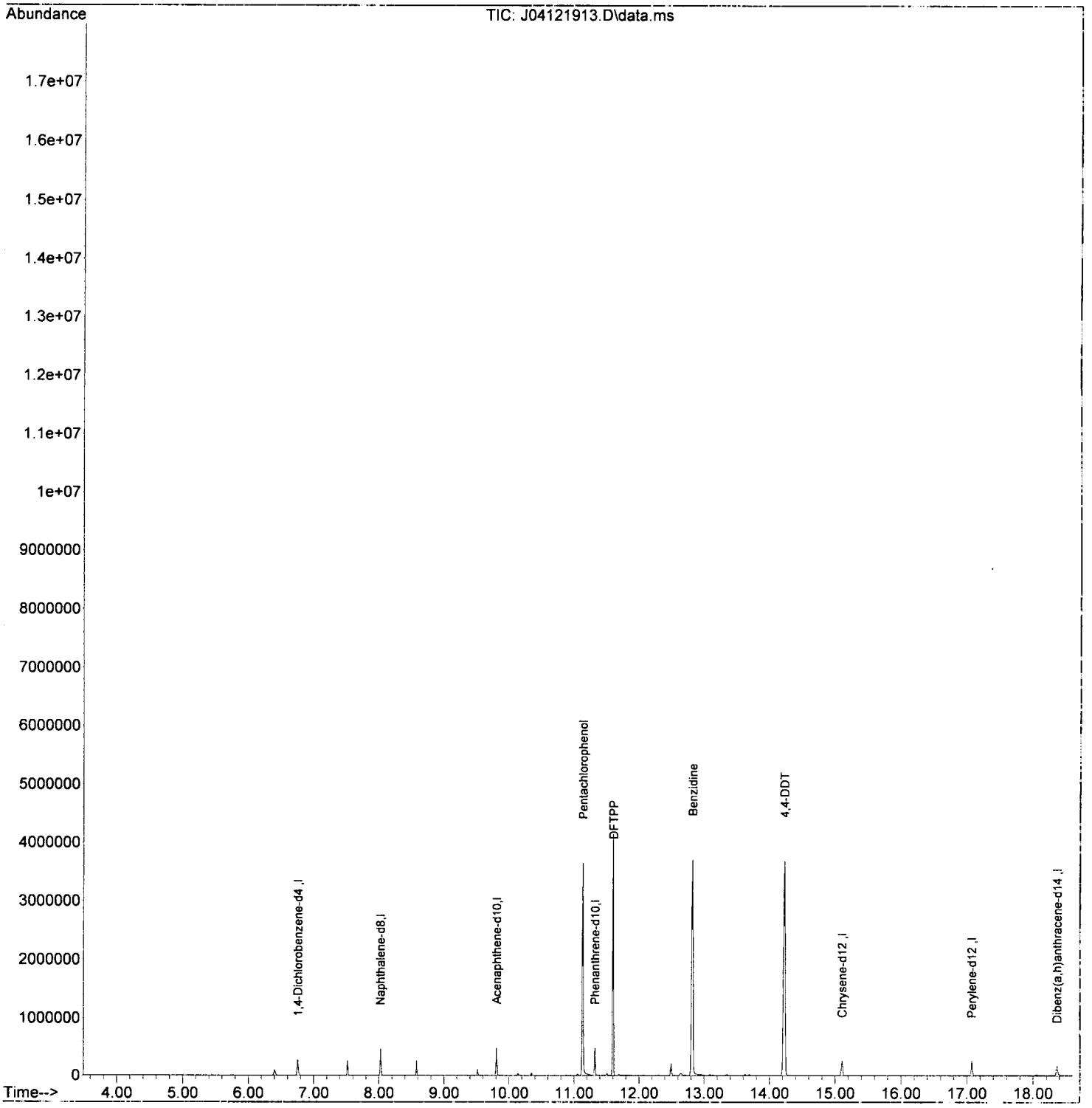
Breakdown must be less than 20% to accept sample data.

9/15/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121913.D
Acq On : 12 Apr 2019 5:47 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-TUN2
Misc : 1x, A19D089 DFTPP@45
ALS Vial : 1 Sample Multiplier: 1
DataAcq Meth:DFTPP-8270.M

Quant Time: Apr 15 08:50:50 2019
Quant Method : C:\msdchem\1\methods\DFTPP-625.M
Quant Title : 8270 DFTPP Tune Method
QLast Update : Mon Apr 15 08:49:58 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:51 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JD 4/19/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	191647	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	826553	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	414672	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	690915	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.350	240	599238	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	535993	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.261	292	488117	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.632	112	56	0.42	ng/ml	0.10
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
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	6.520	93	66	N.D.		
8) Bis(2-chloroethyl) ether	6.520	93	66	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.953	108	54	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...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	0.000		0	N.D.		
17) 3+4-Methylphenol	7.231	107	56	N.D.		
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.365	77	53	N.D.		
22) Isophorone	0.000		0	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	7.809	105	64	535.50	ng/ml#	65
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.		
30) 4-Chloroaniline	0.000		0	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.638	107	83	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 : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:51 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

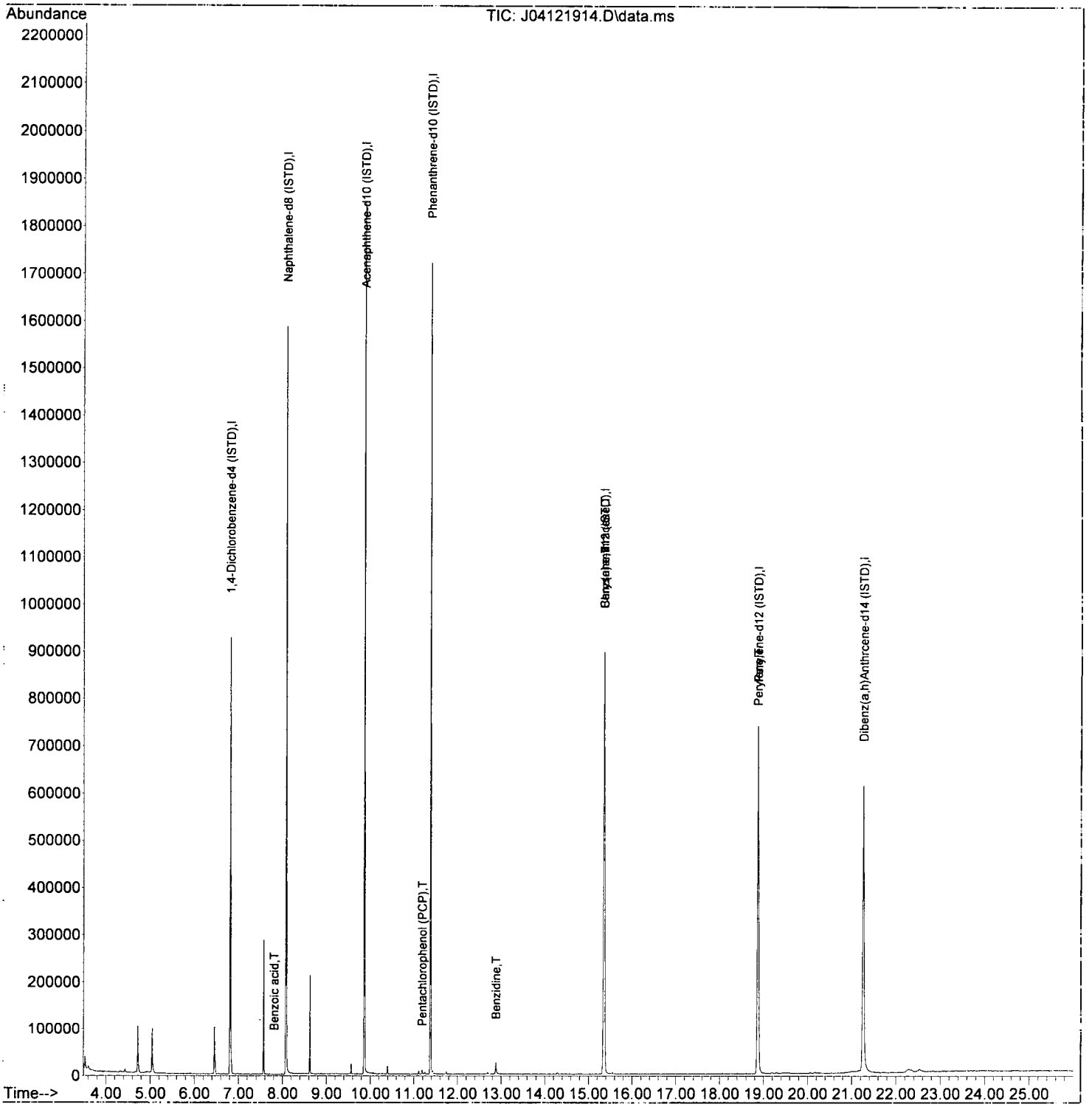
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.		
45) Dimethyl phthalate	0.000		0	N.D.		
46) 1,3-Dinitrobenzene	0.000		0	N.D.		
47) 2,6-Dinitrotoluene	0.000		0	N.D.		
48) 1,2-Dinitrobenzene	0.000		0	N.D.		
49) Acenaphthylene	0.000		0	N.D.		
50) 3-Nitroaniline	0.000		0	N.D.		
51) Acenaphthene	9.863	153	128	N.D.		
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	0.000		0	N.D.		
54) 2,4-Dinitrotoluene	10.018	165	104	N.D.		
55) Dibenzofuran	0.000		0	N.D.		
56) 2,3,5,6-Tetrachlorophenol	10.205	232	90	N.D.		
57) 2,3,4,6-Tetrachlorophenol	10.205	232	90	N.D.		
58) Diethyl phthalate	10.280	149	73	N.D.		
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	10.569	77	73	N.D.		
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.		
69) Hexachlorobenzene	0.000		0	N.D.		
70) Pentachlorophenol (PCP)	11.184	266	1392	81.96	ng/ml	81
71) Phenanthrene	11.376	178	277	N.D.		
72) Anthracene	11.376	178	277	N.D.		
73) Carbazole	0.000		0	N.D.		
74) Di-n-butyl phthalate	11.949	149	56	Below Cal		78
75) Fluoranthene	0.000		0	N.D.		
76) Benzidine	12.874	184	15679	203.41	ng/ml	97
77) Pyrene	0.000		0	N.D.		
80) Butyl benzyl phthalate	0.000		0	N.D.		
81) Bis(2-ethylhexyl) adipate	14.291	129	1022	Below Cal		93
82) 3,3-Dichlorobenzidine	15.281	252	236	Below Cal		83
83) Benz(a)anthracene	15.350	228	1625	4.71	ng/ml	66
84) Chrysene	15.350	228	1600	4.92	ng/ml	63
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	18.581	252	72	N.D.		
92) Benzo(a)pyrene	0.000		0	N.D.		
93) Perylene	18.864	252	1719	6.02	ng/ml	69
95) Indeno(1,2,3-cd)pyrene	21.255	276	344	N.D.		
96) Dibenz(a,h)anthracene	21.325	278	129	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 : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:51 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Final Requant
JD 4/15/19

Quant Time: Apr 15 12:07:03 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	191647	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	826553	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	414672	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	690915	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.350	240	599238	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	535993	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.261	292	488117	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.632	112	56	0.45	ng/ml	0.10
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
2) N-Nitrosodimethylamine	0.000		0	N.D.		
3) Pyridine	0.000		0	N.D.		
6) Phenol	0.000		0	N.D.		
7) Aniline	6.520	93	66	N.D.		
8) Bis(2-chloroethyl) ether	6.520	93	66	N.D.		
9) 2-Chlorophenol	0.000		0	N.D.		
10) 1,3-Dichlorobenzene	0.000		0	N.D.		
11) 1,4-Dichlorobenzene	0.000		0	N.D.		
12) Benzyl alcohol	6.953	108	54	32.86	ng/ml#	74
13) 1,2-Dichlorobenzene	0.000		0	N.D.		
14) 2-Methylphenol	0.000		0	N.D.		
15) 2,2'-Oxybis(1-Chloropr...	0.000		0	N.D.		
16) N-Nitrosodi-n-propylamine	0.000		0	N.D.		
17) 3+4-Methylphenol	7.231	107	56	9.40	ng/ml#	14
18) Hexachloroethane	0.000		0	N.D.		
20) Nitrobenzene	7.365	77	53	N.D.		
22) Isophorone	0.000		0	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	7.809	105	64	752.88	ng/ml#	65
27) 2,4-Dichlorophenol	0.000		0	N.D.		
28) 1,2,4-Trichlorobenzene	0.000		0	N.D.		
29) Naphthalene	0.000		0	N.D.		
30) 4-Chloroaniline	0.000		0	N.D.		
31) Hexachlorobutadiene	0.000		0	N.D.		
32) 4-Chloro-3-methylphenol	8.638	107	83	64.31	ng/ml#	1
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 : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:03 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

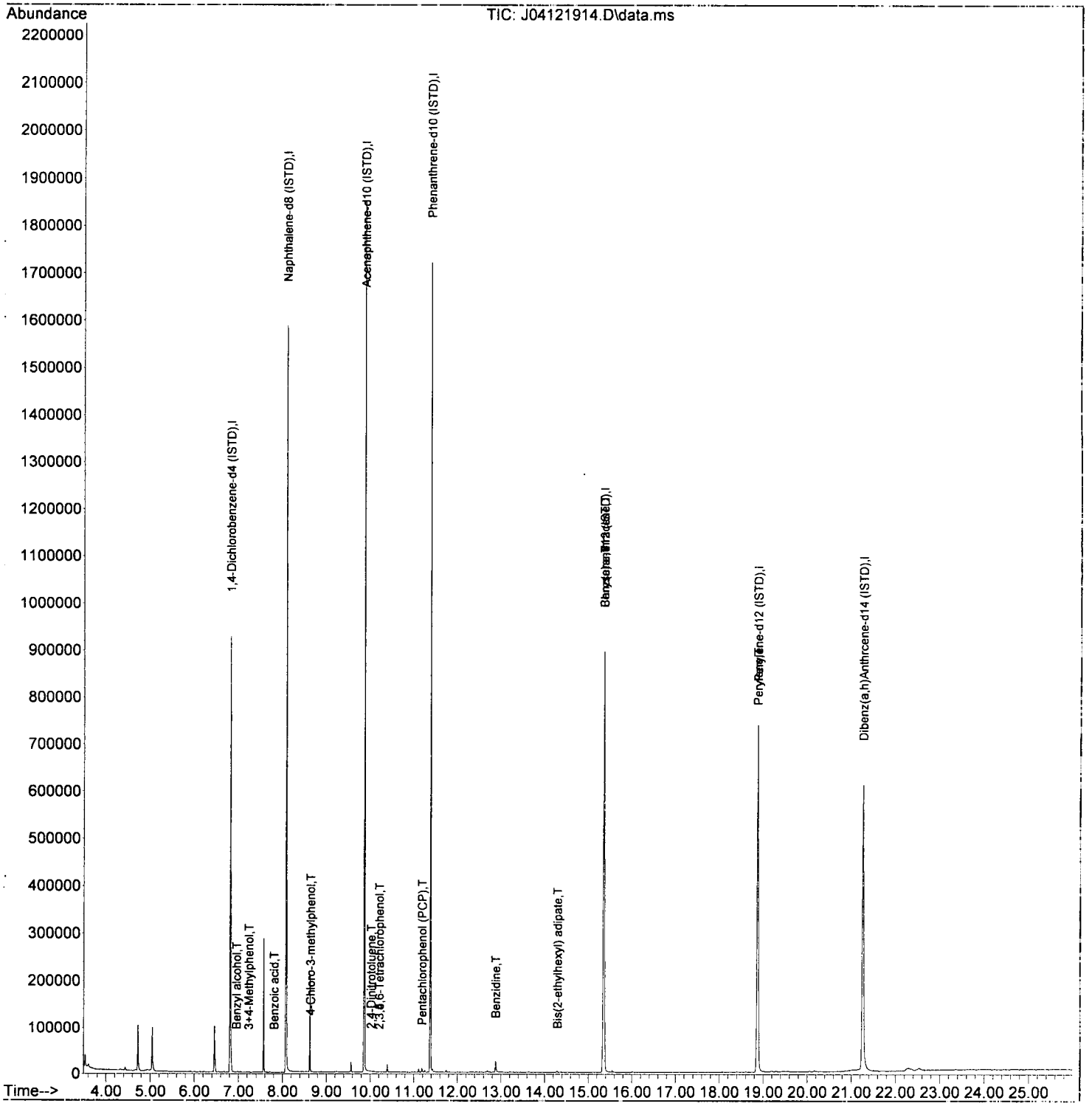
Compound	R.T.	QIon	Response	Conc Units	Dev(Min)
44) 1,4-Dinitrobenzene	0.000		0	N.D.	
45) Dimethyl phthalate	0.000		0	N.D.	
46) 1,3-Dinitrobenzene	0.000		0	N.D.	
47) 2,6-Dinitrotoluene	0.000		0	N.D.	
48) 1,2-Dinitrobenzene	0.000		0	N.D.	
49) Acenaphthylene	0.000		0	N.D.	
50) 3-Nitroaniline	0.000		0	N.D.	
51) Acenaphthene	9.863	153	128	N.D.	
52) 2,4-Dinitrophenol	0.000		0	N.D.	
53) 4-Nitrophenol	0.000		0	N.D.	
54) 2,4-Dinitrotoluene	10.018	165	104	61.45 ng/ml#	17
55) Dibenzofuran	0.000		0	N.D.	
56) 2,3,5,6-Tetrachlorophenol	10.205	232	90	36.65 ng/ml#	54
57) 2,3,4,6-Tetrachlorophenol	10.205	232	90	14.74 ng/ml#	36
58) Diethyl phthalate	10.280	149	73	N.D.	
59) 2,3,5-Trimethylnaphtha...	0.000		0	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)	10.569	77	73	N.D.	
68) 4-Bromophenyl phenyl e...	0.000		0	N.D.	
69) Hexachlorobenzene	0.000		0	N.D.	
70) Pentachlorophenol (PCP)	11.184	266	1392	58.47 ng/ml	81
71) Phenanthrene	11.376	178	277	N.D.	
72) Anthracene	11.376	178	277	N.D.	
73) Carbazole	0.000		0	N.D.	
74) Di-n-butyl phthalate	11.949	149	56	N.D.	
75) Fluoranthene	0.000		0	N.D.	
76) Benzidine	12.874	184	15679	191.05 ng/ml	97
77) Pyrene	0.000		0	N.D.	
80) Butyl benzyl phthalate	0.000		0	N.D.	
81) Bis(2-ethylhexyl) adipate	14.291	129	1022	5.99 ng/ml	93
82) 3,3-Dichlorobenzidine	15.281	252	236	Below Cal	83
83) Benz(a)anthracene	15.350	228	1625	4.97 ng/ml	66
84) Chrysene	15.350	228	1600	5.04 ng/ml	63
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	18.581	252	72	N.D.	
92) Benzo(a)pyrene	0.000		0	N.D.	
93) Perylene	18.864	252	1719	6.32 ng/ml	69
95) Indeno(1,2,3-cd)pyrene	21.255	276	344	N.D.	
96) Dibenz(a,h)anthracene	21.325	278	129	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 : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121914.D
Acq On : 12 Apr 2019 6:15 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICB1
Misc : 1x, DCM + ISTD
ALS Vial : 2 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:03 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:57 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JR 4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	205604	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	838248	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	422298	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	695574	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.350	240	610059	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	540507	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	486802	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	2233	15.43	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	2259	11.76	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.359	82	2134	12.91	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	4958	15.77	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	384	9.61	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	4983	16.49	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.161	74	1826m	17.13	ng/ml	
3) Pyridine	4.230	79	2498	14.70	ng/ml	81
6) Phenol	6.450	94	2105	9.75	ng/ml	94
7) Aniline	6.488	93	3702	19.54	ng/ml	99
8) Bis(2-chloroethyl) ether	6.541	93	3544	22.18	ng/ml	94
9) 2-Chlorophenol	6.605	128	2212	14.62	ng/ml	94
10) 1,3-Dichlorobenzene	6.760	146	3006	18.87	ng/ml	99
11) 1,4-Dichlorobenzene	6.824	146	3174	20.45	ng/ml	85
12) Benzyl alcohol	6.948	108	527	5.19	ng/ml	87
13) 1,2-Dichlorobenzene	6.985	146	2889	18.96	ng/ml	98
14) 2-Methylphenol	7.044	107	1724	14.50	ng/ml	91
15) 2,2'-Oxybis(1-Chloropr...	7.071	45	4404	21.04	ng/ml	89
16) N-Nitrosodi-n-propylamine	7.199	70	2080	17.68	ng/ml	91
17) 3+4-Methylphenol	7.194	107	1519	10.39	ng/ml	89
18) Hexachloroethane	7.322	201	711	16.28	ng/ml	77
20) Nitrobenzene	7.375	77	2275	14.10	ng/ml	99
22) Isophorone	7.605	82	5760	18.13	ng/ml	94
23) 2-Nitrophenol	7.696	139	482	5.84	ng/ml	62
24) 2,4-Dimethylphenol	7.728	122	1331	10.24	ng/ml	87
25) Bis(2-chloroethoxy) me...	7.814	93	2366	13.19	ng/ml	72
26) Benzoic acid	7.766	105	55	535.38	ng/ml#	71
27) 2,4-Dichlorophenol	7.937	162	425	4.07	ng/ml	67
28) 1,2,4-Trichlorobenzene	8.023	180	2246	17.81	ng/ml	96
29) Naphthalene	8.103	128	8711	19.48	ng/ml	99
30) 4-Chloroaniline	8.146	127	1652	15.32	ng/ml	91
31) Hexachlorobutadiene	8.231	225	1492	22.43	ng/ml	77
32) 4-Chloro-3-methylphenol	8.632	107	606	4.80	ng/ml#	68
33) 2-Methylnaphthalene	8.798	142	4843	16.21	ng/ml	92
34) 1-Methylnaphthalene	8.900	142	5287	18.44	ng/ml	95
36) Hexachlorocyclopentadiene	8.964	237	396	6.01	ng/ml	93
37) 2,4,6-Trichlorophenol	9.082	196	637	8.54	ng/ml	71
38) 2,4,5-Trichlorophenol	9.119	198	570	7.78	ng/ml	83
39) 1,1'-Biphenyl	9.269	154	5440	15.36	ng/ml	88
41) 2-Chloronaphthalene	9.296	162	4110	16.40	ng/ml	91
42) 2-Nitroaniline	9.392	138	491	5.67	ng/ml	83
43) 2,6-Dimethylnaphthalene	9.429	156	4471	17.28	ng/ml	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:57 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

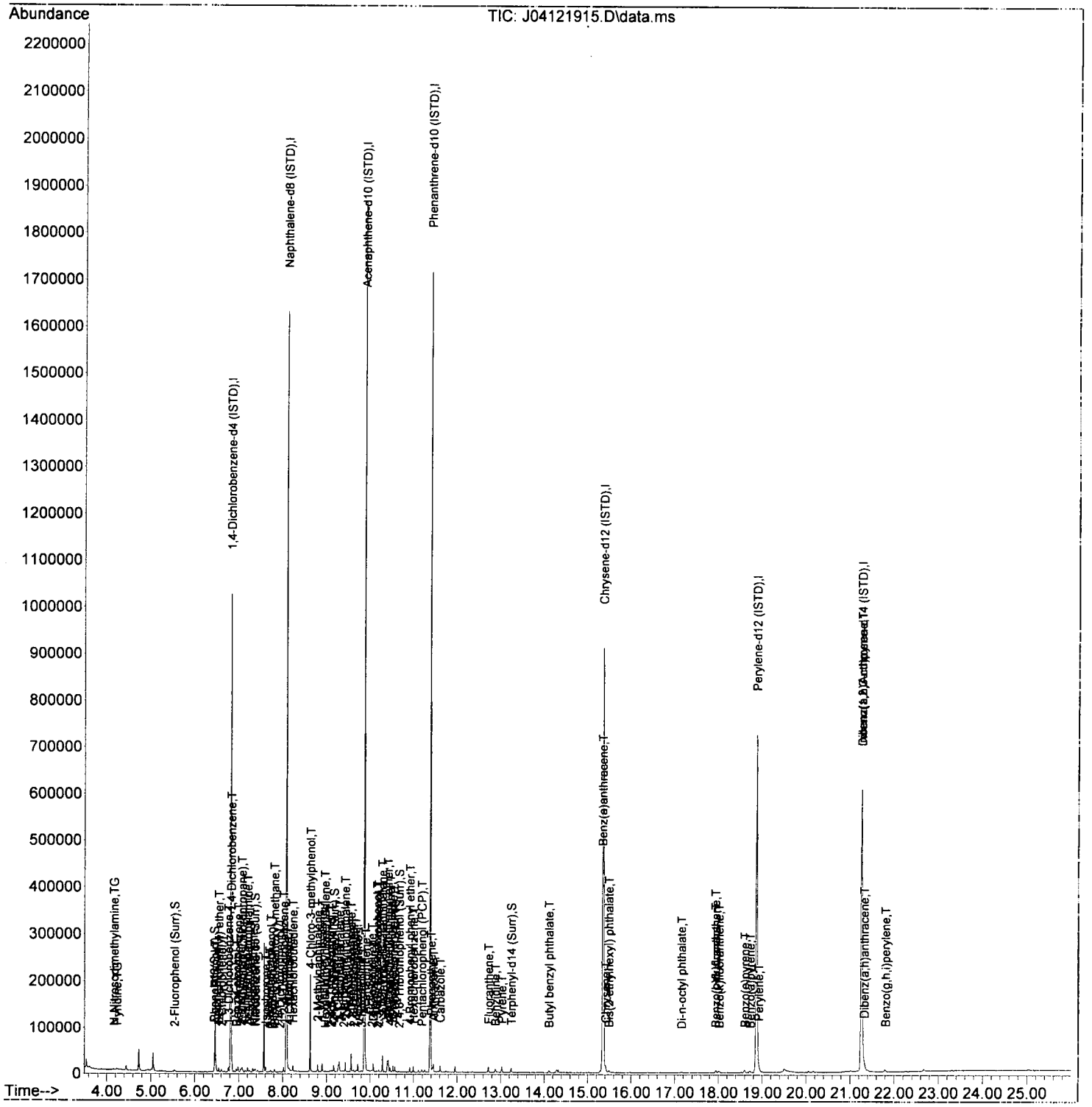
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	72	N.D.		
45) Dimethyl phthalate	9.563	163	5716	18.78	ng/ml	93
46) 1,3-Dinitrobenzene	9.595	168	137	3.07	ng/ml#	21
47) 2,6-Dinitrotoluene	9.627	165	429	6.50	ng/ml	91
48) 1,2-Dinitrobenzene	9.675	168	247	8.02	ng/ml#	68
49) Acenaphthylene	9.718	152	8037	17.73	ng/ml	91
50) 3-Nitroaniline	9.804	138	533	16.13	ng/ml#	76
51) Acenaphthene	9.895	153	5944	20.76	ng/ml	93
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.986	139	81	N.D.		
54) 2,4-Dinitrotoluene	10.039	165	516	6.23	ng/ml	79
55) Dibenzofuran	10.071	168	7180	19.60	ng/ml	94
56) 2,3,5,6-Tetrachlorophenol	10.157	232	365	6.25	ng/ml	82
57) 2,3,4,6-Tetrachlorophenol	10.194	232	466	7.68	ng/ml	89
58) Diethyl phthalate	10.280	149	5489	18.31	ng/ml	96
59) 2,3,5-Trimethylnaphtha...	10.274	170	4447	18.62	ng/ml	85
60) Fluorene	10.419	166	5519	19.07	ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.408	204	2599	19.74	ng/ml	95
62) 4-Nitroaniline	10.424	138	410	7.27	ng/ml	75
63) 4,6-Dinitro-2-methylph...	10.462	198	66	63.96	ng/ml#	1
65) N-Nitrosodiphenylamine	10.526	169	3694	15.82	ng/ml	83
66) Azobenzene (1,2-DPH)	10.569	77	5526	17.81	ng/ml	89
68) 4-Bromophenyl phenyl e...	10.911	248	1143	14.80	ng/ml	91
69) Hexachlorobenzene	10.991	284	2003	22.87	ng/ml	87
70) Pentachlorophenol (PCP)	11.184	266	966	71.99	ng/ml	81
71) Phenanthrene	11.403	178	8041	20.71	ng/ml	93
72) Anthracene	11.451	178	6943	17.74	ng/ml	90
73) Carbazole	11.606	167	5247	7.28	ng/ml	92
74) Di-n-butyl phthalate	11.948	149	6378	Below Cal		96
75) Fluoranthene	12.719	202	6550	15.31	ng/ml	91
76) Benzidine	12.874	184	5651	67.75	ng/ml	90
77) Pyrene	13.029	202	7061	16.03	ng/ml	96
80) Butyl benzyl phthalate	14.109	149	1437	6.93	ng/ml	91
81) Bis(2-ethylhexyl) adipate	14.291	129	2012	Below Cal		92
82) 3,3-Dichlorobenzidine	15.286	252	2133	Below Cal		97
83) Benz(a)anthracene	15.334	228	6716	19.13	ng/ml	88
84) Chrysene	15.409	228	6300	19.02	ng/ml	96
85) Bis(2-ethylhexyl) phth...	15.484	149	1961	7.18	ng/ml	82
87) Di-n-octyl phthalate	17.153	149	1918	4.78	ng/ml	95
88) Benzo(b)fluoranthene	17.934	252	3779	12.19	ng/ml	91
89) Benzo(k)fluoranthene	18.014	252	3388	11.63	ng/ml	97
90) Benzo(b+k)fluoranthene	17.934	252	8014	26.11	ng/ml	92
91) Benzo(e)pyrene	18.602	252	4564	15.02	ng/ml	97
92) Benzo(a)pyrene	18.725	252	3153	11.14	ng/ml	86
93) Perylene	18.918	252	5247	18.21	ng/ml	97
95) Indeno(1,2,3-cd)pyrene	21.260	276	5842	21.89	ng/ml	84
96) Dibenz(a,h)anthracene	21.319	278	4686	18.52	ng/ml	89
97) Benzo(g,h,i)perylene	21.806	276	4399	15.81	ng/ml	91

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121915.D
Acq On : 12 Apr 2019 6:51 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL1
Misc : 1x, A19D053 BNA@20
ALS Vial : 3 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:54:57 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	209444	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	855155	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	428361	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	701109	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.350	240	611518	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	543287	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.260	292	498877	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	5365	36.39	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	6263	32.01	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	4963	29.48	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	14620	45.83	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	864	21.44	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	13758	45.43	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.150	74	5209	47.98	ng/ml	96
3) Pyridine	4.204	79	7142	41.27	ng/ml	96
6) Phenol	6.450	94	7594	34.52	ng/ml	97
7) Aniline	6.487	93	10528	54.83	ng/ml	96
8) Bis(2-chloroethyl) ether	6.541	93	8634	53.05	ng/ml	96
9) 2-Chlorophenol	6.605	128	5987	38.86	ng/ml	79
10) 1,3-Dichlorobenzene	6.755	146	8063	49.68	ng/ml	98
11) 1,4-Dichlorobenzene	6.824	146	8325	52.66	ng/ml	93
12) Benzyl alcohol	6.953	108	1873	18.11	ng/ml#	74
13) 1,2-Dichlorobenzene	6.980	146	8131	52.40	ng/ml	94
14) 2-Methylphenol	7.044	107	4259	35.18	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.071	45	10826	50.78	ng/ml	95
16) N-Nitrosodi-n-propylamine	7.199	70	5246	43.78	ng/ml	91
17) 3+4-Methylphenol	7.194	107	4279	28.73	ng/ml	96
18) Hexachloroethane	7.322	201	2137	48.05	ng/ml	78
20) Nitrobenzene	7.370	77	5793	35.25	ng/ml	97
22) Isophorone	7.605	82	15037	46.39	ng/ml	99
23) 2-Nitrophenol	7.691	139	1610	19.13	ng/ml	94
24) 2,4-Dimethylphenol	7.723	122	3681	27.77	ng/ml	94
25) Bis(2-chloroethoxy) me...	7.814	93	7058	38.57	ng/ml	93
26) Benzoic acid	7.894	105	106	535.95	ng/ml#	53
27) 2,4-Dichlorophenol	7.937	162	2177	20.43	ng/ml	93
28) 1,2,4-Trichlorobenzene	8.023	180	6141	47.73	ng/ml	95
29) Naphthalene	8.103	128	23251	50.97	ng/ml	98
30) 4-Chloroaniline	8.146	127	4055	36.85	ng/ml	80
31) Hexachlorobutadiene	8.231	225	3496	51.51	ng/ml	93
32) 4-Chloro-3-methylphenol	8.627	107	2641	20.50	ng/ml	93
33) 2-Methylnaphthalene	8.798	142	12740	41.81	ng/ml	95
34) 1-Methylnaphthalene	8.900	142	13733	46.94	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	1375	20.57	ng/ml	83
37) 2,4,6-Trichlorophenol	9.082	196	1647	21.77	ng/ml	84
38) 2,4,5-Trichlorophenol	9.119	198	1719	23.12	ng/ml	83
39) 1,1'-Biphenyl	9.269	154	16008	44.55	ng/ml	98
41) 2-Chloronaphthalene	9.296	162	11226	44.17	ng/ml	98
42) 2-Nitroaniline	9.386	138	1501	17.10	ng/ml	88
43) 2,6-Dimethylnaphthalene	9.429	156	12930	49.27	ng/ml	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

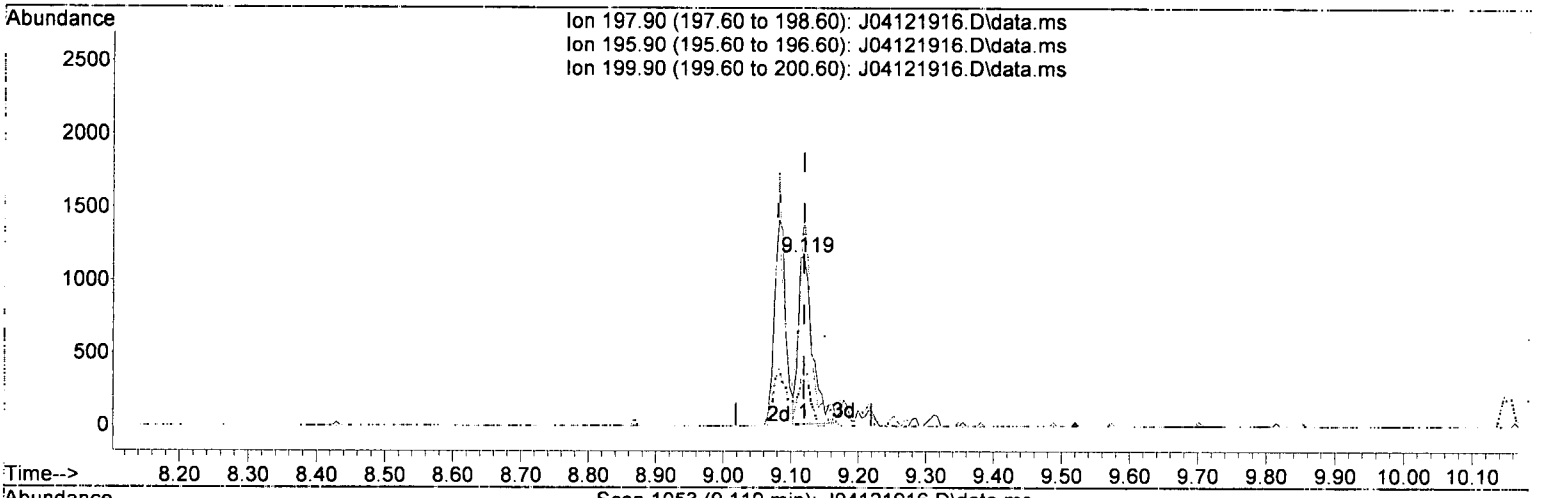
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.520	168	512	12.64	ng/ml#	61
45) Dimethyl phthalate	9.563	163	14804	47.96	ng/ml	98
46) 1,3-Dinitrobenzene	9.595	168	496	10.98	ng/ml#	1
47) 2,6-Dinitrotoluene	9.627	165	1360	20.32	ng/ml	91
48) 1,2-Dinitrobenzene	9.681	168	594	19.02	ng/ml#	57
49) Acenaphthylene	9.718	152	20809	45.26	ng/ml	98
50) 3-Nitroaniline	9.798	138	1478	30.29	ng/ml	83
51) Acenaphthene	9.895	153	14121	48.61	ng/ml	93
52) 2,4-Dinitrophenol	0.000		0	N.D.		
53) 4-Nitrophenol	9.964	139	479	9.21	ng/ml#	64
54) 2,4-Dinitrotoluene	10.039	165	1414	16.84	ng/ml	78
55) Dibenzofuran	10.066	168	18996	51.13	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	1033	17.43	ng/ml	83
57) 2,3,4,6-Tetrachlorophenol	10.194	232	1586	25.75	ng/ml	70
58) Diethyl phthalate	10.280	149	14203	46.71	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.280	170	12035	49.68	ng/ml	96
60) Fluorene	10.419	166	14499	49.39	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.408	204	6570	49.20	ng/ml	96
62) 4-Nitroaniline	10.419	138	1321	23.09	ng/ml#	60
63) 4,6-Dinitro-2-methylph...	10.456	198	144	66.03	ng/ml#	1
65) N-Nitrosodiphenylamine	10.526	169	11052	46.96	ng/ml	98
66) Azobenzene (1,2-DPH)	10.569	77	14382	45.98	ng/ml	92
68) 4-Bromophenyl phenyl e...	10.905	248	3328	42.75	ng/ml	95
69) Hexachlorobenzene	10.991	284	4727	53.54	ng/ml	92
70) Pentachlorophenol (PCP)	11.184	266	1190	76.90	ng/ml	94
71) Phenanthrene	11.403	178	20614	52.67	ng/ml	98
72) Anthracene	11.451	178	18968	48.08	ng/ml	96
73) Carbazole	11.606	167	14600	35.92	ng/ml	98
74) Di-n-butyl phthalate	11.948	149	17235	20.46	ng/ml	99
75) Fluoranthene	12.719	202	16870	39.11	ng/ml	97
76) Benzidine	12.874	184	8239	101.83	ng/ml	98
77) Pyrene	13.029	202	18258	41.11	ng/ml	97
80) Butyl benzyl phthalate	14.109	149	4216	20.28	ng/ml	92
81) Bis(2-ethylhexyl) adipate	14.291	129	4520	Below Cal		94
82) 3,3-Dichlorobenzidine	15.291	252	6271	Below Cal		91
83) Benz(a)anthracene	15.329	228	15643	44.45	ng/ml	92
84) Chrysene	15.409	228	15517	46.74	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.489	149	5834	21.30	ng/ml	84
87) Di-n-octyl phthalate	17.169	149	5426	13.45	ng/ml	91
88) Benzo(b)fluoranthene	17.944	252	11314	36.32	ng/ml	91
89) Benzo(k)fluoranthene	18.014	252	11590	39.56	ng/ml	93
90) Benzo(b+k)fluoranthene	18.014	252	23691	76.79	ng/ml	93
91) Benzo(e)pyrene	18.597	252	12166	39.84	ng/ml	93
92) Benzo(a)pyrene	18.725	252	9489	33.36	ng/ml	95
93) Perylene	18.923	252	12964	44.76	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.255	276	13136	48.03	ng/ml	84
96) Dibenz(a,h)anthracene	21.325	278	11403	43.98	ng/ml	91
97) Benzo(g,h,i)perylene	21.795	276	12250	42.97	ng/ml	90

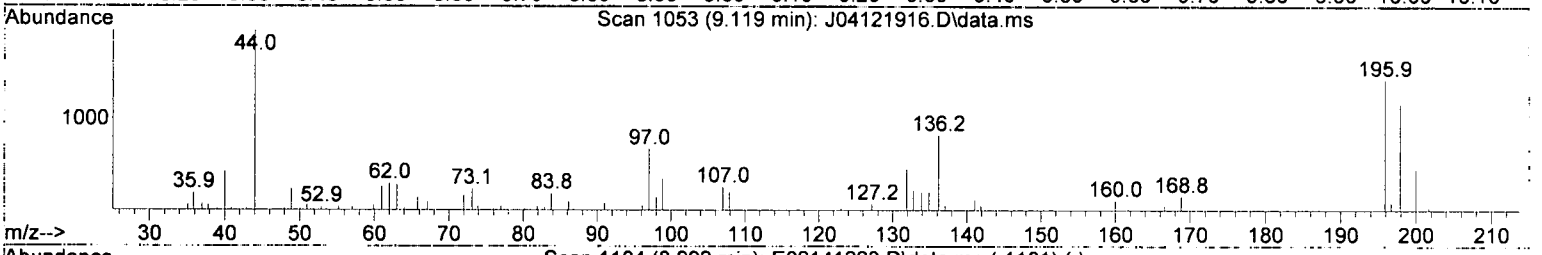
(#) = qualifier out of range (m) = manual integration (+) = signals summed

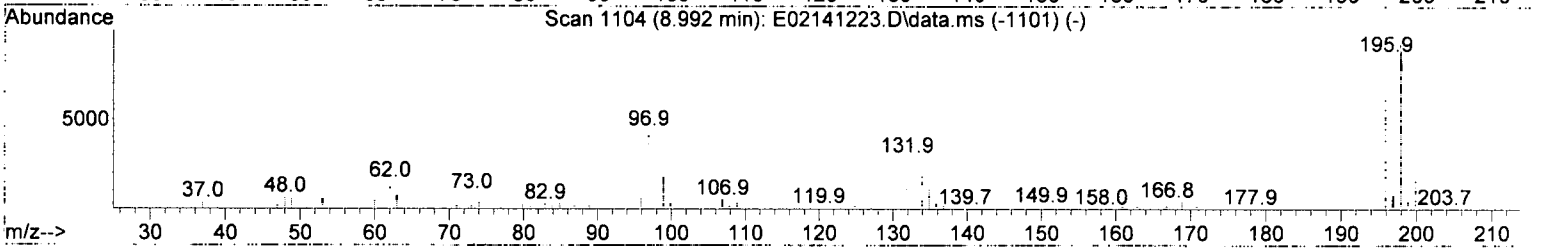
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121916.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 23.12 ng/ml

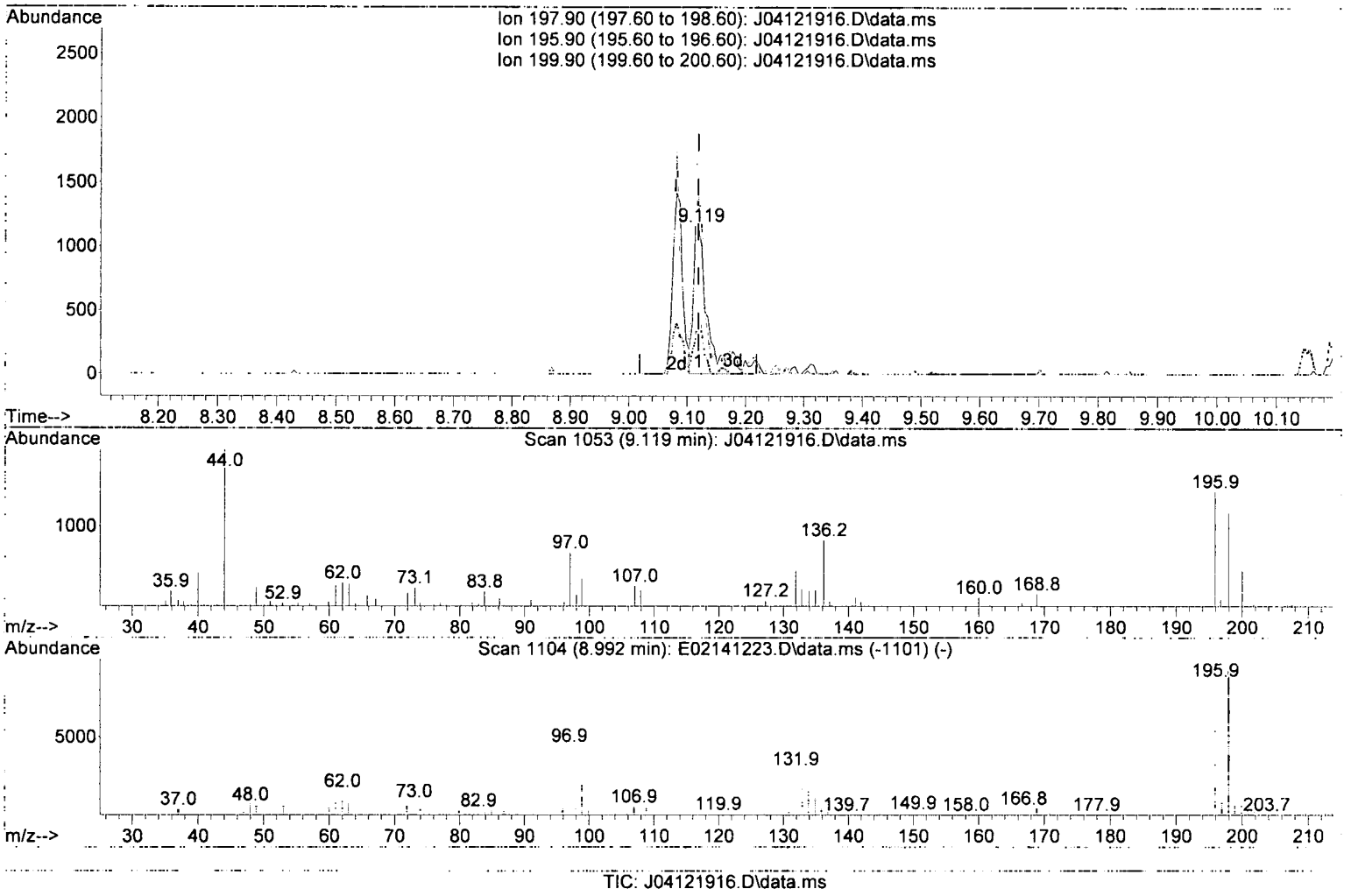
response 1719

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	122.31
199.90	31.10	39.71
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121916.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 26.05 ng/ml m

response 1937

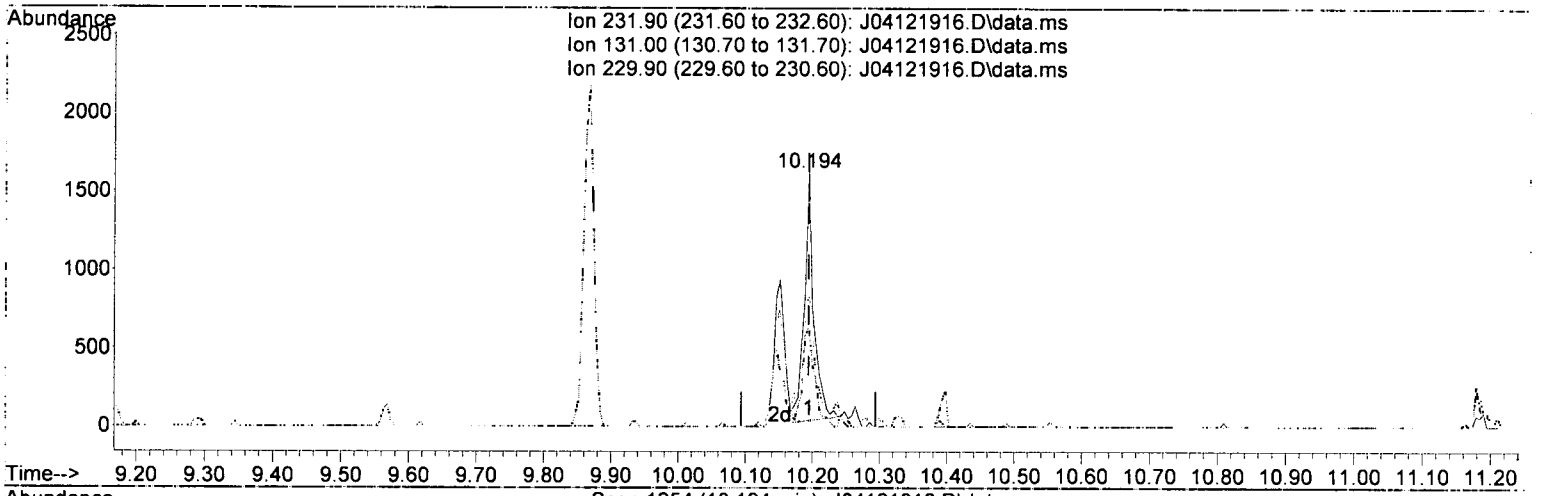
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	122.31
199.90	31.10	39.71
0.00	0.00	0.00

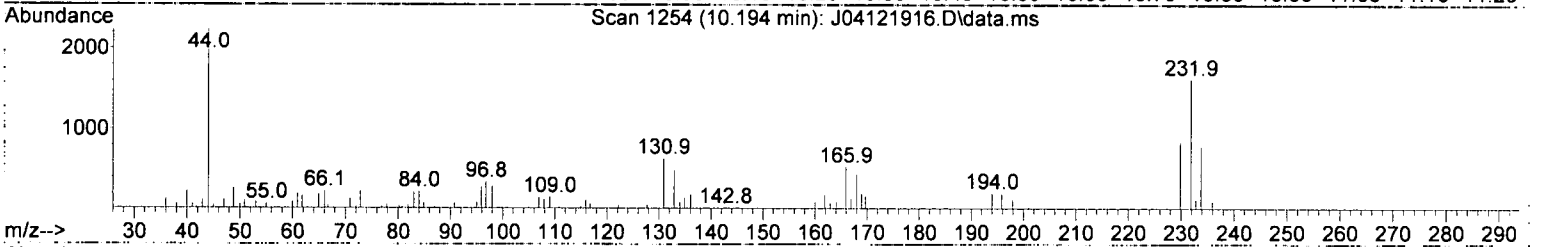
4/15/19

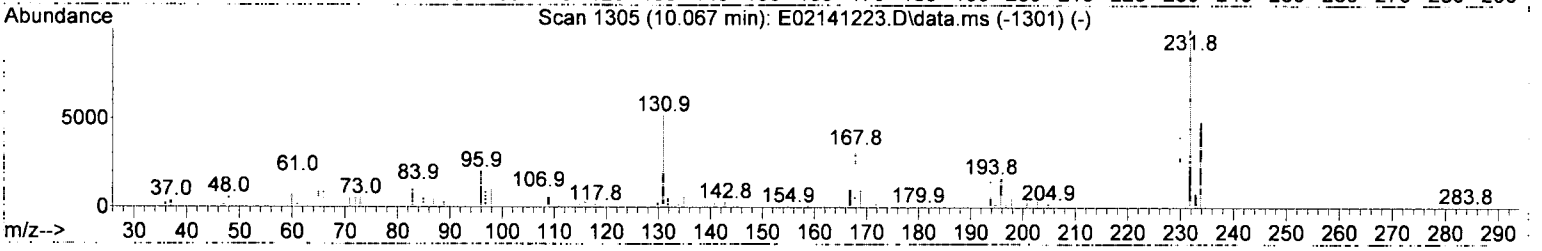
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121916.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 25.75 ng/ml

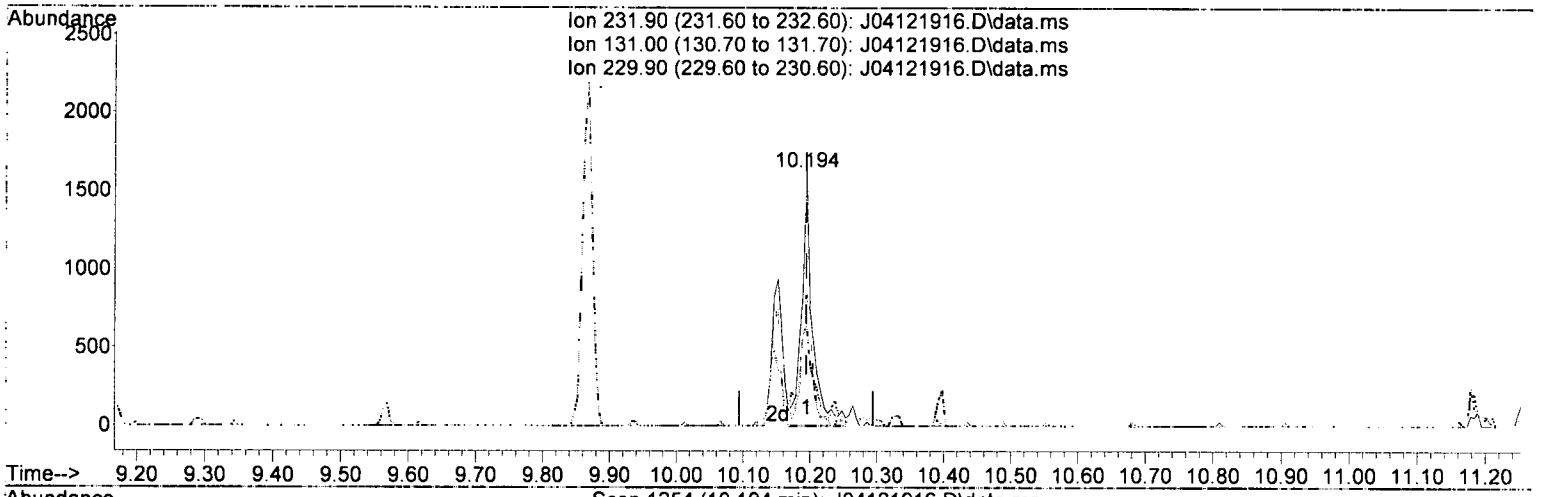
response 1586

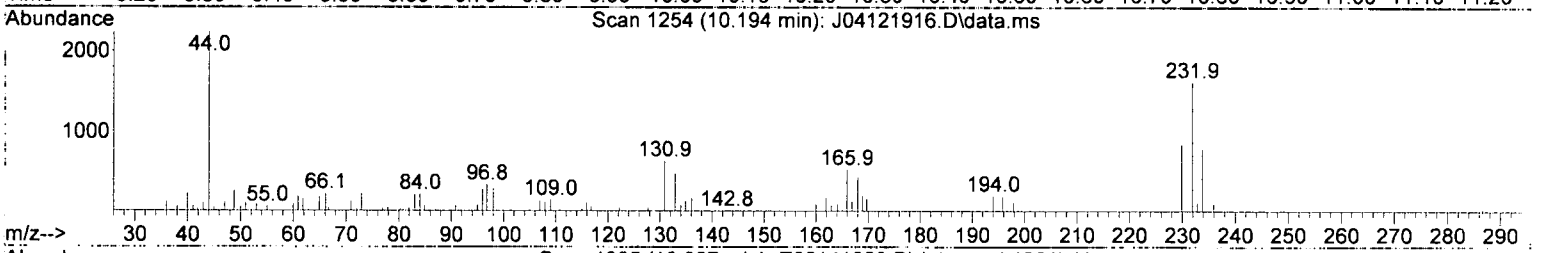
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	39.31
229.90	78.40	52.19
0.00	0.00	0.00

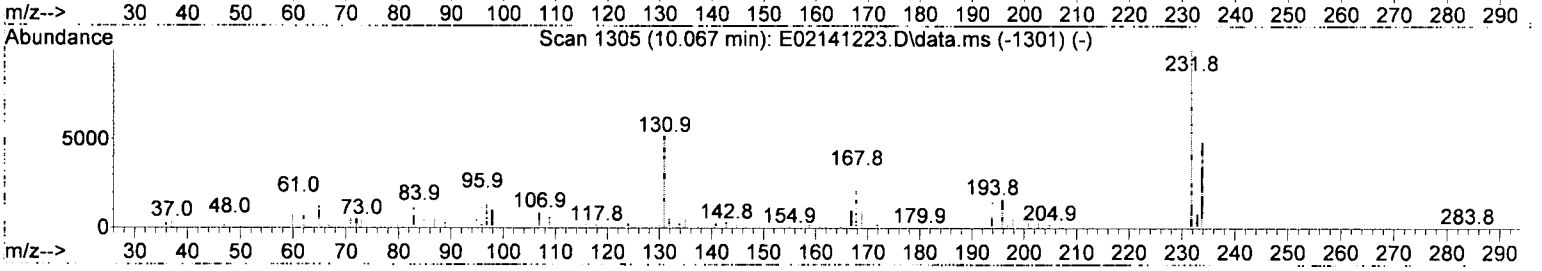
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121916.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 29.63 ng/ml m

response 1825

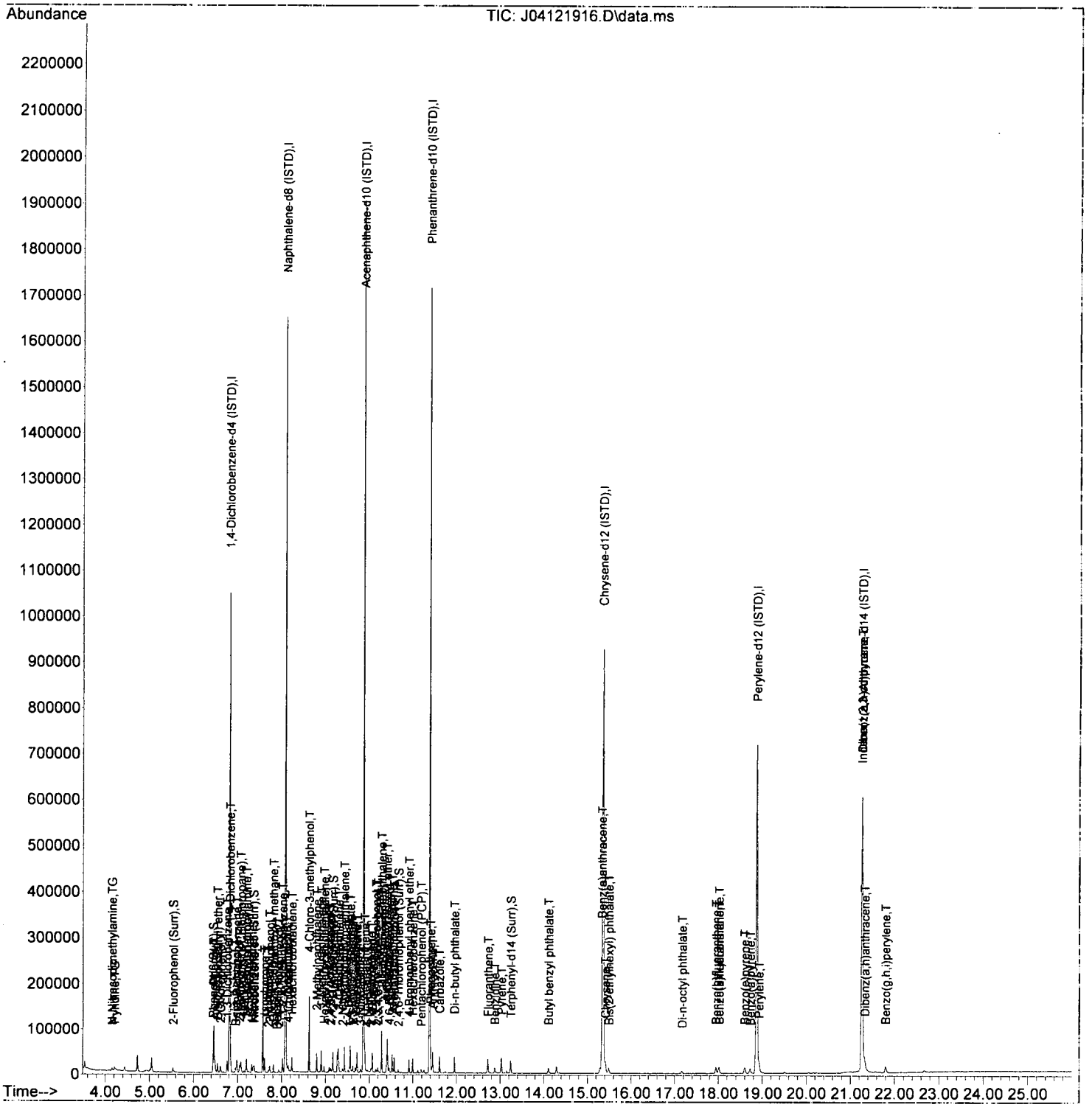
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	39.31
229.90	78.40	52.19
0.00	0.00	0.00

JK 4/19/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121916.D
Acq On : 12 Apr 2019 7:27 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL2
Misc : 1x, A19D054 BNA@50
ALS Vial : 4 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:01 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/19/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	217345	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	867816	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.863	162	441746	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.376	188	754332	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.356	240	677420	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.870	264	613080	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.261	292	548377	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	12560	82.09	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	15186	74.79	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	13960	79.90	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	29847	90.73	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	2582	59.56	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	32507	96.90	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.193	74	10206	90.58	ng/ml	97
3) Pyridine	4.225	79	16277	90.63	ng/ml	96
6) Phenol	6.450	94	16356	71.64	ng/ml	96
7) Aniline	6.493	93	21433	107.56	ng/ml	97
8) Bis(2-chloroethyl) ether	6.546	93	17852	105.70	ng/ml	95
9) 2-Chlorophenol	6.611	128	14013	87.64	ng/ml	96
10) 1,3-Dichlorobenzene	6.760	146	16517	98.07	ng/ml	92
11) 1,4-Dichlorobenzene	6.830	146	17508	106.73	ng/ml	99
12) Benzyl alcohol	6.942	108	4432	41.29	ng/ml	94
13) 1,2-Dichlorobenzene	6.985	146	16678	103.56	ng/ml	97
14) 2-Methylphenol	7.044	107	9962	79.29	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.071	45	22045	99.64	ng/ml	94
16) N-Nitrosodi-n-propylamine	7.199	70	11467	92.22	ng/ml	96
17) 3+4-Methylphenol	7.194	107	11154	72.16	ng/ml	95
18) Hexachloroethane	7.322	201	4477	97.00	ng/ml	96
20) Nitrobenzene	7.375	77	14380	84.32	ng/ml	97
22) Isophorone	7.611	82	31645	96.20	ng/ml	98
23) 2-Nitrophenol	7.696	139	3262	38.18	ng/ml	86
24) 2,4-Dimethylphenol	7.723	122	9305	69.17	ng/ml	95
25) Bis(2-chloroethoxy) me...	7.814	93	18067	97.30	ng/ml	97
26) Benzoic acid	7.782	105	212	537.11	ng/ml#	38
27) 2,4-Dichlorophenol	7.932	162	5136	47.50	ng/ml	90
28) 1,2,4-Trichlorobenzene	8.023	180	13568	103.91	ng/ml	96
29) Naphthalene	8.103	128	49024	105.91	ng/ml	99
30) 4-Chloroaniline	8.146	127	9860	88.31	ng/ml	88
31) Hexachlorobutadiene	8.231	225	7405	107.51	ng/ml	98
32) 4-Chloro-3-methylphenol	8.627	107	5402	41.32	ng/ml	92
33) 2-Methylnaphthalene	8.798	142	27918	90.28	ng/ml	95
34) 1-Methylnaphthalene	8.900	142	29703	100.04	ng/ml	95
36) Hexachlorocyclopentadiene	8.969	237	3968	57.55	ng/ml	92
37) 2,4,6-Trichlorophenol	9.082	196	3552	45.53	ng/ml	97
38) 2,4,5-Trichlorophenol	9.119	198	3524	45.96	ng/ml	90
39) 1,1'-Biphenyl	9.269	154	33353	90.00	ng/ml	99
41) 2-Chloronaphthalene	9.296	162	23833	90.94	ng/ml	99
42) 2-Nitroaniline	9.387	138	3408	37.65	ng/ml	73
43) 2,6-Dimethylnaphthalene	9.429	156	27574	101.89	ng/ml	95

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

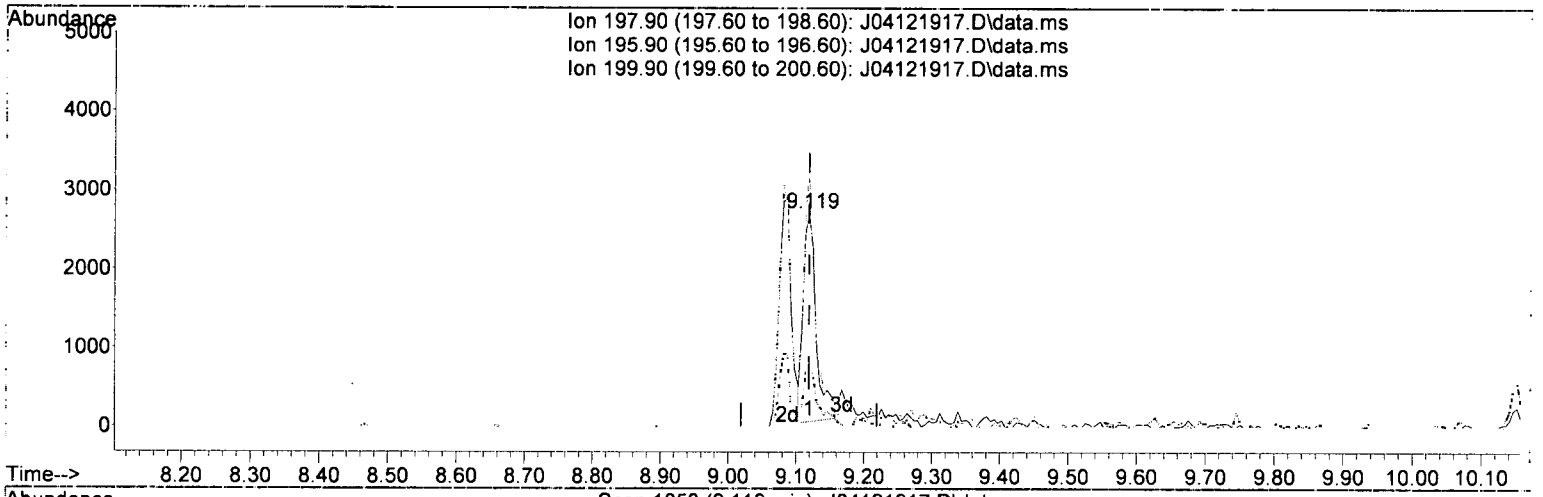
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	9.515	168	1082	25.89	ng/ml	93
45)	Dimethyl phthalate	9.563	163	32685	102.69	ng/ml	98
46)	1,3-Dinitrobenzene	9.600	168	1592	34.16	ng/ml	78
47)	2,6-Dinitrotoluene	9.627	165	3662	53.05	ng/ml	85
48)	1,2-Dinitrobenzene	9.686	168	1685	52.32	ng/ml	89
49)	Acenaphthylene	9.718	152	47235	99.63	ng/ml	97
50)	3-Nitroaniline	9.804	138	4053	67.56	ng/ml	90
51)	Acenaphthene	9.895	153	30980	103.42	ng/ml	99
52)	2,4-Dinitrophenol	9.911	184	95	144.12	ng/ml#	1
53)	4-Nitrophenol	9.959	139	1391	25.93	ng/ml#	66
54)	2,4-Dinitrotoluene	10.039	165	3628	41.90	ng/ml	92
55)	Dibenzofuran	10.066	168	39453	102.98	ng/ml	94
56)	2,3,5,6-Tetrachlorophenol	10.151	232	2960	48.42	ng/ml	97
57)	2,3,4,6-Tetrachlorophenol	10.194	232	4469	70.37	ng/ml	92
58)	Diethyl phthalate	10.280	149	33503	106.85	ng/ml	100
59)	2,3,5-Trimethylnaphtha...	10.280	170	26553	106.29	ng/ml	99
60)	Fluorene	10.419	166	32507	107.38	ng/ml	96
61)	4-Chlorophenyl phenyl ...	10.408	204	14524	105.47	ng/ml	97
62)	4-Nitroaniline	10.419	138	3975	67.37	ng/ml	79
63)	4,6-Dinitro-2-methylph...	10.456	198	481	74.66	ng/ml#	51
65)	N-Nitrosodiphenylamine	10.526	169	26271	103.75	ng/ml	97
66)	Azobenzene (1,2-DPH)	10.569	77	34700	103.12	ng/ml	93
68)	4-Bromophenyl phenyl e...	10.911	248	7754	92.57	ng/ml	97
69)	Hexachlorobenzene	10.991	284	9841	103.60	ng/ml	94
70)	Pentachlorophenol (PCP)	11.184	266	2796	108.89	ng/ml	89
71)	Phenanthrene	11.403	178	45844	108.87	ng/ml	98
72)	Anthracene	11.451	178	44636	105.16	ng/ml	98
73)	Carbazole	11.606	167	36766	96.87	ng/ml	99
74)	Di-n-butyl phthalate	11.949	149	42155	64.03	ng/ml	97
75)	Fluoranthene	12.719	202	42585	91.77	ng/ml	98
76)	Benzidine	12.874	184	20642	246.24	ng/ml	96
77)	Pyrene	13.029	202	44554	93.25	ng/ml	99
80)	Butyl benzyl phthalate	14.109	149	12505	54.30	ng/ml	93
81)	Bis(2-ethylhexyl) adipate	14.291	129	13416	2.92	ng/ml	95
82)	3,3-Dichlorobenzidine	15.286	252	17285	30.85	ng/ml	93
83)	Benz(a)anthracene	15.329	228	36438	93.47	ng/ml	98
84)	Chrysene	15.409	228	36836	100.15	ng/ml	95
85)	Bis(2-ethylhexyl) phth...	15.489	149	17462	57.56	ng/ml	99
87)	Di-n-octyl phthalate	17.158	149	17362	38.13	ng/ml	98
88)	Benzo(b)fluoranthene	17.944	252	30164	85.81	ng/ml	91
89)	Benzo(k)fluoranthene	18.009	252	31556	95.46	ng/ml	97
90)	Benzo(b+k)fluoranthene	18.009	252	63641	182.80	ng/ml	97
91)	Benzo(e)pyrene	18.602	252	32260	93.62	ng/ml	98
92)	Benzo(a)pyrene	18.720	252	26020	81.05	ng/ml	94
93)	Perylene	18.923	252	31514	96.43	ng/ml	100
95)	Indeno(1,2,3-cd)pyrene	21.261	276	29860	99.33	ng/ml	97
96)	Dibenz(a,h)anthracene	21.325	278	27470	96.38	ng/ml	89
97)	Benzo(g,h,i)perylene	21.801	276	27580	88.00	ng/ml	91

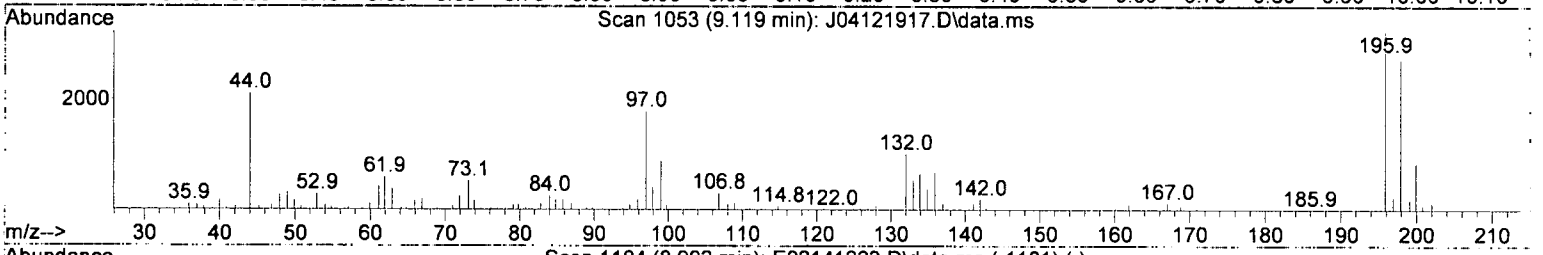
(#) = qualifier out of range (m) = manual integration (+) = signals summed

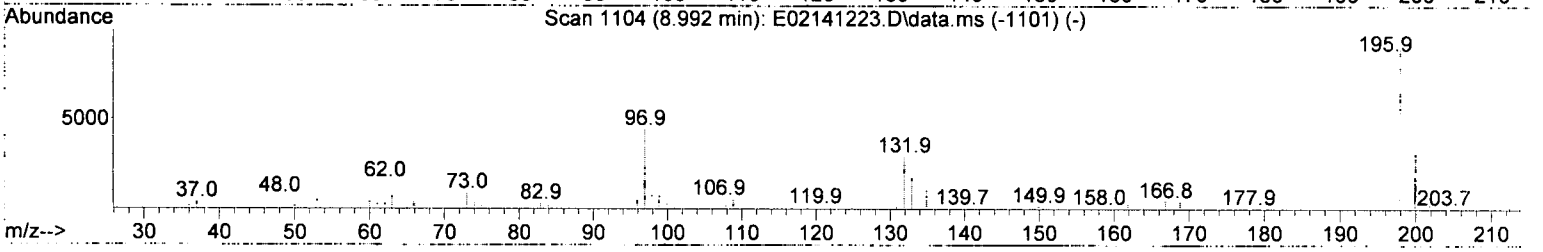
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121917.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 45.96 ng/ml

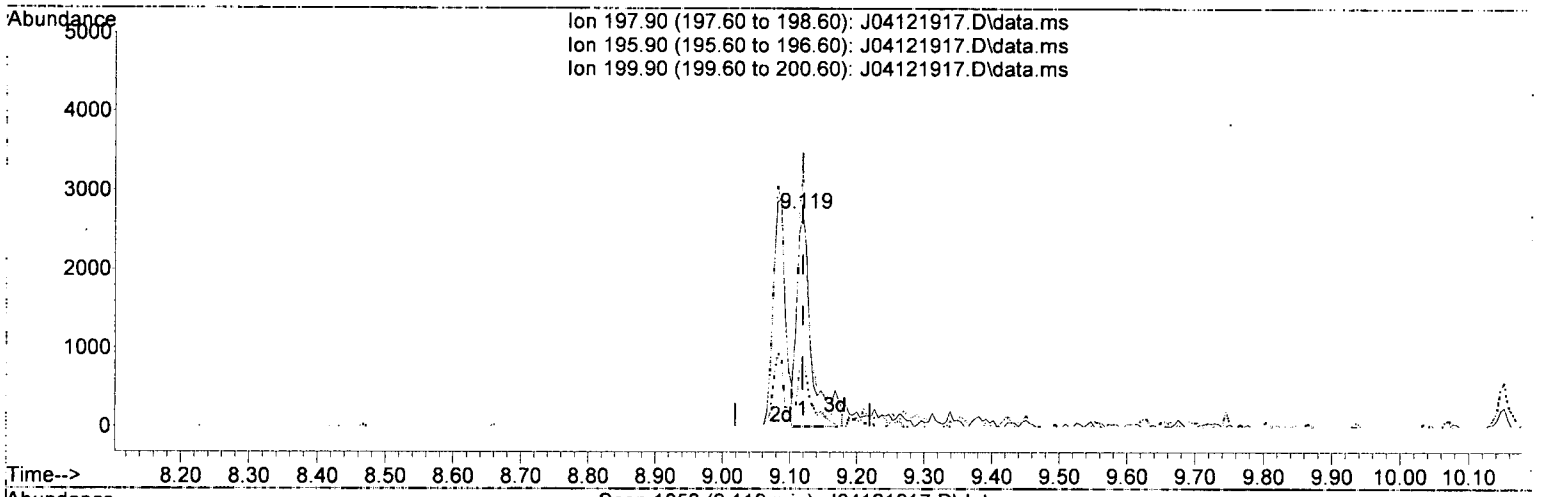
response 3524

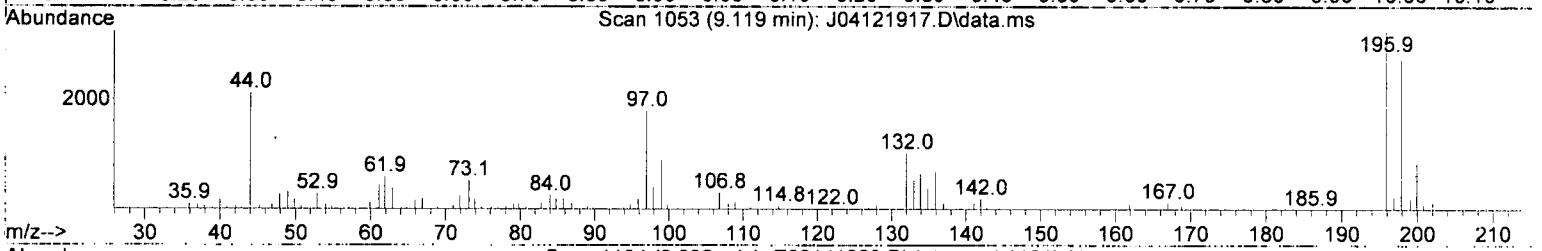
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	118.77
199.90	31.10	31.51
0.00	0.00	0.00

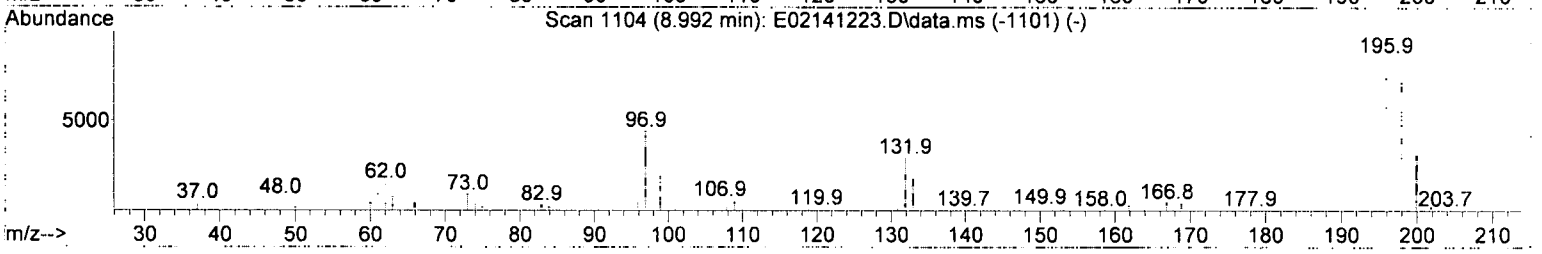
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121917.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 54.87 ng/ml (a)

response 4207

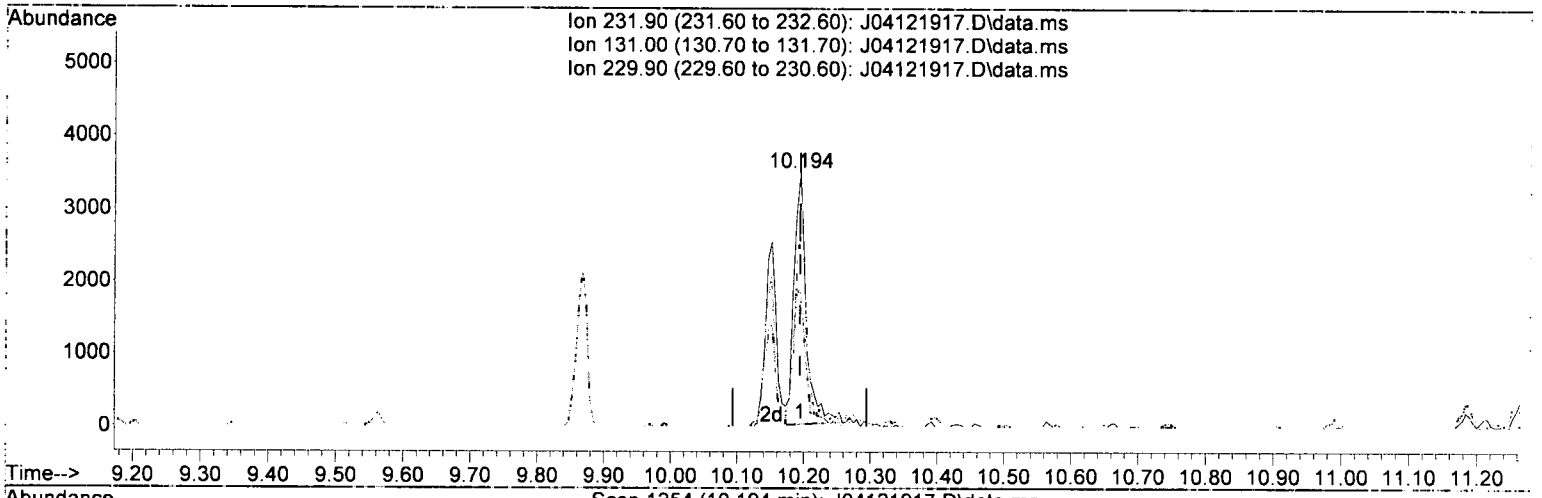
Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	118.77
199.90	31.10	31.51
0.00	0.00	0.00

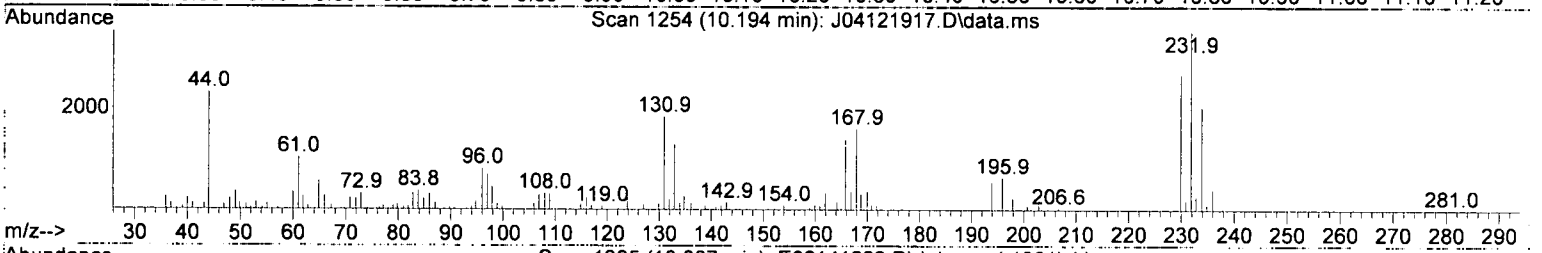
JK 4/15/19

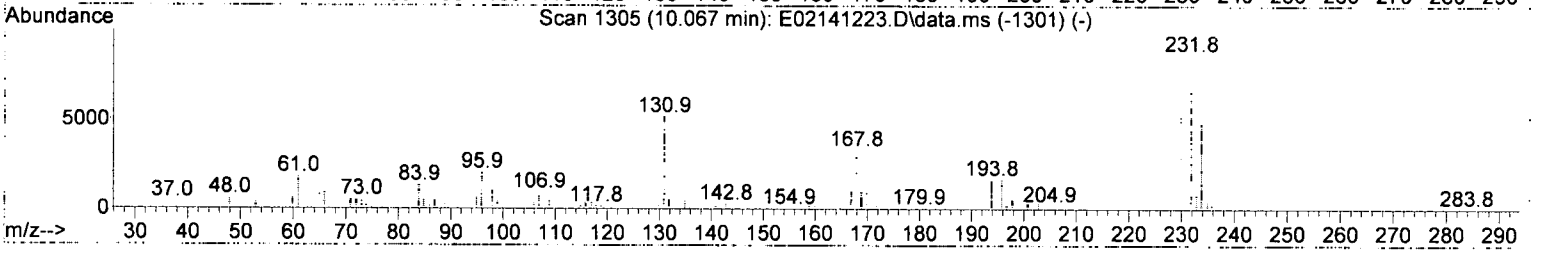
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121917.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 70.37 ng/ml

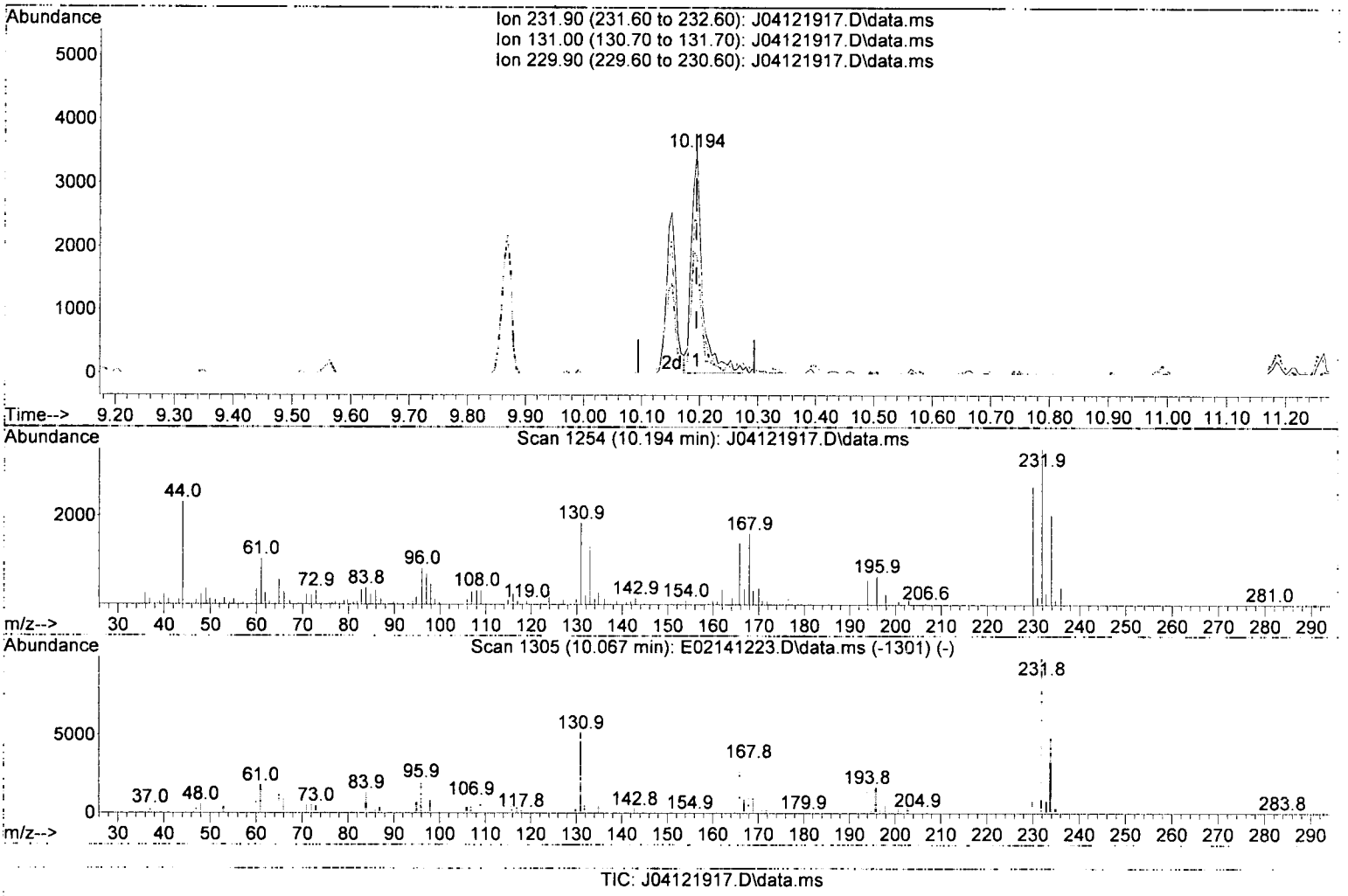
response 4469

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	52.42
229.90	78.40	76.01
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121917.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 74.97 ng/ml m

response 4761

Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	52.42
229.90	78.40	76.01
0.00	0.00	0.00

4/19/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121917.D
Acq On : 12 Apr 2019 8:03 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL3
Misc : 1x, A19D055 BNA@100
ALS Vial : 5 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:06 2019
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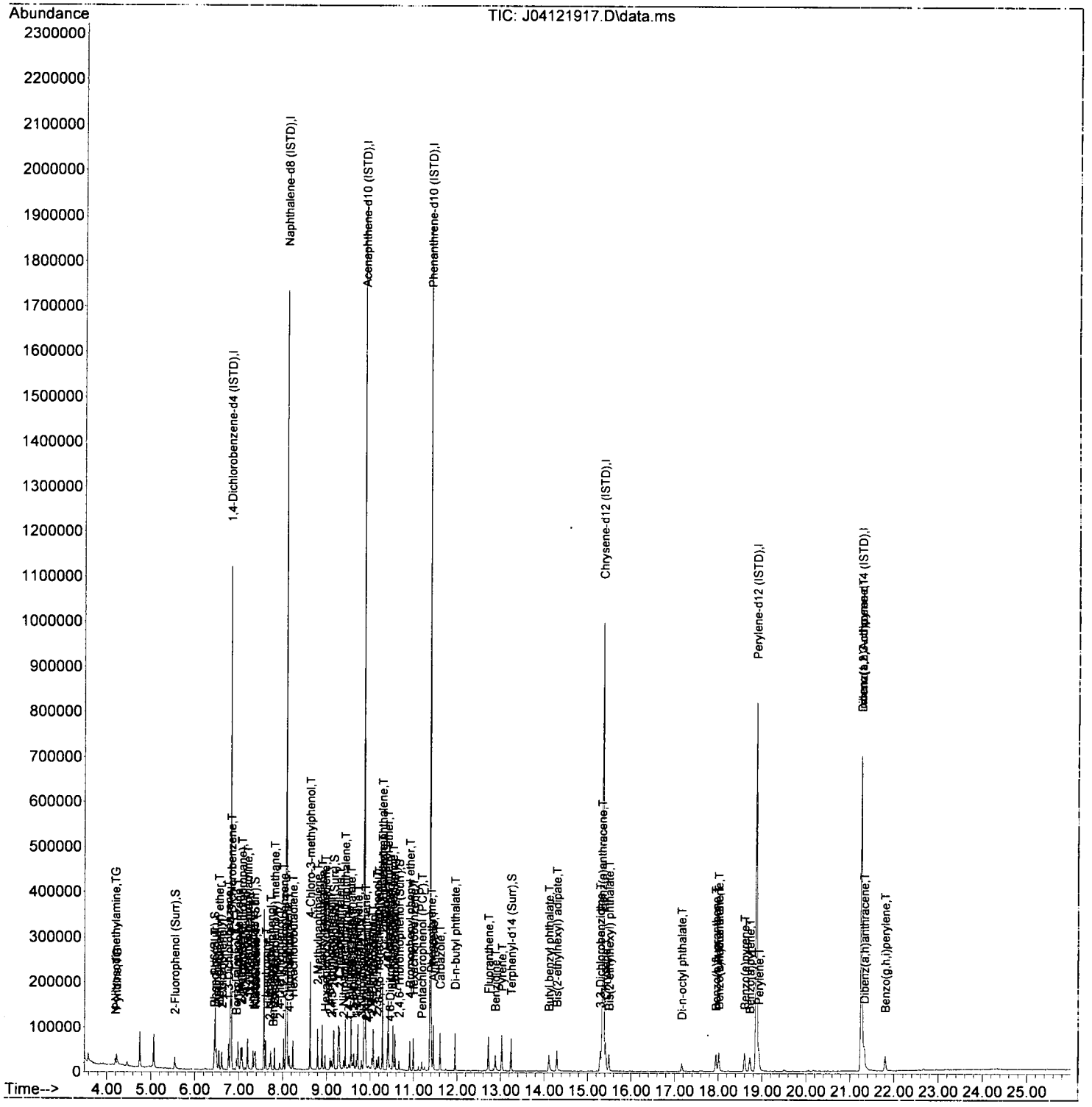


Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

9/19/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	222946	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	907511	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	458269	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	795971	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	745877	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	691727	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	629435	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	28367	180.74	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	34950	167.79	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	29144	162.62	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	71986	210.94	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	7004	153.11	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	72239	195.58	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.198	74	18590	160.85	ng/ml	92
3) Pyridine	4.209	79	35631	193.42	ng/ml	92
6) Phenol	6.450	94	40326	172.18	ng/ml	98
7) Aniline	6.493	93	41636	203.70	ng/ml	93
8) Bis(2-chloroethyl) ether	6.546	93	38143	220.16	ng/ml	99
9) 2-Chlorophenol	6.605	128	29959	182.66	ng/ml	96
10) 1,3-Dichlorobenzene	6.760	146	36684	212.34	ng/ml	98
11) 1,4-Dichlorobenzene	6.824	146	35701	212.17	ng/ml	96
12) Benzyl alcohol	6.942	108	14374	130.54	ng/ml	95
13) 1,2-Dichlorobenzene	6.985	146	36123	218.68	ng/ml	95
14) 2-Methylphenol	7.044	107	22860	177.37	ng/ml	97
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	44983	198.21	ng/ml	92
16) N-Nitrosodi-n-propylamine	7.199	70	25133	197.05	ng/ml	96
17) 3+4-Methylphenol	7.193	107	26267	165.67	ng/ml	97
18) Hexachloroethane	7.322	201	9240	195.16	ng/ml	84
20) Nitrobenzene	7.375	77	31068	177.59	ng/ml	99
22) Isophorone	7.611	82	70389	204.63	ng/ml	98
23) 2-Nitrophenol	7.696	139	10018	112.14	ng/ml	88
24) 2,4-Dimethylphenol	7.723	122	23349	165.99	ng/ml	98
25) Bis(2-chloroethoxy) me...	7.814	93	39106	201.39	ng/ml	96
26) Benzoic acid	7.814	105	384	538.84	ng/ml	93
27) 2,4-Dichlorophenol	7.932	162	14168	125.31	ng/ml	92
28) 1,2,4-Trichlorobenzene	8.023	180	27382	200.53	ng/ml	95
29) Naphthalene	8.103	128	102649	212.05	ng/ml	100
30) 4-Chloroaniline	8.146	127	23535	201.56	ng/ml	98
31) Hexachlorobutadiene	8.231	225	14260	197.98	ng/ml	96
32) 4-Chloro-3-methylphenol	8.622	107	17148	125.44	ng/ml	98
33) 2-Methylnaphthalene	8.798	142	67852	209.83	ng/ml	97
34) 1-Methylnaphthalene	8.900	142	66438	213.99	ng/ml	97
36) Hexachlorocyclopentadiene	8.969	237	9648	134.89	ng/ml	99
37) 2,4,6-Trichlorophenol	9.082	196	11339	140.09	ng/ml	99
38) 2,4,5-Trichlorophenol	9.119	198	10174	127.91	ng/ml	97
39) 1,1'-Biphenyl	9.269	154	81722	212.56	ng/ml	99
41) 2-Chloronaphthalene	9.295	162	56267	206.96	ng/ml	95
42) 2-Nitroaniline	9.386	138	10366	110.39	ng/ml	97
43) 2,6-Dimethylnaphthalene	9.429	156	60607	215.87	ng/ml	98

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

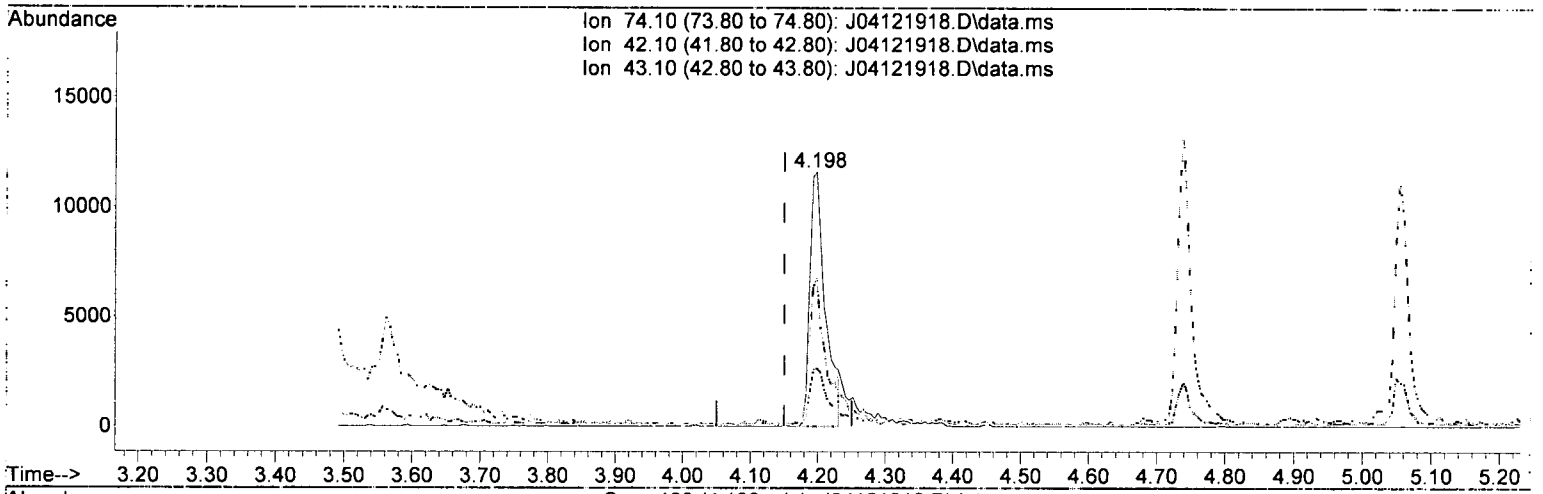
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	9.515	168	2775	64.01	ng/ml	86
45)	Dimethyl phthalate	9.563	163	68197	206.53	ng/ml	97
46)	1,3-Dinitrobenzene	9.595	168	4684	96.88	ng/ml	83
47)	2,6-Dinitrotoluene	9.627	165	11248	157.08	ng/ml	94
48)	1,2-Dinitrobenzene	9.681	168	5007	149.85	ng/ml	90
49)	Acenaphthylene	9.718	152	96629	196.46	ng/ml	99
50)	3-Nitroaniline	9.798	138	11232	169.11	ng/ml	93
51)	Acenaphthene	9.895	153	64550	207.72	ng/ml	99
52)	2,4-Dinitrophenol	9.905	184	631	162.38	ng/ml#	52
53)	4-Nitrophenol	9.959	139	5108	91.80	ng/ml	88
54)	2,4-Dinitrotoluene	10.039	165	11165	124.31	ng/ml	97
55)	Dibenzofuran	10.071	168	85043	213.97	ng/ml	99
56)	2,3,5,6-Tetrachlorophenol	10.151	232	9240	145.70	ng/ml	89
57)	2,3,4,6-Tetrachlorophenol	10.194	232	11552	175.34	ng/ml	89
58)	Diethyl phthalate	10.280	149	68644	211.02	ng/ml	98
59)	2,3,5-Trimethylnaphtha...	10.280	170	55486	214.09	ng/ml	99
60)	Fluorene	10.419	166	68196	217.15	ng/ml	99
61)	4-Chlorophenyl phenyl ...	10.408	204	29693	207.85	ng/ml	96
62)	4-Nitroaniline	10.419	138	11137	181.96	ng/ml	96
63)	4,6-Dinitro-2-methylph...	10.456	198	2085	114.28	ng/ml	93
65)	N-Nitrosodiphenylamine	10.526	169	55332	207.08	ng/ml	99
66)	Azobenzene (1,2-DPH)	10.568	77	74635	210.19	ng/ml	95
68)	4-Bromophenyl phenyl e...	10.911	248	17137	193.88	ng/ml	98
69)	Hexachlorobenzene	10.991	284	19743	196.98	ng/ml	95
70)	Pentachlorophenol (PCP)	11.184	266	7672	203.24	ng/ml	97
71)	Phenanthrene	11.403	178	95305	214.48	ng/ml	99
72)	Anthracene	11.451	178	94023	209.92	ng/ml	98
73)	Carbazole	11.606	167	80323	213.71	ng/ml	98
74)	Di-n-butyl phthalate	11.948	149	102422	166.02	ng/ml	98
75)	Fluoranthene	12.719	202	96117	196.29	ng/ml	98
76)	Benzidine	12.874	184	43225	487.30	ng/ml	97
77)	Pyrene	13.029	202	98204	194.79	ng/ml	98
80)	Butyl benzyl phthalate	14.109	149	33181	130.86	ng/ml	97
81)	Bis(2-ethylhexyl) adipate	14.291	129	32652	86.44	ng/ml	99
82)	3,3-Dichlorobenzidine	15.286	252	40983	321.81	ng/ml	94
83)	Benz(a)anthracene	15.329	228	84134	196.01	ng/ml	97
84)	Chrysene	15.409	228	81237	200.60	ng/ml	97
85)	Bis(2-ethylhexyl) phth...	15.489	149	48543	145.33	ng/ml	97
87)	Di-n-octyl phthalate	17.163	149	57618	112.15	ng/ml	99
88)	Benzo(b)fluoranthene	17.944	252	73883	186.28	ng/ml	96
89)	Benzo(k)fluoranthene	18.014	252	77404	207.53	ng/ml	96
90)	Benzo(b+k)fluoranthene	18.014	252	154717	393.88	ng/ml	96
91)	Benzo(e)pyrene	18.602	252	76788	197.50	ng/ml	99
92)	Benzo(a)pyrene	18.720	252	69007	190.52	ng/ml	97
93)	Perylene	18.923	252	76410	207.23	ng/ml	97
95)	Indeno(1,2,3-cd)pyrene	21.260	276	68379	198.17	ng/ml	90
96)	Dibenz(a,h)anthracene	21.325	278	62866	192.17	ng/ml	95
97)	Benzo(g,h,i)perylene	21.801	276	68971	191.73	ng/ml	98

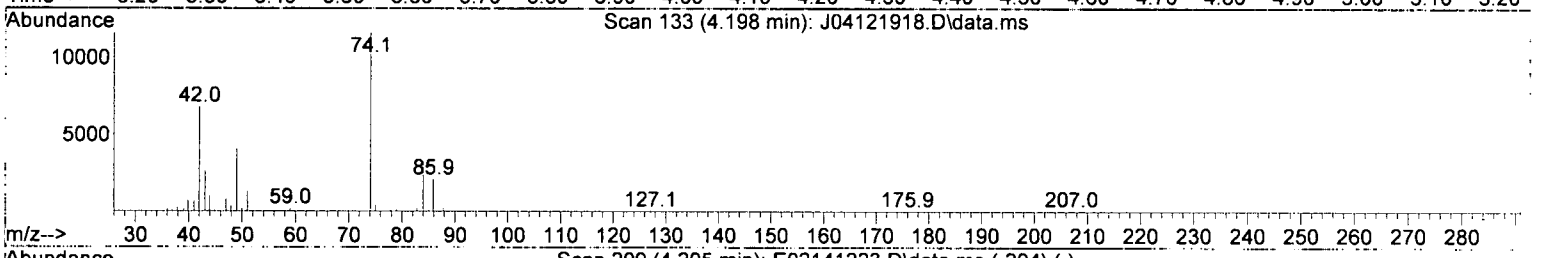
(#) = qualifier out of range (m) = manual integration (+) = signals summed

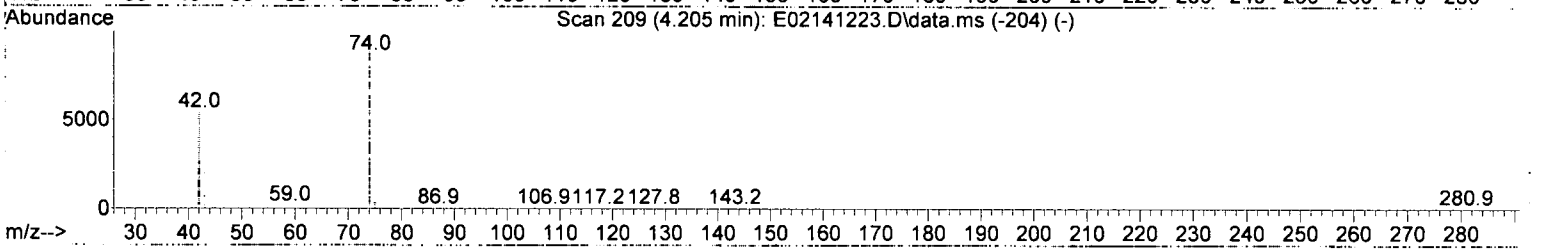
Quantitation Report (Qedit)

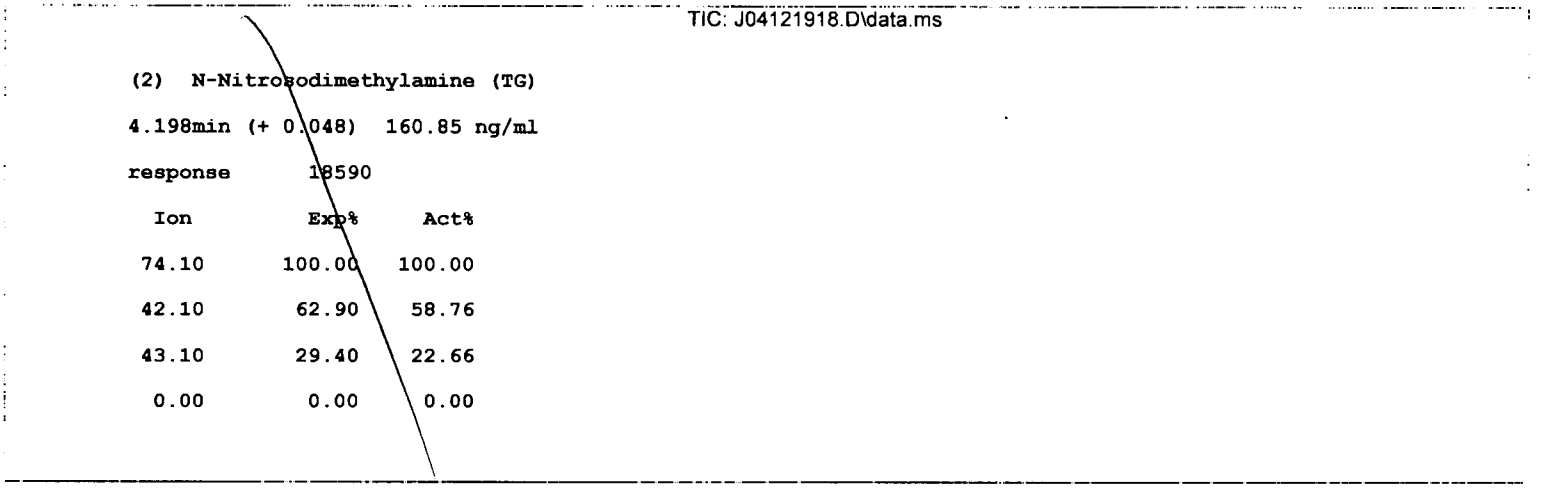
Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10









(2) N-Nitrosodimethylamine (TG)

4.198min (+ 0.048) 160.85 ng/ml

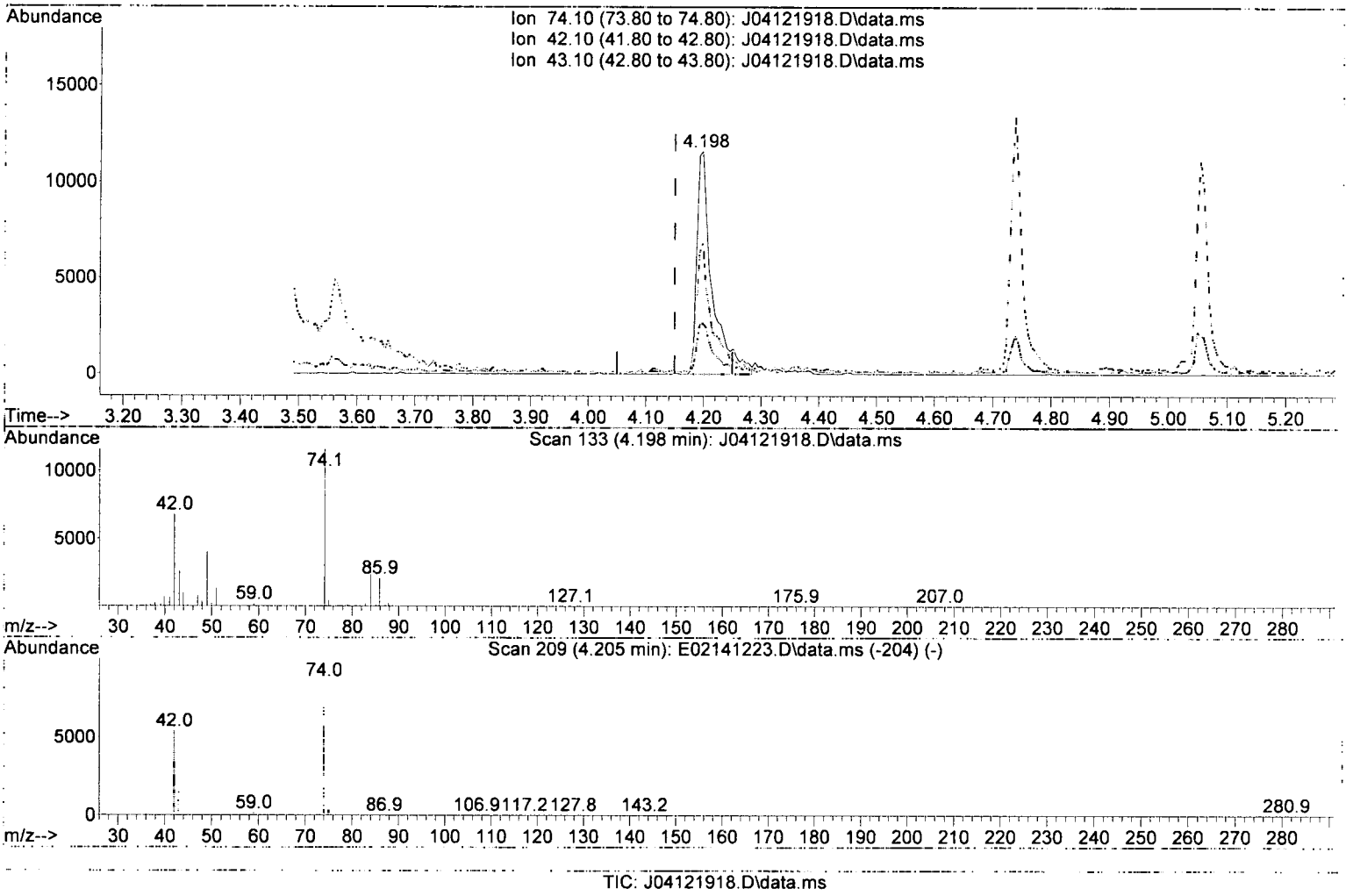
response 18590

Ion	Exp%	Act%
74.10	100.00	100.00
42.10	62.90	58.76
43.10	29.40	22.66
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121918.D\data.ms

(2) N-Nitrosodimethylamine (TG)

4.198min (+ 0.048) 187.68 ng/ml m

response 21690

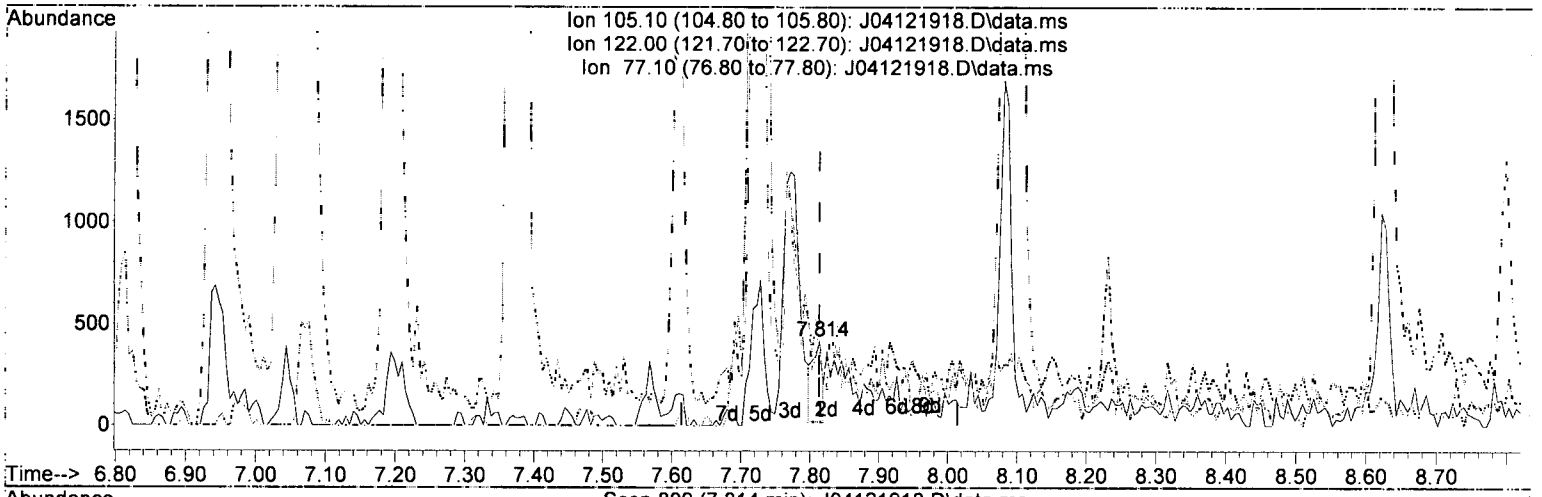
Ion	Exp%	Act%
74.10	100.00	100.00
42.10	62.90	58.76
43.10	29.40	22.66
0.00	0.00	0.00

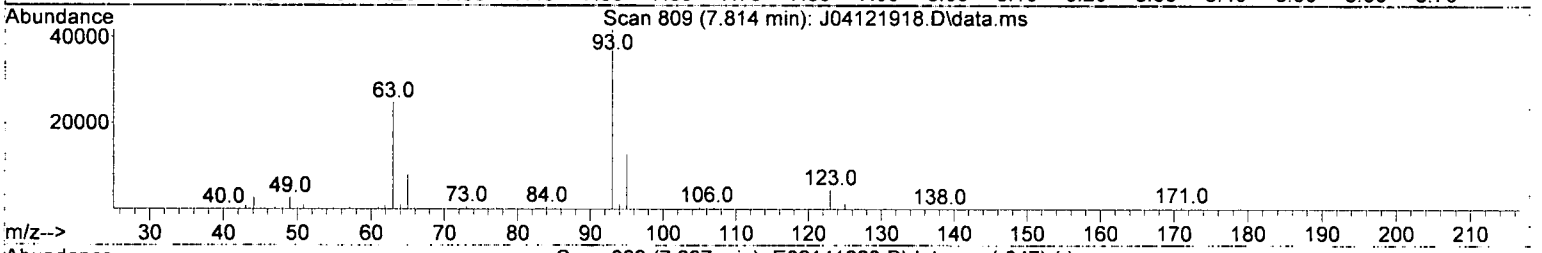
4/15/19

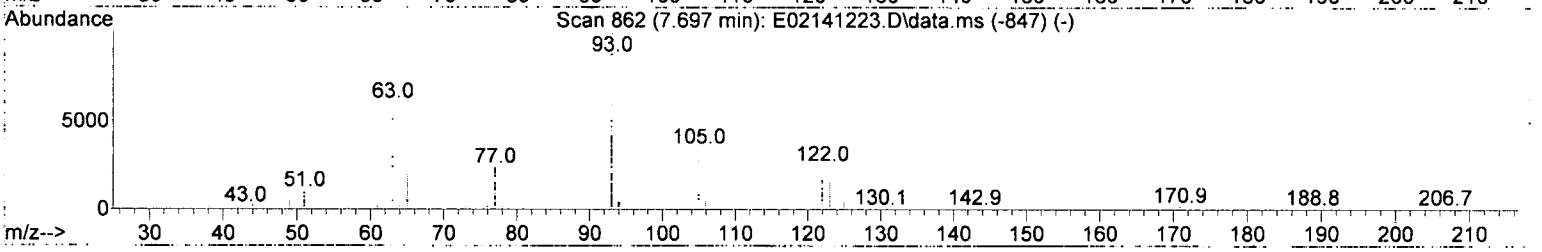
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121918.D\data.ms

(26) Benzoic acid (T)

7.814min (+ 0.000) 538.84 ng/ml

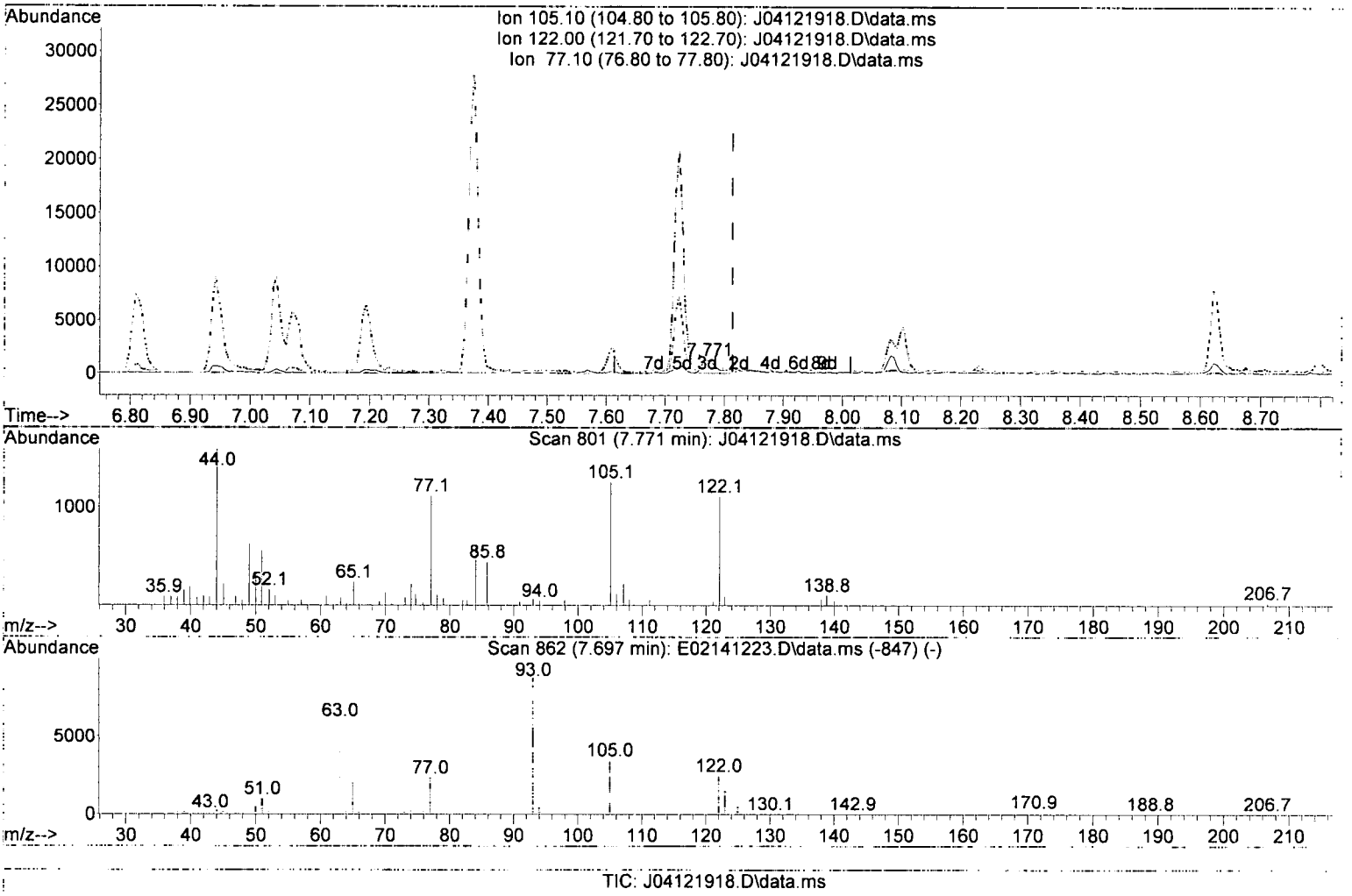
response 384

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	78.90
77.10	76.00	86.09
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121918.D\data.ms

(26) Benzoic acid (T)

7.771min (-0.043) 561.53 ng/ml m

response 2517

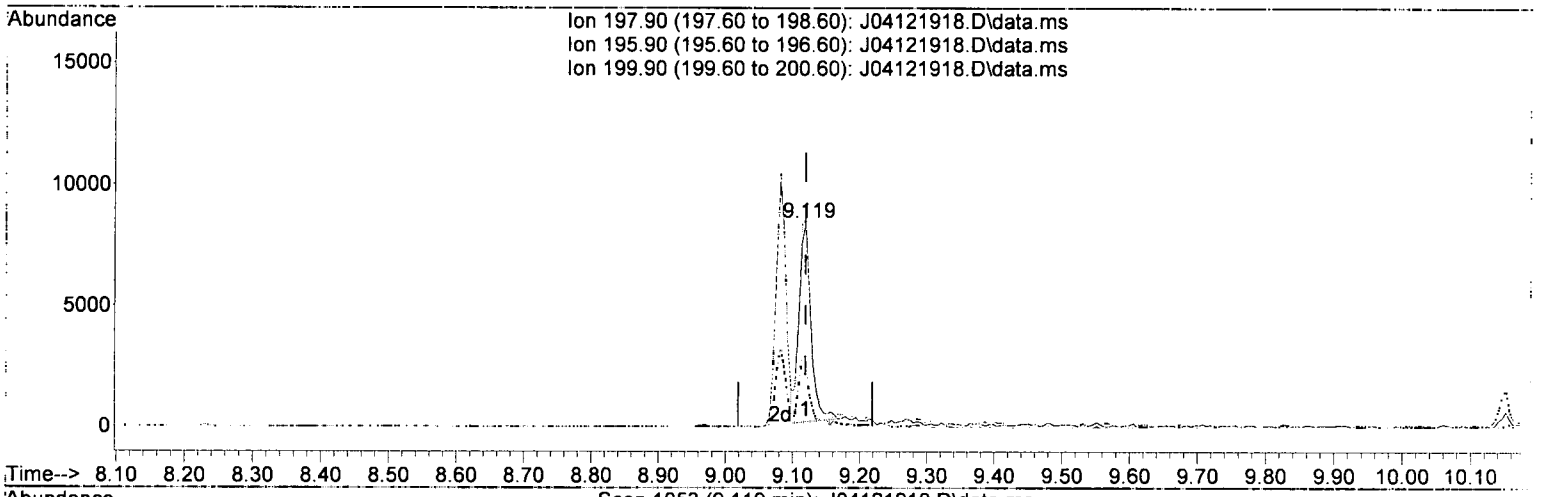
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	88.71
77.10	76.00	88.95
0.00	0.00	0.00

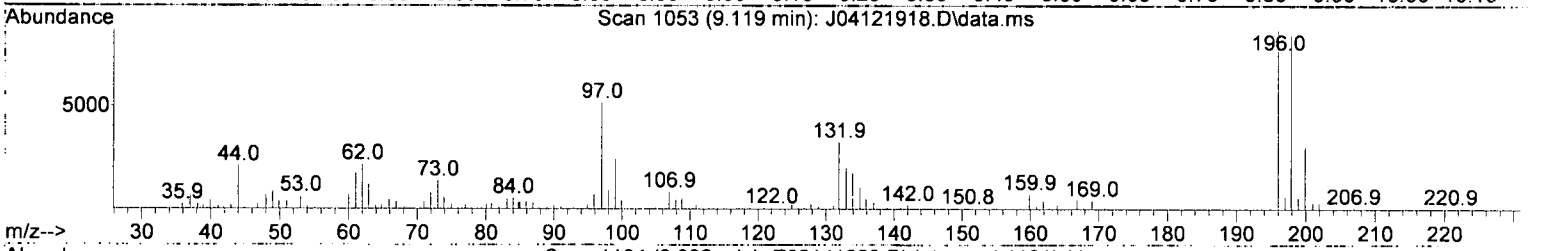
4/15/19

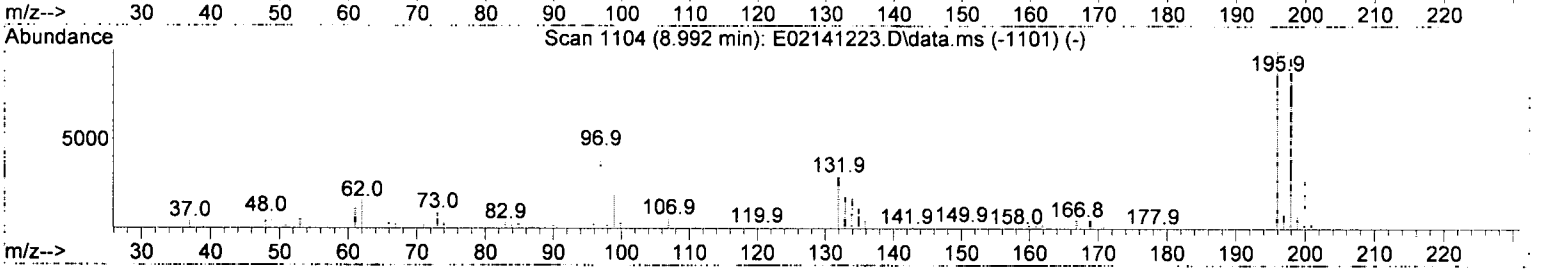
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121918.D\data.ms

(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 127.91 ng/ml

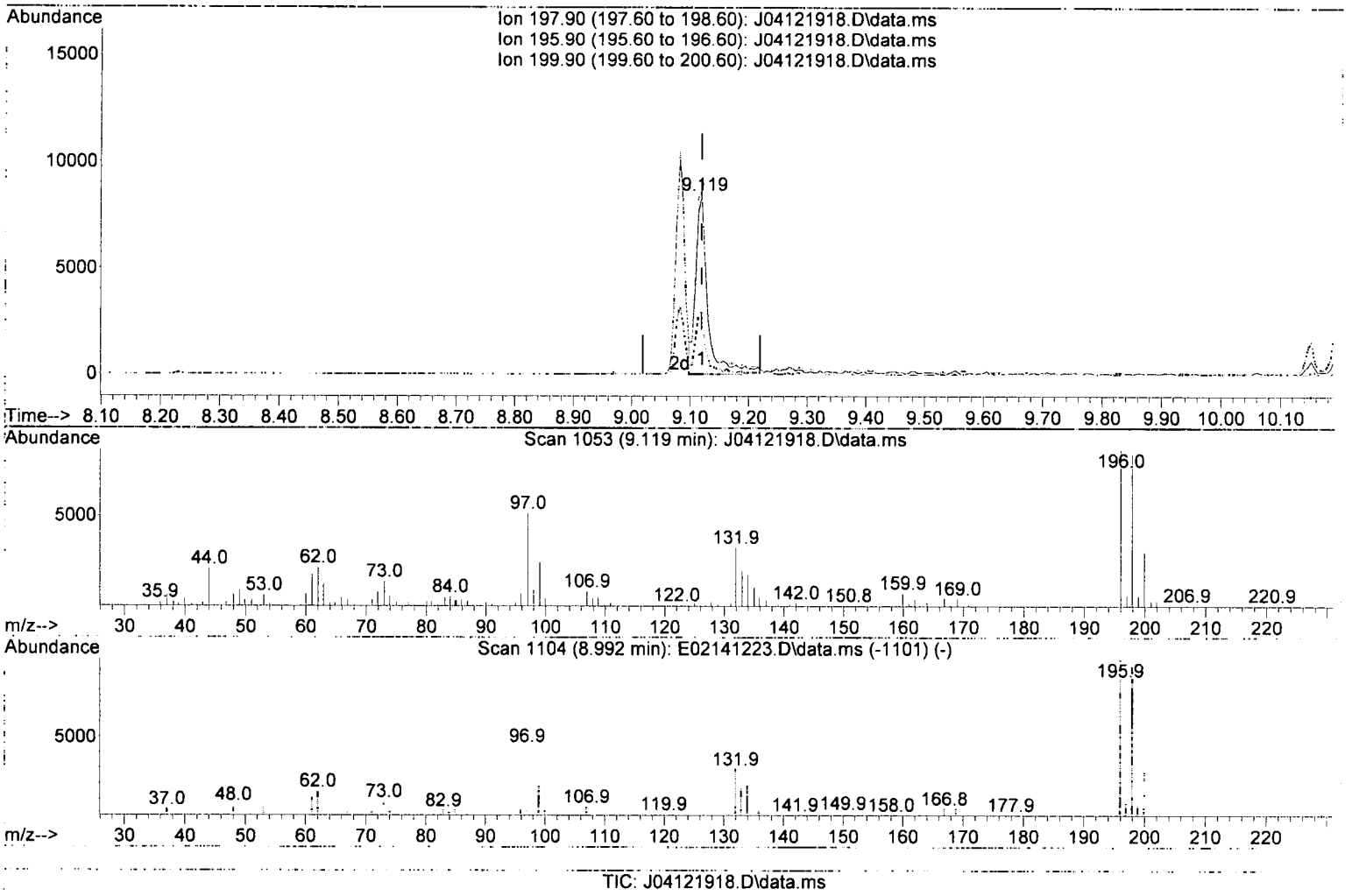
response 10174

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	102.98
199.90	31.10	35.73
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



(38) 2,4,5-Trichlorophenol (T)

9.119min (+ 0.000) 145.31 ng/ml m 4/15/19

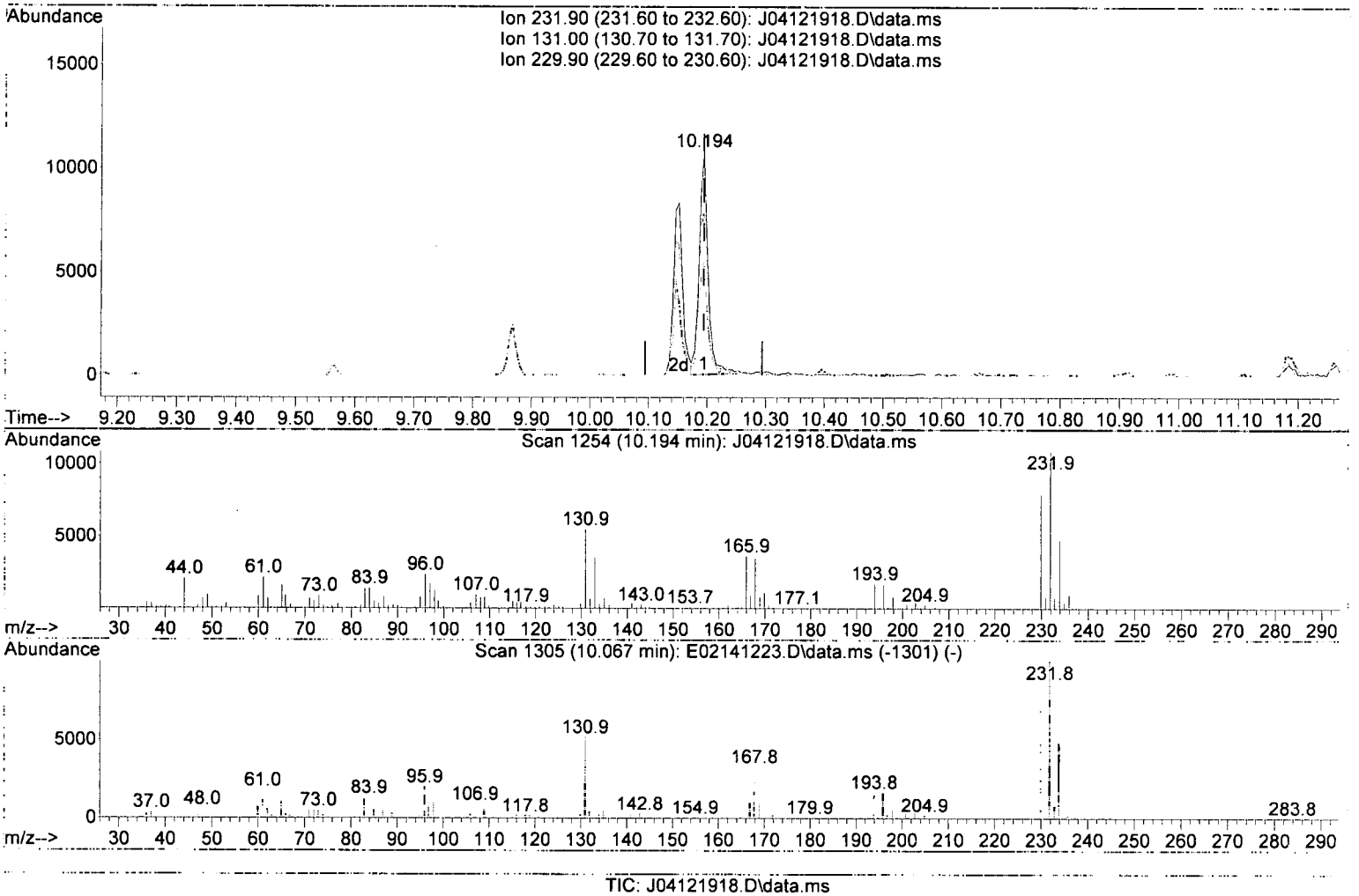
response 11558

Ion	Exp%	Act%
197.90	100.00	100.00
195.90	105.00	102.98
199.90	31.10	35.73
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121918.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 175.34 ng/ml

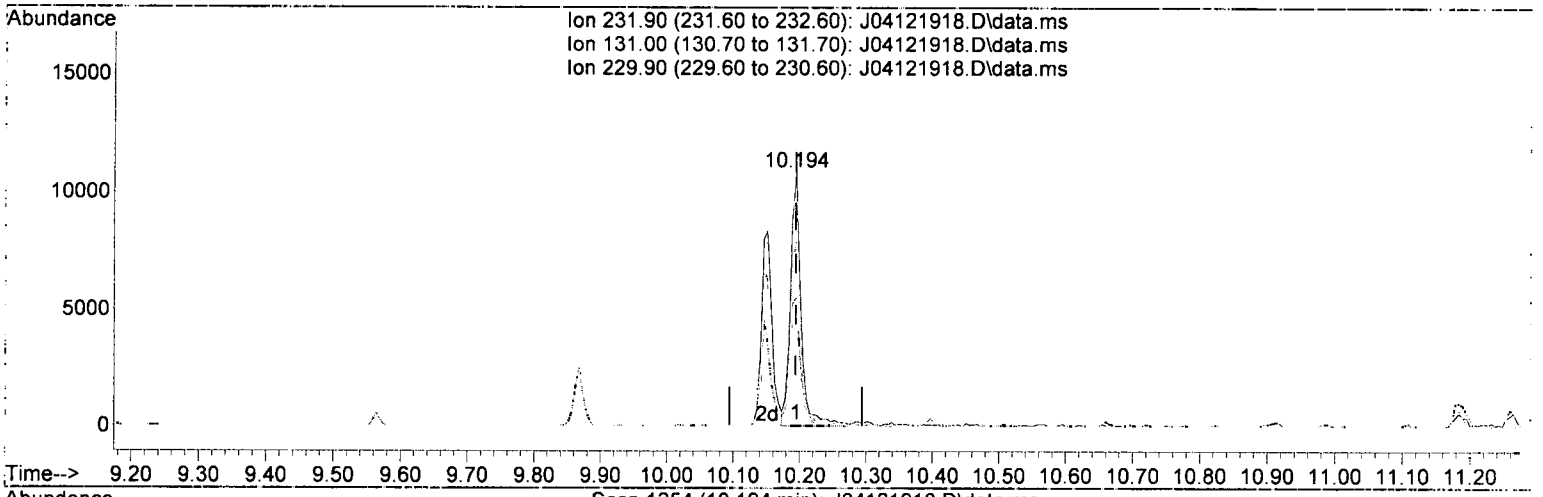
response 11552

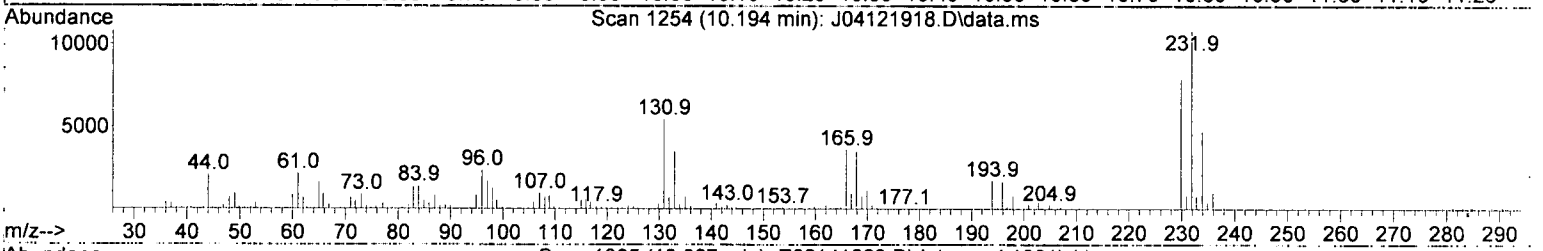
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	50.53
229.90	78.40	72.77
0.00	0.00	0.00

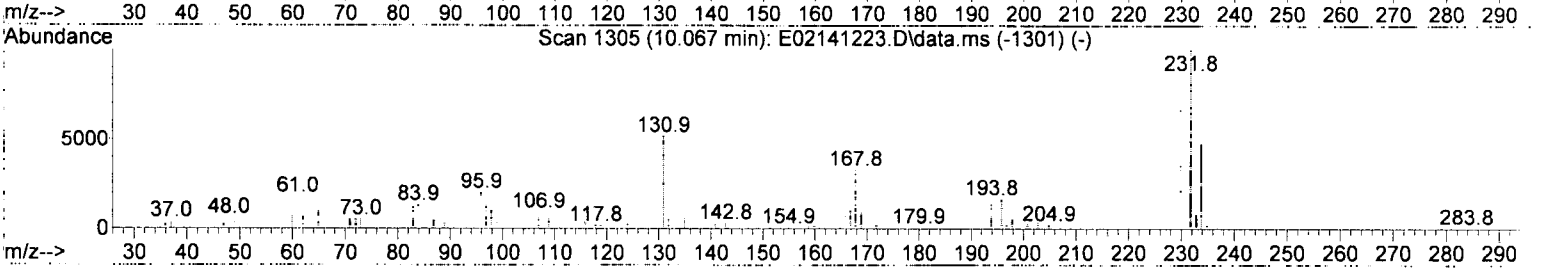
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121918.D\data.ms

(57) 2,3,4,6-Tetrachlorophenol (T)

10.194min (+ 0.000) 182.43 ng/ml m

response 12019

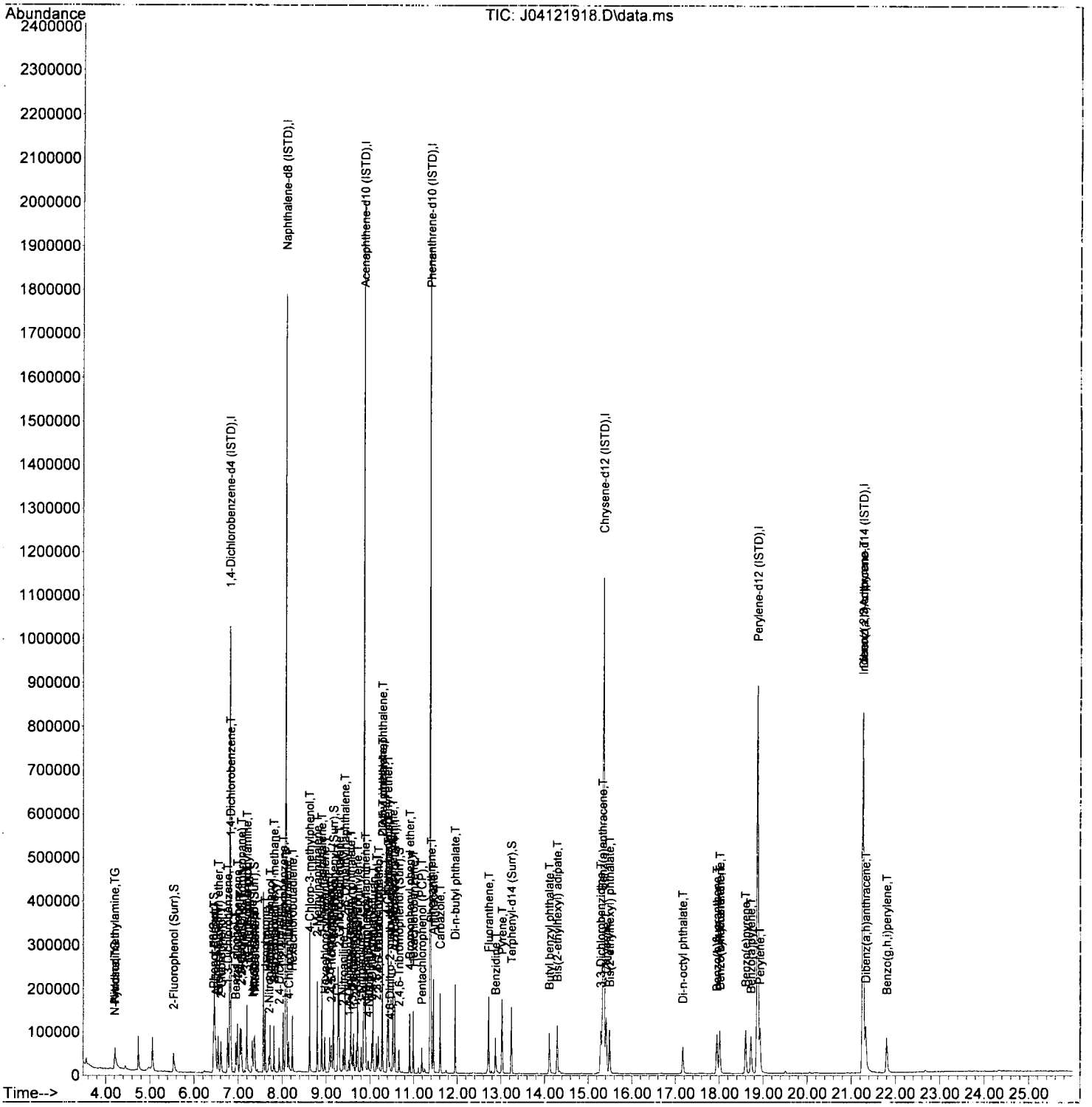
Ion	Exp%	Act%
231.90	100.00	100.00
131.00	63.10	50.53
229.90	78.40	72.77
0.00	0.00	0.00

JK 4/15/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121918.D
Acq On : 12 Apr 2019 8:39 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL4
Misc : 1x, A19D056 BNA@200
ALS Vial : 6 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:11 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121919.D
Acq On : 12 Apr 2019 9:16 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:16 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	217042	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	898567	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.862	162	434239	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	738796	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	671794	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	611227	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	566816	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.530	112	73276	479.58	ng/ml	0.00
5) Phenol-d6(Surr)	6.434	99	92867	457.98	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	77263	442.84	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	177018	547.41	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	17282	407.03	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	169985	510.97	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.155	74	53776	477.96	ng/ml	95
3) Pyridine	4.177	79	87366	487.15	ng/ml	92
6) Phenol	6.450	94	105308	461.87	ng/ml	99
7) Aniline	6.487	93	106597	535.71	ng/ml	97
8) Bis(2-chloroethyl) ether	6.541	93	96650	573.04	ng/ml	99
9) 2-Chlorophenol	6.605	128	78427	491.19	ng/ml	96
10) 1,3-Dichlorobenzene	6.755	146	88880	528.47	ng/ml	98
11) 1,4-Dichlorobenzene	6.824	146	87396	533.51	ng/ml	98
12) Benzyl alcohol	6.937	108	38189	356.25	ng/ml	94
13) 1,2-Dichlorobenzene	6.979	146	87063	541.39	ng/ml	97
14) 2-Methylphenol	7.044	107	61181	487.62	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	112928	511.15	ng/ml	91
16) N-Nitrosodi-n-propylamine	7.199	70	67493	543.56	ng/ml	99
17) 3+4-Methylphenol	7.193	107	77098	499.51	ng/ml	97
18) Hexachloroethane	7.322	201	23400	507.68	ng/ml	96
20) Nitrobenzene	7.375	77	80603	473.27	ng/ml	98
22) Isophorone	7.605	82	179496	527.00	ng/ml	100
23) 2-Nitrophenol	7.696	139	30957	349.98	ng/ml	95
24) 2,4-Dimethylphenol	7.723	122	69085	496.01	ng/ml	97
25) Bis(2-chloroethoxy) me...	7.814	93	99782	518.97	ng/ml	99
26) Benzoic acid	7.787	105	23976	791.78	ng/ml	98
27) 2,4-Dichlorophenol	7.931	162	50336	449.64	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.022	180	68791	508.81	ng/ml	98
29) Naphthalene	8.103	128	257687	537.62	ng/ml	99
30) 4-Chloroaniline	8.145	127	75620	654.08	ng/ml	95
31) Hexachlorobutadiene	8.231	225	35545	498.41	ng/ml	95
32) 4-Chloro-3-methylphenol	8.621	107	61878	457.14	ng/ml	97
33) 2-Methylnaphthalene	8.798	142	173683	542.45	ng/ml	98
34) 1-Methylnaphthalene	8.900	142	168058	546.68	ng/ml	97
36) Hexachlorocyclopentadiene	8.969	237	28477	420.18	ng/ml	99
37) 2,4,6-Trichlorophenol	9.081	196	35536	463.35	ng/ml	97
38) 2,4,5-Trichlorophenol	9.114	198	34165	453.29	ng/ml	99
39) 1,1'-Biphenyl	9.269	154	202383	555.54	ng/ml	99
41) 2-Chloronaphthalene	9.295	162	143842	558.35	ng/ml	98
42) 2-Nitroaniline	9.386	138	37427	420.62	ng/ml	98
43) 2,6-Dimethylnaphthalene	9.429	156	147706	555.20	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121919.D
Acq On : 12 Apr 2019 9:16 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:16 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

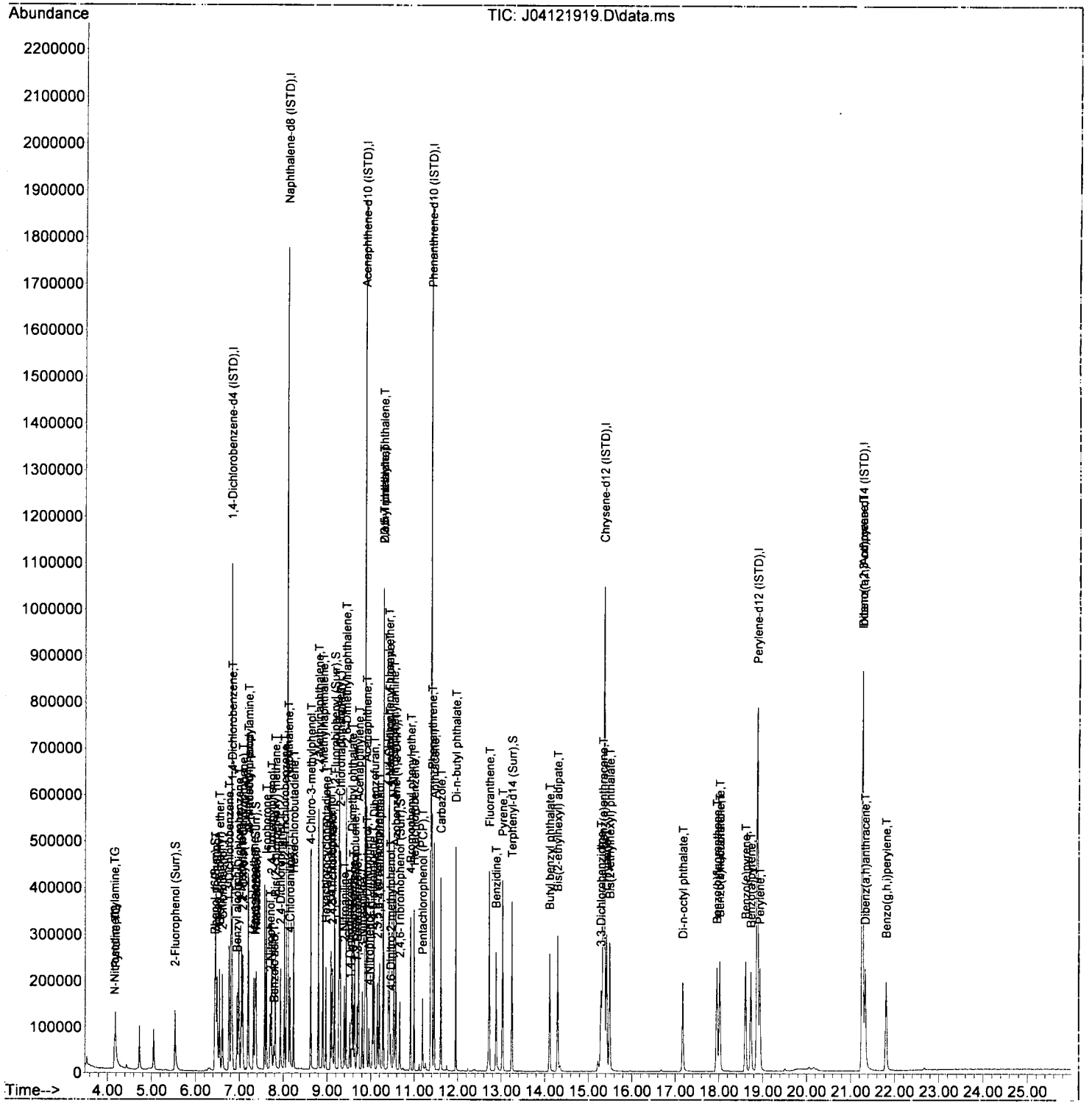
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	10966	266.95	ng/ml	96
45) Dimethyl phthalate	9.568	163	166367	531.71	ng/ml	98
46) 1,3-Dinitrobenzene	9.595	168	16599	362.32	ng/ml	87
47) 2,6-Dinitrotoluene	9.627	165	31238	460.37	ng/ml	95
48) 1,2-Dinitrobenzene	9.686	168	14052	443.83	ng/ml	96
49) Acenaphthylene	9.718	152	239738	514.40	ng/ml	99
50) 3-Nitroaniline	9.804	138	31835	510.70	ng/ml	98
51) Acenaphthene	9.894	153	152764	518.80	ng/ml	99
52) 2,4-Dinitrophenol	9.905	184	3186	255.57	ng/ml	88
53) 4-Nitrophenol	9.959	139	16667	316.12	ng/ml	97
54) 2,4-Dinitrotoluene	10.039	165	34132	401.04	ng/ml	93
55) Dibenzofuran	10.071	168	203340	539.93	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	26249	436.81	ng/ml	89
57) 2,3,4,6-Tetrachlorophenol	10.194	232	29885	478.70	ng/ml	91
58) Diethyl phthalate	10.280	149	165131	535.73	ng/ml	99
59) 2,3,5-Trimethylnaphtha...	10.280	170	130703	532.22	ng/ml	98
60) Fluorene	10.419	166	160999	541.02	ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.408	204	70419	520.22	ng/ml	99
62) 4-Nitroaniline	10.424	138	27588	475.69	ng/ml	93
63) 4,6-Dinitro-2-methylph...	10.456	198	7777	266.49	ng/ml	96
65) N-Nitrosodiphenylamine	10.526	169	133109	536.71	ng/ml	98
66) Azobenzene (1,2-DPH)	10.568	77	177851	539.63	ng/ml	96
68) 4-Bromophenyl phenyl e...	10.911	248	40555	494.33	ng/ml	96
69) Hexachlorobenzene	10.991	284	46685	501.82	ng/ml	96
70) Pentachlorophenol (PCP)	11.183	266	18590	449.47	ng/ml	95
71) Phenanthrene	11.403	178	217396	527.11	ng/ml	99
72) Anthracene	11.456	178	221004	531.60	ng/ml	99
73) Carbazole	11.606	167	187353	581.37	ng/ml	98
74) Di-n-butyl phthalate	11.948	149	254292	473.52	ng/ml	99
75) Fluoranthene	12.719	202	228649	503.09	ng/ml	99
76) Benzidine	12.874	184	133741	1511.70	ng/ml	98
77) Pyrene	13.029	202	236036	504.41	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	94315	412.99	ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.291	129	89139	395.05	ng/ml	97
82) 3,3-Dichlorobenzidine	15.286	252	74081	895.49	ng/ml	97
83) Benz(a)anthracene	15.329	228	193655	500.91	ng/ml	99
84) Chrysene	15.414	228	184149	504.87	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.489	149	135678	451.00	ng/ml	98
87) Di-n-octyl phthalate	17.169	149	179707	395.85	ng/ml	97
88) Benzo(b)fluoranthene	17.950	252	182995	522.16	ng/ml	95
89) Benzo(k)fluoranthene	18.014	252	185113	561.68	ng/ml	98
90) Benzo(b+k)fluoranthene	18.014	252	376051	1083.43	ng/ml	98
91) Benzo(e)pyrene	18.607	252	185968	541.30	ng/ml	98
92) Benzo(a)pyrene	18.725	252	167492	523.32	ng/ml	97
93) Perylene	18.928	252	164210	503.99	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.260	276	156537	503.78	ng/ml	94
96) Dibenz(a,h)anthracene	21.324	278	147780	501.64	ng/ml	97
97) Benzo(g,h,i)perylene	21.806	276	166477	513.91	ng/ml	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121919.D
Acq On : 12 Apr 2019 9:16 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL5
Misc : 1x, A19D057 BNA@500
ALS Vial : 7 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:16 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121920.D
Acq On : 12 Apr 2019 9:52 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:21 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	207595	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	870566	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.868	162	408985	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	701196	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.355	240	609064	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	550560	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	510954	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	141127	965.69	ng/ml	0.00
5) Phenol-d6(Surr)	6.434	99	182856	942.79	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	153864	922.01	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	318318	1045.15	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	34203	848.76	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	302416	1002.69	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.150	74	104701	972.93	ng/ml	95
3) Pyridine	4.177	79	177059	1032.21	ng/ml	91
6) Phenol	6.450	94	183416	841.06	ng/ml	95
7) Aniline	6.487	93	224184	1177.92	ng/ml	96
8) Bis(2-chloroethyl) ether	6.541	93	176845	1096.24	ng/ml	97
9) 2-Chlorophenol	6.605	128	154232	1009.91	ng/ml	94
10) 1,3-Dichlorobenzene	6.755	146	162324	1009.08	ng/ml	97
11) 1,4-Dichlorobenzene	6.830	146	158903	1014.17	ng/ml	100
12) Benzyl alcohol	6.937	108	86489	843.54	ng/ml	92
13) 1,2-Dichlorobenzene	6.979	146	158706	1031.80	ng/ml	98
14) 2-Methylphenol	7.044	107	123097	1025.74	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	207984	984.24	ng/ml	92
16) N-Nitrosodi-n-propylamine	7.199	70	126521	1065.32	ng/ml	99
17) 3+4-Methylphenol	7.193	107	154518	1046.66	ng/ml	98
18) Hexachloroethane	7.322	201	42742	969.53	ng/ml	95
20) Nitrobenzene	7.375	77	159222	977.44	ng/ml	96
22) Isophorone	7.605	82	336596	1020.04	ng/ml	100
23) 2-Nitrophenol	7.696	139	70238	819.60	ng/ml	94
24) 2,4-Dimethylphenol	7.723	122	137294	1017.44	ng/ml	98
25) Bis(2-chloroethoxy) me...	7.814	93	191279	1026.85	ng/ml	99
26) Benzoic acid	7.814	105	96370	1592.13	ng/ml	98
27) 2,4-Dichlorophenol	7.931	162	106512	982.06	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.022	180	129034	985.09	ng/ml	99
29) Naphthalene	8.103	128	475302	1023.54	ng/ml	99
30) 4-Chloroaniline	8.145	127	151775	1355.01	ng/ml	98
31) Hexachlorobutadiene	8.231	225	67844	981.90	ng/ml	96
32) 4-Chloro-3-methylphenol	8.621	107	126121	961.72	ng/ml	95
33) 2-Methylnaphthalene	8.798	142	322088	1038.32	ng/ml	98
34) 1-Methylnaphthalene	8.900	142	303908	1020.38	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	59442	931.23	ng/ml	97
37) 2,4,6-Trichlorophenol	9.081	196	69804	966.36	ng/ml	96
38) 2,4,5-Trichlorophenol	9.119	198	69025	972.35	ng/ml	97
39) 1,1'-Biphenyl	9.269	154	365897	1066.41	ng/ml	99
41) 2-Chloronaphthalene	9.295	162	256777	1058.27	ng/ml	97
42) 2-Nitroaniline	9.392	138	74805	892.61	ng/ml	95
43) 2,6-Dimethylnaphthalene	9.429	156	267086	1065.93	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121920.D
Acq On : 12 Apr 2019 9:52 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:21 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

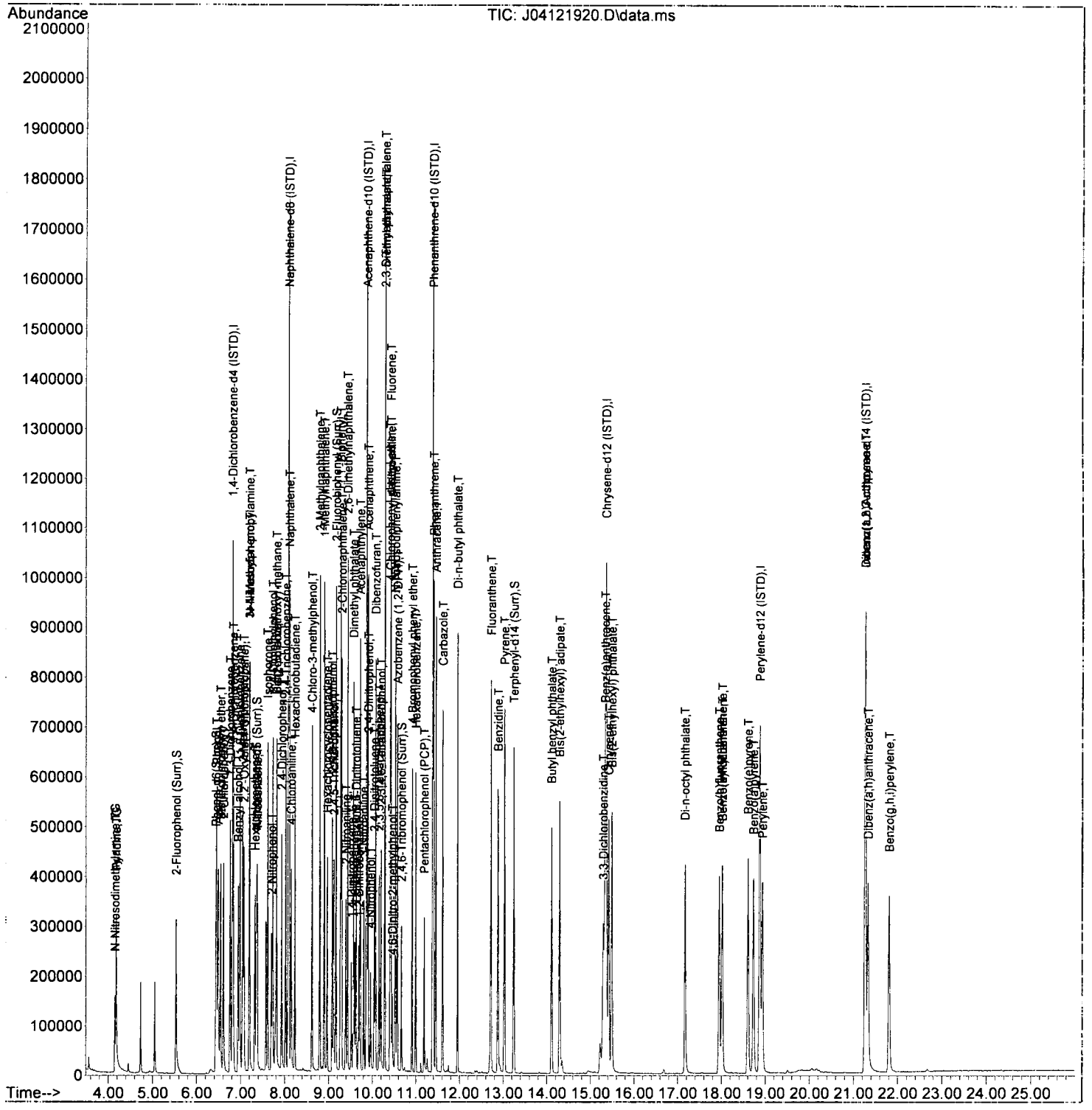
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	24586	635.47	ng/ml	90
45) Dimethyl phthalate	9.568	163	293273	995.18	ng/ml	98
46) 1,3-Dinitrobenzene	9.600	168	33847	784.43	ng/ml	98
47) 2,6-Dinitrotoluene	9.627	165	61642	964.55	ng/ml	98
48) 1,2-Dinitrobenzene	9.691	168	27578	924.83	ng/ml	87
49) Acenaphthylene	9.718	152	438645	999.30	ng/ml	99
50) 3-Nitroaniline	9.803	138	61316	1121.93	ng/ml	96
51) Acenaphthene	9.900	153	274380	989.35	ng/ml	99
52) 2,4-Dinitrophenol	9.905	184	9505	500.16	ng/ml	91
53) 4-Nitrophenol	9.959	139	38661	778.55	ng/ml	92
54) 2,4-Dinitrotoluene	10.039	165	72103	899.50	ng/ml	94
55) Dibenzofuran	10.071	168	357236	1007.14	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	53006	936.53	ng/ml	96
57) 2,3,4,6-Tetrachlorophenol	10.194	232	57975	985.99	ng/ml	94
58) Diethyl phthalate	10.285	149	290221	999.70	ng/ml	98
59) 2,3,5-Trimethylnaphtha...	10.280	170	228198	986.59	ng/ml	94
60) Fluorene	10.419	166	283189	1010.38	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.408	204	127242	998.03	ng/ml	96
62) 4-Nitroaniline	10.424	138	55130	1009.29	ng/ml	95
63) 4,6-Dinitro-2-methylph...	10.461	198	18318	569.15	ng/ml	89
65) N-Nitrosodiphenylamine	10.526	169	233117	990.35	ng/ml	99
66) Azobenzene (1,2-DPH)	10.574	77	317716	1015.71	ng/ml	92
68) 4-Bromophenyl phenyl e...	10.911	248	73569	944.82	ng/ml	96
69) Hexachlorobenzene	10.991	284	85256	965.57	ng/ml	98
70) Pentachlorophenol (PCP)	11.183	266	36665	877.43	ng/ml	97
71) Phenanthrene	11.403	178	396616	1013.22	ng/ml	100
72) Anthracene	11.456	178	394791	1000.55	ng/ml	99
73) Carbazole	11.611	167	340948	1248.96	ng/ml	99
74) Di-n-butyl phthalate	11.948	149	466951	949.24	ng/ml	99
75) Fluoranthene	12.719	202	412285	955.79	ng/ml	98
76) Benzidine	12.879	184	301351	3179.82	ng/ml	96
77) Pyrene	13.029	202	420841	947.56	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	182466	881.28	ng/ml	99
81) Bis(2-ethylhexyl) adipate	14.291	129	172525	913.46	ng/ml	99
82) 3,3-Dichlorobenzidine	15.291	252	125386	1989.57	ng/ml	99
83) Benz(a)anthracene	15.334	228	339038	967.28	ng/ml	99
84) Chrysene	15.414	228	330019	997.98	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.489	149	262635	962.92	ng/ml	97
87) Di-n-octyl phthalate	17.163	149	379612	928.34	ng/ml	98
88) Benzo(b)fluoranthene	17.949	252	328149	1039.52	ng/ml	96
89) Benzo(k)fluoranthene	18.019	252	333411	1123.13	ng/ml	95
90) Benzo(b+k)fluoranthene	18.019	252	674655	2157.92	ng/ml	95
91) Benzo(e)pyrene	18.607	252	331204	1070.27	ng/ml	99
92) Benzo(a)pyrene	18.730	252	305060	1058.17	ng/ml	97
93) Perylene	18.934	252	289485	986.39	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.266	276	278226	993.30	ng/ml	96
96) Dibenz(a,h)anthracene	21.330	278	262242	987.50	ng/ml	93
97) Benzo(g,h,i)perylene	21.811	276	301297	1031.78	ng/ml	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121920.D
Acq On : 12 Apr 2019 9:52 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL6
Misc : 1x, A19D058 BNA@1000
ALS Vial : 8 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:21 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121921.D
Acq On : 12 Apr 2019 10:28 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:26 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	210386	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	872864	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.868	162	422972	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	740336	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.366	240	656807	2000.00	ng/ml	0.01
86) Perylene-d12 (ISTD)	18.880	264	608933	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.271	292	581304	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	292249	1973.23	ng/ml	0.00
5) Phenol-d6(Surr)	6.439	99	384186	1954.56	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.359	82	329613	1948.97	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	622727	1977.02	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.670	330	75759	1780.60	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.248	244	637269	1959.34	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.166	74	208448	1911.30	ng/ml	93
3) Pyridine	4.177	79	358336	2061.29	ng/ml	93
6) Phenol	6.455	94	423399	1915.75	ng/ml	96
7) Aniline	6.487	93	401171	2079.88	ng/ml	96
8) Bis(2-chloroethyl) ether	6.546	93	373313	2283.42	ng/ml	96
9) 2-Chlorophenol	6.610	128	308446	1992.91	ng/ml	93
10) 1,3-Dichlorobenzene	6.760	146	324509	1990.54	ng/ml	97
11) 1,4-Dichlorobenzene	6.830	146	321266	2023.21	ng/ml	99
12) Benzyl alcohol	6.942	108	196023	1886.47	ng/ml	96
13) 1,2-Dichlorobenzene	6.985	146	313391	2010.43	ng/ml	99
14) 2-Methylphenol	7.044	107	248169	2040.51	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.076	45	394994	1844.42	ng/ml	89
16) N-Nitrosodi-n-propylamine	7.204	70	245818	2042.85	ng/ml	99
17) 3+4-Methylphenol	7.193	107	319359	2134.56	ng/ml	99
18) Hexachloroethane	7.322	201	89727	2008.30	ng/ml	99
20) Nitrobenzene	7.375	77	323406	1959.01	ng/ml	99
22) Isophorone	7.611	82	660663	1996.83	ng/ml	99
23) 2-Nitrophenol	7.696	139	144348	1679.95	ng/ml	95
24) 2,4-Dimethylphenol	7.728	122	281937	2083.85	ng/ml	100
25) Bis(2-chloroethoxy) me...	7.819	93	381475	2042.50	ng/ml	99
26) Benzoic acid	7.851	105	293257	3675.18	ng/ml	99
27) 2,4-Dichlorophenol	7.937	162	222208	2043.40	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.022	180	246059	1873.55	ng/ml	98
29) Naphthalene	8.103	128	918583	1972.91	ng/ml	100
30) 4-Chloroaniline	8.151	127	308711	2748.83	ng/ml	98
31) Hexachlorobutadiene	8.231	225	131105	1892.47	ng/ml	99
32) 4-Chloro-3-methylphenol	8.627	107	269479	2049.47	ng/ml	97
33) 2-Methylnaphthalene	8.803	142	633302	2036.20	ng/ml	98
34) 1-Methylnaphthalene	8.905	142	593190	1986.41	ng/ml	99
36) Hexachlorocyclopentadiene	8.969	237	126849	1921.52	ng/ml	98
37) 2,4,6-Trichlorophenol	9.081	196	154065	2062.33	ng/ml	96
38) 2,4,5-Trichlorophenol	9.119	198	144274	1965.17	ng/ml	98
39) 1,1'-Biphenyl	9.269	154	716600	2019.47	ng/ml	100
41) 2-Chloronaphthalene	9.295	162	513880	2047.85	ng/ml	97
42) 2-Nitroaniline	9.392	138	172195	1986.76	ng/ml	96
43) 2,6-Dimethylnaphthalene	9.434	156	523522	2020.26	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121921.D
Acq On : 12 Apr 2019 10:28 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:26 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

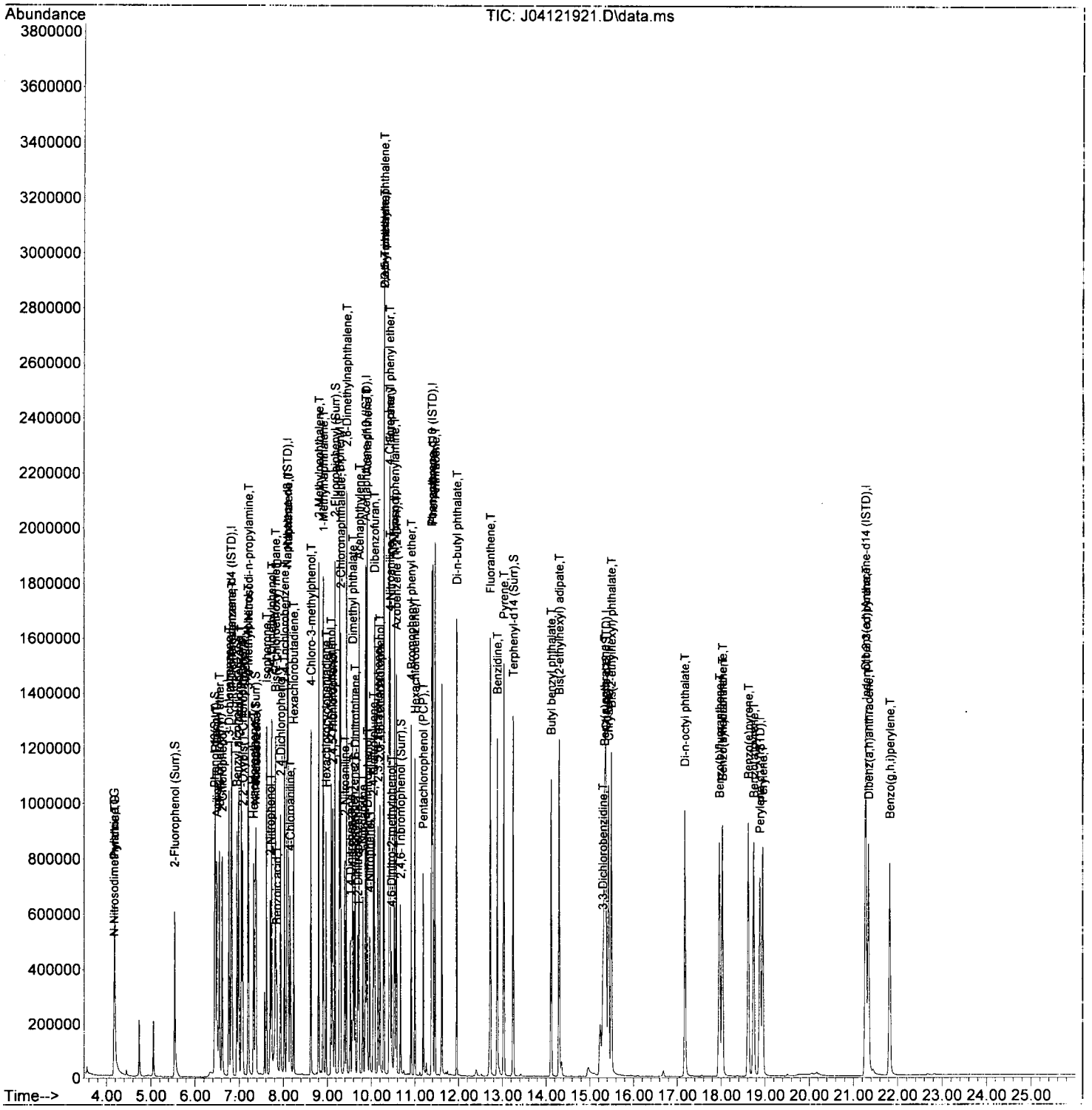
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.520	168	65644	1640.59	ng/ml	95
45) Dimethyl phthalate	9.573	163	593270	1946.60	ng/ml	99
46) 1,3-Dinitrobenzene	9.600	168	81663	1830.02	ng/ml	96
47) 2,6-Dinitrotoluene	9.632	165	130676	1977.14	ng/ml	95
48) 1,2-Dinitrobenzene	9.696	168	58797	1906.56	ng/ml	83
49) Acenaphthylene	9.723	152	847485	1866.85	ng/ml	99
50) 3-Nitroaniline	9.809	138	125110	2923.79	ng/ml	99
51) Acenaphthene	9.900	153	539641	1881.48	ng/ml	99
52) 2,4-Dinitrophenol	9.910	184	29815	1195.29	ng/ml	90
53) 4-Nitrophenol	9.964	139	95687	1863.20	ng/ml	97
54) 2,4-Dinitrotoluene	10.044	165	165775	1999.68	ng/ml	98
55) Dibenzofuran	10.071	168	718481	1958.60	ng/ml	98
56) 2,3,5,6-Tetrachlorophenol	10.151	232	116600	1992.01	ng/ml	96
57) 2,3,4,6-Tetrachlorophenol	10.194	232	124349	2044.88	ng/ml	95
58) Diethyl phthalate	10.285	149	569548	1896.99	ng/ml	99
59) 2,3,5-Trimethylnaphtha...	10.285	170	449654	1879.75	ng/ml	97
60) Fluorene	10.424	166	562191	1939.49	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.413	204	257040	1949.45	ng/ml	98
62) 4-Nitroaniline	10.429	138	116803	2067.65	ng/ml	94
63) 4,6-Dinitro-2-methylph...	10.461	198	52412	1434.08	ng/ml	98
65) N-Nitrosodiphenylamine	10.531	169	470356	1892.57	ng/ml	100
66) Azobenzene (1,2-DPH)	10.574	77	640569	1939.57	ng/ml	92
68) 4-Bromophenyl phenyl e...	10.911	248	152125	1850.40	ng/ml	97
69) Hexachlorobenzene	10.996	284	169660	1819.90	ng/ml	95
70) Pentachlorophenol (PCP)	11.183	266	88610	1928.31	ng/ml	97
71) Phenanthrene	11.408	178	798010	1930.86	ng/ml	99
72) Anthracene	11.456	178	805661	1933.90	ng/ml	99
73) Carbazole	11.611	167	651258	Below Cal		98
74) Di-n-butyl phthalate	11.954	149	975285	1985.06	ng/ml	99
75) Fluoranthene	12.718	202	857707	1883.28	ng/ml	98
76) Benzidine	12.879	184	643196	5527.34	ng/ml	100
77) Pyrene	13.034	202	864674	1843.96	ng/ml	99
80) Butyl benzyl phthalate	14.114	149	421549	1888.00	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.296	129	390927	1971.17	ng/ml	98
82) 3,3-Dichlorobenzidine	15.297	252	194322	3191.28	ng/ml	97
83) Benz(a)anthracene	15.334	228	723880	1915.11	ng/ml	100
84) Chrysene	15.425	228	705299	1977.80	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.489	149	581618	1977.43	ng/ml	99
87) Di-n-octyl phthalate	17.169	149	937211	2072.23	ng/ml	97
88) Benzo(b)fluoranthene	17.960	252	743627	2129.87	ng/ml	97
89) Benzo(k)fluoranthene	18.030	252	719520	2191.44	ng/ml	97
90) Benzo(b+k)fluoranthene	18.030	252	1488733	4305.31	ng/ml	97
91) Benzo(e)pyrene	18.618	252	729599	2131.65	ng/ml	99
92) Benzo(a)pyrene	18.741	252	692390	2171.47	ng/ml	98
93) Perylene	18.944	252	626831	1931.12	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.282	276	633467	1987.86	ng/ml	95
96) Dibenz(a,h)anthracene	21.340	278	618025	2045.60	ng/ml	94
97) Benzo(g,h,i)perylene	21.822	276	672680	2024.78	ng/ml	98

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121921.D
Acq On : 12 Apr 2019 10:28 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL7
Misc : 1x, A19D059 BNA@2000
ALS Vial : 9 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:26 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121922.D
Acq On : 12 Apr 2019 11:04 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:31 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	205518	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.087	136	854691	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.868	162	415395	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	758182	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.372	240	643412	2000.00	ng/ml	0.02
86) Perylene-d12 (ISTD)	18.886	264	604409	2000.00	ng/ml	0.01
94) Dibenz(a,h)Anthrcene-d...	21.287	292	596931	2000.00	ng/ml	0.02
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	601422	4156.92	ng/ml	0.00
5) Phenol-d6(Surr)	6.445	99	778420	4054.04	ng/ml	0.01
19) Nitrobenzene-d5 (Surr)	7.365	82	650463	3937.23	ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.172	172	1129555	3651.49	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.670	330	157542	3615.63	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.248	244	1238678	3887.70	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.172	74	426026	3998.84	ng/ml	90
3) Pyridine	4.177	79	737969	4345.64	ng/ml	94
6) Phenol	6.461	94	846992	3923.16	ng/ml	97
7) Aniline	6.493	93	764336	4056.59	ng/ml	98
8) Bis(2-chloroethyl) ether	6.552	93	730472	4573.86	ng/ml	96
9) 2-Chlorophenol	6.611	128	607949	4021.08	ng/ml	94
10) 1,3-Dichlorobenzene	6.760	146	625796	3929.56	ng/ml	98
11) 1,4-Dichlorobenzene	6.830	146	609817	3931.36	ng/ml	99
12) Benzyl alcohol	6.947	108	417822	4116.25	ng/ml	92
13) 1,2-Dichlorobenzene	6.985	146	590567	3878.27	ng/ml	98
14) 2-Methylphenol	7.049	107	490045	4124.71	ng/ml	98
15) 2,2'-Oxybis(1-Chloropr...	7.076	45	731830	3498.22	ng/ml	88
16) N-Nitrosodi-n-propylamine	7.215	70	453288	3855.30	ng/ml	96
17) 3+4-Methylphenol	7.204	107	622867	4261.78	ng/ml	97
18) Hexachloroethane	7.322	201	177511	4067.21	ng/ml	97
20) Nitrobenzene	7.381	77	629792	3905.28	ng/ml	97
22) Isophorone	7.621	82	1289086	3979.06	ng/ml	97
23) 2-Nitrophenol	7.696	139	303901	3612.06	ng/ml	93
24) 2,4-Dimethylphenol	7.734	122	523529	3951.77	ng/ml	100
25) Bis(2-chloroethoxy) me...	7.825	93	734704	4017.41	ng/ml	99
26) Benzoic acid	7.900	105	750898	8368.75	ng/ml	99
27) 2,4-Dichlorophenol	7.942	162	440368	4135.68	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.028	180	468931	3646.47	ng/ml	98
29) Naphthalene	8.108	128	1661053	3643.43	ng/ml	97
30) 4-Chloroaniline	8.151	127	625745	5690.25	ng/ml	98
31) Hexachlorobutadiene	8.231	225	243190	3585.02	ng/ml	98
32) 4-Chloro-3-methylphenol	8.627	107	543982	4225.11	ng/ml	95
33) 2-Methylnaphthalene	8.803	142	1165928	3828.42	ng/ml	98
34) 1-Methylnaphthalene	8.905	142	1095549	3746.66	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	258289	3983.95	ng/ml	97
37) 2,4,6-Trichlorophenol	9.087	196	304939	4156.41	ng/ml	98
38) 2,4,5-Trichlorophenol	9.119	198	298945	4146.28	ng/ml	99
39) 1,1'-Biphenyl	9.274	154	1284403	3685.63	ng/ml	99
41) 2-Chloronaphthalene	9.301	162	950535	3857.04	ng/ml	96
42) 2-Nitroaniline	9.397	138	356149	4184.16	ng/ml	97
43) 2,6-Dimethylnaphthalene	9.440	156	944826	3712.57	ng/ml	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121922.D
Acq On : 12 Apr 2019 11:04 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:31 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

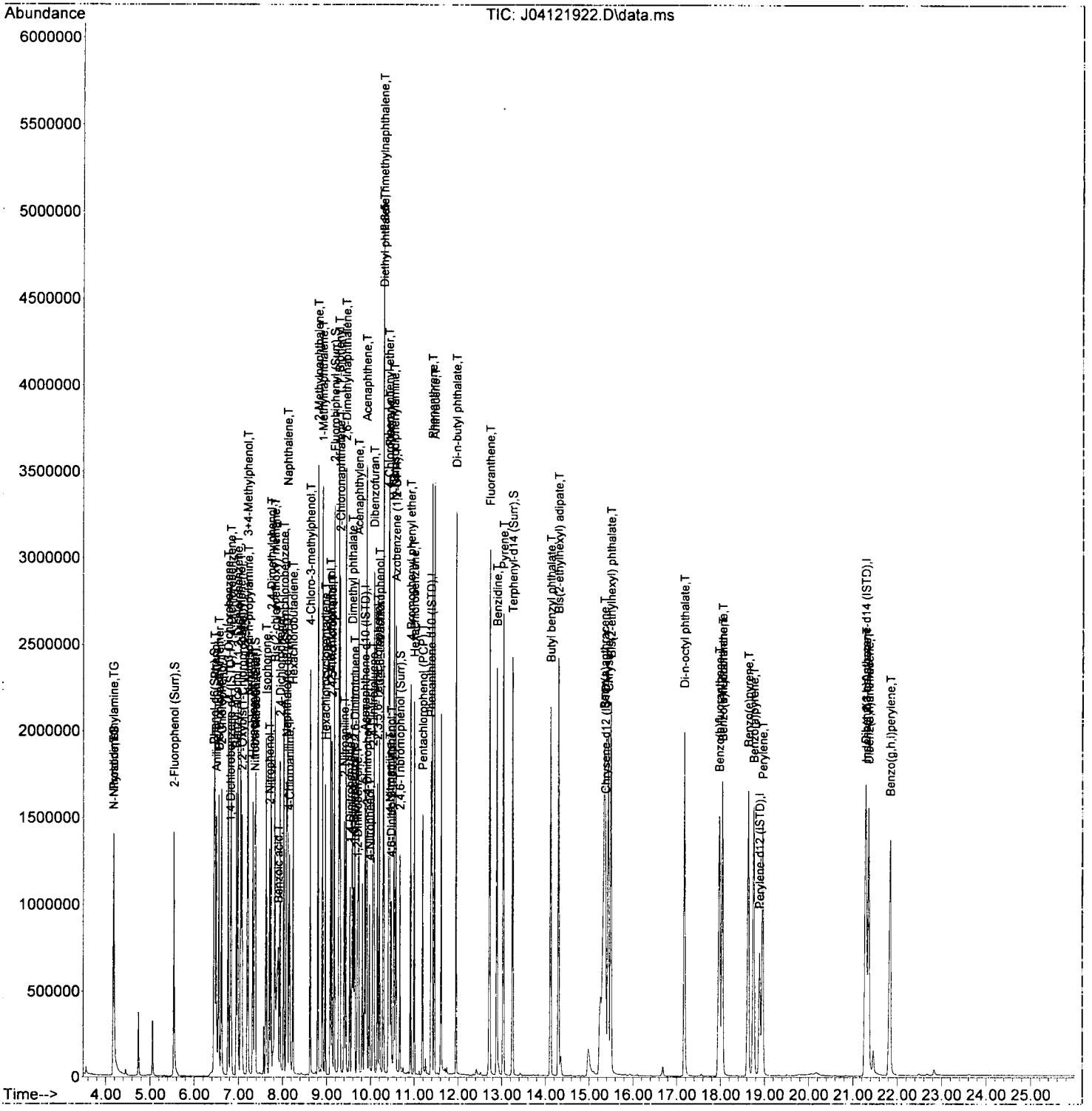
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.525	168	148152	3770.19	ng/ml	96
45) Dimethyl phthalate	9.584	163	1125792	3761.26	ng/ml	98
46) 1,3-Dinitrobenzene	9.611	168	172914	3945.59	ng/ml	98
47) 2,6-Dinitrotoluene	9.638	165	259088	3991.53	ng/ml	96
48) 1,2-Dinitrobenzene	9.702	168	123107	4064.69	ng/ml	93
49) Acenaphthylene	9.723	152	1577347	3537.98	ng/ml	98
50) 3-Nitroaniline	9.814	138	227237	Below Cal		100
51) Acenaphthene	9.905	153	991538	3520.09	ng/ml	99
52) 2,4-Dinitrophenol	9.916	184	85634	2985.64	ng/ml	92
53) 4-Nitrophenol	9.975	139	210496	4173.51	ng/ml	95
54) 2,4-Dinitrotoluene	10.055	165	342144	4202.44	ng/ml	94
55) Dibenzofuran	10.076	168	1332830	3699.60	ng/ml	95
56) 2,3,5,6-Tetrachlorophenol	10.157	232	241470	4200.55	ng/ml	97
57) 2,3,4,6-Tetrachlorophenol	10.199	232	249107	4171.21	ng/ml	95
58) Diethyl phthalate	10.290	149	1025219	3476.98	ng/ml	98
59) 2,3,5-Trimethylnaphtha...	10.285	170	800915	3409.25	ng/ml	97
60) Fluorene	10.429	166	1010351	3549.17	ng/ml	98
61) 4-Chlorophenyl phenyl ...	10.413	204	476543	3680.13	ng/ml	98
62) 4-Nitroaniline	10.440	138	224177	4040.77	ng/ml	92
63) 4,6-Dinitro-2-methylph...	10.472	198	132375	3421.41	ng/ml	92
65) N-Nitrosodiphenylamine	10.536	169	873790	3433.11	ng/ml	100
66) Azobenzene (1,2-DPH)	10.579	77	1195391	3534.31	ng/ml	90
68) 4-Bromophenyl phenyl e...	10.916	248	299638	3558.92	ng/ml	98
69) Hexachlorobenzene	10.996	284	325856	3413.10	ng/ml	99
70) Pentachlorophenol (PCP)	11.189	266	190485	3931.16	ng/ml	97
71) Phenanthrene	11.408	178	1492206	3525.55	ng/ml	98
72) Anthracene	11.462	178	1503459	3523.94	ng/ml	99
73) Carbazole	11.611	167	1088868	Below Cal		99
74) Di-n-butyl phthalate	11.954	149	1863184	4141.28	ng/ml	98
75) Fluoranthene	12.724	202	1642237	3521.01	ng/ml	98
76) Benzidine	12.890	184	1376314	9381.83	ng/ml	99
77) Pyrene	13.040	202	1649971	3435.82	ng/ml	98
80) Butyl benzyl phthalate	14.120	149	881875	4031.91	ng/ml	99
81) Bis(2-ethylhexyl) adipate	14.296	129	814038	4174.04	ng/ml	99
82) 3,3-Dichlorobenzidine	15.307	252	367601	Below Cal		97
83) Benz(a)anthracene	15.345	228	1412877	3815.76	ng/ml	99
84) Chrysene	15.436	228	1362723	3900.89	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.495	149	1174172	4075.15	ng/ml	98
87) Di-n-octyl phthalate	17.174	149	2011354	4480.52	ng/ml	96
88) Benzo(b)fluoranthene	17.971	252	1520664	4388.04	ng/ml	96
89) Benzo(k)fluoranthene	18.046	252	1404715	4310.35	ng/ml	97
90) Benzo(b+k)fluoranthene	18.046	252	2970412	8654.53	ng/ml	97
91) Benzo(e)pyrene	18.634	252	1443185	4248.07	ng/ml	97
92) Benzo(a)pyrene	18.757	252	1361909	4303.18	ng/ml	98
93) Perylene	18.961	252	1230925	3820.57	ng/ml	100
95) Indeno(1,2,3-cd)pyrene	21.298	276	1337697	4087.88	ng/ml	95
96) Dibenz(a,h)anthracene	21.357	278	1232473	3972.57	ng/ml	96
97) Benzo(g,h,i)perylene	21.843	276	1357790	3979.98	ng/ml	96

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121922.D
Acq On : 12 Apr 2019 11:04 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL8
Misc : 1x, A19D060 BNA@4000
ALS Vial : 10 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:31 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121923.D
Acq On : 12 Apr 2019 11:40 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:38 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

JK 4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	204951	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.087	136	861766	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.873	162	421304	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.387	188	776478	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.377	240	633760	2000.00	ng/ml	0.02
86) Perylene-d12 (ISTD)	18.891	264	621448	2000.00	ng/ml	0.02
94) Dibenz(a,h)Anthrcene-d...	21.298	292	616591	2000.00	ng/ml	0.03
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	900422	6240.78	ng/ml	0.00
5) Phenol-d6(Surr)	6.450	99	1151230	6012.24	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.365	82	952331	5780.37	ng/ml	0.01
40) 2-Fluorobiphenyl (Surr)	9.172	172	1558757	4968.29	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.675	330	233263	5227.30	ng/ml	0.01
79) Terphenyl-d14 (Surr)	13.254	244	1748485	5571.36	ng/ml	0.01
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.150	74	627490	5906.15	ng/ml	88
3) Pyridine	4.155	79	1105047	6525.24	ng/ml	91
6) Phenol	6.466	94	1236521	5748.25	ng/ml	96
7) Aniline	6.493	93	1198758	6379.81	ng/ml	98
8) Bis(2-chloroethyl) ether	6.552	93	1009123	6336.12	ng/ml	96
9) 2-Chlorophenol	6.610	128	902513	5985.90	ng/ml	94
10) 1,3-Dichlorobenzene	6.760	146	902850	5684.95	ng/ml	97
11) 1,4-Dichlorobenzene	6.830	146	873197	5644.90	ng/ml	99
12) Benzyl alcohol	6.947	108	625005	6174.38	ng/ml	94
13) 1,2-Dichlorobenzene	6.985	146	851080	5604.53	ng/ml	99
14) 2-Methylphenol	7.049	107	708351	5978.68	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.076	45	1018502	4882.01	ng/ml	87
16) N-Nitrosodi-n-propylamine	7.220	70	641593	5471.96	ng/ml	96
17) 3+4-Methylphenol	7.210	107	876610	6014.53	ng/ml	98
18) Hexachloroethane	7.322	201	259269	5956.93	ng/ml	98
20) Nitrobenzene	7.386	77	911090	5665.21	ng/ml	95
22) Isophorone	7.632	82	1905816	5834.45	ng/ml	98
23) 2-Nitrophenol	7.702	139	463565	5464.54	ng/ml	94
24) 2,4-Dimethylphenol	7.739	122	746900	5591.56	ng/ml	99
25) Bis(2-chloroethoxy) me...	7.830	93	1040589	5643.29	ng/ml	99
26) Benzoic acid	7.739	105	27049	836.96	ng/ml#	1
27) 2,4-Dichlorophenol	7.948	162	634884	5913.61	ng/ml	98
28) 1,2,4-Trichlorobenzene	8.028	180	677553	5225.48	ng/ml	99
29) Naphthalene	8.113	128	2278161	4955.99	ng/ml	97
30) 4-Chloroaniline	8.156	127	903302	8146.79	ng/ml	97
31) Hexachlorobutadiene	8.236	225	350040	5117.80	ng/ml	99
32) 4-Chloro-3-methylphenol	8.632	107	795091	6124.78	ng/ml	96
33) 2-Methylnaphthalene	8.809	142	1614149	5256.67	ng/ml	98
34) 1-Methylnaphthalene	8.910	142	1501404	5092.49	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	390476	5938.38	ng/ml	99
37) 2,4,6-Trichlorophenol	9.087	196	453546	6095.26	ng/ml	98
38) 2,4,5-Trichlorophenol	9.124	198	429331	5871.11	ng/ml	99
39) 1,1'-Biphenyl	9.279	154	1770639	5009.64	ng/ml	97
41) 2-Chloronaphthalene	9.306	162	1327873	5312.62	ng/ml	95
42) 2-Nitroaniline	9.402	138	544899	6311.87	ng/ml	95
43) 2,6-Dimethylnaphthalene	9.440	156	1312335	5084.32	ng/ml	97

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121923.D
Acq On : 12 Apr 2019 11:40 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:38 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

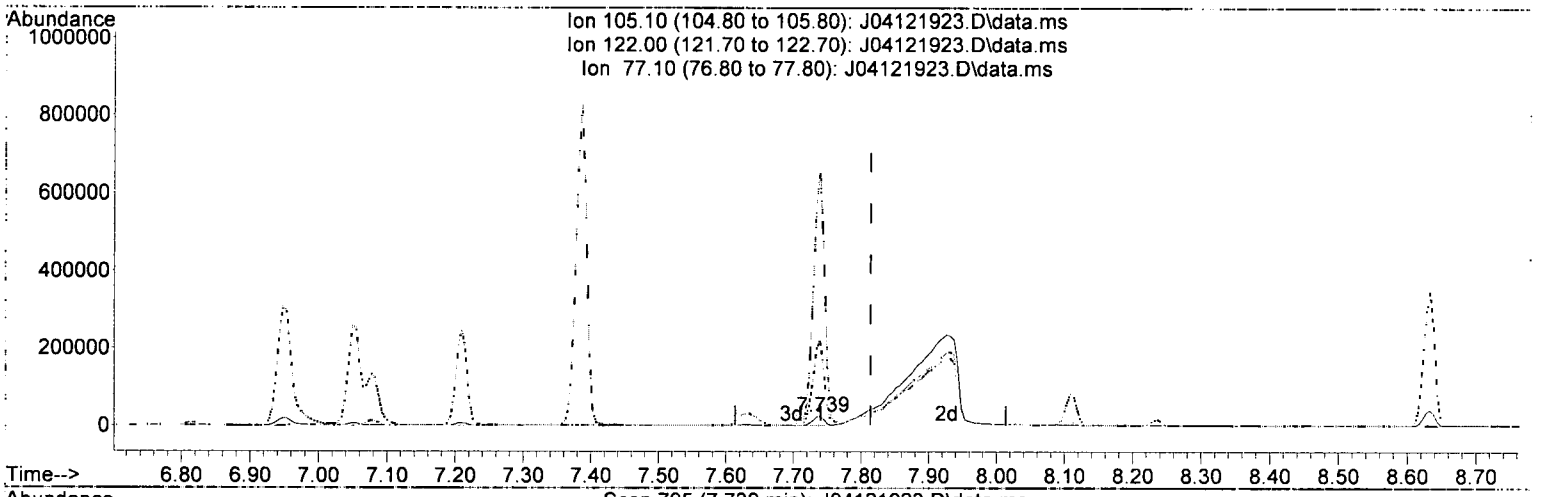
	Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44)	1,4-Dinitrobenzene	9.531	168	231647	5812.31	ng/ml	99
45)	Dimethyl phthalate	9.590	163	1593856	5250.38	ng/ml	97
46)	1,3-Dinitrobenzene	9.622	168	262552	5906.94	ng/ml	97
47)	2,6-Dinitrotoluene	9.649	165	380933	5786.37	ng/ml	89
48)	1,2-Dinitrobenzene	9.713	168	181239	5900.14	ng/ml	86
49)	Acenaphthylene	9.729	152	2093729	4630.36	ng/ml	97
50)	3-Nitroaniline	9.820	138	329674	Below Cal		98
51)	Acenaphthene	9.905	153	1376414	4817.92	ng/ml	98
52)	2,4-Dinitrophenol	9.927	184	149631	4702.65	ng/ml	96
53)	4-Nitrophenol	9.980	139	325043	6354.25	ng/ml	96
54)	2,4-Dinitrotoluene	10.060	165	498579	6037.99	ng/ml	96
55)	Dibenzofuran	10.082	168	1822175	4986.96	ng/ml	94
56)	2,3,5,6-Tetrachlorophenol	10.157	232	352904	6052.92	ng/ml	99
57)	2,3,4,6-Tetrachlorophenol	10.205	232	370697	6120.13	ng/ml	95
58)	Diethyl phthalate	10.301	149	1390913	4651.06	ng/ml	97
59)	2,3,5-Trimethylnaphtha...	10.290	170	1102900	4628.86	ng/ml	96
60)	Fluorene	10.429	166	1382772	4789.29	ng/ml	100
61)	4-Chlorophenyl phenyl ...	10.419	204	666343	5073.70	ng/ml	99
62)	4-Nitroaniline	10.451	138	332833	5915.14	ng/ml	91
63)	4,6-Dinitro-2-methylph...	10.478	198	214039	5197.80	ng/ml	93
65)	N-Nitrosodiphenylamine	10.542	169	1213548	4655.67	ng/ml	100
66)	Azobenzene (1,2-DPH)	10.585	77	1634030	4717.36	ng/ml	87
68)	4-Bromophenyl phenyl e...	10.916	248	426557	4947.00	ng/ml	96
69)	Hexachlorobenzene	11.002	284	468256	4789.07	ng/ml	97
70)	Pentachlorophenol (PCP)	11.189	266	290217	5743.28	ng/ml	96
71)	Phenanthrene	11.414	178	2079626	4797.65	ng/ml	97
72)	Anthracene	11.467	178	2083055	4767.40	ng/ml	98
73)	Carbazole	11.617	167	1519317	Below Cal		98
74)	Di-n-butyl phthalate	11.954	149	2563602	6284.66	ng/ml	97
75)	Fluoranthene	12.729	202	2306517	4828.73	ng/ml	98
76)	Benzidine	12.895	184	2206262	12661.33	ng/ml	99
77)	Pyrene	13.045	202	2327794	4733.07	ng/ml	98
80)	Butyl benzyl phthalate	14.125	149	1284862	5963.82	ng/ml	97
81)	Bis(2-ethylhexyl) adipate	14.302	129	1167165	6000.84	ng/ml	100
82)	3,3-Dichlorobenzidine	15.313	252	561471	Below Cal		98
83)	Benz(a)anthracene	15.350	228	2019475	5537.06	ng/ml	98
84)	Chrysene	15.446	228	1955932	5684.27	ng/ml	99
85)	Bis(2-ethylhexyl) phth...	15.500	149	1684021	5933.67	ng/ml	97
87)	Di-n-octyl phthalate	17.179	149	2987922	6473.44	ng/ml	96
88)	Benzo(b)fluoranthene	17.987	252	2251243	6318.09	ng/ml	97
89)	Benzo(k)fluoranthene	18.057	252	2012368	6005.62	ng/ml	98
90)	Benzo(b+k)fluoranthene	18.057	252	4333245	12279.08	ng/ml	98
91)	Benzo(e)pyrene	18.650	252	2113962	6051.92	ng/ml	98
92)	Benzo(a)pyrene	18.773	252	1987626	6108.05	ng/ml	99
93)	Perylene	18.971	252	1800658	5435.68	ng/ml	99
95)	Indeno(1,2,3-cd)pyrene	21.314	276	2048112	6059.28	ng/ml	95
96)	Dibenz(a,h)anthracene	21.373	278	1836914	5732.05	ng/ml	94
97)	Benzo(g,h,i)perylene	21.865	276	2023853	5743.20	ng/ml	98

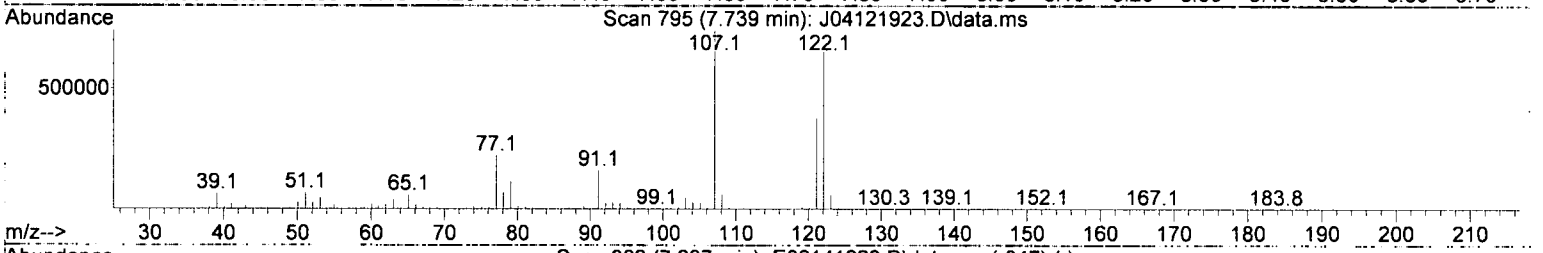
(#) = qualifier out of range (m) = manual integration (+) = signals summed

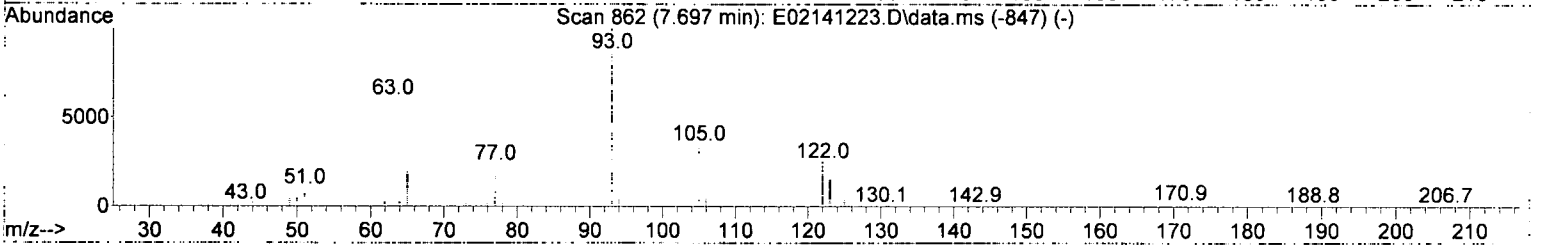
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121923.D
Acq On : 12 Apr 2019 11:40 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:38 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121923.D\data.ms

(26) Benzoic acid (T)

7.739min (-0.075) 836.96 ng/ml

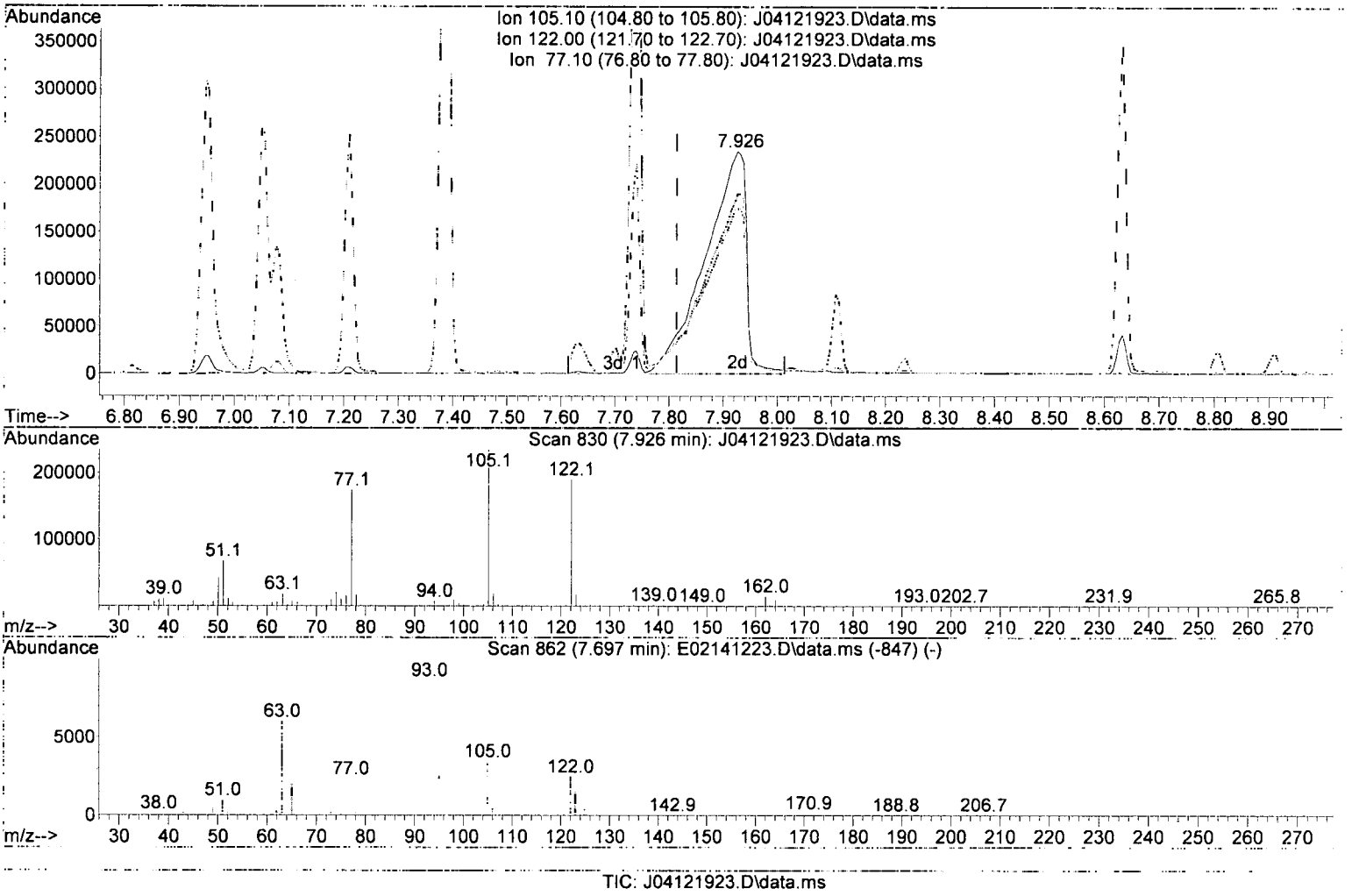
response 27049

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	2703.07#
77.10	76.00	914.78#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121923.D
Acq On : 12 Apr 2019 11:40 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:38 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121923.D\data.ms

(26) Benzoic acid (T)

7.926min (+ 0.112) 12780.48 ng/ml m

response 1234711

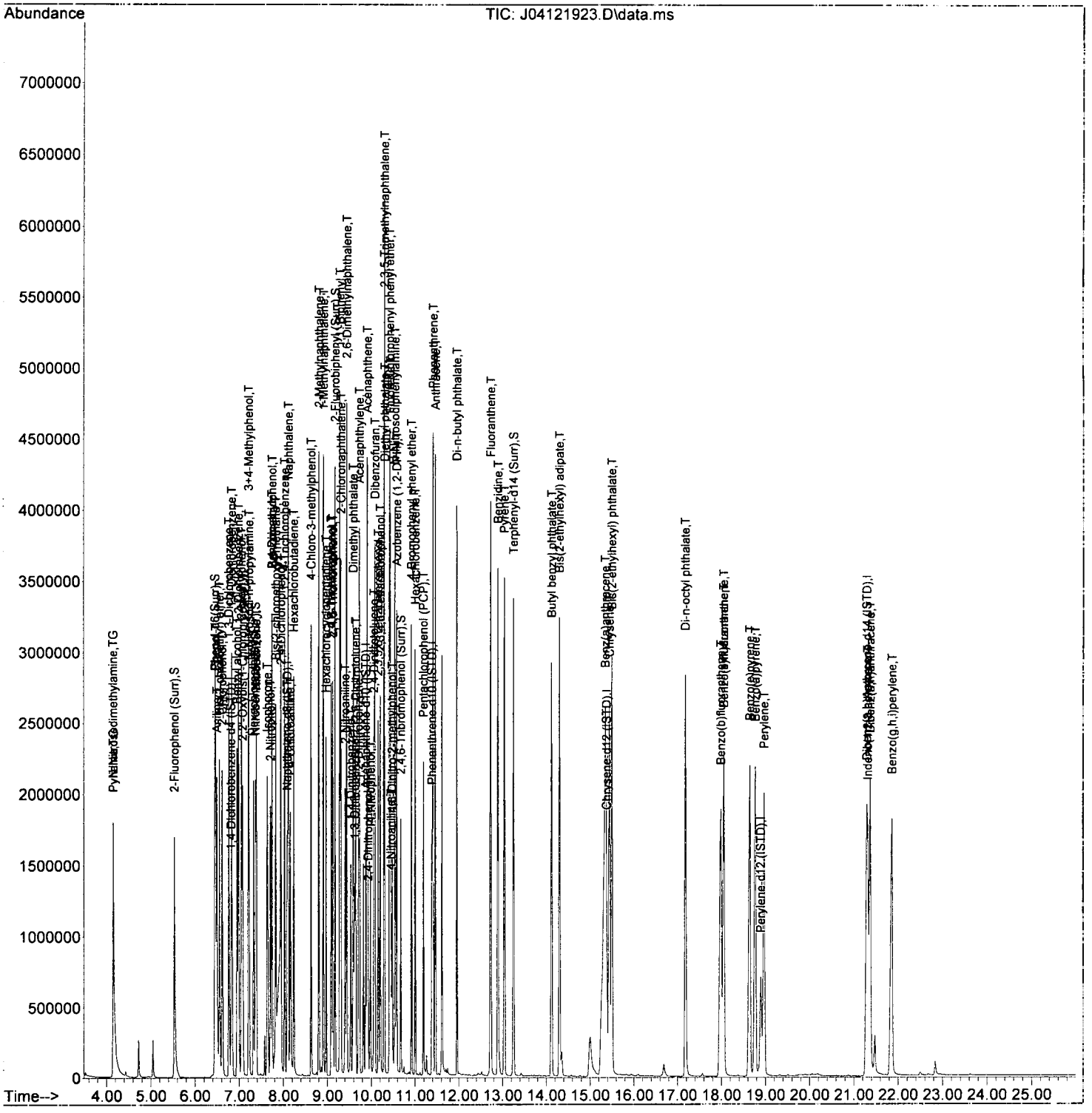
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	80.95
77.10	76.00	74.22
0.00	0.00	0.00

9/15/19

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121923.D
Acq On : 12 Apr 2019 11:40 pm
Operator : JK/ AMS/ DTH
Sample : 9D12042-CAL9
Misc : 1x, A19D061 BNA@6000
ALS Vial : 11 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:38 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.814	152	205419	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.087	136	857219	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.873	162	424880	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.387	188	796822	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.382	240	627246	2000.00	ng/ml	0.03
86) Perylene-d12 (ISTD)	18.896	264	632280	2000.00	ng/ml	0.02
94) Dibenz(a,h)Anthrcene-d...	21.309	292	623208	2000.00	ng/ml	0.04
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.541	112	1179847	8158.82	ng/ml	0.00
5) Phenol-d6(Surr)	6.455	99	1499696	7814.24	ng/ml	0.02
19) Nitrobenzene-d5 (Surr)	7.370	82	1245282	7541.28	ng/ml	0.02
40) 2-Fluorobiphenyl (Surr)	9.178	172	1972042	6232.67	ng/ml	0.01
67) 2,4,6-Tribromophenol (...	10.681	330	307443	6713.74	ng/ml	0.02
79) Terphenyl-d14 (Surr)	13.259	244	2287744	7365.35	ng/ml	0.02
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.172	74	831842	7811.74	ng/ml	87
3) Pyridine	4.172	79	1473300	8679.93	ng/ml	90
6) Phenol	6.471	94	1605219	7438.75	ng/ml	99
7) Aniline	6.498	93	1648364	8752.63	ng/ml	98
8) Bis(2-chloroethyl) ether	6.557	93	1256889	7873.83	ng/ml	95
9) 2-Chlorophenol	6.616	128	1150237	7611.54	ng/ml	94
10) 1,3-Dichlorobenzene	6.766	146	1147379	7208.21	ng/ml	97
11) 1,4-Dichlorobenzene	6.835	146	1104480	7123.79	ng/ml	99
12) Benzyl alcohol	6.958	108	825334	8134.85	ng/ml	94
13) 1,2-Dichlorobenzene	6.985	146	1066099	7004.47	ng/ml	98
14) 2-Methylphenol	7.054	107	904249	7614.73	ng/ml	99
15) 2,2'-Oxybis(1-Chloropr...	7.081	45	1238496	5922.93	ng/ml	81
16) N-Nitrosodi-n-propylamine	7.231	70	824622	7016.94	ng/ml	96
17) 3+4-Methylphenol	7.215	107	1108625	7589.08	ng/ml	98
18) Hexachloroethane	7.322	201	336985	7724.88	ng/ml	98
20) Nitrobenzene	7.391	77	1159115	7191.02	ng/ml	93
22) Isophorone	7.637	82	2513149	7734.54	ng/ml	97
23) 2-Nitrophenol	7.702	139	613878	7274.83	ng/ml	94
24) 2,4-Dimethylphenol	7.744	122	964243	7256.96	ng/ml	99
25) Bis(2-chloroethoxy) me...	7.830	93	1311481	7150.11	ng/ml	98
26) Benzoic acid	7.744	105	36749	947.04	ng/ml#	1
27) 2,4-Dichlorophenol	7.948	162	807681	7562.89	ng/ml	97
28) 1,2,4-Trichlorobenzene	8.028	180	857676	6649.73	ng/ml	98
29) Naphthalene	8.114	128	2813330	6152.68	ng/ml	96
30) 4-Chloroaniline	8.156	127	1106729	10034.43	ng/ml	98
31) Hexachlorobutadiene	8.237	225	453153	6660.52	ng/ml	99
32) 4-Chloro-3-methylphenol	8.638	107	1024540	7934.14	ng/ml	96
33) 2-Methylnaphthalene	8.809	142	2022092	6620.12	ng/ml	98
34) 1-Methylnaphthalene	8.910	142	1877715	6402.65	ng/ml	97
36) Hexachlorocyclopentadiene	8.975	237	512416	7727.27	ng/ml	99
37) 2,4,6-Trichlorophenol	9.092	196	583608	7777.17	ng/ml	98
38) 2,4,5-Trichlorophenol	9.130	198	569105	7717.02	ng/ml	99
39) 1,1'-Biphenyl	9.280	154	2197978	6166.36	ng/ml	97
41) 2-Chloronaphthalene	9.306	162	1678580	6659.22	ng/ml	95
42) 2-Nitroaniline	9.408	138	729589	8380.10	ng/ml	95
43) 2,6-Dimethylnaphthalene	9.445	156	1648270	6332.07	ng/ml	96

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

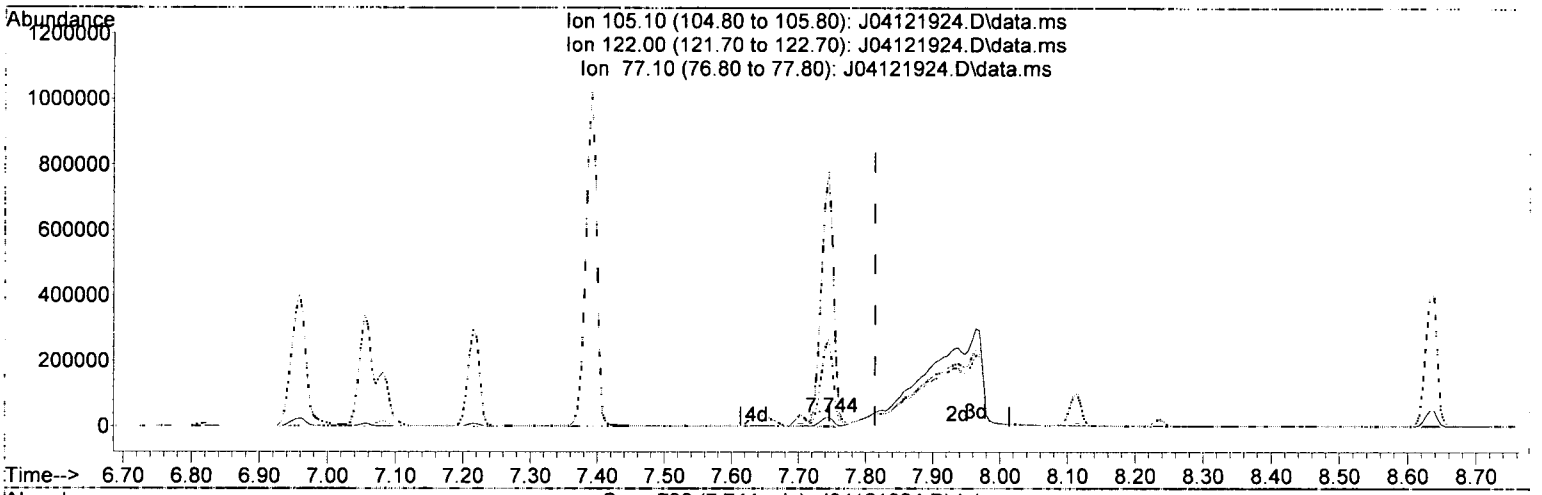
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.536	168	319922	7959.67	ng/ml	97
45) Dimethyl phthalate	9.600	163	2076750	6783.52	ng/ml	98
46) 1,3-Dinitrobenzene	9.633	168	349862	7805.01	ng/ml	95
47) 2,6-Dinitrotoluene	9.654	165	483438	7281.62	ng/ml	91
48) 1,2-Dinitrobenzene	9.718	168	227922	7357.43	ng/ml	90
49) Acenaphthylene	9.734	152	2539761	5569.50	ng/ml	97
50) 3-Nitroaniline	9.830	138	417444	Below Cal		97
51) Acenaphthene	9.911	153	1737085	6029.22	ng/ml	99
52) 2,4-Dinitrophenol	9.932	184	222443	6428.00	ng/ml	98
53) 4-Nitrophenol	9.991	139	441662	8561.36	ng/ml	98
54) 2,4-Dinitrotoluene	10.071	165	642029	7709.78	ng/ml	94
55) Dibenzofuran	10.082	168	2258697	6129.61	ng/ml	93
56) 2,3,5,6-Tetrachlorophenol	10.162	232	471457	8018.25	ng/ml	98
57) 2,3,4,6-Tetrachlorophenol	10.205	232	480353	7863.78	ng/ml	97
58) Diethyl phthalate	10.301	149	1740855	5772.23	ng/ml	97
59) 2,3,5-Trimethylnaphtha...	10.296	170	1390016	5784.78	ng/ml	99
60) Fluorene	10.435	166	1760020	6044.60	ng/ml	99
61) 4-Chlorophenyl phenyl ...	10.419	204	866576	6542.78	ng/ml	99
62) 4-Nitroaniline	10.462	138	435677	7677.72	ng/ml	95
63) 4,6-Dinitro-2-methylph...	10.488	198	299612	6918.04	ng/ml	89
65) N-Nitrosodiphenylamine	10.547	169	1549603	5793.13	ng/ml	99
66) Azobenzene (1,2-DPH)	10.585	77	2030780	5713.07	ng/ml	87
68) 4-Bromophenyl phenyl e...	10.922	248	567177	6409.91	ng/ml	98
69) Hexachlorobenzene	11.007	284	614308	6122.40	ng/ml	95
70) Pentachlorophenol (PCP)	11.194	266	397295	7541.07	ng/ml	97
71) Phenanthrene	11.419	178	2691755	6051.27	ng/ml	97
72) Anthracene	11.467	178	2638439	5884.32	ng/ml	97
73) Carbazole	11.617	167	1858306	Below Cal		97
74) Di-n-butyl phthalate	11.959	149	3263829	10160.74	ng/ml	96
75) Fluoranthene	12.735	202	2984085	6087.72	ng/ml	97
76) Benzidine	12.901	184	2941124	14984.41	ng/ml	99
77) Pyrene	13.050	202	3020323	5984.39	ng/ml	98
80) Butyl benzyl phthalate	14.131	149	1721965	8075.68	ng/ml	96
81) Bis(2-ethylhexyl) adipate	14.307	129	1536908	7867.60	ng/ml	99
82) 3,3-Dichlorobenzidine	15.323	252	752117	Below Cal		98
83) Benz(a)anthracene	15.361	228	2651985	7346.81	ng/ml	98
84) Chrysene	15.457	228	2567396	7538.78	ng/ml	99
85) Bis(2-ethylhexyl) phth...	15.505	149	2197866	7824.63	ng/ml	97
87) Di-n-octyl phthalate	17.190	149	3987899	8491.91	ng/ml	95
88) Benzo(b)fluoranthene	17.998	252	3082964	8504.07	ng/ml	97
89) Benzo(k)fluoranthene	18.067	252	2486052	7292.16	ng/ml	97
90) Benzo(b+k)fluoranthene	18.067	252	5776538	16088.51	ng/ml	97
91) Benzo(e)pyrene	18.661	252	2828166	7957.85	ng/ml	98
92) Benzo(a)pyrene	18.784	252	2622343	7920.50	ng/ml	98
93) Perylene	18.987	252	2414315	7163.28	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.330	276	3112495	9110.45	ng/ml	95
96) Dibenz(a,h)anthracene	21.383	278	2425385	7488.00	ng/ml	95
97) Benzo(g,h,i)perylene	21.876	276	2701841	7585.76	ng/ml	97

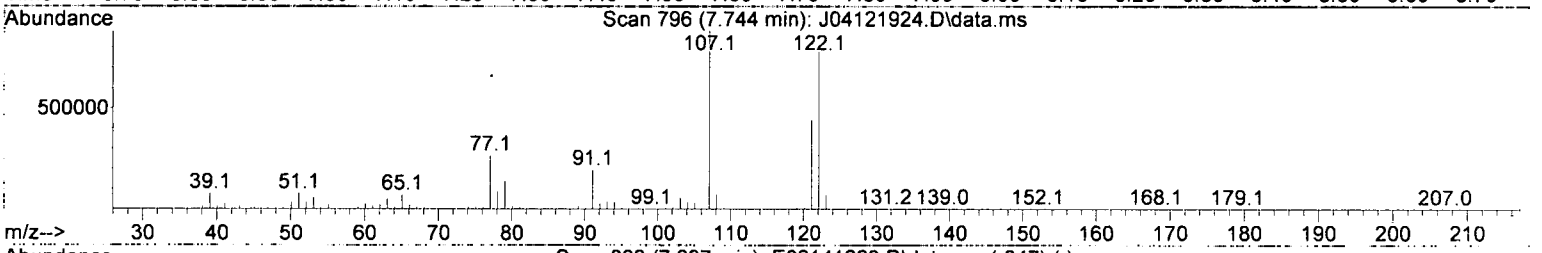
(#) = qualifier out of range (m) = manual integration (+) = signals summed

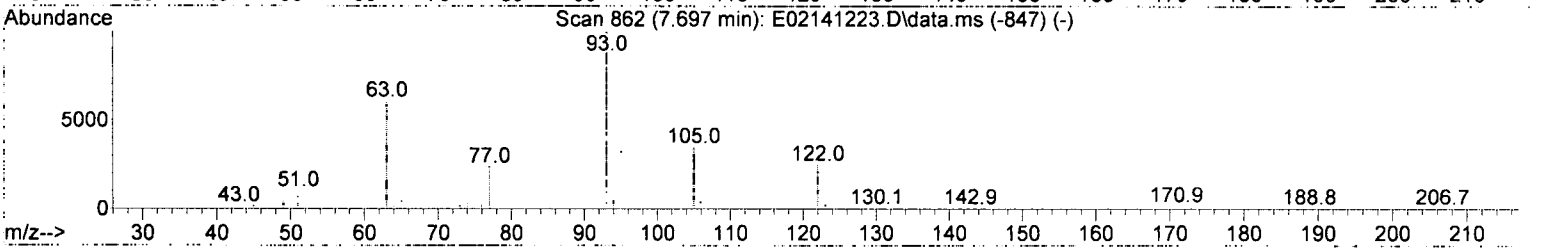
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121924.D\data.ms

(26) Benzoic acid (T)

7.744min (-0.069) 947.04 ng/ml

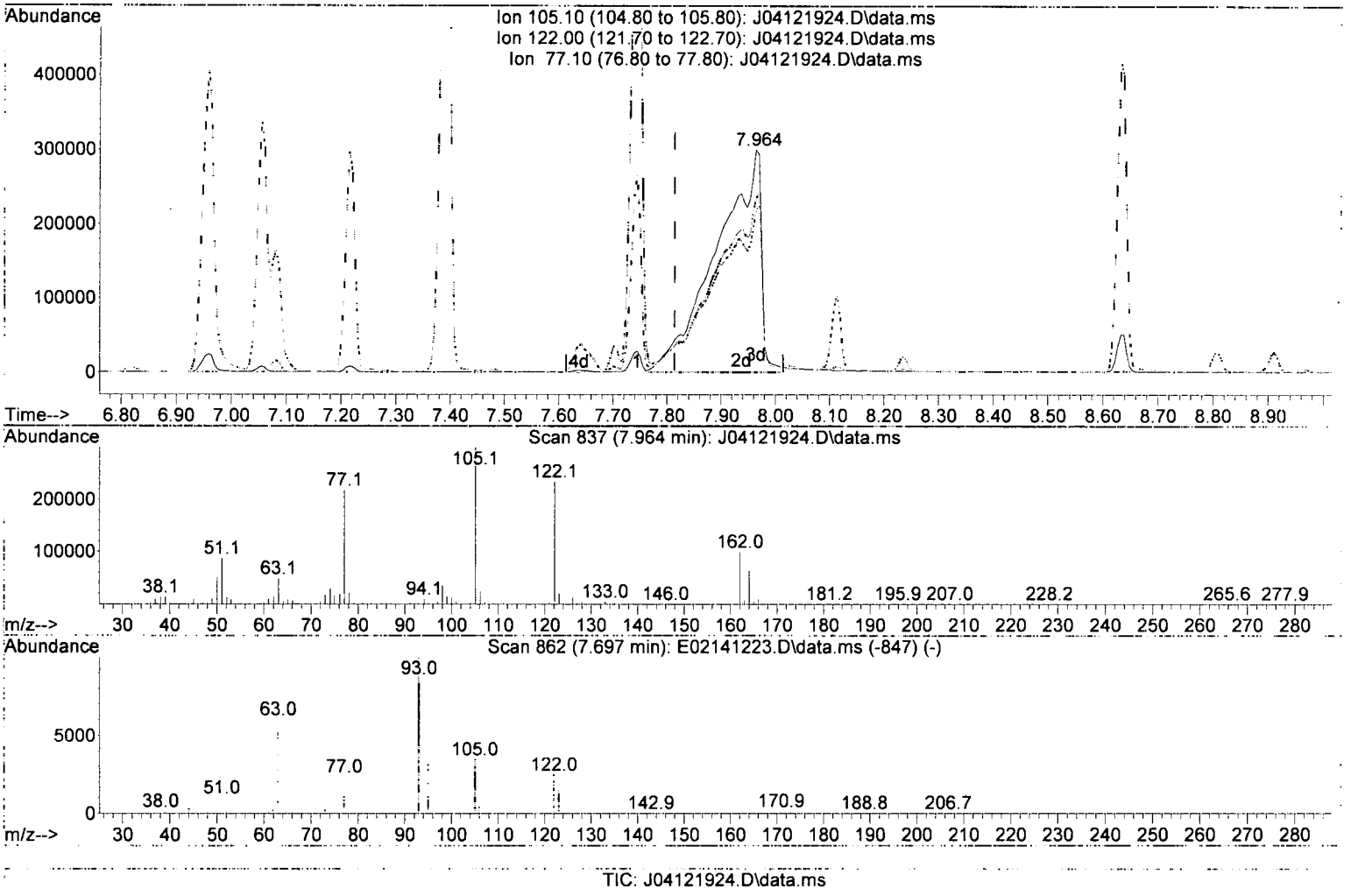
response 36749

Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	2710.75#
77.10	76.00	928.46#
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121924.D\data.ms

(26) Benzoic acid (T)

7.964min (+ 0.150) 16913.93 ng/ml m

response 1706623

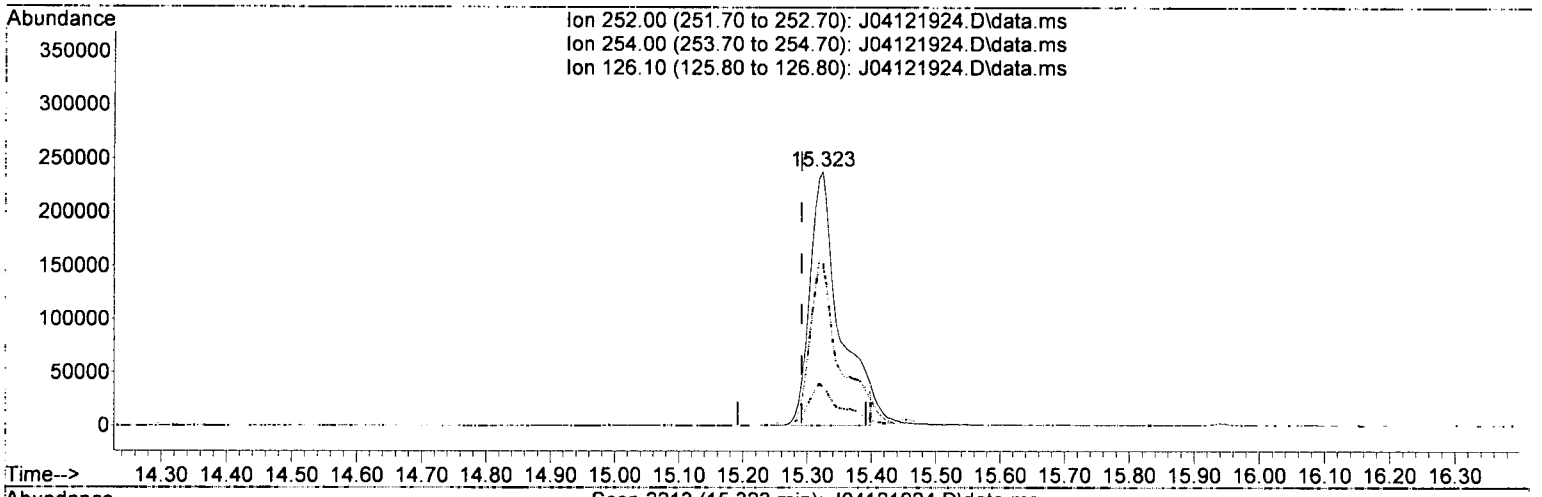
Ion	Exp%	Act%
105.10	100.00	100.00
122.00	80.70	78.16
77.10	76.00	72.89
0.00	0.00	0.00

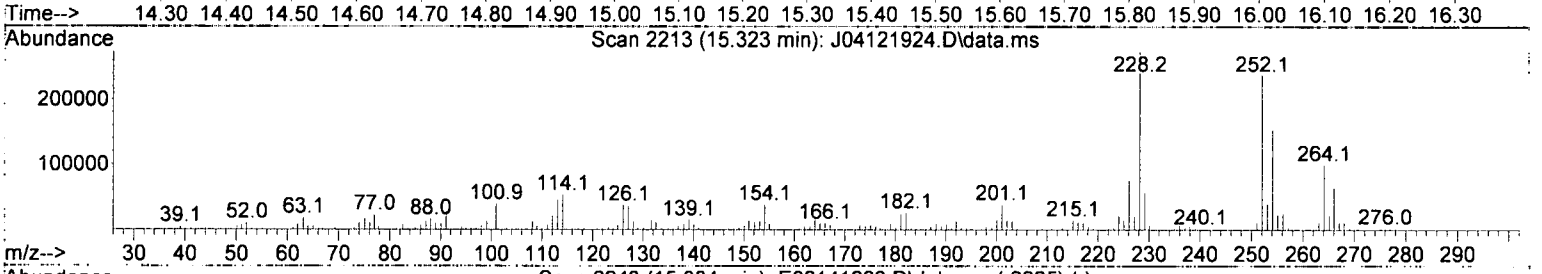
JK 4/15/19

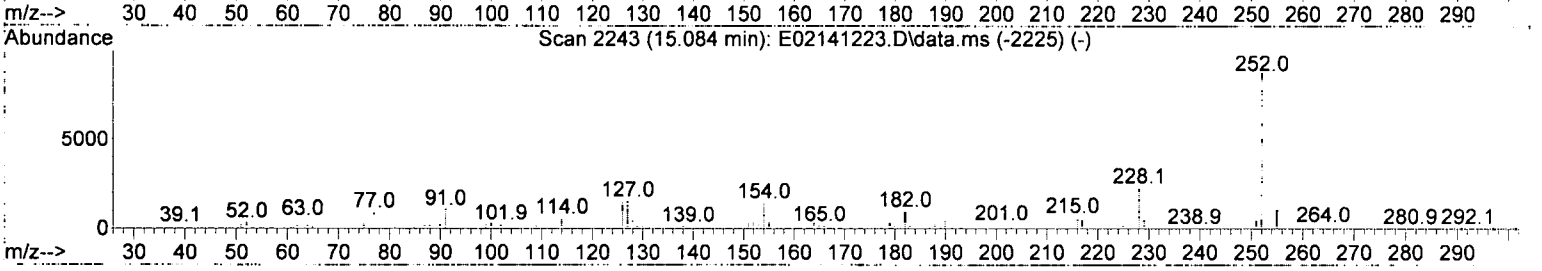
Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10







TIC: J04121924.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.323min (+ 0.032) -2000.00 ng/ml

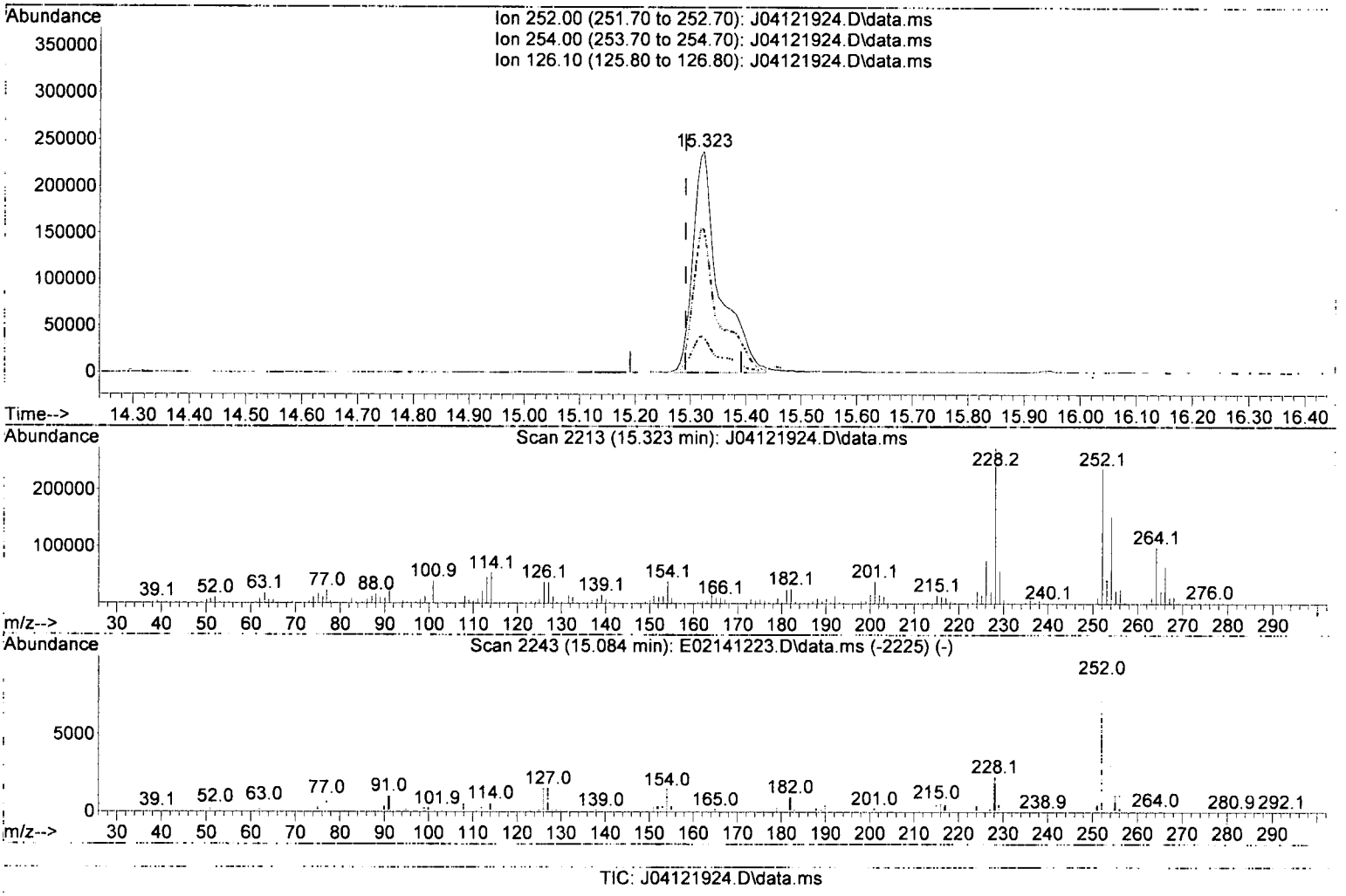
response 752117

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.46
126.10	16.90	15.60
0.00	0.00	0.00

Quantitation Report (Qedit)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



TIC: J04121924.D\data.ms

(82) 3,3-Dichlorobenzidine (T)

15.323min (+ 0.032) -2000.00 ng/ml (m) 4/15/19

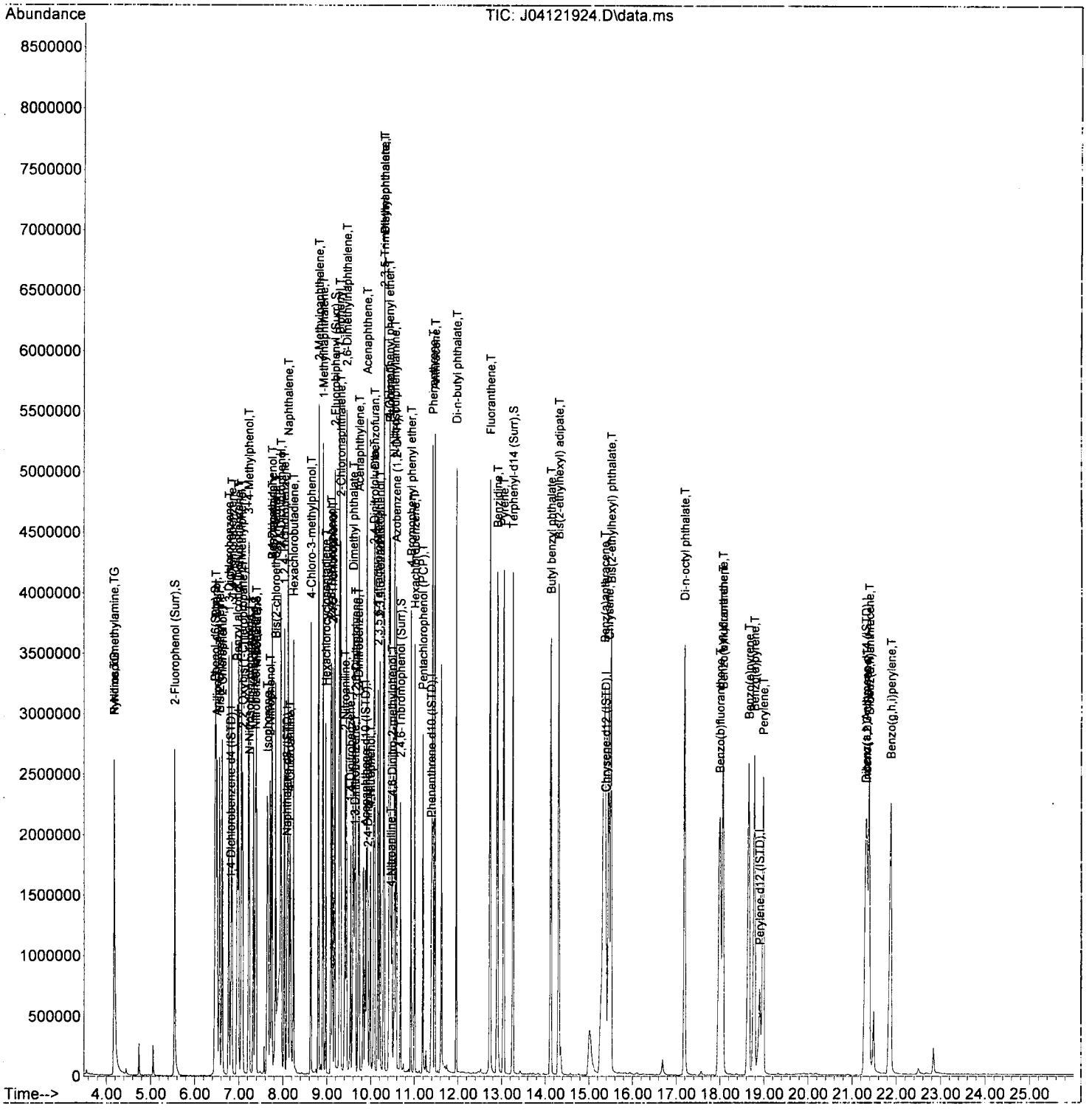
response 784747

Ion	Exp%	Act%
252.00	100.00	100.00
254.00	66.10	64.46
126.10	16.90	15.60
0.00	0.00	0.00

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121924.D
Acq On : 13 Apr 2019 12:15 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-CALA
Misc : 1x, A19D062 BNA@8000
ALS Vial : 12 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:44 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:58 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

4/15/19

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	225231	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	940161	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.868	162	454606	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	789773	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.361	240	706895	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	657267	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	607358	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	150125	946.82	ng/ml	0.00
5) Phenol-d6(Surr)	6.434	99	191648	910.75	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	169867	938.21	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	351303	1037.70	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	38934	857.80	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	347922	993.92	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.155	74	107198	918.13	ng/ml	92
3) Pyridine	4.171	79	168038	902.91	ng/ml	91
6) Phenol	6.450	94	221184	934.83	ng/ml	97
7) Aniline	6.487	93	224581	1087.60	ng/ml	97
8) Bis(2-chloroethyl) ether	6.541	93	193865	1107.65	ng/ml	97
9) 2-Chlorophenol	6.605	128	164404	992.22	ng/ml	93
10) 1,3-Dichlorobenzene	6.755	146	176447	1010.99	ng/ml	98
11) 1,4-Dichlorobenzene	6.830	146	174527	1026.66	ng/ml	98
12) Benzyl alcohol	6.942	108	89446	804.07	ng/ml	93
13) 1,2-Dichlorobenzene	6.979	146	171866	1029.86	ng/ml	100
14) 2-Methylphenol	7.044	107	127820	981.70	ng/ml	97
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	214379	935.06	ng/ml	91
16) N-Nitrosodi-n-propylamine	7.199	70	132402	1027.54	ng/ml	99
17) 3+4-Methylphenol	7.193	107	165705	1034.55	ng/ml	99
18) Hexachloroethane	7.322	201	47249	987.84	ng/ml	96
20) Nitrobenzene	7.375	77	169560	959.40	ng/ml	96
22) Isophorone	7.611	82	360193	1010.74	ng/ml	97
23) 2-Nitrophenol	7.691	139	82990	896.72	ng/ml	97
24) 2,4-Dimethylphenol	7.723	122	142361	976.90	ng/ml	99
25) Bis(2-chloroethoxy) me...	7.814	93	209172	1039.79	ng/ml	99
26) Benzoic acid	7.814	105	98896	1540.07	ng/ml	98
27) 2,4-Dichlorophenol	7.931	162	118350	1010.43	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.022	180	136487	964.85	ng/ml	96
29) Naphthalene	8.103	128	510313	1017.58	ng/ml	99
30) 4-Chloroaniline	8.145	127	163413	1350.91	ng/ml	97
31) Hexachlorobutadiene	8.231	225	72214	967.78	ng/ml	98
32) 4-Chloro-3-methylphenol	8.621	107	136286	962.30	ng/ml	96
33) 2-Methylnaphthalene	8.798	142	346320	1033.79	ng/ml	99
34) 1-Methylnaphthalene	8.900	142	324946	1010.25	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	68590	966.71	ng/ml	95
37) 2,4,6-Trichlorophenol	9.081	196	77965	971.03	ng/ml	98
38) 2,4,5-Trichlorophenol	9.119	198	78439	994.08	ng/ml	97
39) 1,1'-Biphenyl	9.269	154	401597	1053.00	ng/ml	99
41) 2-Chloronaphthalene	9.295	162	288501	1069.70	ng/ml	97
42) 2-Nitroaniline	9.386	138	89325	958.90	ng/ml	99
43) 2,6-Dimethylnaphthalene	9.429	156	289552	1039.62	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:58 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10

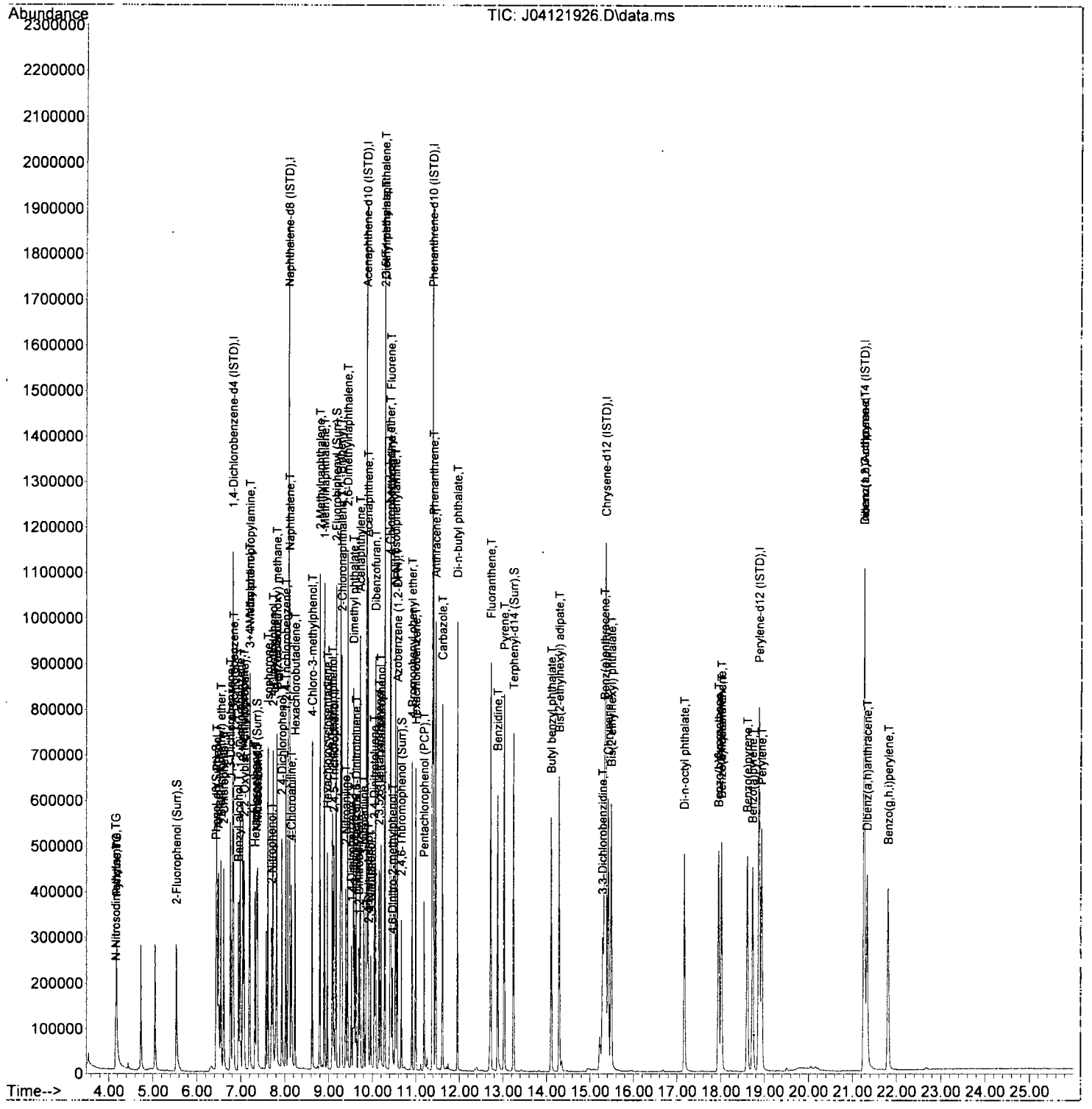
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	32109	746.64	ng/ml	98
45) Dimethyl phthalate	9.568	163	331508	1012.04	ng/ml	99
46) 1,3-Dinitrobenzene	9.600	168	42198	879.83	ng/ml	97
47) 2,6-Dinitrotoluene	9.627	165	71148	1001.57	ng/ml	95
48) 1,2-Dinitrobenzene	9.691	168	30968	934.30	ng/ml	78
49) Acenaphthylene	9.718	152	489910	1004.09	ng/ml	99
50) 3-Nitroaniline	9.803	138	70812	1173.57	ng/ml	96
51) Acenaphthene	9.894	153	301133	976.85	ng/ml	99
52) 2,4-Dinitrophenol	9.910	184	11124	518.82	ng/ml	94
53) 4-Nitrophenol	9.959	139	47352	857.87	ng/ml	95
54) 2,4-Dinitrotoluene	10.039	165	86115	966.49	ng/ml	98
55) Dibenzofuran	10.071	168	404403	1025.70	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	59505	945.85	ng/ml	97
57) 2,3,4,6-Tetrachlorophenol	10.194	232	65002	994.56	ng/ml	95
58) Diethyl phthalate	10.285	149	322768	1000.24	ng/ml	98
59) 2,3,5-Trimethylnaphtha...	10.280	170	253977	987.85	ng/ml	98
60) Fluorene	10.419	166	320366	1028.32	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.408	204	143339	1011.47	ng/ml	100
62) 4-Nitroaniline	10.424	138	67831	1117.19	ng/ml	93
63) 4,6-Dinitro-2-methylph...	10.461	198	26986	731.29	ng/ml	86
65) N-Nitrosodiphenylamine	10.526	169	262526	990.20	ng/ml	100
66) Azobenzene (1,2-DPH)	10.574	77	348955	990.46	ng/ml	91
68) 4-Bromophenyl phenyl e...	10.911	248	84915	968.23	ng/ml	97
69) Hexachlorobenzene	10.991	284	93599	941.17	ng/ml	97
70) Pentachlorophenol (PCP)	11.183	266	44624	943.63	ng/ml	98
71) Phenanthrene	11.403	178	444580	1008.37	ng/ml	99
72) Anthracene	11.456	178	439747	989.49	ng/ml	99
73) Carbazole	11.606	167	376107	1216.39	ng/ml	98
74) Di-n-butyl phthalate	11.948	149	526060	949.47	ng/ml	99
75) Fluoranthene	12.719	202	469482	966.32	ng/ml	98
76) Benzidine	12.874	184	313160	2975.76	ng/ml	98
77) Pyrene	13.029	202	481350	962.25	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	208309	866.85	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.291	129	197557	900.48	ng/ml	100
82) 3,3-Dichlorobenzidine	15.286	252	126187	1660.79	ng/ml	99
83) Benz(a)anthracene	15.334	228	401111	986.00	ng/ml	99
84) Chrysene	15.414	228	382137	995.66	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.489	149	299160	945.04	ng/ml	98
87) Di-n-octyl phthalate	17.163	149	448238	918.20	ng/ml	97
88) Benzo(b)fluoranthene	17.949	252	390614	1036.51	ng/ml	96
89) Benzo(k)fluoranthene	18.014	252	391287	1104.10	ng/ml	97
90) Benzo(b+k)fluoranthene	18.014	252	796315	2133.54	ng/ml	97
91) Benzo(e)pyrene	18.607	252	381547	1032.78	ng/ml	97
92) Benzo(a)pyrene	18.725	252	358790	1042.49	ng/ml	98
93) Perylene	18.934	252	390591	1114.83	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.266	276	325049	976.27	ng/ml	95
96) Dibenz(a,h)anthracene	21.330	278	309719	981.16	ng/ml	92
97) Benzo(g,h,i)perylene	21.811	276	349358	1006.46	ng/ml	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 08:55:58 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 08:54:36 2019
Response via : Initial Calibration
InstName : SV-GCMS10



Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Final Reqmnt

JK 4/19/19

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
Internal Standards						
1) 1,4-Dichlorobenzene-d4...	6.808	152	225231	2000.00	ng/ml	0.00
21) Naphthalene-d8 (ISTD)	8.081	136	940161	2000.00	ng/ml	0.00
35) Acenaphthene-d10 (ISTD)	9.868	162	454606	2000.00	ng/ml	0.00
64) Phenanthrene-d10 (ISTD)	11.381	188	789773	2000.00	ng/ml	0.00
78) Chrysene-d12 (ISTD)	15.361	240	706895	2000.00	ng/ml	0.00
86) Perylene-d12 (ISTD)	18.875	264	657267	2000.00	ng/ml	0.00
94) Dibenz(a,h)Anthrcene-d...	21.266	292	607358	2000.00	ng/ml	0.00
System Monitoring Compounds						
4) 2-Fluorophenol (Surr)	5.535	112	150125	1025.32	ng/ml	0.00
5) Phenol-d6(Surr)	6.434	99	191648	1017.56	ng/ml	0.00
19) Nitrobenzene-d5 (Surr)	7.354	82	169867	1010.05	ng/ml	0.00
40) 2-Fluorobiphenyl (Surr)	9.167	172	351303	1095.25	ng/ml	0.00
67) 2,4,6-Tribromophenol (...	10.665	330	38934	1004.38	ng/ml	0.00
79) Terphenyl-d14 (Surr)	13.243	244	347922	1045.59	ng/ml	0.00
Target Compounds						Qvalue
2) N-Nitrosodimethylamine	4.155	74	107198	965.91	ng/ml	92
3) Pyridine	4.171	79	168038	927.96	ng/ml	91
6) Phenol	6.450	94	221184	1050.65	ng/ml	97
7) Aniline	6.487	93	224581	1014.19	ng/ml	97
8) Bis(2-chloroethyl) ether	6.541	93	193865	1016.60	ng/ml	97
9) 2-Chlorophenol	6.605	128	164404	1073.70	ng/ml	93
10) 1,3-Dichlorobenzene	6.755	146	176447	1024.14	ng/ml	98
11) 1,4-Dichlorobenzene	6.830	146	174527	1015.39	ng/ml	98
12) Benzyl alcohol	6.942	108	89446	990.85	ng/ml	93
13) 1,2-Dichlorobenzene	6.979	146	171866	1027.38	ng/ml	100
14) 2-Methylphenol	7.044	107	127820	1077.70	ng/ml	97
15) 2,2'-Oxybis(1-Chloropr...	7.070	45	214379	993.42	ng/ml	91
16) N-Nitrosodi-n-propylamine	7.199	70	132402	1060.94	ng/ml	99
17) 3+4-Methylphenol	7.193	107	165705	1052.78	ng/ml	99
18) Hexachloroethane	7.322	201	47249	1019.95	ng/ml	96
20) Nitrobenzene	7.375	77	169560	1058.29	ng/ml	96
22) Isophorone	7.611	82	360193	1028.66	ng/ml	97
23) 2-Nitrophenol	7.691	139	82990	1121.76	ng/ml	97
24) 2,4-Dimethylphenol	7.723	122	142361	987.26	ng/ml	99
25) Bis(2-chloroethoxy) me...	7.814	93	209172	1113.78	ng/ml	99
26) Benzoic acid	7.814	105	98896	1817.64	ng/ml	98
27) 2,4-Dichlorophenol	7.931	162	118350	1020.66	ng/ml	96
28) 1,2,4-Trichlorobenzene	8.022	180	136487	1022.10	ng/ml	96
29) Naphthalene	8.103	128	510313	1048.62	ng/ml	99
30) 4-Chloroaniline	8.145	127	163413	1033.03	ng/ml	97
31) Hexachlorobutadiene	8.231	225	72214	995.32	ng/ml	98
32) 4-Chloro-3-methylphenol	8.621	107	136286	992.95	ng/ml	96
33) 2-Methylnaphthalene	8.798	142	346320	1085.22	ng/ml	99
34) 1-Methylnaphthalene	8.900	142	324946	1049.76	ng/ml	98
36) Hexachlorocyclopentadiene	8.969	237	68590	1089.80	ng/ml	95
37) 2,4,6-Trichlorophenol	9.081	196	77965	963.90	ng/ml	98
38) 2,4,5-Trichlorophenol	9.119	198	78439	1081.65	ng/ml	97
39) 1,1'-Biphenyl	9.269	154	401597	1089.76	ng/ml	99
41) 2-Chloronaphthalene	9.295	162	288501	1107.03	ng/ml	97
42) 2-Nitroaniline	9.386	138	89325	1054.08	ng/ml	99
43) 2,6-Dimethylnaphthalene	9.429	156	289552	1071.65	ng/ml	99

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10

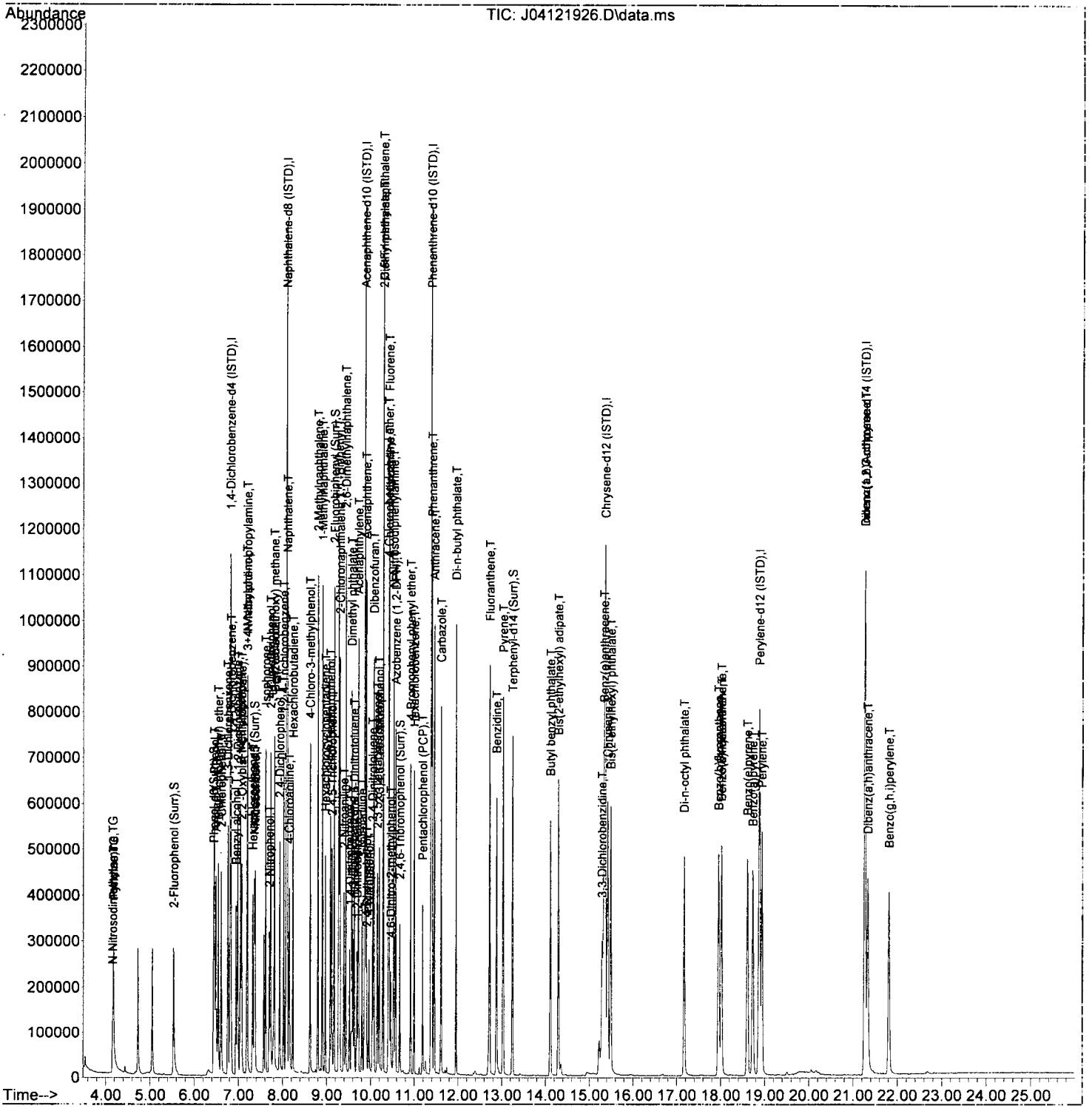
Compound	R.T.	QIon	Response	Conc	Units	Dev(Min)
44) 1,4-Dinitrobenzene	9.515	168	32109	1067.40	ng/ml	98
45) Dimethyl phthalate	9.568	163	331508	1048.39	ng/ml	99
46) 1,3-Dinitrobenzene	9.600	168	42198	1080.55	ng/ml	97
47) 2,6-Dinitrotoluene	9.627	165	71148	1065.26	ng/ml	95
48) 1,2-Dinitrobenzene	9.691	168	30968	1016.45	ng/ml	78
49) Acenaphthylene	9.718	152	489910	1077.32	ng/ml	99
50) 3-Nitroaniline	9.803	138	70812	1139.38	ng/ml	96
51) Acenaphthene	9.894	153	301133	1029.64	ng/ml	99
52) 2,4-Dinitrophenol	9.910	184	11124	962.19	ng/ml	94
53) 4-Nitrophenol	9.959	139	47352	1076.92	ng/ml	95
54) 2,4-Dinitrotoluene	10.039	165	86115	1054.72	ng/ml	98
55) Dibenzofuran	10.071	168	404403	1058.40	ng/ml	99
56) 2,3,5,6-Tetrachlorophenol	10.151	232	59505	1034.56	ng/ml	97
57) 2,3,4,6-Tetrachlorophenol	10.194	232	65002	1042.78	ng/ml	95
58) Diethyl phthalate	10.285	149	322768	1068.75	ng/ml	98
59) 2,3,5-Trimethylnaphtha...	10.280	170	253977	1051.39	ng/ml	98
60) Fluorene	10.419	166	320366	1070.71	ng/ml	100
61) 4-Chlorophenyl phenyl ...	10.408	204	143339	1046.87	ng/ml	100
62) 4-Nitroaniline	10.424	138	67831	1186.32	ng/ml	93
63) 4,6-Dinitro-2-methylph...	10.461	198	26986	1185.98	ng/ml	86
65) N-Nitrosodiphenylamine	10.526	169	262526	1079.66	ng/ml	100
66) Azobenzene (1,2-DPH)	10.574	77	348955	1060.34	ng/ml	91
68) 4-Bromophenyl phenyl e...	10.911	248	84915	1092.31	ng/ml	97
69) Hexachlorobenzene	10.991	284	93599	987.47	ng/ml	97
70) Pentachlorophenol (PCP)	11.183	266	44624	1050.08	ng/ml	98
71) Phenanthrene	11.403	178	444580	1037.41	ng/ml	99
72) Anthracene	11.456	178	439747	1053.61	ng/ml	99
73) Carbazole	11.606	167	376107	1064.80	ng/ml	98
74) Di-n-butyl phthalate	11.948	149	526060	1089.31	ng/ml	99
75) Fluoranthene	12.719	202	469482	1098.54	ng/ml	98
76) Benzidine	12.874	184	313160	1975.91	ng/ml	98
77) Pyrene	13.029	202	481350	1092.93	ng/ml	99
80) Butyl benzyl phthalate	14.109	149	208309	1011.77	ng/ml	98
81) Bis(2-ethylhexyl) adipate	14.291	129	197557	980.78	ng/ml	100
82) 3,3-Dichlorobenzidine	15.286	252	126187	2025.16	ng/ml	99
83) Benz(a)anthracene	15.334	228	401111	1039.86	ng/ml	99
84) Chrysene	15.414	228	382137	1021.00	ng/ml	100
85) Bis(2-ethylhexyl) phth...	15.489	149	299160	1007.49	ng/ml	98
87) Di-n-octyl phthalate	17.163	149	448238	993.34	ng/ml	97
88) Benzo(b)fluoranthene	17.949	252	390614	1030.12	ng/ml	96
89) Benzo(k)fluoranthene	18.014	252	391287	1016.41	ng/ml	97
90) Benzo(b+k)fluoranthene	18.014	252	796315	2049.18	ng/ml	97
91) Benzo(e)pyrene	18.607	252	381547	1058.65	ng/ml	97
92) Benzo(a)pyrene	18.725	252	358790	1035.11	ng/ml	98
93) Perylene	18.934	252	390591	1170.70	ng/ml	99
95) Indeno(1,2,3-cd)pyrene	21.266	276	325049	956.67	ng/ml	95
96) Dibenz(a,h)anthracene	21.330	278	309719	1019.03	ng/ml	92
97) Benzo(g,h,i)perylene	21.811	276	349358	1063.81	ng/ml	99

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

Quantitation Report (Not Reviewed)

Data Path : C:\msdchem\1\data\2019-04\9D12042\
Data File : J04121926.D
Acq On : 13 Apr 2019 1:26 am
Operator : JK/ AMS/ DTH
Sample : 9D12042-ICV1
Misc : 1x, A19C239 BNA@1000
ALS Vial : 13 Sample Multiplier: 1
DataAcq Meth:SV10_AQUISITION.M

Quant Time: Apr 15 12:07:14 2019
Quant Method : C:\msdchem\1\methods\SV10_041219.M
Quant Title : EPA 8270D: Semivolatile Organics
QLast Update : Mon Apr 15 09:10:15 2019
Response via : Initial Calibration
InstName : SV-GCMS10



APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Conventional Chemistry Parameters
Total Organic Carbon (EPA 9060A mod)
Benchsheet & Analysis Sequence Data

Batch 9041101
Sequence 9D23028 (A9D0674-02,03,04,05,06,07,08,12,13,14)

APEX LABORATORIES

Apex Laboratories

PREPARATION BENCH SHEET

JUN 0 5 2019

BATCH #: 9041101 (Sediment)

Prep Method: PSEP TOC

#	Lab Number		Analysis	Prepared	Initial (g)	Final (g)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH Other	pH >11
	9041101-BLK1		QC	04/19/19 09:17	5	5									
	9041101-BS1		QC	04/19/19 09:17	5	5	A19C282		1						
	A9D0674-02	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG05-190417				
	9041101-DUP1		QC	04/19/19 09:17	5	5		A9D0674-02							
	A9D0674-03	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG06-190417				
	A9D0674-04	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG08-190415				
	A9D0674-05	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG11-190415				
	A9D0674-06	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG13-190415				
	A9D0674-07	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG15-190416				
	A9D0674-08	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG16-190416				
	A9D0674-12	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG17-190416				
	A9D0674-13	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					FD-20190415144 1				
	A9D0674-14	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:17	5	5					T4-PDI2019-SG18-190415				

Standards/Reagents

Reagent(s)			Analyte Spike(s)			Surrogate(s)		
Std ID	Exp. Date	Description	Std ID	Exp. Date	Description	Std ID	Exp. Date	Description
A13L221	11/30/23	Wet Chem Balance 3	A19C282	09/22/19	TOC 10k ppm secondary			

Prepared By: SB 4/19/19 Date

Reviewed By: [signature] 4/23/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	**9D23028**	Instrument:	**TOC**
Date:	**04/23/19 07:50**	Calibration:	**A8B0203**

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D23028-CCV1	Sediment	QC	QC				A19C283
2	9D23028-CCB1	Sediment	QC	QC				
3	9041101-BLK1	Sediment	QC	QC		9041101		
4	9041101-BS1	Sediment	QC	QC		9041101		
5	A9D0674-02	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
6	9041101-DUP1	Sediment	QC	QC		9041101		
7	A9D0674-03	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
8	A9D0674-04	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
9	A9D0674-05	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
10	A9D0674-06	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
11	A9D0674-07	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
12	A9D0674-08	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
13	9D23028-CCV2	Sediment	QC	QC				A19C283
14	9D23028-CCB2	Sediment	QC	QC				
15	A9D0674-12	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
16	A9D0674-13	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
17	A9D0674-14	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041101		
18	9D23028-CCV3	Sediment	QC	QC				A19C283
19	9D23028-CCB3	Sediment	QC	QC				

Data Entered By: JKP 4-23-19

Data Reviewed By: CMS 4/23/19

Comments:

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
9D23028-CCV1	1	20	270.40	195.8	9,790.08	9,882	
	2	20	274.00	199.46	9,973.10		
9D23028-CCB1	1	100	0	5.15	51.53	52	
	2	100	0.001	5.15	51.54		
9041101-BLK1	1	99.2	2.284	7.3	73.57	73	
	2	96.1	1.651	6.71	69.79		
	3	97.2	2.309	7.32	75.32		
9041101-BS1	1	20.0	268.5	193.9	9,695.12	9,616	
	2	20.0	267.6	193.01	9,650.53		
	3	20.0	264.6	190.07	9,503.66		
A9D0674-02	1	47.2	29.12	30.43	644.64	630	
	2	48.3	29.11	30.42	629.79		
	3	55.1	33.58	33.93	615.86		
9041101-DUP1	1	57.9	69.03	59.1	1,020.72	1,063	
	2	57.4	64.52	56.13	977.86		
	3	47.9	65.97	57.09	1,191.87		
A9D0674-03	1	57.9	50.24	46.31	799.86	864	
	2	57.5	64.29	55.98	973.50		
	3	53.4	46.72	43.79	819.96		
A9D0674-04	1	23.9	383.4	359.84	15,056.08	17,078	
	2	20.0	369.4	333.03	16,651.41		
	3	23.3	425.8	454.99	19,527.39		
A9D0674-05	1	24.7	337.9	280.13	11,341.18	10,855	
	2	26.0	342.3	286.93	11,035.96		
	3	25.1	321.1	255.74	10,188.97		

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
A9D0674-06	1	25.3	369.9	333.95	13,199.57	14,346	
	2	22.5	380.1	353.33	15,703.39		
	3	27.1	394.7	383.08	14,135.90		
A9D0674-07	1	53.8	33.19	33.63	625.11	639	
	2	47.7	33.79	34.1	714.82		
	3	58.2	33.02	33.5	575.58		
A9D0674-08	1	17.6	264.8	190.27	10,810.65	10,629	
	2	17.0	234.6	163.46	9,615.04		
	3	19.1	291.9	218.93	11,462.37		
9D23028-CCV2	1	20.0	264.8	190.27	9,513.37	9,577	
	2	20.0	267.4	192.81	9,640.65		
9D23028-CCB2	1	100.0	0.302	5.44	54.38	53	
	2	100.0	0	5.15	51.53		
A9D0674-12	1	51.9	66.240	57.27	1,103.44	1,128	
	2	52.4	78.540	65.19	1,244.04		
	3	51.2	59.960	53.07	1,036.43		
A9D0674-13	1	58.6	378.2	349.63	5,966.39	5,899	
	2	50.2	370.4	334.87	6,670.77		
	3	56.6	342	286.47	5,061.22		
A9D0674-14	1	44.9	286.3	212.6	4,735.08	4,729	
	2	42.6	255.6	181.58	4,262.41		
	3	43.5	297.7	225.72	5,188.98		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
9D23028-CCV3	1	20.0	270.8	196.2	9,810.22	9,580	
	2	20.0	261.4	187	9,349.96		
9D23028-CCB3	1	100.0	0	5.15	51.53	52	
	2	100.0	0	5.15	51.53		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		

Sequence 9D23028
Batch 9041101

TOC Soil data log

Date/Time 4-23-19@1525
Analyst JKP

Sample ID	Wt1(mg or ul)** / Wt2(mg or ul)** / Wt3(mg or ul)**	raw TOC (ug)	Comments
9D23028-CCV1	20	270.4	
	20	274	
9D23028-CCB1	100	0	
	100	0.001	
9041101-BLK1	99.2	2.284	
	96.1	1.651	
	97.2	2.309	
9041101-BS1	20	268.5	
	20	267.6	Time Out
	20	264.6	
A9D0674-02	47.2	29.12	55.1 33.58
	~~Outlier 51.3 JKP 4-23-19 19.03~~		
	48.3	29.11	
9041101-DUP1	57.9	69.03	47.9 65.57
	57.4	64.52	
	~~Outlier 49.0 JKP 4-23-19 18.09~~		
A9D0674-03	57.9	50.24	53.4 46.72
	~~Outlier 51.8 JKP 4-23-19 143~~		
	57.5	64.29	
A9D0674-04	23.9	383.4	
	20.0	369.4	
	23.3	425.8	

Sample ID	Wt1(mg or ul)** / Wt2(mg or ul)** / Wt3(mg or ul)**	raw TOC (ug)	Comments
A9D0674-05	24.7	337.9	
	26.0	342.3	
	25.1	321.1	
A9D0674-06	25.3	369.9	
	22.5	380.1	
	27.1	394.7	
A9D0674-07	53.8	33.19	58.2 33.02
	47.7	33.79	
	~~Outlier 46.2 JKP 4-23-19 93~~		
A9D0674-08	17.6	264.8	
	17.0	234.6	
	19.1	291.9	
9D23028-CCV2	20	264.8	
	20	267.4	
9D23028-CCB2	100	0.302	
	100	0	
A9D0674-12	51.9	66.24	51.2 59.96
	52.4	78.54	
	~~Outlier 55.4 JKP 4-23-19 53.2~~		
A9D0674-13	58.6	378.2	56.6 342
~~AD9~~ JKP 4-23-19	~~Outlier 56.8 JKP 4-23-19 315.5~~		
	50.2	370.4	

**Sample mass input into instrument as 1000 mg to output actual ug C

Sequence 9D23028
Batch 9041101

TOC Soil data log

Date/Time 4-23-19@1525
Analyst JKP

Sample ID	Wt1(mg or ul)**	raw TOC (ug)	Comments
	Wt2(mg or ul)**	raw TOC (ug)	
	Wt3(mg or ul)**	raw TOC (ug)	
AFD0674-14	44.9	286.3	
	42.6	255.6	
	43.5	257.7	
9D23028-CCV3	20	270.8	
	20	261.4	
9D23028-CCB3	100	0	
	100	0	

(2)

Batch 9041101 TOC PSEP preweigh Analyst SAS

First in 4/19/19 @ 1015

Date/Time:	4/22/19	4/22/19			Effervesces?	Comments
T(°C) IN / OUT:	71.7 / 67.0	71.8 / 69.9	/	/		
Sample ID	Wt 1(g)	Wt 2(g)	Wt 3(g)	Wt 4(g)	(yes/no)	
A9D0674-02	14.1479	14.1474			N	
-02DUP	14.7272	14.7295			N	
-03	15.2901	15.2943			N	
-04	8.0636	8.0664			N	
-05	8.5454	8.5501			N	
-06	8.5956	8.5988			N	
-07	17.5831	17.5816			N	
-08	9.0857	9.0893			N	
-12	12.4855	12.4901			N	
-13	10.3054	10.3060			N	
-14	12.0663	12.0636			N	

⊠Sample spilled, enough for analysis left SAS 4/22/19 ✓

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Conventional Chemistry Parameters
Total Organic Carbon (EPA 9060A mod)
Benchsheet & Analysis Sequence Data

Batch 9041103
Sequence 9D24032 (A9D0674-15,16,17,18,19,20,21,22,23,24)

Apex Laboratories

PREPARATION BENCH SHEET

JUN 05 2019

BATCH #: 9041103 (Sediment)

Prep Method: PSEP TOC

#	Lab Number		Analysis	Prepared	Initial (g)	Final (g)	Spike ID	Source ID	ul Spike	ul Surr.	Sample ID	Extraction Comments	pH <2	pH other	pH >11
	9041103-BLK1		QC	04/19/19 09:18	5	5									
	9041103-BS1		QC	04/19/19 09:18	5	5	A19C282		1						
	A9D0674-15	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG51-190417				
	A9D0674-16	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG52-190417				
	A9D0674-17	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG53-190416				
	A9D0674-18	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG54-190416				
	A9D0674-19	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG57-190417				
	A9D0674-20	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG58-190417				
	A9D0674-21	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG59-190417	MS/MSD this sample			
	9041103-DUP1		QC	04/19/19 09:18	5	5		A9D0674-21							
	A9D0674-22	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					FD-201904171301				
	A9D0674-23	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG60-190417				
	A9D0674-24	B	Total Organic Carbon - Soil (9060A)	04/19/19 09:18	5	5					T4-PDI2019-SG61-190416				

Standards/Reagents

10:30 SAS 4/24/19

Reagent(s)			Analyte Spike(s)			Surrogate(s)		
Std ID	Exp. Date	Description	Std ID	Exp. Date	Description	Std ID	Exp. Date	Description
A13L221	11/30/23	Wet Chem Balance 3	A19C282	09/22/19	TOC 10k ppm secondary			

SAS 4/19/19
Prepared By: Date

Reviewed By: 4/26/19 Date

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	9D24032	Instrument:	TOC
Date:	04/24/19 09:10	Calibration:	A8B0203

#	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	9D24032-CCV1	Sediment	QC	QC				A19C283
2	9D24032-CCB1	Sediment	QC	QC				
3	9041103-BLK1	Sediment	QC	QC		9041103		
4	9041103-BS1	Sediment	QC	QC		9041103		
5	A9D0674-15	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
6	A9D0674-16	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
7	A9D0674-17	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
8	A9D0674-18	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
9	A9D0674-19	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
10	A9D0674-20	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
11	A9D0674-21	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
12	9041103-DUP1	Sediment	QC	QC		9041103		
13	9D24032-CCV2	Sediment	QC	QC				A19C283
14	9D24032-CCB2	Sediment	QC	QC				
15	A9D0674-22	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
16	A9D0674-23	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
17	A9D0674-24	Sediment	Total Organic Carbon - Soil (9060A)	Anchor QEA, LLC	05/01/19	9041103		
18	9D24032-CCV3	Sediment	QC	QC				A19C283
19	9D24032-CCB3	Sediment	QC	QC				

Data Entered By: SAS 4/24/19

Data Reviewed By: [signature] 4/26/19

Comments:

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
9D24032-CCV1	1	20	266.00	191.44	9,571.86	9,518	
	2	20	263.80	189.3	9,464.95		
9D24032-CCB1	1	100	0.02	5.17	51.69	52	
	2	100	0	5.15	51.53		
9041103-BLK1	1	97.8	1.798	6.84	69.98	71	
	2	95.7	1.848	6.89	72.01		
	3	99.8	1.973	7.01	70.22		
9041103-BS1	1	20.0	263.2	188.72	9,436.05	9,494	
	2	20.0	264	189.49	9,474.61		
	3	20.0	266	191.44	9,571.86		
A9D0674-15	1	20.1	408.6	413.74	20,583.93	20,607	
	2	19.5	403.9	403.11	20,672.34		
	3	18.3	391.5	376.35	20,565.65		
A9D0674-16	1	18.8	410.7	418.57	22,264.52	22,040	
	2	22.8	441.1	494.94	21,707.86		
	3	19.1	412.6	423	22,146.37		
A9D0674-17	1	19.3	430.5	466.93	24,193.08	24,331	
	2	19.5	433.2	473.92	24,303.46		
	3	18.3	423.1	448.26	24,495.17		
A9D0674-18	1	30.8	193	133.19	4,324.44	4,986	
	2	33.2	244.7	171.89	5,177.45		
	3	31.4	244	171.29	5,455.12		
A9D0674-19	1	19.3	419.1	438.47	22,718.66	22,611	
	2	19.5	419.7	439.93	22,560.29		
	3	19.1	415.9	430.78	22,554.19		

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
A9D0674-20	1	16.3	392.8	379.07	23,255.93	23,503	
	2	16.0	389.4	372	23,249.91		
	3	15.2	385.9	364.86	24,003.71		
A9D0674-21	1	20.0	438.1	486.86	24,342.80	24,467	
	2	19.0	428.1	460.79	24,252.31		
	3	19.2	434.1	476.27	24,805.71		
9041103-DUP1	1	23.3	463.5	559.3	24,004.43	24,244	
	2	22.8	466.3	567.86	24,906.17		
	3	21.4	446.5	509.8	23,822.57		
9D24032-CCV2	1	20.0	265.6	191.05	9,552.32	9,611	
	2	20.0	268	193.41	9,670.32		
9D24032-CCB2	1	100.0	0.53	5.65	56.54	54	
	2	100.0	0	5.15	51.53		
A9D0674-22	1	18.6	408.600	413.74	22,243.92	22,608	
	2	19.2	424.300	451.24	23,502.06		
	3	20.7	426.600	457	22,077.28		
A9D0674-23	1	19.6	424.8	452.49	23,086.01	22,894	
	2	22.4	446.5	509.8	22,759.06		
	3	20.9	434.5	477.32	22,838.20		
A9D0674-24	1	21.8	221.6	153.29	7,031.52	8,736	
	2	24.4	289.5	216.19	8,860.36		
	3	21.4	293.5	220.78	10,316.81		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		

Sample ID (Reporting Levels based on lowest amount used.)	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
Sample ID	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	3			5.15	#DIV/0!		
9D24032-CCV3	1	20.0	266.9	192.32	9,616.02	9,643	
	2	20.0	268	193.41	9,670.32		
9D24032-CCB3	1	100.0	0	5.15	51.53	52	
	2	100.0	0	5.16	51.57		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		
				5.15	#DIV/0!		

Sequence 9D24032
Batch 9041103

TOC Soil data log

Date/Time 4/23/19
Analyst SAS

Sample ID	Wt1(mg or ul)** / Wt2(mg or ul)** / Wt3(mg or ul)**	raw TOC (ug)	Comments
CCV1	20	266.0	
	20	263.8	
	—	—	
CCB1	100	0.017	
	100	ND	
	—	—	
BLK	97.8	1.798	
	95.7	1.848	
	99.8	1.973	
BS	20	263.2	
	20	264.0	
	20	266.0	
674-15	20.1	408.6	
	19.5	403.9	
	18.3	391.5	
674-16	18.8	410.7	
	22.8	441.1	
	19.1	412.6	
674-17	19.3	430.5	
	19.5	433.2	
	18.3	423.1	
674-18	30.8	193.0	31.4 | 244.0
	~~27.8~~	~~426.6~~	~~27.7 | 446.5~~
	33.2	244.7	outliers SAS 4/24/19

Sample ID	Wt1(mg or ul)** / Wt2(mg or ul)** / Wt3(mg or ul)**	raw TOC (ug)	Comments
674-19	19.3	419.1	JLCP 4-24-19
	19.5	419.7	
	19.1	415.9	
674-20	16.3	392.8	
	16.0	389.4	
	15.2	385.9	
674-21	20.0	438.1	
	19.0	428.1	
	19.2	434.1	
674-21 dup 4/26/19 DUP	23.3	463.5	
	22.8	466.3	time out
	21.4	446.5	time out
CCV2	20	265.6	
	20	268.0	
	—	—	
CCB2	100	0.531	
	100	ND	
	—	—	
674-22	18.6	408.6	
	19.2	424.3	
	20.7	426.6	
674-23	19.6	424.8	
	22.4	446.5	
	20.9	434.5	Time out WVO 4/24/19

**Sample mass input into instrument as 1000 mg to output actual ug C

Sequence 9D24032
Batch 9041103

TOC Soil data log

Date/Time 4/24/19
Analyst SAS

Sample ID	Wt1(mg or ul)**	raw TOC (ug)	Comments
	Wt2(mg or ul)**	raw TOC (ug)	
	Wt3(mg or ul)**	raw TOC (ug)	
674-24	21.8	221.6	KWD 4/24/19
	24.4	289.5	
	21.4	293.5	
CCV3	20	266.9	
	20	268.0	
	—	—	
CCB3	100	ND	
	100	0.004	
	—	—	

(3)

Batch 9041103 TOC PSEP preweigh Analyst VVO

First in 4/19/19 @ 10:30

Date/Time:	4/22/19	4/22/19			Effervesces?	Comments
T(°C) IN / OUT:	68.1 / 67.0	71.8 / 67.0	/	/		
Sample ID	Wt 1(g)	Wt 2(g)	Wt 3(g)	Wt 4(g)	(yes/no)	
A9D0674-15	5.7950	5.7957			N	
-16	5.5726	5.5720			N	
-17	4.5919	4.5932			N	
-18	11.2129	11.2123			N	
-19	5.0946	5.0939			N	
-20	5.1174	5.1124			N	
-21	4.0846	4.0808			N	
-21 DUP	4.9004	4.9027			N	
-22	5.8623	5.8630			N	
-23	5.0554	5.0571			N	
-24	12.8918	12.8948			N	

Pre-drying sample aliquot > 10g. Constant wt = change of < 0.005g

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Conventional Chemistry Parameters
Total Organic Carbon (EPA 9060A mod)
Calibration Data

Sequence 8B02022 (Cal ID A8B0203) TOC

ELEMENT SEQUENCE LOG

Apex Laboratories

Sequence:	8B02022	Instrument:	TOC
Date:	02/02/18 10:15	Calibration:	A8B0203

Order	Lab Number	Matrix	Analysis	Client	Due	Batch	ISTD ID	STD ID
1	8B02022-CAL1	Soil	QC	QC				
2	8B02022-CAL2	Soil	QC	QC				A18B030
3	8B02022-CAL3	Soil	QC	QC				A18B029
4	8B02022-CAL4	Soil	QC	QC				A18B028
5	8B02022-CAL5	Soil	QC	QC				A18B027
6	8B02022-CAL6	Soil	QC	QC				A18B026
7	8B02022-CAL7	Soil	QC	QC				A18B025
8	8B02022-CAL8	Soil	QC	QC				A18B024
9	8B02022-CAL9	Soil	QC	QC				A18B023
10	8B02022-CALA	Soil	QC	QC				A18B022
11	8B02022-CALB	Soil	QC	QC				A18B021
12	8B02022-ICV1	Soil	QC	QC				A18B031
13	8B02022-ICB1	Soil	QC	QC				
14	8B02022-ICV2	Soil	QC	QC				A18B031
15	8B02022-ICB2	Soil	QC	QC				

Data Entered By: JKP 2-2-18

Comments:

Data Reviewed By: JCS 2/14/18

2/2/2018 5:40:11PM

TOC Data

Sample ID	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
8B02022-CAL1	1	20	1.847	6.89	344.50	323	
	2	20	1.106	6.2	309.77		
	3	20	1.192	6.28	313.81		
[redacted]	1	20.0	14.4	18.2	909.78	[redacted]	
	2	20.0	16.65	20.13	1,006.70		
	3	20.0	15.74	19.35	967.66		
[redacted]	1	20.0	44.37	42.07	2,103.69	[redacted]	
	2	20.0	48.3	44.93	2,246.27		
	3	20.0	47.81	44.57	2,228.65		
[redacted]	1	20.0	123.9	92.03	4,601.40	[redacted]	
	2	20.0	131.8	96.53	4,826.34		
	3	20.0	132.4	96.87	4,843.42		
[redacted]	1	20.0	278.8	204.47	10,223.57	[redacted]	
	2	20.0	287.6	214.05	10,702.70		
	3	20.0	284.1	210.18	10,508.98		
[redacted]	1	20.0	350.7	300.44	15,022.06	[redacted]	
	2	20.0	345	291.2	14,560.12		
	3	20.0	361	317.95	15,897.40		
[redacted]	1	20.0	399.1	392.54	19,626.76	[redacted]	
	2	20.0	402.2	399.33	19,966.67		
	3	20.0	410.3	417.65	20,882.38		

TOC Data

Sample ID	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
8B02022-CAL8	1	20.0	437.8	486.05	24,302.72	24,424	
	2	20.0	440.9	494.4	24,719.83		
	3	20.0	437.4	484.99	24,249.38		
8B02022-CAL9	1	20.0	473.2	589.45	29,472.51	29,844	
	2	20.0	473.6	590.72	29,536.19		
	3	20.0	479.7	610.45	30,522.56		
8B02022-CAL10	1	20.0	503.7	693.77	34,688.41	34,766	
	2	20.0	504.4	696.34	34,816.94		
	3	20.0	504.6	697.07	34,853.73		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
8B02022-CAL11	1	20	529.100	792.36	39,618.21	40,444	
	2	20	532.500	806.41	40,320.67		
	3	20	537.600	827.87	41,393.75		
8B02022-ICV1	1	20.0	298.2	226.32	11,315.89	11,747	
	2	20.0	312	243.55	12,177.38		
	3			5.15	#DIV/0!		
8B022-ICB1	1	20.0	0	5.15	257.64	258	
	2	20.0	0	5.15	257.64		
	3			5.15	#DIV/0!		
8B02022-ICV2	1	20.0	277.9	203.52	10,176.04	10,428	
	2	20.0	287.2	213.61	10,680.34		
	3			5.15	#DIV/0!		
8B02022-ICB2	1	20.0	0	5.15	257.64	258	
	2	20.0	0	5.15	257.64		
	3			5.15	#DIV/0!		

⇒ ICV1 failed high. Reprepped and reanalyzed below as ICV2. JKP 2-2-18

Sequence 8B02022
Batch

TOC Soil data log

Date/Time 2-2-18 @ 1735 ~~1520~~
Analyst JKP JKP 2-2-18

Sample ID	Wt1(mg or ul)**	raw TOC (ug)	Comments
	Wt2(mg or ul)**	raw TOC (ug)	
	Wt3(mg or ul)**	raw TOC (ug)	
8B02022-Cal1	20	1.847	
	20	1.106	
	20	1.192	
8B02022-Cal2	20	14.4	Time Out
	20	16.65	
	20	15.74	
8B02022-Cal3	20	44.37	
	20	48.3	
	20	47.81	
8B02022-Cal4	20	123.9	Time Out
	20	131.8	
	20	132.4	
8B02022-Cal5	20	278.8	
	20	287.6	
	20	284.1	
8B02022-Cal6	20	350.7	Time Out
	20	345	
	20	361	
8B02022-Cal7	20	399.1	Time Out
	20	402.2	
	20	410.3	
8B02022-Cal8	20	437.8	Time Out
	20	440.9	
	20	437.4	

Sample ID	Wt1(mg or ul)**	raw TOC (ug)	Comments
	Wt2(mg or ul)**	raw TOC (ug)	
	Wt3(mg or ul)**	raw TOC (ug)	
8B02022-Cal9	20	473.2	Time Out
	20	473.6	Time Out
	20	479.7	Time Out
8B02022-Cal10A JKP 2-2-18	20	503.7	
	20	504.4	Time Out
	20	504.6	Time Out
8B02022-Cal10B JKP 2-2-18	20	529.1	Time Out
	20	532.5	Time Out
	20	537.6	Time Out
8B02022-ICV1	20	298.2	Time Out
	20	312	Time Out
	JKP 3-2-18 ~~20~~		
8B02022-ICB1	20	0	
	20	0	
	JKP 3-2-18 ~~20~~		
8B02022-ICV2	20	277.9	Time Out
	20	287.2	Time Out
8B02022-ICB2	20	0	
	20	0	

ICV1 failed high. Reprepped and reanalyzed below as ICV2
JKP 2-2-18

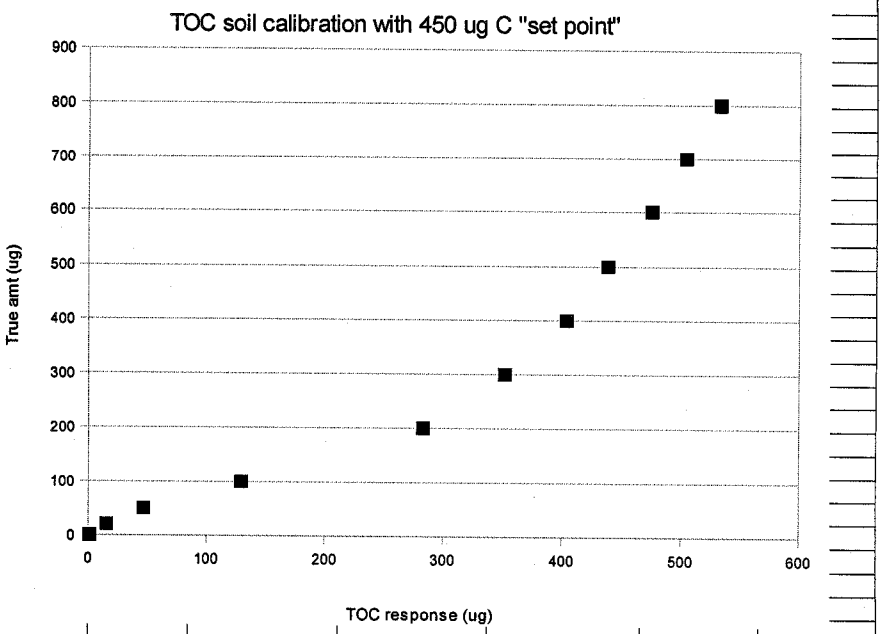
**Sample mass input into instrument as 1000 mg to output actual ug C

Cal Standard	Instrument Reponse	Average Instrument Response
1	1.85	1.38
	1.11	
	1.19	
2	14.4	15.6
	16.65	
	15.74	
3	44.37	46.83
	48.3	
	47.81	
4	123.9	129.37
	131.8	
	132.4	
5	278.8	283.5
	287.6	
	284.1	
6	350.7	352.23
	345	
	361	
7	399.1	403.87
	402.2	
	410.3	
8	437.8	438.7
	440.9	
	437.4	
9	473.2	475.5
	473.6	
	479.7	
10	503.7	504.23
	504.4	
	504.6	
11	529.1	533.07
	532.5	
	537.6	

450 ug curve

TOC resp ug C		True ug C
533.07		800
504.23		700
475.5		600
438.7		500
403.87		400
352.23		300
283.5		200
129.37		100
46.83		50
15.6		20
1.38		0

TOC resp ug C	Requant	% recovery
533.07	808.77	101.1
504.23	695.73	99.39
475.5	596.81	99.47
438.7	488.46	97.69
403.87	403.04	100.76
352.23	302.98	100.99
283.5	209.52	104.76
129.37	95.14	95.14
46.83	43.86	87.73
15.6	19.23	96.15
1.38	6.45	N/A



X (response)	X^2	X^3	y (ug C)
533.07	284160.07	151476261.9	800
504.23	254251.25	128201957.5	700
475.5	226100.25	107510668.9	600
438.7	192457.69	84431188.6	500
403.87	163108.28	65873999.14	400
352.23	124068.32	43700998.31	300
283.5	80372.25	22785532.88	200
129.37	16735.73	2165046.18	100
46.83	2192.74	102678.55	50
15.6	243.26	3793.98	20
1.38	1.91	2.64	0

curve calculations

0.00000740	-0.00289199	0.94586231	5.15285875
0	0	0.14	5.96
0.99945	8.03	#N/A	#N/A
4233.13	7	#N/A	#N/A
818003.66	450.89	#N/A	#N/A

Sample ID	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
8B02022-CAL1	1	20	1.847	6.89	344.50	323	
	2	20	1.106	6.2	309.77		
	3	20	1.192	6.28	313.81		
8B02022-CAL2	1	20.0	14.4	18.2	909.78	961	
	2	20.0	16.65	20.13	1,006.70		
	3	20.0	15.74	19.35	967.66		
8B02022-CAL3	1	20.0	44.37	42.07	2,103.69	2,193	
	2	20.0	48.3	44.93	2,246.27		
	3	20.0	47.81	44.57	2,228.65		
8B02022-CAL4	1	20.0	123.9	92.03	4,601.40	4,757	
	2	20.0	131.8	96.53	4,826.34		
	3	20.0	132.4	96.87	4,843.42		
8B02022-CAL5	1	20.0	278.8	204.47	10,223.57	10,478	
	2	20.0	287.6	214.05	10,702.70		
	3	20.0	284.1	210.18	10,508.98		
8B02022-CAL6	1	20.0	350.7	300.44	15,022.06	15,160	
	2	20.0	345	291.2	14,560.12		
	3	20.0	361	317.95	15,897.40		
8B02022-CAL7	1	20.0	399.1	392.54	19,626.76	20,159	
	2	20.0	402.2	399.33	19,966.67		
	3	20.0	410.3	417.65	20,882.38		

Sample ID	Rep #	Amount (mg or ul)	instrument response (ug C)	Calculated ug C	TOC (mg/kg or mg/l)	Average TOC (mg/kg or mg/l)	Date and Time
8B02022-CAL8	1	20.0	437.8	486.05	24,302.72	24,424	
	2	20.0	440.9	494.4	24,719.83		
	3	20.0	437.4	484.99	24,249.38		
8B02022-CAL9	1	20.0	473.2	589.45	29,472.51	29,844	
	2	20.0	473.6	590.72	29,536.19		
	3	20.0	479.7	610.45	30,522.56		
8B02022-CALA	1	20.0	503.7	693.77	34,688.41	34,786	
	2	20.0	504.4	696.34	34,816.94		
	3	20.0	504.6	697.07	34,853.73		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
	1			5.15	#DIV/0!	#DIV/0!	
	2			5.15	#DIV/0!		
8B02022-CALB	1	20	529.100	792.36	39,618.21	40,444	
	2	20	532.500	806.41	40,320.67		
	3	20	537.600	827.87	41,393.75		
8B02022-ICV1	1	20.0	298.2	226.32	11,315.89	11,747	
	2	20.0	312	243.55	12,177.38		
	3			5.15	#DIV/0!		
8B022-ICB1	1	20.0	0	5.15	257.64	258	
	2	20.0	0	5.15	257.64		
	3			5.15	#DIV/0!		
8B02022-ICV2	1	20.0	277.9	203.52	10,176.04	10,428	
	2	20.0	287.2	213.61	10,680.34		
	3			5.15	#DIV/0!		
8B02022-ICB2	1	20.0	0	5.15	257.64	258	
	2	20.0	0	5.15	257.64		
	3			5.15	#DIV/0!		

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
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Conventional Chemistry Parameters
Total Suspended Solids (PSEP 1986)
Benchsheet Data

Batch 9041165 (A9D0674-02,03,04,05,06,07,08,12,13,14)

PREPARATION BENCH SHEET **Apex Laboratories** JUN 05 2019

BATCH #: 9041165 (Matrix: Sediment)

Percent Solids Worksheet

Lab Number	QC Source ID	Prepared (Time In)	Weighed (Time Out)	Tare Wt. (g)	Wet Weight (+Tare) (g)	Dry Weight (+Tare) (g)	% Solids (Calc)	Sample Comments
A9D0674-02		04/22/19 12:06		1.2927	28.0766	21.2906	74.7	enter TS data for DWt.
A9D0674-02		04/22/19 12:06		1.2927	28.0766	21.2906	74.7	**USE SOLIDS DATA**
9041165-DUP1	A9D0674-02	04/22/19 12:06		1.2906	35.2788	26.6909	74.7	
A9D0674-03		04/22/19 12:06		1.2987	36.2302	27.6678	75.5	**USE SOLIDS DATA**
A9D0674-03		04/22/19 12:06		1.2987	36.2302	27.6678	75.5	enter TS data for DWt.
A9D0674-04		04/22/19 12:06		1.2952	28.6875	13.8607	45.9	**USE SOLIDS DATA**
A9D0674-04		04/22/19 12:06		1.2952	28.6875	13.8607	45.9	enter TS data for DWt.
A9D0674-05		04/22/19 12:06		1.2929	30.1002	16.2929	52.1	**USE SOLIDS DATA**
A9D0674-05		04/22/19 12:06		1.2929	30.1002	16.2929	52.1	enter TS data for DWt.
A9D0674-06		04/22/19 12:06		1.3003	27.7466	14.3202	49.2	**USE SOLIDS DATA**
A9D0674-06		04/22/19 12:06		1.3003	27.7466	14.3202	49.2	enter TS data for DWt.
A9D0674-07		04/22/19 12:06		1.2997	27.4822	21.1553	75.8	enter TS data for DWt.
A9D0674-07		04/22/19 12:06		1.2997	27.4822	21.1553	75.8	**USE SOLIDS DATA**
A9D0674-08		04/22/19 12:06		1.2929	28.4686	15.0471	50.6	**USE SOLIDS DATA**
A9D0674-08		04/22/19 12:06		1.2929	28.4686	15.0471	50.6	enter TS data for DWt.
A9D0674-12		04/22/19 12:06		1.3004	27.7403	20.1777	71.4	**USE SOLIDS DATA**
A9D0674-12		04/22/19 12:06		1.3004	27.7403	20.1777	71.4	enter TS data for DWt.
A9D0674-13		04/22/19 12:06		1.3026	26.5578	17.0511	62.4	**USE SOLIDS DATA**
A9D0674-13		04/22/19 12:06		1.3026	26.5578	17.0511	62.4	enter TS data for DWt.
A9D0674-14		04/22/19 12:06		1.2958	27.7107	18.1962	64.0	**USE SOLIDS DATA**
A9D0674-14		04/22/19 12:06		1.2958	27.7107	18.1962	64.0	enter TS data for DWt.

MRC 4-23-19
Prepared By: Date

Reviewed By: 4/23/19 Date

Total Solids Worksheet

Analyst: MRF Date: 04/22/19 Batch: 9041165

Sample ID	Vessel ID	Tare Weight (g)	Wet+ Tare Weight (g)	Dry Weight (g)		Comments
				1st weighing	2nd weighing	
9041165-dup1	1	1.2906	35.2788	26.6909	26.6972	
A9D0674-02	2	1.2937	28.0766	21.2906	21.3091	
A9D0674-03	3	1.2987	36.2302	27.6687	27.6678	
A9D0674-04	4	1.2952	28.6875	13.8607	13.8779	
A9D0674-05	5	1.2929	30.1002	16.2929	16.3085	
A9D0674-06	6	1.3003	27.7466	14.3202	14.3414	
A9D0674-07	7	1.2997	27.4822	21.1553	21.1648	
A9D0674-08	8	1.2929	28.4686	15.0471	15.0665	
A9D0674-12	9	1.3004	27.7403	20.1777	20.1910	
A9D0674-13	10	1.3026	26.5578	17.0511	17.0657	
A9D0674-14	11	1.2958	27.7107	18.1962	18.2011	

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Conventional Chemistry Parameters
Total Suspended Solids (PSEP 1986)
Benchsheet Data

Batch 9041414 (A9D0674-15,16,17,18,19,20,21,22,23,24)

PREPARATION BENCH SHEET

Apex Laboratories

BATCH #: 9041414 (Matrix: Sediment)

Percent Solids Worksheet

JUN 05 2019

Lab Number	QC Source ID	Prepared (Time In)	Weighed (Time Out)	Tare Wt. (g)	Wet Weight (+Tare) (g)	Dry Weight (+Tare) (g)	% Solids (Calc)	Sample Comments
A9D0674-15		04/29/19 10:50		1.3001	27.7127	11.6065	39.0	**USE SOLIDS DATA**
A9D0674-15		04/29/19 10:50		1.3001	27.7127	11.6065	39.0	enter TS data for DWt.
A9D0674-16		04/29/19 10:50		1.2994	31.5697	11.9510	35.2	**USE SOLIDS DATA**
A9D0674-16		04/29/19 10:50		1.2994	31.5697	11.9510	35.2	enter TS data for DWt.
A9D0674-17		04/29/19 10:50		1.2929	29.6717	10.6828	33.1	**USE SOLIDS DATA**
A9D0674-17		04/29/19 10:50		1.2929	29.6717	10.6828	33.1	enter TS data for DWt.
A9D0674-18		04/29/19 10:50		1.2869	28.2773	20.3495	70.6	**USE SOLIDS DATA**
A9D0674-18		04/29/19 10:50		1.2869	28.2773	20.3495	70.6	enter TS data for DWt.
A9D0674-19		04/29/19 10:50		1.3005	27.6087	10.4078	34.6	**USE SOLIDS DATA**
A9D0674-19		04/29/19 10:50		1.3005	27.6087	10.4078	34.6	enter TS data for DWt.
A9D0674-20		04/29/19 10:50		1.2971	26.1359	9.7828	34.2	**USE SOLIDS DATA**
A9D0674-20		04/29/19 10:50		1.2971	26.1359	9.7828	34.2	enter TS data for DWt.
A9D0674-21		04/29/19 10:50		1.3019	27.5239	10.1616	33.8	**USE SOLIDS DATA**
A9D0674-21		04/29/19 10:50		1.3019	27.5239	10.1616	33.8	enter TS data for DWt.
9041414-DUP1	A9D0674-21	04/29/19 10:50		1.2973	27.9476	10.2748	33.7	
A9D0674-22		04/29/19 10:50		1.3003	28.5707	11.4025	37.0	**USE SOLIDS DATA**
A9D0674-22		04/29/19 10:50		1.3003	28.5707	11.4025	37.0	enter TS data for DWt.
A9D0674-23		04/29/19 10:50		1.3040	30.9559	12.1858	36.7	**USE SOLIDS DATA**
A9D0674-23		04/29/19 10:50		1.3040	30.9559	12.1858	36.7	enter TS data for DWt.
A9D0674-24		04/29/19 10:50		1.3018	26.4246	18.7375	69.4	**USE SOLIDS DATA**
A9D0674-24		04/29/19 10:50		1.3018	26.4246	18.7375	69.4	enter TS data for DWt.

MRE 4-30-19
Prepared By: Date

Reviewed By: 4/30/19 Date

Total Solids Worksheet

Analyst: MRF Date: 04/29/19 Batch: 9041414

Sample ID	Vessel ID	Tare Weight (g)	Wet+ Tare Weight (g)	Dry Weight (g)		Comments
				1st weighing	2nd weighing	
9041414-DUP1	1	1.2973	27.9476	10.2848	10.2748	A9D0674-21
A9D0674-15	2	1.3001	27.7127	11.6156	11.6065	
A9D0674-16	3	1.2994	31.5697	11.9578	11.9510	
A9D0674-17	4	1.2929	29.6717	10.6970	10.6828	
A9D0674-18	5	1.2869	28.2773	20.3585 91	20.3495	
A9D0674-19	6	1.3005	27.6087	10.4125 MR 4/30	10.4078	
A9D0674-20	7	1.2971	26.1359	9.7948	9.7828	
A9D0674-21	8	1.3019	27.5239	10.1709	10.1616	
A9D0674-22	9	1.3003	28.5707	11.4178	11.4025	
A9D0674-23	10	1.3040	30.9559	12.1995	12.1858	
A9D0674-24	11	1.3018	26.4246	18.7479	18.7375	

APEX LABORATORIES, LLC
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Grain Size by ASTM D 422m
Benchsheet Data

Batch 9041136 (A9D0674-01,02,03,04,05,06,07,08,09,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24)

APEX LABORATORIES

Grain Size (D422m/PSET)

PREPARATION BENCH SHEET

9041136

JUN 19 2019
JUN 20 2019

Apex Laboratories
BATCH #: 9041136 (Soil)
Prep Method: ASTM D 421

Lab Number	Due	Prepared	Initial (N/A)	Final (N/A)	Client	ClientID / Sample	Extraction Comments
A9D0674-02	*05/01/19*	**04/24/19 08:46**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG05-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-03	*05/01/19*	**05/06/19 09:19**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG06-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-04	*05/01/19*	**04/24/19 09:03**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG08-190415**	
☐ Grain Size (D422m/PSET)							
A9D0674-05	*05/01/19*	**05/15/19 08:20**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG11-190415**	
☐ Grain Size (D422m/PSET)							
A9D0674-06	*05/01/19*	**05/15/19 08:42**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG13-190415**	
☐ Grain Size (D422m/PSET)							
A9D0674-07	*05/01/19*	**04/24/19 09:41**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG15-190416**	
☐ Grain Size (D422m/PSET)							
A9D0674-08	*05/01/19*	**05/15/19 09:03**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG16-190416**	
☐ Grain Size (D422m/PSET)							
A9D0674-12	*05/01/19*	**04/24/19 09:58**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG17-190416**	
☐ Grain Size (D422m/PSET)							
A9D0674-13	*05/01/19*	**05/15/19 09:26**	**1**	**1**	**Anchor QEA, LLC**	**FD-201904151441**	
☐ Grain Size (D422m/PSET)							
A9D0674-14	*05/01/19*	**04/24/19 09:20**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG18-190415**	
☐ Grain Size (D422m/PSET)							
A9D0674-15	*05/01/19*	**04/30/19 08:43**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG51-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-16	*05/01/19*	**04/30/19 09:01**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG52-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-17	*05/01/19*	**05/02/19 09:40**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG53-190416**	
☐ Grain Size (D422m/PSET)							
A9D0674-18	*05/01/19*	**04/30/19 09:56**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG54-190416**	
☐ Grain Size (D422m/PSET)							
A9D0674-19	*05/01/19*	**04/30/19 08:50**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG57-190417**	
☐ Grain Size (D422m/PSET)							

James A. Johnson 05/20/19
Prepared By: Date

5/20/19
Reviewed By: Date

APEX LABORATORIES

Apex Laboratories
BATCH #: 9041136 (Soil)
Prep Method: ASTM D 421

Lab Number	Due	Prepared	Initial (N/A)	Final (N/A)	Client	ClientID / Sample	Extraction Comments
A9D0674-20	*05/01/19*	**04/30/19 09:10**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG58-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-21	*05/01/19*	**05/02/19 09:55**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG59-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-22	*05/01/19*	**04/30/19 10:10**	**1**	**1**	**Anchor QEA, LLC**	**FD-201904171301**	
☐ Grain Size (D422m/PSET)							
A9D0674-23	*05/01/19*	**05/02/19 10:25**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG60-190417**	
☐ Grain Size (D422m/PSET)							
A9D0674-24	*05/01/19*	**04/30/19 10:21**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG61-190416**	
☐ Grain Size (D422m/PSET)							

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A19D328	10/21/19	Na Hexametaphosphate 40 g/L
A19D333	05/26/19	Na Hexametaphosphate 40 g/L
A19E022	06/01/19	Na Hexametaphosphate 40 g/L

Analyte Spike(s)

Std ID	Exp. Date	Description

A132215 Grain Size Balance 11/30/23

MG 06/19/19

Prepared By: Date

Reviewed By: Date

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-02		Client Sample ID:	T4-PDI2019-SG05-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	SAND with trace Silt and Clay			Max Particle Size:	Gravel		
Particle Shape:	Sub-angular to Sub-rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.106	527.749	516.64	1.89	507.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.357	13.425	12.07	12.07	2.4	97.6
10	2.00	1.377	14.339	12.96	25.03	2.6	95.1
Pan		11.122	501.402	490.28	515.31	94.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9814		D67403	1.367	16.483	16.202	1.89

Hydrometer Analysis

Start Date/Time	4/24/2019	8:46	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.420		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	95.1		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.55		Corrected Dry Weight of Soil Tested (g) (W)	103.67

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8	20.4	1.91	1.8	14.8	0.01365	0.053	1.75
2	7.5	20.4	1.41	1.4	14.8	0.01365	0.037	1.30
4	7	20.3	0.88	0.8	15	0.01365	0.026	0.81
8	10	20.3	3.88	3.7	14.5	0.01365	0.018	3.56
15	7	20.6	0.98	0.9	15	0.01348	0.013	0.90
30	6	20.4		0.0	15.2	0.01365	0.010	0.00
60	5.5	20.4		0.0	15.2	0.01365	0.007	0.00
90	5.5	20.4		0.0	15.2	0.01365	0.006	0.00
120	5.5	20.4		0.0	15.2	0.01365	0.005	0.00
240	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
360	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
1440	4.5	19.6		0.0	15.3	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.300	9.227	7.93	63.73	7.6	87.4
40	0.425	1.293	49.911	48.62	301.10	46.9	40.5
60	0.250	1.297	36.424	35.13	472.60	33.9	6.6
100	0.150	1.302	4.752	3.45	489.44	3.3	3.3
140	0.105	1.285	1.583	0.30	490.90	0.3	3.0
200	0.075	1.297	1.494	0.20	491.86	0.2	2.8
230	0.063	1.289	1.391	0.10	492.36	0.1	2.7
			95.72	93.83	730-MDL	21.8	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG05-190417 (A9D0674-02)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*4.94*
Retained on No. 4 sieve		4.75	97.62	2.38
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	95.06	2.56
Sand				*92.33*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	87.42	7.65
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	40.52	46.9
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	6.64	33.88
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	3.31	3.33
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	3.02	0.29
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	2.83	0.19
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	2.73	0.1
Silt and Clay (Measurements in the Clay fraction are noted)				*2.83*
Hydrometer Test		0.0525	1.75	0.98
Hydrometer Test		0.0371	1.3	0.46
Hydrometer Test		0.0264	0.81	0.49
Hydrometer Test		0.0184	3.56	0
Hydrometer Test		0.0135	0.9	0
Hydrometer Test		0.0097	0.9	0
Hydrometer Test		0.0069	0.9	0
Hydrometer Test		0.0056	0.9	0
Hydrometer Test	Clay	0.0049	0.9	0
Hydrometer Test	Clay	0.0034	0.9	0
Hydrometer Test	Clay	0.0028	0.9	0
Hydrometer Test	Clay	0.0014	0.9	0

Grain Size Summary	**Percent of Total Sample**
Gravel	4.9
Sand	92.3
Coarse sand	7.6
Medium sand	84.1
Fine sand	0.6
Silt	1.9
Clay	0.9

Case Narrative for Sample ID: T4-PDI2019-SG05-190417 (A9D0674-02)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

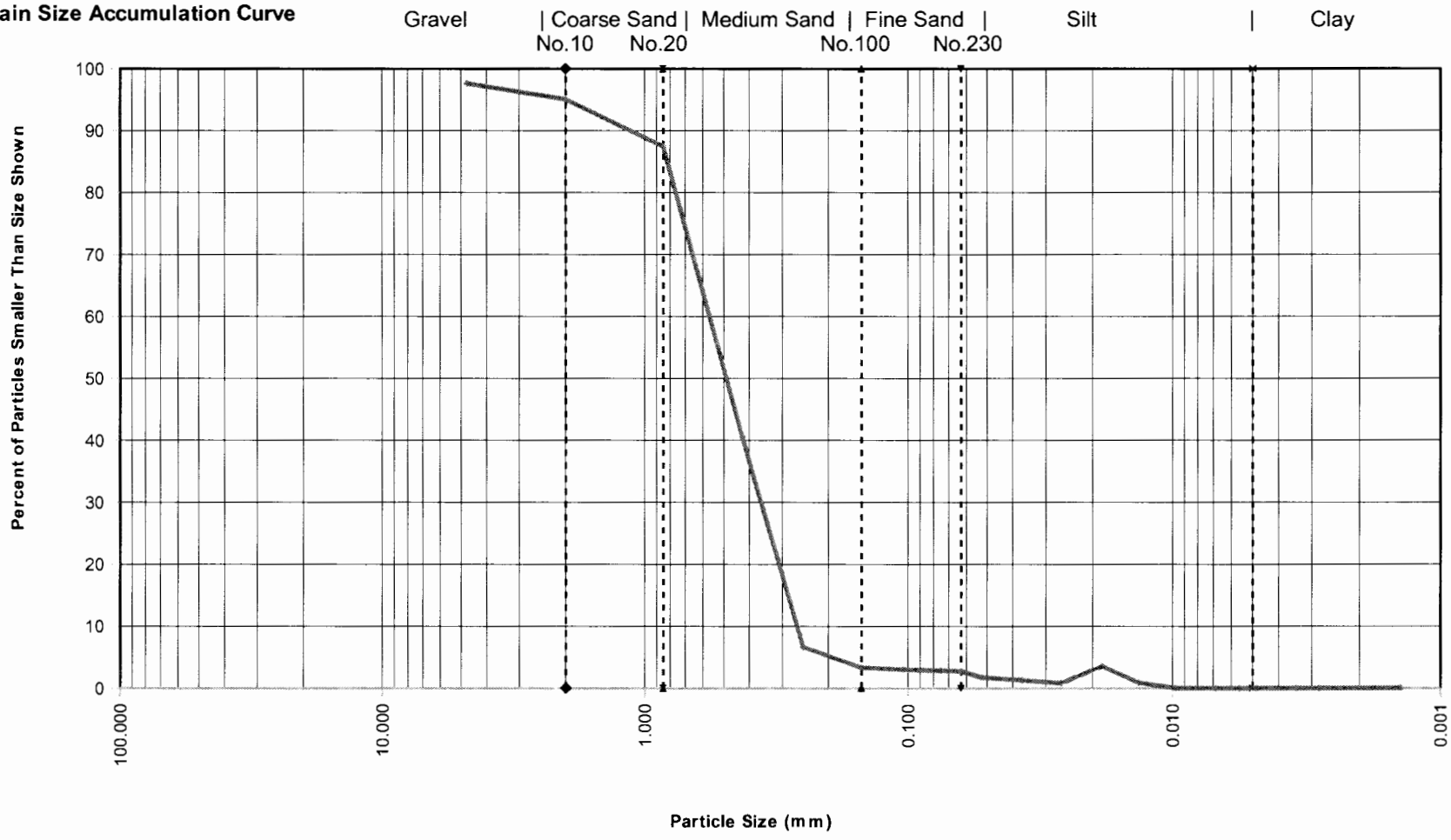
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG05-190417 (A9D0674-02)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Sub-angular to Sub-rounded	Hard and Durable	SAND with trace Silt and Clay

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-02

Whole Sample

									Total
Tare Values	5.540	5.566							11.106
Air Dry + Tare	288.573	239.176							527.749

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.357								1.357
Dry + Tare	13.425								13.425

Sieve Number 10

									Total
Tare Values	1.377								1.377
Dry + Tare	14.339								14.339

Pan

									Total
Tare Values	5.547	5.575							11.122
Dry + Tare	260.319	241.083							501.402

Ensure that Total % Retained is ~ 100%. 99.8

APEX
Grain Size Analysis

Analyst	KAREN WILSON
Batch number	9041136
Start Date/ Time	4-23-19 08:25
Sample ID	9AD0674-02A

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.540	288.573		
5.566	239.176		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.357	14.182	13.425

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.377	14.752	14.339

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.547	260.319		
5.575	241.083		

AME001V

Date/Time/Temp

IN	4-23-19 09:26 109.8
OUT	4-24-19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
674-2	1.367	16.483	16.202

APEX
Grain Size Analysis

Notes

Sample ID: AQD0674-02

Maximum Particle Size: Gravel

Hardness and Shape: Sub-angular to sub-rounded ; Hard & durable

Soil/Sediment Classification: SAND w/ trace Silt & clay.

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	KAREN WILSON		
Batch Number	9041136		
Sample ID	A9D0674 - 02A		
Start Date/Time	04/24/2019 8:46		
Air Dry Sample for Hydrometer Test			100.42
Hydrometer	870249	Dispersant	A19D295 Time/Date: 09:30 4-23-19

08:46	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:47	1	8	20.4	
8:48	2	7.5	20.4	
8:50	4	7	20.3	
8:54	8	10	20.5	
9:01	15	7	20.6	
9:16	30	6	20.4	
9:46	60	~~5.5~~ 5.5	20.4	
10:16	90	5.5	20.4	
10:46	120	5.5	20.4	
12:46	240	4.5	20.3	
14:46	360	4.5	20.3	
8:46	1440	4.5	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.300	9.227
+40	1.293	49.911
+60	1.297	36.424
+100	1.302	4.752
+140	1.285	1.583
+200	1.297	1.494
+230	1.289	1.391
-230 (pan)	1.306	1.425

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	KAREN WILSON		
Batch Number	904 1136		
Sample ID	A9D0674 -02		
Start Date/Time	4-25-19 09:12		
Air Dry Sample for Hydrometer Test		100.799	
Hydrometer	870249	Dispersant	AP 328

suspect dispersant AP 05/20/19

Time/Date: 04-28-19 1506

09:12	Time (min.)	Hydrometer Reading		Temperature (°C)		Amount of Foam
	0.5	KMW		KMW		
9:13	1	6	6	20.4	20.4	
9:14	2	6	6	20.4	20.4	
9:16	4	5.5	5.5	20.4	20.4	
9:20	8	5.5	5.5	20.4	20.4	
9:27	15	5.5	5.5	20.5	20.5	
9:42	30	5.5	5.5	20.8	20.8	
10:12	60	4	4	20.7	20.7	
10:42	90	3.5	3.5	20.7	20.7	
11:12	120	3	3.0	20.6	20.6	
13:12	240		3.0		20.4	
15:12	360		3.0		20.6	
9:12	1440	2.5	2.0		19.5	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

MW 4-26-19

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20		
+40		
+60		
+100		
+140		
+200		
+230		
-230 (pan)		

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Langway			
Batch Number	9041136			
Sample ID	A9D0674-02			
Start Date/Time	5-6-19	09:11		
Air Dry Sample for Hydrometer Test			100.068	
Hydrometer	229773	Dispersant	AE022	Time/Date: 05-03-19 15:22

09:11	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:12	1	6.5	20.6	
9:13	2	6.5	20.5	
9:15	4	6	20.5	
9:19	8	5.5	20.4	
9:26	15	5.5	20.5	
9:41	30	7	20.5	
10:11	60	6	20.5	
10:41	90	6	20.5	
11:11	120	6	20.6	
13:11	240	6	20.5	
15:11	360	6	20.4	
9:11	1440	5	20.0	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20		
+40		
+60		
+100		
+140		
+200		
+230		
-230 (pan)		

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-03		Client Sample ID:	T4-PDI2019-SG06-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	SAND with trace Gravel, Silt, and Clay			Max Particle Size:	Gravel		
Particle Shape:	Angular to Sub-rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.110	526.467	515.36	1.72	506.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.384	26.828	25.44	25.44	5.0	95.0
10	2.00	1.373	16.347	14.97	40.42	3.0	92.0
Pan		11.125	484.735	473.61	514.03	91.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9831		D67403	1.364	18.137	17.853	1.72

Hydrometer Analysis

Start Date/Time	5/6/2019	9:19	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.178		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	92.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.48		Corrected Dry Weight of Soil Tested (g) (W)	107.02

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	7.5	20.4	1.41	1.3	14.8	0.01365	0.053	1.22
2	7.5	20.4	1.41	1.3	14.8	0.01365	0.037	1.22
4	7.5	20.5	1.45	1.4	14.8	0.01348	0.026	1.24
8	7	20.5	0.95	0.9	15	0.01348	0.018	0.81
15	7	20.5	0.95	0.9	15	0.01348	0.013	0.81
30	7.5	20.5	1.45	1.4	14.8	0.01348	0.009	1.24
60	7	20.5	0.95	0.9	15	0.01348	0.007	0.81
90	7.5	20.6	1.48	1.4	14.8	0.01348	0.005	1.27
120	7	20.6	0.98	0.9	15	0.01348	0.005	0.84
240	6.5	20.5	0.45	0.4	15	0.01348	0.003	0.38
360	6.5	20.4	0.41	0.4	15	0.01365	0.003	0.36
1440	6	20		0.0	15.2	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.295	9.232	7.94	77.94	7.4	84.6
40	0.425	1.294	45.795	44.50	288.33	41.6	43.0
60	0.250	1.296	39.028	37.73	466.71	35.3	7.8
100	0.150	1.294	5.683	4.39	487.46	4.1	3.7
140	0.105	1.299	1.727	0.43	489.49	0.4	3.3
200	0.075	1.303	1.610	0.31	490.94	0.3	3.0
230	0.063	1.297	1.465	0.17	491.73	0.2	2.8

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG06-190417 (A9D0674-03)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*7.98*
Retained on No. 4 sieve		4.75	94.98	5.02
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	92.02	2.96
Sand				*89.2*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	84.61	7.42
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	43.02	41.58
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	7.77	35.26
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	3.67	4.1
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	3.27	0.4
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	2.98	0.29
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	2.82	0.16
Silt and Clay (Measurements in the Clay fraction are noted)				*2.82*
Hydrometer Test		0.0525	1.22	1.61
Hydrometer Test		0.0371	1.22	0
Hydrometer Test		0.0259	1.24	0
Hydrometer Test		0.0185	0.81	0.4
Hydrometer Test		0.0135	0.81	0
Hydrometer Test		0.0095	1.24	0
Hydrometer Test		0.0067	0.81	0
Hydrometer Test		0.0055	1.27	0
Hydrometer Test	Clay	0.0048	0.84	0
Hydrometer Test	Clay	0.0034	0.38	0.43
Hydrometer Test	Clay	0.0028	0.36	0.03
Hydrometer Test	Clay	0.0014	0.36	0

Grain Size Summary	**Percent of Total Sample**
Gravel	8.0
Sand	89.2
Coarse sand	7.4
Medium sand	80.9
Fine sand	0.8
Silt	2.0
Clay	0.8

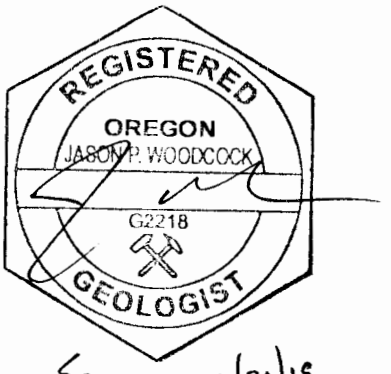
Case Narrative for Sample ID: **T4-PDI2019-SG06-190417 (A9D0674-03)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

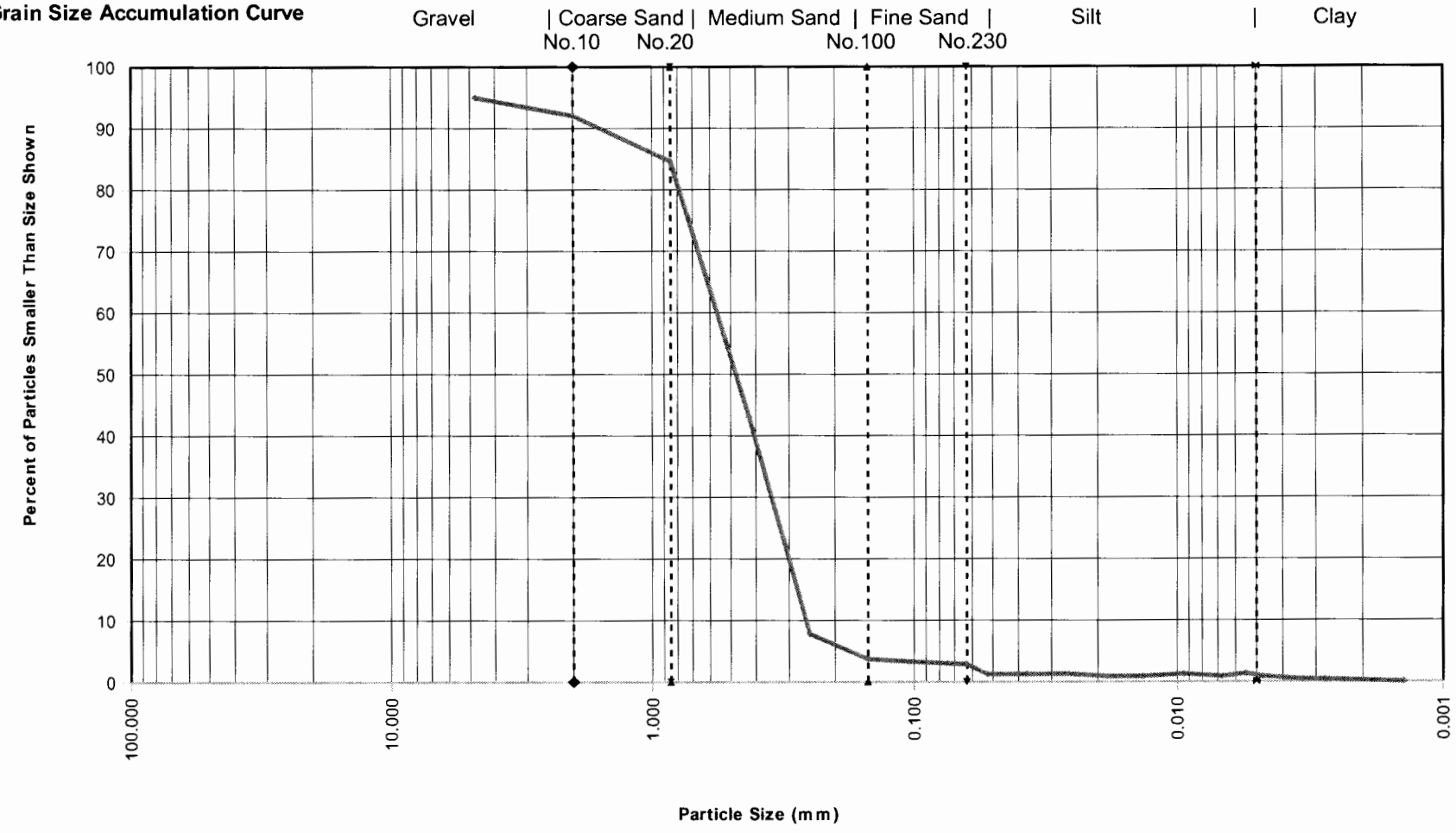
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG06-190417 (A9D0674-03)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Angular to Sub-rounded	Hard and Durable	SAND with trace Gravel, Silt, and Clay

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-03

Whole Sample

									Total
Tare Values	5.494	5.616							11.110
Air Dry + Tare	279.580	246.887							526.467

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.384								1.384
Dry + Tare	26.828								26.828

Sieve Number 10

									Total
Tare Values	1.373								1.373
Dry + Tare	16.347								16.347

Pan

									Total
Tare Values	5.500	5.625							11.125
Dry + Tare	228.026	256.709							484.735

Ensure that Total % Retained is ~ 100%. 99.85

APEX
Grain Size Analysis

Analyst	Samira Longway
Batch number	9041136
Start Date/ Time	04/23/2019 8:50
Sample ID	A9D0674-03A

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.494	279.580		
5.616	246.887		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.384	27.557	26.828

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.373	16.731	16.347

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.500	228.026		
5.625	256.709		

Date/Time/Temp

IN	4/23/19 9:26 109.8
OUT	4/24/19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D6743	1.364	18.137	17.853

APEX
Grain Size Analysis

Notes

Sample ID: A9D06H-03

Maximum Particle Size: Gravel

Hardness and Shape: Hard & durable ; Angular to Sub-rounded

Soil/Sediment Classification:

Sand w/ trace, Gravel, Silt, & Clay

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Jaramillo		
Batch Number	9041136		
Sample ID	A9D0674 - 03		
Start Date/Time	05-06-19 9:19		
Air Dry Sample for Hydrometer Test			100.178
Hydrometer	270249	Dispersant	A196022

Time/Date: 05-03-19 15:24

9:19	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:20	1	7.5	20.4	
9:21	2	7.5	20.4	
9:23	4	7.5	20.5	
9:27	8	7.0	20.5	
9:34	15	7.0	20.5	
9:49	30	7.5	20.5	
10:19	60	7.0	20.5	
10:49	90	7.5	20.6	
11:19	120	7.0	20.6	
13. ~~11:49~~	240	6.5	20.5	
15:19	360	6.5	20.4	
9:19	1440	6.0	20.0	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.295	9.232
+40	1.294	45.795
+60	1.296	39.028
+100	1.294	5.683
+140	1.299	1.727
+200	1.303	1.610
+230	1.297	1.465
-230 (pan)	1.306	1.523

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Langeay			
Batch Number	904136			
Sample ID	A9D0674-03			
Start Date/Time	04/24/2019 8:54			
Air Dry Sample for Hydrometer Test			101.224	
Hydrometer	870249	Dispersant	A19D295	Time/Date: 04/23/2019 9:30

4-24-19	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
08:54				
~~8:55~~	0.5			
8:55	1	7.5	20.3	
8:56	2	7	20.3	
8:58	4	8.5	20.3	
9:02	8	8	20.4	
9:09	15	6.5	20.4	
9:24	30	7	20.3	
9:54	60	6.5	20.3	
10:24	90	6.0	20.4	
10:54	120	6.0	20.4	
12:54	240	5.0	20.3	
14:54	360	5.0	20.4	
8:54	1440	5.0	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

? JMJ 05/20/19

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.290	8.673
+40	1.304	44.296
+60	1.299	40.077
+100	1.311	6.559
+140	1.365	1.839
+200	1.290	1.663
+230	1.301	1.504
-230 (pan)	1.284	1.555

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	KAREN WILSON		
Batch Number			
Sample ID	A9D0674 - 03		
Start Date/Time	4-25-19 09 30		
Air Dry Sample for Hydrometer Test			~~100.554~~
Hydrometer	870249	Dispersant	A19D328

Sandra Tangwey

Suspect dispersant
JSG 05/20/19

Time/Date: 04-24-19 14:59

09:30	Time (min.)	Hydrometer Reading		Temperature (°C)		Amount of Foam
	0.5	KMW	AH	KMW	AH	
9:31	1	6.5	6.5	20.5	20.5	
9:32	2	6.5	6.5	20.5	20.5	
9:34	4	6	6.0	20.5	20.5	
9:38	8	5.5	5.5	20.6	20.6	
9:45	15	5.5	5.5	20.6	20.6	
10:00	30	4.5	4.5	20.8	20.8	
10:30	60	3.5	AH 3.5 ~~2.0~~ 25-19	20.8	20.8	
11:00	90	2.5	2.5	20.7	20.7	
11:30	120	2.5	2.5	20.7	20.7	
13:30	240	~~2~~ AH 04/28/19	2.5		20.6	
15:30	360		2.0		20.6	
9:30	1440		1.0		19.7	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20		
+40		
+60		
+100		
+140		
+200		
+230		
-230 (pan)		

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-04		Client Sample ID:	T4-PDI2019-SG08-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/13/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey Silty SAND			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.195	283.114	271.92	6.97	254.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.377	2.384	1.01	1.01	0.4	99.6
10	2.00	1.376	2.109	0.73	1.74	0.3	99.3
Pan		11.208	279.415	268.21	269.95	98.2	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9348		674-4	1.372	16.905	15.893	6.97

Hydrometer Analysis

Start Date/Time	4/24/2019	9:03	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.842		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.3		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.46		Corrected Dry Weight of Soil Tested (g) (W)	48.80

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	28	20	23.21	47.6	11.5	0.01365	0.046	47.23
2	26	20	21.21	43.5	11.9	0.01365	0.033	43.16
4	23	20	18.21	37.3	12.4	0.01365	0.024	37.05
8	21	19.9	16.18	33.2	12.7	0.01365	0.017	32.93
15	20	20	15.21	31.2	12.9	0.01365	0.013	30.95
30	16	20.2	11.26	23.1	13.5	0.01365	0.009	22.91
60	14	20.2	9.26	19.0	13.8	0.01365	0.007	18.84
90	12	20.3	7.28	14.9	14.2	0.01365	0.005	14.82
120	11.5	20.3	6.78	13.9	14.2	0.01365	0.005	13.80
240	10.5	20.5	5.83	12.0	14.3	0.01348	0.003	11.87
360	9.5	20.5	4.83	9.9	14.5	0.01348	0.003	9.84
1440	8.5	19.8	3.66	7.5	14.7	0.01365	0.001	7.44

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.395	1.484	0.09	2.20	0.2	99.1
40	0.425	1.392	4.570	3.18	18.64	6.5	92.6
60	0.250	1.366	14.648	13.28	87.36	27.2	65.4
100	0.150	1.381	6.786	5.41	115.32	11.1	54.3
140	0.105	1.380	2.868	1.49	123.02	3.0	51.3
200	0.075	1.380	3.056	1.68	131.69	3.4	47.8
230	0.063	1.374	2.171	0.80	135.81	1.6	46.2

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG08-190415 (A9D0674-04)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.68*
Retained on No. 4 sieve		4.75	99.6	0.4
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.32	0.29
Sand				*53.11*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.13	0.18
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	92.62	6.51
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	65.4	27.22
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	54.33	11.08
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	51.28	3.05
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	47.84	3.43
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	46.21	1.63
Silt and Clay (Measurements in the Clay fraction are noted)				*46.21*
Hydrometer Test		0.0463	47.23	0
Hydrometer Test		0.0333	43.16	3.05
Hydrometer Test		0.0240	37.05	6.11
Hydrometer Test		0.0172	32.93	4.12
Hydrometer Test		0.0127	30.95	1.98
Hydrometer Test		0.0092	22.91	8.04
Hydrometer Test		0.0065	18.84	4.07
Hydrometer Test		0.0054	14.82	4.02
Hydrometer Test	Clay	0.0047	13.8	1.02
Hydrometer Test	Clay	0.0033	11.87	1.93
Hydrometer Test	Clay	0.0027	9.84	2.04
Hydrometer Test	Clay	0.0014	7.44	2.4

Grain Size Summary	**Percent of Total Sample**
Gravel	0.7
Sand	53.1
Coarse sand	0.2
Medium sand	44.8
Fine sand	8.1
Silt	31.4
Clay	14.8

Case Narrative for Sample ID: T4-PDI2019-SG08-190415 (A9D0674-04)

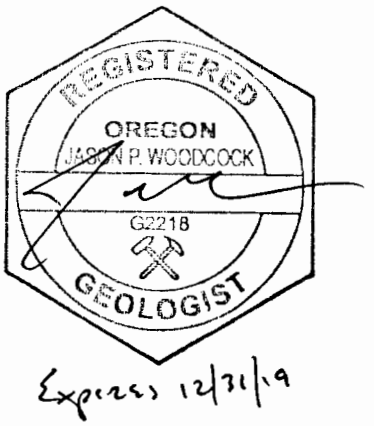
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

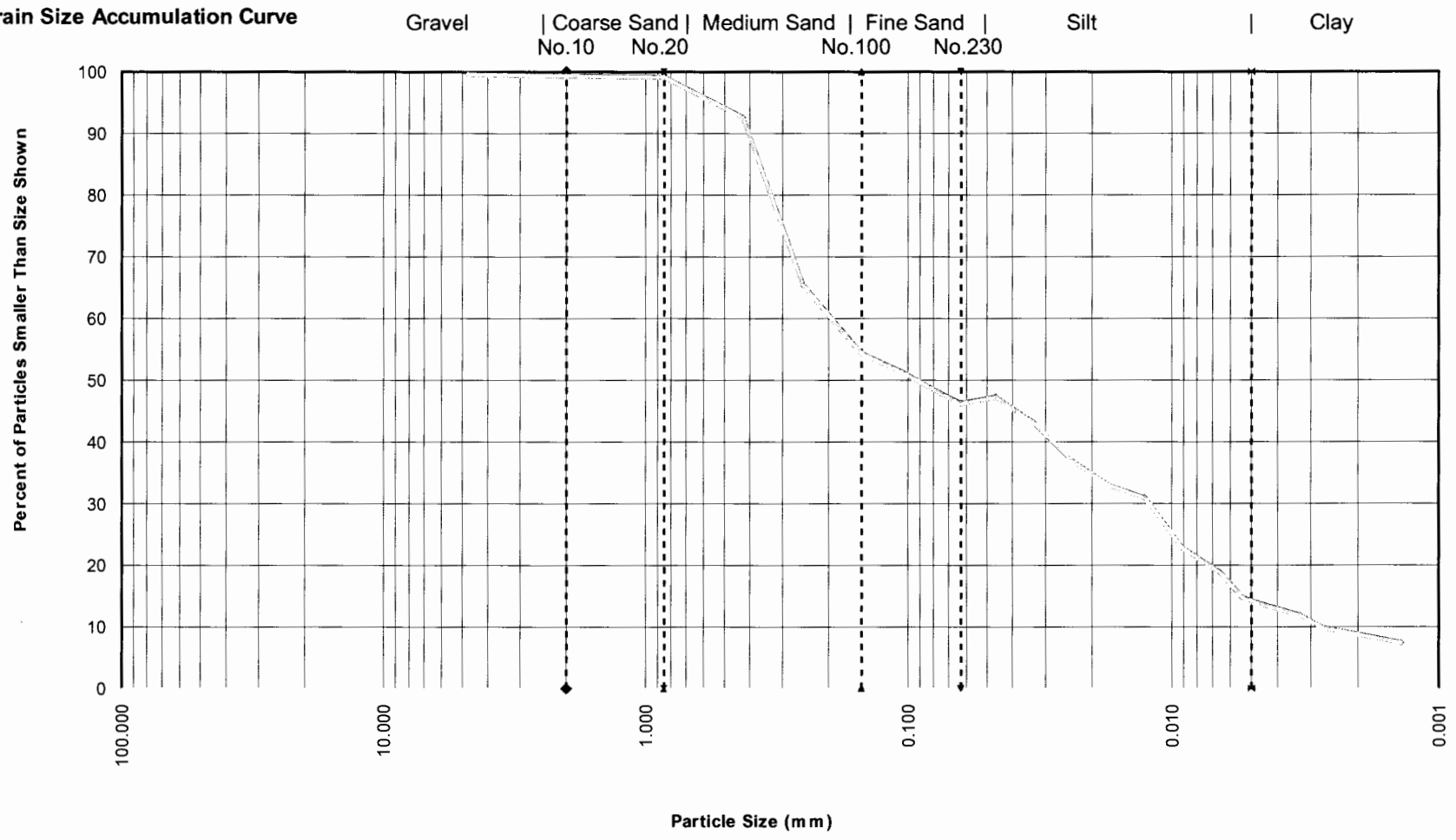
+4 and +10 fractions consist entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG08-190415 (A9D0674-04)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey Silty SAND

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-04

Whole Sample

									Total
Tare Values	5.639	5.556							11.195
Air Dry + Tare	163.691	119.423							283.114

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.377								1.377
Dry + Tare	2.384								2.384

Sieve Number 10

									Total
Tare Values	1.376								1.376
Dry + Tare	2.109								2.109

Pan

									Total
Tare Values	5.647	5.561							11.208
Dry + Tare	161.073	118.342							279.415

Ensure that Total % Retained is ~ 100%. 98.84

APEX
Grain Size Analysis

Analyst	KAREN WILSON
Batch number	9041136
Start Date/ Time	4-23-19 08:50
Sample ID	AQ0674-04A

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.639	163.491		
5.556	119.423		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
~~6.511~~	4-23-19 K	
1.377	2.505	2.384

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.376	2.198	2.109

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.647	161.073		
5.561	118.342		

Date/Time/Temp AME 00 IV

IN	4-23-19 11:15 111.7
OUT	4-24-19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
C74-4	1.372	16.905	15.893

APEX
Grain Size Analysis

Notes

Sample ID: A90674-04A

#10 SIEVE MOSTY STICKS

+4 & +10 entirely organic Material

Maximum Particle Size: Gravel

Hardness and Shape: N/A ; ~~Limited~~ 5/16/19

Soil/Sediment Classification:

Clayey Silty SAND

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	KAREN WILSON		
Batch Number	9041136		
Sample ID	A90674-04A		
Start Date/Time	04-24-19 9:03		
Air Dry Sample for Hydrometer Test			51.842
Hydrometer	22973	Dispersant	A190295

Time/Date: 11:20 4-23-19

9:03	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:04	1	28	20	
9:05	2	26	20	
9:07	4	23	20	
9:11	8	21	19.9	
9:18	15	20	20.0	
9:33	30	16	20.2	
10:03	60	14	20.2	
10:33	90	12	20.3	
11:03	120	11.5	20.3	
13:03	240	10.5	20.5	
15:03	360	9.5	20.5	
9:03	1440	8.5	19.8	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.393	1.484
+40	1.392	4.570
+60	1.366	14.648
+100	1.381	6.786
+140	1.380	2.848
+200	1.380	3.056
+230	1.374	2.171
-230 (pan)	1.359	2.693

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-05		Client Sample ID:	T4-PDI2019-SG11-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with trace Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.445	338.065	326.62	4.52	312.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.384	1.525	0.14	0.14	0.0	100.0
10	2.00	1.378	2.260	0.88	1.02	0.3	99.7
Pan		11.459	336.438	324.98	326.00	99.3	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9568		D67405	1.386	27.795	26.653	4.52

Hydrometer Analysis

Start Date/Time	5/15/2019	8:20	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.166		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.7		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.00		Corrected Dry Weight of Soil Tested (g) (W)	48.15

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	21	20.1	16.23	33.7	12.7	0.01365	0.049	33.60
2	19	20.3	14.28	29.7	13	0.01365	0.035	29.56
4	16	20.4	11.31	23.5	13.5	0.01365	0.025	23.41
8	13	20.3	8.28	17.2	14	0.01365	0.018	17.14
15	11	20.4	6.31	13.1	14.3	0.01365	0.013	13.06
30	9.5	20.4	4.81	10.0	14.5	0.01365	0.009	9.95
60	7.5	20.4	2.81	5.8	14.8	0.01365	0.007	5.81
90	7	20.6	2.36	4.9	15	0.01348	0.006	4.88
120	6	20.6	1.36	2.8	15.2	0.01348	0.005	2.81
240	6	20.7	1.38	2.9	15.2	0.01348	0.003	2.86
360	6	20.6	1.36	2.8	15.2	0.01348	0.003	2.81
1440	5	19.9	0.18	0.4	15.3	0.01365	0.001	0.38

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.301	1.572	0.27	2.78	0.6	99.1
40	0.425	1.295	5.969	4.67	33.06	9.7	89.4
60	0.250	1.295	17.258	15.96	136.47	33.1	56.3
100	0.150	1.297	8.616	7.32	183.88	15.2	41.1
140	0.105	1.304	2.942	1.64	194.49	3.4	37.7
200	0.075	1.299	2.575	1.28	202.76	2.6	35.0
230	0.063	1.282	1.914	0.63	206.85	1.3	33.7

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.33*
Retained on No. 4 sieve		4.75	99.95	0.05
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.67	0.28
Sand				*65.98*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.11	0.56
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	89.4	9.71
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	56.25	33.15
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	41.05	15.2
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	37.65	3.4
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	35	2.65
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	33.69	1.31
Silt and Clay (Measurements in the Clay fraction are noted)				*33.69*
Hydrometer Test		0.0486	33.6	0.09
Hydrometer Test		0.0348	29.56	4.04
Hydrometer Test		0.0251	23.41	6.16
Hydrometer Test		0.0181	17.14	6.26
Hydrometer Test		0.0133	13.06	4.09
Hydrometer Test		0.0095	9.95	3.1
Hydrometer Test		0.0068	5.81	4.14
Hydrometer Test		0.0055	4.88	0.93
Hydrometer Test	Clay	0.0048	2.81	2.07
Hydrometer Test	Clay	0.0034	2.86	0
Hydrometer Test	Clay	0.0028	2.81	0
Hydrometer Test	Clay	0.0014	0.38	2.44

Grain Size Summary	Percent of Total Sample
Gravel	0.3
Sand	66.0
Coarse sand	0.6
Medium sand	58.1
Fine sand	7.4
Silt	28.8
Clay	4.9

Case Narrative for Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

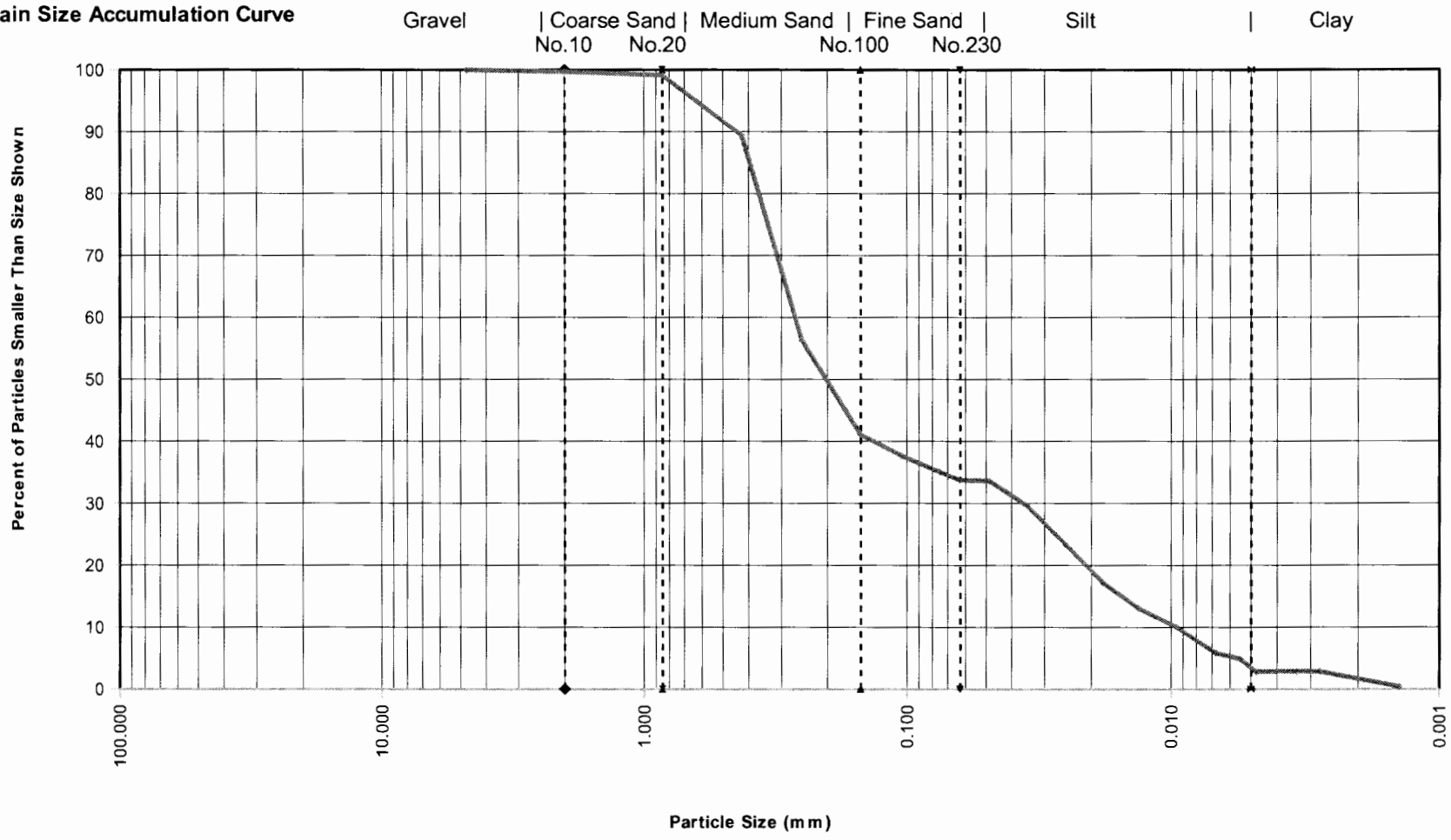
The assumed specific gravity used in the calculations was 2.65.

+4 and +10 fractions consist almost entirely of organic material.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG11-190415 (A9D0674-05)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with trace Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-05

Whole Sample

									Total
Tare Values	5.716	5.729							11.445
Air Dry + Tare	232.496	105.569							338.065

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.384								1.384
Dry + Tare	1.525								1.525

Sieve Number 10

									Total
Tare Values	1.378								1.378
Dry + Tare	2.260								2.260

Pan

									Total
Tare Values	5.726	5.733							11.459
Dry + Tare	227.075	109.363							336.438

Ensure that Total % Retained is ~ 100%. 99.62

APEX
Grain Size Analysis

Analyst	James S. Johnson
Batch number	9041136
Sample ID	A9D0674-05
Start Date/ Time	04/23/19 1835

Air Drying			
Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.716	232.496		
5.729	105.369		

Post 10 mesh sieving

+4 Fraction		
Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.384	1.537	1.525

+10 Fraction		
Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.378	2.312	2.260

-10 Fraction (Pan)			
Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.726	227.075		
5.733	109.363		

Date/Time/Temp	
IN	4-25-19 111.0 13:58
OUT	5-02-19 113.0 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D6740 5	1.386	27.795	26.693

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674

+4 & +10 contain almost entirely organics.

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification: Silty SAND w/ trace clay

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Langwas			
Batch Number				
Sample ID	A900674-05			
Start Date/Time	5-15-19	8:20		
Air Dry Sample for Hydrometer Test			50.166	
Hydrometer	229773	Dispersant	A19E142	Time/Date: 05-14-19 @ 14:47

8:20	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:21	1	21.0	20.1	
8:22	2	19.0	~~19.9~~	20.3
8:24	4	16	~~20.8~~	20.4
8:28	8	13	20.3	
8:35	15	11	20.4	
8:50	30	9.5	20.4	
9:20	60	7.5	20.4	
9:50	90	7	20.6	
10:20	120	6	20.6	
12:20	240	6	20.7	
14:~~20~~	360	6	20.6	
8:20	1440	5	19.9	

Note:

1 cm foam = 5 hydrometer units.

5-15-19 KLY

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.301	1.572
+40	1.295	5.969
+60	1.295	17.258
+100	1.297	8.616
+140	1.304	2.942
+200	1.299	2.575
+230	1.282	1.914
-230 (pan)	1.297	2.326

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tanyay		
Batch Number	9041136		
Sample ID	A9D0674-05		
Start Date/Time	4-25-19	08:29	
Air Dry Sample for Hydrometer Test		57.379	
Hydrometer	~~08:2~~	Dispersant	A19328

questionable dispersant gsg 05/20/19

Time/Date: 4-28-19 15:00

229773 4-25-19

08:29	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:30	1	21	20.4	
8:31	2	19	20.3	
8:33	4	16.5	20.3	
8:37	8	14	20.3	
8:44	15	12	20.4	
8:59	30	10	20.4	
9:29	60	7	20.3	
9:59	90	7	20.5	
10:29	120	6	20.6	
12:29	240	5	20.7	
14:29	360	4	20.7	
8:29	1440	3	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.365	1.603
+40	1.361	6.529
+60	1.376	19.337
+100	1.356	9.550
+140	1.374	~~3.127~~ 3.115 [illegible] 05-07-19
+200	1.390	2.793
+230	1.378	2.095
-230 (pan)	1.363	2.423

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.33*
Retained on No. 4 sieve		4.75	99.95	0.05
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.67	0.28
Sand				*64.26*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.24	0.43
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	89.87	9.38
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	57.28	32.58
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	42.42	14.87
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	39.26	3.16
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	36.71	2.55
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	35.41	1.3
Silt and Clay (Measurements in the Clay fraction are noted)				*35.41*
Hydrometer Test		0.0486	29.49	5.92
Hydrometer Test		0.0348	25.83	3.66
Hydrometer Test		0.0249	21.31	4.52
Hydrometer Test		0.0179	16.78	4.52
Hydrometer Test		0.0133	13.21	3.57
Hydrometer Test		0.0095	9.6	3.62
Hydrometer Test		0.0068	4.13	5.47
Hydrometer Test		0.0055	4.22	0
Hydrometer Test	Clay	0.0048	2.46	1.67
Hydrometer Test	Clay	0.0034	0.69	1.76
Hydrometer Test	Clay	0.0028	0.69	0
Hydrometer Test	Clay	0.0014	0.69	0

Grain Size Summary	Percent of Total Sample
Gravel	0.3
Sand	64.3
Coarse sand	0.4
Medium sand	56.8
Fine sand	7.0
Silt	31.3
Clay	4.1

Case Narrative for Sample ID: T4-PDI2019-SG11-190415 (A9D0674-05)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-06		Client Sample ID:	T4-PDI2019-SG13-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.257	315.244	303.99	5.47	288.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.361	1.938	0.58	0.58	0.2	99.8
Pan		11.259	314.215	302.96	303.53	99.4	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9481		D67406	1.374	23.068	21.942	5.47

Hydrometer Analysis

Start Date/Time	5/15/2019	8:42	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.182		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.8		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.58		Corrected Dry Weight of Soil Tested (g) (W)	47.67

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	26	20.4	21.31	44.7	11.9	0.01365	0.047	44.61
2	23.5	20.6	18.86	39.6	12.2	0.01348	0.033	39.48
4	21	20.6	16.36	34.3	12.7	0.01348	0.024	34.24
8	18.5	20.6	13.86	29.1	13	0.01348	0.017	29.01
15	16	20.6	11.36	23.8	13.5	0.01348	0.013	23.78
30	13.5	20.8	8.91	18.7	13.8	0.01348	0.009	18.65
60	11.5	20.8	6.91	14.5	14.2	0.01348	0.007	14.46
90	10	20.7	5.38	11.3	14.5	0.01348	0.005	11.27
120	10	20.8	5.41	11.3	14.5	0.01348	0.005	11.32
240	8	20.7	3.38	7.1	14.8	0.01348	0.003	7.08
360	7.5	20.7	2.88	6.0	14.8	0.01348	0.003	6.04
1440	7	20	2.21	4.6	15	0.01365	0.001	4.62

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.283	1.430	0.15	1.46	0.3	99.5
40	0.425	1.294	4.904	3.61	23.26	7.6	91.9
60	0.250	1.295	15.002	13.71	106.01	28.8	63.2
100	0.150	1.295	7.992	6.70	146.44	14.0	49.1
140	0.105	1.289	2.954	1.67	156.49	3.5	45.6
200	0.075	1.296	2.723	1.43	165.11	3.0	42.6
230	0.063	1.287	2.056	0.77	169.75	1.6	41.0

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.2*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.8	0.2
Sand				*58.78*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.49	0.31
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	91.92	7.57
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	63.17	28.75
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	49.12	14.05
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	45.63	3.49
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	42.63	2.99
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	41.02	1.61
Silt and Clay (Measurements in the Clay fraction are noted)				*41.02*
Hydrometer Test		0.0471	44.61	0
Hydrometer Test		0.0333	39.48	1.54
Hydrometer Test		0.0240	34.24	5.23
Hydrometer Test		0.0172	29.01	5.23
Hydrometer Test		0.0128	23.78	5.23
Hydrometer Test		0.0091	18.65	5.13
Hydrometer Test		0.0066	14.46	4.19
Hydrometer Test		0.0054	11.27	3.19
Hydrometer Test	Clay	0.0047	11.32	0
Hydrometer Test	Clay	0.0033	7.08	4.19
Hydrometer Test	Clay	0.0027	6.04	1.05
Hydrometer Test	Clay	0.0014	4.62	1.42

Grain Size Summary	**Percent of Total Sample**
Gravel	0.2
Sand	58.8
Coarse sand	0.3
Medium sand	50.4
Fine sand	8.1
Silt	29.7
Clay	11.3

Case Narrative for Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

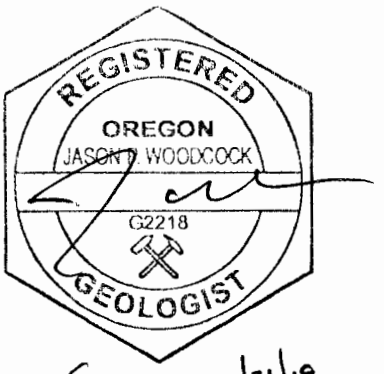
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

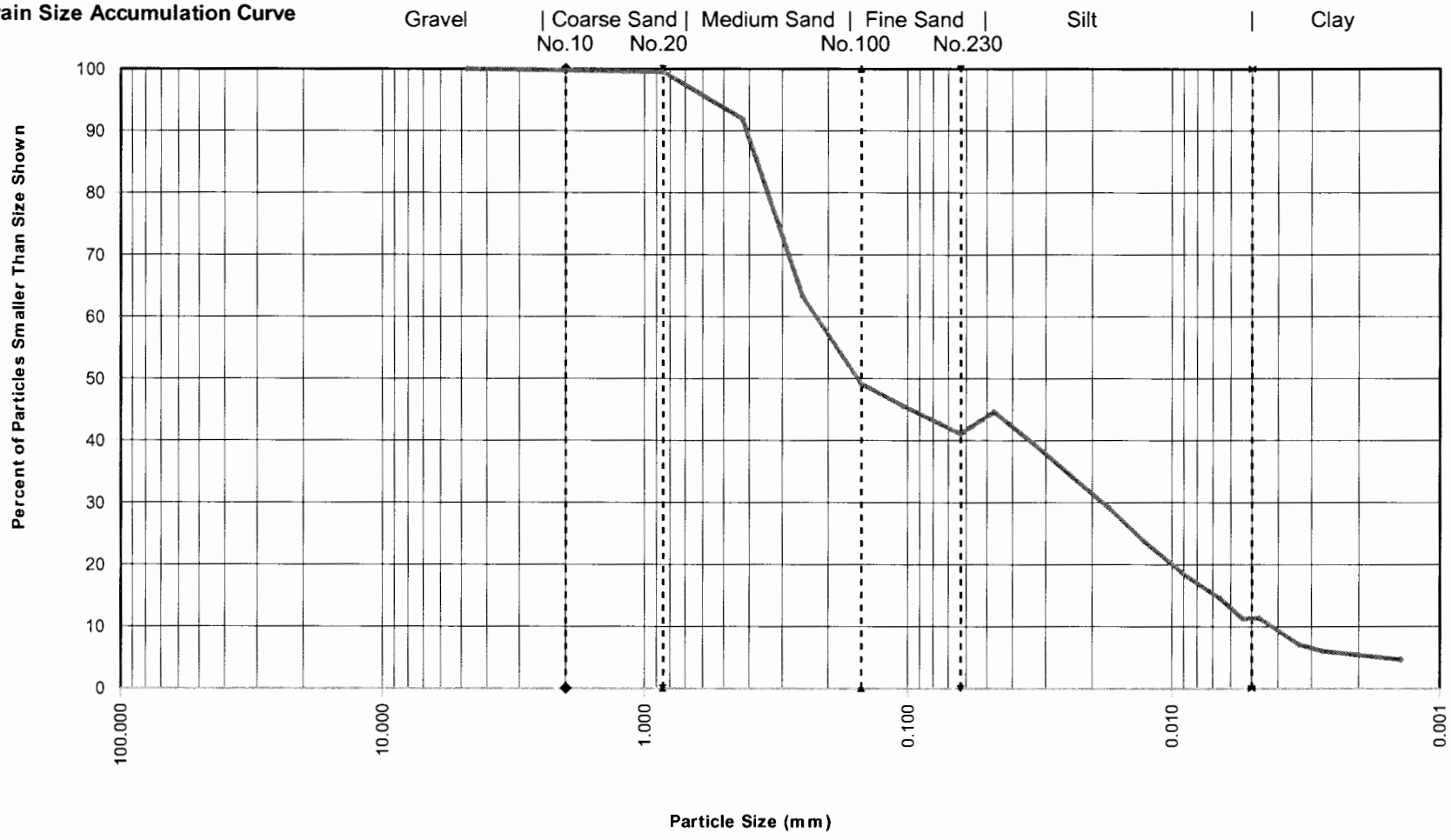
+10 fraction consists almost entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG13-190415 (A9D0674-06)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-06

Whole Sample

									Total
Tare Values	5.622	5.635							11.257
Air Dry + Tare	207.623	107.621							315.244

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values	1.361								1.361
Dry + Tare	1.938								1.938

Pan

									Total
Tare Values	5.629	5.630							11.259
Dry + Tare	207.210	107.005							314.215

Ensure that Total % Retained is ~ 100%. 99.56

APEX
Grain Size Analysis

Analyst	James S. Johnson
Batch number	904136
Start Date/ Time	04/23/19
Sample ID	A9D0674-06 1810

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.622	207.623		
5.635	107.621		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
	N/A	
JG	04/23/19	

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.361	1.972	1.938

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.629	207.210		
5.630	~~106.~~ 85? 04/23/19		
	107.005		

Date/Time/Temp

IN AM6001V	4-25-19 111.0 13:58
OUT	5-02-19 113.0 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67406	1.374	23.068	21.941

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674

+10 = a/most entirely organics.

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

Silty Sand w/ some Clay

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanchez		
Batch Number	904136		
Sample ID	A9D0674-06		
Start Date/Time	5-15-19 8:42		
Air Dry Sample for Hydrometer Test			50.182
Hydrometer	229773	Dispersant	AIPE142

Time/Date: 05-14-19 @ 14:45

8:42	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:43	1	26.0	20.4	
8:44	2	23.5	20.6	
8:46	4	21	20.6	
8:50	8	18.5	20.6	
8:57	15	16	20.6	
9:12	30	13.5	20.8	
9:42	60	11.5	20.8	
10:12	90	10.0	20.7	
10:42	120	10	20.8	
12:42	240	8	20.7	
14:42	360	7.5	20.7	
8:42	1440	7	20	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.283	1.430
+40	1.294	4.904
+60	1.295	15.602
+100	1.295	7.992
+140	1.289	2.954
+200	1.296	2.723
+230	1.287	2.056
-230 (pan)	1.283	2.546

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanchez
Batch Number	9041136
Sample ID	A9D0674-06
Start Date/Time	4-25-19 08:38
Air Dry Sample for Hydrometer Test	53.106
Hydrometer	229773 Dispersant A19D328 Time/Date 4-28-19 14:57

performed with questionable dispersant JSG 05/17/19

8 hr 4-25-19

08:38 Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
0.5			
8:39 1	22	20.3	
8:40 2	19.5	20.3	
8:42 4	17.5	20.3	
8:46 8	16.5	20.4	
8:53 15	16.5	hr 4-25-19 17 20.7	
9:08 30	10.5	20.4	
9:38 60	8	20.3	
10:08 90	7	20.7	
10:38 120	6.5	20.8	
12:38 240	5	20.6	
14:38 360	4	20.7	
8:39 1440	3	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.393	1.511
+40	1.360	5.077
+60	1.373	15.870
+100	1.376	8.331
+140	1.373	3.150
+200	1.381	2.938
+230	1.373	2.283
-230 (pan)	1.365	3.112

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.2*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.8	0.2
Sand				*58.53*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.57	0.23
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	92.2	7.37
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	63.46	28.74
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	49.68	13.79
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	46.16	3.52
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	43.07	3.09
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	41.27	1.8
Silt and Clay (Measurements in the Clay fraction are noted)				*41.27*
Hydrometer Test		0.0483	34.19	7.08
Hydrometer Test		0.0347	29.24	4.95
Hydrometer Test		0.0248	25.29	3.96
Hydrometer Test		0.0176	23.36	1.93
Hydrometer Test		0.0127	23.51	0
Hydrometer Test		0.0094	11.49	11.87
Hydrometer Test		0.0068	6.49	5
Hydrometer Test		0.0055	4.72	1.78
Hydrometer Test	Clay	0.0048	3.78	0.94
Hydrometer Test	Clay	0.0034	0.71	3.07
Hydrometer Test	Clay	0.0028	0.71	0
Hydrometer Test	Clay	0.0014	0.71	0

Grain Size Summary	**Percent of Total Sample**
Gravel	0.2
Sand	58.5
Coarse sand	0.2
Medium sand	49.9
Fine sand	8.4
Silt	36.6
Clay	4.7

Case Narrative for Sample ID: T4-PDI2019-SG13-190415 (A9D0674-06)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

with questionable dispersant JSG 05/17/19

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-07		Client Sample ID:	T4-PDI2019-SG15-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with trace Silt			Max Particle Size:	Gravel		
Particle Shape:	Sub-angular to Rounded			Hardness	Hard and Durable		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	16.841	622.206	605.37	2.38	591.3

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.381	11.933	10.55	10.55	1.8	98.2
10	2.00	1.376	8.377	7.00	17.55	1.2	97.0
Pan		16.865	603.998	587.13	604.69	96.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9768		D67407	1.370	18.301	17.908	2.38

Hydrometer Analysis

Start Date/Time	4/24/2019	9:41	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.566		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	97.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.23		Corrected Dry Weight of Soil Tested (g) (W)	101.24

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	9	20	2.78	2.7	14.7	0.01365	0.052	2.66
2	8.5	20	2.28	2.3	14.7	0.01365	0.037	2.19
4	8.5	20	2.28	2.3	14.7	0.01365	0.026	2.19
8	7.5	20.4	1.41	1.4	14.8	0.01365	0.019	1.36
15	6.5	20.5	0.45	0.4	15	0.01348	0.013	0.43
30	6.5	20.5	0.45	0.4	15	0.01348	0.010	0.43
60	6.5	20.5	0.45	0.4	15	0.01348	0.007	0.43
90	5.5	20.4		0.0	15.2	0.01365	0.006	0.00
120	5	20.4		0.0	15.3	0.01365	0.005	0.00
240	4.5	20.4		0.0	15.3	0.01365	0.003	0.00
360	4	20.5		0.0	15.5	0.01348	0.003	0.00
1440	4	20.1		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.379	5.486	4.11	41.53	4.1	93.0
40	0.425	1.369	42.548	41.18	281.95	40.7	52.3
60	0.250	1.388	42.772	41.38	523.56	40.9	11.4
100	0.150	1.347	8.364	7.02	564.52	6.9	4.5
140	0.105	1.362	2.022	0.66	568.38	0.7	3.8
200	0.075	1.371	1.768	0.40	570.70	0.4	3.4
230	0.063	1.384	1.613	0.23	572.03	0.2	3.2
			94.07		230 PDI R	3.26	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG15-190416 (A9D0674-07)

Grain Size Analysis Summary from Sieving and Hydrometer Testing	Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel			*2.97*
Retained on No. 4 sieve	4.75	98.22	1.78
Gravel, passing No. 4 sieve and retained on No. 10 sieve	2.00	97.03	1.18
Sand			*93.81*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve	0.8500	92.97	4.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve	0.4250	52.3	40.68
Medium sand, passing No.40 sieve and retained on No. 60 sieve	0.2500	11.42	40.88
Medium sand, passing No. 60 sieve and retained on No.100 sieve	0.1500	4.49	6.93
Fine sand, passing No. 100 sieve and retained on No.140 sieve	0.1060	3.84	0.65
Fine sand passing No. 140 sieve and retained on No. 200 sieve	0.0750	3.45	0.39
Fine sand, passing No. 200 sieve and retained on No. 230 sieve	0.0630	3.22	0.23
Silt and Clay (Measurements in the Clay fraction are noted)			*3.22*
Hydrometer Test	0.0523	2.66	0.55
Hydrometer Test	0.0370	2.19	0.48
Hydrometer Test	0.0262	2.19	0
Hydrometer Test	0.0186	1.36	0.83
Hydrometer Test	0.0135	0.43	0.93
Hydrometer Test	0.0095	0.43	0
Hydrometer Test	0.0067	0.43	0
Hydrometer Test	0.0056	0.43	0
Hydrometer Test Clay	0.0049	0.43	0
Hydrometer Test Clay	0.0034	0.43	0
Hydrometer Test Clay	0.0028	0.43	0
Hydrometer Test Clay	0.0014	0.43	0

Grain Size Summary	Percent of Total Sample
Gravel	3.0
Sand	93.8
Coarse sand	4.1
Medium sand	88.5
Fine sand	1.3
Silt	2.8
Clay	0.4

Case Narrative for Sample ID: T4-PDI2019-SG15-190416 (A9D0674-07)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

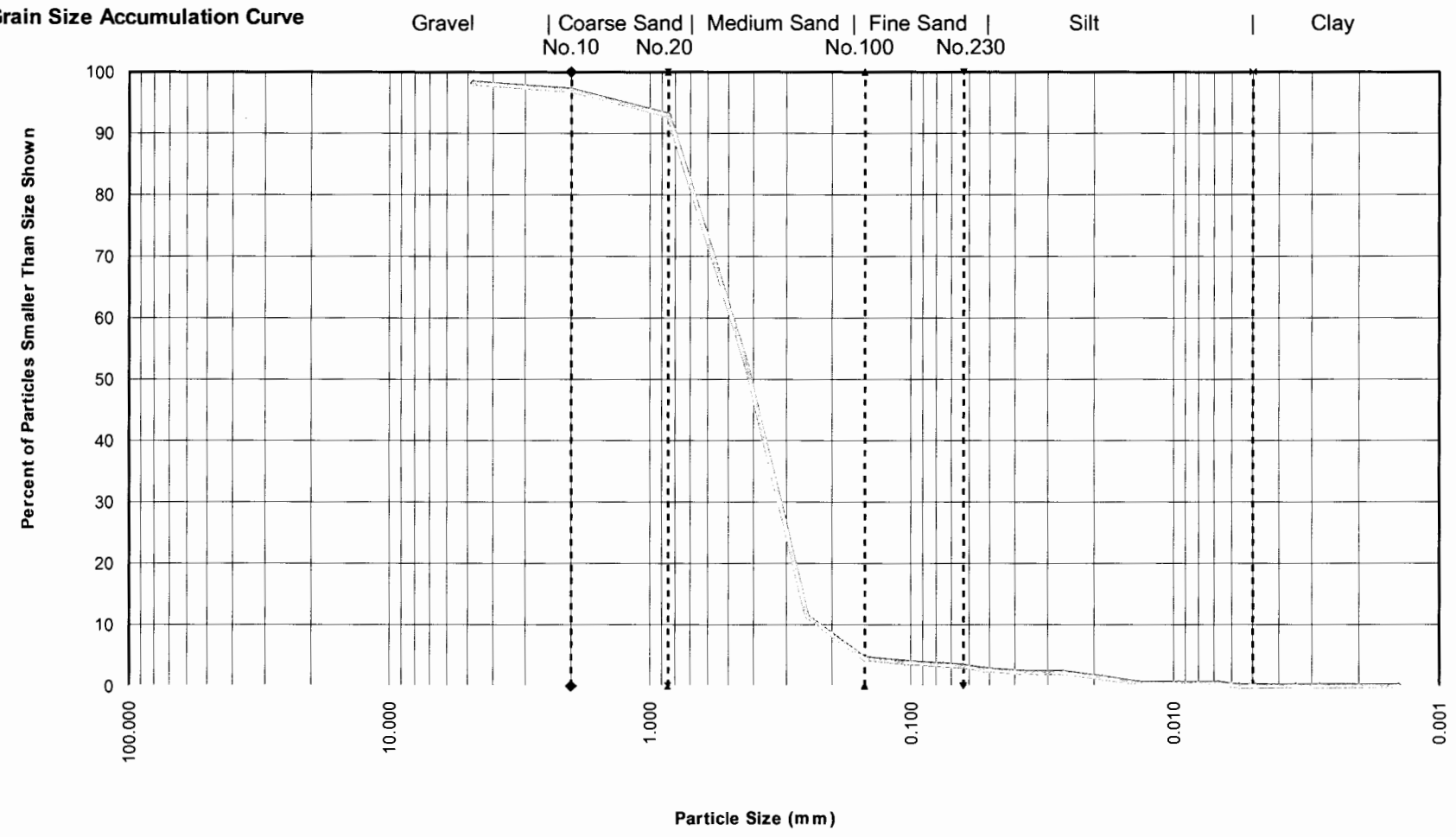
Trace organic material present in +10 fraction.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG15-190416 (A9D0674-07)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	Sub-angular to Rounded	Hard and Durable	SAND with trace Silt

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-07

Whole Sample

									Total
Tare Values	5.595	5.741	5.505						16.841
Air Dry + Tare	246.226	205.056	170.924						622.206

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.381								1.381
Dry + Tare	11.933								11.933

Sieve Number 10

									Total
Tare Values	1.376								1.376
Dry + Tare	8.377								8.377

Pan

									Total
Tare Values	5.601	5.750	5.514						16.865
Dry + Tare	187.823	226.813	189.362						603.998

Ensure that Total % Retained is ~ 100%. 99.9

APEX
Grain Size Analysis

Analyst	BLESSIE JOHNSON
Batch number	9041136
Start Date/ Time	04/23/19 900
Sample ID	A9D0647-07A

674 MH 4/24/19

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.595	246.226		
5.741	205.056		
5.505	170.924		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.381	12.083	11.933

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.376	8.549	8.377

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.601	187.823		
5.750	226.813		
5.514	189.362		

AME 001V

Date/Time/Temp

IN	4-23-19 11:15 111.7
OUT	4-24-19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D0647-07	1.370	18.301	17.908

APEX
Grain Size Analysis

Notes

Sample ID: AQDO 674-07

+10 fraction contains trace organics

Maximum Particle Size: Gravel

Hardness and Shape: Hard & durable; sub-angular to rounded

Soil/Sediment Classification:

SAND w/ trace Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Langway		
Batch Number	9041136 674 AY 04/24/19		
Sample ID	A9D~~0647~~07A		
Start Date/Time	04/24/2019 9:41		
Air Dry Sample for Hydrometer Test			100.566
Hydrometer	870249	Dispersant	A19D295

Time/Date: 4-23-19 - 9:57

9:41	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:42	1	9	20.0	
9:43	2	8.5	20.0	
9:45	4	8.5	20.0	
9:49	8	7.5	20.4	
9:56	15	6.5	20.5	
10:11	30	6.5	20.5	
10:41	60	6.5	20.5	
11:11	90	5.5	20.4	
11:41	120	5.0	20.4	
13:41	240	4.5	20.4	
15:41	360	4.0	20.5	
9:41	1440	4.0	20.1	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.379	5.486
+40	1.369	42.548
+60	1.388	42.772
+100	1.347	8.364
+140	1.362	2.022
+200	1.371	1.768
+230	1.384	1.613
-230 (pan)	1.371	1.566

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-08		Client Sample ID:	T4-PDI2019-SG16-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.869	339.078	328.21	2.98	318.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.386	1.860	0.47	0.47	0.1	99.9
10	2.00	1.363	1.740	0.38	0.85	0.1	99.7
Pan		10.892	337.926	327.03	327.89	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9711		D67408	1.377	19.104	18.591	2.98

Hydrometer Analysis

Start Date/Time	5/15/2019	9:03	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.099		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.7		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.65		Corrected Dry Weight of Soil Tested (g) (W)	48.78

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	21	20.6	16.36	33.5	12.7	0.01348	0.048	33.45
2	20	20.6	15.36	31.5	12.9	0.01348	0.034	31.40
4	18.5	20.6	13.86	28.4	13	0.01348	0.024	28.33
8	17	20.6	12.36	25.3	13.3	0.01348	0.017	25.27
15	15	20.6	10.36	21.2	13.7	0.01348	0.013	21.18
30	13	20.7	8.38	17.2	14	0.01348	0.009	17.14
60	11	20.7	6.38	13.1	14.3	0.01348	0.007	13.05
90	10	20.7	5.38	11.0	14.5	0.01348	0.005	11.01
120	10	20.7	5.38	11.0	14.5	0.01348	0.005	11.01
240	8	20.7	3.38	6.9	14.8	0.01348	0.003	6.92
360	7.5	20.7	2.88	5.9	14.8	0.01348	0.003	5.90
1440	6.5	20.1	1.73	3.6	15	0.01365	0.001	3.54

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.289	1.406	0.12	1.61	0.2	99.5
40	0.425	1.307	7.278	5.97	40.59	12.2	87.3
60	0.250	1.288	18.527	17.24	153.12	35.3	51.9
100	0.150	1.291	8.089	6.80	197.50	13.9	38.0
140	0.105	1.281	2.336	1.06	204.39	2.2	35.8
200	0.075	1.293	2.104	0.81	209.68	1.7	34.2
230	0.063	1.300	1.752	0.45	212.63	0.9	33.2

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG16-190416 (A9D0674-08)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.27*
Retained on No. 4 sieve		4.75	99.85	0.15
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.73	0.12
Sand				*66.51*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.49	0.24
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	87.25	12.24
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	51.91	35.34
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	37.98	13.94
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	35.81	2.16
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	34.15	1.66
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	33.22	0.93
Silt and Clay (Measurements in the Clay fraction are noted)				*33.22*
Hydrometer Test		0.0480	33.45	0
Hydrometer Test		0.0342	31.4	1.82
Hydrometer Test		0.0243	28.33	3.07
Hydrometer Test		0.0174	25.27	3.07
Hydrometer Test		0.0129	21.18	4.09
Hydrometer Test		0.0092	17.14	4.04
Hydrometer Test		0.0066	13.05	4.09
Hydrometer Test		0.0054	11.01	2.04
Hydrometer Test	Clay	0.0047	11.01	0
Hydrometer Test	Clay	0.0033	6.92	4.09
Hydrometer Test	Clay	0.0027	5.9	1.02
Hydrometer Test	Clay	0.0014	3.54	2.35

Grain Size Summary	Percent of Total Sample
Gravel	0.3
Sand	66.5
Coarse sand	0.2
Medium sand	61.5
Fine sand	4.8
Silt	22.2
Clay	11.0

Case Narrative for Sample ID: T4-PDI2019-SG16-190416 (A9D0674-08)

This data is not to be used for engineering purposes.

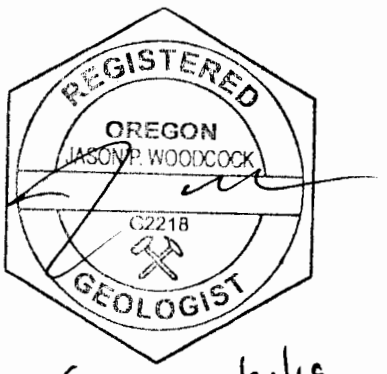
No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+4 fraction consists entirely of organic material.

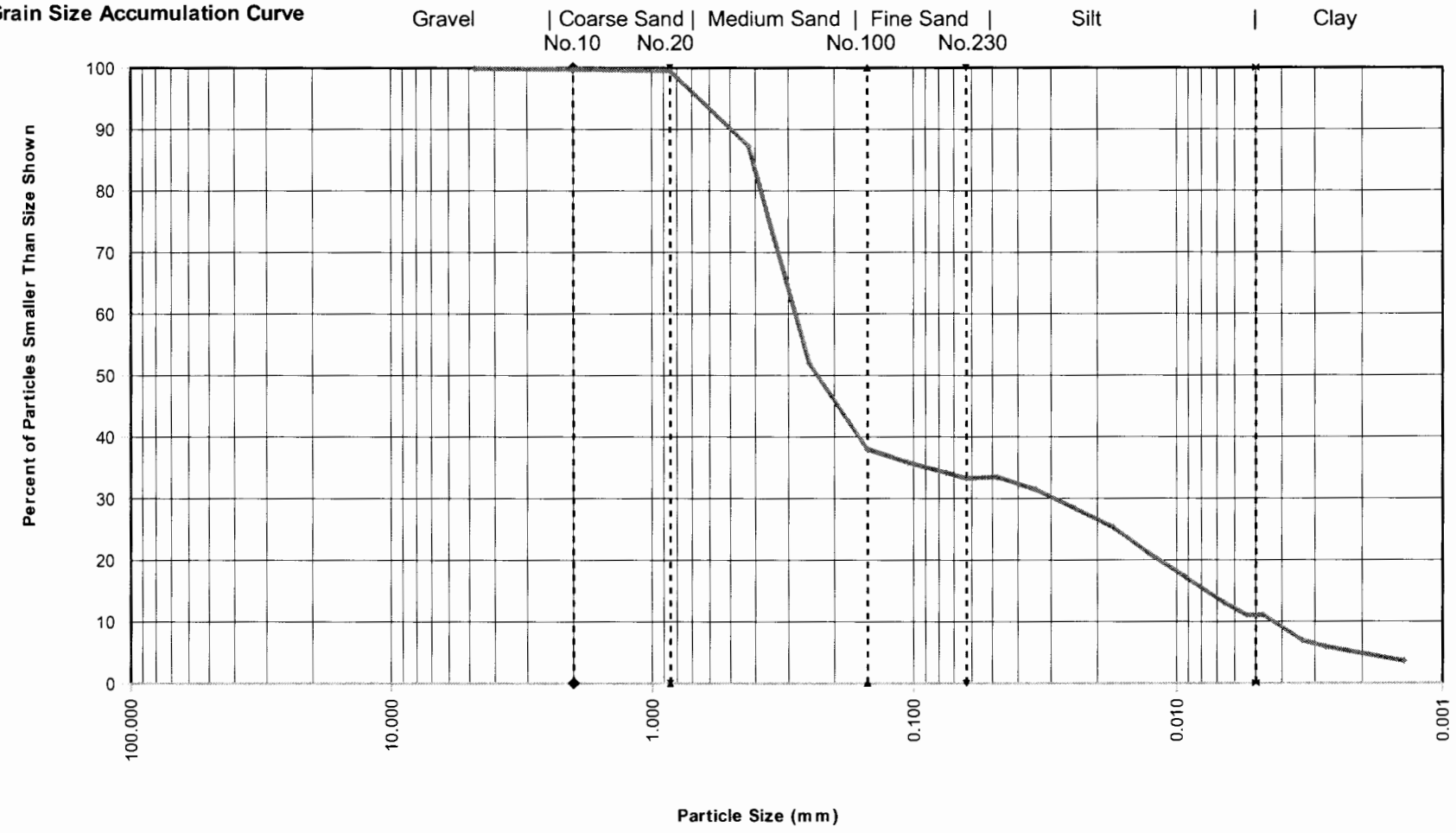
+10 fraction consists almost entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG16-190416 (A9D0674-08)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-08

Whole Sample Total

Tare Values	5.423	5.446							10.869
Air Dry + Tare	266.336	72.742							339.078

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50. Total

Tare Values	1.386								1.386
Dry + Tare	1.860								1.860

Sieve Number 10 Total

Tare Values	1.363								1.363
Dry + Tare	1.740								1.740

Pan Total

Tare Values	5.435	5.457							10.892
Dry + Tare	233.194	104.732							337.926

Ensure that Total % Retained is ~ 100%. 99.82

APEX
Grain Size Analysis

Analyst	James J. Johnson
Batch number	904136
Sample ID	A9D0674-08
Start Date/ Time	04/24/19 1224

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.423	266.336		
5.446	72.742		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.386	1.916	1.860

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.363	1.766	1.740

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.435	233.194		
5.457	104.732		

Date/Time/Temp

IN	4-25-19 111.0 13:58 AMECON
OUT	5-02-19 8:30 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67408	1.377	19.104	18.591

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-08

+4 = entirely organics

+10 = almost entirely organics.

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

Silty Sand w/ some Clay

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	London Sanguez		
Batch Number	9041136		
Sample ID	A9D0674-08		
Start Date/Time	5-15-19 9:03		
Air Dry Sample for Hydrometer Test			50.099
Hydrometer	229773	Dispersant	AP6142

Time/Date: 05-14-19 @ 14:44

9:03	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:04	1	21.0	20.6	
9:05	2	20.0	20.6	
9:07	4	18.5	20.6	
9:11	8	17.0	20.6	
9:18	15	15.0	20.6	
9:33	30	13.0	20.7	
10:03	60	11.0	20.7	
10:033	90	10	20.7	
11~~3~~:03	120	10	20.7	
13:03	240	8	20.7	
15:03	360	7.5	20.7	
9:03	1440	6.5	20.1	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.289	1.406
+40	1.307	7.278
+60	1.288	18.527
+100	1.291	8.089
+140	1.281	2.336
+200	1.293	2.104
+230	1.300	1.752
-230 (pan)	1.295	1.961

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sancha Tangeway		
Batch Number	9041136		
Sample ID	A9D0674-08		
Start Date/Time	4-25-19 09:50		
Air Dry Sample for Hydrometer Test			55.713
Hydrometer	870249	Dispersant JJ 04/24/19	~~BA19 323~~

questionable dispersant. JJ 05/17/19

Time/Date: 04-24-19 16:10

09:50	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:51	1	22.0	20.5	
9:52	2	21	20.5	
9:54	4	19	20.5	
9:58	8	16.5	20.6	
10:05	15	14	20.8	
10:20	30	11.5	20.7	
10:50	60	10.0	20.5	
11:20	90	9.5	20.6	
11:50	120	8.0	20.6	
13:50	240	7.0	20.6	
15:50	360	5.5	20.7	
9:50	1440	5.0	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.384	1.484
+40	1.386	7.107
+60	1.373	20.614
+100	1.380	9.226
+140	1.375	2.624
+200	1.369	2.346
+230	1.398	1.936
-230 (pan)	1.367	2.289

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG16-190416 (A9D0674-08)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.27*
Retained on No. 4 sieve		4.75	99.85	0.15
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.73	0.12
Sand				*65.76*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.55	0.18
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	89	10.55
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	53.53	35.47
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	39.07	14.46
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	36.77	2.3
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	34.96	1.8
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	33.97	0.99
Silt and Clay (Measurements in the Clay fraction are noted)				*33.97*
Hydrometer Test		0.0477	29.32	4.65
Hydrometer Test		0.0340	27.48	1.84
Hydrometer Test		0.0243	23.8	3.68
Hydrometer Test		0.0174	19.27	4.53
Hydrometer Test		0.0129	14.8	4.47
Hydrometer Test		0.0093	10.14	4.66
Hydrometer Test		0.0066	7.26	2.88
Hydrometer Test		0.0054	6.4	0.86
Hydrometer Test	Clay	0.0047	3.64	2.76
Hydrometer Test	Clay	0.0034	1.8	1.84
Hydrometer Test	Clay	0.0028	1.8	0
Hydrometer Test	Clay	0.0014	1.8	0

Grain Size Summary	**Percent of Total Sample**
Gravel	0.3
Sand	65.8
Coarse sand	0.2
Medium sand	60.5
Fine sand	5.1
Silt	27.6
Clay	6.4

Case Narrative for Sample ID: **T4-PDI2019-SG16-190416 (A9D0674-08)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

questionable dispersant. JG 05/17/19

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-12		Client Sample ID:	T4-PDI2019-SG17-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with trace Silt and Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.537	505.616	494.08	2.08	484.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.370	1.733	0.36	0.36	0.1	99.9
10	2.00	1.379	2.946	1.57	1.93	0.3	99.6
Pan		11.558	503.373	491.82	493.75	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9796		D67412	1.362	18.514	18.164	2.08

Hydrometer Analysis

Start Date/Time	4/24/2019	9:58	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	101.628		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.6		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	99.55		Corrected Dry Weight of Soil Tested (g) (W)	99.95

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8	20.1	3.23	3.2	14.8	0.01365	0.053	3.22
2	7	20.1	2.23	2.2	15	0.01365	0.037	2.22
4	7	20.1	2.23	2.2	15	0.01365	0.026	2.22
8	7	20.1	2.23	2.2	15	0.01365	0.019	2.22
15	6.5	20.1	1.73	1.7	15	0.01365	0.014	1.73
30	6.5	20.1	1.73	1.7	15	0.01365	0.010	1.73
60	6	20.3	1.28	1.3	15.2	0.01365	0.007	1.28
90	5.5	20.3	0.78	0.8	15.2	0.01365	0.006	0.78
120	5	20.3	0.28	0.3	15.3	0.01365	0.005	0.28
240	4.5	20.5		0.0	15.3	0.01348	0.003	0.00
360	4.5	20.5		0.0	15.3	0.01348	0.003	0.00
1440	4	20.3		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.282	2.550	1.27	8.07	1.3	98.3
40	0.425	1.291	30.881	29.59	151.26	29.6	68.7
60	0.250	6.450	57.313	50.86	397.41	50.9	17.8
100	0.150	1.295	12.892	11.60	453.53	11.6	6.2
140	0.105	1.289	2.132	0.84	457.61	0.8	5.4
200	0.075	1.296	1.660	0.36	459.37	0.4	5.0
230	0.063	1.287	1.462	0.18	460.22	0.2	4.9
			Sum	94.70	230 Minus	4.85	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG17-190416 (A9D0674-12)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.4*
Retained on No. 4 sieve		4.75	99.92	0.08
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.6	0.32
Sand				*94.74*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.33	1.27
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	68.73	29.6
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	17.84	50.89
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	6.24	11.6
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	5.4	0.84
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	5.03	0.36
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	4.86	0.18
Silt and Clay (Measurements in the Clay fraction are noted)				*4.86*
Hydrometer Test		0.0525	3.22	1.64
Hydrometer Test		0.0374	2.22	1
Hydrometer Test		0.0264	2.22	0
Hydrometer Test		0.0187	2.22	0
Hydrometer Test		0.0137	1.73	0.5
Hydrometer Test		0.0097	1.73	0
Hydrometer Test		0.0069	1.28	0.45
Hydrometer Test		0.0056	0.78	0.5
Hydrometer Test	Clay	0.0049	0.28	0.5
Hydrometer Test	Clay	0.0034	0.28	0
Hydrometer Test	Clay	0.0028	0.28	0
Hydrometer Test	Clay	0.0014	0.28	0

Grain Size Summary	Percent of Total Sample
Gravel	0.4
Sand	94.7
Coarse sand	1.3
Medium sand	92.1
Fine sand	1.4
Silt	4.1
Clay	0.8

Case Narrative for Sample ID: T4-PDI2019-SG17-190416 (A9D0674-12)

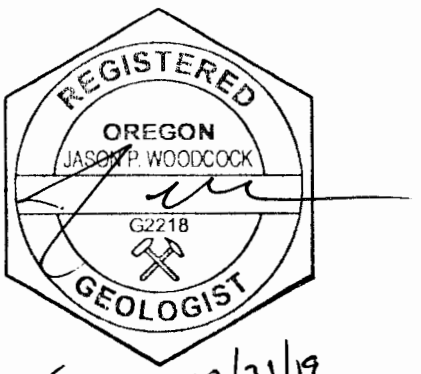
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

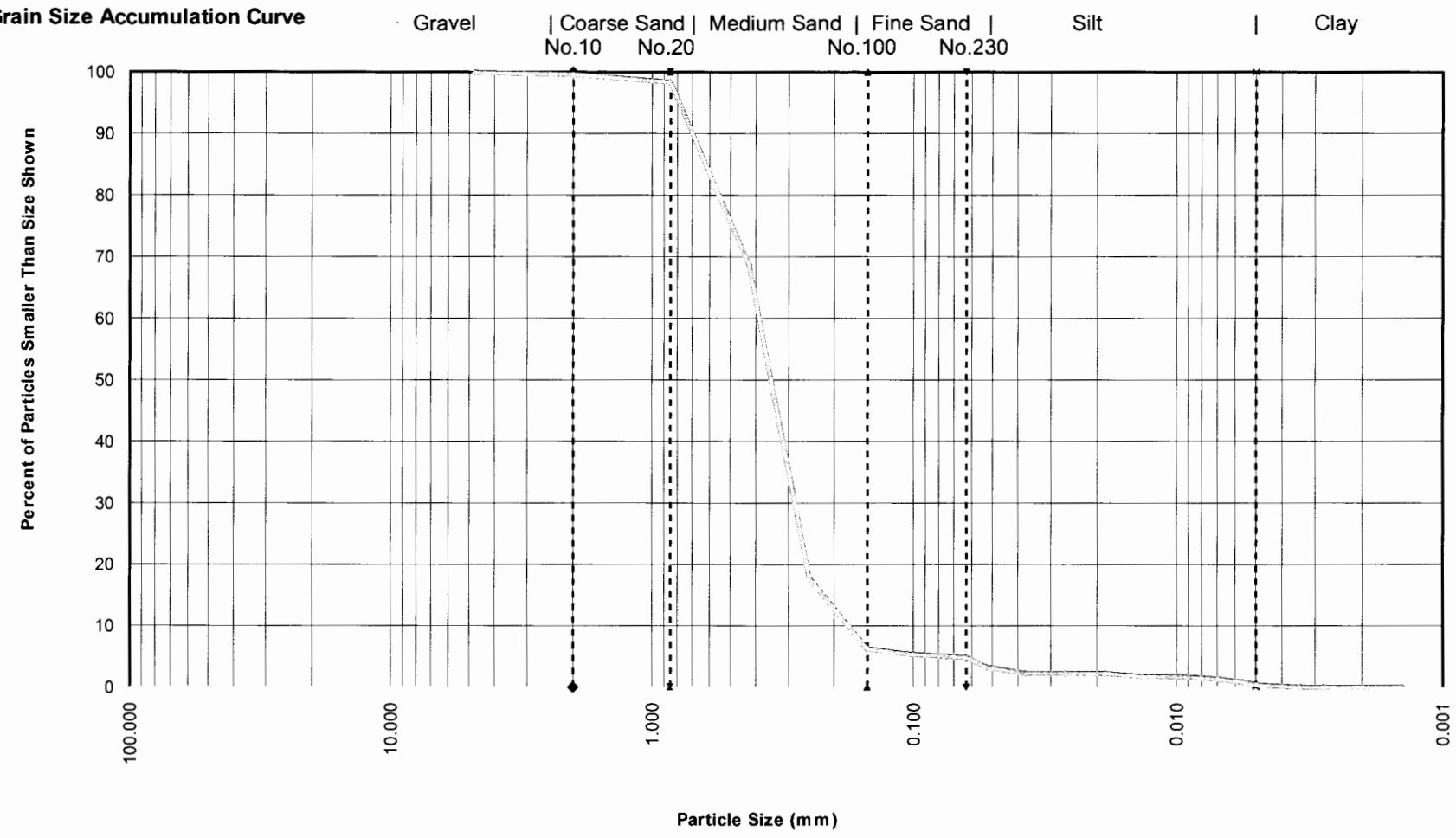
Organic material present in +4 and +10 fractions.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG17-190416 (A9D0674-12)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with trace Silt and Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-12

Whole Sample

									Total
Tare Values	5.667	5.870							11.537
Air Dry + Tare	243.390	262.226							505.616

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.370								1.370
Dry + Tare	1.733								1.733

Sieve Number 10

									Total
Tare Values	1.379								1.379
Dry + Tare	2.946								2.946

Pan

									Total
Tare Values	5.676	5.882							11.558
Dry + Tare	268.658	234.715							503.373

Ensure that Total % Retained is ~ 100%. 99.9

APEX
Grain Size Analysis

Analyst	Sandra Sanguinetti
Batch number	904 1136
Start Date/ Time	04/23/19 9:40
Sample ID	A9D0674 - 12

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.667	243.390		
5.870	262.226		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.370	1.741	1.733

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.379	2.989	2.946

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.676	268.658		
~~5.882~~	234.715		
5.882			

MF 05/14/19

Date/Time/Temp AMEOOIV

IN	4-23-19 11:15 4-23-19
OUT	4-24-19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D674-12	1.362	18.514	18.164

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-12

-organics in #4 & #10 fractions

Maximum Particle Size: Gravel

Hardness and Shape: N/A → limited sample fractions.

Soil/Sediment Classification:

SAND w/ trace Silt & Clay

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sangeway		
Batch Number	9041136		
Sample ID	A9D0674-12		
Start Date/Time	04-24-19 9:58		
Air Dry Sample for Hydrometer Test			101.625
Hydrometer	229773	Dispersant	A19D295 Time/Date: 04/23/19 10:35

9:58	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
9	0.5			
9:59	1	8.0	20.1	
10:00	2	7.0	20.1	
10:02	4	7.0	20.1	
10:06	8	7.0	20.1	
10:13	15	6.5	20.1	
10:28	30	6.5	20.1	
10:58	60	6.0	20.3	
11:28	90	5.5	20.3	
11 58	120	5.0	20.3	
13:55	240	4.5	20.5	
15 58	360	4.5	20.5	
9:58	1440	4.0	20.3	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.282	2.550
+40	1.291	30.881
+60	~~1.309~~	57.313
+100	1.295	12.892
+140	1.289	2.132
+200	1.296	1.660
+230	1.287	1.462
-230 (pan)	1.291	1.516

fw 5-10-19
6.450

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-13		Client Sample ID:	FD-201904151441		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/17/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Silty SAND with some Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	16.925	431.687	414.76	3.18	402.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.367	1.701	0.33	0.33	0.1	99.9
Pan		18.226	431.941	413.72	414.05	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9692		D67413	1.381	17.041	16.559	3.18

Hydrometer Analysis

Start Date/Time	5/15/2019	9:26	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.100		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.9		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	97.02		Corrected Dry Weight of Soil Tested (g) (W)	97.10

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	23	20.6	18.36	18.9	12.4	0.01348	0.047	18.89
2	21.5	20.6	16.86	17.4	12.5	0.01348	0.034	17.35
4	19.5	20.6	14.86	15.3	12.9	0.01348	0.024	15.29
8	17.5	20.6	12.86	13.2	13.2	0.01348	0.017	13.23
15	15.5	20.7	10.88	11.2	13.5	0.01348	0.013	11.20
30	13.5	20.6	8.86	9.1	13.8	0.01348	0.009	9.12
60	11.5	20.7	6.88	7.1	14.2	0.01348	0.007	7.08
90	10	20.8	5.41	5.6	14.5	0.01348	0.005	5.57
120	10	20.7	5.38	5.5	14.5	0.01348	0.005	5.54
240	8	20.7	3.38	3.5	14.8	0.01348	0.003	3.48
360	7.5	20.7	2.88	3.0	14.8	0.01348	0.003	2.97
1440	7	20.2	2.26	2.3	15	0.01365	0.001	2.32

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.289	2.243	0.95	4.28	1.0	98.9
40	0.425	1.283	26.722	25.44	109.42	26.2	72.7
60	0.250	1.286	42.170	40.88	278.39	42.1	30.6
100	0.150	1.300	11.006	9.71	318.51	10.0	20.6
140	0.105	1.291	2.615	1.32	323.98	1.4	19.3
200	0.075	1.297	2.194	0.90	327.69	0.9	18.3
230	0.063	1.283	1.733	0.45	329.55	0.5	17.9
Pan		1.305	19.053	17.75	347.30	18.6	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: FD-201904151441 (A9D0674-13)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.08*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.92	0.08
Sand				*82.03*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.93	0.98
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	72.74	26.2
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.63	42.11
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	20.63	10
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	19.27	1.36
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	18.35	0.92
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	17.88	0.46
Silt and Clay (Measurements in the Clay fraction are noted)				*17.88*
Hydrometer Test		0.0475	18.89	0
Hydrometer Test		0.0337	17.35	0.54
Hydrometer Test		0.0242	15.29	2.06
Hydrometer Test		0.0173	13.23	2.06
Hydrometer Test		0.0128	11.2	2.03
Hydrometer Test		0.0091	9.12	2.08
Hydrometer Test		0.0066	7.08	2.03
Hydrometer Test		0.0054	5.57	1.52
Hydrometer Test	Clay	0.0047	5.54	0.03
Hydrometer Test	Clay	0.0033	3.48	2.06
Hydrometer Test	Clay	0.0027	2.97	0.51
Hydrometer Test	Clay	0.0014	2.32	0.64

Grain Size Summary	**Percent of Total Sample**
Gravel	0.1
Sand	82.0
Coarse sand	1.0
Medium sand	78.3
Fine sand	2.8
Silt	12.3
Clay	5.6

Case Narrative for Sample ID: FD-201904151441 (A9D0674-13)

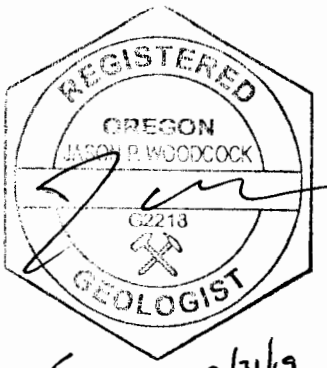
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

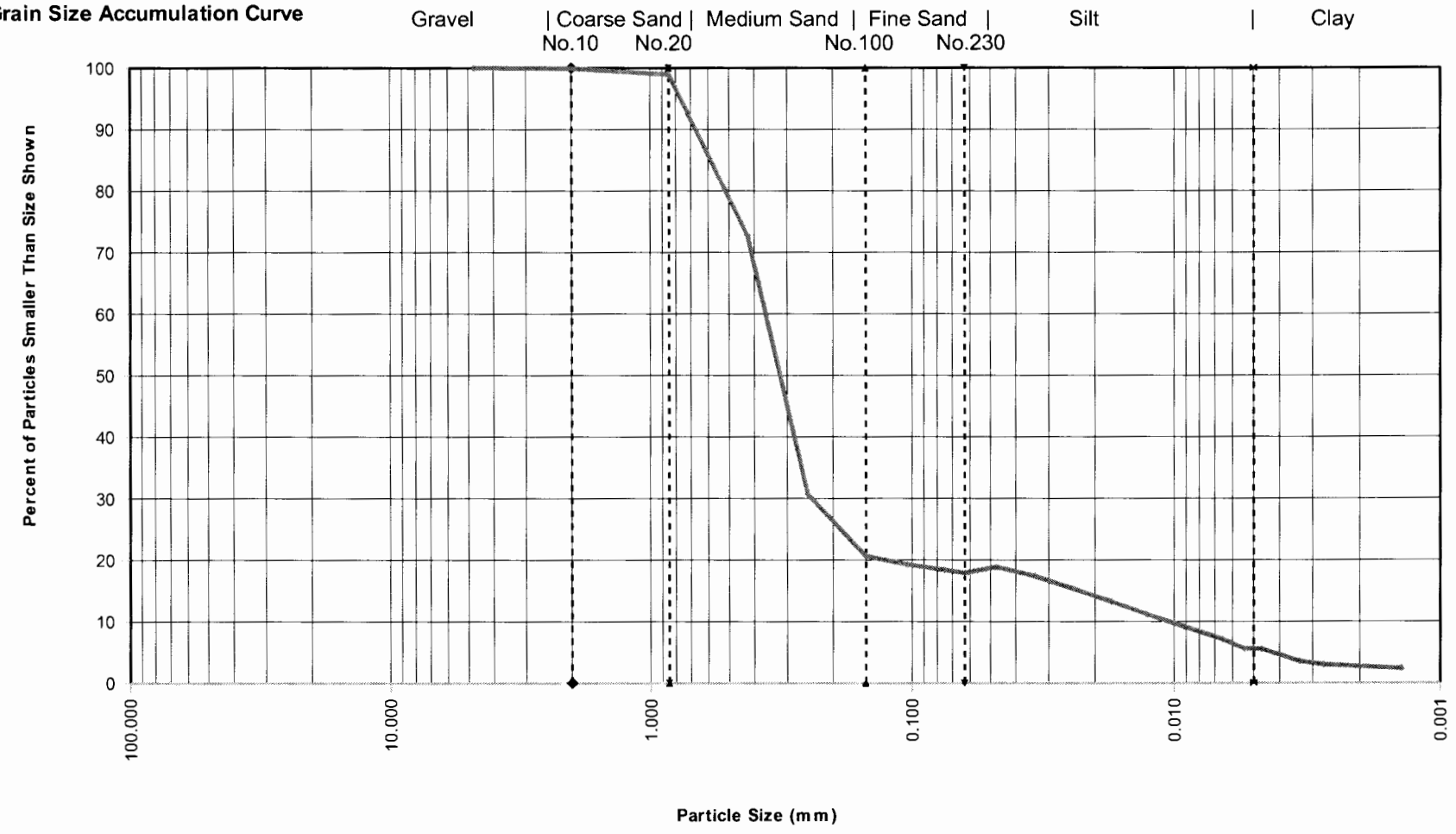
+10 fraction consists almost entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	FD-201904151441 (A9D0674-13)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Silty SAND with some Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-13

Whole Sample

									Total
Tare Values	5.741	5.672	5.512						16.925
Air Dry + Tare	128.552	140.660	162.475						431.687

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values	1.367								1.367
Dry + Tare	1.701								1.701

Pan

									Total
Tare Values	5.744	5.674	5.516	1.292					18.226
Dry + Tare	121.276	160.666	134.699	15.300					431.941

Ensure that Total % Retained is ~ 100%. 99.73

APEX
Grain Size Analysis

Analyst	BLESSIE JOHNSON
Batch number	904136
Start Date/ Time	4-23-19 10:06
Sample ID	A9D067U-13A

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.741	128.552		
5.672	140.660		
5.512	162.475		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
~~1.368~~	~~15.972~~	~~15.444~~
1.367	1.701	1.701

JG 5/20/19

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
~~1.368~~	~~15.972~~	BS 4-23-19	
5.744	121.276		
5.674	160.666		
5.516	134.699		
1.292	15.300		

Date/Time/Temp AME 001V

IN	4-23-19 11:15 111.7
OUT	4-24-19 111.0 15:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
4-23-19 BS ~~10~~ D067U-13	1.381	17.041	16.559

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674 - 13

† 10 = almost entirely organics

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

Silty SAND w/ Some Clay

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanger		
Batch Number	1041136		
Sample ID	A9D0674-13		
Start Date/Time	5-15-19 9:26		
Air Dry Sample for Hydrometer Test			100100
Hydrometer	229773	Dispersant	A19E142

Time/Date: 05-14-19 @ 14:48

9:26	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:27	1	23.0	20.6	
9:28	2	21.5	20.6	
9:30	4	19.5	20.6	
9:34	8	17.5	20.6	
9:41	15	15.5	20.7	
9:56	30	13.5	20.6	
10:26	60	11.5	20.7	
10:56	90	10	20.8	
11:26	120	10	20.7	
13:26	240	8	20.7	
15:26	360	7.5	20.7	
9:26	1440	7	20.2	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.289	2.243
+40	1.283	26.722
+60	1.286	42.170
+100	1.300	11.006
+140	1.291	2.615
+200	1.297	2.194
+230	1.283	1.733
-230 (pan)	1.287	2.027

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tangwey
Batch Number	9041136
Sample ID	H9D06574 - 13A
Start Date/Time	4-25-19
Air Dry Sample for Hydrometer Test	~~100.226~~ 100.728
Hydrometer	229773
Dispersant	~~A19D245~~ A19D328
Time/Date:	~~04/23/19 10:55~~ 04/24/19 14:55

Original 100g was loss due to Analyst error. Soaked a new 100g for Hydro. 04-28-19

Adj 04/24/19

questionable dispersant JSG 05/17/19

08:59	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:00	1	19	20.2	
9:01	2	19	20.2	
9:03	4	18.5	20.4	
9:07	8	15	20.4	
9:14	15	13.5	20.4	
9:29	30	9.5	20.6	
9:59	60	8	20.5	
10:29	90	7	20.6	
10:59	120	6	20.7	
12:59	240	5	20.7	
14:59	360	4	20.8	
8:59	1440	3	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.295	2.340
+40	1.285	26.540
+60	1.287	43.311
+100	1.296	10.168
+140	1.303	2.535
+200	1.277	2.287
+230	1.290	1.802
-230 (pan)	1.297	2.201

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: FD-201904151441 (A9D0674-13)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*3.5*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	96.5	3.5
Sand				*79.03*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	95.47	1.03
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	70.5	24.96
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	28.96	41.54
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	20.2	8.77
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	18.98	1.22
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	17.98	1
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	17.47	0.51
Silt and Clay (Measurements in the Clay fraction are noted)				*17.47*
Hydrometer Test		0.0492	13.6	3.87
Hydrometer Test		0.0348	13.6	0
Hydrometer Test		0.0246	13.17	0.43
Hydrometer Test		0.0179	9.83	3.34
Hydrometer Test		0.0131	8.4	1.43
Hydrometer Test		0.0094	4.63	3.77
Hydrometer Test		0.0067	3.18	1.45
Hydrometer Test		0.0055	2.25	0.93
Hydrometer Test	Clay	0.0048	1.32	0.93
Hydrometer Test	Clay	0.0034	0.37	0.95
Hydrometer Test	Clay	0.0028	0.37	0
Hydrometer Test	Clay	0.0014	0.37	0

Grain Size Summary	**Percent of Total Sample**
Gravel	3.5
Sand	79.0
Coarse sand	1.0
Medium sand	75.3
Fine sand	2.7
Silt	15.2
Clay	2.2

Case Narrative for Sample ID: FD-201904151441 (A9D0674-13)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

used quaternable dispersant. JJG 05/17/19

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-14		Client Sample ID:	T4-PDI2019-SG18-190415		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with some Clay and Silt			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.219	402.323	391.10	4.40	374.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.379	2.931	1.55	1.55	0.4	99.6
10	2.00	1.378	1.963	0.59	2.14	0.2	99.4
Pan		11.226	398.104	386.88	389.02	98.7	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9579		D67414	1.377	18.421	17.703	4.40

Hydrometer Analysis

Start Date/Time	4/24/2019	9:20	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.276		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.4		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.16		Corrected Dry Weight of Soil Tested (g) (W)	48.43

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	15	20.1	10.23	21.1	13.7	0.01365	0.051	21.00
2	14.5	20.2	9.76	20.1	13.7	0.01365	0.036	20.03
4	14	20.1	9.23	19.1	13.8	0.01365	0.025	18.95
8	12.5	20.1	7.73	16.0	14	0.01365	0.018	15.87
15	12	20.1	7.23	14.9	14.2	0.01365	0.013	14.85
30	11.5	20.1	6.73	13.9	14.2	0.01365	0.009	13.82
60	10.5	20.1	5.73	11.8	14.3	0.01365	0.007	11.77
90	10	20.3	5.28	10.9	14.5	0.01365	0.005	10.84
120	9.5	20.3	4.78	9.9	14.5	0.01365	0.005	9.82
240	9	20.5	4.33	8.9	14.7	0.01348	0.003	8.89
360	8.5	20.5	3.83	7.9	14.7	0.01348	0.003	7.87
1440	8	19.9	3.18	6.6	14.8	0.01365	0.001	6.53

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.290	1.702	0.41	5.31	0.9	98.6
40	0.425	1.311	13.195	11.88	96.76	24.5	74.0
60	0.250	1.287	22.379	21.09	259.06	43.5	30.5
100	0.150	1.296	5.881	4.59	294.34	9.5	21.0
140	0.105	1.295	1.895	0.60	298.96	1.2	19.8
200	0.075	1.288	1.792	0.50	302.84	1.0	18.7
230	0.063	1.294	1.540	0.25	304.73	0.5	18.2

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG18-190415 (A9D0674-14)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.57*
Retained on No. 4 sieve		4.75	99.59	0.41
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.43	0.16
Sand				*81.19*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	98.58	0.85
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	74.04	24.54
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.5	43.55
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	21.03	9.47
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	19.79	1.24
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	18.75	1.04
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	18.24	0.51
Silt and Clay (Measurements in the Clay fraction are noted)				*18.24*
Hydrometer Test		0.0505	21	0
Hydrometer Test		0.0357	20.03	0
Hydrometer Test		0.0254	18.95	0
Hydrometer Test		0.0181	15.87	2.37
Hydrometer Test		0.0133	14.85	1.03
Hydrometer Test		0.0094	13.82	1.03
Hydrometer Test		0.0067	11.77	2.05
Hydrometer Test		0.0055	10.84	0.92
Hydrometer Test	Clay	0.0047	9.82	1.03
Hydrometer Test	Clay	0.0033	8.89	0.92
Hydrometer Test	Clay	0.0027	7.87	1.03
Hydrometer Test	Clay	0.0014	6.53	1.34

Grain Size Summary	Percent of Total Sample
Gravel	0.6
Sand	81.2
Coarse sand	0.9
Medium sand	77.6
Fine sand	2.8
Silt	7.4
Clay	10.8

Case Narrative for Sample ID: T4-PDI2019-SG18-190415 (A9D0674-14)

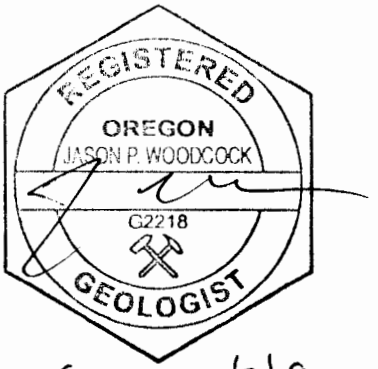
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

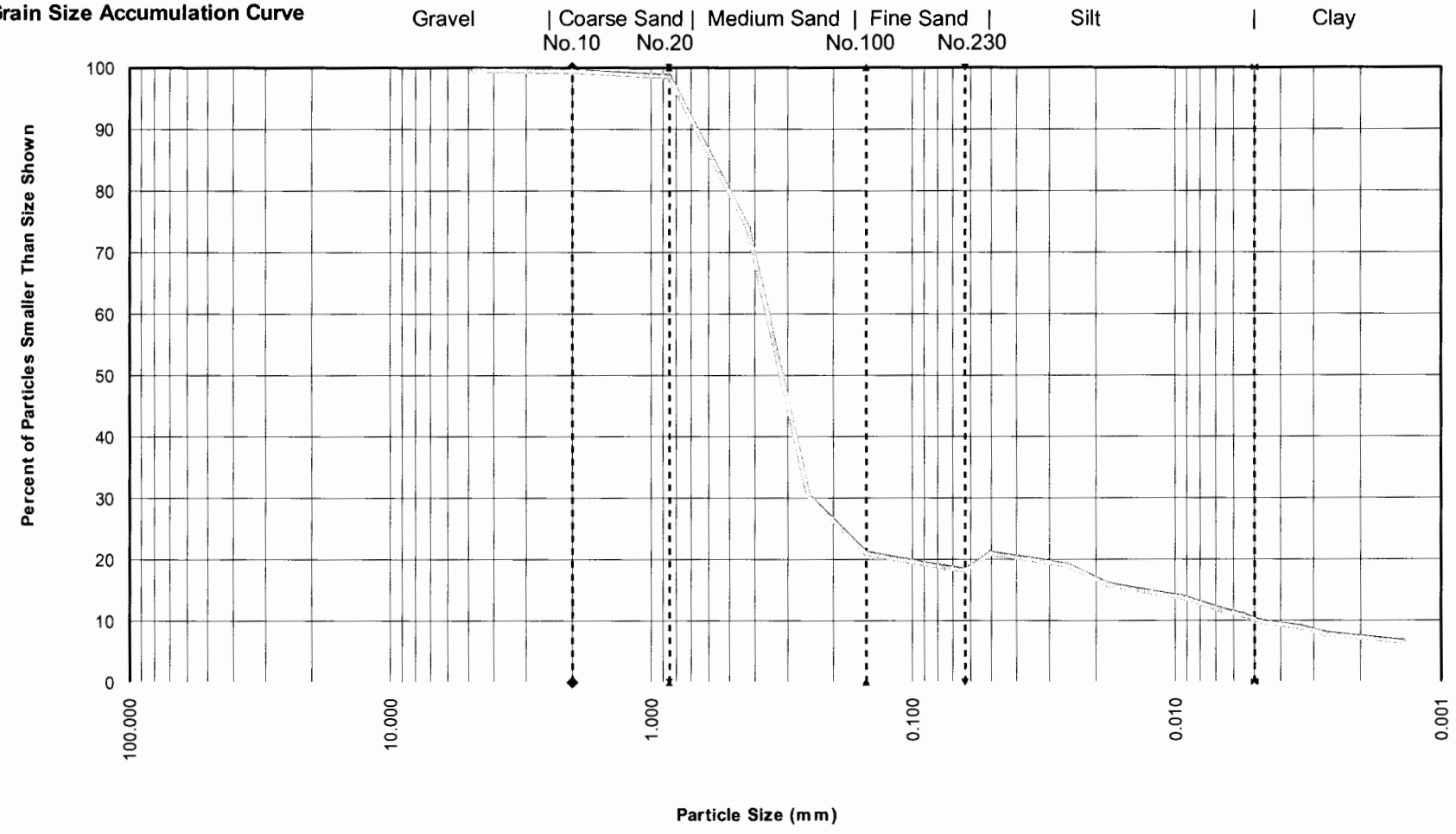
+4 and +10 fractions consist entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG18-190415 (A9D0674-14)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Clay and Silt

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-14

Whole Sample

									Total
Tare Values	5.570	5.649							11.219
Air Dry + Tare	191.936	210.387							402.323

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.379								1.379
Dry + Tare	2.931								2.931

Sieve Number 10

									Total
Tare Values	1.378								1.378
Dry + Tare	1.963								1.963

Pan

									Total
Tare Values	5.573	5.653							11.226
Dry + Tare	242.309	155.795							398.104

Ensure that Total % Retained is ~ 100%. 99.3

APEX
Grain Size Analysis

Analyst	Sandra Langwan
Batch number	9041136
Start Date/ Time	04/23/2019 10:10
Sample ID	A9D674-14

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.570	191.936		
3.649	210.387		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.379	3.756	2.931

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.378	2.071	1.963

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.573	242.309		
5.653	155.795		

Date/Time/Temp AME 001V

IN	9-23-19 11:15 111.7
OUT	9-24-19 13:25 113.0

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D674-14	1.377	18.421	17.703

APEX
Grain Size Analysis

Notes

Sample ID: A19D674-14

#4 & #10 consist entirely of organic material

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

Sand w/ Some Clay & Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sargent			
Batch Number	904136			
Sample ID	AGD0674-14A			
Start Date/Time	04/24/19	9:20		
Air Dry Sample for Hydrometer Test	~~100.041~~ 50.276 HS 04/23/19			
Hydrometer	229773	Dispersant	AGD295	Time/Date: 04/23/19 11:15

9:20	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:21	1	15.0	20.1	
9:22	2	14.5	20.2	
9:24	4	14.0	20.1	
9:28	8	12.5	20.1	
9:35	15	12	20.1	
9:50	30	11.5	20.1	
10:20	60	10.5	20.1	
10:50	90	10.0	20.3	
11:20	120	9.5	20.3	
13:20	240	9.0	20.5	
15:20	360	8.5	20.5	
9:20	1440	8.0	19.9	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.290	1.702
+40	1.311	13.195
+60	1.287	22.379
+100	1.296	5.881
+140	1.295	1.895
+200	1.288	1.792
+230	1.294	1.540
-230 (pan)	1.303	1.632

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-15		Client Sample ID:	T4-PDI2019-SG51-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.771	226.780	215.01	4.61	205.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.376	1.765	0.39	0.39	0.2	99.8
10	2.00	1.383	1.456	0.07	0.46	0.0	99.8
Pan		13.177	227.111	213.93	214.40	99.3	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9559		D67415	1.381	16.587	15.917	4.61

Hydrometer Analysis

Start Date/Time	4/30/2019	8:43	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.086		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	99.8		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.84		Corrected Dry Weight of Soil Tested (g) (W)	48.95

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.4	46.31	94.6	7.8	0.01365	0.038	94.40
2	47	20.2	42.26	86.3	8.4	0.01365	0.028	86.14
4	42	20.3	37.28	76.2	9.2	0.01365	0.021	76.00
8	37	20.4	32.31	66.0	10.1	0.01365	0.015	65.86
15	32	20.5	27.33	55.8	10.9	0.01348	0.011	55.72
30	26.5	20.4	21.81	44.6	11.7	0.01365	0.009	44.46
60	22.5	20.3	17.78	36.3	12.4	0.01365	0.006	36.25
90	20	20.4	15.31	31.3	12.9	0.01365	0.005	31.20
120	17.5	20.3	12.78	26.1	13.2	0.01365	0.005	26.06
240	15.5	20.4	10.81	22.1	13.5	0.01365	0.003	22.03
360	13.5	20.4	8.81	18.0	13.8	0.01365	0.003	17.95
1440	11	19.5	6.08	12.4	14.3	0.01365	0.001	12.39

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.307	1.307	0.00	0.46	0.0	99.8
40	0.425	1.301	1.355	0.05	0.69	0.1	99.7
60	0.250	1.295	1.441	0.15	1.30	0.3	99.4
100	0.150	1.288	1.653	0.37	2.83	0.7	98.6
140	0.105	1.286	1.530	0.24	3.85	0.5	98.1
200	0.075	1.298	1.698	0.40	5.52	0.8	97.3
230	0.063	1.292	1.669	0.38	7.10	0.8	96.5

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG51-190417 (A9D0674-15)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.22*
Retained on No. 4 sieve		4.75	99.81	0.19
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.78	0.04
Sand				*3.24*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.78	0
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.66	0.11
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.37	0.3
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.62	0.75
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.12	0.5
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.31	0.82
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.53	0.77
Silt and Clay (Measurements in the Clay fraction are noted)				*96.53*
Hydrometer Test		0.0381	94.4	2.14
Hydrometer Test		0.0280	86.14	8.26
Hydrometer Test		0.0207	76	10.14
Hydrometer Test		0.0153	65.86	10.14
Hydrometer Test		0.0115	55.72	10.14
Hydrometer Test		0.0085	44.46	11.26
Hydrometer Test		0.0062	36.25	8.21
Hydrometer Test		0.0052	31.2	5.04
Hydrometer Test	Clay	0.0045	26.06	5.15
Hydrometer Test	Clay	0.0032	22.03	4.03
Hydrometer Test	Clay	0.0027	17.95	4.08
Hydrometer Test	Clay	0.0014	12.39	5.56

Grain Size Summary	**Percent of Total Sample**
Gravel	0.2
Sand	3.2
Coarse sand	0.0
Medium sand	1.2
Fine sand	2.1
Silt	65.3
Clay	31.2

Case Narrative for Sample ID: T4-PDI2019-SG51-190417 (A9D0674-15)

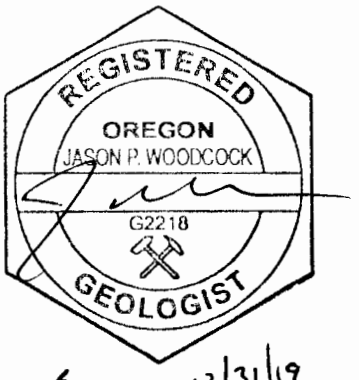
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

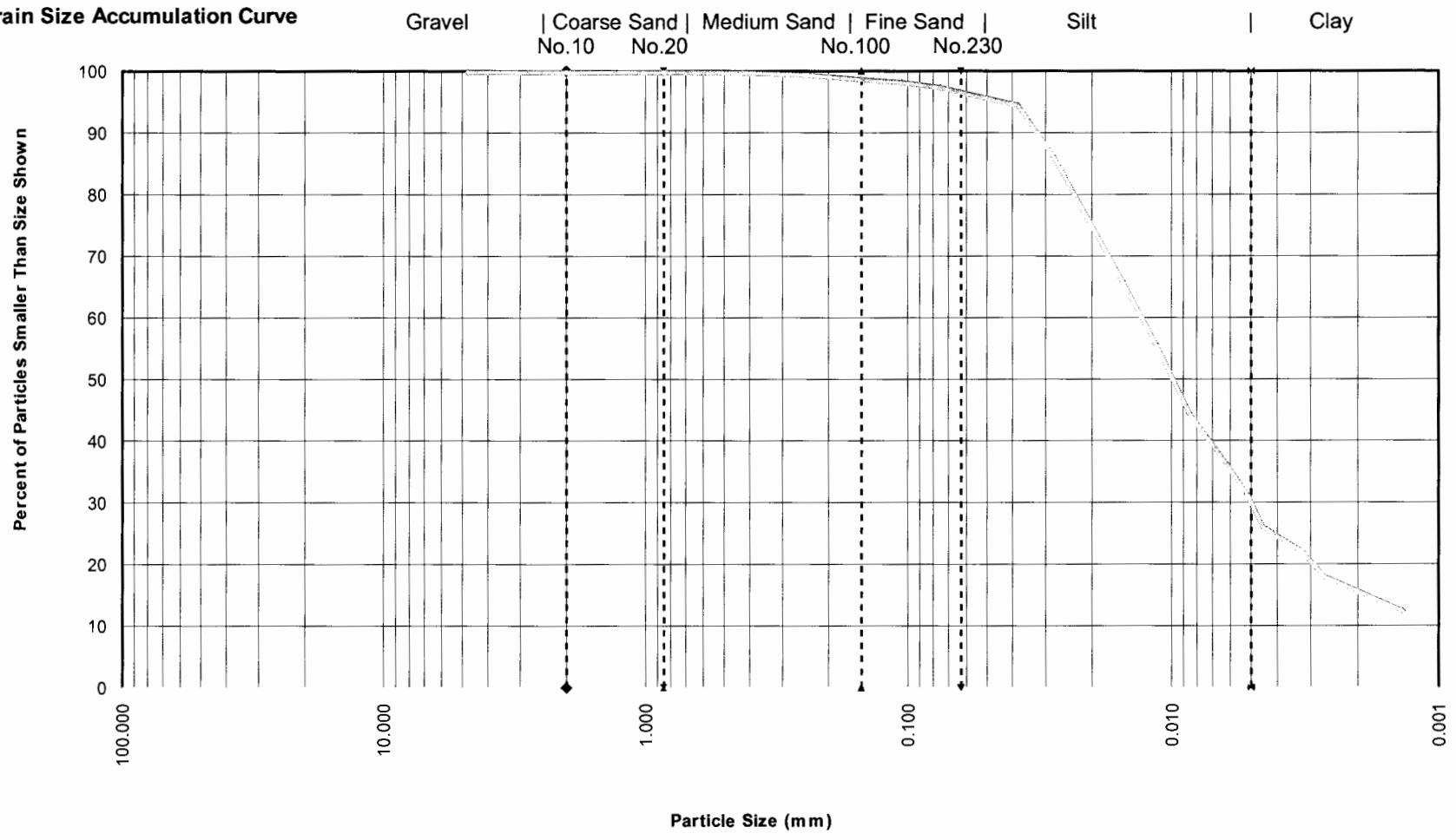
+4 and +10 fractions consist entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG51-190417 (A9D0674-15)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-15

Whole Sample Total

Tare Values	5.756	6.015							11.771
Air Dry + Tare	132.301	94.479							226.780

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50. Total

Tare Values	1.376								1.376
Dry + Tare	1.765								1.765

Sieve Number 10 Total

Tare Values	1.383								1.383
Dry + Tare	1.456								1.456

Pan Total

Tare Values	5.773	6.026	1.378						13.177
Dry + Tare	131.392	89.406	6.313						227.111

Ensure that Total % Retained is ~ 100%. 99.51

APEX
Grain Size Analysis

Analyst	KAREN WILSON
Batch number	9041136
Sample ID	A9D0674-15A
Start Date/ Time	4-26-19 09:50

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.756	132.301		
6.015	94.479		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
~~1.378~~	~~6.746~~	NB 4-26-19 SOME WAS DIET AND SHOULD NOT BE IN THIS PAN
1.376	1.768	1.765

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.383	1.463	1.456

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.773	131.392		
6.026	89.406		
1.378	6.313	Diet from #4 PAN	

Date/Time/Temp

IN	4-26-19 112.4 14:10
OUT	05-02-19 113.0 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
674-15	1.381	16.587	15.917

APEX
Grain Size Analysis

Notes

Sample ID: A9D0474-15

#4 SIEVE INCLUDED 2 SMALL SHELLS
#10 SIEVE IS PIECES OF WOOD ✓

Maximum Particle Size: Gravel

Hardness and Shape: N/a

Soil/Sediment Classification:

Clayey Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Longway		
Batch Number	904136		
Sample ID	A9D0674-15A		
Start Date/Time	4-30-19 08:43		
Air Dry Sample for Hydrometer Test			51.086
Hydrometer	22973	Dispersant	A19D333

Time/Date: 4-26-19 14:12

08:43	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:44	1	51	20.4	
8:45	2	47	20.2	
8:47	4	42	20.3	
8:51	8	37	20.4	
8:58	15	32	20.5	
9:13	30	26.5	20.4	
9:43	60	22.5	20.3	
10:13	90	20	20.4	
10:43	120	17.5	20.3	
12:43	240	15.5	20.4	
14:43	360	13.5	20.4	
08:43	1440	11	19.5	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.307	N/A
+40	1.301	1.355
+60	1.295	1.441
+100	1.288	1.653
+140	1.286	1.530
+200	1.298	1.698
+230	1.292	1.669
-230 (pan)	1.288	2.258

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-16		Client Sample ID:	T4-PDI2019-SG52-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	5.636	181.679	176.04	5.34	167.1

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.378	1.388	0.01	0.01	0.0	100.0
Pan		5.651	181.113	175.46	175.47	99.4	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9493		D67416	1.367	16.198	15.446	5.34

Hydrometer Analysis

Start Date/Time	4/30/2019	9:01	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.099		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.56		Corrected Dry Weight of Soil Tested (g) (W)	47.56

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.3	46.28	97.3	7.8	0.01365	0.038	97.30
2	48.5	20.3	43.78	92.1	8.1	0.01365	0.027	92.05
4	45	20.4	40.31	84.7	8.8	0.01365	0.020	84.74
8	40.5	20.5	35.83	75.3	9.4	0.01348	0.015	75.34
15	35	20.3	30.28	63.7	10.4	0.01365	0.011	63.67
30	30.5	20.5	25.83	54.3	11.1	0.01348	0.008	54.31
60	24.5	20.5	19.83	41.7	12	0.01348	0.006	41.70
90	21.5	20.5	16.83	35.4	12.5	0.01348	0.005	35.39
120	20	20.4	15.31	32.2	12.9	0.01365	0.004	32.18
240	17	20.3	12.28	25.8	13.3	0.01365	0.003	25.82
360	15.5	20.2	10.76	22.6	13.5	0.01365	0.003	22.62
1440	11.5	19.6	6.61	13.9	14.2	0.01365	0.001	13.89

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.294	1.299	0.00	0.03	0.0	100.0
40	0.425	1.300	1.315	0.01	0.08	0.0	100.0
60	0.250	1.295	1.436	0.14	0.57	0.3	99.7
100	0.150	1.313	1.434	0.12	1.00	0.3	99.4
140	0.105	1.285	1.395	0.11	1.38	0.2	99.2
200	0.075	1.289	1.427	0.14	1.87	0.3	98.9
230	0.063	1.288	1.420	0.13	2.33	0.3	98.6

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG52-190417 (A9D0674-16)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0.01*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	99.99	0.01
Sand				*1.39*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.98	0.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.95	0.03
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.66	0.3
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.4	0.25
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	99.17	0.23
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	98.88	0.29
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	98.6	0.28
Silt and Clay (Measurements in the Clay fraction are noted)				*98.6*
Hydrometer Test		0.0381	97.3	1.3
Hydrometer Test		0.0275	92.05	5.26
Hydrometer Test		0.0202	84.74	7.31
Hydrometer Test		0.0146	75.34	9.41
Hydrometer Test		0.0114	63.67	11.67
Hydrometer Test		0.0082	54.31	9.35
Hydrometer Test		0.0060	41.7	12.61
Hydrometer Test		0.0050	35.39	6.31
Hydrometer Test	Clay	0.0045	32.18	3.21
Hydrometer Test	Clay	0.0032	25.82	6.36
Hydrometer Test	Clay	0.0026	22.62	3.21
Hydrometer Test	Clay	0.0014	13.89	8.73

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	1.4
Coarse sand	0.0
Medium sand	0.6
Fine sand	0.8
Silt	63.2
Clay	35.4

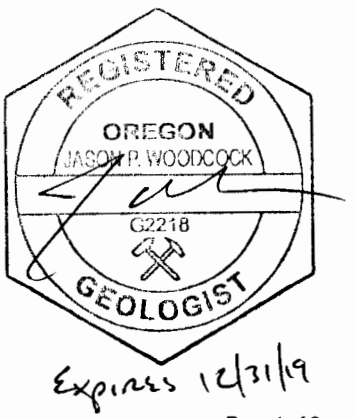
Case Narrative for Sample ID: T4-PDI2019-SG52-190417 (A9D0674-16)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

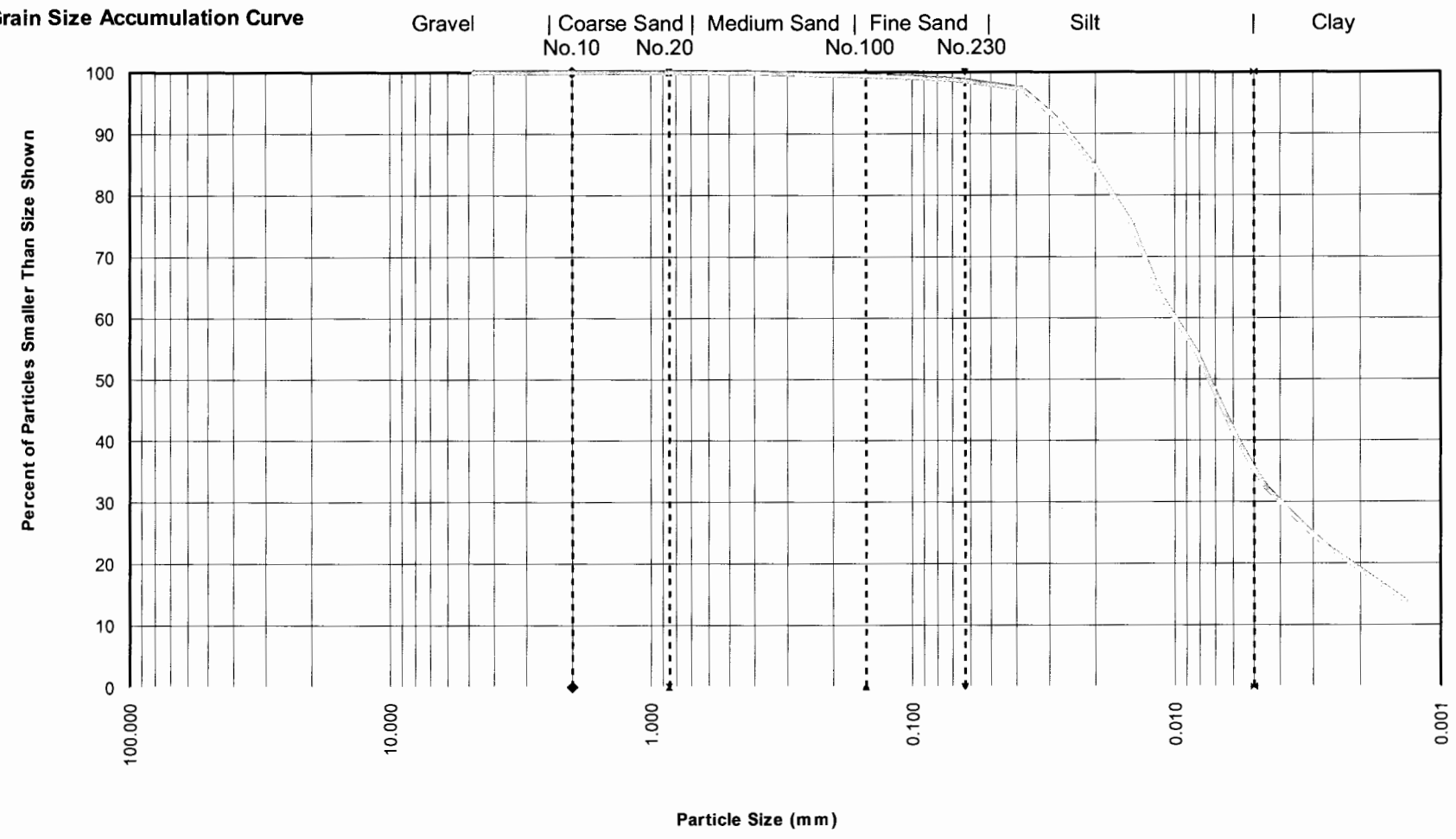
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG52-190417 (A9D0674-16)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-16

Whole Sample

									Total
Tare Values	5.636								5.636
Air Dry + Tare	181.679								181.679

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values	1.378								1.378
Dry + Tare	1.388								1.388

Pan

									Total
Tare Values	5.651								5.651
Dry + Tare	181.113								181.113

Ensure that Total % Retained is ~ 100%. 99.39

APEX
Grain Size Analysis

Analyst	James S. Johnson
Batch number	9041136
Sample ID	A9D0674-16
Start Date/ Time	04/24/19 1845

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.636	181.679		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
	N/A	
JJJ 04/24/19		

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.378	1.390	1.388

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.651	181.113		

Date/Time/Temp

IN AmEcoLV	4-25-19 111.0 13:58
OUT	05 02 19 113 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67416	1.367	16.198	15.446

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-16

Maximum Particle Size: Gravel

Hardness and Shape: N/A ; limited fraction mass

Soil/Sediment Classification:

clayey Silt

5/14/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tangway		
Batch Number	9D41136		
Sample ID	A9D0674-16		
Start Date/Time	4-30-19		
Air Dry Sample for Hydrometer Test			50.099
Hydrometer	229733	Dispersant	A19D333

Time/Date: 4-26-19 14:13

09:01	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:02	1	51	20.3	
9:03	2	48.5	20.3	
9:05	4	45.0	20.4	
9:09	8	40.5	20.5	
9:16	15	35	20.3	
9:31	30	30.5	20.5	
10:01	60	24.5	20.5	
10:31	90	21.5	20.5	
11:01	120	20	20.4	
13:01	240	17	20.3	
15:01	360	15.5	20.2	
09:01	1440	11.5	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.294	1.299
+40	1.300	1.315
+60	1.295	1.436
+100	1.313	1.434
+140	1.285	1.395
+200	1.289	1.427
+230	1.288	1.420
-230 (pan)	1.296	1.703

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-17		Client Sample ID:	T4-PDI2019-SG53-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.234	188.555	177.32	4.42	169.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.258	188.511	177.25	177.25	99.8	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9577		D67417	1.378	15.483	14.886	4.42

Hydrometer Analysis

Start Date/Time	5/2/2019	9:40	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.086		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.97		Corrected Dry Weight of Soil Tested (g) (W)	47.97

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	50	20.7	45.38	94.6	7.9	0.01348	0.038	94.62
2	49.5	20.6	44.86	93.5	7.9	0.01348	0.027	93.52
4	46.5	20.6	41.86	87.3	8.4	0.01348	0.020	87.27
8	42	20.6	37.36	77.9	9.2	0.01348	0.014	77.88
15	36	20.6	31.36	65.4	10.2	0.01348	0.011	65.38
30	30	20.7	25.38	52.9	11.2	0.01348	0.008	52.92
60	24	20.8	19.41	40.5	12.2	0.01348	0.006	40.46
90	20	20.8	15.41	32.1	12.9	0.01348	0.005	32.12
120	18	20.7	13.38	27.9	13.2	0.01348	0.004	27.90
240	15	20.6	10.36	21.6	13.7	0.01348	0.003	21.59
360	14	20.6	9.36	19.5	13.8	0.01348	0.003	19.51
1440	10.5	19.6	5.61	11.7	14.3	0.01365	0.001	11.69

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.304	1.334	0.03	0.11	0.1	99.9
40	0.425	1.293	1.651	0.36	1.37	0.7	99.2
60	0.250	1.288	1.555	0.27	2.32	0.6	98.6
100	0.150	1.288	1.513	0.23	3.11	0.5	98.2
140	0.105	1.296	1.459	0.16	3.69	0.3	97.8
200	0.075	1.289	1.547	0.26	4.60	0.5	97.3
230	0.063	1.282	1.462	0.18	5.24	0.4	96.9
Pan		1.268	1.430	0.16	5.40	0.3	96.6

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG53-190416 (A9D0674-17)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*3.09*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.19	0.75
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.63	0.56
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.17	0.47
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	97.83	0.34
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.29	0.54
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.91	0.38
Silt and Clay (Measurements in the Clay fraction are noted)				*96.91*
Hydrometer Test		0.0379	94.62	2.3
Hydrometer Test		0.0268	93.52	1.1
Hydrometer Test		0.0195	87.27	6.25
Hydrometer Test		0.0145	77.88	9.38
Hydrometer Test		0.0111	65.38	12.51
Hydrometer Test		0.0082	52.92	12.46
Hydrometer Test		0.0061	40.46	12.46
Hydrometer Test		0.0051	32.12	8.34
Hydrometer Test	Clay	0.0045	27.9	4.22
Hydrometer Test	Clay	0.0032	21.59	6.31
Hydrometer Test	Clay	0.0026	19.51	2.08
Hydrometer Test	Clay	0.0014	11.69	7.82

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	3.1
Coarse sand	0.1
Medium sand	1.8
Fine sand	1.3
Silt	64.8
Clay	32.1

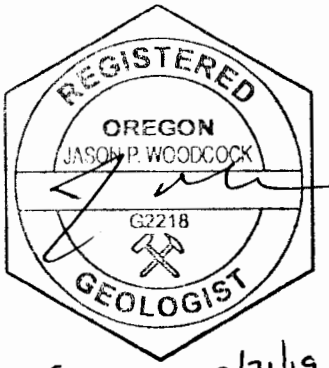
Case Narrative for Sample ID: T4-PDI2019-SG53-190416 (A9D0674-17)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

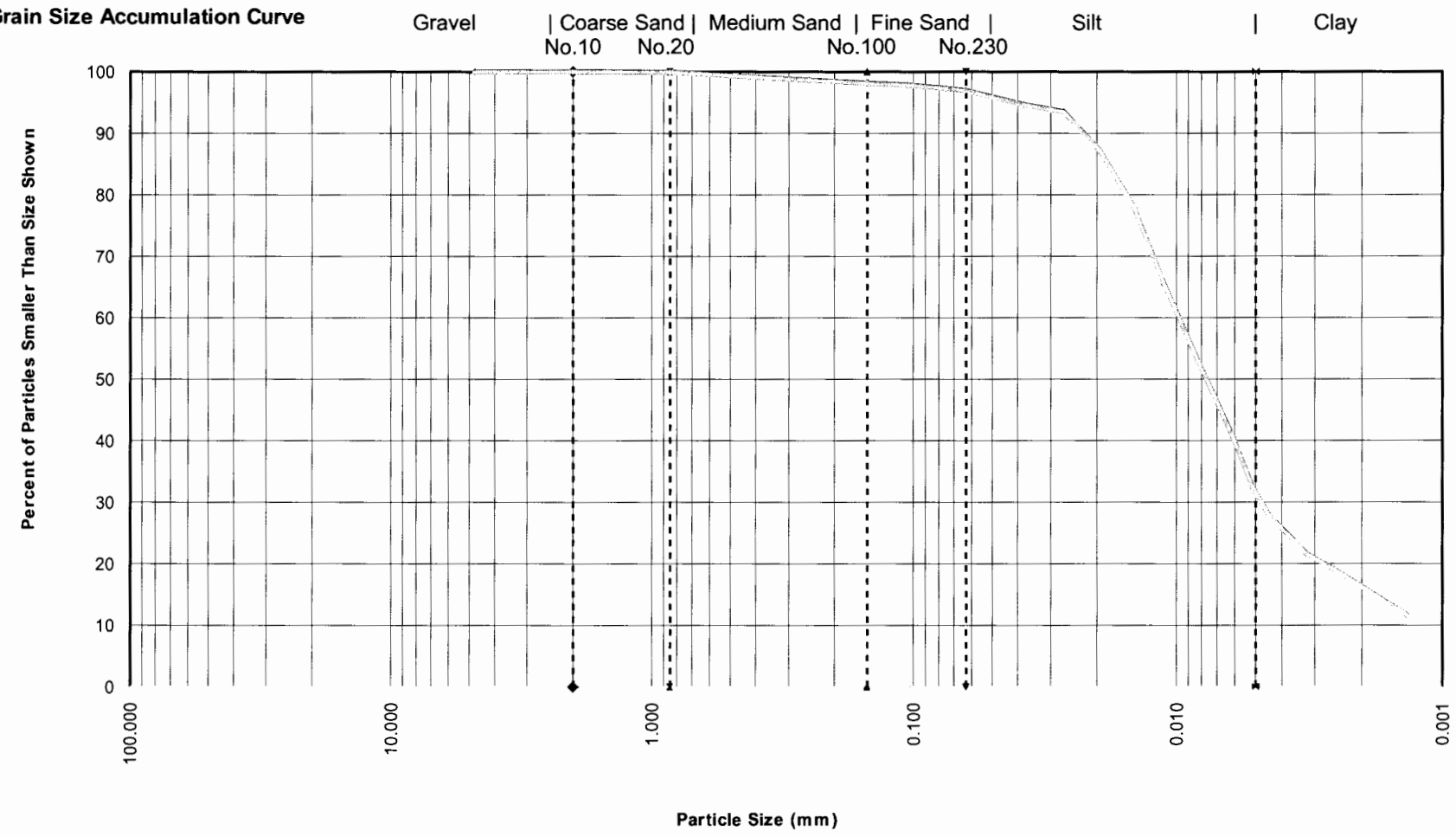
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG53-190416 (A9D0674-17)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-17

Whole Sample

									Total
Tare Values	5.669	5.565							11.234
Air Dry + Tare	90.265	98.290							188.555

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.681	5.577							11.258
Dry + Tare	102.379	86.132							188.511

Ensure that Total % Retained is ~ 100%. 99.77

APEX
Grain Size Analysis

Analyst	BLESSIE JUANSON
Batch number	904136
Sample ID	A900674-17 A
Start Date/ Time	4-29-19 10:00

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.669	90.265		
5.565	98.290		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.681	102.379		
5.577	86.132		

Date/Time/Temp AME001V

IN	5-2-19 08:30 113°
OUT	5-7-19 112.3 15:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
674-17	1.378	15.483	14.886

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-17

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification: Clayey SILT

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Gangway		
Batch Number	9041136		
Sample ID	A9D0674 - 17A		
Start Date/Time	5-2-19 09:40		
Air Dry Sample for Hydrometer Test			50.086
Hydrometer	229773	Dispersant	A19E022

Time/Date: 05-01-19 5-1-19 16:42

09:~~40~~ 3040 kw	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:41	1	50	20.7	
9:42	2	49.5	20.6	
9:44	4	46.5	20.6	
9:48	8	42	20.6	
9:55	15	36	20.6	
10:10	30	30	20.7	
10:40	60	24	20.8	
11:10	90	20	20.8	
11:40	120	18	20.7	
13:40	240	15	20.6	
15:40	360	14	20.6	
9:40	1440	10.5	19.6	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.304	1.334
+40	1.293	1.651
+60	1.288	1.555
+100	1.288	1.513
+140	1.296	1.459
+200	1.289	1.547
+230	1.282	1.462
-230 (pan)	1.291	1.826

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-18		Client Sample ID:	T4-PDI2019-SG54-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/16/19
Sample Description:	SAND with some Silt and trace Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.681	419.919	408.24	2.00	400.2

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.385	5.866	4.48	4.48	1.1	98.9
10	2.00	1.374	8.743	7.37	11.85	1.8	97.0
Pan		11.701	407.255	395.55	407.40	96.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9804		D67418	1.383	16.346	16.052	2.00

Hydrometer Analysis

Start Date/Time	4/30/2019	9:56	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	100.787		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	97.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	98.81		Corrected Dry Weight of Soil Tested (g) (W)	101.82

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	14.5	20.4	9.81	9.6	13.7	0.01365	0.051	9.35
2	13.5	20.3	8.78	8.6	13.8	0.01365	0.036	8.37
4	12.5	20.3	7.78	7.6	14	0.01365	0.026	7.42
8	12	20.5	7.33	7.2	14.2	0.01348	0.018	6.99
15	10.5	20.6	5.86	5.8	14.3	0.01348	0.013	5.58
30	10.5	20.7	5.88	5.8	14.3	0.01348	0.009	5.61
60	8	20.7	3.38	3.3	14.8	0.01348	0.007	3.22
90	7.5	20.7	2.88	2.8	14.8	0.01348	0.005	2.75
120	7	20.5	2.33	2.3	15	0.01348	0.005	2.22
240	6	20.3	1.28	1.3	15.2	0.01365	0.003	1.22
360	5	20.4	0.31	0.3	15.3	0.01365	0.003	0.29
1440	5	19.7	0.13	0.1	15.3	0.01365	0.001	0.12

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.295	4.386	3.09	23.98	3.0	94.0
40	0.425	1.299	25.353	24.05	118.38	23.6	70.4
60	0.250	1.280	41.492	40.21	276.20	39.5	30.9
100	0.150	1.287	15.647	14.36	332.56	14.1	16.8
140	0.105	1.287	5.073	3.79	347.42	3.7	13.1
200	0.075	1.290	3.604	2.31	356.50	2.3	10.8
230	0.063	1.290	2.139	0.85	359.83	0.8	10.0
Sum				88.67	230 Minus	10.0	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG54-190416 (A9D0674-18)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*2.96*
Retained on No. 4 sieve		4.75	98.88	1.12
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	97.04	1.84
Sand				*87.08*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	94	3.04
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	70.38	23.62
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	30.89	39.49
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	16.78	14.1
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	13.07	3.72
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	10.79	2.27
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	9.96	0.83
Silt and Clay (Measurements in the Clay fraction are noted)				*9.96*
Hydrometer Test		0.0505	9.35	0.61
Hydrometer Test		0.0359	8.37	0.98
Hydrometer Test		0.0255	7.42	0.95
Hydrometer Test		0.0180	6.99	0.43
Hydrometer Test		0.0132	5.58	1.41
Hydrometer Test		0.0093	5.61	0
Hydrometer Test		0.0067	3.22	2.36
Hydrometer Test		0.0055	2.75	0.48
Hydrometer Test	Clay	0.0048	2.22	0.52
Hydrometer Test	Clay	0.0034	1.22	1
Hydrometer Test	Clay	0.0028	0.29	0.93
Hydrometer Test	Clay	0.0014	0.12	0.17

Grain Size Summary	Percent of Total Sample
Gravel	3.0
Sand	87.1
Coarse sand	3.0
Medium sand	77.2
Fine sand	6.8
Silt	7.2
Clay	2.7

Case Narrative for Sample ID: T4-PDI2019-SG54-190416 (A9D0674-18)

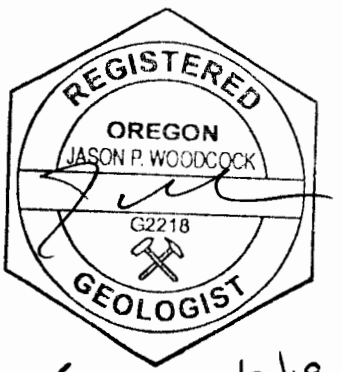
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

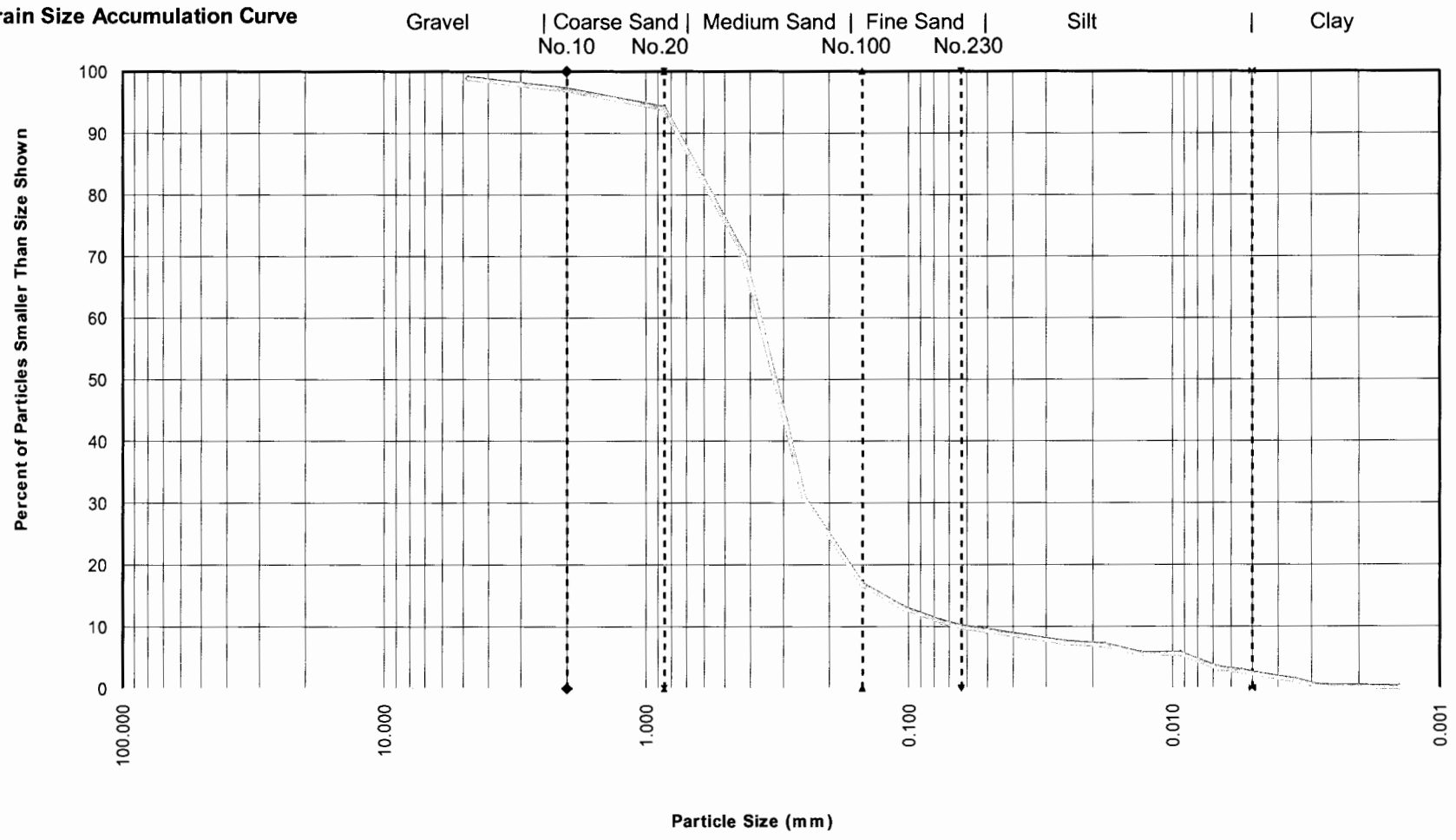
+4 and +10 fractions consist almost entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG54-190416 (A9D0674-18)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Silt and trace Clay

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-18

Whole Sample

									Total
Tare Values	5.674	6.007							11.681
Air Dry + Tare	227.886	192.033							419.919

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.385								1.385
Dry + Tare	5.866								5.866

Sieve Number 10

									Total
Tare Values	1.374								1.374
Dry + Tare	8.743								8.743

Pan

									Total
Tare Values	5.685	6.016							11.701
Dry + Tare	193.108	214.147							407.255

Ensure that Total % Retained is ~ 100%. 99.81

APEX
Grain Size Analysis

Analyst	Sandra Tanguay
Batch number	9041136
Sample ID	A900674-18
Start Date/ Time	4-25-19 14:04

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.674	227.886		
6.007	192.033		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.385	6.116	5.866

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.374	9.043	8.743

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.685	193.108		
6.016	214.147		

Date/Time/Temp

IN	4-25-19 15:40
AMBIENT	112.1
OUT	4-26-19 112.4 14:10

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D674 18	1.383	16.346	16.052

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674 -18

T4 & T10 consist almost entirely of organics (wood & shell fragments)

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

SAND w/ some Silt & trace Clay

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sondra Langway		
Batch Number	9041136		
Sample ID	A9D0674-18		
Start Date/Time	4-30-19		
Air Dry Sample for Hydrometer Test		100.787	
Hydrometer	129733	Dispersant	A19D333

Time/Date 4-26-19 14:15

09:56	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:57	1	14.5	20.4	
9:58	2	13.5	20.3	
10:00	4	12.5	20.3	
10:04	8	12	20.5	
10:11	15	10.5	20.6	
10:26	30	10.5	20.7	
10:56	60	8	20.7	
11:26	90	7.5	20.7	
11:56	120	7.0	20.5	
13:56	240	6.0	20.3	
15:56	360	5.0	20.4	
9:56	1440	5	19.7	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.295	4.386
+40	1.299	25.353
+60	1.280	41.492
+100	1.287	15.647
+140	1.287	5.073
+200	1.290	3.604
+230	1.290	2.139
-230 (pan)	1.287	2.123

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-19		Client Sample ID:	T4-PDI2019-SG57-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.357	189.770	178.41	5.12	169.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.380	189.499	178.12	178.12	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9513		D67419	1.386	15.480	14.794	5.12

Hydrometer Analysis

Start Date/Time	4/30/2019	8:50	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.015		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.58		Corrected Dry Weight of Soil Tested (g) (W)	47.58

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.1	44.81	94.2	7.8	0.01365	0.038	94.18
2	48.5	20.2	42.35	89.0	8.1	0.01365	0.027	89.00
4	46.5	20.1	40.31	84.7	8.4	0.01365	0.020	84.73
8	40.5	20.1	34.31	72.1	9.4	0.01365	0.015	72.12
15	35	20.3	28.88	60.7	10.4	0.01365	0.011	60.70
30	28.5	20.4	22.41	47.1	11.4	0.01365	0.008	47.11
60	23	20.5	16.95	35.6	12.4	0.01348	0.006	35.62
90	20.5	20.5	14.45	30.4	12.7	0.01348	0.005	30.36
120	18.5	20.4	12.41	26.1	13	0.01365	0.004	26.09
240	15	20.5	8.95	18.8	13.7	0.01348	0.003	18.80
360	14	20.4	7.91	16.6	13.8	0.01365	0.003	16.63
1440	11	19.7	4.68	9.8	14.3	0.01365	0.001	9.84

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.285	1.341	0.06	0.20	0.1	99.9
40	0.425	1.294	1.608	0.31	1.32	0.7	99.2
60	0.250	1.288	1.505	0.22	2.09	0.5	98.8
100	0.150	1.290	1.427	0.14	2.58	0.3	98.5
140	0.105	1.303	1.405	0.10	2.94	0.2	98.3
200	0.075	1.295	1.479	0.18	3.60	0.4	97.9
230	0.063	1.292	1.459	0.17	4.19	0.4	97.5
Sum		1.18		230 Minus		46.40	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG57-190417 (A9D0674-19)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.47*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.88	0.12
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.22	0.66
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.77	0.46
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.48	0.29
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.26	0.21
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.88	0.39
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.53	0.35
Silt and Clay (Measurements in the Clay fraction are noted)				*97.53*
Hydrometer Test		0.0381	94.18	3.34
Hydrometer Test		0.0275	89	5.18
Hydrometer Test		0.0198	84.73	4.27
Hydrometer Test		0.0148	72.12	12.61
Hydrometer Test		0.0114	60.7	11.42
Hydrometer Test		0.0084	47.11	13.59
Hydrometer Test		0.0061	35.62	11.49
Hydrometer Test		0.0051	30.36	5.25
Hydrometer Test	Clay	0.0045	26.09	4.27
Hydrometer Test	Clay	0.0032	18.8	7.29
Hydrometer Test	Clay	0.0027	16.63	2.17
Hydrometer Test	Clay	0.0014	9.84	6.8

Grain Size Summary	**Percent of Total Sample**
Gravel	0.0
Sand	2.5
Coarse sand	0.1
Medium sand	1.4
Fine sand	1.0
Silt	67.2
Clay	30.4

Case Narrative for Sample ID: T4-PDI2019-SG57-190417 (A9D0674-19)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

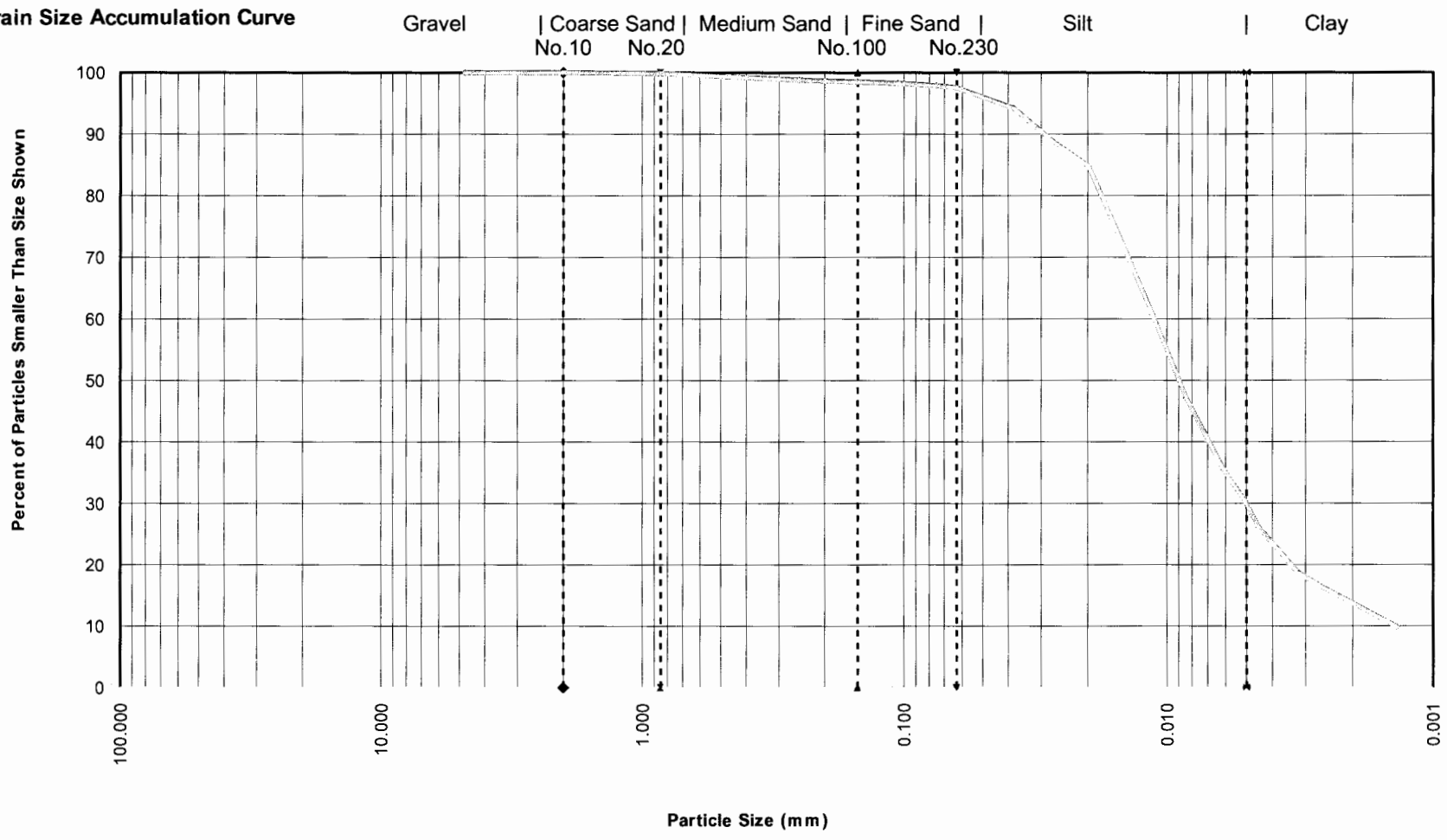
The assumed specific gravity used in the calculations was 2.65.



Exp. 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG57-190417 (A9D0674-19)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-19

Whole Sample

									Total
Tare Values	5.523	5.834							11.357
Air Dry + Tare	105.227	84.543							189.770

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.535	5.845							11.380
Dry + Tare	106.038	83.461							189.499

Ensure that Total % Retained is ~ 100%. 99.57

APEX
Grain Size Analysis

Analyst	Sandra Longacre
Batch number	9041136
Sample ID	A9D0674-19
Start Date/ Time	4-26-2019 11:55

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.523	105.227		
5.834	84.543		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.535	106.038		
5.845	83.461		

Date/Time/Temp	
IN	4-26-19 112.4 14:30
OUT	05-02-19 113.0 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D674 19	1.386	15.480	14.794

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-19

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	[signature]		
Batch Number	9041136		
Sample ID	A9D0674-19		
Start Date/Time	4-30-19		
Air Dry Sample for Hydrometer Test			50.015
Hydrometer	870249	Dispersant	A19D333

Time/Date: 4-26-19 14:17

08:50	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
8:51	1	51	20.1	
8:52	2	48.5	20.2	
8:54	4	46.5	20.1	
8:58	8	40.5	20.1	
9:05	15	35	20.3	
9:20	30	28.5	20.4	
9:50	60	23.	20.5	
10:20	90	20.5	20.5	
10:50	120	18.5	20.4	
12:50	240	15.0	20.5	
14:50	360	14.0	20.4	
8:50	1440	11	19.7	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.285	1.341
+40	1.294	1.608
+60	1.288	1.505
+100	1.290	1.427
+140	1.303	1.405
+200	1.295	1.479
+230	1.292	1.459
-230 (pan)	1.294	1.876

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-20		Client Sample ID:	T4-PDI2019-SG58-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey Silt			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.853	171.041	160.19	5.00	152.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		10.873	170.823	159.95	159.95	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9523		D67420	1.383	16.259	15.550	5.00

Hydrometer Analysis

Start Date/Time	4/30/2019	9:10	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.251		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.86		Corrected Dry Weight of Soil Tested (g) (W)	47.86

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.2	44.85	93.7	7.8	0.01365	0.038	93.71
2	49	20.2	42.85	89.5	8.1	0.01365	0.027	89.53
4	46	20.3	39.88	83.3	8.6	0.01365	0.020	83.33
8	41	20.4	34.91	73.0	9.4	0.01365	0.015	72.96
15	34.5	20.4	28.41	59.4	10.4	0.01365	0.011	59.37
30	30	20.5	23.95	50.0	11.2	0.01348	0.008	50.04
60	24	20.7	18.01	37.6	12.2	0.01348	0.006	37.64
90	21.5	20.6	15.48	32.3	12.5	0.01348	0.005	32.35
120	19.5	20.6	13.48	28.2	12.9	0.01348	0.004	28.17
240	15.5	20.5	9.45	19.7	13.5	0.01348	0.003	19.74
360	14	20.4	7.91	16.5	13.8	0.01365	0.003	16.54
1440	11	19.8	4.71	9.8	14.3	0.01365	0.001	9.85

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.310	1.337	0.03	0.09	0.1	99.9
40	0.425	1.298	1.554	0.26	0.90	0.5	99.4
60	0.250	1.286	1.451	0.17	1.43	0.3	99.1
100	0.150	1.304	1.455	0.15	1.91	0.3	98.7
140	0.105	1.308	1.458	0.15	2.38	0.3	98.4
200	0.075	1.299	1.549	0.25	3.18	0.5	97.9
230	0.063	1.297	1.508	0.21	3.85	0.4	97.5
Sum		1.21	230 Mins	4.65			

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG58-190417 (A9D0674-20)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.53*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.06
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.41	0.53
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.06	0.34
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.75	0.32
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.43	0.31
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.91	0.52
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.47	0.44
Silt and Clay (Measurements in the Clay fraction are noted)				*97.47*
Hydrometer Test		0.0381	93.71	3.76
Hydrometer Test		0.0275	89.53	4.18
Hydrometer Test		0.0200	83.33	6.2
Hydrometer Test		0.0148	72.96	10.38
Hydrometer Test		0.0114	59.37	13.58
Hydrometer Test		0.0082	50.04	9.33
Hydrometer Test		0.0061	37.64	12.4
Hydrometer Test		0.0050	32.35	5.29
Hydrometer Test	Clay	0.0044	28.17	4.18
Hydrometer Test	Clay	0.0032	19.74	8.43
Hydrometer Test	Clay	0.0027	16.54	3.2
Hydrometer Test	Clay	0.0014	9.85	6.69

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.5
Coarse sand	0.1
Medium sand	1.2
Fine sand	1.3
Silt	65.1
Clay	32.3

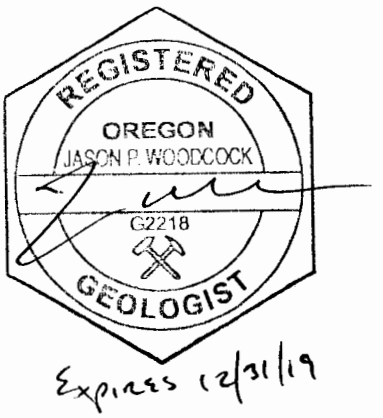
Case Narrative for Sample ID: T4-PDI2019-SG58-190417 (A9D0674-20)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

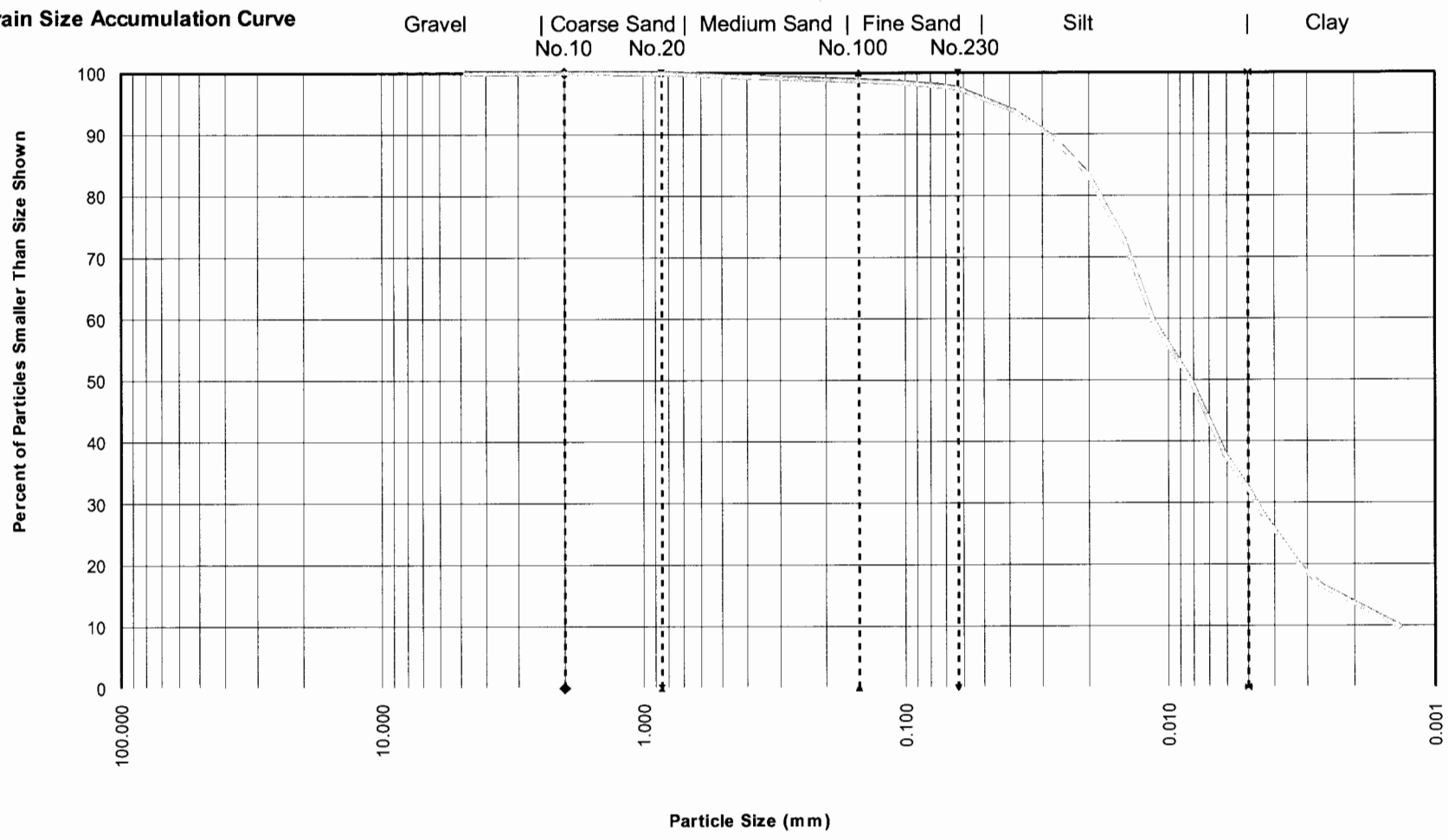
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG58-190417 (A9D0674-20)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey Silt

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-20

Whole Sample

									Total
Tare Values	5.419	5.434							10.853
Air Dry + Tare	102.001	69.040							171.041

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.431	5.442							10.873
Dry + Tare	104.579	66.244							170.823

Ensure that Total % Retained is ~ 100%. 99.6

APEX
Grain Size Analysis

Analyst	Sandra Langeway
Batch number	9041136
Sample ID	A9D0674-20A
Start Date/ Time	04-24-19 10:00

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.419	102.001		
5.434	69.040		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.431	104.579		
5.442	64.244		

Date/Time/Temp

IN	4-26-19 112.4 14:10
OUT	05-02-19 113. 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
674-20	1.383	16.259	15.550

APEX
Grain Size Analysis

Notes

Sample ID: AQD0674-20

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tageway			
Batch Number	9041136			
Sample ID	A9D0674-20A			
Start Date/Time	4-30-19		09:10	
Air Dry Sample for Hydrometer Test			50.251	
Hydrometer	870249	Dispersant	A19D333	Time/Date 4-26-19 14:18

09:10	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam	Note:
	0.5				1 cm foam = 5 hydrometer units.
9:11	1	51	20.2		
9:12	2	49	20.2		Adjust Hydrometer Reading
9:14	4	46	20.3		entered into Excel spreadsheet
9:18	8	41	20.4		by adding 5 hydrometer units per
9:25	15	34.5	20.4		cm of foam.
9:40	30	4-30-19 25 30.	20.5		
10:10	60	24	20.7		
10:40	90	21.5	20.6		
11:10	120	19.5	20.6		
13:10	240	15.5	20.5		
15:10	360	14.0	20.4		
9:10	1440	11	19.8		

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.310	1.337
+40	1.298	1.554
+60	1.286	1.451
+100	1.304	1.455
+140	1.308	1.458
+200	1.299	1.549
+230	1.297	1.508
-230 (pan)	1.293	1.803

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-21		Client Sample ID:	T4-PDI2019-SG59-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.549	176.839	165.29	4.14	158.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.558	175.763	164.21	164.21	99.2	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9602		D67421	1.381	16.512	15.910	4.14

Hydrometer Analysis

Start Date/Time	5/2/2019	9:55	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.362		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.36		Corrected Dry Weight of Soil Tested (g) (W)	48.36

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.6	46.36	95.9	7.8	0.01348	0.038	95.86
2	48.5	20.5	43.83	90.6	8.1	0.01348	0.027	90.64
4	45	20.5	40.33	83.4	8.8	0.01348	0.020	83.40
8	40.5	20.6	35.86	74.2	9.4	0.01348	0.015	74.15
15	35	20.7	30.38	62.8	10.4	0.01348	0.011	62.83
30	29	20.8	24.41	50.5	11.4	0.01348	0.008	50.47
60	22	20.8	17.41	36.0	12.5	0.01348	0.006	36.00
90	19.5	20.8	14.91	30.8	12.9	0.01348	0.005	30.83
120	17.5	20.7	12.88	26.6	13.2	0.01348	0.004	26.64
240	14	20.6	9.36	19.4	13.8	0.01348	0.003	19.35
360	13	20.6	8.36	17.3	14	0.01348	0.003	17.28
1440	10.5	19.7	5.63	11.6	14.3	0.01365	0.001	11.64

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.291	1.324	0.03	0.11	0.1	99.9
40	0.425	1.290	1.561	0.27	0.99	0.6	99.4
60	0.250	1.307	1.629	0.32	2.04	0.7	98.7
100	0.150	1.294	1.597	0.30	3.03	0.6	98.1
140	0.105	1.292	1.552	0.26	3.88	0.5	97.5
200	0.075	1.288	1.719	0.43	5.28	0.9	96.7
230	0.063	1.306	1.606	0.30	6.26	0.6	96.0
Sum				48.36		100.0	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG59-190417 (A9D0674-21)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*3.97*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.93	0.07
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.37	0.56
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	98.71	0.67
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.08	0.63
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	97.54	0.54
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	96.65	0.89
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.03	0.62
Silt and Clay (Measurements in the Clay fraction are noted)				*96.03*
Hydrometer Test		0.0376	95.86	0.17
Hydrometer Test		0.0271	90.64	5.22
Hydrometer Test		0.0200	83.4	7.24
Hydrometer Test		0.0146	74.15	9.25
Hydrometer Test		0.0112	62.83	11.32
Hydrometer Test		0.0083	50.47	12.36
Hydrometer Test		0.0062	36	14.48
Hydrometer Test		0.0051	30.83	5.17
Hydrometer Test	Clay	0.0045	26.64	4.19
Hydrometer Test	Clay	0.0032	19.35	7.29
Hydrometer Test	Clay	0.0027	17.28	2.07
Hydrometer Test	Clay	0.0014	11.64	5.64

Grain Size Summary	**Percent of Total Sample**
Gravel	0.0
Sand	4.0
Coarse sand	0.1
Medium sand	1.9
Fine sand	2.0
Silt	65.2
Clay	30.8

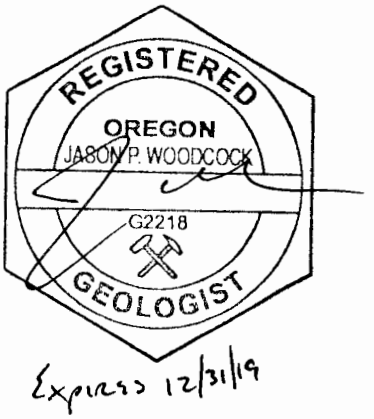
Case Narrative for Sample ID: **T4-PDI2019-SG59-190417 (A9D0674-21)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

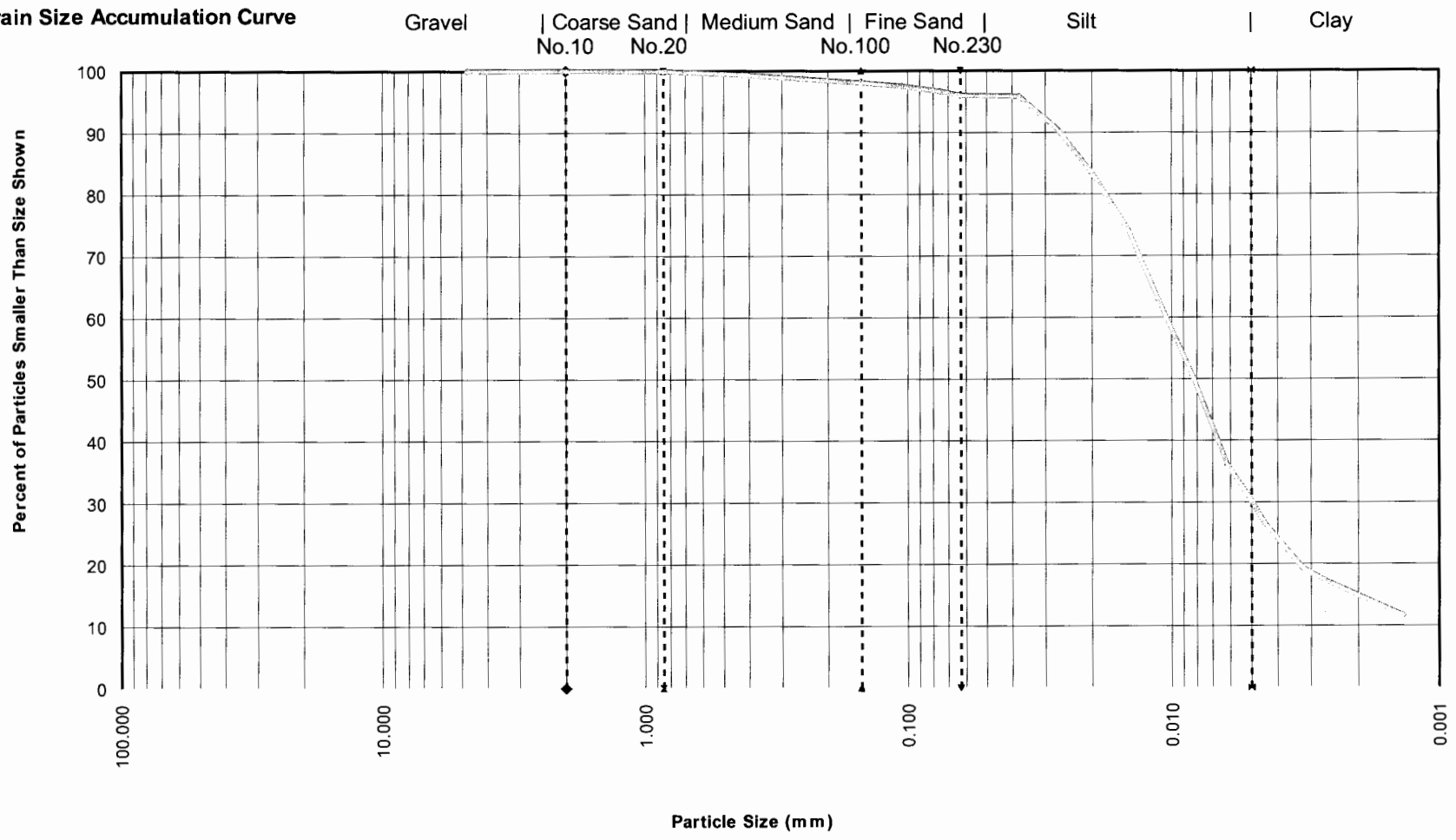
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG59-190417 (A9D0674-21)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-21

Whole Sample

									Total
Tare Values	5.764	5.785							11.549
Air Dry + Tare	88.323	88.516							176.839

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.769	5.789							11.558
Dry + Tare	89.917	85.846							175.763

Ensure that Total % Retained is ~ 100%. 99.17

APEX
Grain Size Analysis

Analyst	Sandra Tanguay
Batch number	9041136
Sample ID	A900674-21
Start Date/ Time	5-01-2019 9:50

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.764	88.323		
5.785	88.516		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.769	89.917		
5.789	85.846		

Date/Time/Temp

IN	05-02-19 113.0
AMB001V	8:30
OUT	05.07-09 15:35 112.3

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67421	1.381	16.512	15.910

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-21

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanguay			
Batch Number	9041136			
Sample ID	A900674-21			
Start Date/Time	5-2-19	09:55		
Air Dry Sample for Hydrometer Test			50.362	
Hydrometer	229773	Dispersant	A196022	Time/Date: 05-01-19 16:35

09:55	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:56	1	51	20.6	
9:57	2	48.5	20.5	
9:59	4	45	20.5	
10:03	8	40.5	20.6	
10:10	15	35	20.7	
10:25	30	29	20.8	
10:55	60	22	20.8	
11:25	90	19.5	20.8	
11:55	120	17.5	20.7	
13:55	240	14.0	20.6	
15:55	360	13.0	20.6	
9:55	1440	10.5	19.7	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.291	1.324
+40	1.290	1.561
+60	1.307	1.629
+100	1.294	1.597
+140	1.292	1.552
+200	1.288	1.719
+230	1.306	1.606
-230 (pan)	1.290	2.081

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-22		Client Sample ID:	FD-201904171301		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT with trace Sand			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.996	202.979	191.98	4.45	183.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.022	201.279	190.26	190.26	98.9	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9574		D67422	1.371	16.096	15.468	4.45

Hydrometer Analysis

Start Date/Time	4/30/2019	10:10	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	51.904		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.69		Corrected Dry Weight of Soil Tested (g) (W)	49.69

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	49	20.5	42.95	86.4	8.1	0.01348	0.038	86.43
2	46	20.5	39.95	80.4	8.6	0.01348	0.028	80.39
4	43	20.4	36.91	74.3	9.1	0.01365	0.021	74.29
8	39.5	20.6	33.48	67.4	9.6	0.01348	0.015	67.38
15	34	20.6	27.98	56.3	10.5	0.01348	0.011	56.31
30	28.5	20.8	22.55	45.4	11.4	0.01348	0.008	45.38
60	24	20.8	18.05	36.3	12.2	0.01348	0.006	36.32
90	21.5	20.7	15.51	31.2	12.5	0.01348	0.005	31.22
120	19	20.5	12.95	26.1	13	0.01348	0.004	26.06
240	16	20.5	9.95	20.0	13.5	0.01348	0.003	20.02
360	14	20.6	7.98	16.1	13.8	0.01348	0.003	16.06
1440	11	19.9	4.75	9.6	14.3	0.01365	0.001	9.55

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.291	1.396	0.11	0.38	0.2	99.8
40	0.425	1.296	1.819	0.52	2.30	1.1	98.7
60	0.250	1.291	2.777	1.49	7.75	3.0	95.7
100	0.150	1.303	2.454	1.15	11.97	2.3	93.4
140	0.105	1.304	1.879	0.58	14.08	1.2	92.3
200	0.075	1.298	2.142	0.84	17.17	1.7	90.6
230	0.063	1.301	1.859	0.56	19.21	1.1	89.5

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: FD-201904171301 (A9D0674-22)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*10.55*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.79	0.21
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	98.74	1.05
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	95.75	2.99
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	93.43	2.32
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	92.27	1.16
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	90.57	1.7
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	89.45	1.12
Silt and Clay (Measurements in the Clay fraction are noted)				*89.45*
Hydrometer Test		0.0384	86.43	3.02
Hydrometer Test		0.0280	80.39	6.04
Hydrometer Test		0.0206	74.29	6.1
Hydrometer Test		0.0148	67.38	6.91
Hydrometer Test		0.0113	56.31	11.07
Hydrometer Test		0.0083	45.38	10.93
Hydrometer Test		0.0061	36.32	9.06
Hydrometer Test		0.0050	31.22	5.1
Hydrometer Test	Clay	0.0044	26.06	5.17
Hydrometer Test	Clay	0.0032	20.02	6.04
Hydrometer Test	Clay	0.0026	16.06	3.96
Hydrometer Test	Clay	0.0014	9.55	6.51

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	10.5
Coarse sand	0.2
Medium sand	6.4
Fine sand	4.0
Silt	58.2
Clay	31.2

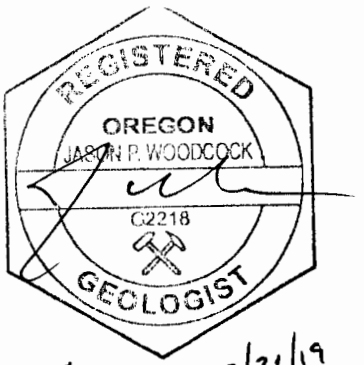
Case Narrative for Sample ID: FD-201904171301 (A9D0674-22)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

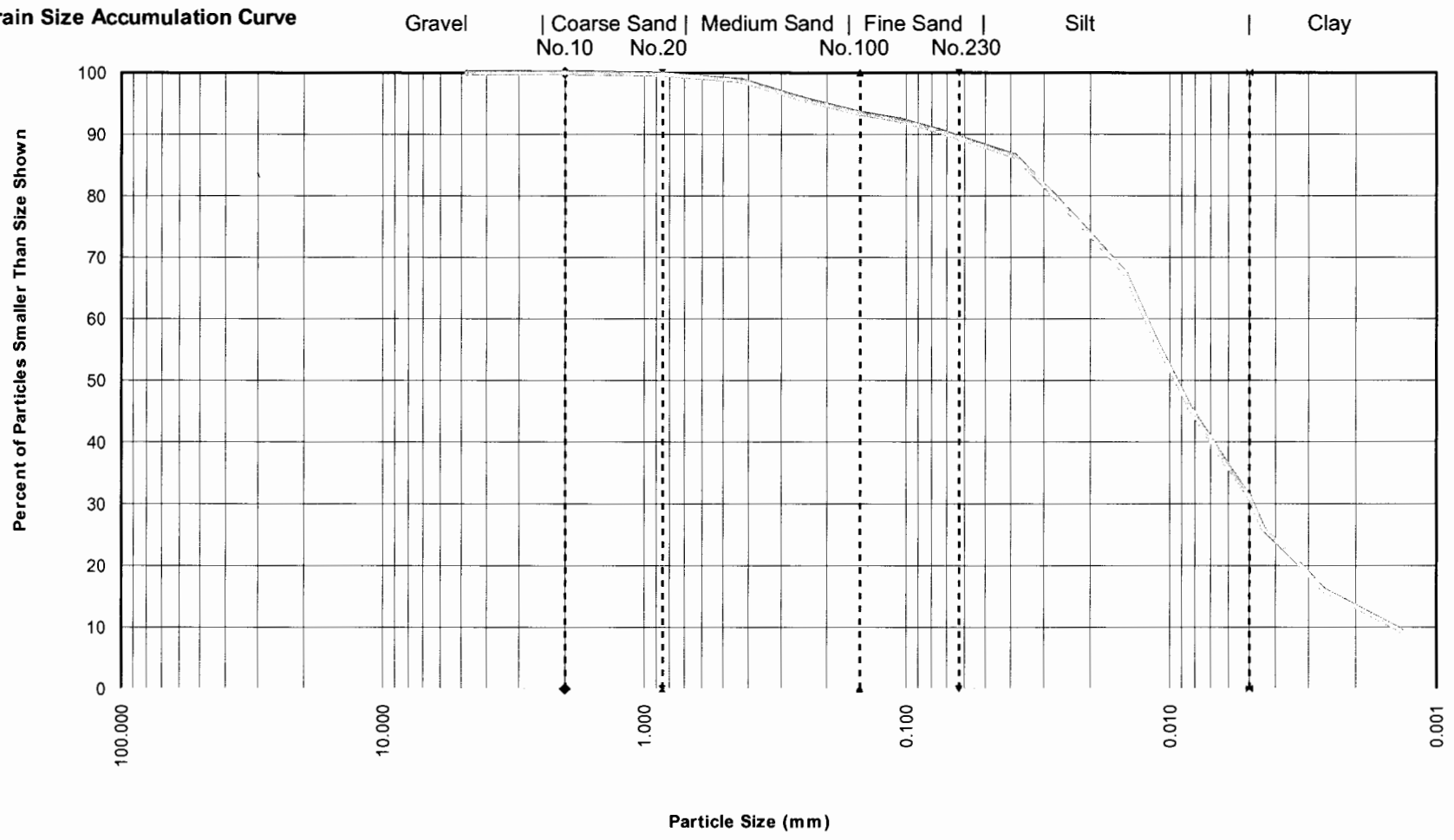
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	FD-201904171301 (A9D0674-22)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT with trace Sand

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-22

Whole Sample

									Total
Tare Values	5.385	5.611							10.996
Air Dry + Tare	102.687	100.292							202.979

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.396	5.626							11.022
Dry + Tare	136.407	64.872							201.279

Ensure that Total % Retained is ~ 100%. 98.9

APEX
Grain Size Analysis

Analyst	Sandra Tangney
Batch number	90411136
Sample ID	A9D0674 -22
Start Date/ Time	04-24-19 12:30

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.385	102.687		
5.611	100.292		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.396	136.407		
5.626	41.872		

Date/Time/Temp

IN	4-26-19 112.4 14.10
OUT	05-02-19 113 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67422	1.371	16.096	15.468

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-22

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt w/ trace Sand

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanchez			
Batch Number	9041136			
Sample ID	AP0674-22			
Start Date/Time	4-30-19 ~~10:00~~ 10:10			4-30-19
Air Dry Sample for Hydrometer Test			51.904	
Hydrometer	870249	Dispersant	A19D333	Time/Date: 4-26-19 14:19

~~4-30-19 10:10~~ ~~+0.60~~

Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
0.5			
1	~~49~~ 49.0	20.5	
2	46.0	20.5	
4	43.0	20.4	
8	39.5	20.6	
15	34	20.6	
30	28.5	20.8	
60	24.0	20.8	
90	21.5	20.7	
120	19.0	20.5	
240	16.0	20.5	
360	14.0	20.6	
1440	11	19.9	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

4-30-19 14:10 ~~12:40~~

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.291	1.396
+40	1.296	1.819
+60	1.291	2.777
+100	1.303	2.454
+140	1.304	1.879
+200	1.298	2.142
+230	1.301	1.859
-230 (pan)	1.289	2.352

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-23		Client Sample ID:	T4-PDI2019-SG60-190417		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/14/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	Clayey SILT with trace Sand			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.989	198.095	186.11	3.57	179.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.367	1.375	0.01	0.01	0.0	100.0
Pan		5.977	191.378	185.40	185.41	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9655		D67423	1.367	18.024	17.450	3.57

Hydrometer Analysis

Start Date/Time	5/2/2019	10:25	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	56.139		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	54.20		Corrected Dry Weight of Soil Tested (g) (W)	54.21

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	53	20.8	47.05	86.8	7.4	0.01348	0.037	86.79
2	49	20.8	43.05	79.4	8.1	0.01348	0.027	79.41
4	47	20.7	41.01	75.7	8.4	0.01348	0.020	75.66
8	43	20.7	37.01	68.3	9.1	0.01348	0.014	68.28
15	36	20.8	30.05	55.4	10.2	0.01348	0.011	55.43
30	31	20.8	25.05	46.2	11.1	0.01348	0.008	46.20
60	25	20.8	19.05	35.1	12	0.01348	0.006	35.14
90	21.5	20.9	15.58	28.7	12.5	0.01348	0.005	28.74
120	20	20.8	14.05	25.9	12.9	0.01348	0.004	25.91
240	16.5	20.7	10.51	19.4	13.3	0.01348	0.003	19.40
360	15	20.7	9.01	16.6	13.7	0.01348	0.003	16.63
1440	12.5	19.9	6.25	11.5	14	0.01365	0.001	11.52

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.297	1.326	0.03	0.10	0.1	99.9
40	0.425	1.298	1.840	0.54	1.89	1.0	98.9
60	0.250	1.303	2.889	1.59	7.13	2.9	96.0
100	0.150	1.297	2.619	1.32	11.50	2.4	93.6
140	0.105	1.300	1.970	0.67	13.71	1.2	92.3
200	0.075	1.297	2.286	0.99	16.98	1.8	90.5
230	0.063	1.296	1.999	0.70	19.30	1.3	89.2

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG60-190417 (A9D0674-23)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*10.78*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.94	0.05
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	98.94	1
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	96.02	2.93
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	93.58	2.44
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	92.34	1.24
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	90.52	1.82
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	89.22	1.3
Silt and Clay (Measurements in the Clay fraction are noted)				*89.22*
Hydrometer Test		0.0367	86.79	2.43
Hydrometer Test		0.0271	79.41	7.38
Hydrometer Test		0.0195	75.66	3.75
Hydrometer Test		0.0144	68.28	7.38
Hydrometer Test		0.0111	55.43	12.85
Hydrometer Test		0.0082	46.2	9.22
Hydrometer Test		0.0060	35.14	11.07
Hydrometer Test		0.0050	28.74	6.39
Hydrometer Test	Clay	0.0044	25.91	2.83
Hydrometer Test	Clay	0.0032	19.4	6.52
Hydrometer Test	Clay	0.0026	16.63	2.77
Hydrometer Test	Clay	0.0013	11.52	5.1

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	10.8
Coarse sand	0.1
Medium sand	6.4
Fine sand	4.4
Silt	60.5
Clay	28.7

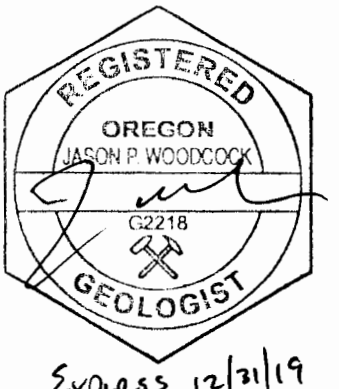
Case Narrative for Sample ID: **T4-PDI2019-SG60-190417 (A9D0674-23)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

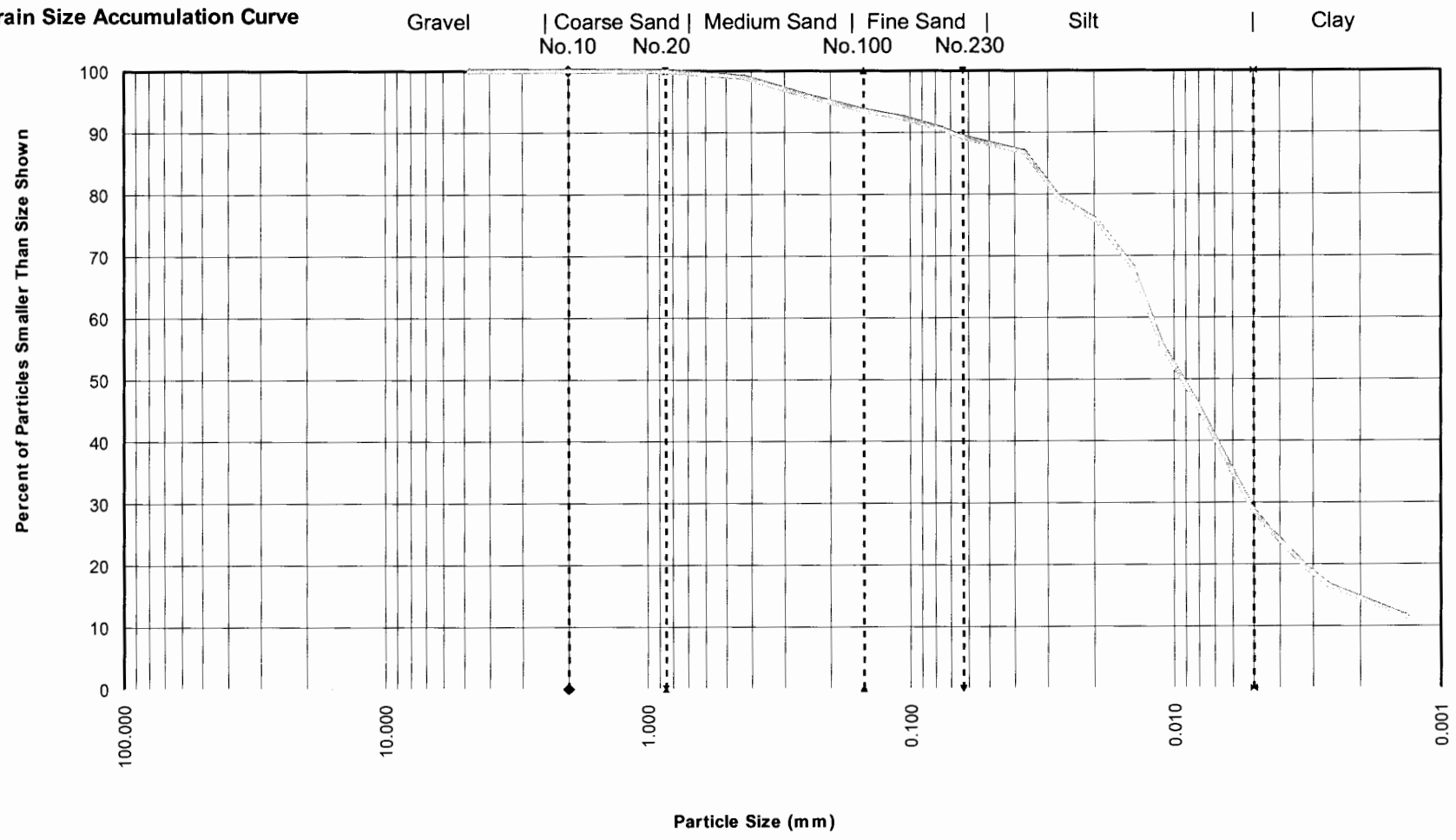
The assumed specific gravity used in the calculations was 2.65.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG60-190417 (A9D0674-23)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT with trace Sand

Hydrometer S/N (drop down):

	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-23

Whole Sample

									Total
Tare Values	5.962	6.027							11.989
Air Dry + Tare	100.956	97.139							198.095

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values	1.367								1.367
Dry + Tare	1.375								1.375

Pan

									Total
Tare Values	5.977								5.977
Dry + Tare	191.378								191.378

Ensure that Total % Retained is ~ 100%. 99.5

APEX
Grain Size Analysis

Analyst	James S. Johnson
Batch number	J041136
Sample ID	A900674 - 23
Start Date/ Time	05-01-2019 16:25

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.962	100.956		
6.027	97.139		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
	N/A JJJ 05/01/19	

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
~~1.339~~		
~~1.365~~		
1.367	1.376	1.375

JJJ 05/01/19

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
~~5.904~~			
5.977	191.378		

JJJ 05/01/19

Date/Time/Temp

IN	05-02-19 113.0 8:30 AM EDT
OUT	5-07-19 112.3 15:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67423	1.367	18.024	17.450

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674 -23

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt w/ trace Sand

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tangsuvan		
Batch Number	9041136		
Sample ID	A9D0674-23		
Start Date/Time	5-2-19 10:25		
Air Dry Sample for Hydrometer Test			56.139
Hydrometer	870249	Dispersant	A19E022

Time/Date: 05/01/19 @1756

10:25	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
10:26	1	53	20.8	
10:27	2	49	20.8	
10:29	4	47	20.7	
10:33	8	43	20.7	
10:40	15	36	20.8	
10:55	30	31	20.8	
11:25	60	25	20.8	
11:55	90	21.5	20.9	
12:25	120	20	20.8	
14:25	240	16.5	20.7	
16:25	360	15	20.7	
10:25	1440	12.5	19.9	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.297	1.326
+40	1.298	1.840
+60	1.303	2.889
+100	1.297	2.619
+140	1.300	1.970
+200	1.297	2.286
+230	1.296	1.999
-230 (pan)	1.305	2.709

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-24		Client Sample ID:	T4-PDI2019-SG61-190416		Batch Number:	9041136
Data Entered by:	JSJ	Date:	05/15/19	Data Reviewed by:	JW	Date:	05/17/19
Sample Description:	SAND with some Silt and trace Clay			Max Particle Size:	Gravel		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.536	444.346	432.81	2.20	423.5

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	1.372	4.254	2.88	2.88	0.7	99.3
10	2.00	1.370	6.254	4.88	7.77	1.2	98.2
Pan		11.561	435.846	424.29	432.05	98.0	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9785		D67424	1.384	17.547	17.199	2.20

Hydrometer Analysis

Start Date/Time	4/30/2019	10:21	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.495		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	98.2		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.41		Corrected Dry Weight of Soil Tested (g) (W)	50.33

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	8.5	20.3	2.38	4.7	14.7	0.01365	0.052	4.64
2	8.5	20.3	2.38	4.7	14.7	0.01365	0.037	4.64
4	8	20.4	1.91	3.8	14.8	0.01365	0.026	3.73
8	7	20.5	0.95	1.9	15	0.01348	0.018	1.85
15	6	20.5		0.0	15.2	0.01348	0.014	0.00
30	6	20.5		0.0	15.2	0.01348	0.010	0.00
60	5.5	20.4		0.0	15.2	0.01365	0.007	0.00
90	5	20.3		0.0	15.3	0.01365	0.006	0.00
120	5	20.3		0.0	15.3	0.01365	0.005	0.00
240	4.5	20.3		0.0	15.3	0.01365	0.003	0.00
360	4	20.2		0.0	15.5	0.01365	0.003	0.00
1440	4	19.9		0.0	15.5	0.01365	0.001	0.00

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.298	2.310	1.01	16.27	2.0	96.2
40	0.425	1.309	11.558	10.25	102.39	20.4	75.8
60	0.250	1.290	20.307	19.02	262.18	37.8	38.0
100	0.150	1.300	10.175	8.88	336.75	17.6	20.4
140	0.105	1.303	4.746	3.44	365.68	6.8	13.5
200	0.075	1.306	3.143	1.84	381.11	3.6	9.9
230	0.063	1.292	1.802	0.51	385.40	1.0	8.9
Sum			49.41		1536.46		

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG61-190416 (A9D0674-24)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*1.83*
Retained on No. 4 sieve		4.75	99.32	0.68
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	98.17	1.15
Sand				*89.3*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	96.16	2.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	75.79	20.36
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	38.01	37.78
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	20.37	17.63
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	13.53	6.84
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	9.88	3.65
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	8.87	1.01
Silt and Clay (Measurements in the Clay fraction are noted)				*8.87*
Hydrometer Test		0.0523	4.64	4.23
Hydrometer Test		0.0370	4.64	0
Hydrometer Test		0.0263	3.73	0.91
Hydrometer Test		0.0185	1.85	1.89
Hydrometer Test		0.0136	1.85	0
Hydrometer Test		0.0096	1.85	0
Hydrometer Test		0.0069	1.85	0
Hydrometer Test		0.0056	1.85	0
Hydrometer Test	Clay	0.0049	1.85	0
Hydrometer Test	Clay	0.0034	1.85	0
Hydrometer Test	Clay	0.0028	1.85	0
Hydrometer Test	Clay	0.0014	1.85	0

Grain Size Summary	**Percent of Total Sample**
Gravel	1.8
Sand	89.3
Coarse sand	2.0
Medium sand	75.8
Fine sand	11.5
Silt	7.0
Clay	1.8

Case Narrative for Sample ID: T4-PDI2019-SG61-190416 (A9D0674-24)

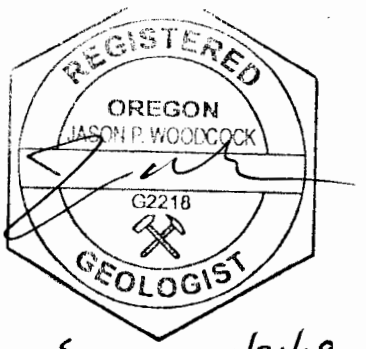
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

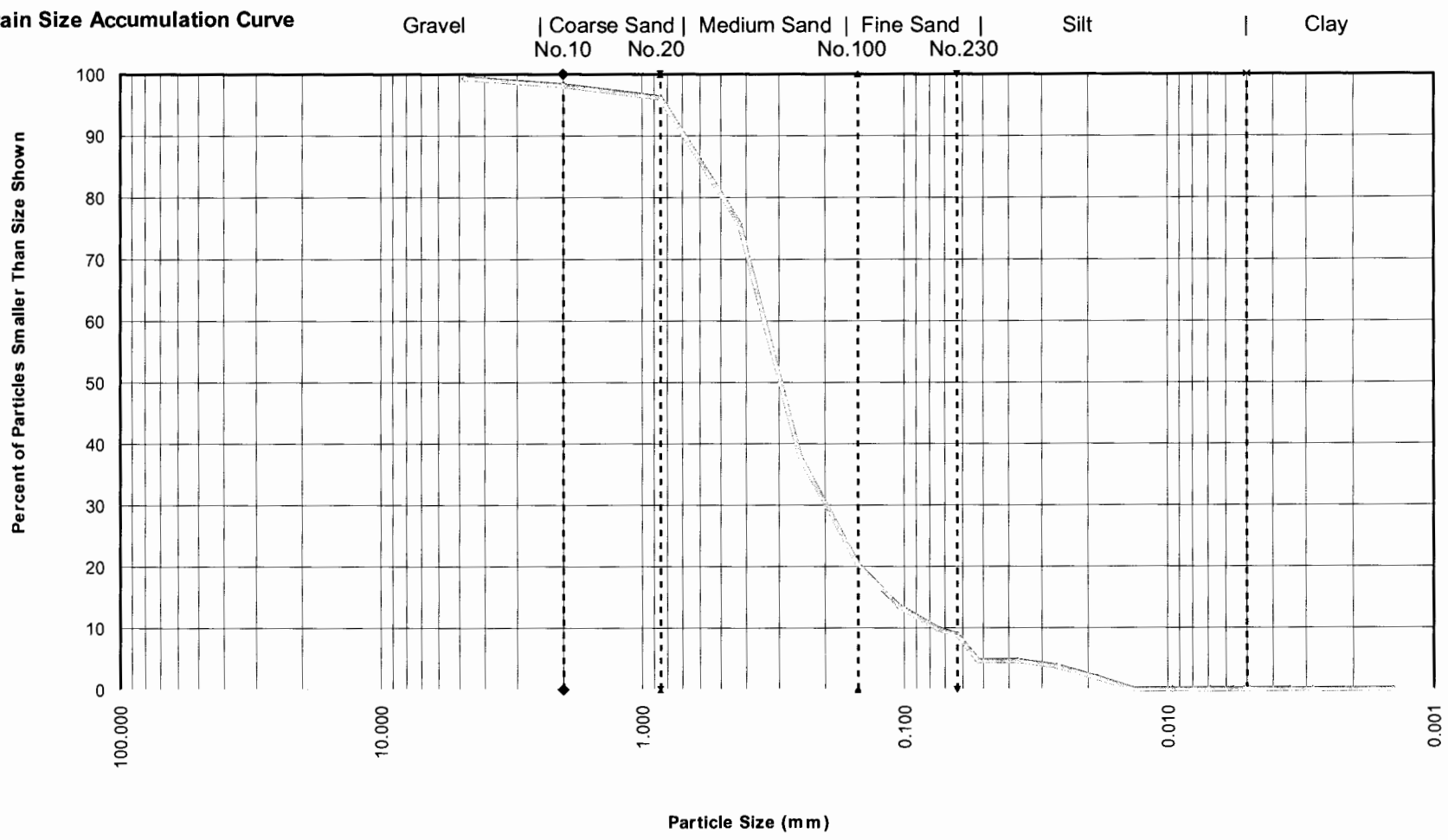
+4 and +10 fractions consist almost entirely of organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG61-190416 (A9D0674-24)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Gravel	N/A	N/A	SAND with some Silt and trace Clay

Hydrometer S/N (drop down):

	m	b
870249	-0.3341	12.9

Sample ID: A9D0674-24

Whole Sample

									Total
Tare Values	5.762	5.774							11.536
Air Dry + Tare	245.839	198.507							444.346

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values	1.372								1.372
Dry + Tare	4.254								4.254

Sieve Number 10

									Total
Tare Values	1.370								1.370
Dry + Tare	6.254								6.254

Pan

									Total
Tare Values	5.773	5.788							11.561
Dry + Tare	301.873	133.973							435.846

Ensure that Total % Retained is ~ 100%. 99.82

APEX
Grain Size Analysis

Analyst	James S. Johnson
Batch number	9041136
Sample ID	A9D0674-24
Start Date/ Time	04/24/19 1857

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.762	245.839		
5.774	198.507		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare
1.372	4.472	4.254

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.370	6.558	6.254

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.773	301.873		
5.788	133.973		

Date/Time/Temp

IN AMEUOIV	4-25-19 111.0 13.58
OUT	05-02-19 113.0 8:30

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67424	1.384	17.547	17.199

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-24

#4 & #10 fractions consist almost entirely of organic material

Maximum Particle Size: Gravel

Hardness and Shape: N/A

Soil/Sediment Classification:

SAND w/ some Silt & trace Clay

5/16/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Samayoa			
Batch Number	904138			
Sample ID	A9D0674-24			
Start Date/Time	4-30-19	10:21		
Air Dry Sample for Hydrometer Test			50.495	
Hydrometer	870249	Dispersant	A9D333	Time/Date: 4-26-19 14:20

10:21	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
10:22	1	8.5	20.3	
10:23	2	8.5	20.3	
10:25	4	8	20.4	
10:29	8	7	20.5	
10:36	15	6	20.5	
10:51	30	6	20.5	
11:21	60	5.5	20.4	
11:51	90	5	20.3	
12:21	120	5	20.3	
14:21	240	4.5	20.3	
16:21	360	4.0	20.2	
10:21	1440	4	19.9	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.298	2.310
+40	1.309	11.558
+60	1.290	20.307
+100	1.300	10.175
+140	1.303	4.746
+200	1.306	3.143
+230	1.292	1.802
-230 (pan)	1.292	1.698

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Grain Size by ASTM D 422m
Benchsheet Data

Batch 9041137 (A9D0674-25)

APEX LABORATORIES

Grain Size (D422m/PSET)

PREPARATION BENCH SHEET

9041137

JUN 19 2019

Apex Laboratories
BATCH #: 9041137 (Soil)
Prep Method: ASTM D 421

Lab Number	Due	Prepared	Initial (N/A)	Final (N/A)	Client	ClientID / Sample	Extraction Comments
A9D0674-25	*05/01/19*	**05/02/19 10:13**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG59-190417-I**	
☐ Grain Size (D422m/PSET)							
A9D0735-01	*05/02/19*	**05/06/19 09:29**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG50-190418**	✓
☐ Grain Size (D422m/PSET)							
A9D0735-02	*05/02/19*	**05/07/19 10:40**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG56-190418**	✓
☐ Grain Size (D422m/PSET)							
A9D0735-03	*05/02/19*	**05/06/19 09:39**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG62-190418**	✓
☐ Grain Size (D422m/PSET)							
A9D0735-04	*05/02/19*	**05/06/19 09:51**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG63-190418**	✓
☐ Grain Size (D422m/PSET)							
A9D0735-05	*05/02/19*	**05/02/19 09:47**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG64-190418**	✓
☐ Grain Size (D422m/PSET)							

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A19E022	06/01/19	Na Hexametaphosphate 40 g/L

Analyte Spike(s)

Std ID	Exp. Date	Description

A13L215 11/30/23 Grain Size Balance
A13L217 11/30/23 Sample Prep Bal 2

JJG 06/19/19

James S. Johnson 05/20/19
Prepared By: Date

5/20/19
Reviewed By: Date

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0735-01		Client Sample ID:	T4-PDI2019-SG50-190418		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Medium Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.984	187.407	176.42	4.55	168.7

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		10.996	186.580	175.58	175.58	99.3	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9565		D73501	1.397	19.534	18.745	4.55

Hydrometer Analysis

Start Date/Time	5/6/2019 9:29	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.970	G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0	Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.75	Corrected Dry Weight of Soil Tested (g) (W)	48.75

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	52	20.6	47.36	97.1	7.6	0.01348	0.037	97.14
2	49	20.6	44.36	91.0	8.1	0.01348	0.027	90.99
4	46	20.6	41.36	84.8	8.6	0.01348	0.020	84.83
8	41	20.7	36.38	74.6	9.4	0.01348	0.015	74.63
15	35	20.7	30.38	62.3	10.4	0.01348	0.011	62.32
30	29	20.8	24.41	50.1	11.4	0.01348	0.008	50.07
60	24	20.5	19.33	39.7	12.2	0.01348	0.006	39.66
90	21	20.7	16.38	33.6	12.7	0.01348	0.005	33.61
120	20	20.7	15.38	31.6	12.9	0.01348	0.004	31.55
240	17	20.5	12.33	25.3	13.3	0.01348	0.003	25.30
360	15	20.4	10.31	21.1	13.7	0.01365	0.003	21.14
1440	12	20	7.21	14.8	14.2	0.01365	0.001	14.78

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.289	1.290	0.00	0.00	0.0	100.0
40	0.425	1.291	1.302	0.01	0.04	0.0	100.0
60	0.250	1.289	1.332	0.04	0.19	0.1	99.9
100	0.150	1.296	1.352	0.06	0.38	0.1	99.8
140	0.105	1.294	1.436	0.14	0.87	0.3	99.5
200	0.075	1.300	1.573	0.27	1.81	0.6	98.9
230	0.063	1.293	1.539	0.25	2.66	0.5	98.4
			Sum	0.77	230 Minus	47.98	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG50-190418 (A9D0735-01)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*1.58*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	100	0
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.98	0.02
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.89	0.09
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.77	0.11
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	99.48	0.29
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	98.92	0.56
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	98.42	0.5
Silt and Clay (Measurements in the Clay fraction are noted)				*98.42*
Hydrometer Test		0.0372	97.14	1.28
Hydrometer Test		0.0271	90.99	6.15
Hydrometer Test		0.0198	84.83	6.15
Hydrometer Test		0.0146	74.63	10.2
Hydrometer Test		0.0112	62.32	12.31
Hydrometer Test		0.0083	50.07	12.26
Hydrometer Test		0.0061	39.66	10.41
Hydrometer Test		0.0051	33.61	6.05
Hydrometer Test	Clay	0.0044	31.55	2.05
Hydrometer Test	Clay	0.0032	25.3	6.26
Hydrometer Test	Clay	0.0027	21.14	4.15
Hydrometer Test	Clay	0.0014	14.78	6.36

Grain Size Summary	**Percent of Total Sample**
Gravel	0.0
Sand	1.6
Coarse sand	0.0
Medium sand	0.2
Fine sand	1.4
Silt	64.8
Clay	33.6

Case Narrative for Sample ID: T4-PDI2019-SG50-190418 (A9D0735-01)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

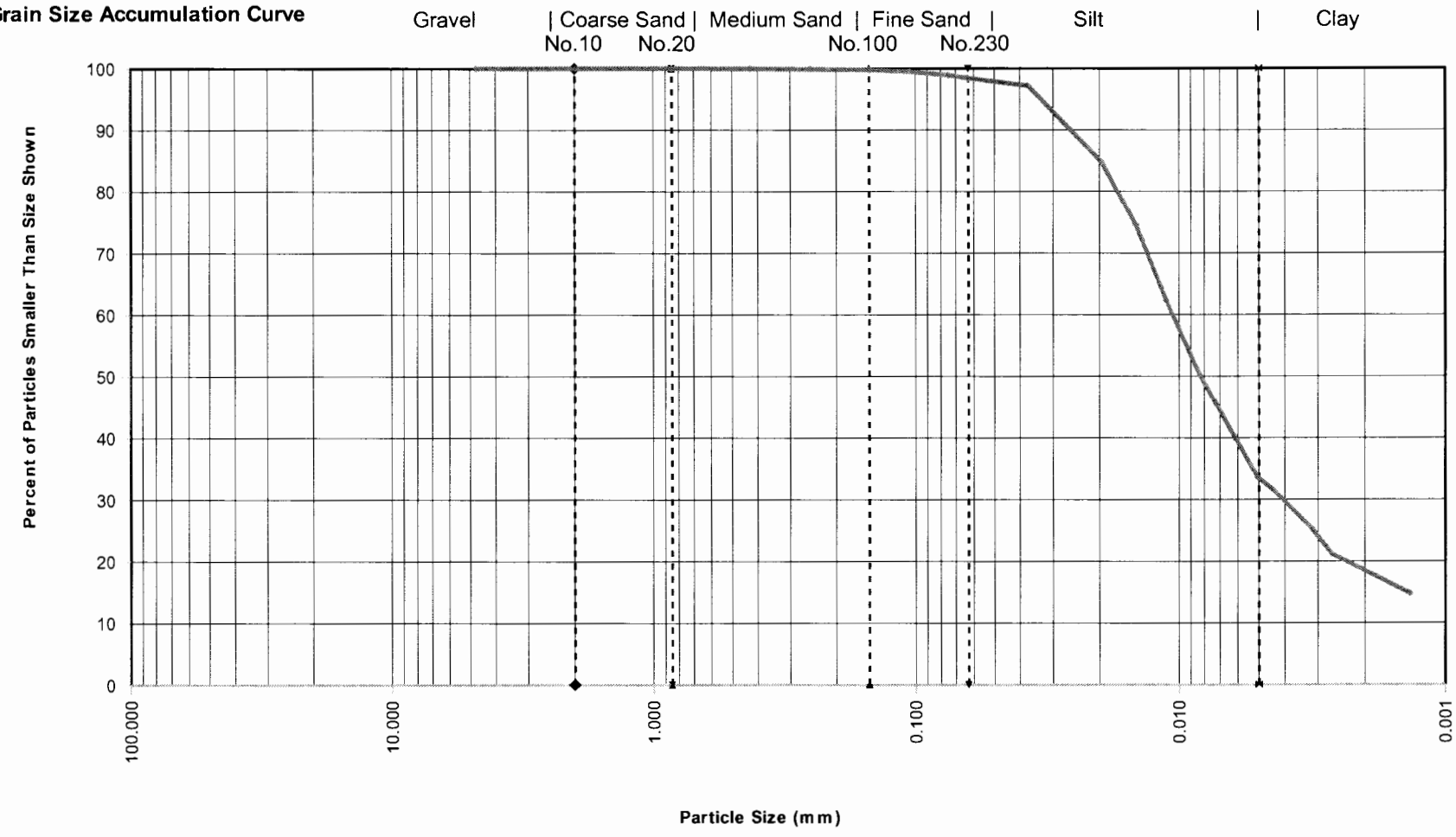
All fractions (+20 to +230) contain abundant organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG50-190418 (A9D0735-01)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Medium Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0735-01

Whole Sample

									Total
Tare Values	5.398	5.586							10.984
Air Dry + Tare	100.127	87.280							187.407

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.405	5.591							10.996
Dry + Tare	102.296	84.284							186.580

Ensure that Total % Retained is ~ 100%. 99.32

APEX
Grain Size Analysis

Analyst	Sandra Langway
Batch number	9041137
Sample ID	A9D0735-01
Start Date/ Time	05-02-19 13:15

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.398	100.127		
5.586	87.280		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.405	102.296		
5.591	84.284		

Date/Time/Temp

IN	05-03-19
	112.6
AM FOOIV	15:10
OUT	05-07-09
	112.3
	15:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D73501	1.397	19.534	18.745

APEX
Grain Size Analysis

Notes

Sample ID: A9D0735-01

All fractions (+20 to +230) contain abundant organic material.

05/20/19

Maximum Particle Size: Medium Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sancha Sangway			
Batch Number	904 1137			
Sample ID	A9D0735-01			
Start Date/Time	05-06-19 9:29			
Air Dry Sample for Hydrometer Test			50.97	
Hydrometer	22973	Dispersant	AI9E022	Time/Date: 05-03-19 15:25

09:29	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:30	1	52	20.6	
9:31	2	49	20.4	
9:33	4	46	20.6	
9:37	8	41	20.7	
9:44	15	35	20.7	
9:59	30	29	20.8	
10:29	60	24	20.5	
10:59	90	21	20.7	
11:29	120	20	20.7	
13:29	240	17	20.5	
15.29	360	15	20.4	
9:29	1440	12	20	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.289	1,296
+40	1.291	1.302
+60	1.289	1.332
+100	1.296	1.352
+140	1.294	1.436
+200	1.300	1.573
+230	1.293	1.539
-230 (pan)	1.291	2.062

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0735-02		Client Sample ID:	T4-PDI2019-SG56-190418		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.521	202.703	192.18	4.78	183.4

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		10.551	202.017	191.47	191.47	99.4	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9544		D73502	1.358	17.155	16.434	4.78

Hydrometer Analysis

Start Date/Time	5/7/2019	10:40	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.058		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	47.77		Corrected Dry Weight of Soil Tested (g) (W)	47.77

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	50	20.8	44.05	92.2	7.9	0.01348	0.038	92.20
2	47	20.9	41.08	86.0	8.4	0.01348	0.028	85.99
4	44	20.8	38.05	79.6	8.9	0.01348	0.020	79.64
8	40	20.9	34.08	71.3	9.6	0.01348	0.015	71.34
15	34	21.1	28.15	58.9	10.5	0.01348	0.011	58.92
30	28	21.2	22.18	46.4	11.5	0.01348	0.008	46.43
60	22.5	21.2	16.68	34.9	12.4	0.01348	0.006	34.92
90	20	21.1	14.15	29.6	12.9	0.01348	0.005	29.61
120	17.5	21	11.61	24.3	13.2	0.01348	0.004	24.31
240	15	21	9.11	19.1	13.7	0.01348	0.003	19.08
360	13.5	20.8	7.55	15.8	13.8	0.01348	0.003	15.80
1440	11	20.1	4.81	10.1	14.3	0.01365	0.001	10.08

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.299	1.303	0.00	0.02	0.0	100.0
40	0.425	1.298	1.411	0.11	0.45	0.2	99.8
60	0.250	1.290	1.430	0.14	0.98	0.3	99.5
100	0.150	1.302	1.640	0.34	2.28	0.7	98.8
140	0.105	1.298	1.539	0.24	3.20	0.5	98.3
200	0.075	1.290	1.646	0.36	4.56	0.7	97.5
230	0.063	1.296	1.612	0.32	5.77	0.7	96.8
		Sum	1.51	230 Minus	46.27		

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG56-190418 (A9D0735-02)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*3.16*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.99	0.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.76	0.24
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.46	0.29
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.75	0.71
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.25	0.5
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.5	0.75
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	96.84	0.66
Silt and Clay (Measurements in the Clay fraction are noted)				*96.84*
Hydrometer Test		0.0379	92.2	4.64
Hydrometer Test		0.0276	85.99	6.21
Hydrometer Test		0.0201	79.64	6.35
Hydrometer Test		0.0148	71.34	8.3
Hydrometer Test		0.0113	58.92	12.42
Hydrometer Test		0.0083	46.43	12.49
Hydrometer Test		0.0061	34.92	11.51
Hydrometer Test		0.0051	29.61	5.3
Hydrometer Test	Clay	0.0045	24.31	5.3
Hydrometer Test	Clay	0.0032	19.08	5.23
Hydrometer Test	Clay	0.0026	15.8	3.28
Hydrometer Test	Clay	0.0014	10.08	5.72

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	3.2
Coarse sand	0.0
Medium sand	1.2
Fine sand	1.9
Silt	67.2
Clay	29.6

Case Narrative for Sample ID: T4-PDI2019-SG56-190418 (A9D0735-02)

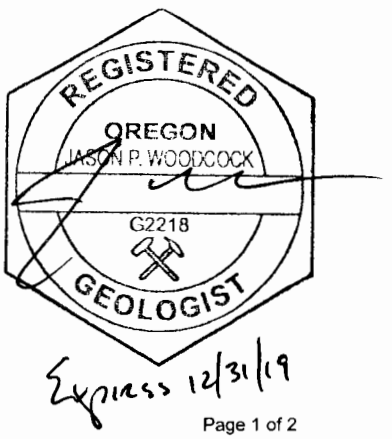
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

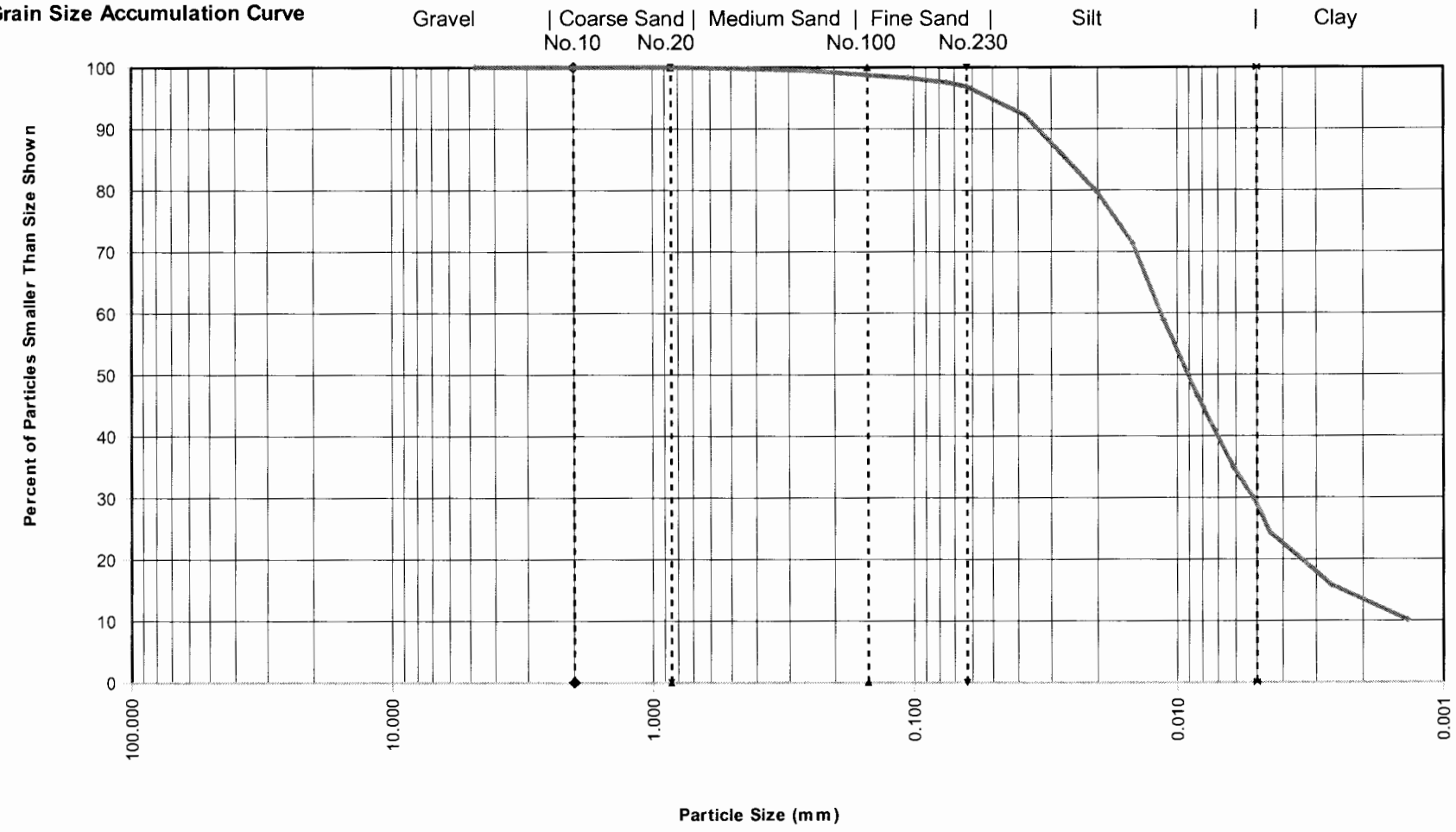
The assumed specific gravity used in the calculations was 2.65.

All fractions (+20 to +230) contain abundant organic material.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG56-190418 (A9D0735-02)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0735-02

Whole Sample

									Total
Tare Values	5.233	5.288							10.521
Air Dry + Tare	121.902	80.801							202.703

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.249	5.302							10.551
Dry + Tare	125.775	76.242							202.017

Ensure that Total % Retained is ~ 100%. 99.4

APEX
Grain Size Analysis

Analyst	Sandra Langeway
Batch number	9041137
Sample ID	A9D0735 - 02 B
Start Date/ Time	5-6-19 12:10

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.233	121.902		
5.288	80.801		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.249	125.775		
5.302	76.242		

Date/Time/Temp

IN AMF001V	5-07-19 1123 15:35
OUT	5-08-19 1183 15:00

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D73502	1.358	17.155	16.434

APEX
Grain Size Analysis

Notes

Sample ID: A9D0735-02

all fractions (+20-+230) contain abundant organic material.

JSG 5/20/19

Maximum Particle Size: Coarse Sand

Hardness and Shape: n/a

Soil/Sediment Classification:

Clayey Silt

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Karen Wilson		
Batch Number	9041137		
Sample ID	A900735 - 02		
Start Date/Time	5-7-19 10:40		
Air Dry Sample for Hydrometer Test			50.058
Hydrometer	870249	Dispersant	A196022

Time/Date: 05-06-19 15:35

10:40	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
10:41	1	50	20.8	
10:42	2	47	20.9	
10:44	4	44	20.8	
10:48	8	40	20.9	
10:55	15	34	21.1	
11:10	30	28	21.2	
11:40	60	22.5	~~20.2~~ 21.2 kw 5-7-19	
12:10	90	20	21.1	
12:40	120	17.5	21.0	
14:40	240	15.0	21.0	
16:40	360	13.5	20.8	
10:40	1440	11.0	20.1	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.299	1.303
+40	1.298	1.411
+60	1.290	1.430
+100	1.302	1.640
+140	1.298	1.539
+200	1.290	1.646
+230	1.296	1.612
-230 (pan)	1.297	2.493

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0735-03		Client Sample ID:	T4-PDI2019-SG62-190418		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT with trace Sand			Max Particle Size:	Medium Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.227	219.702	208.48	4.23	200.0

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	1.378	1.387	0.01	0.01	0.0	100.0
Pan		11.252	219.271	208.02	208.03	99.6	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9594		D73503	1.353	16.164	15.563	4.23

Hydrometer Analysis

Start Date/Time	5/6/2019 9:39	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.535	G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0	Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.48	Corrected Dry Weight of Soil Tested (g) (W)	48.49

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	44	20.4	37.91	78.2	8.9	0.01365	0.041	78.19
2	39	20.4	32.91	67.9	9.7	0.01365	0.030	67.88
4	36	20.4	29.91	61.7	10.2	0.01365	0.022	61.69
8	31	20.4	24.91	51.4	11.1	0.01365	0.016	51.38
15	26.5	20.4	20.41	42.1	11.7	0.01365	0.012	42.10
30	22	20.4	15.91	32.8	12.5	0.01365	0.009	32.82
60	19	20.5	12.95	26.7	13	0.01348	0.006	26.70
90	17	20.7	11.01	22.7	13.3	0.01348	0.005	22.71
120	16	20.6	9.98	20.6	13.5	0.01348	0.005	20.58
240	13	20.6	6.98	14.4	14	0.01348	0.003	14.40
360	13	20.3	6.88	14.2	14	0.01365	0.003	14.19
1440	10	20.1	3.81	7.9	14.5	0.01365	0.001	7.86

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.301	1.303	0.00	0.02	0.0	100.0
40	0.425	1.305	1.338	0.03	0.15	0.1	99.9
60	0.250	1.302	1.436	0.13	0.70	0.3	99.6
100	0.150	1.290	2.085	0.80	3.98	1.6	98.0
140	0.105	1.289	2.312	1.02	8.19	2.1	95.9
200	0.075	1.301	3.183	1.88	15.94	3.9	92.0
230	0.063	1.299	2.721	1.42	21.79	2.9	89.1
			Sum	5.29	230 Minus	43.19	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG62-190418 (A9D0735-03)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*10.91*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.99	0
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.92	0.07
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.65	0.28
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	98.01	1.64
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	95.9	2.11
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	92.02	3.88
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	89.08	2.93
Silt and Clay (Measurements in the Clay fraction are noted)				*89.08*
Hydrometer Test		0.0407	78.19	10.89
Hydrometer Test		0.0301	67.88	10.31
Hydrometer Test		0.0218	61.69	6.19
Hydrometer Test		0.0161	51.38	10.31
Hydrometer Test		0.0121	42.1	9.28
Hydrometer Test		0.0088	32.82	9.28
Hydrometer Test		0.0063	26.7	6.12
Hydrometer Test		0.0052	22.71	3.99
Hydrometer Test	Clay	0.0045	20.58	2.13
Hydrometer Test	Clay	0.0033	14.4	6.19
Hydrometer Test	Clay	0.0027	14.19	0.21
Hydrometer Test	Clay	0.0014	7.86	6.32

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	10.9
Coarse sand	0.0
Medium sand	2.0
Fine sand	8.9
Silt	66.4
Clay	22.7

Case Narrative for Sample ID: T4-PDI2019-SG62-190418 (A9D0735-03)

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

+10 fraction consists entirely of organic and anthropogenic material.

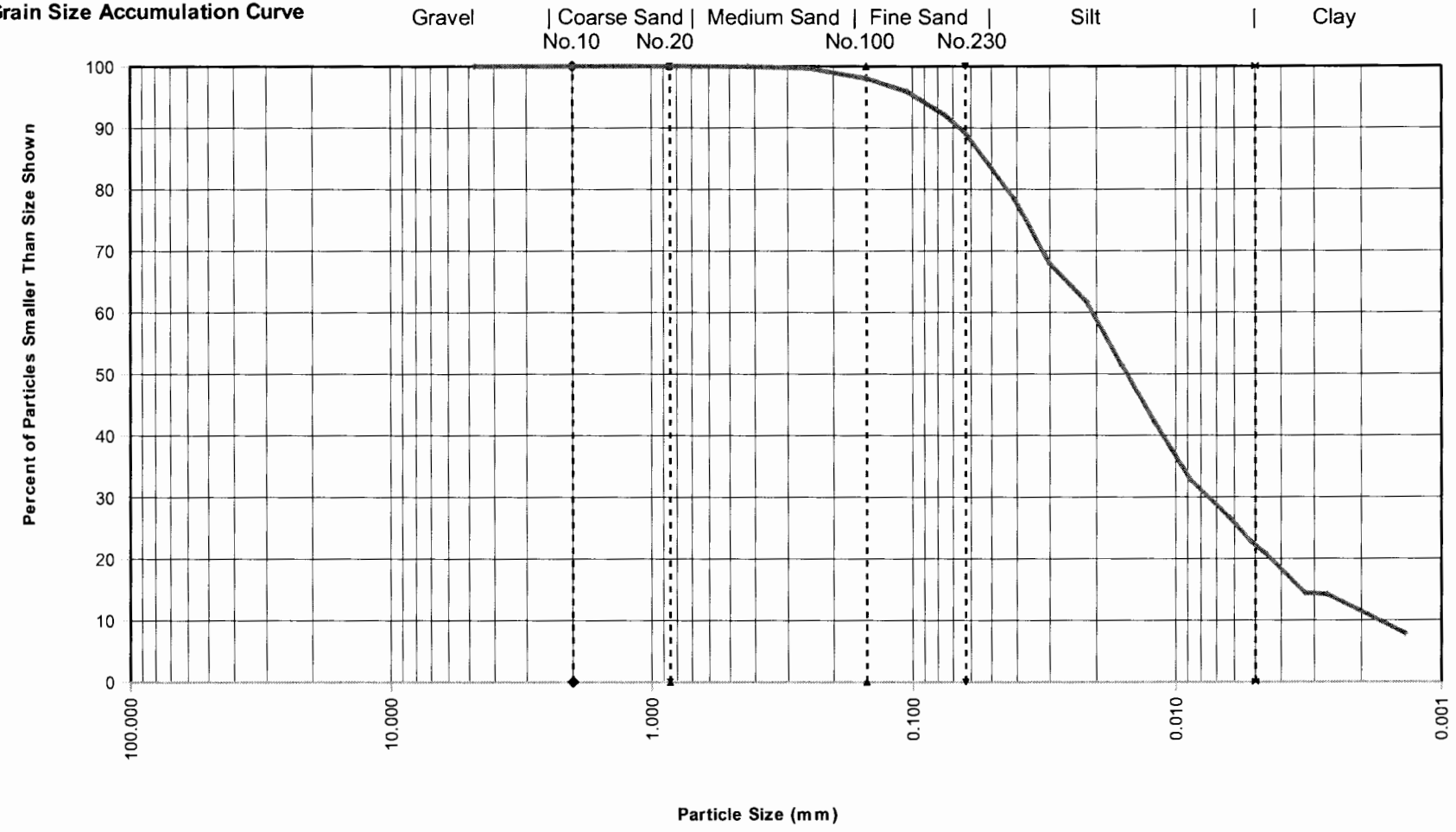
Fractions +20 to +100 contain abundant organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG62-190418 (A9D0735-03)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Medium Sand	N/A	N/A	Clayey SILT with trace Sand

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0735-03

Whole Sample

									Total
Tare Values	5.587	5.640							11.227
Air Dry + Tare	145.383	74.319							219.702

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values	1.378								1.378
Dry + Tare	1.387								1.387

Pan

									Total
Tare Values	5.597	5.655							11.252
Dry + Tare	113.557	105.714							219.271

Ensure that Total % Retained is ~ 100%. 99.61

APEX
Grain Size Analysis

Analyst	Sarah Sanguinetti
Batch number	9041137
Sample ID	A900735-03B
Start Date/ Time	5-2-19 12:50

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.587	145.383		
5.640	74.319		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare
1.378	1.387	1.387

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.597	113.557		
5.655	105.714		

Date/Time/Temp

IN	05-03-19
	112.6
AMBIENT	15:10
OUT	05-07-19 1123
	1335

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
735-3	1.353	16.164	15.563

APEX
Grain Size Analysis

Notes

Sample ID: A9D0735-03B

#10 SEIVE PIECE OF WOOD & PIECE OF PLASTIC

fractions +20 to +100 contain abundant organic material

Maximum Particle Size: Medium Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt w/ trace Sand

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanguyay		
Batch Number	904 1137		
Sample ID	A9D0735 - 03		
Start Date/Time	05-06-19	9:39	
Air Dry Sample for Hydrometer Test		50.535	
Hydrometer	870249	Dispersant	A19E022 Time/Date: 05-03-19 15:27

9:39	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:40	1	44	20.4	
9:41	2	39	20.4	
9:43	4	36	20.4	
9:47	8	31	20.4	
9:54	15	26.5	20.4	
10:09	30	22.0	20.4	
10:39	60	19	20.5	
11:09	90	17	20.7	
11:39	120	16	20.6	
13:39	240	13	20.6	
15:39	360	13	20.3	
9:39	1440	10	20.1	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.301	1.303
+40	1.305	1.338
+60	1.302	1.436
+100	1.290	2.085
+140	1.289	2.312
+200	1.301	3.183
+230	1.299	2.721
-230 (pan)	1.290	4.638

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0735-04		Client Sample ID:	T4-PDI2019-SG63-190418		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	10.608	204.605	194.00	4.53	185.6

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		10.632	203.989	193.36	193.36	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9567		D73504	1.358	18.379	17.642	4.53

Hydrometer Analysis

Start Date/Time	5/6/2019	9:51	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.181		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.01		Corrected Dry Weight of Soil Tested (g) (W)	48.01

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	50	20.2	45.26	94.3	7.9	0.01365	0.038	94.27
2	46	20.2	41.26	85.9	8.6	0.01365	0.028	85.94
4	42.5	20.2	37.76	78.6	9.1	0.01365	0.021	78.65
8	37	20.2	32.26	67.2	10.1	0.01365	0.015	67.19
15	31	20.4	26.31	54.8	11.1	0.01365	0.012	54.80
30	26	20.4	21.31	44.4	11.9	0.01365	0.009	44.38
60	21	20.5	16.33	34.0	12.7	0.01348	0.006	34.02
90	18.5	20.5	13.83	28.8	13	0.01348	0.005	28.81
120	17	20.5	12.33	25.7	13.3	0.01348	0.004	25.69
240	14	20.4	9.31	19.4	13.8	0.01365	0.003	19.39
360	13	20.5	8.33	17.4	14	0.01348	0.003	17.36
1440	10	20.1	5.23	10.9	14.5	0.01365	0.001	10.90

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.308	1.311	0.00	0.01	0.0	100.0
40	0.425	1.301	1.331	0.03	0.13	0.1	99.9
60	0.250	1.298	1.364	0.07	0.38	0.1	99.8
100	0.150	1.298	1.674	0.38	1.83	0.8	99.0
140	0.105	1.298	1.705	0.41	3.40	0.8	98.2
200	0.075	1.293	1.925	0.63	5.83	1.3	96.8
230	0.063	1.296	1.830	0.53	7.89	1.1	95.7
			Sum	2.05	230 Minus	45.96	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG63-190418 (A9D0735-04)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*4.27*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.99	0.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.93	0.06
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.79	0.14
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.01	0.78
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.16	0.85
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	96.85	1.32
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	95.73	1.11
Silt and Clay (Measurements in the Clay fraction are noted)				*95.73*
Hydrometer Test		0.0384	94.27	1.46
Hydrometer Test		0.0283	85.94	8.33
Hydrometer Test		0.0206	78.65	7.29
Hydrometer Test		0.0153	67.19	11.46
Hydrometer Test		0.0117	54.8	12.39
Hydrometer Test		0.0086	44.38	10.41
Hydrometer Test		0.0062	34.02	10.36
Hydrometer Test		0.0051	28.81	5.21
Hydrometer Test	Clay	0.0045	25.69	3.12
Hydrometer Test	Clay	0.0033	19.39	6.3
Hydrometer Test	Clay	0.0027	17.36	2.03
Hydrometer Test	Clay	0.0014	10.9	6.46

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	4.3
Coarse sand	0.0
Medium sand	1.0
Fine sand	3.3
Silt	66.9
Clay	28.8

Case Narrative for Sample ID: T4-PDI2019-SG63-190418 (A9D0735-04)

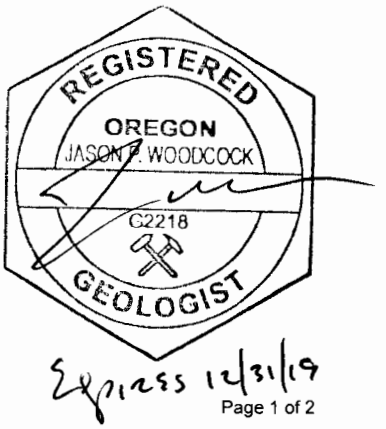
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

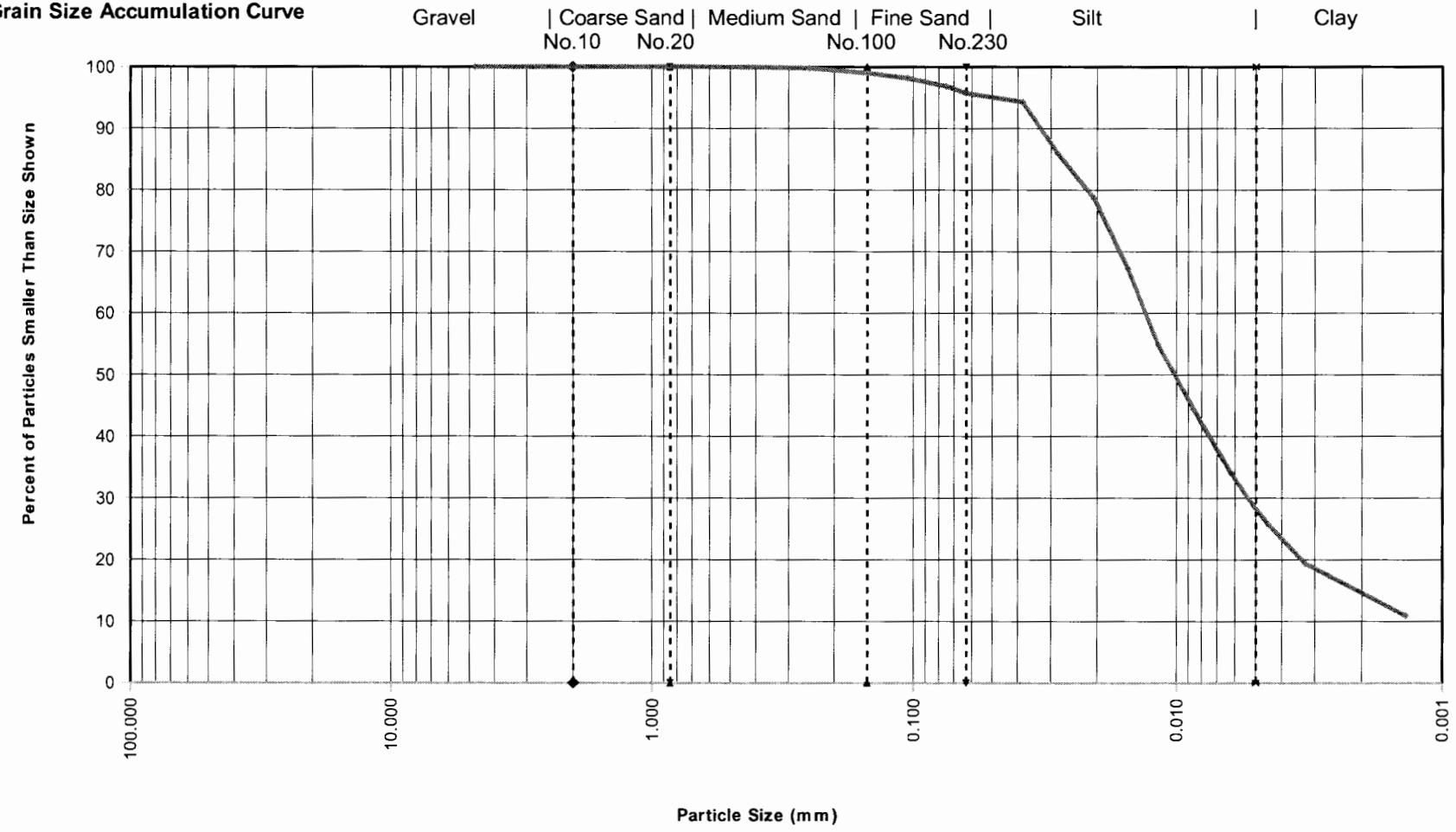
All fractions (+20 to +230) contain abundant organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG63-190418 (A9D0735-04)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0735-04

Whole Sample

									Total
Tare Values	5.339	5.269							10.608
Air Dry + Tare	133.981	70.624							204.605

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.348	5.284							10.632
Dry + Tare	106.188	97.801							203.989

Ensure that Total % Retained is ~ 100%. 99.47

APEX
Grain Size Analysis

Analyst	Sandra Sanchez
Batch number	9041137
Start Date/ Time	5-2-19 13:30
Sample ID	A9D0735-04B

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.339	133.981		
5.269	70.624		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.348	106.188		
5.284	97.801		

Date/Time/Temp

IN	05-03-19 112.6
AMBIENT	15:10
OUT	05-07-09 1123 15:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D7350H	1.358	18.379	17.642

APEX
Grain Size Analysis

Notes

Sample ID: A900735-04B

All fractions (+20 to +230) contain abundant organic material

gsg 05/20/19

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Tangway
Batch Number	9041137
Sample ID	A9D0735-04B
Start Date/Time	5-06-19 9:51
Air Dry Sample for Hydrometer Test	50.181
Hydrometer 05-03-19	229773 Dispersant A19E022

Time/Date: 05-03-19 15:21

	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
9:51 ~~10:51~~				
5-6-19	0.5			
9:52 ~~10:52~~	1	50	20.2	
9:53 ~~10:53~~	2	46	20.2	
9:55 ~~10:56~~	4	42.5	20.2	
9:59 10:59	8	37.	20.2	
10:06	15	31	20.4	
10:21	30	26.	20.4	
10:51	60	21	20.5	
11:21	90	18.5	20.5	
11:51	120	17.0	20.5	
13:51	240	14.0	20.4	
15:51	360	13.0	20.5	
9:51	1440	10	20.1	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.308	1.311
+40	1.301	1.331
+60	1.298	1.364
+100	1.298	1.674
+140	1.298	1.705
+200	1.293	1.925
+230	1.296	1.830
-230 (pan)	1.297	2.733

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0735-05		Client Sample ID:	T4-PDI2019-SG64-190418		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.475	188.375	176.90	4.20	169.8

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.488	187.665	176.18	176.18	99.4	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9597		D73505	1.369	15.323	14.761	4.20

Hydrometer Analysis

Start Date/Time	5/2/2019	9:47	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.253		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	48.23		Corrected Dry Weight of Soil Tested (g) (W)	48.23

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	52	20.6	45.98	95.3	7.6	0.01348	0.037	95.34
2	49.5	20.5	43.45	90.1	7.9	0.01348	0.027	90.09
4	46	20.5	39.95	82.8	8.6	0.01348	0.020	82.83
8	41.5	20.5	35.45	73.5	9.2	0.01348	0.014	73.50
15	36	20.6	29.98	62.2	10.2	0.01348	0.011	62.16
30	30	20.7	24.01	49.8	11.2	0.01348	0.008	49.79
60	23	20.7	17.01	35.3	12.4	0.01348	0.006	35.28
90	20	20.7	14.01	29.1	12.9	0.01348	0.005	29.06
120	20	20.7	14.01	29.1	12.9	0.01348	0.004	29.06
240	16	20.5	9.95	20.6	13.5	0.01348	0.003	20.62
360	14	20.6	7.98	16.5	13.8	0.01348	0.003	16.55
1440	12	19.7	5.68	11.8	14.2	0.01365	0.001	11.78

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.290	1.294	0.00	0.01	0.0	100.0
40	0.425	1.274	1.294	0.02	0.08	0.0	100.0
60	0.250	1.296	1.330	0.03	0.20	0.1	99.9
100	0.150	1.298	1.496	0.20	0.90	0.4	99.5
140	0.105	1.292	1.481	0.19	1.56	0.4	99.1
200	0.075	1.297	1.586	0.29	2.57	0.6	98.5
230	0.063	1.290	1.542	0.25	3.46	0.5	98.0
			Sum	0.99	230 Minus	47.24	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG64-190418 (A9D0735-05)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.04*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.99	0.01
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.95	0.04
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.88	0.07
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.47	0.41
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	99.08	0.39
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	98.48	0.6
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.96	0.52
Silt and Clay (Measurements in the Clay fraction are noted)				*97.96*
Hydrometer Test		0.0372	95.34	2.62
Hydrometer Test		0.0268	90.09	5.25
Hydrometer Test		0.0198	82.83	7.26
Hydrometer Test		0.0145	73.5	9.33
Hydrometer Test		0.0111	62.16	11.33
Hydrometer Test		0.0082	49.79	12.37
Hydrometer Test		0.0061	35.28	14.51
Hydrometer Test		0.0051	29.06	6.22
Hydrometer Test	Clay	0.0044	29.06	0
Hydrometer Test	Clay	0.0032	20.62	8.43
Hydrometer Test	Clay	0.0026	16.55	4.08
Hydrometer Test	Clay	0.0014	11.78	4.77

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.0
Coarse sand	0.0
Medium sand	0.5
Fine sand	1.5
Silt	68.9
Clay	29.1

Case Narrative for Sample ID: **T4-PDI2019-SG64-190418 (A9D0735-05)**

This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

The assumed specific gravity used in the calculations was 2.65.

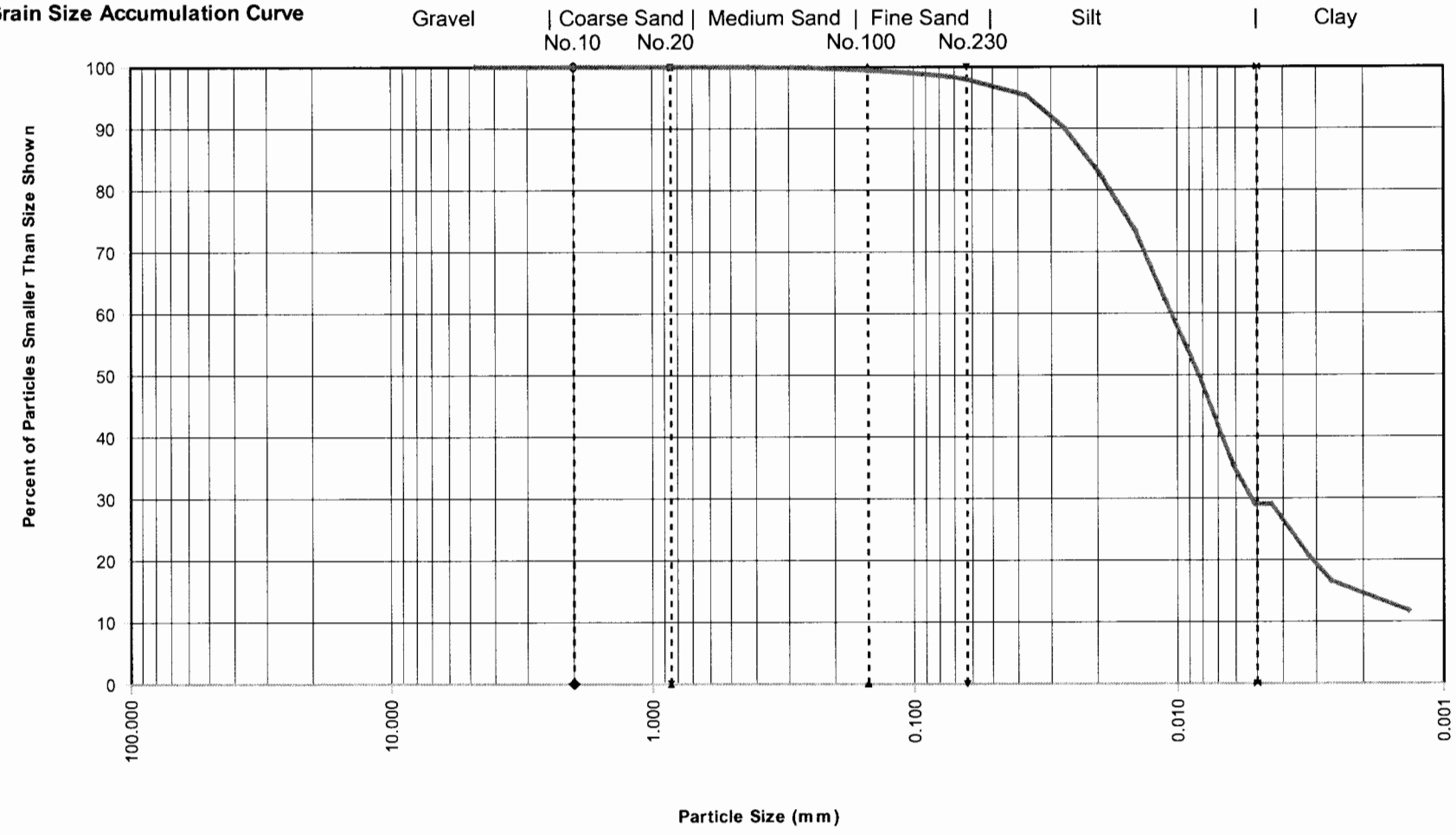
All fractions (+20 to +230) contain abundant organic material.



Expires 12/31/19

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG64-190418 (A9D0735-05)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
870249	-0.3341	12.9

Sample ID: A9D0735-05

Whole Sample

									Total
Tare Values	5.675	5.800							11.475
Air Dry + Tare	116.887	71.488							188.375

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.681	5.807							11.488
Dry + Tare	110.595	77.070							187.665

Ensure that Total % Retained is ~ 100%. 99.42

APEX
Grain Size Analysis

Analyst	KAREN WILSON
Batch number	9041137
Sample ID	A9D0735-5B
Start Date/ Time	5-1-19 10:40

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.675	116.887		
5.800	71.488		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.681	110.595		
5.807	77.070		

Date/Time/Temp

IN AMFOON	05-02-19 113.0 8:30
OUT	05-07-19 112.3 13:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
735-5	1.369	15.323	14.761

APEX
Grain Size Analysis

Notes

Sample ID: AQD0735-05

All fractions (+20 to +230) contain abundant organic material.
05/20/19

Maximum Particle Size: Coarse Sand

Hardness and Shape: N/A

Soil/Sediment Classification: clayey SILT

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Sanguay		
Batch Number	9041137		
Sample ID	A9D0735-05B		
Start Date/Time	5-2-19 9:47		
Air Dry Sample for Hydrometer Test			50.253
Hydrometer	870249	Dispersant	A196022

Time/Date: 05-01-19 16:37

9:47	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
9:48	1	52	20.6	
9:49	2	49.5	20.5	
9:51	4	46.0	20.5	
9:55	8	41.5	20.5	
10:02	15	36	20.6	
10:17	30	30	20.7	
10:47	60	23	20.7	
11:17	90	20	20.7	
11:47	120	20	20.7	
13:47	240	16	20.5	
15:47	360	14	20.6	
9:47	1440	12	19.7	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.290	1.294
+40	1.274	1.294
+60	1.296	1.330
+100	1.298	1.496
+140	1.292	1.481
+200	1.297	1.586
+230	1.290	1.542
-230 (pan)	1.294	2.191

APEX LABORATORIES

Grain Size (D422m/PSET)

PREPARATION BENCH SHEET 9041137

Apex Laboratories
BATCH #: 9041137 (Soil)
Prep Method: ASTM D 421

Lab Number	Due	Prepared	Initial (N/A)	Final (N/A)	Client	ClientID / Sample	Extraction Comments
A9D0674-25	*05/01/19*	**05/02/19 10:13**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG59-190417-**	X
☐ Grain Size (D422m/PSET)							
A9D0735-01	*05/02/19*	**04/22/19 08:38**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG50-190418**	
☐ Grain Size (D422m/PSET)							
A9D0735-02	*05/02/19*	**04/22/19 08:38**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG56-190418**	
☐ Grain Size (D422m/PSET)							
A9D0735-03	*05/02/19*	**04/22/19 08:38**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG62-190418**	
☐ Grain Size (D422m/PSET)							
A9D0735-04	*05/02/19*	**04/22/19 08:38**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG63-190418**	
☐ Grain Size (D422m/PSET)							
A9D0735-05	*05/02/19*	**04/22/19 08:38**	**1**	**1**	**Anchor QEA, LLC**	**T4-PDI2019-SG64-190418**	
☐ Grain Size (D422m/PSET)							

Standards/Reagents

Reagent(s)

Std ID	Exp. Date	Description
A19C174	04/13/19	Na Hexametaphosphate 40 g/L

Analyte Spike(s)

Std ID	Exp. Date	Description

- A13L215 11/30/23 Grain Size Balance
For A9D0674-25 only.
5/19/19
- A13L217 11/3/23 Sample Prep Bal 2 jjg 05/20/19

5/20/19 A9D0674-25 Reviewed

James S. Johnson 05/20/19
Prepared By: Date

Reviewed By: 5/20/19
Date

Apex Laboratories, LLC

Particle Size Analysis of Soil by ASTM D 422

Sample ID:	A9D0674-25		Client Sample ID:	4-PDI2019-SG59-190417-DU		Batch Number:	9041137
Data Entered by:	JSJ	Date:	05/20/19	Data Reviewed by:	JW	Date:	05/20/19
Sample Description:	Clayey SILT			Max Particle Size:	Coarse Sand		
Particle Shape:	N/A			Hardness	N/A		

Whole Sample	Tare	Air Dry + Tare	Air Dry	Moisture	Dry Wt.
	11.673	174.808	163.14	3.85	157.1

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Wt. Retained	% Retained	% Passing
4	4.75	0.000	0.000	0.00	0.00	0.0	100.0
10	2.00	0.000	0.000	0.00	0.00	0.0	100.0
Pan		11.660	174.176	162.52	162.52	99.5	

Hygroscopic Moisture Correction

	Hygroscopic Correction Factor	Oven Sample	Pan No.	Tare	Air Dry + Tare	Oven Dry + Tare	Moisture
	0.9629		D67425	1.385	17.738	17.131	3.85

Hydrometer Analysis

Start Date/Time	5/2/2019	10:13	Dispersing Agent	$NaPO_3$
Air Dry Sample Wt. for Hydrometer Test (g)	50.960		G_s Correction Factor (α)	1.000
Percent Passing No.10 Sieve	100.0		Specific Gravity (G_s)	2.65
Dry Weight of Soil Tested (g)	49.07		Corrected Dry Weight of Soil Tested (g) (W)	49.07

Elapsed Time (min)	Hydrometer Reading	Temperature (°C)	Corrected Hydrometer Reading [R]	% Finer of Hydrometer Sample	L	K	Particle Diameter (mm)	Percent Passing
1	51	20.7	46.38	94.5	7.8	0.01348	0.038	94.53
2	48.5	20.7	43.88	89.4	8.1	0.01348	0.027	89.43
4	45.5	20.7	40.88	83.3	8.6	0.01348	0.020	83.32
8	41	20.7	36.38	74.1	9.4	0.01348	0.015	74.15
15	36	20.7	31.38	64.0	10.2	0.01348	0.011	63.96
30	30	20.8	25.41	51.8	11.2	0.01348	0.008	51.78
60	23	20.8	18.41	37.5	12.4	0.01348	0.006	37.52
90	20	20.8	15.41	31.4	12.9	0.01348	0.005	31.40
120	17.5	20.9	12.93	26.4	13.2	0.01348	0.004	26.36
240	15	20.5	10.33	21.1	13.7	0.01348	0.003	21.06
360	13.5	20.6	8.86	18.1	13.8	0.01348	0.003	18.05
1440	11	19.8	6.16	12.5	14.3	0.01365	0.001	12.55

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve Number	Opening (mm)	Tare	Dry + Tare	Weight Retained	Cumulative Retained	% Retained	% Passing
20	0.850	1.307	1.322	0.02	0.05	0.0	100.0
40	0.425	1.301	1.368	0.07	0.26	0.1	99.8
60	0.250	1.302	1.373	0.07	0.49	0.1	99.7
100	0.150	1.293	1.405	0.11	0.85	0.2	99.5
140	0.105	1.301	1.592	0.29	1.77	0.6	98.9
200	0.075	1.282	1.805	0.52	3.44	1.1	97.8
230	0.063	1.302	1.651	0.35	4.55	0.7	97.1
			Sum	1.43	230 Minus	47.64	

Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Sample ID: T4-PDI2019-SG59-190417-DUP (A9D0674-25)

Grain Size Analysis Summary from Sieving and Hydrometer Testing		Particle Size (mm)	Percent Finer	Total Percent of Sample
Gravel				*0*
Retained on No. 4 sieve		4.75	100	0
Gravel, passing No. 4 sieve and retained on No. 10 sieve		2.00	100	0
Sand				*2.91*
Coarse sand, passing No.10 sieve and retained on No. 20 sieve		0.8500	99.97	0.03
Medium sand, passing No.20 sieve and retained on No. 40 sieve		0.4250	99.83	0.14
Medium sand, passing No.40 sieve and retained on No. 60 sieve		0.2500	99.69	0.14
Medium sand, passing No. 60 sieve and retained on No.100 sieve		0.1500	99.46	0.23
Fine sand, passing No. 100 sieve and retained on No.140 sieve		0.1060	98.87	0.59
Fine sand passing No. 140 sieve and retained on No. 200 sieve		0.0750	97.8	1.07
Fine sand, passing No. 200 sieve and retained on No. 230 sieve		0.0630	97.09	0.71
Silt and Clay (Measurements in the Clay fraction are noted)				*97.09*
Hydrometer Test		0.0376	94.53	2.56
Hydrometer Test		0.0271	89.43	5.09
Hydrometer Test		0.0198	83.32	6.11
Hydrometer Test		0.0146	74.15	9.17
Hydrometer Test		0.0111	63.96	10.19
Hydrometer Test		0.0082	51.78	12.18
Hydrometer Test		0.0061	37.52	14.27
Hydrometer Test		0.0051	31.4	6.11
Hydrometer Test	Clay	0.0045	26.36	5.04
Hydrometer Test	Clay	0.0032	21.06	5.3
Hydrometer Test	Clay	0.0026	18.05	3.01
Hydrometer Test	Clay	0.0014	12.55	5.51

Grain Size Summary	Percent of Total Sample
Gravel	0.0
Sand	2.9
Coarse sand	0.0
Medium sand	0.5
Fine sand	2.4
Silt	65.7
Clay	31.4

Case Narrative for Sample ID: T4-PDI2019-SG59-190417-DUP (A9D0674-25)

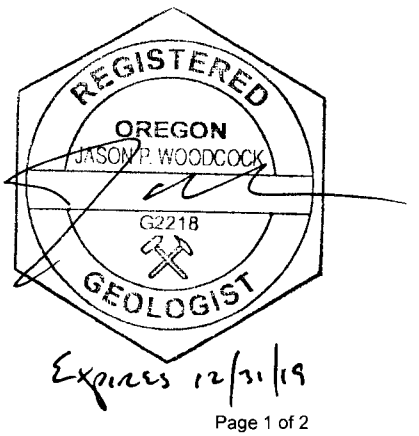
This data is not to be used for engineering purposes.

No difficulty dispersing the fraction passing the No. 10 sieve.

Dispersion device used: Commercial drink mixer operating at least 10,000 rpm for one minute.

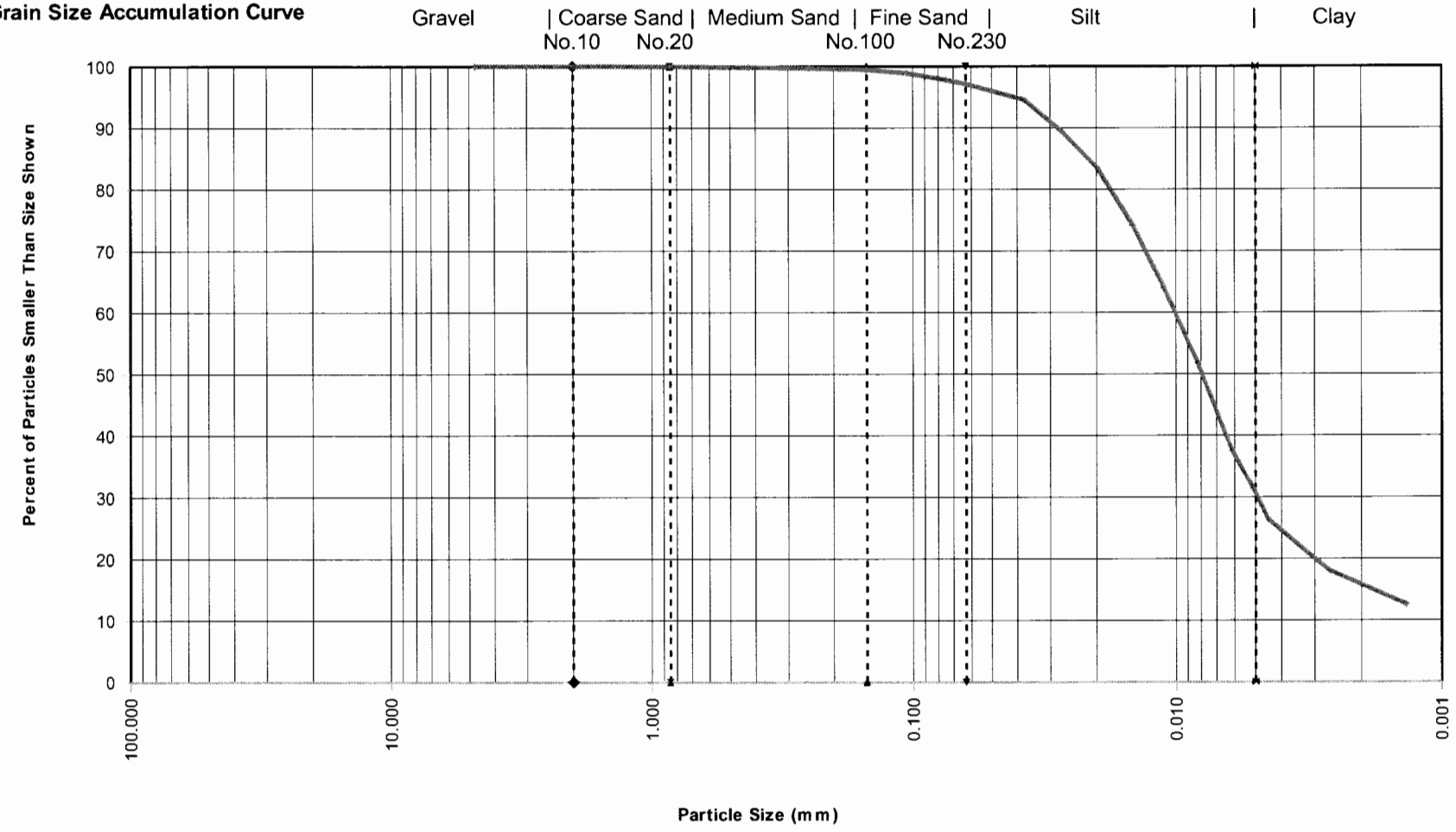
The assumed specific gravity used in the calculations was 2.65.

All fractions (+20 to +230) contain abundant organic material.



Apex Laboratories, LLC
Particle Size Analysis of Soil by ASTM D 422 Modified

Grain Size Accumulation Curve



Sample ID:	T4-PDI2019-SG59-190417-DUP (A9D0674-25)			
Specific Gravity	MAXIMUM PARTICLE SIZE	GRAVEL & SAND		SOIL DESCRIPTION
		PARTICLE SHAPE	HARDNESS	
2.65	Coarse Sand	N/A	N/A	Clayey SILT

Hydrometer S/N (drop down):	m	b
229773	-0.2529	9.85

Sample ID: A9D0674-25

Whole Sample

									Total
Tare Values	5.827	5.846							11.673
Air Dry + Tare	88.749	86.059							174.808

Sieve Number 4 Enter the weight of soil after wash and oven-dry at 50.

									Total
Tare Values									0.000
Dry + Tare									0.000

Sieve Number 10

									Total
Tare Values									0.000
Dry + Tare									0.000

Pan

									Total
Tare Values	5.802	5.858							11.660
Dry + Tare	64.976	109.200							174.176

Ensure that Total % Retained is ~ 100%. 99.47

APEX
Grain Size Analysis

Analyst	Sandra Langway
Batch number	~~9041136~~ 9041137 JJG 05/20/19
Sample ID	A9D0674-25A
Start Date/ Time	05-01-2019 15:25

Air Drying

Tare	Air Dry Sample + Tare	Tare	Air Dry Sample + Tare
5.827	88.749		
5.846	86.059		

Post 10 mesh sieving

+4 Fraction

Tare	+4 fraction (air dry) + tare	+4 fraction (oven dry) + tare

+10 Fraction

Tare	+10 fraction (air dry) + tare	+10 fraction (oven dry) + tare

-10 Fraction (Pan)

Tare	Pan fraction (air dry) + tare	Tare	Pan fraction (air dry) + tare
5.802	64.976		
5.858	109.200		

Date/Time/Temp

IN AMEZOON	05-02-19 113.0 8:30
OUT	05-07-19 112.3 13:35

Hygroscopic Moisture Correction

Pan No.	Tare	-10 fraction (air dry) + tare	-10 fraction (oven dry) + tare
D67425	1.385	17.738	17.131

APEX
Grain Size Analysis

Notes

Sample ID: A9D0674-25

all fractions (+20 - +230) contain abundant organic material.
JVG 05/17/19

Maximum Particle Size: Coarse Sand.

Hardness and Shape: N/A

Soil/Sediment Classification:

Clayey Silt

5/20/19

APEX
Grain Size Analysis

Hydrometer Analysis

Analyst	Sandra Langway		
Batch Number	~~9041136~~ 9041137 JJG 05/20/19		
Sample ID	A9D0674-25A		
Start Date/Time	5-2-19 10:13		
Air Dry Sample for Hydrometer Test			50.96
Hydrometer	229773	Dispersant	A19E022

Time/Date: 05-01-19 17:37

10:13	Time (min.)	Hydrometer Reading	Temperature (°C)	Amount of Foam
	0.5			
10:14	1	51	20.7	
10:15	2	48.5	20.7	
10:17	4	45.5	20.7	
10:21	8	41.0	20.7	
10:28	15	36	20.7	
10:43	30	30	20.8	
11:13	60	23	20.8	
11:43	90	20	20.8	
12:13	120	12.5	20.9	
14:13	240	15.0	20.5	
16:13	360	13.5	20.6	
10:13	1440	11	19.8	

Note:

1 cm foam = 5 hydrometer units.

Adjust Hydrometer Reading entered into Excel spreadsheet by adding 5 hydrometer units per cm of foam.

Sieve Analysis of Portion Finer Than No. 10 Sieve

Sieve No.	Tare	Oven Dry + Tare
+20	1.307	1.322
+40	1.301	1.368
+60	1.302	1.373
+100	1.293	1.405
+140	1.301	1.592
+200	1.282	1.805
+230	1.302	1.651
-230 (pan)	1.302	2.227

APEX LABORATORIES, LLC
12232 SW Garden Place Tigard OR 97223
phone 503-718-2323
fax 503-718-0333

Balance Checksheets

Extractions April 2019
Wet Chem April 2019
Grain Size April 2019

ance Challenge Log

ractions
D FX-2000
5210177

Weight ID	weight (g)	acceptance range (g)	
	=/<1g	± 0.02g	
	>1g	± 2%	
10077	0.5g	0.48	0.52
~~10077 and 02-J60965-11~~	~~100g~~	~~98.00~~	~~102.00~~
1000143395	300g	294.00	306.00 JCS 7/22/18

If other than as listed above, the weight and tracking ID of the mass used to challenge the balance must be recorded.

Alternate Weight/ID used:
→ 1000143396 300g
→ 0.1g S/N JCS 4/30/19
JCS 3/31/19

Date Range:
4/1 → 4/30/19 JCS 4/30/19

nth: April
ar: 2019

	Day/Time	Initials	Weight One	Observed	Weight Two	Observed
1	4/1/18 14:50	JAG		~~49.64~~ .50		298.47
2	12:40	CmH		0.50		299.24
3	8:35	AJJ		0.50		300.01
4	0722	AJJ		0.50		300.01
5	11:40	CmH		0.51		300.02
6						
7						
8	1331	CAS		0.50		299.95
9	1121	JC		0.51		300.02
10	1300	JC		0.50		300.01
11	1220	JC		0.50		300.02
12	0725	AJJ		0.50	300.00g JCS 7/22/18	300.02
13						
14	~~09:45~~	~~JAG~~				
15	09:45	JAG		.50		300.01
16	13:24	CAS	0.50g	.50	~~100.00g~~	300.01
17	0748	AJJ		0.50		300.01
18	09:25	AM		0.50		300.01
19	6:30	BR		0.50		300.01
20						
21						
22	1323	CAS		0.51		298.75
23	10:10	CmH		0.50		299.14
24	1225	JC		0.50		300.00
25	07:10	JAG		0.51		300.01
26	07:20	JAG		0.50		300.00
27						~~300.00~~ JAG 4/30/19
28				~~.49~~ JAG 4/30/19		
29	7:35	JAG		.49		300.00
30	1105	JC		0.50		300.13
31						

Balance Challenge Log

Wet Chem Balance 1
Ohaus Adventurer Pro
ID# 8C30461093

Weight ID	weight (g)	acceptance range (g)	
	<0.5000g	± 0.5mg	
	>/=0.5000g	± 0.1%	
1000015949	0.005g	0.0045	0.0055
66067	0.100g	0.0995	0.1005
66067	100g	99.9000	100.1000

If other than as listed above, the weight and tracking ID of the mass used to challenge the balance must be recorded.

Month: April
Year: 2019

Alternate Weight/ID used:

		Date Range:
100g	10659	4/1 → 4/30/19
0.100g	03-J68049-19	4/1 → 4/30/19
0.005g	1000049215 JCS	3/31/19 4/1 → 4/30/19 JCS

Day/Time	Initials	Weight 1	Observed	Weight 2	Observed	Weight 3	Observed
1 7:30	MRF		99.9994		0.1000		0.0051
2 0808	JKP		99.9998		0.0999		0.0050
3 0943	MRF		100.0002		0.1001		0.0050
4							
5 0743	MRF		100.0011		0.1003		0.0051
6							
7							
8 10:09	MRF		100.0009		0.100371		0.0051
9 0720	JKP		100.0011		0.1001 ME 4/8		0.0051
10 0520	JKP		100.0007		0.1000		0.0050
11 0655	JKP		100.0009		0.1000		0.0050
12 0730	JKP		100.0006		0.0995		0.0049
13							
14							
15 0711	WVD		100.0007		0.1003		0.0050
16 0655	JKP	100.0000g	100.0008	0.1000g	0.1002	.0050g	0.0049
17 0735	MRF		100.0009		0.1001		0.0050
18 0749	MRF		100.0006		0.1000		0.0051
19 0700	JKP		100.0015		0.1001		0.0050
20							
21							
22 0730	MRF		100.0009		0.1000		0.0050
23 1013	MRF		100.0013		0.1001		0.0051
24 0658	JKP		100.0015		0.1001		0.0050
25 1115	SDS		100.0006		0.0999		0.0051
26 0735	JKP		100.0004		0.0995		0.0050
27 0740	JKP		100.0004		0.1000		0.0050
28							
29 0731	MRF		100.0007		0.1000		0.0051
30 0750	JKP		99.9997		0.1002		0.0051
31							

Balance Challenge Log

Grain Size
Mettler B303
ID# 1115401761

Weight ID	weight (g)	acceptance range (g)
	=/<1g	± 0.02g
	>1g	± 2%
03-J68208-34	1g	0.980 1.020
10077	10g	9.800 10.200
03-J68630-11	200g	196.000 204.000

If other than as listed above, the weight and tracking ID of the mass used to challenge the balance must be recorded.

Month: April
Year: 2019

Alternate Weight/ID used: 1g 41612 JCS 3/31/19

Date Range: 4/1 → 4/30/19 JCS 4/30/19

Day/Time	Initials	Weight 1	Observed	Weight 2	Observed	Weight 3	Observed
1							
2							
3 04/03/19 13:01	JD		1.000		10.000		199.999
4							
5							
6							
7							
8 1250	JSJ		199.999		10.000		1.000
9 14:40	SJ		199.994		10.000		1.001
10 12:11	JD		199.997		10.000	MJ 4.1.19	1.000
11 11:02	JSJ		199.999		~~0.999~~ 9.998		0.999
12							
13							
14							
15							
16		200.000g		10.000g		1.000g	
17 14:30	MJ		199.997		10.000		1.000
18 08:20	KW		199.996		9.999		1.000
19							
20							
21					KW 4-24-19		
22					10.00		
23 08:15	KW		199.998		~~100~~.00		~~1~~.000
24 1217	JSJ		199.995		10.000		1.000
25							
26 08:20	KW		199.997		9.999		0.998
27							
28							
29 9:00	MJ		199997		10.000		1.001
30 12:50	KW		199.997		10.000		1.000
31							